



Engineering *Our* Future

Winter 2010-2011

Texas Tech University - Edward E. Whitacre Jr. College of Engineering



Albert Sacco Jr. is Texas Tech's ninth dean of engineering. Sacco was most recently the George A. Snell Distinguished Professor of Engineering and the director of the Center for Advanced Microgravity Materials Processing at Northeastern University.

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Engineering Our Future

Winter 2010-2011 Issue

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I write this Dean's Report for the alumni newsletter with mixed emotions as I leave the role of interim dean. I am excited for the many accomplishments of our faculty and staff detailed in these pages, truly enthused about the many prospects for growth in size and excellence of the Whitacre College of Engineering, and encouraged that I will still remain involved with Texas Tech as director of the university's new decentralized financial management system. But, I will miss my day to day involvement with the faculty, staff, students, alumni, and friends of this remarkable college and the shared glory of their many successes. My wife, Jean, and I have enjoyed our time here in Lubbock; we will always remember the passion that so many of you share for (y)our university.

I am particularly pleased to announce that my friend, Dr. Albert Sacco Jr., will be the ninth dean of engineering at Texas Tech (page 3). Al's experiences as an educator, researcher, and academic administrator, to say nothing of his role as a payload specialist on mission STS-73 of the Space Shuttle Columbia, will play a key role as he guides the college into the future.

In other personnel actions, the Bob L. Herd Department of Petroleum Engineering welcomes Dr. Mohamed Soliman as the new chair of the department (page 4). Mohamed comes from Halliburton where he gained extensive experience in reservoir modeling and R&D management. Dr. Michael Giesselmann is the new department chair in the Department of Electrical and Computer Engineering. Mike has been at Texas Tech since 2002. Additionally, Dr. William Marcy, dean from 1999-2002 and provost from 2002-2008, is serving as an interim department chair in the Department of Computer Science.

The college is strong and improving, and we have two buildings that will soon be under the control of the Whitacre College of Engineering. The HESS building, formerly known as the Men's Gym, and the Mass Communications building will be under the control of Engineering in 2011 and 2012, respectively (page 9). Engineering enrollments are up around 6 percent this year (page 7), and we set a new record for research funding with a total of \$22.1 million for the 2010 fiscal year. Moreover, the Wall Street Journal recently ranked the college among the top 25 schools that produce the best graduates (page 5).

Our faculty are making significant impacts in teaching and research. Drs. Jennifer Farris, an assistant professor of industrial engineering, and Tim Matis, an associate professor of industrial engineering, have been working with a hospital in Odessa to improve patient flow (page 5). Dr. Michelle Pantoya, a professor of mechanical engineering, wrote a children's book that was named a "Best Books 2010 Award" finalist by the online site USABookNews.com (page 6).

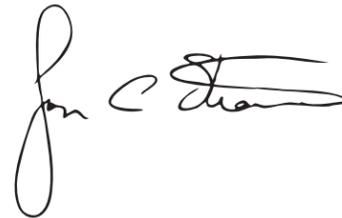
In this issue, we feature two profiles from graduates of the petroleum engineering department. Alan Smith (page 10) and Robert Matejek (page 12) are successful leaders in the petroleum industry.

Our new alumni news section features updates from graduates of the college (page 14). Send us your updated information or stories at www.TTUalum.com.

I hope you enjoy reading about the activities and events of the college.



Interim Dean,
Whitacre College of Engineering
Jon C. Strauss, Ph.D.



Former NASA Astronaut, Dr. Albert Sacco Jr., Named Dean

Dr. Albert Sacco Jr. will become the next dean of the Edward E. Whitacre Jr. College of Engineering effective Jan. 1, 2011.

"Dr. Sacco's background should be uniquely supportive of his new role and contributions at Texas Tech University," Provost Bob Smith said. "We will benefit enormously from his dedication, creativity, and extraordinary experiences, including service as a U.S. astronaut."

"I am thrilled to join the Texas Tech academic team of outstanding researchers and educators," Sacco said. "And I look forward to supporting the Whitacre College of Engineering's desire to become one of the nation's top-rated engineering colleges."

Sacco is currently the George A. Snell Distinguished Professor of Engineering and the director of the Center for Advanced Microgravity Materials Processing at Northeastern University. He flew as the payload specialist on the Space Shuttle Columbia on shuttle mission STS-73 in 1995. The 16-day mission aboard Columbia focused on materials science, biotechnology, combustion science, and fluid mechanics contained within the pressurized Spacelab module.

Born in Boston, Mass., Sacco completed a bachelor's degree in chemical engineering from Northeastern University in Boston in 1973, and a doctorate in chemical engineering from the Massachusetts Institute of Technology in 1977. He then joined the faculty of the Worcester Polytechnic Institute, becoming a full professor and serving as the chair of the chemical engineering department from 1989 until 1997, when he joined the faculty at Northeastern. He has consulted for numerous companies in the fields of catalysis, solid/gas contacting, zeolite synthesis and applications, and equipment design for space applications.

Sacco has more than 192 publications (including book chapters) in the areas of carbon filament initiation and growth, transition metal and acid catalyst and their deactivation, and zeolite synthesis, and he has been the principal investigator on more than \$24 million in research grants.

Using his space flight experience, Sacco has given more than 300 presentations to approximately 27,000 K-12 teachers and their students as a means to motivate students to consider careers in science and engineering. He is a fellow of the American Institute of Chemical Engineers and in 2004 was elected to the International Academy of Astronautics. Most recently, he was named the recipient of the 2010 New England Institute of Chemists Distinguished Chemist Award. **E**

Front (L-R) Albert Sacco Jr., Kent V. Rominger, and Michael E. Lopez-Alegria. Back (L-R) Catherine G. Coleman, Kenneth D. Bowersox, Fred W. Leslie, and Kathryn C. Thornton. The STS-073 crew launched aboard the Space Shuttle Columbia on October 20, 1995.



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News

Dr. Mohamed Soliman Named Chair of Petroleum Engineering Department

Dr. Mohamed Y. Soliman will become the new chair of the Bob L. Herd Department of Petroleum Engineering and the George P. Livermore Chair of Petroleum Engineering effective Jan. 10, 2011.

“Mohamed brings a wealth of experience to Texas Tech from his work in the petroleum industry at Halliburton,” said Jon C. Strauss, interim dean of engineering. “He is the right person to lead the Bob L. Herd Department of Petroleum Engineering to new heights of excellence in instruction and research.”



Dr. Mohamed Soliman

Soliman has a bachelor's degree in petroleum engineering with top honors from Cairo University, and master's and doctoral degrees in petroleum engineering from Stanford University. His career has focused on reservoir completion and production engineering. He holds 17 patents on fracturing operations and analysis, testing, and conformance applications. He is an author or co-author of more than 150 technical papers and articles in areas of fracturing, reservoir engineering, well test analysis, conformance, and numerical simulation. He is a distinguished member of the Society of Petroleum Engineers.

At Halliburton, Soliman was responsible for the development of the analysis technique of the limited-emissions FasTest® well testing system, a winner of the 2005 Hart's E&P Meritorious Award for Engineering Innovation. He also conceived and developed the philosophy for the QuikLook numerical simulator. He led the development of the software and guided it into what has become the main simulator used by Halliburton engineers. The software is also used by several operating companies, generating considerable direct, consulting, and pull-through revenue. He has developed multiple fracturing design and analysis, well testing, and reservoir engineering techniques, and has authored several engineering software packages that are in current use. He has authored chapters in World Oil's

Handbook of Horizontal Drilling and Completion Technology, the text Well Construction, and the SPE monograph Well Test Analysis of Hydraulically Fractured Wells.

“Dr. Soliman has strong leadership capabilities and a solid reputation in the petroleum industry,” President Guy Bailey said. “His vast experience makes him a natural choice.”

“It is a great honor to be trusted to lead the petroleum engineering department at Texas Tech,” Soliman said. “I am excited about this opportunity and I firmly believe that the petroleum engineering department as a team will achieve a great standing academically and within the industry as a tier one program in the near future.” **E**

Department Facts

Bob L. Herd Department of Petroleum Engineering

Endowments

Petroleum Engineering Endowments..... **31**
Endowment Value **\$22M**

Fall 2010 Enrollments

Undergraduate **430**
Graduate **39**
Total..... **469**

2009-2010 Graduates

Undergraduate **78**
Graduate **17**

Faculty Members

Faculty..... **8**
Instructors **2**

Department Needs

Endowed Undergraduate Scholarships
Laboratory Renovations
Graduate Fellowships

Engineering Ranks Among Top 25 Schools for Skilled and Educated Graduates

The Whitacre College of Engineering is one of the Wall Street Journal's (WSJ) “Top 25 schools that produce the best graduates,” according to recruiters for the nation's largest public and private companies, nonprofit organizations, and federal agencies.

TOP 25

The WSJ wanted to identify the schools that are most likely to help students land a job in key careers and

professional areas that are growing, pay well, and offer high levels of satisfaction.

To be considered for the engineering ranking, a school had to have at least seven companies rank it; most had more. The result is a list of the Top 25 schools that produce the best graduates, according to recruiters, and similar rankings broken down by recruiter favorites in eight majors or combination of similar majors. **E**

Industrial Engineers to Save More than \$250,000 for Medical Center Hospital

Two Texas Tech industrial engineering professors have collaborated with administrators and nursing staff at Odessa's Medical Center Hospital (MCH) to develop a plan, when fully implemented, which is projected to save the hospital more than \$250,000 dollars each year. Through this work, they have been able to introduce efficiencies that make discharge from the hospital easier and will enable most patients to go home sooner.



Dr. Jennifer Farris

Jennifer Farris, assistant professor of industrial engineering, and Tim Matis, associate professor of industrial engineering, were asked by MCH chief nursing officer Marlene McAllister to help the hospital improve patient flow, and thereby reduce a backlog that regularly built up in MCH's emergency room (ER).

Farris and Matis responded with a three-phase approach for solving the backlog problem, saving the hospital money, and saving time for patients.



Dr. Tim Matis

In phase one, Farris and Matis observed that the backlog in the ER was often due to delays in discharging patients from the hospital. “We noticed that patients had to wait in the ER for rooms within the hospital to become available,” said Farris, “We collected data at MCH and looked at other hospitals' information to set a goal for MCH's future.”

In phase two, the Texas Tech researchers sought to understand why it took so long for patients to be discharged from the hospital. Farris and Matis identified sources of significant delay from which Beth Baker, MCH nurse and divisional director of Women's, Children's and Acute Care Services, and Chad Dunavan, telemetry unit director, developed new procedures for the hospital that eliminated unnecessary paperwork and procedures that delayed each patient's departure. This phase, already in implementation, is already helping patients to be discharged more than 40 minutes earlier than before.

“With the changes that we recommended, patients' waiting periods in the ER are much shorter as well,” said Farris, “MCH can now place patients into a comfortable room much sooner.”

In the third phase, Farris and Matis are working on a system that allows patients to schedule their discharge times. “If you have been in the hospital before, you may have waited a long time to be discharged,” Matis said, “and you might have made arrangements for someone to pick you up. Our system can help match a patient's needs with the departure time. This way, you can plan on going home from MCH at a time that fits your schedule.”

This system involves an intricate network of scheduling and workflows that matches patient needs with staffing availability for the benefit of both patients and the hospital. **E**





News

Texas Tech Engineering Hosts 12 Solar-Powered Cars in Lubbock

In July, the college hosted a pit stop for the 2010 Hunt-Winston School Solar Car Challenge. The challenge was a cross-country solar car race for high school students, featuring 12 solar cars and their teams, which stopped in Lubbock as they raced from Dallas to Boulder, Colo. Approximately 90 vehicles and 216 individuals (students, advisors, etc) drove through the campus for the afternoon.

The Texas Tech solar car racing team, the EcoCAR Challenge team, the Formula SAE team, and other student organizations set up booths at the pit stop so that the high school students from across the United States could learn about opportunities at Texas Tech.

The Hunt-Winston School Solar Car Challenge was established in 1993 to help motivate students in science and engineering and to increase alternative energy awareness. The challenge, a part of The Winston School Solar Science Academy, teaches high school students around the world how to build road worthy solar cars. **E**

Dr. Michelle Pantoya's Children's Book Wins National Recognition

A children's non-fiction book coauthored by a Texas Tech engineering professor is recognized as a "Best Books 2010 Award" finalist by USABookNews.com, the premiere online magazine and review website for mainstream and independent publishing houses.

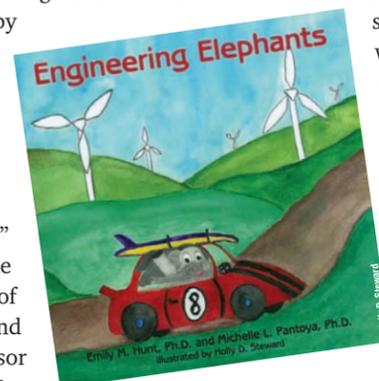
"Engineering Elephants," coauthored by Dr. Michelle Pantoya, a professor of mechanical engineering, and Emily Hunt, an assistant professor of mechanical engineering at West Texas A&M University, seeks to educate very young children about who engineers are and what they do.

"Children know doctors and teachers and police and firemen and soldiers, but not engineers," Pantoya



Interim Dean Jon Strauss and Raider Red accept a plaque from the director of the solar car challenge, Dr. Lehman Marks.

said. "This is a way of introducing young children to engineering. Our goal is to inspire some of these young people to think about an engineer as something they want to be when they grow up."



Between them, Pantoya and Hunt have seven children ages seven and under. The women discovered that there is a lack of children's books on engineering geared toward young children ages 4 to 8 and began work on the book about two years ago.

Jeffrey Keen, president and CEO of USABookNews.com, said this year's contest yielded an unprecedented number of entries, which were then narrowed down to more than 500 winners and finalists in more than 140 categories covering print and audio books. Awards were presented for titles published in 2010 and late 2009.

The book is available online authorhouse.com and at amazon.com. **E**

Whitacre College of Engineering Among America's Best

The educational experience in the Whitacre College of Engineering is one of the nation's top 80, according to U.S. News & World Report's 2011 college rankings.

In the magazine's yearly assessment of America's best schools, Texas Tech's undergraduate engineering program is now tied for 78th. The undergraduate program rankings are based on peer assessments only.

"The faculty and staff of the Whitacre College of Engineering are working continuously to provide our students with the highest quality education," said Jon Strauss, interim dean of the college. "This ranking confirms that Red Raider engineers are among the best in the nation."

Earlier this spring, five Whitacre College of Engineering graduate programs received rankings as well, in the magazine's Graduate School issue:

The overall graduate engineering program moved up to a ranking of 99th among 198 programs nationwide.

- The Department of Industrial Engineering ranked 29th in the Industrial/Manufacturing category.
- The Department of Electrical and Computer Engineering ranked 66th in the Electrical/Electronic/Communications category.
- The Department of Chemical Engineering ranked 68th in the Chemical category.
- The Department of Civil and Environmental Engineering was ranked 73rd in the Civil category.
- The Department of Mechanical Engineering ranked 93rd in the Mechanical category. **E**



Engineering Enrollments Continue to Increase, Break Record Again

In the fall of 2009, the Whitacre College of Engineering set a new enrollment record. With 4,732 undergraduate and graduate students enrolled, the college broke a record that had stood for more than 25 years.

This fall, the college instituted the new PreEngineering program, an opportunity for students who do not meet assured admission standards to benefit from the success-oriented and career-focused advising provided by University Advising during their first academic semesters at Texas Tech.

When including PreEngineering students, the college's enrollment for fall 2010 is now 5,033 students, a 6 percent increase from last year's total enrollment.

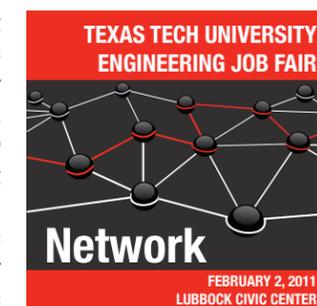
The university also surpassed previous enrollment records for the second straight year. The university's total enrollment for fall 2010 is 31,637, a 5.2 percent increase from last year's enrollment. **E**

More than 2100 Students Attend Fall Engineering Job Fair

The fall Engineering Job Fair, which was held on September 22, 2010, featured more than 120 companies seeking to fill internships, co-ops, full-time positions, and other positions. More than 2,100 Texas Tech students rode the free shuttles or made their way to the Lubbock Memorial Civic Center to take advantage of the career opportunities.

The next Engineering Job Fair will be held in the spring semester on February 2, 2011. Sponsorships and booths are available for this event.

For information, visit www.coe.ttu.edu/careers. **E**



Industry Partners

Texas Instruments Partners for Student Success at Texas Tech

When a Fortune 500 company sets out to partner with an institution of higher learning, the collaboration can be a win-win situation for the company, but more importantly for students.

Arthur George of Texas Instruments Inc. (TI) visited the campus in September and spoke to engineering students about their futures, different business units, and the latest products at TI. George, senior vice president and manager of Analog Engineering Operations, said this trip was his first to Lubbock, and he was impressed with the students, professors, and laboratories.

"I can honestly say that I've really been impressed and enjoyed every aspect of the visit," George said.

During the history of the relationship between Texas Tech and TI, the company has contributed more than \$5 million, including \$680,000 in the 2010 fiscal year. The funding has extended research opportunities and contributed to scholarships.

In addition, TI has a vast collaboration with Texas Tech's Program for Semiconductor Product Engineering (PSPE) and the Advanced Electronic System Engineering (AESE) program. PSPE is a two-year master's program designed to prepare students for the culture and environment of the engineering profession. PSPE places students in a six-month co-op with one of the industry sponsors; TI was the first to sponsor Texas Tech. In the 12 years of the PSPE program, more than 175 students have accepted full-time positions at TI, amounting to 80 percent of the program's participants. Success of PSPE led to the initiation of the AESE program in 2004. AESE, led by Dr. Richard Gale, emphasizes advanced system engineering and integrated circuit design.

TI also supported several research projects in the Department of Electrical and Computer Engineering during fiscal year 2010.

Dr. Donald Y.C. Lie received \$225,000 to investigate headset-based portable electrovestibulography/electrocochleography technology and analog design research.

Lie is working with doctors at the Texas Tech Health Sciences Center to develop low-power



Arthur George addresses Texas Tech engineering students and discusses engineering and Texas Instruments.



analog circuits with wireless technology that can eventually help to identify central nervous system-related disorders in the elderly. The technique, called electrovestibulography/electrocochleography, or EVestG/ECochG, uses devices that are inserted into or near the ears that stimulate the vestibular and auditory systems. Currently, these devices are cumbersome and expensive. These factors prevent the devices from being readily accessible in rural areas.

Through this research, Lie hopes to develop portable, lightweight, and low-power devices that can help to provide early diagnosis of dementia, balance problems, and other health issues to patients in clinics and hospitals across the country.

Lie is also facilitating analog design research projects with Texas Tech students and TI. Texas Tech is one of only two universities that have access to a Texas Instruments Design Kit. These kits allow undergraduate and graduate students to gain hands-on experience with the development tools that TI engineers use each day to test, analyze, and develop devices and products.

Each student works with Lie and other Texas Tech faculty members to devise and design a solution to a real-world problem.

George said TI has the utmost respect and admiration for the faculty, administrators, and talented students at Texas Tech. He believes this collaboration will continue into the future.

"I know we are going to continue to have a great partnership, and we're going to find ways to build and expand the relationship between Texas Tech and Texas Instruments," he said. **E**

New Engineering Buildings

Engineering To Take Control of Two Additional Campus Buildings

Two additional buildings on the Engineering Key will soon be under the control of the Whitacre College of Engineering. As research funding continues to increase within the college, these buildings will play a pivotal role in the addition of more research opportunities for engineering faculty.

The Health, Exercise, and Sport Sciences (HESS) Building, formerly known as the Men's Gym, is located east of the Industrial Engineering and Mechanical Engineering buildings. The building features a swimming pool, a gymnasium, and two floors of offices and laboratories. The gymnasium and pool areas will be transformed into engineering offices and laboratories.

The HESS building has more than 37,000-square feet of usable space. The Whitacre College of Engineering will take control of the building in 2011. HESS faculty,

staff, and students will relocate to space formerly occupied by the university's printing operations.

The Mass Communications building, located at the corner of the Engineering Key and Memorial Circle, will be under the control of the Whitacre College of Engineering in 2012. This building has more than 73,000-square feet of usable space.

This building has three floors of classrooms, offices, and laboratories, including large laboratory spaces in the basement. College of Mass Communications faculty, staff, and students will relocate to the Business Administration building when the Rawls College of Business moves to its new building.

The university and the college are developing specific redevelopment plans for each of the spaces. The addition of each of these buildings will help to meet the current needs for additional research space as well as the growing student population. **E**

The map below shows the Engineering Key, with current buildings under the control of the Whitacre College of Engineering in red. The buildings that are in blue will be turned over to the college in the next few years.





Alumni Profile

Petroleum Engineering Alumnus Alan L. Smith Leads Quantum Resources

Alan L. Smith began his engineering career in 1985 after he graduated with a degree in petroleum engineering from Texas Tech. He started by holding positions of increasing responsibility with multiple oil and gas companies including ARCO Oil and Gas Company, Burlington Resources, Ryder Scott Company, XPLORE Energy, and Ocean Energy. Smith quickly demonstrated his aptitude during his time at Ocean and became vice president of business development, where he completed transactions with an aggregate value more than \$450 million and was an integral part of the company's external growth.

Smith continued to confirm his commercial knowledge of the oil and gas industry during his heavy involvement in the \$5.3 billion merger between



Quantum Resources
Management, LLC

Ocean Energy and Devon Energy Corporation in April 2003 which, at the time, created the largest U.S.-based independent producer of oil and gas with an enterprise value in excess of \$20 billion.

In 2003, Smith decided to make an entrepreneurial move when he began an association with Quantum Energy Partners, a private equity firm. Quantum committed \$15 million to his start-up company, Chalker Energy Partners, L.P. Smith and his team built a very successful company in just over two years, and in 2006 they sold it to a large independent oil and gas company for \$225 million. When Chalker was sold, Smith joined Quantum as a managing director and partner.

Today, Smith continues to be part of the Quantum

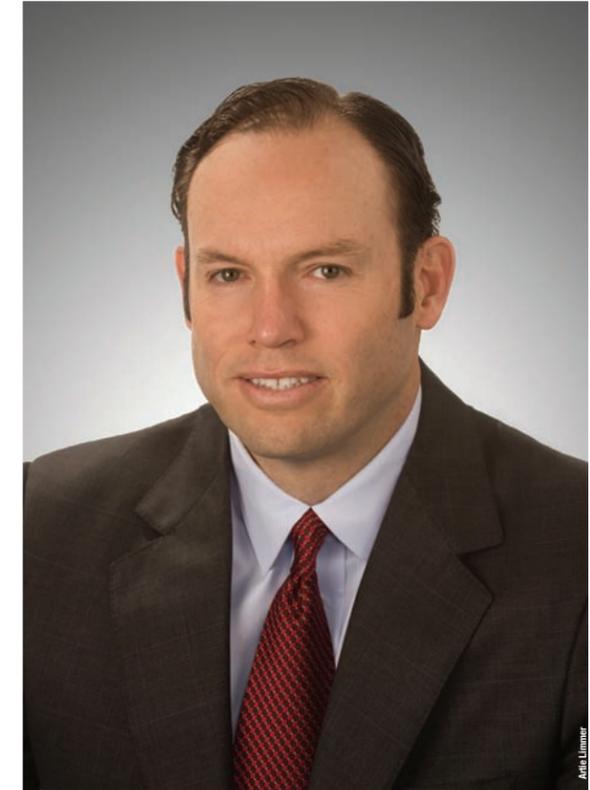
(L-R) T. Scott Hickman, '57 PE, and Alan L. Smith, '85 PE, at the Society of Petroleum Engineers football tailgate tent for the Texas Tech vs. Texas A&M game in October 2009.



family, but has moved back to the oil and gas industry and is currently the chief executive officer of Quantum Resources, a private equity fund that makes direct investments in oil and gas properties. Smith's primary responsibility is charting the strategic direction of the company, as well as, significant involvement in the financial and investor relations aspects of the company's business.

Smith maintains a busy work schedule but keeps a commitment to his community by serving as a board member to the Southeastern Region IPAA, an advisory board member of Stoney Creek Ranch, a Christian camp serving urban kids, an advisory board member to the Bob L. Herd Department of Petroleum Engineering, and is an emeritus Dean's Council member. He was also on the board of the Houston Producers Forum.

Alan and his wife Michelle, have two children, Tiffany and Kendall.



Alan L. Smith is the chief executive officer of Quantum Resources, a private oil and gas production company.

Engineering Our Future asked Alan some additional questions about his time at Texas Tech and his career. The questions and his responses are recorded here:

What is your fondest memory of your time on campus?

Other than those long, cold walks from Weymouth dorm to the Petroleum Engineering building, I would have to say the camaraderie that existed with my study buddies in engineering as we tackled all of our labs, classes, and exams. We worked hard, but we also played hard which made it all an enjoyable experience and made lifetime friends.

What is most interesting about being an engineer?

We are clearly taught to be analytical, problem solvers and that education has given me the skill set to look at any given situation, be able to assess it, devise a solution, and solve the problem. Of course, we are not always right and the process is sometimes iterative, but it is a rewarding experience when you are able to create value through either creating and implementing an idea or providing a solution to a problem.

What do you want your legacy to be, both professionally and personally?

My faith is very important to me and is a significant part of my life, both professionally and personally. It influences what I do professionally through my desire to be ethical and fair and being known for doing what you say you will do. It influences me personally in that it is at the core of my being and how I live my life. My desire is that my legacy will be that I was a loving father and husband and that I got out of the way and allowed God to utilize me to accomplish His purposes. **E**



Alumni Profile



Robert R. Matejek Retires from Merit Energy, Focuses on Family Foundation

Robert Matejek a West Texas native, was born and raised in Midland, Texas. He graduated from Midland High School in 1979 and came to Texas Tech that fall. Four years later he graduated as a Red Raider Petroleum Engineer.

In 1983, Matejek began his engineering career at Exxon Co. USA in Midland, Texas. His projects focused on reservoir and production engineering in oil fields located in West Texas and the Rocky Mountain states.

Seven years later Matejek's career relocated him to Dallas where he joined Merit Energy. At the time, Merit Energy was a start-up company, purchasing their first properties in 1990. Robert began as an engineer and progressed as the company grew, working on various properties in Texas and New Mexico. In 1996, he was promoted

to vice president of operations for the company, which now has operations in 13 states, the Gulf of Mexico, and Canada. He was promoted to president in 2006 and served as the president for four years. During that time, Merit produced approximately 100,000 barrels of oil equivalent per day and employed more than 800 people. After 20 impactful years of service with Merit, Matejek retired and is currently consulting on various projects for the company.



During his career Matejek continued to show his support to his alma mater by serving on the

Bob L. Herd Department of Petroleum Engineering Advisory Council Board, the Vision and Tradition: The Campaign for Texas Tech Advisory Board, and the Texas Tech Foundation Board. Robert has also been honored for his contributions and commitment

Robert R. Matejek
 Career in the Petroleum Engineering Industry

1983-1990

Exxon Co. USA

**Reservoir Engineering
Production Engineering**

1990-2010

MERIT ENERGY COMPANY

**Engineer
Vice President of Operations
President**



Robert Matejek recently retired as president of Merit Energy.

to Texas Tech with membership in the Spur and Matador Societies.

Retirement has not been quiet for Matejek as he has focused his energy on creating his family foundation. The Matejek Family Foundation aims to support educational opportunities and faith-based initiatives. He believes that education is the key component that can lead to a successful life. The foundation also supports several organizations that provide basic services to support everyday needs for the needy and the underprivileged. Matejek also established several

endowments at Texas Tech: the Matejek Family Presidential Scholarship Endowment, the Robert Matejek Petroleum Engineering Graduate Fellowship, and the Matejek Faculty Fellowship Endowment.

Engineering Our Future asked Robert some additional questions about his time at Texas Tech and his career. The questions and his responses are recorded here:

What is your fondest memory of your time on campus?

I think when I attended Texas Tech my fondest memories, at that time, were the typical college experiences and the lifetime friends that I developed. However, I now believe that the best experience was the incredible quality of education that I received from the college. This education allowed me to be prepared for the industry's demands and ultimately led to my career successes.

What is most interesting about being an engineer?

An engineer has a continual challenge to solve complex problems. I have loved being an engineer because there are new challenges each day and engineers are given the flexibility to solve those problems through the use of creativity. Engineering is interesting because I have never been bored in seeking resolutions to problems and I get real satisfaction when a solution is successful.

What do you want your legacy to be, both professionally and personally?

Professionally, ultimate success is the respect of not only your peers, but also managers or employees. As a manager, my ultimate goal was to create opportunities for my employees. Personally, I attribute my success to hard work and a great education. Our family foundation was created to give people the opportunity of an education. In short, we want to help secure bright futures through faith and education. **E**





Alumni Updates/More News

Whitacre College of Engineering Alumni Updates

1958

James E. Bustin, of Walden, Texas, died on September 17, 2010. Bustin attended Texas Tech and received petroleum and mechanical engineering degrees in 1958. His career spanned more than 50 years in the petroleum industry with Mobil, Gulf and Occidental Petroleum companies. He retired in 1990 as president and general manager of Occidental Operations in Oman.

1964

William Pearce, a 1964 graduate with a bachelor of science in civil engineering, works for Transocean Offshore Deepwater in Houston, Texas. He holds a law degree from the University of Texas at Austin.

1982

Retired Capt. Jay S. Lewis received a bachelor of science in mechanical engineering technology in 1982 from Texas Tech. He was recently awarded the Legion of Merit as the Executive Officer at Naval Base Guam and concurrently retired with over 26 years in the U.S. Navy as an Explosive Ordnance Disposal (EOD) Technician and a Navy Diver. Lewis and his family will make Guam their home and he will continue his government service with Naval Facilities Engineering Command Marianas as a mechanical engineer and program manager.

Andrews Receives Top Techsan Award from Alumni Association

Glenna Andrews, senior advisor in the Department of Civil and Environmental Engineering, was recently named a Top Techsan by the Texas Tech Alumni Association.



Andrews

Selections for the Top Techsan Award are made based on completed nomination forms that emphasize extraordinary work proficiency and an attitude of team spirit within the Texas Tech family.

1989

Jeff Sipes, a 1989 Texas Tech graduate with a bachelor of science in chemical engineering, recently took a position with Chart Energy & Chemicals as Vice President and General Manager of the Systems Division in The Woodlands, Texas.

1998

Eric West, a 1998 Texas Tech graduate with a master of science in civil engineering, is a stockholder, team leader, and civil office manager in Midland, Texas with Parkhill, Smith, and Cooper. He has been selected 2010 National Young Engineer of the Year by the National Society of Professional Engineers (NSPE).

The award recognizes young NSPE members who have made outstanding contributions to the engineering profession and their communities during the early years of their careers.

2008

Richard Borge, a 2008 graduate with a bachelor of science in mechanical engineering, was recently hired into the Lockheed Martin Engineering Leadership Development Program at the Knolls Atomic Power Laboratory in Schenectady, New York. He is currently attending Georgia Tech for a master of science in mechanical engineering.

Submit your updates online at www.TTUalum.com. Find us at www.facebook.com/TexasTechEngineering. **E**

Andrews won the Texas Tech University President's Excellence in Academic Advising award in 2007 and the university's Quality Service Award in 2005 for service to students and the university.

She helps civil engineering students in all facets of their academic lives including academic advising, obtaining scholarships, and finding jobs. She is the first point-of-contact for the department's foreign students and she works to make them feel welcome and to help them transition to life at Texas Tech. **E**

Vision & Tradition: The Campaign for Texas Tech

The Texas Tech University System kicked off a \$1 billion fundraising campaign that will help provide the resources necessary to continue the growth and success of the system's three universities.

"Today, the Texas Tech University System is making a bold statement about where we want to be as an organization and how we're going to get there," said Kent Hance, Texas Tech University System chancellor. "With Vision & Tradition: The Campaign for Texas Tech, we are working to take our institutions to the next level by heightening our investments in the students and faculty who make our university system great."

Vision & Tradition: The Campaign for Texas Tech is co-chaired by Ed Whitacre ('64 industrial engineering), former chairman of the board and CEO of General Motors Company, and Jerry Rawls ('67 mechanical engineering), executive chairman of Finisar Corp.

"Texas Tech prepared me to be a leader in business and in my community. I am so grateful for the education I received and I know a lot of alumni who share that feeling," Whitacre said. "Supporting this campaign for Texas Tech was my way to give back and I know our alumni and supporters are ready to meet this challenge too."

"I am excited to help lead this historic fundraising effort, as it will help shape future generations of students," Rawls said. "The component institutions of the Texas Tech University System not only provide exceptional academics but also promote the values necessary to develop leaders in today's global market."

The campaign's silent phase kicked off in September 2005. More than \$632 million has been raised to date; and \$123 million for the Whitacre College of Engineering. The campaign encompasses all three institutions: Texas Tech University, Texas Tech University Health Sciences Center, and Angelo State University.

Through the generosity of alumni, friends, corporations, and foundations, the Whitacre College of Engineering has grown exponentially with endowed student scholarships and graduate fellowships, endowed chairs, lab renovations, student

Partnerships

Vision & Tradition THE CAMPAIGN FOR TEXAS TECH

classroom renovations, etc., and has quickly become a competing national college of engineering.

Though there have been many successes in the campaign for the college, there are several major projects and milestones to complete that will require the assistance of private philanthropic investments. With the addition of the Mass Communications Building and the HESS Building to the college, there are significant renovations that must occur in these buildings to construct world-class research space.

Additionally, an increase in endowed professorships is necessary to assist with the retention of mid-career faculty members, along with more endowed scholarships and graduate fellowships.

Private gifts to the Whitacre College of Engineering are a key element to the college's continued success in the campaign, its national and international notoriety, along with the university's pursuit of Tier One status. **E**

Naming Opportunities

Opportunities to Support and Enhance the Mission of the College

Available Areas Within the College

Academic Departments
Academic Buildings
Academic Programs
Research Centers
Laboratories
Classrooms and Auditoriums

Endowments

Gifts to the College that have a Perpetual Impact

Levels

\$1,500,000 Chair
\$500,000 Professorship
\$250,000 Faculty Fellow
\$100,000 Dean's Distinguished Scholarship
\$50,000 Graduate Fellowship
\$25,000 Scholarship
\$10,000 Discretionary Endowment

Endowments are payable over three years with 1/3 needed to establish the fund. Only a portion of the interest is utilized ensuring that the fund will last in perpetuity. The endowment can be named and others may contribute to the fund. There is flexibility on the use of the endowment as long as it meets the rules of the Texas Tech University System Board of Regents and the laws of the State of Texas.





TEXAS TECH UNIVERSITY

Edward E. Whitacre Jr. College of Engineering™

Engineering Our Future

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Winter 2010-2011



Future Red Raider engineers visit the campus and meet Ed Whitacre and Chancellor Kent Hance. (L-R) Don Sinclair, '80, Will Sinclair, Edward E. Whitacre Jr., '64, Laurin Thompson, Chancellor Hance, '65, Ken Baker, '65 & '70.

Jeff Simmons