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# Newsletter

of the  
Petroleum Engineering Department  
Colorado School of Mines

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## Greetings From Craig Van Kirk

### PE Program Thriving—100% Placement Rate

Hello again from the Petroleum Engineering Department here at CSM in Golden. I am happy to report that we are healthy and enjoying a good level of activity in many areas. The program has plenty of students, jobs, and research projects.

This past summer I completed my one-year sabbatical leave in my hometown of Banning, California. Some people have asked me recently if I am back at CSM for good. Well, I'm not sure I was ever here at CSM "for good," but whatever it has been in the past, I hope and intend to continue to serve CSM for many more years.

My sabbatical leave was most enjoyable and very satisfying. Most of my time was spent at Banning High School, and some time was spent on the Morongo Indian Reservation and the grade school in the small town of Cabazon. It was very rewarding working with a wide variety of kids, exposing them to subjects they don't normally get, such as local geology, global geology, geography, international business, careers, engineering, and field trips.

In November 1996 we took 120 high school kids to THUMS offshore island near Long Beach; this was a big deal! No accidents, no AWOL's! Other field trips included the San Andreas fault, ancient Cahuilla Indian grounds, mountain climbs, and fishing. I figured if I could help the students "learn how to fish," then they would be more independent

citizens and less reliant on others. The fishing trip turned out to be "the greatest day of my life" for a couple students. If you're interested in more about my sabbatical leave, refer to the recent article in CSM's Alumni Association Mines Magazine issue dated September/October 1997.

The PE Department staff did a great job in my absence during my sabbatical leave. Upon my return to regular service this summer, everything appeared to be in good order. Special thanks must go to everyone on the staff, especially to Professor Ramona Graves for serving as Acting Department Head during the year. We are a small group with a heavy load and lots of involvement with our students. Whenever one of us is gone, the extra load on the rest of the staff is noticeable.

This school year Professor Robert Thompson is on a well-deserved sabbatical leave to concentrate on the final stages of his Ph.D. program in Educational Leadership and Innovation in the School of Education at the University of Colorado at Denver.

One of the many great pleasures I enjoyed during my sabbatical leave was a visit from our CSM PE students. Our annual Summer Field Session for the sophomore class, PE315, toured the southwest part of the U.S., focusing on the oil industry in southern California. Professors Richard

*(continued on page 2)*



*1997 Summer Field Session for PEGN 315 at Banning Fault in California*

## Craig Van Kirk (continued)

Christiansen and Bill Eustes guided the 30 students to rendezvous with me in the Banning-Palm Springs area on May 14 and 15.

After touring geothermal operations below sea level near the Salton Sea in the desert, the group met me to ride the Palm Springs aerial tramway for a trip of several miles up to an elevation of almost 9,000 feet above sea level. From there we had a great view of the San Andreas fault, major branches of the fault, and several examples of evidence indicating the presence of faults.

The next day we visited the actual fault gouge of the San Andreas fault zone, igneous rocks which have been pulverized into powder. We had lunch at the Banning High School cafeteria, went to the school library to study aerial photos and maps, and met the high school principal Alex McConahay. After lunch we took a field trip up Banning Water Canyon to see a unique water system of streams, ponds, and wells capable of 100,000 BWPD. Then to the Morongo Indian Reservation to join with reservation

*This coming summer of 1998 we plan to take the sophomore class to Alaska for Summer Field Session, so please contact us to arrange when we might be able to meet up with you Alaskans*

kids for a field trip to a recently completed new water well, also capable of 100,000 BWPD.

During dinner back in Banning I enjoyed visiting with the students and getting to know them better. After that they headed west to the LA area for the next day's visit to THUMS Islands offshore Long Beach.

Soon after that I enjoyed another visit from Golden, CSM's Vice President of Academic Affairs John Trefny and his wife Sharon, son Ben, and daughter-in-law Frances. We enjoyed a few hours together as my wife Denise and I showed them some of the highlights of the area, the San Gorgonio Pass.

By the way, John Trefny is no longer Acting VPAA, on June 18 he was named as the "official" VPAA and Dean of Faculty by President George Ansell.

In case you haven't yet heard, this past summer on June 16 President Ansell announced his retirement effective next

August 1, 1998. We will miss him and his wife Marge, and will hope to see them visiting CSM for years to come.

This coming summer of 1998 we plan to take the sophomore class to Alaska for Summer Field Session, so please contact us to arrange when we might be able to meet up with you Alaskans. We are interested in visiting interesting geology, operations, or an alumni BBQ.

Here's some more personnel news. Professor Mark Pearson resigned from his full-time position here after last spring semester to take a position in private industry. We will miss him, and we wish him well. In fact, Mark continues to be on our staff as an Adjunct Professor and continues to work with our graduate students and research projects. Also, Research Assistant Professor Saad Saleh has been lured back to private industry.

Department secretary Carol Driste is no longer working for the department full time, but continues to help us out on a part time basis when we have a need. Research project secretary Chris Trujillo has moved into the main office to join Dee Brown in running the place. Our lab technician/machinist Bill Robbins continues on a full time basis, but will be retiring in a few years.

We are currently advertising for a new full-time professor to replace Mark Pearson and hope to have someone on staff as early as January, or next fall semester at the latest. Also, we have high hopes to start advertising for an



*PEGN 315 students visit Dr. Van Kirk at Banning High School during their field trip to California. Dr. Van Kirk taught here during his sabbatical.*

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additional professor in the near future, but we do not yet have approval from the Administration.

In addition to the full-time tenure-track professors on our staff discussed above, during this past year we hired two new research assistant professors on “soft money,” that is, using research income and donations from department sponsors. Mark Miller and Shameem Siddiqui not only participate on our research projects, but are also quite involved in teaching classes. More details of their backgrounds and current activities are included later.

Last October’s SPE Conference in Denver and the several activities we hosted on campus were great successes. Lots of hard work by our staff and SPE students paid big dividends, hosting several hundred other PE students, professors, and people from private industry, plus hosting several hundred high school kids from Colorado and Wyoming.

This year’s SPE Conference in San Antonio should be successful and well attended. We expect to have all of our professors in attendance and sponsor approximately 50 of our students to make the trip. Two of our students will be competing in the finals of the Student Paper Contests—try to attend. They are Scott Goldberg, last year’s SPE Student Chapter President, and Max Scuta. Scott will be competing at the undergraduate level on Monday afternoon, October 6, while Max will compete at the Ph.D. level on Tuesday afternoon, October 7.

Last year’s CSM Alumni Reception on Tuesday night of the SPE Conference was held on campus in the new Student Center, and it was quite successful; a big turnout and lots of fun. I invite all of you CSM Alumni to attend this year’s Reception on October 7, Tuesday evening, from 5:30 to 7:00 pm at the San Antonio Marriott Rivercenter in San Antonio.

This past summer we organized and successfully conducted a short course (Super School) on campus for training non-PE’s in the fundamentals. Seventeen professionals from industry without PE educations spent all day long with us for four weeks. The program was so successful and has generated so much additional attention that we might expand it next summer.

Our Industry Visiting Committee is scheduled to meet on campus this coming spring semester on February 26 and 27. This group of seasoned professionals, including some CSM alumni, meets with us approximately every two years and provides us with valuable advice and guidance.

Major current business within the department revolves around the undergraduate curriculum. This school year CSM is finalizing our multi-year campus-wide curriculum review and reform. The major emphases of the new curriculum are to be more integrated and more multi/interdisciplinary, to better introduce the frosh to “engineering,” and to improve student retention. All of our profs have served and continue to serve on campus committees and are working on the development of the new curriculum. Even though the project

is not yet complete, it appears that we PE’s will like the outcome. Our current practice of integration fits right into the new plans.

In concert with this curriculum reform, we are thoroughly involved with the other three “earth” departments in developing even closer ties. In case you can’t guess, the other three are Mining, Geology, and Geophysics. We are taking advantage of this opportunity to make sure we optimize (increase) the amount of interdisciplinary activities we share: undergraduate and graduate classes, research projects, hiring, and staffing. We want to ensure that our students and programs enjoy the maximum benefits from the natural synergism we should possess, without going too far and making our students too narrow.

The other three departments appear to be healthy, with strong staffs and good levels of enrollment. By working even closer in the future, we four departments should improve together and for the benefit of CSM. Personally, I am very involved in these efforts and am excited about the outcome.

Our enrollment continues to be quite strong as it has been for a long time. Senior class sizes have been approximately 35, and this year’s frosh class size is the largest in a long time.

Our graduate student program is quite healthy, with approximately 45 students. This fall semester we have three students from Austria via our exchange program with the Mining University, Leoben, Austria.

Job placement for our graduating students during the past school year was 100 percent, as

it has been for some years. This fall’s level of interest from industry looks very strong, and I expect 100 percent placement again this year.

Our student body appears to be very strong with excellent academic abilities, good enthusiasm and curiosity, and a high level of moral character, as exhibited by their elected SPE officers.

That’s enough for now. I hope I haven’t bored you or disappointed you. Please feel free to contact me anytime with comments, advice, or questions, and come for a visit whenever you can. The place looks really nice, thanks in great part to your support. The future appears bright, and we’ll all work extremely hard to guarantee a good outcome.



**Craig Van Kirk**

*The P.E. program has plenty of students, jobs and research projects*

My Best to You,

Craig

## Ramona Graves

Those of you who were at the alumni reception held on the CSM campus last October in conjunction with the annual SPE conference held in Denver will understand the following “It is good NOT to be the queen!” I owe a great debt to the faculty and staff that made my year as acting department head go so smoothly. Thanks for making me look good and Craig, thanks for coming back.



**Ramona Graves**

In addition to the departmental duties, I also chaired two successful conferences. One, held on the CSM campus, was the Rocky Mountain Symposium on Environmental Issues in Oil and Gas Operations. This was the third year of the conference and we plan on having another next year. My co-chair was Sherri Thompson, who works for the BLM in Lakewood and graduated from our department in 1984. Many other alums attended. It is always a shock when I see my former students with what little hair they have left mostly gray! Although it seems like yesterday that I started teaching here, this is the beginning of my 16th year.

The other conference was the 4th Colloquium on Petroleum Engineering Education held in Breckenridge in conjunction with the SPE Forum Series. I had a great committee made up of representatives from other schools and industry. If you are curious about the discussions during this week, four papers will be presented on Tuesday morning, October 7th, at the SPE meeting in San Antonio. These discussions ranged from academic issues such as accreditation to SPE's role in promoting petroleum engineering.

Although I am curtailing my committee work this year, it still doesn't appear that I will have time to “clean my office”. I am the interim director of the research consortium, PERFORM. Shameem, who is introduced in this newsletter, is my co-director and is a great help. We have such enthusiastic and energetic graduate students and faculty working on the nine research projects that the transition is going very smoothly.

The biggest news is that I was recently awarded a two-year \$600,000 GRI contract. My co-principle investigator is Darien O'Brien, owner of a consulting firm called Solutions Engineering. Darien graduated from CSM with a PE degree in 1983. The title of the project is “Determining the Benefits of Starwars Laser Technology for Drilling and Completing Natural Gas Wells”. Great name! We will be doing our laser testing (zapping rocks) at the Army and Air Force laser labs. The Air Force lab is donating \$300,000 worth of laser time. It is a very exciting project.

Finally, but not least, Jacob is 16 and driving. Only one minor accident in the first 6 months of having a license. Lacey is 15 and just got her learner's permit. I am a nervous wreck!!!! As Robert Thompson told me (his daughter is 17), they learn how to drive sometime and it isn't when you are in the car.

## Bill Eustes

This has been an incredibly fast-moving year. I have become quite involved in numerous classes and committees and serve as the faculty advisor for the SPE student chapter and the new AADE student chapter. My areas of research are coming along. And, true to the profession, papers are in progress.

An exciting event—the founding of the world's first student chapter of the American Association of Drilling Engineering—occurred at CSM this last year. In September 1996, the Denver Chapter of the AADE convened. I and three students went to the meeting. Afterward, the three students asked me if they could set up a student chapter. The national officers that attended this inaugural meeting said that such a thing had never come up before and to go for it! So Leif Nelson, Juan Bulgerroni, Tyson Foutz, and I set up a charter, received approval from the local chapter and national offices, and started recruiting. Our first official meeting saw 23 students in attendance. We had a successful joint session in March of this year with our patrons in the Denver Chapter. We have also had a movie night where we showed “The Hellfighters” with John (*Salute when you say that*) Wayne. Already this semester, we have had a steak cookout and had 14 students attend the September Denver Chapter meeting. With about 15 student members, we have a successful growing organization.



**Bill Eustes**

This last May, I had the pleasure of helping Dr. Christiansen take 28 students to Southern California. This was my first trip on a 315 field session. This trip is described elsewhere in this newsletter, so I won't go into details. My overall impression was it is a lot of work; but, it was a lot of fun, too (except LA traffic). In addition, it was a pleasure to work with this group of students. Next May, Dr. Van Kirk and I will be leading another class of students to Alaska, where I graduated from high school (Eielson AFB). I am looking forward to the trip and working with those of you in Alaska.

Dr. Tong Xinghua of the University of Petroleum of the Shandong Province of the Peoples Republic of China is visiting the department as a research scholar. He is working with DERG (Drilling Engineering Research Group) and visiting classes.

DERG research is continuing in the Wave Propagation Laboratory. We plan to purchase more equipment to perform more experiments in wave propagation and damping.

In the near future, the Johnson Space Center and CSM expect to sign a Memorandum of Understanding regarding space mining. There is an old joke about Earth First, We'll get to the rest of the planets later. Well, it's later! One area of

great interest is drilling on the Moon, Mars, the Asteroids, and the Comets. The great success of the Sojourner on Mars has spurred a lot of interest in this area. In fact, the Jet Propulsion Laboratory is interested in drilling a hole on Mars to reach deeper than the cryosphere, (the frozen part of Mars) to look for life. This may be a depth of ten kilometers! If you think it is tough to get rig crews on Earth, just try it on Mars.

Life at home is as busy as it is at CSM. My son Will seems to have one desire in life and that is to completely and wholeheartedly live up to the definition of the "terrible twos." My daughter Alicia no longer thinks I know everything, now that she is in first grade and learning so much on her own.

Finally, I would like to let you know about Dr. Mitchell, my predecessor in this position. He is doing fine. He still lives in Lakewood and occasionally visits the campus. He continues to advise some students. He has done well considering his surgeries for a rotator cuff and cancer. Recently he played racquetball against two graduate students (ages 27 and 32). The students won one game each. Dr. Mitchell won four (4-1-1) in cut throat play between the three of them. He did not tell them that it took him two to three hours to recover.

## Robert Thompson

This summer, my family and I completed our third RAGBRAI across Iowa. In addition to a lot of fun, three H's (Hot, Hilly, and Humid) best describe the ride. We are planning to make next year's ride. If you are interested, the ride is always the last full week of July.

I am presently on sabbatical and will use this opportunity to complete my course work for my Ph.D. and conduct a pilot study on multidisciplinary teams of geologists, geophysicists, and petroleum engineers. I plan to submit a proposal later this year.

In the Spring 1997, the Departments of Geology and Geological Engineering, Geophysics, and Petroleum Engineering began a new initiative to facilitate academic-industry sharing of ideas and the learning process which occurs through this transfer of ideas. The initiative, Learning Through Academic-Industry Interaction (LAI<sup>2</sup>), will occur as part of the senior level multidisciplinary design course. Students will interact through the Internet with industry professionals on questions of current industry interest.

This is a unique opportunity to assist in the education of future co-workers. We received excellent response from industry but started the networking too late in the semester to test the concept. I have been in touch with many of you and appreciate your support. If you are interested in learning more about this effort, please send me an e-mail (rthompo@mines.edu). We plan to keep the time commitment from industry personnel to a minimum. Professors will monitor and regulate message traffic from student teams. The hope is that a positive result will be obtained by both the students and industry personnel. Your contribution of a small amount of time for a few consecutive weeks during the Spring semester would be needed.

## Mark Miller

I am a new research associate and am responsible for the department's computing resources, teaching EPICS and conducting research. I graduated from the Colorado School of Mines in 1996 with a Petroleum Engineering Ph.D. My research involved numerical simulation of air coring operations at Yucca Mountain, Nevada.

### Petroleum Engineering Computing Resources

With the renovation of Alderson Hall in 1994, the Petroleum Engineering Department implemented its Computing Resource Plan. The department dedicated space for a twenty-computer lab, purchased state-of-the-art computers and software, and began integrating the computer lab into classroom activities. Our goal is to train the students to use the most modern petroleum engineering computing tools available.

Almost one million dollars worth of industry software is donated to the department each year. This includes reservoir simulation, well testing, drilling, log analysis, and fracturing software. All of the lab's maintenance is paid from funds donated to the department. With the help of these donations, our department's computer lab is regarded as one of the best on campus.

Classes are regularly held in the lab. Last year we purchased a digital projector to enhance our ability to demonstrate software to students. Because the projector has multimedia capabilities, professors have been able to give students a better feel for tools and field operations. It has also come in handy showing "Hellfighters" to the AADE student chapter.

Our network is available to all students taking petroleum engineering classes. Because of the increased focus on integrated multi-disciplinary studies, students from seven other departments and divisions (Chemical Engineering, Metallurgical and Materials Engineering, Economics and Business, Engineering, Mathematics, Geology, Geophysics) attend our classes and use our computer lab. The lab also gets a workout during the summer when the department teaches short courses. Other than the lab, there are over 40 computers used in research programs and other activities around the department.

### EPICS

I am also privileged to be a part of the EPICS program. I was among the entering 1981 fall semester students who were given the opportunity to become guinea pigs for the new EPICS program. The purpose of EPICS was to provide team-



Mark Miller

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work, speaking, writing, and computing experience culminating with project work for an industrial client. During the fall semester, I guide the students through a Fortran project, while during the spring semester I find industry projects for the students to work on. Some of these projects have included extending a natural gas pipeline to a small Colorado town, developing drilling software, and evaluating the merits of large-scale importation of LNG. Beginning this semester, the EPICS program is being revised to be a two semester sequence, rather than four, and will focus on project design.

### Research

While at CSM, I have been part of a number of research projects. The most prominent of them has been involvement with DERG, Drilling Engineering Research Group. More about DERG can be found under Bill Eustes' section of this newsletter. I helped complete the reservoir simulation portion of the multi-disciplinary study of the Hambert field, a three-year DOE funded study.

## Shameem Siddiqui

Hello everyone! You must be wondering who this guy is, with such a strange name. So, without further ado let me introduce myself. I joined the CSM Petroleum Engineering faculty as a Research Assistant Professor last July. Some of you may have seen me at CSM before that because I began working here as a Post-Doc in March 1995. Initially I worked



**Shameem Siddiqui**

for two years at our department's Foam Diversion Project, which was funded by six oil and service companies and the Gas Research Institute. I taught the laboratory section of PE 309 (Rock and Fluid Properties) last spring and this semester I am involved with PE 413 (Gas Measurement and Formation Evaluation). For these courses I am writing new lab manuals and adding new experiments that would make our graduates better equipped for facing the challenges of the oil industry.

Besides teaching, I am heavily involved in research. With Ramona Graves, I am currently working on the PERFORM projects. One of the areas in which I am directly involved is the use of foam to lift liquids from low-pressure gas wells. We have a 40-ft flow-loop designed specially for this study. I am also working to get enough support for the laboratory study of the use of foam to divert acid into low-permeability zones in radial cores.

This will be a continuation of the Foam Diversion Project. The evaluation of formation damage in horizontal wells is

another project for which I am trying to muster support. Our department has excellent laboratory facilities, and we have a team of talented graduate students and faculty members to respond to the petroleum industry's most pressing needs. I would like to take this opportunity to urge our CSM alumni to communicate with us regarding their field problems. By working closely with those of you who are working in the industry, we can find excellent solutions for our industry's problems. I can be reached by email at [ssiddiqu@mines.edu](mailto:ssiddiqu@mines.edu) or by phone at (303) 384-2087.

I received both my M.S. and Ph.D. degrees in Petroleum Engineering from Penn State (yes, I am a Nittany Lion, besides being a proud supporter of the Orediggers). Both my M.S. and Ph.D. research focused on the understanding of fluid flow through porous media—two- and three-phase relative permeabilities, Buckley-Leverett shocks, application of computerized tomography for visualizing and quantifying three-phase flow, and numerical simulation. My current research interests are in the area of EOR, Production and Stimulation. Before becoming a graduate student, I worked as a drilling and completions engineer for about seven years in Bangladesh and Algeria.

## Richard Christiansen

### Summer Field Session: Thanks to Alumni!

After a half-day organization session at CSM, students and professors flew from Colorado Springs to Las Vegas, and then drove to industry sites in sunny Southern California. We visited Hoover Dam, geothermal operations of CalEnergy near the Salton Sea, and we walked along the San Andreas fault with Craig Van Kirk. In LA, THUMS hosted the students for a day on White Island, and Vennoco showed us their operations adjacent to the ball field of the Beverly Hills High School. The students were invited by Pacific Offshore Operators to tour their platform that produces from the Carpenteria Field near Santa Barbara. In Bakersfield, we were welcomed at a picnic organized by CSM alumni. After a couple hours of visiting, the festivities blew to a finish with a dust storm! Chevron, Core Labs, and Schlumberger Wireline hosted visits in and around Bakersfield. Our visit to the Elk Hills operations was dramatically pre-empted by brush fires. After returning to Colorado, the group used another week to visit industry sites near CSM, and we drove south to see Amoco and Burlington Resource operations near Durango and Farmington. The students and professors owe much



**Richard Christiansen**

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thanks to the alumni and others who made these visits possible.

### **Research: Out with the Old**

Research with graduate students always intensifies as their desire to graduate increases. At the start of a research project, the professor is pushing, but at one and a half years into the program, most M.S. candidates start pulling the professors. For Ph.D. candidates, the change occurs after two or three years. With five of my graduate students finishing degrees this year, there has been a lot of pulling. Here is a sampling of their research products. In February, Ralph Nelms finished his thesis on the economics of drilling horizontal wells into fractured reservoirs. Then, right at the end of the Spring semester, Abdulrahman Al-Kraishi and Osamah Al-Omaid defended their theses. Abdul showed that placement of proppant in hydraulic fractures can be successfully studied with small laboratory experiments if they are properly scaled. Osamah demonstrated a visualization technique for measuring capillary pressure in centrifuge experiments. In a July defense, Hassan Al-Kandari described an interesting approach to measuring fluid properties for calculating the velocity of seismic waves. And finally, right at the end of August, Nelson Maan defended his experimental studies of compositional gradients in reservoirs.

Even with all these completions, there are still a few students remaining for me to torment. They continue to work on velocity of seismic waves through rock and fluids, on lifting of liquids from low productivity gas wells, on measurement of capillary pressure and relative permeability, and on transport of proppants in fractures. And I hope to find a student to continue the work started by Nelson on compositional gradients.

## **Jeffrey Henry** **President, SPE Student Chapter**

The 1997-98 school year, again looks to be promising for the student chapter here at Mines. The officers and I have been very busy working on details for upcoming events this year. Our primary focus, at this time, is getting ready for the 1997 Annual Technical Conference and Exhibition. This year we will have a large representation from CSM. There are 47 students going to make the trip, so all of you in attendance should consider yourselves forewarned!

We are also working very hard on continuing membership growth of the chapter. At the first meeting of the year approximately 85 members were present, which was wonderful to see. Last year there were sixty new members added to our roster. We realize that number will be hard to match, but

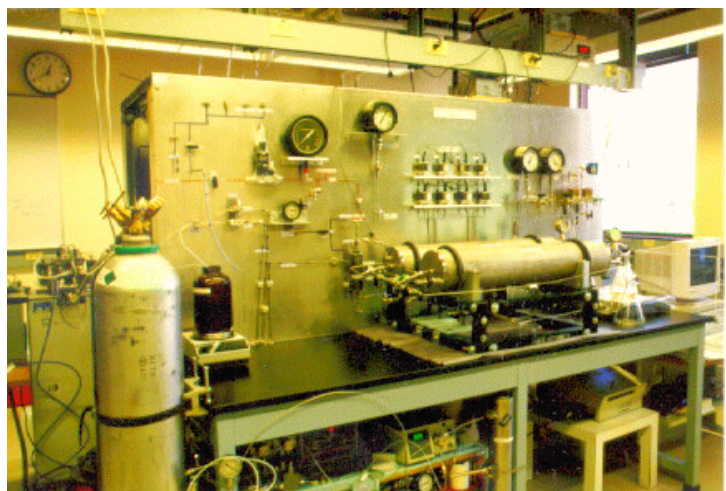
we are going to do our best to reach and hopefully exceed it. Also, the chapter plans to become more actively involved with the alumni and the Denver SPE Section. We are all looking forward to this year's Joint Session. It should prove to be a rewarding experience for everyone, so leave your calendars open! As of right now, it is tentatively set for the month of March. Also, don't let your golf clubs get rusty over the winter because we would like to host a four-person scramble golf tournament. The plan would be to host this sometime during the Spring semester with local alumni and members from the Denver Section joining us for a round of nineteen.

The upcoming school year looks to be very busy as well as exciting for our chapter. We encourage anybody to come visit us and partake in our activities. Feel free to contact me for meeting dates through the department, or by calling me at 215-0113.

## **Joseph Witt** **Chairman, AADE Student Chapter**

The student chapter of the American Association of Drilling Engineers (AADE) is entering its second year of existence at the Colorado School of Mines and is to date the only student chapter of the AADE. Chapter officers include Joseph Witt, Chairman; Daniel Riedel, Vice Chairman and Kelly Nickel, Secretary.

Our student organization strives to promote the disbursement of drilling technology from operators, contractors and research organizations to students who will eventually apply it to their work in industry. The organization also promotes social activities such as joint meetings with the Denver Chapter of the AADE, barbecues, movie nights (featuring films such as John Wayne's "Hellfighters") and drilling simulator training nights with an occasional meeting ending at the "Ace High."



*The 3000 psi Dual-Core Flooding Unit used for Foam Diversion Research*



*Scott Hickman (third from left in back row), the International SPE President, recently visited CSM and spoke to several petroleum classes. He is standing in the Alderson Hall lobby with some of our students, faculty and exchange students from the University of Leoben. The stained glass in the background is a major project funded by the State of Colorado Art in Public Places Program.*

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