2011 ANNUAL REPORT

GEOFORCE TEXAS

THE UNIVERSITY OF TEXAS AT AUSTIN
JACKSON
SCHOOL OF GEOSCIENCES

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On the cover:

Ninth-grade Young Geoscientists from the southwest Texas region get ready to visit the Annandale Bat Cave near Uvalde, Texas.

Contact Information:

GeoFORCE Texas
Jackson School of Geosciences
The University of Texas at Austin
J.J. Pickle Research Campus
10100 Burnet Road, Building 196
Austin, TX 78758-4455

Phone: 512-471-4360
E-mail: geoforce@jsg.utexas.edu
Web site: www.jsg.utexas.edu/geoforce

THE UNIVERSITY OF TEXAS AT AUSTIN
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Contents

Message from the Dean

Dr. Sharon Mosher, Dean
Jackson School of Geosciences

GeoFORCE is full of surprises and heart-warming experiences. When we first started the program, we had no idea what obstacles we would face or what results we would achieve. We knew when we targeted challenged schools in inner-city Houston and rural southwest Texas that we might be wading into turbulent waters, and we braced ourselves for disappointments.

But after seven years of operation, our challenges have been miniscule—especially compared with what some of our students face every day—and our results have been fabulous. In trying to convey the feeling of success and accomplishment that GeoFORCE provides, I think it is best expressed by those directly involved.

Mark Martin
Shell

Here is an example from one of our sponsors (Mark Martin of Shell) of the satisfying results of the program as it grows and affects more students and their families:

Two Sundays ago a group of Shell geologists and I were returning from a field trip out in the Del Rio area of SW Texas and made the required pull-off at the U.S. Border Patrol station north of Del Rio on Hwy 90. Two Patrol officers greeted us. Once they were aware that we were geologists with Shell and understood where we had been and what we had been doing, one of the officers said *"So you do geosciences?"*

Our ears perked up! . . . and we confirmed.

He went on to tell us that his daughter, going into her senior year in high school, was the top student in her class and that she was about to leave for a Florida GeoFORCE trip. That she loved this program and was getting much from it!

The pride that this father/officer had written across his entire face and his smile was very special.

It was equally special for me. I told him that Shell has been sponsoring GeoFORCE for a number of years and that I had been on one of the early GeoFORCE 9th-grade South Texas field trips in the Uvalde area a number of years back.

He thanked us!

I am very happy and proud that Shell continues to sponsor GeoFORCE and that Shell staff participate in GeoFORCE field trips. As a UT geology alum, I am proud that the UT Jackson School gave birth to this program and that it is thriving!

It was a great Sunday!

And here a student (Daniela Ocada, senior, Del Rio High School) shares what it means to experience GeoFORCE as not just a geoscience lesson but also a life lesson:

I realize that this has affected my day-to-day routine. I've picked up many of the characteristics that we use in our adventures: stopping to see the surroundings, taking a new path, and taking the long way to appreciate the beauty. Emotionally, I have become an independent individual, able to take care of myself. **I think I'm ready to take on college.**

Quotes such as these attest to the value of GeoFORCE and its impact. As we move our third cohort to college (now 272 students in college), we can truly say it isn't just talk. Our thanks go to everyone who has made this such a great experience.

Dr. Sharon Mosher, Dean
Jackson School of Geosciences

2011 Highlights

Achieving Our Objectives

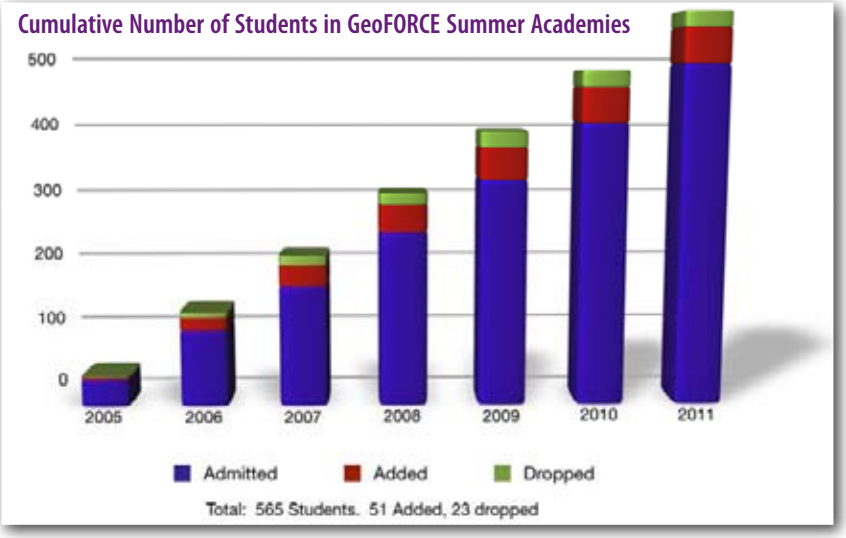
We continue to achieve our main objectives to establish diversity, maintain retention, and promote growth of the GeoFORCE program while increasing the number of students pursuing STEM-related careers. At the core of the program is our goal to create a cohort of diverse young students who have an interest in science and keep them challenged and engaged over the next four years of high school so they are prepared to succeed in college. Meeting our capacity numbers is important because GeoFORCE is designed to cast a big net with the hope that after the long winnowing process of high school, we have captured the interest of a substantial number of promising students who then go on to college in STEM fields. The data we have gathered indicate we are on the right path.

The demographics of GeoFORCE summer events reflect the diverse populations of our target areas.

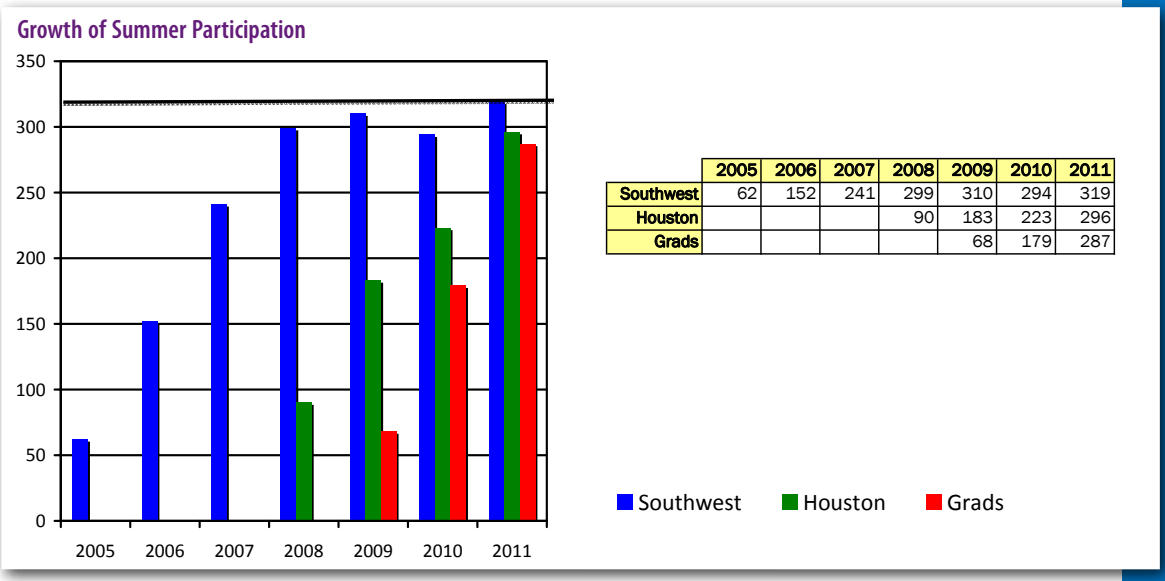
Demographics of 2011 GeoFORCE Summer Events

Houston		Male	Female	Hispanic	Black	Asian	White	Other
Academies								
9th	41	18	23	15	12	6	8	0
10th	40	12	28	16	12	6	6	0
11th	40	17	23	19	10	7	4	0
12th	42	16	26	13	13	9	7	0
Young Geoscientists								
9th	35	12	23	20	10	1	4	0
10th	27	6	21	14	10	2	1	0
11th	32	12	20	14	16	1	0	1
12th	39	12	27	16	15	6	2	0
Southwest Texas								
Academies								
9th	43	15	28	29	0	3	11	0
10th	42	16	26	25	1	2	14	0
11th	40	16	24	30	2	0	8	0
12th	42	18	24	30	0	0	11	1
Young Geoscientists								
9th	44	18	26	30	0	1	13	0
10th	42	10	32	29	1	0	12	0
11th	33	9	24	26	0	0	7	0
12th	33	13	20	27	0	0	6	0
TOTAL	615	220	395	353	102	44	114	2
		36%	64%	57%	17%	7%	19%	<1%

GeoFORCE students continue to exhibit a high degree of loyalty to the program. We track retention rates for our Academy events because students in the academies are required to attend all four years to remain in the program. We allow those who participate in the Young Geoscientist program to miss one or more summers and return.



We now have all four classes (grades 9, 10, 11, and 12) engaged in both the Houston and the southwest Texas regions. Our planned total capacity is 640 students. During the summer of 2011, we were within 25 students (4 percent) of achieving this level.

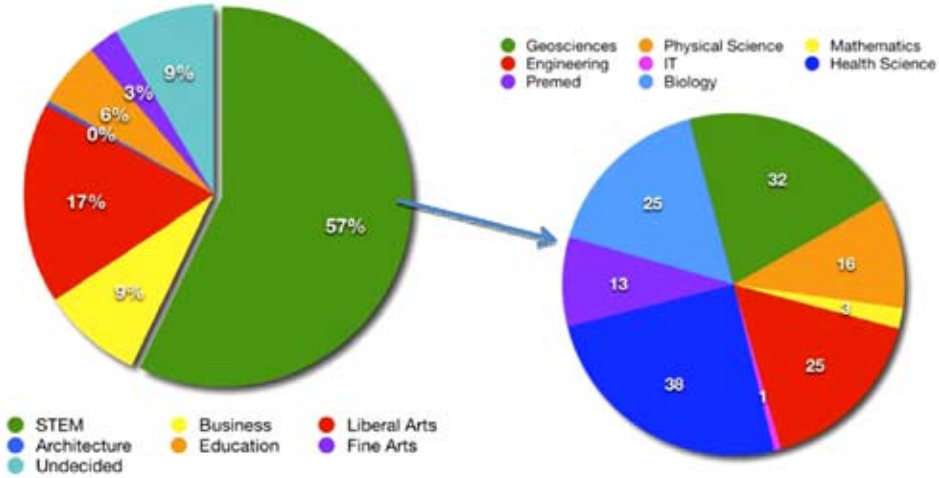


	2005	2006	2007	2008	2009	2010	2011
Southwest	62	152	241	299	310	294	319
Houston				90	183	223	296
Grads					68	179	287

Two of our most important measures of success are to increase high school graduation rates and to gain admission to college. Once again, our numbers indicate that we are succeeding:

100	Percentage of GeoFORCE students graduating from high school (includes all three cohorts who have graduated)
58	Average graduation rate (percent) from high school in schools attended by GeoFORCE students
98	Percentage of GeoFORCE students admitted to college
50	Average college admission rate (percent) in southwest Texas and Houston regions
57	Percentage of GeoFORCE students pursuing STEM degrees

Majors of GeoFORCE College Students, Fall 2011



GeoFORCE Students in College as of Fall 2011					
Four-Year Colleges				**Two-Year Colleges**	
Angelo State	6	Tarleton State	1	Blinn College	1
Baylor	1	Texas A&M	26	Coastal Bend College	1
Brigham Young	1	Texas A&M Corpus Christi	4	Houston Community College	7
Dallas Baptist	1	Texas A&M International	7	Navarro College	1
Fort Valley State	1	Texas A&M Kingsville	5	Northwest Vista College	5
Harvard	1	Texas Christian	1	Palo Alto College	1
Houston Baptist	1	Texas Lutheran	1	San Antonio College	3
Howard	2	Texas Southern	2	Southwest Texas Junior College	26
Incarnate Word	6	Texas State	11	Technical school	1
Kansas State	1	Texas Tech	7	Total 2-year students	**46**
Lamar	3	U Houston	7	**Completed College**	
McMurry	1	U Houston Downtown	1	Graduated AA/AS degree	4
Ohio State	5	U Houston Victoria	1	Graduated BA/BS degree	1
Our Lady of the Lake	1	U Mary Hardin-Baylor	1	Total completed	**5**
Pepperdine	1	U North Texas	4	**Total GeoFORCE College Students**	**272**
Prairie View A&M	4	U.S. Coast Guard Academy	1		
Rice	2	Ursinus College	1		
Sam Houston	3	UT Austin	54	Out of state	19
Schreiner	3	UT El Paso	1	Private colleges	31
Southern Methodist	1	UT Permian Basin	1	HBCU	13
Southern	1	UT San Antonio	27	Texas state schools	232
St. Edward's	2	Wabash	1		
St. Mary's	1	Xavier	1	**Not in College**	
Stephen F. Austin	3	Yale	1	U.S. Armed Forces	3
Sul Ross	2	Total 4-year students	**221**	Not in college	12

HBCU = Historically Black Colleges and Universities.

Going Green

For six years, GeoFORCE has provided water to our students in disposable water bottles. As the size of GeoFORCE has increased, so has our consumption of plastic bottles. In fact, an estimate of consumed and discarded bottles during the summer of 2010 comes to more than 14,000! Not very green.

Eleanour Snow, *at left in photo,* suggested that we investigate ways to address this waste, and beginning in 2011 we provided participants with reusable water bottles. The bottles are refilled from large containers kept in the trail vehicle. GO GREEN!!

Staff Accolades

A paper by Eleanour Snow and coauthor Doug Ratcliff—"GeoFORCE Texas at UT Austin; Six Years of Experience Turning Rural and Urban, Mostly-Minority High School Students into College Science Majors"—won second place in the 2010 Thomas A. Philpott Excellence of Presentation Award by the Gulf Coast Association of Geological Societies.

Academic Accolades

GeoFORCE was honored at a UT basketball game in December. Four of the thirty-two UT GF Grads were on hand to accept the accolade.

From the far right: **Marissa Vara, Chris Graham, Inmer Cardona, and Taylor Sunderman show their UT school spirit and GeoFORCE roots.**

A-Team Honors

The A-Team is a program sponsored by the San Antonio Express-News that recognizes high school students for not only their academic performance but also their involvement in community affairs. The article recognizing these students captured the spirit of their contributions: "They are diligent, responsible and considerate of others and serve as positive role models for their peers." Eduardo Aranda, of Eagle Pass High School, now Harvard class of 2015, and Allison Boehme, of Hondo High School, now UT Austin class of 2015, were honored this year. Both are from the GeoFORCE class of 2011.

Eduardo Aranda and Allison Boehme receive A-Team awards from Thomas A. Stephenson, publisher and president of the San Antonio Express-News.

And More from the Class of 2011

The GeoFORCE class of 2011 continued our tradition of high achievers with all 109 students graduating from high school. Every one of the 2011 class is an outstanding kid, but it is worth mentioning a few students that distinguished themselves at the top of their classes:

Valedictorians

Eduardo (EJ) Aranda
Eagle Pass HS
Harvard—Math

Divyben Bhakta
Scarborough HS
UT—Geology

Allison Boehme
Hondo HS
UT—Nursing

Jose Gomez
Cotulla HS
UT—Chemistry

John (JT) Morey
Nueces Canyon HS
Texas A&M—Undetermined

Jesse Ortegon
La Pryor HS
Texas Tech—English

Enrique Reyes
Sam Houston HS
UT—Geology

Adam Taylor
Washington HS
SMU—Business

Salutatorians

Caroline Beltran
Knippa HS
UT—Journalism

Bryan Calk
Brackett HS
Texas A&M—
Biomedical Engineering

Daniel Campos
Uvalde HS
UT—Chemical Engineering

Jonathan de la Cruz
C. C. Winn HS
Texas A&M International—
Music Education

Luiz Garcia
Cotulla HS
UT—Aerospace Engineering

David Lee Obregon
Dilley HS
Ohio State—Psychology

Nathaly Olascoaga
La Pryor HS
Texas A&M—Psychology

Krizelle Olivio
Eagle Pass HS
North Texas—Speech

Sarah Rubio
Leakey HS
UT—Geology

Cheyenne Walker
Nueces Canyon HS
Schreiner—Biology

James White
Pearsall HS
Southwest Texas Junior College—
Pre-Engineering

GeoFORCE Overview

The Need

GeoFORCE began in 2005 when the Advisory Council of the Jackson School suggested we increase our efforts to attract diversity—into the geosciences, specifically, and into science, technology, engineering, and mathematics (STEM), in general. This advice followed on the heels of the National Academies' often-cited "Rising Above the Gathering Storm," which brought national attention to the looming shortage of qualified scientists for the future workforce. Much has been made about the impact of the baby boomers' reaching retirement age, but the fact that the fastest growing segment of our population (minorities) is severely underrepresented in STEM fields is equally disconcerting.

A quick look at the numbers brings this issue into perspective (from *Science*, January 14, 2011):

30	Percentage of U.S. population that is minority
9	Percentage of U.S. STEM workforce that is minority
6	Percentage of 24-year-olds with undergraduate STEM degrees
2	Percentage of African American, Hispanic, and Native American 24-year-olds with an undergraduate STEM degree

Maintaining our standard of living will require that the United States lead in advancing technology, and we can't do that with a large segment of our population drastically underrepresented in STEM fields.

The Method

GeoFORCE is designed to address this issue by targeting geographic regions whose populations are predominately minority. Our two regions are rural southwest Texas and selected schools in inner-city Houston.

The objectives of GeoFORCE are to

- Increase the number of students pursuing degrees in math and science.
- Increase the diversity of the future high-tech workforce.

With the valuable assistance of science teachers from our targeted schools, we identify eighth-grade students who have shown an interest in science and math and have proven it by earning good grades (a B or better in math and science). Once identified, the students are brought into the GeoFORCE program, where they receive spectacular science learning experiences over the next four years of high school, with the goal of encouraging them to excel in the sciences and pursue higher education in scientific fields. We have learned that one effective way to excite and engage young people is to immerse them in geologic experiences that spark their imagination, inspire their academic development, and broaden their perception of the world.

This goal is accomplished through a four-year series of summer academies and field courses that include learning in dynamic field and classroom environments, living on a major university campus, interacting with university faculty and research scientists, and participating in field trips to spectacular geologic settings in Texas and across the United States. The field trips last from two to six days and include study on the UT Austin campus, as well as visits to places such as Mount St. Helens, Florida Keys, Guadalupe Mountains, and the Grand Canyon that give the students outstanding opportunities to discover science in some of the most beautiful field sites in the world. Each event includes a detailed guidebook, and the students take quizzes each evening and a final exam. A minimum score of 80 must be achieved to continue in the program.

Parent, family, and community support are critical to student success in GeoFORCE. Family members are required to support their child through the four-year

program, signing a commitment document as part of the application process. Parents attend orientation sessions and closing ceremonies and are invited to participate in college admission and scholarship workshops every fall. To build a sense of civic pride for GeoFORCE and our student participants, we also work with local media to publish press releases in hometown newspapers. At the completion of each academy, a closing ceremony brings together students and their families, representatives from the University of Texas, program sponsors, and program participants such as park rangers and museum curators. These events are designed to strengthen the community, family, and student commitment to continued success of the program all the way to college and beyond.

As GeoFORCE students approach their senior year of high school, our focus is on helping them make a successful transition to college. To further improve the chances of GeoFORCE students entering higher education, the 11th-grade program includes an SAT preparation session aimed at maximizing their scores. We also offer a college and financial aid application workshop to students in their senior year. The ultimate goal is to have them attend a university and achieve a degree in science, math, or technology. Of course, having these students pursue geoscience studies at UT Austin would be a bonus to our program.

A new program, GF Grads, has now been created to maintain contact with and support for the students as they proceed through college. Communication is essential to our being able to analyze the impact of GeoFORCE (that is, the extent to which we are increasing the number and diversity of students pursuing STEM degrees), as well as to provide resources that include scholarships and internships.

Results

Three GeoFORCE classes have graduated from high school and entered college. GeoFORCE has a 100 percent high school graduation rate and a 95 percent college matriculation rate, with a 3 percent college dropout rate. For comparison, in the communities we draw from, high school graduation rates range from 45 to 80 percent, and college attainment is less than 20 percent. Our demographics are 61 percent Hispanic, 14 percent African American, 7 percent Asian, 1 percent Native American, and 17 percent Caucasian.

Our graduates are studying in STEM fields in much higher numbers than the national average. As of fall 2011, 57 percent of GeoFORCE graduates are declared STEM majors, including 32 geoscience majors and 25 engineers. While most of our college students are in four-year schools in Texas, we also have students in 11 other states and in two Ivy League universities.

One further measure of our success: The GeoFORCE class of 2011 includes 8 valedictorians and 11 salutatorians.

GeoFORCE Staff

The success of GeoFORCE requires many elements to come together (funding, partners, teachers, and of course, students), and in the case of the actual events, our coordinators are responsible for making sure that everything is in the right place at the right time. Edgar Garza and Lindsay Stephens, both Coordinator II's, are in charge of the summer events and also supervise our two Coordinator I's, Matt Hofer and Ann Merriman. Briana Schroeder, on temporary assignment with us this summer, helped coordinate several summer events. Eleanour Snow, Associate Director of Outreach, manages our GF Grads program, assists as an instructor at events, runs the School's First-Year Interest Group (FIG), and helps with many other aspects of outreach. Karen Barton manages our finances, and Doug Ratcliff, Director of Outreach, supervises the staff.

Many others in the Jackson School assist with the program, and they are mentioned in other sections of this report. Of special note, Jay Raney continues to help with designing and participating in field activities, as well as writing the guidebooks used on each trip. Guidebook preparation and layout were done by Jamie Coggin, Lana Dieterich, Susie Doenges, Joel Lardon, and David Stephens.


Eleanour Snow


Edgar Garza


Matt Hofer


Lindsay Stephens


Briana Schroeder


Ann Merriman


Karen Barton

Partnerships

GeoFORCE continues to benefit from strong partnerships that include our sponsors, Southwest Texas Junior College, the Houston Independent School District, Fort Valley State University, and new this year, the University of Alaska Fairbanks. After seven years of operation, our partners have become "family." Although some interactions follow formal business procedures (proposals, reports, and the like), our relationships go far beyond the usual bureaucratic routine. In addition to providing critical and essential funding for the program, our partners give us access to the things they do best. Our corporate partners have provided us exciting venues for field trips, and our academic friends give us access to their educational networks that include teachers and students.

But as much as we value our supporting institutions, we realize that standing behind every one of these partnerships are people: people who join us in the field, people who serve as role models for our students, and people who care about GeoFORCE and its potential to make a difference.

This report attempts to mention those who have been involved with GeoFORCE, but some contributors may inadvertently have been left out, and we sincerely apologize for any such oversight.

Will Dugat, BP geologist, illustrates grain compaction to Houston 10th graders on Mustang Island.

Southwest Texas Junior College

Southwest Texas Junior College (SWTJC) is the connection between the Jackson School and 18 independent school districts in southwest Texas. Since the beginning of GeoFORCE in 2005, SWTJC has provided access to its established network of schools, administrators, and teachers. Because of this resource, GeoFORCE can efficiently disseminate information, conduct the application process, and operate the program across a vast geographic area in rural southwest Texas. In addition, SWTJC is an active participant in all aspects of the program. SWTJC personnel (Blaine Bennett, Mayta Garza, Andrea Flores, Willie Edwards, Stephanie Cerna, Wade Carpenter, and others) assist in setting up GeoFORCE events in the Uvalde area, arrange transportation for students in Eagle Pass and Del Rio, and prepare news articles for publication in local newspapers. SWTJC employees provide local logistical support, make initial contacts with students and teachers, and maintain financial records for local purchases.

Houston Independent School District

The Houston Independent School District (HISD) is the seventh largest school district in the country, and navigating through its operations can be a daunting task. Three HISD administrators (Shelley McKinley, Yolanda Evans, and Karla Auzenne) have continually assisted us with school contacts,

and, whenever necessary, they have made personal visits to schools to make sure information is properly disseminated. HISD has allowed us to use space in their headquarters building to conduct orientations, hold SAT reviews, and gather as a mustering point for the beginning of several of our summer events.

Fort Valley State University

GeoFORCE owes a great deal to Fort Valley State University (FVSU), as their successful Mathematics, Science, and Engineering Academy (MSEA) provided the template for the initial design of GeoFORCE. Dr. Isaac Crumbly created the FVSU program, continues to direct it, and has personally provided valuable guidance to GeoFORCE.

As part of our partnership with FVSU, the Jackson School funds and hosts the FVSU MSEA 11th graders during their field experience in Austin. The Jackson School also provides scholarships for FVSU students who choose to transfer to the Jackson School and pursue degrees in the geosciences.

Dr. Isaac Crumbly *(far left)* pauses with the MSEA 11th Grade Academy, a program he created at FVSU, on the UT campus in front of a statue of Dr. Martin Luther King, Jr. Perhaps the students find inspiration here to fulfill their dreams for higher education.

University of Alaska Fairbanks

Our partnership with the University of Alaska Fairbanks (UAF) has just gotten under way with the specific objective of establishing a GeoFORCE Alaska program to serve the predominately Native American population of Alaska's North Slope. Ed and Karen Duncan of Great Bear Petroleum were the initial force behind the Alaska project by providing funding and guidance for initial planning. Shell's Denise Butler introduced us to UAF's Rural Alaska Honors Institute (RAHI), who will be the lead organizer of the program with the Jackson School providing assistance in preparing the guidebook and trip agenda. The goal is to have 40 rising ninth graders participate in a week-long summer field event in 2012. The program will then be built in a similar fashion to GeoFORCE Texas with new ninth graders brought in each year until a capacity of 160 students is achieved. Stay tuned . . . .

Anine Pedersen (*in black sweater*) collects donations for GeoFORCE at the JSG tailgate party.

Foundations and Individuals

GeoFORCE meets the objectives of many major foundations: diversifying the future workforce, empowering at-risk students, and engaging students in STEM learning. Seven foundations contributed to GeoFORCE in 2010–11: American Association of Petroleum Geologists Foundation, Brown Foundation, GDL Foundation, George and Mary Josephine Hamman Foundation, Kinder Morgan Foundation, Ed Rachal Foundation, and Society of Exploration Geophysicists Foundation. In addition, several individuals contributed to the program, including two families who have established endowments for GeoFORCE (Janet E. and David I. Rainey Endowment and Darwin Family GeoFORCE Endowment). See table on page 15 for a complete list of donors.

Of special mention is the Jackson School Undergraduate Geological Society (UGS) who, on their own, organized a fund-raising event for GeoFORCE at a tailgate party preceding the UT–Oklahoma State football game in November 2010. **Anine Pedersen put it all together—organizing several others in UGS and some GF Grads to raise $957 that was matched by the Jackson School for a total contribution of $1,915.**

Industry and Government

Our industry and government partners provide funding, access to sites, instructors, mentors, and insight into what it is like to work as a geoscientist. GeoFORCE students benefit from interactions with corporate and government participants who take the time to personally meet with them. Each year several sponsor representatives spend as much as a week in the field with our students and take part in instruction and review. They also assist with our Educator Workshops. The table on page 14 illustrates the incredible commitment of corporations and government agencies to the GeoFORCE program.

Industry and Government Participation

Corporations	Funding[1]	Other	Individuals	Region and Event
AEP	✓	Services	Tony Arce	Trimmed trees at Ft. Inge, Uvalde, Texas
Baker Hughes	✓			
BP	✓	Fleeces, gadgets	Peter Hargrove	Southwest GeoFORCE Academy 9
			Genevive Mathers	Houston GeoFORCE Academy 12
			Hermali Patel	Houston Young Geoscientists 12
			Jeff Dingler	Houston Young Geoscientists 9
			Gill Apps	Southwest GeoFORCE Academy 11 GeoFORCE Advisory Committee Mentor
			Dmitry Bazykin	Mentor
			Will Dugat	Houston Young Geoscientists 10
			John Naranjo	Southwest Young Geoscientists 11
			Blair Francis	Southwest GeoFORCE Academy 10
			Sneha Chanchani	GeoFORCE Advisory Committee
			Kira Diaz Tushman	GeoFORCE Advisory Committee
Chevron	✓	T-shirts	Susan Howes	Houston Young Geoscientists 9
			Danielle Carpenter	Southwest Young Geoscientists 10 Mentor
			George Hildebrandt	GeoFORCE Advisory Committee
			Joni Baird	GeoFORCE Advisory Committee
ConocoPhillips	✓		Frank Rodriguez	Southwest Young Geoscientists 12
			Peter Hennings	GeoFORCE Advisory Committee
			Andy Dewhurst	GeoFORCE Advisory Committee
Devon	✓		Lori Parr	GeoFORCE Advisory Committee
ExxonMobil	✓	Backpacks, pad folios Grand Canyon IMAX tickets	Nysha Chaderton	Southwest GeoFORCE Academy 12
			Laura DeMott	Houston GeoFORCE Academy 10
			Julie Cogswell	GeoFORCE Advisory Committee
			Mike Loudin	GeoFORCE Advisory Committee
Great Bear Petroleum	✓	Travel services	Karen Duncan	Arranged and paid for travel costs to meet with University of Alaska Fairbanks
			Ed Duncan	
Halliburton	✓	Facility visit, hard hats	Bill Agee	GeoFORCE Advisory Committee
			Kelly George	Senior field event
			Bryce Tawney	Senior field event
			Dean Mento	Senior field event
			Myrna Smith	Senior field event
			Diana Gabriel	Senior field event
Marathon	✓	Materials, water bottles	Brian Gottfried	Houston GeoFORCE Academy 9
			Martha Barnes	Houston GeoFORCE Academy 12
			Laura Reich	GeoFORCE Advisory Committee
			Sarah Clark	GeoFORCE Advisory Committee
Schlumberger	✓		Susan Rosenbaum	Houston Young Geoscientists 10 GeoFORCE Advisory Committee
			Paula McCann Harris	GeoFORCE Advisory Committee
Shell	✓	Windbreakers, backpacks, water bottles, sunscreen, gadgets, T-shirts, notebooks, iPod, hand towels	Kristen Woody	Southwest Young Geoscientists 10
			Denise Butler	Southwest GeoFORCE Academy 12 GeoFORCE Advisory Committee
			Paul Ontiveros	Mentor
			Daniel Samake	MSEA 11
			Mike Alvarez	Houston GeoFORCE Academy 10 GeoFORCE Advisory Committee
			Aaron Shunk	Houston GeoFORCE Academy 11
Talisman Energy			Woody Pace	Mentor
TXI Aggregates		Webberville Aggregate Quarry visit	Bill Flanigan	Houston GeoFORCE Academy 9
			Joe Parks	
			Ricky Williams	Southwest GeoFORCE Academy 9
			Mark Palquist	
Valence Petroleum	✓		Bud Scherr	Houston Young Geoscientists 11
Valero	✓			
Vulcan Materials	✓	Uvalde Quarry visit	Chris Havelka	Houston Young Geoscientists 9
		Knippa Quarry visit	Armando Quiroz	Southwest Young Geoscientists 9

Government	Funding[1]	Other	Individuals	Region and Event
Bureau of Ocean Energy Management, Regulation and Enforcement	✓		Eric Hawkins	Mentor
Texas Workforce Commission	✓		Kelly Sadler	GeoFORCE Advisory Committee
Texas Commission on Environmental Quality			Lauren Welker	Mentor
U.S. Department of Education	✓			
U.S. Geological Survey	✓		Randy Orndorff	Southwest GeoFORCE Academy 11
			Lydia Quintana	Southwest GeoFORCE Academy 11

1 See table on page 15 for funding levels.

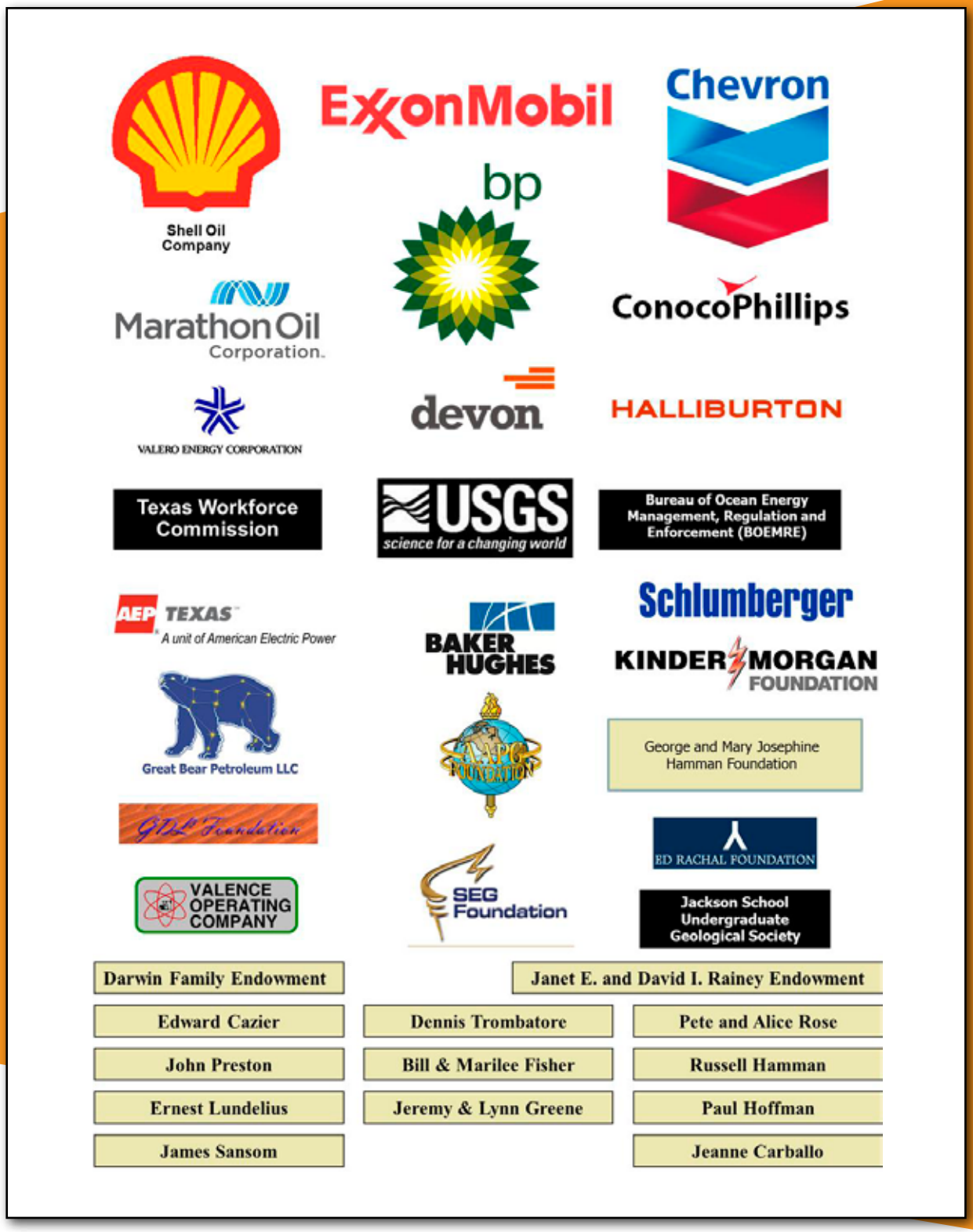
Financial Status

OUTREACH PROGRAM SUMMARY (including grants, contracts, and endowment payouts)									
Income	**03–04**	**04–05**	**05–06**	**06–07**	**07–08**	**08–09**	**09–10**	**10–11**	**Total**
Jackson School	61,483	120,453	300,553	466,995	778,224	678,334	663,965	741,621	3,811,628
UT Tuition Waivers			18,816	24,313	26,850	19,898	87,760	116,424	294,061
Subtotal Jackson School	61,483	120,453	319,369	491,308	805,074	698,232	751,725	858,045	4,105,689
Gifts—Companies									
Chevron				40,000	40,000	200,000	161,000	173,000	614,000
Shell		65,000	60,000	40,000	70,000	125,000	125,000	125,000	610,000
ExxonMobil		10,000	25,000	40,000	10,000	220,000	120,000	130,000	555,000
BP				50,000	80,000	120,000	120,000	120,000	490,000
Marathon		3,000			150,000	100,000	100,000	100,000	453,000
ConocoPhillips		41,000	43,000	21,000	21,000	21,000	21,000	21,000	189,000
Devon					25,000	40,000	40,000	40,000	145,000
Halliburton			10,000	20,000	30,000	30,000	30,000	25,000	145,000
Vulcan Materials					30,000		15,000		45,000
Valero					15,000		10,000	10,000	35,000
AEP					3,000	25,000	1,500	1,000	30,500
Swift Energy			10,000	12,000					22,000
Alcoa				5,000		15,000			20,000
Baker Hughes								20,000	20,000
Dominion			10,000	5,000					15,000
Schlumberger			3,000	3,000		3,000		12,000	21,000
El Paso Corporation						10,000			10,000
Great Bear Petroleum								10,000	10,000
Priority Oil & Gas	2,000								2,000
Subtotal Gifts—Companies	2,000	119,000	161,000	236,000	474,000	909,000	743,500	787,000	3,431,500
Gifts—Foundations, Professional Organizations									
AT&T Foundation		25,000	15,000						40,000
Anonymous								15,000	15,000
AAPG Foundation					10,000	10,000	10,000	15,000	45,000
Brown Foundation via SWTJC								2,000	2,000
Ed Rachal Foundation							20,000	20,000	40,000
Hamman Foundation								20,000	20,000
GDL Foundation					1,400	2,500	7,500	7,500	18,900
Salvation Army (Upward Bound)								6,615	6,615
Kinder Morgan Foundation						5,000	5,000	5,000	15,000
SEG Foundation						5,000	3,000	5,083	13,083
SIPES—Central Chapter							1,000		1,000
Undergraduate Geo. Society								1,915	1,915
Subtotal Gifts—Foundations	0	25,000	15,000	0	11,400	22,500	46,500	98,113	218,513
Gifts—Individuals									
Myrtle Isensee Estate						29,975			29,975
Leon Long	10,593								10,593
William and Marilee Fisher					1,000	1,000	1,000	2,000	5,000
Jeremy and Lynn Greene							2,500	2,500	5,000
Ernie Lundelius							2,000	2,500	4,500
Jim Sansom							1,000	3,000	4,000
Charles Woodruff, Jr.							1,000		1,000
Edward Cazier							500	500	1,000
John Preston							200	300	500
Paul Hoffman								500	500
Pete and Alice Rose								500	500
Dennis Trombatore	100							250	350
Russell Hamman								250	250
Jeanne Carballo								100	100
Subtotal Gifts—Individuals	10,693	0	0	0	1,000	30,975	8,200	12,400	63,268
Endowment (Payout)									
Darwin Family Endowment							1,086	2,697	3,783
Janet E. and David I. Rainey							0	1,000	1,000
Valence Operating Company							2,146	4,120	6,266
Subtotal Endowment (Payout)	0	0	0	0	0	0	3,232	7,818	11,050
Contracts and Grants									
Texas Workforce Commission					171,549	215,217	179,300	140,382	706,448
Texas Workforce Commission								34,133	34,133
Title V CAMSC						161,989	178,760	59,926	400,675
NSF TXESS								15,548	15,548
BOEMRE			25,000	25,000		25,000	50,000	50,000	175,000
TG Foundation							99,342		99,342
Communities Foundation					42,324				42,324
USGS Counselors								42,267	42,267
USGS EDMAP/GeoFORCE							14,266		14,266
Subtotal Contracts and Grants	0	0	25,000	25,000	213,873	402,206	521,668	342,255	1,530,002
Total Funding	74,176	264,453	520,369	752,308	1,505,347	2,062,913	2,074,825	2,105,631	9,360,022

Expenses	03–04	04–05	05–06	06–07	07–08	08–09	09–10	10–11
JSG Staff and Administration	41,883	123,253	152,900	232,662	418,683	416,952	425,261	518,772
General Expenses	366	33	24,942	112,254	214,899	123,512	838	181,448
Educator Workshops		4,528		5,172	22,064	19,688	16,440	56,506
GF Grad Events					71,144	10,314	26,202	25,836
GeoFORCE Scholarships							78,832	31,113
CAMSC Summer Interns						71,071	100,000	0
Explore UT/Inner Space Exploration					6,870	12,465		17,063
USGS EDMAP							14,266	0
Exemplar Manor /Upward Bound					21,455	792		5,230
Summer Math Initiative								1,600
GeoFORCE Alaska								560
MSEA 11th Grade Academy	30,772	28,305	41,103	29,031	39,641	45,387	20,485	27,429
FVSU Scholarships (adjusted)			56,400	72,291	35,308	13,500	164,800	216,082
CDEP Student Visits	1,544	2,255			610	9,298	3,795	6,292
GeoFORCE Southwest								
9th Grade Academy		77,753	70,184	72,879	89,551	87,528	69,888	81,583
10th Grade Academy			62,783	72,479	65,207	70,513	77,078	79,271
11th Grade Academy			2,996	84,034	92,060	92,846	82,492	81,672
12th Grade Academy			818		100,042	89,162	76,516	83,239
9th Grade Young Geoscientists		5,988	7,910	11,398	9,976	14,141	14,743	10,073
10th Grade Young Geoscientists			12,979	15,583	15,529	15,292	18,494	23,568
11th Grade Young Geoscientists				9,183	17,385	16,450	11,683	14,805
12th Grade Young Geoscientists					15,424	25,705	24,874	35,846
GeoFORCE Houston								
9th Grade Academy					83,426	79,704	85,316	75,603
10th Grade Academy						94,018	80,703	89,204
11th Grade Academy					88,710	78,333	86,923	85,241
12th Grade Academy						84,503	79,797	92,342
9th Grade Young Geoscientists					15,000	16,566	14,685	20,600
10th Grade Young Geoscientists						25,655	19,202	20,829
11th Grade Young Geoscientists					16,984	16,955	15,362	13,529
12th Grade Young Geoscientists						31,717	27,339	43,421
Dual-Credit Course					42,832	92,709	86,668	5,739
Total Expenses	74,565	242,115	433,015	716,964	1,482,800	1,654,777	1,722,682	1,944,496
Surplus/Deficit	-389	22,338	87,353	35,344	22,547	408,136	352,143	161,135

Students in the Houston 11th Grade Academy gather at Seal Rock, Oregon.

Our Financial Support Team



Participating Schools

To succeed in moving our students into college and careers in the sciences, we first have to succeed at the high school level. Schools that are served by GeoFORCE are obviously of critical importance to the program. School administrators, counselors, and teachers have been extraordinary in their support of GeoFORCE. Individuals in the schools identify students who exhibit the qualities needed for success in GeoFORCE: an interest in math and science, a willingness to work hard and take difficult courses, good citizenship, and the early signs of being a leader. New students are admitted at the eighth-grade level, and our recruitment is restricted to the network schools. Some of our students are now in schools outside the network as a result of transfers. For instance, Houston is an open district, and its students are allowed to choose any school in the district, so the list of schools attended by GeoFORCE students can become extensive. The following schools have students currently enrolled in GeoFORCE:

Network Schools

Southwest Texas

School District	Schools
Brackettville	Brackett High School, Brackett Junior High School
Carrizo Springs	Carrizo Springs High School, Carrizo Springs Junior High School
Cotulla	Cotulla High School, Frank Newman Middle School
Crystal City	Crystal City High School, Sterling Fly Junior High School
D'Hanis	D'Hanis School
Del Rio	Del Rio High School, Del Rio Middle School
Dilley	Dilley High School, Mary Harper Middle School
Eagle Pass	Eagle Pass High, C.C. Winn High, Eagle Pass Junior High, Memorial Junior High
Hondo	Hondo High School, McDowell Middle School
Knippa	Knippa School
La Pryor	La Pryor School
Leakey	Leakey School
Nueces Canyon	Nueces Canyon School
Pearsall	Pearsall School
Rocksprings	Rocksprings School
Sabinal	Sabinal School
Utopia	Utopia School
Uvalde	Uvalde High School, Uvalde Junior High School

Houston

High Schools		Middle Schools				
Chavez	Sharpstown	Attucks	Dowling	Hartman	Lanier	Sharpstown
E-STEM	Sterling	Burbank	E-STEM	Hogg	Long	Stevenson
Madison	Washington	Clifton	Fondren	Holland	Ortiz	Williams
Milby	Worthing	Deady	Grady	Jackson	Revere	
Scarborough			Hamilton	Key	Ryan	

Additional High Schools (students who have transferred)

Southwest Texas	Houston
Brandeis–Northside ISD–San Antonio	Alvin–Alvin ISD
Tom C. Clark–Northside ISD–San Antonio	Bellaire–HISD
Edinburg North–Edinburg CISD	Carnegie Vanguard–HISD
Excel Academy–Uvalde ISD	DeBakey–HISD
Lago Vista–Lago Vista ISD	Dobie–HISD
Mission–Mission CISD	East Early College–HISD
O'Connor–Northside ISD–San Antonio	Eastwood Academy–HISD
San Diego–San Diego ISD	Elkins–Fort Bend ISD
San Marcos–San Marcos CISD	Furr–HISD
	Houston Academy for International Studies–HISD
	King–HISD
	Lamar–HISD
	Law Enforcement and Criminal Justice–HISD
	Lee–HISD
	Performing and Visual Arts–HISD
	Reagan–HISD
	Sanchez–Charter School
	Southwest–Charter School
	Westside–HISD
	Yates–HISD

Park Rangers and Others in the Field

Location	Personnel
Colorado River Discovery	Dianne Powers
Glen Canyon Dam	Nikki Johnson, Rachel Dawavendewa, Dana Crane, Curtis Jaborski
Grand Canyon	Justin Roberts, Jim Heywood
Sunset Crater	Inez Paddock
Wupatki National Monument	Dawn Beeker
Zion National Park	David Walker, Amy Esplin
Crater Lake National Park	Amelia Bruno, Carole Holomuzki
Mt. Hood National Forest	Tammy Villali
Mt. St. Helens	Todd Cullings
Newberry National Volcanic Monument	Pete Hatman
Oregon Coast Aquarium	Nemesia Herzstein
Siuslaw National Forest	Lori Robertson
Tualatin Valley Fire & Rescue	Jeff Rubin
TXI–Texas Industries Inc.	Joe Parks, Bill Flanigan, Ricky Williams, Mark Palmquist
JSG Wind Tunnel Experiment	Dave Mohrig, Erin Eastwood, John Shaw
Everglades National Park	Bonnie Foist
John Pennekamp Coral Reef	Cecelia McCafferty, Jesula Milfort
Windley Key Fossilized Coral Reef	Melba Nezbed
Lovers Key State Park	Gloria Beauchamp
Archbold Biological Station	Nancy Deyrup, Mark Deyrup, Rick Lavoy, Shane Pruett
Canaveral National Seashore	Eric Lugo, Candace Carter
Merritt Island National Wildlife Refuge	Nancy Corona, Turtle Watch Volunteers
Longhorn Cavern State Park	Kaye Barlow, Troy Futrel
Thunderbird Lodge	John Williams, Donna Williams
Woody's Sports Center	Captain Billy Gafkins, Deckhand T-Jo
Katy Research Vessel	Captain Stan Dignum
Marine Science Institute	Linda Fuiman, Sara Pelleteri
Port Aransas Parks and Recreation	Gary Mysorski
Texas State Aquarium	Jennifer Johnston
Inner Space Cavern	Shirree Krahn
Barton Springs Pool	Katie Dalman
Texas State Capitol	Elizabeth Garzon
UT Union Underground	Matthew Davis
Texas Memorial Stadium	Baxter McConnell, Chase Harvey
Carlsbad Caverns	Helen Fields
Guadalupe Mountains	Dr. Jeanine Hearst, Brian Osbourne
Hueco Tanks	Wanda Olszewski
White Sands National Monument	Cliff Wagner, McKinney Briske, David Bustos
Annandale Bat Cave	LeAnn Sharp
Big Oak River Camp	Terri Maner
Fort Inge and Uvalde Historical Society	Dick Whipple
Del Rio outcrop	Sherman Mumme
Vulcan Materials, Knippa	Ron Robles, Armando Quiroz
Vulcan Materials, Uvalde	Chris Havelka

Summary of 2011 Activities

The 2010–11 academic year was one of the busiest yet for the GeoFORCE program and its many associated outreach activities. Our main activities continued to include the delivery of our dual-credit course, our Fort Valley State University partnership (MSEA and transfer students), and our now standard 16 GeoFORCE summer events. We also added a new field event for Upward Bound students from Houston's Lee High School.

	Academies	Young Geoscientists	Total
Air miles	19,658	0	19,658
Bus miles	7,024	8,334	15,358
Hotel room nights	3,970	995	4,965
Meals	14,328	4,128	18,456

A quick look at the logistics associated with GeoFORCE (see table) shows the breadth of the program in providing our students with opportunities for travel and learning experiences beyond their hometowns.

Dual-Credit Geology Class

GeoFORCE delivered an online dual-credit geology class for the third time in the 2010–11 school year. The course was designed to bring a high-level geoscience class to schools and districts that are challenged to provide such a class for their students. The students who took the course not only learned geology but also received six hours of college science credit. We were quite successful in conducting this class; however, the course failed to draw enough support to become self-sustaining. As a result, with the end of the grant that supplemented the cost, the class will not be offered again until the economics of education improve.

The problem boils down to money. School district budgets are stretched tighter each year. In Houston, neither the individual schools nor the district had funds to support the course. In southwest Texas, either the schools are too small to generate enrollment, or they have chosen to focus resources on Texas Assessment of Knowledge and Skills (TAKS) remediation rather than upper-level science instruction.

In the final year the dual-credit class was offered, 9 students at Madison High School in Houston and 12 students at six schools in southwest Texas completed the course. Each group received four hours of credit in physical geology and an additional two hours of credit for a geology elective. A field trip was held in each region. In southwest Texas, Eleanour Snow took the students to many of the same places visited by our GeoFORCE 9th Grade Young Geoscientists. One student made a wonderful discovery with her find of a mesosaur jawbone in the Vulcan Asphalt Quarry. The Houston group visited two beaches, studying the effects of Hurricane Ike on coastal stability. This trip was led by David Mohrig of the Jackson School.

Fort Valley Partnership

The partnership between the Jackson School and Fort Valley State University in Georgia continues to engage and encourage minority youth to study geology and geophysics. Four college students were enrolled at The University of Texas at Austin this year through this partnership. Two of them, Jasmine Langston and Keri Vinas, completed their summer EDMAP project in the fall, creating a geologic map of the Mansfield Dam quadrangle just west of Austin. Both women graduated in the spring with B.S. degrees from the Jackson School.

GeoFORCE also visited Fort Valley State University in the winter and welcomed a group of students to Austin in the spring. These freshmen and sophomores were taking a look at UT with an eye on applying to the university when they have completed their FVSU degrees.

Left, Jasmine Langston and, *far right,* Keri Vinas, transfer students from Fort Valley State University, celebrate the completion of their undergraduate degrees as they are joined by Professor Aditya Kar of FVSU and Dean Sharon Mosher at the May commencement.

Upward Bound

In May we hosted a group of Houston area high school students, part of the Upward Bound Academy at Lee High School. Bud Scherr, a Jackson School graduate and Houston area GeoFORCE sponsor who works with this group, accompanied them on the field trip. We picked the students up in Houston and brought them to several Austin area geologic sites, including McKinney Falls State Park and Inner Space Cavern. Students studied basic geologic principles, as well as river and groundwater systems. They also toured the University of Texas and visited the Texas Memorial Museum. For many in the group, this was their first trip to a state park and to a university.

Educator at Sea

GeoFORCE identified an excellent educator, Randy Laurence at C.C. Winn High School (Eagle Pass, Texas), and sponsored his participation in the Inner Space Center's (Rhode Island) Educator at Sea program. Randy trained at the Inner Space Center at the University of Rhode Island last summer, and in September he will sail on an oceanic research vessel in the Mediterranean Sea. His adventures and the discoveries will be followed by students in Eagle Pass and throughout the world.

Summer Math Initiative

We identified math preparation as a significant hurdle for GeoFORCE graduates entering college in STEM fields. As a pilot program, in the summer of 2011 we offered our recent graduates the opportunity to register for a complete online summer math tutorial. The ALEKS® tutorial is designed to pinpoint deficiencies in the student's math knowledge and target learning exercises to teach fundamental concepts. Twenty-four students signed up for the program and completed the initial assessment, and fourteen of those students completed the entire program. On average, students improved their scores by 100 percent. Nine of the students achieved a high enough score to register for calculus in the fall of their freshman year.

Teacher Professional Development

Each year, GeoFORCE offers workshops for the teachers in our school districts. This year the theme was energy. The fall workshop, which was held in Corpus Christi, focused on energy offshore. Twenty-nine teachers from Houston joined fourteen teachers from our Southwest Texas region for two days of engaging activity. The workshop was presented by the National Energy Education Development (NEED) project, and teachers left with a wealth of materials for use in teaching their students about energy.

The spring workshop was held in Austin. Teachers gathered at a local hotel overlooking Lady Bird Lake and learned about energy, carbon, and sequestration. The materials and instruction were provided by the Sequestration Training, Outreach, Research and Education (STORE) project, based at the Bureau of Economic Geology. The workshop included a field trip to Barton Creek to study carbonate rocks and to the solar power array at the Austin airport. This workshop brought together 22 teachers from Southwest Texas and 32 teachers from Houston.

Associated Outreach Activities

GeoFORCE staff and other members of the Jackson School community assisted with a broad range of outreach activities:

Associated Outreach Activities				
Group	**Requested by**	**Handled by**	**Number of Students**	**Grade Level**
Ann Richards School	Judy Kenney	Jaime Barnes	120	6th grade
Gorzycki Middle School	Joelle Dondeville Mimi Halfert	Travis Wicks Rachel Simon	80	Middle school
True Vine School	Don Duncan	Autumn Kaylor	12	5th and 6th grades
Cub Scout Den 405	Doug Watson	Jeri Rodgers	8	4th grade
UIL Team	Enrique Reyes	Rong Fu	6	12th grade
Harmony Middle School	Celal Keskin	Bobby Reece	3	Middle school
Buda Rock Quarry	Philip Burks	Sigrid Clift	140	4th grade
Tippit Middle School	Tracy Askew	Osareni Ogiesoba	30	6th grade
Austin Science and Engineering Festival Exposition—Austin	Shell Oil Company	Eleanour Snow Edgar Garza Lindsay Stephens	500	All grades
25th Annual Career and Education Day—Houston	Shell Oil Company	Edgar Garza Lindsay Stephens	600	All grades

Academies

9th Grade Academy

9th Grade Academy (Austin, Texas; Florida)		
	Houston	Southwest Texas
Number of Students	41	42
Coordinator	Lindsay Stephens	Edgar Garza
Instructors	Ernie Lundelius	Tiffany Caudle
	Jim Sansom	Ernie Lundelius
	Steve Seni	Jay Raney
		Jim Sansom
Trail Driver	Matt Hofer	Ann Merriman
Sponsor Representative	Bryan Gottfried, Marathon	Peter Hargrove, BP
Education Coach	Karla Auzenne	B. Schroeder
Counselors	Inmer Cardona	Rosy Arellano
	Dennis East	Raquel Espinoza
	Alejandra Eljuri	Eryn Freitas
	Victoria Herndon	Oscar Fuentes
	Linda Nguyen	Bianca Sanchez
	Kimberly Routt	Drew Slack

Objectives	Geologic Topics	Locations
Introduce students to basic geological terms and processes	Geologic time, erosion, deposition, lithification, law of superposition, uniformitarianism, rock cycle, coastal plain, faults, geomorphology, differential erosion, lateral continuity, plate tectonics, orogeny	Austin: Aggregate quarry, McKinney Falls, Texas Memorial Museum
Experience life on a major university campus		Florida: Lovers Key, Everglade City, Pennekamp National Park, Windley Key

10th Grade Academy

10th Grade Academy (Nevada, Utah, Arizona)		
	Houston	Southwest Texas
Number of Students	40	42
Coordinator	Lindsay Stephens	Edgar Garza
Instructors	Peter Flaig	Liz Catlos
	Chock Woodruff	
Trail Driver	Ivan Ponce	Briana Schroeder
Sponsor Representatives	Mike Alvarez, Shell	Blair Francis, BP
	Laura DeMott, ExxonMobil	
Education Coach	Madelyn Percy	Jeff Santleben
Counselors	Alejandra Eljuri	Rosy Arellano
	Abi Guerra	Leigh Aromin
	Linda Nguyen	Adelso Contreras
	Vickie Perkins-Miller	A.J. Freitas
	Tim Prather	Faith Musquiz
	Larry Savoy	Vickie Perkins-Miller
	Dolores Van der Kolk	

Objectives	Geologic Topics	Locations
Inspire students to "think like a geoscientist"	Law of superposition, lateral continuity, crossbedding, unconformity, desert varnish, monocline, gradient, antecedent drainage, mass wasting, uniformitarianism, differential erosion, dendrochronology, cinder cone, strata volcano	Utah: Zion National Park
Apply geological concepts to what is seen in real time		Arizona: Glen Canyon, Balancing Rock, Lees Ferry, Navajo Bridge, Grand Canyon—Desert View, Grand Canyon—Kaibab Trail hike, Wupatki, Sunset Crater
Expose students to sedimentary structures, processes, and environments		
Reinforce geological concepts from 9th Grade Academy		

11th Grade Academy

11th Grade Academy (Oregon, Washington)		
	Houston	Southwest Texas
Number of Students	40	40
Coordinator	Lindsay Stephens	Edgar Garza
Instructors	Jeff Paine	Jeff Paine
	Jay Raney	
Trail Driver	Ivan Ponce	Matt Hofer
Sponsor Representatives	Sarah Fowell, UAF	Gill Apps, BP
	Aaron Shunk, Shell	Randy Orndorff, USGS
		Lydia Quintana, USGS
Education Coach	Madelyn Percy	Eleanour Snow
Counselors	Inmer Cardona	Debbie Duran
	Dennis East	A.J. Freitas
	Alejandra Eljuri	Oscar Fuentes
	Melanie Lynch	Melanie Lynch
	Emily Potter	Martha Ortiz
	Jasmine Scott	Karina Robledo

Objectives	Geologic Topics	Locations
Expose students to volcanic structures, processes, and environments	Law of superposition, lateral continuity, uniformitarianism, magma, lava, fissure, vesicular texture, pyroclastic flow, caldera, longshore current, tides, tsunami, sea stack, marine terrace, intertidal zone	Washington: Mount St. Helens
Compare beach environments on east and west coasts of United States		Oregon: Columbia River Gorge, Mount Hood, Newberry Caldera—Big Obsidian Flow, Crater Lake, Salt Creek Falls, Multnomah Falls, Cape Perpetua, Heceta Head, Oregon Dunes, Seal Rock, Glacial Erratic
Reinforce geological concepts from 9th and 10th Grade Academies		






12th Grade Academy

12th Grade Academy (Florida)		
	Houston	Southwest Texas
Number of Students	42	42
Coordinator	Lindsay Stephens	Edgar Garza
Instructors	Terry Quinn	Jamie Austin
		Eleanour Snow
Trail Driver	Ivan Ponce	Ivan Ponce
Sponsor Representatives	Martha Barnes, Marathon	Denise Butler, Shell
	Genevive Mathers, BP	Nysha Chaderton, ExxonMobil
Education Coach	Karla Auzenne	Madelyn Percy
Counselors	Inmer Cardona	Rosy Arellano
	Debbie Duran	Raquel Espinoza
	Alejandra Eljuri	Oscar Fuentes
	Jarrett Mayon	Adriana Jarosek
	Andrew Nunez	Drew Slack
	Larry Savoy	Christina Thomas

Objectives	Geologic Topics	Locations
Immediately apply teaching, seeing, doing, and testing methodology to all field work	Carbonate rocks, reefs, high/lowstand, rock record, siliciclastic, beach renourishment, barrier flat, longshore drift, washover, storm surge, beach profiling, ocean currents	Florida: Pennekamp Coral Reef, Windley Key Fossilized Coral Reef, Everglades—Shark Valley, Lovers Key State Park, Canaveral Seashores, Merritt Island Wildlife Refuge—Sea Turtle Watch, Epcot
Expose students to carbonate structures, processes, and environments		
Reinforce geological concepts from past three summers		

Young Geoscientists

9th Grade Young Geoscientists

9th Grade Young Geoscientists (Uvalde, Texas)		
	Houston	Southwest Texas
Number of Students	35	44
Coordinator	Briana Schroeder	Ann Merriman
Instructor	Eleanour Snow	Madelyn Percy
Trail Driver	Doug Ratcliff	Doug Ratcliff
Sponsor Representatives	Jeff Dingler, BP	Eric Potter, BEG
	Susan Howes, Chevron	
Educational Coach	Madelyn Percy	Jeff Santleben
Counselors	Sambrosia Duskin	Rosy Arellano
	Dennis East	Luciano Esquivel
	Teresa Gaitan	Oscar Fuentes
	Karina Robledo	Cristina Marquez
	Jasmine Scott	Samantha Moore
	Drew Slack	Karina Robledo

Objectives	Geologic Topics	Locations
Introduce students to basic geological terms and processes	Uniformitarianism, law of superposition, lithification, deposition, differential erosion, columnar joints, rock cycle, water table, point bar, cutbank, aquifer, terrace, quarry, floodplain volcano	Uvalde and surrounding area: Blackwater Hole, Vulcan Materials Asphalt Quarry, Knippa Traprock Quarry, Del Rio Hacienda Formation, Fort Inge, Leona River, Annandale Bat Cave
Expose students to fluvial systems		
Apply concepts to hands-on experiences		






10th Grade Young Geoscientists

10th Grade Young Geoscientists (Port Aransas, Texas)		
	Houston	Southwest Texas
Number of Students	27	42
Coordinator	Briana Schroeder	Matt Hofer
Instructor	Tiffany Caudle	Eleanour Snow
Trail Driver	Doug Ratcliff	Doug Ratcliff
Sponsor Representatives	Will Dugat, BP	Danielle Carpenter, Chevron
	Yolanda Evans, HISD	Kristen Woody, Shell
	Susan Rosenbaum, Schlumberger	
Education Coaches	Jessica Gordon	Madelyn Percy
		John Won
Counselors	Maricruz Bustamante	Abi Guerra
	Inmer Cardona	Luciano Esquivel
	Sambrosia Duskin	Karina Robledo
	Dennis East	Eryn Patterson
	Cristina Marquez	Melerie DeLeon
	Jasmine Scott	Oscar Fuentes

Objectives	Geologic Topics	Locations
Learn basic coastal processes and nomenclature of the coastal zone	Accretion, algal mat, swash zone, longshore drift, salt marsh, scarp, surf zone, estuary, fetch, high tide, jetty, beach, backbeach	Port Aransas: Mustang Island, Packery Channel, Leonabelle Turnbull Birding Center, UT Marine Science Institute Katy Research Vessel
Inspire students to "think like a geoscientist" and apply the geological concepts to what they are seeing in real time		
Reinforce geological concepts from previous summer		Corpus Christi: Texas State Aquarium






11th Grade Young Geoscientists

11th Grade Young Geoscientists (Austin, Texas)		
	Houston	Southwest Texas
Number of Students	32	33
Coordinator	Matt Hofer	Ann Merriman
Instructors	Ernie Lundelius	Joel Johnson
	Jim Sansom	Ernie Lundelius
		Jim Sansom
Trail Driver	Doug Ratcliff	Doug Ratcliff
Sponsor Representatives	Bud Scherr, Valence	Stephanie Cerna, SWTJC
		John Naranjo, BP
		Denise Wartes, RAHI
Education Coach	Jessica Gordon	Eleanour Snow
Counselors	Linda Nguyen	Leigh Aromin
	Kimberly Routt	Oscar Fuentes
	Larry Savoy	Eryn Patterson
	Drew Slack	Karina Robledo
	Marissa Vara	Bianca Sanchez
		Drew Slack

Objectives	Geologic Topics	Locations
Give students a glimpse of life on a major university campus	Law of superposition, uniformitarianism, geologic time, erosion, deposition, watershed, stream discharge, geomorphology, topography, flood, fault, earthquake, escarpment, karst, cave, speleothem	Austin and surrounding area: McKinney Falls, Barton Springs, Darrell K. Royal–Texas Memorial Stadium, Texas State Capitol, Inner Space Cavern, Mount Bonnell, Perry Park
Expose students to fluvial systems and aquifers		
Compare fluvial systems in Austin and Uvalde		
Reinforce geological concepts from 9th- and 10th-grade field courses		

12th Grade Young Geoscientists

12th Grade Young Geoscientists (New Mexico)		
	Houston	Southwest Texas
Number of Students	39	33
Coordinator	Matt Hofer	Briana Schroeder
Instructor	Xavier Janson	Kitty Milliken
Trail Driver	Doug Ratcliff	Doug Ratcliff
Sponsor Representative	Hermali Patel, BP	Frank Rodriguez, ConocoPhillips
Education Coach	Madelyn Percy	Jessica Gordon
Counselors	Dennis East	Maricruz Bustamante
	AJ Freitas	Adelso Contreras
	Victoria Herndon	Debbie Duran
	Melanie Lynch	Luciano Esquivel
	Linda Nguyen	Teresa Gaitan
	Jasmine Scott	Cristina Marquez

Objectives	Geologic Topics	Locations
Expose students to the many types of careers in the geosciences, all while giving them first-hand experience in the field	Aquifer, groundwater, basin, desertification, depositional environment, eolian dunes, subduction, tectonics, water table, recharge, discharge, spring	New Mexico: White Sands National Monument, Carlsbad Caverns
Expose students to basic tectonic concepts		Texas: Pena Park, Pecos High Bridge, Guadalupe Mountains, McKittrick Canyon, Hueco Tanks
Make in-depth comparison of fluvial systems		
Reinforce geological concepts from past three summers		

GF Grads Program

After students complete their final summer trip they are classified as GF Grads, and the college mentoring and support program kicks in. The goal of the GF Grads program is to help GeoFORCE students successfully transition to college and, later, into the workforce.

The GF Grads Bulletin

GeoFORCE publishes the GF Grads Bulletin quarterly, and it is distributed as a PDF file by e-mail. Each issue covers topics about college (applications, financial aid, internships), profiles of GeoFORCE graduates, news from GeoFORCE, and class notes with updates from students. The bulletin debuted in December 2010 (see http://www.jsg.utexas.edu/geoforce/students/geoforce-grads/newsletters).

For Seniors

For GeoFORCE seniors, we offered three events: a fall career field trip, a college application workshop, and a spring graduation field trip.

The **fall field trip** focused on careers in the energy industry. Halliburton welcomed two groups of GeoFORCE students and wowed them with a trip to their visualization lab. Students got to see a 3-D view of the well system in one part of the Gulf of Mexico. Halliburton also convened a panel of scientists to talk about careers and college. Afterward we visited the *Ocean Star* Offshore Drilling Rig and Museum in Galveston.

We conducted three **college and financial aid application workshops**—in Houston, Eagle Pass, and Uvalde. Parents and students were invited to learn about how to choose a college, how to apply, and how to find financial aid. GeoFORCE was joined at these events by UT Admissions officers from the outreach centers in Houston and San Antonio.

The **graduation field trip** followed tradition by inviting all GeoFORCE seniors to Austin for a weekend in April. Students were picked up locally after school on Thursday and brought to Austin. We led a field trip to Enchanted Rock on Friday, followed by a college panel discussion at the hotel with current GeoFORCE college students offering their best college advice. An evening dinner cruise on Lady Bird Lake capped the celebration. Instructors and sponsors who had been with these students were also invited.

College Support and Mentoring

GeoFORCE now has 5 students who have graduated from college and 267 students enrolled as undergraduates at more than 50 U.S. colleges and universities. About half of them are the first generation in their family to seek a college degree, so college is very new and a little bit foreign. GeoFORCE is committed to the success of each of these students. We communicate regularly by e-mail, phone, and social utility, and we make an effort to see the students in person when we are nearby.

College Dinners: GeoFORCE hosted a welcome dinner for all 32 GeoFORCE graduates who were enrolled at UT in early September and another at the start of spring semester in January. The dinners give the students a great opportunity to meet other GF Grads both from different regions and from different classes. It is great to see friendships growing between a sophomore from Pearsall and a freshman from Houston. In addition, we visited College Station, San Antonio, and Kerrville and invited GeoFORCE students out for a meal in all three cities.

Mentoring: In the 2010–11 school year, we had 20 students studying geology at 9 different colleges, mostly in Texas. In 2011–12 we will have 32 geology students. It is our goal to match each GeoFORCE geology major with a professional mentor who can provide advice about college and careers. So far we have matched eight mentors from six different companies with GeoFORCE scholars.

Scholarships: GeoFORCE has been able to give scholarships to graduates who are studying geology or natural sciences at UT. Through the support of gifts from Chevron and the Darwin Family and a grant from the Texas Workforce Commission, we were able to award 23 scholarships in 2010–11.

GeoFORCE in the News

Lisa and Sherman Mumme of Uvalde receive T-shirts from Naiva Morales, a staff member at UT Austin's Jackson School of Geosciences, during a recent field trip by students and instructors in a dual-credit geology class visiting an outcropping of the Del Rio Formation on the Mummes' property.

Dual-credit geology students explore Del Rio formation

WILLIE EDWARDS
CONTRIBUTING WRITER

An outcropping of the Del Rio Formation on Sherman and Lisa Mumme's property near Uvalde is one of the sites dual-credit geology students visited March 29 during an annual field trip required for the class.

According to University of Texas at Austin professor Eleanour Snow, the Del Rio Formation is a limestone rock unit that formed about 100-140 million years ago in a shallow sea. Professor Snow said the formation is exposed in many areas of the Texas Hill Country, but outcrops very strongly on the Mummes' property.

"Much of the formation is ordinary limestone, but the layer on the Mummes' place is packed full of fossils which is great for teachers," Snow said. "We can emphasize the clues geologists use to tell what type of environment a rock formed in and the students love collecting fossils to take home."

In addition to the dual credit students, participants in the GeoFORCE Texas Young Geoscientists Program also visit the site during their annual summer visits to Uvalde County.

"The Mummes have been very gracious to let us invade their property several times a year and we really appreciate their support," Snow said.

To show their appreciation, the dual credit group presented the Mummes with GeoFORCE Texas T-shirts during their March 29 visit.

Other sites visited by the group included the Black Waterhole on the Frio River south of Knippa, the Knippa rock-crushing plant and the Vulcan Materials rock quarry west of Uvalde.

A total of 12 students from six area high schools are enrolled in the year-long dual-credit geology class. The class counts for a full year of high school credit and six hours science credit at Southwest Texas Junior College.

Schools represented include Brackettville High School, Eagle Pass CC Winn High School, Leakey High School, Sabinal High School, Utopia High School and Uvalde High School.

The class, taught by Snow, is web-based and labs are held at the students' high schools every other week. About half of the class are also participants in the GeoFORCE Texas summer program.

AAPG EXPLORER

GeoFORCE Gets Foundation Grant

By NATALIE ADAMS, AAPG Foundation Manager

The AAPG Foundation Trustees have approved granting $45,000 to the Texas GeoFORCE program, to be given over the next three years.

GeoFORCE eleventh graders at Mt. Saint Helens; the AAPG Foundation provides funding for the program, which seeks to increase interest in the geosciences among high school students.

The Foundation began funding the GeoFORCE program three years ago, which continues to meet its objective of increasing interest in the geosciences among high school students with emphasis on minorities.

Currently, there are nearly 700 students in the GeoFORCE program, which identifies eighth-graders who are high achievers in math and science and then provides them with a four-year series of work-and-reward activities that motivates them to excel. Field trips to places like Washington, D.C., and the Grand Canyon are included (see **"Making a Difference"**).

Funding also was approved for the AAPG Student Focus Booth at the Geological Society of America Annual Meeting, held in Denver in late October and early November. The booth promoted and facilitated AAPG new member recruitment, primarily targeting students and academic faculty.

The Foundation has provided funding for this event since 2006.

The Foundation continues to support programs all over the world that educate, train and enhance the careers of those in the geosciences – your contributions are hard at work and making a difference.

For a **list of programs and projects** supported, or to submit a **proposal for funding**,.

Many thanks to William Dost Jr. for making a contribution to establish a University Subscription for Western Kentucky University.

Through a one-time endowment gift of $12,500 to the AAPG Foundation Digital Products Fund-University Subscription, students and faculty at your alma mater receive uninterrupted access to the entire AAPG Digital Library – over 850,000 pages of international, national and regional libraries of petroleum and geology and geophysics information.

Several opportunities currently exist to have your contribution to the AAPG Foundation matched, including:

- The Tulsa Geological Society will match donations made toward a university subscription to two universities – the University of Tulsa and the University of Arkansas.
- Gifts given to the Erik Mason Memorial fund will be designated to support the scholarship established in his name at Oklahoma State University and matched two-to-one through OSU and made available by AAPG member T. Boone Pickens if they are received by Feb. 11, or 1:5 to 1 if they are pledged over the next five years.
- All are encouraged to inquire at your company about matches that may exist there.

Every gift made to the **AAPG Foundation** will count toward the "Meeting Challenges … Assuring Success" campaign. The current status of campaign pledges and contributions is

SHARE

Natalie Adams

Natalie Adams has been named manager of the AAPG Foundation. She previously worked in fundraising for Oral Roberts University in Tulsa, as alumni director, executive director of the Alumni Association and serving on the Alumni Foundation Board. She also has served on the board for the Alzheimer's Association.

For information on how your gift can make the greatest impact, go to the **Foundation Web site**; or **contact Natalie Adams** , Foundation manager, (918) 560-2644.

FOUNDATION UPDATE ARCHIVES

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AAPG EXPLORER Reaching Our Olympic-Size Goal April 2010

Aromin to play college tennis

Former Uvalde High School tennis standout Leigh Aromin soon will be playing collegiate tennis for Fort Valley State University in Georgia.

Aromin will be playing tennis on a full scholarship.

"It just kind of came to me from out of the blue. Someone from Fort Valley State found my profile on the Internet and contacted me. They asked me to send them a video of me playing tennis," said Aromin. "A short time after that, they contacted me about playing for them on scholarship."

Uvalde High School head tennis coach Terri Rambie said Aromin is very deserving of the scholarship.

"Fort Valley State saw Leigh's profile and her high ranking in USTA tennis and offered her this great opportunity," said Rambie.

"Leigh getting this scholarship offer is a tribute to her many, many years of hard work and dedication, both in the classroom and on the playing court," said Rambie. "Leigh has put forth so much hard work through the years. She is very deserving of this opportunity and I am extremely happy for her."

During her time at UHS, Aromin racked up most valuable player honors during her sophomore, junior, and senior seasons.

Aromin advanced to regional tennis competition as a freshman and junior, while she was a member of the UHS team tennis team that advanced to regional competition four years in a row.

She was the UHS tennis team captain her senior year.

Aromin, who will be studying to become a nurse practitioner, will major in biology at Fort Valley State.

"They do not have a nursing school program at Fort Valley State University, so I will get my degree there and then go to nursing school somewhere else," said Aromin.

This past semester, Aromin attended Texas State University at San Marcos. "I did pretty good during my first semester at Texas State University. All A's except for a couple of B's," said Aromin.

"As for tennis, I have been playing club tennis at San Marcos, so I am in fairly good shape," said Aromin. "But it will probably take me a while to make the transition from club ball to the tennis program at Fort Valley State."

Fort Valley State University is a National Collegiate Athletic Association Division II school.

The Wildcats are a member of the Southern Intercollegiate Athletic Conference,which includes 13 colleges located in five different states, including Kentucky, Tennessee, Alabama, Georgia, and South Carolina.

The school is located at Fort Valley, Ga., approximately 89 miles south of Atlanta.

"I am excited about the opportunity to play," said Aromin. "The tough thing will be living so far away from home. My family is not ready for me to live so far away from home."

Leigh is the daughter of Uvaldeans Willy and Yolly Aromin.

JAMES HOLGUIN/UNEWS

Uvalde High School tennis coach Terri Rambie (left) gives former UHS tennis standout a congratulatory hug in celebration of her gaining a tennis scholarship.

"I am sure that Georgia is a lot different from Texas. Hopefully, the weather will be similar to what it is here in Texas. I prefer warmer weather," said Aromin. "But, I think it is going to fun playing tennis over there and I believe that I can do it."

Leigh Aromin (on left) at an earlier time participating in the 2007 10th Grade Academy at Glen Canyon Dam.

From Planet BP (internal publication)

BP renews support for key science education outreach effort

By Gillian Apps
Tuesday, May 31, 2011

BP's Gillian Apps (right) with high school student Rolando Garza during a GeoFORCE academy trip to the Colorado Plateau in 2010

BP recently extended its sponsorship of GeoFORCE, a program started in 2005 that brings Texas high school students into a college environment to study STEM (Science, Engineering, Technology, and Math) subjects.

BP, which has been a sponsor since GeoFORCE's early days, has agreed to a renewed three-year commitment totaling $360,000.

Dave Rainey, VP of Science, Technology and the Environment in the Gulf Coast Restoration Organization, and Gillian Apps, a geoscientist with BP's Global Projects Organization (GPO), recently met with Doug Ratcliff, the Director for Outreach and International Programs at the Jackson School of Geoscience, concerning the new BP commitment.

GeoFORCE is funded by the Jackson School of Geoscience at the University of Texas and a consortium of companies, government agencies, foundations, and individuals. The sponsors recognize this program as a source of outstanding and diverse recruits in the long term.

GeoFORCE takes successful applicants on a different field trip each summer during high school at no cost to the student's family. Destinations include Florida, the Colorado Plateau, Oregan Cascades, the Appalachians, the Grand Canyon, and Washington, D.C.

This summer BP is sending eight BP employees, seven of whom are members of the BP Challenge program, on GeoFORCE field trips. In the future, BP plans to link interested GeoFORCE graduates with mentors in BP.

The Jackson School created GeoFORCE to target academically promising students from small cities in the southwest Texas region, which was originally identified as a region that the University of Texas was not successfully recruiting from.

GeoFORCE was designed to broaden student diversity and increase the number of minority students pursuing degrees in math and science.

In 2008, the program expanded to selected schools in the Houston Independent School District (HISD), and it now enrolls 640 high school students each year. The majority of GeoFORCE students in Texas are Hispanic and African American, reflecting the populations in their diverse communities.

Last year, the first 189 students graduated high school, and 176 went to college. Fifty-nine percent of them are studying STEM subjects, with 45% of those having declared majors in Earth Science and engineering.

GeoFORCE's success has attracted national attention. In 2012, a new GeoFORCE program will start in Alaska, reaching out to Native populations in the remote rural communities of the North Slope. It will be managed by the University of Alaska at Fairbanks.

Find out more about GeoFORCE here.

At Shell, and our downstream joint venture Motiva Enterprises, we recognize that diversity and inclusion is a strategy for winning and directly supports our ambition to be the world's most competitive and innovative energy company.

10th grade GeoFORCE participants, shown with Shell volunteer Denise Bufec, gained hands-on experience during a visit to a geological field.

"When we support diverse vendors and encourage students to pursue science and math studies, we are engaging the community in our drive to build a brighter energy future."

Debra Stewart, Manager, Supplier Diversity, Workforce Development & Diversity Outreach, Shell Oil Company.

As we work to solve the challenge of more and cleaner energy, innovation is a key. Finding new ideas requires that we actively seek and nurture diverse perspectives. The business case for diversity extends beyond a diverse workforce and supplier base to building a diverse talent pipeline of skills in science, technology, engineering and mathematics.

Through our supplier diversity, workforce development and diversity outreach programs, we bring focused attention to integrating diversity and inclusion in all our business practices and attracting a diverse and well prepared workforce to carry on our work on the energy challenge into the decades ahead.

The return on our efforts is measured in vibrant communities, strong partnerships and a positive reputation that supports our license to operate and engenders brand loyalty for Shell/Motiva as a marketer and employer.

This brief report describes our US diversity strategies during 2010 and highlights some of the programs that helped us move forward in our goal of tapping into the full range of diversity to unleash the human potential for accomplishing a brighter energy future.

Summer field trips take students to geological wonders

17-Aug-2011 (Shell Internal Communication)

During GeoFORCE Texas' summer field trips, low-income South Texas and inner-city Houston students traveled the country, visiting spectacular geological sites and learning about geoscience careers with help from Shell and other geosciences professionals.

Shell has been a partner with GeoFORCE, an outreach initiative of the Jackson School of Geosciences at The University of Texas-Austin, since its inception in 2005. The GeoFORCE partnership is managed and supported through the Workforce Development Initiative group. The program focuses on 8th- through 12th-graders from rural South Texas and inner-city Houston schools that serve primarily minority students. It encourages them to take a rigorous math and science curriculum and to pursue higher education in these fields.

"Since 2005, 100 percent of GeoFORCE participants have graduated from high school and more than 94 percent have attended college. Nearly two-thirds have majored in science, technology, engineering or mathematics fields."

Each summer, GeoFORCE organizes 17 field trips for over 600 students that take them throughout Texas and the United States to such spectacular geological settings as the Florida Keys, Mustang Island, the Grand Canyon, InnerSpace Caverns, Crater Lake, Carlsbad Caverns and the Appalachian Mountains. The trips, led by university faculty and research scientists, engage and empower the students by exposing them to experiences completely different from those they receive at home or school. They provide opportunities for them to meet new and inspiring people, learn about geology and gain information about the career paths in the geosciences.

Geoscientists and other Shell professionals participated on five of these excursions this summer. They mentored the students, joined in field activities to enhance the youngsters' knowledge and awareness of geology and presented information about geosciences career opportunities at Shell.

The success of the program can be seen in some of its key metrics: On post-program surveys to assess GeoFORCE participants' knowledge of geology, scores averaged in the 90th percentile, far exceeding scores on surveys conducted before their trips. Since 2005, 100 percent of GeoFORCE participants have graduated from high school and more than 94 percent have attended college. Nearly two-thirds have majored in science, technology, engineering or mathematics fields.

Aaron Shunk and Houston 11th Grade Academy at Mt. St. Helens

Mike Alvarez and Houston 10th Grade Academy Students Fossil Hunting

Mike Alvarez and Houston 10th Grade Academy

Looking Ahead to 2012 GeoFORCE Activities

Dates	Region	Event and Grade	Location(s)	Summary of Venues
June 3–5	Houston	9th Grade Young Geoscientists	Uvalde, Texas	Knippa Basalt Quarry, Uvalde Rock Quarry, Annandale Bat Cave, Leona Springs, Fort Inge, Nueces River
June 9–16	Houston	10th Grade Academy	Arizona, Utah, Nevada	Zion, Glen Canyon Dam, Colorado River raft ride, Balanced Rock, Grand Canyon, Kaibab Trail hike, Wupatki, Sunset Crater
June 9–16	Southwest Texas	9th Grade Academy	Austin, Texas; Florida	McKinney Falls, Pennekamp Coral Reef, Windley Keys, Everglades, Lover's Key
June 10–12	Southwest Texas	11th Grade Young Geoscientists	Austin, Texas	McKinney Falls, Perry Park, Inner Space Cavern, Mt. Bonnell, Texas Memorial Museum, Darrell K. Royal–Texas Memorial Stadium
June 14–16	Houston	11th Grade Young Geoscientists	Austin, Texas	McKinney Falls, Perry Park, Inner Space Cavern, Mt. Bonnell, Texas Memorial Museum, Darrell K. Royal–Texas Memorial Stadium
June 23–24	Southwest Texas	9th Grade Young Geoscientists	Uvalde, Texas	Knippa Basalt Quarry, Uvalde Rock Quarry, Annandale Bat Cave, Leona Springs, Fort Inge, Nueces River
June 23–30	Houston	9th Grade Academy	Austin, Texas; Florida	McKinney Falls, Pennekamp Coral Reef, Windley Keys, Everglades, Lover's Key
June 23–30	Southwest Texas	10th Grade Academy	Arizona, Utah, Nevada	Zion, Glen Canyon Dam, Colorado River raft ride, Balanced Rock, Grand Canyon, Kaibab Trail hike, Wupatki, Sunset Crater
June 27–July 1	Houston	12th Grade Young Geoscientists	New Mexico West Texas	Guadalupe Mtns., White Sands, Hueco Tanks, Pecos River, Carlsbad Caverns
July 7–14	Houston	12th Grade Academy	Pennsylvania, Maryland, West Virginia, Virginia, Washington, D.C.	Moraine State Park, McConnells Mill State Park, Graff North Mine, Valley and Ridge Province, Allegheny Front, Catskill Delta, Roundtop Hill, Sideling Hill, Crystal Grottoes, Harpers Ferry, Great Falls, USGS, Washington monuments
July 7–14	Southwest Texas	12th Grade Academy	Pennsylvania, Maryland, West Virginia, Virginia, Washington, D.C.	Moraine State Park, McConnells Mill State Park, Graff North Mine, Valley and Ridge Province, Allegheny Front, Catskill Delta, Roundtop Hill, Sideling Hill, Crystal Grottoes, Harpers Ferry, Great Falls, USGS, Washington monuments
July 7–14	Houston	11th Grade Academy	Oregon Washington	Mt. St. Helens, Columbia River Gorge, Crater Lake, Mt. Hood, Newberry Caldera, Oregon Coast
July 8–11	Southwest Texas	12th Grade Young Geoscientists	New Mexico West Texas	Guadalupe Mtns., White Sands, Hueco Tanks, Pecos River, Carlsbad Caverns
July 17–20	Houston	10th Grade Young Geoscientists	Port Aransas, Texas	*Katy* Research Vessel, Mustang Island, Packery Channel, Marine Science Institute
July 21–28	Southwest Texas	11th Grade Academy	Oregon Washington	Mt. St. Helens, Columbia River Gorge, Crater Lake, Mt. Hood, Newberry Caldera, Oregon Coast
July 21–28	Alaska	9th Grade Academy	Alaska	Permafrost Tunnel, Trans-Alaska Pipeline, Chena River, Denali National Park, Earthquake Park, USGS Volcano Observatory, Portage Glacier, Alpine Historical Park
July 24–27	Southwest Texas	10th Grade Young Geoscientists	Port Aransas, Texas	*Katy* Research Vessel, Mustang Island, Packery Channel, Marine Science Institute