Good Work

I read with interest the winter issue. It has the best format and content I have seen. Very interesting and thought provoking, especially about the energy issue. I am impressed with the background and ideas of John Poate, clearly a fine addition to the School’s management.

Stan Hadley
BSc Met E ’58

E-Days ‘Round the World Celebrations

As the one-person alumni association chapter in Ukraine, I kept my promise and went onto my balcony (dodging the clothes drying on the line – they don’t know what dryers are over here!), looked far, far, far away towards the Rockies and hoisted a glass of Obolon to salute y’all as I completed my “sentence” at Mines in 1972. I did likewise at 9 p.m. (noon in Golden), but with Bile (pronounced “beale”). Sorry, but Coors is unknown over here and, frankly, would be considered pretty tame compared to some of the local brews!

Tom Hamlyn
BSc CPR Eng ’72
A Conversation with President Scoggins
Bill Scoggins is optimistic about School’s future

Short Takes

Employee Organization Helps Students, Other Employees
ACE helps create a Mines community

Notes & Quotes

Athletics

Fuel Cell Research Center Opens on Campus
New laboratory provides central location for collaborative efforts

People Watch
Pearson ’59 Retires Again
Book Review: The Bomb in My Garden
by Mahdi Obeidi
Alumnus led Saddam Hussein’s nuclear weapons program
From Kabul to Golden
Proud Father Sends Greeting

Campus Group Provides Real World Serviced-Based Experiences
Students help develop innovative, practical solutions

Mines Seeks NSF Funding for Deep Underground Laboratory
Lab would be first of its kind in the country

The Petroleum Institute Graduates First Class
Mines-Abu Dhabi collaboration reaches milestone

New Energy Minor Offered
Interdisciplinary studies to provide broad background

Transforming Resources: The Campaign for Mines
An Unprecedented Success
Giving Back on the Back Nine
Staying Connected
In Memoriam
Historic Trail is Preserved
On the Move

About Our Cover: Three CSM scientists pose inside the new fuel cell research center recently opened on campus. From left, Tony Dean, William K. Coors Distinguished Professor in chemical engineering, Neal Sullivan, assistant professor of engineering, who is holding a fuel cell and Andrew Herrig, associate professor of chemical engineering. Photo by Tom Cooper.
Mines’ new president, Dr. M.W. “Bill” Scoggins, started his tenure June 19. I sat down with him in mid-July to get his first impressions and immediate agenda. Thinking quickly and smiling often, Dr. Scoggins answered my questions with obvious enthusiasm for the School.

How does it feel to serve as Mines’ 16th president?

This is the pinnacle of my career. It’s a great honor and also a great responsibility to protect and build upon the stellar reputation of this institution.

What have your first few weeks been like?

Busy. Very busy. First I had a short transition period where I overlapped with Dr. Trefry. Then came the Board of Trustees retreat, which provided an overview of what’s going on around campus with a special focus on our new budget process and research programs. Now I’m getting to know faculty and staff as well as meeting with key government leaders. I’ve also been meeting incoming students and their parents at Explore CSM. We’re all eager for the fall term to get underway.

What are your immediate challenges?

Finances. Although it’s relatively small, we must eliminate the current operating deficit. In addition, I want to ensure we effectively implement the new “All Funds” budget process. I aim to work effectively with the state, to augment state funding, look to our alumni and friends to augment funding, look to our alumni and friends to

What are your plans for the long term?

I’m impressed with Mines’ Strategic Plan and will move forward with its full implementation. My vision is to enhance our global stature as a major research university. As Mines’ international influence increases, I also want to encourage a more diverse student body and faculty. We need to increase the opportunities our students have to study abroad and encourage more international students to attend Mines. Having lived and worked abroad, I believe it is important for our students to develop a strong global perspective and an appreciation of other cultures. We’ll help develop that appreciation through coursework in the liberal arts and humanities. In addition, I want all Mines students to cultivate a commitment to service, contributing their knowledge and skills to society in exciting, innovative ways.

As Mines’ international influence increases, I’m also optimistic that we’ll see more collaborative opportunities like the one we have with the Petroleum Institute in Abu Dhabi, as well as more partnerships with other institutions of higher education, industry and government. A good example is the “Collaboratory,” a new Colorado renewable energy research collaboration that includes Mines, Colorado State University, the University of Colorado and the National Renewable Energy Laboratory. With our wealth of extraordinary talent and an effective multi-disciplinary approach to teaching and research, Mines is right on target to contribute significant solutions to the world’s most pressing problems.

Have you been doing any traveling?

I haven’t traveled yet, but I expect to begin a series of visits throughout the country in late August or early September when I’ll be meeting with alumni and friends of the School. To further spread the word about Mines’ outstanding programs and people, I also plan some international travel in the future.

Tell me a little bit about you and your family.

My wife, Karen, has a master’s degree in nursing from Texas Women’s University. She has worked and volunteered in the health care industry. We have three grown sons. Robert has an M.D./Ph.D. from the University of Virginia and is currently a Pulmonary/Critical Care Fellow at Vanderbilt. Robert and his wife, Maren, live in Nashville. Michael and his wife, Quanah, live in Tulsa where he is a third year law student at the University of Tulsa. James earned his degree in finance from Southern Methodist University last year and now works for Cameron in Houston. Karen and I both enjoy volunteer work and I’m sure you’ll see us involved in the Mines and Golden communities. We are enthusiastic sports fans, particularly at the college level, and you will see us—and hear us—supporting all the various Mines’ teams.

Are you and Karen settled in on campus yet?

We have received a wonderful welcome and are enjoying the friendliness of everyone on campus and in the community. We will feel really “settled in” when we move from our temporary accommodations into the president’s residence in late July. Dr. Scoggins, all of us here at Mines wish you well.

On June 19, 2006, Dr. Myles W. (Bill) Scoggins was appointed as the 16th President of Colorado School of Mines. Dr. Scoggins retired as a senior executive of ExxonMobil Corporation in 2004, with more than 34 years experience in the global oil and gas business. He earned his B.S. and Ph.D. in petroleum engineering from the University of Tulsa and his M.S. in petroleum engineering from the University of Oklahoma. Dr. Scoggins served on the Board of Trustees of the University of Tulsa prior to his presidential appointment at Mines. For more information about Dr. Scoggins see http://www.mines.edu/admin/president.
Director Selected
Angel Abbud-Madrid has been appointed director of the Center for Space Resources (CSR), a NASA Research Partnership Center based at Mines. Associated with Mines since 1998, Abbud-Madrid has more than 17 years of experience in space-related projects, including conducting experiments on a variety of NASA's low-gravity facilities, such as drop towers, parabolic-flight aircraft and orbiting spacecraft. In 2004 he received the prestigious NASA Astronaut Personal Achievement Award for his outstanding contributions to the success of astronaut corps for his outstanding contributions to the success of human space flight missions.

CSR brings together government, academia and industry to pursue the development of space technology, as well as the human and robotic exploitation of space and the utilization of its resources.

Honorary Doctorate
The Mining University of Leoben (MUL) in Leoben, Austria, has awarded Ramona Graves PhD Pet Eng ’82, Petroleum Engineering Department, an honorary doctorate degree in recognition of her significant scientific achievements. Graves is the first woman to receive this honor in the 166-year history of the university. Previous recipients include former U.S. President Herbert Hoover, the pioneer of petroleum engineering in the Austrian-Hungarian empire Hans Hoeser, Oil Minister of Saudi Arabia Sheikh Ahmed Zaki Yamani, and former Mines Professor Fred Poettmann. “The name Ramona Graves is a credit to the list of our honorary doctors,” said Brigitte Weinhardt, former vice president for public relations at the MUL.

Ramona Graves

Alumni Teaching Award
Described as “demanding” and “caring” by students and peers, Richard Wendlandt received this year’s Alumni Teaching Award in recognition of superior teaching at the undergraduate level. Wendlandt is a professor in the Geology and Geological Engineering Department. “His knowledge and passion for our science can be seen in every lecture, although it never seems that he is simply lecturing to us. Rather, Professor Wendlandt makes each class feel more like a conversation, encouraging questions and comments with every sentence,” said one of his students.

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Richard Wendlandt

Fall Sports Broadcast Schedule

Football

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Opponent</th>
<th>Score</th>
<th>Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept. 2</td>
<td>1 p.m.</td>
<td>Washburn</td>
<td>v.</td>
<td>Wshburn</td>
</tr>
<tr>
<td>Sept. 9</td>
<td>12 noon</td>
<td>Fort Hays State</td>
<td>v.</td>
<td>Fort Hays State</td>
</tr>
<tr>
<td>Sept. 16</td>
<td>12 noon</td>
<td>Adams State</td>
<td>v.</td>
<td>Adams State</td>
</tr>
<tr>
<td>Sept. 23</td>
<td>12 noon</td>
<td>Chadron State</td>
<td>v.</td>
<td>Chadron State</td>
</tr>
<tr>
<td>Sept. 30</td>
<td>12 noon</td>
<td>Oklahoma Panhandle State</td>
<td>v.</td>
<td>Oklahoma Panhandle State</td>
</tr>
<tr>
<td>Oct. 7</td>
<td>1 p.m.</td>
<td>New Mexico Highlands</td>
<td>v.</td>
<td>New Mexico Highlands</td>
</tr>
<tr>
<td>Oct. 17</td>
<td>12 noon</td>
<td>Fort Lewis</td>
<td>v.</td>
<td>Fort Lewis</td>
</tr>
<tr>
<td>Oct. 20</td>
<td>1 p.m.</td>
<td>Nebraska-Kearney</td>
<td>v.</td>
<td>Nebraska-Kearney</td>
</tr>
<tr>
<td>Nov. 4</td>
<td>12 noon</td>
<td>Mesa State</td>
<td>v.</td>
<td>Mesa State</td>
</tr>
<tr>
<td>Nov. 11</td>
<td>1 p.m.</td>
<td>Western State</td>
<td>v.</td>
<td>Western State</td>
</tr>
</tbody>
</table>

Volleyball

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Opponent</th>
<th>Score</th>
<th>Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept. 17</td>
<td>7 p.m.</td>
<td>Utah</td>
<td>v.</td>
<td>Utah</td>
</tr>
<tr>
<td>Oct. 13</td>
<td>7 p.m.</td>
<td>Nebraska-Kearney</td>
<td>v.</td>
<td>Nebraska-Kearney</td>
</tr>
<tr>
<td>Oct. 20</td>
<td>7 p.m.</td>
<td>Metro State</td>
<td>v.</td>
<td>Metro State</td>
</tr>
</tbody>
</table>

Please note that all broadcasts are subject to change without notice.
Congratulations!

Siegfried S. Hecker, director emeritus of Los Alamos National Laboratory, was the speaker at May commencement ceremonies honoring 325 graduates. Honorary degrees were awarded to Hecker and Stanley Dempsey, chairman and chief executive officer of Royal Gold, Inc. John and Lynne Golden, recently executive officer of Royal Gold, Inc. Distinguished Medalists. Distinguished Graduates. Honorary degrees were awarded to Hecker and Stanley Dempsey, chairman and chief executive officer of Royal Gold, Inc. A Mines Medal went to Louie Wildeman, retired as lead energy specialist at the World Bank. A Mines Medal went to Louie Wildeman, retired as lead energy specialist at the World Bank. Distinguished Achievement Medals were presented to:

- James R. Daniel Geol E ’81, executive vice president of Muffin Drilling Company
- Olu Akin Oduolowu MSc Geol ’74, PhD Min E ’78 recently retired as lead energy specialist at the World Bank
- Donald D. Schwemmer Jr. MSc Met Eng ’78, president of AMET, Inc.

A Mines Medal went to Louise Wildeman, retired as director of recruiting and cooperative education and assistant director of the Career Center at Mines. A Mines Medal went to Louise Wildeman, retired as director of recruiting and cooperative education and assistant director of the Career Center at Mines.

Dean’s Excellence Award

In recognition of significant and meritorious achievement in teaching and scholarship, Jeff Squier BSc ME Phy ’84, MSc Phy ’96 was presented with the Dean’s Excellence Award at the Annual Faculty Convocation in April. A professor in the Department of Physics, Squier has brought creativity and enthusiasm to the reform and delivering of the electronics laboratory sequence. According to Nigel Middleton, executive vice president for Academic Affairs and dean of faculty, “One of the central themes of his reform effort has been to bring research issues into the course curriculum making the course more challenging, interesting and relevant.”

Women in Engineering

In the summer 2006 issue of PRISM, published by the American Society for Engineering Education, Mines was ranked 16th among U.S. engineering schools in the number of women awarded engineering bachelor’s degrees in 2004-2005. Mines was ranked 5th in the percentage of engineering bachelor’s degrees awarded to women in 2004-2005.

Special Symposium for VP

A special Materials Research Society (MRS) symposium was held in San Francisco in April to recognize John Poate’s contributions to materials research over his career. Poate is vice president for research and technology transfer at Mines. All invited speakers at the symposium, held during the MRS spring meeting, had worked with Poate during the years. The bulk of Poate’s research career was at Bell Labs where he was head of the silicon processing research department. He also collaborated with scientists worldwide, mentoring young scientists at critical stages in their careers.

Athletics Program Nationally Ranked

The June 22 issue of USA TODAY included the U.S. Sports Academy Directors’ Cup standings, recognizing the best overall collegiate athletics programs in the country, with Mines ranked 22nd in Division II.

The USA Directors’ Cup was developed as a joint effort between the National Association of Collegiate Directors of Athletics (NACDA) and USA TODAY. The USA Directors’ Cup was developed as a joint effort between the National Association of Collegiate Directors of Athletics (NACDA) and USA TODAY.

National Donor of the Year Award

Erika and John Lockridge Geol E ’32 were honored for their outstanding support of Mines athletics at the 13th Annual Convention of the National Association for Athletic Development Directors (NAADD) held in June in New Orleans. The Lockridges received the 2006 NAADD College Division Donor of the Year Award in recognition of the more than $4 million they have donated to Mines’ athletic programs.

NAADD is the first organization of its kind to provide educational and networking opportunities, enhancement of acceptable operating standards and ethics, and establishment of the overall prestige and understanding of the profession of athletics development and fundraising. The NAADD Donor of the Year Award has been presented to leading philanthropists in university athletics since 1995.
Employee Organization Helps Students, Other Employees

Creating a connected learning community at Mines was one of President John Trefny's legacies to the School. The Association of Classified Employees (ACE) — between 250 and 260 School staff — organized in 2003 to pursue that goal. "We try to be proactive in finding ways to get classified staff together to know each other," says Debbie Cockburn, current chair of the council. "We're trying to build a sense of community.

"We started out kind of slow," says Dick Porter, vice chair, "but interest has been building. That was our expectation." ACE's council of five — one person each from Plant Facilities, Student Life, Academic Affairs, Finance and one person at-large — is elected by the classified employees to serve two-year terms. The group meets in the Arthur Lakes library the last Friday of every month to discuss ways to engage the classified employees in the Mines community. Anyone is welcome to attend.

One of the first projects the group undertook was the culmination of Expand Your Horizons, a series of brown bag lectures held in a classroom over the lunch hour. These have included members of the police department giving pointers to avoid identity theft, a slide show from Dr. Bob Siegrist on a recent mountain-climbing identity theft, a slide show from Dr. Bob Siegrist on a recent mountain-climbing expedition, a talk on the Washington during the Bill Clinton presidency. Lectures are announced in an e-mail distributed newsletter called Campus Briefs.

The group has also started an annual social event held in Friedhoff Hall. The themed event includes entertainment, food and games. A talent show includes music, vocalists and this year, a harpist. "Dr. Trefny has been very supportive right from the beginning," says Porter. "It's been very important to have that support that comes right from the top.

Every year at Celebration of Mines, ACE holds a garage sale, mainly for students. People throughout campus donate household items that are then sold cheaply. Students get help furnishing their apartments and the money that's raised goes toward the ACE in the Hole Fund. "This is a last resort fund for students or classified employees who have key financial needs that are not being met by any other program," says Porter. The first year, $700 was awarded to a graduate student whose husband was diagnosed with cancer. The second year, $1,100 was awarded to an employee who had become disabled.

A fourth program, just getting started, is Helping Hands. ACE is coordinating a network of employee volunteers to help others on campus. "It's to help each other get tasks done," explains Cockburn. "It's the kind of thing you'd ask your next-door neighbor for help with." The job of coordinating offers and requests will be handled by a rotating group.

More information about the group, including minutes of meetings and quarterly newsletters, can be found online at www.mines.edu/fac_staff/ace/.

Alumni notes & quotes

Dagdelen Honored by SME

The Society for Mining, Metallurgy and Exploration (SME) has awarded Kadri Dagdelen BSc Min '76, MSc Min '80, PhD Min '85 a professor in SME's Mining Engineering Department, its Mining and Exploration (M&E) division's distinguished service award. Dagdelen teaches and performs research in the areas of ore-reserve estimation, geostatistics, open-pit mine planning and optimization. He is a recognized expert in geostatistical resource estimation, open-pit mine planning, cutoff grade and scheduling optimization and serves as a technical consultant to worldwide mining projects.

Before joining CSM in 1992, Dagdelen was manager of technical services at Homestake Mining. He has worked with SME's M&E division since 1989 when he chaired his first annual meeting session on open-pit mine planning. Since then, he has served on a number of other committees. He is currently a member of SME's board of directors.

Johnson Honored for Volunteer Work

Donald L. Johnson Met E '50, MSc Eng '56 was awarded the George B. Harrington Jr. Award for Outstanding Volunteer of the year by the National Park Service (NPS) in May. Johnson has volunteered with the NPS's submerged resources program for more than seven years. He has provided scientific information about the condition and continued possible deterioration of such valuable historic resources as the USS Arizona and a B29 aircraft submerged in Lake Mead. Johnson helped design and implement a corrosion monitoring program on the hull of the Arizona.

"Don't research is wholly innovative and provides a minimum-impact, cost-effective methodology that will have applications through the National Park System and to historic iron and steel shipwrecks worldwide," said Larry Murphy, chief of the NPS's Submerged Resources Center. Johnson was also praised by the director of the USS Arizona Preservation Project. "His enthusiastic and untiring efforts on behalf of NPS managers have led to a new understanding of Arizona's deterioration process, and have given NPS researchers new tools to monitor and preserve an American icon."

Johnson's research has also been applied to a Japanese midget submarine submerged off the coast of Pearl Harbor and the Civil War submarine Explorer, located in the Bay of Panama.

Burger Writes Book on Caving

Paul Burger BSc Geol Eng '91, MSc Geol E '99, geologist-hydrologist for Carlsbad Caverns National Park, has published a second book, Cave Exploring: The Definitive Guide to Caving Technique, Safety, Gear and Trip Leadership. Burger is a veteran caver who has explored and mapped caves in the western United States, most notably Letchuguilla Cave (featured in the Winter 2000 issue of Miner's magazine). His first book, Deep Secrets, was about that cave, which is the deepest limestone cave in the country. Recently Burger has been part of several international caving expeditions to Mexico and China. According to the book jacket, "Cave Exploring sheds a light on the unique underground world of rock formations, flowing rivers, and crawling critters...Burger clearly and carefully describes the techniques needed to safely climb, crawl, tread softly and swim in the quest for underground discovery." The book is published by Falcon Guide.
Junior Golfer Mark Vallee Enjoys Dream Season

CMS junior golfer Mark Vallee enjoyed one of the finest seasons by an individual at CMS. The Louisville, Colo., native earned his second consecutive selection to the All-RMAC Teams, which were contested May 16-19 in Daniels, W.Va. However, he lost out in a sudden death playoff to Sean Packer of Western Washington.

In addition to his success on the course, Vallee also excels in the classroom as he sports a 4.0 grade point average. For his efforts, he was named to ESPNU’s The Magazine Academic All-District VII College Division First Team and also advanced to the national ballot where he is eligible to earn Academic All-American accolades.

CSM Athletics Ties for Second in RMAC/Wells Fargo Cup

The Department of Athletics tied for second place in the the Rocky Mountain Athletic Conference (RMAC) All-Sports Competition/RMAC Wells Fargo Cup. It is the highest finish for CSM, eclipsing last year’s sixth place finish.

Nebraska-Kearney won the overall title for the 11th straight year with 770 points. CSM and Adams State tied for second place with 655 points, followed by CSU-Pueblo (643), Metro State (640), Fort Lewis (635), Fort Hays State (630), Mesa State (600), Regis (590), UC-Colorado Springs (580), Western State (550), New Mexico Highlands (548), Chadron State (508) and Colorado Christian (423).

The Wells Fargo Cup is awarded to the school that accumulates the most points over the year based on its teams’ outcomes in the RMAC’s four “core” sports – football/men’s soccer, men’s basketball, women’s basketball, volleyball – along with four “wild card” sports (two men’s and two women’s). CSM scored 340 of its points in the four core sports, 150 in two women’s wildcard sports (cross country and outdoor track and field) and 165 in two men’s wildcard sports (football and cross country). The 340 points in the “core sports” category was second best in the RMAC behind UNK’s 380.

Total points are calculated based on the teams’ finish in RMAC tournaments or final regular season standings.

Bruce Allison Inducted into RMAC Hall of Fame

Former Mines Director of Athletics Bruce Allison has been elected as a member of the 2006 Rocky Mountain Athletic Conference Hall of Fame. He was inducted at a dinner and ceremony in Colorado Springs July 8.

Allison served as the director of athletics from 1976-95 and also began the lacrosse program at CSM. He was the head lacrosse coach from 1976-91 and again from 1992-94.

Allison was instrumental in the inception of women’s athletics being sanctioned for intercollegiate athletics for the 1976-77 season and was a large reason the sport of lacrosse was introduced to the western region of the United States.

Allison joins Lloyd Madden ’41 and Fritz Brennan as CSM inductees into the RMAC Hall of Fame.

Heather Beresford has earned eight All-American honors during her track and cross country career.

Oredigger Track and Field Teams Shine at Nationals

Once again, the Mines track and field teams proved that they are among the best in Division II.

At February’s NCAA Division II Indoor National Championships contested in Boston, the men’s team placed 14th behind several strong performances. The team came back in the spring and tied for 18th place at the Outdoor National Championships contested in late May in Kansas.

Meanwhile, the women’s team captured 10th place at the Indoor Nationals and tied for 33rd at the Outdoor Championships.

CSM had five players earn All-RMAC honors, including junior pitcher Matt Thome who was a Second Team pick. Junior utility player John Naccarato, sophomore second baseman Caleb Rudkin, sophomore leftfielder Michael Svejcar and freshman designated hitter Stefan Revielle were all named to the honorable mention team.

One of the highlights of the season came on March 6 when the Orediggers swept a doubleheader from Western Oregon, a team that ended the year as the No. 1 ranked team in the West Region. CSM won 9-4 and 9-6.

Leading the way for the women’s team was senior Heather Bresford who was the national runner-up in the mile run at Indoors for the second straight year. Her school-record time of 4:47.68 was just .06 seconds behind the winner.

Beresford also placed third in the 1,500-meter run at Outdoor Nationals to garner All-American honors.

In addition, she helped propel the distance medley relay team to a runner-up finish at Indoor Nationals in a School-record time of 1:13:50. Joining her on the team were seniors Hannah Davy-Briggs and Serena Gardiner and junior Melanie Peddle.

On the men’s side, senior Joel Hamilton earned four All-American honors as he placed sixth in the 5,000-meter run at both the Indoor and Outdoor Championships and third in the 10,000-meter run at Outdoor.

Hamilton was also a key component for the distance medley relay team, which placed fourth in a School-record time of 9:57.14 at Indoor Nationals to place fourth.

Other team members were juniors Larry McDaris and Ryan Miles and freshmen Chris Fitzpatrick.

McDaris also had a strong season individually as he recorded a pair of All-American honors. He was third in the mile run at Indoor Nationals and also placed sixth in the 1,500-meter run at Outdoor Nationals.

Rounding out the All-American performances was Miles who placed sixth in the 3,000-meter steeplechase during the Outdoor Championships.

Joel Hamilton earned All-American honors in cross country, indoor and outdoor track this year.
Fuel Cell Research Center Opens on Campus

By Maureen Keller

Mines is now at the forefront of fuel cell technology in the region thanks to the opening in May of the Colorado Fuel Cell Center (CFCC) located on campus. Mines was chosen to house the lab, the first of its kind in the state. About $3 million is being invested in equipment purchases and in expanding the laboratory in the general research building, which also houses the Geology Museum and the Center for Space Resources. Funding was provided by the Governor’s Office of Energy Management and Conservation (OEMC), the School, the Gas Technology Institute, Versa Power Systems Inc. and the National Renewable Energy Laboratory (NREL).

The U.S. Department of Energy is encouraging the study of fuel cell technology with a $1 billion initiative, FutureGen. By 2015, the U.S. Department of Energy would like to have a 100-megawatt fuel cell running as part of a coal-burning power plant. One of the CFCC partners, TerraPower Systems in Colorado, is participating in FutureGen. But even by next year, Kentrick says, the fuel cell industry should be producing fuel cells that can power laptops and cell phones.

The CFCC already has projects underway in three fuel cell research areas. Associate Professor Andy Fleming is developing new high-performance polymers that will improve the power output and the longevity of fuel cells designed for portable and transportation applications. Professor Tony Dean is studying fuel processing with the goal of making fuel cells compatible with a wide range of alternative and renewable fuels. Professor Robert Key is designing high-temperature fuel cells and cell components to develop new modeling and simulation tools for improving performance and lowering costs.

Currently 10 graduate and undergraduate students are performing research on a variety of externally funded projects. Eventually, the laboratory will be able to accommodate up to 25 researchers. The CFCC is funded by the governor’s OEMC with matching funds from the center’s partners. There is hope that within two years, the CFCC could become self-sustaining through research and development contracts and consulting agreements.

As the market for fuel cells starts to grow, the price will come down,” predicts Kentrick. The U.S. Department of Energy is encouraging the study of fuel cell technology with a $1 billion initiative, FutureGen. By 2015, the U.S. Department of Energy would like to have a 100-megawatt fuel cell running as part of a coal-burning power plant. One of the CFCC partners, TerraPower Systems in Colorado, is participating in FutureGen. But even by next year, Kentrick says, the fuel cell industry should be producing fuel cells that can power laptops and cell phones.

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But some things haven’t changed. “Students are basically the same,” says Bob. “They’re goal-oriented and have the proper perspective on class work and athletics.” In addition to coaching varsity sports, Bob also was the School’s intramural director for 18 years. Bob, fit and active in his 70s, believes that athletics improve the quality of life.

“I believe athletics are important because they really give the players a chance to relax after school without the stress of studies. It makes their minds more receptive,” says Pearson. Bob also thinks athletics are important for older people. He has coached senior women’s basketball in Golden and took his teams to the Senior Olympic Championships in Pittsburgh, Pa., last year. He also plays in senior volleyball and softball leagues.

While on the staff of the Alumni Association, Bob’s job was to develop section activities. He took an active role in encouraging alumni to plan local events to keep connected to the School and each other. “The highlight of the job was the continued opportunity to visit and reminisce with classmates and previous students or players from my teams,” he says. Earlier this year, Bob organized the first E-Days “Round the World event, which resulted in celebrations in more than 40 locations around the world on the same day.

Now that Bob will have more free time, he plans to go fishing more often. He’s also considering attending his Navy ship crew’s reunion. Bob served as a “tin can sailor” for three years during the Korean War aboard the USS Fletcher. From his ship, he witnessed the first hydrogen bomb test at Eniwetok in 1952. He watched through the ship’s rangefinder and saw the mushroom cloud develop. “It went up fast,” he recalls. “It was quite a sight.”

Bob was honored by the School with a Mines Medal in 2001 and by the Alumni Association with the Outstanding Alumnus Award in 2005. Although he’ll spend more time away from campus, you’ll probably still be able to find him at home games, rooting for the Orediggers.

Pearson ’59 Retires Again

Bob Pearson PE ’59 retires from the Alumni Association this year after seven years on the job. In 1998, he retired from the School, where he coached various athletic teams for 32 years, winning six conference championships along the way. Before that, he was a student at the School, graduating in 1959. But Bob’s connection goes back even further. He could see the “M” from his bedroom window growing up in Wheat Ridge.

Bob’s life at Mines spans the administration of six School presidents and the graduation of more than 20,000 students. When he attended Mines, enrollment was mostly male and only about one-fourth the population it is today. Hazing, while on the wane, still occurred and new students were “pantsed.” “Most freshmen ran around the first week without trousers,” Bob remembers. “The all male enrollment lent a more raucous reputation to the School. I appreciate the difference now.”

While on the staff of the Alumni Association, Bob’s job was to develop section activities. He took an active role in encouraging alumni to plan local events to keep connected to the School and each other. “The highlight of the job was the continued opportunity to visit and reminisce with classmates and previous students or players from my teams,” he says. Earlier this year, Bob organized the first E-Days “Round the World event, which resulted in celebrations in more than 40 locations around the world on the same day.

Now that Bob will have more free time, he plans to go fishing more often. He’s also considering attending his Navy ship crew’s reunion. Bob served as a “tin can sailor” for three years during the Korean War aboard the USS Fletcher. From his ship, he witnessed the first hydrogen bomb test at Eniwetok in 1952. He watched through the ship’s rangefinder and saw the mushroom cloud develop. “It went up fast,” he recalls. “It was quite a sight.”

Bob was honored by the School with a Mines Medal in 2001 and by the Alumni Association with the Outstanding Alumnus Award in 2005. Although he’ll spend more time away from campus, you’ll probably still be able to find him at home games, rooting for the Orediggers.
When the United States invaded Iraq in February 2003, the mission was to find weapons of mass destruction Saddam Hussein was allegedly developing. The extensive search found nothing. Nothing until Mahdi Obeidi PRE '67 turned himself in to American intelligence and gave up the nuclear secrets he had buried in his backyard.

In The Bomb in My Garden, Obeidi tells the story of his rise to prominence in Iraq as the mastermind of Saddam Hussein’s nuclear weapons program. The book reads like a thrilling spy novel despite being full of technical details. Obeidi describes how a nuclear program can be started and kept hidden from the world. Whether using his charm or Hussein’s seemingly endless supply of money, Obeidi managed to obtain all the classified information he needed to jumpstart a nuclear program and found foreign associates willing to manufacture parts. Hussein’s nuclear program ended with the first Gulf War, but he kept alive his hope that he would eventually restart it. What he might have done with nuclear weapons is not known.

In addition to explaining the uranium-enrichment program necessary to manufacture nuclear weapons, Obeidi gives us insight into life under a brutal and increasingly out-of-touch dictator. Obeidi, educated at the Colorado School of Mines in the 1960s, planned to be a petroleum engineer, then turned his attention to nuclear energy. As he rose to prominence in his profession, he also gained the notice of Hussein and his regime, particularly son-in-law Hussein Kamel. It was Kamel’s vision and energy that drove Iraq’s secret nuclear weapons program. Kamel set impossible deadlines for Obeidi and his staff and backed them up with threats. At one time, Obeidi and his staff were confined to a laboratory for six months, as if in prison, to accomplish Kamel’s goals.

Hussein’s nuclear program is long defunct but Obeidi cautions that the issues remain. “The lesson is simple: knowledge is the first and most important ingredient for a covert weapons program and once nuclear know-how goes underground it is difficult to control,” he writes in the epilogue. Chilling words from a former Mines student who buried deadly secrets in his own backyard.

By Maureen Keller

From Kabul to Golden, Proud Father Sends Greeting

When Devin Mills BSc Pet ’06 graduated from Mines in May, his father, Jim Mills, couldn’t attend the celebration in Golden. Jim Mills, a two-term civilian volunteer with the U.S. Army Corps of Engineers, Afghanistan Engineer District, works on reconstruction projects in Afghanistan.

Instead, the proud father listened on a cellphone as his wife described their son walking across the stage at the commencement ceremony. He told friends in Kabul that Devin had earned a degree from “the best school in the United States.” They helped him create a large banner for the occasion and gathered together for a photograph that appeared not only in Devin’s email, but also in The Denver Post.

Devin had scholarships in both track and football at Mines. He has accepted a position as a drilling engineer with Occidental Petroleum Corporation in California. The Mills family lives in Santa Maria, Calif.
Marquez Hall to Raise Mines’ Profile in Petroleum Engineering

Mention Petroleum Engineering at Mines and top-notch teaching and research come to mind. The department is noted for its international student body, its interdisciplinary rigor, and the high starting salaries its graduates attract. Soon, the department will enjoy another mark of distinction—a new, state-of-the-art facility that will advance the School’s capability to continue finding viable solutions to the world’s energy needs.

Named in honor of Tim Marquez BSc Pet Eng ’80 and Bernadette Marquez who provided a lead $10 million gift for the $40 million project, Marquez Hall will stand at the corner of 16th and Arapahoe Streets, on the site currently occupied by the Annex building. The location is optimal, considering its proximity to the computing center, which will be moved into the Center for Technology and Learning Media (CTLM) upon completion of that building’s phase II construction. In addition, the new building will be constructed adjacent to the department’s current home in Alderson Hall, allowing Petroleum Engineering (PE) to continue using some of its more recently updated laboratories.

“Marquez Hall will provide Colorado School of Mines with the physical infrastructure to reinforce its global reputation for excellence in petroleum engineering teaching and research,” noted Dr. Craig Van Kirk PhD Pet Eng ’72, head of the Petroleum Engineering department. Over the last five years PE enrollment at Mines has nearly tripled to over 330 students, placing constraints on teaching and research in Alderson Hall, designed for only 150.

At 73,000 square feet, Marquez Hall will increase PE’s laboratory, classroom and academic office space threefold. Teaching laboratory space will grow from 6,300 to 11,000 square feet, and research lab space square footage will nearly triple, from 5,000 to 14,000. Customized classroom space totaling 3,350 square feet will incorporate advanced instructional technology for active learning.

As demand for petroleum engineers escalates, the new facility will enable the department to accommodate anticipated future enrollment growth, set at a target of 400 students. Throughout its 132-year history, Mines has been integral to the advancement of the energy industry, generating outstanding graduates and conducting leading-edge research, noted Mines President Bill Scoggins. He added, “With the completion of Marquez Hall, we will have the capacity to increase both the quantity and quality of our petroleum engineering graduates and to expand our research technology significantly. These are steps that will ensure our leadership in this vital field throughout the 21st century.”

Marquez Hall will extend the School’s specialized approach to engineering education, with unique features conducive to active learning and interdisciplinary collaboration. “Smart classroom” technology will support interactive teaching and learning, allowing professors to move beyond traditional lectures. Similar technology is incorporated throughout CTLM, and has facilitated the development of groundbreaking techniques for teaching introductory physics courses. Designated classroom and laboratory space will also accommodate interdisciplinary courses jointly offered by Petroleum Engineering, Geology and Geophysics.

Visualization technology, critical to educating petroleum engineers and conducting advanced research, will be integrated throughout Marquez Hall. The 3-D and 4-D models produced through visualization provide comprehensive earth models to ensure precise and efficient reservoir management. Visualization labs will create a key advantage for Mines over competitor institutions, keeping the PE department abreast of best practices in the petroleum industry and enabling the School to develop more effective research partnerships.

A 50-seat visualization laboratory will form the centerpiece of the facility, with 10 six-station group annexes located throughout the building to house smaller scale visualization equipment. While Petroleum Engineering, Geology, and Geophysics have the most critical need for this technology, visualization capabilities will enhance other disciplines on campus as well. The visualization laboratory will also add to the School’s outreach for K-12 teachers and students. Simulated earthquakes and volcanoes will provide a comprehensive view of earth processes to complement science and geography instruction.

Major gifts to the Campaign for Marquez Hall will be recognized with commemorative tributes throughout the building and its exterior courtyard. To view the list of gift recognition opportunities, please visit the PE department website at: www.mines.edu/academic/petroleum/

Individuals and corporations interested in supporting the Campaign for Marquez Hall may contact:

Dr. Craig Van Kirk
Petroleum Engineering Department Head
303.273.3749
cvankirk@mines.edu

or

Peter Han
Vice President for Institutional Advancement
303.273.3130
phan@mines.edu

Tim and Bernadette Marquez’s extraordinary gift of $10 million has launched the Campaign for Marquez Hall. A major oil and gas corporation has also committed $2 million toward the project. The School seeks to raise the additional funds through private philanthropy from alumni, corporations and foundations, whose support is increasingly essential to higher education financing.

Phish@mines.edu
Colorado School of Mines graduate engineering student Richard Waller BS Eng ‘06 made the final adjustments to a compact filter that was designed to remove arsenic from drinking water. The family that owned the well had never been able to drink their water with the confidence that they weren’t poisoning themselves. Tests showed levels of naturally occurring arsenic in their primary water source more than 10 times the level considered safe in American domestic water systems.

This family doesn’t live in some Third World country. In fact, they are residents of a small community in Colorado’s San Luis Valley. The median family income in Conejos County is less than half the national average. More than a quarter of county residents live below the poverty level, over twice the U.S. average. Many families have lived here since long before Colorado became a state. They are part of an agricultural tradition that stretches back hundreds of years and are very proud of their culture — one that values self-sufficiency and entrepreneurship.

Conejos County is typical of the communities in which iCAST (International Center for Appropriate and Sustainable Technology) works. iCAST is an independent not-for-profit organization based on the School of Mines campus. Its mission is directly related to the School’s educational goals: to develop and commercialize innovative, practical technologies and to provide real world service-based experience to students.

For iCAST, its technology development and commercialization activities are defined in the organization’s name. Appropriate technologies typically are technically simple, small scale and inexpensive. These characteristics make iCAST’s work ideal for communities that don’t have access to the financial and technical assets that are typically available in more affluent, urban settings. Appropriate technologies use existing local resources to meet local needs without depleting those resources more quickly than can be renewed and without resulting in harmful emissions or waste. Ideally, these technologies also provide the basis for new economic opportunities, new technical assets that are typically available in more affluent, urban settings.

The concept of appropriate technologies originated in developing countries. The lack of available capital and the problems associated with advanced technologies in rural communities were its catalyst. iCAST founder and Executive Director Ravi Malhotra started this work in India prior to moving to the United States in 1992 with a degree from the Indian Institute of Technology. After receiving a master’s degree in engineering and an MBA from the University of Texas–Austin, Malhotra moved to Colorado. While visiting Native American and rural communities, he realized the needs of many rural American communities were similar to those he experienced in India. The result was the creation of iCAST.

For the past three years, iCAST has worked with local partners to develop projects and provide access to the technical and financial assistance necessary for economic success, environmental health and a better quality of life. Basic to this work and the iCAST mission is the concept of service learning. iCAST works with teams of students, faculty and subject-matter experts acting as mentors to identify and analyze the feasibility of various solutions to the problems facing the community. Student interns develop new technology solutions, conduct economic and resource studies, create business plans and write grant applications. In addition to practical experience, students gain teamwork and communication skills, and exposure to the principles of sustainable development to take into their professional careers.

Community projects provide opportunities for Mines students participating in EPICS and Senior Design programs. Like Richard Waller, many iCAST interns are working on advanced degree programs. “The relationship between the School of Mines and iCAST has been a great advantage to both organizations,” according to Robert Knecht Met E ’70, MSc CPR Eng ’75, PhD CPR Eng ’78, director of the EPICS program. “We have access to projects in which students can apply their learning in a way that benefits themselves and communities. In return, iCAST gets access to some of the brightest students in the country.”

Another Mines alumnus, Robert Benson PhD Geol ‘97, associate professor of biology and earth sciences at Adams State College in Alamosa agrees. “iCAST provides opportunities for our students to discover new local opportunities while they serve their communities. Perhaps these opportunities will allow them to stay in the San Luis Valley.”

International Center for Appropriate and Sustainable Technology

For more information about how alumni, students and faculty can make a difference by becoming involved with iCAST, please visit www.ic-ast.org or contact Ravi Malhotra at (303) 273-3044 or savvi-r@ast.org.

Paul Aldretti is director of community programs for iCAST.

By Paul Aldretti
Mines Seeks NSF Funding for Deep Underground Laboratory

Mines could be at the forefront of underground science and engineering if the National Science Fund (NSF) chooses the Henderson Mine near Empire, Colo., as the site of its Deep Underground Science and Engineering Laboratory (DUSEL). Mines is part of the Henderson Underground Science and Engineering Project (HUSEP), a collaboration between industry, higher education, state and local officials, and community members, that is proposing to build a 7,400-foot deep underground laboratory where testing could be done without interference from cosmic rays.

During the past few decades, large-scale underground physics laboratories in Canada, Europe and Japan have made major discoveries in science, including neutrino physics. But no comparable labs exist in the United States. In February 2005, the NSF requested proposals for such a lab facility so that the United States might re-establish leadership in underground science and engineering. The largest and deepest underground laboratory in North America, SNOLab, is located in the Creighton Mine in Canada. The proposed Henderson DUSEL would be deeper than the Canadian laboratory by 600 feet and would be much larger with space for 150 researchers and staff.

Life on the surface of the Earth today may trace its origins back to microorganisms that sought refuge deep underground in the distant past. During the past few decades, large-scale underground physics laboratories in Canada, Europe and Japan have made major discoveries in science, including neutrino physics. But no comparable labs exist in the United States. In February 2005, the NSF requested proposals for such a lab facility so that the United States might re-establish leadership in underground science and engineering. The largest and deepest underground laboratory in North America, SNOLab, is located in the Creighton Mine in Canada. The proposed Henderson DUSEL would be deeper than the Canadian laboratory by 600 feet and would be much larger with space for 150 researchers and staff.

The Henderson DUSEL would be a multi-disciplinary underground research center that would house a variety of advanced experiments in physics, geosciences, mining and engineering, and the biosciences and would have a lifespan of at least 30 years. Experiments would explore the mysterious nature of neutrinos and the stability of protons that are critical in establishing a unified theory of particle physics; shed light on processes in supernovae and black holes; and provide crucial clues to the search for extraterrestrial life; examine properties of the deep rock itself; and establish methods of constructing deep, large and safe underground caverns for a variety of future uses.

Understanding the structure of the Earth tells us how natural resources like the watershed and ores are formed and how the planet surface continues to evolve through tectonic activity.

The proposed Henderson DUSEL would be deeper than the Canadian laboratory by 600 feet and would be much larger with space for 150 researchers and staff. If chosen as the site, both the Henderson Mine and the School would benefit. “The concept of ‘sustainable development’ in the mining industry is very important now,” says Kuchta, “and it has become very important to figure out how to reuse mine sites once a mine is depleted.” Either Henderson must remove the infrastructure or find a new use for it when operations are expected to shut down in about 20 years. As the largest employer in Clear Creek County, the mine already has a highly trained staff with an outstanding safety record. “Henderson has a phenomenonal safety record and program, which we can leverage” notes Kuchta. “Most of the scientists that would be using the facility don’t know much about mine safety but the Henderson people are experts.”

Mines will be part of the team that will manage the facility if Henderson is selected for DUSEL and the School will have the opportunity to become involved in many exciting research projects. Faculty, graduate students and even undergraduates will be able to work and conduct research in a world-class facility. Being associated with DUSEL could bring top researchers and professors to the School. The HUSEP collaboration conceptual design report was submitted to the NSF in late June and a decision is expected later this year.
The Petroleum Institute of Abu Dhabi, established in 2001 and for which CSM has been providing leadership, graduated its first class of 42 bachelor of science degrees in chemical, electrical, mechanical, petroleum, and petroleum geosciences engineering in June.

The PI is the first special purpose Western-modelled higher academic engineering college in the Gulf region. Conceived by the Abu Dhabi National Oil Company (ADNOC) and funded by a consortium of oil companies, CSM has provided academic leadership for the curriculum, led the development of facilities and academic infrastructure and helped recruit faculty. The long-term goal is to achieve international accreditation.

When the Institute first opened, it had 142 male students being taught by 14 instructors in two buildings. This month, the PI has 814 students registered for classes taught by more than 100 faculty members. Current enrollment targets call for the admission of approximately 300 men and 150 women per year.

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The PI also conducts research with applications to the needs of ADNOC and its operating companies. Integral to the PI’s mission, research is important for the professional development and intellectual growth of its faculty and students. Several individual research projects are currently underway in petroleum engineering and petroleum geosciences.

Recently, with sponsorship from ADNOC and the operating companies, the Institute has received six research grants. Subject areas covered by these grants include removal of sulfur-containing compounds from process streams (chemical engineering); improved gas sweetening processes (chemical engineering); solar energy applications at ADNOC facilities (mechanical and electrical engineering); organic and inorganic solids deposition and reservoir souring (petroleum and petroleum geosciences engineering); fault and fracture characterization and modeling (petroleum and petroleum geosciences engineering); and 4-D seismic (petroleum and petroleum geosciences engineering).

The Institute continues to develop other research proposals and projects and three major research initiatives are currently in the planning stages: Exxon/Mobil Research and Technology Development Center, Takreer Refining Research Center and Bourouge/Borealis Innovation Center. All three initiatives will bring new state-of-the-art facilities and research personnel to the PI campus. Also in the early planning stage is a research building that will house all program-related research in support of the PI’s post-graduate educational programs and for research and development activities associated with the Institute’s role as ADNOC’s research organization.

The Institute also plans to continue efforts to establish a post-graduate program. In addition to the master’s programs initiated this fall, plans are underway to begin offering several post-graduate courses leading to the master of engineering or a post-graduate certificate. Ultimately, research-based master of science and PhD degrees will be developed and offered in each of the five engineering programs.

By Dr. Robert Baldwin PhD CPR ’75

The Petroleum Institute Graduates First Class

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The PI facilities have expanded to accommodate increasing enrollment. The current campus consists of four academic buildings that are used primarily for classrooms, undergraduate laboratories and faculty offices. Newly opened facilities also include a recreation center with dual sports halls and a fitness center, a dining hall with seating for 600, a library and an administration building that includes space for continuing education and functions.

The PI offers studies in chemical engineering, electrical engineering, mechanical engineering, petroleum engineering and petroleum geosciences engineering. The PI has recently received initial institutional licensure from Abu Dhabi’s Ministry of Higher Education, as well as for each of its departments, a first step on the way to earning accreditation from the Accreditation Board for Engineering and Technology (ABET) and from the Southern Association of Colleges and Schools.

In addition to educating future petroleum industry workers, the PI also conducts research with applications to the needs of ADNOC and its operating companies. Integral to the PI’s mission, research is important for the professional development and intellectual growth of its faculty and students. Several individual research projects are currently underway in petroleum engineering and petroleum geosciences.

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Dr. Robert M. Baldwin is professor and director of the Petroleum Institute’s chemical engineering program.
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For more information, visit www.alumnifriends.mines.edu, click on Alumni Association and find the Alumni Directory announcement under Quick Links, or call 303.273.3295 or e-mail csmaa@mines.edu

Todays future scientists face a world in transition and Mines is helping to prepare them by offering a new minor in energy. “We want to make sure our students know what they will be encountering in their careers,” says John Fanchi, petroleum engineering professor and one of the forces behind the new minor. The world’s energy needs today are met predominantly by oil and gas, but in the future, energy will be provided by a mix of technologies.

Starting this fall, the new minor will be offered and could be the first of its kind in the country. Many schools offer energy programs, but most are at the graduate level. The Mines minor will provide students with an overview of energy sources including wind, solar, nuclear, fossil fuels, bio-fuels, hydroelectric, ocean thermal and geothermal. The minor is multidisciplinary and will include coursework from petroleum engineering, economics, liberal arts and international studies, chemical engineering, electrical engineering, geological engineering and physics.

The key component of the minor is a survey course that introduces students to all aspects of energy. “It’s like a general science course at a liberal arts school, but can be taught in much more depth because our students are more scientifically prepared,” Fanchi says. To earn the minor, students will be required to take an energy survey course, two courses that examine the relationship between energy and society and three technical courses for a more in-depth study of specific energy options of their choice.

Approved by the Board of Trustees in May, the energy minor has been more than a year in the planning stages and the first graduates are expected in two years. In the spring of 2005, Fanchi and other interested professors surveyed 558 Mines students. About 11 percent of them expressed interest in an energy minor. The survey also showed that students were more interested in learning about renewable energy than any other topic. In response, Mines first developed a course titled Sustainable Energy Systems and have now created the new minor.

Before deciding to offer energy as a minor, the School considered developing an energy major at both the undergraduate and graduate levels. “There was concern that employment opportunities would be insufficient to support graduates of these programs,” says Fanchi. “On the other hand, many students who were majoring in a technical discipline were interested in energy concepts outside of their discipline.” Offering an energy minor structures student learning, provides a broad background in the subject, and formally recognizes a course of study. Fanchi says he expects students from all the School’s disciplines to be interested in the minor.

Because the minor has been developed from existing courses and interested faculty, it has been done with minimal demand on the School’s resources. Fanchi will promote the concept of an energy minor to other engineering educators at the September SPE meeting in San Antonio, Texas.

“Professionals in energy companies and governmental institutions need to understand and appreciate the role of alternative energy components in the energy mix,” says Fanchi. “The creativity of future energy professionals and their ability to contribute to policy formation will be enhanced if they are able to identify and solve problems in the acquisition and environmentally acceptable use of several energy options.”
Transforming Resources: The Campaign for Mines: an Unprecedented Success

On June 30, the largest campaign in School history came to a close with $315 million in gifts and commitments raised for Colorado School of Mines. Transforming Resources: The Campaign for Mines was not only the most ambitious fundraising campaign in Mines’ 132-year history, but also the most successful.

Six years ago, Mines set out to secure strategic investments in the educational resources that drive its dynamic learning community. Over the course of the campaign, more than 8,200 alumni, friends, and corporations made contributions exceeding the original campaign goal by over $10 million.

Campus success was made possible by Mines’ loyal donors and the efforts of nearly 300 dedicated individuals who volunteered their time, energy and passion to help the School reach its goals. With the help of the Mines community, the School has secured critical investments in the people, programs and infrastructure that make it such a distinctive institution.

Thanks to Mines’ alumni and friends, the School is now able to provide financial support to more talented students, create new positions to attract accomplished faculty, enhance and expand its academic and research programs, and move forward with its vision for a more connected and centralized campus. Endowed academic and research programs, and move forward with its positions to attract accomplished faculty, enhance and expand its provide financial support to more talented students, create new programs to support scholarships at Mines.

George, Dean and Kim had all benefitted from scholarship support during their college careers at Mines. They felt that their Mines education and their participation in athletics had been fundamental to their success and were strongly motivated to give back to the School to help other students attain such a distinctive education. Furthermore, in order to offset the out-of-state tuition that Houston students pay to attend Mines, they became interested in designating the scholarship funds with a preference for students from the Houston area.

The trio approached the Colorado School of Mines Alumni Association Houston Section with their idea, and soon a joint planning committee was formed. Vivek Chandra BSc Geop ’98, Gene Roberts BSc CPR ’98, Kathy Bolden BSc Geop ’98, Julie White BSc CPR ’93, and Bill McElrath BSc Pet ’82 were instrumental in getting the tournament off the ground and establishing the scholarship.

Kazemi Named Chesebro’ Distinguished Chair in Petroleum Engineering

Dr. Hossein Kazemi has been named Chesebro’ Distinguished Chair in Petroleum Engineering, established through the generosity of Steve PE ’64 and Dollie Chesebro’ as the first endowed faculty position for Mines’ Department of Petroleum Engineering.

“Throughout his career at Colorado School of Mines, Hossein Kazemi has attracted renown worldwide as a researcher, teacher, and mentor,” remarks Craig Van Kirk PhD Pet Eng ’72, head of Mines’ Petroleum Engineering Department.

The Chesebro’ Distinguished Chair acknowledges his significant ongoing advancements in computer-based reservoir simulation, well pressure transient analysis, and improved oil recovery, and bestows him with a professional honor that will further his pioneering work and extend Colorado School of Mines’ global reputation.

Kazemi received his B.S. (1961) and Ph.D. (1963) in petroleum engineering from the University of Texas at Austin. He began teaching as an assistant professor at Mines in 1980, and has served as co-director of the Marathon Center of Excellence in Reservoir Studies since its founding in 2003. From 1969 to 2000, Kazemi was employed by Marathon Oil Company where he held positions of increasing responsibility leading to the company’s top technical position of Executive Technical Fellow. He is a member of the National Academy of Engineering and an Honorary Member of the American Institute of Mining, Metallurgical and Petroleum Engineers (AIME). He is also a Distinguished Member of the Colorado School of Petroleum Engineers (SPE).

In April 2006, Kazemi was awarded the SPE Improved Oil Recovery Award for his advancements in improved recovery technology and processes. His other SPE honors include: the John Franklin Carll Award, the Ernesto Lee DeGolyer Medal, the 1991 SPE Distinguished Service Award, and the Denver Section 1980 Henry Mattson Technical Service Award.

Giving Back on the Back Nine Houston Golf Tournament generates over $100,000 for scholarship endowment

At an Astros-Rockies game, a Houston section event in the summer of 2000, George Puls BSc Min Eng ’75 was reunited with an old friend and fellow football player from Mines, Dean Stoughton BSc Math ’75 MsC Geop ’78. Dean had just moved to the Houston area after a stint in London and the two found themselves reminiscing over their shared experiences at Mines. They also found that they both shared a pastime common to many Mines alumni – golf. Over the course of a few rounds together, George, Dean and another alumnus and former football player, Kim Harden BSc Met Eng ’74, hatched the idea of organizing a golf tournament in Houston to support scholarships at Mines.

The tournament grew out of an idea shared by Houston area Mines alumni, several of whom had been visibility motivated to give back to the School. The trio approached the Colorado School of Mines Alumni Association Houston Section with their idea, and soon a joint planning committee was formed. Vivek Chandra BSc Geop ’98, Gene Roberts BSc CPR ’98, Kathy Bolden BSc Geop ’98, Julie White BSc CPR ’93, and Bill McElrath BSc Pet ’82 were instrumental in getting the tournament off the ground and establishing the scholarship.

The tournament got its start in April 2001 at Bear Creek Golf World outside Houston, attracting 73 participants and raising a total of $7,200 toward the scholarship fund. Over the past six years the event has grown considerably. Last year’s tournament at Augusta Pines generated an impressive $28,000 through 23 corporate sponsorships and 91 individual participants. A total of $100,300 has been added to the endowment for the CSMAA Houston Section scholarship, an investment actively managed by the CSM Foundation that will grow in perpetuity while being supplemented by future tournament proceeds. The endowment supports both athletic and academic scholarships.

The tournament organizers also credit the assistance of the Colorado School of Mines Alumni Association and Charles (Chuck) Russell PRE ’54, one of the board members, in making the Houston tournament both a valuable fundraiser and an enjoyable alumni gathering.

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The Houston golf tournament does more than raise money for student scholarships. The event has demonstrated that the Mines community extends far beyond the Golden campus. Puls notes that alumni have come from Colorado, Louisiana, Oklahoma, California and even Mexico to attend the event, and that several of Mines’ faculty and staff have also made the trip to Houston. According to Stoughton, event sponsors and participants who have no formal ties to Mines have been impressed by the strong alumni network and the active involvement of the School in supporting the golf tournament.

In addition to the collective support from hundreds of Mines alumni who participate in the tournament, the event’s success has hinged upon the volunteer efforts of several others, notably the founders’ spouses. “The behind-the-scenes work of Lindsay Stoughton, Pat Harden and Barbara Pul’s has been essential to putting on such a successful event,” says Rod McNeill, director of major gifts for Mines’ Office of Institutional Advancement.

Lindsay has overseen the accounting for the event, Pat puts together Mines merchandise for prizes, and Barbara organizes event-related meetings and mailings.

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Recent individual gifts of $25,000 or more to Colorado School of Mines include: Patricia Bradley made a generous gift of $25,000 to the Leo Bradley Family Endowed Scholarship Fund, which was established to provide undergraduate scholarships to students on the varsity golf team. Jerome T. '64 and Rebecca Bourbous continued their support of the Broussard Family Engineering and Technology Management Scholarship Fund with a $50,000 gift.

Marshall C. III '67 and Jane Crouch completed their $100,000 Transforming Campaign pledge as part of their $100,000 gift to the Marshall and Jane Crouch Student Recreation Center. This pledge payment provides funding for unrestricted support for Mines, including nonresident student scholarships.

Joe J. '42 and Mary Keating made a generous $25,000 gift to establish a scholarship for undergraduate students. Francis '52 and Mary Labriola made a $100,000 gift to the John U. and Sharon L. Trefny Endowment for Curriculum Advancement and a $25,000 gift to The Mines Fund in continued support of the School.

Bob Piper '49 donated cash and securities with a value of $400,000. The gift was split between the Piper-Wisconsin Centennial Scholarship Fund and the Trefny Endowment for Curriculum Advancement.

Allan G. Provoost '62 made a generous gift of $25,000 to establish a new scholarship—the Niles E. Grovenor Scholarship in Underground Mining Engineering—in memory of the late Niles Grovenor '30, a professor in the Mining Department from 1952 to 1972.

Charles L. '64 and Louanne Shultz made gifts totaling $141,190 to continue their support of the Shultz Athletic Scholarship Fund and to provide unrestricted support for the School through The Mines Fund.

Bob and Ruth Weiner donated real property with a value of $520,000. Eighty percent of the gift was used to establish a charitable remainder trust; the other 20 percent was given outright for the existing Loren Weiner Memorial Scholarship and the Robert and Ruth Weiner Fund for Sedimentary Geology.

Bill '56 and Nancy Yopp donated securities with a value of $50,000 and pledged an additional $25,000 to establish a charitable remainder trust. The gift was in honor of Bill’s 50th reunion.

Recent corporate and foundation gifts of $25,000 or more to Mines include: Anadarko Petroleum Corporation contributed $30,000 to support the Department of Petroleum Engineering. Baker Hughes contributed $25,000 to support the Center for Petrophysics.

ConocoPhillips pledged $1,000,000 to the Transforming Resources Campaign. Its first pledge payment of $250,000 will support the ConocoPhillips SPIRIT Scholarship Program, the departments of Chemical Engineering, Geology and Geophysical Engineering, Geophysics, and Petroleum Engineering; graduate fellowships in Geology and Geophysical Engineering and Geophysics; the Minority Engineering Program; the Society of Petroleum Engineers; and the Career Center.

The Adolph Coors Foundation continued its support of student scholarships with a gift of $75,000.

Herrenknecht AG contributed gifts totaling $65,000 to support students studying geotechnical engineering, underground construction and tunneling.

The William and Flora Hewlett Foundation contributed $270,000 in support of their $1,167,000 pledge for the Engineering Schools of the West Initiative.

IGI Group contributed $86,411 to support Professor Kim Williams in the Chemistry and Geochemistry Department.

Infiltrator Systems, Inc. continued its support of the research and educational activities of Dr. Robert L. Siegrist in the area of on-site and alternate wastewater technologies with gifts totaling $33,600.

The Henry Luce Foundation contributed $103,666 in support of its $545,646 pledge toward the Clare Booth Luce Assistant Professorship in Electrical Engineering.

Planar Solutions, LLC contributed $27,700 to support the research activities of Professor Kim Williams in the Chemistry and Geochemistry Department.

Rio Tinto contributed $50,000 toward The Edgar Mine, the School’s experimental mine.

The Edna Bailey Sussman Fund contributed $48,960 to support the Environmental Internship Program.
Lake Tahoe Reunion


Houston

A group of Houston alumni got together in May to watch the Astros beat the Rockies. In June, they held an alumni picnic.

Gulf Coast

Houston

A group of Houston alumni got together in May to watch the Astros beat the Rockies. In June, they held an alumni picnic.

The CSM Alumni Association thanks the following for their participation in the 22nd annual golf tournament.

2006 Committee
Mark Woempner ’93 • Roy Banks • Janet Blair • Kathy Breit • Anita Paniseau

Corporate Sponsors
Coors Brewing • Stevinson Lexus

Hole Patrons
George ’80 and Kathy Breit • Class of 1954 • Lockheed Martin • Kenneth W. Nickerson ’48 • Thompson Creek Metals Co. • Wells Fargo Bank, Golden • XTO Energy, Inc.

Hole Sponsors
A G Wassenaar, Inc. • Applied Research Concepts • Colorado State Employees Credit Union • Colorado Legislative Services LLC • Coral Production Corporation • Hugh Evans ’49 • Geoscope • Liberty Mutual Insurance • Dan Lewis • Miller Consulting Services • The Mines Fund • Peterson Energy Management • Resource Solutions, LLC

Prizes
Banks Insurance • CSM Alumni Association • CSM Bookstore • Dimension Z Golf • Liberty Mutual • The International @ Castle Pines • Sheraton Denver West Hotel

New Life Members
Robert E. Arlin ’92 • Dean R. K. Bell ’93 • Mark R. Burtschi ’84 • Tyson S. Foutz ’90 • Billy W. Harris ’78 • Corey Hartwig ’95 • Barbara D. Hazel ’88 • Mark Levin ’87, ’92, ’94

Classes of ’91, ’96, ’01 Reunions: Front row from left, Chris Locallo ’96, Steve Regini ’96, Holly Spradling ’91, Jason Thompson ’96, Raal Varela ’96, Jodi (Noone) Varela ’97, Kate (Rossbach) Hill ’96, Lynette (Dobler) Vann ’96, Jeff Vann ’96. Second row, Shannon Castfield ’01, Dan Baker ’91, Kevin Hill ’95, Robert DeHerrera ’91, Eric Bengtson ’96, Erik Ressel ’96, Chris Callaway ’96, Dan Huber ’96, Tracy Gardner ’96, Jeff Jaco ’02. Third row, Chad Castfield ’01, Scott Van Sickle ’96, Eric Kline ’96, Matt Moore ’96, Andrew Kelly ’96, Rob Carlson ’96, Mike Chenoweth ’96, Joe Wojniak ’96, Mike Orobona ’91.

For more reunion class photos, visit alumni@mines.edu/

Metro-Denver

Reunions took place in May and the annual Alumni Golf Tournament took place in June.


More than 120 people played in the Association’s annual golf tournament.

From left, Scott Modesitt, Raimond Orzes, Mark Dettomich, Mark Woempner ’93. Woempner was this year’s committee chair.

In June, 200 people rode the rapids in Clear Creek.

For more reunion class photos, visit alumni@mines.edu/
WILLIAM W. "BILL" BUTLER PE ’48 died April 13 at age 84. The Colorado native was a star athlete in high school where he earned 11 letters in four sports. He attended Mines for one year before enlisting in the Navy Air Corps where he became a pilot. He was scheduled to ship out when World War II ended and he returned to CSM. At Mines, Butler was a member of ATO, Blue Key and Theta Tau. In 1945, he returned to Ohio Oil Company (now Marathon) and later formed Allen & Butler Consulting. In 1953, he married his wife, Gloria. In 1963, in order to spend more time with his family, he joined Walt Forbes Insurance Company. In 1979, he retired and returned to his hometown. When he was a little boy, hunting, fishing and coaching some football teams, Butler’s community involvement included serving for four years on the Casper City Council. He was also a board member of community recreation, Casper Country Club, St. Anthony’s Manor, Rotary and American Bank. The lifelong Republican was active politically at every level from precinct committee man to state delegate. Butler is survived by his widow, six children, 15 grandchildren and two great-grandchildren. A son, a grandson and a great-grandson preceded him.

RICHARD V. “DICK” GOOD EM ’60 died Mar. 28 at age 70. Good was born in Belfour, Ohio, and after graduation from high school, served in the U.S. Army from 1954-56 during the Korean Conflict. He was stationed in Germany. After he was discharged, he attended Mines. He married Ellie E. Drennen in 1972 and they spent the next 25 years in Las Vegas, where Good worked for the Atomic Energy Commission performing underground testing on nuclear weapons. He then moved to Ohio where he worked for Bird and Bull Engineering Company. Good was a member of the Saint John Lutheran Church for 46 years where he was a former council member. He was also a member of the American Legion, CSMAA and belonged to the Professional Anglers of Ohio. He was an avid fisherman and an animal lover. Good is survived by his widow, two daughters, a stepson, a brother, a sister, six grandchildren and three great-grandchildren.

NILES E. GROVENER EM ’50, MSC, MSc ’52 died April 7 in Denver. He was 84. Born and raised in Pennsylvania, he moved to Colorado after enlisting in the Army Air Corps during World War II. During the war he taught bombights and autopilots. After the war he attended Mines and received his MSc in the Mining Department from 1952 to 1957. In 1964 he received the Van Diest Gold Medal from the School. While at Mines he served four years as a member of the committee on rock mechanics for the National Academy of Science and represented the United States three times at the International Bureau for Rock Mechanics in East Germany. Grovener joined Gates Engineering Co., a coal consulting firm, in 1972. He was vice president of western operations and senior vice president from 1972 to 1985. In 1985 he formed Grovener Engineering Co., a mining consulting firm, and was president until he retired in 2001. Grovener was a long-time member of the Society for Mining Metallurgy and Exploration (SME). He was a Registered Professional Engineer in over 20 states, worked on the SME professional registration committee, and served as program chairman for mechanics sessions. He was a founding member of The Denver Coal Club and was also a member of CSMAA, Rocky Mountain Coal Mining Institute and the Colorado Mining Association. During his career, Grovener worked on many domestic and international consulting assignments and traveled to Russia, Germany, South Africa, Greenland, Australia, Bulgaria and Canada. He was especially noted for his coal and rock mechanics expertise and was an expert witness in mining-related litigations.

Grovener was a life-long educator and was a lecturer at the Total Concept of the Mining industry program for K-12 teachers given in Tulsa, Okla. He served in the U.S. Marine Corps before attending Mines. He married Ann Vickery in 1955 and they recently had celebrated their golden anniversary. Houchins spent his professional career as a geophysicist for Amoco Production Company and its predecessors, becoming manager of exploration systems. He retired in 1986 and began to travel extensively with his wife. Houchins was an avid sports fan and was especially interested in ice hockey and football. He also enjoyed reading and playing bridge. His wife, a daughter, two grandchildren, a step-granddaughter, a niece and a nephew survive him.

THOMAS C. MACH PE ’65 died March 2 at age 64. Born in Tulsa, Okla., he graduated from Edison High School. He was an athlete and played football, basketball, baseball and golf. He attended Mines on a football scholarship. In 1965, he married Pat Godfrey. After graduation, he served two years in the Army as a member of the Army Corps of Engineers. He was a Vietnam veteran and retired as a captain. For 25 years, Mach was an independent oil producer, serving as president and founder of Mach Petroleum. He is survived by his widow, a daughter and two grandchildren. Two sons predeceased him.

RUSSELL C. NELSON MSC, MSc, EM ’49, DSc, MET E ’51 died March 15 at age 80. He was a retired professor emeritus, University of Nebraska-Lincoln. Nelson served U.N. for more than 30 years. He developed a program in metallurgical engineering with the mechanical engineering department and also served as associate dean for graduate studies and research. Nelson conducted research and did consulting on metallurgical aspects of fracture, fatigue analysis, powder metallurgy and biomaterials. He earned his undergraduate degree from Lehigh University and was a member of Theta Chi. He served in the U.S. Marines during World War II. Nelson is survived by his widow, Dorothy, a son, and four grandchildren.

RICHARD S. RUSSELL ‘M57 MET E’37 died Jan 30 at age 95. Russell was a superintendent of maintenance at the Hurricane Creek alumina plant for Alcoa for 13 years. He spent the last 24 years of his career as an engineering management executive for Reynolds Metals. During World War II, he served in the Office of Price Administration. He was a member of Rotary International and the Benton, Ark., Chamber of Commerce. In 1974, he retired to Bella Vista, Ark., where he served as chairman of streets and utilities and as a two-time member of the property owners’ association board of directors. He was a member of First United Methodist Church, Fly Tyers, Fellowship of Christian Athletes and the Model Train Historical Society. His hobbies included playing bridge, hunting, fishing, golfing, bowling, tennis, gardening and model railroad building. His wife of 66 years, Margaret, predeceased him. He is survived by three sons, a daughter, nine grandchildren and nine great-grandchildren.

MARVIN B. SMITH PHD MIN EC ’85 died Feb. 13. He was 69. Smith earned a bachelor’s degree in petroleum engineering from Texas Tech University. In 1989, he married Billie Jean Strohle. Smith was a petroleum engineer for Marathon Oil Company, an operations research analyst for Mobil Oil and an associate professor of industrial engineering at University of Houston and manager of business planning and development at BP Petroleum Company. He was the recipient of numerous prestigious professional awards. Upon retirement in 1992, he and his wife moved to Colorado where they had homes in Black Hawk and Golden. Smith’s widow, a brother, a sister and extended family and friends survive him.

EDWIN H. STINEMEYER JR. MET E ’31 died March 30. He was 97. Stinemeyer was born in Canton City, Colo. After graduation, he mined zinc and gold in Colorado until retiring in 1945 to work for Shell Oil in Long Beach. During his career with Shell, he progressed from laboratory assistant to division paleontologist. He helped develop an in-house palaeontological data processing system for Shell. After retiring in 1970, he consulted from his lab-office in the rear of his residence for 21 years. In 1992, Stinemeyer was honored by the Drake and Derrick Club of Bakersfield as "Oil Man of the Year." During World War II, Stinemeyer worked in Gen. George Patton’s war room. He was in Luxembourg during the Battle of the Bulge. In 1944, he became senior war room officer and led a team responsible for plotting the latest battle information. During his tour he earned five battle stars for Normandy, Northern France, Central Europe, Ardennes and Rhineland campaigns. After V-E Day, he was assigned to a unit responsible for rebuilding industry and manufacturing. He continued serving in the Army Reserves. He joined the Navy League in the 1960s and was a member of the Military Officers Association, the Bakersfield Scottish Rite and St. Paul’s Episcopal Church. Stinemeyer was an avid golfer and was a member of Stockdale Country Club since 1939. His widow, Connie, three daughters, four grandchildren, four great-grandchildren and a sister survive him.

ROBERT R. STRINGHAM PE ’41 died Nov. 13 at age 86. Stringham grew up in Colorado and enjoyed hiking, fishing, mining for gold and hunting for exotic rock crystals. After graduating from Mines, he also earned a degree from Denver University in organic chemistry. During World War II, Stringham joined the U.S. Air Force and afterward, was on the team that ran the Nuremberg War Crimes tribunals. After the war, he worked for Dow Development as an organic chemist, then for Dow Chemical as a patent agent where he co-invented the first effective artificial kidney—employing hollow fibers—and other important innovations. Stringham loved classical music and played the coronet. At various times in his life he was a gymnast, spoolboard driver, skin/scuba diver and competitive swimmer capturing numerous titles in both college and the master’s division. He won a world championship in the medley relay at age 86. Wasingham is survived by his wife of 62 years, Joyce, a son and four daughters.
PISOOT PETE SUDASNAEM '48 of
Bangkok, Thailand, died Nov. 11, 2005, after
a short illness. He was 83. Sudasna came to
CSM in early 1946 after serving as a Free
Thai veteran under the guidance of the
United States’ Office of Strategic Services
(OSS) to liberate Thailand from the
Japanese occupation during World War II.
In recognition of his contributions, he
received the Medal of Freedom from the
U.S. Central Intelligence Agency in 2000.
Prior to the
war, Sudasna was an engineering student,
intended for the U.S. government in 1947 and the Agency
accepted to study petroleum engineering in the
U.S., and to receive professional training
with several multinational oil companies.
These officials now serve Thailand just as
Sudasna did before his retirement in 1982.
During his long career with the Thai
government, Sudasna distinguished himself
in his total devotion to Thailand’s
petroleum exploration and production
industry. He received several high honors
and awards for his achievements in this
industry. He was a pioneer in
exploration and production as a
prerequisite for an invitation to these oil
companies. To further support the young
Thai petroleum industry, he initiated a
government-awarded scholarship program
to send highly qualified government
officials to study petroleum engineering in the
U.S., and to receive professional training
with several multinational oil companies.
These officials now serve Thailand just as
Sudasna did before his retirement in 1982.

In memoriam

JOHN L. HOL TEM ’58 UNKNOW
JOSEPH P. HILL PE ’52 JAN 6, 2005
CHARLES W. IRISH PRE ’50 JANUARY 2006
JAMES V. BOND EM ’52 NOVEMBER 2005
CHARLES C. GATES HON. DEG. ’85 AUGUST 2005
JAMES A. DAVIS MEM E ’39 APRIL 12, 2004
ELMER F. KESSLER GEOL E ’51 2005
BILL E. JUMP PHY E ’69 AUGUST 2004
SCHUYLER A. HERRES MET E ’39 APRIL 2, 2006
DANIEL A. CHAPA BSC CPR ’00 JUNE 23, 2005
ROBERT L. “ROXY” ROOT EM ’35 FEB. 11, 2004
WALTER G. NILLER GEOL E ’59 NOVEMBER 2006
SAMUEL C. PRUTCH BSC CPR ’72 JANUARY 2006
DOUGLAS L. REESE GEOL E ’50 AUGUST 2004
J. ANN. 2005
NICK SHILLING BSC MET ’79 2002
LAYNEM. SHILLING BSC MET ’79 2002
CHARLES J. LEWIS EM ’50 2006
LAYNE M. SHILLING BSC MET ’79 SEP. 30, 2005
JOHN P. STORRS JR. BSC MIN ’81 SEP. 30, 2005
ROBERT “BOB” C. YOUNG BSC GEOL ’79, MSc Min ’81 JULY 7, 2005

For those who haven’t been to Golden recently, you may
be surprised at how much it has changed. New condominiums are
under construction along Washington Avenue and Clear Creek
and houses are popping up all along Highway 93. The area is
growing so rapidly and the demand for more housing is so great
that part of Colorado’s oldest historic trail, Beaver Brook Trail,
just outside Golden, had been in imminent danger of being
developed. But now, because of a recent 360-acre purchase and
conservation easement, all private land along the trail is protected
from development. Beaver Brook Trail will remain an escape to
the wilderness in Golden’s own backyard.

Cleary Brook Canyon, along which the 7-mile Beaver Brook
Trail runs, is the deepest, narrowest and shereest canyon in the
Front Range and is home to a variety of wildlife, rare and
deranged plant and diverse ecosystems, from prairie to sub-
alpine. The trail was laid out in 1919 by the Colorado Mountain
Club to connect Golden and Genesee Park. Although both ends
of the trail are in public parks – one on Lookout Mountain, the

Historic Trail is Preserved

The Beaver Brook Trail is one of the most popular hikes in the
metro area and is especially accessible for Mines students. It is just
south of the lighted “M.” Once on the trail, hikers become isolated
from human development and can see the natural beauty of the
Front Range as it was when the pioneers first arrived. The idea of
preserving lands along the nature trail is credited to Carla Swan
Coleman, a native Coloradan who loved the area and, with her
husband, bought a cabin on Lookout Mountain in the 1950s. The
couple began purchasing and preserving land and created a non-
profit organization, Northwoodside Inc., devoted to maintaining
the wilderness of Clear Creek Canyon. The organization’s legacy
has been continued by the recent purchase of Ralston land. Mines
geology professors Bob Weimer, as president, and Greg Holden, as
vice-president, played a key role in the Northwoodside purchase,
assisted by Denver University law professor Rock Pring, president of
Clear Creek Land Conservation and for many years an adjunct
professor at Mines teaching environmental law. This is the fourth
conservation easement in which Northwoodside has been
involved with protection of more than 900 acres along the trail.
1942
Joe S. Keating PE is retired in Bexar, Texas.

1950
Ben H. Shewmon EM is retired in Bemidji, Minn.

1951
Nancy McNally PE and her wife, Ilene Joan, are celebrating their 62nd anniversary.

1954
Giovanni Rossi MSc Met is group leader for EXL Consultants in Cagliari, Italy. 

Boram Y. Saged DSc PE is retired in Dublin, Ireland.

1956
Gary Bank E Adams Grad is works for Adams Consulting A S in Canacas, Venezuela.

John Zuman PE received his 30-year silver diploma on the same day his granddaughter, Sarah Ambrosek BSc Eng, ‘86, received her undergraduate degree.

1958
Jerome F. Gschaepf Grad is retired in Elko, Colo.

Paul A. Winkham PE is retired in The Woodlands, Texas.

Richard E. Wirtz Met is an engineer for Pertex Corporation as Muscle Shoals, Ala.

1959
Harry F. Hinkle Grad is president of Hinkle Engineering in Meadl, Texas. David W. Lee Met is advised by National Officers LLC in Houston.

1960
Harry E. McCarthy PE is an independent consultant in Merklo, Colo.

1961
M. David Bright Whitfield Met is retired in Houston.

David M. Dougherty Met is a general partner for Dougherty & Associates LLP in Everett, Wash.

Bruce B. Henry Met is retired in Wihon, N.H.

Aung Tin-U Geol, Geop has retired in the chief geophysicist of Myanoom Oil and Gas Enterprise in Yangon (Rangoon), Burma.

John G. Palmer MPhil, PhD is a strategic consultant for Sardar Ahmad in Dubai, Saudi Arabia.

1962
Carl F. Novak Met is retired in Houston.

Robert S. Rogers Grad is retired in Sequim, Wash.

1963
Steven L. Harvey Met is retired in Sequoia Valley, Wash.

C. Alan Roberts PE is retired in Merklo, Colo.

1964
John D. Ellis Jr. Met is a plant manager for CMA-Perm Recyling Inc. in Grand Rapids, Mich.

Richard J. Fulford Met, MSc Met is plant manager for ALSTOM Power Inc. in Golden, Colo.

E. Kent Hudson Met is retired in Visalia, Mont.

1965
Jeny D. Shulsky Met, MSc Met Eng is manager for Nordon Systems in Rambouillet, Minn.

Michael L. Garrison PE owns First Class Kent in Sarpsborg, Norway.

Terrence J. Hankski EM is president of Electro-Wire Corp. in Baggs, Wyo.

Henry A. Passmore Geop is an engineer at Trinity International Church of Strasbourg, France.

John W. Schlender Jr. EM is president of Company 21 Heritage Real Estate in Lafayette, Calif.

Robert W. Warning Met is retired in Taon, N.M.

1966
Robert M. Bumman EM is senior consultant for Hilti Assoociates Inc. in urbo, Colo.

Gaylord Cleveland Geop is an exploration manager for Chevron Cusas (U.S.) Inc. in Brus, N.Y.

Danny R. Kinchla EMS owns Davis Whithouse Company Inc. and Wichita Mountain Whithouse Co. in Purcy, Ark.

1969
William P. Long PhD, PhD Ex is retired as the chief executive officer for Ahb International Management Inc. and lives in Cody, Wyo.

Stephen G. Miller Met of ’79 PE, pined up at Millikanium.

1972
Allan V. Moran BSc Geol Eng is principal geologist for TDK Consulting in Tucson, Ariz.

1974
Kenneth L. Manning BSc Met Eng is in charge of regional capital projects and technical services for Barrick Gold Corporation South America in San Juan, Argentina.

1975
Roberta Professor from BSc Met, MSc Eng ’77 is a teacher at Mayde Creek High School in Houston.

Harry P. Trager Jr. BSc Met is president of Metals and Society Inc. in Cambridge, Mass.

Paul A. Sattler BSc Min, MSc Min ’80 owns Technology Transfer Associates in Highlands Ranch, Colo.

1978
James C. Atkinson BSc, FE is a engineering instructor at Warren County Technical High School in New DWark, N.J.

1982
James K. Crotiss BSc Con, PE is a engineering instructor at Warren County Technical High School in New DWark, N.J.

1984
David D. Bara BSc Grad is an associate geologist for Terraco Inc. in Seattle, Wash.

Bobby D. Brandy Jr. BSc Petr is operations manager for Resolute Natural Resources Company in Denver. 

Richard B. Castle BSc CPR is a chemistry teacher and varsity basketball coach at Pure Creek High School in Colorado Springs, Colo.

James C. Culkin BSc Grad married Media Senior in4er in Cogon, Colo., in June 2005. They spent their honeymoon touring Italy and sampling local vintages. Joseph is group director of construction management for NEL Associates in Denver.

1986
Gary Bank E Adams Grad is works for Adams Consulting A S in Canacas, Venezuela.

John Zuman PE received his 30-year silver diploma on the same day his granddaughter, Sarah Ambrosek BSc Eng, ‘86, received her undergraduate degree.

1987
Stephen W. Taylor BSc Met is retired in Taon, N.M.

1988
Robert M. Bumman EM is senior consultant for Hilti Assoociates Inc. in urbo, Colo.

Gaylord Cleveland Geop is an exploration manager for Chevron Cusas (U.S.) Inc. in Brus, N.Y.

1990
Allan V. Moran BSc Geol Eng is principal geologist for TDK Consulting in Tucson, Ariz.

1993
Dennis W. Hinkle Grad is president of Century 21 Heritage Real

alumni o n t he move

2000
Mark A. Canning Grad is chief technical executive officer for BP in Saudi Arabia.

2003
Edgar C. Bell BSc, MSc, PhD is an engineering instructor at Montana State University.

2006
David L. Kuehler Grad is an engineering instructor at Warren County Technical High School in New DWark, N.J.

2007
James C. Atkinson BSc, FE is an engineering instructor at Warren County Technical High School in New DWark, N.J.

2008
Mark A. Canning Grad is chief technical executive officer for BP in Saudi Arabia.

Michael J. Baysal Grad is president of operations for AT&T-Wah Chang in Albany, Ore.

William M. Callery Grad is senior geologist for Geyshur Western U.S. Inc. in Dili, North Timor.

2009
James P. Campbell BSc Grad, MSc Grad, MSc Grad ’96 is chief geophysicist for Seismic Sonic Services in Zuerich, Germany.

A. Moore Grad, MSc Grad is chief geologist for Western Oil Sands Inc. of Shell Canada Ltd. in Calgary, Alberta.

Robert W. Warning Met is retired in Taon, N.M.

Tanzania, climbed the 19,496-foot Mount Kilimanjaro in Ngorongoro, Tanzania.

George H. Holm BSc Grad is chief geologist for PetroChina Company in Vancouver, Wash.

2010
C. Alan Roberts PE is retired in Merklo, Colo.

James B. Holstrom BSc Grad is a geophysicist consultant for Sound Leisure Services in Zuerich, Germany.

2011
Harvey M. Ellsworth Grad is president of Fawr Limited in Melbourne, Victoria, Australia.

2012
William W. Spirko BSc Grad is a chief geologist for Alaska-AIR in Langnau, Bayern.

2013
David L. Kuehler Grad is a president with EXI PLD in Witten, Ren.

Benjamin W. Greenlaw BSc Grad is in international technical executive officer for AngloGold Ashanti Limited in Cerkchomth, Cambur, United Kingdom.

2014
James C. Atkinson BSc, FE is in a partnership in Travelers in Midland, Texas.

2015
Michael S. Ryan BSc ME Chem, MSc PE ’78 is a project consultant for Keane in Richmond, Va.

2016
Mark S. Rosenthal BSc Grad is a senior geologist for Galapagos Resources China LLC in Chengdu.

2017
James C. Atkinson BSc, FE is in a project for United Land Partnership in Midland, Colo.

2019
Paul A. Groven BSc Min is a flight simulator instructor for the Boeing Company in Oklahoma City, Okla.

John Y. Caribou Petr is a president and chief operating officer for Tesoro E&P Corporation in Houston.

Thomas K. Lamberger BSc Min, MSc Min ’80 is a president of Newgate Development Corp. in McMurray, Pa.

Mark J. Ledingham BSc Grad is a senior mining engineer for the Hecla Mining Corporation in Coeur d’Alene, Idaho.

Stephen A. Johnson PhD Grad is technical director for BrightFields Inc. in Boulder, Colo.

Alfredo Parra MSc Min, PhD Min ’87 is a chief executive officer for Minera Real Mineria S.A. de C.V. in Tepic, Nayarit, Mexico.

2020
Paul A. Barrat BSc Petr is a engineering adviser for BP in SA, Australia.

2021
C. Alan Roberts PE is an engineering instructor at Montana State University.

2022
James C. Atkinson BSc, FE is an engineering instructor at Warren County Technical High School in New DWark, N.J.

2023
James C. Atkinson BSc, FE is an engineering instructor at Warren County Technical High School in New DWark, N.J.
Charles H. Murray BSc Hons Math is a principal systems analyst for Gemcom in Centennial, Colo.
Duncan W. Riley BSc Eng Geop Eng is vice president of business administration for Global Geophysical Services Inc. in Houston.

1988
Jeffery A. Black BSc Eng is a specialist for Doceku Technologies in Golden, Colo.
Meredith A. Bond BSc Eng Geop Eng is deputy chief of a quality assurance for the U.S. Fish and Wildlife Service in Lakewood, Colo.
Larry C. Medina BSc CPR is director of technical services at Airge Technology in Singapore.

1989
Andrew C. Head BSc Eng is a manufacturing engineer for GDX Manufacturing Corp in Lakewood, Colo.
Jon M. Teh BSc CPR is an environmental engineer for Global Geophysical Services Inc. in Houston.

Mary A. Graham BSc Eng is an associate veterinarian for Mt. Scott Veterinary Hospital in Coupeville, Wash.

1990
Mahdi A. Abe-All Alloush is a geophysicist consultant for the Saudi Aramco Company in Dhahran, Saudi Arabia.
Jeffery L. Doud BSc Min Eng is senior mining engineer for Pincock, Allen & Holt in Lakewood, Colo.

1991
Cullen J. Bryan BSc GeoL, MSc GeoL is a senior environmental engineer for STRATA Inc. in Boise, Idaho.
Michael A. Cooke BSc Mat is director of technical services for IPSCO Steel Works in Marysville, Iowa.
Gregoire Dzvikoski BSc Env is an engineering manager for Martin Engineering in Kirkland, Wash.
Beki R. Dyk BSc Geo is vice president of commodities for Morgan Stanley in Paris, France.

1992
Tarig A. Al-Omar MSc CPR CPR is a process engineer for Mustang Engineering in Houston.
Randy J. Dunean M Eng Grad spent three months in New Delhi, India, as a Fulbright Scholar under the Indo-American Environmental Cooperation Program.
Jay BSc GeoL, MSc GeoL ’91 and Jamie BSc Chem Eng IV support in Denver, Ore. where he is an engineer and project manager for general, geological, and bridge work.
Sarah B. Powell Lynnge BSc Pet owns Yellow Cat Publishing LLC in Great Falls, Va.
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Kevin J. Hunter BSc Env is an environmental consultant for the U.S. Fish and Wildlife Service in Elk City, Okla.
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John H. Matison BSc Hons Math is program engineer for Hostoff Packaged Company in Houston.
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Allan B. Barnesheh Mng Pet is a senior completion engineer for Hydro Energy in Calgary, Alberta, Canada.
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Jon D. Jenson BSc Eng is vice president, business development and strategic planning for ConocoPhillips Canada in Calgary, Alberta.
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Jeffery A. Black BSc Eng is a specialist for Doceku Technologies in Golden, Colo.
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Andrew C. Head BSc Eng is a manufacturing engineer for GDX Manufacturing Corp in Lakewood, Colo.
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Mary A. Graham BSc Eng is an associate veterinarian for Mt. Scott Veterinary Hospital in Coupeville, Wash.

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Jocelyn D. Brent BSc Pet Eng is a senior manager for Schlumberger in Houston, Tex.

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Joseph B. Jones BSc CPR is a mechanical engineer for Elgin A. Brown Mechanical Inc. in Elgin, Ill.

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Littleton, Colo.
Golden, Colo. The couple resides in
Anthony R. Sparacino Sept. 16 in
Sci, MSc Eng & Tech Mgt ’03
Helicopter in Torrance, Calif.
as a design engineer for Robinson
Portland, Ore.
as a program engineer for PCC Structurals in
advanced management development
Littleton, Colo.
Ventura, Calif.
as a production engineer for DCOR LLC in
Houston.
as an energy management engineer for Air Liquide Large Industries U.S. LP in
an investment development manager for
in Houston.
as a geophysicist with Occidental Oil and Gas
a consultant for Accenture in Denver.
as a recruiter for Think Resources in
Norcross, Ga.
as a manager for Sandis in Oakland, Calif.
as a project engineer for the Raytheon
Kanagawa, Japan.
as a senior scientist for Schlumberger Ltd in
energy and resources for commercial
in Dubai, U.A.E.
as an engineer for Impregilo/Healy J.V. in
Englewood, Colo.
as an integrity engineer for American
in Denver.
as a technical professional for the Halliburton
Company in Houston.
as an engineer for EnCana Oil & Gas (USA)
Inc. in Denver.
as a technical professional for the URS
Corporation in Colorado Springs, Colo.
as a process engineer for Jacobs
Engineering Group Inc. in Golden, Colo.
as a project engineer for Jacobs
Engineering Group Inc. in Golden, Colo.
as an energy account manager of corporate
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as a software engineer for Lockheed Martin
Space Systems Company in Littleton,
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as an embedded software engineer for Lockheed Martin
Space Systems Company in Littleton,
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as a graduate student at University of
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Every phone call our ’DiggerDialers’ make brings us one successful step closer to world-renowned academic programs, top students and faculty, and a more beautiful, technologically-advanced campus.

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This sculpture appears on Berthoud Hall's north entrance. The building, built in 1938, was designed by Temple Hoyne Buell's architecture firm. Buell's buildings are part of Colorado's architectural legacy. Aid from the federal government's Public Works Administration helped with the funding.

Photo by Carolyn Hendrix