

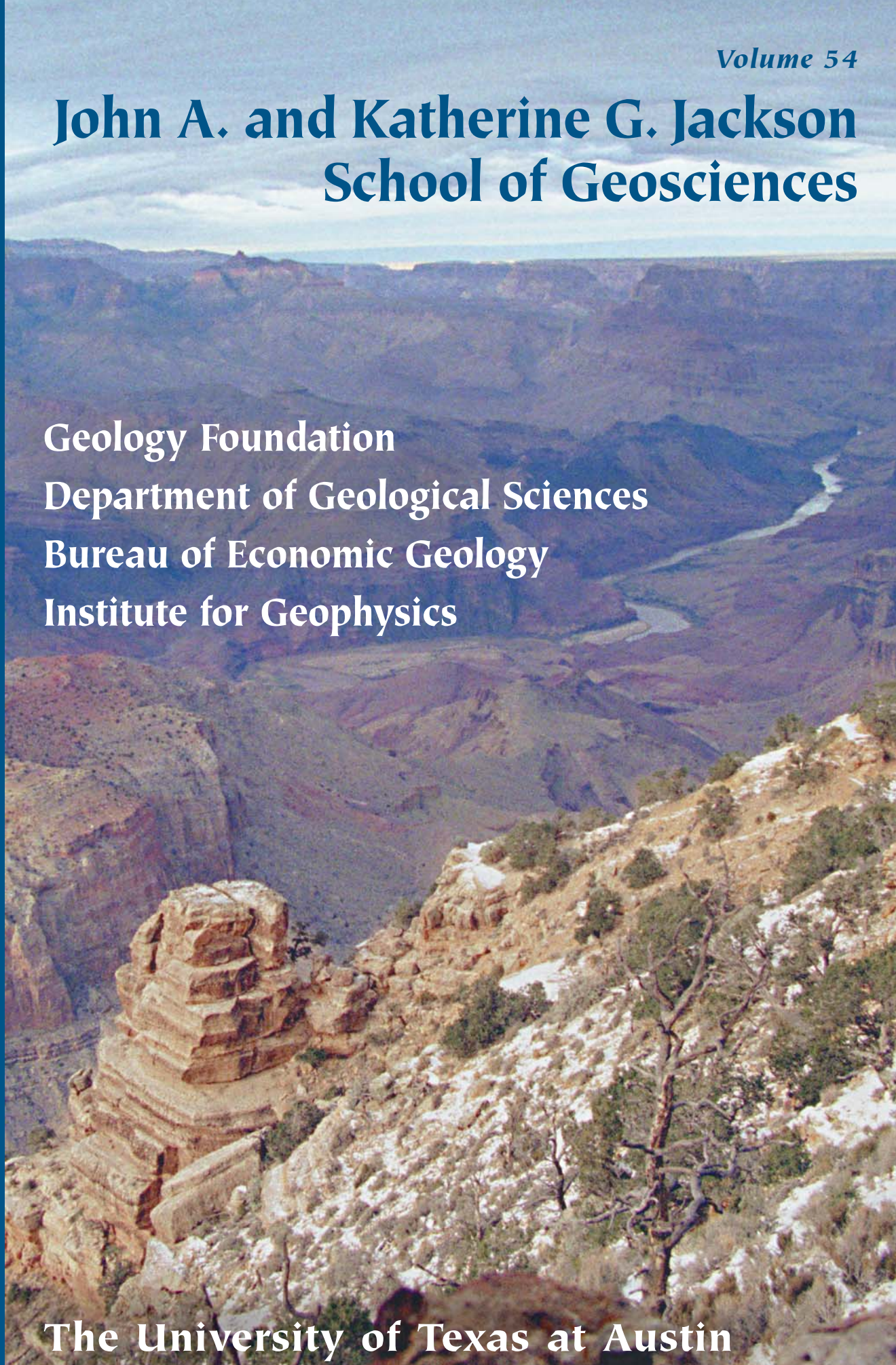
2004 Newsletter

Volume 54

John A. and Katherine G. Jackson School of Geosciences

**Geology Foundation
Department of Geological Sciences
Bureau of Economic Geology
Institute for Geophysics**

The University of Texas at Austin





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No State-appropriated funds were used to publish this *Newsletter*.

Front Cover
South Rim of Grand Canyon, looking northeastward from Mary Colter's Watchtower at the Desert View, Grand Canyon National Park, Arizona. Photo by Jamie H. Coggin.

Inside Front Cover
Palo Duro Canyon, North Texas. Photo by Jamie H. Coggin.

Back Cover
Digital terrain model (DTM) of Powder River Basin, Wyoming. With the sponsorship of Marathon Oil Company, the Bureau of Economic Geology and Center for Space Research at The University of Texas at Austin conducted lidar surveys of the Powder River Basin in Wyoming between May 2003 and March 2004. A set of 23 DTM's having a 5 ft x 5 ft horizontal resolution and 1 ft vertical accuracy were generated for hydrologic and engineering applications. This image is a portion of one of the DTM's.

Inside Back Cover
Laguna de Términos, Gulf of Mexico, October 1992. STS52-73-085. Photo provided by William H. Muehlberger.

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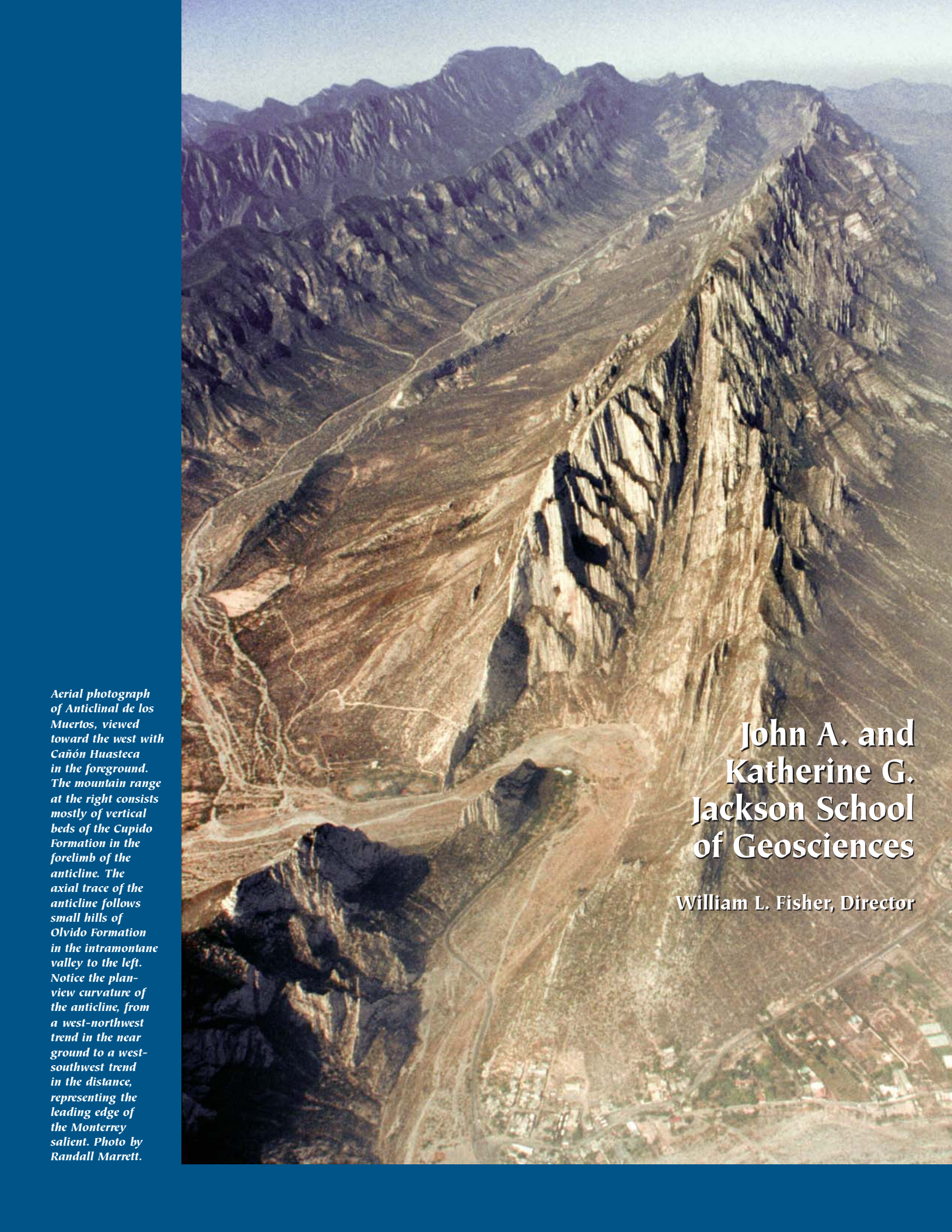
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Aerial photograph of Anticlinal de los Muertos, viewed toward the west with Cañón Huasteca in the foreground. The mountain range at the right consists mostly of vertical beds of the Cupido Formation in the forelimb of the anticline. The axial trace of the anticline follows small hills of Olvido Formation in the intramontane valley to the left. Notice the plan-view curvature of the anticline, from a west-northwest trend in the near ground to a west-southwest trend in the distance, representing the leading edge of the Monterrey salient. Photo by Randall Marrett.

**John A. and
Katherine G.
Jackson School
of Geosciences**

William L. Fisher, Director

From the Director



To borrow a catchy headline from the University's news story on President Larry Faulkner's proposal that a new school of geosciences be established at the college level, it's an "Earth-Shaking Idea" (@Texas, the University's electronic newsletter, May 12, 2004). Indeed it is, and the announcement was the culmination of a deliberate process nearly a year in the making.

In late summer 2003 President Faulkner commissioned a high-level group of academic, corporate, and government leaders to advise him on the most efficacious way to utilize the resources generated by a substantial endowment created through gifts from the late John A. Jackson. The Jackson School Vision Committee, chaired by President Emeritus Peter T. Flawn, was also charged to assess the scope and quality of the existing program in the geosciences in the Jackson School, review the organization and leadership of the school, and recommend an appropriate operational structure. The Committee submitted their report to the President in December 2003.

The Vision Committee Report contains a number of recommendations, including the establishment of the Jackson School as a separate school outside the College of Natural Sciences that would be under the leadership of a new dean reporting directly to the Provost. The Vision Committee further urged the recruitment of a new dean charged with the reorganization of the School to integrate effectively the academic and research functions of the School to realize Mr. Jackson's vision of building a premier program in the geosciences at the University. The Committee also recommended the recruitment of 5 to 10 new hires from

active members of the national academies or candidates who have the potential for election to the academies in the near future, as well as the creation of an Appointments Committee who would review candidates for faculty and research scientist positions and have the authority to initiate or reject nominations.

President Faulkner circulated the Vision Committee Report to the Jackson School community, the Geology Foundation Advisory Council, and officials of the University, requesting comments.

On April 1, 2004, Faulkner sent a 16-page memorandum to this community, giving a thoughtful analysis of the Vision Committee report and beyond, wherein he laid out options and gave his analysis of them. He concluded his memorandum with his stated inclinations, which were that the most effective organizational structure would be a federated school with the head of the school reporting to the Executive Vice President and Provost. He defined clear separation of strategic and tactical authorities between the dean of the School and the heads of the component units. He invited further comments from the community and on April 29 laid out his formal proposal for a new and independent School of Geosciences to be headed by a Dean of Geosciences reporting directly to the Executive Vice President and Provost. Faulkner indicated that creation of the campus-level school was justified by the extraordinary opportunity facing the University and by the unusual combination of units comprised by the Jackson School, noting that "this is a time for invention and new thinking about the sciences of the earth and how they are developed, taught, and practiced."

An Implementation Committee has been appointed by the President to guide the transition to the new in-

dependent school. A nationwide search for a new dean will be undertaken.

The John A. and Katherine G. Jackson School of Geosciences includes the Department of Geological Sciences, the Bureau of Economic Geology, and the Institute for Geophysics. The School has about 135 faculty and research scientists, 170 undergraduate majors, and 164 graduate degree candidates, making it the largest academic geoscience community in the nation. The School currently operates on an annual budget of about \$40 million and is supported by the Geology Foundation, which has assets on the order of \$320 million. The Jackson School and the Geology Foundation are advised and counseled by the Advisory Council of the Foundation.

The basic operational course for the School has been set. We have much to do in recruiting new faculty, research scientists, and students and in launching new research initiatives. The opportunity to make geosciences at The University of Texas at Austin one of the world's best programs is exciting; it is equally challenging. We welcome your comments and advice as we go forward.

The *Newsletter*, which we have been publishing since 1953, is formatted a little differently this year to reflect the activities of the entire School while retaining many of the traditional items, including, most importantly, the popular "Notes from the Alumni." We hope you like it, and we appreciate your comments, for we know the rich tradition that the *Newsletter* represents.

Bill Fisher

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Department of Geological Sciences

Gary Kocurek, Chairman

Photo of Sierra Blanca, West Texas, an area where water resources are critical. Photo provided by Bridget R. Scanlon.

From the Chairman



The 2003–04 academic year will be remembered as the one in which the Department of Geological Sciences, the Institute for Geophysics, and the Bureau of Economic Geology were united in the college-level Jackson School of Geosciences. The challenges we face in defining this School and making it a success are obvious. The three units have different histories and traditions, and distinct missions. The opportunities, however, are truly unparalleled today in the geosciences globally. The breadth of the School and the resources of the Jackson gift afford us the potential to build an Earth science unit that can have major impact upon science, education, and even policy and society. The niche of the Department has always been in fundamental research driven by individual programs, and excellence in teaching at both the graduate and undergraduate levels. Within the broader Jackson School, this mission will continue, but it will be enhanced by greater resources and interactions with the Bureau and the Institute.

The base from which we begin the Jackson School era is not insignificant. The Department remains the largest and one of the best equipped in the United States. Graduate enrollment remains around 160 students, and there are 170 undergraduate students. In total numbers of students, this is almost twice as large as the next largest geoscience department. Students have been primary beneficiaries of the Jackson gift, including more competitive recruiting offers for graduate students and greater availability of semesters devoted entirely to research. Both graduate

and undergraduate students have a strong base of financial support for education and research from the Geology Foundation. Faculty research remains diverse and growing, as measured by publications, and their impact upon the science, and in our level of external grants. Our programs in sedimentology/stratigraphy, hydrogeology, tectonics/structure, and paleontology remain ranked nationally within the top 10. Our analytical facilities are excellent, but there is a constant challenge in upgrading these as well as our computational facilities. The faculty continues to be engaged in teaching at all levels, including the introductory level, where annually more than 1,500 majors and nonmajors chose from a diverse selection of courses. In terms of bringing a broad look at the Earth sciences to undergraduates at the University of Texas, our suite of nonmajor courses is particularly important. The Jackson School, in cooperation with the Environmental Science Institute, has an active program in K–12 and public outreach. With the building addition and renovation of the existing structure, the Department has the best facilities it has had in decades. Space, however, will again be a problem in the coming years as the Department and School grow. A remaining goal is the upgrading of our displays, both inside and outside the building, to museum quality. The idea is for the Jackson Building to serve as a place where the University of Texas audience and the general public can learn about how the Earth sciences affect their lives and what we do at the Jackson School. Please visit the Departmental Web site <http://www.geo.utexas.edu/> for a much fuller description of our recent activities than space allows here.

One goal of the Jackson School era is significant new faculty hiring, which should allow us both to strengthen our base and to explore new scientific frontiers. We were able this year to begin to rebuild our program in igneous rocks and high-temperature geochemistry, which had suffered with the retirements of Dan Barker and Doug Smith. James Gardner from the University of Alaska at Fairbanks joined us as an associate professor in volcanology. In the fall, John Lassiter from the Max-Planck Institute will join us as an assistant professor in geochemistry. The hiring of both Gardner and Lassiter allowed us to construct major new analytical labs. In the hydrogeology program, John McCray from the Colorado School of Mines joined us as an associate professor. Ron Steele is the new Davis Centennial Chair, filling the shoes of the retired Bill Galloway in stratigraphy and basin analysis. It is clear, however, that with scheduled retirements and competitive pressures for the best faculty, we will have to be aggressive in recruitment.

With the end of this academic year, I will have finished my 4-year term as Department chairman. Clark Wilson will take over, bringing to the task considerable experience from a previous term as chairman. The number of individuals who have contributed over the last 4 years to make the Department work are far too numerous to mention, and I am reduced to a blanket, but sincere, acknowledgment of alumni, the UT administration, faculty, research scientists, staff, students, and colleagues at the Bureau and the Institute. For me, the last 4 years have been challenging, rewarding, and enjoyable.

Gary Kocurek

Department of Geological Sciences

Focus on Research

Exploration Geophysics

By Robert H. Tatham

The EDGER Forum is a cooperative program between The University of Texas at Austin and the petroleum industry to

advance education and research in the technology of exploration geophysics, to facilitate recruiting graduates and technology transfer and implementation in upstream petroleum operations. This program has evolved as a key element in the larger Exploration Geophysics Initiative.

The Exploration Geophysics Initiative, established by the Geology Foundation in 1998, continues to gain momentum as it has evolved into a

The screenshot shows a web browser window titled "Multi-component seismic interpretation browser - Microsoft Internet Explorer". The address bar shows the URL: <http://epaso.geo.utexas.edu/formScripts/browser.html>. The page content is divided into two main sections: a table on the left and a detailed view on the right.

Project Name	Objective	Sub Obj. 1	Sub Obj. 2	Method Name	D
Valhall 8	Gas Cloud Imaging			Structural	2D
West Cameron 5	Gas Cloud Imaging			Structural	3D
Tommeliten 1	Gas Cloud Imaging			Structural	4C
Yinggehai Basin 1a	Gas Cloud Imaging			P and S Amplitudes	2D
Attaka 1	Gas Cloud Imaging			Structural	3D
Tommeliten 3	Gas Cloud Imaging			Structural	2D
Tommeliten 5	Gas Cloud Imaging			Structural	2D
West Cameron 2	Gas Cloud Imaging			Structural	3D
Donald 4	Gas Cloud Imaging			Structural	3D
Lomond 1	Gas Cloud Imaging			Structural	3D
Caspian Sea	Gas Cloud Imaging			Vp/Vs	2D
Valhall 12	Gas Cloud Imaging			Structural	3D
Valhall 14	Gas Cloud Imaging			Structural	2D
Donald 5	Gas Cloud Imaging			Structural	3D
Far East 1	Gas Cloud Imaging			Structural	3D
North Sea 4	Gas Cloud Imaging			Structural	3D
Valhall 17	Gas Cloud Imaging			Vp/Vs	2D
Donald 2	Gas Cloud Imaging			Structural	3D
Mc Arthur 1	Gas Cloud Imaging			Structural	2D
Valhall 19	Gas Cloud Imaging			Structural	2D
East Cameron 1	Gas Cloud Imaging			Structural	3D
North Sea 7	Gas Hydrate			P and S Amplitudes	2D

The right panel displays details for the selected project "Donald".

Field Name: Donald
Objective: Gas Cloud Imaging
Area: Gulf of Mexico
Age of Target: Tertiary
Comment:
Type of Interp.: Structural
Sub-Obj. 1:
Sub-Obj. 2:

The image shows seismic data with annotations: "P-wave image from OBC data (PreSDM)", "Gas cloud", "Full-wave image via Porome data", and "Converted-wave image (anisotropic PreSDM)".

Resolution: Structure
Data Type: 3D 4C
Date of Acq.: 1999
Int. Thick.:
Obj. Thick.:
Source: Airgun
Receiver: 4C

Reference:
 Nolte, B., Sukup, D., Krail, P., Temple, B., and Cafarelli, B, 2000, ...

Comments/Suggestions? Please contact Bob Tatham at tatham@mail.utexas.edu.

Example of computer screen accessing the Internet-based database for use by geophysics students and industry members of the EDGER Forum. The database allows geoscientists to quickly review published interpretations of actual applications of multicomponent seismic data. The spreadsheetlike list on the left allows searching for examples by actual exploration/development objectives. Selecting one entry displays a summary of the example on the right panel of the display. To date, more than 400 published examples are included, and more than 3,500 hits from users have been recorded. Image provided by Bob Tatham.

focused program with petroleum industry involvement and a truly cooperative program within the Jackson School of Geosciences. The formation of the Forum for Exploration and Development Geophysics Education and Research (EDGER Forum) at the University has played a significant role in supporting graduate student and faculty research focused on problems that exist in the upstream petroleum industry. Benefits of participation in the Forum include a stream of graduates employable by industry, a forum for exchange of information and technology transfer between (and within) industry and academia, participation in defining research directions, and access to results of student, post-doctoral, and faculty research. The research focus of the EDGER Forum is analysis, imaging, and interpretation of multicomponent seismic data, including P-P and P-SV AVO.

My colleague Robert J. Ferguson and I continue to be dedicated full time to the Exploration Geophysics Program. Paul L. Stoffa continues to be actively involved in exploration geophysics, and senior researchers at the Institute for Geophysics are actively involved in the teaching program. With the establishment of the Jackson School, cooperation with researchers at both the Institute and the Bureau of Economic Geology has increased, particularly in the area of advising graduate students.

With the support of the EDGER Forum, the number of graduate students focusing on exploration geophysics has continued to increase. Three students graduated during the past year (two M.S. and one Ph.D.), and six new graduate students have accepted admission offers for the fall 2004 term. Sixteen exploration geophysics graduate students are expected to be enrolled in the fall 2004 term.

The EDGER Forum supports technology transfer and information-sharing activities between industry

and academia and between individual members in the industry. This last year, the annual technical symposium, sponsored by the Forum and held on The University of Texas at Austin campus, addressed issues of successful applications of multicomponent data in exploration and development settings. This has been our best attended symposium to date. The next technical symposium will be February 14–15, 2005, also on the University campus. In addition to the technical symposium, the EDGER Forum sponsored an informal workshop of industry participants to address common problems in the application of multicomponent seismic methods. The workshop, hosted by Shell in Houston, will be repeated at another venue late summer or early fall of 2004.

Another successful project of the EDGER Forum is the development of an Internet-based database organizing published results of multicomponent seismic interpretations in an objective or problem-oriented format. This organization of data allows users to survey (browse) published results focusing on a particular interpretation problem. An additional browser has recently been added to the database to allow consideration of results on an individual project or geographic location basis. An example of a computer screen from the problem-oriented browser is shown in the illustration accompanying this story. To date, about 400 separate entries are available in the database. Both undergraduate and graduate students have helped to develop this database.

Many of the graduate student research projects are defined with the cooperation of industry members of the EDGER Forum. Recent research projects include effects of fluids (particularly variations in fluid viscosity) on seismic reflection processes, a detailed examination of compressional and shear-wave reflectivity and its variation with source-receiver offset,

defining spatial variations in the characterization of gas hydrates, and comparisons of so-called nine-component and three- (or four-) component seismic data with variations in subsurface geologic parameters. Other research projects, some evolving out of earlier success, are quite active in the technology associated with exploration geophysics.

The 3D Seismic Interpretation Laboratory continues to be a thriving activity in the Exploration Geophysics Program. Established with Geology Foundation support and located in the L. Decker Dawson Center Exploration Geophysics Training Center in the Jackson Geological Sciences Building, the lab consists of six state-of-the-art interpretation workstations, complete with a full suite of industry-donated interpretive and processing software, large-format plotting capability, and access to industry-donated 3D seismic data. A highlight of the lab is a high-speed (1 gigabyte per second) storage area network attached to a disk server with a full terabyte of storage. This setup allows students nearly instantaneous access to numerous 3D seismic data sets from any one of the interpretive workstations.

The lab not only supports students studying exploration geophysics but also is open to all soft-rock geology students. Essentially all petroleum geologists will at some point in their careers find themselves in front of an interactive workstation examining 3D seismic data. This lab is designed to support those students. In fact, most of the students routinely working in the lab are petroleum geology students utilizing 3D seismic data in their thesis research. We anticipate that this trend will continue and ultimately include petroleum engineering students as well. Such integration of disciplines working with 3D seismic data is consistent with the industry trend of employing multidisciplinary work teams in nearly all aspects of exploration and development.

Overall, the vision of the Geology Foundation in establishing the Exploration Geophysics Initiative is being fulfilled. Facilities are in place, students are learning, research is evolving, and the petroleum industry is constructively and interactively involved in the entire process.

Petrology/ Geochemistry

By John Lassiter

In the Earth sciences, sometimes it pays big to think small. As new faculty, Jim Gardner and I are ready to apply this philosophy by using melt inclusions to study problems ranging from how and why volcanoes erupt to how volatiles are recycled into the deep mantle at subduction zones. Melt inclusions are small blebs of melt trapped by crystals growing inside magma chambers. The crystal walls protect these inclusions from changes in the outside environment, so they provide a snapshot of the composition of the melt from which the host crystal grew at the time of entrapment. These inclusions often contain high concentrations of volatile species such

as water or CO₂ that normally escape during eruption. The volatile contents of melt inclusions can provide a great deal of information about the degassing history of a magma, the depth of magma storage, and the nature of the mantle source.

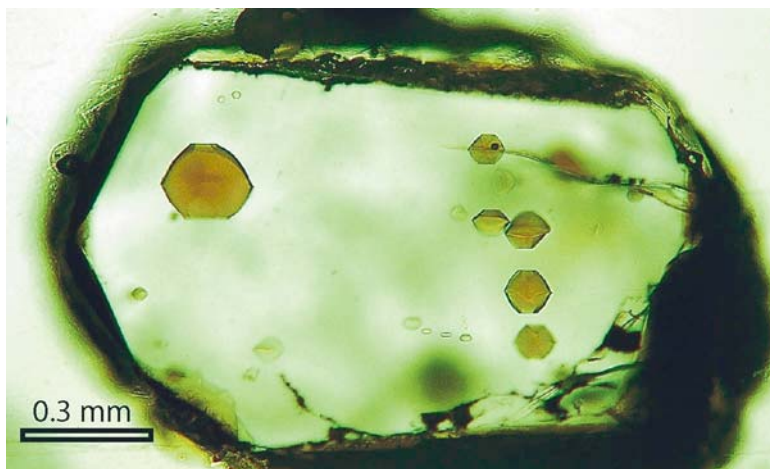
The challenge in studying melt inclusions lies in their size—typically less than the thickness of a human hair (~50 μm). Recent additions to the analytical capabilities of the Department, however, provide the tools needed to extract the wealth of information contained in these igneous “time capsules.” The newly installed JEOL 8200 electron microprobe can measure major element compositions, as well as chlorine, fluorine, and sulfur contents, in inclusions only a few micrometers in size. Many trace elements can be analyzed in melt inclusions by laser ablation coupled to one of the Department’s two new inductively coupled plasma mass spectrometers. The Department hopes to further expand its microanalytical capabilities by acquiring a Fourier transform infrared (FTIR) spectroscopy instrument in the near future. This instrument will allow direct measurement of water and CO₂ concentrations

in melt inclusions and other geologic materials. The study of melt inclusions is one of the most exciting new areas of research in igneous petrology and geochemistry. The amount of information these inclusions contain is phenomenal, and we have the capabilities and expertise in the Department to be at the leading edge of research in this field.

Climate Science Program

By Zong-Liang Yang

The past 3 years have been very successful for the Department’s new Climate Science Program (CSP) (www.geo.utexas.edu/climate). The Program’s mission is (1) to develop a unique and innovative climate science research and education program with a national and international reputation, (2) to carry out climate research that balances basic theoretical and modeling work with impact assessment and societal applications, and (3) to help reduce vulnerability to and increase the advantage of the impacts of climatic variability and climatic change on Texas, the United States, and other parts of the world. The mission receives generous Federal support from the Environmental Protection Agency (EPA), the National Aeronautics and Space Administration (NASA), and the National Oceanic and Atmospheric Administration (NOAA), as well as the Geology Foundation. Joining me in the CSP are three graduate research assistants, one postdoctoral fellow, and one research associate who are working on a wide variety of research questions. These problems include mathematical modeling of land-surface hydrology and its role in controlling weather and climate, characterizing vegetation and snow cover, including their influences on the surface energy and water balances using ground-based and remotely sensed data sets, quantifying the relative role of land versus oceans in determining



Several unusually large melt inclusions (dark-brown) contained in an olivine crystal. The amount of water and other volatiles in such inclusions provides many clues to how magmas form and evolve. Photo provided by John Lassiter.

View from the southeast: 64-Ma Red Hills porphyry copper system in the foreground with 32-Ma ash-flow-tuff sequences of the Chinati Mountains caldera forming the skyline. Photo provided by Rich Kyle.



rainfall in the southwest and south-central United States, developing tools for assessing the potential impact of heavy precipitation associated with severe weather on urban watersheds and improving flash flood prediction, and investigating the impact of vegetation-derived chemicals on Texas air quality. The CSP enjoys productive collaborative relations with many faculty and scientists at The University of Texas at Austin, as well as major national and international climate modeling groups.

Ore Geology

By Rich Kyle

My graduate students—Amy Gilmer, Jenny Head, and Fabienne Grellet-Tinner—and I have been conducting research for the past several years in the Shafter area of Presidio County, Texas, working with the Rio Grande Mining Company that is exploring the district. Silver production at Shafter from the 1880's until the early 1940's still represents the large metal-mining operation in Texas. These silver concentrations represent deeply oxidized zinc-lead-silver deposits in karsted Permian carbonates, where significant metal resources remain.

The Red Hills pluton west of Shafter has long been suggested as the source

of the Shafter mineralizing solutions, but magmatism and mineralization were thought to be related to the nearby 32-million-year-old Chinati Mountains caldera. Research on the Red Hills intrusive system in the Department, including zircon uranium-lead dating in Jim Connelly's lab, has established that Red Hills magmatism is of Laramide age (~64 Ma). These results not only indicate that the Red Hills intrusion is the oldest Tertiary igneous body in Trans-Pecos Texas, but also extend the Laramide magmatic province significantly eastward, suggesting that Laramide subduction-related magmatism and deformation are coextensive over a broad area of southwestern North America (A. K. Gilmer and others, 2003). Red Hills also is the easternmost "porphyry copper" deposit, the type of deposit that has accounted for most of the copper produced in western New Mexico, Arizona, and Sonora. These results further suggest that there is a significantly larger region for the exploration for these important ore deposits than the current cluster of producing deposits.

Gilmer, A. K., Kyle, J. R., Connelly, J. N., Mathur, R. D., and Henry, C. D., 2003, Extension of Laramide magmatism in southwestern North America into Trans-Pecos Texas: *Geology Boulder*, v. 31, no. 5, p. 447–450.

A Unique Historical Record of Massive Soil Erosion from the Edwards Plateau

By Jay Banner

During the Pliocene and Quaternary Periods, global climate change was a driver of sustained soil erosion. In contrast, recent soil erosion has been driven in large part by anthropogenic processes such as land use practices. Predicted global climate changes in the 21st century, and associated changes in precipitation intensity, are expected to increase soil erosion. To predict how changes in both climate and land use will affect soil erosion, we need to understand soil-erosion rates and mechanisms through time and space.

Doctoral candidate Jenny Cooke, Professor Libby Stern, Research Associate Larry Mack, and I have developed unique geochemical tools to unravel a high-resolution history of soil erosion on the Edwards Plateau. Changes through time in the isotope composition of strontium (expressed as the $^{87}\text{Sr}/^{86}\text{Sr}$ ratio) in deposits in Hall's Cave, Kerr County, Texas, provide a record of late Quaternary landscape denudation of Central Texas. The basis for this historical record is the cor-

relation between modern Central Texas soil $^{87}\text{Sr}/^{86}\text{Sr}$ ratios and soil thickness. Plants and soil-dwelling animals, such as pocket gophers and voles, in turn express the $^{87}\text{Sr}/^{86}\text{Sr}$ ratio of exchangeable strontium in the soil. Therefore, changes in strontium isotope ratios through a well-dated stratigraphic sequence of fossil plants and animals in Hall's Cave serve as a proxy for changes in soil thickness over the past 20,000 years.

The Hall's Cave record shows that continuous erosion removed at least 180 cm of soil at a constant minimum rate of 11 cm per thousand years and that this continuous phase of erosion ended 5,000 years before present. This erosion history is consistent with late Quaternary environmental change in Central Texas that has been indepen-

dently modeled by using local and regional climate records. The rate of this climate-driven soil-erosion event, however, was an order of magnitude slower than recent soil erosion caused by human land use. These results link

erosion to century- to millennial-scale climate change and are cautionary evidence that even greater landscape degradation may result from coincident climatic variability and anthropogenic influences.



Above: Entrance to Hall's Cave, Kerr County, Texas. Note the thin, stony soils that are typical of the Edwards Plateau today. Fossil mammals, such as pocket gophers and voles, and fossil plants, such as hackberry seed coatings, are preserved in a sequence of sediments that partly filled Hall's Cave as a result of the landscape denudation. The geochemistry of these fossils is used to infer that soils were nearly 2 m thick in this region during the early Holocene and late Pleistocene. This indicates that the plateau underwent massive soil loss during the last 20,000 years. Photo provided by Jay Banner.

Summer Field Camp 2003— GEO 660



*Summer 2003
field class at
Sultan Creek,
near Silverton,
Colorado.
Photo by
David Keeler.*

By Mark Helper

Twenty-two students and a staff of five left Austin for El Paso on Memorial Day 2003 and returned a day later, four smaller in number and forever changed by a tragic accident on Interstate 10 west of Fort Stockton. As I write this a year later, those injured have now nearly completely recovered. For all of us, the profound sadness at the loss of a beloved teacher, mentor, and colleague, Robert K. “Bob” Goldhammer,

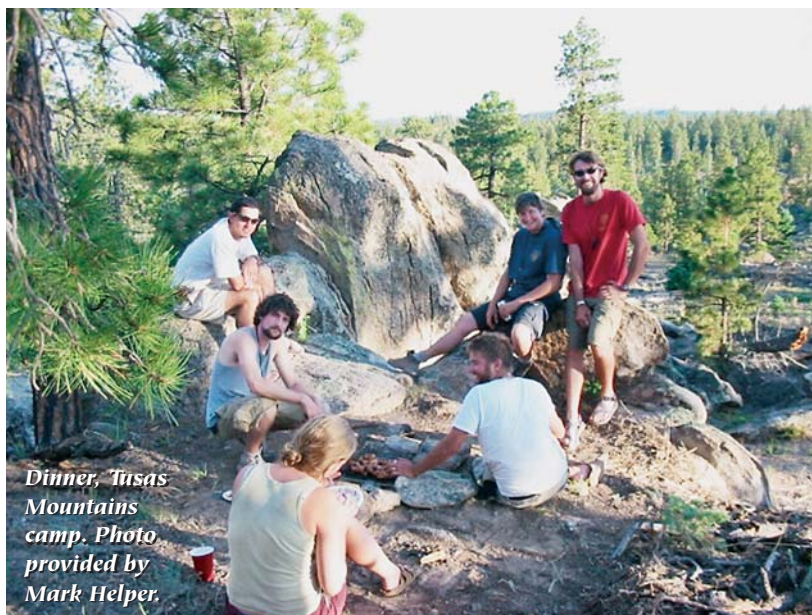
and of an adventurous student pursuing her passion, Raquel V. De Savariego, is not so easily diminished.

Two weeks after returning to Austin, 17 of these students returned to the field. This 4-week class, led at different times by me, Randy Marrett, Lesli Wood, and Jim Connelly and assistant instructor Brook Riley, assembled in Albuquerque and traveled by caravan to Moab, Utah, for the first

project. Stops along the way provided opportunities to examine oil seeps and the Upper Cretaceous stratigraphy of the southern San Juan Basin, cliff dwellings at Mesa Verde National Park, Newspaper Rock near Monticello, and structures associated with evaporate-cored folds on the Colorado Plateau. In Moab, under the direction of Wood, students studied and reported on depositional and sequence stratigraphic aspects of the Sego Sandstone in the Book Cliffs. Visits to Arches National Park and a variety of local sites completed the stay there.

The class then traveled to Durango, Colorado, by way of Grand Junction, Montrose, and the San Juan Mountains. Stops along the way in the San Juan volcanic field provided a brief introduction to the geology of calderas. Working out of Ft. Lewis College in Durango and later from a camp at Molas Lake, students led by Riley, Marrett, and me spent about 2 weeks mapping, describing, and interpreting the Paleozoic and Mesozoic geology of the Durango-Silverton area.

In late June the class moved to Los Alamos, New Mexico, for field trips through the Valles Caldera and a brief project that examined the stratigraphy



*Dinner, Tinas
Mountains
camp. Photo
provided by
Mark Helper.*

Balanced Rock at Arches National Park, Utah. Photo by Alka Tripathy.



Students examine the Gallup Sandstone at Ram Mesa, near Grants, New Mexico. Photo provided by Mark Helper.



Molas Lake, Colorado. Photo by Alka Tripathy.

of ash-flow tuffs at Bandelier National Monument. The group then established a primitive camp in the central Tusas Mountains of northwestern New Mexico, where Connelly and I shifted the focus to mapping and describing Mesoproterozoic metamorphic and plutonic rocks.

Project work concluded in Taos, New Mexico, with 2 days of field trips and projects guided by me and Marrett looking at the tectonic and magmatic

history of the northern Rio Grande rift. Students from the 1980's will recall many of these stops and projects, as we examined rift-fill stratigraphy from the high bridge and Arroyo Hondo, visited several localities along the Embudo Fault, and made brief stops in the Picuris Mountains at Piedra Lumbre and the Harding Mine.

This was not quite the end of the 2003 class. Some of these students returned wanting to visit the Guadalupe

Mountains, a traditional starting point for previous summer classes. In February this year, Jay Banner and I led a 4-day trip for these students, hiking the reef trail and making most of the stops associated with the back reef-to-basin transect that are so familiar to students of years past. Bob and Raquel were remembered atop the Permian reef trail.

Master of Science

August 2003 (6)

José Francisco Delgado

B.S., Biology, 1997
Universidad Central de Venezuela

Stratigraphic evolution and facies analysis in a Paleocene reef mound, La Popa Basin, Northeast Mexico

Supervisors: William L. Fisher,
Robert K. Goldhammer

Committee Members:
Robert L. Folk, Earle F. McBride

Amy Elizabeth Hobbs

B.S., 1997
Lafayette College

Estimating the sediment budget for the Barton Springs segment of the Edwards aquifer

Supervisor: John M. Sharp, Jr.
Committee Members: Philip C. Bennett, Zong-Liang Yang

Julymar Milagros Morantes

B.S., Chemistry, 1998
Universidad Central de Venezuela

Quartz cementation modeling and reservoir quality of the Upper Cretaceous sandstones in Carito field, North Monagas, Venezuela

Supervisors: Earle F. McBride,
Kitty L. Milliken

Committee Member: William L. Fisher

Holly Anne Nance

B.S., Biology, 2001
The University of Texas at Austin

The cranial osteology of Angolosaurus skoogi (Squamata: Gerrhosauridae) with comments on the morphology and phylogeny of the Cordyliformes

Supervisor: Christopher J. Bell
Committee Members: Timothy B. Rowe, James T. Sprinkle

Laura I. Net

B.S., 1996
Universidad de Buenos Aires

Diagenesis and reservoir quality of the eolian Nugget/Navajo sandstone (Early Jurassic), Utah and Wyoming

Supervisor: Earle F. McBride
Committee Members: Gary A. Kocurek, Kitty L. Milliken

Graduate Degrees in Geological Sciences

Conferred by The University of Texas at Austin, 2003–2004

Songul Yildiz

B.S., 1997
Istanbul University

Sequence stratigraphy and depositional systems of late Cenozoic sediments, Matagorda Bay, Gulf of Mexico

Supervisors: William L. Fisher,
Robert G. Loucks

Committee Members: William E. Galloway, Hongliu Zeng

Doctor of Philosophy

August 2003 (3)

Yong-Joon Park

B.S., 1990
Yonsei University

Seismic lithology and depositional facies architecture in Texas Gulf Coast Basin: A link between rock and seismic

Supervisor: William L. Fisher
Committee Members: William E. Galloway, Bob A. Hardage, Robert H. Tatham, Hongliu Zeng

Christie Lynn Schneider

B.A., 1999
University of Minnesota

Community paleoecology of the Pennsylvanian Winchell Formation, North Central Texas

Supervisor: James T. Sprinkle
Committee Members: Christopher J. Bell, Robert K. Goldhammer, Christopher Maples, Ann M. Molineaux

Changshu Wang

B.E., 1982
Southwestern Petroleum Institute
M.S., 1987

Wuhan Geological College
Velocity estimation from seismic data by nonlinear inversion and characterization of gas hydrate deposits offshore Oregon

Supervisors: Robert H. Tatham,
Mrinal K. Sen

Committee Members:
Nathan L. Bangs, Robert J. Ferguson, Paul L. Stoffa

Master of Science

December 2003 (13)

Amy Michelle Balanoff

B.S., 2000
The University of Texas at Austin

Osteological description of an embryonic Elephant Bird (Ratitae: Aepyornis) using high-resolution X-ray computed tomography, with a discussion of growth in Aepyornis

Supervisor: Timothy B. Rowe
Committee Members: Christopher J. Bell, Matthew W. Colbert

Matthew Allan Campbell

B.A., 2000

Pomona College

Development of the Los Chivos Platform, a Paleocene carbonate buildup in a siliciclastic dominated salt basin, La Popa Basin, northeast Mexico

Supervisors: William L. Fisher, Robert K. Goldhammer

Committee Member:

Randall A. Marrett

Mochammad Fachmi

B.S., 2000

Bandung Institute of Technology

Quantitative seismic geomorphology of Gabus and Belanak fields, West Natuna Basin, Indonesia

Supervisors: William L. Fisher, Lesli J. Wood

Committee Member: William E. Galloway

Roy Westin Fuller

B.S., 2000

Brigham Young University

Geochronology of Heimefrontfjella, East Antarctica, with implications for Grenvillian and Pan-African orogenesis

Supervisor: James N. Connelly

Committee Members: William D. Carlson, Mark A. Helper

Krishnavikas Gudipati

B. Tech., 2001

Indian Institute of Technology

Long term subsidence monitoring using synthetic aperture radar interferometry

Supervisors: Sean M. Buckley, Clark R. Wilson

Committee Members: John M. Sharp, Jr., Zong-Liang Yang

Shanty Ilona

B.E., 2000

University of Trisakti

Structure and stratigraphy of the Kra field, West Natuna Basin, Indonesia

Supervisor: William L. Fisher

Committee Members: William E. Galloway, Robert H. Tatham

Martha Alexandra**Jaimes Carvajal**

B.S., 1998

Universidad Simón Bolívar

Paleogene to recent tectonic and paleogeographic evolution of the Cariaco Basin, Venezuela

Supervisors: William L. Fisher, William P. Mann

Committee Member:

William E. Galloway

Adam Wesley Krawiec

B.S., 1999

University of Rochester

Linking the Nagssugtoqidian and Rinkian orogens of West Greenland through the Disko Bugt region by U-Pb geochronology

Supervisor: James N. Connelly

Committee Members: Mark P. Cloos, Sharon Mosher

Edward David Lane

B.A., 1998

Amherst College

An evaluation of the pressure dependence of rare-earth-element concentrations in garnets from the Llano Uplift

Supervisor: William D. Carlson

Committee Members: James N. Connelly, Douglas Smith

Matthew Graham Morris

B.S., 2001

University of Missouri-Rolla

A generalized reflectivity approximation for P-P and P-SV AVO

Supervisor: Robert H. Tatham

Committee Members: Robert J. Ferguson, Mrinal K. Sen

Nina Elise Triche

B.A., B.S., 2001

Tulane University

Cranial osteology of Caiman Crocodilus and implications for its systematic placement

Supervisor: Timothy B. Rowe

Committee Members: Christopher J. Bell, Chris Brochu

Eric Tuitjer

B.S., 2000

Baylor University

Depositional history and paleogeographic evolution of the Pliocene Globoquadrina altispira sequence, northern Gulf of Mexico

Supervisor: William E. Galloway

Committee Members: William L. Fisher, Michael R. Hudec

Judson Bryan Walker

B.S., 2001

Texas Christian University

3-D seismic geomorphology: Integrating well log data and stratal slice data in West Natuna Basin, Indonesia

Supervisors: William E. Galloway, Lesli J. Wood

Committee Member:

William L. Fisher

Doctor of Philosophy

December 2003 (8)

Imtiaz Ahmed

B.S., 1999

IIT

Imaging the lower slope, offshore Nicaragua and Costa Rica using a new residual migration velocity analysis technique in the space-offset domain

Supervisors: Kirk D. McIntosh, Paul L. Stoffa

Committee Members: Mrinal K. Sen, Robert H. Tatham, Clark R. Wilson

Jorge Barrios Rivera

B.E., 1983

Instituto Tecnológico de Ciudad Madero

M.E., 1998

Universidad Nacional Autónoma de México

Stratigraphic analysis of reflectivity data application to gas reservoirs in the Burgos Basin, Mexico

Supervisor: William L. Fisher

Committee Members: Albert W. Bally, Bob A. Hardage, Robert H. Tatham, Carlos Torres-Verdin

Juan Clemente Bermudez Santana

B.S., 1987; M.S., 1994
Instituto Politécnico Nacional
de México

Sequence stratigraphy and depositional history of the upper Canon Del Tule, Las Imagenes, and Lower Cerro Grande formations, Central Parras Basin, northeastern Mexico

Supervisor: Richard T. Buffler
Committee Members: Earle F. McBride, William L. Fisher, Timothy F. Lawton, Francisco J. Vega

Ricardo Ignacio Combellas Bigott

B.E., 1997
Universidad Simón Bolívar

Depositional and structural evolution of the middle Miocene depositional episode, East-Central Gulf of Mexico

Supervisor: William E. Galloway
Committee Members: Jack H. Christiansen, William L. Fisher, Bruno C. Vendeville, Lesli J. Wood

Alejandro Escalona

B.S., 1995
Universidad Central de Venezuela

Regional tectonics, sequence stratigraphy and reservoir properties of Eocene clastic sedimentation, Maracaibo Basin, Venezuela

Supervisors: William L. Fisher, William P. Mann
Committee Members: William E. Galloway, Robert H. Tatham, Carlos Torres-Verdin

Pedro Tomás Gómez-Cabrera

B.S., 1984
Instituto Tecnológico
de Ciudad Madero
M.S., 1993

Universidad Nacional
Autónoma de México

Stratigraphic and structural analysis of the Neogene sediments of the offshore portion of the Salina del Istmo Basin, Southeastern Mexico

Supervisors: William L. Fisher, Martin P. A. Jackson
Committee Members: Edgar H. Guevara, Earle F. McBride, Robert H. Tatham, Carlos Torres-Verdin

Robert Douglas Rogers

B.S., 1986
Appalachian State University
M.S., 1989

Colorado State University
Jurassic–Recent tectonic and stratigraphic history of the Chortis Block of Honduras and Nicaragua (Northern Central America)

Supervisor: William P. Mann
Committee Members: William E. Galloway, Kirk D. McIntosh, William R. Muehlberger, Lesli J. Wood

Karah Lynn Wertz

B.S., 1997
University of Wyoming

From seafloor spreading to uplift: The structural and geochemical evolution of Macquarie Island on the Australian-Pacific plate boundary

Supervisor: Sharon Mosher
Committee Members: James N. Connelly, William R. Muehlberger, Jonathan Snow

Master of Science
May 2004 (14)

Joey Jacquelin Barker

B.S., 1996
University of Michigan

The effects of nutrient-bearing minerals on hydrocarbon biodegradation

Supervisor: Philip C. Bennett
Committee Members: John M. Sharp, Jr., Libby A. Stern

Ryan Cotter Ewing

B.A., 1998
Colorado College

Pattern variability in natural dune fields

Supervisor: Gary A. Kocurek
Committee Members: Melba M. Crawford, Clark R. Wilson

Beatriz García-Fresca

B.S., 1997
Universidad del País Vasco
Urban effects on groundwater recharge in Austin, Texas

Supervisor: John M. Sharp, Jr.
Committee Members: Jay L. Banner, Robert E. Mace

Meredith Diane Guhl

B.S., 2000
University of Wyoming

Origin and evolution of the Todilto Formation, Northern New Mexico: Stratigraphic and geochemical evidence

Supervisors: Jay L. Banner, Gary A. Kocurek
Committee Member: Earle F. McBride

Sally Lynn Holl

B.A., 1998
Oberlin College

The sensitivity of land surface model simulations to bias reduction of ERA-15 downward radiation forcing

Supervisors: James S. Famiglietti, Zong-Liang Yang
Committee Members: David Maidment, Clark R. Wilson

Katherine Suzanne Kier

B.S., 2001
Baylor University

Hydrogeologic significance of depositional systems on groundwater quality and water resources in the Cisco Group, Upper Pennsylvanian and Lower Permian facies, Rolling Plains, Texas

Supervisor: Alan R. Dutton
Committee Members: Philip C. Bennett, John E. McCray

Erick Leuro

B.E., 1997
Universidad Distrital Francisco José de Caldas

Radar interferometry measurement of land subsidence in El Paso, Texas

Supervisors: Sean M. Buckley, Clark R. Wilson
Committee Member: Paul L. Stoffa

Alison Suzanne Mote

B.S., 2000
University of Georgia

A kinematic investigation in the Cripple Creek District, Central Colorado: Implications regarding the structural controls influencing the location and distribution of gold ore zones

Supervisors: J. Richard Kyle, Timothy F. Wawrzyniec
Committee Member: Randall A. Marrett

John Terrill Paterson

B.A., 2001
University of Montana
Magmatic and pervasive hydrothermal mineralogy of the Grasberg Cu-Au porphyry copper deposit (West New Guinea)
Supervisor: Mark P. Cloos
Committee Members: William D. Carlson, James N. Connelly

Elizabeth Ann Roller

B.A., 2001
Colgate University
Petrogenesis of the Llano granites, Central Texas: Formation mechanisms and tectonic implications of radiogenic isotopes
Supervisor: James N. Connelly
Committee Members: Daniel S. Barker, Sharon Mosher

Jason Andrew Stine

B.A., 2000
Franklin & Marshall College
Sensitivity of AVO reflectivity to fluid properties in porous media
Supervisor: Robert H. Tatham
Committee Members: Robert J. Ferguson, Mrinal K. Sen

Tony John Troutman

B.S., 1997
University of Southern California
Reservoir characterization, paleogeomorphology, and genesis of the Mississippian redwall limestone paleokarst, Hualapai Indian Reservation, Grand Canyon area, Arizona, USA
Supervisors: William L. Fisher, Charles Kerans
Committee Member: Earle F. McBride

Daniel Shane Valentine

B.S., 1997
Cornell College
Formation and organization of aeolian bedforms
Supervisor: Gary A. Kocurek
Committee Members: James C. Gibeau, Randall A. Marrett

Tania Clare Wallace

B.S., 2001
University of Miami
The geochemical behavior and transport characteristics of estrogens
Supervisor: Philip C. Bennett
Committee Members: John M. Sharp, Jr., Libby A. Stern

Doctor of Philosophy
May 2004 (9)**Suk-Joo Stephen Choh**

B.S., 1990
Korea University
Microfacies and depositional environments of selected Pennsylvanian calcareous algal deposits from southern USA, and application of information technology for sedimentary petrology teaching and research
Supervisor: William L. Fisher
Committee Members: Robert L. Folk, Brenda L. Kirkland, Earle F. McBride, Stephen C. Ruppel

Wan-Joo Choi

B.S., Engineering, 1989; M.S., Engineering, 1991
Seoul National University
Silicate surface chemistry and dissolution kinetics in dilute aqueous systems
Supervisor: Philip C. Bennett
Committee Members: William D. Carlson, Franz Hiebert, Kitty L. Milliken, Libby A. Stern

Annette Summers Engel

B.A., 1995
Wittenberg University
M.S., 1997
University of Cincinnati
Geomicrobiology of sulfuric acid speleogenesis: Microbial diversity, nutrient cycling, and controls and cave formation
Supervisor: Philip C. Bennett
Committee Members: Katrina Edwards, Barbara J. Mahler, John M. Sharp, Jr., Libby A. Stern

Jonathan William Franzosa

B.S., 1983
Louisiana State University
Evolution of the brain in Theropoda (Dinosauria)
Supervisor: Timothy B. Rowe
Committee Members: Christopher J. Bell, Matthew Colbert, James T. Sprinkle, Walter Wilczynski

Hongbo Lu

B.E., 1993; M.E., 1996
University of Petroleum, Beijing, China
Global and local controls on depositional cyclicity: Canterbury Basin, New Zealand
Supervisors: William L. Fisher, Craig S. Fulthorpe
Committee Members: William E. Galloway, William P. Mann, Ronald J. Steel, Hongliu Zeng

Astrid Makowitz

B.S., 1997; M.S., 1999
Michigan State University
The genetic association between brittle deformation and quartz cementation: Examples from burial compaction and cataclasis
Supervisors: Earle F. McBride, Kitty L. Milliken
Committee Members: Robert H. Lander, Randall A. Marrett, John M. Sharp, Jr.

Patrick John Mickler

B.A., 1992
State University of New York (SUNY)-Buffalo
M.S., 1998
University of Cincinnati
Controls on the stable isotopic composition of speleothems, Barbados, West Indies
Supervisors: Jay L. Banner, Libby A. Stern
Committee Members: Bridget R. Scanlon, Frederick W. Taylor, Zong-Liang Yang

Brook Colleen Daun Riley

B.S., 1996

University of Arizona

Laramide exhumation and heating in Southeastern Arizona: Low-temperature thermal history and implications for zircon fission-track systematics

Supervisor: Mark P. Cloos

Committee Members: George H.

Davis, John I. Garver, Ray Ingersoll, Randall A. Marrett, Earle F. McBride

Xinxia Wu

B.E., 1995; M.E., 1998

China University of Geology

Upper Miocene depositional history of the Central Gulf of Mexico Basin

Supervisor: William E. Galloway

Committee Members: William L. Fisher, Martin P. A. Jackson, Robert H. Tatham, Lesli J. Wood

Undergraduate Degrees in Geological Sciences

Conferred by The University of Texas at Austin, 2003–2004

Bachelor of Science

August 2003 (9)

Russell Kyle Barrett

Jennifer Leigh Bird

Ronald Lee Dildine

Christopher L. Gordon –

Highest Honors

Lisa Renee Hatzky

Daniel Eugene Jones

Raymond Francis Schiltz

Nicholas Kurt Sommer

J. Fernandez Velasquez

Bachelor of Science

December 2003 (9)

Joseph Addison Beery

Joseph T. Bentley

Kevin Eugene Burns

Jason Lars Clayton

Hunter-West A. Danque – *Honors*

Deanna R. Eames

Michael N. Michaelides

Julie Ann Pecarina

Alka Kumari Tripathy – *Honors*

Bachelor of Arts

May 2004 (2)

Drennan Travers Fuller

Keri Renee Kelley

Bachelor of Science

May 2004 (4)

Benjamin David Dameron – *Honors*

Lindsey Diane Hammer

David Alton Keeler

Amy Denise Wagner

Bachelor of Arts

December 2003 (3)

Kimberly Demel Huebel

Chadwick Nelms Lyons

Jennifer Michelle Rimes



Undergraduate students receive scholarships from the Austin Gem and Mineral Society.

Left to right: Leon Long, Undergraduate Advisor; Mary Koch, Senior Administrative Associate of the Geology Foundation; Ana York; Michael Osborne; Drennan Fuller; Lindsey Hammer; and Betsy Gager of the Austin Gem and Mineral Society. Photo by Kerry Gager.

New Faculty

James E. “Jim” Gardner



J. Javorski

Jim Gardner joined the Department in September 2003, in the area of volcanology and igneous

petrology. He teaches Earth materials at the undergraduate level, as well as advanced igneous petrology and physical volcanology. Prior to joining the faculty, Gardner was an Assistant Professor at the Geophysical Institute and Department of Geology and Geophysics at the University of Alaska, Fairbanks.

Gardner received his B.S. from Southern Methodist University in 1985, his M.A. from Washington University in St. Louis in 1987, and his Ph.D. in 1993 from the University of Rhode Island. His research focuses on the physical and chemical aspects of volcanic eruptions and magmatic processes.

John C. Lassiter



John C. Lassiter will join the Department in August 2004, in the areas of igneous petrology

and isotope geochemistry. His research is focused on understanding the thermal and chemical evolution of the

mantle, as well as the mechanisms of melt generation and extraction in different tectonic environments. Lassiter earned his B.A. in geology from Brown University in 1989 and his Ph.D. from the University of California, Berkeley, in 1995. He has been a Staff Scientist at the Max-Planck-Institut für Chemie, Geochemistry Division, in Mainz, Germany, since 1999. Lassiter is currently an associate editor for *Reviews of Geophysics*. He is a member of the American Geophysical Union, the Geochemical Society, and the European Union of Geosciences.

John E. McCray



J. Javorski

John E. McCray joined the Department in September 2003 in the area of hydrogeology.

He earned a B.S. from West Virginia University in 1986, an M.S. from Clemson University in 1994, and a Ph.D. from the University of Arizona in 1998. McCray teaches geology of engineering and physical hydrology at the undergraduate level. At the graduate level he teaches watershed hydrology, groundwater modeling, and advanced courses in vadose zone hydrology and contaminant-transport modeling at various hydrologic scales. McCray currently serves as an associate editor for *Water Resources Research*, *Journal of Contaminant Hydrology*, and

Vadose Zone Journal. He was selected as the Associate Editor of the Year for the *Vadose Zone Journal* in 2002. He also serves on a research-review panel for the U.S. Department of Energy.

Ronald J. “Ron” Steel



J. Javorski

Ron Steel joined the faculty in September 2003, teaching petroleum geology

and clastic depositional environments. He received his B.S. in 1967 and Ph.D. in 1971 from the University of Glasgow, Scotland. He went on to teach at the University of Bergen, Norway, from 1973 to 1982 and again from 1990 to 1995. He also worked for Norsk Hydro in Bergen and Oslo, then went on to teach at the University of Wyoming until his move to Austin.

In addition to his work at the Department, Steel also teaches industry short courses in sequence stratigraphy and in deepwater systems. His research aims at evaluating the signatures of tectonics, sea-level change, and climate in fluvial, shallow-marine, and deepwater strata and has an important outcrop component. Current activity focuses on fluvial successions, shelf-margin deltas, tidal signatures and sand bodies, the process of transgression, improving the lowstand model, and fluvio-lacustrine systems.

Bill Galloway Retires from Teaching

By Kathy McWilliams

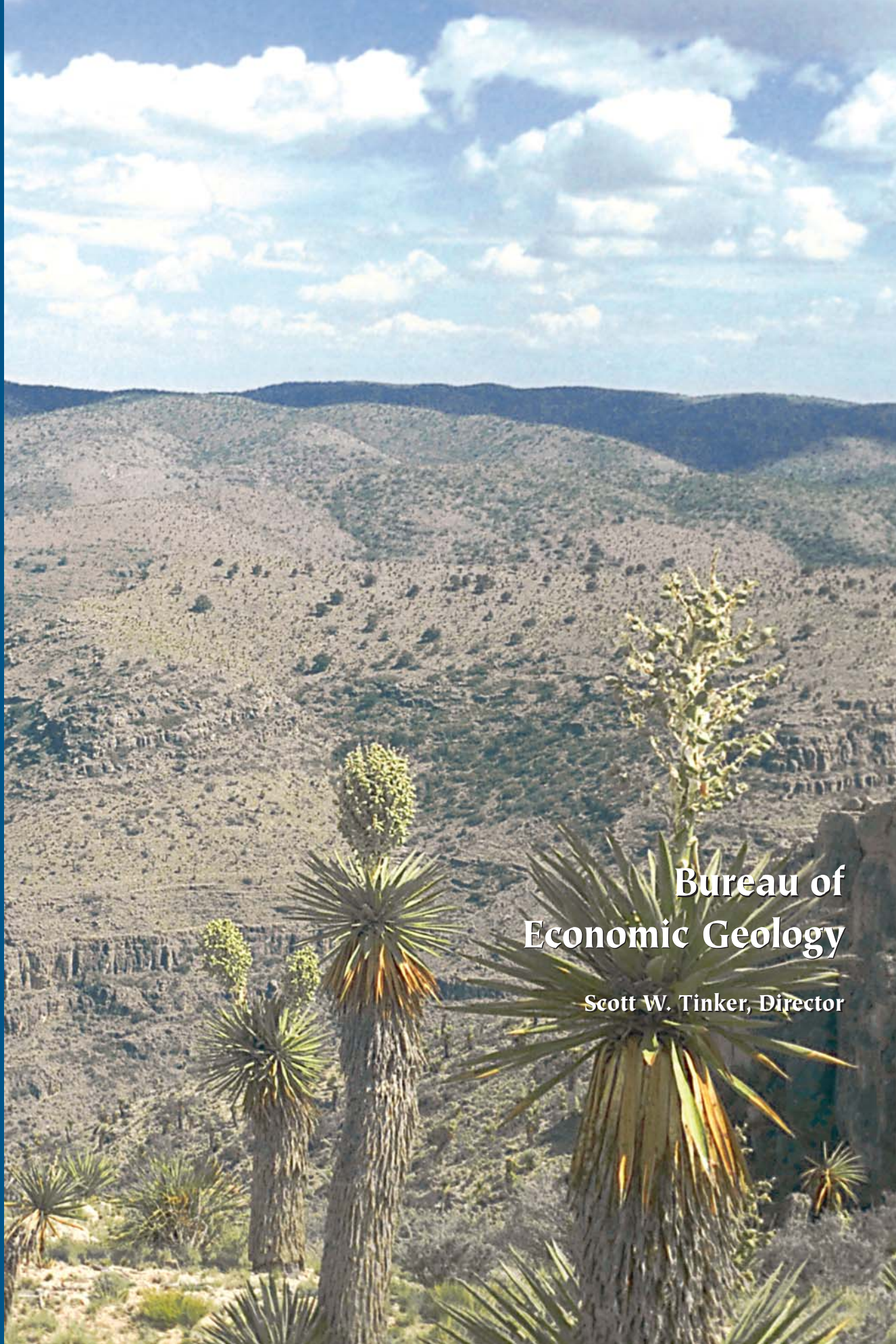


Bill and Rosemary Galloway.
Photo by Patricia Ganey-Curry.

The Department of Geological Sciences and the Geology Foundation honored William E. "Bill" Galloway and his wife, Rosemary, at a retirement dinner at the University's Campus Club October 24, 2003. Many colleagues and current and former students attended, sharing stories about the professor who has earned his place as one of the most distinguished sedimentary geologists of his generation.

Galloway was born in Waco, Texas, October 8, 1944. He attended Texas A&M University for his B.S. degree and received both his M.A. and

Ph.D. from The University of Texas at Austin. Before returning to the University to teach, Galloway spent several very productive years with Conoco. He also conducted research at the Bureau of Economic Geology, where he was a Research Scientist and senior author of the classic *Atlas of Major Texas Oil Reservoirs*. Galloway was the first recipient of the Bureau's Alumnus of the Year Award in 2003. He received the Outstanding Educator Award from the Gulf Coast Association of Geological Societies in 1993 and in 2004 received the Grover E. Murray Memorial Distinguished Educator Award from the American Association of Petroleum Geologists. His pioneering publications, grants, and awards have centered on research on various clastic depositional systems, emphasizing shelf and slope/basin deposits. He continues to be engaged in long-term synthesis studies of the Cenozoic deposits of the Gulf of Mexico and North Sea basins. He now pursues his research at the Institute for Geophysics, continuing the Gulf Basin Depositional Synthesis Project, which is entering its 10th year with full industry funding. Always a highly sought speaker, Galloway has taught many short courses to industry and professional societies and served as visiting professor at universities in Norway and Australia. His classes in the Department had record enrollments. We will miss his engaging and enthusiastic teaching style in the Department. In his leisure time, Galloway remains an avid fisherman and outdoorsman. He is also involved in a number of charitable projects, including Habitat for Humanity and Meals on Wheels.



Bureau of Economic Geology

Scott W. Tinker, Director

Deep-water carbonate deposits of the Bone Spring Formation cropping out in Victorio Canyon in the Sierra Diablo of West Texas. This early Permian outcrop is an ideal laboratory for studying slope and basin-floor carbonate reservoir analogs. Photo by Charles Kerans.

From the Director



It has been just under 5 years since I left an 18-year career in the private sector to come to The University of Texas at Austin to serve as Director of the Bureau. I anticipated with some excitement the necessary changes and considerable energy that the Bureau would require, but I did not anticipate, nor have any way to conceive of, the remarkable changes that have occurred in geosciences at UT during the past 3 years, and the potential that lies before us.

First, a bit of background on the Bureau. I believe that scientific creativity has two enemies at the extremes: complacency and volatility. The Bureau business model—which requires that we raise around 90 percent of our gross operational budget each year, with 100 percent of researcher funding coming from external sources—does not allow much room for complacency. The model mandates a focus on relevance, as most agencies and companies do not fund science that they consider irrelevant. And the model provides some measure of flexibility: our fate is in our own hands each year. The downside to the model is the volatile times when, regardless of effort or excellence, external funding sources are limited and the Bureau must constantly shift programs in an attempt to maintain stability.

In January of 2000 when I arrived, the Bureau had just come through a period of significant staff reductions; the gross annual operational budget at the time was around \$10 million. I laid out, with the full support of the Bureau staff, a 5-year plan to increase the annual budget to \$15 million and also to seek ways to provide some measure of stability

to the annual budget. We reached our \$15 million goal 1 year early and must now work hard to maintain and grow that annual level of external funding.

I am proud of this 5-year growth, as it requires a tremendous amount of work and commitment from the full scientific and support staff. It is not growth *per se* that is good, but rather the ability to broaden our reach—to contribute to geoscience research impact on society—that comes with the growth and the increased breadth of private, State, and Federal funding sources. Growth also provides vitality—fully one-third of our scientific staff are new in the past 5 years—and serves to mitigate complacency.

In terms of volatility reduction, we have accomplished several things. With the patience and leadership of Vice President for Research Juan Sanchez, the Bureau is now returned a portion of our annual overhead. This type of unrestricted funding, although representing only around \$450 thousand last year, has remarkable positive impact. In addition, we increased our annual line item to help run the State geological survey business, have added more than \$4 million to endowments to help run our core research centers, and are working toward a significant funding increase for our State of Texas Advanced Resource Recovery program. Small but significant steps.

A larger step is the formation of the Jackson School of Geosciences. We have before us a unique opportunity in geosciences: to combine focused, fundamental research based around the traditional and tested model of individual researcher and graduate students, with broad, integrated, collaborative research that is conducted to address and to impact

real-world problems. No other university brings this breadth of scale and impact to the geosciences. We are indeed unique in our potential, and the opportunity as described by President Faulkner for “invention and new thinking” is upon us.

The new School will involve many challenges. Change at all levels—to individuals, to member units, to the School, and to the University—is fundamental, but if approached correctly change will be healthy and even fun. Recognition and acceptance of historical differences—so that the sum becomes greater than the parts—will be critical as we federate the units. Broad thinking and creativity will govern in order to build something that has no analog. Tolerance and understanding of other viewpoints and perspectives—which are as likely as not to be correct—will be critical to build trust. Energy and passion must be pervasive, because something that is unique and special cannot be formed without the contribution and commitment of personal energy from every member. And finally there will be risk, because few things great were ever accomplished without risk.

So we embark on this opportunity, this experiment, and this challenge: to maintain and continue to grow a healthy and vibrant Bureau, while at the same time contributing to a healthy and vibrant School and University. I believe that it can be done, and in fact it must be done for all of those who have invested themselves into the enterprise, not least of all Jack Jackson. It promises to be quite a ride.

Scott W. Tinker

Bureau of Economic Geology

Who We Are and What We Do

What Is the Bureau of Economic Geology?

The Bureau of Economic Geology was established in 1909 as a successor to the Texas Geological Survey and the Texas Mineral Survey. Today the Bureau functions as an international research unit within the Jackson School. The Bureau also serves as the State Geological Survey of Texas. As the State Survey, the Bureau is charged with maintaining facilities and providing management for the office of Publication Sales, the Geophysical Log Facility, and three Core Research Centers.

Nearly 60 researchers and 20 to 30 student research assistants are complemented by 45 support staff professionals who handle administration, contracts, core and geophysi-

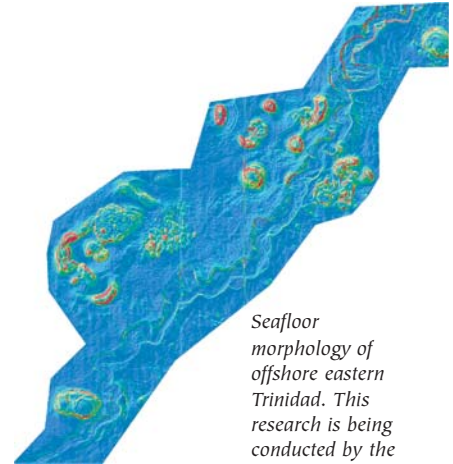
cal log data maintenance, and media information technology. This combined staff provides wide-ranging advisory, technical, informational, and research-based services to industries, nonprofit organizations, and Federal, State, and local agencies.

Public outreach is also an important and wide-ranging part of the Bureau's mission. This commitment begins with the Director, who visits classrooms, lectures to a broad variety of audiences, provides State and Federal testimony, and encourages all Bureau employees to volunteer time for educating students, teachers, and decision makers about the importance of geoscience in society.

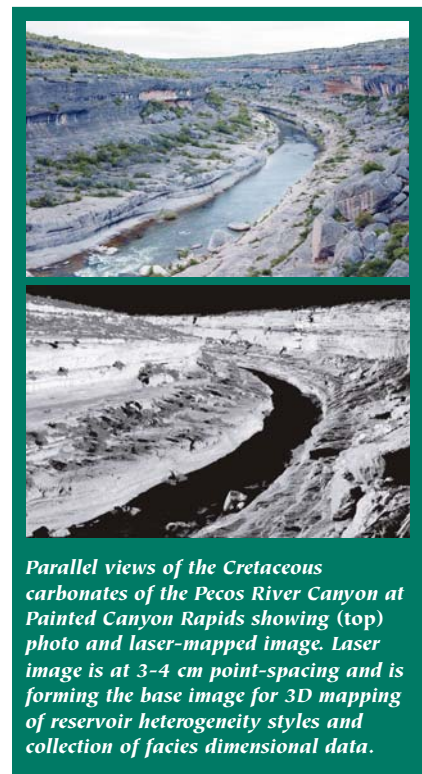
Energy Research

Energy research makes up about two-thirds of the current Bureau research effort. Bureau scientists conduct basic research, as well as numerous sponsored research projects funded by various State and Federal agencies and individual companies or groups of companies. General areas of research include basin analysis, carbonates, clastics, fractures, gas hydrates, geophysics, reservoir characterization, resource assessment, salt tectonics, and structural geology and tectonics.

Nine programs are supported by multiple industry sponsors, including two new programs launched in 2003: Fluid-Rock-Seismic Technology



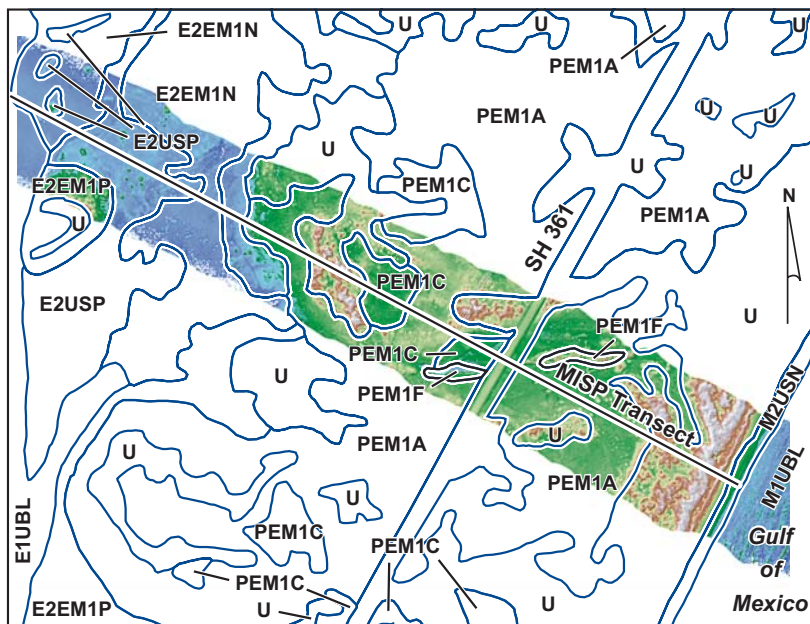
Seafloor morphology of offshore eastern Trinidad. This research is being conducted by the Deep Marine Depositional Margins program.



Parallel views of the Cretaceous carbonates of the Pecos River Canyon at Painted Canyon Rapids showing (top) photo and laser-mapped image. Laser image is at 3-4 cm point-spacing and is forming the base image for 3D mapping of reservoir heterogeneity styles and collection of facies dimensional data.

Bureau staff, January 2004. Photo by David M. Stephens.





Lidar-derived digital elevation model of a transect of Mustang Island State Park showing a variety of coastal habitats. Aerial photograph signatures, field observations, and elevations were combined to produce this image.

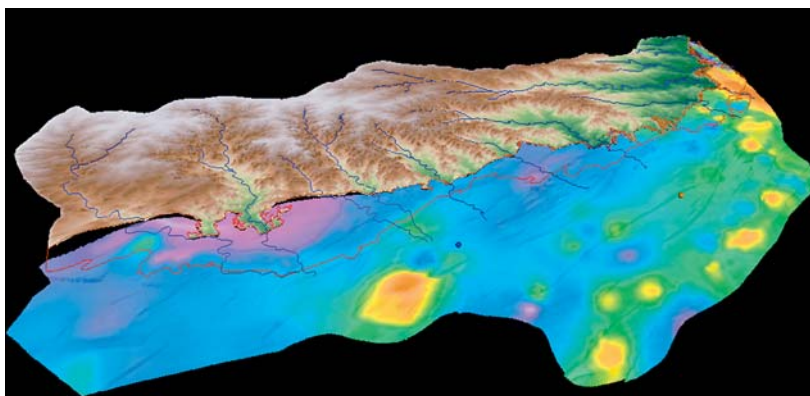


Image of the Edwards aquifer derived from the Bureau's 3-D Web-based aquifer model. The earth-tone colors represent the land surface just north of the aquifer; rivers (blue lines) flowing over this land contribute water to the aquifer. The brightly colored portion of the model represents the aquifer; colors here indicate changes in porosity throughout the aquifer.

(FRST), led by Jim Jennings; and Laser-assisted Analogs of Siliciclastic Rocks (LASR), led by David Jennette. The ongoing programs are Applied Geodynamics Laboratory (AGL), led by Martin P. A. Jackson; Deep-Marine Depositional Margins (DM2), led by Lesli J. Wood and Paul Mann of UTIG; Exploration Geophysics Laboratory

(EGL), led by Bob A. Hardage; Environmental Quality Research (EQR), led by Bridget Scanlon; Fracture Research and Application Consortium (FRAC), led by Stephen Laubach and colleagues at the Department of Geological Sciences and the Department of Petroleum and Geosystems Engineering; Gulf Coast Carbon Center (GCCC),

led by Susan Hovorka; and Reservoir Characterization Research Laboratory (RCRL), led by Charles Kerans and F. Jerry Lucia.

Earth and Environmental Systems

The diverse earth and environmental studies group conducts basic and applied research in CO₂ sequestration, coastal studies, groundwater contaminants, groundwater resources, geologic mapping, near-surface geophysics, remote sensing, and vadose zone hydrology. The Bureau is developing programs that relate energy and the environment, including GCCC, which is a major initiative in sequestration of greenhouse gases. The environmental projects address the needs of State and Federal agencies in Texas, as well as Latin America. Bureau collaborators include the Department of Geological Sciences, the Institute for Geophysics, the Center for Space Research, the Integrative Biology Section in the School of Biological Sciences, and the Institute for Computational Engineering and Sciences.

Highlights and New Initiatives

Houston Research Center

Just a year after BP donated the Houston Research Center (HRC) to the Bureau, it has increased its holdings and brought in new staff to maintain the nation's largest collection of geologic cores and samples. The climate-controlled warehouse, modern core layout rooms, well-equipped conference rooms, and 5,000-square-foot technical library donated this year by UNOCAL provide visitors a great opportunity to view materials and conduct research. Onsite geologists serve as curators of the collection and help the public with technical information and logistics at the center.

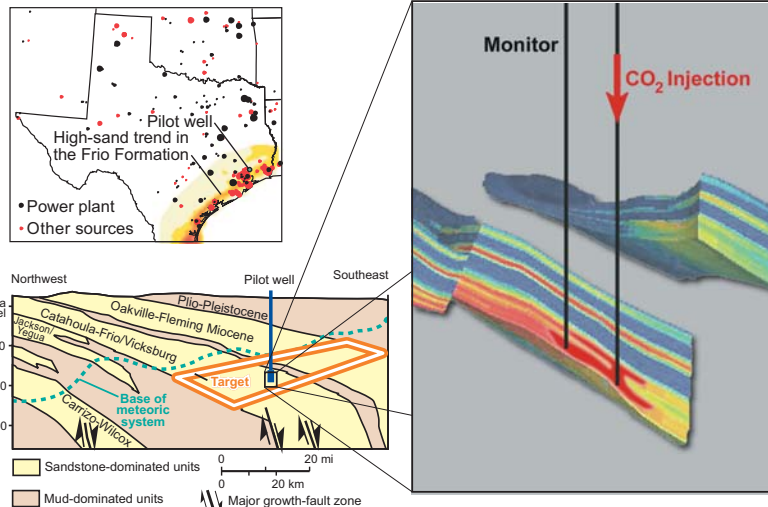
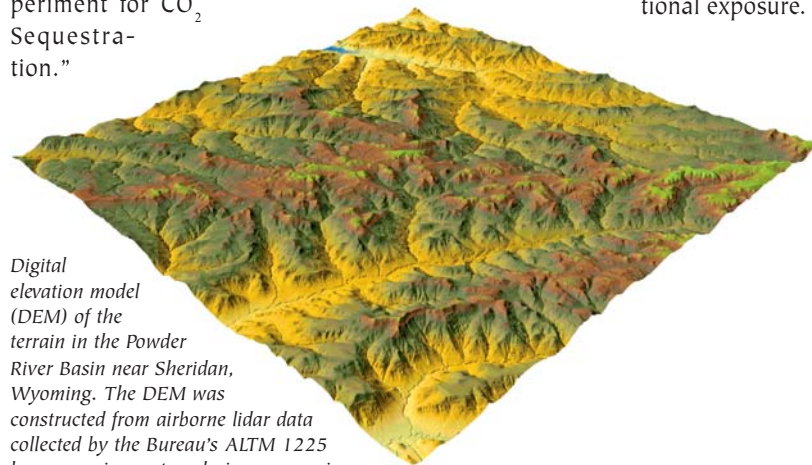
On its 12-acre campus in west Houston, the HRC houses more than 600,000 boxes of core and cuttings. Most of the cores are from onshore sites across the United States, but a recent donation of more than 50,000 boxes by Occidental Petroleum Corporation (Oxy) added cores from all over the world to the collection. Many of these cores are from world-class reservoirs that can now be studied at the facility.

The HRC is fast becoming a hub for Bureau activities in Houston. The Bureau, industry, academia, and professional societies use the facility for workshops, seminars, research, outreach activities, and joint research planning. A portion of the collection was showcased at the 2004 American Association of Petroleum Geologists Annual Meeting in Dallas, where the first cores in the Bureau's teaching collection were introduced to the public. Cores in the teaching collection will eventually be searchable by depositional setting, geologic age, and geologic province through an online database.

Frio Brine Field Experiment for CO₂ Sequestration

The GCCC, in a project funded by the U.S. Department of Energy and supported by several research partners, is conducting an experiment titled "Frio Brine Field Experiment for CO₂ Sequestration."

Digital elevation model (DEM) of the terrain in the Powder River Basin near Sheridan, Wyoming. The DEM was constructed from airborne lidar data collected by the Bureau's ALTM 1225 laser mapping system during surveys in November 2003 and March 2004.



The pilot project is sited on the sand-rich fairway of the Frio Formation in the upper Texas Gulf Coast. We will inject CO₂ into a thin, high-permeability sandstone of the upper Frio Formation.

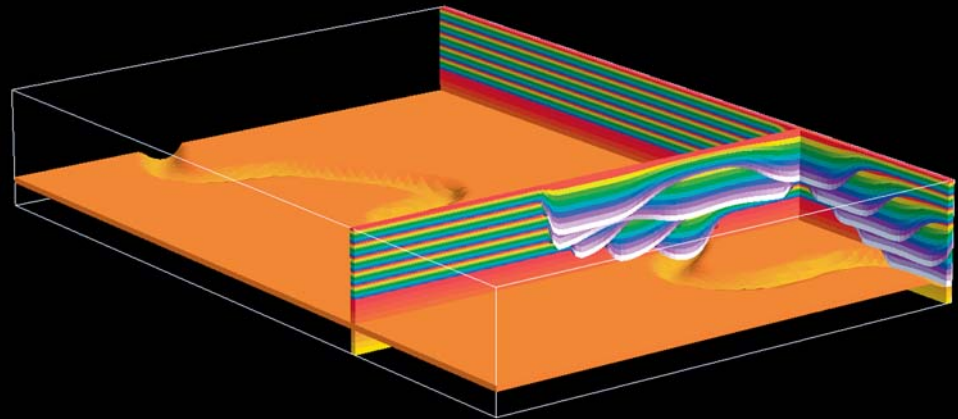
In May an injection well was drilled into the regionally extensive high-permeability sandstones of the Frio Formation in Liberty County, Texas. This pilot experiment will test the injection of CO₂ into the subsurface and monitor its movement in the subsurface by means of an updip injection well. The experiment emphasizes intensive preinjection modeling and risk assessment; extensive monitoring before, during, and after injection; and a proactive approach to identifying the environmental risks that may be encountered during a CO₂-injection experiment. The site is gaining national and international exposure.

Airborne Lidar Terrain Mapping in the Powder River Basin

Production of natural gas from coal beds (CBNG) has proved to be a significant addition to U.S. natural gas resources, and a large percentage of this production comes from the Powder River Basin in Wyoming and Montana. Since 2002, Bureau researchers have been working with one of the basin's technology leaders, Marathon Oil Company, to apply their skills in lidar high-resolution topographic mapping and hydrogeology to achieve the greatest production having the least surface and environmental impact on the basin. Using Bureau-owned and -operated airborne lidar equipment, researchers have conducted nearly 600 miles of airborne lidar and ground Global Positioning System (GPS) surveys of the basin. Data generated from the surveys were used to construct high-resolution, detailed 3-D maps called digital elevation models (DEM's) that are currently being used to evaluate and plan extensive CBNG operations.

Project hydrologists are using the DEM's to delineate surface drainage features, design reservoirs and con-

Cross sections through a 3-D gridded prototype model of a deepwater channelized sandstone.



tainment ponds, and model water retention and ground recharge to manage produced groundwater. They have become an excellent tool for project engineers as they plan drill locations and design roads, surface facilities, and pipelines with minimal environmental impact. The value and wide usability of lidar-generated DEM's have made them an indispensable tool for the development of CBNG reserves.

Fluid-Rock-Seismic Technologies (FRST)

The Fluid-Rock-Seismic Technologies (FRST) research program is a new Bureau initiative and collaboration between the Jackson School and partner companies designed to make material improvements in the ability to assess the seismic detection of fine-scale reservoir and seal elements in subsurface reservoir settings. FRST research will address limitations in geophysical research involving the analysis, quantification, and improvement of seismic resolution caused by the common lack of integrated approaches and multidisciplinary teamwork, and will incorporate a new suite of tools and approaches that are now available to outcrop geologists, reservoir modelers, and geophysicists for

rapidly and accurately capturing and analyzing true 3-D outcrop volumes.

Houston Museum of Natural Science

The Houston Museum of Natural Science conducts one of the largest ongoing public outreach programs in the State of Texas. By mandate, every 4th- and 10th-grade student in the Houston Independent School District—more than 600,000 students—visits the museum each year, and surrounding school districts, such as Austin and San Antonio, use the museum for class visits. The museum receives more than 2 million visitors each year.

A key exhibit at the Museum is the Weiss Energy Hall, which is one of the most complete and best-funded energy-related exhibits in the country. On November 1, 2004, the Weiss Energy Hall will unveil a completely renovated energy exhibit to the public, which will be a centerpiece animation of the geologic history of the Texas Gulf coastal plain produced by researchers and the Bureau's Media Information Technologies staff. This 7-minute film spans the onset of the Triassic rifting to the present day and will be constructed with detailed 3-D models and 2-D animations and

graphics. The animation will offer visitors an appreciation of the varied and complex geology that lies beneath the flat, featureless coastal plain in a way that will make this information clear and entertaining.

Texas Commission on Environmental Quality

The Texas Commission on Environmental Quality (TCEQ) is the environmental agency for the state. The Bureau recently negotiated a University-TCEQ agreement that facilitates research contracts with the agency so that our expertise in the geosciences can be applied to environmental issues of concern to Texas. These contracts offer opportunities for new applied research that will improve our scientific understanding, improve the quality of our environment, and be of service to Texas. Current projects focus on the occurrence and mitigation of contaminants in public drinking water supplies, protection of water resources, and studies related to karst aquifer systems.

Media and Information Technologies

In December the Bureau established the Media and Information Technolo-

gies (MIT) department to further its goals of creatively disseminating research results. This department brings together editing, digital imaging, graphics design and illustration, Web content and multimedia development, publication sales, and information technologies to better provide services to Bureau scientists, the Jackson School, and external partners. Using the latest technology, MIT is developing new products intended to inform and educate both technical and non-technical readers. John M. Els, Joel L. Lardon, and Scott D. Rodgers together manage MIT.

In addition to promoting research produced at the Bureau, MIT will seek opportunities to offer services to other departments at the University. The Bureau will continue to publish using traditional means while expanding the list of digital materials, including publishing through the Internet and on CD. In all phases of publishing, MIT is working with the Bureau's research staff to identify the best means for disseminating research results.

Research through Partnerships

The Bureau has established broad, long-term research alliances with several organizations, including PEMEX, ARAMCO, and ExxonMobil, through contracts known as "framework agreements." These agreements contain the general legal and business requirements—such as liability, confidentiality, publication of results, and jurisdiction—that are needed for the Bureau to conduct research for the sponsor. Reaching agreement on terms and conditions before projects are conceived makes it easier to initiate new research projects. Framework agreements usually cover several years and allow for specific work orders to be added to original documents, thereby decreasing contract approval time.

The Bureau as the State Geological Survey of Texas

As the State Geological Survey of Texas, the Bureau is responsible for managing the Office of Publication Sales, Core Research Centers, Geophysical Log Facility, and Data Center and providing the services of a Public Information Geologist.

Office of Publication Sales. The Bureau has produced numerous research publications and products since 1915 that are sold through the Office of Publication Sales. There are nearly 60 categories of research products, including atlases and maps, CD-ROM's, guidebooks, rock kits, cross sections, and educational materials, that sell at just over the cost of reproduction. The Bureau also handles the publications of the Gulf Coast Association of Geological Societies and many of its affiliates, as well as selected publications of the Gulf Coast Section SEPM. Bureau publications may be purchased online at our Web site, www.beg.utexas.edu.

Core Research Centers (CRC's). The CRC's are storage and public research facilities for the nearly 1.7 million boxes of donated core and rock materials maintained by the Bureau in three locations: the Austin Core Research Center, the Midland Core Research Center, and the Houston Research Center. The Austin CRC is the Bureau's main core repository for core and rock material donated to the University, and the Midland CRC will eventually hold all University-owned Permian Basin/West Texas core and cuttings. The Houston Research Center, the largest of the three facilities, strives to be the flagship public-sector curator of industry and non-marine academic geoscience material in the United States. Public facilities at the CRC's include core examination

rooms, processing rooms for slabbing core, and office space. Many of the Bureau's holdings of core, geologic materials, and geophysical well logs are included in an online, searchable, and integrated log and core database located on the Bureau Web site.

Geophysical Log Facility (GLF). The GLF is a repository for the geophysical data received from private donations, Bureau projects, and the Railroad Commission of Texas. All geophysical data are available for public viewing and copying and include wireline electric logs, well records, and scout tickets from hundreds of thousands of wells located in Texas. Approximately 96 percent of the GLF's 234,269 indexed logs have been entered into an online integrated log and core database, and efforts are under way to enter the remaining logs into the database. This searchable database is available online through our Web site.

Data Center. The Data Center is the Bureau's in-house facility for the collection of maps, periodicals, publications, reports, well logs, and open-file materials for staff members, students, and visitors interested in Texas geology. The Data Center also contains a computer for free online database searches. It is open to the public Monday through Friday from 8:00 a.m. to 5:00 p.m. and is managed by the Public Information Geologist.

Public Information Geologist. The Bureau receives requests for information about the geology, energy, mineral, and land resources of Texas on a daily basis from people throughout the United States by phone, e-mail, correspondence, and onsite visits. These requests are handled by Sigrid Clift, who serves as the Bureau's Public Information Geologist.

New Faces

New Associate Directors

Jay P. Kipper became the Bureau's Associate Director for Administration in December 2003. Kipper comes to the Bureau after 20 years at Aspen Technology in Houston, Texas, where he was most recently Vice President of Sales, and replaces Doug Ratcliff, now Associate Director of the Geology Foundation and Jackson School.



Ian Duncan became the Bureau's Associate Director for Environment and Earth Systems on July 1, replacing Jay Raney, who served in this role for about 6 years. Duncan comes to the Bureau after 10 years as a Scientist Manager at the Virginia Department of Mines, Minerals and Energy Division of Mineral Resources. He previously worked as a geology professor at Southern Methodist University and Washington University.



New Researchers

Renaud Bouroullec, a structural geologist with research interests in basin analysis, salt tectonics, stratigraphy, and fault analysis, joined the Bureau in October. He has a Ph.D. (2001) from London's Imperial College of Science, an M.S. (1996) from the Université de Rennes, Rennes, France, and a B.S. (1994) from the Université de Bretagne Occidentale, Brest, France.

Structural geologist and Postdoctoral Fellow **Tim Dooley** joined the Bureau in December. Dooley has a



Ph.D. (1998) from the University of London and a B.S. (with honors) (1994) from the University of Dublin. Dooley's research focus has been on the dynamics and kinematics of fault systems using scaled analog modeling, field studies, remote sensing, and seismic data.

New Assignments

Stephen C. Ruppel and **F. Jerry Lucia** were promoted to Senior Research Scientist, the highest technical position at the Bureau.

Geophysicist **Sergey Fomel** was promoted to Research Scientist. Fomel came to the Bureau in 2002.

Robert Reedy was promoted to Research Associate. Reedy is a hydrologist interested in hydrologic data analysis, field instrumentation systems design and installation, and computer applications.

Ursula Hammes and **Robert M. Reed** joined the staff as Research Scientist Associates. Hammes, who earned a doctorate at the University of Colorado, specializes in carbonate sedimentology and diagenesis, as well as sequence and seismic stratigraphic interpretation. Reed is part of the FRAC Industrial Associates team and runs the scanning electron microscope, which enables studies of small-scale structures in rocks. His doctorate is from The University of Texas at Austin.

Geographic Information Systems specialist **Caroline "Cari" Breton** was promoted to Research Scientist Associate I. She is a member of the Deep-Marine Depositional Margins (DM2) program.

Jay Raney is happily reinsconced on the second floor of the Bureau, returning to environmental research. He will help ensure a smooth transition as Ian

Duncan takes on responsibility for overseeing the Bureau's program in Environment and Earth systems. Raney will serve the Bureau in the coming year as Senior Technical Advisor to the Director and will also help the Director with his increased duties in the Association of American State Geologists.

James W. Jennings, Jr., has returned to the Bureau's RCRL after spending a year as a Visiting Professor for Shell International Exploration and Production Company in Rijswijk, The Netherlands. Jennings taught Shell's Carbonate Development Team techniques for modeling carbonate reservoirs that were developed at RCRL.

Alan R. Dutton, a Bureau researcher since 1982, accepted a position starting fall 2004 as an associate professor in the Department of Earth and Environmental Science at The University of Texas at San Antonio. Dutton will continue his research on groundwater and teach courses in hydrogeology and groundwater modeling.

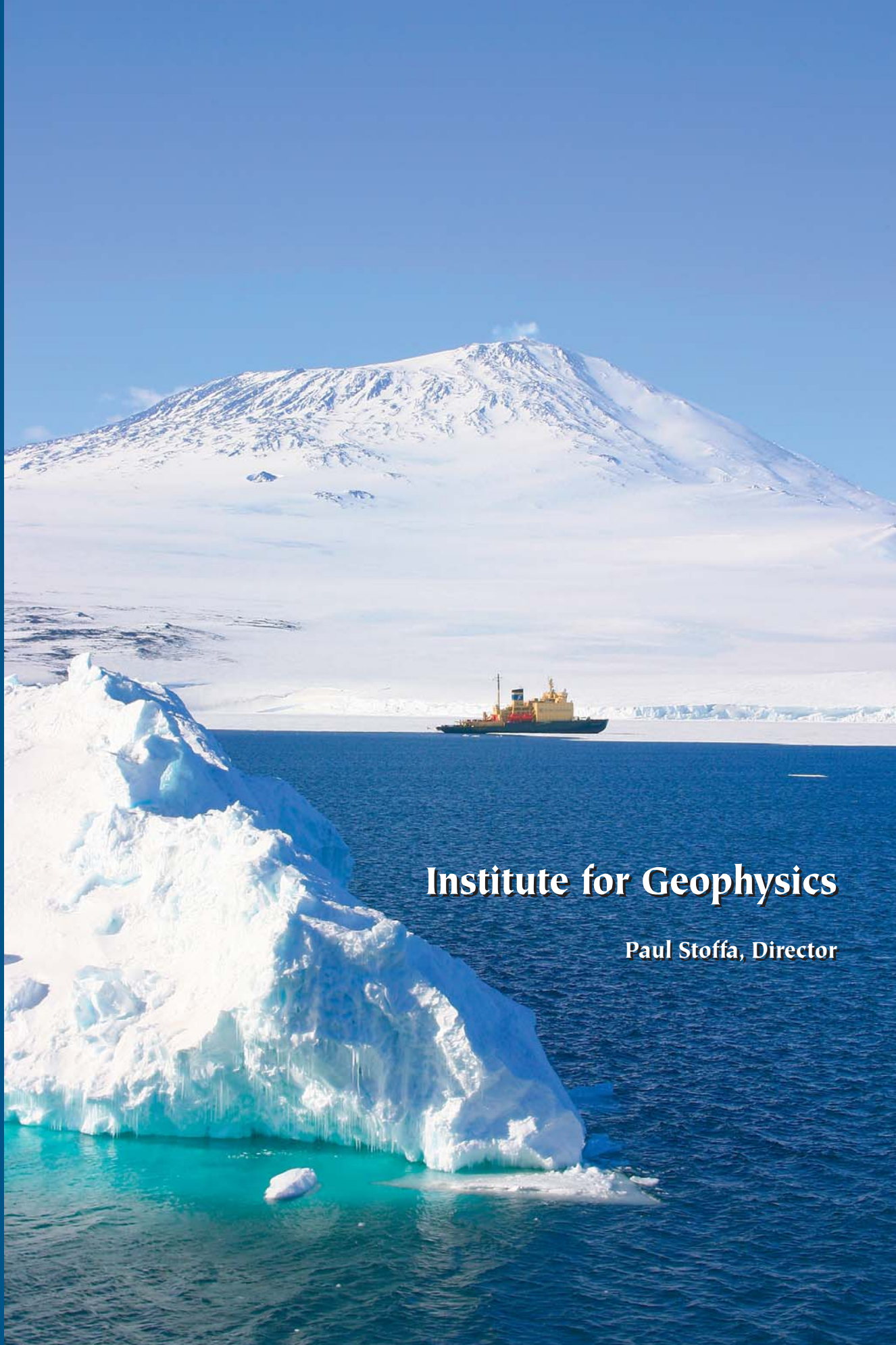
Bureau geologist **Paul R. Knox** retired in January 2004. He began his career at the Bureau in 1992 and worked on a range of projects, including studies in the Matzen field, Vienna Basin, Austria, and, most recently, carbon dioxide sequestration in the Texas Gulf Coast.

Research Science Associate **Xuejiao Liu** is leaving in August 2004 to return to school. Liu began her work at the Bureau as a student research assistant for the Applied Geodynamics Laboratory.

AGL researcher **Dan Schultz-Ela** retired from the Bureau in March 2004 to return to his home in western Colorado. He continues his association with AGL as a consultant.

Bruno Vendeville left the Bureau and AGL in January 2004 to join the faculty at Université des Sciences et Technologies de Lille in Lille, France.

While RVIB N. B. Palmer worked in McMurdo Sound, Jackson School scientists enjoyed views of Mount Erebus, an active volcano on Ross Island. Mt. Erebus (note the plume rising from its summit) is 3,794 meters high and contains a lava lake in its summit crater. M/V Kapitan Khlebnikov, a Russian-owned icebreaker now operated as a tour ship, is seen docked in the ice near Cape Evans, site of Scott's Hut, where Robert Scott stayed almost a century ago. The photo was taken by Lawrence Lawver, a UTIG researcher who was co-chief scientist of RVIB N. B. Palmer. His NSF-financed expedition studied the neotectonics of the western Ross Sea and McMurdo Sound region.



Institute for Geophysics

Paul Stoffa, Director

From the Director



UTIG researchers enjoy continued success in securing significant National Science Foundation (NSF) funds for marine geophysical science. Most recent-

ly, NSF's Office of Polar Programs awarded our aerogeophysical group, led by Don Blankenship, a \$1.5 million grant to collect data over the Amundsen Sea Embayment. This area is of concern to scientists because it is losing ice more rapidly than other parts of the unstable West Antarctic ice sheet. UTIG will team up with the British Antarctic Survey to collect more than 65,000 line kilometers of data over two field seasons.

We have also received funding for several large marine geophysical seismic programs. These successes are a tribute to the caliber of our researchers and students at a time when most Federal programs supporting this type of field-oriented research have not increased significantly. Concerns about the potential impact of marine seismic data acquisition on the well-being of marine mammals, however, led to the postponement of all of our marine geophysical programs originally scheduled during the 2003 and 2004 calendar years—a development that poses a challenge to the entire marine community. UTIG is working closely with the NSF and the Lamont-Doherty Earth Observatory (LDEO) at Columbia University—the operator of the ship we most often use for our marine geophysical work, the research vessel (R/V) *Maurice Ewing*—to address these issues. Two of the affected cruises—the Hess Deep and the Southeast Caribbean BOLIVAR (Broadband Onshore-offshore Lithosphere Investigation of Venezuela and the Antilles Arc Region)—did finally sail, and three

others have been rescheduled for either later this year or early 2005.

UTIG continues to receive funding for our industry-supported programs, including both the PLATES Project, a program of research into plate tectonic and geologic reconstructions managed by Lisa Gahagan with principal investigators Lawrence Lawver and Ian Dalziel, and the Gulf Basin Depositional Synthesis Project (GBDS), managed by Patricia Ganey-Curry with principal investigator Bill Galloway. Soon to begin its 10th year and fifth phase, the GBDS project continues to maintain an average sponsorship level of 15 companies. Both programs continually offer research experience for both graduate and undergraduate students.

We continue to strengthen our leadership within the global geoscience community. Most notable is the role Jamie Austin and I played in guiding the science and managing the Integrated Ocean Drilling Program (IODP) during its inaugural year. The IODP, an international partnership of scientists and research institutions organized to explore the evolution and structure of the Earth, began on October 1, 2003. The NSF and the Ministry of Education, Culture, Sport, Science and Technology (MEXT) of Japan are the Lead Agencies for the IODP. Austin served as the interim director of the program, and I was the president of IODP Management International Inc., a not-for-profit corporation NSF qualified to fill the role of the central management office for the IODP. UTIG researchers Craig Fulthorpe, Sean Gulick, Nathan Bangs, Harm van Avendonk, Kirk McIntosh, Gail Christeson, and Kathy Ellins play important roles in the IODP science advisory structure, in related data acquisition and processing efforts, and in IODP education and outreach. Cliff Frohlich

continues to serve as the Jackson School representative to the Incorporated Research Institutions in Seismology (IRIS). Austin currently serves on the American Geophysical Union's Fundraising and Development Committee.

UTIG continues to fulfill a role in advising, mentoring, and supervising the research of graduate students, as well as a number of undergraduate students. To date, 200 students who engaged in research at UTIG have received advanced degrees, mostly from the Department of Geological Sciences. Senior Research Scientist Mrinal Sen was recently awarded a joint appointment as Professor of Geophysics in the Department of Geological Sciences.

While UTIG's focus on education is at the university level and higher, we have a history of formal and informal educational outreach to the public, teachers, and K-12 students. Since 1995 we have included teachers, writers, and artists in our field programs to communicate the value of our science to the public and to enhance collaboration between science researchers and educators.

UTIG has completed its second year of the NSF-sponsored GK-12 fellowship program to enhance collaboration and communication between science researchers and educators by partnering graduate students with K-12 teachers. UTIG's GK-12 fellowship program has supported nine graduate students from the Department of Geological Sciences and two from the Department of Anthropology.

Also in 2004, we developed a new look for our Web site and increased the functionality of its library of Web pages. Please visit us at <http://www.ig.utexas.edu>.

Paul Stoffa

Institute for Geophysics

Who We Are and What We Do

The University of Texas Institute for Geophysics (UTIG) is known internationally as a leading academic research group in marine geology and geophysics. As part of the Jackson School, UTIG researchers provide basic and applied geophysical research opportunities for graduate students at the M.A. and Ph.D. level through our worldwide programs in solid earth geophysics, marine geology/geophysics, aerogeophysics, earthquake seismology, and multichannel reflection and refraction seismology. Some of our scientists also participate in the Environmental Science Institute and the Center for Subsurface Modeling in the University's Institute for Computational Sciences and Engineering.

UTIG research activities are carried out all over the world and include large-scale field programs involving multiple investigators and institutions. Geographically, UTIG's scope includes the ocean basins, continental margins, Antarctica, and all sites of natural seismic activity. Chronologically, research topics include developing tectonic evolution models that reconstruct continental arrangements as much as a billion years ago to predicting how future climatic scenarios would impact sea-level changes and thus the habitability of densely populated coastal regions. The Institute's research is often relevant to natural resource exploration, as well as the assessment of geologic hazards. The

development of new mathematical analysis methods, data processing and imaging techniques, and geophysical instrumentation is also an integral part of UTIG's ongoing research. The importance of geophysical measurements and their quantitative interpretation in the exploration for petroleum and economically useful minerals has also led to valuable partnerships between UTIG and industry. UTIG plays a role in K-12 education through formal educational programs and informal outreach efforts.

Highlights and New Initiatives

BOLIVAR

The BOLIVAR Project is an NSF-sponsored multidisciplinary investigation of the Caribbean-South American plate boundary, focusing on how island arcs, marginal basins, and oceanic plateaus become attached (accrete) to continents. The project involves scientists from Rice University, UTIG, the University of Arizona, the University of Houston, and Georgia Tech University. Other collaborators include scientists from Fundación Venezolana de Investigaciones Sismológicas (FUNVISIS), the Venezuelan national seismological organization, as well as the Venezuelan and Trinidadian national oil companies. Land and marine field campaigns, which began in autumn 2003 and will



*At sea, co-chief scientist Paul Mann delivers his interpretation of a recently collected seismic line to the science team.
Photo by Steffen Sastrup.*

run through summer 2005, are aimed at improving the understanding of the tectonics of the Southeast Caribbean plate boundary and determining the likelihood of earthquakes at specific locations.

Two active and passive seismic experiments are the core of the BOLIVAR Project. The first of these makes use of 34 permanently installed broadband instruments in Venezuela that are operated by FUNVISIS, as well as a number of permanently installed high-frequency seismographs. The second involved land and marine imaging of the crust and mantle beneath the Caribbean Sea and northern Venezuela using reflection and refraction seismology and required approximately 1,475 land-based seismographs, ocean-bottom seismographs and hydrophones, and two ships, the research vessel (R/V) *Maurice Ewing* and the R/V *Seward Johnson II*. During 52 days at sea in April and May 2004 the scientists



Part of the BOLIVAR Project research team onboard the R/V Maurice Ewing.

onboard the *Ewing* and *Seward Johnson II* collected more than 6,093 kilometers of seismic data offshore Trinidad and Tobago, and Venezuela. Gail Christeson and Paul Mann served as the co-chief scientists onboard the two research vessels. Other Jackson School participants were Steffen Sastrup, John Gerboc, postdoctoral fellow Alejandro Escalona, and graduate students Trevor Aiken and Sean Sullivan.

The results of the BOLIVAR Project are particularly important to the people of Venezuela, a country ranked as having seismic hazards similar to parts of the San Andreas Fault region of California. FUNVISIS, the Venezuelan agency charged with assessing earthquake hazards, will use information from the project to inform Venezuelan policymakers about ways to improve building codes and otherwise save lives and property in Venezuela.

Earthquake Seismology in the Dominican Republic

At 11:45 p.m. on September 22, 2003, a magnitude 6.5 earthquake severely shook the northern Dominican Republic on the island of Hispaniola and caused landslides and extensive dam-

age to buildings in the major cities of Puerto Plata and Santiago. In October 2003, Jay Pulliam and Paul Mann responded to a request from the Dominican Republic's Colegio Dominicano de Ingenieros, Arquitectos y Agrimensores (CODIA) to install seismographs and resurvey Global Positioning System (GPS) benchmarks in the northern area of the island affected by the earthquake. Pulliam joined two Dominican engineers and two seismologists from the University of Puerto Rico at Mayagüez to install 10 broadband seismograph stations that IRIS PASSCAL provided through its Rapid Array Mobilization Program. During its deployment from mid-October to mid-December, the broadband network showed a data recovery rate of nearly 100 percent, including the recording of several large aftershocks related to the September 22 event.

Mann teamed up with scientists from Purdue University and resurveyed 12 GPS sites in the area of the earthquake. This GPS effort is one of several GPS projects involving UTIG scientists, Mann, Fred Taylor, and Ian Dalziel, who investigate crustal motion in geographic regions as diverse as the Caribbean and Antarctica.

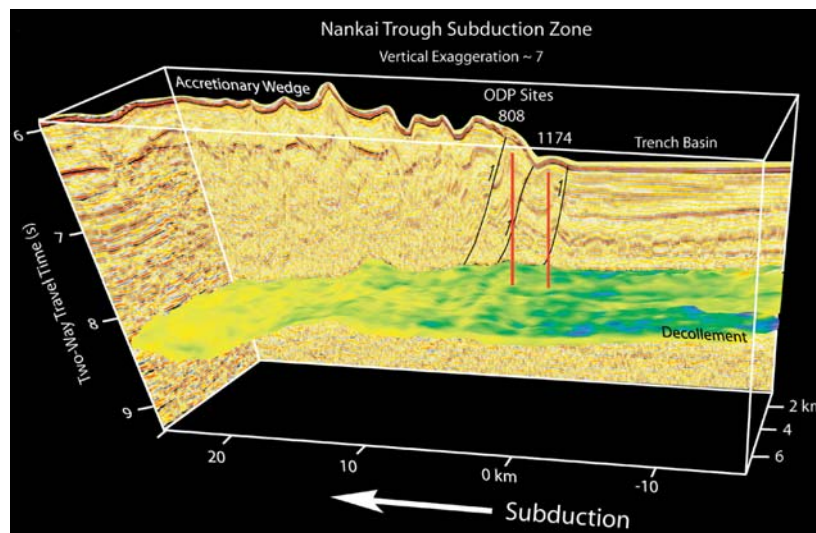


P. Mann (UTIG) and L. Pena (CODIA) reoccupied this GPS site on hilltop near La Vega, Dominican Republic, in October following the September 22 earthquake. This site has been occupied twice before over a period of 4 years.

Nankai Trough Subduction Zone

Subduction zone megathrusts generate many of the world's largest and most destructive earthquakes and tsunamis. UTIG researchers Nathan Bangs, Tom Shipley, and Sean Gulick have been collaborating with Japanese and other U.S. scientists to investigate the seismogenic zone of the Nankai Trough, offshore southwestern Japan. The initial phase of this study produced images of an 8 × 70 km area of the subduction thrust offshore Shikoku Island using three-dimensional (3-D) seismic reflection data. These data as well as samples collected on two drilling legs of the Ocean Drilling Program help to determine the physical properties at the initial, updip portion of the thrust where the fault is sufficiently weak that it slips aseismically. The 3-D seismic reflection data provide key information about the structure downdip along the décollement thrust and into the seismogenic zone allowing UTIG scientists to examine how fault zone physical properties evolve as fault rocks are consolidated and undergo mineral phase transitions that increase their competence and cause them to rupture seismically (see figure).

The next phase of the program will continue the collaborations through the IODP NanTroiseize program target-



Perspective view of the 3-D seismic reflection data cube showing a cross section of the trench and accretionary wedge offshore Shikoku Island, southwest Japan. The décollement thrust is the main slip surface between subducting and overriding plates. Dark colors are fluid-rich areas of the fault that are presumably overpressured and thus inherently weak. Note the significant loss of fluids within 25 km of the trench.

ing a nearby area off the Kii peninsula. NanTroseize plans to drill eight shallow holes with the non-riser drilling vessel (D/V) *Resolution* and one deep hole with the new Japanese riser-drilling vessel, *Chikyu*. The deep hole will penetrate 6 km below the seafloor into the subduction thrust where the fault ruptured in the most recent 1944 M 8.0 event. A complementary 3-D seismic reflection survey of the NanTroseize drilling area will image and characterize fault zone physical properties as they evolve into the seismogenic zone.

Hess Deep

In summer 2003, Gail Christeson, Yosio Nakamura, and Kirk McIntosh led a marine geophysical cruise to Hess Deep, located in the eastern Pacific. The purpose of the seismic survey was to generate a “picture” of the structure of Earth’s crust at Hess Deep from the seismic data, which scientists can compare with the outcrop geology observed by NSF-sponsored submersible dives carried out in 1999 and 2001. Student participants included Danny Brothers, an IRIS summer intern from the University of Colorado, and Department of Geological Sciences graduate students David Gorney, Astrid Markowitz, Alejandro Escalona (now a postdoctoral fellow at UTIG), and Armando Sena. UTIG researchers Steffen Sastrup and Ben Yates, and Mary Phillips, a teacher at Lake Waco Montessori School, also sailed on the Hess Deep cruise.



Hess Deep science team onboard the R/V Maurice Ewing.

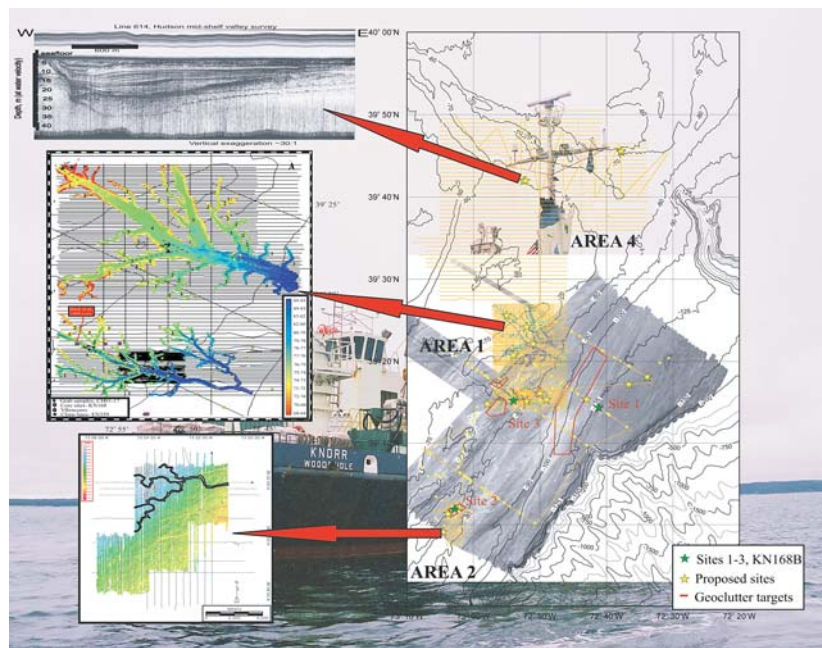
High-Resolution Continental Shelf Stratigraphy

Since the late 1980’s, UTIG researchers James Austin, Craig Fulthorpe, John Goff, Sean Gulick, Hilary Olson and a succession of students have studied the latest Pleistocene-Holocene evolution of the preserved stratigraphy underlying the New Jersey mid- and outer continental shelf. Predictable, continuous funding has come from the U.S. Office of Naval Research (ONR). During STRATAFORM, the Strata Formation on Margins initiative (1993–2001), UTIG identified and began to map shallowly buried, dendritic drainage systems in this region and off the northern California margin (Eel River Basin). Detailed swath/backscatter maps of the seafloor highlighted the complexity of the modern shelf, while at the same time underscoring how little the modern seafloor resembles the surficial stratigraphic succession. STRATAFORM allowed UTIG to deploy a multiple-frequency array of geophysical tools, from multichannel seismic reflection profiling to deep-towed chirp sonar. UTIG also spearheaded

sampling of the subsurface, and over the years has collected grabs, piston and vibra-cores, and long cores using the DOSECC AHC-800 drilling system. UTIG researchers have also participated in both Ocean Drilling Program expeditions (legs 150 and 174A) on the New Jersey margin. Since 2001, UTIG has helped to develop and lead another ONR program, Geoclutter, designed to help the U.S. Navy discriminate naturally occurring phenomena on continental shelves from potential threats, like submarines. Geoclutter has allowed UTIG to continue and extend geophysical mapping and sampling of the New Jersey continental shelf.

Terror Rift, Western Ross Sea

Lawrence Lawver, Co-Principal Investigator of the UTIG PLATES Project, works on piecing together the story of how Earth’s tectonic plates have moved and developed through geologic time. One of his interests is in understanding the tectonic development of Antarctica and how the region around the Ross Sea and the West



Examples of research products from the New Jersey shelf developed for ONR by UTIG. These panels are superimposed on an image of the Woods Hole Oceanographic Institution R/V Knorr.



While it was snowing back in Austin, co-chief scientist Lawrence Lawver enjoyed an especially nice day on the Palmer in the Ross Sea.

Antarctic rift system fits into the larger, plate tectonics jigsaw puzzle, also referred to as the “global plate circuit.” The Ross Sea is underlain by rift basins and structures that began to form in the mid-Cretaceous but is overlain by the now active Terror Rift along the western side of the Ross Sea.

On January 19, 2004, the research vessel/icebreaker *Nathaniel B. Palmer*, set sail from McMurdo Base in Antarctica to study the southern McMurdo Sound and the Terror Rift. The scientists onboard led by Lawver and Terry Wilson of Ohio State University and including UTIG researcher Marcy Davis and graduate student Nedra Bonal, acquired key new data sets with a grant from the NSF Office of Polar Programs. The data show

active faulting and volcanic structure along the eastern margin of the Terror Rift. Lawver and Sam Mukasa of the University of Michigan made seven dredges of the seafloor and recovered an excellent suite of mantle peridotites, one sample of which even contains a piece of granite entrained as the magma passed through the older continental crust. Severe ice conditions precluded complete planned coverage, and a second cruise will be made when the major iceberg, B-15A, finally shifts. Cruise results already show how extensive the neotectonic faulting is and will help delineate the late Cenozoic–active boundary between East and West Antarctica along the Terror Rift.

Aerogeophysical Research in Antarctica

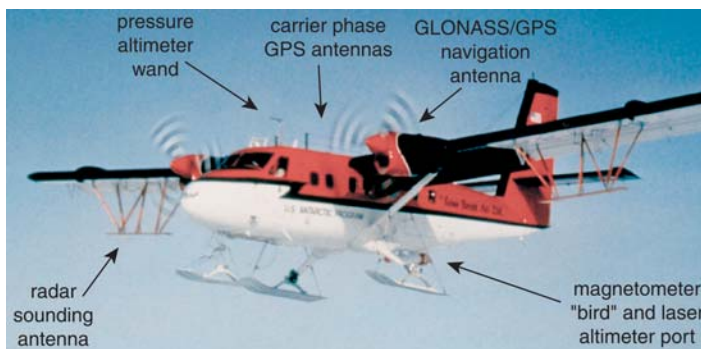
Donald Blankenship, David Morse, John Holt and a team of engineers and graduate students have been developing and applying aerogeophysical techniques to address a wide range of research topics in Antarctica. UTIG’s aerogeophysical program began in 1991 with a project to develop the first integrated airborne platform to simultaneously address problems in glaciology and subglacial geology. This project focused on understanding the influence underlying geology on the

location and evolution of West Antarctic ice streams. Following the success of the initial 50,000 line-kilometer survey, the National Science Foundation asked UTIG to operate a facility (the Support Office for Aerogeophysical Research [SOAR]) for conducting all U.S. aerogeophysics in Antarctica. In successive field campaigns from 1994 until 2002, SOAR acquired and reduced 210,000 line kilometers of aerogeophysical data from 425 research flights. These flights supported 10 research projects with 20 investigators at 14 U.S. institutions. Approximately 130,000 line kilometers of these data were collected for research projects carried out by UTIG scientists in both East and West Antarctica.

Concerns about the potential impacts of global environmental change are a principal motivation for glaciological research in West Antarctica. Satellite remote sensing observations confirm that the Amundsen Sea Embayment is the only major ice drainage basin in Antarctica that is currently out of balance and contributing to global sea-level rise. In some locations, ice thickness is thinning at rates of more than 10 meters per year. In collaboration with researchers at the British Antarctic Survey, UTIG researchers Holt, Morse, and Blankenship will conduct an 800 × 800 × 1100 kilometer survey of the entire Amundsen Sea Embayment of the West Antarctic ice sheet during 2004–2005.

Climate Surprises

One of the most significant discoveries in climate research is the documentation of repeated periods of abrupt warming in the Greenland climate record. During these sudden “warmings,” which represent 60 percent of the total temperature change between glacial and interglacial climate recorded in the Greenland ice sheet, the temperature increased by as much as 15°C over only a few years. First observed in the Greenland



For its aerogeophysical work in Antarctica, UTIG researchers use a ski-equipped, DeHavilland Twin Otter aircraft. Basic data from the instrumentation suite consist of profiles of (a) ice thickness, (b) ice-surface elevation, (c) free-air gravity, and (d) magnetic field intensity. Researchers are able to create two-dimensional images of geophysical and geomorphologic characteristics of the area surveyed from profiles collected over dense grids. These images allow them to define both critical ice-dynamic regimes and their underlying geologic provinces.



Top, UTIG scientist Fred Taylor collects cores from fossil corals in New Guinea from which they will obtain a suite of paleoclimate measurements that span the abrupt climate changes marking the beginning of the Holocene.

climate record, these events have since been observed in other climate proxy records in many regions of the globe.

One of the goals of the numerical climate modeling initiative led by Rob Scott and Charles Jackson at UTIG is to investigate sources of uncertainty in climate model predictions of climate. The effort takes advantage of the Institute's strength in the development and application of efficient algorithms for searching through different ways models may be formulated to match observational data. Although these algorithms have been designed to identify multiple plausible interpretations of geophysical data, the numerical climate modeling initiative is using these algorithms to solve many climate change science problems that have long been thought to be computationally intractable, including the nature of abrupt climate change.

Fortunately over the past few years there has been a revolution in the availability of computational resources

with the increasing power of personal computers and the ability to tie them together into clusters. These "Beowulf" clusters are approximately 10 times less expensive than their typical supercomputer counterparts. Although Beowulf clusters are not appropriate for all problems, they are perfect for certain kinds of climate modeling. With funds from the G. Unger Vetlesen Foundation, UTIG purchased a portion of a 600-processor Beowulf cluster installed and maintained by The University of Texas Advanced Computing Center.

Ongoing projects are addressing a number of difficult questions about the ocean's role in abrupt climate change. Examples include how and why the El Niño/Southern Oscillation (ENSO) has varied in frequency and intensity, as seen within archives of fossil corals, and what parameters are the primary sources of uncertainty in model predictions of future climate.

Seismic Data Center

The Marine Geosciences Data Management System funded by the NSF consists of two centers: a Processed Data Center at UTIG administered by Tom Shipley and a Field Data Center

at Columbia University. The project is organizing UTIG and Columbia University seismic reflection data into a modern relational database management system accessible through the Internet at <http://www.ig.utexas.edu/sdc>. It will eventually include all NSF-sponsored seismic reflection projects. The centers will be coupled into a distributed system linked by shared metadata attributes and database interoperability. The Field Data Center will serve field data of the R/V *Ewing*, the portable high-resolution system, and potentially other acquisition systems. The Processed Data Center will serve processed seismic data, other derived products, and related information from contributions of scientists and will also serve the combined older processed data of the Lamont-Doherty Earth Observatory (LDEO) and UTIG.

In the News

Paul Mann shared his knowledge about the seismic hazards in the Dominican Republic with the public, policymakers, local seismologists, and the media at a news conference in Santiago covering the earthquake that occurred September 22, 2003, in Puerto Plata, Dominican Republic.

Home page of UTIG's Processed Data Center Web site.

Climatologist **Charles Jackson** was interviewed on local television about abrupt climate change in connection with a news story about the release of the summer blockbuster *The Day After Tomorrow*.

New Books

Heterogeneity in the Crust and Upper Mantle Nature, Scaling and Seismic Properties. Edited by **John A. Goff** and **Klaus Holliger**, Kluwer Academic/Plenum Publishers, 358 pp., 2002.

This book describes crustal and upper mantle heterogeneity from three differing perspectives: (1) geological—as derived from crustal exposures and deep boreholes; (2) stochastic—a search for order and structure in these seemingly chaotic data; and (3) seismological—the end product of complex interaction of seismic energy with heterogeneous structure.

Texas Earthquakes. By **Cliff Frohlich** and **Scott D. Davis**, The University of Texas Press, 293 pp., 2003.

This book presents a comprehensive description of all earthquakes felt by Texas citizens between 1811 and 2001. Intended for both scientists and nonscientists, it includes nontechnical chapters explaining basic seismology and comparing seismicity in Texas with that elsewhere in the United States and the world.

New Faces

We are pleased to welcome several new faces to UTIG this year. **Luc Lavier** and **Evelyn Price** joined UTIG in September 2003 as research scientist associates, and UTIG continues to attract excellent postdoctoral fellows.

Luc Lavier (Ph.D., Columbia University, LDEO, 1999). Lavier's research focuses on large-scale tectonic questions, specifically the dynamic structural and



geo-dynamic evolution of continental and oceanic rifts, as well as collisional environments. To address these questions, he uses and develops numerical techniques to model tectonic processes on crustal and lithospheric scales.

Evelyn Price (Ph.D., UCSD, Scripps



Institution of Oceanography, 1999). Price uses Synthetic Aperture Radar Interferometry (InSAR) to map the deformations of the Earth's crust in regions that are tectonically and volcanically active. She applies inverse modeling techniques to these deformations to learn about parameters of the sources of the deformations.

Wolfgang Bangerth (Ph.D. and Diploma, University of Heidelberg, Germany, 2002 and 1999, respectively) holds a joint position as a postdoctoral fellow at



both UTIG and the Center for Subsurface Modeling in the Institute for Computational Sciences and Engineering. At UTIG he works with **Luc Lavier** and **Mrinal Sen** on the numerical solution of inverse problems for partial differential equations, as well as of wave equations by adaptive finite elements.

Faming Wang (Ph.D., Texas A&M



University, 2003) is a postdoctoral fellow supported with funding from the G. Unger Vetlesen Foundation and the Jackson School. Wang works with **Robert Scott** using state-of-the-art satellite data and numerical climate and the Jackson School models to understand the ocean circulation and its role in climate.

Texas Ex **Alejandro Escalona** (Ph.D., The University of Texas at Austin, 2003) works with **Paul Mann** on the Tertiary evolution of the Venezuelan



margin basins (offshore and onshore) by integrating 2D-3D seismic data, well data, and previously published studies in the region.

Timothy Whiteaker (Ph.D. and M.S.,



Engineering, Environmental and Water Resources Engineering, The University of Texas at Austin, 2004 and 2001) is a postdoctoral fellow

with the successful Gulf Basin Depositional Synthesis program now in its 10th year. Whiteaker comes to UTIG from the Civil Engineering Department and the Center for Water Resources. He will develop and test new algorithms for data presentation, synthesis, and 3D visualization using geographic information system software.

Christina Holland (Ph.D., University of South Florida, 2003)



is a postdoctoral fellow supported with funding from the Vetlesen Foundation. She is working with **Charles Jackson** and **Robert Scott** on decadal variations in ENSO events.

UTIG Scientist Abroad

Jay Pulliam will spend the 2004–2005 academic year as a visiting professor at the University of Puerto Rico at Mayagüez (UPRM), where he will teach one graduate and one undergraduate course, as well as study the Earth's crust and upper mantle structure in the Northeast Caribbean. Pulliam intends to make use of the data from seismograph networks located on several of the Caribbean islands, including the most advanced broadband, three-component network operated by UPRM.



Geology Foundation

William L. Fisher, Director

*View of
Tuff Canyon in
Big Bend National
Park, West Texas,
from the overlook
along the southern
end of Ross Maxwell
Scenic Drive. Photo
by Kerza A. Prewitt.*

EXTRAORDINARY JACKSON BEQUEST TO THE GEOLOGY FOUNDATION

Since the death of John A. Jackson in March 2003, approximately \$235.5 million has been transferred from his estate to the Geology Foundation. In addition, prior to his death Mr. Jackson had contributed \$10 million to the Jackson Endowment. The independent executor of Jackson's estate, James T. Langham, Jr., estimates the remainder to be transferred to be no less than \$7 million, bringing the book value of the Jackson Endowment to at least \$252.5 million. The endowment had a market value of \$267.3 million as of March 31, 2004. Beyond his gifts to the endowment, Mr. and Mrs. Jackson provided \$15 million for the construction of a new wing of the Jackson Geological Sciences Building, which houses the Department, the Foundation, and the Jackson School headquarters. The gift is recognized as the second largest single gift in the history of public higher education in America. Only the Walton gift to the University of Arkansas is reported as larger, but it is payable over 20 years and thus smaller in present value terms than the Jackson gift.

A portion of Mr. Jackson's bequest is in the form of overriding royalties on oil and gas production from nearly 1,000 wells, chiefly in Wise County, Texas. In addition, future royalty will come to the Geology Foundation from any wells drilled over some 115,000 acres of leases, most of which include the Barnett Shale—the most active natural gas play in the United States today. The value of the oil and gas interests is booked at \$80.1 million, though with continued development of the Barnett play, the value of oil and gas interests conveyed by Mr. Jackson will most likely increase substantially. In President Faulkner's memorandum

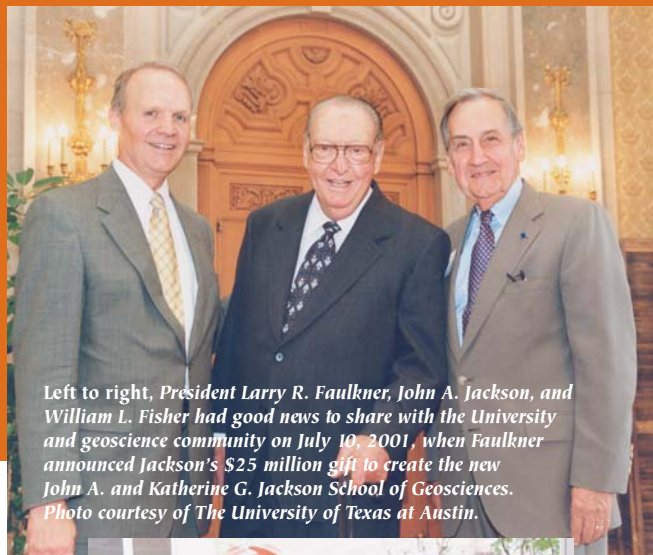
of April 1 to the geoscience community he stated, "I personally have no doubt that the Jackson gift is the most valuable ever made to a public university in the United States. Any gift carries an obligation to produce results. This one carries an extraordinary obligation to produce extraordinary results."

President Faulkner further characterized the gift in his April 1 response to the report of the Jackson School Vision Committee:

"The result that Mr. Jackson sought is sustained leadership at the very top level in the geosciences internationally. Such leadership could be founded only on a large program delivering consistently superior scientific achievement and teaching. While he expressed the hope and expectation that The University would achieve recognition within the top five programs nationally within five years, he gave the gift toward a loftier goal. He offered it, and The University's leadership accepted it, with the concept that his extraordinary endowment would provide a base strong enough for us to reach the top and to stay there.

"It takes more than money to do that. It also takes talent, judgment, leadership, and organizational effectiveness. But it does take money.

"The especially notable aspect is that the agreement between the donor and The University provides very broad latitude with respect to use. This aspect was deliberate with Mr. Jackson, because he desired that the endowment truly provide for the margin of excellence he sought, and he anticipated that The University might need to redefine the endowment's best application toward that



Left to right, President Larry R. Faulkner, John A. Jackson, and William L. Fisher had good news to share with the University and geoscience community on July 10, 2001, when Faulkner announced Jackson's \$25 million gift to create the new John A. and Katherine G. Jackson School of Geosciences. Photo courtesy of The University of Texas at Austin.



Left, Jack Jackson visiting with Bill Fisher on the day of the groundbreaking ceremony for the new wing of the John A. and Katherine G. Jackson Geological Sciences Building, April 17, 2001. It was on this day that Fisher first pitched the idea of a new geological sciences school when Jackson posed the question, "What's next?" Photo by Joe Jaworski.



Left, President Emeritus Peter T. Flawn greets his friend John A. Jackson at the dinner celebrating the formation of the new Jackson School of Geosciences on September 27, 2001. Photo by David M. Stephens.

margin from time to time. An implication, also understood by Mr. Jackson, is that we would have to undertake a definition for this era. Most donors of very large gifts are more prescriptive with respect to application.

"Mr. Jackson left us with an unmistakable challenge and a great deal of flexibility. The challenge is fully compatible with the best of The University's ambitions."

Geology Foundation Advisory Council News



Left to right, Geology Foundation Advisory Council Chairman James C. "Jim" Patterson gives plaques to outgoing Advisory Council members Robert "Bob" Piotrowski and David "Dave" A. Stephenson in honor of their service. Photo by Joe Jaworski.



Left, Outgoing Geology Foundation Advisory Council member Robert "Bob" Piotrowski receives thanks from Advisory Council Chairman James C. "Jim" Patterson. Photo by Joe Jaworski.

The Geology Foundation and its Advisory Council were formed by The University of Texas Board of Regents in October 1953 to enhance and enrich geological education, training, and research at the University. The organizations were originally established to support and provide counsel to the Department of Geological Sciences and the Bureau of Economic Geology. This charge was broadened in September 2001, when the charter and by-laws of the Geology Foundation and Advisory Council were amended to provide support and counsel to the entire Jackson School.

The Geology Foundation began with modest total assets of \$1,010 and no endowed accounts. Today, the Foundation holds more than 120 specifically endowed accounts having a market value in excess of \$320 million, making it the largest foundation at The University of Texas at Austin and the largest geoscience foundation in existence.

The prominent part of the Foundation is its Advisory Council, which historically has included many of the corporate leaders in the energy and mineral industries. The Advisory Council met twice during the year in Austin, holding its fall meeting on October 17, 2003, and spring meeting on April 30, 2004. The Council currently consists of 7 Honorary Life Members and 41 Members drawn from the energy and environmental industries, government, and academia. The current Chairman of the Council is James C. Patterson, of Houston, retired Vice President, Worldwide Exploration, Conoco; Vice-chairman is Fred L. Oliver, of Dallas, President, PVT, Inc. The Foundation is governed by the Executive Committee, chaired by Foundation Director Bill Fisher and consisting of Department of Geological Sciences Chair Gary Kocurek, Bureau of Economic Geology Director Scott Tinker, and Institute for Geophysics Director Paul Stoffa.

Joining the Foundation Advisory Council in September 2004 are Paul D. Ching, Director, Shell International Exploration and Production Research and Development, Rijswijk, Netherlands; Richard J. Chuchla, Area Manager/Africa, ExxonMobil Exploration Company, Houston, Texas; Denis François, Vice President, Geosciences, TOTAL E&P USA, INC., Houston, Texas; John W. Gibson, Jr., President and Chief Executive Officer, Halliburton Energy Services Group, Houston, Texas; Bill D. Holland, President, Holland Exploration, Inc., Houston, Texas; James T. Langham, Jr., Partner, Langham McKay & Company, Addison, Texas; and F. "Woody" Pace, Jr., Exploration Manager, Deepwater Gulf of Mexico, Marathon Oil Company, Houston, Texas.

Effective September 1, 2004, resigning or rotating off the Council are members David S. Birsa, Doug Hall, Robert G.

Piotrowski, William E. Preeg, and David A. Stephenson. Their past support and counsel are very much appreciated.

Two new endowments were created in the Geology Foundation during the year. The Milo M. Backus Endowed Fund in Exploration Geophysics was established by Decker Dawson, Honorary Life Member of the Council and Chairman of Dawson Geophysical Company in Midland. Dawson has been a generous supporter of the Foundation for many years and most recently has substantially supported research and training in exploration geophysics. The Fort Worth Wildcatters Association Undergraduate Scholarship was established to support scholarships in petroleum geology for undergraduate students from the North Texas area. The name on a third endowment—the Elf Aquitaine Petroleum Faculty Fellowship in Geological Sciences—was changed to TOTAL E&P USA Petroleum Faculty Fellowship in Geological Sciences to reflect the change in the name of the company and, therefore, the name of the fund.

Also during the past year the bulk of the estate of John A. Jackson was transferred to the Foundation. Bequests from the estate were placed in the John A. and Katherine G. Jackson Endowed Fund in Geosciences. An important component of the Jackson estate is overriding royalties from oil and gas properties, as well as interests in yet-to-be-developed properties. Of the revenues from these interests, 25 percent goes directly to the Jackson Endowment; the balance is available for expenditure by the Foundation.

Contributions from companies for the academic year totaled \$451,166. Total contributions to unrestricted funds from companies, ex-students, and friends for the period from June 1, 2003, through May 31, 2004, were more than \$334,000. The Foundation also received income in the form of scholarships from the Dorothy B. Banks Charitable Trust in the amount of \$4,166 for the 2003–2004 academic year. The Foundation greatly appreciates all of these contributions, which sustain programs and give it flexibility to spend needed funds.



Paul D. Ching



Denis François



John W. Gibson, Jr.



James T. Langham, Jr.



Richard J. Chuchla



Bill D. Holland



F. "Woody" Pace, Jr.

Geology Foundation Advisory Council

Effective September 1, 2004

Chairman

Mr. James C. Patterson
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	Book Value (\$)	Market Value (\$)
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Edwin Allday Lectureship in Geological Sciences	214,965	356,446
Mary and Ben Anderson Endowment for Graduate Studies in Geology	46,182	77,020
Millard B. Arick Memorial Fund in Petroleum Geology	14,285	17,067
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William Stamps Farish Chair in Geology	495,098	1,107,101
Peter T. Flawn Centennial Chair in Geology	855,621	1,856,825
R. L. Folk / E. F. McBride Petrography Fund	40,853	43,284
Robert L. Folk Excellence Fund in Geological Sciences	90,087	106,524
Fort Worth Wildcatters Association Undergraduate Scholarship	25,000	24,358
Geology Foundation Advisory Council Centennial Teaching Fellowship	119,594	229,571
Geology Foundation Excellence Fund	117,713	195,191
Getty Oil Company Centennial Chair in Geological Sciences	1,015,103	2,308,207
Graduate Fellowship in Exploration Geophysics	533,294	558,128
Miss Effie Graves Scholarship Fund	32,874	83,138
Guy E. Green Endowed Presidential Scholarship	39,714	89,617
J. Nalle Gregory Chair in Sedimentary Geology	782,882	1,581,152
J. Nalle Gregory Regents Professorship in Geological Sciences	341,897	625,276
Thelma Lynn Guion Geology Library Staff Award	18,132	23,612
Karl Frederick Hagemeyer, Jr., Memorial Endowed Presidential Scholarship	49,375	90,820
George S. Heyer Memorial Fund	110,733	276,088
Bill D. Holland Endowed Presidential Scholarship in Geological Sciences	45,690	53,504
Houston Oil and Minerals Corporation Faculty Excellence Awards	63,621	143,591
F. Earl Ingerson Graduate Research Assistance Fund in Geochemistry	64,409	110,698

	Book Value (\$)	Market Value (\$)
John A. and Katherine G. Jackson Centennial Teaching Fellowship in Geological Sciences	179,919	358,081
John A. and Katherine G. Jackson Endowed Fund in Geosciences	254,755,312	262,065,864
John A. and Katherine G. Jackson Exploration Geophysics Fund	26,347	27,667
John A. and Katherine G. Jackson Fellowship in Geohydrology	294,715	416,351
G. Moses and Carolyn G. Knebel Teaching Fund	109,708	244,019
Martin B. Lagoe Student Research Fund for Micropaleontology	36,497	46,281
Clara Jones Langston Centennial Lectureship in Vertebrate Paleontology	29,268	61,792
J. Donald Langston Special Operations Fund	354,943	567,018
Wann and Marietta Langston Research Fund in Vertebrate Paleontology	131,267	289,093
Jack K. Larsen-Mesa Petroleum Company Fund in Sedimentary Geology	175,235	392,041
Howard R. Lowe Vertebrate Paleontology Endowment	41,065	90,312
J. Hoover Mackin Memorial Scholarship Fund	31,870	68,645
George W. Marshall, Jr., Memorial Endowed Presidential Scholarship	43,273	71,575
Arthur E. Maxwell Graduate Fellowship in Geophysics	106,243	124,090
John C. and Marian B. Maxwell Endowed Undergraduate Scholarship in Geological Sciences	123,725	133,381
Jack H. Mayfield, Jr., Fund for Excellence in the Geological Sciences	508,403	876,917
John H. and Lujza McCammon Endowed Scholarship	14,687	34,157
Mr. and Mrs. L. F. McCollum Scholarship in Geology	29,923	63,780
Michaux Scholarship Fund	14,451	32,110
Joan A. Middleton Endowed Scholarship in Geology	11,480	14,769
Carroll C. Miller Endowed Presidential Scholarship	39,502	90,537
William R. Muehlberger Field Geology Scholarship Fund	126,171	180,663
Wes Ogden Memorial Scholarship in Geophysics	15,225	26,779
Fred L. and Frances J. Oliver Lectureship in Texas Hydrology and Water Resources	81,963	155,451
Judd H. and Cynthia Oualline Centennial Lectureship in Geological Sciences	106,512	188,823
Judd H. and Cynthia Oualline Centennial Lectureship in Petroleum Geology	98,615	175,964
Judd H. Oualline Endowment Fund	24,229	51,034
Ed Owen-George Coates Fund	135,085	307,404
James C. Patterson Fund for Excellence in the Geophysical Sciences	125,216	130,482
Bill R. Payne Centennial Teaching Fellowship	116,851	233,966
Joyce Bowman Payne Centennial Teaching Fellowship	113,454	219,363
Pennzoil and Pogo Producing Companies-William E. Gipson Scholarships	215,520	394,643
O. Scott Petty Geophysical Fund	240,084	508,547
Wallace E. Pratt Professorship in Geophysics	236,501	512,064
Louis and Elizabeth Scherck Geology Scholarship	124,075	240,182
Wilton E. Scott Centennial Professorship	313,587	724,579
Walter Benona Sharp Memorial Scholarship in Geology	49,794	120,145
Shell Companies Foundation Centennial Chair in Geophysics	1,279,948	2,613,081
Shell Companies Foundation Distinguished Chair in Geophysics	1,089,603	2,293,668
F. W. Simonds Endowed Presidential Scholarship	35,029	86,999
William T. Stokes Centennial Teaching Fellowship in Geological Sciences	182,850	386,916
Structural Geology and Tectonics Fund	136,227	246,324
Harlan Tod Sutherland Memorial Scholarship Fund	57,353	101,277
John and Elizabeth M. Teagle Scholarship in Petroleum Geology	780,754	1,426,307
David S. Thayer Memorial Scholarship Fund	34,955	81,025
Tobin International Geological Map Collection Fund	98,763	237,445
TOTAL E&P USA Petroleum Faculty Fellowship in Geological Sciences	217,662	398,839
Udden Memorial Scholarship Fund	24,811	43,094
Glenn and Martha Vargas Endowed Presidential Scholarship	43,078	70,550
Glenn and Martha Vargas Endowment for Gems and Gem Minerals Instruction	79,699	141,944
Glenn and Martha Vargas Fund for Gem and Mineral Curation	65,847	71,592
Glenn and Martha Vargas Gemological Scholarship in Geological Sciences	20,643	39,514
Joseph C. Walter, Jr., and Elizabeth C. Walter Geology Library Fund	785,531	1,206,777
Albert W. and Alice M. Weeks Centennial Professorship in Geological Sciences	231,199	465,727
Albert W. and Alice M. Weeks Fund in Geology	635,214	1,085,483
E. A. Wendlandt Fund	10,853	23,230
Arno P. (Dutch) Wendler Professional Development Fund	136,312	298,870
Francis L. Whitney Endowed Presidential Scholarship	56,973	129,824
Francis L. Whitney Memorial Book Fund	57,787	94,764
Addison A. and Mary E. Wilkinson Endowed Presidential Scholarship in Geological Sciences	68,348	82,718
John A. Wilson Professorship in Vertebrate Paleontology	213,863	423,014
Charles E. Yager Undergraduate Field Scholarship Fund	65,684	146,969
The First, Second, Third Mr. and Mrs. Charles E. Yager Professorships	531,208	1,274,340
Keith and Ann Young Endowed Fund for the Curation of Non-Vertebrate Collections	36,643	41,167

WALTER GEOLOGY LIBRARY REPORT

By Dennis Trombatore

Our first full year in the newly renovated facility has been a rewarding one with many changes. Most significant is the appointment of a new Director/Vice Provost for The University of Texas at Austin General Libraries, Fred Heath. Heath comes to us from Texas A&M, and he has set in motion a number of changes that we expect will lead to a more efficient and service-oriented organization. A larger and larger proportion of General Libraries funding is tied to student fees, and one of the Vice Provost's first priorities is to be sure we are meeting the service and information needs of students, for both course- and research-related work. Heath convened a campus-wide Library Summit in March as part of a wide-ranging planning effort. The General Libraries are also working on a request for proposals for a new computer system to replace the six platforms and multiple databases we now use. This upgrade will be a multiyear effort.

On the local front, Vickie Drake, our new Library Assistant III, has been hard at work on a number of improvements in on-site work flow, Web pages, and staffing patterns, helping us adapt to smaller student worker budgets and the need for more efficient use of our resources. In addition, the Jackson School has generously provided funding for three Graduate Research Assistants from the Information School for several cataloging and digitizing projects, including ongoing work on the ARCO library gift and work on the Landscapes of Texas project, an addition to our earlier Dumble Survey digitizing effort (see: http://www.lib.utexas.edu/dlp/project.html?project_id=landscapes). We are especially pleased with this new suite of documents and hope to add even more historical materials soon.

Tom Barrow made a substantial donation to the Barrow Periodicals Fund this year, enabling us to take on several new subscriptions. Additionally, with the support of several outside science units and the Jackson School, we are finally developing a license for online access to the journals of the American Geophysical Union—good news for the entire campus.

In other news, we are proud to still be hosting a part-time indexer from the American Geological Institute who is building the GeoRef database from materials in our collection. Special thanks this year go to Guion Award winners Margi Bienneman and Yuzliza Mohd Sufian and to our long-suffering volunteer Rosemary Barker for all their good efforts for our collections. Carol Russell received her 40-year University Service Award, and Alice Dewberry received her 25-year University Service Award.

DONORS OF BOOKS AND MATERIALS TO THE WALTER GEOLOGY LIBRARY: 2003–2004

Chris Bell
Cave Research Foundation
Conoco-Phillips
Ann Fowler
William Galloway
Robbie Gries
Anatoly Kaplan
Keck Geology Consortium
J. Richard Kyle
Larry Lawver
Desheng Li
Leon Long
Kitty Milliken
William Muehlberger
Amos Salvador
Benyamin Sapiie
Schlumberger
John M. Sharp
Doug Smith
Dennis Trombatore
Glen Vargas
Karen L. Webber
James Lee Wilson
Charles M. Woodruff, Jr.

Jackson School Awards and Honors

William D. Carlson, Peter T. Flawn Centennial Chair in Geology, was awarded the Dana Medal by the Mineralogical Society of America (MSA). This medal recognizes “continued outstanding scientific contributions through original research in the mineralogical sciences” by individuals in the midst of their careers. Carlson received a bronze engraved medal and gave a scientific presentation that was published in *American Mineralogist*. Carlson was also awarded the G. Moses and Carolyn G. Knebel Distinguished Teaching Award in the Department of Geological Sciences. This award recognizes outstanding teaching, and the recipient is selected by graduate students and undergraduate majors. It carries a \$1,500 monetary award from the Geology Foundation.



Six-time winner of Knebel Award, William “Bill” Carlson. Photo by Joe Jaworski.

Carlson came to the University in 1980 after completing graduate school at UCLA and undergraduate work at Stanford. His re-

search interests include studies of metamorphic and igneous rocks. He has had an active research program in this general area and was instrumental in founding the National Science Foundation X-ray imaging facility at Texas. As a national resource, the X-ray lab supports not only Carlson’s work, but also the work of many others from the University and around the country. Carlson also has a distinguished professional service record, having served terms as Department Chairman, Associate Dean of the College of Natural Sciences, and President of the MSA.

Carlson taught the undergraduate course in igneous and metamorphic petrology and a graduate course in geochemical analytical techniques during the 2003–04 academic year. It is noteworthy that within the nearly three decades following the establishment of the Knebel Award, Carlson has received it six times. Only one other faculty member has received the award as many as three times. Carlson received his first Knebel Award at the end of his first year as an assistant professor in 1981. Subsequent awards were in 1985, 1988, 1991, 1994, and this year, 2004. A colleague of Carlson’s in the

Department, Clark R. Wilson, aptly summed up Carlson’s enduring contribution to the Department: “Clearly, many generations of students have recognized Bill Carlson’s unusual gift for teaching.”



Ian Dalziel

The Edinburgh Geological Society of Scotland awarded the Clough Medal for 2004 to **Ian Dalziel**. The Clough Medal is presented to a senior scientist who has made a significant contribution to knowledge of the geology of Scotland or the north of England, or a Scottish geologist who has significantly advanced the knowledge of any aspect of geology. Dalziel qualified on both counts.

William L. Fisher, Leonidas T. Barrow Chair in Mineral Resources, Director of the Geology Foundation, and Director of the Jackson

School of Geosciences, received the American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME) Robert Earl McConnell Award. This award was created to “recognize beneficial service to mankind by engineers through significant contributions which tend to advance the nation’s standard of living or replenish its natural resources.” Fisher was also honored by the American Geological Institute Foundation through the establishment of the William L. Fisher Congressional Geoscience Fellowship Endowment, which will enable selected geoscientists to work as congressional staffers. Chairman of the Foundation, Russell G. Slayback, said the endowment was named in Fisher’s honor “to commemorate his important geoscience contributions and the key role he has played in development of geo-policy decisions at the national level.” Fisher served as Assistant Secretary of the Interior for Energy and Minerals under President Ford and has chaired many committees and served on many boards and councils at the national level.

Bob Hardage was awarded Life Membership in the Society of Exploration Geophysicists.

Mark Holtz received the Distinguished Service Award from the West Texas Geological Society.

F. Jerry Lucia was awarded an Honorary Lifetime Membership in the Permian Basin Section of



Center, *Bureau Alumnus of the Year Doug Ratcliff, shown here with (left) current Bureau Director Scott Tinker, and former Bureau Director William Fisher, now Director of the Jackson School and Geology Foundation.*

SEPM (Society for Sedimentary Geology).

Doug Ratcliff was named Associate Director for Administration of the Jackson School of Geosciences in July 2004. He will also continue to serve as the Associate Director of the Geology Foundation, a title he has held since May 2003. Prior to moving to the Foundation, Ratcliff worked for 30 years at the Bureau of Economic Geology. He received the Bureau’s Alumnus of the Year award at the Jackson School Reception at the American Association of Petroleum Geologists (AAPG) convention in April in Dallas.

Stephen Ruppel received the Dedicated Service Award from the Permian Basin Section of SEPM (Society for Sedimentary Geology).

Institute for Geophysics Director **Paul Stoffa** received the Foreign Geophysicist Recognition Award from the Society of Brazilian Geophysicists.



Bureau of Economic Geology Director **Scott Tinker** served as SEPM Vice Chair for the National AAPG/SEPM meeting in Dallas and was asked to join the National Research Council Board on Energy and Environmental Systems.

Christopher J. Bell, Assistant Professor and John A. Wilson Fellow in Vertebrate Paleontology, was awarded the Houston Oil and Minerals Corporation Faculty Excellence Award at the Department of Geological Sciences award ceremony in May 2004. This award, which comes with a \$2,000 gift from the Geology Foundation, is given “to recognize faculty excellence in any area.” The recipient was selected by the Geology Foundation Executive Committee on the basis of nominations of faculty and students.

William E. Galloway, Professor Emeritus, received the AAPG Grover E. Murray Memorial Distinguished Educator Award. AAPG honored Galloway for his distinguished and outstanding contributions



to geological education, both at the university level and toward education of the general public.

Mark Helper, Senior Lecturer, received the Phi Beta Kappa Teaching Excellence Award from the local Austin chapter of Phi Beta Kappa.



Top, *Ethan Perry* and, bottom, *Theresa Diehl* receive GSEC Student Service Awards from *Younis Altobi* at the Department's annual award ceremony. Photos by *Joe Jaworski*.

Libby A. Stern, Assistant Professor, received the Outstanding Teaching in an Introductory Class Award. The award was presented at the Department of Geological Sciences award ceremony in May 2004. This award was created to recognize excellence in teaching at the introductory level, especially in courses designed for nongeology majors. Nominations are requested from students, faculty, and staff, and the winner is chosen by the Geology Foundation Executive Committee. It comes with a \$1,000 monetary award given by the Geology Foundation.

Zong-Liang Yang, Assistant Professor, received the College of Natural Sciences Teaching Excellence Award. This award is given to "increase recognition of the College's many exceptional

faculty who are committed to teaching at either the undergraduate or graduate level."

Linda Bonnell was named an AAPG Distinguished Lecturer for 2003–2004. The title of her talk is "Diagenetic Effects on Fracture Development."

Steve Laubach was named a Society of Petroleum Engineers Distinguished Lecturer for 2003–2004. The title of his talk is "Fractures in Reservoirs: Prediction, Characterization, and Incorporation in Fluid-Flow Simulation."

William Ambrose, lead author of "Upper Miocene and Pliocene Gas and Oil Plays in the Macuspana Basin, Southeastern Mexico," received the Best Paper Award from the Houston Geological Society (HGS) for his presentation at the HGS International Meeting in March. Coauthors of the paper are Khaled Fouad, Rebecca Jones, Mark Holtz, Shinichi Sakurai, Edgar Guevara, Javier Meneses-Rocha, Leonardo Aguilera, Lino Miranda, Roberto Rojas, José Morales, José Berlanga, Suhas Talukdar, and Tim Wawrzyniec.

Sergey Fomel received Honorable Mention, Best Paper Award in Geophysics, from the Society of Exploration Geophysicists. Fomel's paper, coauthored with Paul Sava, is titled "Angle-Domain Common-Image Gathers by Wavefield Continuation Methods."

James Gibeaut, **Roberto Gutierrez**, and **Tiffany Hepner** received the Third-Place Grover E. Murray Best Published Paper Award from the Gulf Coast Association of Geological Societies (GCAGS) for their paper presented at the 2002 annual convention, "Threshold Conditions for Episodic Beach Erosion along the Southeast Texas Coast."

Charles Kerans received the First-Place, Grover E. Murray Best Published Paper Award from the GCAGS for his paper "Styles of Rudist Buildup Development along the Northern Margin of the Maverick Basin, Pecos River Canyon, Southwest Texas," presented at the 2002 convention. **Kerans** and **Bob Loucks** received the Third-Place, Gordon I. Atwater Best Poster Award from the GCAGS for their presentation at the 2002 convention,



The winners of the annual McBride/Folk Petrography Award, left to right: *Jaclynn Fallon*, *David Keeler*, and *Edward Lane*. *Earle McBride* (far right) explains how the award was chosen. Photo by *Joe Jaworski*.

“Stratigraphic Setting and Controls on Occurrence of High-Energy Carbonate Beach Deposits: Lower Cretaceous of the Gulf of Mexico.” **Ted Playton** and **Kerans** received the Second-Place Gordon I. Atwater Best Poster Award from the GCAGS for their presentation at the 2002 convention, “Slope and Toe-of-Slope Deposits Shed from a Late Wolfcampian Tectonically Active Carbonate Ramp Margin.”

Jeff Paine was recognized for Best Paper, “Applying Airborne Electromagnetic Induction in Groundwater Salinization and Resource Studies, West Texas,” at the Symposium on the Application of Geophysics to Engineering and Environmental Problems.

Bureau researchers **Hongliu Zeng** and **Charles Kerans** will receive the Wallace E. Pratt Memorial Award for best paper published in the 2003 *AAPG Bulletin* for their article “Seismic Frequency Control on Carbonate Seismic Stratigraphy: A Case Study of the Kingdom Abo Sequence, West Texas.”

Danielle M. Bailey, **M. Jennifer Cooke**, and **Steven L. Keyes** each received the Outstanding Teaching Assistant Award at the Department’s award ceremony in May 2004. The students were selected by the Geology Foundation Executive Committee on the basis of faculty nominations for their outstanding performance as teaching assistants.

Each received a plaque and \$750 monetary award from the Geology Foundation.

Christopher Berg received an Outstanding Student Research Award from the Structural Geology & Tectonics (SG&T) Division of the Geological Society of America (GSA) in 2003. This award was chosen on the basis of a research proposal submitted for funding to GSA in spring 2003. Chris was awarded a plaque at the SG&T Division Meeting at the annual GSA meeting in Seattle, Washington, in November 2003.

Theresa M. Diehl and **Ethan R. Perry** received Graduate Student Executive Committee (GSEC) Student Service Awards at the Department’s award ceremony in May 2004. The honorees were selected by GSEC. The award recognizes outstanding service by a geology graduate student to the graduate student community and confers a plaque from the Geology Foundation, as well as a check for \$250.

Edward D. Lane (graduate student), **David A. Keeler** (undergraduate student), and **Jaclynn F. Fallon** (undergraduate student) won the R. L. Folk and E. F. McBride Petrography Awards at the Department, which are given for superior performance in petrographic identification and interpretation in an annual contest. This contest confers a plaque and a \$1000



Mark Helper gives Alka Tripathy the Estwing Hammer Award for outstanding skills in field geology at the Department’s annual award ceremony. Photo by Joe Jaworski.

monetary award for graduates and a \$250 monetary award for undergraduates from the Geology Foundation.

Alka K. Tripathy was awarded the Estwing Hammer Award, which is given to students who have demonstrated outstanding skills in field geology, as judged by performance in GEO 420K and GEO 660. Selections are made by the field camp director and undergraduate advisor. A geologic rock pick is donated each year by the Estwing Corporation. In addition, Tripathy was recognized as a Dean’s Honored Graduate. This award is given to “top honors students who have not only excelled in their class work, but also have done outstanding research as an undergraduate and/or contributed to the College and the University through significant service.”

Leonel Gomez won third place in the AAPG Student Oral Presentation Award at the AAPG annual meeting in Dallas for his talk “Predicting Macrofracture Spacing from

Small Rock Samples: Testing New Analytical Techniques Using Microfracture Spacing.” Gomez received \$300, and the Jackson School was awarded \$600 for his work.

Kristine L. Mize and coauthors **Lesli J. Wood** and **Paul Mann** received the SEPM Best Poster Award at the 2004 AAPG/SEPM annual meeting for “Controls on the Morphology and Development of Deep-Marine Channels, Offshore Trinidad and Eastern Venezuela.”

Julymar Morantes won first place in the Selected Academic Research Topics at the AAPG annual meeting in Dallas for her poster “Mechanisms of Porosity Reduction of the Upper Cretaceous Sandstones in the Eastern Venezuela Basin: Carito Oil Field.” Morantes received \$1,000, and the Jackson School was awarded \$2,000 that was put into the University’s AAPG Student Chapter.



The MARGINS initiative awarded **Sylvia Nordfjord** their first Annual Prize for Outstanding Student Presentation for her poster “Geomorphologic Comparisons of Shallowly Buried, Dendritic Drainage Systems on the Outer New Jersey Shelf with Modern Fluvial and Estuarine Analogs” presented at the fall 2003 meeting of the American Geophysical Union.

Best Speaker Awards are given to graduate students for superior oral presentations at

Technical Sessions each semester. Winners are selected on the basis of student evaluations and are awarded a plaque and \$200 gift from Robbie Gries and the Geology Foundation. Best speakers at the 2003–2004 Technical Sessions were **Tania M. Wallace** (M.A. fall 2003): “The Geochemical Behavior and Transport Characteristics of Estrogens”; **Karah L. Wertz** (Ph.D., fall 2003): “From Seafloor Spreading to Uplift: Geologic Evolution of Macquarie Island on the Australian-Pacific Plate Boundary”; **Jamie S. Levine** (M.A., spring 2004): “Structural Analysis and Detrital Zircon Provenance in the Western Llano Uplift: Implications for a Southern Collider”; and **Tarek A. S. Elshayeb** (Ph.D., spring 2004): “Integrated Reservoir Characterization, 3D-Diagenetic Modeling, and Reservoir Assessment and Prediction of the Cotton Valley Sandstones, East Texas Basin.”

The partnership led by **Patricia Ganey-Curry** involving Bertha Casey Elementary’s fifth-grade class and the Institute for Geophysics won first place at the 2004 Austin Science Fun Day, a competitive science fair staged annually at the Texas Memorial Museum by The University of Texas at Austin’s College of Natural Sciences.

Margaret Bienemann, Library Assistant II, and **Yusliza Mohd Sufian**, Library Assistant II, both received the Thelma Lynn Guion Geology Library Staff Award. This

award is given to recognize excellent performance by staff members of the Joseph C. Walter, Jr., and Elizabeth C. Walter Geology Library. Each received \$200 from the Geology Foundation.

Jeffrey “Ty” Lehman, Senior Systems Analyst, received the Distinguished Service Award at the Department’s award ceremony in



Ty Lehman, winner of the Department’s staff service award. Photo by Joe Jaworski.

May 2004. The award is given by the Department for the most outstanding contribution to the facilities or operations of the Department throughout the previous

year. The winner is evaluated on the basis of nominations from faculty, staff, and students and is chosen by the Geology Foundation Executive Committee. Not only is Lehman in charge of all the computers and networking in the Department, but he is also noted for his serenity amid hectic situations.

Jenny Turner, an Administrative Associate at the Bureau of Economic Geology,



D. M. Stephens

was awarded one of 30 Staff Excellence Awards given by The University of Texas at Austin at the

43rd Annual Staff Recognition Program and President’s

Reception in May 2004. The award recognizes non-teaching employees for their outstanding contributions to the University.

The first-ever Jackson School Staff Excellence Award was presented to an employee of the Geology Foundation and of each of the three units of the Jackson School and is expected to become an annual award. This year's awards were presented to **Ty Lehman**, Senior Systems Analyst, Department of Geological Sciences; **Eleanor Picard**, Assistant to the Director, Institute for Geophysics; **Ron Russell**, Computing Services Manager, Bureau of Economic Geology; and **Debra Sue Trinque**, Senior Administrative Associate, Geology Foundation.

The Jackson School was well represented among University staff service awards presented at the 2004 Staff Recognition Program and President's Reception. The University of Texas at Austin Staff Service Award Program honors staff who have completed 10 or more years (in multiples of 5 years) of service at the University and recognizes the importance of their contributions to the continuing success of the University. Twenty-two Jackson School staff were so honored in May 2004.

Recipients of Staff Service Awards from The University of Texas at Austin

Name	Years of service	Unit
Jean L. Abernathy	25	Bureau of Economic Geology
James A. Austin, Jr.	25	Institute for Geophysics
Sharon A. Bierschenk	10	Bureau of Economic Geology
Gail L. Christeson	10	Institute for Geophysics
Sigrid Clift	15	Bureau of Economic Geology
Fong-I T. Dewberry	25	General Libraries
Janet E. Everett	15	Institute for Geophysics
Clifford A. Frohlich	25	Institute for Geophysics
William E. Galloway	10	Institute for Geophysics
Roberto Gutierrez	10	Bureau of Economic Geology
Wilbert J. King, Jr.	10	Institute for Geophysics
Lawrence A. Lawver	20	Institute for Geophysics
Jeffrey T. Lehman	10	Geological Sciences
Robert G. Loucks	10	Bureau of Economic Geology
Glynis G. Morse	25	Bureau of Economic Geology
Lisa E. Remington	10	Bureau of Economic Geology
Carol W. Russell	40	General Libraries
Daniel D. Schultz-Ela	15	Bureau of Economic Geology
Thomas H. Shipley	25	Institute for Geophysics
Debra S. Trinque	20	Geology Foundation
Bruno C. Vendeville	15	Bureau of Economic Geology
William A. White	30	Bureau of Economic Geology



Far left, Patricia Ganey-Curry led the UTIG-supported Adopt-A-School class from Bertha Casey Elementary to another first-place win at the Austin Science Fun Day sponsored by The University of Texas at Austin College of Natural Sciences. The annual public event promotes science as accessible, meaningful, important, and fun for everyone—especially children.

Starting with the Basics: K-12

Outreach Efforts



The Jackson School hosted 11th graders from the Mathematics, Science & Engineering Academy at Fort Valley State during their visit to The University of Texas at Austin campus in June.

Each unit of the Jackson School has a long tradition of providing geoscience information to the public and to kindergarten through 12th grade (K-12) students and teachers in a common quest to learn about Earth's resources.

These programs have grown dramatically over the last 5 years as a result of increased funding, collaboration with education and outreach organizations, and the creation of the Environmental Science Institute (ESI), headed by Professor Jay Banner of the Department. Integration of efforts within the School will promote future growth of the outreach program. Highlights of activities during the last year are summarized here.

Several teachers took part in marine geophysical research cruises led by UTIG scientists. Steven Stevenoski, a science teacher at Lincoln High School in Wisconsin Rapids, joined the Western Ross Sea, Terror Rift cruise onboard the *Nathaniel Palmer* as part of the National Science Foundation's (NSF) Teachers Experiencing Antarctica and the Arctic (TEA) program. Stevenoski sent journal entries and photos to TEA's Web site throughout the cruise. Mary Phillips from Lake Waco Montessori School sailed to the Hess Deep. Biology teacher Meredith Keelan from Van Vleck, Texas, participated in the 52-day Southeast Caribbean Margin cruise with UTIG scientist Paul Mann onboard the *Maurice Ewing* through an NSF supplemental Research Experience for Teachers (RET) grant. As an NSF Graduate Teaching Fellow in K-12 Education (GK-12), Sean Sullivan, who also sailed on the cruise, worked with Keelan to create a video documentary of the cruise. Keelan's daily journal entries and her e-mail exchange between shore-based students and scientists at the Southeast Caribbean Margin Web site can be viewed at <http://www.ig.utexas.edu/outreach/ttif/secaribb/index.php>.

To bring minorities into the Jackson School we have formed an alliance with Fort Valley State University in Georgia, whose students are predominantly African American. Minority students who have an interest and aptitude in science and engineering are recruited as eighth graders and mentored through high school, when they are offered full scholarships to attend college.

This program, begun in 1983 at Fort Valley State, has achieved a graduation rate in geosciences of 86 percent (18 of 21) and in engineering of 95 percent (54 of 57). The Mathematics, Science & Engineering Academy (MSEA) guides the students from grades 8 through 12 and feeds into the Cooperative Developmental Energy Program (CDEP) that sees the students through college.

Next year we will bring Southwest Texas Junior College in Uvalde into the alliance to draw Hispanics into the program. We will help to expand their existing network of Texas high school counselors in predominantly Hispanic high schools and provide a degree transfer program similar to the one at Fort Valley.



Bureau researcher Randy Remington leads fourth-grade students from Gattis Elementary School, Round Rock, in an inquiry about soil properties. Photo by David M. Stephens.



Waco student speaking to Meredith Keelan onboard the R/V Maurice Ewing.

At the college level, six geology graduate students and three undergraduates received in-depth training and experience in outreach through the NSF-funded GK-12 program. College students from several sciences worked in the classroom with science teacher mentors to develop and present activities to students. Twelve teachers involved in this program

continue to benefit from training and interaction with researchers.

In other efforts Bureau researchers Susan Hovorka and John Andrews have been working with the Witte Museum in San Antonio to develop the 3-D computer visualization of the Edwards aquifer as part of a forthcoming exhibit on water.

UTIG sponsored a Distinguished Speaker in the Incorporated Research Institutions for Seismology (IRIS) program in the popular ESI Outreach Lecture Series. U.S. Geological Survey scientist David Wald presented "Citizen Science: Man vs. Machine in Providing Rapid Earthquake Information."

The fourth annual Earth Science Week Career Fair—hosted by 60 earth science professionals from local geoscience organizations—drew 350 Austin-area eighth-grade students and 25 teachers to the University campus in the local celebration of this national event sponsored by the American Geological Institute (AGI). The Bureau's information geologist, Sigrid Clift, chairs the Earth Science Week organizing committee. The Bureau's Houston Research Center (HRC) hosted a tour of the HRC on behalf of the Houston Geological Society's (HGS) annual celebration of Earth Science Week. More than 70 HGS members, their families, and college students from area community colleges viewed the center's rock cores and cuttings and learned of their importance to our understanding of Earth.

Almost 6,000 Texas K-12 science teachers from around the state attended the annual Conference



Iridium Satellite Solutions generously provided GK-12 RET teacher Meredith Keelan with a satellite telephone so that she could call her students daily, as well as speak with students in other parts of Texas. Photo by Alejandro Escalona.

for the Advancement of Science Teaching (CAST) in Houston, the largest conference of its kind in the United States. The Jackson School presented professional development workshops on topics such as using geographic information systems in the classroom and conducting research on global warming.

Bureau Director and State Geologist Scott Tinker gave testimony to the State Board of Education in support of making earth science courses more available to high school students in Texas. This testimony followed efforts of the Texas Education Agency-sponsored Earth Science Task Force, on which Susan Hovorka served. Patty Ganey-Curry of UTIG serves on the Austin Science Fun Day organizing committee. Katherine Ellins, also of UTIG, served as the interim chair of the EarthScope Education and Outreach steering committee, was a co-convenor of the Integrated Ocean Drilling Program (IODP) Education and Outreach Workshop, and is currently a member of the IODP Education and Outreach Task Force and the IRIS education advisory committee.

An NSF-funded project led by Katherine Ellins, Cataclysms and Catastrophes, completed Web-based modules on earthquakes, tsunamis, hurricanes, asteroid impacts, and landslides to train teachers how to use data and analytical techniques developed by UTIG and Bureau scientists with their students. UTIG has created more than 40 different learning activities aligned with State and national science education standards available to teachers as a rich educational resource on its Web site.



The NSF-funded GK-12 Program provides geoscience and environmental outreach experiences for Austin-area K-12 teachers. Among these activities was a field workshop in the Edwards aquifer. Standing at far left, Ph.D. candidate Nico Hauwert discusses issues of urban impact at Goat Cave, which is part of a protected karst preserve in the recharge zone of the Edwards aquifer. Photo provided by Jay Banner.

Well-Traveled Jackson School Booth

The Jackson School of Geosciences (JSG) hosted several exhibit booths and alumni functions at professional society meetings last year and will continue to do so in the future. JSG staff and students made presentations, coordinated sessions, led field trips, and hosted separate exhibit booths at several national and international geological and geophysical meetings. The JSG Steering Committee appointed a JSG Exhibits Committee to help coordinate School-wide activities. The Committee was charged with organizing exhibit booths and alumni events to represent the whole School. The exhibition area at the national meetings is always the center of activity and business during the conventions. The JSG exhibit booth offers a setting for staff, students, and alumni to collect and convene, and the alumni events offer a designated time and place for friends of The University of Texas at Austin to get reacquainted. They also offer a venue for providing information to potential students and sponsors of the industry-funded organized research programs of the JSG. The events of the past year were well received by staff, students, and alumni, and future events promise more opportunities for the JSG to showcase its programs and create a relaxed setting for alumni and prospective students and staff to visit. Look to the JSG Web site for pre-convention abstracts and lists of presentations, as well as exhibit booth and alumni event announcements and pictures from past events: http://www.ig.utexas.edu/jsg/meetings_2004.htm.



The JSG exhibit booth is a great place to meet friends. Visiting at the AAPG meeting (from left) are past AAPG president John J. Amoroso, JSG Director William L. Fisher, and UT alumnus Robert L. Boyce.

The Jackson School went on the road last year to these major professional venues:

October 22–24, 2003, **Gulf Coast Association of Geological Societies (GCAGS)** Annual Convention, Baton Rouge, Louisiana

October 26–29, 2003, **Society of Exploration Geophysicists (SEG)** International Exposition and Annual Meeting, Dallas, Texas

October 30–November 1, 2003, **Conference for the Advancement of Science Teaching (CAST)**, Houston, Texas

November 2–5, 2003, **Geological Society of America (GSA)** Annual Meeting & Exposition, Seattle, Washington

December 8–12, 2003, **American Geophysical Union (AGU)** Fall Meeting, San Francisco, California

April 18–21, 2004 **American Association of Petroleum Geologists (AAPG)** Annual Convention, Dallas, Texas

Upcoming Meetings

Meeting	Date	Location
SEG	October 10–15, 2004	Denver
GCAGS	October 10–12, 2004	San Antonio
AAPG International	October 24–27, 2004	Cancun
CAST	November 4–6, 2004	Corpus Christi
GSA	November 7–10, 2004	Denver
AGU	December 13–17, 2004	San Francisco
NSTA	March 31–April 3, 2005	Dallas
AAPG	June 19–22, 2005	Calgary

For information on Jackson School exhibits or alumni events, contact Patricia Ganey-Curry, patty@ig.utexas.edu, 512-471-0408.

Memorials



Eric Rutherford. Photo by Joe Jaworski.

Eric Robert Rutherford, 29, died on November 12, 2003, in Austin, Texas, after fighting a courageous battle against cancer. Eric moved to Austin in August 2003, to pursue his graduate degree in hydrogeology at The University of Texas. Before moving to Austin, he worked with the U.S. Geological Survey's Hawaii Volcano Observatory, mapping newly emplaced lava flows, collecting fresh lava samples, and preparing maps. He was an adventurer. Eric traveled throughout the world seeking to learn about new cultures and traditions. He began his travels in Germany, New Zealand, and Australia through a study-abroad program at Rice University.

His excursions led him to Turkey, Thailand, Guatemala, Mexico, Spain, France, Sweden, Norway, Japan, Vietnam, Greece, Morocco, England, and Ireland. Dedicated to pursuing excellence, Eric lived by the motto *carpe diem*. He had close circles of friends around the world, and although only at UT for a few, too short, months, Eric quickly established a community of friends among UT-Austin graduate students. Shortly after learning of his illness, students at the Jackson School joined together to encourage other students and faculty to donate blood in support of Eric and his family. Eric had a wonderful spirit and made a large impact on the school in his small amount of time. His friends and family miss him dearly. Eric's family has set up an Endowed Scholarship Fund in his name: memorial donations can be made to the Eric Rutherford Endowment Fund, c/o All Saints Episcopal Church, P.O. Box 7423, Warner Robins, Georgia 31095-7423. All donations made to the endowment fund are tax-deductible.

By John M. Sharp

Edward Redington Baird

Edward Redington Baird died March 9, 2004, in Houston, Texas, at the age of 85. He was born and raised in Little Rock, Arkansas, and attended the University of Texas in Austin, receiving a Bachelor's degree in geology in 1943. He then served with the 351st Bomb Group as a photographer and gunner on B17 aircraft based in Polebrook, England, during World War II. After the war, he married Ida May Mueller of Houston. During his career, he discovered oil and gas fields in Wyoming, Texas, and Louisiana. He and his family lived for several years in Morelia, Michoacan, Mexico, and then settled in Houston in 1952. He returned to school at South Texas College of Law, obtaining his law degree in 1962, and he then started a second career as a title lawyer, which lasted until he retired in 1996 at age 78. He enjoyed a wide range of interests, including Tai Chi, history, jazz, Chinese calligraphy, classical music, English literature, and his son John's rock band. He is survived by his children, Charles Cary O'Connor and wife Linda; Justice Michol O'Connor; Jane Baird; John Baird and wife Leann Vose; and David Baird; as well as by several grandchildren, a large extended family, and many friends.

Jerrell Lee “Butch” Baldrige of Dallas, Texas, died October 30, 2003, at the age of 66. Butch was born and raised in Fort Worth, Texas, graduating from Arlington Heights High School. He then attended the University of Texas, working toward a degree in geology for 3 years before joining the U.S. Army in 1959, serving on active duty for 2 years. In late 1961 he served some additional active duty when his reserve unit was activated. He retired from IBM after more than 25 years, and then worked in the technology field as an independent contractor until late 2002. He is survived by his mother, France Gunter Baldrige; sister Betty Sue Chapman; brother Joseph F. Baldrige, Jr., and many nephews, nieces, grand-nephews, and grand-nieces.

Wesley F. Blankenship died February 24, 2004, in Austin, Texas. He received a Bachelor’s degree in geology from the University of Texas in 1957 and became Executive Vice-President of Coastal Corporation. He was widely known in the oil and gas industry. He enjoyed traveling, especially in the mountains of Colorado and on beaches around the world. He also loved his ranch in Blanco, Texas, where he raised miniature donkeys and Boer goats. He is survived by his wife Cyndi; children Wesley Jr. and wife Kathy, Keith and wife AnnMarie, Bret and wife Sue, and Karen

Blankenship; sisters Janice Caldwell and husband Robert, and Patricia Krisak and husband Mike; brothers Floyd and wife Sandy and Michael and wife Linda; stepmother Dorothy Blankenship; and many grandchildren, nieces, nephews, and friends throughout the country.

Frank I. Brooner, Jr., 75, died February 24, 2004, in San Antonio, Texas. He graduated from the University of Texas in 1951 with a degree in geology. He served during the Korean War in the U.S. Navy. He began a career as an exploration geophysicist in 1954, and then became an independent geologist in 1964, continuing with that career until his death. He is survived by his wife Doreen; daughters Stephanie Smith and Stacey Hughes and husband Jeff; son Barry Alan; and grandchildren Lindsey and Samuel Smith and Jessica and Campbell Hughes. He was preceded in death by his son Brian Keith.

Amil Blake Cockrum died August 9, 2003, in Austin, Texas, at the age of 88. He lived in Austin for the previous 2 years, having moved to Austin from Hemet, California. He was born March 5, 1915, in Missouri, moving with his parents to McAllen, Texas, in 1920. He graduated from McAllen High School and attended the University of Texas, receiving

a B.S. in 1938 and an M.A. in 1940, both in geology. He enlisted in the Army Air Force during World War II, serving in India and the China-Burma-India theatre. He was a petroleum geologist in Oklahoma and Venezuela. Later, he taught photography at Mesa Verde, as well as geology, astronomy, and oceanography in El Centro Junior College, located in the Los Angeles area. He is survived by his brothers Dr. Logan Cockrum and Jim Cockrum and their wives, along with many nieces, nephews, and great-nieces and great-nephews.

Gordon Craig died March 9, 2004, in Midland, Texas, at the age of 77. He was born in Denton, Texas, on October 7, 1926. He received his B. S. degree in geology from the University of Texas at Austin in 1949. On May 17, 1957, he married Marilyn Johnigan in Amarillo, Texas. He worked for Sinclair Oil and Gas for 14 years and then went on to become an independent consulting geologist. He was a member of the Memorial Christian Church, where he served in several different capacities, including as an Elder and as chairman of the board. He was also a member of SEPM, the Pop-Up Toastmasters Club, and the West Texas Geological Society. He is survived by his wife Marilyn Craig; daughters Sandra Soria and Susan and husband Bryan Paddack; brother Robert Craig, and five nephews and nieces.

Franklin W. Daugherty, 76, died August 23, 2003, in Fort Stockton, Texas. He was born in Alpine, Texas, on June 20, 1927. Frank grew up in Alpine, Texas, and graduated from Alpine High School in 1945. In July of that year he married Dorothy Mae Cotton. He joined the Army in 1946, last serving as a company first sergeant in the 304th Signal Operations Battalion of the Eighth Army in Japan. Upon returning, he received a B.S. degree in geology from Sul Ross State University (SRSU). Frank then went to work first for Lone Star Mercury Mines and then Dow Chemical Company until 1958, when he enrolled in the University of Texas. He received his M.A. degree in geology in 1959 and his Ph.D. in geology in 1962. Frank then went back to work for Dow Chemical Company, this time in the Mexican subsidiary. In 1963 he became a faculty member at West Texas State University (now West Texas A&M University). He was elected as a Fellow in both the Geological Society of America and Sigma Xi. He was appointed to the Texas Mining Council in 1981 by Governor Clements. He also served on the Brewster County Historical Commission for 19 years, serving as Chairman for 15 years. He was a lifetime member of the SRSU Ex-Students Association and helped sponsor several scholarships at SRSU and

Sul Ross University. He was a member of the advisory council and executive committee of the Center for Big Bend Studies at SRSU as well as the American Legion. He is survived by his sister, Flora Daugherty; two daughters, Sheila Daugherty and Claire Newman; and one son, Stephen Daugherty, as well as five grandchildren.

Don Bradley Depew passed away on December 25, 2003, in Galveston, Texas, at the age of 73. He was born in Gainesville, Texas, on June 26, 1930, and grew up in Corpus Christi, Texas. He attended the University of Texas, earning a degree in geology. He was an exploration geophysicist for several oil companies, including Humble Oil, Exxon, and Agip, and did consulting work for various other companies. Don and his wife Evelyn owned Gulf Rubber and Supply Co. and Depew Properties, located in Houston, Texas. He lived all over the world, including Texas and Louisiana, Sydney, Australia, Singapore and London, England. He was a member of the West Isle Presbyterian Church in Galveston, the Society of Exploration Geophysicists, the National Rifle Association, the Republican Party, and the Elks Lodge. He served in the U.S. Navy during the Korean War. He enjoyed fishing, sailing, politics, and hunting. He is survived by his daughters

Donna Borden and Sonia Palmer; sons Tim and Neal; and many grandchildren, great-grandchildren, nieces, nephews, and cousins.

Mark Eidelbach died July 9, 2004, in San Antonio, Texas, at the age of 78. He was born in Flatonia, Texas, on April 1, 1926. He served in the U.S. Army as a basic training instructor and then earned a Bachelor's degree in geology at the University of Texas at Austin in 1951. He then moved to San Angelo, Texas, to begin his career as an independent geologist, and while there he met Baylor Collins, who became his wife. He was a member of the American Association of Petroleum Geologists, the South Texas Geological Society, the Society of Independent Professional Earth Scientists, and the American Institute of Professional Geologists, and he was a founding member of the Petroleum Club of San Antonio. His company, Mark IV Energy, drilled for and produced gas from the Cindy Ann field in Wilson County, Texas, and Mark, along with Edward Roy, Jr. and Nancy Trumbly, received the AAPG A. I. Levorsen Memorial Award and the GCAGS Best Paper Award for a paper they co-authored on that field. He is survived by his wife Baylor; son Rosser and wife Donna; daughters Jennifer Eidelbach and Ellen Pitluk and husband Lee, several grandchildren, and one great-granddaughter.

Leslie James Franz died October 10, 2003, in Houston, Texas, at the age of 83. He is survived by his wife of 60 years, Mattie Lou “Pat” Franz; daughter Linda Carol Aery and husband Bently; son James Craig Franz and wife Dot; grandchildren Amanda Franz, Clay Bass, and Carrie Evans; sister Evelyn Jolet; great-grandchildren Dayton Biggs, Charlesy Bass, and Christian Evans; and numerous other relatives.

Fred E. Grinstead died on April 15, 2004, in Tyler, Texas, at the age of 76. He was born in Kerrville, Texas, on June 12, 1927, and graduated from Tivy High School in 1944. He attended Louisiana State University. He served in the Navy during World War II and then attended Schreiner Institute in Kerrville, Texas. He graduated from the University of Texas at Austin with a B.S. in geology in 1950. He worked for Exxon in Houston, Texas, as an exploration geologist for 30 years. He then relocated to Tyler, Texas, where, starting in 1980, he worked as an independent geologist. He is survived by his wife, Mildred Henderson Grinstead; son Jay Henderson Grinstead; sister-in-law Mary Martha Henderson, and several nieces, nephews, and grand-nieces and grand-nephews.

Charles Hallmark died September 9, 2003, in Austin,

Texas. He received a B.S. degree in geology from The University of Texas at Austin in 1973 and went to work at the Texas Department of Health. In 1998 he resigned and devoted himself full time to charitable work, becoming a staff member at the Lesbian/Gay Rights Lobby of Texas (LGRL) and Project Transitions office. In addition he volunteered a great deal of his time to organizations such as AIDS Services of Austin, TARAL, ALGPC, and the Texas Freedom Network, among others. He helped with fundraising efforts and political events such as AIDS Walk of Austin, Texas Pride Festival and Holiday Swing, and was instrumental in the passage of the James Byrd, Jr. Hate Crimes Act, which marked the first time that gays and lesbians were protected under Texas law. By the end of his life, he had spent most of his time and money supporting causes that were close to his heart, and making a difference in the world around him.

James “Jim” Vincent Hardwick died January 13, 2004, in Midland, Texas, at the age of 90. He was born on April 29, 1913, in Medina, Texas. He was raised and educated in Charlie, Texas, by his father and stepmother, after losing his mother during his infancy. He attended the University of Texas in Austin and received a B.S. degree in geology in 1940. He then worked as a mining engineer

in cinnabar mines in Terlingua, Texas. On May 30, 1942, he married Sarah “Sue” Chapman. Jim served in World War II in the U.S. Navy in the Pacific theatre. In 1947, he and Sue moved to Midland, Texas, where he worked for Atlantic Refining Co. and then British-American Petroleum. He became an independent geologist in 1959, working primarily in the Permian Basin but also throughout the world. He was a member of the Kiwanis Club, American Association of Petroleum Geologists, Society of Independent Earth Scientists, and the West Texas Geological Society (WTGS). Since 1952 he had been a member of First Presbyterian Church in Midland, where he served as both an elder and a deacon. In 1995, he was honored as an oil industry pioneer by the WTGS. He is survived by his wife Sue Hardwick; son Clifford and wife Melinda; son Mark and wife Linda; daughter Nancy Gierhart and husband Mel; daughter Sarah Bell and husband Chuck; brother Elmer and sister-in-law Pauline; and many grandchildren, great-grandchildren, nephews, and nieces.

Wiley B. Harle, 79, died December 7, 2003, in Houston, Texas. He received a Bachelor’s degree from the University of Texas in geology in 1950, after serving with the Army Air Corps during

World War II. He went on to work as a petroleum geologist. He was an Elder and Trustee at Grace Presbyterian Church in Houston and was an Eagle Scout. He also enjoyed woodworking and jewelry making. He is survived by his wife of 45 years, Mary K. Harle; sons James and wife Mary, Bascom and wife Sally, and James; grandchildren James Mitchell, Rebecca Anne, and Stark Hunter, along with many nieces, nephews, and friends.

Laurence H. Hawes, Jr. died February 7, 2004 in Midland, Texas, at the age of 77. He was born in Houston, Texas, on November 28, 1926. He attended the University of Texas at Austin and received a Bachelor's degree in geology in 1951. He married Joyce Marie Reinhardt on April 30, 1955. He is survived by his wife Joyce; son Scott and wife Leslie; daughter Dayna Marie Hawes; sister Eveline Carstens; grandson Cory Travis Hawes; and many nieces and nephews.

Charles G. Heil, 75, died August 6, 2003, in Montgomery, Texas. He was born on March 20, 1928, in Mercedes, Texas. He served in the Navy during World War II. He attended the University of Texas at Austin and received a Bachelor's degree in geology in 1951. He worked for Conoco for 37 years. He is survived by his wife of 55 years, Shirley J.

Heil; children Keith and wife Rebecca, and Janice Chilton and husband Greg; brother Allen Heil; eight grandchildren; and three nephews.

Robert H. Kelso died April 22, 2004, at the age of 87. He was born on November 27, 1916, in Houston, Texas. He graduated from San Jacinto High School in 1934, and then attended the University of Texas, graduating in 1942. After graduation he served in the U.S. Navy during World War II as a torpedo-man. After the war he became a consulting geologist, work he did for 44 years. His career included the first oil drilling in the Gulf of Mexico and led him to travel to Africa, the Far East, the North Sea, and the Philippines. He was a 32nd degree Mason and a charter member of Champions Golf Club. He is survived by his second wife, Jean Hendricks Kelso; and two sisters, Jane Wolcott and Carolyn Andrews.

Leon Kent, 85, died February 3, 2004, in Houston, Texas. He was born on April 25, 1918, in Pittsburgh, Texas. He served as a Captain in the Army Air Corps in Italy, the Mediterranean, southern France, and Germany during World War II. He then graduated from the University of Texas in Austin with a Bachelor's degree in physics, then a Master's degree in geology, which he received in 1940. He then moved to

Houston and worked as a geophysicist for Tenneco Oil for 35 years. He was able to travel extensively in Europe, South America, and Africa in the search for oil. He then retired and lived in the Bear Creek area, where he enjoyed playing golf and spending time with family and friends. He is survived by his brother, John Kent; sons Edward, Robert, and Michael; daughter-in-law D.J. Kent; and granddaughters Sarah JoAnn Kent and Allison Bernardini.

Eldon Woodrow Langford, 89, died January 12, 2003, in San Antonio, Texas. He was born on May 7, 1915, in Bandera, Texas, and graduated from Bandera High School in 1933. He then went to business school in Tyler, Texas, and from there to the University of Texas at Austin, receiving a Master's degree in geology in 1942. While at the University he met his future wife, Lucille Evelyn Treybig, and they were married on April 21, 1944. During World War II he worked as an electrician at the freighter shipyard in Houston, Texas. Then in the early 1950's, along with his brothers Cohen and Othell, he formed the Lazy L Ranches, some of the first ranches in the United States to breed and sell Charolais and Charbray cattle. He worked in both the ranching and oil industries until 1964, at which time he became a professor of geology at San Antonio

College, teaching until his retirement in 1985. Once he retired, Eldon became an avid painter, working with the Warren Hunter Art Group and The Coppini Academy of Fine Arts in San Antonio. He is survived by his wife; sons Brian and Alan and wife Ruth; daughter Lauren and husband John, as well as several grandchildren.

Everett Lawley, Jr. died April 4, 2003, at the age of 80 in San Antonio, Texas. He was born in Gonzales, Texas, on August 9, 1922, and he graduated from Alamo Heights High School in Gonzales. During World War II he served in the United States Marine Corps Third Marine Division, 9th Regiment. After he was discharged, he attended the University of Texas at Austin and received a Bachelor's degree in geology. He went on to work in the petroleum industry. He is survived by his wife Wilhelmina "Willie" Foss Lawley; son Everett; daughter Sarah; stepsons Dan Costley and wife Mary Alice and Mike Costley and wife Dorena; brother-in-law Arthur Foss and wife Jessie; and grandchildren Brooks and Everett Lawley.

Erwin Richard "E. R." Lochte, Jr., age 74, died February 3, 2004 in San Antonio, Texas. He was born April 3, 1930, in San Antonio, and graduated from Texas Military Institute in 1947.

He attended Vanderbilt University, followed by the University of Texas at Austin, where he received a Bachelor's degree in geology in 1956. He also served in the United States Air Force from 1951 to 1954. He was a member of St. Gregory the Great Catholic Church, as well as the South Texas Geological Society, the Ex-Students Association at the University of Texas, the American Association of Petroleum Geologists, and the Houston Geological Society. He is survived by his wife of 52 years, Elizabeth Anne "Bess" Lochte; children Richard Lochte III, M.D., and wife Mary Ann, Cary Ellen Kopecky, Elizabeth Anne and husband Craig Kirby, Mary Marcella Aune and husband Jon, Therese Marie Darr and husband David; as well as many grandchildren.

LeRoy McCravey of Austin, Texas, died January 20, 2004, at the age of 90. He was born on October 28, 1913, in Thornton, Texas, where he graduated from Thornton High School. He graduated from the University of Texas in 1942 with a B.A. in geology. He worked as a geophysicist for Texaco throughout the world, notably in Louisiana, Oklahoma, Colombia, and Venezuela. He retired in 1978. He was preceded in death by his wife Annie Laurie Smith McCravey and his brother Harold McCravey. He is survived by daughters

Sally McCravey and Jenny Cloudman; brother James Hugh McCravey; and grandchildren John Cloudman and Anne Cloudman.

Robert "Bob" McLellan died June 14, 2003, in Kerrville, Texas, at the age of 77. He was born May 1, 1926, in Corsicana, Texas. Bob spent much of his early life in Tyler, Texas, and then received pilot training in the U.S. Naval Reserve. He graduated from the University of Texas in 1949 with a B.S. degree in geology. He also was a member of the UT swim team and set several backstroke records in the Southwest Conference. While at UT, Bob was also a member of the Delta Kappa Epsilon fraternity. He started work as a geologist with Humble Oil Company and later became an independent consultant in Midland, Texas. He was a member of the American Association of Petroleum Geologists and the West Texas Geological Society. Bob was a Eucharistic Minister at St. Peter's Episcopal Church and a driver for Kerrville Meals on Wheels. He was also a member of the Riverhill Men's Golf Association. He enjoyed travel, gardening, and competing in the Kerrville and U.S. Senior Olympics from 1992 to 1998. Bob won a total of 51 medals, including silver medals in the backstroke competition of the U.S. Senior Olympics in 1995, 1997, and 1998. He is survived by his wife of

52 years, Barbara Holt McLellan; son Daniel and wife Diane; son David and wife Theresa; sister Rose Ann M. Hoy; sister Laura M. Clemens; and grandchildren Andrew, Ian, Bonnie, and Christian.

Richard C. Peckham died August 15, 2003, at the age of 73. He was born in San Antonio, Texas, on April 11, 1930. He graduated from the University of Texas in 1956 with a B.S. in geology. He went on to work as a hydrogeologist for the U.S. Environmental Protection Agency. He is survived by his wife Jeanene Becker Peckham; mother Laura Louise Dorsett Peckham; sons David and wife Donna, Darrell and wife Chris and Russell and wife Phyllis; brother Ross and Larry; and six grandchildren. He was preceded in death by a brother, Raymond.

Teena Moore Ramage died March 31, 2004, in Sacramento, California, at the age of 44. She was born on March 29, 1960, in Houston, Texas, where she graduated from Robert E. Lee High School. She then attended The University of Texas at Austin, graduating with honors in 1986 with a Bachelor's degree in geophysics. She later founded the Granite Management Company. She was also an artist, receiving art awards including Art Volunteer of the

Year at Cosumnes River Elementary School in California. She is survived by her husband Joe; daughters Claire and Cassie; mother Mary Ann Moore; brothers Theron Jr. and wife Annette, Tom and wife Linda, and Tim and wife Sandra.

Kemp D. Solcher, 85, died July 26, 2003, in San Antonio, Texas. Kemp was born in San Antonio on December 17, 1917. He graduated from Thomas Jefferson High School in 1935 and later attended the University of Texas, where he received an Honors degree in geology in 1939. He went to work for John F. Camp and Son, an independent oil company in San Antonio. Kemp married Catherine Thomas in 1942 and then enlisted in pilot training in the U.S. Air Corps, earning his wings in August 1943. While a pilot he was assigned to a bomber group, and flew a B-24 "Liberator Bomber" as part of the 15th Air Force. He was awarded a Presidential Unit Citation and the Distinguished Flying Cross, Air Medal, with two oak leaf clusters. At the end of World War II Kemp returned to his geological career, working with George A. Musselman in San Antonio, with whom he worked for 38 years until retirement. He was a member of the San Antonio Petroleum Club and the South Texas Geological Society. His love of aviation translated into a

lifelong hobby of building and flying model airplanes, and he belonged to several local flying clubs as well as the Academy of Model Aviation. He is survived by his son Scott and wife Phyllis; four grandchildren; and eight great-grandchildren.

Jean W. Stark died August 7, 2003, in College Station, Texas, at the age of 84. She was born in Dobbin, Texas. She graduated from Conroe High School in Conroe, Texas, and received a B.A. degree in geology from the University of Texas in 1940. She then went to work for Humble Oil Company in Houston, Texas, for a time, then became a teacher at Fannin and Lamar schools in Bryan, Texas. She was a member of the A&M United Methodist Church in College Station. She is survived by her son, John W. Stark, Jr., and wife Judy Collins; daughter Sallie McGehee and husband Robert; four grandchildren and one great-grandchild.

Walter Morrill Strong, 70, died November 15, 2003, in Algiers, Louisiana. He was born in Ithaca, New York, later attending Cornell University, where he graduated with a degree in geology. He then came to the University of Texas and earned his Master's in geology in 1957. He worked for Humble Oil, and then went on to become the Account Vice President

and Investment Management Consultant at Paine Webber. He is survived by his wife Marguerite Golden Strong; daughters Cheryl Landry and Melanie Schwartz and husband Michael; son Kenneth Everett Strong; sister Ruth Strong Johnson; as well as seven grandchildren.

We are saddened to report the death of the following alumni, about whom we had no further information at press time:

Charles Milton Baker
(B.S., 1951)

Joe S. Clark, Jr.
(attended 1940)

Tonia Judith Clement
(B.S., 1981; M.A., 1989)

George Perkins Derry, Jr.
(B.S., 1949)

Mona D. Guiler
(B.A., 1942)

Vincent Charles Gunn
(M.A., 1976)

Edwin Kubena
(B.S., 1939)

Charles Henry Townsend
(attended 1956)

Frederick Bradley Wallis died November 12, 2003, at the age of 90. He was born in Wortham, Texas, on January 6, 1913. He graduated from the University of Texas in 1941 with a B.S. in geology. While there, he met and married Ethlene Ross, the love of his life. He served as a naval officer in the Asiatic-Pacific theatre in World War II, and then returned to Texas. He started his career as a geophysicist with Texaco. He saw the work of looking for oil as fun and said, "I never worked a day in my life." He is survived by sons Will Wallis and John Wallis and wife Martha Rutland; daughter Kathy Holler and husband Trygve; brother Hal Wallis and wife Amy, and several grandchildren.

Robert Eugene "Doug" Watson died November 4, 2003, at the age of 84. He was born in Oklahoma City, Oklahoma, on February 4, 1919. He graduated from the University of Texas at Austin with a Bachelor's degree in geology in 1942. After he graduated he served aboard the *USS Maryland* as a naval lieutenant during World War II. He then went to work for Exxon as a geophysical scientist for 35 years. He was an avid golfer and long-time member of Champions Golf Club. He is survived by his wife of 59 years, Peggy O'Brien Watson; his daughter Patricia Watson Freise and husband Wesley; son Robert and wife Barbara, as well as many grandchildren, great-grandchildren, and nieces and nephews.



J. A. Roney

NOTES FROM THE ALUMNI

Jim W. Adams (B.S., 1951) is a consulting geologist in Midland, Texas, and writes, "enjoyed seeing the Weeks Geology Building at University of Wisconsin. Overnighted in Lloyd Pray's new retirement home on Lake Superior. Enjoyed the hardrock geology driving 340° around Lake Superior. Also the coast of New England from Boston to St. John, New Brunswick. Would like to hear from old friends at slatsjacobs@aol.com."

Floyd J. Adcock (B.S., 1955) is retired and living in Kilgore, Texas, and writes, "\$40 a barrel of oil makes petroleum geology a helluva lot more interesting! Hook 'em Horns!"

Saleh Al-Saleh (M.S., 2001) is working on a Ph.D. in geophysics at the University of Calgary in Calgary, Canada.

Nancy J. Anderson (B.A., 1950) is retired and living in Cedar Hill, Texas, and writes, "again planning to spend part of the hot Texas summer in cooler northern New Mexico. There I continue to learn more about the geology of that area. Health and international conditions have restricted our travel abroad in recent years."

Payton V. Anderson (B.S., 1945) is a partner in W. D. Anderson and Sons in Midland, Texas, and writes, "Evelyn and I have been married for 59 years. Three daughters and six grandchildren and two great-grandchildren. Still active in oil and gas interest in most of the continental U.S. Travel is my main hobby but still go to the office when at home. I have seen most of the world."

William Bandy Anderson (M.A., 1974) is Director of Operations at Access Sciences Corporation in Bellaire, Texas, and writes, "The E&P career was a fun ride; I am now providing records and document management services for the energy industry." He can be reached at wanderson@accesssciences.com.

Sara S. Avant-Stanley (B.S., 1978) is living in The Woodlands, Texas, and can be reached at savant@alumni.utexas.net.



Far left in blue jacket and white cap, Jay Banner and students examined depositional environments on the Permian Reef Trail in McKittrick Canyon, Guadalupe Mountains, West Texas, on a February 2004 field trip. Photo by Mark Helper.

Walter B. Ayers (Ph.D., 1984) is a Visiting Professor in the Department of Petroleum Engineering at Texas A&M University in College Station, Texas.

T. Dale Bagwell (B.S., 1979) is a systems analyst with Landmark Graphics in Houston, Texas, and writes "Al Haertlein gave a nice little UT Geo-Exes party this past year. I have a few pictures at <http://homepage.mac.com/dbagwell/PhotoAlbum6.html>. Barbara Smith Blaisdell had a great picture from GEO 320 or 660 of a school bus full of Geology students being observed by their graduate-student instructor that I want a copy of for my website. It is a great picture with an equally good story that needs wider distribution. Why not put it in the Newsletter?" Dale can be reached at dbagwell@houston.rr.com or dbagwell@lgc.com.

Carol Swenumson Baker (B.S., 1984) is working for ExxonMobil in Houston, Texas, and writes, "Our family is doing fine, and our oldest is entering high school this year."

Thomas D. Barrow (M.A., 1948) is living in Houston, Texas, and writes, "2003 was a bad year since Tobin International, of which I was Chairman, was sold at a huge loss and the common shareholders got nothing. 2004 appears to be a better year, since we believe that GX Technology, a geophysical service company, which the Barrow family essentially controlled, is in the process of being sold on a very profitable basis. My son, Ken, and I continue to participate in wildcats and manage a very successful exploratory program under the name T Bar X." Thomas Barrow is an Honorary Lifetime Member of the Geology Foundation Advisory Council.

Don G. Bilbrey (B.S., 1953; M.A., 1957) is retired and living in New Orleans, Louisiana, and writes, "still playing a lot of golf—3 to 4 times a week. I shoot my age quite regularly, but it's easier now that I've reached 75. I fly to Seattle several times a year to visit my daughter and grandkids. Other than that my travels have been infrequent. I haven't been to Austin in 5–6 years but hope to remedy that this fall."

Norman G. Bishop (B.S., 1957) is retired and living in Sun Lakes, Arizona, and writes, "Barbara and I recently relocated from Woodville, Texas, to Sun Lakes, Arizona, our last move—we hope. In June we will celebrate our 50th wedding anniversary. Still keep up with the 'Horns via satellite and Internet." Norman may be reached at nbi2706@aol.com.

William T. Biskamp (B.A., 1954) is a real estate agent in Dallas, Texas, and writes, "Mona had a knee replacement in February and is due for two hip replacements. I am now a pretty good nurse! However, we are still selling real estate. Our five kids (they still seem like kids) are doing great, as are our eight grandchildren." William can be reached at 7billbis@airmail.net.

Fredrik S. Blackmar (B.S., 1955) is retired and living in Corpus Christi, Texas, and writes, "still adjusting to life with no right hip. Have learned to hit a golf ball while standing in my walker. Have made a few pars from the old men's tees and shot 48 for nine. Back to teaching one lesson at a time. Am back to my agates and lapidary. Notice everything is 'back to' and not the opposite. That's good! My motto, 'don't get involved with staph germs!'"

Asa Lee Blankenship, Jr. (B.A., 1950; M.A., 1952) is retired and living in Houston, Texas, and asks that Exes in Houston call him at 713-778-5838.

Patricia Bobeck (M.A., 1985) is a geologist with the Bureau of Radiation Control at the Texas Department of Health in Austin, Texas, and writes, "Many thanks to the Jacksons for their fantastically generous gifts and best wishes to the Geology Department in using their legacy to promote the geosciences. What a wonderful opportunity! After 3 years of weekend and evening research and translation and two trips to France, I completed the English version of Henry Darcy's *Les Fontaines publiques de la ville de Dijon*. Darcy's book about the planning and construction of Dijon's water supply system in 1840 contains the background and description of the experiments that led to Darcy's law. My son Dennis is a senior in high school and plans to become a mechanical engineer. How time flies. I'm still looking for **Anna Chappell**. Any leads? Contact me at pbobeck@earthlink.net."

Neil Bockoven (M.A., 1976; Ph.D., 1980) is a geologist in Houston, Texas, and writes, "still working for ExxonMobil looking for gas in South Texas Vicksburg and Frio sandstones. The oldest of my four children will go to A&M next fall. Still getting used to that. It was really good to see so many of the old Austin crowd at **Al Haertlein's** party a while back!"

Silverio "Sil" Bosch (B.S., 1974; M.A., 1975) is an oil and gas exploration geologist in Corpus Christi, Texas, and writes, "This being my 30th year of obtaining my undergraduate geology degree, I look back and thank God for being so fortunate to have attended UT. The education, the friends and the good times I had there are what have allowed me to survive in a tumultuous and cyclical industry. Even after 30 years I am learning new geology and new technology and making new business acquaintances, but the basics I learned at UT continue to be the foundation for everything I do. As of this writing the prices of oil and gas are near historic highs, yet the number of rigs running is far from a historic high. The attrition of our industry's personnel continues unabated, and I guess our country is predisposed to import even more of our basic energy needs. I don't know what the answer is, but I guess all we can continue to do is perform our jobs we were trained to do as well as we can, and let nature run its course. My family continues to complement my cyclical and tumultuous career with a similarly cyclical and tumultuous life. With two male teenagers (Matthew, 16 and Eric, 14), there is never a dull or predictable moment. Fortunately, they are good kids, BUT THEY ARE TEENAGERS!! Lisa (40 something) is by my side to help control and nurture all that uncontrollable energy; if only they could be harnessed and marketed as a renewable energy source! Hello to my old classmates and hope things are going your way. Thanks again, UT, you're the best."

Andrew Bowen (B.S., 1991) is a Storage Marketing Manager at Dell, Inc., in Round Rock, Texas, and writes, "After spending 5 wonderful years as a groundwater consultant I went back to graduate school and completed an MBA. I then jumped into the small technology fray and have recently moved to Dell. In my free time I do volunteer work for an educationally focused non-profit, MainSpring Schools. I also just enjoy all the wonderful qualities of living in Austin. I have recently visited the Geology building and am happy to see all of the wonderful progress taking place. Best wishes to the Geology Department and to my fellow rockhounds!" Andrew may be reached at andrewbowen@alumni.utexas.net.

Walter A. Boyd, Jr. (B.S., 1953) is retired and living in Houston, Texas, and writes, "Another great year! I'm still here! Keep up the good work." Walter can be reached at wildbill@p38.com.

Walt V. Boyle (B.S., 1954; M.A., 1955) is retired and living in Houston, Texas, and writes, "enjoying retirement. Vada Marie and I stay busy with travels, gardening, and church."

Philip Braithwaite (M.A., 1958) is retired and living in Dallas, Texas, and writes, "Barbara and I are still enjoying retirement in Dallas. We took a cruise to Panama earlier this year and have enjoyed the spring flowers during short trips around Texas. Barbara is still teaching her senior fitness classes at the local Rec center and daughter Bridget is an attorney in Addison."

Robert F. "Bob" Brandt (B.S., 1957) is an Adjunct Instructor at Houston Community College in Houston, Texas, and writes, "I am teaching Internet-based courses in Environmental Science and Physical Geology part time (but it seems more like full time) at Houston Community College. I guess I should retire (I'm old enough), but I am enjoying myself too much to do so. I will be 70 in November but so far feel much younger!" Bob may be reached at rbrandt@aol.com.

Susan Painter Briggs (B.S., 1985) is a psychotherapist in Seabrook, Texas, and writes, "**Mark** (B.S., 1985) and I have now lived in the Houston/Clear Lake area for several years. I'm loving my work as a therapist at Samaritan Center, and Mark is glad to be back in the concrete recycling business after a bit of a detour (a long, bittersweet story). Our son Clay recently got his first car (yikes!) and hopes to go to A&M!" Susan can be reached at mscbriggs@earthlink.net.

Ben "Bud" M. Brigham (B.S., 1983) is the Chairman and CEO of Brigham Exploration Company in Austin, Texas, and writes, "My wife **Anne Low** (B.S., 1984) is doing great and expecting our fifth child in early August. Elizabeth, Conner, Mary Anne, and Amanda are all doing great as well. Nice to have the 'wind at our backs.'" Bud may be reached at bbrigham@bexp3d.com.

Christina Brister (B.S., 2000) is a hydrogeologist with Hargis and Associates, Inc., in San Diego, California.

Charles Elmo Brown (B.A., 1976) is the Owner and President of TRES Geologic Consulting in Denver, Colorado, and writes, "It's been a busy year with a trip out to Utah to receive the AAPG Public Service Award, running a couple sessions of the Dinosaur Ridge Summer Science Camp for 10- to 12-year-olds, writing a quarterly newsletter, helping compile and scan 60 years of Rocky Mountain Association of Geologists (RMAG) guidebooks for inclusion into a CD/DVD set, and aiding the design of a CD of the Geology of the Red Rocks-Dinosaur Ridge area to be used in a couple of visitor centers. Not to mention the fun I have been having while consulting with a company that is aggressively developing its oil and gas fields in northwest Wyoming. If that weren't enough, I have been elected President-elect of the RMAG and will serve my term as President in 2005. Can't say it hasn't been interesting!"

Wallace E. Brunson (B.S., 1942; M.A., 1954) is semi-retired and living in Houston, Texas, and writes, "The years are passing, but I still keep an office with Big '6' Drilling Co."

J. E. "Woody" Bryant (B.S., 1943; M.A., 1948) is a "semi-retired" independent geologist in Fredericksburg, Texas, and writes, "work on a few prospects annually."

Leonard C. Bryant (B.A., 1957) is retired and living in Helotes, Texas.

Thais Freda Bullard (M.A., 1951) is living in Austin, Texas, and writes, "I set up the Fred M. Bullard Fund for Student Research. Any and all donations to it will be very much appreciated! Fred Bullard loved his students!" Thais may be reached at thaisbullard@aol.com.

Robert Burger (Ph.D., 2002) is an Associate Program Director with the U.S. Science Support Program in Washington, DC, and can be reached at rburger@joiscience.org.

Susan Kiefner Cage (B.A., 1950) and **Warren J. "Jack" Cage, Jr.** (B.S., 1950) are living in Georgetown, Texas, and write, "no trips this year. Jack's health has not been up to it. We have enjoyed UT sports, although we hope for a better football ending next year. Always enjoy the *Newsletter*." They can be reached at circlesujak@aol.com.

Frank Kell Cahoon (B.S., 1957) is an independent oil operator in Midland, Texas, and writes, "having a great time with our children and grandchildren."

Amy L. Campbell (B.S., 1997) is a financial advisor with Morgan Stanley in Austin, Texas, and writes, "On a business note: I am in the final stage of obtaining my Certified Financial Planner (CFP) designation. On a lighter note: we spent a week hiking and camping in Big Bend National Park—first time back since Dr. Sharp's Fractured Rock Hydro field trip in 1996!" Amy can be reached at amy.campbell@morganstanley.com.

Donald H. Campbell (M.A., 1962) is the President of Campbell Petrographic Services, Inc., in Dodgeville, Wisconsin, and writes, "With retirement looming, I am beginning to think about distribution of many books, professional journals (*JSedPet*), and equipment. Until then, petrographic examination of cement, clinker, and concrete continues with vigor."

Donald M. Campbell (B.A., 1955) is retired and living in Abingdon, Maryland, and writes, "still living in Maryland, near the Bay. Currently working part-time at a new library about a mile away. Will be going to the family's Ocean City condo for a while this summer. We go there in off season too. Still see daughter, son-in-law, and granddaughter Kimberly most every day. Kimbo enters middle school next year. Gave several talks this year at schools on careers in geology and geophysics." Donald may be reached at dctexaslh@aol.com.

A. T. (Toby) Carleton (B.S., 1951; M.A., 1952) is a geologist and rancher in Midland, Texas, and writes, "family status the same. I am still involved in oil and gas and ranching businesses. Recently got into wind power electrical generation." A. T. Carleton is a member of the Geology Foundation Advisory Council.

Marvin T. Carlsen (B.S., 1952) is living in Midland, Texas, and writes, "At 87 I get angry at myself for not being able to do things like I once could. But I keep trying and thank the good Lord I still can. My memories of UT will never fade, and I applaud the leaders who are participating in the worthwhile effort to use the Jackson gifts to help make UT the uppermost college in the nation doing geological research, etc. Wish I could do more to help. Thanks for the memories!"

Danielle L. Carpenter (M.A., 1996) is an Exploration Advisor with ChevronTexaco and can be reached at danielle921@mindspring.com or at dcarpenter@chevrontexaco.com.

Richard F. Carroll (B.S., 1980) is a Senior Staff Geologist Onshore with Dominion Exploration and Production, Inc., in Houston, Texas, and writes, "I'm still working with Dominion and still enjoying both the work and the people I work with. My two boys, Ian (11) and Austin (9), are both doing great. I've also decided to expand my family, and to that end I am marrying a very beautiful woman, Tracy, with two wonderful daughters, Sydney (9) and Sheridan (7). Obviously I'm going to have to keep working for a while." Richard can be reached at richard_f_carroll@dom.com.

Jack C. Cartwright (B.S., 1951; M.A., 1955) owns his own business in Midland, Texas, and writes, "Barbara and I continue to be blessed by the life that the good Lord has given us. Our family continues to grow—the three daughters have given us nine grandchildren and six great-grandchildren. Next year (2005) will mark 50 years since graduate school and also 50 years of marriage. I continue to manage my business affairs from my home office." Jack may be reached at jccartw@sbcglobal.net.

Dave Casey (B.S., 1960) is retired and living in New Orleans, Louisiana, and writes, "really enjoying New Orleans but too much going on to keep up. Raye and I would love to hear from any classmates coming this way. Quite a few Geology grads in the area. Phone co. has me listed as Casey David Jr.; my number is 947-8379. Can't seem to get it corrected."

Dwight E. Cassell (B.S., 1954; M.A., 1958) is a self-employed petroleum geologist in Austin, Texas, and writes, "Participate as a working interest partner in maintaining and developing old, reliable, shallow oil production. Can't retire, having too much fun looking for one more location. Linda and I try to make cruises and traveling a regular occupation as time permits. Love going to off-the-beaten-track places. Anyone for Torres del Paine?" Dwight may be reached at declsc@texas.net.

Steve Clabaugh (B.S., 1940; M.A., 1941) is a Professor Emeritus at the Department of Geological Sciences at The University of Texas at Austin and writes, "Many geology students will recall gatherings at our weekend place on the Pedernales branch of Lake Travis, especially the annual fall graduate student parties during the 1960's era. There was room for volleyball, touch football, swimming, and boating, and the student society provided plenty of beer. The old house has been replaced by a new home for oldest daughter, Cathy, and husband. Stop by if you are near."

Jason Clayton (B.S., 2003) is a geotech with Patterson Petroleum, LP, in Austin, Texas, and writes that he is "working full time and reviewing schools for graduate studies." Jason can be reached at jasonlclayton@sbcglobal.net.

Joel Coffman (B.S., 1984) is a Senior Geologist with Napa County in Napa, California, and writes, "has been a great year! Was able to visit Austin twice—once in August when it was 110 degrees (not so fun) then in the past May when it was in the 80s (much better!) Still lead regulator for Napa County. Susan and I are doing great and miss Texas. We plan on permanently getting back there in the next couple of years (job opening announcements welcomed!). Hello to the 660 group of 1983!" Joel may be reached at geologistjc@yahoo.com or jcoffman@co.napa.ca.us.

Annette Peloquin Colgan (B.S., 1991) writes in from Houston, Texas, to say, "Gene and I are still in Houston. We welcomed the newest member of the family last May. At 1 year of age, Emily is a very vocal part of the family and happy to hang with her folks and two older brothers. Gene is still at Newfield looking at stuff in the Val Verde Basin, and I'm officially a soccer/baseball mom now. Look us up if you get to town." Annette can be reached at colgans@houston.rr.com.

John Cooper (M.S., 1964; Ph.D., 1970) is retired and living in Chino Hills, California, and writes, "I'm enjoying my retirement from teaching, but keep busy with a variety of projects, including managing Orange County, California's extensive fossil collection and continuing Ordovician studies in the southern Great Basin. I also continue as Managing Editor and Treasurer of Pacific Section SEPM and received their Lifetime Achievement Award last year. Retirement allows me the luxury of pursuing my other passions:

trail hiking (I average about 50 miles per week); following the Lewis and Clark Trail and attending all the Bicentennial Signature Events; and serving on several museum boards, where I help with exhibits and programs. I also just completed a very rewarding experience as a 6-year member of the Petroleum Research Fund's Geology Advisory Board."

Frank G. Cornish (M.A., 1975) is with Imagine Resources, L.L.C. in Corpus Christi, Texas, and writes, "established Imagine a year ago. Have two workstations and two joint ventures with UT alums. Have an undergraduate as a geotech. Hoping to drill more Wilcox wells, trying to get the complete Wilcox 3-D box set. Graduated Dante, oldest son, from University of Georgia. He has a landscape architecture degree (2 more grads to go, Trish and Darian). Last year we returned to Scotland, Isle of Skye." Frank can be reached at fcornish@interconnect.net.

Raymond W. Cozby III (B.A., 1983) is a Vice President and Trust Officer at Regions Bank in Tyler, Texas, and can be reached at raymond.cozby@regions.com.

Alan Cunningham (B.S., 1973) is President and Chief Operating Officer with Swift Energy New Zealand in Wellington, New Zealand, and can be reached at alanc@swiftenergy.com.

Hugh W. Curfman (B.S., 1948) is retired and living in Lafayette, Louisiana, and writes, "My partner since 1948—Jayne—passed away in April. Starting a new life."

Harris P. "Koop" Darcy (B.S., 1951) is an independent in Houston, Texas, and writes, "Visit or write to the Institute for Creation Research, P.O. Box 2667, El Cajon, California, 92021-0667 for their catalog. They have a great report on the geology of the Grand Canyon and Mt. St. Helens. Also visit or write to The Creation Evidence Museum, P.O. Box 309, Glen Rose, Texas, 76048. They have some great info on dinosaurs. Write for their catalog. If you are in the Pensacola, Florida, area, visit Dinosaur Adventureland."

Mike Darr (B.S., 1981) is an environmental consultant with MJDarrconsult, Inc., in Albuquerque, New Mexico, and writes, "doing groundwater and environmental planning work in New Mexico these last 12 years and loving it. Reminds me of GEO 660 at Sipapu—The Phantom Rules!" Mike may be reached at mjdarr@nmia.com.

Mary O. Davis (B.S., 1948) is retired and living in Tyler, Texas, and writes, "I became a Master Gardener this year, and I am still enjoying children and grandchildren."

Carlos Deere (B.S., 1950) is retired and living in Bellville, Texas, and writes, "The first well I drilled, many years ago, is still producing. The last well I drilled, also many years ago, was a dry hole. If it had been the other way around, I'd still have to show up for work. Not a pleasant thought!"

Frederik E. Dekker (M.A., 1966) is the Managing Director of Wessex Exploration, Ltd., in London, England, and writes, "Wessex Exploration is growing apace, with exploration projects in southern England, French Guiana (Guyane), and southwestern Morocco. Visit our website to learn more about us (www.wessexexploration.co.uk)." Frederik may be reached at fdedeker@wt.net.

Patricia Wood Dickerson (B.A., 1970; Ph.D., 1995) is a Visiting Research Fellow at the Department of Geological Sciences at The University of Texas at Austin, and writes, "Happily mapping

for the Park Service and continuing my own research in the Big Bend; I expect to present some of those results at the GSA meeting in Denver. Hoping for reunions with many of you there! Satisfying to have several publications out. Along with others from this Department (Kempter, Coley), I serve as a study leader for Smithsonian tours to Iceland, the northern Rockies, Newfoundland/Labrador, and Costa Rica. Work for NASA continues under a grant for developing geophysical instruments/robotic devices for planetary exploration; collaboration on astronaut field training in New Mexico continues as well. From a base in the UT Geology Library, I review and index publications, particularly Spanish-language materials, for inclusion in GeoRef (AGI). I'm relishing the travel, not only for field work, research, lecturing and tours, but also for Argentine tango!" Pat may be reached at patdickerson@earthlink.net.

Jane Ormond Dinkins (B.S., 1938) is retired and living in Houston, Texas, and writes that she "sold the Washington County farm, now retired from ranching."

Robert E. Doyle (B.S., 1955) is the President of American Energy Investment Group in Houston, Texas, and writes, "We are still very active in Russia, where oil development activity is at a high level and the potential is significant. Give me a call at 713-334-4464 and let's discuss."

Jack Drodody (Ph.D., 1978) is a Senior Scientist at Baker Hughes Fluids in Houston, Texas, and writes, "still at Baker Hughes doing core analysis and formation damage studies. Lots of changes for us recently; after two floods in Houston, we moved to 'higher ground' in the Spring-Woodlands area. Things are no longer quiet in the Drodody household since adopting Daniel (7) and sister Leesa (5) from Ukraine in 2002. They're a lot of fun and are doing great in their new home." Jack may be reached at jack.drodody@inteq.com.

Ralph C. Duchin (M.A., 1955) is an independent in Tucson, Arizona.

Don Dunbar, Jr. (B.S., 1951) is a General Partner with Dunbar Oil and Gas, Ltd., in Corsicana, Texas, and writes, "We count a geophysicist, a geologist, and a petroleum engineer in the next generation in the FLP. News you might not get: **Scott D. Spradlin** (M.A., 1980) has moved from Halifax to Baku, Azerbaijan, to run the ExxonMobil efforts in the Caspian Sea, as of 5/1/04, in partnership with BP"

Bobby G. DuPree (B.S., 1954) is retired and living in Huntsville, Texas, and writes, "Lerla and I doing great! 16 grandchildren, 1 great-grandchild. I'm still spending about 12 hours per week ministering 1 on 1 to inmates in 2 units at TDCJ."

Alan R. Dutton (Ph.D., 1982) is currently living in Austin, Texas, but writes, "I will join the faculty of The University of Texas San Antonio as an associate professor in the Department of Earth and Environmental Science starting in fall 2004. I'm leaving the Bureau of Economic Geology, where I have worked on many varied hydrogeologic studies for the past 22 years, since getting my Ph.D. in 1982."

Fred A. Ealand (B.S., 1948) is retired and living in Houston, Texas, and writes, "happy to report health and happiness are continuing to smile on our family. Oldest grandson is to marry UT grad in October 2004."

Patricia Mench Ellis (Ph.D., 1985) is a hydrologist with the State of Delaware in Newark, Delaware, and writes, "I'm still

working as a Hydrologist for the State of Delaware. Much of my time the past year has been spent on a project in Rehoboth Beach, one of Delaware's resort towns, where 14 wells have been impacted by fairly high concentrations of gasoline. We're in the design phase of extending a public water line into the neighborhood—a project that will probably exceed \$500,000. To investigate the plume, we've been installing some neat multi-level monitoring wells. I've also been teaching and developing guidance documents on gasoline oxygenates with the Interstate Technology Regulatory Council, and was just recruited by EPA to work on EDB and EDC, lead scavengers from the old leaded gasoline days. I'm getting ready to leave on a 3-week trip with my kids and a group from school—India, Nepal, and Tibet. We're leaving husband Dave behind to cat-sit. Provided that we manage to get through Nepal alive (it's in the middle of a Maoist uprising, with strong warnings from our State Department to avoid travel there), we should make it to the Everest Base Camp in Tibet by mid-June. Those of us who live barely above sea level will see how little oxygen there is in the air at 17,056 feet! Looking forward to eating yak meat and drinking hot yak-butter tea for 2 weeks of the trip." Patricia may be reached at pme-quilt@comcast.net or patricia.ellis@state.de.us.

Rizer Everett (B.A., 1937; B.S., 1937) is retired and living in Austin, Texas, and writes, "enjoying attending LAMP (Learning Activities for Mature People) meetings and visiting octogenarian friends in Texas." Rizer may be reached at rizere@aol.com.

Irma Morgan Feibelman (B.S., 1959) is retired and living in Canyon Lake, Texas, and writes that she "continues to live on the most beautiful lake in Texas."

Hewitt B. Fox (B.A., 1947; B.S., 1948; M.A., 1948) is the President of Hewitt B. Fox, Inc., in Corpus Christi, Texas, and writes, "I am in the process of promoting my largest and most valuable prospect in Utah, where I have over 55,000 acres leased and very good shows from geochem, radiometrics, aerial resistivity and conductivity surveys, magnetics, etc., plus wells drilled into the Devonian with oil shows that could not be tested before well collapse. I am also enjoying the high prices of oil and gas!" Hewitt may be reached at hewittbfoxinc@aol.com.

Curtis C. Franks (B.S., 1950) is retired and living in Fair Oaks Ranch, Texas, and writes, "getting older and hopefully wiser but enjoying it in spite of all the unbelievable thinking and changes our world is experiencing. I recently had occasion to visit the geologic library in the new (to me) Jackson building on campus in Austin. An enjoyable and impressive experience. Even found the information I was looking for. My best to all."

Annabelle Bannahan Friddle (B.A., 1945; M.A., 1950) is retired and living in Aztec, New Mexico, and writes, "The 55 years since I was enrolled at the college have gone by fast. I enjoy the *Newsletter*. It has been so great to keep in touch. Thank you."

Henry B. Gayle (B.A., 1958; M.A., 1960) is retired and living in San Antonio, Texas, and writes, "Margee and I are still ticking along—gardening when we must and traveling when we can. Margee got one of her travel wishes—a Panama Canal cruise last year, and we took our daughter and granddaughter on a Western Caribbean cruise too. Leaving tomorrow on a 3-week driving trip to DC to see Margee's niece get her L.L.D." Henry may be reached at mhgayle@satx.rr.com.

Paul Giraudin, Jr. (B.S., 1948) is retired and living in Corpus Christi, Texas, and can be reached at pgiraudin@juno.com.

Georgette Covo Browder Goble (B.A., 1944) is a homemaker and community volunteer in Waco, Texas, and writes, "How exciting it was to read that the Jackson School is being designated as a campus-level school with its own dean and tuition and fee incentives that will attract outstanding graduate students." Georgette may be reached at gcb@grandecom.net.

Charles A. Goebel (B.S., 1980) is living in Plano, Texas, and writes, "staying very busy 1) consulting and 2) getting nearer to having my projects drilled. Playing a little tennis, too. Please keep in touch at pres@santaritaenergy.com and www.santaritaenergy.com. Oldest heir—son—will be a freshman at UT Arlington Honors College in fall 2004, then move to UT-Austin in fall 2005."

W. Leonard Goode (B.A., 1953) is a consulting geologist in Midland, Texas, and writes, "Health remains good. Slowing down a bit. Same wife and children. Hope everyone has a good year."

Ian T. Gordon (M.A., 1997) is living in San Francisco, California.

Edwin R. "Win" Goter (M.S., 1973), with Shell E&P in Houston, Texas, writes "seems like quite a few years have passed since I last 'reported in' to the *Newsletter*. Things have been pretty stable for me in the meantime. Linda and I had our 25th anniversary last year, and I'm going on 27 years with Shell. (When I write these numbers I feel as though they must apply to someone else.) Our older daughter Allison just finished her first year at A&M. (Yep, my daughter's an Aggie, despite my lobbying! I've had to retire all my Aggie jokes.) Younger daughter Liz is going into 5th grade, and signs of becoming a teenager are already showing up. I've been working Nigeria Deepwater for 3 years now, and it is a 'Happy Hunting Ground' for an oil explorer. Very active area with some good finds made and more expected. Lots of travel involved, 11 trips across the pond in 12 months. I always enjoy reading the *Newsletter* and finding out how things are going for everyone. Also brings back good memories of fellow students, great professors, a fantastic department, and living in the 'student's paradise' of the Austin of old." Contact him at goterel@earthlink.net.

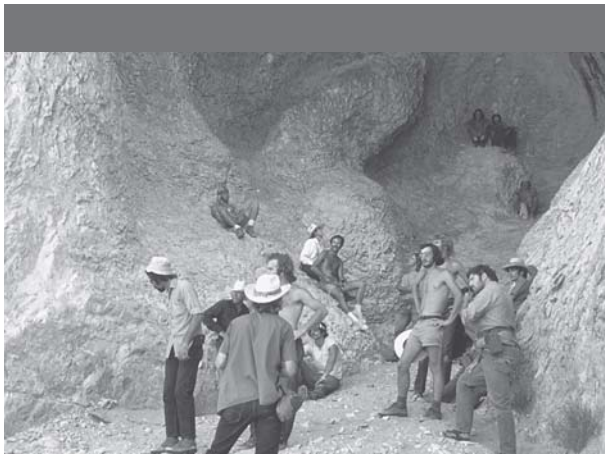
Ronald L. Graner (B.A., 1958) is retired and living in Brentwood, Tennessee, and writes, "still enjoying good health and the fruits of retirement in beautiful Brentwood, Tennessee. My interests include volunteer work at church, Habitat for Humanity, Brentwood Historical Society, Sons of the American Revolution, golf, travel, and grandchildren's activities." Ronald may be reached at ron@graner.us.

Amy Gray (B.S., 1995) is living in Austin, Texas.

C. DeVearle Gray (B.S., 1957) is retired and living in Kerrville, Texas, and writes, "no change in habitat. Still continue golf along with other minor hobbies. Glad to be out of oil and gas business and not answering questions about high gas prices from people who do not have a clue. The Department is doing outstanding work with all the recent growth. You are to be commended."

Robert Wynn Grayson (B.S., 1948) is retired and living in Austin, Texas, and writes, "glad to have **Pete Rose** in business here in Austin."

Nancy Elizabeth Green (B.A., 1955) is a housewife living in Houston, Texas, and writes, "Ray [Lister] is still enjoying real estate development. We're busy being grandparents, hunting, fishing and traveling. Have been to the Grand Canyon twice in 8 months. It's so spectacular! We go to Colorado whenever possible. It too is great. 'Hello' and our best wishes to all of you!"



GEO 660 1973 Summer Field Course in Big Bend National Park, Texas. Photo by James Engelbrecht.

Will Green (M.A., 1955) is an independent consultant in Midland, Texas, and writes, “participated with small working interests in four drilling ventures during 2003, resulting in three producers and one dry hole. Enjoyed attending my spouse’s (Marianne’s) 50th reunion at UT in April 2004.”

Robbie Gries (M.A., 1972) is the President of Priority Oil and Gas, L.L.C., in Denver, Colorado, and writes, “spent three weeks in eastern Europe, and geology contacts make travel delightful. Four years of ‘house and yard’ remodel finally coming to a close—back to full-time petroleum geology now! With UT’s Dr. Sharon Mosher we’re finally launching GeoScienceWorld, an electronic aggregate of geoscience publications! Great asset for universities and companies!” Robbie is a member of the Geology Foundation Advisory Council and may be reached at rrgries@aol.com.

Bryan A. Griffin (B.S., 1996) is working for Liberty Power in Houston, Texas, and writes that he is “trying to keep exploring and learning as much as I can. Not doing geology but still have that wildcatter spirit.” Bryan can be reached at bryan_a_griffin@sbcglobal.net.

Joy Griffin (M.S., 2001) is a geologist with Marathon Oil in Houston, Texas, and writes, “My new name is Joy G. Thomas. John and I were married in April 2002. I joined Marathon in 2001 and have been working the deepwater Gulf of Mexico in exploration ever since.”

John C. Griffiths (B.S., 1975) is the President of Calvin Resources, Inc., in Houston, Texas, and writes, “generating and participating in oil and natural gas projects in East and South Texas. Working with **Ray Pilcher** (B.S., 1975) on a startup company that has a patented process that can make stranded natural gas marketable. Working with a major international engineering consulting group on a secondary oil recovery project in one of the larger producing fields in the United Arab Emirates. I appreciate being able to remain in contact with and work on projects with so many of the friends that were made at UT, like Ray, **John Drake**, **Leslie Provence**, **Keith Haun**, and others.” John may be reached at jgriff@calvinresources.com.

Furman A. Grimm (B.S., 1947) is retired and living in Temple, Texas, and writes, “retired fully after a recent move to Temple. Travels and golf occupy much of my time. Enjoy frequent visits with our son Mike, a 1977 graduate of UT-PLM. He serves as President of the Dallas-based Rising Star Energy Co., an independently owned exploration and production company.”

Roy H. Guess (B.A., 1939; M.A., 1940) is a consultant in Casper, Wyoming, and writes, “The price of oil and gas is great. It really should cause a lot more exploration than it has so far. My nanotechnology stocks are doing great. Fuel-cell stocks are slow to move. Australia and New Zealand stocks do well and pay good dividends. At 86 the market keeps my mind alert. Best regards to UT geologists.”

Bill Gumert (M.A., 1968) is a geophysicist with Carson Aerogravity Division in Perkasi, Pennsylvania, and writes, “just completed the most interesting helicopter-borne aerogravity survey of my career. Collected 40,000 kilometers of data over the salt basin in the Mexican portion of the Gulf of Mexico. Flew out 250 kilometers from the coast in areas previously unexplored by Pemex. Also had to collect 50,000 kilometers of bathymetric data, some in waters over 3000 meters deep. Looks just like the Texas Gulf, and Pemex has prospects for many years to come. My thesis was on airborne gravity, and the company that I am with was the only one in the world offering this exploration service until the mid-90’s. Now there are 10 different companies doing it in one form or another.”

Albert Haertlein (B.S., 1978) is a geologist with SG Interests in Houston, Texas, and can be reached at ahaertlein@sginterests.com.

James J. Halbouty (B.A., 1942; M.A., 1943) is retired and living in Houston, Texas, and writes, “looking at pictures of me with fellow students on field trips or in a group sure brings back fond memories. Again, best regards to all who are around.”

Robert W. Hare (B.S., 1979) is an independent geologist in Fort Worth, Texas.

Erik (B.S., 1989) and **Monica** (B.A., 1990) **Harris** are living in Austin, Texas, where Erik is a Civil Engineer and Project Manager and Monica is an Investigation Program Coordinator. They write, “Erik is a Project Manager for the City of Austin Public Works Department. Monica coordinates the storm water and concentrated animal feeding operations investigation programs for the TCEO. Our two daughters, Ingrid (6) and Camille (4), both love science, and each has her own rock collection.”

H. Lee Harvard (B.A., 1955) is Chairman of the Harvard Petroleum Company, L.L.C., in Roswell, New Mexico, and writes, “My wife Joanne (Wertz—UT ‘55) and I are in good health and will celebrate our 50th anniversary in August. I remain active drilling and producing wells primarily in New Mexico and West Texas. Our son Jeff (petroleum engineering, UT ‘84) is President of HPC and is going an excellent job—both for the company and the industry (past President of Independent Petroleum Association of New Mexico). He and his wife Jane (UT ‘86) have two children, Jeremy, 12, and Julia, 9, whom we enjoy spoiling.”

Hugh Hay-Roe (M.A., 1952; Ph.D., 1958) is a Senior Vice President for BPZ Energy Inc, in Kingwood, Texas, and writes, “am still looking for oil in onshore and offshore Peru. Congratulations to the J.S. of G. on its promotion to a campus-level school! Professors Ronald K. DeFord and Samuel P. Ellison would be proud.” Hugh can be reached at hhr@hal-pc.org.

The Reverend Reid Hensarling (M.A., 1981) is living in Lakeland, Florida, and writes, “Congratulations to the Jackson School of Geosciences for the very exciting prospects for development and enlargement of its influence in the scientific and academic communities. The School’s impact upon our culture is potentially far-reaching and substantial. May your future goals and vision be realized and implemented to the fullest degree.”

Jon Herwig (M.A., 1982) is the Vice President of CH2M Hill in Kailua, Hawaii, and writes, “still enjoying island living and doing a lot of work in Korea and Japan in support of U.S. military relocations and consolidation. Becoming a part-time resident of Seoul—an exciting and safe big city with monumental traffic and air pollution problems. Korean is coming along but unfortunately slowly. *Annyonghaseyoto* to all!” Jon may be reached at jherwig@ch2m.com.

Charles H. Hightower, Jr. (B.S., 1956) is an independent petroleum geologist in Lafayette, Louisiana.

Nolan Hirsch (B.S., 1944) is the President of MVC, Inc., in Midland, Texas, and writes, “still active, still exciting, awarded West Texas Pioneer Certificate on May 27th. To quote a great philosopher, ‘it’s not over ‘til it’s over,’ steady as she goes.”

Dave Hixon (M.A., 1959) is semi-retired and living in Friendswood, Texas, and writes, “expanding my M.A. thesis at Big Bend by looking and sampling (with their permission) Buda, Del Rio and Boquillas flagstones.”

William C. Holland (B.S., 1981) is a geologist in Missouri City, Texas, and writes, “Hope all is well. Always remember the mapping clan. Such great memories!!”

James W. Hood (B.S., 1948) is retired and living in Salt Lake City, Utah, and writes, “little change of late. Eva and I are comfortable in retirement, with few debts and a lot of correspondence with relatives and friends. Both are in relatively good health but have ongoing problems. Celebrated our 58th anniversary on 3/16/04.”

Jennifer Glasford Hood (M.A., 1989) is living in Calgary, Alberta, Canada.

Ben P. Hooper (B.S., 1980) is an Exploration Manager with Joy Resources in Houston, Texas, and can be reached at joseyhoop@msn.com.

James V. Hooton (B.S., 1949) is retired and living in Fort Worth, Texas.

Eleanor M. “Ellie” Hoover (B.S., 1956) is a consultant in Conroe, Texas, and writes, “strolled through the halls of the beautiful new addition to the Geology Building after a game last football season—what a generous donation from the Jacksons. Good news about the new Jackson School of Geosciences. Had some increase in work along with new drilling the past year. Cheers to all.”

Jack M. Howard (B.S., 1951) is retired and living in Austin, Texas, and writes, “same wife, 55 years, same house, 43+ years. Both son and daughter live in Austin. Three grandchildren. Great trip to Maui in 2003. Our life is blessed.”

William P. C. Hudson (B.S., 1975) is the CEO of Paseo de la Resaca in Brownsville, Texas, and writes, “still loving deep South Texas—baby graduated Citadel, now third ID 18th Airborne. Join me for a margarita in sub-tropical paradise.”

Kim Huebel (B.A., 2003) is living in Austin, Texas.

Edward W. “Ed” Hughston (M.A., 1950) is retired and living in Taos, New Mexico, and writes, “nothing new except the death of Joan Hughston, my wife of 54 years, in July 2003. Joan was one of the very fine oil painters and teachers in Taos. Had been

together since the fall of 1945. We met as freshmen at SMU (I was 16 years old, Joan was 17).”

Emmett A. Humble (M.A., 1951) is retired and living in Houston, Texas, and writes, “Retirement provides me more time with family, including a 6-year-old great-grandson, and community service work with the Boy Scouts and supports my research in Houston’s Medical Center.” Emmett can be reached at ehumble@houston.rr.com.

Gary Hummel (M.A., 1982) is a geologist with LLOG in Houston, Texas, and writes, “I changed jobs about a year ago and am now a consultant for LLOG. Still exploring for oil and gas offshore Gulf of Mexico. Kiki and I enjoy birding whenever we get the chance. We have two boys, Max (age 11) and Kurt (age 7).” Gary can be reached at garyh@llog.com.

Elvin M. Hurlbut, Jr. (B.S., 1943) is retired and living in Tyler, Texas, and writes, “have had quite a number of phone conversations with old friend Clay Durham, reminiscing about colleagues and trips and World War II experiences over 60 years ago. Very enjoyable. Congratulations to President Faulkner for a Dean-led separate entity for the Jackson School of Geosciences on the UT-Austin campus. Virginia and I still keeping the doctors in business.”

Daniel C. Huston (M.A., 1987) is a Vice President with Hunter 3-D, Inc., in Houston, Texas, and writes, “Holly and I have a couple of papers coming out this year. One is on gravity modeling in the deepwater GOM and the other involves geostatistical techniques applied to gravity, seismic velocities and well log data. The geostat. paper is under review for *The Leading Edge* and the other has been accepted for an upcoming SEG volume on potential fields applications. Our consulting business has slowed up a bit, which gives us more time for following up some ideas, hence the papers. Kids are doing well, but our first Yegua well has a problem with collapsed casing. *Que sera, sera.*” Daniel may be reached at hunter3d@wt.net or via his work website, www.hunter3dinc.com.

William Clyde Ikins (B.S., 1938; M.A., 1939; Ph.D., 1941) is retired and living in Georgetown, Texas, and writes, “Here I am at 88 years old and right back close to my alma mater! ‘How sweet it is!’ I used my degree all my life working for Dow and having my own oil company. I minored in botany and have also had a water plant business for many years. I feel I got a wonderful education at UT and I’m very proud to be a ‘Pioneer Texas Ex!’”

Russell W. Jackson (B.S., 1976) is a geologist in Tyler, Texas, and writes, “still have a boom going on here in East Texas. Always like to hear from UT geologists if in the area.” Russell may be reached at rwjtogi@cox-internet.com.

Otis James (M.A., 1952) is an independent living in Gainesville, Texas, and writes that there have been “no changes.”

Ken L. Jarratt (B.S., 1957) is the owner of Jarratt Realty in Edna, Texas, and writes, “still selling real estate, fishing, and hunting. Sure hope U.S. oil companies get a chance to start drilling—we need more oil now. Keep hoping the ‘Horns will beat OU this year.”

Charles B. John (B.S., 1951) is a geologist in Tulsa, Oklahoma, and writes, “working at BLM, Tulsa, principally on the thrust belts of the Ouachita Mountains. Norma and I will celebrate our 58th year of marriage this October 2004. God has blessed us beyond measure. Thanks to UT-Austin Geology Department for my start.”

Ms. Gene (Funkhouser) Keyser Jones (B.A., 1948) is retired and living in Midland, Texas, and writes, "It rained in West Texas this year—and we see green everywhere, wildflowers, and an occasional rig on the horizon—welcome sights! I am well, busy, and looking forward to hearing about friends I keep up with through the *Newsletter*. You do a great job!"

J. Phil Jones (B.S., 1964) is a Land Advisor with Devon Energy Corp. in Edmond, Oklahoma, and writes, "moved from Regulatory Affairs Barnett Shale–Fort Worth Basin and being pursued by 14 rigs to Arcoma Basin—CBM and 2 rigs. Either way the activity level is high. Hopefully this activity will dent the ever-growing demand for natural gas. I'm looking forward to a week fishing the Madison and Galletin in and around Yellowstone. Congratulations on being designated as a campus-level school. We are all very appreciative of the Jacksons' generosity and for the increased level of influence. Best wishes for another successful year." Phil may be reached at phil.jones@dvn.com.

E. A. Karper (B.S., 1941) is the owner of The Karper Co. in Graham, Texas, and writes, "You do not like to call your old friends or classmates because the usual answer is they are no longer with us. It is good to hear about the Jackson School."

Steven G. Katz (Ph.D., 1975) is in the e-commerce business in Granville, Ohio, and writes, "Connie and I continue to enjoy living in Granville, Ohio. Regards to the gang at UT!"

Peter C. Keller (M.A., 1974; Ph.D., 1977) is the President of Bowers Museum in Santa Ana, California, and writes, "I've been traveling a great deal in search of great exhibits. Six trips to Tibet in 18 months. Did a major gemstone exhibit last year that I'm now sending to Shanghai, so all is not lost on geology and all that Steve Clabaugh taught me!" Peter may be reached at pkeller@bowers.org.

Ed R. Kennedy, Jr. (B.S., 1948; M.A., 1949) is a consulting geologist in Midland, Texas, and writes, "still enjoy working, but work shorter hours."

Don Kerr, Jr. (B.S., 1960) works for Kerr Construction Services in Houston, Texas.

Marcus Key (B.S., 1983) is an Associate Professor of Geology at Dickinson College in Carlisle, Pennsylvania, and writes, "This summer I am doing field work in Estonia, collecting Ordovician bryozoan fossils to analyze their oxygen isotopes for paleoclimatic information." Marcus may be reached at key@dickinson.edu.

Howard W. Kiatta (B.S., 1958) is an independent geologist in Houston, Texas.

Robert J. Killian (B.S., 1977) is a geologist with Texana Resources in Houston, Texas, and writes, "getting ready to drill some exciting wells in Galveston Bay and South Louisiana. Big reserve prospects especially attractive with high crude/gas prices!" Robert can be reached at mavrah@yahoo.com.

Don Kirksey (B.S., 1960) is in waste management consulting in Oklahoma City, Oklahoma, and writes, "At 67 I have not retired yet. The only retirement has been from an 8–5 busy corporate job of 30 years in oil and gas exploration. My wife B. J. and I work hard in our waste management consulting business, but we work at home on our own time schedule and I'm the boss. We have just finished a 5-year project of developing an education program of a short course, manuals, and mentoring for those who would like a new career in waste

management. If you are interested, you can visit our web site, www.wastemanagementconsulting.com. Our family is well. For fun we spend 2 to 3 months a year in our RV in Oklahoma state parks and enjoy our grandchildren a great deal."

Fanchen Kong (Ph.D., 1998) is a Geological Specialist in Houston, Texas, and writes, "I currently work in the GOM Deepwater Exploration department in Kerr-McGee Oil and Gas Corporation." Fanchen may be reached at fkong@kmg.com.

Erwin K. Krause (B.S., 1949; M.A., 1954) is retired and living in Houston, Texas, and writes that he is "trying to stay alive in Houston...it gets more difficult each year."

Karen Carter Krogh (M.A., 1985; Ph.D., 1990) is living in Apex, North Carolina, and writes, "reaching elementary school children through SCIENCE! They are wonderful, excited little sponges for cool experiments! I enjoy feeling like I'm making a difference." Karen may be reached at ut@kroghsnest.com.

Ralph Kugler (Ph.D., 1987) is a Geoscience Manager with Schlumberger in Medias, Romania, and can be reached at rlkugler@arenisca.com.

J. Scott Kuykendall (B.A., 1975) is a geologist in San Antonio, Texas.

Ted B. LaCaff (B.S., 1950) is living in Santa Fe, New Mexico, and writes, "still in Santa Fe: enjoying the good news (oil at \$50 a barrel) not enjoying the bad news (gasoline at \$2.25 a gallon), enjoying the good news (natural gas at \$6/MCF), so I guess two out of three is not bad!" Ted may be reached at tedlatx@aol.com.

James L. Lamb, Jr. (B.S., 1956) is an oil and gas producer in Austin, Texas.

Cori Lambert (B.S., 1996; M.S., 2000) is a geologist with EOG Resources, Inc., in Corpus Christi, Texas, and can be reached at cori_lambert@hotmail.com or at cori_lambert@eogresources.com.

Leon M. Lampert (B.S., 1951; M.A., 1953) is an independent geologist in Dallas, Texas, and writes, "still doing some exploration in New Mexico and South Texas. Also buying producing royalties in Texas, Rockies, and Midcontinent. Enjoyed seeing some 'old' friends at the April '04 Dallas convention. We have two grandchildren in Dallas (one of whom will attend UT-Austin in September '04) and three more grandchildren in Denver. Also have my original wife of 51 years."

Bill Layton (B.S., 1981) is a petroleum geologist in San Antonio, Texas, and writes, "still exploring the Texas Gulf Coast with Burk Royalty Co. Daughter Jessica is a junior at UTSA and son Jordan is a junior in high school. K.C. and I stay busy with camping, handball, and visiting friends when not working. Special hello to all 1981 660 friends...remember: the Phantom ruled the Sipapow Youth Gang!" Bill may be reached at laytonbrc@sbcglobal.net.

H. Louis Lee (B.S., 1954; M.A., 1958) is a consultant in Austin, Texas, and writes, "Austin is a great place to have a consulting office. More and more of the new geologists in town are making the move from Houston. I am still working in the 3-D seismic on some Gulf Coast shoots and having a great time. Success is only a bright spot away!"

David M. Levin (B.A., 1978) is the owner of Power Petroleum in San Antonio, Texas, and can be reached at powerpet@juno.com. David writes, "doing lots of very cool and exciting exploration and production geology. Never

thought I would have this much fun for so many years. Hello Casita Alta crew.”

Ning Li (Ph.D., 1998) is living in Irving, Texas, and can be reached at ning_1898@yahoo.com.

Tung-Hung Thomas Lin (M.A., 1984) is a Senior Staff Geophysicist with Devon Energy Corporation in Houston, Texas, and can be reached at thomas.lin@dvn.com.

Allen C. Locklin (B.S., 1954) is an independent in Tyler, Texas, and writes, “Just as I’m exhausting my limited reserves of oil and gas we get tremendous prices. I’m glad anyway—Nancy (Summers) and I will log 50 years of marriage on August 14, 2004. We have been richly blessed. Granddaughter Macy Shaver will be a junior at UT next semester. I’m spending most of my time writing novels. If anyone is interested, I have finished three. All are for sale. Write me at P.O. Box 633, Tyler, TX, 75711. Still enjoy the *Newsletter* very much.”

T. E. “Ted” Longgood, Jr. (B.S., 1958; M.A., 1960) is retired and living in Austin, Texas, and writes, “continue to enjoy the retired life. Also enjoy living in Austin and attending sports and school events.”

Bill Mantinband (B.A., 1959) is retired and living in St. Louis, Missouri, and writes that he’s “been retired for a year now, and like everyone, busier than ever in volunteer jobs. It’s what you call a labor of love.” Bill may be reached at bill@mantinband.com.

Thomas P. Markel (B.A., 1973) is the Vice President and CFO of Vernon Faulconer Oil and Gas in Tyler, Texas.

Cristopher Marshall (B.S., 1997) teaches high school science at The Colony High School in The Colony, Texas, and can be reached at crism@c-zone.net.

Sabin W. Marshall (B.S., 1952) is retired and living in Houston, Texas.

Louis M. Martinez (B.S., 1954) is a Senior Geologist with Copano Energy in Houston, Texas, and writes, “still active and enjoying the work. I’m now learning to use a workstation, but not very well. All children and grandchildren live in Austin, so we go there often. Best regards to all!” Louis may be reached at lou.martinez@copanoenergy.com.

Robert Warren Mathis III (M.A., 1947) is retired and living in Texarkana, Texas.

Sharon (Pickett) Maxwell (B.S., 1978) is a Ministry Assistant with the First Baptist Church of Dallas in Dallas, Texas, and writes, “Steve and I have been blessed with 22 years of marriage, and look forward to the remainder of our lives together! Nathan is 17 and will be a senior in high school in fall 2004. It’s hard to believe that he’s already almost grown! Raising a teenager has its challenges and rewards—we’re also looking forward to when he grows up and we get smart again! God continues to bless us professionally and in ministry, and we’re very thankful. I’d love to hear from some of y’all—Charlie and Linda, Rick, Janet, James, and others from our time at UT!” Sharon may be reached at smaxwell1@hotmail.com or smaxwell@firstdallas.org.

Robert L. McBroom, Sr. (B.A., 1951) is the Owner of Hueco Glorioso Oil Company in Wichita Falls, Texas, and writes, “still hunting for oil in North Texas, East Texas, and Utah. East Texas and Paluxy “A” sand have been good to me in the past 2 years. Good luck to everyone!” Robert may be reached at macescoba@aol.com.



GEO 660 1973 Summer Field Course at Dark Canyon Cave, New Mexico, Dr. Jim Sprinkle (in back, wearing cowboy hat) leading the way. Photo by James Engelbrecht.

Bill J. McGrew (B.S., 1954; M.A., 1955) is retired and living in Columbia, Tennessee, and says that “everything is the same.”

Wayne E. McIntosh (B.S., 1956) is a consulting engineering geologist in Rio Rancho, New Mexico, and writes, “seems like I just filled out a *Newsletter* card. Time sure passes fast. Still consulting and doing as much ‘RVing’ as we find the time and money (100-gallon diesel tank). Grandchildren still expanding, and maybe there will be some future Longhorns in the mix.” Wayne can be reached at wemhuz1@aol.com.

Thomas E. McKenna (Ph.D., 1997) is a hydrogeologist with the Delaware Geological Survey in Newark, Delaware, and can be reached at mckennat@udel.edu.

W. N. “Mac” McKinney, Jr. (B.A., 1960; M.A., 1963) is a semi-retired geologist in Spring, Texas, and writes, “I’m still involved in drilling gas wells in the Texas Panhandle. Also building a new house here in Spring. Trying to retire, but I’m too busy.”

Joe N. Meadows (B.A., 1962) is a Justice of the Peace in Waco, Texas, and writes, “When in Waco, come down to the courthouse and we can swap stories.”

William J. Meek (B.A., 1955) is the president of William J. Meek Insurance and Financial Services, Inc., in Arlington, Texas, and writes, “still in the insurance and financial planning business. Started building ‘spec’ houses last year in Golf Resort (The Retreat) near Cleburne, Texas. Didn’t think I had enough to do! Grandkids are growing up—oldest grandson is in his first year at the U.S. Naval Academy in Annapolis, Maryland. Until next year!”

Charles M. Merrill (B.S., 1956) is retired and living in Austin, Texas, and writes, “just recently added sixth grandchild (girl). Promised her dad I’d try to make her high school graduation. Great Scott!! I’ll be 90 years old then! If I’m still around, I just hope I know who I am, who she is, and why I’m there. Still attend the Austin Geological Society meetings even though I left the oil patch and the profession 44 years ago. I’m amazed at all the new geological lingo and high-tech stuff. For me, just being able to operate a fax machine is hi-tech. Only the presence of a couple of old classmates assures me that I just didn’t walk into the wrong meeting by mistake. Life is good in far Southwest Austin for this old ‘shade tree’ geologist as he sits in his outdoor chaise lounge, sipping a cold one, and reminiscing about Fuzzy’s in Llano and those memorable summer field trips.” Charles may be reached at austinmerrills@hotmail.com.

Anne (Smith) Miller (B.A., 1983) is a Project Manager with the Texas Commission on Environmental Quality in Austin, Texas, and can be reached at aesmiller@aol.com.

Michael Reed Miller (B.S., 1980) is a geologist in Austin, Texas, and writes, "visited Germany this year, took our band (About Seven) to play in Irish pubs there. It was a hoot. Go to our website, *bitte* (<http://home.austin.rr.com/about7/>). Hey Scum!!" Michael may be reached at mike.citysurvey@birch.net.

Wayne D. Miller (M.A., 1957) is a consulting geologist in Midland, Texas, and writes, "still busy consulting and doing regional studies. Finished drilling on a development prospect. Have three re-entries plus two new drills completed. Unfortunately, they did not have the production rates hoped for—that's the oil business. Family fine and looking forward to another busy year." Wayne may be reached at wdmillergeol@aol.com.

Robert J. (B.S., 1986) and **Catherine L. (Mayes) Morris** (B.S., 1985; M.A., 1988) are living in Dallas, Texas, where Robert is Vice President of Lyons Manufacturing and Cathy is a homemaker. They write, "We have three children and are enjoying watching them grow up. James is 10, Matt is 8, and Caroline is 4."

Jerry Namy (Ph.D., 1969) is the President and CEO of Texland Petroleum, L.P., in Fort Worth, Texas, and writes, "have enjoyed 26 years of exploration and management with Texland Petroleum. Susan and I love living in Fort Worth near all three of our children. Rapid-fire technological advances make keeping up a continuous challenge. Still a great deal left to find in the Permian Basin. Best regards." Jerry may be reached at jnamy@texpetro.com.

Holly Nance (M.S., 2003) is a Ph.D. student at the University of North Carolina in Chapel Hill, North Carolina, and can be reached at hnance@unc.edu.

G. Allan Nelson (B.S., 1947) is a consultant in Westminster, Colorado, and writes, "After officing in downtown Denver for 46 years, I'm moving office home. Still plan to work full time. I'm only 82. I have coffee with UT classmate, **John Osmond** (B.S., 1947)."

Paul Neumann (B.S., 1987) is now in Houston, Texas, and writes, "After 10 years in South America, I have relocated to our corporate office in Houston, Texas, to become Operations Manager for our Gulf Coast region. I will be keeping busy at Gyrodata as our new GWD and Rotary Steerable Divisions are really taking off."

Isaac W. Norman (B.S., 1948) is retired and living in Taylor, Texas.

Bob R. O'Brien (B.S., 1952; M.A., 1956) is retired and living in San Diego, California, and writes, "visited the campus for the first time since dedication of 'new' geology building in the mid-1960's. All I can say is awesome! Finally retired now and plan even more travel. Australia and New Zealand so far this year." Bob may be reached at bobrien@mail.sdsu.edu.

Kenneth I. Owens (B.S., 1954) is retired and living in Austin, Texas, and writes, "When I first came to UT, there were 12,000 students; and when I graduated, there were 17,000. During the past 10 lustrums, I strove to become a permanent Austinite and have since felt sorry for others who only vacation here. For I have become Conrad's 'trilobite' and have watched the changes come and go."

Aysen Ozkan (M.S., 2001) is a geologist with Core Lab in Houston, Texas, and can be reached at aozkan@corelab.com.

Lisa Hawkins Paton (B.S., 1985) is a librarian in Laredo, Texas.

Robert W. Pettigrew (B.S., 1952; M.A., 1954) is retired and living in Spring Branch, Texas, and writes, "nothing new here. About to be overwhelmed by San Antonio urban sprawl." Robert may be reached at robertwp@gvtc.com.

Nestor D. Phillips II (M.A., 1991) is a Senior Geologist with St. Mary Land and Exploration Company in Houston, Texas, and writes, "I left Dominion Exploration in June 2003 for an opportunity with St. Mary, still working Texas Gulf Coast in Houston. Vickie, Gabriella, and Donovan are all happy and doing well. Life is great." Nestor may be reached at nphillips@stmaryland.com.

George B. Pichel (B.S., 1951) is retired and living in Oceanside, California, and writes, "Note growth in the petroleum industry in Libya and Russia. Geologists not needed." George may be reached at gpichel@cox.net.

Gerald "Jerry" S. Pitts (B.S., 1954) is retired and living in Midland, Texas, and writes, "The continuing search for additional reserves is never ending. Oil business good with prices at such high levels. Still go to the office if I am in town, but my sons are running Pitts Energy Co. We bought a ranch 4 miles north of Llano. My Fault-Finders Guide Book on Igneous and Metamorphic field trip taken in the spring of 1953 has stops adjacent to the ranch. One of my granddaughters is fascinated with the llanite found on the outcrop on Highway 16. The nesting bald eagles 8 miles east of Llano on Highway 29 have created a great deal of interest this year." Jerry may be reached at jerry@pittsenergy.com.

Robert B. "Bob" Porter (M.A., 1951) is a geologist with RBP Land Co. in Midland, Texas, and writes, "hangin' in there. Wife Polly doin' great, kids doin' great, grandkids doin' great. Have one great-great-grandson and he's the greatest! We have so much to be thankful for—and UT is one of those blessings. But I'd like to see one more National Champion in football and/or baseball before it's too late for me to enjoy it [we've been #1 in Geology for a long time]. *Semper Fi.*"

John Proctor (B.A., 1950; B.S., 1955) is retired and living in New Braunfels, Texas, and writes, "In February, we went on a cruise around South America. We boarded the ship at Valparaiso and sailed around Cape Horn to Port Stanley and ultimately Buenos Aires. The highlight of the cruise was the Lake District in Chile."

August Leo Pugh (B.S., 1952) is retired and living in Galena Park, Texas. "Leo reports in from the Houston area, still retired and now getting into the planting and flower mode. Sends his regards to all his old friends."

Donald F. Reaser (Ph.D., 1974) is retired and living in Waxahachie, Texas, and writes, "I'm enjoying retirement but still keeping busy teaching a night graduate course in geology for teachers at UTA in Dallas. Bette and I are leaving in late May for a 17-day vacation to London and the Baltic region. The highlight of the trip will be a 2-day stay in St. Petersburg, Russia." Donald may be reached at breaser_2000@yahoo.com.

James T. Reid (B.A., 1988) is an aircraft pilot with Texas Parks and Wildlife in Austin, Texas, and can be reached at jtreidx@aol.com.

Jeffrey C. Reid (M.A., 1973) is a Senior Geologist dealing with minerals and GIS at the North Carolina Geological Survey in Raleigh, North Carolina, and writes, "now in my 18th year at the North Carolina Geological Survey. Current work includes geological hazards, industrial minerals and aggregates, GIS, National Geological Map Database, and the National MAP. My wife, Mary, and I observed our 30th wedding anniversary in February and celebrated the event by a trip to Europe in April. Our daughter is engaged to be married in June 2005. Our son Eric is an exchange student in England."

W. F. Reynolds (M.A., 1953) is a Managing Partner with J. C. and W. F. Reynolds Oil Producers in Wichita Falls, Texas. Mr. Reynolds is a member of the Geology Foundation Advisory Council.

Robert L. Rhudy (B.S., 1985) is a Senior Staff in Tech Solutions with Core Tech in Austin, Texas, and writes, "After spending some time working in bier gardens in West Germany post-graduation, I enrolled at UT in the Germanic Languages program and wound up with a Master's in German. Due to the weak job market and poor pay in that field, I found my way into the software industry, where I have worked for the last 10 years or so. Currently I'm at CyberTrader doing network programming and high-performance server development in the financial industry. I remember enjoying the field courses at the end of the geology curriculum very much, making maps in the mountains of Colorado and New Mexico. It's something I miss. It was fun and good exercise too; but by 1985 pretty much all the maps had already been made that the USGS uses, so I went into another field. My hobbies these days include language studies and motorcycles (see www.motorcycleblog.org/bulletblog/index.html) and going surfing (on occasion)." Robert may be reached via his web site or at bullet@motorcycleblog.org.

James V. "Jim" Richard (B.S., 1956) is a Consulting Petroleum Geologist with Genesis Producing Company in Houston, Texas, and writes, "found two new nice oil discoveries this year. Still generating prospects in the Gulf Coast and doing some consulting. Celebrating my 44th year in the exploration business. I am doing a lot of essay writing, some of which is on the SIPES Houston website. I hope to republish my grandfather's Texas Ranger scrapbook and diary in the near future. Still enjoy playing my tenor sax in the Longhorn Alumni Band each year during football season and attending the NROTC reunions on campus. Family continues to own and operate the Famous Christmas Store in Austin." Jim can be reached at jr1934@aol.com.

Wade C. Ridley (B.S., 1953; M.A., 1955) is the President of Ridley Oil Corporation in Tyler, Texas, and writes, "amazed at how our old 'Department of Geology' has become the 'Jackson School'—quite an achievement thanks to numerous benefactors and outstanding faculty. I am proud to be an alum." Wade may be reached at cridley@cox-internet.com.

Jess Roach (B.A., 1941) is retired and living in Austin, Texas, and writes, "I am still navigating but much slower. My wife of almost 60 years is bedridden but never complains. I try to keep healthy by exercising regularly at a health club and mentally by reading. What great news that the Jackson School now merits a dean of its own. I have no doubt we will be in the top five—probably number one!"

Lowell T. "Tom" Rogers (B.S., 1956; M.A., 1960) is retired and living in Austin, Texas.

Oliver "Tres" Ross (B.S., 1975) is a Captain with American Airlines in Fort Worth, Texas, and writes that he is "flying around

the 48 states enjoying geomorph from 35,000 feet. Big Bend is still my favorite place thanks to all those field trips during college." Tres can be reached at tres3ross@aol.com.

Robert Brooks Ross (B.S., 1950) is retired and living in Houston, Texas.

Rollins M. Roth (B.S., 1958) is a Completion and Workover Manager in Breckenridge, Texas, and writes, "Good oil and gas prices keep me working full-time."

Peter D. Rowley (Ph.D., 1968) is a consulting geologist with Geologic Mapping, Inc., in New Harmony, Utah, and writes, "continuing my new career as a consulting geologist—making and publishing geologic maps for state agencies, water districts, and energy companies, as well as siting production water wells and tracking ground-water flow in Utah and Nevada. The website is www.geologicmappinginc.com." Peter may be reached at pdrowley@accesswest.com.

Jimmie Norton Russell (B.S., 1952; M.A., 1954) is retired and living in Austin, Texas, and writes, "completing 10th year of 'retirement' in my 'hobby' of teaching; this is my 8th year assisting teaching emotionally disturbed students in grades 6–12. Rita (wife) and I just returned from a week at Playa del Carmen, Mexico; pharmacist there thought I was from Spain as 'no one comes here from the USA that can speak Spanish'—the wonderful people and margaritas made our stay there pleasant indeed!"

Carolyn Rutland (M.A., 1979) is an Environmental Engineer with the Public Services Department with the City of Kalamazoo in Kalamazoo, Michigan, and writes, "I spend as much time as possible knitting these days—hats, mittens, scarves, sweaters, socks. I've even spent a weekend at a knitting camp (for real). In recent years I've gone on three cruises, including one to Glacier Bay, which I'd wanted to see since my first geology class in 1972. My father died in October 2001, which jolted me onto the list of Americans-on-antidepressants. I miss being able to talk to him. My mother took our 13-member immediate family to England in 2002, and we had a terrific and surprisingly healing time. In 2003 I went to Cuba on a mission trip. Our construction project was in the middle of a serpentine. I can talk about my experiences there for hours, if you ask. I still manage environmental projects for the City of Kalamazoo, but these days my projects are all moderately boring, so that's all there is to say. My older son (21) is happily well on his way to his goal of being a high school math teacher, this after a disastrous freshman year during which he ended up on both academic and disciplinary probation (got caught smoking pot in a dorm room). My younger son (15) started his school year suspended for going to class stoned. Those who know me well will appreciate the irony of my offspring's experimentation because I never touched the stuff. My husband is a burnt-out geology professor with a full-time antique gun repair and restoration hobby. The four of us like to fly-fish and play Clue and Taboo together. Go figure. We have a beagle named Ishmael and a bearded dragon named Icarus—Ish and Ick. I am so far resisting pleas for a pet boa constrictor, no matter how educational it is to have your own snake."

Floyd Sabins (B.S., 1952) is retired and living in Fullerton, California, and writes, "I am continuing my volunteer work—President of Fullerton Public Library Foundation, Director of Fairway Village Homeowner Association, MADD Volunteer. I enjoy my annual fly-fishing trips to Alaska and the Caribbean. Jan and I are celebrating our 50th anniversary this year. Jan still considers me a 'work in progress.'"



A Saguaro cactus gives the "Hook 'em Horns" salute on Charles Sewell's Tucson, Arizona, property. Photo by Charles Sewell.

Jack S. Sanders (B.S., 1957) is retired and living in Dallas, Texas, and writes, "staying vertical and sporadically traveling. Recently saw a lot of brown land, brown water, and brown air in China. Our interesting world continues to get 'smaller.' We have a valuable geologic perspective to offer."

Randy Michael Schmitz (B.S., 1999) is a computer technician with the Keller Independent School District in Keller, Texas, and writes, "I am currently working as a computer technician for a school district in Fort Worth, Texas. I am applying for graduate school at some of the local universities and plan on attending in the fall or spring semesters. I was married to my wife Ellen in May of 2001, and we have purchased a house in north Fort Worth." Randy may be reached at schmitzrandy@hotmail.com.

George W. Schneider, Jr. (B.S., 1958) is living in Madisonville, Louisiana, and writes that he is "still enjoying \$40 oil and \$6 gas and life on the Tchefuncte River."

Louis Schneider (B.S., 1960) is a Vice President of Edison Chouest Offshore in Houston, Texas, and can be reached at lsjr@aol.com.

Rubin A. Schultz, Jr. (B.S., 1961) is a District Maintenance Manager with the Texas Department of Transportation in Corpus Christi, Texas, and writes, "not a lot new—I am still with TXDOT and enjoy living in Corpus Christi. Grandkids growing up fast. Nancy and I just returned from our annual May trip to Maui, Hawaii."

Eugene P. Scott (B.S., 1957) is living in Corpus Christi, Texas, and writes that he "is still a consulting petroleum geologist. See you later!"

John E. Seale (B.S., 1941) is retired and living in Houston, Texas, and writes, "I stay busy doing small things. Enjoy the *Newsletter*."

Clyde Seewald (B.S., 1963; M.A., 1966) is self-employed and living in Henderson, Texas, and writes that he is "still looking for natural gas in East Texas."

Charles R. Sewell (M.A., 1955) is living in Tucson, Arizona, and writes: "Dear Friends, Thank you for friendship and an excellent education. Although my thoughts of the Geology Building, professors, and friends may be out of date, the memories are as real as sunshine. The times that I spent there were among my happiest of times! When I left Texas in 1964, Tucson, Arizona, became home. Currently we live in a hilltop home surrounded by 26 acres of giant Saguaro and luxurious desert vegetation. We adjoin the Saguaro National Park and have a never-ending and quite variable supply of four-footed, slithering, and feathered friends. The 360-degree views at all times and seasons are exceptional. The sunsets defy description. We have a very rare pet giant crestate Saguaro we refer to as

our 'Guard Cactus.' Since these transplanted Texans have bought this property, nature decided to give this Saguaro horns to embrace the crestate top. See the photo for a real 'Hook 'em Horns' salute! Now the call of grandchildren pulls us back to Texas. We are planning to land in East Texas soon."

William "Bill" W. Sharp (B.S., 1950; M.A., 1951) is an investor/geologist in Dallas, Texas, and writes "for the past year (plus) involved in a major real estate transaction with a Dallas real estate developer—plans are to rebuild a Collin County town/community 30 miles north of Dallas. Sixty-five percent of new town development to be located on family-owned acreage. The many years as a 'corporate expert witness' before the Louisiana Conservation Commission helped in many ways to make me aware of the legal maneuvers in this venture—had an excellent legal team—never too old to learn." Sharp is listed in *Who's Who in Finance and Industry, Science and Engineering, America, and the World*. He is also an Honoree in the National World War II Memorial Registry of Remembrances for his service in the U.S. Army Air Forces. He was nominated as International Scientist of the Year by the International Biographical Centre of Cambridge, England. Sharp was selected for inclusion in *America's Registry of Outstanding Professionals*. He also writes, "The producer of a new television series offered Rubylin and me the opportunity to be candidates for the millionaire couple on a new reality version of *Gilligan's Island*. Rubylin would fit in nicely—but I am way too grumpy..."

Stephen L. "Steve" Shaw (B.S., 1971; M.A., 1974) is a Senior Geological Advisor with Burlington Resources in Midland, Texas, and writes, "It is an exciting time to be serving on the Advisory Council to the Geology Foundation at the Jackson School. Nancy and I enjoy being grandparents and traveling. We are off to Ireland this year. Best regards to all."

Kazeem Akorede Shitta (B.S., 1999) is a lab assistant with the University of Ado-Ekiti in Ado-Ekiti, Nigeria, and can be reached at kaz1424@yahoo.com.

Charles Sicking (Ph.D., 1980) is a Geophysicist with Weiman GeoSciences in Plano, Texas, and writes, "joined Weiman GeoSciences in October 2003, after working outside the oil patch for 4 years with Raytheon."

Samuel J. Sims (M.A., 1957) is a consulting geologist in Bethlehem, Pennsylvania, and writes, "I continue doing consulting work in the local stone industry even though eventual retirement nears." Samuel may be reached at s768@aol.com.

R. Sam Singer (B.S., 1961) is a consulting petroleum reservoir/reserve engineer in Houston, Texas, and writes that he is "working independently as a full-time consultant."

Ben Sloan (Ph.D., 1995) is a geologist with ChevronTexaco in Houston, Texas, and writes, "working and living in Oslo this year. Winter in the mountains was marvelous, but summer on the fjord is even better. I sure miss Betty K.'s laugh, the old second-floor computer room where the cavers used our pen plotter, Milo's cigarette-burned Macintosh, Number 22 "The Stink Pig," Coffee and Cookies, Folk's hairy nape, Speer, H.I.T.W. Reality Burger, and Sprinkle's neckties." Ben may be reached at benjaminsloan@chevrontexaco.com.

Marriott Wieckhoff Smart (B.S., 1957) is retired and living in Centennial, Colorado, and writes, "It is great to see so many good things happening in Geology at UT-Austin. Good luck. John and I are still in Colorado. Mostly things are the same. I am retired, and he works from time to time. We do quite a bit of traveling

with good friends and visit our daughters as often as possible. One lives in Whitefish, Montana, and has a family. The other daughter lives in Tulsa, Oklahoma. For several years I have been on the Board of Trustees for a wonderful small museum north of Colorado Springs. The focus is the mining industry in the West, with major emphasis on mining history in Colorado. It is called the Western Museum of Mining and Industry and is located very near the north entrance of the Air Force Academy. If any of you are in the area, it is worth a visit." Marriott may be reached at Marriott@ix.netcom.com.

Tommy T. Smiley (B.S., 1951) is retired and living in San Antonio, Texas, and writes, "still able to get out of bed in the morning and enjoying our wonderful country. We do a lot of traveling, and we are planning a trip this summer with all our kids and grandkids. Wow!"

Charles E. Smith (B.S., 1954) is retired and living in Dallas, Texas.

Cynthia Lopez Smith (M.A., 1981) is living in Houston, Texas.

Dan L. Smith (B.S., 1958) is the Executive Vice President at Sandalwood Oil and Gas, Inc., in Houston, Texas, and writes, "I continue as Executive Vice President of Sandalwood Oil and Gas, Inc., an E&P company active in the Gulf Coast Area. I am now a member of the Geology Foundation. I was President of the American Association of Petroleum Geologists for the 2002–2003 year and am now Chairman of the Advisory Council." Dan may be reached at dsmith@soginc.net.

Harry L. Smith (B.S., 1951; M.A., 1956) is retired and living in Boerne, Texas, and writes, "have been living in the same house for 20 years. Still trying to play golf, but it is getting more difficult as the years roll along."

J. T. Smith (B.S., 1950; M.A., 1956) is retired and living in Fredericksburg, Texas, and writes, "still enjoying retirement in the Texas Hill Country. I still look back with fond memories at my 37-year career in the petroleum industry in both the good times and bad times. Working in the industry with crude oil selling at \$40/bbl must be nice—something I never experienced."

Paul K. Smith (B.S., 1984) is a fitness and yoga instructor at Lake Austin Spa Resort in Austin, Texas, and can be reached at bluegeckoyoga@cs.com.

Stephen V. Smith (B.A., 1964) is an investigator with CICESE in Ensenada, Mexico, and can be reached at svsmith@cicese.mx. Stephen writes, "I retired from the University of Hawaii after 30+ years and took a job in Ensenada, Baja California, Mexico, for a government research lab called CICESE, Centro de Investigación Científica y de Educación Superior de Ensenada."

Traci Trauba Smith (B.S., 1985) is the office manager at Birdsong Real Estate in Lake Jackson, Texas, and can be reached at trackeye@swbell.net.

Brian Smyth (B.S., 1976) is a Partner with Northwind Exploration in Houston, Texas, and writes, "**Jesse Fowler** (B.S., 1974) and I are partners in Northwind Exploration and have been since 1981. E-mail us at nwx2@air2lan.net." Brian may also be reached at bsmyth@air2lan.net.

Stephen W. Speer (M.A., 1983) is a General Partner with Genesis Limited Partnership in Mount Pleasant, South Carolina, and writes, "high tech communications are VERY cool and can give one

great freedom. The Lord provided my family the opportunity last year to relocate to the Charleston, SC, area so I could observe modern tidally influenced clastic depositional processes while simultaneously exploring for oil and gas in southeast New Mexico. After 1 year, so far...so good and I'm now busier than ever with several drilling programs. This is a great area to live and has lots to see and do. My son Erik (16) is getting to experience things here I only dreamed of when I was a desert rat at his age and, like a good dad, I'm living vicariously through him. My oldest daughter Sarah graduated from Liberty University last year, got married, and is living in Pittsburgh while her husband Jeremy does the law school thing. Our second daughter Janine is attending the College of Charleston here but isn't so sure she's cut out for the humid Southeast and wants to head back to New Mexico or Colorado when she's finished with school. Therese and I are having a ball here; the Lord and life have been good to us. Went to AAPG and had a great time catching up with **Dave Carr** (M.A., 1983) and other buds from our era at UT. Hope all the Dirty Dozen are doing great; drop a line or come out and see us as the beaches here are real fine places to hang out." Stephen may be reached at speerex@comcast.net.

Sam Renick Stanard (attended 1951) is retired and living in San Antonio, Texas.

Theodore Stanzel (B.S., 1956) is the President of Victor Stanzel Co. Toy Manufacturer in Schulenburg, Texas, and writes, "My time is used to wind down the company, selling out inventory on eBay and retail stores where toys are sold. A Stanzel Factory Museum is being established utilizing much of the machinery. I invite you to come to Schulenburg on October 16, 2004, for a grand celebration of the 5th Anniversary of Stanzel Model Aircraft Museum."

Frederick L. Stead (M.A., 1950) is retired and living in Addison, Texas, and writes, "Betty and I enjoying three great grandchildren and the high price of oil!"

Burgess Stengl (B.S., 1985) writes, "Well, it has been 3 1/2 years since we moved to Tyler from Austin, and we are still loving it. The dogwood trees and azaleas are beautiful each spring, but the fall leaves continue to be a nuisance. The past year has been a busy one for the Stengl family. Our daughter Shara was married on June 26th in Austin and continues to teach in Austin ISD. Our daughter Susan finished her junior year at Whitehouse High School and teaches part time at Whitehouse Tumble and Cheer. She plans on attending UT-Austin after graduation next year. Kyle finished kindergarten at Owens Elementary (where Angela teaches) and is a very active little boy (enough said). People said he would 'keep us young'; however, I feel very old some days. His t-ball team went undefeated, and the outcome of the playoffs is yet to be determined. Angela continues to teach second grade and was recently elected President of the Whitehouse High cheerleader group. At least now she can delegate more than last year, when she was on the calling committee. I completed my second year with Allied Waste as an Environmental Manager over four East Texas landfills and two Northern Louisiana landfills near Shreveport. It still amazes me that it has been almost 20 years since I took field camp and graduated from UT. Where has the time gone? Have a great year, and we can catch up again next *Newsletter*."

John Stout (B.A., 1953) is retired and living in Lone Tree, Colorado, and writes "after 10 years at Lawrence Livermore National Laboratory, I am now an adjunct lecturer in geology at Colorado School of Mines." John can be reached at johnstout@aol.com.

Ted Stout (B.S., 1985) is Chief of Interpretation at the Craters of the Moon National Monument in Bellevue, Washington, and writes, "After 7 years at Mount Rainier National Park, I transferred to Craters of the Moon National Monument in December. This is a great geology park with lost of luscious lava and the possibility of future eruptions." Ted may be reached at ted_stout@nps.gov.

Mike Stowbridge (B.S., 1982) is a consulting geologist in Abilene, Texas, and writes "continue well-site work through Geosite, Inc., out of San Angelo, and I remain a member of the Paleozoic Society Log Library here in Abilene. I'm glad to report a very busy oil patch. Confidence is growing that oil prices will stay high. The rush to drill is on." Mike can be reached at mikestowbridge@peoplepc.com.

John L. Stripling (B.A., 1940) is retired and living in Fort Worth, Texas, and writes, "Marjorie and I continue to travel across our great state. I'm still playing golf as the weather allows. Best to all Exes, and especially to our Veterans."

Hal Stubblefield (B.A., 1954) is retired and living in Kingwood, Texas, and can be reached at halstub@pdq.net.

Bruce Swartz (B.S., 1982) is an independent oil and gas operator in San Angelo, Texas, and can be reached at swartzoil@wconline.net.

Christopher Swezey (M.A., 1991; Ph.D., 1997) is a Research Geologist with the U.S. Geological Survey in Reston, Virginia, and writes, "Currently, I am working on oil and gas studies in the Appalachian Basin and the Michigan Basin." Chris may be reached at cswezey@usgs.gov.

Dennis A. Sylvia (Ph.D., 2002) is a Land Management Planner with Thorne Bay Ranger District in Thorne Bay, Alaska, and can be reached at dennissylvia@fs.fed.us.

Christina Massell Symons (M.S., 1997) is working at Scripps Institution of Oceanography, UCSD, in Chesapeake, Virginia.

Lindsay Tade (B.S., 1972) is a Senior Geologist with Cabot Oil and Gas in Houston, Texas, and writes, "It has been an enjoyable year developing prospects on Gulf Coast of Texas and Louisiana. What great oil and gas prices—hope they last a long time. Daughter Lilly graduated from UT in May 2004." Lindsay may be reached at lindsay.tade@cabotog.com.

Dick Teel (B.S., 1941) is a consulting geologist in Houston, Texas, and writes, "still with IHS Energy as a consultant. Enjoy working with younger people and also a computer. Can do so much with a computer—scout tickets available, all U.S. production figures and to be able to make maps with ease. Back to Africa in September—still hunt a lot. Gone to digital photography and like it over film." Dick may be reached at dick.teel@ihsenergy.com.

T. J. Thompson (B.S., 1957) is the owner of Toro Exploration Company in Rockwall, Texas, and writes, "Keep up all the good news. The Jackson School sounds super too."

Everette J. Travis (M.A., 1951) is retired and living in Buchanan Dam, Texas, and writes, "retired and doing as I please. Keep interested in lots of things here in Llano County. Geology has not changed in the last 53 years. Still see students I taught College Geology. Fishing still great in Lake Buchanan."

Lloyd R. Travis (B.A., 1948) is an oil and gas consultant in Houston, Texas, and writes, "still working for a small independent oil and gas company. We are using 3-D surveys to locate prospects

in South Texas with good results. Keep up the good work by informing former students on present activities at the Geology Department."

Arthur J. "Art" Tschoepe (B.S., 1951) is semi-retired and doing some consultant work in Leakey, Texas, and writes, "enjoying my wonderful family."

James J. "Jeff" Tucker (B.S., 1948) is retired and living in Ridgeland, Mississippi, and writes, "My wife and I are enjoying living in the city of Ridgeland. To add to our pleasure is our beautiful garden home."

Eric Tuitjer (M.S., 2003) is a Development Geologist with ChevronTexaco Corporation in Houston, Texas, and writes, "This year I am getting married to the most wonderful woman in all the world, my fiancée Anna. We will be starting our little family in Houston and look forward to staying in touch with everyone." Eric may be reached at erictuitjer@hotmail.com.

Neil L. Turner (Ph.D., 1970) is a consulting geologist in Fulshear, Texas, and writes "continuing work on carbonate fields. We will be going to the Eastern Mediterranean this fall and back to the Dolomites for mostly vacation."

Ellen Naiman Tye (M.A., 1982) is living in Dallas, Texas.

Matthew M. Uliana (M.A., 1995; Ph.D., 2000) is an Assistant Professor in the Department of Biology at Texas State University in San Marcos, Texas and writes "currently full-time tenure track faculty at Texas State, teaching geology and hydrogeology in the geology minor and supervising students in our new Aquatic Resources Ph.D. program. Still drinking beer and playing in local heavy-metal bands. Some things never change."

Charles B. Upton (B.S., 1957) is retired and living in San Antonio, Texas, and writes, "It's amazing how much geology is evident by what plants are growing there. I am still staying busy with my retirement woodworking hobby/job." Charles may be reached at cupton@satx.rr.com.

Don Urbanec (B.S., 1960) is an independent in Boerne, Texas, and writes, "still active in oil and gas exploration but taking more time to do the things I enjoy (other than geology), including visiting with my first grandchild." Don can be reached at durbanec@ev1.net.

Jean-Paul Van Gestel (Ph.D., 2000) is a geophysicist with BP in Houston, Texas, and writes, "everything great in Houston. I got married and bought a house. Further, I am still working as a geophysicist for BP in the Brasil Deepwater Exploration Team. For more news and pictures: www.vangestel.com." Jean-Paul may be reached at jpgestel@yahoo.com.

Mark Ver Hoeve (M.A., 1982) is an International Exploration Manager with EOG Resources in Houston, Texas, and writes, "Janice and I have now been living in Houston for the last 12 years, our longest stay anywhere, and looking permanent. Janice is a Director at Bank of Nova Scotia and I am Exploration Manager for EOG's International effort. We have two daughters, Emily and Sarah, both in Taylor High School in Katy." Mark can be reached at mverhoeve@earthlink.net.

Harry A. Vest (M.S., 1959) is retired and living in Houston, Texas, and writes, "Read any report in the last 20 years and you have our news. Cheers!" Harry may be reached at harryvest@aol.com.

Marjorie Vogelsang (B.A., 1937) is retired and living in Rosenberg, Texas.

A. H. "Al" Wadsworth, Jr. (B.S., 1941; M.A., 1941) is a geologist in Houston, Texas, and writes, "still at it after 63 years."

Tom Waggoner (B.A., 1957) is retired and living in Big Fork, Montana, and writes, "my wife and I spend 90% of our time in our Montana home near Glacier Park—we miss the University activities but love Montana. Proud of the recognition that the Jackson School has received."

Joe Dudgeon Walker, Jr. (B.S., 1951; M.A., 1951) is retired and living in Houston, Texas, and writes, "still 'hanging in' there but have slowed down. A lot of our group is still with us. Some not. Wife Shirley is okay, plus 3 children and 10 grandchildren. Thanks for all the year's work!!"

David Wallace writes, "I'm still in Lakewood, Colorado, working in the telecom industry. I started a new position with Avaya in January and am helping develop a start-up, which has been a great learning experience so far—wearing just about every hat possible. Zoë, our daughter, was born March 2003 and is doing great. Every day is something new for her—including a fascination with rocks. I also am happy to report that #2 is on the way and expected to arrive in mid-October. Mom and the player to be named later are both doing fine. Living in the foothills west of Denver, we are surrounded by amazing geology, which I experience as much as I can by hiking and mountain biking as often as possible. If any old geo-dogs are in the area, please look me up." David can be reached at dawalace@yahoo.com.

Virgil A. Walston (B.S., 1960) is retired in Mouton, Texas, and can be contacted at 36suzanne@direcway.com.

Chengshu Wang (Ph.D., 2003) is a Senior Engineer with Overseas Research Center, CNODC, in Beijing, China, and writes, "I have joined CNDODC (China National Oil and Gas Exploration and Development Corporation), CNPC, as a Senior Engineer. Welcome you to visit Beijing, and I will be happy to host you." Chengshu may be reached at wang_chengshu95@yahoo.com.

Bernie Ward (B.A., 1955) is a geologist in Tyler, Texas, and writes, "We took a seaborne trip along Mediterranean coast to celebrate wife's big seven-oh! Spectacular ports. Crystals on Isle of Elba, a rockhound's dream. Recently read *Silver in the Sierra Madre* by UT's own Peter Flawn. It's the true exploits of a Spanish-speaking geologist who gets it all done under unbelievable hardships and danger. Truly he was *un macho entre los machos*. Especially enjoyable for geologists—hard rock or not."

Daniel L. Ward (B.A., 1949; M.A., 1950) is retired and living in Grand Junction, Colorado.

Ralph H. Warner (M.A., 1961) is retired in Kingwood, Texas, and writes "mild stroke in January 2004 has resulted in somewhat impaired vision. Tennis and freeway driving are not presently in my daily program. Plan to keep on keeping on. All okay with the rest of the family."

Karl Warning (B.S., 1971, M.A., 1977) is living in Lucas, Texas, and writes, "continuing to work for the premier mineral auction website, mineralauctions.com. Nature's beauty never ceases to



Zoë
Wallace
and Dad
at Waimea
Canyon,
Kauai,
Hawaii,
July 2004.

amaze me. Check us out and become a client. Our daughter, Tracy, finished her first year at Trinity University in San Antonio and even took a geology course without her father's urging! Fellow grads **Crick Stanton**, **Frank Cornish**, **Mike Looney**, and **Robert Manson** continue to meet annually for a UT football game. We are now in our 17th year." Karl can be reached at warben@dfwair.net.

Bill D. Watson (B.S., 1958) is retired and living in Sugar Land, Texas, and writes, "enjoying retirement with wife, Jean, and eleven grandchildren. We're playing lots of golf and doing some traveling. I'm playing trumpet at my church, with a community band, a senior citizen choir, and the Singing Men of Southeast Texas. Just enjoying life!" Bill can be reached at dewalt@ev1.net.

Joseph D. Watzlavick (B.S., 1941) is living in Bellaire, Texas, and writes, "enjoy recalling the years of the friends and efforts of being a geologist. Hi guys!"

Gerald E. Weber (M.A., 1968) is an Emeritus Professor at the University of California at Santa Cruz and writes, "keeping busy at about half-time working as an expert witness in engineering geologic matters. Traveling when possible. Some SCUBA diving. Still running rivers and am now spending more time on art work. Photography, pencil drawings, and some watercolor. Kids doing fine. Still drinking—got to do my share!" Gerald may be reached at jweber@es.ucsc.edu.

Bonnie R. Weise (B.S., 1974; M.A., 1979) is a Geological Consultant with Pyr Energy Corporation in San Antonio, Texas, and can be reached at bweise1@sbcglobal.net.

James V. White (M.A., 1995) is a Senior Exploration Geologist with ExxonMobil in Melbourne, Australia, and writes, "After 18 months in Jakarta with fellow UT geos **John Thomson**, **Dennis Brock**, and **James Farmer**, I have moved to Melbourne, Australia, and can't find a single Longhorn."

Leslie P. White (B.S., 1956) is retired in Austin, Texas, and writes, "The recent achievements at my old school are truly remarkable. You make us all very proud. A highlight of the year for me was a day with **Steve Clabaugh** and a group of geology buddies. A great time." Leslie can be reached at lesndianne@yahoo.com.

Rex H. White, Jr. (B.S., 1956; M.A., 1960) is an attorney in Austin, Texas, and writes, "I am still active in oil and practice of law. Probably will not retire for a few years at least. We have four grandchildren now—they are perfect children—can do no wrong. I cannot wait to teach them all my old tricks. I have seen **Les White**, **Bill Ward**, and **Dr. Clabaugh** recently. Great visit with them. My best to all, and pray for world peace." Rex can be reached at rex@rexwhite.com.

Steve White (B.S., 1978) is a consulting geologist in Flint, Texas, and writes "still enjoying the oil business in Tyler."

Fred L. Whitney (B.S., 1943) is retired and living in Kerrville, Texas, and writes, "61 years and counting since graduating from UT. Sincere best wishes to all old friends and new. Let the good times roll!"

Frederick W. Wiegand, Jr. (B.S., 1969) is a drilling foreman and writes that he's "working in Saudi Arabia, drilling horizontal oil wells in the Arab D limestone. Interesting subsurface geology. Family okay. Wiegand brothers are growing up. Continued interest in the North Sea exploration. Cheers to all." He may be reached at fred@wiegand.com.



John Wright presenting his newest addition.

Michael A. Wiley (B.S., 1957; M.A., 1963; Ph.D., 1970) is a consultant in Canyon Lake, Texas, and writes, "enjoying semi-retirement and some consulting—mostly environmental GIS programming. Lake life is great! Still active in AAPG-EMD with 1 year left on third term as EMD Treasurer. Good to see so many old friends at Dallas AAPG. All the news and plans for the Jackson School are stunning. Call and come by—the beer is always cold!" Michael may be reached at mawiley@gvtc.com.

Richard Allen Wiley (B.S., 1942) is retired and living in Lafayette, Louisiana, and writes, "enjoyed 40 years employment by Amerada Petroleum and Amerada Hess Corporation in Houston, Texas, and Lafayette, Louisiana. Retired in 1986. Wife Emily Wood and I in good health and enjoying Cajun country."

Jefferson Williams (B.A., 1988) is a geophysicist and log analyst in Los Angeles, California, and writes, "am in the third year of business with Supersonic Geophysical. Doing a lot of work in Australia." Jefferson can be reached at jeff.williams@acousticpulse.com.

Robert R. Williams (B.S., 1954) is retired in Dallas, Texas, and writes, "I stay busy with church activities, reading fiction, nonfiction, and professional periodicals and attend SIPES meetings. My wife, Robin, and I enjoy the Los Amigos group, friends in the oil business and wives, who get together once a month to eat at Mexican food restaurants. Our three daughters, their husbands and children visit often. Life is good."

Doug Wilson (B.S., 1980) is Area Exploration Manager for the Gulf of Mexico Eastern Offshore division of Anadarko Petroleum in The Woodlands, Texas, and writes, "I am also a Captain and 10-year veteran in the Klein Volunteer Fire Department. Rachel is finishing her first year of junior high and is excited to attend orchestra camp this summer. Rebecca is a PTO board member and actively volunteering for the school district."

James L. Wilson (B.A., 1942; M.A., 1944) is retired and living in New Braunfels, Texas, and writes, "I no longer do field geology. The past year, with the help of the Bureau of Economic Geology, we revised the Humphrey-Diaz book on the stratigraphy of northern Mexico, Report of Investigations No. 267. I donated my library to the University of Texas Geology Library but still have my notes, files, and reprints, which I will gladly share." James can be reached at strata@nbt.com.

William Feathergail Wilson (B.S., 1960; M.A., 1962) is the President of Strat Geological Services, Inc., in Bandera, Texas, and writes that he is "teaching through OGCI, drilling public water wells and performing water availability studies in the Texas Hill Country. Mapping Cretaceous aquifers. Very busy consulting and teaching internationally." Feather may be reached at featherg@hctc.net.

Hugh Winkler (M.A., 1992) is with the Architecture Group at BetweenMarkets, Inc., in Austin, Texas, and writes, "Mighty little geophysics going on at our little software company, but I know there is an inverse problem in here somewhere." Hugh can be reached at hughw@hughw.net or hwinkler@betweenmarkets.com or via his work website, www.betweenmarkets.com.

Amy R. Wood (B.S., 1985) is living in Austin, Texas, and writes, "I'm enjoying staying at home with my 3-year-old son. I'm still doing some web and programming work to maintain my skills." Amy may be reached at amywood@alumni.utexas.net.

Gene Woodyard (M.A., 1956) in Bertram, Texas, is retired from Conoco and writes, "While visiting Australia a couple of years ago, we realized we only had one more continent to visit and we would have seen all seven. So earlier this year we took the long trip south to say hi to the penguins. Those rascals stink (big time!). Antarctica is worth the trip—once. I picked up a rock, and it is black and white, but I doubt that would get very far on an exam."

LeRoy Woollett (M.A., 1951) is retired and living in Houston, Texas, and writes, "Retirement isn't all that great—I am now a real estate broker—fun and busy—2 children, 6 grandchildren, 3 great-grandchildren—all are wonderful." Leroy can be reached at lwoollett@oal.com.

Charles J. Worrel (B.S., 1951) is a consultant with Worrel Exploration in San Antonio, Texas, and writes, "I say a very hearty hello to all the graduates and especially the class of 1947. **Al Nelson**, don't you think we ought to try for one more reunion in downtown Austin? Perhaps the new Hilton or Four Seasons? I still yearn to see some of you guys." Charles may be reached at Charlie@worrel.net.

Jesse W. Wright, Jr. (B.S., 1950) is retired and living in San Antonio, Texas, and can be reached at jwwright@airmail.net.

John B. Wright (M.A., 1956) is retired in New Orleans, Louisiana, and writes "still hanging on in the Big Easy."

Phil Wyche (B.S., 1951) is retired and living in Austin, Texas. He is a member of the Geology Foundation Advisory Council.

Charles Yager (B.S., 1984) is President of Texas Bank in Fort Worth, Texas.

John C. Yeager (M.A., 1960) is an independent geologist in Lafayette, Louisiana, and reports that he is "still generating prospects."

Francis Scott Zimmer (B.S., 1986) is a senior public health sanitarian in Vernon, New York, and writes, "Hi Geo Buddies, hope everyone is doing well. I continue to work for the Health Department doing lead poisoning investigations, indoor air quality, and nuisance complaints. Melanie continues storytelling and puppetry. Cuchulian, our Dalmatian, keeps us playing and having fun. Went back to Austin in February after 3 years. Wow, has the city grown. Boy, have I missed Tex-Mex food. Had a nice time with my parents. Look forward to reading about you all here."



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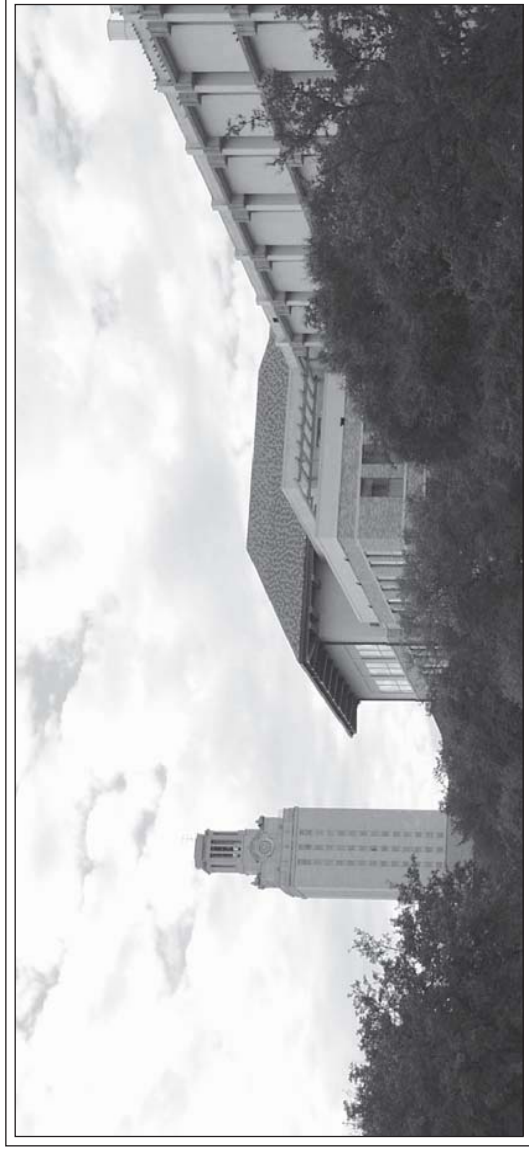
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Bill Fisher, Director

