New degree offers management solutions

Software helps predict rockfalls

Kids call Bashen ’48 a “hero”
Korean Veterans Not Forgotten

Mines graduates who served in Korea during the combat might want to know about an announcement published in the Daily Midway Driller (near Taft, Calif.) last August. There was extensive coverage pertaining to the Korean War Service Medal. Also, several pages are devoted to Korea, “the forgotten war,” the “Inchon Invasion,” and the “Korean War Service Medal Application Fact Sheet.” The medal is free, but due to limited availability, will be issued to living veterans first, followed by posthumous awards to “primary next of kin.” For additional information, contact the Air Force Personnel Center, Monday – Friday, 7:30 a.m.–4:30 p.m. (CST) at 800-558-1404; Awards and Decorations Section, 210-565-2520/2516; or write to HQ AFPC/DPPPRK, Suite 12, Randolph Air Base, Texas 78150-4714; or visit their Web site, www.afpc.randolph.af.mil/awards/. The organization’s fax number is 210-565-3118.

General information on the medal also can be found by writing the Department of Defense, 50th Anniversary of the Korean War Commemoration Committee, 1213 Jefferson Davis Highway, Crystal Gateway 4, Arlington, Va. 22202; 703-604-0831; korea50.army.mil.

Paul Fritts Geol E ’52

Kim Update: The Last Word?

After the story on Herbert Kim EM ’28 ran in Mines magazine (Spring 2000), I received a letter from Tom Northrop, son of Tom Northrop EM ’32. Included in the letter was a copy of an article written by Northrop Sr. Mr. Northrop served with the Army in Korea in 1946-48 and recounts meeting with Herb Kim and learning that in 1948, he had done tungsten beneficiation of sheelite at Allis Chalmers in Milwaukee before returning to China in 1949. Kim’s American wife, Pauline, had refused to join him in Korea when he returned from China and they were divorced. Kim reported to the Coolbaughs that he had remarried. In June of 1950, the North Koreans overran South Korea and Northrop writes that Kim’s wife was pregnant and couldn’t be moved. They were both captured, never to be heard of again.

In June of 1950, the North Koreans overran South Korea and Northrop writes that Kim’s wife was pregnant and couldn’t be moved. They were both captured, never to be heard of again. The Russians used Kim as a mining engineer, under contract: then they convicted him for spying. The Chinese used him as a contract mining engineer as did the South Koreans. Is this closure or did the North Koreans impress him into service as a mining engineer?

Dave Coolbaugh Geol E ’43, EM ’47, DSc Geop ’61

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

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

For more information, contact the managing director, CSMF Foundation Inc.
Linda M. Landrum at 303-273-3142
On a Roll…  
With engineering geology software

Furtak and Confucius say:  
“I hear, I know. I see, I remember. I do, I understand.”

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When Jerry Higgins is on a roll, he makes predictions about rocks. Falling, bouncing, rolling rocks.

For travelers and mountain residents, his predictions are critical. In steep mountainous terrain, rockfall presents a hazard to both transportation routes and structures.

Dr. Higgins, of the Department of Geology and Geological Engineering, speaks all over the United States and the world on the Colorado Rockfall Simulation Program (CRSP). It was developed at CSM, in cooperation with the Colorado Department of Transportation (CDOT), to model rockfall behavior and provide a statistical analysis of how rocks are likely to bound down a slope. The simulation is used by engineers as a basis for designing rockfall barriers.

Now used worldwide, the program was originated in 1987 for the I-70 highway project through Glenwood Canyon in Colorado. “Of course it was full of rockfall problems,” says Higgins. So CDOT contracted with Mines to combat the geological hazards associated with the high-country highway construction.

“We got paid to roll rocks down slopes,” says Higgins with a smile. And that rock rolling probably saved property and lives then – and continues to prevent catastrophes today – by keeping boulders from launching onto highways.

The program is an analysis tool in making design choices about:
• Where to build barriers to stop rocks
• What kinds of barriers are best in each situation
• Where constructing ditches alongside the road is a better solution than a barrier.
The CRSP algorithm was the thesis project of one of Higgins’ graduate students, Timothy Pfeiffer ME Geol Engr ’89. The computer model incorporates slope profiles where rockfall might occur. It takes into account slope surface characteristics, such as bare soil, soft soil or soil scattered with boulders.

Also, parameters such as slope geometry, rock diameter and density are required input for the simulation model, which calculates bounce heights, velocities and energies of bouncing rocks along the slope profile. Rocks were actually rolled down slopes to calibrate the computer model with real data. CRSP still uses Pfeiffer’s original algorithm.

Slight changes were made in the program between the late ’80s and late ’90s, when CDOT again contracted with Mines, this time to do more calibration on the model and develop a Windows-based version. Another of Higgins’ graduate students, Christopher Jones ME Geol Engr ’98, created the latest version.

He received technical advice from Rick Andrew of CDOT and help with statistical analysis of data from Dr. Keith Turner of CSM’s Geology and Geological Engineering Department. Graduate student Paul Berger MSc Geol ’99 also assisted with some final programming changes.

Now more accurate and easier to use, the software is applied all over Colorado, and beyond, for safe rock slope design.

Software developed in the Geology and Geological Engineering Department helps designers prevent rocks from bounding onto highways or into structures in mountains regions.

The data aids in decisions about type and placement of barriers, such as fences or walls, or the construction of ditches as effective preventive measures.
Furtak and Confucius Say:

“I hear, I know.

I see, I remember.

I do, I understand.”
It’s not a teaching approach that he favors. Nevertheless, Dr. Thomas Furtak delivered a lecture.

Speaking in February to colleagues who had selected him as the 2000 CSM Faculty Senate Distinguished Lecturer, Furtak described the old paradigm of teaching. “The room is configured so that one person is the center of attention. That person talks, and everyone else listens. This is the academic lecture.”

Typical students in this learning environment:
- Take notes at lecture
- Open books to problems
- Look for equations
- Turn in problems

Ouch. Furtak is a proponent of constructivism, a new teaching paradigm strongly supported by research. “Learning is determined by what goes on in the student’s head, not by what comes out of a teacher’s mouth. The learners must be actively engaged through environments and exercises that encourage them to interact and to think,” he said.

With this in mind, Furtak, professor in the Department of Physics, has designed the Physics Learning Studio, a teaching method that replaces traditional lectures with active-engagement sessions in a computer-equipped classroom. During the last three years, Furtak and others in the department have worked with, and perfected, a pilot version of the learning studio.

Now the system, in which students talk to each other and develop complex thinking skills, will be installed in CSM’s new Center for Technology and Learning Media. A closer look at the system can be found on the Web at mines.edu/studio.

The learning studio supports the School’s well-founded commitment to high quality education, according to Furtak. He is determined that Mines students avoid an educational shortfall cited by the National Science Foundation: “Graduates go out into the workforce ill-prepared to solve real problems in a cooperative way, lacking the skills and motivation to continue learning.”

It’s not the easiest path – for instructors, constructivism is both challenging and time-consuming – but Furtak believes it’s the best path to foster skills for lifelong learning. And, he added, the evidence is overwhelmingly in favor of constructivist teaching.

Cooperative learning groups, with the teacher facilitating the interaction, play a key role in constructivism, according to Furtak. The groups can be complex, such as the Mines EPICS teams that complete major projects. Or they can be as simple as a pair of students discussing with one another their reasoning about a thought-provoking question. Either way, students are no longer passive, and they work hard. They also enjoy the process more, since they are always interacting socially.

In his Faculty Senate Distinguished Lecture, Furtak made the following recommendations for a new paradigm in education at CSM:
- Put control of the action, and of the learning, in the hands of the student.
- Make choices about the essential concepts and skills to be taught in depth. As nationally noted physics educator Robert Fuller said, “Covering lots of content by lecturing…does not mean anything other than that your students have been exposed to many ideas. They could not necessarily use these ideas themselves.”
- Use criterion-based assessment with well established learning objectives. As an institution, excel at talent improvement.
- Recognize the value of the new teaching paradigm and commit to it. Under the old paradigm, lectures are viewed as more valuable than labs, and academic credit is awarded that way. A properly handled constructivist class is hard work for the students, and this should be recognized. Also commit to redesigned classrooms and more support for teaching faculty.

Finally, Furtak said, “We need to take teaching seriously and give it the respect it deserves. The professor who does original research and is published in refereed journals typically receives the most credit.

“Is it not the case, however, that the professor who influences the most lives is the one who has the greatest impact?”

By Marsha Konegni
Bashen ’48 Named 
“Hero for Children”

Like Clark Kent, George Bashen Geol E ’48 is mild-mannered and unassuming, but he, too, has a heroic alter ego.

Bashen, a retired geologist, has spent the past five years tutoring students at Hauke Academic Alternative School in Conroe, Texas, and has created an endowment for them at Montgomery College, now totaling $19,000.

His love for the students recently earned him the title "Hero for Children" from the Texas State Board of Education. "He's our Superman," said Hauke Principal JoAnn Beken. "How we got him I don’t know."

Physical comparisons to the Man of Steel aren’t so far-fetched considering that the 76-year-old is an avid marathoner. In fact, he bypassed the Sept. 15 “Heroes of Education” award ceremony in Austin to compete in a race in Ohio. Bashen completed 71 miles in 24 hours.

“He got second place in his age group,” said wife Betty. “He’s been running about 20 years now, and runs in 100-mile, 70-mile and 50-mile races. He ran 85 miles in this same race five years ago, but he’s older now.”

The Bashens, who met while working at Shell Oil Co., in Houston, married 46 years ago and adopted three children. They are longtime members of First Baptist Church in Conroe, where Betty plays in the handbell choir and George has taught Sunday school for 35 years.

After leaving Shell, Bashen worked as a consultant, but decided to fill his newly found free time by tutoring for the Houston school district. "They sent him to their alternative school," said Betty. "He discovered that those kids were so far behind that he had to use flashcards with them. He felt he was doing more for those students because they needed so much more."

Full retirement from consulting kept Bashen closer to home; and wanting to continue working with alternative school students, he asked to volunteer at Hauke. His specialty is math. "He loves it over there," said Betty. "It’s very satisfying to him to help those students.”

The Bashens, their son and daughter-in-law and a friend established the Hauke Endowed Scholarship Fund in April 2000; the first two $500 scholarships were awarded last May, one to a female graduate and the other to a male graduate from Hauke.

"Having at least the first semester of college paid for might help create a spark for the student," said Bashen. "We want to give them the incentive to succeed and get them enrolled.”

The scholarships can be used for the students’ first semester of studies at Montgomery College or any other college in the North Harris Montgomery Community College District in Texas.

By Nancy Flake, The [Conroy, Texas] Courier
Reprinted with permission

Two Miners Become 
Honorary Colonels

Marvin L. Kay EM ’63 and Hugh W. Evans EM ’49 were inducted as honorary colonels in the 115th Engineer Regiment in December during the ROTC commissioning ceremony.

The 115th Engineer Regiment, formed in 1917, distinguished itself in France during World War I. In 1931, veterans of the regiment presented their colors to the corps of cadets at CSM, where the colors and traditions have been proudly maintained ever since.

Since 1986, the regiment has annually recognized individuals who have made significant contributions to the U.S. defense establishment, particularly to the CSM corps of cadets. Kay was a distinguished military graduate of CSM. After graduation, he was commissioned in the Corps of Engineers and served in Germany as platoon leader and company executive officer. He then spent two years in the active reserves and three in the inactive reserves. In 1967 he became an assistant football coach at CSM, head football coach in 1968, and athletic director in 1995. Kay has actively supported the CSM ROTC program, recognizing its potential for leadership in athletics and for bringing outstanding scholar/athletes to Mines.

Evans served with the 10th Mountain Division at Camp Hale, Colo., and in Italy in 1943-45, earning the Combat Infantryman’s Badge, the Silver Star and a Purple Heart. After graduation from Mines, he was recalled to duty during the Korean War, serving as a first lieutenant at the Army language school in Monterey, Calif. A successful career in mining resulted in his being a vice-president at Atlantic Richfield and president and CEO of two major coal companies. In 1979, he was awarded CSM’s Distinguished Achievement Medal. He has been on the CSM Board of Trustees since 1977.
Merelli ’59 Heads Leading Colorado Company

Denver’s Key Production Co. Inc., headed by F.H. “Mick” Merelli PE ’59, had the greatest increase in stock prices of any Colorado company in 2000, according to the Denver Post. The company’s shares soared from a low of $6.94 to finish the year at $33.56, a 348 percent stock-price gain.

Merelli, Key’s chairman and CEO, said, “We’ve always strived for consistent, profitable growth. That’s allowed us to withstand some of the ups and downs in the market.” He said his company performed well because its balance sheet carries little debt.

Three Miners Featured in Wooden Canoe

Three members of the Class of ’48 – Edwin T. “Ned” Wood EM, Jim “Woody” Woodruff Geol E and Ken “Hector” Matheson EM – were featured in the May 2000 issue of Wooden Canoe magazine, the journal of the Wooden Canoe Heritage Association. The article, written by Woodruff’s grandson, was originally published in 1997. It tells of a post-graduation canoe trip by the three Mines men and Woodruff’s brother, then a Michigan State University student.

The adventurers paddled wood-and-canvas canoes for two weeks through the wilderness of Western Ontario, Canada during the summer of 1948. Although inexperienced, they survived the rapids without life vests, camped under the stars and fought off mosquitoes.

Matheson died recently and Wood and Woodruff are retired. Wood lives in Hilton Head, S.C., and Woodruff lives in Michigan on Grand River, where he still canoes on occasion.

Burrows ’43 Explains Cracked Bridges

Dick Burrows EM ’43 will be the first keynote speaker at the Convention of the American Concrete Institute in Dallas in October. Last October, his paper, “The Visible and Invisible Cracking of Concrete,” was awarded the Wason Medal for the Most Meritorious Paper Award for 1998. In the paper, Burrows suggests that the reason 253,000 concrete bridges in the United States are cracking is because modern cement, designed for rapid-hardening for high speed construction, makes concrete that is crack-prone. He has proposed a new, slower hardening portland cement similar to the now obsolete crack-resistant cements of 1953.

All 12 keynote speakers at the conference will address the issue of cracking cement. Burrows’ paper is the result of five years of researching 234 investigations.

Aguilera ’71, ’77 Named SPE Distinguished Lecturer

Roberto Aguilera, M Eng Pet. ’71, PhD Pet ’77 was named a Distinguished Lecturer by the Society of Petroleum Engineers (SPE) for the 2000-2001 season. He will make presentations in 27 cities of North Africa, Europe, United States, Canada and South America on “Case Histories of Naturally Fractured Reservoirs Around the World.”

Aguilera is president of Servipetrol Ltd. in Calgary, Canada. His firm specializes in the study of oil and gas naturally fractured reservoirs worldwide. He is author of “Naturally Fractured Reservoirs” (PennWell, First Edition 1980, Second Edition 1995), and co-author of “Horizontal Wells” (Gulf Publishing Company, 1991), “The Technology of Artificial Lift Methods, Vol. 4” with Kermit Brown et al (PennWell, 1984), and “Determination of Oil and Gas Reserves” (Petroleum Society of CIM Monograph No. 1, 1994) and has published over 90 papers and technical notes on geologic and reservoir engineering aspects of naturally fractured reservoirs.

Aguilera was an AAPG lecturer on “Fracture Reservoir Analysis” from 1984 to 1996. He is a Distinguished Author of the Journal of Canadian Petroleum Technology (1993 and 1999) and received the Outstanding Service Award from the Petroleum Society of CIM in 1994.
How in the heck did I get into the mining business? I’ve often wondered over the years. The answer, I think, is that I was born into it. Why did I stay in the business? Because it provided a decent living, travel, fascinating co-workers and great satisfaction.

My father earned a mining engineering degree from University of Wisconsin in 1925 and went to work at a mine in Idaho. I was born August of that year. When froth flotation was in its infancy, Dad transferred from the company’s mine to its mill. As a metallurgist, he was in on the development of technology for the electrolytic recovery of zinc, along with its inventor, Mr. Tainton.

In 1929, Dad and Tainton were sent to Illinois to open another plant, but that fall, the stock market crashed. As the economy began to crumble, Dad moved us to Silverton, Colo., where he found work at the Sunnyside Mine.

A year later, the Great Depression caught up with us. Our family returned to Chicago to live with grandparents and Dad returned to UW for an engineer of mines degree. The Depression grew worse. Dad found an engineering job in a power-tool manufacturing company in Indiana, but the pay was only $100 a month. We survived and in 1935, Dad became assistant general manager, and a year later general manager, for Peru Mining Co. in Deming, N.M.

The economy was improving, but now war was brewing. In 1942, Dad was called into the Army to fight in World War II. I graduated from high school in 1943 and enlisted that September. In between, I attended Texas A&M for the summer and fall of 1946, then transferred to CSM.

After graduation, I joined ASARCO’s mining department in Chihuahua, Mexico. P.B. Lord, the general manager, was tough as a boot but fair to his employees. He had been assistant general superintendent at the mine when he was captured by Pancho Villa and held for $25,000 ransom. Lord looked Villa in the eye and told him he was only a shift boss. If the company paid the ransom, Lord said, he would surely be fired. Eventually, he talked Villa down to $2,500 and was released.

All together, I was in Mexico for almost 10 years, a high point of my life. By then, my daughters were completing grammar school and would have to attend boarding school if we stayed, so we returned to the States. I worked for Pima Mining Co. in Tucson, Ariz., and saw it grow from a 10,000-tpd operation to a 36,000-tpd operation in two years. In 1966, I set up a mineral-processing lab for the Illinois State Geological Survey at the University of Illinois. In addition to locating mineral opportunities, the survey demonstrated mineral benefication techniques.

I joined Dravo Corp. as head of new-product development in 1973. We developed thiosorbic lime, which made a better scrubbing agent for sulfur dioxide from power-plant emissions than any other product. We also produced a stabilizing agent, calcilox, which made the jelly-like scrubber sludge into a solid. During that time, I worked in Mexico, Canada, Colombia and Venezuela, as well as stateside. Eventually I became technical director. After 12 years, though, Dravo downsized its R&D department and me along with it. I returned to the Illinois State Geological Society until I retired in 1993. Today, I consult and have been to Mexico and Kazakhstan on business.

Would I do it all over again? Yes, I would. Mining has been an interesting and rewarding career for me and I’ve enjoyed every minute. I don’t think I could have done any better.
The Colorado School of Mines wrestling team hosted the University of Oklahoma, California-State Fullerton, the University of Wyoming, and the Air Force Academy in the inaugural Jack Hancock Invitational Tournament Saturday, Jan. 27, at Volk Gymnasium in Golden. The University of Oklahoma won the tournament with 138.5 team points, while the Air Force Academy came in second with 128 team points. Wyoming placed third as a team with 66 points, Cal-State Fullerton took fourth with 45 points, while Mines took fifth with 28.5 team points.

Division II Mines placed three wrestlers in the top four among the opposing Division I schools. Freshman 149-pounder Mark Wennogle took fourth place, junior Jon Martinez took fourth in the 157-pound weight class, and heavyweight senior Mike Roberts also took fourth.

OU’s Jared Frayer was dubbed the tournament’s Outstanding Wrestler. The 149-pounder from Clearwater, Fla., was ranked sixth in the nation (NCAA I) at the time with a 31-4 record. Frayer pinned USAFA’s No. 20 (NCAA I) Scott Frohardt (4:32) in the tournament finals.

In the 197-pound weight class, Cal-State Fullerton’s undefeated Babak Nejadmahjaddam was pinned by OU’s Waymon May in the finals. Nejadmahjaddam, a senior from Gothenburg, Sweden, was an undefeated 15-0 before the loss.

USAFA won two finals matches in the last remaining seconds. One came in the heavyweight division when Falcon Kevin Hoy beat Oklahoma’s Leonce Crump 3-2. Crump was awarded the tournament’s Most Falls, Least Time award.

The Jack Hancock Invitational was named for former Mines wrestling coach Jack Hancock, who coached at CSM for 37 years. In his career at Mines, Hancock coached 33 all-Americans, three individual National Champions, and had two teams finish second and fourth at the NCAA Championships.

CSM Athletics Hall of Fame Nominees

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

Washing wheelchairs and repairing playground equipment are not typical weekend activities for college students.

But engaging in such acts of community service is how some 10 percent of the Mines undergraduates spent a Saturday in February.

The first annual CSM “Into the Streets” was sponsored by the Associated Students of the Colorado School of Mines (ASCSM).

The students represented 10 campus fraternities and sororities, the Interfraternity Council, Panhellenic (CSM’s sorority council), and ASCSM.

They divided their time among 12 Denver area organizations, engaging in a wide variety of activities, including:

- Distributing food at the Denver Rescue Mission
- Assisting at the Children’s Miracle Network
- Playing card games with senior citizens
- Working at the CSM indoor track meet
- Repairing a parking lot and a kitchen.

“The minister assessed the political climate of Russia as “stable” and indicated that the current president is very popular, with a 90 percent approval rating. “The legislature has a good working relationship and hopes for stability,” he said.

He also said that the investment climate in Russia is encouraging. Russia continues to decrease the tax burden and compete on a level with other well-endowed mineral countries.

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The Office of International Programs and the Mining Engineering Department sponsored and hosted the minister’s visit.

Also visiting campus this spring was Sergey P. Reshetnyak, a member of the Russian Academy of Sciences and the Mining Institute of Kola Science Centre.

Dr. Reshetnyak was speaking at the fourth international symposium on slope stability in surface mining, in conjunction with the annual meeting of the Society for Mining, Metallurgy, and Exploration.

His topic was analysis of slope failure and open pit design in geologically stressed regions.

A resident of Murmansk, he is director of the open pit mining division at the Kola Centre.

Geology and Mining named tops in Gourman Report

The 2001 Gourman Report has named the CSM Departments of Geology and Geological Engineering
prior to this year, with $22.3 million. FY-98 had the largest number of awards prior to this year, with 421.

Examples of research projects funded in FY-00 include:

- NASA’s funding of $3.5 million to the Center for Commercial

Applications of Combustion in Space (CCACS). The Center received additional funding from NASA for related projects, from other federal agencies, from industry and from the State of Colorado, bringing the total center funding from external sources to over $4 million for the year.

- Over a million dollars from Cargill-Dow Polymers (CDP) over a three-year period to the Chemical Engineering & Petroleum Refining and the Chemistry & Geochemistry Departments to conduct fundamental scientific studies on polylactic acid (PLA), a new environmentally benign plastic material.

**Phi Gamma Delta is good news!**

The CSM chapter of Phi Gamma Delta fraternity was among 10 individuals and organizations honored at the 11th annual Jefferson County Good News Celebration Breakfast in March.

Each of the honorees was selected for contributions to the diverse cultural, historical, economic, religious and social understanding within Jefferson County.

This year’s honorees represented businesses, non-profit organizations, governmental units, volunteers, schools, service clubs and community groups.

The Good News Celebration is sponsored by a coalition of Jefferson County volunteers dedicated to recognizing individuals and organizations who make the broader community a better place to live and work.

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**SHORTSTAKES**

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and Mining Engineering as number one in their fields.

Runners-up in geological engineering were the University of Missouri-Rolla and the University of Minnesota, while others in the mining engineering category were the University of Arizona and the University of Missouri-Rolla.

According to *The Gourman Report*, rankings are based on the “general impression of a university’s strengths and the weaknesses of its academic profile.”

Other considerations are:

- Faculty
- Institutional auspices
- Quality of undergraduate and graduate students
- Curriculum content
- Instruction quality
- Research funding and opportunities.

*The Gourman Report* is an assessment of higher education programs published by Random House, Inc. Students, employers and educators use the report to make academic choices, assess quality of applicants and improve academic programs.

**CSM Trustee named to Mining Hall of Fame Board**

Hugh Evans Geol E ’49, a member of the CSM Board of Trustees, has been elected to the Board of Directors of the national Mining Hall of Fame and Museum in Leadville, Colo.

Evans is a veteran of 35 years in the mining business. He played a key role in developing major mines in New Mexico, Wyoming and Australia.

He retired first in 1983 as president of Old Ben Coal Co. and a second time in 1985 as president of Enoxy Coal Co. He continues to do consulting.

In WWII, he trained at Camp Hale near Leadville, serving with the 10th Mountain Division in Italy, where he was awarded the Silver Star and Purple Heart medals. He is chairman emeritus of the division’s national association.
Phelps Dodge CEO keynotes spring commencement

J. Steven Whisler ’84 MSc Min Ec delivered the keynote address at the 127th annual commencement on May 4, 2001.

Whisler is president, CEO and board chairman of Phelps Dodge Corporation. In 1976 he began his career with Phelps Dodge, which now has operations and investments in mines and manufacturing facilities in 27 countries and employs nearly 16,000 people worldwide.

A native of Colorado Springs, Whisler also holds a B.S. degree from the University of Colorado and a J.D. from the University of Denver College of Law. In 1994, he received CSM’s Distinguished Achievement Medal for career accomplishments.

Honorary Degrees

J. Steven Whisler, president, CEO and chairman of the board, Phelps Dodge Corporation
Dr. William D. Nix, Lee Otterson Professor, School of Engineering, Stanford University
Dr. Gordon P. Eaton retired Director of the U.S. Geological Survey

Close to 300 students received degrees, and six individuals received honorary degrees and medals.

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Dr. Gordon P. Eaton retired Director of the U.S. Geological Survey

Distinguished Achievement Medals

A. Frederick Banfield, president, Mintec, Inc.
James D. Dunn, president, Mill Creek Lumber and Supply Company
F. H. Merelli, chairman and CEO, Key Production Company, Inc.

CSM Office of Tech Transfer opens

Colorado School of Mines announced the opening of an Office of Technology Transfer for an initial period of at least 16 months, effective March 14.

“We believe this move not only will generate new revenue for the institution but also will provide another vehicle for rewarding creative faculty and staff,” said Dr. Phillip R. Romig, dean of the graduate school and research.

The purpose of the office is to reward innovation and entrepreneurial activity on the part of faculty and staff, recognize the value and preserve ownership of CSM’s intellectual property, and contribute to economic growth.

The responsibilities of the office will include:
• Participating in the revision of CSM’s intellectual property policy (both patent and copyright) and establishing procedures for IP management
• Providing training for faculty and students on identification and protection of potentially valuable ideas
• Creating a database of faculty activities that may lead to patents or institutional copyrights
• Tracking ideas, patents and copyrights from initial disclosure to final disposition
• Analyzing and evaluating disclosures, working with faculty and staff to make decisions about pursuing patents, and negotiating patent and copyright agreements
• Coordinating and monitoring patent and copyright submission and prosecution
• Marketing CSM technologies and intellectual property
• Negotiating and prosecuting license and royalty agreements
• Reporting quarterly to the CSM administration and Board of Trustees.

The office will be led by Dr. Rahmat Shoureshi, Dobelman Professor of Engineering at CSM.

Dr. Philippe Ross resigns

Dr. Philippe Ross resigned his position as director of the Environmental Science and Engineering Division effective May 4, 2001. Dr. Ross is remaining on the faculty at Mines as a professor.
Dr. Robert Siegrist is serving as interim division director.
At the recent Tucson Gem and Mineral Show, the CSM Geology Museum’s exhibit of fake minerals, fossils and gems was named “Most Educational Display.”

More than 35,000 people saw the exhibit at Tucson. The display was also shown at the Fort Collins Gem and Mineral Show on March 24 to 25. Plans call for it to be permanently exhibited in the Geology Museum, beginning this summer.

And for the second year in a row, a specimen from the museum’s collection was selected as the poster mineral for the Denver Gem and Mineral Show on September 14 to 16, 2001.

A stunning mixture of amazonite, smoky quartz and albite from Pikes Peak, now on display at the museum, was the choice for this year’s poster. Last year’s winning specimen of gold on quartz (at left) from the Smuggler Union Mine in the San Juan Mountains is on display at the Arthur Lakes Library.

New Curator

CSM welcomes Paul Bartos, new curator of the Geology Museum.

He joins the School from ASARCO, Inc., where he was the exploration and business development manager for Latin America. His most recent project was the discovery and development of a large silver resource (~100 million ounces) on the flanks of Bolivia’s legendary silver mountain, the Cerro Rico de Potosi.

He has explored extensively for gold, silver and copper throughout the western United States, Mexico and South America. Considered an authority on vein deposits, he has written papers that are included in many university graduate level seminars, including those here at Mines.

Bartos says he is pleased to be at CSM, as it presents many new opportunities. His responsibilities as curator will lead him in a variety of directions:

- Research into Colorado ore deposits
- Expansion of the museum’s community outreach programs
- Direction of museum operations.

Most importantly, Bartos is deeply involved in planning new facilities for the museum in the new research building to be located on Maple Street. Construction starts this summer, with completion scheduled for September 2002.

Bartos also hopes to expand the museum’s focus to incorporate more of CSM’s history and present achievements into future displays.

Geology Museum a jewel

by Misti Brady
C SM's new degree in Engineering Technology Management (ETM) has captured the attention of business leaders, who anticipate sending their employees through the program, as well as hiring new CSM graduates.

CSM's Division of Economics and Business has introduced the new master's degree program, which will begin with the fall 2001 semester. The Colorado Commission on Higher Education approved the degree January 9.

According to Michael Walls, interim director of the Division of Economics and Business, CSM implemented the new degree program to meet the needs of business:

Companies in all business sectors have a growing need for engineers who are technically competent and possess the required management skills to effectively function in a competitive and technologically complex business economy.

Students can tailor their ETM degree to specialize in either quantitative decision methods or strategy and organization.

Through its integrative approach to engineering and technology management education, the program will provide graduates with:

- Increased analytical skills, decision-making capabilities and a grasp of key technology issues
- Enhanced understanding of planning, organizing and resource allocation
The Engineering Technology Management degree was made possible by a $1 million gift from Jerome Broussard Met E ’63 and his wife Rebecca of Whitefish, Mont.

The first $100,000 of the Broussard’s gift will be used to develop, market and provide technical support for the program.

- Strengthened strategies for supervising global technology development, acquisition and commercialization.

Walls anticipates that the existing resources of the division’s mineral economics program will enhance the breadth of the ETM program, providing expertise in microeconomics, operations research, finance and decision science. Of interest to current mineral economics students are the skill sets offered by the ETM program, including e-business, entrepreneurship and technology policy.

Expectations for ETM graduates are high. “The strong managerial aspects of the ETM curriculum provide graduates with skills that enable them to rapidly assume leadership roles in industry and government… graduates will chart career paths they find intellectually and financially rewarding,” said Walls.

President John U. Trefny is enthusiastic about the new degree, which he says is an example of how Mines constantly strives to tailor its programs to be meaningful for the student and relevant to the marketplace.

“Changes in the Colorado and global business economies underscore the importance of engineering and technology management skills. The ETM program will train CSM graduates to be leaders in this new economy,” he said.

An additional $900,000 will be set aside in an endowment to help fund the program in perpetuity, with $50,000 a year for three years pledged to support scholarships.
Forty-seven parents, alumni and players enjoyed a buffet between basketball games Saturday, Jan. 6 in the University of Colorado/Colorado Springs student center.

Coach Vic Doperalski (left with glasses) enjoys the between-games buffet held at the Southern Colorado gymnasium between basketball games played in Pueblo Jan. 5. Alumni and parents were on hand to cheer the Orediggers.

Mines Ultimate Frisbee team and San Diego alumni met for dinner at El Torito restaurant Feb. 18. The team competed in the University of California-San Diego President’s Day tournament.

Mines men’s ski team participated in NCAA regional competition in Park City, Utah, from Feb. 21-24. Jeff Odenbaugh BSc Eng ’93 organized a dinner on the first day with CSMAA Executive Director Michael Watson and Randy Johnson BSc Eng ’83 at Chuck-a-Rama in Salt Lake City.

Dean Stoughton BSc Math ’75, MSc Geop ’78, George Puls BSc Min ’75 and Julie White BSc CPR ’93 organized an alumni golf tournament that was to be held April 27 (as we go to press). Funds raised will be used for academic and athletic scholarships for out-of-state students with a preference to Texas.
Searching for a Classmate?

Almost daily, the Alumni Association gets calls from people looking for classmates they have lost touch with. Unfortunately, sometimes we can’t help them because many of our alumni have moved or changed jobs without notifying us. If you know any of these “missing” alumni, please let us and/or the requester know. E-mail Bob Pearson PE ’59 at rpearson@mines.edu

Name/Contact of Requestor
Arnoldo Garcia ’79 agarcia@cempro.com

Name/Class of Lost Friend
Luis Ramirez Maroto ’97
Ricardo Ganoza ’92
Miguel I.Z. Kubes ’62

or call him at (800) 446-9488, ext. 3959 or (303) 273-3959 to help us update our database or to add your missing friends to the list.
Robert and Stasia Davison's Donate $1 Million to Arthur Lakes Library

One shared priority and 50 years of compromise benefit CSM’s collections

They’ve shared a marriage, family and life together for more than 50 years, but that appears to be where the similarity ends for Robert and Stasia Davison.

“We’re about as different as two people can be,” Stasia says, and they have been since they first met. In 1943 Stasia accompanied her sister to Mississippi, where her sister’s fiancé was stationed in the military. Bob shared living quarters with him and agreed to spend time with “the sister.” Enter the controversy: According to the “southern” version, when Bob offered to show Stasia around New Orleans for the first time, she hopped the first train back to New York to protect her reputation. The “northern” version says, “I probably just had to get back for a football game.”

But the Davisons have always agreed on the important things. It was at Stasia’s encouragement that Bob established a $1 million collections endowment for the Arthur Lakes Library. Stasia says that “Bob always was a scholar,” but Bob explains, “I gave to the library because I had used it when I went to Mines, and I felt an obligation to do this for the library and the School.”

Director of the Arthur Lakes Library Joanne Lerud explains that the library has come a long way since Bob graduated in 1943: “The collection has grown by leaps and bounds over the years, but those steady strides are somewhat unremarkable next to Bob and Stasia’s extreme generosity.” Indeed, the $1 million Robert P. and Stasia Davison Endowment for Collections will help the library to accommodate the changing needs of its users by procuring and maintaining all necessary forms of information resources – from print to electronic, from audio to video. The endowment will establish a firm, reliable basis for developing and preserving the collection. “We really needed a gift of this enormity to keep pace with the disciplines and industries we serve,” Lerud says.

Graduation day was bittersweet for Bob. Early that morning he was sworn in to the Army Corps of Engineers as a second lieutenant before returning to Guggenheim to graduate with a professional degree as a geological engineer. Despite the miscommunication that tainted their first meeting, Bob and Stasia pursued a “romance through the mail.” Not long after the war ended and immediately upon landing on American soil, Bob called Stasia. “You still want to get married?” he asked. She replied “Well, I’ve got no one courting me now, so, sure, why not?” She explains her noncommittal response simply: “I never forgave him for being a Southerner.”

With his mother’s blessing, Bob boarded a train to Denver to further his education in mining at CSM. However, his geology professor, Francis M. Van Tuyl, advised him that he “really should be a geological engineer. You’ve got good potential for that,” Bob says, “That sounded pretty good to me, so I did.”

During his years at Mines, Bob was befriended by a librarian who cultivated his interest in literature. “She pushed books off on me – and not just engineering books!” he says. “There really weren’t many at school who were interested in getting books to just read.”

Small and crowded, the entire library once occupied the few rooms making up the left flank of Guggenheim. In the early 1940s when Bob attended the School, the library was home to a collection of some 38,000 volumes. Today the library boasts 500,000 volumes, 1,200 journal titles, 200,000 maps, 600,000 government publications, and the Russell L. and Lyn Wood Mining History Archive.

From an early age Bob knew he wanted to be a part of the mining industry. He began pursuing his dream at Auburn University, but his mother was less than pleased with the educational opportunities Alabama had to offer at the time. She called a friend who worked in the industry to discuss her son’s education alternatives. He suggested Bob attend Colorado School of Mines because it was “the best place in the country” for mineral extraction and resource engineering.

Robert Davison's 1943 yearbook photo

Arthur Lakes Library in February 2001
Bob’s military term ended shortly after they married. He worked for a while in Delaware but “hated the Northeast.” He then began to follow in his father’s footsteps by pursuing law school. He insists that the reason he returned to Colorado for law school was not compromise on the North/South issue but because “he got the most intelligent response from CU.” The Davisons moved to Eldorado Springs, Colo. Stasia says she “really felt like a pioneer there. The people were friendly and sort of hardy. I liked Colorado.” For once they agreed.

After Bob finished law school, he took a job practicing mineral law at Holland & Hart, a Denver-based law firm, for $250 a month. The firm’s eighth lawyer, he says he was “the first attorney at the firm to have a law degree from somewhere other than Yale, Oxford, Yale, Harvard, Yale, Yale or Yale.” But Bob knows why they hired him anyway. “Mines got me that job,” he says, one he stayed with for three decades.

Bob enjoys reminiscing about his days at Mines and where they led him. But Stasia believes that “when the past is past, it’s gone. I’d rather look toward the future.” Fortunately their donation to the Arthur Lakes Library at Colorado School of Mines allows them to do both.

Don’t wait in line - get online to support Mines!

You already use CSM’s website to stay informed about the School; now you can use the site to support it. With Mines’ secure online server, your donation is completely safe. Simply complete the form at https://www.oia.mines.edu/forms/pledge/pledge.htm with your contact information, giving preferences, and preferred payment method (we currently accept Visa, MasterCard, American Express and checks). Supporting your alma mater couldn’t be easier!

Colorado School of Mines received more than $25,000 from each of the following donors between 15 December 2000 and 15 March 2001. With their gifts, these benefactors will join or renew their membership in the Simon Guggenheim Society, a distinguished group of Mines alumni and friends who annually donate $25,000 or more to the School. In many cases, the donors’ gifts earn them membership in the Mines Century Society, which honors alumni and friends whose cumulative contributions to the School total $100,000 or more.

**Individual Gifts**

Already members of the Mines Century Society at the Gold level, Jerome Met E 63 and Rebecca Broussard contributed $94,297 in start-up funds for the new Engineering and Technology Management master’s degree program. The Broussard family contributed $906,953.12 last October to establish an endowment to support the degree program in perpetuity.

S.D. (Steve) Chesebro’ P E 64, a Copper-level member of the Mines Century Society since 1999, contributed $25,000 to the Chesebro’ Faculty Development Fund in Petroleum Engineering. His gift made him a renewing member of the Simon Guggenheim Society.

With a gift of $50,000 James R. Daniels Geol E 51 and his wife Patricia created the James R. and Patricia A. Daniels Graduate Fellowship in Geology and Geophysics. They also contributed $5,720 to the Mines Annual Fund. The gifts established their position in the Copper level of the Mines Century Society and the Simon Guggenheim Society.

Frederick F. Dueser P E 49 renewed his membership in the Simon Guggenheim Society with a gift of $25,000 to the Mines Annual Fund.

Charles R. Fitch E M 49 joined the Simon Guggenheim Society with a gift of $50,000 to the Mining Department in support of faculty enhancement.

Alfred T. Ireson P E 48 donated $55,000 to the Alfred T. Ireson and Family Endowed Scholarship Fund and $5,707 to the Mines Annual Fund. With this gift, he renewed his membership in the Simon Guggenheim Society.

Patrick M. James E M 68 joined the Simon Guggenheim Society with a $25,000 contribution to the Leslie S. James Endowed Scholarship Fund.

**Corporate Gifts**

Burlington Resources Foundation contributed $25,000 toward the Adjunct Professor Program for graduate studies in the Petroleum Engineering Department under the direction of Dr. Craig W. Van Kirk.

The Chemical Engineering Department received a $30,000 donation from the Japan Polychemical Corporation. The funds will support research under the direction of Dr. David W. M. Marr into the morphology development and characterization of ICP powders and blends.

Phelps Dodge Foundation contributed to Mining and Engineering Department programs with a grant of $40,000 and continued its support of the Phelps Dodge-Ansell Endowment for Excellence in Mining Engineering in the amount of $100,000.

The Li Foundation, Inc., contributed $42,000 to support two graduate fellowships in the Department of Metallurgical and Materials Engineering. The two graduate students are from the Central South University of Technology in Changsha, Hunan, China.
1952
Douglas R. Cook DSc Geol is retired in Reno, Nev.

1953
Richard D. Erdman PRE owns Erdman Consulting in Laguna Niguel, Calif.

1954
Edward C. Burgan Geol E is retired in West Hill, Ontario, Canada.

1956
Ralph H. Dougherty Met E is a partner for Dougherty & Clement LLP-patent law in Charlotte, N.C.

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William E. Amlong PE is retired in Dewey, Ariz.

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John T. Chandler PE is an adviser for XCL Ltd., in Lafayette, La.

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Joseph L. Anjier PRE is R&D manager for Kaiser Aluminum & Chemical Corp., in Baton Rouge, La.

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Clifford B. Farris PRE, MSc, PRE '66 is technical consultant for Clifford Farris and Associates in Lakewood, Colo.

1962
L. Duncan Creed EM is retired in Orange Beach, Ala. He is a part-time consultant.

1963
Bruce A. Miller Geol E is senior vice president of Marsh USA Inc. in Atlanta, Ga.

1964
Stephen D. Chesbro' PE, Medalist '91, Hon D Engr '98 was named to the Benton Oil and Gas Co. board of directors in January.

1965
E. Avery Reed EM is president and chief executive officer of Reed Technical Group Inc., in Santa Ana, Calif.

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Eldon W. Brickle EM is executive vice president and chief operating officer for Stanbury Holdings Corp. in Denver.

1967
Hans J. Boving MSc Met, PhD Met '69 is retired in Gals, BE, Switzerland.

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Thomas S. Elliott PE is an executive for Elysium Energy in Cypress, Texas.

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William A. Abbott PE, MSc Pet '74 is an engineer for Systems

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Technology Associates in Golden, Colo.

W. Dennis Heagney PE ’69, Medalist ’97 was promoted to executive vice president and CEO of Transocean Sedco Forex Inc. Heagney joined a predecessor company of Transocean, The Offshore Company, in 1969 as a division engineer, and has served in various positions of increasing responsibility in operations and marketing.

Steven J. Maoine Geol E, MSc Geol ’71 is senior geophysicist for Core Laboratories in Houston.

Patricia C. Mosch Geol E, EM ’69 is retired in Colorado Springs, Colo.

James M. Riddle EM, MSc Min ’74 is senior environmental scientist for MidAmerican Energy Holdings Co., in Des Moines, Iowa.

1970

Charles D. Crew BSc Met is a vice president and division manager for Hawthorne Lift Systems in San Diego.

H. Michael Hartmann BSc Pet is a partner for Leydig, Voit & Mayer, Ltd., in Chicago.

1971

Roger Newel MSc Geol is president and chief executive officer for West Gold Ltd., in Golden, Colo.

1972

Michael G. Long BSc Pet is vice president of Nations Energy in Houston.

1973

James L. Green BSc CPR is a remedy project engineer at the Rocky Mountain Arsenal in Commerce City, Colo.

Frank L. Natta BSc Met, MSc Min ’75 is a manager for Quintana Consulting Services in Lexington, Ky.

1974

Charles K. Chambers BSc CPR is a senior engineer for PM Tech and lives in Golden, Colo.

Timothy J. O’Connor BSc Min is a civil engineer for Engineering Surveys and Services in Columbus, Mo.

Carol Packard Ferrera BSc Met, MSc Env Sc ’94 is a quality assurance officer and Kenneth P. Ferrera BSc Met ’72 is a manager for Kaiser Hill Co., LLC, in Golden, Colo.

Dennis D. Gertenbach BSc CPR, MSc CPR ’77, PhD CPR ’80 is senior project manager at Hazen Research Inc., in Golden, Colo.

Benton T. Kelly BSc Min ’74 has left Phillips Coal Co. because of an asset sale and has opened a consulting business, Kelly Energy Fuels Services. His primary fields are independent power producing and coal property analysis. He lives in Plano, Texas.

Thomas Kelly BSc Min, M Eng Min ’95 is manager of mining for MRDI in San Mateo, Calif.

Robert P. Otto BSc Geol is a network consultant for Altaire Enterprises, Inc., in Spearfish, S.D.

1975

Michael L. McGonagill BSc Pet is vice president, U.S. operations, for Alliance Pipeline Inc., in Eden Prairie, Minn.

1976

M. Stephen Enders BSc Geol has been promoted to vice president, mine-site exploration, for Phelps Dodge Exploration Corp., in Tucson, Ariz.

Steven R. Gasser BSc Met is smelter manager at ASARCO, Inc., ray complex, Hayden Smelter in Hayden, Ariz. He has been with ASARCO for 24 years.

Bruce E. Grewcock BSc Min is president and chief operating officer for Peter Kiewit Sons, Inc., in Omaha, Neb.

Jimmy B. Taylor BSc Math is senior energy analyst for TAC Americas in Mustang, Okla.

1977

William A. Sargent BSc Pet is China upstream commercial manager for Phillips Petroleum Co., in Bartlesville, Okla.

1978

Gary P. Hoffman BSc CPR is contract manager for URS Corp., in Denver. He and his wife Karie just celebrated their daughter Riley’s first birthday.

E. Russell Lambert PhD CPR is retired in Mooresville, N.C.
1979

Frank D. Clouse BSc CPR is technical director for Tesoro Petroleum in Kapolei, Hawaii.

David Holstein BSc Pet is president of Victory Oil and Gas, Inc., in Gun Barrel City, Texas.

1980

Wilson H. Herrold PhD Geol is an independent geologist in Cody, Wyo.

Douglas R. MacAfee BSc Pet is a driller for the Apache Corp., in Kingwood, Texas.

Thomas L. Netzel BSc CPR is a portfolio asset manager for PG&E National Energy Group in Bethesda, Md.

Scott K. Palm BSc Min is executive vice president, Western Hemisphere, for World Minerals Inc., in Santa Barbara, Calif.

Robert M. Pickard BSc Geol is president of Pickard Geological Services, providing oil and gas consulting in Denver.

Brian W. Rothkopf BSc Pet is South American program manager for iReservoir.com in Greenwood Village, Colo.

Mark T. Strever BSc Min is manager, mining engineering services, for Viking Explosives in Rosemount, Minn.

1981

John Ballegeer BSc Geol is a senior geotechnical engineer at GEI Consultants, Inc. in Englewood, Colo. He is project engineer for GEI’s Plateau Creek pipeline-replacement project.

1982

James F. Brayton BSc Pet is an area engineer for Saga Petroleum in Midland, Texas.

Reino F. Clark MSc Geol is an area engineer for Subsurface Consultants and Associates, LLC, in Lafayette, La.

1983

Mark A. Balderston BSc Pet is an oil and gas consultant for Battle Mountain Operators in Craig, Colo.

Thomas H. Cochran III BSc Met is regional manager, mountain, mining and marine, for FireMaster® in Denver.

1984

Jeffrey P. Lee BSc Geop is a lieutenant colonel in the U.S. Army.
His email address is jplee@aol.com.

Ricky T. Thomas MSc Geol is a technician at WaferTech, LLC, in Camas, Wash.

**1985**

Mitchell Kruse BSc Eng is software product manager for Advanced Digital Information Corp., in Redmond, Wash.

**1986**

Peter Criss BSc Geop, MSc Geop ’88 is senior geophysicist for Saudi Aramco in Dhahran, Saudi Arabia.

Eric C. Knowles BSc Min is an engineer for PACCAR in Renton, Wash.

James P. Werkmeister BSc Geol is senior project manager for IT Corp., in Irvine, Calif.

**1987**

Julie L. (Ekman) Bader BSc Geop, BSc Eng is deputy regional engineer for the U.S. Bureau of Reclamation in Boulder City, Nev.

W. Larry Fink BSc Math works for Landmark Graphics in Englewood, Colo.

**1988**

David A. Beck BSc Eng is a civil engineer for the U.S. Army Corps of Engineers and lives in Destrehan, La.

Patricia Glora Chambers BSc CPR is chief operating officer for Tango Technologies, Ltd., in Boulder, Colo.

**1989**

Guy Brada BSc Met, MSc Met ’93 is senior metallurgical engineer/consultant for Bodycote Taussig, Inc., in Skokie, Ill.

Rodney B. Griffin BSc CPR is a senior quality engineer for ATK Aerospace in Ogden, Utah.

**1990**

Anthony P. Gangemi BSc Eng, MSc Env Sc ’93 is a patent attorney with Dorsey & Whitney LLP in Denver.

Steven M. Lassee BSc Eng, MSc Appl Mech is core information manager for CalTex Corp., in Dallas. He lives in Singapore. His email address is smlassee@yahoo.com.

Carlos Rolandez BSc CPR is manager of European and Middle Eastern business development for Merichem Chemicals and Refinery Services LLP in the United Kingdom and manages the UK office located in Guildford. He is married and has two sons, Antonio, 4, and Marco, born July 2000.

**1991**

Jan E. Caffey MSc Min Ec is operations research analyst for the U.S. Space Command in Colorado Springs, Colo.

Ted E. Kramer BSc Pet is a production supervisor/engineer for Forest Oil Company in Anchorage, Alaska.

Karen M. Maestas BSc Geol is a project manager for the URS Corp., in Denver.

Eric Petersen BSc Met has been promoted to general manager of operations for Rockport Works, AK Steel in Indiana. Petersen joined the company in 1991 as an assistant metallurgist.

**1992**

Michael J. Martin BSc Eng is an environmental engineer for Exponent in Boulder, Colo.

Juan Carlos Porras MSc Geol is a petrophysicist for Petroleos de Venezuela S.A. in Puerto La Cruz, Anzoategui, Venezuela.

Michael Ryaner BSc Eng, M Eng Engr Sys ’98 was selected to serve as an LDI intern for the American Society of Mechanical Engineers (ASME) for 2001-2002.

Joe Savage PE Geop is in his second year as statewide chair of the IEEE Mississippi Section in Vicksburg, Miss.

Brian E. Spencer BSc CPR is production engineer for Lyondell Chemical Co., in Lake Charles, La.

**1993**

Andres S. Escalante BSc Eng is a P.C. technician with XOCOMP, LLC in
for H & L Concrete, Inc., live in Naranjo BSc Eng City of Loveland, Colo. She and compliance administrator for the Min Ec ’98 Yohan Sumaiku MSc Min Ec, PhD announce the May 3, 2000 birth of his wife, Natasha Margaret, born Nov. 7.

Dan Cutting BSc CPR and his wife Holly announce the birth of their daughter, Natasha Margaret, born Nov. 7.

David R. Hammond MSc Min Ec, PhD Min Ec ’99 is principal mineral economist for Hammond International Group in Highlands Ranch, Colo.

Vicki L. Hutson BSc CPR is an instrumentation engineer for Overload Services, Inc., in Houston.

Kelly S. Sexsmith MSc Env Sc is an environmental geologist for SRK Consulting in North Vancouver, British Columbia, Canada.

Robert Hyta MSc Env Sc is an associate in the law firm of Baker & Daniels’ Indianapolis, downtown office. His area of concentration is intellectual property law. He received his law degree from Gonzaga University School of Law in 2000.

Bennie P. Mondragon BSc Math is a senior systems analyst for Corporate Document Systems in Kansas City, Kan.

Paul M. Santi PhD Geol is a professor at University of Missouri-Rolla.

Richard M. Wenzel BSc Geol is a geotechnical engineer for Geocal, Inc., in Aurora, Colo. He has four children.

Juan Carlos Villagran MSc Env Sc is an environmental health and safety coordinator for Grupo Generador de Guatemah in Guatemala City.

1997

Jeremy A. Fix BSc Math is a staff engineer with Aerospace Engineering in Littleton, Colo.

Damien E. Harr BSc Math is senior technical consultant for Vastera, Inc., and lives in Lakewood, Colo.

Brett D. Jackson BSc Eng is an executive officer in the U.S. Army in Ft. Lewis, Wash.
Kathleen Peak de Richardo BSc Eng works for ExxonMobil Power Investment Co., in Houston.

Goran Saradzic BSc Eng is a test engineer with Cisco Systems Inc., in Boulder, Colo.

Robert J. Spang MSc Geol is principal geoscientist, Angola LNG for Texaco in Houston.

Richard A. Wertz BSc Math is senior software engineer for Planet Consulting in Omaha, Neb.

Tonya L. Wyatt BSc CPR is an applications engineer for Micro Motion, Inc., in Boulder, Colo.

Tenley Krueger BSc CPR and Jared M. Spritzer BSc Eng ’97 welcomed their first child, son Pruitt Riley, into the world Sept. 29. The family is pictured above along with their dog Simba.

Bruce Mattocks PhD Geop works for Petroleum Geo-Services in Houston.

Christina “Tina” Nammar BSc Eng ’98 and Travis Flowers BSc Eng ’98 were married Sept. 9 in Chapel in the Woods in Tulsa, Okla. Hilary Haruff BSc CPR ’98 was maid of honor. Scott Goldberg BSc Pet ’97 was groomsman. Marv Hewitt Geop E

’98, Kelly Lapinski BSc Pet ’97, Danna Turner BSc CPR ’99, Kelly Nikon BSc Pet ’99, Mike Galianas BSc Eng ’99, Phil Marsh BSc Geol ’99 and Damian Diaz BSc Math ’98 were guests. Tina and Travis are both production engineers for Texaco in Midland, Texas.

Gene D. Roberts BSc CPR and Jamie Y. Jones BSc CPR ’99 were married June 4. They both work for BP Amoco in Houston. Gene is a drilling engineer and Jamie is a reservoir engineer.

Edward W. Stafford BSc Eng is a transportation engineer/planner for the City of Arvada, Colo.

Matthew J. Alinger MSc Met & Mat is a research assistant at the University of California, Santa Barbara.

Eric N. Avila BSc Eng is a math and science teacher at The Futures Academy in Boone, Colo.

Vanessa Ann Davies-Pappas BSc Math & Comp Sci is a software engineer for Lockheed Martin Mission Systems in Santa Maria, Calif.

Katy K. Lau BSc CPR is production assistant for Archer Daniels Midland in Decatur, Ill.

Kelly A. Nikel BSc Pet is a drilling engineer for EOG Resources, Inc., in Corpus Christi, Texas.

Matt Swinton BSc Geol ’99, BSc Min ’99 married Chantel Goldman in January. The wedding party cruised from Florida to Nassau, Bahamas where the couple was married on the beach. Groomsmen included Will Culp BSc CPR ’99 and Adam Wood BSc Eng ’97. The newlyweds honeymooned in the Florida Keys. A reception was held in Omaha, Neb., Jan. 19th. Other CSM alumni in attendance were Tom Scuderi BSc Eng ’97, who was unable to attend the wedding. Matt is a field engineer for Kiewit Construction Co. in Georgia.

2000

Jennifer Dunteman BSc Eng is a test engineer for caterpillar in Peoria, Ill.

Joshua J. Harris BSc Eng is an associate design engineer for Ball Aerospace & Technologies Corp., in Westminster, Colo.

Brian M. Meachum BSc Eng is a transportation engineer/planner for the City of Arvada, Colo.

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(M-F, 8 a.m. - 5 p.m., MST)
Harold Bloom
Harold Bloom MSc Chem '61, a Mines professor, died Jan. 24. He was 87.

Bloom was born in Brooklyn, N.Y. and graduated from Brooklyn College in 1935. During World War II he was a mapmaker for the Department of the Interior. After the war, he worked for the U.S. Geological Survey in Denver where he was instrumental in developing the field of geochemistry.

In 1955, Bloom became a professor of geochemistry at CSM. His link as a geochemist took him to Europe, South America, Australia, Africa and Canada. He retired in 1978.

Bloom is survived by his wife of 59 years, Betty, a daughter, a brother, a sister and several nieces and nephews. A son, William, preceded him in death.

Carlos W. Carroll
Carlos W. Carroll EM '53 died Sept. 22 at the age of 79.

Carroll was born in Guatemala City and in 1949, married Vernalee Hurlburt. He served in the Royal Canadian Air Force during World War II. He was a retired mining engineer for the Colorado Department of Transportation.

Carroll was a member of the Traffic Engineering Society, CSM Alumni Association and the Registered Professional Engineers Association. Carroll is survived by a son, two daughters, two sisters and four grandchildren.

E.L. Colthurst
E.L. “Peg” Colthurst PRE '52 died July 27 at age 75.

Born on Long Island, N.Y., Colthurst joined the U.S. Navy after high school and served as a gunner’s mate on merchant ships in World War II. After his discharge in 1946, he traveled the country, drove trucks and worked on a ranch before attending CSM. He was a member of Tau Beta Pi, Scabbard and Blade, Sigma Gamma Epsilon and Blue Key and was student-body president his senior year.

In 1949, he married Margaret Mead. After graduation, they moved to New Jersey where Colthurst worked for Esso Standard Oil Company Bayway Refinery.

In 1955, Colthurst moved to Texas and worked for American Liberty Oil Co. He then tested rocket and jet engines and experimental fuels for the U.S. Navy and the Gemini and Apollo space programs at a high security facility in Lone Star, Texas. He then joined Howe-Baker Engineers, first as a design engineer, then as manager of Far East technical sales. In that capacity, he traveled to China, Japan, Korea, India, Pakistan, Australia, Ecuador, Venezuela, Italy and England.

Colthurst is survived by his widow, a daughter, two sons, five grandchildren, a sister and two dogs.

Harry Coppin
Harry Coppin EM '37, a swimmer on the honored teams of 1934-35 and 1937-38, inducted into the CSM Athletic Hall of Fame Sept. 1, died Dec. 3. He was 89.

Coppin was unable to attend the Hall of Fame induction ceremony so in late September, Dave Coolbaugh Geol E ’43, EM ’47, DSc Geop ’61 presented Coppin’s plaque to him at the Vista Village Retirement Community in Wheat Ridge, Colo., where a ceremony had been arranged. Some 35 members of the community, plus many outside friends attended. Coppin was very pleased to receive his plaque and to tell those assembled about Mines and its swim teams. Then, of course, everyone wanted to know about his life as a mining engineer.

Coppin’s cousin reports that after his induction, recounting to his many friends the exploits of the CSM swim team and his life as a mining engineer became an important part of his life.

Michael P. Erskine
Michael P. Erskine BSc Phy ’00, BSc Eng ’00, who was studying for a master’s degree at CSM, died Nov. 22 from cancer. He was 44.

Erskine is remembered by friends and family as intelligent, easy-going and free-spirited. “Mike never spent a lot of time talking about the weather or making small talk,” said fellow physics student Ray Reichert. “He preferred to talk about science or science fiction or anything else he found interesting. He had a way of making an hour of talking in the halls seem like five minutes.”

Erskine enjoyed listening to music, dancing and drinking with friends. “I’ve had a short sweet life,” he told Reichert. “I’ve experienced more than most will in a lifetime.”

Erskine is survived by his widow, Kelly, and two stepchildren.

Jimmy Joe Jacobson
Jimmy Joe Jacobson MSc Geop ’64, PhD Geop ’69, an exploration geophysicist and insurance broker, died Oct. 15 at age 63.

Jacobson was born in Wyoming and earned his bachelor’s degree from University of Wyoming before attending Mines. In 1973 he married Rhonda Farrow. His interests included hunting, travel and reading.

He is survived by his widow, two sons, a daughter, a granddaughter, five sisters and three brothers.

Lawrence V. Madison Jr.
Lawrence Madison Jr. Geol E ’54 died May 31 in Casper, Wyo. He was 73.

Madison was born in Hammond, Ind. Following high school, he served in the U.S. Navy during World War II until 1946. In 1950, he married Mary H. Demeter. They would have celebrated their 50th
anniversary last October.

After graduation from Mines, Madison worked for Marathon Oil Co., both stateside and overseas, until his retirement in 1986. He enjoyed fishing, talking shop with fellow retirees and friends, and visiting with his children and grandchildren. Madison is survived by his widow, three daughters, a son, a sister, a brother and four grandchildren.

Michael F. Padgett
Michael F. Padgett M Eng Geol ’87 died Nov. 10 while playing racquetball. He was 40.

Padgett, a California native, was president and partner of a family-owned restoration business with offices in Redlands and Ontario, Calif. He formerly managed projects and offices for the engineering firm of Dames and Moore in Denver; Fresno, Calif.; Thailand; Spain; and Sydney, Australia.

Padgett graduated from Brigham Young University before attending CSM. He was a registered geologist and a member of the international and American Society of Civil Engineers and the Association of Engineering Geologists. He was a high priest and member of the Church of Jesus Christ of Latter-day Saints. He was an assistant Scoutmaster and a coach and referee with the Redlands AYSO soccer program.

Padgett is survived by his widow, Tracy, a son, two daughters, his parents, two brothers and two sisters.

H. Dell Redding
H. Dell Redding PE ’47 died of cancer Jan. 1 surrounded by his family. He would have been 78 on Jan. 4.

Redding, who was from Denver, entered Mines in 1940 where he played varsity football for three years before volunteering for the Army Air Corps. He served as a B-24 bomber pilot, flying more than 25 missions over Germany, Austria and Romania. He was shot down, dropping into the Adriatic Sea where he was rescued by a British picket boat.

After the war, he returned to Mines and was football team captain in 1946 and student-body president his senior year. Redding was highly regarded as a decorated combat veteran (Air Medal and Distinguished Flying Cross) and a varsity athlete who was intelligent and had a droll sense of humor. He was a member of ATO, Tau Beta Pi, Scabbard and Blade and Theta Tau.

After graduation, Redding joined Phillips Petroleum, working in Texas, Oklahoma and Alaska. In 1969, on a flight to an offshore location, his helicopter when down and he again had to be rescued from the ocean. Afterward, he traveled by boat.

After leaving Phillips, Redding worked for a number of drilling contractors, ending his career with Neddrl. His employment took him to West Africa, the Middle East, Malaysia and Canada. He retired in 1987.

“Dell was a man’s man, a true professional in his field, and a wonderful friend,” says Thomas H. Cole EM ’43. “He was greatly admired and will be sorely missed.”

Redding is survived by his widow, Lu, two daughters, three sons, four granddaughters and a brother, Vern Redding Geol E ’40.

Frank F. Ruskey
Frank F. Ruskey Geop E ’54 died Aug. 27 at the age of 72 in Morrison, Colo. He was from Cherokee Village, Ark. His ashes were scattered in the Straits of Juan de Fuca.

Ruskey was born in Vancouver, British Columbia, Canada. He was a geophysicist and metaphysicist. He worked for the U.S. Bureau of Mines, the U.S. Army and co-founded Rimrock Geophysics.

Ruskey was a member of Toastmasters International, the Society of Exploration Geophysicists and the American Society of Dowsers. In 1982 he married Mary Baldwin of Honolulu, Hawaii. He was earlier married to Loudell M. Waters of Golden, and was divorced in 1974. Ruskey is survived by his widow, two brothers, eight children and seven grandchildren.

George S. Ryan
George S. "Pat" Ryan Geol E ’53 died at his home Feb. 13, 2000, at age 72 after a long battle with emphysema.

Ryan was born in Seattle, Wash., and raised in California. He was a Merchant Marine during World War II serving in the South Pacific. In 1946 he married Elece Straughan who died two months after him.

After graduation from Mines, Ryan worked for Anaconda until he was drafted in 1954. He served in the 517th Engineering Detachment, earning the rank of first lieutenant. Ryan returned to Anaconda in 1956 and explored geophysically for porphyry deposits in Arizona and Nevada. He then worked for Mineral Survey in Salt Lake City, Utah. In 1979 he joined the U.S. Bureau of Mines in Denver and published many reports on the mineral potential of wilderness/roadless study areas. He retired in 1990 and returned to Salt Lake City.

Among his many accomplishments, Ryan started a ski club in Tooele, Utah and donated 1,465 pints of blood through 1990. He loved the Broncos, classical music, parades and being outdoors. He is survived by four daughters, two sisters and six grandchildren.

Carl A. Willner
Carl A. Willner Geol E ’48 died Feb. 21, 2000 at the age of 82.

Willner was born in Lincoln, Neb. and in 1942, married Virginia Thompson. He served in the Army Air Forces during World War II. After graduation from Mines, he became a geophysicist.

Willner is survived by his widow, a daughter, two sons and four grandchildren.

Richard H. Morley attended ’46-’47
A Look Back: 100 Years Ago at Mines

By Robert Sorgenfrei

Now that the 21st century is here, let’s look back at Mines as it entered the 20th century 100 years ago. What lasting legacies link us to that period?

In 1901, Mines had been a state-supported school for 17 years. Regis Chauvenet, who put Mines on the map academically, had been president since 1883. In 1901, student enrollment was 234–154 from Colorado, the rest from 23 states, Canada, and Mexico.

The campus consisted of the chemistry building, built between 1880 and 1890 where Hill Hall is today; the Hall of Engineering, completed in 1894; and the president’s house on what is now Kafadar Commons. An assay laboratory, now part of Chauvenet Hall, was completed in late 1900. Stratton Hall was being planned and Cripple Creek mining magnate Winfield Stratton had contributed $25,000 toward a metallurgy building that would be named after him.

Colorado School of Mines was now the official name. Prior to 1901 it was The State School of Mines. The 1900–1901 catalog reported free tuition for state residents with living expenses, laboratory fees, books and incidentals less than $350 a year. Out-of-state students paid an additional $100 a year. Sophomore Grace McDermut was the only female student. Two degrees were offered: Engineer of Mines and Electrical Engineer.

All 106 members of the 1900–01 freshman class took the same courses their first year: algebra, geometry, general chemistry, descriptive geometry and drawing the first semester and trigonometry, algebra, general chemistry, descriptive geometry, drawing and qualitative analysis the second. The first semester ran Sept. 17 to Feb. 6. Second semester was Feb. 10 to June 10, with commencement June 11.

Field trips for seniors were scheduled almost weekly. In fall 1901, seniors visited the chlorination mill at Colorado City and the iron and lead smelters of Pueblo. Seniors were required to submit “a thesis upon some practical subject.” Most of them, usually reports on a mine or mining operation, survive to this day in the archive.

Early second semester 1900-01, 10 freshmen flunked a chemistry exam and 19 flunked descriptive geometry. Most felt an injustice had been done and they formed a committee to appeal to the faculty. When the faculty sided with their colleague, about 100 freshmen boycotted classes for several days. After delicate negotiations, students went back to class. However, Chauvenet forced the boycotters to re-register. The students at first balked, but eventually, grudgingly complied. This marked the beginning of several years of student unrest with strikes, resignations and hard feelings that focused on exams and grading perceived to be unfair.

Mines had no gymnasium, but athletics were popular. As part of the Rocky Mountain League, CSM played football with University of Colorado, Colorado State University and University of Denver, among others. No mention is made of how the football season went that year, but the baseball career of major league pitcher and former Mines student Burt Jones was being closely followed.

Names still familiar today, at least on buildings, were prominent figures on campus in 1901. Edward Berthoud, a Territorial School of Mines founder and its first geology professor, was on the Board of Trustees, as was Winfield Stratton. Louis Hill was professor of physics and electrical engineering.

In 1900, Paul Meyer in the mathematics department became Mines’ first professor emeritus. He was regarded as something of a genius. He mastered Greek and Latin as a child, graduated from University of Berne at 13 and earned a medical degree from University of Heidelberg at 18. After establishing a medical practice in Golden, he was hired to teach mathematics and physics in 1883. Meyer is said to have been a gifted teacher who inspired many early Mines students. He had job offers from all over the world, but refused to leave Mines or his practice in Golden. After resigning, he continued to tutor Mines students for years. The class of 1901 gave him a gold-headed cane with 11 mathematical symbols on it that he carried the rest of his life. Meyer was replaced by Andrew Weiss EM 1900, the second alumnus to join the Mines faculty after William Jonathan Hazard EE 1897 who, after graduation, was hired to teach physics and drafting. Weiss later became a noted civil engineer heading major irrigation projects in Mexico in the 1930s and 1940s.

One can get a feel for what it was like in 1901 before the Prospector, Oredigger, or Mines magazine by looking at student theses and catalogs of the time. Mines has changed a great deal in 100 years, but if a turn-of-the-century student visited today, he could still sense a link from his time to the present. If nothing else, he could come to the archive and probably find his senior thesis.
Alumni Events

### May
28 Young Alumni get together in Denver. LaDo's Bar and Grill rooftop, downtown Denver. 6-8 p.m.

### June
1 Annual Golf Tournament, Westwood Golf Club, Arvada, Colo. Shotgun start at 7 a.m. Call CSMAA for reservations, 303-273-3295.
14 Lunch Bunch, an informal alumni get-together meets at the Buffalo Rose in Golden, Colo., 11:30 a.m.
19 Rockies vs. Astros @ Enron Field, Houston. Tickets are $12 each. For reservations, call Vicky Jackson Nielsen, 281-297-1223.

### July
12 Lunch Bunch, an informal alumni get-together meets at the Buffalo Rose in Golden, Colo., 11:30 a.m.
19 Grand Junction Section Luncheon at Bookcliff Country Club, 2730 G Road, noon. For information call John Howe at 970-242-4903 or Del Tolten at 970-256-1118.
21 Grand Junction Section Luncheon at Bookcliff Country Club, 2730 G Road, noon. For information call John Howe at 970-242-4903 or Del Tolten at 970-256-1118.
24 Mines night at the Rockies vs. San Francisco game, Coors Field, 7:05 p.m. Contact Bob Pearson ’59 for information, rpearson@mines.edu or 303-273-3959.

### August
04 Alumni Fishing Derby at the Cross D Bar Trout Ranch in southern Colorado. Details TBA.
09 Lunch Bunch, an informal alumni get-together meets at the Buffalo Rose in Golden, Colo., 11:30 a.m.
16 Grand Junction Section Luncheon at Bookcliff Country Club, 2730 G Road, noon. For information call John Howe at 970-242-4903 or Del Tolten at 970-256-1118.

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**CSM License Plates Now Available**

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

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

**CSMAA License Plates**
P.O. Box 1410
Golden, CO 80402-1410

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Telephone
Number of sets @ $50 each (made payable to CSMAA) for a total of _________.

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**Announcing The 17th Annual Alumni Golf Tournament**

**June 11, 2001**
West Woods Golf Course
6655 Quaker Street
Arvada, CO

6 a.m. registration begins
7 a.m. shotgun start

Price: TBA
(Includes lunch)
Proceeds benefit the CSMAA Emergency Student Loan Fund

Sponsorships available:
Individual sponsor: $100
Patron: $250
Corporate donor: $500

Tournament chair: John F. Bauer III ’84, ’90

For information, to register or to volunteer, call the CSMAA office at 303-273-3295.

**Join Us!**

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It's big fun on the bayou when Jim Ely, head of the Department of Chemical Engineering and Refining, cooks up his yearly Cajun feast of homemade gumbo and sandwiches for students.