GEOFORCE TEXAS

JACKSON SCHOOL OF GEOSCIENCES

Let the Adventure Begin.

2004-2005 Annual Report

THE UNIVERSITY OF TEXAS AT AUSTIN

Foreword

The October 2003 meeting of the Jackson School's Geology Foundation Advisory Council included a discussion of the looming shortage of geoscientists. Concerns raised by the members identified the removal of earth sciences from the required curriculum of public school systems and the resulting loss of exposure of students to the excitement of the geosciences. Lack of exposure will undoubtedly lead to a decrease in the number of high school graduates pursuing degrees in our discipline, and the council members encouraged the Jackson School to establish a comprehensive program to increase the number of geoscience students in the college-bound pipeline.

Advisory Council members Jim Farnsworth (BP) and Mark Leonard (Shell) referred me to the Cooperative Developmental Energy Program (CDEP) created by Dr. Isaac Crumbly of Fort Valley State University as an example of a student pipeline program with a proven track record. This was great advice, and it has created a very rewarding working and personal relationship with Dr. Crumbly and members of his staff at Fort Valley. The CDEP approach has provided the model for the GeoFORCE Texas program. The Jackson School is truly indebted to Dr. Crumbly, whose vision and dedication to the education of young scientists is an inspiration to us all.

William L. Fisher, Dean
Jackson School of Geosciences
The University of Texas at Austin

Front cover: Randy Orndorff of the U.S. Geological Survey explains the geology along the Shenandoah River in Harpers Ferry, West Virginia, to ninth grade academy students from GeoFORCE Texas 2005.

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JACKSON SCHOOL OF GEOSCIENCES

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Introduction

Every once in awhile several things come together in a special way and produce something extraordinary. The Jackson School's GeoFORCE Texas program represents one of those special events.

Through the help of many organizations, GeoFORCE Texas is on its way to making an impact and inspiring a new generation of geoscience leaders. Tapping into the existing Cooperative Developmental Program (CDEP) at Fort Valley State University allowed GeoFORCE Texas to gain from all the lessons learned over their 20-year history. Our new partnership with Southwest Texas Junior College in Uvalde, Texas, provided us with instant access to middle- and high-schools throughout Southwest Texas. Science and math teachers of the area stepped up to identify outstanding students and direct them to our program. The U.S. Geological Survey provided our students with three days of examples of just how exciting careers in the geosciences can be. And our supporters (Shell Oil Company, ExxonMobil, ConocoPhillips, Marathon, SBC Foundation, and Priority Oil & Gas LLC) provided essential financial assistance.

Without generous institutional, corporate, and government support, the program would not have gone forward. Perhaps even more significant is the contribution of individuals to the program. There are over a hundred people who took personal time to make the GeoFORCE experience something special for our students. It did not matter where we went, everyone, without exception, provided positive role models for the students and presented their information in a manner that stirred excitement in the kids.

I cannot name everyone in this document. I hope that each of you understand that we thank you immensely for your contribution and enthusiasm for the program. There are some that must be mentioned by name and they are: Isaac Crumbly and Jackie Hodges of Fort Valley State University, Blaine Bennett and Dick Whipple of Southwest Texas Junior College, Steve Hammond of the U.S. Geological Survey, and Leon Long and Julie Spink of the Jackson School. For all of you who worked so hard to make this happen, I provide you the following letter (with permission from the authors) as a statement of what your efforts meant to the community of Southwest Texas.

Thank you all for everything.

Doug Ratcliff
Associate Director, Geology Foundation
Jackson School of Geosciences
The University of Texas at Austin

July 27, 2005

Geo Science Force sponsors and staff,

I would like to thank you for giving my son, Bryan Gonzales, this wonderful opportunity. You gave him something that we couldn't give him. New experiences, and wonderful memories and we cannot thank you enough. I could tell by the sound of his voice that he was happy and excited to be there. That alone put me at ease. My son has never left the state of Texas, nor flew in an airplane before. In fact nobody in our family has, so now he can enlighten us with his experience. I know there were a lot of people working together to make this whole learning experience possible. You have made a young man's dream come true. Thank you Geo Science Force sponsors and staff for everything you did for my son. Your intense planning and hours of hard work truly paid off. Everything seemed to run smoothly and I felt at ease knowing that he was in good hands. I could hear the excitement in his voice and I'm sure I will see it in his face when I see him tonight. You have brought a smile to our family and you have enchanted a life.

Thank you,

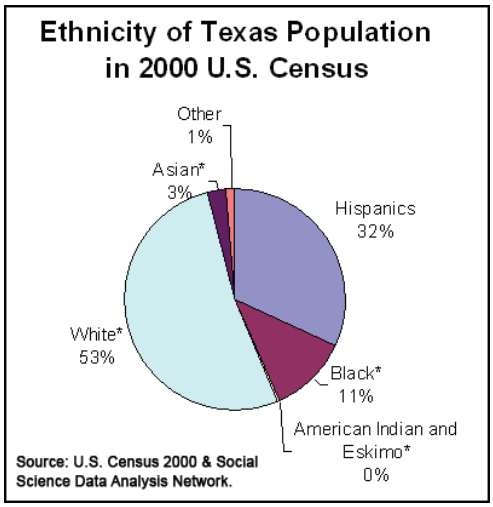
Parents of Bryan Gonzales, Uvalde Texas

Led by Plant Manager Chuck Beavis (far right), ninth graders in the Young Geoscientists program explore the Vulcan Materials Asphalt Quarry in Uvalde, Texas.

Purpose of GeoFORCE Texas

GeoFORCE Texas addresses two pressing issues for the geosciences: inspiring the next generation of geoscientists and fostering increased diversity in the U.S. workforce.

GeoFORCE Texas seeks to increase the number of students ready to enter today's high-tech workforce. The specific focus is on encouraging students to pursue and complete degrees in math and science that prepare them to work in fields associated with the geosciences. National Science Foundation (NSF) statistics indicate that participation by minorities in science and engineering in general, but specifically in the geosciences, is unacceptably low. According to the NSF, underrepresented groups earn almost 15 percent of all U.S. bachelor's degrees in science and engineering, but they earn only 4.6 percent of the degrees awarded in the geosciences. GeoFORCE Texas recognizes that minorities represent a virtually untapped reservoir for recruitment into geosciences careers. To this end, the program seeks innovative ways to work with underrepresented students, leveraging existing programs while pioneering new approaches to inspire all students to enter the field.



Methodology

GeoFORCE Texas is not a subtle approach. Our strategy is to provide an outstanding experience for middle- and high-school students—one that will motivate them to continue to excel in school and build awareness of opportunities in math and science.

Rather than duplicate existing efforts, the project targets existing programs for expansion and focuses them on the geosciences. GeoFORCE Texas incorporates many aspects of the Cooperative Developmental Energy

Left to right: Dr. Leon Long explains the geology of Taos, New Mexico; the Jackson School welcomed four FVSU scholars to the University in fall 2005: Stanley Stackhouse (far left) and April Duerson in the geology track and Alex Tripp, Jr. (far right) and Prince Kwarteng in petroleum engineering, pictured with FVSU Geology Associate Professor, Aditya Kar (center).

Program, a program established at Fort Valley State University that has been successfully increasing African American student participation in math and science for more than 20 years. GeoFORCE Texas expands the FVSU program to target the Hispanic population of Texas. Hispanics represent a major portion of the Texas population—32 percent of the state overall and 75 percent of South Texas—yet they are vastly underrepresented in the high-tech workforce and scientific community. To reverse this trend, the Jackson School has joined with Southwest Texas Junior College (SWTJC), which has campuses in Uvalde, Eagle Pass, and Del Rio, Texas, to establish a recruitment and retention program that is focused on the sciences. SWTJC has an existing network of science and math teachers in South Texas that provides the students for participation in GeoFORCE Texas.

The FVSU program does an excellent job of attracting young minority talent, especially outstanding African American students, and they have a proven 20-year record of performance. GeoFORCE Texas is an active partner in the FVSU program providing assistance with their summer academies and college-transfer students. These activities are being expanded to South Texas in an effort to significantly increase the number of students involved.

The Plan for South Texas—We worked with SWTJC to identify counselors and science/math teachers in their network of 21 school districts. In February 2005, we invited these individuals to our Austin campus for a half-day presentation on how the Jackson School plans to implement GeoFORCE Texas and how they can assist us in the program. The teachers were enthusiastic and returned to their schools with brochures and set about identifying their top students for the program.

South Texas teachers gathered at the University in February 2005 to learn about GeoFORCE Texas and help connect the Jackson School with outstanding students.

The first call for applications went out in April 2005, and we received 118 applications

Locations visited by GeoFORCE and Young Geoscientists participants in 2005: Rio Grande Gorge, New Mexico; Main Tower, The University of Texas at Austin; Carlsbad Caverns, New Mexico; Smithsonian National Air and Space Museum, Washington, D.C.

from eighth grade-honor students. This was an incredible response. The applications were reviewed, and the top 40 students were selected to attend the first summer academy in July 2005.

These students participated in a two-week academy that included living in a dormitory on the UT campus, classroom instruction in math and science, and spectacular field trips to Washington D.C. to visit the U.S. Geological Survey and the Smithsonian, and to Taos, New Mexico for visits to mountains and Indian sites.

This is just the first step in a building-block approach that has proven to work well. We will continue these initial 40 ninth graders in summer academies in each of their subsequent years of high school education. We also plan to continually bring in ninth graders each year so that ultimately we will have 160 students (40 new ninth, tenth, eleventh, and twelfth graders) in the academy system at any one time.

MSEA eleventh graders "rock" the night away with closing ceremony skits on what they learned during their academy experience.

During 2005-06, returning students will graduate to the second-year academy that will include a field trip to the Grand Canyon, and we will again conduct another first-year academy for students completing the eighth grade. A summer academy will be added each year until we have four operating each summer including students who have completed the eighth through eleventh grades. The final academy (between the eleventh and twelfth grades) will include a four-day preparation course for the SAT exam.

Maintaining the numbers—It is essential that we maintain adequate participation in the program throughout all academies and all cohort groups. Annell Bay (Shell) suggested that we find ways to include as many students as possible beyond the 40 selected for participation in the academies. The Jackson School addressed this suggestion by creating the "Young Geoscientists Program" as part of GeoFORCE Texas. This program allows the students who missed the top 40

Ninth grade academy students from GeoFORCE Texas were warmly welcomed at the U.S. Geological Survey headquarters in Reston, Virginia.

cut, but exhibited outstanding academic achievement, to experience exciting geoscience field trips and continue to be associated with GeoFORCE Texas. These students provide a pool of proven young scientists should any of the top 40 choose to drop out of the academy program.

The Young Geoscientists program will be continued each summer in the same building-block progression as the GeoFORCE Texas academies. In July, 30 Young Geoscientists participated in a two-day field course that visited several exciting sites in South Texas. Next year these students will go to another two-day field course and a new set of 30 rising ninth graders will participate in the South Texas field trip. When all four Young Geoscientists summer field courses are in place, this will add 120 students to the 160 participating in the GeoFORCE academy program.

Projected Enrollment

Cohort	Venue	2005	2006	2007	2008	2009	Total
FVSU 11th Grade	Austin	26	30	30	30	30	146
GeoFORCE 9th Grade	Austin/Washington, DC[1]	40	40	40	40	40	200
GeoFORCE 10th Grade	Austin/Nevada		40	40	40	40	160
GeoFORCE 11th Grade	Austin—SAT/New Mexico			40	40	40	120
GeoFORCE 12th Grade	Austin/Houston				40	40	80
Young Geoscientists 9th Grade	Southwest Texas	30	30	30	30	30	150
Young Geoscientists 10th Grade	Coastal Texas		30	30	30	30	120
Young Geoscientists 11th Grade	Austin—SAT Reviews			30	30	30	90
Young Geoscientists 12th Grade	Austin/Houston				30	30	60
Total							**1126**

[1] The 2005 academy visited New Mexico as well as Washington, DC. Future academies will be limited to the DC area.

Summary of 2005 Activities

The first year of GeoFORCE Texas included continuing our relationship with Fort Valley State University and establishing a new partnership with Southwest Texas Junior College. The process of setting up teacher networks, application and review procedures, and orientation sessions for the participants was all completed over the winter of 2004-05. Academies (both for FVSU and GeoFORCE) and a two-day field seminar for Young Geoscientists were conducted.

Fort Valley State University Summer Academy—The Jackson School hosted FVSU's rising eleventh-grade summer academy from June 19-26, 2005. Twenty-one students from six states, four counselors, and four adults participated in the event that included classes at our Austin campus, field trips to areas of geologic interest in the Austin area, and a closing ceremony.

This is the second year that the Jackson School has hosted the young scholars who participate in the FVSU Mathematics, Science, and Engineering Academy. Leon Long and Brad Garner taught the classroom and field portions of the academy. Hazel Abe and Margo Bellamy conducted classes in ethics, social behavior, and provided review sessions each day. Logistics were handled by Jackie Hodges, Vicky Halbert, and Linda Boyd of Fort Valley State University. Local assistance was provided by Julie Spink. Joe Butts, Kenneth Leonard, Charmain Smith, and Alvontee Jackson were counselors for the academy.

Classroom requirements for the academy included a pretest to determine the initial skill level of the students followed by several lectures focused on basic geology and an orientation to the local geology of the Austin area. The students then went into the field and visited

- Mt. Bonnell.
- Shoal Creek.
- Barton Springs.
- Lake Buchanan.
- Spider Mountain.
- Enchanted Rock.
- Devil's Waterhole.

At the conclusion of the field activities, the students took a test to determine whether

Left to right: Dr. Leon Long and Brad Garner (UT Geology graduate student) explain the geology of Mt. Bonnell to the 2005 MSEA eleventh grade students; FVSU summer academy students join Dr. Long on top of Enchanted Rock in Marble Falls.

Left to right: Young Geoscientists learn the geology of their region while touring the Vulcan Materials Basalt Quarry in Knippa, Texas, then experience the Edwards Aquifer in 3-D at a demo by the Jackson School's Bureau of Economic Geology.

they had absorbed the material presented. The final activity included a closing ceremony hosted by Jackie Hodges. The students presented a rousing tribute to the sponsors and staff as well as hilarious skits on the geology lessons learned. A list of all students who participated in the FVSU summer academy appears as Appendix A in this document.

Young Geoscientists Field Course—The Young Geoscientists Field Course was designed to provide an exciting program for the students who applied but were not selected for the GeoFORCE academy. These students have outstanding scholastic histories and went through the rigorous application process (an indication of their motivation). The course was designed to give them many of the aspects of the GeoFORCE academy (a trip away from home, interesting geological sites, and exposure to a college setting), but on a lesser scale. These students will be moved up to the GeoFORCE academy program should any of the academy students choose to drop out.

The field course was conducted on July 12-13 in the Southwest Texas area and included 26 rising ninth graders from nine cities in Southwest Texas, three local math and science teachers, three van drivers, and two lifeguards. Sigrid Clift of the Jackson School and Dick Whipple of Southwest Texas Junior College conducted the course. Local teachers Wanda Demboske, Brett White, and Kathryn Dowlearn provided reviews and adult supervision. Students from Southwest Texas Junior College served as lifeguards (Kendo Gallardo and Roberto Rio Rodriguez) for all swimming activities, and Ricardo Vazquez, Nicolas Castano, and Jose Pineda drove the vans. Many members of the Southwest Texas Junior College staff participated, including Suzanne McCormack, Julie Garcia, Willie Edwards, Ana Marie Darden, and Nita Reed. Julie Spink was the coordinator for the Jackson School.

The students were given a series of lectures that included basic geology and an orientation to the local geology of the Uvalde, Texas area. They were also treated to a demonstration of 3-D visualization technology that allowed them to "fly" through the Edwards underground aquifer.

The students then went into the field and visited

- Black Hole Tuft.
- Basalt Quarry (Knippa).

- Del Rio Outcrop.
- Fort Inge/Leona Springs.
- Annandale Bat Cave.
- Asphalt Quarry (Uvalde).
- Big Oak River Camp.

A list of all students who participated in the Young Geoscientists field course appears as Appendix B in this document.

GeoFORCE Texas Summer Academy— The first summer academy for the GeoFORCE Texas program was held July 16-27, 2005. Forty academy students were selected from 118 applications received from honor students completing the eighth grade. The selected students came from 14 different cities in the southwest region of Texas. Geology instruction was provided by Leon Long and Anna Morisani of the Jackson School and Steve Hammond and Randy Orndorff of the U.S. Geological Survey. Countless others provided technical presentations during the students' visit to the headquarters of the U.S. Geological Survey.

Julie Spink coordinated the logistics for the trip. The Southwest Texas Junior College Staff mentioned in the Young Geoscientists section contributed throughout the GeoFORCE Academy. Additional assistance was provided by teachers Wanda Demboske (Uvalde ISD), Kathryn Dowlearn (Leakey ISD) and Annette Pena (Cotulla ISD). Student counselors were Martha Gomez, Jennifer Arreola, Mariana Miranda, Michael Cavasos, Michael Ponce, and Mary Gabaldon.

The trip began with a charter bus ride from the Southwest Texas Junior College campus to The University of Texas at Austin. The first two days of the academy included classroom instruction and field trips to

- Mt. Bonnell.
- Shoal Creek.
- Barton Springs.

The students were then flown to Washington, D.C. where the U.S. Geological Survey hosted them for three days. During this time the students were treated to presentations on the role of the geosciences in major government agencies including the Environmental Protection Agency, National Park Service, Army Corps of Engineers, Minerals Management Service, and Department of

Left to right: GeoFORCE Texas students learn the geology of Barton Springs and Zilker Park in Austin; Steve Hammond of the U.S. Geological Survey provides graphic illustrations of historical floods at Great Falls Park in Virginia.

Energy. Exhibits were set up to display careers that included the study of volcanoes, floods, wetlands, endangered species, and distant planets.

Following these spectacular displays and presentations, the students went into the field to visit Harpers Ferry and Great Falls National Parks. These were excellent sites to develop an understanding of geology and river processes as well as learn about American history.

The third day in the Washington area was spent visiting the monuments and museums. This was especially exciting to the students and provided a perfect ending to their time in our nation's capital.

The group then flew into Albuquerque, New Mexico, where they were met by Leon Long. This portion of the trip included visits to the Rio Grande Gorge, Taos, Los Alamos, Bandelier National Monument, and Carlsbad Caverns. Following a lunch in the bottom of the caverns, they were bused back to Uvalde and the next day took a test to measure their success in learning the material presented. A final ceremony took place on the Uvalde campus of Southwest Texas Junior College with over 200 family members, teachers, and community leaders in attendance.

A complete list of the students who participated in the GeoFORCE Texas summer academy appears in Appendix C.

Student counselors from SWTJC enjoy the scenery of Great Falls National Historic Park. Left to right: Michael Cavasos, Mary Gabaldon, Marianna Miranda (UT student), Martha Gomez, Michael Ponce, and Jennifer Arreola.

Financial Information

The Jackson School has determined that the GeoFORCE Texas program is a strategic priority for the school and has dedicated resources to ensure its success. The school provides staff time necessary to operate the program, thus allowing all contributed money to be directly applied to the costs of the program activities.

2004-05 Program Costs—The following chart shows the expenditure of funds for the 2004-05 academic year.

2004-05 Program Costs

Activity		Cost
Teacher Workshop	$	2,500
GeoFORCE Orientation	$	3,500
FVSU Summer Academy	$	38,000
Young Geoscientists Field Course	$	4,500
GeoFORCE Summer Academy	$	68,000
Total	**$**	**116,500**

2004-05 Sponsors—GeoFORCE Texas would not exist without the strong support of our sponsors. Our sponsors not only provide financial assistance; they have also provided valuable operational suggestions and have participated in academy events. As the program expands toward its goal of engaging over 300 students each year, additional financial support will be required. There must be an identified and worthy return on investment for our sponsors. It is the intent of the GeoFORCE program to increase the number and quality of future geoscientists as well to provide widespread acknowledgement of all sponsors. It will take time to determine if we are fulfilling the goal of increasing the numbers, but the visibility of GeoFORCE and its sponsors is clearly evident. Appendix D provides examples of newspaper articles associated with the program. In addition to press coverage, the South Texas community has embraced the program, as evidenced by enthusiastic support from students, parents, teachers, and community leaders.

Because the Jackson School provides all staff time for GeoFORCE, 100% of funds contributed go directly to program activities.

Sponsors

(as of September 2005)

	2004-05	2005-06	Total
Obligated			
Priority Oil & Gas LLC	$ 2,000		$ 2,000
ExxonMobil	$ 10,000		$ 10,000
Marathon		$ 3,000	$ 3,000
Shell Oil Company	$ 50,000		$ 50,000
ConocoPhillips	$ 20,000	$ 42,000	$ 62,000
SBC Foundation	$ 25,000	$ 15,000	$ 40,000
Subtotal	**$ 107,000**	**$ 60,000**	**$ 167,000**

Estimated Future Costs—The table below provides the estimated costs as the program expands in future years. The increased costs reflect adding academies each year, adding FVSU transfer students, and inflation calculated at 4 percent.

The cost for the 2005-06 program is estimated to be $227,700. We have $50,500 remaining from support provided in 2004-05, so we need to raise an additional $177,200 to fully fund the 2005-06 academy. The goal is to raise additional funds beyond the 2005-06 requirement in an effort to build a reserve.

Estimated Cost of GeoFORCE Texas Program

		04-05	05-06	06-07	07-08	08-09
Teacher Workshop	$	2,500	2,600	2,700	2,800	2,800
GeoForce Orientation		3,500	3,700	3,900	4,000	4,000
FVSU 11th Grade		38,000	40,000	42,000	44,000	44,000
FVSU Transfer Student Scholars[1]		--	32,000	102,000	108,000	112,000
GeoForce 9th Grade		68,000	71,000	74,000	77,000	77,000
GeoForce 10th Grade		--	71,000	74,000	77,000	77,000
GeoForce 11th Grade		--	--	74,000	77,000	77,000
GeoForce 12th Grade		--	--	--	77,000	77,000
Young Geoscientists 9th Grade		4,500	3,700	3,900	4,100	4,100
Young Geoscientists 10th Grade		--	3,700	3,900	4,100	4,100
Young Geoscientists 11th Grade		--	--	3,900	4,100	4,100
Young Geoscientists 12th Grade		--	--	--	4,100	4,100
Total		116,500	227,700	384,300	483,200	487,200

Inflation of 4% is used in out years.
[1] FVSU student scholars increase: two in 05-06 and then six in each subsequent year.

APPENDIX A
Fort Valley State University Summer Academy

Student Participants			
First	**Last**	**City**	**State**
Armyia	Bryant	Vienna	GA
Jessica	Dawson	Columbus	GA
Johnne'	Dawson	Fort Valley	GA
Cory	Dennard	Macon	GA
Anthony	Gardner	Anchorage	AK
Monica	Johnson	Fort Valley	VA
Tyler	Kitchens	Stafford	VA
Darrel	Lockhart	Thomaston	GA
Jasmine	Mathis	Statesboro	GA
Lakia	McMillan	Anchorage	AK
Akeem	Meyers	Augusta	GA
Cayshia	Piersaul	Warner Robins	GA
Ra'shead	Pompey	Fort Valley	GA
Samarj	Redding	Byronville	GA
Raul	Salazar	Las Vegas	NV
Sheree	Snipes	Macon	GA
Rubin	Sorrell	San Francisco	CA
Bianca	Tarrant	Fort Valley	GA
Dawnesha	Tibbs	Bunkie	LA
Stephanie	Troutman	Fort Valley	GA
Solondria	Vickers	Macon	GA

APPENDIX B
Young Geoscientists Two-Day Field Course

Student Participants				
First	**Last**	**School**	**City**	**State**
Kimberly	Albarado	Uvalde Junior High School	Uvalde	TX
Javier	Amaro	Del Rio Middle School	Del Rio	TX
Emily	Calk	Brackett ISD	Brackettville	TX
Natalie	Chapa	Sterling Fly Junior High School	Crystal City	TX
Jeffrey	Dabney	Rocksprings Junior High School	Rocksprings	TX
Raquel	De La Cruz	Memorial Jr. High School	Eagle Pass	TX
Melerie	DeLeon	Mary Harper Middle School	Dilley	TX
Luciano	Esquivel	Eagle Pass Junior High School	Eagle Pass	TX
Abram	Garcia	Mary Harper Middle School	Dilley	TX
Jamie	Hawkins-Kirkham	Uvalde Junior High School	Uvalde	TX
Melissa	Jimenez	Eagle Pass Junior High School	Eagle Pass	TX
Liliana	Jimenez	Eagle Pass Junior High School	Eagle Pass	TX
Azia	Ledesma	Eagle Pass Junior High School	Eagle Pass	TX
Siena	Mancha	Eagle Pass Junior High School	Eagle Pass	TX
Samantha	Perez	Uvalde Junior High School	Uvalde	TX
Harmony	Pettett	Brackett ISD	Brackettville	TX
Mysia	Proctor	Mary Harper Middle School	Dilley	TX
Stephanie	Ramirez	Newman Middle School	Cotulla	TX
Ricardo	Rodriguez	Uvalde Junior High School	Uvalde	TX
Abigail	Rodriguez Barrios	Eagle Pass Junior High School	Eagle Pass	TX
Karmen	Sanchez	Sterling Fly Junior High School	Crystal City	TX
Stephanie	Sanchez	Eagle Pass Junior High School	Eagle Pass	TX
Jacob	Schroeder	Brackett ISD	Brackettville	TX
Joshua	Smith	Del Rio Middle School	Del Rio	TX
Crystal	Torres	Mary Harper Middle School	Dilley	TX
Andrew	Valles	Newman Middle School	Encinal	TX

APPENDIX C
GeoFORCE Texas Summer Academy

Student Participants				
First	**Last**	**School**	**City**	**State**
Siobhain	Alvarado	Newman Middle School	Cotulla	TX
Rosy	Arellano	Uvalde Junior High School	Uvalde	TX
Joseph	Arrevalos	Rocksprings Junior High School	Rocksprings	TX
Katie	Bales	Sabinal ISD	Sabinal	TX
Elyana	Barrera	Del Rio Middle School	Del Rio	TX
Aaron	Cason	Mary Harper Middle School	Dilley	TX
Sabrina	Cervantez	Del Rio Middle School	Del Rio	TX
Jairo	Chavez	Newman Middle School	Encinal	TX
Jonathan	Cubriel	Pearsall Junior High School	Moore	TX
Carlos	de la Torre	Sabinal ISD	Sabinal	TX
Natalia	De Los Rellez	Memorial Jr. High School	Eagle Pass	TX
Karyssa	DeLeon	McDowell Middle School	Hondo	TX
Debbie	Duran	Eagle Pass Junior High School	Eagle Pass	TX
Schaefer	Edwards	Uvalde Junior High School	Uvalde	TX
Oscar	Fuentes	Eagle Pass Junior High School	Eagle Pass	TX
Miranda	Garcia	Rocksprings Junior High School	Rocksprings	TX
Elsa	Garza	Eagle Pass Junior High School	Eagle Pass	TX
Bryan	Gonzales	Uvalde Junior High School	Uvalde	TX
Victoria	Herndon	Nueces Canyon Junior High School	Camp Wood	TX
Isaac	Jimenez	Eagle Pass Junior High School	Eagle Pass	TX
Ramon	Lopez	Sterling Fly Junior High School	Crystal City	TX
Melanie	Lynch	Pearsall Junior High School	Pearsall	TX
Benjamin	Martinez	Pearsall Junior High School	Pearsall	TX
Samantha	Moore	Brackett ISD	Brackettville	TX
Andrew	Nunez	Uvalde Junior High School	Uvalde	TX
Nazarey	Ortiz	Uvalde Junior High School	Uvalde	TX
Alexandra	Perez	Sterling Fly Junior High School	Crystal City	TX
Hilary	Prado	Uvalde Junior High School	Uvalde	TX
Karina	Robledo	Pearsall Junior High School	Pearsall	TX
Kaitlin	Rodrigues	Eagle Pass Junior High School	Eagle Pass	TX
Rosalie	Rodriguez	Mary Harper Middle School	Dilley	TX
Andrea	Rodriguez	Eagle Pass Junior High School	Eagle Pass	TX
Michelle	Rodriguez	Uvalde Junior High School	Uvalde	TX
Andy	San Miguel	McDowell Middle School	Hondo	TX
Pat	Saucedo	Eagle Pass Junior High School	Eagle Pass	TX
Justin	Treviño	Newman Middle School	Cotulla	TX
Karen	Treviño	Eagle Pass Junior High School	Eagle Pass	TX
Marissa	Vara	Uvalde Junior High School	Uvalde	TX
Adriana	Vargas	Sterling Fly Junior High School	Crystal City	TX
Felipe	Villanueva	Uvalde Junior High School	Uvalde	TX

APPENDIX D
Newspaper Articles

SWTJC
Southwest Texas Junior College

(The following editorial is being reprinted with the permission of the Uvalde Leader-News. It appeared in the paper's Sunday, August 7, 2005, edition.)

Boosting the sciences

May the GeoFORCE be with you could certainly apply to the 40 southwest Texas ninth-graders who recently completed a summer academy aimed at budding scientists.

A collaborative initiative designed by the University of Texas at Austin's Jackson School of Geosciences and Southwest Texas Junior College, GeoFORCE Texas increases awareness of the geosciences and motivates participation in experiences outside the classroom.

For example, this year's academy included travel to Austin, Washington, D.C. and New Mexico where students heard presentations by leading scientists on topics ranging from the Mars landing mission to volcanoes and tsunami research.

The group of 40 also took field trips to areas of geologic interest in the Austin area, Harper's Ferry and the Great Falls National Park in Virginia, the monuments and Smithsonian Museums in Washington, D.C., and Bandolier and Carlsbad Caverns National Parks in New Mexico.

"You represent some of the best and brightest science talent in our area, and I congratulate each and every one of you on a job well done," SWTJC dean of Technology and Institutional Advancement Blaine Bennett told the group at a July 27 graduation ceremony.

Indeed. At a time when American educators are lamenting the shortage of students with an aptitude for the sciences and mathematics, GeoFORCE promises to take a proactive role in exposing young people to the adventurous side of what may be thought of as an otherwise dry subject in the classroom.

Thanks to Shell Oil Company, ConocoPhillips, SBC Foundation and Priority Oil & Gas Company for helping underwrite the cost of the project. And thanks to educators for having the vision to create such a stimulating program.

This year's participants will continue with the academy next summer in a program slated for the Grand Canyon. A new group of ninth-graders will be chosen to take up where this year's students left off.

If you have a science-minded youngster in your household, it would be wise to begin planning their application now. You never know, the GeoFORCE might be with you, too.

The Uvalde Leader-News

Locally Owned Independent Newspaper - Since 1879 A Leader in Southwest Texas

ExxonMobil joins GeoFORCE Texas team

Posted: Monday, Aug 22, 2005 - 09:24:06 am CDT

ExxonMobil has joined the GeoFORCE Texas program in its efforts to inspire budding Southwest Texas scientists to consider the geosciences and related fields of study.

Debra Weeden, senior petroleum geophysicist for ExxonMobil, was in Uvalde July 27 to visit with program participants and attend the closing ceremony for the inaugural GeoFORCE Texas summer academy.

At the ceremony, Weeden presented a $10,000 check to UT-Austin Jackson School of Geosciences Associate Director Doug Ratcliff.

BIG CHECK - ExxonMobil Senior Petroleum Geophysicist Debra Weeden (left) presents a $10,000 check to Doug Ratcliff, associate director of UT-Austin's Jackson School of Geosciences. The presentation was made during closing ceremonies for the first GeoFORCE Texas summer academy. The ceremony was held July 27 on the Uvalde campus of Southwest Texas Junior College.

The contribution from the ExxonMobil Foundation represents her company's initial support for the GeoFORCE Texas initiative.

"GeoFORCE Texas provides a great opportunity for students interested in math and science to be exposed to the wonders of Earth science and to interact with students from the Southwest Texas region who share their interest in academic excellence," Weeden said. "ExxonMobil is excited to be a part of the GeoFORCE program and we look forward to following these young students all the way to careers in the high-tech industries of the future."

Earlier in the day, Weeden addressed the 40 ninth graders who had just completed the summer academy and provided insight into opportunities available in geoscience-related fields. She also gave students her personal perspective on the role and challenges facing female geoscientists in the oil and gas industry.

Rocksprings Record and Texas Mohair Weekly
Serving Edwards County Since1893

Internet Edition, August 8, 2005.

Area ninth graders complete first GeoFORCE TX summer academy

Participants in the GeoFORCE Texas summer academy gather for a group shot in front of the U. S. Capitol during a visit to Washington, D.C. The trip was part of a 12-day cross country tour of national parks and other sites of geologic interest. Forty students representing 10 Southwest Texas communities took part in this summer's academy. Representing Rocksprings High School on the 12-day cross country adventure were Miranda Garcia and Joseph Arrevalos and Victoria Herndon of Nueces Canyon High School.

Students were selected for the program last spring through a rigorous application process targeting high achievers in math and science.

Representing Rocksprings High School on the 12-day cross country adventure were Miranda Garcia and Joseph Arrevalos. Victoria Herndon of Nueces Canyon High School also took part in the program.

GeoFORCE Texas is a collaborative initiative, designed by The University of Texas at Austin's Jackson School of Geosciences and Southwest Texas Junior College, to increase awareness of the geosciences and to motivate students to maintain high grades in their coursework through their participation in spectacular experiences outside the classroom.

Corporate support for the program is provided by Shell Oil Company, ConocoPhillips, ExxonMobil Foundation, SBC Foundation, and Priority Oil & Gas Company.

This year's summer academy included travel to Austin, Washington DC, and New Mexico. Students were treated to presentations by leading scientists in topics ranging from the Mars landing mission, to volcanoes and tsunami research.

The group also enjoyed field trips to areas of geologic interest in the Austin area, Harpers Ferry and Great Falls National Park in Virginia, the monuments and Smithsonian Museums in Washington, DC, and Bandolier and Carlsbad Caverns National Parks in New Mexico.

Field trip leaders from UT-Austin were Dr. Leon Long, professor of geological sciences and Anna Morisani, graduate assistant. Steve Hammond and Randy Orndorff of the U.S. Geological Survey in Reston, VA., led the activities in the Washington D.C. area.

Continued next page >>

Rocksprings Record
and
Texas Mohair Weekly
Serving Edwards County Since1893

Internet Edition, August 8, 2005.

GeoFORCE, continued

At closing ceremonies in Uvalde, SWTJC Dean of Technology and Institutional Advancement Blaine Bennett, Ph.D., congratulated the group for their successful completion of this summer's academy.

"You represent some of the best and brightest science talent in our area and I congratulate each and every one of you on a job well done," Bennett said.

Julie Spink, GeoFORCE Texas coordinator, congratulated parents for the enthusiastic participation of their children during the intense cross-country tour.

"These kids are the greatest. They endured eating squashed sack lunches, a flat tire on the bus in the middle of west Texas, late nights and early mornings," Spink said. "They did it all with enthusiasm and continual interest in the science being presented each day. They are going to be outstanding scientists in the future."

Spink was assisted by area teachers Wanda Demboske of Uvalde High School, Kathryn Dowlearn of Leakey and Annette Pena of Cotulla High School. Counselors assisting with the project were college students from UT-Austin and SWTJC including Mary Gabaldon, Jennifer Arreola, Michael Cavasos, Michael Ponce, Martha Gomez and Mariana Miranda.

GeoFORCE Texas will continue next year with a new group of ninth graders following an itinerary similar to this summer's academy. This year's group will participate in the academy for tenth graders that will take place at the Grand Canyon.

The Uvalde Leader-News

Locally Owned Independent Newspaper - Since 1879 A Leader in Southwest Texas

GeoFORCE Texas students explore Uvalde-area's geology

Posted: Thursday, Jul 21, 2005 - 08:34:03 am CDT

Young scientists explored some of the rich geology in Uvalde County on July 11 and 12 as participants in a two-day field study that was part of the GeoFORCE Texas Program.

Sponsored by Southwest Texas Junior College and The University of Texas at Austin's Jackson School of Geosciences, with corporate support from ConocoPhillips, Exxon-Mobil Foundation, Shell Oil Company, the SBC Foundation and Priority Oil and Gas, the new program is aimed at recruiting prospective geoscientists from among top Southwest Texas math and science students.

"The purpose of the field study in Uvalde County was to demonstrate to students how interesting geology can be and hopefully spark an interest that will carry them on to a future study of the geosciences," said Doug Ratcliff, associate director of the Jackson School.

A total of 24 area students who will be entering the ninth grade this fall took part in the two-day event hosted by SWTJC and the Jackson School.

The students represented eight Southwest Texas communities including Brackettville, Cotulla, Crystal City, Del Rio, Dilley, Eagle Pass, Rocksprings and Uvalde.

Program participants from Uvalde were Kimberly Albarado, Jamie Hawkins-Kirkham, Samantha Perez and Ricardo Rodriguez.

LOOK, UP IN THE SKY! - A visit to the Bat Cave on the Annandale Ranch near Concan was part of a two-day field study in Uvalde County on July 12 and 13. The field study was sponsored by GeoFORCE Texas a new program aimed at recruiting students into geoscience fields. (Photo courtesy of SWTJC).

On the first day of the field study, students learned from Sigrid Clift, geologist for the Jackson School's Bureau of Economic Geology, that Uvalde was in a province of volcanic activity about 80 million years ago.

GeoFORCE Texas students, continued

Visiting a site of the Frio River just off Garner Field Road, students were able to stand where there was once a volcanic crater.

At this same location, students observed where volcanic ash had been converted, over time, to rock.

First day activities also included a trip to the Vulcan Materials rock quarry in Knippa.

There students were given a tour of the quarry by assistant plant manager Mike Shutter and were able to collect basalt samples.

On their way back to Uvalde, students also collected samples of a Del Rio formation alongside one of the area farm-to-market roads just outside the city.

Lunch was served at the Uvalde Historical Commission's Fort Inge Park where students sat along the Leona River while Clift discussed river ecology and the Edwards Aquifer.

They also learned that Mount Inge is composed of remnants from an extinct volcano.

Later in the day, John Andrews, also with the Jackson School's Bureau of Economic Geology, gave a virtual tour of the Edwards Aquifer and the Big Bend National Park to the group and Clift presented a simulation on the importance of water conservation and pollution awareness.

After dinner, students were taken to the Annandale Ranch to watch the nightly exodus of more than a million Mexican free-tail bats from a large cave along the Frio River.

The first event of day two was a visit to the Vulcan Materials Uvalde Plant located off Highway 90 west of Uvalde.

Chuck Bevis, Vulcan plant manager, gave an overview of the plant's operations and then took students on a tour of the quarry.

Students examined and collected fossils embedded in the limestone material used to make rock asphalt.

Following the trip to the Vulcan plant, an examination of the upper Nueces River canyon and an overview of the two-day field study was made at Big Oak River Camp on Highway 55 near Lake Nueces County Park.

Students then had lunch and swam in the Nueces River.

A closing session was held on the SWTJC Uvalde campus in the college's Tate Auditorium. Program participants received a certificate of completion, along with a rock kit.

"This was a wonderful group of students to work with and I know they went home with an increased awareness of the area's geology," said GeoFORCE Texas Program Coordinator Julie Spink.

Spink thanked area teachers Wanda Demboske of Uvalde High School, Brett White of Hondo Junior High and Kathryn Dowlearn of the Leakey Independent School District for helping chaperone and teach the young geoscientists.

SWTJC's Whipple also thanked college staff members Julie Garcia, Nita Reed, Suzanne McCormack, Eva Gonzalez and Anna-Marie Darden for assisting with the event.

"Thanks to everyone involved I believe we put on an event that will inspire and motivate these students to actively consider geology as a future course of study," Whipple said.

Eagle Pass News-Guide
Thursday, April 21, 2005
Front page

Eagle Pass Junior High School students selected for the Texas Geo-Force Programs are from left to right: Debbie Duran (alternate), Isaac Jimenez, Elsa Garza, Oscar Fuentes, Andrea Rodriguez, Ramon Saucedo, Kaitlin Rodriguez, Esteban Rodriguez (alternate), Karen Trevino.

Eight junior high students from EP selected to participate . . .

SWTJC GeoForce program geared to develop scientists

A total of 36 Southwest Texas eighth graders have been selected as the first participants in GeoFORCE Texas, an initiative aimed at encouraging budding young scientists to consider careers in the geosciences.

Sponsored by the University of Texas at Austin's Jackson School of Geosciences and Southwest Texas Junior College, GeoFORCE Texas received a total of 118 applications for this year's inaugural summer academy. Shell Oil Company provided the initial corporate funding for the academy. ConocoPhillips and the SBC Foundation have now joined the program and are providing financial assistance to sustain and expand it.

"The response was terrific and we want to thank all the students and teachers who took the time to apply," Southwest Texas Junior College Dean of Technology and Institutional Advancement Blaine Bennett said. "Students selected for the first GeoFORCE Texas class are an outstanding group and I feel certain they will represent Southwest Texas well."

Eagle Pass eighth graders selected for the program include: Oscar Fuentes, Elsa G. Garza, Isaac Jimenez, Kaitlin Rodrigues, Andrea Rodriguez, Ramon Saucedo and Karen Trevino, all from Eagle Pass Junior High; and Natalia De Los Rellez from Memorial Junior High.

According to Bennett, 15 school districts from across SWTJC's 11-county service area had students submit applications. Students selected come from 12 different communities including: Brackettville, Camp Wood, Cotulla, Crystal City, Del Rio, Dilley, Eagle Pass, Hondo, Pearsall, Rocksprings, Sabinal and Uvalde.

Through weeklong summer academies that include geology-based field trips, research projects and course work led by university professors, GeoFORCE Texas hopes to expose students to the geosciences in ways that inspire and motivate them to actively pursue geology as a future course of study.

Students selected for the program are committed to attend GeoFORCE Texas summer academies for the next four years. Preference in the selection process was given female and minority applicants, two groups that are significantly under-represented among current geologists. There is no cost to students who were selected for the program.

The itinerary for the first summer academy, scheduled July 16 through 27, calls for students to begin with three days on the UT Austin campus for classes and tours of local geological sites, followed by a trip to the U.S. Geological Survey headquarters in Reston, VA., and additional field trips to various geological sites and national park facilities across New Mexico.

An orientation session is scheduled April 23 at the SWTJC Uvalde campus to outline plans for this summer's academy to selected students and their parents.

According to Jackson School of Geosciences Associate Director Doug Ratcliff, GeoFORCE Texas will recruit additional applicants for the program on an annual basis.

"Our program is patterned after a very successful program that has had tremendous success for over 20 years at Fort Valley State University in Georgia," Ratcliff said. "With continued support from Shell, ConocoPhillips, SBC and others, we believe GeoFORCE Texas will be equally successful for many years to come."