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About Our Cover:
The Abu Dhabi National Oil Company has chosen CSM as its academic partner in the development of the Petroleum Institute in Abu Dhabi, United Arab Emirates.
Trefny to lead Mines

Dr. John U. Trefny was named the 15th president of the Colorado School of Mines by the School’s Board of Trustees in August.

“The Mines curriculum and academic programs have repeatedly been cited by the Colorado Commission on Higher Education as models for other educational institutions,” he added.

“John is respected and well liked both on campus and in the city of Golden. Residents of Golden, he and his wife Sharon have participated in many civic activities over the years. We know John will do a fine job maintaining good relations with the Golden community, the CSM alumni, the Colorado Legislature, and other friends of the School,” Erisman said.

Dr. Trefny has been a member of the CSM faculty since 1977. Named interim vice president for academic affairs and dean of faculty in 1995, he was formally appointed in June 1997.

Trefny has won several teaching excellence awards, including the James R. Wailes Award by the Colorado Alliance for Science in recognition for his leadership in science, technology and mathematics education in 1997. He also received the Excellence in Science Teaching Award in 1992 from the Colorado Association of Science Teachers for his work in helping determine the needs of future graduates, leading to improvement in K-12 science education.

Trefny served as head of the CSM Department of Physics from 1990 to 1995 and has authored over 70 technical publications on such topics as quantum mechanics, the thermal properties of organic materials, superconductivity, acoustics and direct energy conversion. He has served on the board of directors of Sigma Xi, the scientific research society.

He holds a B.S. in physics from Fordham University and a Ph.D. in physics from Rutgers University. After a post-doctoral appointment at Cornell University, he taught at Wesleyan University before coming to Mines.

He has served as acting president, as well as academic vice president, since the retirement of Dr. Theodore Bickart last August.

CSM Board President Frank Erisman said, “We have been very impressed by Dr. Trefny’s performance over the past year. During this period, the school has raised more money than at any other time, including a significant contract with the Abu Dhabi National Oil Company to develop a petroleum institute in the United Arab Emirates.”

Also on the list of accomplishments for the past year is passage by the Colorado Legislature of an exemplary school bill, giving Mines special status among the state institutions of higher learning.

This status, for example, grants the School the power to determine its own degree programs, within its statutory role and mission. It further allows the School to negotiate its performance measures with the Colorado Commission on Higher Education.

During his 24-year tenure at Mines, according to Erisman, Dr. Trefny has also been heavily involved in developing a curriculum that produces engineers, applied scientists and business leaders who receive starting salaries higher than the national average.
Women at Mines

by Leah McNeill

Above: Mayumi Fukusima, class of ’01, celebrates with her son Kendo at the spring Continuum, sponsored for women graduates by the CSM student chapter of the Society of Women Engineers.

Above: S2S committee members and guests display the teapots donated to attendees by Barnes & Noble, which operates the CSM bookstore.

Above: Sister-to-Sister Scholarship winner Cambrey Johnston is surrounded by her supporters: Bottom left: Mom, Top left: Deb Lasich, Karen Ostrander-Krug, Sharon Trefny, President John Trefny, Bottom right: Louise Wildeman. See story on page 27.

Right: CSM SWE student chapter president Tara Sistko, left, presents the traditional rose to graduating senior Mayumi Fukusima.

Above: Attendees at the Sister-to-Sister Scholarship Tea tour CSM’s Center for Commercial Applications of Combustion in Space. Center Director Frank Schowengerdt leads the tour.
Colorado School of Mines and the Abu Dhabi National Oil Company (ADNOC) have signed a 10-year agreement for the development of the Petroleum Institute in Abu Dhabi, United Arab Emirates. A physical plant with a value in excess of $100 million is planned for the Petroleum Institute campus.

“This is a unique, one-of-a-kind collaboration between industry and academia,” said CSM Chemical Engineering Professor and Petroleum Institute Project Director Robert Baldwin. “It will bring world-class educational resources and research to the Arabian Gulf.”

CSM President John Trefny noted, “Our affiliation with this prestigious institute will allow us to expand and strengthen our international reach. It is a tremendous opportunity for our students and faculty. Our alumni, too, will benefit from the continuing education opportunities afforded by this partnership with one of the leaders in the oil and gas industry.”

The institute was established by Abu Dhabi government decree as a separate legal entity, operating in the Emirate of Abu Dhabi, and funded by ADNOC and its industrial partners. Located on the Arabian Gulf, Abu Dhabi is the largest of the United Arab Emirates and has estimated hydrocarbon resources that comprise 10 percent of the world’s oil and natural gas reserves.

“To have a presence in such a rich part of the world, in relation to energy resources, is invaluable. It will increase our visibility in the energy industries and will provide enrichment for all our programs,” said CSM Associate Vice President of Academic Affairs Nigel Middleton.
Recognizing the potential for advancement and innovation in the oil and gas industry — through degree programs, research opportunities, and continuing education for practicing professionals — ADNOC took the initiative in developing the institute.

Following a world-wide search, ADNOC chose CSM as its academic partner because of the School’s longstanding reputation for excellence in engineering education and applied sciences, as well as its focus on energy and natural resource technologies. CSM will provide leadership in program and curriculum design, and in mechanisms for achieving international accreditation.

“The joint vision we have set for the Petroleum Institute is without parallel in our industry. Together with our international industry partners, we can create the center of excellence to which we all aspire,” said ADNOC Chief Executive Officer Yousef Omair Bin Yousef.

The Petroleum Institute will open its doors in newly constructed, interim facilities on September 15, when the first UAE students will begin a foundation year to prepare them for baccalaureate courses in engineering. The permanent campus is in the architectural design stage, with ground-breaking planned for this fall.

The Petroleum Institute will offer five baccalaureate degree programs:
- Chemical engineering
- Petroleum engineering
- Petroleum geosciences engineering
- Mechanical engineering
- Electrical engineering.

A governing board will direct the institute. It will be chaired by ADNOC and include a representative from the Abu Dhabi Ministry of Higher Education and Scientific Research, a representative from CSM, and industry partners British Petroleum/Amoco, Japan Oil Development Company, Shell and TotalFinaElf.

See [www.mines.edu/pi](http://www.mines.edu/pi) for more information.

CSM professors Bob Baldwin, left, and Nigel Middleton were instrumental in developing the petroleum institute agreement with ADNOC.

A circular fountain graces the Corniche, Abu Dhabi’s tree-lined waterfront.

Representing the School at the signing ceremony in Abu Dhabi were Director of CSM Legal Services Ed Liberatore (bottom left) and CSM Associate Vice President of Academic Affairs Nigel Middleton (bottom, second from left).
Heinrichs ’40 writes about Pima Mine

Walter E. Heinrichs Jr., Geol E ’40, van Diest Medal ’55, has published Forerunner of the Mission Complex: The Pima Mine Story. It describes a landmark event in post-World War II mining history: the discovery of Pima Mine in Arizona. Heinrichs explains in detail how applied geophysical techniques were used for the first time to find a major non-ferrous ore deposit under more than 200 feet of cover where no economic mineral deposit was thought to exist. Heinrichs’ book relates the various exploration intrigues involved, including some claim-jumping, how the mine was eventually developed, and how it was incorporated into ASARCO’s Mission Complex to become a world-class copper producer.

In addition to historical photographs, the 33-page, full-color, illustrated book includes a glossary of technical terms, a chronology of events, graphs of geophysical results and production history, maps and selected bibliography.

Heinrich’s book is available through the publisher, Western Economic History Center, P.O. Box 637, Marana, AZ 85653; telephone 520-682-4121.

Hiking trail commemorates Colorado gold rush

The mining area around Victor, Colo., once off-limits to tourists because of liability issues, is now open to hikers, bicyclists, dog-walkers and horseback-riders thanks, in part, to some Mines graduates. Ed Hunter EM ’53 is one of a group of volunteers working with Roger Johnson BSc Met ’81, process manager for Pikes Peak Mining Company, representatives from Stratton (after whom Stratton Hall is named) Independence Mine, and others to encourage tourists to stop in Victor and learn about the area’s rich gold-rush history.

Hunter and other volunteers in The Southern Teller County Focus Group have established the two-mile historic interpretive Vindicator Valley Trail, complete with about 30 explanatory signs. “They probably tell more than you’d ever want to know,” Hunter jokes. Since opening in late 1999, more than 3,000 people have visited, he adds.

One stop along the trail is the old Bebee House, once home to Alfred Bebee EM ’15, Medalist ’49, son Alfred Bebee Jr. EM ’42 and three generations of the family. The home was built as a small log boarding house for miners in the 1890s. When it became the Bebee home, it grew room by room as the family grew. It now consists of a central log cabin with eight wood-frame additions. Members of the Bebee family occupied the dwelling until the 1950s when the nearby Vindicator Mine, run by Alfred Sr., closed.

The Bebee house was originally built in the 1890s to house miners. Empty for decades now, the Bebee House is in a state of deterioration; but recently, The Focus Group received a $9,800 grant from the Colorado Historical Fund to hire an architect and structural engineer to assess its condition. Plans are to restore the Bebee House to its former glory and use it as a visitor’s center.

In addition to renovations, the group hopes to build a replica of an ore-sorting shed next to the main building. Ore sorting was an important part of the gold recovery process. In general, the smaller particles of ore contained the most gold. Sorting out the higher grade pieces to be sent to the mill for further processing reduced transportation costs and reduced the number of tons to be charged for the processing.

The Vindicator Valley Trail is just one of many projects volunteers are working on in conjunction with Cripple Creek & Victor Gold Mining Company to be part of the Golden Loop Historic Parkway.
Bickart named to Society of Scholars

Retired CSM president Ted Bickart was elected to the Johns Hopkins University Society of Scholars. The society, created in 1967, honors former postdoctoral fellows and junior or visiting faculty at Johns Hopkins who have gained marked distinction in their fields of physical, biological, medical, social or engineering sciences or in the humanities. “I believe it is fair to say that he has been one of the two most influential academic leaders in engineering education in the past two decades,” said Charles Westgate, the Johns Hopkins engineering professor who nominated Bickart.

Thank you!

CSM AA’s 17th annual golf tournament held in June to raise money for the Student Financial Assistance Program was a big success. Proceeds from this year’s event put the amount raised for the fund since its inception at over $100,000. Thanks to all of you who participated and a special thanks to the following:

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- Ken Nickerson ’48

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- Demand Management
- Denver Art Museum
- Denver Marriott West
- Energx
- Foss General Store
- Golden City Brewery & Pub
- Golden Hotel
- Hooters
- The “INTERNATIONAL” at Castle Pines Golf Club
- Jackson’s Sports Grill
- King Soopers – Golden
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2001 Committee Members:
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- Bob Francisco, co-chair
- Lynn Brown ’50
- Joel Day ’95
- Jennifer Day ’90
- John Starritt ’95
- Kathy Brent
- Janet Blair
An internationally recognized writer, Joanne Greenberg is the author of best-selling novels such as *I Never Promised You a Rose Garden* and *High Crimes and Misdemeanors*.

An adjunct assistant professor in the Division of Liberal Arts and International Studies, she has taught at CSM since 1983. In 1996 she was named the Mines Senate Distinguished Lecturer and in 1999 received a Distinguished Achievement Medal from the School.

A graduate of American University, where she earned a B.A. in English and anthropology, she developed a special interest in Native American issues. She has lived at Taos Pueblo in New Mexico and on the Navajo Reservation in Window Rock, Arizona. Her short stories based on these experiences have been included in anthropology texts.

Honors bestowed upon Dr. Greenberg include honorary doctorates from Western Maryland College and Gallaudet University (for the deaf), the Denver Women's Institute Award, Kenner Award, Fromm Reichmann Award, Christopher Award, and Harry and Ethel Daroff Memorial Award.

She currently has a novel “going round to publishers” that features a ski lawyer. “You didn’t know there was such a thing, did you?” she laughed. “Well, there is. It’s a branch of personal injury law.”

She is also at work on another novel that she says she can’t discuss yet and is in the negotiation phase of having a play produced from one of her works.

Bob Waterman Geop E ’58 has been in search of excellence his whole career. In fact, he co-authored a book by that title in 1982, which has been called one of the top three business books of the century.

A graduate of Denver’s East High School, he says he attended Mines because it was “a family tradition.” His father and two cousins are also alumni.

At Mines, Waterman was a member of Sigma Alpha Epsilon and served as the local chapter president of Theta Tau, a national engineering honorary fraternity.

After Mines, he attended Stanford University, earning an M.B.A. in 1961. Then came a short stint in Denver before he went to work for McKinsey Company, an international management consulting firm, ultimately serving as senior director.

It was during his employment at McKinsey that he and Tom Peters wrote *In Search of Excellence*, based on a survey of companies. The best-selling book has sold millions of copies in hardcover and paperback, making Peters and Waterman probably the best-known management gurus in the world.

In a 1982 letter to the Mines Magazine editor, written before the book’s publication, Waterman described his book as “what we can learn from some of the most innovative, successful companies in America.” Competition with the Japanese was fierce then, but the book prophetically affirmed “why there is hope for American management” and asserted that there was plenty to learn from this country’s best companies.

Waterman continued his writing career, publishing three more business books over the past 15 years, including *Renewal Factor*, which became the first book ever excerpted in its entirety in the history of Business Week magazine.

Currently, he is chairman of the board of University Profnet, which markets CareerSteps, the first Web-based, self-assessment and career development software designed to increase employee productivity and retention.

A water-colorist and avid skier, he also serves as an advisor to the National Academy of Science.
Many academics believe that literature is now the province of dead white males, according to author James Lough, a lecturer in the Division of Liberal Arts and International Studies.

“Currently, there is a School of Resentment against those who are creative, a hatred of the written word. Literature today, this school maintains, seems to have no purpose or aesthetically redeeming value,” he said.

As a living white male writer, Dr. Lough has published short stories and non-fiction essays. His non-fiction book, “Use Your Muse: Uncovering Your Sources of Natural Creativity,” is currently represented by an agent.

A book reviewer for The Denver Post, he is also shopping for a publisher for a book of short stories he has authored.

In his fiction, he describes his overall theme as “alienation versus belonging.” His newspaper essays concern such topics as “the horrors of male pattern baldness” and “how Californians are helping upgrade Colorado.”

He confesses to being hopelessly old-fashioned in his belief that literature can teach morality and ethics, using such authors as Tolstoy and Virginia Woolf in his classes. “I know it’s not a very popular notion right now,” he says.

A current project of his involves what he terms “essential email skills,” covering the ethics, etiquette and expertise needed for writing for Internet applications. “It’s basically a primer for effective email,” he said. “The problem with this form of communication is that there is no way to get across the emotions behind the words. So people tend to be terse, which offends.”

A review of

Buddha’s Little Finger

by James Lough

As far as I’m aware, “Buddha’s Little Finger” is the first work of fiction that draws a parallel between traditional Buddhist thought (which is 2,500 years old) and cutting edge postmodern theory.

... Most of our thoughts are conditioned by history and technology. We only imagine that we are free individuals, when in fact, we’re merely bundles of other people’s beliefs, values and self-centered desires.

The only - and vast - difference between Buddhist and postmodern thought is that Buddhism offers real and deeply transformational solutions to the problems, whereas postmodernism offers only a shrug, an ironic wink, and lip service to pale political remedies.

The Denver Post, August 14, 2000
Derrick Jensen BSc Phy '83

Unhappy during his time at Mines, Derrick Jensen BSc Phy '83 has found fulfillment as an environmental philosopher, although he's not happy with that description. "I hate that word 'philosopher," he says, "because so much philosophy has nothing to do with real life. I try to relate every single thing back to life." Jensen's third book, A Language Older Than Words, was published in August and is doing well and getting good reviews.

"Singular, compelling and courageously honest, this book is more than just a poignant memoir of a harrowingly abusive childhood," Publishers Weekly says about Jensen's book. "It relates the extraordinary journey of one man striving to save his own spirit and our planet's. ... His visceral, biting observations always manage to lead back to his mantra: 'Things don't have to be the way they are.' Jensen's book accomplishes the rare feat of both breaking and mending the reader's heart."

As an environmental writer, Jensen is concerned for the future of the planet. "We're killing the planet, but we don't talk about it," he says. He points out that his local newspaper has a 10-page sports section, but only occasionally runs stories about the environment.

Jensen had quite a journey on his way to becoming a writer. He wanted to write but attended Mines because he got a scholarship. "As much as I disliked it," he says about CSM, "it did encourage rigorous thinking." After earning his bachelor's degree, he enrolled in graduate school because he was a high jumper, loved the sport and his coach, and had another year of eligibility. When he broke his foot, however, he dropped out. Jensen entered the working world as a professional beekeeper, a job he did for several years before starting to write. He then earned a master of fine arts degree at Eastern Washington University and today, he says, "I am so happy doing what I'm doing." He spends his days "thinking about issues that matter."

Jensen had a difficult childhood, and he draws comparisons between his physically and sexually abusive father destroying the family while denying it and the environmental destruction of the planet by its human inhabitants, who also don't like to discuss it. "If we are trained to believe the abuse doesn't exist and that we can't even talk about it, we end up doomed to repeat that abuse endlessly. That's true on a family level and on a cultural level."

Jensen's latest book is available at most bookstores. He is currently working on the introduction to an encyclopedia of hate groups.
George Saunders

"I was never meant to be an engineer," says author George Saunders BSc Geop '81. But he doesn't regret his undergraduate degree. "Mines teaches students to do whatever they're doing in a very intense way. It allows for no excuses mentally. You just do the work. I found that really helpful when I started writing because there is a lot of rejection [in trying to publish]."

Saunders, now a creative writing professor at Syracuse University in New York, published his third book, The Very Persistent Gappers of Frip, last August for children. He also has published two adult short-story collections, Pastoralia, and CivilWarLand in Bad Decline, which was a finalist for the prestigious 1996 PEN/Hemingway Award for the best first work of fiction. His work has received three national magazine awards and has three times been included in O. Henry Awards collections. Both short story collections were selected as New York Times "Notable Books." His children's book was on the New York Times bestseller list for one week. In 1999, Saunders was chosen by The New Yorker as one of the 20 best American fiction writers aged 40 and under. He is a frequent contributor to both The New Yorker and Harper's Magazine.

That's quite a literary resume for a former geophysicist. "I loved it," Saunders says of geophysics. "But I wasn't a great student. One of my guilty pleasures during college was sneaking up to the top floor of the library and reading novels."

After graduation from Mines, Saunders landed a geology job and went to Sumatra, all the while keeping journals. When he was 28, he decided to get a creative writing degree at Syracuse, where he studied under Tobias Wolff [This Boy's Life]. After graduation, Saunders joined the Syracuse faculty.

The Very Persistent Gappers of Frip grew out of nightly bedtime stories he tells his two young daughters that usually feature a little girl's clash with an unthinking adult world. The tale is part fable, part fairy tale. It focuses on the trials and tribulations of a young girl named Capable who lives in the town of Frip where she battles "gappers," strange, spiky critters that cause havoc in the local economy. The book is beautifully illustrated by Lane Smith, award-winning illustrator of "James and the Giant Peach."

Again, Saunders' Mines education comes into play. His writing is described as spare, minimalist prose. "The way I write tends to resemble technical writing," he says. "It's minimalist and to the point."

CivilWarLand in Bad Decline is available in paperback from Riverhead Books. The other two, in hardcover, are published by Random House/Villard. All are available at most bookstores.
Mining Engineers blast competition

Two CSM mining engineering teams placed third overall in the International Collegiate Mining Competition in Reno, Nev., last spring. The Mines teams were inched out of second place by Montana Tech, and West Australia received first place honors.

Nearly 500 students competed on more than 20 teams during the two-day event in Reno. Student coaches Jen Kramb and Casey Vanloo led undergraduate and graduate mining students to third place victories in four events:
- Drilling – Co-ed
- Drilling – Men’s
- Track Laying – Co-ed
- Mucking – Co-ed.

“This is an incredible opportunity for students to see Australia’s mining operations,” said Mosch.

New building opens

The new Center for Technology Learning Media will open August 2001 in time for fall classes. This high-tech classroom building will provide faculty with such instructional technologies as:
- Computers in all classrooms
- Cameras in labs
- Interactive white boards
- State-of-the-art audio/video equipment
- Video projectors
- Wired classrooms.

“The lab cameras are especially unique in that they will be used to create electronic lab notebooks that will replace the traditional hand-written versions,” said CSM architect Paul Leef. “Another unique feature is the wireless networking infrastructure. If needed in the future, CTLM could be a wireless facility.”

Classified Employee of the Year

Michelle Kozel, program assistant for the Guy T. McBride, Jr. Honors Program, received the 2001 CSM Classified Employee of the Year Award at the annual classified employees awards luncheon June 11. “She does whatever needs to be done to improve the learning of McBride students,” said Professor Ronald Miller.

Kip Findley, McBride senior class representative, added, “She is a leader, a supporter, and a friend to all she works with in the McBride department.” Kozel has been employed at Mines for 15 years.

CSM student wins Bolder Boulder

The winner of the citizens race at this year’s Bolder Boulder was Martin Weiss, who in May received a master of science degree in environmental science and engineering at CSM. In the Memorial Day race that drew 44,375 entrants, Weiss won with a time of 31 minutes, 10 seconds.

“It was amazing and unexpected,” said Weiss.

An exchange student from Suhl, Germany, he was on the Mines track team. Weiss took third place in the 5000-meter run at the NCAA Division II nationals just two days before the Bolder Boulder. In cross country he was all-conference and named “newcomer of the year.” In indoor track he concentrated on the mile run and was an All-American.

“He had quite a remarkable performance this year. He was just getting better and better. He’s a super young man,” said his Mines coach, Professor Emeritus Ardel Boes.
Honors Program finds new home

The Guy T. McBride, Jr. Honors Program House, dedicated May 3, is located on the School’s campus at 1620 Maple Street. Former CSM President Emeritus Guy T. McBride joined President John Trefny, CSM Board President Frank Erisman and the CSM community in celebrating the opening of the new facility.

The home will serve as meeting and classroom space for McBride Honors Program students.

“This is an exciting opportunity for students to meet and enjoy the benefits of the Honors Program,” said Michelle Kozel, program assistant. “The home will also allow us to grow in new directions.”

ANWR debate set for November

Should the oil and natural gas resources in the Arctic National Wildlife Refuge be developed to help meet the energy needs of the United States?

This question will be the topic of the first Young Environmental Symposium on November 6, from 7-9 p.m. in the Student Center Ballrooms. The event is being co-sponsored by the Audubon Society and the CSM Divisions of Liberal Arts and International Studies and Environmental Science and Engineering.

Featured speakers will be Harold Heinze PE ’64, retired ARCO Alaska president and a former Alaska Commissioner of Natural Resources, and Dr. John Schoen, senior scientist for the Audubon Society’s Alaska State Office and former research biologist with the Alaska Department of Fish & Game. For more information, go to the LAIS Web site at mines.edu/Academic/lais.

Ultimate frisbee season a flying success

The ultimate frisbee team at CSM completed a victorious season last spring with 24 wins and eight losses to finish 35th in the United States. After defeating CalTech, Florida State, Colorado State University, Utah State, Iowa, Texas, Air Force Academy and several others in regular season play, they went on to compete in regionals in San Diego, Calif.

“It’s been exciting to see the growth of this team over the past few years. We’ve built a national caliber team from pure commitment and love for the game,” said Eric Huelson, co-captain.

One of 13 schools represented at regionals, CSM lost to Santa Barbara in the semi-finals, placing in the top five.

“We’re most proud of our winning record. We didn’t give up and pushed ourselves to the end,” said Nick Flannery, vice president of the club.

According to Flannery the team set goals at the beginning of the season and achieved most of them. Two were to:

• Win Tournaments – Out of the six tournaments the team competed in last season, they won two, including the prestigious Rocky Mountain Invitational held at Colorado State University.

• Achieve National Ranking – The highest national ranking the team received during the season was 29th.

Ultimate Frisbee is a club sport at CSM. For more information on the team see www.mines.edu/Stu_life/organ/ufos.
Mines designated ‘Exemplary Institution’ by State Legislature

Senate Bill 01-229, signed into law by Colorado Governor Bill Owens June 7, 2001, “recognizes Colorado School of Mines as an exemplary institution” and authorizes CSM to develop “a performance contract with the Colorado Commission on Higher Education” (CCHE) and upon approval by the General Assembly, operate under the contract through June 30, 2011.

Passing the Colorado State Senate by a vote of 31 to 1 and the House by a vote of 65 to 0, the bill recognizes CSM as having “demonstrated a high degree of responsibility and capability with regard to its academic and administrative functions” and allows CSM to:

- Work with CCHE to develop performance goals and accountability measures that are suitable to CSM’s uniqueness
- Create, modify (or eliminate) academic programs and directions, within the School’s role and mission, to serve the needs of industry and society.

“We are pioneering this concept in Colorado and are serving as a model for other institutions in the country. This new relationship with the state will allow CSM to realize its full potential as an institution of higher education,” said President John Trefny.

See csmis5.mines.edu/fo/external_affairs1.htm for the final version of the bill.

High-tech ethics

Deciding whether to buy a research paper on-line is a common temptation facing today’s college students.

Deciding whether to spend the time and money to make a Web site handicapped-accessible is a dilemma they may face once they are on the job.

Requiring that all freshmen buy laptops is an issue for schools themselves.

These were the types of issues discussed at a five-day Computer Ethics workshop held in May at Mines, as professors from England,

CSM’s top ranked Physics Department named ‘Program of Excellence’

CSM’s physics department received a Colorado Commission on Higher Education “Programs of Excellence” award for its nationally recognized innovative programs. The announcement was made at the June 7 commission meeting.

Over the past several years, the department has enjoyed an impressive 15.5 percent increase in physics students at a time when other school enrollments are falling – some as much as 30 percent.

“Out of 750 physics programs in the country, CSM’s consistently ranks in the top one percent with respect to numbers of baccalaureate degrees conferred,” said John Trefny, president and professor of physics.

Trefny also credits the department’s success to the “practical, applied engineering physics that prepares students for the unique challenges of our high tech world.”

“The word is out that our graduates are strongly recruited by the high tech industries. Our students attract some of the highest starting salaries in the School – a fact that no doubt will help us continue to grow our program,” said Jim McNeil, Physics Department head.
Australia and the United States studied applied ethics - the human values intertwined with computing and telecommunications.

The skills needed to teach ethics to technically-savvy students was also on the agenda, as well as gender issues.

One of the workshop leaders was CSM's Dr. Tracy Camp, a leading expert on women in computing who has been quoted in the New York Times and other leading publications.

“A senior at the Colorado School of Mines said she didn’t major in computer science due to the advice of a professor at a local community college. This professor said she should not major in computer science because women think from the right side of the brain and computer scientists need to think from the left side of the brain,” she told her colleagues.

“Bad advice such as this is just one reason why in the last 15 years, the percent of bachelor’s degrees awarded to female computer science majors across the country has decreased from 37.1 percent to 26.7 percent,” she added.

Chemical Engineering signs agreement with Thailand

King Mongut's University of Technology Thonbury in Bangkok, Thailand, and CSM have entered into an agreement of cooperation between the chemical engineering departments of the two institutions. The first program participant, a Ph.D. student from King Mongut's University, will study and conduct research at CSM this year. The agreement was signed on April 24 by Dr. John Trefny and Professor Ratana Jiraratananon, department head, chemical engineering, King Mongut's University. She represented the university's president, Hrissanapong Kirtikara.

CSM Remembers Robert Thompson

Robert S. Thompson, 54, associate professor in the Petroleum Engineering Department, died June 8.

“To accomplish our goals for the Colorado School of Mines and our students, Robert was always on the right course, heading in the right direction, the most perfect path to be followed,” said Petroleum Engineering Department Head Craig Van Kirk.

Dr. Thompson earned a petroleum engineer degree from Mines in 1969, an M.B.A. from the University of Houston in 1977, and a Ph.D. from the University of Colorado at Denver in 2000. Before joining the CSM faculty, Thompson had more than 12 years experience in the petroleum industry.

He came to Mines in 1981 and taught courses on oil property evaluation, petroleum management, artificial lift design, surface facilities design, risk analysis, and hydrocarbon fluid behavior. He also taught industry courses worldwide and co-authored, with John Wright PE '69, PhD Pet '85, the widely used textbook Oil Property Evaluation.

“His had a wonderful way of taking difficult concepts, breaking them down, and rebuilding them in a way that made them easy to understand. He was a natural teacher,” said Wright.

Donations to a scholarship fund in Thompson’s memory should be sent to Maureen Silva, Office of Institutional Advancement, 1600 Arapahoe St., Golden, CO 80401.
Colors
With bold colors and shapes, David Gardner’s watercolors recall the mining days of the old West.

From scenes of Dauntless and Hilltop Mines near Leavick, Colo., to the Nevada mining town of Tuscarora, Gardner expresses his love of history, geometry and color.

As a painter and history buff, with an interest in mining sites, Gardner has traveled to England, Canada and New Zealand developing his craft. His canvases depict the life of a mine through light and color.

During his more than 10 years as an artist, Gardner has exhibited numerous works in juried Colorado watercolor shows, including those of the Colorado Watercolor Society and the Heritage Fine Arts Guild. Some are displayed at The National Mining Hall of Fame and Museum in Leadville, Colo.

“My interest in painting mining scenes bloomed along with my interest in history. After looking into the mining history of Colorado, I discovered a lack of art depicting historic mining sites and thought I'd pick up the brush,” said Gardner.

To contact Gardner call 303-377-3445 or email him at dnhgardner@msn.com.

By Misti Brady

of Mining

David Gardner
Mines is at the leading edge in engineering education, according to Dr. Ruth Streveler, director of the CSM Center for Engineering Education.

“The extent and scope of the work going on here is amazing, especially when you consider that we have no school of education and no psychology department,” she said.

The late Ernest Boyer, president of the Carnegie Foundation, proposed a model that organizes the Center’s goals and direction, she said.

Calling for an expanded view of “scholarship” in academia – beyond conducting original research and publishing results – his model applies scholarly rigor to the integration of disciplines, to finding practical solutions to societal problems, and to transferring knowledge to students and helping them transform and extend that knowledge.

Throughout the Mines curriculum, there are many such innovative educational approaches designed to improve understanding of students and the instruction that they receive, Streveler points out.

As an example of integration, she named the Division of Engineering’s award-winning MEL program, a multi-disciplinary engineering laboratory combining three traditional lab areas: circuits, fluids, and strength of materials.

MEL students decide which measurements to take, what is the best way to take them, and how to analyze the gathered data to discover the true problem, she explained. Student feedback indicates they really enjoy seeing how the solutions they devise apply directly to problems encountered on the job.

Finding and applying practical solutions to societal problems is the essence of EPICS, another unique program, in which freshmen and sophomores have designed playground equipment for children with handicaps, developed a solar water still for tribes in Africa, and found ways to recycle used vehicle tires that clutter up the landscape. Currently, they are working on flood-resistant housing for families in Vietnam.

The Physics Learning Studio employs a unique teaching paradigm for transferring knowledge to students by engaging them in interactive sessions in a computer-equipped classroom. “Students become active learners, no longer passive, and they work hard,” said Dr. Tom Furtak, who developed the program at Mines. “They are always interacting socially and enjoy the process more.”

The MEL, EPICS and Studio Physics programs, together with the Center for Engineering Education, are moving into CSM’s newest building, the Center for Technology and Media Center, located on the northeast section of campus.

This state-of-the-art building will provide a showcase and the newest learning technology for these exemplary Mines programs. (See related story on page 14.)

And there is more.

The DOLCE project is developing on-line computer ethics for teachers of undergraduate computer science students. The goal is to help students learn to improve societal issues in computing and telecommunications.

Dr. Tracy Camp and Dr. Barb Moskal, both of the Department of Mathematical and Computer Sciences, have joined with colleagues at other schools in this effort. See their Web page at www.uis.edu/~miller/dolce/.

For the last 20 years, Dr. Mike Pavelich in the Department of Chemistry & Geochemistry has researched developing and evaluating teaching methods that foster higher-level thinking abilities.

His freshman chemistry lab manual requires students to find patterns in data and explain them. Set answers are not available, so students must do their own thinking. In many experiments the students are also required to design their own experiments and redesign them as data comes in.

His manual has been used in colleges across the country for almost two decades. To learn more about Dr. Pavelich’s research, go to his Web page at www.mines.edu/Academic/chemistry/faculty/pavelich/.

Editor’s Note: For more information on articles, presentations, and grants by Center for Engineering Education faculty, go to their Web site at www.mines.edu/research/cee.

Also, for a list of new education books available at the Arthur Lakes Library, go to www.mines.edu/research/cee.
Benign cull or needless loss: Why do half of science, engineering and math majors quit?

By Leah McNeill

The loss of about half of the undergraduates from science, mathematics, and engineering (SME) majors to disciplines which are not science-based cannot be explained away as a “benign cull of students who are under-prepared.”

Nor do other typical rationalizations hold up under the scrutiny of research, according to Director of Ethnography and Evaluation Research Elaine Seymour at the Bureau of Sociological Research at the University of Colorado in Boulder.

Speaking on campus spring semester as the Women’s History Month lecturer, Dr. Seymour cited 20 years of research by UCLA that tracks the national patterns of loss from some disciplines. Over the last decade, the percentages have remained constant at 38 percent from engineering, 51 percent from the physical and biological sciences, and 63 percent from mathematics.

Faculty, she says, have traditionally considered these departures to be “appropriate,” speculating that the students were “less able, less interested, or less willing to work hard, or as an entirely laudable decision following the discovery (after several semesters in science and mathematics) that their true vocation lies elsewhere.”

To systematically explore these assumptions in her three-year study – funded by the Alfred P. Sloan Foundation – she and her research partner Nancy Hewitt chose as their main research sites seven different types of institutions – from major research universities to small liberal arts colleges. Six additional institutions were later selected for validation of findings.

Almost equal numbers of non-switching seniors and students who had switched into other fields, and only students with SAT scores (or the equivalent) of 650 or greater were included in the interview study. The sample was further subdivided by discipline, gender and race/ethnicity.

The results implicate a set of practices in science, mathematics and engineering teaching that commonly turn interested students away from the sciences, regardless of the type of school they attend.

The interviews yielded 23 concerns that were shared both by students who left and those who stayed. However, 83 percent of all student concerns referenced “the structure of SME learning experiences, and the practices and attitudes which sustain them.”

These concerns include:
• Faculty teaching methods that make it difficult for students to sustain their incoming interest level or develop a deep understanding of the material
• The “unapproachable” nature of SME faculty
• Harsh, competitive grading systems that preclude or discourage collaborative learning that students find valuable
• Faculty modeling of career and lifestyle behaviors that their student do not care to emulate.

While these concerns were shared across the board, women and students of color remain disproportionately likely to leave SME programs: special efforts to recruit and retain them have not addressed the problems with teaching methods identified in her study.

“The different socialization experiences of many of the women and students of color help explain these departures,” she said.

“‘The science culture seeks to select only the strong and able by forcing students to rise to the challenge of two years of fast-paced, competitive, impersonal and unsupportive classes.’

“‘Young, white males are more likely to be familiar and comfortable with this concept of proving yourself, through their experiences in team sports, military practices and relationships with adult males throughout their upbringing.’

However, this encoded message to “prove” oneself is meaningless to students who are accustomed to learning by Socratic dialog and collaboration. As one female senior engineering student phrased it: “I don’t do my best in harsh environments. I can push myself. I don’t need stern teachers beating up on me.”

As a result of the system, many high-ability students leave, along with students of lower interest or ability who are the actual intended targets of the weeding-out process, Dr. Seymour pointed out.

More details on these and other findings are included in their book, Talking about Leaving: Why Undergraduates Leave the Sciences, published by Westview Press in Boulder, Colo. (The original 1997 edition is now available in paperback.)

See the article on the facing page to learn more about what Mines faculty and the CSM Center for Engineering Education are doing to improve pedagogy on campus.

Editor’s Note: Dr. Seymour’s lecture was jointly sponsored by the CSM Women in Science, Engineering and Mathematics program (WISEM) and the U.S. Department of Energy National Renewable Energy Laboratory (NREL) in Golden.
At a school with a past full of treasures and a future full of possibilities, the athletic department at Colorado School of Mines takes every opportunity to blend the School’s commendable background with the lives of current students and faculty. The CSM Athletics Hall of Fame allows the university to achieve this goal of combining past achievements with future goals and endeavors.

On September 7, Mines will induct the sixth class into the CSM Athletics Hall of Fame. The induction class of 2001 includes Glen Frank, Nelson King, Kelly Thistlewood, Tony Evans, the ski teams of 1936-1940, and Frank and Dot Stermole.

Frank, King and Thistlewood comprise the individual category. Frank graduated from CSM in 1994, and ended his Mines athletic career as a highly esteemed wrestling All-American. A four-time letterman and four-time All-American, Frank went undefeated in dual matches during his tenure in Golden. He was voted Most Outstanding Wrestler of the NCAA II Championships his senior year as he took home the title at the 142-pound weight class. Frank took the 1991-1992 season off to train for the U.S. Open Greco-Roman Trials in Barcelona, Spain, where he took third. Frank spent five years of service in the Marine Corps, and was a member of the all-Marine wrestling team. He graduated from Mines with a mechanical engineering degree, and received his master’s degree from Mines in 1998.

King played football at Mines from 1967-1971. The wide receiver earned four letters and received RMC First-Team Mountain Division honors in 1970. King currently holds CSM records for most receptions in a game (tied with 10), most receptions in a season (54), most career receptions (144), and most career touchdown receptions (21). King also played baseball for the Orediggers. He was drafted into the professional ranks by the Texas Rangers in 1972, as he also received MVP and First-Team All-Conference honors the same year.

With her outstanding career as a varsity basketball, softball and volleyball player at Mines, Thistlewood becomes the sixth individual woman to receive induction into the Mines Athletics Hall of Fame. A four-time basketball and softball letter-winner, Thistlewood still holds five school records on the basketball court for most points in a season, highest scoring average in a season, most field goals made in a season, most career points, and most career field goals. She received various Rocky Mountain Athletic Conference and NAIA awards, including RMAC First-Team All-Conference honors in basketball her senior year in 1986-1987. Thistlewood was also named to the conference’s First Team...
in softball in 1988. Thistlewood was also a varsity member of the 1987-1988 volleyball team and the 1984-1985 club soccer team. Thistlewood continued her lush legacy in Golden as she coached the softball team in 1990.

The 2001 Historic Achievement Award will be presented to Evans. The All-RMAC running back made Mines history on October 16, 1993, when he scored three touchdowns in one minute and 30 seconds in the Orediggers’ 51-28 win over the Chadron State College Eagles in Golden. Evans scored three TD’s on a 19-yard run, a 53-yard pass, and a 14-yard pass in less than two minutes, and added another score to total four in the game.

The 2001 Team Award goes to the ski teams of 1936-1940. The teams had two first place finishes and two second place finishes in the annual Intercollegiate Championships during their reign at Mines, and went undefeated in invitational meets from 1936-1938. The ski team from 1938-1939 never placed lower than second in the invitational they entered. Five members served with the 126 Engineer Battalion of the 10th Mountain Division that served in Italy during World War II.

Finally, special recognition goes to Frank and Dot Stermole, outstanding supporters of CSM athletics. The Stermoles have provided philanthropic support to Mines academics and athletics programs over a 30-year period. Dr. Frank Stermole, professor emeritus of the Economics and Business Division and his wife Dot are long-time members of the Mines and Golden communities.

Colorado School of Mines is always accepting nominations for its Athletics Hall of Fame. If you would like to nominate an athlete, coach, outstanding supporter or historic achievement from Mines’ long and legendary athletic history, applications may be sent to the Hall of Fame Committee c/o Marv Kay.
Philanthropy at mines

In Memoriam

Russell L. Wood E M 49, a dedicated Colorado School of Mines alumnus, Board member, benefactor and friend, died April 29, 2001. He was 73.

Wood served on the Colorado School of Mines Board of Trustees from 1981 to 1997; for six of those years he was president of the board. Mines awarded Wood the Distinguished Achievement Medal in 1981, the Melville F. Coolbaugh Memorial Award in 1993, the Trustees Emeriti Honor Award in 1996, and an Honorary Doctor of Engineering Degree in 1997.

Wood spent a lifetime in the mining industry. Beginning in 1961, he worked as an engineer at the New Jersey Zinc Company and ultimately became senior vice president. In 1975 he started Gold Fields Mining Company, where he served as president and CEO until 1979. For the next five years Wood was president of Copper Range Company; he and two partners acquired the company in 1985 and sold it in 1989. Wood then served as president and chief executive officer of Asamera Minerals, Inc., from 1990 to 1992.

His professional devotion to the mining industry was also his personal passion. He served as director of the Colorado Mining Association and was elected as Honorary Member in 1991. He also founded the National Mining Hall of Fame Museum.

CSM President John Trefny said, “When we speak of graduates who make a difference, surely Russ comes to mind. He made a difference not just at this institution, but in this world.”

Beginning in 1994, Wood and his wife Lyn made a series of gifts to help establish the Russell L. and Lyn Wood Mining History Archive at the Colorado School of Mines Arthur Lakes Library. “Russ always wanted to give back to the School, and give back he did,” said CSM President Emeritus George Ansell at a campus memorial service. “He left a legacy of integrity, a legacy of how to embrace change. This School is his memorial.”

Suggestions for memorial remembrances are Colorado School of Mines Arthur Lakes Library, Mount Evans Hospice, or Colorado Neurological Institute. Call 303-273-3154 for contact information.

Marsha Konegni contributed to this article.

Mines Alumni Return for Reunion

Visits Prompt Investment in the School

The classes of ’91, ’86, ’81, ’76, ’71, ’66, ’61, ’56, ’51, ’46, ’41, and ’36 returned to Golden for reunion week, held simultaneously with Mines’ 127th commencement. The alumni enjoyed catching up with their classmates at breakfasts, luncheons, receptions, and banquets. Those who returned to campus were also treated to tours of new buildings, golf outings, a trip to the casinos in Central City, and a visit to Ocean Journey.

A breakfast commemorating the 50th reunion of the Class of 1951 was held Thursday, May 3. According to the Class Vice President, Roger Richter E M 51, three topics emerged as the main conversation themes among the class: war stories, heart conditions, and the extracurricular activities they participated in while students at Mines. “Not to slight the excellent education we received, but the extracurriculars were, if not more interesting, certainly more fun! They were the stuff that made the Mines experience.”

For the class of ’51, which celebrated its 50th reunion, participating in commencement was undoubtedly the highlight of the week. The veteran alumni were honored with silver diplomas similar to those received by graduating seniors. One member of the class was so inspired by the festivities that he donated $100,000 to the School in honor of his reunion. The class of 1951 itself contributed $294,718. In all, reunion class members raised over $1 million to support their alma mater, in addition to a $2 million bequest intention from Thomas Snedeker P E 36 in honor of his 65th reunion.

Reunion events for the classes of ’92, ’87, ’82, ’77, ’72, ’67, ’62, ’57, ’52, ’47, ‘42, and ’37 are currently being planned. Details will be printed in the winter issue of Mines.
Philanthropy at Mines

Colorado School of Mines received more than $25,000 from each of the following donors between 15 March 2001 and 15 June 2001. With their gifts, these benefactors will join or renew their membership in the Simon Guggenheim Society, a distinguished group of Mines alumni and friends who annually donate $25,000 or more to the School. In many cases, the donors’ gifts earn them membership in the Mines Century Society, which honors alumni and friends whose cumulative contributions to the School total $100,000 or more.

Individual Gifts

Already a member of the Mines Century Society, Nathan M. Avery P E 56 renewed his membership in the Simon Guggenheim Society with a $25,000 donation in memory of Russell L. Wood.

Virginia B. Case left a bequest of $200,000 to Mines. She was the widow of William B. Case E M 20.

Distributions totaling $130,295 were received from the estate of Bart P E 30 and Helen De Laat. The contribution was added to the De Laat Scholarship Fund.

Arthur J. Dyson P E 51 joined the Simon Guggenheim Society with a $51,929.60 contribution to the Petroleum Engineering Department in support of departmental student workers.

Bruce E. Grewcock Bsc Min 76 joined the Simon Guggenheim and Mines Century societies with a gift of $25,000 to the Mines Annual Fund and another $25,000 in support of Mining Engineering Department activities.


Carolyn V. Mann donated $50,000 to the John and Carol Mann Graduate Fellowship in Geology in honor of her late husband John F. Mann Jr. Geol E 43. A member of the Mines Century Society since 1999, Mann also renewed her membership in the Simon Guggenheim Society with her latest gift. The Woods are members of the Mines Century Society at the copper level.


A bequest of $25,000 was received from the estate of Robert D. Switters Met E 50 to establish an endowed scholarship fund.

Shortly before he passed away, Russell L. E M 49 and Lyn Wood established their eighth gift annuity with a contribution of $50,000.

In honor of his 50th reunion, Thomas Valente Geol E 51 E M 56 and his wife Frances Valente contributed $100,000 to the Mines Annual Fund. In recognition of their generosity, the Valentes join the 2000-2001 Simon Guggenheim Society and will be inducted into the Mines Century Society this fall.

Corporate Gifts

With a gift of $75,000, the Adolph Coors Foundation will provide scholarships to students in the Minority Engineering Program.

Environmental Studies Group contributed $100,000 toward a pledge by Infiltrator Systems to support Dr. Robert L. Siegrist’s research and educational activities in the area of onsite and alternative wastewater technologies.

ICI Technology made gifts totaling $56,700 to support research conducted by the Department of Chemistry and Geochemistry under the direction of Professor Kim R. Williams.

The ISS Foundation contributed $25,000 to support ISS Foundation Ferrous Metallurgy Grant Program Professor John Speer.

To assist Dr. Dan Knauss’s polymer and materials chemistry research, KRATON Polymers donated $28,382.

The Mikkelson Foundation contributed $28,000 toward the New Engineering and Applied Technology Program under the direction of Dr. John Steele.

To support the research of Professor David Wu in the Departments of Chemistry and Chemical Engineering, the Mitsubishi Chemical Corporation contributed $55,000.

Shell Oil Company made a gift of $25,000 to support the research of Professor Max Peeters in the Department of Geophysics.

With gifts totaling $58,842, the Edna Bailey Sussman Fund supported 14 students in the Environmental Internship Program.

Unocal Corporation contributed $200,000 toward their $1,000,000 pledge for the Unocal International Fellowship in Petroleum Studies.
Phonathon Connects Mines’ Past, Present, and Future

Thanks to hundreds of Mines’ supporters, the 2000-2001 annual CSM Phonathon raised $289,760 by June 30, 2001. Similarly impressive, the percentage of the people called who pledged gifts to Mines through Phonathon this year increased more than 10 percent, from 19.6 percent in 1999-2000 to just over 30 percent in 2000-2001. With the program ready to begin in September for the 2001-2002 school year, improving upon that success presents an exciting challenge to the dedicated Phonathon callers.

Each year, the Mines Annual Fund program hires students to call alumni, parents, and friends of the School in the United States and Canada. In addition to taking pledges, the students provide updates of current events and new academic programs, and answer questions about the School.

“Not only is it a convenient on-campus job, but the callers gain so much from the experience,” said Phonathon manager Ryan Hill. For Phonathon caller Felipe Galindo, just getting a glimpse into life after graduation is an unexpected reward. “The people we talk to are involved in the business, and you can see yourself doing something similar in a couple years,” he said. Several students have even received offers for internships and employment following their Phonathon conversations.

Just a few years ago, the Phonathon program was run semi-annually in one- or two-week sessions by volunteers from fraternities and other campus organizations. Today 15 students work for Phonathon from September through late November, and again from January to the end of April. The students make calls between 5:45 p.m. and 9 p.m. mountain time, dialing the east coast first to balance the variance in time zones.

“I really look forward to hearing from the students each year,” said David Wickham PhD Chem 86. “Sharing stories, reminiscing, seeing how things are on campus today – it’s like a mini-reunion!”

Phonathon pledges can be completed in several different ways. People wishing to make pledges over the phone will receive a pledge card in the mail to complete and return with a check or credit card information; pledge gifts may be made in installments. Callers can also process gifts on Visa, MasterCard, and American Express credit cards. Pledges can be satisfied and new gifts can be made online at the Mines Web site: www.oia.mines.edu.

An easy way to maximize your support is through corporate matching programs. If you work for a company with a matching program, present your pledge card or receipt as proof of your donation to your employer.

Profiles of all the student callers can be found on the Mines Web site at www.oia.mines.edu/valued_supporters/phonathon_callers_00. In the meanwhile, keep a line open for the 2001-2002 Phonathoners. Mines’ Annual Fund will be recruiting student callers this month. Training sessions will be held in the first week of September, and calls will begin the following week.

New List Serve Helps Parents Stay Connected to Mines, Each Other

Colorado School of Mines is pleased to announce a free email discussion list for parents of Mines students. In addition to the newsletter sent via postal mail, the discussion group will help parents stay connected to the School and informed about campus activities. With the new online forum, parents can also discuss topics of interest and concern and submit questions to other Mines parents. The list serve will also provide periodic updates on campus events, student deadlines, and parent programs. Parents can join the group for free at any time and remove themselves from the list serve whenever they like.

Hosted by the Mines Parents Fund staff, the moderated CSM Parents Online discussion group is now active. Staff members are currently looking for input about what events parents would like to participate in or services they would like to receive as the upcoming school year’s activities are planned. Send your suggestions to CSM parents@mines.edu.

To sign up for the discussion list, visit the Parents Fund Web site at www.oia.mines.edu/valued_supporters/parents and click the link to “E-mail Discussion Lists.” For more information about the parents list serve or any CSM Parents Fund program, or if you’d like to volunteer for CSM Parents Fund activities, contact Rhonda Gathers at 303-273-3153 or rgathers@mines.edu.
Scholarship Supports the Spirit of Sisterhood at Mines

Colorado School of Mines junior Cambrey Johnston is the first student to be honored by a new women’s scholarship program organized by a group of Mines alumnae. Johnston received the $1,000 scholarship on May 2 at a High Tea reception. “I am so honored and grateful to have been chosen [as the first recipient of the Sister-to-Sister scholarship]; words cannot even express how pleased I am,” Johnston said.

The program grants a one-year scholarship to help female students complete their higher education at Mines. Scholarship recipients are also matched with alumna mentors to help prepare them for a future in science. “I think it is so wonderful to have the support of women in the community,” Johnston said. “I hope that someday I can help other women the way [they] have helped me.”

Majoring in geophysics, Johnston concluded her junior year in May. She always knew she wanted to be an engineer and decided to pursue that goal at Mines because she “had heard of the School’s great reputation for engineering education. I wanted a school that would be challenging and would give me the attention I needed to succeed.”

Even while satisfying the demands of Mines’ rigorous education, Johnston has been an active leader in the Mines community. She served as an officer for Pi Beta Phi, volunteered as a Student Ambassador, and is an active member in the Society of Women Engineers (SWE) and the Society of Student Geophysicists. In addition to her campus involvement, Johnston also works part-time as a dancer for the Denver Nuggets Dancers.

The idea for the Sister-to-Sister program was born in October 1998 at a celebration honoring the 100th anniversary of Florence Caldwell’s graduation. (Caldwell became the first woman to graduate from CSM when she received a degree in civil engineering in 1898.) Women involved in the Caldwell Centennial Celebration gathered in 2000 to develop the Sister-to-Sister Scholarship Fund. Efforts to establish the scholarship have been supported by both male and female alumni and friends; the Alumni Association; Women in Science, Engineering, and Mathematics; SWE; and the Minority Engineering Program.

In the first year of the program, the Sister-to-Sister scholarship committee raised $17,174.83 for the program, from which the $1,000 scholarship was awarded. The committee hopes to raise another $9,000 to reach the amount needed to endow the fund and support students in perpetuity. The goal is to ultimately raise $500,000 to make a truly significant impact.

Resident and non-resident students are eligible for the scholarship after their freshman year. The scholarship is awarded annually, but recipients may apply for the funds in subsequent years. Students may receive scholarship applications at www.mines.edu/Academic/affairs/wisem/SistoSis.htm or by contacting Financial Aid at 303-273-3301. Applications for next year’s scholarship must be received by April 1, 2002.
Nothing came easy for this event. Not the initial campus support. Not the fundraising. Not even the weather. In fact, on the day of the event, 17 inches of snow fell, and every school in the region – except School of Mines – was closed.

Still, nearly 800 people packed the Green Center’s Bunker Auditorium on April 11 to hear a Nobel Prize laureate deliver a lecture, organized by members of the Mines 2000/2001 freshman class. Inspired, ambitious and conscious of the year that marks their start at CSM, freshmen in two sections of CSM 101 instituted the Millennium Lectures.

The inaugural lecturer was Dr. Kary Mullis, who was awarded the Nobel Prize in Chemistry in 1993 for his invention of the polymerase chain reaction method and is credited for other works in DNA research. His presentation, “Science: The Realm of the Senses,” was directed to an undergraduate audience that enjoyed hearing about his “long fascination with things that explode” and “the mean professors at Georgia Tech who didn’t allow calculators.”

While on campus, Mullis was also the guest of honor at a dinner with students and faculty, and he visited Dr. Mark Eberhart’s physical chemistry class. Mullis counseled students, “If it’s too easy to learn, it may not be true. If you have to work, think, dig and then decide, it’s more likely to be true. Never let someone else do your thinking.”

Information on the Internet is free and convenient, he noted, but most of it is not verified. “Anyone with a notion can put it on the Web,” he said. Mullis doubts that the ozone layer is truly threatened and questions the theory of global warming. He told students to question everything, to not take anything for absolute fact, even from textbooks. “Going against the stream is not easy,” he said, “but many strongly held opinions are wrong opinions.”

“Dr. Mullis typifies the person who sticks by his guns to the end. This class was told that their plan would never work, that only 20 people would show up – but they went ahead anyway. All creative people need to learn to do that,” said Eberhart.

“While on campus, Mullis was also the guest of honor at a dinner with students and faculty, and he visited Dr. Mark Eberhart’s physical chemistry class. Mullis counseled students, “If it’s too easy to learn, it may not be true. If you have to work, think, dig and then decide, it’s more likely to be true. Never let someone else do your thinking.”

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Now they hope the tradition continues, with each freshman class organizing a lecture by a distinguished member of the technological community who has something to say about the experience of being a scientist or engineer – and can say it to an audience of underclassmen. The incoming freshmen will be told that nothing came easy. “It was time-consuming,” said freshman Michael Deneff. “It was a big commitment,” said freshman Brian Philippe.

“But,” they both said with grins, “it was worth it.”

Nothing could stop the freshman class from successfully orchestrating the inaugural lecture in the Millennium Lectures series.
While the Hubble Telescope looks for signs of life in outer space, NASA-Ames researcher Christopher McKay is on a similar mission. But he is looking at the bottom of the Earth.

Dr. McKay hopes that by learning where life exists in the most extreme climes on Earth, such as the bottoms of Antarctic lakes, he can develop a protocol for searching for life on other planets and astral bodies.

So he visits deserts in Mongolia and Chile… Siberian permafrost regions… Lechuguilla Cave in New Mexico. And he has been to the Antarctic 15 times.

He focuses on the Antarctic because it is the oldest, driest place on Earth, with an average temperature of only -20 degrees C and a climate 10 times dryer than Death Valley. It never rains there, it only snows.

“ ‘The Antarctic is a good Mars analog,’ he explained spring semester to CSM students and faculty during the 4th Lucas Seminar, sponsored by the Department of Chemistry and Geochemistry. ‘I don’t think that Mars has ever been any warmer than Antarctica.’

Why is Mars such a good candidate for supporting - or having supported - life? It has all the elements needed for life, according to McKay. The atmosphere is roughly the same as the Earth’s was throughout most of its history, mostly CO₂. (Oxygen is a recent pollutant, he quips.)

McKay also believes Mars has had flowing water. “Mars did have something viscous flowing at one time,” he says, pointing to photos of a red planet canyon that is a “dead ringer” for Grand Canyon.

Could other fluids have caused the fluvial terrain? “Doesn’t hold water,” he dismisses the question. While some of the fluvial features could be explained with liquid water - for example by ice, wind, or even CO₂ - there are many features such as the winding canyons with a river bed on the canyon floor that “convincingly imply liquid water.”

Martian meteorites also show other similarities to Earth’s geologic history, as does evidence from the Mariner, Viking and Pathfinder missions. “Early Mars was very Earth-like. This is why we are crashing more space craft into Mars than any other planet,” he joked.

Mars lost its early atmosphere, he believes, because it had no plate tectonics, which is necessary to sustain habitability. The Earth stays warm because of the CO₂ in the atmosphere, which is created when carbonates are recycled by plate tectonics and vulcanism.

This theory raises the question of why Mars lacks plate tectonics. “Mars is small, with only 1/10th of the Earth's mass. Jupiter formed first and prevented Mars from growing large enough to produce plate activity,” he explained.

Despite its current inhospitable conditions, McKay thinks that there is a good possibility that carbonates did exist on early Mars. Where would he look for them, if he could search there? Hebes Canyon. “It’s a box canyon that has a high plateau with no inlets. It could possibly be a huge carbonate reef, like the Guadalupe Mountains. Put me on Mars and this is where I would drill!” he says.

There are also many crater lakes on Mars, where, he believes, fossils might also be found.

Such fossils would most likely be in the form of frozen bacteria. They wouldn’t still be alive, although he has found live bacteria in the Siberian permafrost that has been frozen for 3.5 million years.

“Even though bacteria could survive the extreme cold, it’s not likely they could survive the ionizing radiation they would have been exposed to,” he said. “But even so, we could still analyze their microstructures.”

What are the odds that there is life in the universe that is not based on water but another element, such as ammonia? “It’s possible but we wouldn’t even know what to look for. So we are focusing on the Earth model of life as we explore Mars. Let’s look for our cousins before we look for aliens,” he said.

Lucas Lecturer:
Looking for our Cousins
By Leah McNeill
One unique component of a Mines education is the summer field session all undergraduates must complete in their major fields of study.

In Mathematical and Computer Sciences, field session also serves as the department’s capstone course. Students are expected to transfer their classroom knowledge to a challenging applied problem in mathematics or computer science.

Appropriate projects are solicited from industry, government, educational and research organizations, according to MCS Associate Professor Robert Underwood.

This summer, students will be working on projects for a diverse array of companies, such as Sun Microsystems, IBM, the National Park Service, Honeywell, and Dale Carnegie.

One group of students is helping save Chaco Canyon, the center for the ancient Anasazi culture in New Mexico, where the ruins of this Native American culture are being threatened by flooding from a river in the canyon bottom.

Students worked this summer with the National Park Service to produce an animated computer simulation of the canyon that predicts the damage from seasonal flooding. The product will be sent to Congress in hopes they will fund work to protect this national archaeological treasure.

“I was really impressed with what the Mines students did,” said Wallace “Monte” Bingham, chief civil engineer for Peter Laurice & Associates, the engineering firm that is helping the National Park Service develop solutions for saving Chaco Canyon.

“We can’t take the Canyon to Washington or bring Congress to New Mexico,” he explained. “So what the students have done is critical to persuading the legislators to save these 1500 year-old ruins, which may be the oldest such site in the country.”

Other student projects include the following:

Finding uses for the millions of recycled vehicle tires that cause aesthetic pollution around the country and pose an environmental hazard through fire. Students developed a mathematical model of the thermal resistivity of tire bales so that an effective conductivity can be determined. This data will help answer the question of whether tire bales can be used for practical purposes, such as home construction and highway noise barriers. The project was funded by CSM’s Colorado Advanced Materials Institute (CAMI).

Predicting toxicity of drug compounds for Ricerca, an Ohio company that offers an extensive drug development system to enhance conversion of drug discoveries into new medicines. The ability to predict acute toxicity of chemical compounds is critical for determining the feasibility of further research and development. Students developed a software program to compare certain attributes of a given compound to a database of compounds whose toxicities are known.

Preventing pipeline plugs in underwater oil fields becomes more difficult as oceanic exploration proceeds into deeper and deeper waters. Increased pressure and frigid temperatures can result in clathrate hydrates, causing plugs in pipelines. Students worked to
enhance an existing software program developed by a Mines graduate student to make it more user friendly and effective, by developing a front-end program to calculate data and view it in an easy manner.

Creating custom Web sites for Honeywell and Dale Carnegie

The Honeywell intranet will allow employees to easily store and share documents, download software patches, and gather information about their new Environmental Information Management Solutions system. Dale Carnegie clients will be able to visit their new Web site to view class pictures, lifelong email listings, video clips of class sessions, homework assignments, etc.

Assisting Sun Microsystems educational division with life cycle analysis of its training courses. Students first performed a business analysis to determine how the end-of-life process works at SunEd. The next step was to design software module(s) to track and direct this process. The product was then placed on Sun's project services portal for easy access by product managers.

By Leah McNeill
## Alumni Events Calendar

### August

### September
- **13**: Lunch Bunch, an informal alumni get-together meets at the Buffalo Rose in Golden, Colo., 11:30 a.m.
- **20**: Grand Junction section luncheon at Bookcliff Country Club, 2730 G Road, noon. For information call John Howe at 970-242-4903 or Del Tolen at 970-256-1118.

### October
- **06**: Houston luncheon at Brady’s Landing, 8505 Cypress at noon, followed by Port of Houston guided tour by boat. For reservations (limited to 45), contact Julie White, 713-767-1612.
- **08**: Lunch Bunch, an informal alumni get-together meets at the Buffalo Rose in Golden, Colo., 11:30 a.m.
- **11**: Lunch Bunch, an informal alumni get-together meets at the Buffalo Rose in Golden, Colo., 11:30 a.m.
- **13**: Royal Gorge Railroad outing, Canon City. Details TBA.
- **18**: Grand Junction section luncheon at Bookcliff Country Club, 2730 G Road, noon. For information call John Howe at 970-242-4903 or Del Tolen at 970-256-1118.

### November
- **08**: Lunch Bunch, an informal alumni get-together meets at the Buffalo Rose in Golden, Colo., 11:30 a.m.
- **09**: Houston Happy Hour, 5:30 p.m. at Slainte’s, 509 Main at Prairie. For more information, contact Vivek Chandra 713-350-4384 (no R.S.V.P. required).
- **15**: Denver West section meeting. Detail TBA
- **20**: Grand Junction section luncheon at Bookcliff Country Club, 2730 G Road, noon. For information call John Howe at 970-242-4903 or Del Tolen at 970-256-1118.

### December
- **04**: Annual Holiday Party, 11:15 a.m.-1:30 p.m., Top of the Rockies, Bluebell Room, 555 17th St., Denver.
- **13**: Lunch Bunch, an informal alumni get-together meets at the Buffalo Rose in Golden, Colo., 11:30 a.m.
- **20**: Grand Junction section luncheon at Bookcliff Country Club, 2730 G Road, noon. For information call John Howe at 970-242-4903 or Del Tolen at 970-256-1118.

### CSM License Plates Now Available

Support the Alumni Association’s Student Financial Assistance Program by purchasing CSM license plates. The one-time fee of $50 per vehicle goes directly to the assistance program, which provides loans, grants and scholarships to CSM students. Once your application and fees have been received, CSM AA will send you the paper work you need to take to the motor vehicle department AT THE TIME OF YOUR YEARLY RENEWAL to receive your plates. If you have questions, call CSM AA at 303-273-3295.

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>County of residence</th>
<th>Telephone</th>
<th>Number of sets</th>
<th>6th Annual CSM AA Family Picnic, 1-5 p.m. at the Coolbaugh House on campus. Price: $10 for adults, $6 for children (4-10 years old). Under 3 free. To register, call Janet at 303-273-3295.</th>
</tr>
</thead>
</table>

Send completed form, along with check made out to CSM AA ($50 per vehicle) and mail to:

CSM AA License Plates
P.O. Box 1410
Golden, CO 80402-1410

For the most up-to-date information, check the Web site: www.alumnifriends.mines.edu/news_and_events/default.htm

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Students design flood-proof housing in Vietnam

By Diana Wagner

In Vietnam, 2,450 families lost their homes and belongings to recent flooding.

The spring semester 2001 Design EPICS students responded, using their engineering skills to help rebuild the small community in central Vietnam. Fourteen teams submitted plans, models, and even animated computer demonstrations for storm- and flood-resistant housing.

The teams compiled research, made contact with organizations in the United States and Vietnam, and consulted Vietnamese members of the CSM community. In designing the housing, the teams worked with the following housing specifications:

- 16x18 feet, or 288 square feet
- able to accommodate 11-14 people
- affordable for a resident who annually earns $200
- flood resistant
- made of materials found in Vietnam, such as bamboo and concrete.

By the end of the semester, three basic types of dwellings emerged: stilt house, floating house, and a house with a solidified structure.

The 14 teams submitted their designs to the Vietnamese Children's Network, the University of Saigon, and other organizations in Vietnam for potential construction. The designs selected as finalists were:

- Little Bubba: The team designed the foundation to remain during a flood, with an upper structure that could easily be repaired.
- Tasty Nougat: This plan has a strong foundation and requires only natural local materials.
- Water Wings: Their proposal includes an octagonal shape.
- Well Engineering: The only stilt design, this dwelling is supported by concrete blocks, with thatched walls and bamboo floors and poles.

The top design nod went to Little Bubba. What edge did this idea have over the others? In the opinion of team member Kevin Pera, “It was much more than designing a house that looks good. We wanted to design a place called home.”

In keeping with the learning objectives of EPICS, the students applied their engineering skills and learned to work as a team. But beyond these benefits, nearly all of the students believed that the project’s greatest lessons were in helping others and in gaining an understanding of Vietnamese culture. As Brian Buller of Team Five Star Engineering said, “We wanted to propose a new design, not a new way of life. We tried to work with what the residents have in terms of materials and skills.”

Bob Knecht, Director of Design EPICS, believes that this cultural experience will benefit these future engineers who may work overseas. More importantly, he believes the students develop a process of problem-solving. “That’s what engineering is about—solving problems.”
DO Sweat the Small Stuff

The class of 1951 - back in town to celebrate its 50th reunion - left words of wisdom to the class of 2001 and anyone else smart enough to listen. From advice on setting priorities to health to warnings, the class of ’51 tells it like it is.

**You’re the best. Be the best.**
Paul Bollheimer Geop E

*Remember, you know a hell of a lot more than I do.*
Tom Carney PRE

Work hard but balance with spouse and family. First priority to family without downgrading loyalty to employer. Respect job and appreciate it. Personal business and ethical integrity.
Jim Daniels Geol E

Work hard. Make your boss look good and don’t give him any problems.
Pete De Santis Met E

It really is worth the effort to stay with it and receive the Mines diploma!
Art Dyson PE

Be humble, honest and industrious.
Bob Einarsen PE

Your ability to clearly express your thoughts, both orally and in written form, takes priority over technical excellence.
Bill Glater Met E

Your real education is before you; make the most of it!
Bob Hansen EM

Hope you enjoy your career as much as I did. It moves along and ends very quickly.
Paul Hodges EM

Join the Alumni Association!
Van Howbert Geol E

Aim high!
Geoff Jeffreys Geol E

With the recent general demise of the hard-rock mining industry, I now feel like an out-of-work buggy-whip manufacturer. Try to pick a field where you won’t also be involved with future buggy whips.
Dave Jonson Geol E MSc Geol ’55

Never forget when facing challenges and deadlines following graduation, those that you previously experienced and overcame earning a degree from Mines.
Tom Keating Geol E

Remain proud of being a Mines graduate. You have taken a giant leap from the halls of academe to the real world and you have a great foundation upon which to build.
Bud King Geol E

Play as often as you can and DO sweat the small stuff; otherwise it may “bite” you.
Dick Klebe Met E

I hope that you all have good scholastic records. Then you can be choosy in regard to whom you go to work for. Also, you are well prepared for other engineering professions.
John Lathrop Geol E
As you work through your first 10 years, you will remember what you learned at Mines.

Dave Lohr PRE

Be honest in your decisions. Don’t cut corners.

Bob MacCannon Met E, EM ’54

Just because you have never done it before doesn’t mean you can’t. Save your money; it’s worth it.

Jack McFarlin EM

Hard work comes first. Great people skills are a “must.” Volunteer for things. Be the best at something.

Wayne McNeeley PE

From this time of achievement, share the gifts you have received and the lessons learned that you may be gracious and humble at your 50th graduation anniversary.

Bob Meader Geol E

Never look back. Keep your eye on the future. Integrity should be #1 quality.

Bob Menk PRE

Turn your problems into opportunities.

John Miley EM

Remember, your family comes first.

Ed Montgomery EM

Don’t be afraid to take a production job in your option to learn how to work and see how it is done for the first years.

Bob Morrison EM

Be serious in your work, but “cool” in your life.

Bob Murray PRE

Know yourself. Then be yourself.

Swede Nelson PE

“The price one pays for greatness is responsibility.”
(A quote from Churchill)

Don Neuschwander EM

With your Mines education, you are better prepared than the ordinary bear. Use it!

Dick Oppel Geol E, MSc Geol ’53

Develop vocabulary. Be a master salesman to get ideas and recommendations across. Develop master computer skills. Put 150 percent effort in work. Work hard. Be gregarious. Practice sound ethics. IT WILL PAY OFF.

Tex Owen Geol E

Hang in there and remember – do the easiest thing first.
(Then you’re always doing the easiest thing.)

Bob Peters PE

Congratulations. You made it.

Jack Rairden Met E

You are prepared to work with all kinds of people in many activities. Go do it.

Rod Rawlins EM

Try to eventually go into business for yourself or have equity with others. Keep your weight down and your health up.

Roger Richter EM

Be yourself. Do what you want to do. Face bad times with courage and confidence.

Satyabrata Sarkar MSc Met

An honest and sincere effort always pays a good dividend. Education at CSM is much more than just having a technical education and obtaining a degree.

With my experiences of the past 50 years, I can say without reservation that what I am today is the outcome of my training at Mines. The perseverance, discipline and training to face challenges in life and profession, focus on problems, are some of the best qualities experienced at Mines.

Bineshwari Sinha DSc Geol

Even the lower-half graduate can be a success – if you work.

Chuck Stewart PE

Never compromise your integrity – for anyone or anything.

Chuck Stoddard EM

Live, work and play with knowledge, competence and INTEGRITY. The resultant internal pride is what it’s all about.

Jim Ternahan Met E

Try to leave the world a better place, physically and morally.

Jim Tiffany EM

Seek and meet challenges. Keep a “can-do” attitude.

Don’t let little bumps in the road become mountains.

Spence Titley Geol E, EM ’56

Work hard. Be fair to people.

Juan Villarreal PE

Gifts of Appreciated Property Are Appreciated...

... and can provide for you and the School, for example:

- You may receive a tax deduction for the full market value of your property.
- You may avoid any taxable capital gain.
- You may be able to provide lifetime income for yourself and your family.
- You may realize estate-tax savings.
- With gifts of $1,000 or more in value, you are recognized as a member of the CSM President’s Council.

Undeveloped, revenue-generating or environmentally sensitive land may be accepted by the CSMF Property Management Corp. The unique expertise and talents of the CSMF Property Management Corp. could help relieve you of the liability of property with environmental issues.

Gifts of property, stock or other capital assets can be used in making a charitable gift to your alma mater. As with any gift to the School, you will have the satisfaction of knowing that you are providing for future generations of students.

For more information, contact the Managing Director, CSM Foundation Inc.

Linda M. Landrum at 303-273-3142
Melville F. Coolbaugh Award

Franklin J. Stermole 
Assoc '84, Brown 
Medal '99 receives the Melville F. Coolbaugh Award this year for his outstanding contributions to enhancing the reputation of the School. Stermole, a professor emeritus in the departments of Mineral Economics and Chemical Engineering and Petroleum Refining, has been at CSM since 1963. He has spent much of his career developing and teaching economic evaluation techniques to both graduate and undergraduate students. His domestic and foreign industrial and government teaching and consulting experience has provided a broad base of discounted cash-flow investment analysis experience to draw upon to apply to current investment evaluations.

Outstanding Alumnus Award

Marvin L. Kay EM '63, Hon Mem '88 was named Outstanding Alumnus for his years of service to the School and the community of Golden. As mayor of Golden, he improved relations between the city and the School. As CSM athletic director, he has enhanced the reputation of the School and improved its sports program. Kay served in Germany during World War II and then served in the reserves. He has actively supported the CSM ROTC program, which has helped bring outstanding scholar-athletes to Mines.

Young Alumnus Award

Vivek Chandra BSc Geop '88 has been active in CSM AA sections since graduation and currently serves as co-chair of the Houston CSM AA section. He has represented Mines at high-school fairs in Dallas, Anchorage and Houston and is always enthusiastic. He has recruited at Mines for Arco and Schlumberger. Chandra has remained active with Phi Gamma Delta fraternity, providing motivational talks about academics, fraternity and careers and is an excellent role model. Currently, he is business development manager for North America at IndigoPool.com.

Honorary Memberships

Roger C. Beach PRE '61, Medalist '87, Honorary D Eng '95 has been an outstanding leader of Unocal through difficult times. His company has been a leader in the petroleum industry, and Beach has often been cited in the news. He is a credit to Mines and to the country. Beach successfully reorganized Unocal, shedding costly refining and retail activities, which led to a favorable sale of the headquarters property and to a relocation of his firm. Beach has also been very supportive of alumni activities, particularly in his talks to Southern California alumni.

William D. Watts EM '52 has shown dedicated service as a class agent. His involvement with CSM AA began in the late 50s during fund-raising campaigns. He signed letters to all 240 of his classmates urging them to participate. At his class' 40th reunion, he was instrumental in establishing the Class of '52 Endowed Scholarship Fund. Currently, the scholarship fund is more than $666,000. “By our 50th reunion, we plan to reach $1 million,” he says. Watts spent his entire career with U.S. Steel and its subsidiaries. Highlights include years in Nassau, Bahamas, a year in Johannesburg, South Africa, and time in Rio de Janeiro. Today, he is retired in Florida and is an active member of his local section.

Melville F. Coolbaugh Senior Award

Tiffany Mensing, a chemical engineering and economics and business double major, is an outstanding student and athlete. She runs on the varsity track team and, in 2000, won the Rocky Mountain Athletic Conference academic award. During summers, she has been an intern for Conoco, Exxon Mobil, and BP. She is a member of Blue Key, the Guy T. McBride Honors Program, Society of Women Engineers and the American Institution of Chemical Engineers.
LELAND “LEE” B. KORT BSc Chem '83, BSc CPR '83 of Lakewood, Colo., died Dec. 17 in Ponte de Sor, Portugal. He was 39.

Kort was a graduate of Alameda High School in Denver. After graduation from Mines, he earned a master's of business administration degree from University of Phoenix. He worked for Autoliv/OEA in Denver, Germany and Portugal.

Kort is survived by his mother and a brother.

MORTIMER A. “MORT” KLINE JR. Geol E '54, MSc Geol '56 died Oct. 10 from cancer. He was 68.

Kline was in the oil and gas business in California, Canada, Texas and Louisiana. He was an artist and an active outdoorsman. At Mines, he was a member of the football team, Blue Key and Sigma Alpha Epsilon.

"Mort Kline was a close friend who will be missed by his friends," said Murray McKinnon PE '52.

Kline is survived by his wife of 46 years, Betsy, a son, a daughter and two granddaughters.

CHRISTIAN G. KUEHN EM '41, died Dec. 9 at the age of 83.

Kuehn was born in Scotch Plains, N.J., and one year after graduation, married Alice Shepherd, who preceded him in death. Kuehn worked in mining operations in Nevada, Colorado, Wyoming and Bolivia for 10 years. In 1952, Kuehn and his wife moved to Boise, Idaho, where he worked for a mining and construction company until 1969. They moved to Burnett, Texas, in 1996.

Kuehn is survived by a daughter, two sisters and a granddaughter.

GLENN LANCASTER PE '41, a retired petroleum engineer, died Jan. 21 at age 81. He loved Mines so much he requested the "Mining Engineer" be played at his funeral.

Lancaster worked for Stanolind Oil and Gas Co. He then was an Air Force flight engineer on B-29s during World War II, flying over Japan, Burma and Malayan states.


Lancaster is survived by his widow, a stepdaughter, a brother, nine grandchildren and 10 great-grandchildren.

SOLOMON “SOL” MELTZER Geol E '51 died at his home in Texas Dec. 9, a month shy of his 82nd birthday.

Before attending CSM, Meltzer served as a navigator in World War II and married his wife Thelma. After graduation, he worked as a geologist until he retired.

By the time he retired, Meltzer had become the "Herb Man." He wrote Herb Gardening in Texas and supplied herbs to nurseries and restaurants in the Houston area.

Meltzer is survived by two daughters, three grandchildren and a sister.

JOHN JAY NAUGLE JR. PRE '51 died Sept. 25, 2000, at the age of 77.

While at Mines, Naugle was a member of the track and field team, ATO fraternity and student government. He served in the U.S. Navy Air Corps as a pilot and was active in Rotary and the Republican Party of Texas.

Naugle was preceded in death by his wife, Sally. He is survived by three daughters, two sons and seven grandchildren.

WILLIAM F. “BILL” ROBERTSON JR. Geol E '51 died Dec. 27 in Casper, Wyo. He was 81.

Robertson enlisted in the U.S. Army in 1941, and then later in the U.S. Army Air Corps. He served in Japan and Korea before being discharged as a captain in 1946.

At CSM, Robertson was a member of Sigma Gamma Epsilon and was on the Oredigger staff. After graduation, he became a geologist for Pure Oil Co. and later began developing the first computer systems used in oil exploration. He was a member of the Wyoming Geological Society until his death.

Robertson retired in 1985 to a life of travel, house projects, computers, and spending time with children and grandchildren. He is survived by his widow, three daughters, two sons, a sister, two brothers and eight grandchildren.

Also in Memoriam

Raymond Anderson MSc CPR '69
Patrick E. Brennan Geol E '53
Traci R. Holt BSc Eng ’95
G.S. Landrith Jr. MSc Min '51

Dec. 30, 1999
Jan. 1, 2001
Unknown
Unknown

Jose A. Rodriguez PRE '62
Robert D. Switters Met E ’50
Richard B. Willoughby BSc Min ‘83

1991
2001
Unknown
Unknown

Also in Memoriam
In May, Samantha Przywitowski BSc Met ’94 and husband, Pat Coughlin, hosted a second reunion of the Mines Ultimate Frisbee team and alumni from the San Diego area. The team had visited San Diego in February and returned to compete in the regional tournament.

Local alumni joined students and staff of the CSM mining department in April for a buffet at Harrah’s Casino in Reno. The students were there to take part in the mining competition held that weekend at University of Nevada, Reno. Another Reno event occurred in June when Bob Pearson PE ’59, of the CSM AA staff, reported to the group on the latest happenings on campus.

Alumni in Bakersfield held a barbecue May 12 for students and faculty attending petroleum engineering field camp in the area. Scott Ash, a Mines student working for Chevron in Bakersfield this summer, was the special guest. Lonnie Kerley BSc Pet ’85 played chef grilling the hamburgers and hot dogs. Joe Nahama MSc Pet ’90 organized the event. The fun included students being quizzed on alumni and alumni being quizzed on students and the school, with free movie tickets going to those who knew the most.

The 17th annual Alumni Golf Tournament in the Denver area raised several thousand dollars putting the Student Scholarship Fund at over $100,000. Twenty-five teams of four participated. Lunch and a raffle followed. Donated prizes were so numerous this year that nearly everyone went home with something.

A group of alumni, organized by Maria Leathrom BSc Met ’97, was on hand to cheer on the Mines track team as it competed in Edwardsville, Ill., this spring. “Our meeting was so much fun,” Leathrom wrote to section coordinator Bob Pearson PE ’59. “I am still hearing about it from my family. I don’t know if we will start running on a team, but we definitely came to appreciate the sport better. Thank you for involving me in this get-together! I hope to see you all and more again next year.”

Twenty alumni, spouses and friends enjoyed a luncheon at the Chalkboard Restaurant in Tulsa in June. Bob Pearson was on hand to report on activities at Mines.

Above, Knox Williams discusses avalanches.

Dave Chojnacki, Olga Chojnacki, Scott Seiler and Dave Brown play a round for student scholarships.

Kathy and Leon Munyan BSc Min ’76 hosted the Arizona Spring Fling at their home in Ahwatukee, Ariz. in April. The pig roast was delicious and the activities (golf putting, billiards, ping-pong, badminton) created a wonderful afternoon of fun and camaraderie.
Nearly 70 miners, family and friends gathered for the 12th annual Bone Valley section barbecue in April at the CF Industries Ranch in Hardee County, Fla. Representatives from campus included Pres. and Mrs. John Trefny. A.L. “Judge” Holmes Geol E '60 organized the event.

The first annual Houston section golf tournament, held April 27 at Bear Creek Golf World, was a big success. The tournament brought together 45 alumni, 28 friends, and 22 corporate and individual sponsors for a purposeful alumni and industry gathering. Barbara and George Puls BSc Min '75, Lindsay and Dean Stoughton BSc Math '75, MSc Geop '78, and Pat and Kim Harden BSc Met '74 were key organizers of the event. Other volunteers were Dave Drummond BSc Pet '75, Marv Kay EM '63, Julie White CPR '83, Jeff Epstein BSc Met '87, Robert Cleek BSc CPR '87, MSc CPR '93, Kathy Roldan BSc Geop '88, Vivek Chandra BSc Geop '88 and Melissa Stowe BSc Geop '93.


Seventy-three people golfed and $7,200 was raised for academic and athletic scholarships.

Nine alumni got together in Guatemala March 24 to talk about their goals as a group. Then they spent the rest of their reunion socializing and eating lunch. More get-togethers are planned. Of the attendees, one came from Honduras, another from El Salvador, and the rest from Guatemala. The next reunion should include Miners from Panama, as well.
Kemp ’66 Trains Bush Pilots in Alaska

Sometimes, life experiences lead to unexpected careers. Richard N. Kemp Geop E ’66 expected to be a geological engineer. After graduation, he spent two years on active duty in the Army including a tour with Special Forces along the Cambodian border in South Vietnam. After his discharge, he began his career as an engineer in seismic oil exploration. But after six years, he decided to return to his childhood love: flying.

“I had soloed my first airplane at the age of 16 and was bitten by the flying bug,” Kemp says. “Since 1972 I’ve been making my living as a pilot. I moved to Alaska in 1976 and, like most of us up here in general aviation, have flown a variety of different jobs including photogrammetric mapping, geophysical surveys, radio-tracking and counting game and birds, fish counts, freight and mail delivery, small regional airlines and hauling skydivers in a DC-3.”

In 1987, Kemp began working for the U.S. Department of the Interior flying personnel and supplies on wheels, skis and floats into remote ranger stations and research camps. He became a law-enforcement ranger/pilot and flew resource and visitor protection patrols, search and rescue and other support flying.

“Lately, I’ve become the regional aviation trainer for the National Park Service in Alaska,” Kemp reports. “I train our new pilots in ‘bush flying’ skills and our personnel in aviation safety and survival.”

Kemp currently lives outside of Fairbanks with his wife, Patty, a cat, and a beautiful view of the Alaska Range.

Wilson ’82 Helps California Inmates

When the Rodney King verdict was handed down, Amanda Wilson BSc Geop ’82 just happened to be inside a California men’s prison. The inmates popped open the doors to their cells - something the guards were unaware was possible - and began rioting. It was a tense time that terrified many of the prison guards. But Wilson was unafraid. “I’ve never felt any fear being in a prison,” she says, and she has been in most of California’s prisons. Her office is right outside the maximum-security facility at San Quentin. She’s never afraid because she is an advocate for California inmates. “The inmates are always respectful and appreciative,” she adds.

Wilson didn’t expect to become a civil rights attorney when she attended Mines, but that is where her career has taken her. She always planned to study law, but after graduation she needed a break from school. She became a geophysicist for Mobil Oil and worked in Houston for five years, then attended University of Houston Law School. Because of her engineering background, she specialized in environmental law, even serving as president of the campus environmental law society. For her final semester she moved to New Mexico to work for Indian legal services on the Navajo reservation. She was supposed to work on a coal development class-action lawsuit. “But two weeks after I arrived, the case was settled,” she says. So Wilson began helping out on other cases and got hooked on civil rights law.

“I really enjoy working in civil rights and on Constitutional questions,” Wilson says. “I like dealing with human issues much more than environmental regulations.” After 10 years working in San Francisco with a public interest law firm, Wilson became staff attorney for the San Quentin Prison Law Office a year ago.

“We get about 100 letters a day from inmates,” Wilson says, “and we start to see a pattern of complaints.” Patterns indicate areas where problems might exist, and then Wilson gets to work on them. Currently, inmates are complaining about their medical care. Inmates do see doctors, but the prison medical facilities aren’t licensed. Most of Wilson’s cases involve class-action lawsuits, although she also handles individual problems if they merit her attention.

Despite the differences between engineering and law, Wilson feels her education at Mines serves her well. “The way they taught us to think translates very well to the study of law,” she notes. “Thinking logically is the same in both professions.”
1942
John McNaughton PE owns the M Bar Ranch in Alvarado, Texas.

1949
Hugh W. Evans Geol E was elected to the National Mining Hall of Fame and Museum’s board of directors. He will serve through February 2004.

1950
Douglas L. Reese Geol E is retired in Salt Lake City, Utah.

1951
Paul A. Bollheimer Geop E is retired in Houston.

1952
Willard A. Maxey Geop E is retired in Mt. Gilead, Ohio.

Thomas McLaren Geol E is retired from Exxon and lives in Scarborough, N.Y.

Kurt A. Wittges Jr. Geop E is retired in Colorado Springs, Colo.

1959
James Payne Geop E, Medalist '93 is retired from Devon Energy Corp in Houston.

Richard Spears Met E is president of Florida Forensic Engineering Inc. in Largo, Fla.

James Swaisgood Geol E is principal for Swaisgood Consulting in Conifer, Colo.

1960
Lennox Hagemann EM is retired from Harrischlager Corp. of Canada. He lives in Ontario.

1961
David M. Brightwell Met E is retired in Houston.

Richard Wyatt Geop E is senior design engineer for Giersch & Associates in Madera, Calif.

1962

1964
Jon A. Ferris Geop E is retired from GraviMetrics Inc. and lives in Tulsa, Okla.

Robert Gaisendorfer ME is retired in Yakima, Wash.

John Schmidt Met E is retired in Torrance, Calif.

Barrett E.G. Sleeman EM is president of Ernest Resources Limited in Pt. Roberts, Wash.

1965
Harold L. Darling Phy E is retired from Schlumberger in Spring, Texas.

Anise Ishteiwy PE, M Sc Pet '66 is with Intoil Inc. in Englewood, Colo.

1966
Henry A. Paasonen Geop E is founding pastor of Berlin International Church in Berlin, Germany. After graduation, he worked for Tenneco Oil in Texas. Then he was managing editor of a New York City engineering book publisher. He earned a master's degree in journalism from Columbia University in New York, then a master’s degree from Alliance Theological Seminary. He became senior pastor in Olympia, Wash., then was a pastor in Paris before moving to Germany.

Ronald P. Sage M Sc Geol has retired from Ontario Geological Survey in Sudbury.

1967
Wayne N. Holliday Met E has been elected vice chairman of the 2001 American Society for Testing and Materials (ASTM) board of directors. He is vice president of technology for LTV Cooperweld in Independence, Ohio.

Kenneth Pohle EM, M Sc Min '70 is general manager, American Reclamation Group in Anchorage, Alaska.

1968
Robert Pahl Met E is director of product and process for Alcoa in Lafayette, Ind.

1969
Larry D. Hartman PE is retired in Brookhaven, Miss.

1970
Robert G. Burley Math E is
Consultants cont.

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1978
Dan E. Lowe BSc Geol is president of Independent Consultant-Petroleum/Drilling in Breckenridge, Colo.

1974
Craig Kemp BSc Geol is a geological engineering consultant for Oxy Perimian Ltd. in Houston.

1975
Robert W. Wetzel BSc Geop is self-employed in Paradise, Calif.

1976
Neil A. Brown BSc Geol is manager of geology minerals for Anadarko Petroleum Corp. in Houston.

1977
John F. Arestad MSc Geop, PhD Geop ’95 is a geophysicist for ExplorTech in Denver.

1979
Alan D. Buell BSc Min is president of Sherlock Home Inspection in Absarokee, Mont.

1980
Craig Camozzi BSc Pet owns CMC Drilling LLC in Denver.

1971
James W. Calvin PE is chief operating officer for National Energy Company Ltd. in Geneva, Switzerland.

John R. Terry PhE, MSc Math ’72 is a software engineer for Spheron Corp. in Ft. Lauderdale, Fla.

Ronald C. Williams BSc PhY is president of The Williams Management Group in The Woodlands, Texas.

1972
Dirk A. Benham BSc PhY, MSc Min ’78 has graduated from Logan College of Chiropractic and has opened Benham Chiropractic in St. Louis, Mo.

John R. Johnstone BSc Pet is a resource adviser, global staffing for Texaco in Bellaire, Texas.

1973
Richard LiConti BSc Geol, BSc Min is CEO of Nexus Energy Solutions Inc. in Canonsburg, Pa.

Constance Martin BSc Geop is a paraprofessional with Jefferson County Public Schools in Colorado.

John M. Neubauer BSc Pet is resident manager-Thailand for Pogo Producing Co. in Bangkok.

1974
Craig Kemp BSc Geol is a geological engineering consultant for Oxy Perimian Ltd. in Houston.

Thomas M. Smagala BSc Geop is senior geologist with AEC Oil & Gas Inc. in Denver.

1975
Robert W. Wetzel BSc Geop is self-employed in Paradise, Calif.

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Neil A. Brown BSc Geol is manager of geology minerals for Anadarko Petroleum Corp. in Houston.

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Alan D. Buell BSc Min is president of Sherlock Home Inspection in Absarokee, Mont.

1980
Craig Camozzi BSc Pet owns CMC Drilling LLC in Denver.
technology manager/assistant plant manager for Basell Polyolefins in Lake Charles, La.

Rosanne “Rosy” Jacobsen BSc CPR is senior counsel for BP Exploration in Anchorage, Alaska.

Randy L. Nickerson BSc Geop has been named lead onshore geophysicist for Dominion Exploration & Production Inc.’s onshore business unit in Houston. Previously, he was senior exploration geophysicist with North Central Oil Corp.

Robert Pickard BSc Geop is president of Islands Exploration Co., in Denver.

Steven Schatz BSc Met is a metallurgical engineer for International Truck & Engine Corp., in Fort Wayne, Ind.

1981

John P. Ballegeer BSc Geol is senior geotechnical engineer for GEI Consultants Inc. in Englewood, Colo.

Claude Joseph BSc Pet, M Sc Pet ’88 is CTO for Performance Sciences Inc. in Miami, Fla.

Joanna E. Zernell BSc Geop is a software engineer for Anadarko Petroleum Corp. in Houston.

1982

Brian R. Disney BSc Pet is a petroleum engineer with Kestral Energy Inc. in Denver.

John Galbavy BSc Geop is corporate counsel for Hecla Mining Company in Coeur d’Alene, Idaho.

1983

William A. Burgett MSc Geop is manager, corporate planning with Apache Corp. in Houston.

C. Thomas Heinzler BSc Geop is manager of evaluation, planning and competitive intelligence for Anadarko Petroleum Corp. in Houston.

Richard J. Jones MSc Pet is project engineer for Enron Global Exploration and Production in Houston.

Randy Latta BSc Pet is president of Malaysia/Thailand for PB Asia Pacific Pte. Ltd. in Singapore.

Arthur L. Muller BSc Pet is environmental health and safety manager for General Electric Co., in Somersworth, N.H. He and his wife have adopted three children. In 2000, they were nominated as Foster Parents of the Year for Vermont.

Michael Nogorka BSc Pet, MSc Pet ’86 is engineer/scientist with Schafer Corp. and lives in Pleasanton, Calif.

Elizabeth Robinson PhD Min Ec is chief executive officer of Executus Inc. She and her husband Marcel Thoma live in Torrington, Conn.

1984

Michael Glen BSc CPR is assistant manager of planning and analysis for Environmental Industries in Calabasas, Calif.

James Eastwolfe BSc CPR does strategic consulting for Caterpillar in Morton, Ill.

1985

James Vollinger BSc Math is a systems engineer with Nortel Networks in Lexington, Va.

Kenneth Chen BSc Chem, MSc

CPR ’86 is business development director for Radiant Photonics Inc. in Austin, Texas.

James V. Ierubino M Eng Pet is Prudhoe Bay offshore supervisor for Exxon Mobil Production Company in Anchorage, Alaska.

Ellen L. Johnson BSc Geop is a geophysicist for Unocal Corp. in Sugar Land, Texas.

Glen Mizenko BSc Pet is manager of corporate development and new ventures for Forest Oil Corp. in Denver.

W. David Ledds BSc Geop is project manager, Calera Quarry, for Vulcan Materials Company in Calera, Al.

K. Jay Pillai PhD Met is director of strategic business for Fatpipe Networks in Salt Lake City, Utah.

Paul C. Reeves BSc Geop is senior member of the technical staff at Sandia National Laboratories in Albuquerque, N.M.

Stephen P. Smith BSc Pet is president of business services for Nisource in Columbus, Ohio.

James Whitfield BSc Math works for Hi Country Wire & Telephone in Arvada, Colo.

1986

James Gill BSc Geol, MSc Appl Mech ’89 owns Contour Consulting Engineering in Morrison, Colo.

Justin P. Hedley BSc Geop, MSc Geop ’91 is a test engineer with Landmark Graphics in Englewood, Colo.

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Elizabeth Ignacio BSc Met and husband Robert Gilhuly announce the birth of their second son Cole
Duncan Feb. 22. He joins 19-month-old big brother Ethan.

Mitchell S. Mather BSc Math is manager, international ticketer plant for CQC Inc. in Boulder, Colo.

Stephen D. Whidden BSc Geop is an account manager for Western Geo in Houston.

1988

Amir Assar BSc CPR is vice president of strategic sales for Taviz Technology in Palo Alto, Calif.

Faisal Abd Rahman BSc Eng is general manager for Sabutak (M) Sdn. Bhd in Kuala Lumpur, Malaysia.

Christopher Kruger BSc Pet is a design engineer for NW Natural in Portland, Ore.

1989

Linda Bliss BSc Chem is senior manufacturing analyst for Corning Inc., in Corning, N.Y.

Colleen Brisnehan BSc Geop is an environmental specialist for the Colorado Department of Public Health and Environment. She earned an MBA from Carnegie Mellon in 2000.

Gregory L. Davoli BSc Math is director of project management for Labs Inc. in Westminster, Colo.

Gerard Konst BSc Eng is project manager for Dow Chemicals in S. Charleston, W.V.

Paul E. McElligott BSc Eng is coordinator of business development for Conoco Inc. in Houston.

1990

Nicholas Battaglini BSc Geop and Dorena Battaglini BSc CPR ’91 live in Abu Dhabi. Nick is country manager of United Arab Emirates operations for WesternGeco. Dorena resigned from Chevron Chemical Co. to attend The Natural Gourmet Cooking School in New York City. She then interned at Whole Foods and is a part-time private chef and full-time mother. They have one son, Nicholas, born in 1999.

1991

Mikyong Hand BSc Pet, MSc Engr Sys ’93 married Paul Searcy, a Cal Tech graduate, Dec. 17 in Morrison, Colo. CSM alumni in attendance were T omy Lyon BSc Eng ’93, M Sc Engr Sys ’96, Jim Wong BSc Met ’92, Tom Drouillard BSc Phy ’95, M Sc Engr Sys ’98, Deb Schult BSc Pet ’91. Jodi (David) Menebroker BSc CPR ’91, Debbie (Waterloo) Simpson BSc Pet ’88, Dan Simpson BSc Pet ’93, Lee Landkamer M Sc Env Sc ’96, Brian Asbury (director of CSM’s Earth Mechanics Institute) Glen Frank BSc Eng ’94, M Eng Engr Sys ’98, David Hart PE ’90. Hand is in her second year of medical school at Colorado
University Health Sciences Center–Denver.

Casey J. Jones BSc CPR is manager of operations, West Natuna Transportation System, for Conoco Inc. in Jakarta, Indonesia.

Karl G. Randall MSc Min Ec, PhD Min Ec ’94 is president of Gresham S.ar.L. in Geneva, Switzerland.

Angela Yearous BSc Eng is a systems programmer with SAIC in Houston.

Mark A. Wasinger BSc Phy is a structural engineer for Carl Walker Inc. in Denver.

1992

Janeen Chaney BSc Met does fracture analysis for Boeing in Renton, Wash.

John B. Fairbanks BSc Math is senior staff engineer for Aspen Technology in Houston.

Oguz Gunduz MSc Met is a continuous casting metallurgist for Eregli Iron and Steel Works in Zonguldak, Turkey.

Timothy Hoos BSc Eng is a civil engineer for the City of Arvada in Colorado.

1993

Wendy Duhon BSc CPR and Carl Krutka BSc Eng ’94 were married Sept. 9 in Monument, Colo. From left, Amy Flammang BSc CPR ’95, Heather Boyd, best man Chuck Sprague BSc Met ’95, Carl and Wendy. Scott Denton BSc CPR ’94, bridesmaid Denise Dihle BSc Eng ’93 and Jay Bauer. Carl is a facilities engineer for Lockheed Martin and Wendy is ultrapure water and industrial waste systems O&M manager for Intel. The couple lives in Colorado Springs, Colo.

Troy Gorrell BSc Eng is a product metallurgist for TIMET in Toronto, Ohio.

Dennis R. Horner MSc Env Sc is president/owner of Strategic Environmental Management Co., in Golden, Colo.

Hamidon Md. Khayon BSc Pet is business development manager for Tanjung Offshore Services Sdn Bhd in Kuala Lumpur. He is married to Jamalah Sidek BSc CPR.

Peter E. Kowalewski BSc Geol, M Eng Appl Mech ’97 is the environmental department manager for SRK Consulting in Lakewood, Colo.

Masoud Molaei MSc Met is project group leader, R&D, for Guidant Corp. in Menlo Park, Calif.

Adif Bin Zulkifli BSc Pet is an analyst for Petronas in Kuala Lumpur, Malaysia. His wife, Azmah Azman BSc CPR is a senior reservoir engineer for Petronas.

1994

Tim Bakkendahl BSc Phy is president of BakkTech LLC in Loveland, Colo.

Brenda Eckles BSc Geop is a crude refinery trader for BP in London.

Jason Maas BSc CPR is a facility engineer for Rosemont Pharmaceutical in Denver.

Ibrahim Mustafa MSc CPR is a technical development researcher for SABIC R&D in Riyadh, Saudi Arabia.

Stephanie Reiva BSc Eng has married Brent Hughes. She is a project engineer for H.G. Constructors and lives in Longmont, Colo.

Neilsun Valenski BSc Eng is regional access planner for Qwest Communications in Denver.

Craig R. Walters BSc Pet is senior petroleum engineer for Anadarko Petroleum Co. in Amarillo, Texas.

1995

Nicole Cain BSc CPR is senior process engineer with Cabot Corp. in Tuscola, Ill.

William Dobler BSc Eng is a sales engineer for Schlumberger Oilfield Services in Bakersfield, Calif.

Linda G. Gaines BSc CPR works for Texas Natural Resource Conservation Commission in Austin.

Joe Skaggs BSc Met, MSc Met ’97 is senior metallurgical engineer for Schaefer Engineering Corp. in Golden, Colo.
mining program manager for IT Corp. He lives in Evergreen, Colo.

David K. Rael BSc Phy is a software development engineer with Quest Communications in Denver.

Preston K. Reichert BSc Eng is engaged to Sarah E. Wickstrom. He is a project engineer for SeaWest WindPower Inc. in San Diego.

Adi Adriansyah Sjoekri MSc Geo is a GIS and mapping specialist for PT Dwinad Nusa Sejahtera in Jakarta, Indonesia.

2000

Armando A. Troconis MSc CPR is an environmental specialist for Petrolera Ameriven in Caracas, Venezuela.

Jennifer Wahl BSc Pet has married Ryan Martino BSc Math & Comp Sci. She is a consultant with Accenture in Boulder, Colo.

2000

Mikael W. Black BSc Eng is a design engineer for the Boeing Co., and lives in Mukilteo, Wash.

Meaghan Castor BSc Geol is in graduate school at Michigan Tech in Houghton, Mich.

Alexis T. Cupo MSc Geo is a technology analyst for Accenture in New York, N.Y.

Mischa Gibson BSc CPR is a process technician for Atmel Corp. in Colorado Springs, Colo.

Michael Griffith BSc Pet is a drilling engineer for Anadarko Petroleum Corp. in Houston.

Louise Jacobsen BSc Pet is a drilling engineer with BP in Houston.

Tricia (Lampson) Klete BSc CPR is a pharmaceutical engineer for JM Hyde Consulting, Inc. in Boulder, Colo.

Irene Qian Li PhD Appl Chem is a specialist, life science industrial for Dow Corning in Shanghai, China.

Robert Lorenzen PhD Geop is a geophysicist for BP Exploration in Anchorage, Alaska.

Michelle “Micki” Martine (Moore) McCassey MSc Min E is a major in the U.S. Army in the mathematics department at West Point.

Ryan McDermid BSc Eng is a staff engineer for Yenter Companies in Snowmass, Colo.

Luke R. Noffsinger BSc Eng is a sustaining engineer for Spectra Logic in Boulder, Colo.

Alvero Ranero BSc Pet married Jiuliana Gonzalez March 3. Ranero is an engineer with Anadarko Petroleum Corp. in Houston.

Christopher Robinson MSc Geop is a geophysicist for Texas Gulf Coast Group in Houston.

Mollie Schneter BSc CPR is a controls engineer with Honeywell PAI in Lakewood, Colo.

L. Eric Stellmon BSc Eng is a process engineer for Intel Corp., in Albuquerque, N.M.

Christian J. Sutton BSc Phy is an engineer for IBM Micro Electronics and lives in Wappingers Falls, N.Y.

Kelly T. Taga BSc Chem is an analyst for Accenture in Denver.

Sanuel F. Tellgen BSc Chem is a business consultant for Arthur Andersen in Houston.

Andrea M. Trujillo BSc Eng is project engineer for Kraft General Foods in Houston.

Carvin Umali BSc Eng is a material tester for Geocal Inc. in Aurora, Colo.

Michael S. Watkins BSc Eng is an electrical engineer for RMH Group, Inc., and lives in Arvada, Colo.

Brandon D. Yeton BSc Eng is a hardware engineer for Hewlett Packard in Ft. Collins, Colo.

1999

Mohan Dangi BSc CPR is a chemical engineer for Great Western Inorganics Inc. in Arvada, Colo., and a consultant for the University of Colorado, Boulder and USAID for preparing renewable energy curriculum at Tribhuvan University in Nepal.

Christopher Giberson BSc Geol is a staff geologist with Gold Associates in Irvine, Calif.

Melissa Lane BSc CPR is an etch process engineer for Intel Corp. in Colorado Springs, Colo.

Jason E. McGraw BSc Geol is a mine geologist for Robinson Brick Co. in Denver.

John D. Simpson BSc Eng is a water and sanitation engineer in the Peace Corps in Honduras.


Gileen Steenstra PhD Geop is a specialist, life science industrial for Dow Corning in Shanghai, China.

Robert Lorenzen PhD Geop is a geophysicist for BP Exploration in Anchorage, Alaska.

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One of seven states in the federation of the United Arab Emirates (U.A.E.), Abu Dhabi is a modern city of one million people who enjoy a high standard of living. U.A.E. successfully blends the traditional values of the Middle East with Western technology.