

Advancing Excellence

Update from the Development & Alumni Office at The University of Texas at Austin's Jackson School of Geosciences - No. 2, September 2009

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Sharon Mosher became the new dean of the Jackson School this July.



Learning in the Field: Hydrology Students Work to Save Farm

When David and Katie Pitre bought farm land east of Austin, Texas in 1993 with the idea of starting an organic farm, they were drawn in large part by the abundant water. That, and the rich soil and ready market in nearby Austin. A hand-dug well on the site dating to before World War II had flowed continuously, even through the state's record-setting 1950s drought. For 16 years, the Pitres have sold their produce at local farmer's markets and more recently to subscribers who pay in advance for weekly baskets of food.

"We've always had lots and lots of water," said Katie Pitre. "We couldn't suck our well dry if we tried."

But in 2005, that began to change. The Manville Water Supply Company, a municipal water supplier, installed two pumps across the road from the Pitres' Tecolote Farm to provide water to new developments. Worried that their well would be affected, the Pitres installed a second, deeper well. Water levels in both wells began dropping. Then in 2007, Travis County installed two more wells nearby to water recreational fields and a catch-and-release fishing pond. The Tecolote well levels fell even faster. By 2008, both had run dry. Despite a drought in the region, Pitre is convinced that the new wells are to blame.

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THE UNIVERSITY OF TEXAS AT AUSTIN

JACKSON

SCHOOL OF GEOSCIENCES

Dean's Update

Dear Alumni and Friends of the Jackson School,

Many of you will remember me from classes I taught after I first arrived here as a young professor in the 1970's or from field camp -- or perhaps primarily as a graduate student supervisor or researcher. I have had the privilege of watching many of you head off to successful careers in the geosciences, and I am proud to be taking the helm of this outstanding institution as the new Dean. Now, as before, I have felt that our success as a school hinged on the way we nurture and empower our students. The department has grown and become the cornerstone of a great new school. The research excellence of the Institute, Bureau, and Department bring an unparalleled scientific depth to the school, which other institutions can't match, and contribute to the world-class education of our students. We've all changed and evolved, but the fundamentals remain—a solid education, research that advances the geosciences and benefits society, and a strong geosciences community. One of my priorities as dean is to ensure that students remain at the center of all that we do.

There is much more to accomplish as we work to create the most student focused and research oriented college on the UT campus with true integration of the two. We believe providing a superior academic curriculum, a commitment to advancing scientific research, and access to adequate resources for success are the differentiating factors for the Jackson School. This publication is a companion to our annual newsletter, designed to show you how your participation makes a real difference in the academic life of the school. I hope you enjoy reading how philanthropy from our friends enhances the quality of our field experiences, recruits superior graduate students and assures that we continue to inspire the next generation of geoscientists through GeoFORCE. And through the Friends and Alumni Network regional chapters, we are available to you right in your own community.

I look forward to visiting with many of you in the months to come, to learn about your experiences with the Jackson School. We have accomplished so much as a school in just a few short years, but there is so much more to do to realize our vision of being the preeminent geoscience program in the nation. I am eager to roll up my sleeves and move the school forward to a new level of excellence.

Warmly,
Sharon Mosher



Sharon Mosher, the William Stamps Farish Chair at the Jackson School and chair of the Department of Geological Sciences from 2007-2009, became dean of the school in July.



Capital Campaign Progress Report

The University's Capital Campaign began officially on Sep. 1, 2006 with a quiet phase and then entered a public phase in October 2008. As of July 31, 2009, the University as a whole had raised \$905,581,376 (or 30%) towards its goal of \$3 billion, and the Jackson School had raised \$47,540,887 (or 59%) towards its goal of \$80 million.

UT Austin Overall

Goal: \$3 Billion

To Date: \$905.6 Million

Jackson School

Goal: \$80 Million

To Date: \$47.5 Million

Hydrology Students Work to Save Farm — Cont'd

Hydrogeological consultants hired by the farmers and the county disagreed on whether or not the new wells were having an impact on the farm's water supply.

If their wells don't return soon, they'll be forced out of business. To stay afloat, they're currently buying chlorinated water from Manville at the residential rate, which is hugely expensive at farm volumes. Pitre said it's a matter of priorities: Which is more important, having lush fields of grass for recreation or locally grown food? It's a variation on a debate that's playing out in communities across the country as growing populations grapple with how to make do with a limited supply of fresh water. For their part, county officials don't believe they're to blame. Still, they've expressed interest in helping. They've offered to drill test wells to help the Pitres find a new source of water.

At the end of the day, it might not matter legally whether the county's wells are impacting the farm's wells given Texas' antiquated water laws, known as the rule of capture. In the absence of special conservation rules in a particular region, the person with the biggest straw gets the most water. As long as your well is located on your property, it's perfectly legal to extract water out from under your neighbor.

Still, there have been some hopeful developments. In June 2009, a group of 13 hydrogeology students and two teaching assistants from the Jackson School of Geosciences set out to use science to help save the farm.



Into the Fray

As fate would have it, one of the Pitres' neighbors is Marcus Gary, a hydrogeologist completing his doctorate at UT Austin. Gary told his advisor Jack Sharp about the situation and wondered if there was any way he could help. Sharp teaches a hydrogeology field methods course each spring that gets students out of the classroom and into the field. He had an idea: he could get his students to conduct a geophysical survey of the site to find an alternative source of water for the farm. The students would learn field methods that they would use in their careers and at the same time provide useful information to help real people with a real problem.

"It makes it more meaningful for the students not just to get a grade, although they did get a grade, but that it helps real people," said Sharp.

The farm's soil is mostly clay, but based on the known geology of the area, the students suspected there might be ancient buried stream channels of sand and gravel that carry water. To find channels, they measured the soil's electrical resistivity and conductivity along several transects laid out in a grid pattern. Different materials have different geophysical signatures—clays have high conductivity and low resistivity; sand and gravel have low conductivity and high resistivity. The measurements were compiled into two dimensional slices of the subsurface about 25 to 30 meters deep.

The students spent five long days in June in what was unusually hot weather even for Texas. Sometimes the Pitres let them stand in the chill air of their vegetable cooler to revive themselves.

The first day, the students found two anomalies that might indicate ancient stream channels. On the fourth day, they found a third. But interpreting ER and EC data is notoriously tricky. Clay rich soils tend to mask sand and gravel. Anomalies aren't conclusive without ground truthing, actually digging down to see what's really there. They were getting close to the end of their course and still hadn't found spots that they could confidently tell a driller, you should drill here.

"So we definitely felt that sense of urgency, we're running out

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**Help us Reach Our Goal:
\$3.5 Million for Field Experiences**

3.5	Jurassic Period		Dinny Dinosaur
3.0	Triassic Period		Fido Dinosaur
2.5	Permian Period		Pterodactyl Pteron
2.0	Pennsylvanian Period		Giant Insects
1.5	Mississippian Period		Brachiopods
1.0	Devonian Period		Primitive Fishes
0.5	Fennoscandian Period		Giant Insects
0.5	Mississippian Period		Brachiopods
0.5	Devonian Period		Primitive Pteron
0.5	Silurian Period		"Sea Scorpions"
0.5	Ordovician Period		Trilobites
0.5	Cambrian Period		Trilobites

Fossils older than Cambrian age are rare. The earliest span of time is usually called, simply, Precambrian.

Alumni and friends have already given more than \$2.1 million to endow student field experiences. Thanks to your support we raised our goal from \$2.5 to \$3.5 million. Help us move out of the Devonian period and reach the Quaternary with \$3.5 million to ensure this peak educational experience for future generations.

Darwin Family Helps Inspire

FUTURE SCIENTISTS

The Darwins believe in the importance of promoting the early success of future earth scientists. That's why Pam (MS '84) and her husband Barnes led the way in creating the first formal endowment for the GeoFORCE Texas program.

"We know that what we have done is a small token, but we hope that if others join this effort it will make a broad impact on the future of so many wonderful students," says Darwin, Vice President at ExxonMobil.

GeoFORCE Texas, based at the Jackson School and the nation's largest college prep program for earth sciences, fills a critical need by inspiring the next generation of geoscientists. It also fosters increased diversity in the U.S. workforce. The program rewards outstanding students from select South Texas Independent School Districts and Houston schools from grades 8-12 with the chance to travel the country, meet inspiring people and learn about opportunities for careers in the geosciences.

Darwin attended her first GeoFORCE event last year. The program has long been supported by her employer, but it was the first time she was able to meet these extraordinary students and hear their stories. The encounter prompted her to find ways to support the program.

"This was the first time that many of the students had ever traveled outside of Texas," she says. "They were so excited about what they'd seen and their parents were excited too. The kids were at the top of their respective classes, but they hadn't had exposure to a lot of other kids who liked math and science. So it was very fulfilling for them. And it was touching for me."

Darwin recalls how a wonderful earth science teacher inspired her to learn about the world around her when she was only 12 years old. She hopes GeoFORCE will have that same power to inspire these students.

"It doesn't matter whether they go into math or science," she says. "What's important is that it offers them a view into science. They can see what it's like to be a scientist, hear what graduate



Darwin Family: (L to R) Sarah (Grade 8), Kristin (Class 2011 Yale), Tyler (Grade 11), with Barnes and Pam behind.

school is like and learn what people in industry do. It's a great opportunity to go beyond what they get in the classroom."

Darwin enhanced her family's gift by using ExxonMobil's 3:1 matching program and the Jackson School's own 1:1 matching program. This immediately grew their fund to \$100,000.

The Darwin Family GeoFORCE Texas Fund will assure the long term availability of resources so students admitted to the program can continue their geosciences journey throughout high school.



First GeoFORCE Grads Go to College

This fall, the first cohort of 80 students to complete all four years of the GeoFORCE Texas program—all graduates of southwest Texas high schools—are heading to college. A whopping 90 percent were accepted into colleges and universities, with 63 percent majoring in science, engineering, or math.

Over the last 10 years, not a single student from the high schools GeoFORCE draws from in southwest Texas pursued a geosciences degree at The University of Texas at Austin. This year, 12 GeoFORCE graduates are attending UT Austin, and five of them are pursuing majors in the Jackson School.

GeoFORCE 10th Graders in the Young Geoscientists track explore the sea wall in Port Aransas, Texas, June 2009.

GeoFORCE not only opens the minds of young high school students, it provides opportunities for Jackson School undergraduates to give back while serving as mentors.

Undergraduates Form Vital Part of GeoFORCE

It's 6:00 am. It's June and the sizzling Texas sun is already brightening the clear sky. In a hotel in Port Aransas, 40 high school students and several adult counselors and instructors turn off their alarms, hit the showers, dress and meet downstairs for breakfast.

This is GeoFORCE Texas, the Jackson School's initiative to increase the number and diversity of students pursuing degrees in math and science, especially the earth sciences. The program, the largest such science pipeline initiative in the country, takes kids on geological field trips across the country to educate and excite them about science. There are 16 field trips each summer—some as close as Austin and Port Aransas, some as far away as Florida and Oregon.

It takes an enormous amount of pre-trip planning and on-the-ground work from Jackson School staff to pull it all off. Among the unsung heroes are the counselors, undergraduate university students who receive a modest stipend to travel and work with about six kids each. This summer, fifteen Jackson undergraduates are participating as counselors on various trips.

"Counselors are very important to the success of GeoFORCE," said Doug Ratcliff, director of the program. "They are the 'go to' staff for their assigned students and spend their entire day, which begins at 6 am and ends at 11 pm, with their students. They literally wake them up in the morning and put them to bed at night, and work with them throughout the day to make sure they understand the material being presented."

On this particular day, the students, counselors and instructors board a bus to the southern end of Mustang Island, part of a nearly continuous chain of barrier islands that protect the coast from storms. Tiffany Caudle, a coastal expert from the Bureau of Economic Geology, illustrates in this dramatic landscape how wind, waves, storms and people shape and reshape the island. Students analyze the topographic profile of the beach and dunes, map the line of vegetation, and make observations of the wind and waves. They learn why the beach and dunes look the way they do. Then it's back on the bus and the counselors count up their students. Despite the hard work and long hours, most counselors find it rewarding.

"It helps me remember what it was like to be in high school and to be more comfortable with them," said Kendall Phillips, a Jackson School student and counselor who plans to become a high school science teacher after graduating in a year. "I've learned little techniques and tricks for working with students."

"GeoFORCE has been a great way for me to connect with professional geologists who are instructors," said Samantha Abbott, a Jackson School student and counselor for eight trips this summer. "I'm getting good insights into everything from how to get into graduate schools to how to pick an advisor."

In the afternoon, students board the Katy, a small research boat based at the university's Marine Science Institute. On the four hour cruise, an outreach expert collects organisms from the intercoastal ship channel and from Corpus Christi Bay to show students what lives



at different depths. Student reactions to the strange denizens of the deep—such as plankton, crabs, squid, brittle stars and male catfish carrying mouthfuls of marble-sized fertilized eggs with little eyes staring back—range from fascination to disgust.

For many of these students, it's their first time far from home or their first time on a boat or (for some of the more far-flung trips) their first time on an airplane. It's also one of their first experiences learning college-level material.

"With the individual attention provided by counselors, these students obtain a fabulous broadening of their life experience, gain confidence in their own abilities and prove to themselves they can succeed at a high level," said Ratcliff. "So what begins as a summer job for the counselors ends up in a much more rewarding experience that stays with them for years to come. They truly depart a GeoFORCE event knowing that they have changed lives."

It's evening now and time for dinner at the pizzeria. After that, back at the hotel students study and then take a test to evaluate their understanding of the day's material. Following an hour or two of free time to swim in the pool, play volleyball or just hang out, it's lights out. And hopefully sleep soon follows, because the alarm will go off at 6 am and it will all start over again.

GeoFORCE Sponsors

GeoFORCE relies on generous outside support to pay for all expenses associated with the student participants. The Jackson School provides resources for overhead and administrative expenses. In this way, our sponsors are assured that every dollar is given directly to the kids. Below is a partial list of corporations, foundations and government agencies that have supported GeoFORCE in 2009.

BP
Chevron
Communities Foundation of Texas
ConocoPhillips
Devon
ExxonMobil
Halliburton
Marathon Oil Company
Minerals Management Service Company
Shell Oil Company
TG Foundation
Texas Workforce Commission
Vulcan Materials Foundation

Individual sponsors:
Marilee and Bill Fisher
The Darwin Family

Inside the Jackson School:

Career Center Offers Services for Alumni, Students and Employers

The Jackson School is one of the top geosciences degree-granting programs in the nation. Our graduates stand shoulder to shoulder with the best geoscientists from across the country when it comes to scientific knowledge and technical expertise. Yet to be truly successful in their careers, students and alumni must also understand how to effectively present their skills and knowledge to employers, explore which fields and employers match their abilities and temperaments, and seek out experiences that enrich their professional lives.

In its 2007 strategic plan, the school identified a major goal as “placing the school at the forefront of education, student services, and student opportunities.” The school reaffirmed its commitment by creating the JSG Career Center (JSGCC) in January 2008 to help students and alumni bridge the gap between education and career.

“I enjoy working with and getting to know the students and employers,” says Maurine Riess, the career center coordinator. “It’s especially exciting in the fall when we have so many activities and employers are doing the heaviest recruiting.”

In this turbulent job market, Riess hopes alumni will also make full use of the center’s services. Many alumni may not realize they can make use of the career center’s services—not just as recruiters but as job seekers. (Interested alumni can contact Riess through the career center’s Web site.)

The center hosts bi-annual on-campus information sessions and interviews, as well as an annual career fair. The first career fair, held in September 2008, drew representatives from 37 companies and more than 150 students. Riess is striving to increase participation at this year’s fair.

The JSGCC offers numerous workshops throughout the year on topics such as writing effective resumes and cover letters, improving interviewing skills, business ethics and etiquette, the Texas Professional Geoscientist License, and jobs at the Texas Commis-

sion on Environmental Quality. During the busy fall recruiting season, one-on-one assistance is available for every student through Walk-In Resume Reviews.

JSG students, alumni, and employers can utilize extensive personalized career services through GEO•SOURCE, an online site where applicants can upload and view resumes, apply for jobs and summer internships, and sign-up for on-campus interviews. Employers can post jobs, review resumes, and schedule interviews. You can access GEO•SOURCE and other resources by visiting the Career Center’s home page at www.geo.utexas.edu/careers/.

Riess holds a master’s in geology from the University of Texas at El Paso and has worked as a professional geologist in the oil and gas and environmental sectors. She taught geology at Austin Community College for five years before coming to the Jackson School. Riess says her varied background gives her an invaluable perspective for students and alumni.



Maurine Riess, Career Center Coordinator, can be contacted at 512-232-7673 or mriess@jsg.utexas.edu.



Second Annual Jackson School Career Fair

September 16, 2009
10:00 a.m. - 3:00 p.m.
Texas Union Ballroom
The University of Texas at Austin

Companies from energy, petroleum, environmental, hydrogeology, and government industries will have the opportunity to meet our graduate and undergraduate students from the Jackson School.

To register, contact the Career Center at: 512-232-7673 or careers@geo.utexas.edu.

Tips for Employers: Engage Students Through Sponsorships

Your company can reach UT geoscience students in an informal and educational way, familiarizing them early and often with your company, by sponsoring events at the Career Center. Here's just a sampling:

- » **Student Awards:** Create a competitive award for students based on a unique industry problem and award the top entries.
- » **Student Groups:** Sponsor a meeting or provide a presenter to talk about professional development or industry-related topics.
- » **Field Trips:** Bring students to your company to learn about the “real world,” or sponsor our faculty to take students into the field.
- » **Tech Support for the Classroom:** Provide improved technical equipment such as microscopes, computers and lab supplies to enhance the research training within the School.
- » **Etiquette Dinner:** Give students the opportunity to learn which fork to start with and how to gracefully exit the table. A great preparation for real world professional experience.

Opportunities range from \$500 to \$15,000. If your company is interested in sponsoring these or other activities, please contact Maurine Reiss (512-232-7673, mreiss@jsg.utexas.edu).

Seen at recent alumni events:

(L to R, top to bottom): Kami (B.S. '95) and Scott Keim, Christi (B.S. '96) and Charlie (M.A. '96) Gell reconnect at the Houston Alumni Reception, September 2008; Don Clutterbuck (M.A. '58) gives alumni a private tour of the Weiss Energy Hall at the Houston Museum of Natural Science; Bill Agee (B.A. '83; M.A. '90), Gerry Gilbert (B.S. '68), and Jim Lockley (B.S. '78) attending the spring continuing education lecture, The Iranian Oil Card: Can They Play It?; Building a Longhorn Legacy — the Reinsborough family at the Jackson School Tailgate Party, October 2008.



Alumni Welcome New JSG FANs President

This fall, Doug Brown (B.S. 1984) assumes the presidency of JSG FANs, the Jackson School Friends and Alumni Network. As president-elect, Brown created SMART Start, a summer job program for undergraduate students. He says he looks forward to expanding the young organization.

“I think the most exciting thing is that we have an opportunity to create an organization that provides tangible benefits in enriching people’s lives,” he says.

FANs aims to unite alumni with the school and one another, develop programs and events that enrich the careers and lives of alumni, and give graduates a way to give back to the school and its students. Through the network, alumni help students by conducting mock interviews, offering career advice, providing summer jobs through SMART Start, and helping the school recruit outstanding high school students. While the organization has successfully established active chapters in the major metropolitan areas of Texas,

Brown says it’s time to reach out to and engage smaller communities. Another challenge that he plans to work on is communicating to the alumni the goals, objectives and benefits of the organization.

“The University of Texas at Austin and the Department of Geological Sciences had a profound impact on my life and success, so I benefited personally and professionally as a graduate of the school,” he says. “So I wanted to give back some of my time and energy.”



Incoming FANs President Dan Brown says the program has an excellent foundation thanks to work done by outgoing president Dan Smith and staff at the school.

Your 2009-10 FANs Board



Al Erxleben, President-Elect, retired Sr. Exploration Advisor, El Paso Exploration and Production, Houston



Past President: Dan Smith, Exec VP-Exploration, Sandalwood Oil & Gas, Houston



Treasurer: David Wallace, Sr. Project Manager, IHS, Inc. – Houston



Secretary: Bonnie Weise, Geological Consultant, San Antonio



Member at Large: Patricia Bobeck, Consulting Geologist/Owner, Geotechnical Translation, Austin



Member at Large (Outside of TX): Ray Pilcher, President, Raven Ridge Resources, Grand Junction, CO



Member at Large (International): Petro Papazis, Development Geologist, Chevron Canada Resources and Production, Houston



Austin Chapter Director : Robert Mace, Assistant Division Director, Texas Water Development Board



Corpus Christi Chapter Director: Frank Cornish, President, Imagine Resources, LLC



Houston Chapter Director (joint): Jim Richards, Consulting Petroleum Geologist, Genesis Producing Company



Houston Chapter Director (joint): Christie Rogers, Geoscientist, ExxonMobil Exploration Company



Midland Chapter Director: David Schmidt, Senior Geologist, Kinder Morgan Production Company.



Photo credit: Richie Humphreys

Tour the New Stadium!

The Dallas chapter of FANs is hosting its fall kick-off event at the Dallas Cowboys' new stadium in Arlington. And you can witness this bit of history in the making. Join us for a private tour of the new facility, followed by a barbecue reception inside the Cowboys locker room. This VIP tour includes a visit to the press box, scoreboard control room, player interview room, field access and more!

Construction on the \$1.4 billion stadium, which has the largest retractable roof of its kind in the world and the largest high definition video display in the world, was completed earlier this year. The giant center-hung, colossal video board measures 160 feet in length and covers the distance between the 20-yard lines on both sides of the field. It will hang 90 feet above the field from the roof structure and will weigh 1.2 million pounds. Believed to be the largest video board in the world, it's comprised of four individual boards: two facing the sidelines and two facing the end zones. Say, how many

channels you get on that thing?

In addition to the Cowboys' home games this fall, the new stadium will host the Big 12 Championship game on December 5th and the UT men's basketball team as they face defending National Champion North Carolina on December 19th.

Dallas Alumni Reception

Thursday, October 22nd

6:00-9:00pm

Arlington, Texas

Cost: \$25 per person

Space is limited to 100 people. Only one guest allowed per invitee. To reserve a space, contact Julie Paul (471-2223, jpaul@mail.utexas.edu).

Upcoming Alumni Events

Monday, October 19th

Portland, Oregon

GSA Alumni Reception

Tuesday, October 27th

Houston, Texas

SEG Alumni Reception

Saturday, November 7th

Austin, Texas

Alumni and Friends Tailgate Party

2 Hours Prior to Kick-off

East Mall in front of the Geology Building

Wednesday, December 16th

San Francisco, California

AGU Alumni Lunch

Wednesday, October 7th

Petroleum Club of San Antonio

Alumni Reception & Groundwater Lecture featuring Dr. Jack Sharp

6:00 p.m. Cocktail Reception

7:00 p.m. Lecture and Discussion

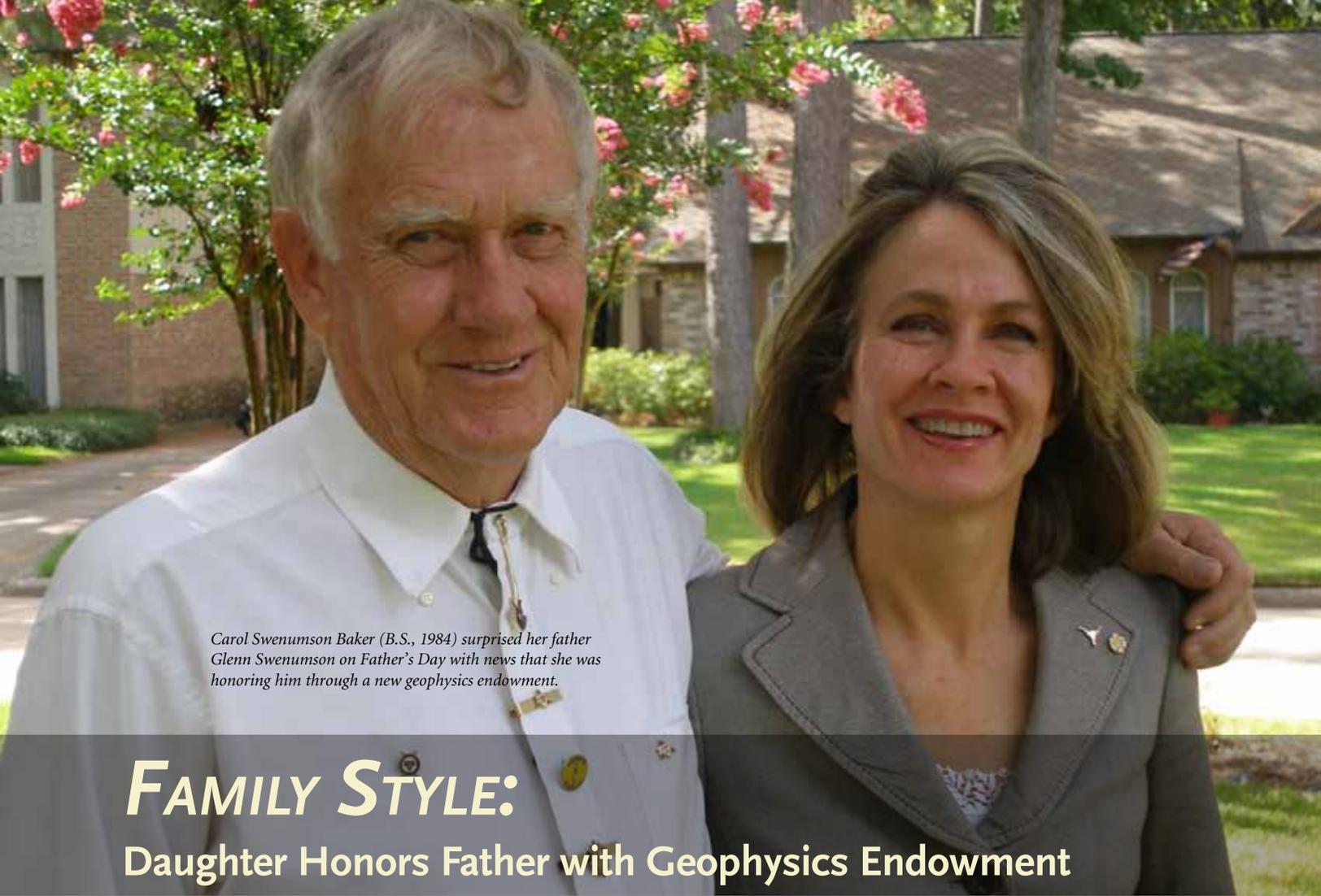
Tuesday, November 17th

AAPG International Reception

Rio De Janeiro, Brazil

AAPG International Alumni Reception





Carol Swenumson Baker (B.S., 1984) surprised her father Glenn Swenumson on Father's Day with news that she was honoring him through a new geophysics endowment.

FAMILY STYLE: Daughter Honors Father with Geophysics Endowment

Glenn Swenumson started work on a seismic crew for Conoco in 1948. He reckons that over the next 38 years, he and his growing family lived in 22 places. His son was born in Louisiana, his first daughter in Colorado and his second daughter in New Mexico. He wistfully recalls those days as a doodlebugger.

“Everybody was just out of the military and everyone was broke and had little kids and we’d hit a new town two or three times a year and we’re all looking for places to live,” he recalls.

“We had a spirit, and we still do,” he adds. “I had affection for all the people and their families, the old grizzled dynamite shooters and the shothole drillers.”

He worked his way up to party chief, then seismic supervisor, division geophysicist, and finally area geophysicist with responsibility over several divisions. He retired from Conoco in 1985 and lives in Houston.

This past Father’s Day, his daughter Carol Swenumson Baker (B.S., 1984) surprised him by revealing that she had created an endowment at the Jackson School partly in his honor. The Swenumson-Baker Geophysics Excellence Fund is designed to “promote excellence in the geophysics program, including support for equipment, travel and other expenses associated with geophysics field trips and field courses.”

“It was a heck of a nice surprise on Father’s Day,” he says. “I asked her how did Swenumson get ahead of the Baker in the name? And she said that’s just how she wanted it.”

In 1984, Baker went to work for Exxon as a seismic data processor. Now she works in information technology support-

ing geoscientists and managers across the company. ExxonMobil matches all employee charitable contributions three to one. The Jackson School matches certain contributions (including corporate matches) one to one. Together, these matches magnify her gifts eightfold. For example, a gift of \$1,000 is raised to \$4,000 with the corporate match and then doubled to \$8,000 with the Jackson match.

“I had already been giving each year to a geophysics fund and I started very early on in my career,” she said. “I started small because I wasn’t making much money then and as I could, I increased that. I had never even thought about giving an endowment until Ann Flemings approached me about it last year and explained how you don’t have to be Bill Gates to create an endowment, someone at my level could do it.”

Her father never pushed her towards petroleum geophysics, in fact he was surprised when she told him that that’s what she wanted to study in college. But she says he did pass on his love of geology in subtle ways, for example pointing out interesting geological features on family trips to the mountains, national parks, and his South Dakota birthplace.

Baker says this fund is her way of giving back to an institution that made such an important impact on her life.

“It was a very special time in my life,” she says. “The group of friends I made in the department, we remain friends to this day. We spent weekends cramming and studying together. The whole experience was great. The caliber of the institution and the people are top notch and I’d like to see them grow even more.”

Hydrology Students Work to Save Farm — Cont'd

of time,” said Clint Waller, one of the students on the project who graduated this summer with a bachelor’s in geosystems engineering.

On the last day, the students ran a new transect between the first two anomalies and found another part of what was looking more and more like a large gravel bed. Bob Reedy, a scientist at the Bureau of Economic Geology, brought to the farm a geoprobe, a device that bores into the ground and collects core samples. With just a few hours left before the end of their last field day, everyone gathered around as two core samples were brought up.

“You could tell everyone was excited but kind of nervous at the same time,” said Waller. “The farmers left their work and they were coming out and watching the machine and there was a little curiosity and ‘What’s that thing doing?’ and ‘If you find anything, does it look good?’”

“And then we started bringing up sand and gravel and water was pouring out of it,” he said. “That’s as good a sign as you can find with this machine. And there was a sense of relief.”

In their final report prepared for the county, the students identified a handful of promising sites for drilling wells that seemed to be unconnected to the shallow aquifer of their current wells. News reports have placed the value of such an assessment from a professional consulting firm at \$50,000. Waller said that is a very conservative estimate given the time and manpower that was devoted to the project. He put the value at closer to \$150,000.

“They were very grateful for us being out there,” said Travis Swanson, a graduate student and teaching assistant for the course. “Even though we’re students and it’s a class exercise, they believed in us. And we got some good data for them.”

As this article goes to press, the county plans to drill 6 test wells at their expense later this summer. The outcome could be a major turning point for Tecolote Farm.

Win-Win

The students also benefited from the project. They learned how to

characterize a site using modern geophysical equipment and how to analyze the data to determine where the best places are to get water.

“This is a great introduction into hydrogeological consulting,” said Swanson. “And they get a few blisters and sunburn as well.”

“We designed the entire project,” said Waller. “Jack wasn’t out there telling us you should do this here and you should do that there. The students had to decide where we were going to do the work, what we were trying to find and how we were going to go about running the project. We wrote up our results in a report. Now if any of us want to go into consulting, we can say, I have experience in consulting.”

The reality of the farmers’ predicament pushed students to work hard. For example, they spent hours hand augering, twisting a long metal rod with a drill tip into the ground to do ground truthing.

“The big thing was seeing the kids out there playing and you realize if these people lose their water and the farm goes under, it’s not just some big farm that’s going down, it’s a local farm here in Austin, it’s these people’s family, it’s all these farm workers’ only income,” said Waller. “It really hit us, we’re not just going out there to do some project and run some machines. We’re going out there to try to help find these people water so they can save a resource in Austin.”

Still, hurdles remain. Pitre said some of the new sources of water are on the back part of their property and would require installing new pipes and electricity, which would be expensive. There are also no guarantees that a new well would continue producing consistently for many years. Pitre said an unfortunate side effect of the school’s assistance might be that the county could feel absolved of responsibility and be less inclined to help.

“I was very impressed with the students,” said Pitre. “From what I can tell, hydrogeology is the wave of the future in Texas because we’re running out of water.”

Contacts

Make an Impact

Gifts of endowments, gifts in kind or estate planning

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- » Kimberly Kassor, Assistant Director (512-232-8085, kkassor@jsg.utexas.edu)

Get Connected

Alumni involvement, volunteer opportunities, special events

- » Julie Paul, Assistant Director (512-471-2223, jpaul@mail.utexas.edu)

Local Link

Social, educational and networking activities near you

- » Austin: Pat Bobeck (pbobek@earthlink.net) and Robert Mace (robert.mace@twdb.state.tx.us)
- » Corpus Christi: Frank Cornish (frank.cornish@gmail.com)
- » Dallas: Doug Brown (bxpco@aol.com)
- » Houston: Jim Richards (jr1934@aol.com) and Christie Rogers (christie.m.rogers@exxonmobil.com)
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