Letter to the Editor

I read the article on “The Glory Years of ROTC” by Lorraine Wagenbach in the fall 2002 edition of Mines magazine with great interest. I knew there was a history and tradition there, but I did not know the details.

I am proud to say that many of my classmates and I shared in this history and tradition. I was in the Mines ROTC “Corps” beginning as a freshman in 1949 and ending in 1953 with a commission as a second lieutenant in the U.S. Army Corps of Engineers. Col. Wendell Fertig was the professor of military science and tactics during my first two years at Mines. Because of his widely known accomplishments during World War II, he was a hero and mentor to us all.

I well remember our officer-commissioning ceremony that took place immediately following our academic graduation exercise. We had our uniforms on underneath our robes. After the academic ceremony, we took off our robes, were called to attention in our uniforms and were sworn in. We then lined up, returned to the stage and were given our commission certificates and our orders. This was during the last stages of the Korean War, and we were all called to active duty.

After undergoing engineer officers basic training at Fort Belvoir, I was assigned to the 30th Engineer Topographic Survey Group at the Presidio in San Francisco. Many of my fellow junior officers, as well as enlisted men, were Mines graduates and people that I had known at the School. We had our own little unofficial alumni group there.

I have never regretted the two years I put into the service of my country. My Mines education fitted me well in the performance of my duty. As a 22-year-old soldier with command responsibility, I also did a lot of growing up.

I know that some of the people in school with me were sent to Korea and won medals. Several others stayed in the Army, made a career of it and retired as senior officers. Still others had very interesting duty assignments that utilized their Mines training. There must be a lot of good stories out there and perhaps someone ought to collect a few of them.

There is no doubt that the historic Mines ROTC has made a major contribution to the Corps of Engineers and the general well being of our country.

Fred Meissner
Geol E ’53, MSc Geol ’54
U.S. Army Corps of Engineers
1954-1956

Take home... a memory of Mines
A Special Remembrance
presented by Robin Laws, sculptor & Spirits in the Wind Gallery as seen in front of Guggenheim Hall at the Colorado School of Mines.

Order this valuable bronze which is offered in three sizes:
6” x 5 1/2” x 6 1/2” Edition 500 $600.
8” x 7 1/2” x 9” Edition 50 $1800.
4 1/2” x 4” x 5” Edition 19 $37000.

A special amount is donated to Colorado School of Mines on purchase.

Downtown Historic Golden on Washington Ave.
or shop online at www.spiritsinthewindgallery.com

“A Friend to Lean On”

A Special Remembrance presented by Robin Laws, sculptor & Spirits in the Wind Gallery as seen in front of Guggenheim Hall at the Colorado School of Mines.

Order this valuable bronze which is offered in three sizes:
6” x 5 1/2” x 6 1/2” Edition 500 $600.
8” x 7 1/2” x 9” Edition 50 $1800.
4 1/2” x 4” x 5” Edition 19 $37000.

A special amount is donated to Colorado School of Mines on purchase.

Downtown Historic Golden on Washington Ave.
or shop online at www.spiritsinthewindgallery.com

“A Friend to Lean On”

Your Marriott Awaits in Golden.

DENVER WEST/GOLDEN
303-271-0909
Residence Inn is designed for travelers who are away from home for more than a few days, with all the comforts of home, plus a full free breakfast and daily housekeeping.

303-271-0776
Courtyard, the hotel designed by business travelers, offers the services and amenities you want. We accommodate you with conveniences that make travel easy.

Plus, enjoy these conveniences at both:
• Several meeting rooms with space up to 40 people
• Complimentary in-room & business center high-speed internet access, based on availability
• Ask for Colorado School of Mines rate
• Complimentary use of The Point Athletic Club
• 24-Hour Complimentary Business Center
• Marriott Rewards Points

Located on 6th Ave. & Indiana. Call Today!

MINES SPRING 2003
Mines is published quarterly by the Colorado School of Mines and the CSM Alumni Association for alumni and friends of the School. The magazine is a merger of Mines Magazine (founded in 1910) and Mines Today (founded in 1986). The merger took place in 2000. Comments and suggestions are welcome. Contact us by writing to MINES, P.O. Box 1410, Golden, CO 80402; or call 303-273-3294 or 800-446-9488, ext. 3294, between 8 a.m. and 5 p.m., M-F, MST; or email magazine@mines.edu.

John U. Trefny, President
Colorado School of Mines

John N. Schwartzberg ’88
President
CSM Alumni Association

Maureen Keller, Editor
CSM Alumni Association

Marsha Konegni, Co-editor
CSM Communications Coordinator

Contributing Writers
Aaron Burman
Greg Murphy
Robert Pearson ’59
Jo Marie Reeves
Robert Sorgenfrei
Nick Sutcliffe

Photography
Harry Olsson
Julie VanLaanen

Graphic Design
Emelene Russell

Advertising & Design
American Web
CPM Number #40065056
www.mines.edu/csmagazine/mines.edu/alumni

“Letter to the Editor”

I read the article on “The Glory Years of ROTC” by Lorraine Wagenbach in the fall 2002 edition of Mines magazine with great interest. I knew there was a history and tradition there, but I did not know the details.

I am proud to say that many of my classmates and I shared in this history and tradition. I was in the Mines ROTC “Corps” beginning as a freshman in 1949 and ending in 1953 with a commission as a second lieutenant in the U.S. Army Corps of Engineers. Col. Wendell Fertig was the professor of military science and tactics during my first two years at Mines. Because of his widely known accomplishments during World War II, he was a hero and mentor to us all.

I well remember our officer-commissioning ceremony that took place immediately following our academic graduation exercise. We had our uniforms on underneath our robes. After the academic ceremony, we took off our robes, were called to attention in our uniforms and were sworn in. We then lined up, returned to the stage and were given our commission certificates and our orders. This was during the last stages of the Korean War, and we were all called to active duty.

After undergoing engineer officers basic training at Fort Belvoir, I was assigned to the 30th Engineer Topographic Survey Group at the Presidio in San Francisco. Many of my fellow junior officers, as well as enlisted men, were Mines graduates and people that I had known at the School. We had our own little unofficial alumni group there.

I have never regretted the two years I put into the service of my country. My Mines education fitted me well in the performance of my duty. As a 22-year-old soldier with command responsibility, I also did a lot of growing up.

I know that some of the people in school with me were sent to Korea and won medals. Several others stayed in the Army, made a career of it and retired as senior officers. Still others had very interesting duty assignments that utilized their Mines training. There must be a lot of good stories out there and perhaps someone ought to collect a few of them.

There is no doubt that the historic Mines ROTC has made a major contribution to the Corps of Engineers and the general well being of our country.

Fred Meissner
Geol E ’53, MSc Geol ’54
U.S. Army Corps of Engineers
1954-1956
Athletics
Men’s basketball team enjoys phenomenal run

About Our Cover:
Engineers Without Borders—USA started with the drilling of a well to provide water for the village of San Pablo, Belize. Before the well was installed, children carried water for drinking and irrigation from a nearby river. Now the Mines chapter of Engineers Without Borders will work to bring the village electricity.

Photo by Julie VanLaanen, Engineering Division.

Philanthropy at Mines
Events Calendar
Staying Connected
From the Archive
In Memoriam
Six Honored by CSMAA
On the Move

Letter to the Editor
Short Takes
Changing Their Corner of the World
Building a Better World One Community at a Time
Hewlett Foundation Funds Humanitarian Engineering
Showcasing Inventions with Market Potential
People Watch
Notes & Quotes

Contents

Alumnus Finds Opals in Ethiopia
Ethiopian Rift Valley mine yields wide variety of colors
They're dancing again at Bartlesville High School in Oklahoma. But in 1970, Murray Hitzman wrote an editorial in the student newspaper, The Nautilus, which led to the cancellation of the school's prom.

"We wanted to be radical and change the world," recalls Hitzman, now head of CSM’s Department of Geology and Geological Engineering and the Charles F. Fogarty Professor of Economic Geology. Prom funds, he wrote convincingly in his editorial, could be more nobly spent on an environmental cause.

Hitzman and his classmates wanted to convert a riverbottom forest, located immediately adjacent to the school campus, into an outdoor science lab.

The project, of course, would cost much more money than existed in the prom fund. But the students' willingness to sacrifice caught the attention of others. "Our principal John Haley gets the credit," says Hitzman. He talked to influential parents, well-heeled corporations, the school board, and eventually the city council. Then, Hitzman says, "All the stars fell in alignment. Somehow the money was found."

The governor of Oklahoma attended the lab’s dedication, and President Richard Nixon called to offer his congratulations.

According to a story in the Bartlesville Examiner-Enterprise, the 16-acre site served as an environmental science lab into the 1980s, when the area became overgrown. It remained nearly unusable until 2000, when again students, teachers, administrators, school board members and city officials worked together to not only save the site, but also enhance it. Now students learn about soil, water, animals and plants in a setting that includes a river, pond, meadow and woodlands.

Examiner-Enterprise reporter David Rain wrote of Hitzman's involvement in the lab's beginnings: "A former Bartlesville resident who in high school inspired the board of education to purchase land for an environmental science laboratory went on to win the International Science Fair, work in the White House, discover a major ore deposit in Ireland and head the geology department at one of the most important schools for geology in the world."

Now Hitzman is looking at ways that Mines might partner with the high school on environmental research. "There are just a host of projects that could be done," he says. Numerous lab improvements have been made, and many more are planned.

So the outdoor classroom at Bartlesville High is thriving—and students at the school are dancing too. Three years after Hitzman's editorial ended the prom, another student reinstated the tradition. Hitzman smiles as he reveals who that student was: Daniel Hitzman, his younger brother.

Murray Hitzman, Nautilus editor

Murray Hitzman today

More Frogs at this Prom Alternative

By Marsha Konegni
Honored by TMS

The Minerals, Metals & Materials Society (TMS) presented its highest award, TMS Fellow, to Mines Professor Emeritus George Krauss, for outstanding contributions to the practice of metallurgical science and technology, at the organization’s annual meeting in March.

Krauss

David K. Matlock is a newly elected member of The National Academy of Engineering (NAE). Academy membership is among the highest professional distinctions accorded an engineer. Total U.S. membership is 2,138 and foreign associates total 165.

Matlock is the director of CSM’s Advanced Steel Processing and Products Research Center and the Armco Foundation Fogerty Professor in the Department of Metallurgical and Materials Engineering. In according academy membership honors, NAE notes Matlock’s “fundamental and applied contributions in the uses of advanced steels, including the development of microalloyed steels for critical vehicle applications.”

Matlock Elected to NAE

Young to Serve on College Board

A. William “Bill” Young, associate vice president and director of enrollment management, has been elected to a four-year term as a trustee of the College Board, a not-for-profit association founded in 1900. Now composed of more than 4,300 schools, colleges, universities, and other educational organizations, the College Board serves more than 3 million students and their parents, as well as 22,000 high schools and 3,400 colleges, through major programs in college admissions, guidance, assessment, financial aid and enrollment.

Trefny Appointed to IIE Board

President John U. Trefny is one of three new members named to the Rocky Mountain Regional Center of the Institute of International Education (IIE) Advisory Board. Others appointed were Encore International President and CEO Michele SeWhitten and former two-term Wyoming Governor and U.S. Ambassador to Ireland Mike Sullivan.

Founded in 1919, the Institute of International Education supports cooperative initiatives related to international business, diplomacy, education, the environment, energy, population and human rights.

Trefny Appointed to IIE Board

Challenge in Spain

Jordan Dimick, a geophysics junior, and Sarah Sherer BSc ’02 and currently, a geophysics master’s candidate, were among 90 students from around the world who participated in the Shell Business Challenge in January in Marbella, Spain. The students teamed together to develop and present to senior Shell management a five-year business plan for a fictional island in the East Indian Ocean.

Geop ’02

Department of Defense Funds Research

A Department of Defense program that identifies and develops environmental technologies relating to military readiness for national defense will fund research projects led by two Mines professors, Tissa Illangasekare and Robert Segrist.

Their projects are two of eight funded nationwide by the Strategic Environmental Research and Development Program that addresses the risks and cleanup of dense nonaqueous phase liquids in soil and groundwater.

Illangasekare and Robert Segrist

Olds Heads to NSF

Associate Vice President Barbara Olds will serve at the National Science Foundation (NSF) in Washington D.C. for approximately two years. She began in March.

Olds has been appointed director of the Division of Research, Evaluation, and Communication in the Education and Human Resources Directorate at NSF.

Barbara Olds

Olds Heads to NSF

Mines Educates Visitors at Stock Show

Displaying many donated items from the Mines Petroleum Engineering Department, the Independent Petroleum Association of Mountain States won first place for the “Most Educational” booth at the 2003 National Western Stock Show in Denver.

TAKES SHORTS

Vice President of Academic Affairs and Dean of Faculty Nigel Middleton said, “Dr. Olds’ selection for this position is exceptional testimony to her national stature in the assessment of educational programs, and her appointment is indicative of the increasing respect for the Colorado School of Mines within NSF and related circles.”
Students Design Earthquake Recording Systems

Their assignment was to design an inexpensive seismic wave sensor for use in classrooms around the world. So more than 350 Mines freshman enrolled in Engineering Practices Introductory Course Sequence (EPICS) went to work building seismometers for $150 or less that were sensitive enough to measure a magnitude 6.5 or greater earthquake anywhere in the world.

The U.S. Geological Survey, in collaboration with the IRIS Consortium and CSM, hosted a challenge in December for the EPICS teams that awarded a $300 first-place prize. Since the seismic sensors were intended for classroom use, a Middle School Design Award was also presented by student judges from West Jefferson Middle School.

CSM Remembers Professor White

James E. “Ed” White died Jan. 30 at age 84. White, professor emeritus of geophysics at Mines, was past president of the Society of Exploration Geophysicists and a member of the National Academy of Engineering. Last October he was also selected as an honorary member of the Chinese Geophysical Society.

Dr. Beatrice “Bettie” Willard, the first department head of CSM’s Environmental Science and Engineering Ecology Department, died Jan. 7, at age 77. Willard was internationally known for her research, teaching and books about high-altitude plants and protecting the mountain tundra. She served in both the Ford and Nixon administrations as head of the Council on Environmental Quality.

They select a lecturer admired and respected as an educator, as well as a person known for having stimulating ideas to convey and an ability to communicate those ideas effectively.

Beatrice Willard Remembered

Dr. Beatrice “Bette” Willard, the first department head of CSM’s Environmental Science and Engineering Ecology Department, died Jan. 7, at age 77. Willard was internationally known for her research, teaching and books about high-altitude plants and protecting the mountain tundra. She served in both the Ford and Nixon administrations as head of the Council on Environmental Quality.

The selection committee noted the quality and scope of King’s innovative teaching both in and out of the classroom.

Hugh King P.E. ’55, senior lecturer in the Department of Mathematical and Computer Sciences, has been honored with the 2003 Burton W. Jones Award for Distinguished College or University Teaching from the Rocky Mountain Section of the Mathematical Association of America. The selection committee noted the quality and scope of King's innovative teaching both in and out of the classroom.

Traylor Dedication

The lounge in CSM’s new Center for Technology and Learning Media has been named in honor of Claire Traylor, a Republican state legislator from Wheat Ridge who served in the Colorado Senate from 1982 to 1994. Sen. Traylor died Aug. 31, 2002. “It is entirely fitting that Claire Traylor’s name be associated with our new Center for Technology and Learning Media, a state-of-the-art instructional facility,” said Mines President John U. Trefny. “She was a great friend of education in the state of Colorado and a great friend to this School.”

Sands of the World

A unique sand collection is now on display in Berthoud Hall. Donated to the School by Elsie Stucka and her late husband Steve, the collection includes sands from around the world—from beaches, mountains and cities to famous homes and the pyramids. More than 700 vials are displayed. Family members, including Mines alumni, helped the Stuckas compile the collection.
Graduates leave Mines...
The careers of Mines alumni take many paths. The three profiled here have spent at least part of their professional lives working for change within the system.

By Maureen Keller

A 
vocating for wildlife is how Debbie (Schwabach) Goodman BSc CPR ’80 is helping to make the world a better place. She is the legislative lobbyist for the Audubon Council of Utah. During last year’s session she helped convince the legislature to keep the Endangered Species Act

enu萄tion Fund almost intact – quite a coup in these times of budget cuts. “I give animals a voice where they have none,” she says.

Goodman always has had a passion for wildlife and her first career was as an environmental engineer. After graduation, she went to work for Chevron and was assigned to a massive environmental problem: what to do with thousands of gallons of refined product floating on the water table near the California coast. “I wanted to try and clean up the environment and I got to,” she recalls. “I was in the right place at the right time.”

After her success in California, Goodman was transferred to Utah where she worked on Chevron’s pipeline system, which covered six states. “I got to do lots of travel and see lots of wildlife. I was in the field with people who were wildlife enthusiasts. I remember I loved this stuff. I had a passion for wildlife since I was a little kid.”

Some of what she saw horrified her, especially the mass slaughter of animals considered varmints, such as jack rabbits, coyotes and prairie dogs. “Anyone who loves animals would be repulsed by this discovery, more so me, because both my parents are Holocaust survivors. The parallels were just too much for me and I couldn’t walk away from my outrage.”

Goodman says she began to get restless after 11 years with Chevron and quit the industry. But she took with her valuable knowledge. “Women were in the minority at Mines and in the oil industry,” she says. “I had to learn to function in an environment dominated by males, mostly older and conservative. I learned how to win acceptance and earn their trust and respect.” Those are critical skills to have when facing the Utah state legislature, a historically conservative, mostly male group.

The transition to lobbyist was a gradual one. Goodman remained in the oil industry for awhile by consulting part time and enrolled in art classes. “My right brain needed building,” she says. During that time she also took a course in environmental politics. “We studied the politics of wilderness designations and the points of controversy; who’s advocating for what and why and how that translates into public policy.”

The class produced a book, Contested Landscape, published in 1999 by the University of Utah Press. Goodman co-wrote the chapter on the role of public interest groups in influencing wilderness policy. After interviewing advocates and lobbyists from both sides, Goodman was inspired to volunteer for the Utah Division of Wildlife Resources. Eventually she showed up at the Utah legislature as an interested citizen. “The first time I testified I could hardly speak,” she recalls. “Testifying is as awful as it looks, but it must be done.”

Hers Mines education, which taught her to think in terms of resource economics, and years in the oil industry have given her added credibility. In 2001, when the Utah Audubon Council needed a lobbyist, Goodman took the job. “I’m speaking for them,” she says, “but I’m also speaking from my heart.”

In addition to lobbying, Goodman is an artist whose subject matter is wildlife. Her medium is cut paper. Samples of her work illustrate this article. She has four up-coming shows in Utah including the Antelope Island State Park Visitors Center and the Ogden Train Station art gallery in 2004. She sells her artwork and also donates it for environmental group fundraisers.

“Being a wildlife advocate, I end up hearing about awful things, like when deer are starving in winter because the snow is too high and their winter habitat has been turned into residential housing, or when hundreds of migrating birds collide with a communications tower in a foggy night,” says Goodman. “Partly my artwork is an antidote to those sorrows, and it allows me to focus on the joyous side of nature and life.”

“There is another facet as well. At the legislature, I am forced to talk about animals as a resource, or in terms of their economic or recreational value to humans. So these images are an antidote to that as well, and a way of expressing my amazement and fascination with the animal world, and of sharing those feelings with others who feel the same way.”

Art Appreciation

Foothills Art Center Director Carol Dickinson led CSM’s chapter of the Society of Women Engineers hosted a Girl Scout Badge Day at the School in February. Approximately 200 Girl Scouts ages 10 to 12 had the opportunity to earn merit badges in science and engineering.

The annual banquet is sponsored by Wells Fargo Bank in Golden.

Girl Scouts Earn Badges

CSM’s chapter of the Society of Women Engineers hosted a Girl Scout Badge Day at the School in February. Approximately 200 Girl Scouts ages 10 to 12 had the opportunity to earn merit badges in science and engineering.

Mines athletes is 3.32. The overall cumulative GPA of all student-athletes must maintain a minimum 3.20 grade point average.
A 40-Year Interest in Politics

Charles “Chuck” Baroch Met E ’54 is a consultant and chairman of the board for an environment company and previously spent more than 30 years in the power-generation business. He’s also had a more than 40-year interest in politics - local, state and federal. “I got involved in the 1960s when there was a lack of good candidates in many locations,” he recalls. “I helped encourage and support good candidates. I never had ambitions to be a politician.”

But today he is an office-holder himself as the mayor of Golden, Colo. Baroch was appointed to the position by the Golden City Council in January 2002. He has been serving on the council since January 1996, representing District 2 in Golden. His mayoral term runs through fall 2003, at which time a charter amendment enacted in 2001 takes effect. The mayor will no longer be appointed by the council. He or she will be elected by the citizens. Baroch can no longer run for council as a representative of District 2 because of term limits. He could, however, run for mayor. Baroch has not yet decided if he will. If he doesn’t, he probably will retire from politics.

Golden’s City Council meets most Thursday evenings throughout the year. Baroch says being mayor takes about 15 hours per week. He chairs council meetings, represents Golden in other organizations within the metropolitan area and, with the rest of the council, governs. It’s no easy task. “There’s quite a contingency of naysayers,” Baroch notes. “No matter what you do, they don’t like it.”

Baroch’s focus for the rest of his two-year term is to complete the projects that have already been started, such as the new bridge across Washington Avenue, solving the city’s water problems, finishing the golf course, and completing the sale of property in Clear Creek County. The land, purchased at the turn of the 20th century, is being sold to the U.S. Forest Service for open space. Funds from the sale are needed to improve Golden’s water supply.

Baroch serves because he believes he has the ability to get people to work together. “I can see both sides of the fence,” says the former vice president of a Fortune 500 company. “I’m trying to make the world a better place, even if it’s just a little segment of the world.”

Homeland Security

Sitting in his Virginia office a quarter mile from the Pentagon Sept. 11, 2001, Miles Kara Geol E ’61 felt his desk shake and heard a loud noise. He went to his window and looked up expecting to see jets flying in formation over nearby Arlington National Cemetery. Instead, he saw dense black smoke billowing and papers flying from the direction of the Pentagon. It was, of course, the terrorist attack and one of Kara’s former colleagues died that day.

Kara, a retired U.S. Army colonel whose career has been spent in intelligence, was quick to volunteer his services to the government. When the 107th Congress announced a 9/11 Joint Inquiry Committee to investigate the attack, Kara immediately applied to join the joint Inquiry Staff. Having previously worked with former CIA Inspector General L. Britt Snider, the first staff director, and former Department of Defense Inspector General Eleanor Hill, who took over from Snider, Kara’s qualifications were known to both.

“The Joint Inquiry Committee was set up as a bipartisan, bicameral committee. By law, it had two permanent standing committees, the Senate Select Committee on Intelligence and the House Permanent Select Committee on Intelligence,” says Kara. “This is historical, the first time ever in the history of the U.S. Congress that such a thing has been done.”

The Joint Inquiry Staff was made up of five teams of four: one each for the CIA, FBI and National Security Agency (NSA); another, on which Kara served, for all other related agencies; the fifth as a “look back” team to research the history of past terrorist attacks dating back to 1986 and provide overarching perspective. Their mission was to investigate the activities of the intelligence community relating to the Sept. 11 attacks. What did the intelligence community know before the attacks? What has it learned since? How did it relate to other local, state and federal agencies? How did the different intelligence agencies communicate with each other?

According to Kara, “One reason we were attacked is because of who we are. It is easier for terrorists to plan and execute such attacks here because of our freedoms. Balancing security concerns with individual freedoms is a fundamental problem of grave concern that Congress wrestled with during the inquiry.”

“We hit the ground running,” recalls Kara. “We held nearly two dozen hearings, some closed, some open. On Dec. 20, 2002, we officially logged [to Congress] an 850-page report that included indexes and alternative views.” The group reviewed thousands of documents and interviewed or spoke with nearly 600 people.

The Joint Committee made 19 recommendations including the formation of a new cabinet-level position for national intelligence. The group also identified systemic problems in communications - between the various intelligence agencies - and between the intelligence community and law enforcement and recommended changes. A National Commission, approved by Congress in January, will now expand on the work done by the Joint Inquiry.

Kara recalls his career in intelligence as somewhat serendipitous. “In 1961, I had every intention of being a geologic engineer” he says. First, though, he had to serve his ROTC commitment, ended up in intelligence, enjoyed the work, and made it his career. Nevertheless, Kara says his Mines education helped him succeed. “It gave me a lot of analytical skills. The skills I learned in scientific approach have served me in good stead, especially the skills to recognize and understand anomalies.”

After the professional staff of the Joint Inquiry completed its work Feb. 2, Kara was hired as a professional staff member of the National Commission on Terrorist Attacks Upon the U.S. and began that assignment immediately.

Eleanor Hill, who took over from Snider, was the first staff director, and former Department of Defense Inspector General L. Britt Snider, the first staff director, and former Department of Defense Inspector General Eleanor Hill, who took over from Snider, Kara’s qualifications were known to both.

“The Joint Inquiry Committee was set up as a bipartisan, bicameral committee. By law, it had two permanent standing committees, the Senate Select Committee on Intelligence and the House Permanent Select Committee on Intelligence,” says Kara. “This is historical, the first time ever in the history of the U.S. Congress that such a thing has been done.”

The Joint Inquiry Staff was made up of five teams of four: one each for the CIA, FBI and National Security Agency (NSA); another, on which Kara served, for all other related agencies; the fifth as a “look back” team to research the history of past terrorist attacks dating back to 1986 and provide overarching perspective. Their mission was to investigate the activities of the intelligence community relating to the Sept. 11 attacks. What did the intelligence community know before the attacks? What has it learned since? How did it relate to other local, state and federal agencies? How did the different intelligence agencies communicate with each other?

According to Kara, “One reason we were attacked is because of who we are. It is easier for terrorists to plan and execute such attacks here because of our freedoms. Balancing security concerns with individual freedoms is a fundamental problem of grave concern that Congress wrestled with during the inquiry.”

“We hit the ground running,” recalls Kara. “We held nearly two dozen hearings, some closed, some open. On Dec. 20, 2002, we officially logged [to Congress] an 850-page report that included indexes and alternative views.” The group reviewed thousands of documents and interviewed or spoke with nearly 600 people.

The Joint Committee made 19 recommendations including the formation of a new cabinet-level position for national intelligence. The group also identified systemic problems in communications - between the various intelligence agencies - and between the intelligence community and law enforcement and recommended changes. A National Commission, approved by Congress in January, will now expand on the work done by the Joint Inquiry.

Kara recalls his career in intelligence as somewhat serendipitous. “In 1961, I had every intention of being a geologic engineer” he says. First, though, he had to serve his ROTC commitment, ended up in intelligence, enjoyed the work, and made it his career. Nevertheless, Kara says his Mines education helped him succeed. “It gave me a lot of analytical skills. The skills I learned in scientific approach have served me in good stead, especially the skills to recognize and understand anomalies.”

After the professional staff of the Joint Inquiry completed its work Feb. 2, Kara was hired as a professional staff member of the National Commission on Terrorist Attacks Upon the U.S. and began that assignment immediately.
Someone who drives a nice car and lives in a large house is surely richer than 75 percent of the people in the world. Right? The fact is that a person who stores food in a refrigerator and hangs clothes in a closet is richer than more than three quarters of the world. Approximately 4.5 billion people do not have these basic amenities. In addition:

- 5 billion people (80 percent of the world's population) live below the poverty line.
- 4 billion people (70 percent) cannot read.
- 3 billion people (50 percent) do not have access to clean water and sanitation.

Helping disadvantaged communities improve their quality of life is the mission of a new, non-profit organization, Engineers Without Borders-USA (EWB-USA), which asks, “What can we do?”

Dr. Bernard Amadei began to answer this question when he met some people from San Pablo, Belize. They told him that most of the people of the village worked all day at a nearby banana plantation. Since the village had no electricity, running water or sanitation, children carried water for drinking and irrigation from a nearby river. Amadei, a professor of civil engineering at the University of Colorado, recruited eight students and Denis Walsh, a civil engineering expert from Boulder, to help tackle this problem. It was the start of Engineers Without Borders-USA. He had no idea then how quickly it would grow.

The students and Amadei decided to install a ram pump to carry the water up to the village. The well was still working.

Only the CU chapter of EWB-USA existed at the beginning of the 2002 school year. Now 22 universities across the country have chapters encouraging engineering students to get involved in the developing world. Students are eager to participate so they can apply their engineering knowledge to real-world projects, while helping improve the worsening poverty gap throughout the world.

Currently EWB-USA has 10 ongoing or completed projects around the world. Many of them deal with providing clean water to small villages in countries from Mauritania to Nicaragua. Volunteers work with the leaders of villages to develop locally sustainable systems using appropriate technologies that respect their culture and autonomy. EWB-USA also provides small electrical systems to give schools light and power. One of those systems now lights a school for 850 students in Haiti. Most of the projects are in small villages or on the outskirts of larger cities. This gives EWB-USA the ability to talk to the people and implement a system that they want and can maintain.

EWB-USA has been approached for many more projects. When a chapter takes on a project, members must find funding to purchase necessary equipment and fly students to the site to implement it. It is a wonderful experience not only for the students but for the villagers as well. All donated money goes directly to the projects, not to fundraising events or TV commercials. All of the directors of the program are volunteers.

For information about contributing to a Mines project, contact the campus EWB-USA president Paula Schmitz at pschmitz@mines.edu. To learn more about the organization and current projects visit http://www.ewb-usa.org.

By Aaron Burman BSc Eng '02

Note about the author: Aaron Burman currently works for the U.S. Geological Survey as a research assistant and plans to attend graduate school to pursue a degree in international energy policy. He is the Webmaster for the EWB-USA site.
Mission Granted: Hewlett Foundation Funds Humanitarian Engineering
By Marsha Konegni

Often, when possible, Mines engineering students have combined course work with humanitarian projects, gaining practical experience while improving the lives of others. Now, more often, more students will have more service opportunities within the engineering curriculum at Mines.

In addition to recruiting current students enrolled in CS4 engineering programs, which could raise retention rates, the project is expected to draw more future students, particularly women and minority students, to engineering.

Developing the curriculum’s humanitarian engineering component will involve enhancing or modifying existing courses, as well as introducing new ones. The curriculum will consist of both technical and non-technical courses. Gosink describes two current course adaptations:

- Senior Design will significantly increase the number, complexity and duration of projects with community and international emphases.
- The Multidisciplinary Engineering Laboratories (MEL) sequence will provide new skills with relevance to service missions. For example, MEL will introduce experiments related to distributed energy systems (fuel cells, solar cells, wind turbines), sensors for monitoring well water levels and quality, and sensors for contaminant transport and containment.

New courses will include one-credit “applications” courses addressing technical issues: small hydro; micro-turbine design; dehalogenization; photovoltaic systems; alternative energy; biomechanics for the disabled; groundwater and pollutant transport and remediation; low-cost medical imaging methods; small-scale communications systems; remote sensing as a tool in community planning, infrastructure planning, natural resource planning, environmental assessment and disaster relief. Another addition will be a senior civil engineering elective course titled “Explosive oil spills: causes, damages, and solutions.”

Activities for both students and teachers are also planned.

Regional and international internships—within the engineering community—will involve enhancing or modifying existing courses, as well as introducing new ones. The curriculum will consist of both technical and non-technical courses. Gosink describes two current course adaptations:

- Senior Design will significantly increase the number, complexity and duration of projects with community and international emphases.
- The Multidisciplinary Engineering Laboratories (MEL) sequence will provide new skills with relevance to service missions. For example, MEL will introduce experiments related to distributed energy systems (fuel cells, solar cells, wind turbines), sensors for monitoring well water levels and quality, and sensors for contaminant transport and containment.

New courses will include one-credit “applications” courses addressing technical issues: small hydro; micro-turbine design; dehalogenization; photovoltaic systems; alternative energy; biomechanics for the disabled; groundwater and pollutant transport and remediation; low-cost medical imaging methods; small-scale communications systems; remote sensing as a tool in community planning, infrastructure planning, natural resource planning, environmental assessment and disaster relief. Another addition will be a senior civil engineering elective course titled “Explosive oil spills: causes, damages, and solutions.”

The humanitarian engineering program will also feature coursework related to human factors. LAIS is developing new courses, including training in different cultural perspectives, and offering a minor in humanitarian engineering. K-32

Activities for both students and teachers are also planned.

Regional and international internships—within the engineering community—will involve enhancing or modifying existing courses, as well as introducing new ones. The curriculum will consist of both technical and non-technical courses. Gosink describes two current course adaptations:

- Senior Design will significantly increase the number, complexity and duration of projects with community and international emphases.
- The Multidisciplinary Engineering Laboratories (MEL) sequence will provide new skills with relevance to service missions. For example, MEL will introduce experiments related to distributed energy systems (fuel cells, solar cells, wind turbines), sensors for monitoring well water levels and quality, and sensors for contaminant transport and containment.

New courses will include one-credit “applications” courses addressing technical issues: small hydro; micro-turbine design; dehalogenization; photovoltaic systems; alternative energy; biomechanics for the disabled; groundwater and pollutant transport and remediation; low-cost medical imaging methods; small-scale communications systems; remote sensing as a tool in community planning, infrastructure planning, natural resource planning, environmental assessment and disaster relief. Another addition will be a senior civil engineering elective course titled “Explosive oil spills: causes, damages, and solutions.”

The humanitarian engineering program will also feature coursework related to human factors. LAIS is developing new courses, including training in different cultural perspectives, and offering a minor in humanitarian engineering. K-32

A keynote address from John Hansen, chief technology officer for the state of Colorado, preceded the showcase. Awards were presented to the following researchers who have developed new and patented technologies: Ronald W. Klueman, Daniel M. Kinnaas, Angelo J. Madonna PhD Applied Chem ‘02, John J. Moore, Maximilian Peters, Dennis W. Readey, Earl D. Sloan, Jr., Rahmat Shoureshi, Kent J. Voorhees and James D. Way. Receiving recognition for their efforts and leadership in forming CS4 start-up companies were John S. O’Reilly MSc CPR ‘99, president of Metafluidics Inc., and John H. Wheeler BSc Geoph ’84, president of Microphage Inc.

For more information about the Mines Office of Technology Transfer see www.mines.edu/research/ott.
The first female president of Williams Alaska Petroleum is a Mines graduate. Diane Prier BSc CPR ’81 is responsible for Alaska’s largest petroleum refinery, a $80+ million.

The secret to her success: a balanced lifestyle. I believe we will have more of ourselves to dedicate to the workplace if we make time for our families – first.”

Prier has worked for Williams Energy since 1993. She began as an operations manager of field services, director of the energy group, vice-president of energy services and finally, in 2001, was named president of Alaska Petroleum Inc. As such, she oversees environmental, health and safety, retail operations and marketing, wholesale marketing, refinery operations including engineering, Development Council, The Alaska Oil and Gas Association and the Providence Health Care Foundation. Prier is protective of both business development and the environment.

Prier credits her Mines education with helping her succeed. “My Mines education taught me how to think logically through complex problems and to evaluate a wide range of possibilities,” she says. “My time and studies at Mines also helped me to develop so prioritizing and delegating skills are essential for success.” Prier says. “My expectations of myself as a wife/mother/daughter and a member of my community depend on a balanced work/life balance. I strongly believe in work/life balance so prioritizing and delegating skills are essential for success,” Prier says. “I give them technology to improve performance, “ she says. “It’s very difficult, but they are in the process of going online. If they are not pushing the envelope hard enough, it’s a problem.”

In addition to leading her company, Prier is active in the community. She was co-chair of the 2002 United Way campaign in Anchorage and serves on the Anchorage Economic Development Council, The Alaska Oil and Gas Association and the Providence Health Care Foundation. Prier is protective of both business development and the environment.

“The environment is what makes Alaska so special and we have to keep it in focus as we develop our industry,” she says. “We can help the people in the community understand that technology exists to expand business and jobs with a minimal impact on the environment. That makes development and growth a win-win for all of us.”

Prier priors her Mines education with helping her succeed. “My Mines education taught me how to think logically through complex problems and to evaluate a wide range of possibilities,” she says. “My time and studies at Mines also helped me to develop a very disciplined approach to time management and priorities. I definitely refined my skills in persistence and in achieving goals.”

Prier may soon set some new goals because the Williams Alaska business unit is for sale and her position with a new owner is uncertain. Her motto will carry her through to the next stage, “Treat life as an adventure; keep learning and growing. Put passion into your work and balance into your life.”

Gogden chose CSM 494 so he could ski and decided to return to Colorado for more. “I remembered a day the rugby squad played a match in the beautiful Vail valley and decided to go skiing for a season,” he says. He arrived in 1993. “I then got a job flipping burgers up on the hill at Two Elk, the busiest spot in Vail at that time. After a week, I went from lackey to running the station, answering to the executive chef.” Near the end of that first season, one of Ogden’s employees recommended he help at Terra Bistro. “I was my first real experience in fine dining,” he says. For the next four years, Ogden worked his way from prep cook to lunch cook to dinner. “At dinner, I started in salad then progressed through all four courses,” Ogden says. “It was my first real experience in fine dining.”

Another challenge involves getting people from different departments to communicate well and work closely together. It requires continual encouragement, but the benefits include a team that understands the big picture, appreciates how their work impacts others, and a group that works efficiently and effectively towards common goals. A true sense of ownership is developed when barriers between groups are removed.”

Ogden had chosen CSM 494 so he could ski and decided to return to Colorado for more. “I remembered the rugby squad played a match in the beautiful Vail valley and decided to go skiing for a season,” he says. He arrived in 1993. “I then got a job flipping burgers up on the hill at Two Elk, the busiest spot in Vail at that time. After a week, I went from lackey to running the station, answering to the executive chef.” Near the end of that first season, one of Ogden’s employees recommended he help at Terra Bistro. “I was my first real experience in fine dining,” he says. For the next four years, Ogden worked his way from prep cook to lunch cook to dinner. “At dinner, I started in salad then progressed through all the stations: hot apps, sauté, grill and expeditor.” He left Terra Bistro as sous chef and began at that level at SaddleRidge, a beautiful resort in Beaver Creek originally built by American Express as a corporate retreat. When the chef left, Ogden moved into the top spot.

Ogden’s biggest challenge as president involves change. “We are focusing on eliminating waste, streamlining processes and using technology to improve performance,” he says. “It’s very difficult, yet rewarding, to encourage people to move outside of their comfort zone to try something new and risk failure. I give them permission and protection to make mistakes. If we only achieve success, we are not pushing the envelope hard enough. It’s wonderful to see momentum build as people try new things, experience success and are encouraged enough to try something else.”

“Another challenge involves getting people from different departments to communicate well and work closely together. It requires continual encouragement, but the benefits include a team that understands the big picture, appreciates how their work impacts others, and a group that works efficiently and effectively towards common goals. A true sense of ownership is developed when barriers between groups are removed.”

Ogden’s biggest challenge as president involves change. “We are focusing on eliminating waste, streamlining processes and using technology to improve performance,” he says. “It’s very difficult, yet rewarding, to encourage people to move outside of their comfort zone to try something new and risk failure. I give them permission and protection to make mistakes. If we only achieve success, we are not pushing the envelope hard enough. It’s wonderful to see momentum build as people try new things, experience success and are encouraged enough to try something else.”

“Another challenge involves getting people from different departments to communicate well and work closely together. It requires continual encouragement, but the benefits include a team that understands the big picture, appreciates how their work impacts others, and a group that works efficiently and effectively towards common goals. A true sense of ownership is developed when barriers between groups are removed.”

CSM Alumni Association By the Numbers

| $1,587,154   | Total amount provided to students since 1963 |
| $146,000    | Total amount provided in legacy grants ($84,000), field session grants ($38,000), science fair scholarships ($12,000) and teaching awards ($12,000) |
| $8,230      | Number of record changes input per year |
| 20,000      | Number of Mines magazines distributed each quarter |
| 2,000       | Number of Network directories distributed annually |
| 1,851       | Number of volunteer hours contributed in 2002 |
| 1,770       | Total number of students who have received loans or grants |
| 1,110       | Number of alumni volunteers in 2002 |
| 633         | Alumni using e-mail forwarding |
| 594         | Number of people attending 4-day reunion events in 2002 that included 14 dinners, 2 luncheons, 13 tours, 4 days of the hospitality room, golf and 2 cocktail parties |
| 486         | Total number of CSM license plates sold |
| 314         | Number of people attending graduation banquets in 2002 |
| 250         | Number of students attending senior pizza parties in 2002 |
| 200         | Number of jobs posted on the web site in 2002 |
| 79          | Number of section events sponsored in 2002 in 9 states and 4 foreign countries |
| 4           | Number of times annually CSMAA BoD meets with School president, student representatives, Office of Institutional Advancement and regional directors |
Hollywood honors Springfield ’91
Christopher D. Springfield BSc Phy ’91 has received the Academy of Motion Picture Arts and Sciences 2002 Technical Achievement Award for his work on the Deep Canvas rendering software. The software program captures the original brush strokes of the traditional background artist to render the elements in three dimensions for animated films. Deep Canvas was developed at the Walt Disney Company for use on Tarzan, Atlantis: The Lost Empire and Treasure Planet. The award was presented at a gala black tie dinner in March in Beverly Hills. Springfield and his wife live in Glendale, Calif.

Springfield, who also has a doctorate in applied physics from the California Institute of Technology, has worked for the animation division at Disney for the past five years. He was software developer and technical director on Tarzan and Treasure Planet. While in graduate school, Springfield wrote and produced Green Eggs and Hamlet with writer/director Mike O’Neal. The film is currently available on video.

Genereaux ’89 chronicles extreme sports adventures
Bruce Genereaux MSc Min Ec ’89 has published Beyond the Comfort Zone – Confessions of an Extreme Sports Junkie, excerpted in M ines Vol. 92, No. 1 (Winter 2002). The book provides a look into the motivations, successes and failures of extreme sportsmen as they tackle Class 5 kayaking, rock climbing, extreme skiing and adventure racing. Settings include New England’s Tuckerman’s Ravine, Chile’s Patagonia, California’s Sierra Nevada, Arizona’s Salt River Canyon, New Zealand’s South Island and, of course, Colorado’s Rocky Mountains.

The book is published by Class Five Press and retails for $17.50.

Holstein ’79 elected judge
David H. Holstein BSc Pet ’79 was elected county judge for Henderson County, Texas, running on the Republican ballot. The Henderson County seat is located in Athens, Texas. Holstein has been living in Gun Barrel City, Texas, and remains active in the oil and gas business.

Cowart begins March 1. She has spent the last 10 years serving as state geologist and director of the Colorado Geological Survey. “Planned Parenthood provided women and men with the fundamental freedoms and rights to make their own choices that allowed me to pursue a career and succeed in a non-traditional field for women,” said Cowart. “When the opportunity to lead this organization presented itself, I couldn’t resist the exciting challenge of blending the next step in my career with a cause about which I am passionate.”

Olsen ‘84 named battalion commander
Lt. Col. Jared W. Olsen BSc Geo ’84 was named battalion commander of the 926th Engineer Battalion at Green Springs, Birmingham, Ala., in January. He was an ROTC scholar at Mines and was commissioned in the U.S. Army after graduation. He served on active duty until 1995.

Tel Johannes at work in his home in Wheat Ridge, Colo.

Opals have fascinated mankind since before recorded history. Archaeologist Louis Leakey found opals among 6,000- year-old artifacts in Kenya in 1939. In the first century A.D., the Roman Pliny wrote about opals comparing them to rubies, amethysts and emeralds. Napoleon gave Josephine a magnificent opal with brilliant red flashes called the “Burning of Troy.” Queen Victoria was especially fond of the gem and wore opals frequently, making them popular during her reign.

No other gemstone displays the variety of shades, patterns and brilliance as does the opal. The gemstone is 2 percent to 10 percent water, and is made of small silica spheres. The brilliance is caused by light traveling through the silica and diffracting as through a diffraction grating into one or more colors to produce what is called “play of colors.”

Gem-quality stones come from two types of deposits: volcanic and sedimentary. The highest quality and largest quantity of opals today come from Australia, where deposits are sedimentary. Mexico, where deposits are volcanic, is the world’s second-largest producer. In the early 1990s, Telahun “Tel” Yohannes MSc Chem ’80 discovered opals, also of the volcanic variety, in his native Ethiopia. He hopes soon to be competing in the world opal market.

Yohannes, a U.S. citizen since 1979 living in Wheat Ridge, Colo., had not returned to Ethiopia in 41 years. In 1993 he took his family there for a six-week vacation. While being reintroduced to his relatives and enjoying the beautiful Ethiopian scenery, he met a geologist who invited him to his office for professional consultation. In the geologist’s conference room, Yohannes noticed an opal nodule that had been cracked open to exhibit a most beautiful content opal with a wonderful play of colors. The geologist offered the opal nodule, which was found in Ethiopia, to Yohannes as a gift.

Yohannes took it home to Colorado to study the opal’s stability, characteristics and value as gem stone after it has been cut and polished.

In 1995, after positively establishing the characteristics and value of the opal, Yohannes returned to Ethiopia to conduct reconnaissance, geological exploration,
and lived in a tent while conducting detailed geological survey, exploration and systematic sampling for a financial feasibility study.

At the end of that year, while working in the opal field, Yohannes became ill and then sustained neck and back injuries when he fell down a cliff. Sick and injured, he returned to Colorado for treatment. In his absence, the opal mine was confiscated by locals and a clique of individuals whom he trusted, who bribed government officials and began mining and selling the opals themselves.

Only about 0.5 percent of the nodules contain opals that are gem-quality. But of those gem-quality stones, more than half are exceptional. What is unusual about Ethiopian opals is their large size and variety of colors. They range from clear white to dark brown. The gem quality stones range in value from $10 to more than $10,000 per gram.

"Unfortunately, the group that took over didn't know how to mine the opal nodules, knew nothing about opal quality and characteristics issues and did not know how to manage the business," Yohannes says. Opals are brittle, heat sensitive, crack, break, craze and scratch easily. They are soft compared with quartz (5 to 6 on the Mohs scale of 1-10 where talc is 1 and diamond is 10). Opals can self-destruct by cracking and crazing due to loss of the water within. It takes knowledge and care to mine and market opals successfully.

For the past four years, Abay Resource Technology International LLC (ARTI LLC), Yohannes' American company, has been in Ethiopian court fighting for the return of the claim. Recently, the court decided in favor of ARTI and Yohannes has been invited back to continue his work. He hopes to return to Ethiopia soon.

In addition to reclaiming the mine, Yohannes has been working to solve the cracking and crazing problem of opals. Donald Hoover DSc Geop '66, ARTI staff gemologist, is working with Yohannes to stabilize rough and finished stones. Also, Yohannes has approached James F. Ranville MSc Geochem '88, PhD Geochem '92 for consultation and assistance on the same cracking and crazing problem.

Several other Mines alumni also have become part of the Ethiopian opal project. Alan Mencin BSc CPR '79 is involved with marketing the opals. Bob Johannes BSc Geol '85 and Caren Johannes BSc Geol '85 have cut and polished some of the experimental stones. "These two are doing an excellent job in cutting, polishing and mounting the stones," Yohannes says. He hopes they will continue their work in the company when the opals are brought to market.

Opals in Ethiopia

By Maureen Keller

On site in Ethiopia.
II. It marked the highest ranking ever attained and the No. 26 ranked team in all of Division the No. 4 ranking in the North Central Region CSM would run off a school-record 11 games and stood at 4-2 on Dec. 5. That's when the real fun began.

The 2002-03 season began with a memorable game when Mines knocked off Northern Colorado, 81-80. The final two points came capped by a 77-70 win in Volk Gymnasium against Kearney. The streak also included the Orediggers' first seven-game sweep of the RMAC West Division. CSM was one of two teams in the league to accomplish that feat this season, joining Nebraska-Kearney, which spent much of the season nationally ranked.

But Mines would run into some stiff competition following its 11-game win streak as it lost seven of its next 10 games. During that losing streak, the Orediggers played good basketball against good teams, but could never hit the key shot or get a key foul call down the stretch.

Included in the losing streak was a six-point road loss at former national champion Fort Hays State, a one-point loss at home to Chadron State on a buzzer beater, a three-point loss at home to Metro State, the defending Division II National Champion, and a two-point heartbreaker in Volk Gymnasium to Nebraska-Kearney, which was ranked second in the nation and undefeated at the time.

Mines concluded the regular season with road wins over Colorado Christian and Regis to earn the No. 5 seed at the RMAC Tournament with an overall mark of 18-9 and 12-7 in league play. By virtue of clinching the No. 5 spot in the tournament, Mines had to travel to Fort Hays State, the No. 4 seed, for an opening round quarterfinal game. Mines and FHU had split the first two meetings of the regular season setting up the rubber match at Gross Memorial Coliseum on March 5.

The Tigers started out strong and claimed a 10-point lead midway through the first half before settling on a nine-point lead at the break. From there, Fort Hays would extend its lead to as many as 20 points in the second half. However, Mines used a late run to slice its deficit to seven points with two minutes to play, but would get no closer as it concluded its season with an 82-69 setback to the Tigers.

Seven of Mines’ 10 losses came to teams who would go on to qualify for the NCAA Division II National Tournament.

Bahl earned First Team All-RMAC honors after leading the league in scoring at 22.5 points per game.

The 2002-03 Colorado Mines men's basketball team set a school record by winning 11 consecutive games from Dec. 14 through Jan. 23. The squad ended the season at 18-10 overall and 12-7 in the RMAC and advanced to the RMAC Tournament.
Kickoff Gala

TRANSFORMING RESOURCES

Transforming Resources: The Campaign for Mines was publicly launched on Feb. 22 at a black tie gala in the Volk Gymnasium attended by approximately 250 alumni and friends. While details of the event were reported in the winter issue of Mines, it was too close to press time to include photos. Entertained by the Mines Marching Band, the Choir and the Jefferson County String Quartet, guests enjoyed an elegant and lively evening in the company of fellow Mines supporters, renewing old friendships and making new ones.

In after-dinner remarks, President Trefny outlined a vision for the School, emphasizing the role the campaign will play in realizing Mines’ future.

Following the president’s remarks, Campaign Co-Chairs Steve Chesebro ’64 (left) and Howard Janzen ’76 unveiled the specific goals of the campaign and the amount raised to date—$65 million.
Colorado School of Mines received gifts of $25,000 or more from the following individuals between September 1, 2002 and March 20, 2003. Acknowledgements of corporate and foundation gifts received during this period will be included in the summer issue of Mines.

Stanley and Judy Dempsey established a flexible gift annuity—annuity with a gift of appreciated stock worth $166,238. They also made an outright gift of $6,650 to the Arthur Lakes Library.

Fred '49 and Dorothy Duesser continued their support of the Mines Annual Fund with a $25,000 gift.

In continuing support of the Petroleum Engineering Department, R. Charles '49 donated $25,000.

Earlougher '36 contributed $30,000 to the Arthur Lakes Library.

They also made an outright gift of $6,650 to the Denver area Thursday Mixer: Wyncoop Brewing Company, 1634 18th Street, Denver, 5-7:30 p.m. No charge at door, pay own way. RSVP to Janet Blair, 303-273-3295.

Irelan Family Endowment for the McBride Scholarship Fund.

John '52 and Erika Lockridge made a gift of $52,837 in support of their men's basketball scholarship, the Blaster Endowed Scholarship Fund.

A bequest of $79,681 was received from the estate of Isabel McNeill, who was the widow of Harry McNeill ’24. The gift was directed to the Harry McNeill Endowed Scholarship Fund.

Don E. '53 and Barbara Miller contributed $25,000 to the Miller Scholarship Fund in honor of his 50th reunion.

Steven and Gayle Mooney made a gift of $150,000, which was part of their $1,250,000 commitment to the Transforming Resources campaign.

An unrestricted bequest of $332,000 was received from the estate of Graciel Murdock.

Cheesbro’s Create Distinguished Chair in Petroleum Engineering

Transforming Resources campaign Co-Chair Stephen D. Cheesbro ’64 and his wife Dolly have created the first distinguished endowed chair in the Petroleum Engineering Department. The Cheesbro chair will be funded with $2.5 million endowment comprised of a $2 million Transforming Resources campaign commitment and several previous gifts. It will aid the internationally recognized department in recruiting outstanding industry leaders to the faculty. “The petroleum industry is vital to our national security and economic prosperity. Dolly and I want this gift to not only strengthen the department and the School, but to contribute to the industry worldwide,” said Cheesbro. “We also hope that this gift will challenge others in the Mines community to consider making an investment in the School’s future.”

Energy is one of Mines’ six focus areas for preeminence, identified as part of the ongoing strategic planning process. Remarkably on the gift, President Troyf said, “The Cheesbro Distinguished Chair addresses one of our most pressing needs. The success of the Petroleum Engineering Department and the School rests upon the intellectual achievement of our faculty. We are delighted that Steve and Dolly have provided this special resource to ensure the continued preeminence of this area and the institution.”

Cheesbro currently serves as chairman of Harvale Natural Resources, Inc. He formerly served as chairman and CEO of Tencro Energy and president and CEO of PennEnergy.
CSM Alumni Association

Officers
John N. Schwartzberg BSc Met ‘88
President
Arthur T. Biddle Met E ‘61
President-elect
Alan J. Mencin BSc CPR ‘79
Treasurer
Kathleen A. Altman BSc Met ‘80
Secretary

Directors
Scott R. Clark BSc Pet ‘85
Brenda J. Eccles BSc Geop ‘94
Carole D. Graas PhD Mat Sc ‘89
Hugh W. Evans EM ‘49
Roxann M. Hayes BSc Eng ‘95
Robert Kendrick EM ‘54
Blase A. Leven MSc Geol ‘89
Kimberly M. Lewis BSc CPR ‘92
Pat Phillips Met E ‘61
Laurence G. Preble PRE ‘61
Stefany B. Stokley BSc Geop ‘99
Julie D. White BSc CPR ‘93

Staff
Michael Watson
Executive Director
Janet Blair
Administrative Assistant
Kathy Bret
Deputy Director
Maureen Keller
Editor
Bob Pearson PE ‘59
Sections Coordinator
Jo Marie Reeves
Records

P.O. Box 1410
Golden, CO 80402
Office: (303) 273-3295
(800) 466-5488, ext. 3295
Fax: (303) 273-3583
E-mail: csmaa@mines.edu
www.alumnifriends.mines.edu

Phoenix, Ariz.

Anchorage, Alaska
Seven alumni participated in a day of skiing on Super Bowl Sunday to benefit a local battered women’s shelter. Pictured from left, Wendy King BSc Pet ’90, Tanya Barb BSc Pet ’01, MSc EMT ’02, Katie Brown BSc Math ’92, Patty Chamberlain BSc CPR ’89, and Holly Daugherty BSc Eng ’01. Not pictured is Kai Binkley BSc Pet ’02.

Durango, Colo.
The men’s basketball team played Ft. Lewis College in Durango Jan. 18 and alumni showed up to cheer.

Golden, Colo.
Director of CSM’s Center for Commercial Applications of Combustion in Space Frank Schowengerdt (standing) addressed the Golden Lunch Bunch Jan. 9.

Denver Metro
The Athletic Department, in conjunction with CSMAA, held two basketball reunions of former Mines players. The first was Dec. 13 (above top). The second was Feb. 15 (above middle). An alumni wrestling reunion (right) was held Feb. 9.

Bone Valley, Fla.
The Bone Valley alumni group held its annual picnic barbecue March 19 even though it rained.
Miners Celebrate Marriage and the Good Life
By Allen McGlone Geol E ’54

Marian and Bob Kendrick EM ’54 began celebrating their 50th wedding anniversary two years early by hosting a Caribbean cruise for 61 of their friends. The Kendricks will be married 50 years in 2004.

The 14-day cruise took place in May aboard the Windjammer Cruise Lines ship, the Amazing Grace, which carries freight and passengers between the Bahamas and Trinidad. It also services the tall ships of Northern Lighthouse Board and hosted the Mines bunch including John McIver Met E ’50, Sue and George Mitchell EM ’53, Dave Jonson Geol E ’53, MSc Geol ’55 and Jan Hall, Mary and Tom Young EM ’52, Nancy and Gordon Wieduwilt Geop E ’53, Carolyn and Don Adams Pe ’52, Louise and Allen McGlone Geol E ’54, MSc Geol ’55, Harry and Gordon Miner EM ’48, Beth and Harry Ellis Pe ’54, Anne and Dick Siegfried Geop E ’50, Ann and Sam McClaren Pe ’54, and Jim Mulryan EM ’54 and Gail Wieder.

Partying started at a bon voyage dinner-dance in Miami, followed by a flight to Freeport, Bahamas, the next morning. During the cruise, we visited 10 islands, sailing at night and enjoying island life and tours during the day.

The Amazing Grace docked first at Grand Turk Island with a School of Mines flag flying from the halyard. Grand Turks and Caicos Governor Cynthia Atwood and her attorney general were received at a luncheon aboard ship. Some of us fed stingrays at Grand Turk, others went snorkeling and toured the tall ships, Flying Cloud and Mandalay. In the evening, lectures were given by passengers: Siegfried gave an overall view of the world petroleum reserves, Wieduwilt discussed continental drift.

A special event was the auction of passenger-donated items and services for the Queen Elizabeth orphanage in Grenada. More than $1,400 was raised and given to the orphanage along with stuffed animals and clothing.

The Amazing Grace was loading for her return trip. The cruise was at an end, but the Kendrick celebration continues.

Another event was a costume party where all were dressed as something starting with “R.” Kendrick was the Perfect Person—a M ines man.

After 12 days at sea, the Amazing Grace pulled into Port of Spain, Trinidad, for a last day of steel-band performances and a dance contest; Jonson and partner Hall were the winners.

M meanwhile the Amazing Grace was loading for her return trip. The cruise was at an end, but the Kendrick celebration continues.

Maj Orn Donation Preserves Part of Colorado’s Industrial Heritage

By Robert Sorgenfrei

The Morse Brothers Equipment Company closed its doors in October 1985 after almost 90 years in business in the Denver area. It began a liquidation sale of its inventory of crushers, compressors, ball mills, mine loaders, locomotives, cars, pumps and other equipment used primarily by the mining industry. In the mid-80s, the mining industry was in a deep economic downturn. There was not a viable hard-rock mine in full production anywhere in Colorado. It was time to quit the business. Founded in 1898, the Morse Brothers Machinery Company had been a leading purveyor of reconditioned industrial machinery. Along with companies like Denver Equipment Company and Mine and Smelter Supply Company, it had helped make Denver a major center for the manufacture and sale of mining machinery worldwide. In 1936, the company was purchased by Max Grimes. He retained the Morse Brothers Machinery Company name and under his stewardship, developed worldwide sales of both new and reconditioned equipment. In its heyday, the company employed 140 people. But in the 1970s the company began to shrink until by 1985, only three employees remained, and two of them were the company’s owners, Harold and Raymond Grimes, who had taken over from their father, Max.

One of the people who attended the liquidation sale that October day was William G. “Chip” Parfet Hon Mem ’96. As the sale was winding down, he noticed shelf after shelf of catalogs, manuals and other published material available. All of the company’s technical publications were gone. The sale also included large boxes of photographs that employees had used as reference material in the course of their work reconditioning equipment for almost 90 years. Parfet asked the owners what they planned to do with the material. From their reaction, it was obvious they hadn’t given it any thought. Parfet offered to take it off their hands, and after a little hesitation, they agreed, on the condition that he was not to sell it. After sealing the deal with a handshake, Parfet boxed up his new collection with no idea of what to do with it. He knew the collection was important to preserve, but was not sure how to do it. For 17 years, the material sat in a trailer in Golden, Colo. Last December, Parfet donated it all to the Russell L. & Lyn Wood Mining History Archive. It consists of more than 30 boxes of material that will be invaluable to the study of mining technology.

Material such as industrial equipment catalogs are characterized as ephemera, never intended to be permanently kept, but simply used for a specific purpose and disposed of. Much of the collection was intended to advertise and sell products. Once a new model or product line came out, old catalogs were of no use and usually thrown away. Surviving copies of these publications are scarce, even rare. Since the Morse Brothers Company was in the business of reconditioning equipment, it kept every single publication it received for possible future reference, making this collection rare and significant. With this material, one can trace the evolution of a piece of equipment as it underwent design changes over decades. The scope of this material on mining and milling machinery and related technology makes it one of the finest collections in the world.

Efforts have begun to catalog and preserve the thousands of brochures, technical bulletins, catalogs and other publications that will eventually be made accessible. All the great names in mining machinery are represented—Denver Equipment Company, Hendrie and Boltzoff, M line and Smelter Supply Corporation and many others. In addition, the collection contains boxes of photographs taken by professional commercial photographers for catalogs published by Morse Brothers. These photographs are a visual record of the type of machinery reconditioned and sold by the company and were taken with the best possible lighting and contrast.

The industrial base that manufactured mining and milling equipment in Denver is largely gone. And with it, much of the documentary record of Denver’s role as a center for the manufacture of mining equipment has been lost or scattered. But we can be grateful that a promise sealed by a handshake 17 years ago saved part of that record for posterity.

In memoriam

ROBERT C. “Skip” Arnim PE ’72 died at his home in Bartsville, Okla., Jan. 8. He was 83. Arnim was born in Pasadena, Calif., and was raised in Calgary, Alberta, Canada. In 1971, he married Elizabeth Gregory in Augusta, Ark. Arnim worked for British Petroleum Company for five years, then for Phillips Petroleum Company for 25 years, retiring last October. He was a member of the First Baptist Church in Bartlesville, the Society of Petroleum Engineers, CSMAA and Sigma Baptist Church in Bartlesville, Okla., Jan. 8. He is survived by his widow, Betsy, four sons, a daughter, and two brothers.

RICHARD A. “Dick” Arterburn M EE ’66 died at home in Graeagle, Calif., Dec. 18 at age 63. Arterburn was born in Nebraska, but spent most of his childhood in Amarillo, Texas. It was there he met and married his lifelong companion and wife, Gail, in 1962. After graduation, Arterburn worked for ASARCO at its Amarillo zinc smelter. He then became mill metallurgist for AMAX in Salt Lake City, Modesto since 1984. During that time he volunteered for many veterans’ organizations in Florida. Arterburn was a reservoir engineer with BP Amoco in Amarillo, Texas. He was a passionate golfer and loved trout fishing and returned to Graeagle to pursue golf and fishing.

GEORGE M. Ball GEOP E ’52 died Nov. 7 in Stuart, Fla., from complications associated with chronic obstructive pulmonary disease. He was 76. Ball was born in Texas but was raised in Golden, Colo. He graduated from Golden High School at age 17 and then joined the U.S. Navy, serving in the South Pacific during World War II. He was part of the force that occupied Japan after the war. Afterwards, he attended Mines where his father was a professor in the petroleum engineering department. Ball graduated with a geophysical engineering degree, but switched careers to become a technical writer. He retired to Florida. Ball loved trout fishing and returned to Colorado nearly every summer to fish. He also loved to read and was actively involved in the Veterans of Foreign Wars and other veterans’ organizations in Florida. Ball’s wife, Dret, preceded him in death. He is survived by three sons, a daughter, a sister and 12 grandchildren.

LARRY G. Hayes EM ’52 of Modesto, Calif., died Sept. 15 at home. He was 77. Hayes was a native of McCormick, Neb. He had lived in Middletown since 1984. He was a mining engineer for 34 years and worked for Kaiser Engineers. He was a member of Smyrna Lodge Free & Accepted Masons of Cerros, Veterans of Foreign Wars and Moose Lodge. He was a member of the World War II Army Air Corps veteran. Hayes is survived by his widow, Donna, a son, a brother, two sisters and seven grandchildren.

Elizabeth J. Jorgensen BSc. Geol. ’98 died Nov. 11 at home following a long illness. She was 32. Jorgensen was a homemaker and mother of twins. She had worked for a time as S.R.K. Consulting in Lakewood, Colo. Jorgensen is survived by her husband, Todd, two sons, her parents and two sisters.

Ronald E. Lengerich BSc. Met E ’75 died June 24 in Hewas in Golden, Colo., for his son Benjamin’s (BS Eng ’02) graduation ceremony. He was a reservoir engineer with BP Amoco in Houston. While at Mines, he was a member of Blue Key and was active in the Alumni Association. He is survived by his wife, Judy, and four children.

Charles S. Lindberg M EE ’40 died at home in Farmington, N.Y., Dec. 20. 11 days shy of his 89th birthday. After graduation, Lindberg went to work for American Smelting & Refining in Amarillo, Texas. There he met and married Kat Roach, whom he married in 1942. The couple moved to Mexico and lived there for 11 years. All three of their children were born in Mexico. In 1953, Lindberg moved to Shippock, N.Y., where he supervised the construction of the uranium mine for Kerr-McGee in 1956. He started C & K Industrial Supply, retiring in 1975. During that time he volunteered for many civic and church activities. Two of his children predeceased him. He is survived by his widow, two daughters, and nine grandchildren.

Ronald E. Lengerich BSc. Met E ’75 died June 24 in Hewas in Golden, Colo., for his son Benjamin’s (BS Eng ’02) graduation ceremony. He was a reservoir engineer with BP Amoco in Houston. While at Mines, he was a member of Blue Key and was active in the Alumni Association. He is survived by his wife, Judy, and four children.

Dwight L. Myers EM ’41 died Dec. 5, nine days shy of his 93rd birthday. His wife, Mary, was 31 when he graduated from Mines. Prior to his education, he spent 12 years in the western states mining a boron mine. He was married on Nov. 2, 1965 in the Columbia River. He excelled in track and debate in high school and graduated with honors. During the 1930s, he was a laborer and fisherman. He and Gail moved to Graeagle to pursue fishing and golfing. Arterburn was a passionate golfer and returning to Graeagle to pursue golf and fishing, fulfilling a long-time dream. He also attended the M aster’s in Augusta, Ga., in 2001 and also enjoyed several rounds of golf at Pebble Beach. Arterburn was active in the Graeagle Community Church and was a deacon on the church board at the time of his death. Arterburn is survived by his wife, two sons and three granddaughters.

James W. Minette EM ’59 of Modesto, Calif., was 73, of Indian Rocks Community College. He is survived by his widow, Myrna, five children and seven grandchildren.

William D. Payne Geol E ’59 died Dec. 16 in Denver. He was 66. After graduation, the New Y ork City native fulfilled his military duty as a second lieutenant in the U.S. Army. He then began his career as a mine geologist in Butte, Mont., with Anaconda Company, where he developed an appreciation of the economic aspects of geology. From 1963-1966 he worked for Anglo American Corp., in Zomba. On returning from Africa, Payne earned a doctorate from Stanford University in 1971. From 1973-1981, he was Noranda’s southwestern district geologist, a position that allowed him to integrate his talents as a scientist, teacher and manager, and was based in Tucson, Ariz. Payne then became area manager for Getty Mining Co. In 1986, he became a principal for Engineering Dynamics, Inc. in Englewood, Colo. Over the past five years as opportunity dwindled in mining and mineral exploration, Payne’s enthusiasm and love for the economic aspects of geology remained. He was a strong supporter of the project tooward petroleum geology and various futuristic projections in economic geology. He is survived by his widow, Suzanne, a daughter and two grandchildren.

John A. Riddle Met E ’49 died peacefully at his home in Castro Valley, Calif., Nov. 24. He was 74. Riddle was a chief engineer for M & M Resources, Inc. He also served in the M innesota National Guard. Riddle was a loving husband, father and grandfather. John will always be remembered for his wisdom, friendship,
Six Honored by CSMAA

Melville F. Coolaugh Award

Ken Larner Geoph E ’60 is the Charles Henry Green Professor of Exploration Geophysics and director of the Center for Wave Phenomena at CSM. Larner joined the CSM faculty after 18 years with Western Geophysical Company that included nine years as vice president of research and development. He is active in numerous professional societies and served as president of the Society of Exploration Geophysicists. He also received SEG’s highest award, the Maurice Ewing Medal. In 1981, he was awarded the CSM Distinguished Achievement Medal. In 1992, he received the Presidential Award for outstanding educator.

William O’Malley EM ’42 of Tipperary, Ireland, has been a lifelong loyal and vocal supporter of Mines and the Alumni Association. After graduating from prestigious Phillips Exeter Academy, he spent two years at Princeton University before transferring to Mines. After graduation from Mines, he earned a graduate degree in geology from Stanford University. According to O’Malley, his education from Mines was far superior to either Princeton or Stanford. O’Malley has a career in the oil business, but since 1969 has also raised horses on his farm in Ireland. He has always been a great supporter of and a goodwill ambassador for the School.

After graduation, Robert W. Pearson PE ’59 worked briefly as an engineer, but soon followed his real passion—sports. For 32 years he was a teacher, coach and athletic administrator at Mines. During his tenure as assistant basketball coach, Mines won two conference championships. As associate athletic director, Pearson joined the staff of the Association as sections manager. He has also served as chairman of the CSMAA board of directors as well as the board of the CSM Credit Union.

Robert A. Pond is executive vice president and a director of Frontier-Kemper Constructors Inc. in Indiana, one of the leading tunneling and mining contractors in North America. He has more than 40 years of experience in nearly every phase of mining, tunneling, shaft sinking and heavy construction. Pond studied at Mines, but left before graduation. While still a student, he co-founded and managed Hardrock Contractors in Durango, Colo. Today his duties at Frontier-Kemper include overall business and contract management for the company and its sponsored joint ventures. Pond is an officer of several construction-related corporations and a member and officer of several professional organizations. He is on the Visiting Committee for the CSM Mining Engineering Department and is active in several local civic and sporting organizations. He also writes a monthly column for a sport-shooting newspaper, The Clay Pigeon.

The Clay Pigeon
1949 Arthur W. Ruff Geol E, EH, DSc Min ’58 is an independent consultant in La Mesa, Calif.
1950 Dan H. Stephenson EM is a mining consultant for Western Mineral Appraisals, LLC, in Bozeman, Mont.
1952 John P. Lockridge Geol E is president of Mountain Petroleum Corporation in Pebble Beach, Calif.
1953 Edgar T. Hunter EM and Harvey E. McCann became Legion of Honor members of the AIME Jan 1. They each joined in 1951 and have maintained membership for 50 years. They received gold label pins and now pay 50 percent of their regular dues.
1954 Carl L. Blood Geoph E is an independent consultant in Honolulu, Hawaii.
1956 Ralph H. Dougherty Met E is a partner with Dougherty, Clements & Higginson in Charlotte, N.C.
1957 Robert B. Stack Met E is an associate vice president for Morgan Stanley and Company Inc. in Times Square, N.Y.
1959 Gerald S. Keen Geol E is retired in Cypress, Texas.
1961 Gary A. Holcomb EH is retired in Grand Junction, Colo. 
William M. Walker Geol E is now Walker Geological Services in Reno, Nev.
1962 Charles W. Downie PRE is retired from Eolectric Energy Corporation and lives in Leadville, Colo.
1963 J. Paul Mathis PRE is retired in Centennial, Colo.
1964 Lloyd J. Nordhaussen PRE is a refinery operations manager for Frontier Refining Inc. in Cheyenne, Wyo.
1966 James E. Suggs Geoph E is a chief geophysicist for Rock Creek Nuclear in Norman, Okla.
1968 Michael C. Deyo PRE is retired in Rocky Lake, Idaho.
1970 Wesly L. Lynne Met E is a senior metallurgical engineer for Fike Corp. in Blue Springs, Mo.
1971 Richard C. Gilder BSc Chem is a business manager for Village Church of Guerneville in Guerneville, Ill.
1972 Randolph H. Hicks BSc Met, PhD BSc Met ’90 is a vice president of sales and marketing for Bostock Packaging Technology in Brooklyn Park, Minn.
1973 Allen M. Roman BSc Geol is an independent consultant in Tuscan, Ariz.
1974 Larry R. Fischer BSc Min has taken early retirement in Gallup, N.M.
1975 Dan R. Harrison BSc Min is branch manager for American Civil Constructors in Greenwood Springs, Ohio.
1976 David V. Philipp EM is a proprietor of D&W Mining and Tunneling in Yucaipa, Calif.
1978 Michael G. Long BSc Met is executive vice president for Nations Energy in Athabasca, Alberta, Canada.
1979 Richard H. Brusten BSc CPG is a drilling consultant for ARAMARK Uniform Services in Overland Park, Kansas.
1980 Ronald H. Brusten BSc CPG is a family physician for OSU Healthcare System at St. Francis Hospital in Gladstone, Mo. He is the chair of safety and quality improvement and a physician liaison for information technology.
1981 Timothy M. Hawk BSc Min is a mining engineer for Shell International Exploration and Production in Houston.
1982 Ronald L. Brusten BSc CPG is a member of the board of directors for Sasol America Inc. and chairman of its operations in Scotland.
1983 Edward E. Downer Jr. BSc Min is regional sales manager for Whayne Supply Company in Louisville, Ky.
1984 David R. Salter BSc Min E is a senior petroleum engineer for Shell Oil Company in Midland, Texas.
1985 Carl L. Blood Geoph E is managing director of chemistry for El Paso Corporation in Houston. 
Edwin Darling Ph.D. is director of ARAMARK Uniform Services in Coppell, Texas.
1986 Frank J. Fields PRE is vice president of Fieldstar, Inc., in Houston.
1987 James F. Higby Jr. BSc Min is a partner in GeoScience for Pappo, Inc. in Warren, Pa.
1988 Andrew J. Schneider BSc Min, PhD ’92 is a mining engineer for襫 consultancy for Pappo, Inc. in Warren, Pa.
1990 Michael J. Dern BSc Pet is a senior petroleum engineer for Shell Oil Company in Midland, Texas.
1991 Larry J. Brown BSc Met is the head of the department of mining and metallurgy and is now a senior consultant for Marlin, Inc. in Pine, Utah.
1992 John L. Kirk Jr. BSc Met, MSc ’74 is a vice president of sales and marketing for Bostock Packaging Corporation in Brookville, Pa.
1993 Richard E. Ackerman BSc Met E is a mining engineer for Earth Tech Inc. in Oak Brook, Ill.
1994 Larry J. Brown BSc Met is the head of the department of mining and metallurgy and is now a senior consultant for Marlin, Inc. in Pine, Utah.
1995 Michael J. Dern BSc Pet is a senior petroleum engineer for Shell Oil Company in Midland, Texas.
1996 Mark F. Coobough BSc Geol is a research assistant professor for the Great Basin Center for Geothermal Energy at University of Nevada-Reno.
1997 Michael J. Dern BSc Pet is corporate manager of processing for Forest Oil Corp. in Denver.
1998 Richard L. Brown BSc Min is a president of Bond Mining Company in Montrose, Colo.
1999 Brian T. Bond BSc Min is a president of Bond Mining Company in Houston. Chris Ogden BSc Geol, MSc Geol ’88 and his family have moved to Abyaneh, Afganistan near the Caspian Sea. He conducts economic analysis for project expansion and ensures that associated government regulatory work is completed.
2000 Leanne M. Baker BSc Min, PhD E is a consultant in Tulsa, Okla. J., Hugh Dickey MSc CPG is a manager of policy and political affairs for ChevronTexaco Corporation in San Ramon, Calif.
2001 Richard E. Ackerman BSc Met E is a manager for BearBerg, Inc. in McAllen, Texas.
2002 Scott M. Rosenberg BSc Met is a staff reservoir engineer for Shell Production in Houston.
2003 John C. Hubbell BSc Met is a petroleum engineer for ExxonMobil Exploration in North Carolina.
2004 Matthew W. Mason BSc Min is an environmental engineer for Western Weather Services in Anchorage, Alaska.
2005 Don H. Lander BSc Min is a research assistant professor for the University of Nevada-Reno.
2006 James A. Colyer BSc Geol is a consulting geologist for Asia-Pacific Exploration Co. in Dubai, United Arab Emirates.
2007 Michael J. Dern BSc Pet is a senior petroleum engineer for Shell Oil Company in Midland, Texas.
2008 Richard T. Bond BSc Min is a president of Bond Mining Company in Houston.
2009 John C. Hostick BSc Met, PhD BSc Met ’92 is a worldwide commodity director for Johnson and Johnson in New Brunswick, N.J.
2010 Joanne E. Jones BSc Min E is a principal engineer for ExxonMobil Exploration in New York.
2011 Richard E. Ackerman BSc Met E is an independent consultant in Sarasota, Florida.
2012 Jill A. Schoning BSc Min E is an independent consultant in St. Louis, Missouri.
2013 Michael J. Dern BSc Pet is a senior petroleum engineer for Shell Oil Company in Midland, Texas.
2014 Mark F. Coobough BSc Geol is a research assistant professor for the Great Basin Center for Geothermal Energy at University of Nevada-Reno.
2015 Michael J. Dern BSc Pet is corporate manager of processing for Forest Oil Corp. in Denver.
2016 Richard L. Brown BSc Min is a president of Bond Mining Company in Montrose, Colo.
2017 Brian T. Bond BSc Min is a president of Bond Mining Company in Houston.
2018 Leanne M. Baker BSc Min, PhD E is a consultant in Tulsa, Okla. J., Hugh Dickey MSc CPG is a manager of policy and political affairs for ChevronTexaco Corporation in San Ramon, Calif.
2019 Richard E. Ackerman BSc Met E is a manager for BearBerg, Inc. in McAllen, Texas.
2020 Matthew W. Mason BSc Min is an environmental engineer for Western Weather Services in Anchorage, Alaska.
Natural Pharmaceutical in Fall River, Mass.

1983
Mark A. Baiderston BSc Pet is a consulting petroleum engineer for his own company, Baiderston Engineering Inc. in Craig, Colo.
Luis E. Edington BSc Gnp is an applications engineer providing training and support to civil engineers who use the MXRoad design software. He works for InFrost North America Inc. in the Denver area.

Andrew S. McPherson BSc Pet is an independent consultant in Grand Junction, Colo.
Daniel S. Morris BSc Pet is president of Imagine Exploration in Denvers, Colo.
Michael James Glen BSc Min is a team risk engineer for ConocoPhillips in the Denver area.

1984
Ceramography: Preparation and Analysis of Ceramic Microstructures, a reference text book by Richard F. Chinn, BSc Min, MSc Min, PhD Min, 1984, co-author by ASM International and the American Ceramic Society in December 2002. China is a materials research engineer at the U.S. Department of Energy in Alabany. 
Michael James Glen BSc Min is president of Saddle Peak Associates in Calabasas, Calif.

1987
Deborah A. Beck BSc CPR is a global improvement leader for Dow Chemical Company in Hanvile, La.
Peter C. Dillingham BSc Pet is director of business development for the Advanced Food Company in Erid, Okla.
Virginie Goudjama BSc Gnp is senior geology for Anglo America in Bentley, W.A., Australia.
J. Scott Emburgo BSc Chem is a research associate at the lunar and planetary laboratory and a program manager for geocience at the University of Arizona in Tucson.

1988
Glen L. Anderson BSc Min is a senior planning consultant with Geologic Control Services in La Paria, Texas.
Eric D. Smith BSc Gnp is a project specialist for Conoco Phillips Chemical Company LP in Houston.

1988

1989
Colin Engle BSc Gnp, Gei 1989 is a senior mining engineer consultant with Terrametallurgy, Inc. in Houston.

1989
Michael James Glen BSc Min is a team risk engineer for ConocoPhillips in the Denver area.

1991
Shamlal A.W. Hussain BSc Eng is a petroleum engineer at Cepco Resources in Dubai, United Arab Emirates. His dissertation was on reservoir management and planning as well as stormwater design projects.

1992
Brett C. Bush Ph BSc is an information officer for Coca-Cola Resources in Bentley, W.A., Australia.
Richard K. Mackay BSc Ph BSc, Eng, MSc Appl Math 1994 is an adjunct instructor in the Civil Engineering Department.

1992
Allison Thomas Bowman BSc Eng is an information developer for Magic Earth in Highlands Ranch, Colo.
Dedra L. Edwards BSc CPR is a geophysicist for the U.S. Army Corps of Engineers in Huntsville, Ala.
Renee L. Luke BSc Eng is a director for Carnegie Inc. in Littleton, Colo.
James D. Parry BSc Pet has been promoted to operations manager for Precision Oil in Jakarta, Indonesia.

1993
Chad C. Solis BSc Gnp is a patent attorney for Santar_reading, Law Office, P.C. in Fort Collins, Colo.
T. Brooks Tucker BSc Pet is a vice president and general manager for Dimensions Diversified Inc. in Englewood, Colo.
Michael R. Walker Hsc Min Ec is director of project development for the Xanogen Broadband Development Authority in Ann Arbor, Mich. He and his wife, Andrea, have two children.
A bequest to Mines may allow you to make a rewarding gift while retaining control of your assets during your lifetime. There are many ways to structure a bequest without compromising your security or that of your loved ones. Examples include:

- **Percentage Bequest**—To protect against market fluctuations, your bequest can direct a specific percentage of your estate to Mines.
- **Residual Bequest**—After providing for loved ones, you can direct some or all of the remaining assets to Mines.
- **Life-Income Bequest**—You can create a bequest that pays income to an individual for life, then goes to Mines.
- **Property or Fixed-Sum Bequest**—You can name a fixed amount or a specific property to be directed to Mines.

The best reason to make a bequest is the satisfaction of providing valuable support to an institution you care about. Also, including a charitable bequest as part of your estate plan can provide significant tax and financial benefits.

Please note that bequests to Mines should be directed to the "Colorado School of Mines Foundation, Incorporated, of Golden, Colorado."

For additional information or a confidential discussion of your plans, please contact our planned giving staff Chris Wenger or Rod McNeill at (303) 273-3275.
CSM’s Oldest and Youngest

Mines’ oldest student Hugh Evans, 79, and youngest student Dylan Jones find they have a world in common. When Board of Trustees member and alumnus Evans EM ’49 takes a break from graduate studies in mining and mineral economics, he skis. Jones, a sophomore pursuing degrees in mathematical and computer sciences, as well as chemistry and geology, snowboards.