Be Careful What You Predict…

Last year I made the statement that “Our student numbers appear to have leveled out”. WRONG! I just finished reading the faculty articles and there is definitely a running theme – a lot of students. I think I hold the record for the biggest session of the sophomore class Rock Properties in the department’s history – 170 students. This class also has a wet lab so I had five sections with five experiments going concurrently. I had teaching assistants (TAs) for the class grading and for each experiment. I ended up with 25 TAs but most were juniors and seniors so your unrestricted donations to the department not only helped with class management but also supported a lot of students – not just for this class but for all of our undergraduate classes. Thank you! To ensure quality and consistency, I taught a “TA class” to show them what I wanted them to teach the students. This number of TAs is probably larger than many of your graduating classes!

Now you might be noticing in the Statistics Box on this page that it says we have 150 juniors. No - 20 of them did not flunk the class (well 20 of them did but they’re coming back). The extra 20 students are from other departments on campus. There were about ten mechanical, civil, and mining engineering students that were hired as drilling engineers and thought it would be a good idea to minor in PE. There were also about ten students that are getting an Energy Engineering minor. The Petroleum Engineering Department is on the Energy Minor Board and the leader of the Fossil Fuel Track. So we have a lot of majors but we are also supporting many other departments whose students will be working in the petroleum industry.

You’ll also notice in the Statistics Box that our graduate student enrollment continues to grow. This fall semester we have 35 new graduate students. This is not an indication that we have lowered our admission standards. In fact, the opposite is true. We’ve increased our admissions requirements, we now have a Graduate Admission Committee, our research volume is at a record high, and the number of applications to the PE graduate program was the highest on campus. We accepted approximately 10% of those that applied and statistically only about 30%-40% of these would enroll in a normal year. This is a very good example that making decisions based on statistics doesn’t always work out – over 80% of the accepted students actually enrolled. The graduate program is becoming as strong as our undergraduate program.

PE STATISTICS FOR 10-11
New Research Contracts $3.152 MM

GRADUATES

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CURRENT ENROLLMENT

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*Sophomore/Freshmen - do not declare until Spring Semester
So now you are probably asking yourself how do we do it? If you aren’t asking yourself that, you should be! Your PE faculty continues to be the MOST PRODUCTIVE on campus. Craig said that to the administration for almost 30 years. I’ve repeated it for the last five years. Our new Provost, Terry Parker, recently ran some statistics and told not only me, but all the department heads and division directors, that same thing. We continue to get new faculty support from the administration even though Colorado’s financial situation is not good which translates to the support of higher education declining. Here are some of the faculty changes:

1. Dr. Craig W. Van Kirk has retired! Ok, so not completely he still works 50% of the time per Colorado’s retirement rules and we couldn’t continue with our high quality undergrad program without him. He was awarded Emeritus Professor status for his many years of service to CSM and the Petroleum Engineering Department.

2. Dr. Dwayne Bourgoyne left CSM to join his father’s consulting business. I think it was always Dwayne (and Ted’s) dream to work together. The timing was right for both of them. We all wish him much success.

3. Dr. Todd Hoffman joined us in August as an Assistant Professor. When you read his article in this newsletter you will understand how fortunate we are to have him.

4. Provost Parker just gave the PE Department approval to hire 1) a Teaching Associate Professor and 2) a tenure track Assistant Professor. The ads will be in the JPT and the Oil and Gas Journal by the time you read this. Please encourage those you know that might be a good fit for our department to apply.

Support Staff

5. To support the growing experimental research and the large number of undergraduate students, we were able to hire another Lab Coordinator. Joe Chen comes to us with a background in the bio and life science area. Al Sami is rapidly turning him oily! You’ll hear from him next year.

And Goodby

Obituary for Dr. Billy J. Mitchell

Bill Mitchell, Professor Emeritus at the Colorado School of Mines, suffered a stroke that led to his passing Sunday, August 14th, 2011. He was 76 years of age and his body was donated to science, as he wished. Bill Mitchell functioned as roustabout, roughneck, derrick man, toolpusher, rig supervisor, drilling superintendent, drilling manager, and/or drilling engineer on holes in the U.S.A., Abu Dhabi, Argentina, Canada, Dubai, Egypt, Indonesia, and Malaysia; on tender, floater, and land rigs. He was an expert witness in oil well drilling, a computer software analyst, and an author of multiple detailed drilling manuals and handbooks for major corporations and industry. He was a consultant, a renowned lecturer, a business owner, and a multi-millionaire (BJ would just love it that they mentioned this!). Bill Mitchell joined the Colorado School of Mines faculty in 1966 as the professor of oil well drilling within the Petroleum Engineering Department. He became an Associate Professor in 1970 and received full Professorship in 1976. At his retirement in 1996, he was awarded the rank of Professor Emeritus.
year’s newsletter will be the “joys” of moving! There are still naming opportunities so if you don’t see your company on the list or if you would like to personally contribute please see the information in the center.

It is now time to ask for your help. Next year will be our six-year accreditation review from ABET. As part of the review documentation we need feedback from our alumni. Bill Eustes is leading our efforts this time so he asked if I would put in this request:

We are always interested in having our alumni give us feedback on our program. This next year, we will be undergoing our sexennial ABET accreditation process, which makes the feedback all that more important. To make it easier on all of us, we have set up a website at: https://www.surveymonkey.com/s/H9X3RQC. If you have ten minutes, we would appreciate your feedback at this survey site to help us shape our program’s future trajectory. Many thanks to you for participating.

My time and space have run out! As most of you know, I could go on about the department and all we are doing for pages. I’ll leave you with an explanation of my photos. Our education and research partnership with the Petroleum Institute in Abu Dhabi continues to thrive. Part of the PE, GE, and GP research team traveled to Abu Dhabi in March (see Dr. Kazemi’s article). Another highlight of my year (ok, my entire career) was my visit to Drake’s Well with the PEGN 315 field session. The curator of the museum had never seen anyone so excited so he gave me a small bottle of oil from the original well. (No one will ever convince me that it is not the original oil!!)

Hope to see everyone at the ATCE Alumni Reception in Denver. Information is on the back cover. It should be a great event!

Thanks to all for your continued support and keep in touch!

PETROLEUM ENGINEERING

RESEARCH PROFESSOR & CSM PRESIDENT, M.W. SCOGGINS

If you have visited the Mines campus lately, you’ve likely noticed we are “under construction.”

The tangible projects currently underway on campus also represent the intangible growth of the institution — Mines consistently attracts the very best students and our spectrum of research and technology continues to advance.

We broke ground last October on the new home for Mines’ Petroleum Engineering Department — Marquez Hall — and we’ll welcome students into its classrooms next fall. This component of Mines’ visible growth will help propel PE’s pioneering teaching and research and will enhance the university’s position as a global leader in developing innovative approaches to resource exploration and production.

I am looking forward to another great academic year. If you’re in the neighborhood, perhaps during the SPE conference this fall or any other time, I invite you to “pardon our progress,” as the construction signs say, and come see what’s new at Mines.

Best Regards,

M.W. Scoggins
FACULTY LETTERS

LINDA A. BATTALORA

The 2010-2011 academic year was spiced with international events, additional course development, and increased enrollment in the Department. This year promises to be equally as busy, and we are excited to meet the challenges of educating and graduating top-quality petroleum engineers.

This semester I am teaching graduate petroleum seminar and Fossil Energy, the introductory course under the Fossil Energy Track of the newly developed Energy Minor. Additionally, Dr. Graves has me working on a variety of internal projects within the Department.

Last Spring Dr. Mark Miller, our colleagues from the Geology and Geophysics Departments and I taught the revised PEGN439 Multidisciplinary Engineering capstone course with a focus on unconventional reservoirs. We were pleased that CSM alum, Bruce Smith, joined us as an adjunct professor, contributing greatly from his wide industry experience. Additionally, I taught Environmental Law for both the Petroleum Engineering Department and the Environmental Science & Engineering Department. Once again I coordinated the PEGN 315 Field Session and led a group of 52 students to Southern California and Bakersfield in May. The rest of my summer was leisurely spent with plenty of hiking, camping and enjoying the Vail International Dance Festival.

I remain active in the Society of Petroleum Engineers International (SPE) and continue to serve as the Faculty Advisor to the CSM Student Chapter of SPE and as a Board Member of the Denver Section. At ATCE 2010 in Florence, Italy, I presented a paper on the newly revised Energy Minor and served as a chair for the Health Safety and Environment (HSE) Session. This year, I will present a paper on the newly revised Multidisciplinary Engineering capstone course and again, serve as a chair for the HSE Session.

Our SPE Student Chapter had another great year. We received over $25,000 in undergraduate and graduate scholarships from SPE International Inc. and the SPE Denver Section. With funding from various industry partners, SPE Denver Section and student organized fundraisers, 16 students attended ATCE 2010 in Florence. This was an exceptional educational opportunity for the students to experience the industry and professionalism in another country.

The annual Joint Session Meeting in April with the Denver Section was a tremendous success. Our own Dr. Jennifer Miskimins presented on hydraulic facturing. We were pleased by the SPE Denver Section attendance and grateful for their financial contribution. Additionally last spring, the CSM Student Chapter organized a Clay Shoot that was an overwhelming success. By the time this newsletter goes to print, the students will have hosted another Golf Tournament with wide participation from industry partners. We are proud of our Student Officers for their tremendous leadership, professionalism and organizational skills.

I continue to work closely with the Association of International Petroleum Negotiators (AIPN) of which I am a member and for which I serve on the Education Committee. One of my favorite duties is to judge the annual Writing Competition that is open to all universities that have an affiliation with AIPN. Additionally, it is my pleasure to select one student from our Department to attend the annual conference all expenses paid by AIPN. This unique opportunity allows the student to network with engineers, negotiators, attorneys, and management and to learn the most current issues in the upstream segment of the oil and gas industry.

Outside of CSM, I maintain my legal consulting practice in the area of international oil and gas law. It is a pleasure to work with my colleagues Philippe Auzas, Laure Bona, and Audrey Grosset at Grand Auzas & Associés of Paris, France and to occasionally have them co-teach with me a short course on international hydrocarbon agreements. Last March, my colleagues and I were invited to teach at the Université Paul Cézanne (Aix-Marseille III) Institute of Business Law, Master of Energy Law & Governance Program, in Aix-en-Provence, France. This was a wonderful, collaborative experience and we look forward to returning to Aix-en-Provence to teach again next spring.
On a personal note, I continue to take ballet classes and pointe classes weekly. Swimming, hiking, and soon cross-country skiing fill in the gaps in my fitness schedule. My PhD program in the Civil & Environmental Engineering Department at CSM is underway, under the direction of Dr. John Spear. I am beginning my research this semester.

“Rosebud,” my brilliant Boston Terrier, will be three years old in December. She continues her education a few days a week at Animal Lodge, the doggie daycare of Alameda East Veterinary Clinic, where she has made many new friends. She is litter-box or more accurately, newspaper-box trained and prefers The New York Times to The Denver Post. She is a joy to be around and never fails to make me smile. A socialite, she loves people and other dogs. She asked me to call on all CSM PE alums with furry friends to send a photo and bio of their furry friend to her email address: Rosebud122008@gmail.com. She’ll see what she can do about getting some “alum” four-legged photos in next year’s PE Department newsletter!

Thanks for your continuing support of the Petroleum Engineering Department and Mines! We look forward to seeing many of you at ATCE 2011 in Denver and of course, we always enjoy seeing you on campus for alumni events and recruiting!

Last year at this time, I was looking at the largest number of students in my drilling class ever. I was wrong; it is this year’s class that is the largest! We are living in a huge ramp up and given the economy and all of the news articles on Petroleum Engineering coming out on how great it is to be a PE. I believe this is the new normal.

My trips to Tripoli, Libya, where I was to teach four short courses this year were canceled. Actually, the email that “suspended” the course work was one of the most prescient, as well as sad, documents I have read in a very long time. Clearly, many in Libya knew the revolution was coming.

We ask a lot of you for our students. We have tours, meetings, gifts, service, and donations because of your generosity. I want to acknowledge those of you working with the 311/361 classes. The Mining Department up at the Edgar Mine really comes through for us with tours and with a new experiment we are trying this year. We have taken that small rig I had of the NASA JPL experiments, moved it up to the Mine, and are planning on letting the students poke holes in the mountain to get firsthand experience in drilling. My plan is to take the rig, instrument it, mechanize it, teleoperate it, and finally, to automate it. This is a multiyear project and anything you would like to contribute is appreciated.

I also want to commend David Hobbs, Tim Anderson, and their team at Noble Energy and Tommy Thompson, Randy Sprouse, John Strahan, and their team at Anadarko for graciously donating their time and efforts for giving the PEGN 311 class three rig tours each last fall! I also want to thank Dennis Heagney for coming on campus last December to give a “state-of-the-art” talk, as he has done every year, on the “Introduction to Offshore Drilling”. Only this year,
Greetings from Golden.

This year BP again supported my position as an adjunct, and I thank them for their support. This last year I taught an interdisciplinary graduate class focused on shale reservoirs with Dr. Tom Davis from Geophysics and Dr. John Curtis from Geology. There was tremendous interest from the students, and industry was very helpful for providing specialized speakers and case histories about this quick changing topic. I also taught graduate classes in Drilling and Workover Operations, which were taught in the evening to encourage industry participants to attend.

In other news, I have been named the Undergraduate Coordinator for the upcoming ABET accreditation cycle in 2012. For us to have a successful outcome (six more years of accreditation), we will need to document outcomes. We have been doing a good job here on campus. However, it is the alumni that ultimately show our success. We need to survey our alumni with certain questions to highlight how well (or not) we prepare you for your careers. You can find the online survey at: https://www.surveymonkey.com/s/H9X3RQC. Thank you in advance for your responses. We will need this completed by December 31st.

I do have a great job. This is a fun place to work. Our faculty and staff team work well together. The students are the best and the alumni are wonderful. My health is improving with every year. I have a fantastic wife and two wonderful children. We lost our beloved Golden Retriever last year to leukemia; but, we now have a six month old German Shepherd that can “woof” in three languages: German, English, and Dog. I will continue to be visited by you and visiting you, maybe on field session or a conference or wherever our paths may cross. Until then, stay safe. See you in Denver at the ATCE!
“matches” the greatest good for the greatest number, and you are contractually obligated to go where you matched.

So when the dust settled on my normal interview process and I was offered the faculty position last February, we still had to wait another month to see if Holly “matched” a program in Denver. She did, and now she is working at St. Anthony North – her first choice. Often it is difficult to make dual careers succeed, but fortunately for us, it is working out well.

Now that I am here, let me give you my quick background. I grew up on a cattle ranch in Idaho and went to college in Montana. Although I had never seen an oil well before or even knew much about the industry, I kind of fell into petroleum engineering – and loved it. After my BS, I worked in Houston for Anadarko. The job was great, but Houston and I didn’t fit. By then, I had started to consider being a professor, so we decided to head to California where I did petroleum engineering graduate work at Stanford. I received my MS in 2002 and my PhD in 2005, and I went back to Montana Tech to teach. After three years, we moved to Seattle where Holly went to med school, and I worked as a consultant – first independently, then for the last year and a half with Golder Associates. Consulting was convenient while Holly was going to school, but I was really looking forward to getting back to the academic world.

I am teaching an EOR graduate level class this fall and Petroleum Geostatistics next spring (and I might try to help out Senior Design – by far my favorite class to teach when I was at M. Tech). I am doing some research on representing complex hydraulic fractures and improving reservoir modeling and history matching, but currently the main focus of my research is on gas injection into shale oil reservoirs such as the Bakken and Niobrara. Primary
recovery is expected to be low in these types of reservoirs, so it makes sense to start planning for enhanced recovery now. I have been doing some sector modeling of the Elm Coulee field, and expect to expand on that with some fluid and core experiments.

Holly and I have three kids: 2 girls, Dove (13) and Reagan (11) and a boy, Carter (5). The girls were not as excited as us to move to Colorado, but they are starting to see the benefits of living here, including the sun, which we missed while in Seattle. There is no doubt that I am thrilled to be teaching and researching here at CSM’s PE department, and I look forward to meeting you, the alumni and supporters of CSM, over the coming years as you come back to campus and as I travel to industry.

It has been a beautiful summer in the Denver metropolitan area because the July rain has provided a lot of needed moisture to the vegetation. As a consequence the rolling hills in the countryside are beautiful. It turns out that I love all of the Rockies—especially Montana, where my eldest son lives. My wife Bonnie and I visited our family and spent a week at his cabin in Seeley Lake, an hour from Missoula. She and I did a little kayaking on Holland Lake (Picture 1), a freshwater lake against snowcapped mountains.

I have tried faithfully to jog every morning for about 40 minutes. It turns out that, both in Castle Rock and in Montana, I worry about black bears (Picture 2) and mountain lions when I jog on the forested back roads. My granddaughters had bought me a six-foot long walking stick to take it along when I jog. It was too clumsy, so I gave it up and took the risk of being outdoors! The black bear in the picture showed up at the cabin two days in a row, but I never saw a mountain lion that my son had seen crossing a creek which runs in his cabin’s backyard. Anyway, I love the West, but not its hazards!

Another general area I love is the oil-rich Arabian Gulf countries in winter and early spring. I was fortunate to go to Abu Dhabi for a week in early March 2011 to participate in technical discussions and a course on Carbonate Reservoirs, organized by colleague Dr. Rick Sarg. Besides Rick, Dr. Graves, Dr. Prasad, Dr. Batzle, Dr. Revil, and several graduate students were also participants. This was a great trip to reaffirm our commitment to collaboration with the Abu Dhabi Petroleum Institute (PI) faculty and graduate students.

Every time I sit at my PC to write for the new school year’s newsletter, I discover that there is never a dull moment to talk about. Last year I worried about the events surrounding BP’s Macondo runaway well. This year I am anxiously watching the events around our country’s runaway federal expenditure, borrowing, economy and the global events!

The best summer fun events for me were watching the NBA championship series in early June (Mavericks and the incredible Dirk), and the games of the Women’s Soccer World Cup in Germany in June and July. I only wish U.S. team had won the championship game. The U.S. team was ahead the entire game through the 117th minute but Japan tied the game with 3 minutes left. Eventually U.S. lost in the tie-breaker penalty shots. I will miss these games until the next men’s World cup in three years and the women’s in four. On the other hand, the summer Olympic games are not too far away, and the Men’s Under-20 World Cup soccer games were held
KAZEMI CONT.

in August, which I am currently enjoying. Finally, the NFL games are beginning to shape up to satisfy my interest in sports through January 2012. I think the NBA season will be doubtful for this year which will make college basketball the place to focus!

My summer was really a working summer. Seven of my PhD students stayed at CSM to work on their theses. Hopefully, we will be able to graduate four or five of these students by year-end 2011. Another student conducted her research in Houston while flying back and forth to CSM to review her work.

Adding to this were students’ technical papers, theses and other documents. Obviously, it is the age of the internet and we must work 24/7! Last summer I wrote that according to Tony Komaroff of Business Week, Harvard doctors’ secrets for healthy living was to “ditch the iPhones.” How true, but this has not worked out for me so far and I continue to add to my iDevices!

As for the upcoming fall semester, I am very excited about the prospect of making significant progress in our research programs on low-permeability shale and sand formations, matrix-flow dominated reservoirs with discontinuous fractures, and especially our experimental work. In fall 2011, I will teach Reservoir Simulation with an emphasis on Discontinuous Galerkin finite-element method. This course, as usual, will be both a fluid flow and a numerical simulation course. In spring 2012, I will teach Flow in Naturally Fractured Reservoirs and Numerical Simulation.

I wish everyone the best in health and a productive academic year.

MARK G. MILLER

Another year brings many students to our department - an ongoing headline. CSM has done very well in various ratings and surveys, bringing lots of students to campus and our department in particular. Last fall brought approximately 110 students into the junior classes. This fall’s junior enrollment is over 150. In addition to teaching the juniors programming this semester and production next, I teach a section of graduate production, and am also responsible for our department’s computer labs, computers, printers and servers. It was very satisfying last spring to receive teaching awards from the students. The seniors voted me “Outstanding Petroleum Engineering Faculty”. The Order of Omega also awarded me the “Teacher of the Year” for the petroleum faculty.

In addition to school year duties, I was able to help with the second field session and our SuperSchool. Leading field session was a lot of fun, but I am glad Jennifer is back. More about it is in the 316 field session section. Bill Eustes coordinated most of this year’s SuperSchool field trip. However, I would like to thank Ramsey King of Anadarko for helping organize the production facilities part of the day.

Finally, I was saddened to learn of Bill Mitchell’s passing. Bill always had an interesting story to tell. Whether talking about the forces on spaghetti, chasing monkeys through the Venezuelan rain forest (with a helicopter), or how to make yourself into a millionaire, he enjoyed helping students learn. I will miss Bill’s charismatic handling of classroom duties, seven a.m. lectures, and extra-curricular adventures.

The Black Bear with a White Spot on its Chest in the Cabin Backyard, MT, July 2011
Greetings to all of you! I am very excited to be writing this article, and to be a part of this department. First let me introduce myself. I am a Mines alumnus from the Engineering Department and a Professional Engineer. After many years of constructing petrochemical plants, working in hydraulics and hydrology, consulting and raising babies, I finally decided to pursue my love of engineering and of teaching. I earned my M.S. in Environmental Engineering from the University of Colorado. I am now finishing my PhD, also at CU. My research is focused on how to make effective engineering decisions and long range plans, while considering uncertain future conditions, and accounting for technological, social, political, legal, and energy related issues.

I am serving my third year as an adjunct professor for the PE department and am having a blast. I have spent the last two years trying to fill the very big shoes of Karl Nelson teaching Fluid Mechanics to the department sophomores. I continue to try to make this class a challenging and interesting introduction to fluids and petroleum engineering.

This summer, I was lucky enough to get to take a PEGN 315 group to Texas and Louisiana. The highlight of the trip was the many “Nerdy Moments” that the students in my van and I enjoyed. We marveled over driving past wellheads and knowing for the first time what we were seeing. We marveled over beautiful bridges and the Superdome. And we were astonished as we drove over 8 miles across the spillway in Louisiana that was relieving the great Mississippi River floods of the summer. Imagine… miles and miles of water that was all at least 10 feet deep!

This year I will teach Fluid Mechanics again, as well as, the PE Senior Seminar class. It will be fun to discuss all the aspects of engineering that they don’t always consider to be important aspects of the profession. These include professionalism, technical writing, making presentations, and considering issues such as ethics and diversity. I am honored to get the opportunity to work even more with the students and more with the Petroleum Department.

Hello to you all! I hope you are having a good 2011 so far. I’m writing this article while sitting in an airport. This is not surprising since I feel like I have been in airports and hotels more during the last twelve months than I think I’ve been in my own house. You might recall from last year’s newsletter that I was planning on taking a sabbatical this past academic year, and that’s exactly what I did. What a wild, enjoyable, busy, intense, and wonderful experience!! The majority of it was spent touring as a Distinguished Lecturer for SPE, giving a presentation entitled “Unconventional Frac Jobs for Unconventional Reservoirs- What Should You Be Concerned About?” I provided over 30 lectures at locations in the United States and around the world, during which I had the opportunity to meet a number of new and interesting people. I appreciate all of the alumni that came to the various section meetings and said hello – it was great to see you and have your support. I won’t mention where my favorite visits were – that could get me into trouble – but I can say I enjoyed the overall experience tremendously!

In addition to the lecture series, I also had the opportunity to spend some time teaching classes at the Delft University of Technology (TU Delft) in the Netherlands over a period of several weeks last spring. I thoroughly enjoyed getting to meet and work with new colleagues at the university and see how they approach their teaching and research needs. I also loved the opportunity to experience living in the Dutch
MISKIMINS CONT.

Culture, and enjoyed everything from the Saturday markets to riding a bike everywhere. I have adopted the belief that riding a bike in Amsterdam can be used as an analogy of how to live your life – sometimes you just have to plunge in and hope you survive!!

When I look back over the past year, I wonder how it flew by so quickly. A sabbatical is intended to be a time to recharge and take advantage of opportunities to enhance your research and teaching. I believe I accomplished those goals, however, I feel as though I was every bit as busy as ever, just in a much different way. I really look forward to getting back to CSM and applying the new tools and information I’ve gained to my classroom and research. I missed my students and look forward to getting back into a routine with them, and I’m sure they’ll appreciate having a real live advisor instead of emails and the occasional blur of me running into my office (well, that part might not change...)

As you probably know, the SPE Annual Technical Conference and Exhibition are back again in Denver this year. I’ll be there and hope to see several of you at the reception and around the floor. And, if you come out to campus, be sure to swing by the department and say “hello”!

The background in my picture this year probably looks familiar to some of our Kazakhstan student and alums. It was taken in Almaty during my lecture tour visit to that wonderful city. A tad bit chilly that day but still was a wonderful chance to see some new sites. This was taken in front of the Voznesensky Cathedral.

ERDAL OZKAN

I usually miss the deadline to submit my newsletter article because this time of the year, my schedule is always hectic. This is not to say that I am busier than the other faculty; but early fall, when I reach the point to cross out some items from my to do list, I figure out that the alumni would be the most forgiving. This year is not much different, but I am determined to include my greetings in the newsletter.

Last year, it was back to school year for me after my full-year sabbatical. Overall, it was just a regular year. It is customary to say that I felt refreshed after my sabbatical leave, but, apparently, I was not too worn out (I hope it is not because I had nothing left to be refreshed). The new graduate course on Shale-Gas Reservoir Engineering we taught with Dr. Tutuncu was a new addition to my class portfolio in the spring. It gave me the opportunity to organize the material and experience I had accumulated over the past six to seven years working on unconventional shale-gas and oil projects. Throughout the summer, I kept working on my class material to improve it further.

In May, we were on the road with a group of 46 students, faculty, TA’s. With Dr. Yin and Ms. McClelland’s help, we brought everybody back home unharmed. I was not too concerned about the dangers of the oilfield because we provide serious safety training for the students and take all the necessary precautions during the field session; I thought we were putting ourselves on harm’s way by taking the students to Bourbon Street in New Orleans. But it would be too cruel to bring them back from the swamps of Louisiana without having their moment at Bourbon Street – and they had their moment. Considering the potential outcomes, I was reasonably happy and proud with our students; so I will not disclose my records of the night (but I will keep the records until they take my PEGN 414 Well Testing class in their senior year). You will find some (edited) pictures of the PEGN 315 Field Session in this newsletter.

In June, after attending our son’s graduation from the University of Chicago, I went to Abu Dhabi to teach a three-week graduate course on Horizontal Wells at the Petroleum Institute.
OZKAN CONT.

Institute. I enjoyed the enthusiasm of the students and appreciated very much the hospitality of the PI. Looking forward to future opportunities, I left Abu Dhabi for Indonesia. I taught a one-week short-course on Tight Gas and Shale Gas Reservoir Engineering in Bandung to professionals from a variety of background and companies. It turned out to be a very interactive class which will help my Shale-Gas Reservoir Engineering class at CSM next spring.

In the rest of the summer, I was in Turkey spending time with the family, working on a couple of projects, and trying to finish a paper before the extension deadline. I returned home just the day before school started and I was still working on the paper. This is the second week of the school; the paper is finished but not much hope for the rest of my to do list. At least, I will have my newsletter article done. I hope to see you in Denver at the SPEATCE.

MANIKA PRASAD

“The Ones Who Work”

In every group, there are some people who do all the work and there are others who understand enough to stay out of the way and cause as little damage as possible. Obviously, I belong to the second category; my students belong to the first. This year, we feature them in their own words:

Patricia Castillo - MS
Patricia A. Castillo is an MSc. Petroleum Engineering student at CSM, where she also serves as a Research and Teaching Assistant. She received her BS in Petroleum Engineering from Universidad Central de Venezuela in 2007. During her Bachelor program she developed a software named DryGasMB using C++ language, for calculating the material balance in dry gas reservoirs. This work received the Maximum Score and Honors from UCV and was presented in the SPE Venezuelan Student Chapter.

Her research aims to achieve a better understanding of the behavior of relative permeability curves and capillary pressure in low-permeability sandstones and attempts to find an empiric relationship with additional information obtained from logs. Additionally, since pore structure exerts a determinant control on the gas flow in low permeability formations, imaging analysis and modeling is used to gain a better understand the pore geometry. Established relationships would be useful in predicting behavior of prospective intervals and would provide an important criterion to decide the optimum completion placement.

Saul Rivera - MS
Greetings,
My name is Saul Rivera and I am originally from Mexico. I obtained my BS in Petroleum Engineering just this past May and now am “back for some more action. I am very delighted to be joining the graduate studies in this very prestigious petroleum department. I plan to do my research in the Monterey Shale Oil, which many speculate to be the “next wave of U.S. exploration and production”, larger in resources than the Bakken and Eagle Ford as reported by the EIA. I am very excited to start on this new topic of studies.
On a more personal note this summer I have enjoyed the beautiful scenery that the 14ers in Colorado have to offer. I have visited eight of the 54, and I hope to one day complete all of them. I hope everyone had a wonderful year and I look forward to the start of this new academic year.

Utpalenu Kuila - PhD
I’m currently a Ph.D. graduate student. I have a MS in Applied Geology from the Indian Institute of Technology Bombay, Mumbai. At CSM, my research is focused on the changes in the physical properties characterization of shale gas and clays in general. I have worked as a Visiting Scholar in CSIRO Perth, Australia, on mechanical and elastic properties of deforming shales. I have also had internships with the National Institute of Oceanography, Goa, India, ConocoPhillips, Schlumberger, and Chevron ETC. I’m interested in working on rock physics and shale gas core analysis in general.

Milad Saidian - PhD
Milad is a new PhD student in our group. He has an M.Sc. degree from the Sharif University of Technology (SUT), Iran and a B.Sc. degree from the Petroleum University of Technology (PUT), Iran, both in Petroleum Engineering. While he decides his PhD topic, Milad is working on experimental investigation of asphaltene precipitation on elastic properties of rock; extracting and characterizing asphaltene particles using SARA, MBMS; measuring rock bulk properties for damaged and undamaged core samples; making 3D images of core samples with Micro-CT and Scanning Acoustic Microscope; and measuring the extent of permeability damage using core flooding setup.

Ravi Sharma - PhD
I have completed seven semesters of my PhD program in this department. Coming from a geophysics background it was not an easy journey to undertake. The necessary drive for me to take this challenge came from the very fact that this engineering domain holds immense possibilities of integration with active seismic exploration by means of iterative Petro-Elastic Modeling (PEM). To obtain the industry perspective on this integration, I underwent three internships with leading E&P companies and carried out work that in part supports the idea of PEM to be developed as an exploration tool in the near future.

In addition to my internships, I carried out an experimental and modeling work to determine the impact of fabric heterogeneity on flow and elastic properties in carbonate rocks. I presented this work in recognized international forums and also wrote my Masters thesis. At the end of 7th semester, I am done with all the formalities for the doctorate candidacy except for finishing my dissertation (All-But-Dissertation, ABD).

On the personal front, I have a wife and a daughter and they both are very accommodating. My efforts are concentrated on passing out of the school before my daughter plans to start on it. I am thankful for being a part of this research group where we are adequately challenged.

Saeed Zargari - PhD
Saeed is a new PhD student in our group. He has an M.Sc. degree in Petroleum and Natural Gas Engineering from West Virginia University; an M.Sc. degree in Chemical Engineering from the Sharir University of Technology (SUT), Iran and a B.Sc. degree in Petroleum Engineering from the Petroleum University of Technology (PUT) in Ahwaz, Iran. Saeed is working on reservoir characterization of the Bakken shale for his PhD. His current research involves elastic property measurements of the various components of shale formations using atomic force microscopy and other nanoscale techniques and then combining them to make a macroscale model of the physical and seismic property changes with maturation.

Potential - MS / PhD
With new students, Kannappan Swaminathan (MS), Debo Gao (PhD), and Saleh Goodarzian (PhD), we are in the process of checking each other out!

Have a wonderful year!
What a fantastic year it was. While it went by so quickly, I had ample opportunities to meet many of the distinguished Mines Alumni and bond with the faculty, staff and students. Early in the academic year, one exciting event was the ground breaking ceremony for our new Petroleum Engineering building, “Marquez Hall”. The growing industry need for high quality fundamental geomechanics, R&D particularly in unconventional resources magically overlapped my research interests and a new geomechanics laboratory with state-of-the-art unique measurement capabilities to our superb experimental facilities has been added to Marquez Hall. We have been building a custom designed load frame, sample cells, acoustic transducers, syringe pumps and other essential high tech devices in Alderson Hall until moving to our new home to enjoy the coupled multi-scale geomechanics, acoustic, transport property measurement and modeling capabilities. We are excited to have this unique research and teaching tool added to our department’s experimental systems to attract high quality graduate students and postgraduate staff to Mines in a time that geomechanics has an unusually significant role in difficult reservoir exploration, drilling, production, stimulation and abandonment. We have also added a new gas adsorption experimental setup next to the geomechanics assembly complementing our coupled measurements and modeling effort. We look forward to continuing the enhancement and coupling of the geomechanics into all our projects to meet the vast demand by the industry on the core/micro and nano scale fundamental understanding of reservoir characterization and contributing many novel ways of recovery enhancement from challenging reservoirs while keeping the field integrity in great shape.

One of the first priorities next to teaching this year was to organize an UNGI (Unconventional Natural Gas and Oil Institute) Workshop on the technical, economic and environmental challenges around the unconventional resources to introduce our new institute to the industry and to our alumni. The workshop attracted quite a distinguished attendee list from the industry, government and academia. The distinguished speakers highlighted many technical, economic and environmental challenges helping us to identify a list of challenges from which the top priority ones were used as the basis for our research proposals to the industry. We held a follow up Research Forum at BP Helios Learning Center in Houston to introduce several of our proposals to the industry to pursue setting an UNGI Consortium. After several more trips between Houston, Denver and Golden, UNGI CIMMM (Coupled Integrated Multiscale Measurements and Modeling) Consortium is about to be initiated. We are very excited about the collaboration opportunities with the industry and government while unifying our effort in Mines. If you haven’t seen the proposal package we put together, please drop me an e-mail atutuncu@mines.edu. I hope to see you and your companies among our sponsors at the consortium this year. I would like to thank the entire faculty, staff and all the colleagues who participated in the Workshops and Forums we have organized throughout last academic year for their contributions in preparation of our UNGI CIMMM Consortium proposal package.

We have added three new courses, “Unconventional Geomechanics”, “Reservoir Geomechanics” and “Shale Reservoir Engineering” to our graduate class portfolio. The interest in geomechanics classes and research opportunities are at such a peak level that our students have even set-up the first Student Chapter of the American Rock Mechanics Association (ARMA) at Mines with 70 new members. Two of our students helped the organizing committee at the annual US Rock Mechanics/Geomechanics Symposium held in San Francisco We had a great presence at the conference, having an exhibit space and presentations from several of our students and faculty. We also had an ARMA/UNGI workshop preceding the Symposium that brought many distinguished speakers and attendees. Tom Bratton of Schlumberger and Dan Moos of Baker Hughes were...
our inaugural distinguished speakers for the CSM ARMA student chapter events, and I would like to thank both of them for their support on the campus as well as other UNGI activities.

In my opinion, the PEGN 315 summer field classes offered for the undergraduate students, not only add a unique learning experience from technical implementation perspective, but also provides the opportunity for nurturing camaraderie as they spend two weeks side by side with their fellow classmates creating bonding that will last the rest of their careers. I joined the East Coast team, first ever trip organized in department’s history to the East this year. You might see the direct connection between the boom in Marcellus shale gas operations and our decision to organize a trip there. Everywhere we went industry welcomed us and made this a wonderful experience for us. We enjoyed spending a hot Sunday afternoon at the Drake well where Colonel Edwin Drake struck oil along the banks of Oil Creek in August 1859 and making history by initiating the industry we are all in with his world’s first commercial oil well. It is captivating to walk on the same grounds as Colonel Drake and see the 152 year old structure standing there and still producing. To those who helped us organizing this trip and spend time with us, we are so grateful and appreciate your collaboration and contributions to make our visits a success. Among many of the Alumni I had met this year, one had a very special place on my career. I am so fortunate to have met, Harry D. Campbell. Harry graduated from our department in 1942 and ever since contributed greatly to enriching Mines’ worldwide reputation as a top engineering university with outstanding teaching and research capabilities. His support enabled the department to establish an endowed faculty Chair position that was named after him. It is a profound honor for me to be the first faculty member to hold this distinguished position at Mines. I feel very fortunate having the opportunity to meet Harry in person on several occasions before he departed us this year. In spite of the short time I knew, Harry; I enjoyed learning of his adventures and why he had such a successful career, with his sharp mind and wonderful vision. I will always cherish my time spent with him and his family.

The friendship and support I have from the entire faculty and staff has been remarkable and I am so fortunate to be here. Hope to see most of you during this year in many happy occasions…

As you know, so much of our activities include international components, such as students, teaching, training, research, joint projects, partnerships with IOCs and NOCs, and others. And, many of our international associates are from the Middle East and North Africa, the MENA region. With the “Arab Springs” starting this new year of 2011 and continuing at this time, many of my daily efforts address these historically significant events and transitions currently underway. My best wishes for success go out to these peoples and their countries, and it is my privilege to help out as much as I can.

Coincidentally starting this past January 2011, my “official” role here at CSM went to 50% as part of the State of Colorado and CSM’s Transitional Retirement Program, so I am proceeding at that “level”, with plans to do so for many more years. Consequently, this past Spring semester I taught one course, Introduction to PE for freshpeople, PE 102 with 127 students. This coming Fall 2011 I expect to teach the senior PE 423 Reservoir Engineering course with 125 students, with great pleasure. Each semester I plan to teach 1 or 2 courses, including frosh and seniors and graduate students.

The rest of my “50%” is composed of serving on grad student research committees, service to CSM and for CSM, and “Outreach” activities both on and off campus. In fact,
VAN KIRK CONT.

most of this “other 50%” is the Outreach which focuses on international activities in response to numerous invitations to assist countries in establishing PE Programs similar to our own CSM PE Program, either in creating new universities from scratch or enhancing already existing PE Programs at established universities. Examples from the past include the Abu Dhabi Petroleum Institute (the PI), universities in Saudi Arabia and Kuwait, and the new Basra Petroleum College (BPC) in Iraq, just to name a few. Other countries and continents are on my currently active list of ongoing projects, at different stages of completion. In fact, rarely are any of these projects ever “finished”, these partnerships tend to continue for many years (a natural and healthy fact).

The current “Arab Spring” events ongoing within and throughout the MENA region have created a wide variety of outcomes for our joint partnerships; some of the projects have been put “on hold” or in a “time out” mode, while others are proceeding at the same pace as before. These transitional times occupy much of my own attention and efforts, and just imagine the level of “attention” being paid by the peoples (many of our friends and associates) of these countries.

During the past few months several of my long-planned trips to the region were postponed; meetings in Libya, Bahrain, and Jordan, plus a meeting in London which was to focus on Iraq. I expect to travel soon to meetings in Bahrain in September, Istanbul in October, Iraq in December; and perhaps Abu Dhabi in the fall also. Probably I will not make all of these dates based upon my past experiences and practices.

One specific example of these kinds of international “outreach” activities is demonstrated by the Bahrain connection: More than a year ago I was asked to be an “Invited Speaker” at the SPE Middle East Oil and Gas Show and Conference (MEOS) scheduled for March 2011. That meeting date has been rescheduled for late September, and I plan to be there to host a half-day session and make a “keynote presentation” of my paper titled “Collaboration Models for University and Petroleum Industry Partners with Focus on MENA”. This Session is titled “People Development” with focus on issues regarding human resources, human capital, talent management, diversity in the workforce, university partnerships in collaboration with other significant stakeholders, and education and training.

Opportunities for new partnerships with our CSM PE Program have never been more numerous or important than they are today, not only throughout the MENA region, but also in many other countries globally. It is my pleasure to continue to be engaged with numerous parties concerned with these matters, as I have been for more than 35 years, after my first trip to Iraq in 1975. A good example of this is when myself and CSM’s Outreach partner Gary Baughman recently visited in China with one of many very successful “trainees” (from 10 years ago at CSM), Mr. Baocai Fang who is currently VP of Daqing Oil Field Exploration and Development Institute. Also, Fang’s daughter recently received here MS degree from CSM.

In closing, I continue to very much enjoy teaching young people at CSM, hosting visitors from both near and far, and engaging with decision makers and leaders of the global petroleum industry, especially addressing partnerships among international universities, IOCs, NOCs, and Ministries. If you would like more information or assistance, don’t hesitate to contact me at your convenience.

Please do keep in touch; it is very satisfying to hear from you and to visit with you.

My best to you and yours, as always, yours truly,

Craig Van Kirk
My third year as a PE faculty member at CSM turned out to be a very good year for me. While maintaining high-level activities academically, I enjoyed more and more teaching and life, in general, of Colorado. The highlights of the past year for me must have been when I saw so many happy faces of our graduating seniors in December and May as well as I had my first Ph.D student graduated at CSM.

In the past year, I devoted most of my efforts and time to the research in the two areas: (1) develop new funded research projects/programs and (2) carry out state-of-the-art of research in reservoir simulation and in energy resources in general. Our new PE research team, the Energy Modeling Group (EMG), established the year before, has grown significantly in its research activities, volume, and outcomes. EMG now consists of 7 team members of graduate students, faculty members, post-doctoral fellows, and visiting scholars. The mission of the EMG is to develop and promote reservoir modeling technology and simulation tools in research, teaching, and application in the fields of subsurface energy and natural resources, and environmental science and engineering.

One milestone accomplished by EMG in the past year was completion of the development of a CO2-EOR reservoir simulator, sponsored by PetroChina after a two-year effort. In addition, significant progresses have been made on our two major DOE-funded, multi-year research projects on CO2 sequestration and geothermal engineering in the efforts to couple rock mechanics with multiphase fluid flow and heat transfer in reservoirs.

Also, I am very happy to report to you that there is a sudden jump in my scientific productivity, since I joined CSM in 2008. In the past academic year alone, for example, I authored and co-authored 20+ publications with 10 peer-reviewed journal papers published.

In the coming year, I would expect more interactions between EMG, PE faculty, students, and our alumni to enhance our EMG modeling capabilities in energy related fields of the PE department, such as conventional and unconventional petroleum reservoir simulation, geothermal systems, and CO2 sequestration. Ultimately, we will develop a CSM reservoir simulation system for our teaching and research.

It is amazing how fast another year has passed! What are the marks that I left in the year of 2010-2011? On my job, both teaching and research activities are going reasonably well. I enjoyed my time spent in PEGN 310 Reservoir Fluid Properties, PEGN 511 Advanced Fluid Properties and Phase Behavior, and PEGN 315 Field Session trip to Houston this May 2011 with Dr. Ozkan. This 2011 fall semester, I am co-teaching PEGN 310 with Dr. Hoffman, and PEGN 414 Well Testing with Dr. Ozkan and Dr. Wu. On the research side, thanks for the hard working students, the projects have been progressing steadily, and some new exciting topics and projects are emerging in cryogenic fracturing, porous media flow, and suspensions. Some of my graduate students’ work will be presented at the 2011 SPE ATCE and the 2011 Canadian Unconventional Resource Conference as well as American Physical Society Meetings. A manuscript on synthetic porous media experimental model will be
Although the sky was overcast and the wind was blowing, spirits could not have been higher this past Friday for the groundbreaking of the newest addition on the campus, Marquez Hall. Festivities started off with a performance by the CSM marching band and chorus, followed by a pleasant acknowledgement to the many people who helped make this building a reality by President Scoggins. “As you may know, 1980 alumnus Tim Marquez and his wife, Bernie, laid the groundwork for this new facility with a generous challenge grant of $10 million in 2005. Since then, more than 150 individuals and corporations stepped up to that challenge, contributing nearly $27 million and helping Mines fulfill its vision for a new home for petroleum engineering at the school. Thanks to donor support, Marquez Hall is the first academic building on campus completely funded with private resources.” President Scoggins then thanked the students for their support in helping fund the addition to the building through a portion of their student fees, “Because of [the student’s] own investment, we were able to add approximately 25,000 square feet of much-needed classroom space through a separate wing addition that will be built on the southeast side of the Marquez Hall building.”

Ramona Graves, department head for petroleum engineering, was next to speak on the advantages of the new, state of the art facility will bring to students of the school. “The building will be truly state-of-the-art, and will further our position as a global leader with a unique breadth of industry expertise.” With hopeful optimism for the future of the department, Ramona Graves continued on about the new features of the building, including “smart classrooms enabling interactive audio-visual technologies, 3-D and 4-D visualization labs, adaptable space for classroom instruction and interdisciplinary research, and one of the most sophisticated drilling simulators in the country.”

Other speakers at the event included Tim Marquez, who was proud to dedicate the building to his family and the future of petroleum engineers at Mines’ Mike LeBaron, a senior in petroleum engineering who expressed many thanks to the long list of donors who have empowered the petroleum program; and Harold Korell, recently retired CEO of Southwestern Energy Company and graduate of Mines. Each of these speakers focused on the future that this building will bring to the school with the hopeful intent that it will help the school gain even more recognition in the area of petroleum engineering.

Among the crowd for the event were members of the school’s Board of Trustees along with famed architect Peter Bohlin, designer of such buildings as the New York City Apple Store and Pixar Studios headquarters in California, and now Marquez Hall here at Mines. To end the reception and start the groundbreaking, President Scoggins displayed his appreciation for all those in attendance, “You are all a part of the community that keeps this institution moving forward.”

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**Major Gift Donors to Marquez Hall**

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<tr>
<th>Name</th>
<th>Amount</th>
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<tbody>
<tr>
<td>Timothy M. ‘80 and Bernadette Marquez</td>
<td>$10,000,000</td>
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<tr>
<td>Encana Oil &amp; Gas (USA) Inc.</td>
<td>$2,000,000</td>
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<td>Margaret Jalili (Mahir Jalili estate)</td>
<td>$1,387,051</td>
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<tr>
<td>Southwestern Energy Company</td>
<td>$1,250,000</td>
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<tr>
<td>Harold M. ‘68 and Patricia M. Korell</td>
<td>$1,250,000</td>
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<td>Chevron</td>
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<td>ConocoPhillips</td>
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<td>Hess Corporation</td>
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<td>Marathon Oil Corporation</td>
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<tr>
<td>Schlumberger</td>
<td>$1,000,000</td>
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<tr>
<td>Harry D. Campbell ‘42 (Deceased)</td>
<td>$700,000</td>
</tr>
<tr>
<td>John G. Underwood ‘53 (Deceased)</td>
<td>$652,940</td>
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<td>Anadarko Petroleum Corporation</td>
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<td>BHP Billiton Petroleum</td>
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<td>Devon Energy Corporation</td>
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<td>Noble Energy, Inc.</td>
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<tr>
<td>Questar Corporation/QEP Resources, Inc.</td>
<td>$400,000</td>
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<tr>
<td>Marshall C. III ‘67 and Jane Crouch</td>
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<tr>
<td>Vernon A., Jr. ‘64 and Kaye Isaacs</td>
<td>$253,224</td>
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<tr>
<td>Bill Barrett Corporation</td>
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<tr>
<td>William W. Fleckenstein ‘86 ‘88 ‘00</td>
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<tr>
<td>SM Energy Company</td>
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<tr>
<td>Lawrence B. ‘49 and Rose Curtis</td>
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<tr>
<td>Bonanza Creek Energy Company</td>
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<td>Pioneer Natural Resources Company</td>
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<td>Ward Petroleum Corporation</td>
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<td>Whiting Petroleum Corporation</td>
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<td>Michael R. ‘83 and Patricia K. ‘83 Starzer</td>
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<td>Grace Wanner</td>
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<td>Joe S. ‘42 &amp; Mary G. Keating (both deceased)</td>
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<td>William J. and Louise K. Barrett</td>
<td>$25,698</td>
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<td>SPE Denver Chapter</td>
<td>$25,000</td>
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If you don’t see your company on the major donor list, there are still naming opportunities in Marquez Hall. If your company or you personally would like to donate, please contact Kim Senger-Director, Corporate and Foundation Relations at the Colorado School of Mines Foundation at ksenger@mines.edu
CSM President Dr. Scoggins thanking Tim and Bernie Marques and the many people who helped make the building a reality.

A performance by the CSM marching band to help celebrate the recent progress of Marquez Hall. You can monitor the construction progress via webcam by visiting http://ccit.mines.edu/webcam.

PE Professor Azra Tutuncu with Harry D. Campbell (another generous contributor to the building).

Tim Marquez was proud to dedicate the building to his family and to future petroleum engineers at Mines.

Recent progress of Marquez Hall. You can monitor the construction progress via webcam by visiting http://ccit.mines.edu/webcam.

Dr. Craig Van Kirk with Tim Marquez.

Groundbreaking with Dr. Scoggins, Dr. Graves, Tim and Bernie Marquez and Peter Boldin (architect).
submitted soon to Lap on a Chip, a premier journal on micro- and nanofabrication.

In the past summer, I had the pleasure of visiting Institut Universitaire des Systèmes Thermiques Industriels in Marseille, France, and worked with my French collaborator on suspension flow and transport modeling. It was a great trip. After the work, my wife and I visited a couple of cities in France and, of course, took many pictures. I truly enjoyed the rich art and history of France and the sun of Mediterranean. My “Picture of the Year” was taken on the steps of an ancient Rome coliseum in the city of Arles, Provence. Another picture was taken in the street of Paris, where I accidentally bumped into Mines Paris - les Mines - Mr. Conrad Schlumberger’s alma mater.

FACULTY LETTERS

We are increasingly excited, counting minutes and seconds for the completion of Marquez Hall and moving day. As we are preparing to move into a brand new and one of the first-on-campus LEED buildings, space management is being planned ahead of the time. The space in Marquez Hall is not unlimited.

The resolution for moving to the new building is a lot more important than the resolution for a New Year as it happens very few times in our lifetime and the other happens once a year.

New work places, new policies, new strategies, new plans, new expectations, new thoughts, new methods …… much towards the next level in research. Among a few projects that I know are the third phase of non-Darcy flow and modeling of proppant transport in horizontal natural fractures. acoustic impedance under high confining stress and 3D reservoir modeling are few more.

A project of my own that I finally have permission from the CSM Office of Technology Transfer to openly reveal is a new attachment for a centrifuge, which demonstrates that the direction of migration in centrifuge is not parallel to the horizontal plane. Also, it offers the capability to implement all side forces (tensional and linear moment of inertia) towards the direction of migration, mechanically. This attachment also, responds to the changes in the center of gravity and radius of gyration during the gradual and on-going migration through the core, proportional to the speed of the rotor.

I am very pleased to mention that the department has a new full time associate lab coordinator, Joe Chen, who started last May. With Joe being on board, we together, will be able to turn the priorities around a lot faster and more efficiently.

Wishing all a continued success.

AL SAMI

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Wishing all a continued success.
Our last year in Alderson Hall

From left to right- Jennifer Miskimins, Hossein Kazemi, Azra Tutunçu, Mark Miller, Manika Prasad, Bill Eustes, Ramona Graves, Will Fleckenstein, Carrie McClelland, Todd Hoffman, Linda Battalora, Yu-Shu Wu, Xiaolong Yin, Erdal Ozkan, Craig Van Kirk

THANKS TO DR. GRAVES FROM THE PE OFFICE STAFF

Thanks to Dr. Graves, Denise and Terri had the rare opportunity to go the ATCE conference in Florence, Italy. Since we were responsible for travel arrangements for both faculty and PE students, we thought it was worth a try for us to attend as well. The PE Students would definitely need a few chaperones to help out when needed, instead of bothering the faculty. At least that was our twist on how to get to Italy. What a wonderful experience it was. With our husbands in tow, we watched the Petro Bowl, visited the booths, and made sure the alumni reception ran smoothly. After the conference, the PE students went off to Rome with us following not far behind with a side trip to Siena and Pisa. In Rome we made the most of the few days we had left, and saw the Coliseum, Vatican, St. Peters Basilica, Pantheon, Forum and the many piazzas. Meanwhile, Patti graciously stayed back in the office to keep the department on track. But no worries, she went on field session in May then immediately back to the Florida Keys for two and half weeks in June for some very deserved rest and relaxation.

With the PE department growing so fast and the move to Marques Hall, we will have no problem keeping busy, maybe too busy.

We hope to see many of the familiar faces of graduated students at the ATCE alumni reception in Denver.
Brenden Swensen

I preach every day to my peers and to underclassman about how important it is to be involved in school activities. It not only teaches us leadership skills we will take with us into industry, but it makes each of our time here at Mines more enjoyable and successful. Get involved, GO MINES!

As for industry experience, I have to give a sincere thank you to Forest Oil for whom I have interned with for the last two summers. While there, I did decline analysis for the Haynesville Shale both summers which was a fun project to come back to a year later and see the fields development. I also did a small field study on the Arkoma Basin in Oklahoma and Arkansas that helped the engineers to understand why some wells in the field were not producing as expected. The largest project I worked on was a field study on the Granite Wash in Mendota Ranch across Hemphill and Roberts Counties in the panhandle of Texas. Through each of these, I have gained knowledge that will undoubtedly be valuable to me in the future.

Thank you again to my family, friends, teachers and mentors. I hope to make you proud.
As I sit down to write this, a new school year is about to start and with it, plenty going on with our SPE Chapter. If you don’t know me, I am Chris Enger, President of SPE here at Colorado School of Mines. I am in the middle of my term and I can tell you it is a great time to be in the industry and involved in SPE. Last September around 20 student members (including myself) were able to attend the ATCE conference held in Florence, Italy. We all had a great time in Italy (and at the conference) where we listened to recently published SPE papers being presented by their authors. I would like to thank all of our industry support for giving us the opportunity to send so many students to the conference. After that long haul, this year ATCE will be held in Denver. While this may be a little disappointing for some, it will allow all of the students to attend and meet industry professionals and students from around the world.

April was a busy month for us. First, we hosted our Second Annual Sporting Clays Tournament. This year it was a great success with over 20 teams participating! The next day as part of CSM’s E-Days Celebration, we held Oilfield Olympics where students were able to learn what it’s like to be in the “real” oilfield. Events included coffee drinking, doughnut eating, bean spitting, and a race to put on PPE and make-up and breakdown frac iron connections. Also in April, we held our annual Joint-Session meeting with the Denver SPE chapter. This year we were blessed to have our own Dr. Jennifer Miskimins speak about fracing unconventional reservoirs, which is the topic she spent the past year speaking about as an SPE Distinguished Lecturer.

Now looking at what’s coming up, our Fourth Annual Golf Tournament will be September 30th at Fossil Trace Golf Course in Golden. This year our tournament will be donation only as a thank you to all of our support from the Denver SPE Chapter and from companies.

Ongoing throughout the school year, we continue to have lunch and learn presentations, which involve industry professionals giving a technical presentation which also includes lunch. We have had a great support from both companies willingness to come to campus and students showing up to learn (and get some free food). If you would like to host a lunch and learn on campus, please contact me.

To close, I would like to thank all of the support we have received from the Denver SPE Chapter. This year alone more than 25 students received scholarships from Denver SPE. Also, I would like to thank all the companies that donate their dollars and time to helping us learn and spread positive information about the industry.

Best regards,
Chris Enger
cenger@mines.edu
PI EPSILON TAU

Hello, I am Graham Patton, the 2010 - 2011 Pi Epsilon Tau chapter president. Pi Epsilon Tau, the Petroleum Engineering honor society, was founded in 1947 and first established at the Colorado School of Mines in 1983. This honor society accepts Petroleum Engineering students that have demonstrated excellence in both leadership and academics. The society’s objectives are to create a closer bond between its student members and industry, to broaden the scope of activities of members, and to maintain the high ideals and standards of the engineering profession.

This past year, the chapter has continued to have tremendous success and growth. Another record setting initiation ceremony took place on April 6th, where 52 new members were initiated. While Dr. Graves was unable to attend, Dr. Eustes did an excellent job in her place and again led the initiates in the singing of the chapter song. Pi Epsilon Tau helped to get the department involved in the annual Race for the Cure. This year over 50 students and professors participated in the race and nearly $3,000 was raised. The department was again able to persuade Dr. Scoggins to declare October 1st “Pink Friday” on campus, encouraging everyone to wear pink to show their support. This past year, Pi Epsilon Tau also organized two successful fundraisers to support the Haiti earthquake victims and the Japanese tsunami victims.

I would like to take this time to introduce the new 2011 - 2012 Pi Epsilon Tau officers.

President – David Clark
Vice President – Andrea Switzer
Treasurer – Ashley Reed
Secretary – Jon Nilemo
Activities Chair – Marcus Argueta

I give my best wishes and support to the new officers of Pi Epsilon Tau and hope that the motto of Pi Epsilon Tau, “Success is the product of knowledge and effort,” continues to be embodied by the students of the Colorado School of Mines Petroleum Engineering department.

Best regards,
Graham Wilson Patton

AMERICAN ASSOCIATION OF DRILLING ENGINEERS

Last semester was both productive and exciting for the CSM Student Section of the American Association of Drilling Engineers (AADE). We are working hard to continue the growth and involvement of AADE throughout the 2011-2012 school year.

I believe the growth of CSM AADE is directly related to the involvement of our newly elected officers and to the efforts of our growing membership. There are an incredible 15 officers this year. This is impressive because there are years in the past that had fewer than 15 members total.

The Denver Chapter of AADE has continued to show tremendous support. Over this last year, the Denver Chapter has contributed a significant amount of time and money to our section. This support never goes unappreciated. In
STUDENT ORGANIZATIONS

AADE CONT.

a small way, our CSM AADE has tried to give back to the
chapter. This is exemplified by Hunter Dunham and Seth
Dickson – these two Joint Session officers did an excellent job
representing CSM to the local professionals and members of
Denver AADE. We also contributed multiple students to help
out at the First Annual Fin, Feather, Fur Food Festival held
in September.

One of our goals this past semester was to become more active
in both the local community and the oil and gas industry.
With generous funding from Denver AADE, we were able
to attend the 2011 AADE National Technical Conference in
Houston, TX. This was a great opportunity for students to
discuss with industry leaders, network and promote CSM.
In addition to attending the conference, Ben Radelet and I
prepared and presented an academic research poster titled
“Drilling Simulators: A Cost Benefit Analysis for Petroleum
Engineering Departments.” Ben did an excellent job in the
final judged presentation and received Third Place – but most
importantly, the poster helped raise industry awareness on
the role of simulators in education.

In April, CSM AADE wrote a proposal on behalf of the
Petroleum Engineering Department for the purchase of three
new small portable type drilling simulators. We are proud
to announce that this request was funded through the CSM
Technology Fee. However, the funding by the Technology Fee
may not have been possible without the generous donation
by Dr. William Fleckenstein. This donation will increase the
total time that PE students have access to drilling simulators
by 300%! Dr. Fleckenstein’s contribution will have a lasting
impact on the education of PE students at CSM. We continue
to raise funds for the full-scale drilling rig simulator slated
for the first floor of Marquez Hall.

We hope to increase our involvement in the local community
this semester. In September, we will be volunteering at the
Denver AADE’s Second Annual Fin, Feather, Fur Food
Festival. All proceeds from this event will be donated to
the Food Bank of the Rockies and the Children’s Hospital
Colorado. Students are looking forward to helping this fun
and worthwhile event.

Several educational opportunities are offered to students this
fall semester. In September, George Stewart from Weatherford
has agreed to teach a fishing class to our members. This fishing
class is scheduled to be four hours long and will be similar to
an industry short course. Carrying on the tradition from last
year, we have planned several “Lunch & Learns” from top
companies. Lunch & Learns have proven to be valuable for
students who benefit from hearing engineers discuss how
they are applying the very things taught at CSM.

I would like to emphasize that AADE’s accomplishments
this past year would not have been possible without the
leadership and expertise provided by Dr. Alfred Eustes. He
has devoted countless hours of his free time to ensure the
success of his students and this section. On behalf of CSM
AADE, I would like to thank Dr. Eustes for making us a
premier student organization.

We would enjoy your input. If you have any questions or
suggestions or would like to become involved, please don’t
hesitate to contact me at jcremer@mines.edu.

Best regards,
Justin Cremer
Colorado School of Mines AADE Student Section

From left to right: Mehdi Mokhtari, Anil Tokcan, Jonathan Harrelson, Henry Unger,
Chris Hatcher, Justin Cremer, Seth Dickson, Ben Radelet, Afiq Ishak, Matt Taulton, Felipe Silva, Anjali Jha, Brian Hardierode, Kailey Kilcrease, Ricardo Mendez,
Ghysella Nababan, Hunter Dunham, Trevor McIntoch, Barbara Hatcher, Juliane Von Pichl, Katie Mills, Ty Thompson, and Stuart Allen
In Houston, Texas for the 2011 AADE Conference.
Established: My name is Sen Guan, your Colorado School of Mines American Rock Mechanics Association student chapter president. Our Student Chapter at Colorado School of Mines was established in 2011 and we are very proud to be the first student chapter of ARMA.

Officers:
President: Sen Guan, Treasurer: Tlek Kadyrov, Secretary: Patricia Cuba, Faculty Advisor: Dr. Azra N. Tutuncu, Harry D. Campbell Chair, and the Director of Unconventional Natural Gas and Oil Institute (UNGI)

Purpose: ARMA student chapter’s goal is to disseminate information through presentations, publications (ARMA E-News), lectures and topical symposia to inform Mines’ students and other members of the organization about the state of art in geomechanics knowledge and promote the innovations and contributions to the knowledge within the field.

Activities: Our chapter was established in mid-Spring 2011 and, in spite of the short history, we have already been quite active on campus. The first event was a Lunch and Learn with guest speaker Dr. Dan Moos of Baker Hughes, on barriers for shale reservoirs and how geomechanics provides solutions for optimization.

Our next distinguished speaker was Tom Bratton of Schlumberger. Mr. Bratton not only gave us a lecture on the importance of geomechanics for lifecycle operations, but also provided Petrel training to all students who were registered for Unconventional Reservoir Geomechanics, Introduction to Geomechanics and Shale Reservoir Engineering classes. In both events ARMA CSM Student Chapter presented appreciation certificates to commemorate these special inaugural events for the chapter.

On Friday, September 2nd, our organization participated in the Celebration of Mines.

Our exhibition drew a lot of attention during this event and we had opportunity to introduce geomechanics key concepts and its use in the oil industry throughout the life cycle of the operations to freshman and sophomore students. More than 60 people signed up to be new ARMA members during this event.

In June, we rented an exhibition booth at the annual US Rock Mechanics/Geomechanics Symposium organized by ARMA in San Francisco and represented CSM and UNGI at the Symposium. Vladimir as well as several student members from Engineering Department and Dr. Tutuncu also had technical presentations at the annual event representing Mines. Dr. Tutuncu has also received a presidential recognition as the past president for her significant contributions to the organizations various activities and her consecutive organizing committee membership at the annual event.

Dr. Ömer Aydan from Tokai University, Ocean Research Institute, Shizuoka, Japan visited us and gave a guest lecture on The State of In-Situ Stress in the Earth’s Crust and the Techniques for Inference and Measurement of In-Situ Stress on September 14th. We have other guest lecturers scheduled throughout the academic year and are looking forward to seeing all of you to become a member of our chapter. Have a successful academic year full of fun.
FIELD SESSIONS

FIELD SESSION – THE NORTH EASTERN UNITED STATES By Alfred Eustes

This year for field session, we had a new location to check out. And did we! This year, I took a group of 42 students, along with Dr. AzraTutuncu, Denise Winn-Bower, and three teaching assistants; Felipe Silva, David Schanbel and Anil Tolkan. For the first time, we traveled to the north eastern United States.

Our first stop was unplanned. As we were accelerating down the runway at DIA, a generator in the Boeing 757 tripped offline and immediately, the pilots slammed on the brakes. We shut down on a side taxiway and after discussion (United has the “from the cockpit” channel I like to listen to), they brought her back to the terminal to get another 757 (we stole the next Boston flight’s jet). We got to Boston much later than anticipated. After a challenge finding our vehicles in the rain, we managed to get to our hotel really late. The next morning, we drove to downtown Cambridge to Schlumberger’s Doll Research Center. Thanks to Dr. Martin Poitzsch, Ms. Susan Sparks, Mr. BradEales, Ms. Dena French, Dr. Yi-Qiao Song, Dr. Brad Roscoe, Dr. Abigai Matteson, and Dr. Giovanna Barazzutti, we had a fantastic tour of Schlumberger’s R&D facilities. They treated us well! Some of you may remember Dr. Neil Hurley; he is doing quite well there in Cambridge. We left that afternoon and managed to get to Middletown, NY in a blinding rain storm by 8:30 that night.

The next morning, we left for Williamsport, PA and Anadarko. We met the Anadarko team led by Scott Chesebro at the Watertown Tavern, a quaint restaurant from 1825 in the back woods of north central Pennsylvania. Who knew Pennsylvania was so pretty? We dropped by one of their Precision Drilling rigs on a pristine location followed by a visit to their water impound facility. Helping with the tours was Ms. Stephany Mitchell, Mr. Doug Shotts, Mr. Mike Micozzi, Mr. Matt Peloquin, Mr. Mark Barbier, and Mr. Nick Fornicola. Unfortunately, by then, yet another blinding rain storm hit and cut things short. On our way to Pittsburgh that evening, we stopped in on Dr. TurgayErtekin at Penn State who treated us to a campus tour and an ice cream treat! I appreciate the efforts of Alfred Tischler for getting this started. Saturday saw us driving in the opposite direction to visit Weatherford with Mr. Tim Smithand Mr. Kevin Davis studying wellheads in Punxsutawney, PA, yes of ground hog fame. And that city doesn’t let you forget it. Thank you to Mr. Darwin Trahern and Mr. Rick Davis for getting this arranged. We had to drive through Amish country to get there, too. It is interesting dodging horse carts. Later that evening, Dr. Graves joined the team for the rest of our field session.

On Sunday, after a late morning, we all saddled up and headed out for the birthplace of the petroleum industry, the Drake Well! What a journey through time. We had a picnic at the site where Cody and Nina Teff and their children joined us. We then toured the park with an incredible variety of old equipment including, of course, the shrine itself: the Drake Well. I don’t recall ever seeing Dr. Graves so enthused before!

Monday, we left Pittsburgh and after a bus tour of Range Resources’ (the founder of the Marcellus as I understand it) operations in southwestern PA with Mr. Mark Windle, Mr. Mike Mackin, Mr .Travis Henry, Mr. Justin Relivar, Mr. Shawn Hodges, and Mr. Brad Wernicki, we entered West Virginia and EQT’s operations. At the Savanna Rig #640E, we had a good time with Williams in Pennsylvania. The group at the Savanna rig 640E

Our next day saw us bright and early south east of Pittsburgh with Williams Exploration and Production. Mr. Jim Jackson started off our day with Williams with a tour of two
Mr. Steve Schlotterbeck of EQT and his team consisting of Mr. Chad Stallard, Mr. Joe Pletcher, Mr. Richard Hill, Mr. Jim Rose, Mr. Brad Maddox, Mr. Jeremy Smith, Mr. Beau McQue, and Ms. Janet Klein (who coordinated a lot of this) among many others along with their service providers had set up a tent with a demonstration of bits, mud, directional drilling, mud logging, well heads, and stimulation as well as a rig tour with Mr. Steve Van Howe. We ended up with a dinner on site that beat just about anything I have experienced in the many years of field session.

The next day, we spent the morning visiting the National Energy Technology Laboratory in Morgantown, WV. I have always wanted to see that lab. They really showed a lot of their operations and cutting edge research. Thanks go to Ms. Jessica Welling, Ms. Holly Biddle, Mr. John Duda, Mr. James Ammer, Dr. Mehrdad Shanham, Dr. Peter Balash, Dr. Alexandra Hakala, Ms. Staci Kief, Ms. Leah Briner, Mr. Don Fergason, Mr. Grant Bromhal, Mr. Yongkoo Seo, Ms. Eilis Rosenbaum, and Dr. Dustin Crandall. From there, we motored over to Washington, D.C. That evening, Mr. Peter Smeallie, Director of the American Rock Mechanics Association, stopped by our hotel to give us the “low down” on Washington DC and how it works (or doesn’t work as the case may be).

On Wednesday, after a challenging rush hour drive to downtown Washington, we all met the deputy director of the new Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), Dr. Walter Cruickshank at the Department of the Interior along with the Chief of Staff, Tom Lillie. That was an interesting discussion. Then, from there, we walked over to the White House for a tour. For all the world, the White House reminded me of an European castle with American furniture. The “big guy” as per the guards, was not there for comments. We left downtown for the USGS in Renton and a grand tour of those facilities. Thank you goes out to Mr. Douglas Duncan, Mr. Robert Ryder, Mr. Michael Trippi, Mr. Alex Demas, Ms. Janet Ameson, Ms. Ione Taylor, and Ms. Brenda Pierce. We ended up with a talk with the director of the USGS, Dr. Marsha McNutt, this year’s spring commencement speaker.

We left for Newark, NJ the next day with a stop at Gettysburg National Military Park and an afternoon at ExxonMobil’s research center in Annadale. Dr. David Yale and his team are doing some unique and fascinating research there. Thank you goes to Ms. Kathy Edwards, Mr. Max Deffenbaugh, Mr. Bill Horn, Mr. Hubert King, Ms. Dalia Yablon, Mr. Brian Wiggins, Mr. Paul Oldenburg, Mr. Dave Moser, Mr. Arnie Kushnick, Mr. Alex Kanevsky, Mr. Laurnet White, Mr. Huseyn Denli, and Mr. Rohan Panchadhaara. We stayed in Newark, NJ that evening which makes me appreciate Denver all that much more.

Our last day was one of the more unique days in field session history. Dr. Bill Murphy of eSciences/Earthworks and his team consisting of Mr. Matt Art, Mr. James Trotta, Ms. Caroline Cianni, and especially Mr. Daniel Rosales (our
EAST COAST CONT.

coordinator) met us at Elizabeth Harbor, NJ. There, we boarded the Sorenson Miller, a fine ship, and made a tour of New York harbor. We were reviewing the geophysical studies that e4sciences is doing of the harbor floor, studying the geology, and noting the environmental remediation efforts (centuries of harbor traffic can make a mess). We ended up at North Cove Marina in south Manhattan, next to Ground Zero. In an emotional moment, we embarked and overlooked the construction efforts of the new World Trade Center and paid our respects to the lives lost on 9/11.

We left Manhattan and, after the drivers and I retrieved the vans from NJ and met the students on Staten Island, we all had to get to Boston. Keep in mind this was Friday afternoon on Memorial Day weekend with all of New York between Boston and us. I now can say I have driven through Manhattan on a holiday weekend during rush hour. It wasn’t too bad until we hit Connecticut, then it ground down to a slugging match. Luckily, the e4sciences people gave me a driving tip (CT 15) that made it somewhat easy to make it to Boston in reasonable time. We left at 7 am on Saturday and returned to Denver, safe and sound, no aborted takeoffs this time.

What an intense trip this one was. We saw, did, and heard a lot! I cannot thank Azra, Ramona, and especially Denise for their efforts and assistance. I also appreciate Felipe, David, and Anil’s work along with John Stubbs and Sarah Nowak, two student drivers. And of course, kudos to all those companies and people that made this a fantastic field session and a signature event for the Petroleum Engineering Department and the Colorado School of Mines. I know I have missed some that should be named. If so, please forgive me and please accept our gratitude!

PEGN 315 FIELD SESSION – CALIFORNIA By Linda Battalora

Thanks to the generosity and enthusiasm of our many alumni and friends, the 2011 PEGN 315 Field Session in Southern California and Bakersfield was a great success! Fifty-two students, four graduate student TAs, Patti Hassen (Administrative Assistant to Dr. Ramona Graves), Al Sami (PE Lab Coordinator) and I, arrived in Los Angeles on Monday, May 16, 2011 and once again set up “camp” at the La Quinta Inn in Ventura. We began our first full day on Tuesday with a morning tour at Weatherford “Oil Country” followed by a delicious lunch catered by Weatherford at the Pirou Petroleum Club. In the afternoon, Kris Khircher and Andrew Prestridge, DCOR, arranged an informative tour of DCOR’s Rincon Onshore Separation Facility. Many thanks to Weatherford and DCOR for a great first day!

It wouldn’t be Field Session in California if we didn’t meet with Jon Schwalbach, Aera Energy, for our annual “beach” geology field trip in Arroyo Burro Park and Loon Point. Together with Dave Mayer, Berry Petroleum, and Indar Singh, Aera Energy, Jon succeeded in teaching the students about formation fractures and regional fracture development and structural traps amidst higher than predicted tides and cold Pacific Ocean water! The students had their first taste of “unexpected conditions in the field” and quickly learned that it’s wisest to remove shoes when wading through water that is thigh-high. Best question of the day (and perhaps
the entire Field Session) asked of Dave Mayer by one of the students: “Hey, do you have an extra pair of shoes?”

On Thursday, we visited Venoco Inc.’s Platform Grace. Divided into two groups, the students enjoyed a comprehensive tour of the platform including delicious snacks provided on the platform and the boat rides. The Billy Pugh ride is always a big hit bringing delight not only to those being transported but also to those watching from the boat and the platform. We thank Venoco for providing the Safety Training on Wednesday afternoon in anticipation of the Thursday tours and for their generosity in arranging the platform tours.

On Friday morning, geologist Don Miller led us on a tour of Vintage/OXY’s San Miguelito Field and arranged a delicious hot lunch for us on the beach. In the afternoon, we visited SoCalGas’ Honor Rancho storage facility where the student’s learned that petroleum engineers not only produce resources from the subsurface but also can store them underground.

The students enjoyed a half-day geology field trip on Saturday led by John Harris, Numeric Solutions, LLC, which concluded with a “hands on” exercise at the natural oil seeps on Highway 150. This is the second year that John has given up his Saturday morning to lead us on a tour and we are very appreciative of his interest in our students and the Field Session.

On Sunday, May 22, 2011, we arrived in Bakersfield for a tour of the Kern County Museum, the CSM Alumni Picnic and three more action-packed days. We would like to thank Tiffany Brewster, Peter and Michelle Ashton, Lonnie Kerley, Dave and Billie Mayer, Joe and Beth Nahama and many others who worked behind the scenes to organize the Alumni Picnic. The students had a great time meeting alums, their family, and playing Frisbee. Once again, Lonnie assumed the position of master griller and grilled the burgers while telling the students stories of what it was like when he went to Mines.

We are fortunate that so many alumni step up to volunteer their time and facilities for Field Session days, especially in Bakersfield. We have so many opportunities that we are now scheduling site visits on a yearly rotational basis. This year Mike and Patricia Starzer of Bonanza Creek arranged a field tour and provided lunch for the students at Panorama Bluffs Park. The students really enjoyed the opportunity to talk with Bonanza Creek representatives informally about production equipment, steaming, gathering treating and sales. In the afternoon on Monday, we visited the Bureau of Land Management where the students learned about California regulations of oil and gas operations.

On Tuesday morning we visited Aera Energy’s Belridge Field. The tour began with a safety meeting followed by an impeccably arranged tour of the field featuring a variety of contractors including BJ, Weatherford, Pengo Wireline, Pro Tools downhole equipment, Key Production Rig and Coiled Tubing. Many thanks to Angel Forsling and Travis Ransom for coordinating the tour along with Michael Dixon and Tiffany Brewster. The tour was followed by a delicious lunch at Aera’s headquarters in Bakersfield, a question and answer session with President & CEO Gaurdie Banister, Jr., and a panel discussion with CSM alum Aera employees.
FIELD SESSIONS

CALIFORNIA CONT.

Indar Singh, Tiffany Brewster, Michael Dixon, Irina Hardesty and Travis Ransom. We finished the day with a tour of the Core Lab facility led by Linda Specht who always provides delicious snacks including cookies from an independent bakery!

Our final day in Bakersfield was split with tours in the morning by Schlumberger and in the afternoon by OXY Elk Hills. Schlumberger provided breakfast burritos for the students before sending us in multiple groups in multiple directions at two different facilities so that all aspects of their operations could be presented to our students. Brent Vangolen of OXY Elk Hills arranged lunch and an afternoon tour of Elk Hills field operations. The students had a great time seeing drilling operations in progress and meeting with various vendors on locations. Many thanks to OXY Elk Hills for providing a top notch tour!

Our final day of the Field Session was spent with THUMS/OXY Long Beach, Inc. We appreciate CSM alum Mike Carter’s time and effort in organizing a full day of hospitality including breakfast at The Reef Restaurant, presentations about THUMS and the Wilmington Field, a site visit to Tiger Wireline’s new shop to learn about packers, ESP’s, and more, lunch at the boat dock and finally, a tour of Island White.

This field session in Southern California and Bakersfield would not have been possible without the generosity of our alumni and friends in the area. The students, TAs and Faculty had a wonderful learning experience and another enjoyable visit to California. Thanks again! We hope to see you next year.
This year’s summer field session trip was larger than ever! Our field session group had nearly 50 students. As a result we had to add a van (and a driver) to our team. The tireless drivers that ventured to the Gulf Coast this time included myself, Dr. Ozkan, Carrie McClelland (she taught PEGN 251 before the field session and every student knows her) and three Graduate Teaching Assistants - Baharak Barzegar, Juan Carlos Carratu, and Midowa Gbededo.

The first day, May 16th, was a travel day. We flew to Houston Hobby Airport and picked up the vans. We spent a couple of hours on the beach front in Kemah, Texas and had meals. After that we drove into Houston and checked into our hotel.

The next day, we visited the corporate offices of Marathon Oil (morning) and Anadarko (afternoon). Both trips were arranged by our alumni and it was great seeing some of our recent graduates. We took an early leave from The Woodlands and drove to Fairfield, TX where we stayed for the night.

The next two days were tours on field operations. On May 18th, Marathon Oil hosted us at the Mimms Creek Field - a tight gas sand reservoir - in the morning. In the afternoon, we visited EOG production facilities near Tyler, TX. On May 19th, we visited Devon operation in Carthage field.

We spent Friday the 20th with Shell and visited the offshore training facility in Hammond, LA. The drilling simulator at the facility, in particular, was very impressive.

The weekend activities, as always, were thoroughly enjoyed by both students and the drivers. We visited the Oak Alley Plantation on the bank of the Mississippi, and then did the swamp tour in the afternoon. As usual, the students spent good times with alligators, and they learned that we produce oil and gas from the swamps! We had dinner in the French Quarter. Luckily, we were able to get all students back to the hotel by midnight. We headed back to Houston on Sunday (22nd) and on the way visited the Spindletop Museum – one of the most famous oil gushers in Texas oil history – and Galveston via the ferries.
The field session “classes” continued on Monday. We visited Chevron offices in downtown Houston, Schlumberger Reservoir Completions Center in Rosharon, and Baker Hughes. Again, hosted by Marathon Oil, we visited the Energy Museum in Houston, TX and looked their outstanding exhibition and collection about oil and gas industry.

The last leg of the trip was made in the Eagle Ford Shale near San Antonio. We visited Anadarko operations in the rich condensate field in Maverick Basin, and the Pioneer production facility in the east. In the evening of Thursday the 26th, after touring the Alamo and enjoying a break at the River Walk of San Antonio, we drove the students back to Houston Hobby at 5:00AM.

I would like to use this opportunity to thank the excellent work of faculty members and teaching assistants. We also thank the enthusiastic support from our alumni and the companies. Without your commitment and dedication this trip would not be possible!
After having the pleasure of watching Dr. Jennifer Miskimins run field session for the past two years, I was placed in charge of this summer’s Massadona experience. Dwayne Bourgoyne, myself, and geologists Peter Bucknam and Maria Brunhart-Lupo led two groups into the wilds of northwest Colorado and eastern Utah. Each section had about 55 students. The first section was marked by rain and more rain. Exercises were shifted around to avoid getting stuck in mud and potholes of unknown depth. While all exercises were completed, the Raven Ridge exercise will be one that sticks with this year’s students. On that exercise, road conditions made it prudent to walk two miles to the top rather than drive. Unfortunately, on the way back the rain was more than a light drizzle. It was soak you to the bone rain. Everyone was drenched by the time cars were reached.

The rain also made everything cold. More than a drum of kerosene was used during each section to keep the cabins warm. The rain also made roof leaks readily apparent. A quick survey showed that 100% of the cabins with asphalt roofs leaked. Some of them were leaking right around electric outlets, a bad situation. Dr. Bourgoyne noticed some surplus sheet metal roofing sitting in one of the cabins. With this, skilled students (bribed with steak dinners), and some new power tools (of course) he was able to put steel roofs on four more cabins, two in the first section and two in the second. Stripping the roofs down to the plywood revealed some interesting repair techniques that may have led to the 100% figure. Fortunately, the recent metal roofs have needed a lot less maintenance.

The students also worked hard at shoveling. For decades, cows have loved the Massadona site because of the shade and wind protection. In return for the shade and protection, they leave behind good garden fertilizer. Lots of it. In places, they left more than a foot piled next to the buildings and their 4”x6” wood foundations. From the lack of paint on the base of the buildings, you could tell that it had been years since the bottom portion had seen the light of day. Unfortunately, leaving the beam foundations covered in rich organic material was too much of a good thing. Portions of the excavated foundations were gone, completely rotted away (and in cases into the 2x4 sub-frame). While wheelbarrow
FIELD SESSIONS

MASSADONA CONT.

after wheelbarrow was removed, there is still a lot to go. If you need a source of fertilizer, feel free to come on out. Take as much as you want.

Both sections visited Chevron and Production Logging Services. John Clausen arranged a day of talks about the Rangely Oilfield. He and his teammates focused on the geology and reservoir engineering needed to develop this giant field. It was interesting to see that the expected life of the field was always about 20 years, regardless of whether a study was done in the 70’s or recently. Technology improvements have always been able to keep the field going. The students greatly appreciated being able to see how the field is being produced from rocks that they had climbed on the previous week. We again thank John and Chevron for providing the educational link between the outcrop and the field. Production Logging Services (PLS) also hosted both groups. They provided vital production logging training for the students. The students got a hands-on look at the tools and the logs they produce. They found it interesting to see a log that had been run only a few days before. Both Chevron and PLS made the comment that the students were attentive and asked great questions. Thanks students.

Thanks Chevron. Thanks Production Logging Services.

Homework isn’t so bad when you’re in the great outdoors!

Graves and Miller taking a break from the hardships of Massadona
Alumni Reception at SPE ATCE

To Our Petroleum Alumni:
Please join us for the Colorado School of Mines, Petroleum Engineering Alumni Reception to be held during the Annual SPE Technical Conference in Denver, Colorado.

October 30th through November 2nd, 2011

The Alumni Reception will be held on
Monday evening, October 31st at the
Grand Hyatt Convention Center, in Centennial Room D
NOTE THIS IS MONDAY
1750 Welton Street, Denver
5:30 to 7:00 pm.

Cost $30
As always, there will be plenty of food with a cash bar.

All are welcome to attend this reception, regardless of attendance at the SPE Conference.
You may now RSVP and pay online at www.minesonline.net/SPEDenver2011

Don’t hesitate to email Terri Snyder (tsnyder@mines.edu) with any questions.