



Spring 2000  
Vol. 90 No. 2

# MINES MAGAZINE

Colorado School of Mines Alumni Association

## Dinosaurs Were Here

Evidence near Golden, Colo., draws visitors from around the world.

George Breit '80, '86 studies arsenic-contaminated water in Bangladesh.

Herbert Kim '28 survived three years in a Soviet prison, then disappeared.

China



Douglas Baldwin

### Oredigger Editor Erin Kock Aims High

The student newspaper *The Oredigger* is finding renewed interest on campus this year under the leadership of geophysics major Erin Kock, its editor-in-chief. She has helped bring the paper out of debt and has managed to produce several 16-page editions. Her leadership skills will come in handy in the future because she plans to be a CEO. "I do much better when I get to delegate," she says. She'll start out as an engineer and work her way up.

This summer Kock will intern in Houston at Vastar Resources Inc., where she will work on a project interpreting data. "I'm excited about my internship because it will give me a better feel for geophysics," she says. "Also, I've never been to Texas so it'll be something new."

Kock, a Colorado native, chose Mines because she was good in mathematics and science and her high school counselor recommended it. When she arrived, she didn't know what she

would major in, but she learned about the geophysics department during Option Showcase and found geophysics suited her interests. "I'm interested in the Earth and I wanted a job that would allow me to do a lot of traveling." Currently she works in the department.

In preparation for heading the student newspaper, Kock served as news editor and assistant editor. She is a member of Blue Key honor fraternity, Society of Women Engineers, Society of Student Geophysicists, and is in the top third of her class academically. Kock also tutors third graders at Mitchell Elementary School in Golden, Colo. "I usually tutor in math," she says. Recently, Kock joined the CSM Women's Ultimate Frisbee team.

In her spare time, Kock enjoys camping, hiking, reading, writing and meeting new people. ■

## Colorado School of Mines Alumni Association

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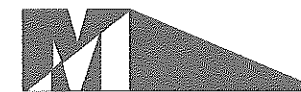
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# MINES MAGAZINE

Colorado School of Mines Alumni Association

The Voice of Mines Alumni Since 1910

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On the cover: Ed Warren '50 points to an iguanodon track at Dinosaur Ridge. Photograph by Douglas Baldwin.

VICKI COWART MSc GEOP '77, 2000 PRESIDENT OF THE CSM ALUMNI ASSOCIATION

A NEW YEAR, A NEW BOARD AND A NEW DAY

The CSM Alumni Association Board of Directors for the year 2000 met for an exciting planning session in February. We came together to talk about our plans for the year and how we can be a more effective organization for the alumni and all the people and groups CSMAA serves. The CSMAA staff, several former CSMAA presidents and Ted Bickart were full participants in the session.

Finding the right path to be more effective is a big challenge for an organization with a few hard-working staff members, a modest budget and dedicated volunteers who live all over the world. But we are inspired by a common goal—to make the CSMAA the best it can be for the benefit of our members, all alumni and the future of CSM.

We spent most of a day discussing three key questions: Who are we, why do we exist and whom do we serve? We

identified our values, which include Relationships, Traditions, Stewardship, Leadership, and Excellence, we drafted a vision statement and re-evaluated our Mission Statement. Much work by individuals and committees is still underway to bring these planning efforts to fruition. We are already taking steps to better implement one of the important aspects of our vision statement: to make CSMAA a vital, essential and integral part of Mines, working in a highly cooperative and collaborative way.

We are beginning to move from abstract ideas to concrete programs and day-to-day activities. Last year, the Board agreed that we wanted to improve Mines Magazine by increasing the number of pages, publishing quarterly and adding more color. In the spirit of collaboration and cooperation, we have agreed to join forces with the school to produce one great quarterly magazine. Beginning in August, all alumni will receive the new, improved magazine. Mines, as it will be

called, will be published jointly by CSMAA and CSM. Over the next few issues you will see continued improvement in size, color, design and content as we feature our traditional stories about CSM alumni, and increase stories about campus activities, department news and issues of interest to those in the CSM community.

In his last President's letter, Dick Beach challenged us to think about which came first, the school or the alumni. At the Board planning day we grappled with the reality of interdependence; we each need the other and we each prosper and thrive as the other prospers and thrives.

It is going to be an exciting and challenging year. We are off to a good start as a result of the work done by last year's Board under Dick's able leadership. I am pleased to have working with me a talented group of Miners from all over the country. Serving you on the Executive Committee are Ed Crabtree EM '60 (President-Elect), Bill Zisch BSc Min '79 (Treasurer) and Jodi (Davidson) Menebroker BSc CPR '91, who was appointed to fill the vacancy left when our elected secretary, Kathy Altman BSc Met '80, took a transfer to Canada.

We all look forward to hearing from you about the CSMAA vision, mission, goals and activities.

AND SPEAKING OF TRADITION...

The hard-working planning facilitator we hired to guide our planning day activities was amazed that our group worked from early in the morning until right up to our designated stopping time. Then those who didn't have a plane to catch regrouped to help write up notes, start a committee activity, etc. All this from a group who had worked through lunch and breaks. She commented on what she perceived as an "amazing" work ethic and dedication. Those of us within earshot just shrugged and said, "Hey, we're Miners."

President Bickart Announces Plans To Retire July 31

President Theodore A. Bickart recently announced that he will retire July 31. He stated he has met his goal of helping the School transition from a period of long-term stability in the fields of applied science and engineering to an era of rapidly changing technology, and he is looking forward to retirement.

Bickart joined Mines on August 1, 1998, as the School's 14th president. The CSM Board of Trustees has launched the search for a new president.

"Explosive growth in both the applied sciences and engineering is presenting many challenges for institutions of higher education such as Mines. Over the past two years, I have laid the groundwork for new partnerships and opportunities in the international arena to encourage more students to study abroad, as well as to enable faculty to interact with colleagues in other countries and thus stay at the leading edge of research worldwide," said Bickart.

"Leading an institution the caliber of Mines has been a wonderful opportunity. It gives me a sense of pride to have two prestigious institutions as bookends for my career, Johns Hopkins and Colorado School of Mines. Colorado is a wonderful place, and my wife Frani and I have enjoyed living here. We are also looking forward to spending more time

with our family, as well as pursuing our other interests," Bickart continued.

Mines' endowment rose during Bickart's tenure and now is at \$125 million, which ranks it 11th in the nation among state-supported schools in endowments per student.

Another memorable event during his tenure was the CSM art show which brought together engineering students, faculty, staff, alumni and donors. The show was organized by Bickart's wife, Frani.

"It was just a demonstration of the cohesiveness that has come to this place," Bickart said. "Some of the alumni were almost in tears finally getting an opportunity to recognize that engineers and scientists are both right-brained and left-brained."

"We are grateful to Ted for all of his efforts to prepare Mines for the challenge of educating students during an era of rapid growth in knowledge and new trends in higher education," said Frank Erisman Met E '65, Medalist '93, president of the CSM Board of Trustees. "Among his accomplishments has been using his extensive international experience to prepare our students for success in the new global marketplace."

"Ted has been wonderful to work with over the last two years," Erisman con-

tinued. "His leadership and support have contributed significantly to some exciting new partnerships between Mines and the Alumni Association. On behalf of the Alumni Association, we thank him for his friendship and the fine work he has done. We wish the very best for Ted and Frani in their retirement."



EPICS students involved in a tire-recycling project were featured twice on 9NEWS in February. Funded with a grant from CSM's Colorado Advanced Materials Institute, the team is testing load-bearing ability and other construction characteristics of tire bails for use in home construction, highway barriers and other possible applications. Colorado drivers throw away millions of tires per year, a growing environmental concern and a waste of resources, since each tire contains the equivalent of one barrel of oil.

In April, U.S. News and World Report's annual graduate school guide ranked CSM's petroleum engineering department fourth in the nation.

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## Rowlinson Shares Wildcat Wealth With \$1.5 Million Gift to Mines

The '52 Prospector gave the following thumbnail of Norm Rowlinson Geol E '52:

Norman Richard Rowlinson, Crandon, Wisconsin, Petroleum Geology, Alpha Tau Omega, Blue Key, Sigma Gamma Epsilon, Tau Beta Pi, Oredigger, Press Club, E-Day Committee, S.A.M.E.

The credentials speak volumes about a young man who distinguished himself in the classroom and in extra-curricular activities, and went on to a successful career in oil exploration and consulting. Also speaking volumes about Rowlinson is his recent \$1.5 million endowment to Mines dedicated to recruiting and retaining top-in-their-field faculty and providing scholarship support for non-resident or international undergraduate students.

Rowlinson, who now lives in Houston, was an out-of-state student on a full scholarship, which he maintained through his four years at Mines. He also took full advantage of everything Mines had to offer. Of him, Dean of Students William V. Burger wrote: "I regard Mr. Rowlinson as a young man of excellent character, and possessing traits of resourcefulness, dependability, imagination and initiative. Mr. Rowlinson has commanded the respect of the faculty and is well liked by his fellow students."

Rowlinson's traits carried him to Central and South America where he worked as a field and wellsite geologist for a petroleum engineering and geologic consulting firm, then to Bogota, Colombia where he served as operations manager for United Fruit Company's petroleum program, which was terminated, along with Rowlinson, in 1961.

Undaunted, Rowlinson stayed in Bogota and spent the next 36 years running his own management-consulting firm for independent U.S. oil companies. The first 16 years comprised what Rowlinson called a "bulldog-like struggle" to establish recognition within the industry. As a hobby, Rowlinson wildcatted. He generated his own wildcat prospects under the company name Petrolinson S. A. In 35 years, he drilled 14 consecutive dry holes.

"Unlike my prosperous consulting business, it became obvious that as an oilfinder I was a complete, abject, dismal, utter failure," said Rowlinson. "Mercifully, my 15<sup>th</sup> wildcat four years ago tested 3,400 barrels of oil per day, and my incipient inferiority complex disappeared shortly thereafter."

That 15<sup>th</sup> wildcat opened the Guaduas oilfield, which Rowlinson sold—along with Petrolinson—to Seven Seas Petroleum Inc. in March 1997.

Rowlinson returned to the U.S. in 1997 but continues to operate his administrative management consulting business in Bogota, Colombia by modem from his Houston office.

Rowlinson, who grew up "in the backwoods of northern Wisconsin," is a past president of the Colombian affiliate soci-



Norm Rowlinson

ety of the American Association of Petroleum Geologists. He holds a master's degree in geology from the University of Colorado, Boulder.

Regarding the endowment, Mines President Theodore A. Bickart said, "This gift touches the School in a very special way. We pride ourselves on our students, our faculty and our programs, and the Rowlinson Endowment Fund will impact all three areas. We are very thankful for Mr. Rowlinson's gift, which increases the School's endowment to \$130 million."

Rowlinson's e-mail address is [nrowlinson@bigcity.net](mailto:nrowlinson@bigcity.net).

Krys Strzelec  
Development Writer

## Blomberg '39 Donates Histories and Biographies To Arthur Lakes Library

Charles R. Blomberg PE '39 has donated to the Arthur Lakes Library a number of recently published books on American history politics and government, including some biographies of prominent Americans such as Franklin Delano Roosevelt, Harry Truman, Dwight Eisenhower, and J. P. Morgan. The books will go into the and will be available for anyone to use.

## Spherical Triangle License Plates Expected Out in January 2001

University of Colorado students and alumni are already sporting personalized license plates that proudly display a bison, their school mascot. Where is Blaster or the spherical triangle, you ask?

In 1997, the state legislature passed Statute 42-3-115.7 that allows special license plates for alumni associations of Colorado colleges and universities. Proceeds from the sale of the special plates will go toward scholarship funds for current students or to support academic programs at the school.

To order these special plates, an alumni association must submit both a design for the plate and a list of 500 interested



alumni with their addresses by the end of March preceding the year the plates will first be issued. In March 1999, CSMAA had fewer than 500 names and so was unable to apply for the special plates for 2000. However, this year we have submitted the proper forms and CSM license plates are expected to be available next January.

When we first heard about the availability of the special plates we took a poll of what our members wanted as the design. Of the choices given—a spherical triangle, Blaster and a combination of Blaster, triangle and large "M"—the one that was chosen was the spherical triangle. It will appear in the center between the license numbers and letters. Along the bottom of the plate beneath the numbers, letters and logo will be the words "School of Mines."

More information on the cost and how to order these special plates will be forthcoming.

## Mission to Bangladesh

High rates of skin cancer in West Bengal, India, and Bangladesh led to the discovery in 1993 that groundwater supplies for 30 million people are contaminated with arsenic. The cause, natural leaching of arsenic from the sediment in contact with the groundwater, has been identified, but there is no easy solution. The world scientific community has been studying the problem and Bangladesh is overwhelmed by suggestions of what they should do. But the problem persists.



Bangladeshis are adept at using simple tools. These men are drilling for sediment samples with a metal spear for a bit, a steel-pole tripod for a rig, and a garden hose to flush out mud. Everything is done by hand, yet they are about as successful at collecting samples as Americans with more complex drill rigs.

George Breit MSc Geochem '80, PhD Geochem '86 was one of four U.S. Geological Survey scientists who traveled to Bangladesh in February to conduct a study. "We asked ourselves 'what can we

provide that's unique?'" says Breit. A lot of work has been done in the southern and western parts of the country, so Breit and his team went to the east along the Meghna River. Along with analyzing the samples he took while there, Breit and his team plan to return to explain to the Bangladeshis what they have learned. "Often, scientists don't go back and explain their results to the people affected," Breit says. "But these people are fully capable of understanding our results and successfully applying some of the technology used elsewhere in the world. They have the manpower and the intelligence."

Bangladesh is a small country about the size of Wisconsin with a population of about 130 million. When Bangladesh gained independence in the 1970s, the population was drinking surface water contaminated with cholera, dysentery and other pathogens. To solve this problem, international organizations funded an effort to build tube wells throughout the country. Now, this new problem has emerged. Bangladesh needs to be able to tell which wells are contaminated and which are safe and there is a national effort to test every well. But scientists would also like to learn what is happening. "Arsenic contamination is becoming a global issue, says Breit, even in the United States. Drinking arsenic-contaminated water increases one's chance of getting cancer 10-fold, more than if one smoked a pack of cigarettes a day. "It's a challenging problem," continues Breit. "We're working to better understand how we're modifying our environment."

Although Bangladesh is a country of few resources, the people manage very well with simple tools. Four men using hand tools can drill 160 feet down in six hours. Because the mission was collaborative, the U.S. team worked closely with Bangladeshi scientists. "They were about as successful at collecting samples using hand tools as we are using more complex drill rigs."

Breit says the best part of the trip for him was the people. He found them friendly, curious and eager to learn. He described his participation in the project as "a very good thing. I had the chance to be relevant on a higher level. We may be able to provide real-time information that may help save lives."



Bangladeshi boys love posing for the camera, but girls run and hide.

**STUDENT VOICE**

**All I Ever Needed to Know I Learned at Mines...**

1. Addition is futile—it must all be integrated.
2. Never anger your calculator...
3. Engineers are never wrong—it's the equipment.
4. At most schools you can study, have a social life and sleep—at Mines you can only do two of those.
5. It doesn't matter how poorly you do on an exam as long as everyone else does just as bad.
6. There will always be someone who will ruin the curve.
7. On homework assignments, it only takes one person with answers (not necessary correct) for the entire class to finish the assignment.
8. There's even a hierarchy of nerds.
9. The odds help no one's dating life at CSM.
10. It doesn't matter that you're a procrastinator, as long as you get it done.
11. If you don't know what you're talking about in a presentation, just use a lot of colorful transparencies—they serve as great distractions.
12. Who needs to talk good English!?!?
13. You know you're at Mines when your Valentine card reads "The free body diagram of my heart points to you."
14. Academic success is 20 percent intelligence and 80 percent jumping through hoops.
15. Women—the less men can get, the more they blame it on the women.
16. Run while you still can!!!
17. No matter when your first class of the day is, it will always be too early, even at noon.
18. No matter how trivial the class, you always feel bad after ditching.
19. Guys are desperate everywhere. Mines merely accentuates the fact.
20. Brownies are great bribery.
21. No matter how hard you study for a test, there is still a very good chance you got every single question wrong.
22. All angles are 37, 53, 45 or 90 degrees.
23. Entering Mines, one immediately becomes nocturnal.
24. Going to CSM is like living in a cave—you forget what the sun looks like.
25. Shower doors open in, stall doors open out.
26. Any club worth joining serves free lunch.
27. You can kill your neighbors with a 9-volt battery.
28. E-mail is an addiction.
29. Grades do not reflect knowledge.
30. Everyone is someone else's weirdo.
31. Multiple choice does not mean easy.
32. A 95.7% can be an A.
33. A 65.4% can be an A+.
34. Free goodies are the best reason to go to the career fair.
35. Holidays should never be taken for granted.
36. Alcohol only *seems* to enhance coordination.
37. 70-0 is, in fact, a football score.
38. Don't drink from a beaker.

*The Oredigger Staff  
Spring 2000*

**Students, Staff, Faculty Show Off Creative Talents at Campus Art Show**

Quilts, sculpture, paintings, photography, ceramics and more were on display for three weeks at the end of spring semester at CSM's first community-wide art show. About 90 students, staff, faculty and spouses participated in the show, displayed on the main floor of the Arthur Lakes Library.



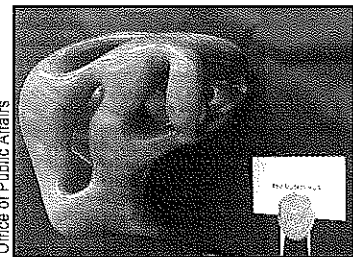
Staffers Mike Ray (second on left) and Randy Gray (center), with family and friends, pose with Gray's hand-crafted totem.

The show was the brainchild of President Ted Bickart and his wife, Frani, who borrowed the idea from their experiences in Syracuse, N. Y. where a local museum sponsored an annual show featuring work by employees at local businesses.

"Remembering the shows in Syracuse and thinking about how so

many employees at Mines have talents that the rest of Mines and the Golden community are unaware of, made us think seriously about trying to have an art show here. We thought it would be fun and would build community on campus," says Mrs. Bickart.

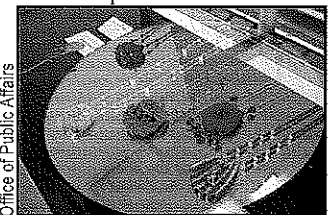
The show opened April 14 with wine, hors d'oeuvres, a string quartet and the unveiling of the 125th Mines anniversary quilt. Local artist Leon Loughridge judged the show and prizes, donated by local businesses, were awarded to five students, one faculty member, and seven staff. Best-of-show went to technical support staffer Ginny Lee for a hand-dyed, hand-sewn quilt, "Ulu (Breadfruit)." Best student work went to Larry Wagg for an untitled wood sculpture.



Larry Wagg's award-winning wood sculpture.



Student Ismael Mendoza's painting "Flower Dancer (Fiesta de las Flores)."



Student Codi Shafer's prize-winning "Knitted Beaded Bags."

**Seniors Showcase 31 Projects**



Mike Delaplain (left) and Haris Imamovic helped to design a wheelchair sensor for the Denver Veteran's Medical Center. The system rests on the wheelchair seat and is capable of collecting and displaying temperature and humidity data. A separate pad collects pressure data. The data will be used to analyze conditions and circumstances that lead to the breakdown of human tissue. Other team members (in background) are Damian Gonzalez, Brandon Miera and Lance Randolph.

Twenty-five alumni helped judge this semester's Senior Design Trade Fair April 13. The 31 projects included a portable rafting toilet for use by rafters who must carry out their waste from rivers in National Parks, a hands-on educational tool for 8- to 12-year olds using an existing water wheel for the Salvation Army High Peak Camp, and a transportation cart for the Jaws of Life for the Boulder Rural Fire Department.

Alumni judges included Janis Christopher BSc Eng '97, John Coats Met E '57, Allen Cockle Geol E '70, Thomas Cole EM '43, Michael Cruson Geol E '65, PhD Geol '73, Denise Dihle BSc Eng '93, Stephen Fenton BSc Eng '87, Gregory Floerke BSc Pet '86, van Diest Medal '98, Michael Gathers BSc CPR '94, Rhonda Gathers BSc CPR '95, Linda Hadley MSc Geop '75, Hugh Harvey BSc Min '74, MSc Pet '80, Alfred Ireson PE '48, Robert Morroni BSc Phy '76, George Off BSc Math '70, James Oltmans II Geop E '70, Arthur Pansze Jr. Geol E '63, PhD Geol '71, Kenneth Parrott BSc Math '74, MSc Geop '81, Allan Provost EM '62, Medalist '84, Holly Sprackling BSc Eng '91, Lori Stucky BSc Eng '97, George Taniwaki BSc CPR '81, Vesper "Bud" Vaseen Met E '39, Al Wieder PE '60 and John Wyatt EM '50.

The judges evaluated the various projects and their evaluations will figure in the students' grades. "It makes the trade fair more real since they are presenting their projects to strangers," explains John Steele, technical adviser for the wheelchair senior project (pictured above).

**Dr. Joan Gosink Honored As "Unique Woman of Colorado"**

Dr. Joan Gosink, CSM professor and director of the Division of Engineering, was named "2000 Unique Woman of Colorado" by the Women's Foundation of Colorado May 8.

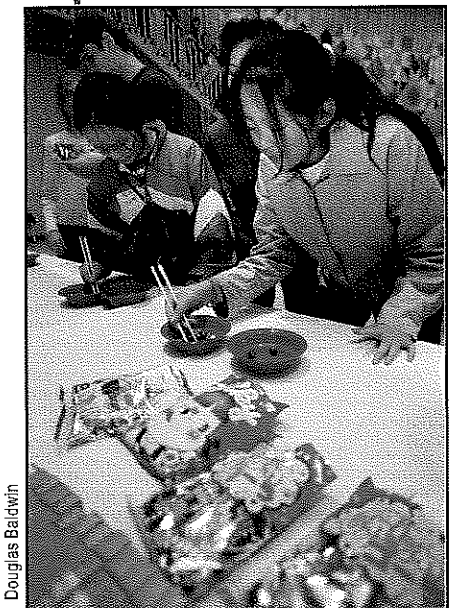


Gosink was chosen for being a leader in her profession. She is one of only seven female deans of engineering in the country and has served locally and nationally as a role model and mentor for women and girls.

Gosink has been responsible for providing rationale and framework for the Women in Science, Engineering and Mathematics program at Mines, which has been in existence for three years. "We need more women engineers," she told the packed auditorium at the Temple Buell Theatre in Denver. "If women, instead of men, had designed airbags, for example, we wouldn't have all the problems we're having now."

Gosink was honored during the final lecture in the 2000 Unique Lives & Experiences program. The Women's Foundation of Colorado, a co-sponsor of the lecture series, works to create communities in which women participate as full and equal partners in all aspects of society.

**Campus Celebrates Chinese New Year**



Asian students celebrated the Chinese New Year in February with a festival for everyone on campus. It included food, music and entertainment.

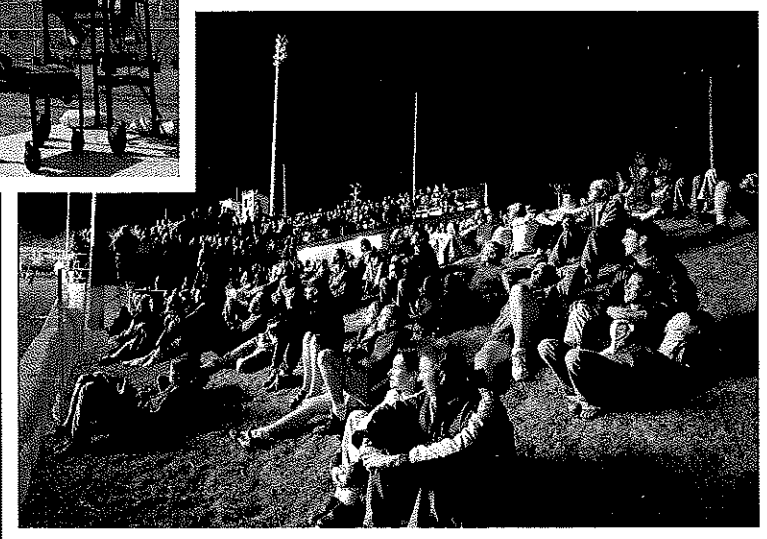
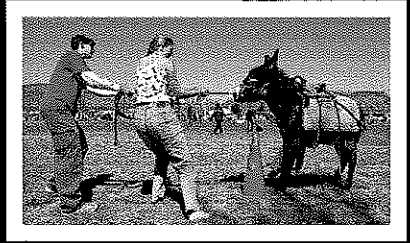
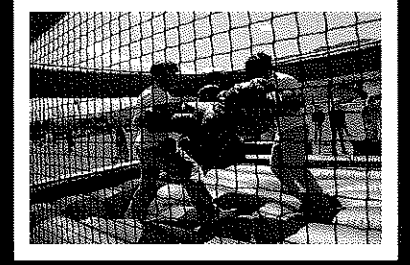
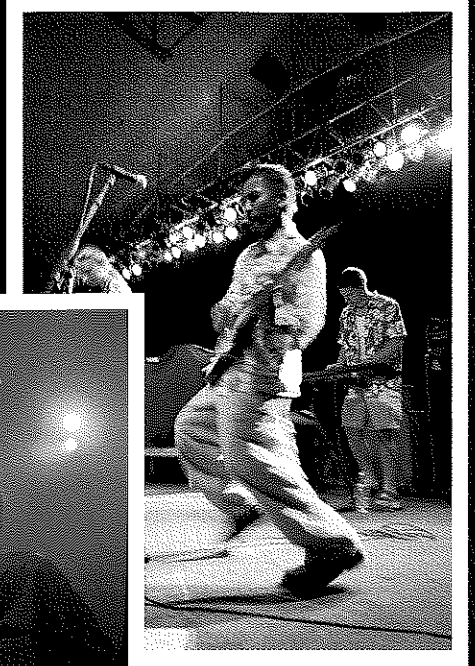
**Learning On-Line**

CSM now offers graduate-level courses over the Internet in petroleum engineering and related disciplines. A certificate in petroleum reservoir management is awarded upon completion of five courses in the on-line program.

E-DAYS

2000

The weather cooperated fully at this year's E-Days celebration. Bands Stroke 9 (above) and Twelve Cents for Marvin (above right) performed and Night Musik put on another great fireworks display. Photos by Douglas Baldwin.



# THE HISTORY AND MYSTERY OF Herbert Kim

By Dave Coolbaugh Geol E '43, EM '47, DSc Geop '61

Herbert Kim was a man of the world. He was born in Korea, fled with his family to China to escape persecution, attended and graduated from Colorado School of Mines, married an American, worked for the Soviets in Russia, and then for the government in China. What ultimately happened to the man is still a mystery. But for a time, his fate was of the utmost concern at the highest levels of CSM administration.

Kim was born in Korea in January 1904. Early in life, his family was forced to flee to China because of Japanese political persecution in Korea. He attended preparatory schools in Korea and then in Nanking, China. From there, he traveled to Colorado to attend CSM, arriving in September 1924.

The president of CSM (1925-46), Dr. Melville Coolbaugh, and his wife Osie took an interest in Kim and invited him into their home to live with them and their four children, the oldest two of which were CSM students. Kim graduated with honors with an engineer of mines degree in May 1928. He remained close to the Coolbaughs and corresponded with them for the rest of his life.

After graduation, Kim worked for two years at the Home-stake Mine in South Dakota where he had also spent his summers while going to college. He then enrolled at Columbia University in New York where he attended graduate studies in mining. In 1931 he married Pauline, an American citizen and graduate of New York University. By then he had contracted with the government of the Soviet Union to work as a mining engineer. He and his new wife headed to Russia in 1931. Much of the information known today about Kim comes from letters written to Coolbaugh, whom he called "Prexy" and Mrs. Coolbaugh, whom he called "Mother." Pauline also corresponded with them.

Life in the Soviet Union was hard, Kim wrote in 1932 and 1933 in letters addressed from Kozakstan ASSR. Goods, food and services were scarce and could only be obtained by ration cards at high cost. Some items, mostly food, were subsidized

## Russia Jails Graduate of Mines School

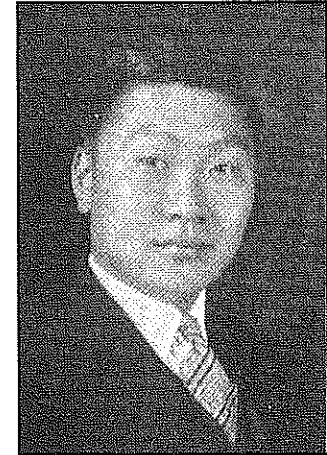
Dr. Coolbaugh, President of Institution, Appeals to Consulate in Behalf of China-Born Honor Student

MINNES ALUMNI APPEAL TO STALIN TO SAVE LIFE OF EX-CLASSMATE

Herbert Kim, 1928 Honor Graduate of Golden School, Reported Involved in Current Blood Purge in Soviet Russia

In a desperate move to save the life of a former classmate believed to have been caught in Red Russia's current blood purge, alumni of the Colorado School of Mines have appealed directly to Josef Stalin for mercy.

Herbert Kim, 1928 Honor Graduate of Golden School, Reported Involved in Current Blood Purge in Soviet Russia



Herbert Kim's senior picture in the 1929 Prospector.

RUSSIA JAILS GRADUATE OF MINES SCHOOL

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and available in limited amounts. However, Kim reported progressive improvements. The Soviet government had initiated strong programs to combat illiteracy, Kim said, and the majority of the people were satisfied with socialism, including those in mining and farming.

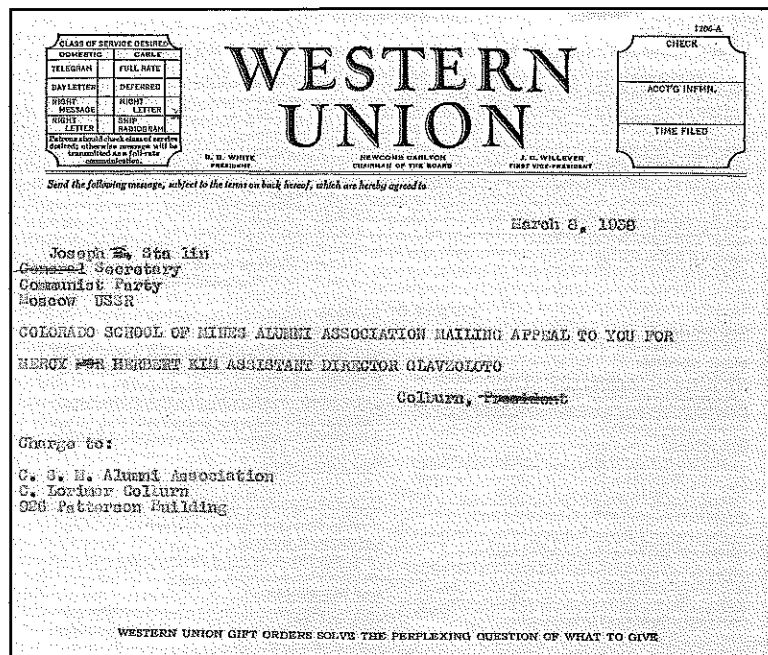
Transportation, however, was very poor and inefficient. "Everybody needs documents to travel, purchase goods and do almost anything," Kim wrote. Nevertheless, Kim said he held high hopes for Russia.

Kim did well at his new job and advanced to being "in charge of the most important mine in our management district," he said. The foreign engineers were given relative freedom in their jobs although the remuneration did not meet what was stated in their contracts. The foreign engineers were given power over the Russian engineers, but Kim found that cooperation was very limited and, therefore, so were the results. The Russian engineers were very good theoretically but not as practical as the American and German engineers. They generally felt that mechanization was the solution to most problems, Kim observed, although the infrastructure was not adequate. Kim found Russian engineers and mine workers inefficient and unenthusiastic. According to a 1942 article in the *Denver Post*, Kim became a naturalized citizen of the USSR and was rewarded for his engineering work by being made head of the Soviet gold trust.

In a letter to the Coolbaughs received June 25, 1936, Kim announced the birth of his son Robert, born Jan. 1, 1934. Robert understood English perfectly but preferred to speak Russian, he reported. In the same letter, he commented again that he was well satisfied with his progress in the Soviet Union. For two years he had been holding a responsible mining position, had received wage increases and, in 1935, had been elected a member of the executive committee of the district government. As a result, Kim said it "makes me want to stay on in the USSR where Pauline and I see a good future and about the best place for our son to grow up and be educated."

Not all was perfect, though. In the same letter Kim also wrote that there were "some moments that are not quite pleasant." The older conservative engineers without foreign training or experience were much harder to work with than the younger engineers, he continued. "The old generation of engineers are some of the hardest people to deal with, especially when they are under the control of such an engineer as I am this moment." That was the last word from Kim for nine years.

Early in 1938, Coolbaugh learned that Kim had been imprisoned in the Soviet Union. He immediately notified the CSM Alumni Association. According to the *Denver Post*, "Dr. Coolbaugh collected documents bearing on the character, scholarship, dependability, professional attainments and Chinese citizenship of Kim and forwarded them to the consulate of the Russian government in New York and also to China's ambassador in Washington, D. C."



March 8, 1938. To Joseph Stalin: "COLORADO SCHOOL OF MINES ALUMNI ASSOCIATION MAILING APPEAL TO YOU FOR MERCY FOR HERBERT KIM ASSISTANT DIRECTOR GLAVZOLOTO." signed Colburn

A March 3, 1938 article in the *Denver Post* said, "In a desperate move to save the life of a former classmate believed to have been caught in Red Russia's current blood purge, alumni of the Colorado School of Mines have appealed directly to Josef Stalin for mercy, Russel H. Volk, secretary of the alumni association, revealed Wednesday.

"A letter pleading for clemency for Herbert Kim, 1928 honor graduate of the School of Mines, was drawn up by C. Lorimer Colburn, president of the association, with the help of several prominent Denver mining engineers who have served in Russia under the Soviet government."

"We have no idea what kind of predicament Kim is in," said Volk. "But we do know that it is mighty serious. We have been unable to get any account telling why he was arrested, or what has happened to him. All we can do is to beg for mercy directly from Stalin himself." At the time, Pauline Kim and son Robert were thought to be "still in Russia, and may be in constant peril."

Nine months later, in a letter dated Dec. 12, 1938, Pauline contacted the Coolbaughs. She said she had been detained for 10 months in Russia after her husband was arrested (probably in December 1936). On Nov. 2, 1937, her husband had been sent to Siberia, possibly charged with spying for the Japanese though most doubted that Kim would have spied for a country that had caused his family to become refugees. Pauline and her son were returning to Brooklyn, N. Y. Pauline continued to correspond with the Coolbaughs and reported that Kim had received a 25-year sentence. Of the numerous letters she sent afterward, she reported no contact with or about her

continued on next page

husband.

The next time the Coolbaughs heard from Kim it was in May 1942. He wrote a short letter from the Chinese Embassy in Russia. "It has fallen to my lot to drink the unearned cup! I am feeling so uplifted and hopeful for the future that I defy to remember the past detestful experience that I have finished only yesterday." He ended by saying he was going to China to

*"It was only my strong physical constitution and elastic temperament which enabled me to live through the barbarism of physical torture..."*

Herbert Kim, 1942

work in the mining industry. Apparently, Kim's release was orchestrated by the Chinese after the Soviet Union and Japan broke off relations because of World War II. Russia and China had become allies.

Several months later, in a letter dated Oct. 15, 1942, postmarked New Hwa Chi, Szechwan, China, Kim recounted his reunion with his parents and four of his siblings after 20 years of separation. Kim was made chief engineer for the mining company of Kansu Province by the president of the province. He also discussed his imprisonment in Russia. "It is only there in the Soviet prison that I understood the worth of a pound of black bread," he wrote. "When a person is being subjected to a constant hunger for years, he becomes a hungry beast whose sole desire is to satisfy that hunger. He forgets everybody, even closest and dearest.

"It was only in my strong physical constitution and the elastic temperament which enabled me to live through the mediaeval [sic] barbarism of physical torture (and) moral encroachment practiced upon me by the 20th century inquisitors. Before my very eyes, the social system to which I was devoted, (and) unhesitatingly had given all my knowledge, experience—in fact my very being—tottered down like a house of cards. The very means they had been using to achieve the desirable qualities in society had so completely killed the souls that the builders of the new human society became a band of political gangsters."

But, Kim continued, "I nurse no grudge against anybody. I feel calm and sure, for I did no wrong to anybody. At the same time, I am infinitely grateful for the gift of my second life and I am eager to use this life in an unselfish and fruitful undertaking."

It was not until late 1942 that Kim found out Pauline and Bobby had gotten out of Russia. He had been led to believe that Pauline had been arrested and Bobby put into an orphanage. He was never to see them again.

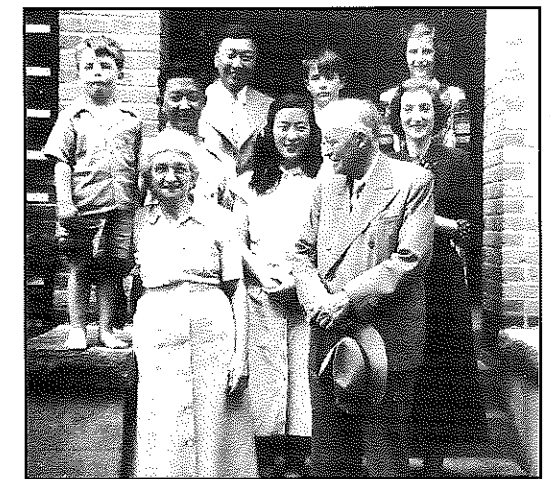
In a letter dated Nov. 14, 1944, Kim talked of the great potential of Kansu and other provinces in China to develop their minerals industry after the war. By May the following year, Kim was anticipating the end of the war. Although it had ended in Europe, it continued in China. "This must be the beginning of the end," he added hopefully. Although mine

production had increased and prices continued to rise, he noted that "The highest [monthly] salary of a very responsible worker amounts to only 30 to 35 U. S. dollars. I should be the last one in the whole world to kick, for didn't I taste a thousand times worse life than this now?" But in December, Kim wrote from Chungking that he had met with three CSM graduates—Yoong Wong EM '20, Cooper Ho EM '27 and Edward Stone Met E '29—and all were very pessimistic about their futures in China.

Kim left China in late 1946 and returned to Korea to work for a tungsten mining company. The Korean Bureau of Mining told Kim they would send him to the United States for tungsten research work, but the trip fell through. In 1948, he wrote to the Coolbaughs saying he had decided to return to Mines on his own and that he had been admitted to the graduate school. In the same letter, he said, "Korea is now gripped with political confusion, trampled down by industrial and social anarchy. Nobody obeys the law."

Kim did return to Golden—the Coolbaugh's have a photo of him taken in 1948 or 1949. However a recent search of his records in the registrar's office produced only an undergraduate transcript. No record of his attending graduate school exists. It is known that he did return to Korea. After that, Herbert Kim became silent. An unsubstantiated rumor surfaced that Kim had been eliminated by political foes in Korea. Substantiation of his fate could possibly be supplied by his sister, Pearl, but investigations to date have been unsuccessful in locating her.

What really happened to Herbert Kim remains a mystery. What is known is that he had an eventful, difficult and often tragic life. He was an outstanding student and representative of CSM and was remembered fondly by those who knew him. Dr. Coolbaugh commented at the time of Kim's Soviet incarceration, "I recall few students at the School of Mines since I have been here who made such a favorable impression on his classmates, professors and others, as did this young man." ■



Herbert Kim (back row left) with Dr. and Mrs. Coolbaugh (in front) and Pearl Kim (center), another Kim relative, Lois Coolbaugh Hinkley (middle row right) and her three children taken in 1948 or 1949.

## EVENTS

### June

**12 16th Annual Alumni Golf Tournament.** West Woods Golf Course, 6655 Quaker St., Arvada, Colo. 7 A.M. Proceeds to benefit CSMAA Emergency Student Loan Fund. For more information or to register, call (303) 273-3290.

**15 Denver Section Lunch, Southeast Area.** 11:30 A.M. Location TBA.

**Grand Junction Section Lunch.** An informal get-together of CSM alumni the third Thursday of every month at the Bookcliff Country Club, 2730 G Road. Call for further information: John Howe, (970) 242-4903 (B) or Del Tolen, (970) 256-1118 (B).

**29 Cirque Du Soleil.** 5 P.M. in the Pepsi Center parking lot.

### July

**13 Golden Lunch Bunch.** An informal lunch get-together of CSM alumni the second Thursday of every month at the Buffalo Rose in Golden, Colo., corner of 12th and Washington, 11:30 A.M. Order from the menu.

**19 Washington, D.C. Reception.** CSM President Ted Bickart is the featured speaker. Time and place TBA.

**21 Grand Junction Section Lunch.** An informal get-together of CSM alumni the third Thursday of every month at the Bookcliff Country Club, 2730 G Road. Call for information: John Howe, (970) 242-4903 (B) or Del Tolen, (970) 256-1118 (B).

**26 Denver Section at Rockies-Dodgers baseball game.** 7:05 P.M. Call (303) 273-3295 for tickets (\$15 each).

### August

**10 Golden Lunch Bunch.** An informal lunch get-together of CSM alumni the second Thursday of every month at the Buffalo Rose in Golden, Colo., corner of 12th and Washington, 11:30 A.M. Order from the menu.

**17 Grand Junction Section Lunch.** An informal get-together of CSM alumni the third Thursday of every month at the Bookcliff Country Club, 2730 G Road. Call for information: John Howe, (970) 242-4903 (B) or Del Tolen, (970) 256-1118 (B).

**26 Annual Alumni Picnic.** 1 P.M. Coolbaugh House.

### September

**2 Hall of Fame Football Game.** Mid-America Nazarene @ Mines. Tailgate brunch 11 A.M. Brooks Field (hospitality tent).

**13 Golden Lunch Bunch.** Buffalo Rose in Golden, Colo., corner of 12th and Washington, 11:30 A.M. Order from the menu.

**16 Tailgate Party.** Chaddron @ Mines football. 11 A.M. Brooks Field.

**21 Denver Section at Merrick & Company.** 2450 South Peoria Street, Aurora, Colo. Lunch will be followed by a presentation on Merrick & Company's use of leading edge processes and technologies in Geographical Information Systems (GIS) and a tour of the facilities. 11:30 A.M. Cost of lunch TBA.

**Grand Junction Section Lunch.** Bookcliff Country Club, 2730 G Road. Call for information: John Howe, (970) 242-4903 (B) or Del Tolen, (970) 256-1118 (B).

**23 Tailgate Party.** Ft. Hayes @ Mines football. 11 A.M. Brooks Field.

### October

**7 Four Corners Tailgate Party.** Mines @ FLC football in Durango. Details TBA.

**12 Golden Lunch Bunch.** Buffalo Rose in Golden, Colo., corner of 12th and Washington, 11:30 A.M. Order from the menu.

**14 Tailgate Party.** New Mexico Highlands @ Mines football. 11 A.M. Brooks Field.

**19 Grand Junction Section Lunch.** Bookcliff Country Club, 2730 G Road. Call for information: John Howe, (970) 242-4903 (B) or Del Tolen, (970) 256-1118 (B).

**21 Homecoming.**

Visit the  
CSMAA  
website:  
[csmaa.mines.edu/alumni](http://csmaa.mines.edu/alumni)

## In Their Own Words: Mines Men in the Korean War

Part 2 of a two-part series

By Steve Voynick



From left, Lt. H. Don Adams PE '52, Lt. Bob "Tex" Owen Geol E '51, Lt. Claude Jenkins Geol E '52 and Lt. Chet Westfall Geol E '52 at AECOC Engineer School, Ft. Belvoir, Va., in 1952.

While combat operations in the Korean War made the headlines, many Mines men far behind the front lines filled supply and port-control positions that were vital to the logistics of the war effort.

Army 1st Lt. **Douglas E. Brown EM '51** served with the 434th Engineer Construction Battalion. "Supervised two different rock quarries in Pusan supplying crushed rock to an asphalt plant for paving the streets of Pusan. Then became executive officer of the Battalion labor officer in charge of hiring about 500 indigenous personnel for the Battalion."

Army 1st Lt. **James E. Massey EM '52** also served in port operations, where he met many other Mines men. "When assigned to the 532nd Regiment, Shore Bn., in Japan, I took charge of the same platoon that Chet Westfall [Geol E 1952], my SAE fraternity brother, had been in charge of. He had left for Korea the week before. In Korea we operated a port near Ulsan. Out scrounging for parts, I went to a nearby pipeline detachment and found Jerry Diver [PE '52], my classmate. John Volosin [PE '52] was in the same unit. I learned later that Jack Petty [EM '51] was located in Taegu in tungsten mining management only a few miles from Ulsan. Also at Taegu was Earl Torgerson [Met E '52], who was a civilian with Utah Construction Co."

Since tungsten was a wartime strategic metal, maximizing production of the Korean tungsten mines was of considerable importance. But Petty, the U. S. Army liaison to the Korean tungsten-mining industry, had recollections of the war that focused neither on tungsten nor mining, but on "kimchi, honey buckets and cold."

Army 1st Lt. **Charles Mallette Geol E '52**, a Pusan cargo officer, was also involved with tungsten. "My job was to oversee shipment and handling of Corps of Engineers equipment and materials going through the port facilities. One headache that occurred quite frequently, every two or three weeks, was the shipment of tungsten concentrates to the States. It was part of Lt. Col. John Veatch's [MSc Min '51] operation [the Dal Sung Tungsten Mine, operated by the Utah Construction Co., near Taegu] and I got roped in on the deal. Often times a million or more dollars of tungsten would go out—all guarded by a platoon of infantry."

Mines men, especially Army engineers, frequently met former classmates, and the benefits could go far beyond camaraderie.

Army 1st Lt. **Thomas M. McLaren Geol E '52** writes: "Upon reporting for duty in Seoul during the fighting in September 1952, I was advised that I was assigned to a front-lines engineer company to oversee removal of land mines under fire. While I waited in the Chief of Engineers' office, I looked at the wall map of all the engineer units in Korea. The Chief of Engineers asked if I knew any of the other engineer officers and I said I saw quite a few from the Colorado School of Mines, including Tom Johnson [Geol E '52] who had been best man at my marriage in 1951. Against the objections of many, the Chief of Engineers then changed my assignment to the 98th Engineers in Seoul as executive officer. I served with Tom Johnson, and flew in helicopters with Claude Jenkins [Geol E '52], my SAE frat friend."

Army 1st Lt. **John F. Fox Geop E '52** found the discomfort of life in wartime Korea tempered by contact with many Mines men. "Seoul, on the Han River, was hot and humid in the summer and freezing cold and windy with snow in the winter. Master Sergeant Carpenter, who had been on the Mines ROTC staff during 1949-1952, showed up in my office one day. The larger unit next door was the 98th Aerial Photo Reproduction Company, where classmates Lt. Tom Johnson [Geol E '52] and Lt. Tom McLaren [Geol E '52] were assigned. Bill Brown [Geop E '52] also joined that unit a bit later as an enlisted man. John Volosin [PE '52] and Jerry Diver [PE '52] visited us several times from an engineer pipeline company."

Navy Lt. **JG Curtis D. Conley Geop E '52 Geol E '59** found that during the war years, Mines men could turn up anywhere in the Far East. "We were anchored in Hong Kong harbor. I stepped into the wardroom when an Air Force flier was standing with his back to me. I could see his profile over his shoulder. I

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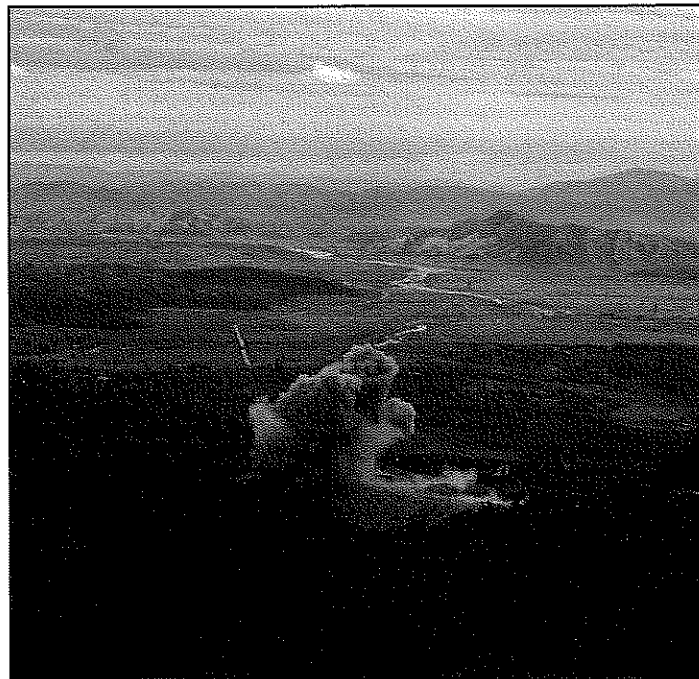
said, 'Hello, Bill Barnes [PE '49].' He wheeled around and nearly collapsed when he saw me. We had dinner that night. Next day he returned to Korea."

Mines men also participated in the air war in Korea, which involved bombing of North Korean industrial and transportation facilities, supporting ground troops, reconnaissance and maintaining air superiority, the latter accomplished by U. S. Air Force F-86 Sabrejets, which racked up a 10:1 kill ratio over Russian MIG 15s.

U. S. Air Force T/Sgt. **John Ernest Hoffman Geol E '57** considered himself fortunate to serve with an Air Force recon squadron. "The 91st Strategic Reconnaissance Squadron consisted of RB-29s. Into 1953, we worked on increasing numbers of reconnaissance-rigged jets. Other secret-mission aircraft were attached to us to support. On hazard pay, I flew over Korea and beyond with combat crews, always thankful I was not on the frigid ground of Korea, or even a regular member of a flight crew. I salute them all."

Pilot **Fred Johnson Met E '54**, a Navy Reserve lieutenant JG, flew a propeller-driven fighter aircraft in close support of ground troops. "Flew Corsairs. I didn't like being shot at."

Army 1st Lt. **David C. Jonson Geol E '51 MS Geol '55** was an engineer construction officer with the 917th Engineer Aviation Brigade attached to the U. S. Air Force. "We helped build the large Osan air base, about 30 miles south of Seoul. I was in Korea exactly a year; I was 22 and 23 years old. Starting from scratch with a large, nearly flat, rice paddy-filled valley, we built a six-lane, concrete runway 10,000 feet long, with a four-lane taxiway 9,000 feet long, hardstands for 90 jet aircraft, and a large aircraft machine-gun firing backstop—a small mountain on the taxiway. Also helped build barracks, mess halls, chapels, etc., for the complete air base.



Blasting for the Paris Mountain road near Mochan, September 1953.

"The first aircraft 'landing' at our air base was a flameout jet that belly-flopped into the mud before the concrete was poured. The mud-covered pilot walked away from the mud-filled airplane. We later watched jets perform impressive 360-degree victory rolls over our completed runway after successful combat missions over North Korea.

"As officer of the day on a cold, misty Christmas morning about 0400, I was touched to see about a dozen Korean war orphans walking several miles toward our camp from our sponsored orphanage. They carried candle-lit homemade lanterns and were singing Christmas carols in English. After we warmed them up with some hot chocolate at the mess hall, I arranged for wake-up singing in the officers' barracks, which wasn't entirely appreciated. Then we took them back to the orphanage by truck and brought them back later in the day for a small Christmas party."

Another Army first lieutenant supporting aviation operations was **Robert B. "Tex" Owen Geol E '51**. "I was assigned to SCARWAF [Special Category Army with Air Force] and the 1093rd Engineer Aviation Battalion near Pyong Taek, about 50 miles south of Seoul. Our primary mission was to construct the K-6 air base, a 10,000-foot concrete jet airstrip for the Marines, Navy and Air Force. SCARWAF was a little confusing in that I got my orders from the Army; whiskey, food and security from the Marines; and pay and travel from the Air Force."

U. S. Air Force 2nd Lt. **Howard W. Leaf Geop E '50**, who flew 102 F-80 sorties and 100 F-86 sorties over North Korea, later rose to the rank of lieutenant general. By 1952, Leaf's view of the war was shared by a growing number of U. S. military men. "Like World War II, I felt that it was a worthy effort. But I later realized that unlike World War II, we were not there to win."

Through 1952, the United Nations staged no all-out offensives believing that peace was imminent and any ground gained north of the 38th parallel would have to be relinquished. Both sides, however, initiated bitter, limited actions to improve their positions at places like Old Baldy and Pork Chop Hill, and in the regions known as the Punch Bowl and the Iron Triangle.

Army Capt. **Fred A. Nagel E M '40**, who had fought in World War II in Italy only to be recalled for Korea, was one of many Mines men engaged in behind-the-lines construction. "I was the commanding officer, C Company, 44th Engineer Construction Battalion. After initially punching through the Pukhan River military road, my company was assigned to undertake reconstruction of the major high-level bridge on the same Pukhan River southeast of the city of Seoul. In addition, I was sent to reconnoiter and estimate reconstruction of the principle steel truss bridge that had been bombed and dropped into the river between Seoul and the port city of Inchon. Later, my company was assigned to construct a railroad spur for the U.S. air base at Kunsan."

The Korean War also brought racial restructuring to the U. S. military. Nagel recalls: "At this time, the army was just integrating black troops with whites. I had one black sergeant assigned to my company. After some initial friction, it worked OK. One reason was that this sergeant was six-foot-four and weighed about 250 pounds. But another reason was that he was a real leader."

Despite peace often seeming so near, the bloody fighting continued into 1953. Army 1st Lt. Kenneth Volkert Riley had attended Mines, but graduated from the United States Military Academy at West Point. While serving with the 5th Regimental Combat Team, 7th Infantry Division, Riley died of wounds received in combat on Feb. 9, 1953.

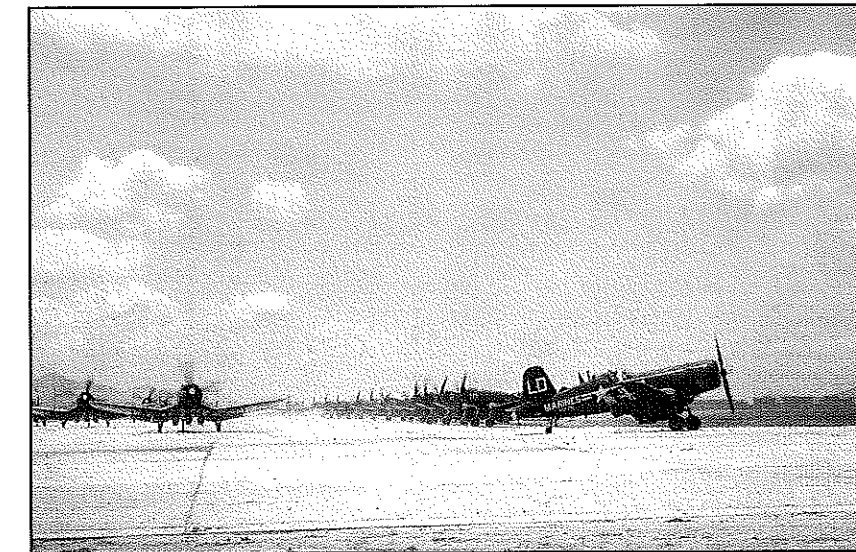
**Spencer Titley Geol E '51** later found a tragic side note to Riley's death. "I understand his mother ran a wire-service flower shop and received many telegrams in those days. She discovered the telegram about Ken mixed in with a bunch of others."

As in any war, not all fatalities were due to combat. In January 1953, U. S. Air Force 1st Lt. **Edward R. Francis PRE '51** was killed in a plane crash in Korea and his name added to the long list of "non-battle deaths."

Keeping infantry, armor, transportation and aviation units supplied with fuel was an enormous job that fell to men like Army 1st Lt. **Hugh E. Bradley PE '50**. "I was company commander of a pipeline company in Korea. Our pipelines transported gasoline and jet fuel from Inchon to close to Panmunjom. Ray Govett reported to me in Korea."

Army 1st Lt. **Ray Govett Geol E '52** served under Hugh Bradley with the 82nd Engineer Pipeline Company. "I lived in a two-room house a short distance from the front lines. Artillery duels got extremely heavy at night and sometimes you could almost read a paper with the light from the firing, even where I was. We had regular visits from "Bed-Check Charlies," L-type planes [obsolete, bi-wing aircraft] that flew in low to avoid radar and dropped bombs out of the cockpits onto the pipelines. The Chinese knew as much about our pipelines as we did. Several times we got calls on the radio about a leak in the pipeline some place, and it would be the Chinese."

Despite large-scale North Korean and Chinese attacks in May and June of 1953 that were attempts to influence the peace talks, the cease-fire agreement was finally signed on July 27, 1953. The war had taken a horrific human toll. More



Sorties of Marine Air Group 12 Corsairs taxiing from warm-up apron to runway on their way for close ground support against the North Koreans. K-6 Air Base near Pyong Taek, Korea, 1953.



Lt. Norman Zehr EM '52, MSc Min '56 in his L-19 aircraft, Chorwan Valley, Korea, 1953.

than 500,000 North Koreans, one million Chinese, and 250,000 South Koreans had lost their lives. The American death toll stood at 36,913, with more than 103,000 Americans wounded in combat.

Army 1st Lt. **John H. Wilson II PRE '48** was in Inchon harbor when the cease fire agreement was signed. "We made three attempts to get ashore on landing craft as the Army could not make up its mind whether we were to take weapons into Korea or not. We boarded LCs three times, twice either turning in or drawing weapons before we finally made it to shore without weapons."

Although the shooting had ended, an enormous amount of defense-related work remained. After the cease-fire agreement, the front lines became a demilitarized zone where adjacent areas of South Korea required permanent fortification.

Army Col. **Harry D. Hocking Jr. EM '37** helped construct the DMZ defenses that exist today. "My battalion built the original position across all 55 miles of IX Corps that is presently occupied by American troops. It was done on a crash basis. If there had been a breakthrough in the Chorwon Valley, the high-speed attack route into the south, there were no lateral roads and supply and evacuation points to fall back to. We put those in and roughed out where the combat elements would be positioned. Edward R. Murrow visited Korea about this time and wound up making an hour-long program on what we were doing. But then he never got clearance to show it."

1st Lt. **Jack D. Cutter PRE '52** arrived in Korea immediately after the cease fire. "We boarded a troop transport in Sasebo, Japan, the evening of July 27, for Korea. When we awoke the next morning, we were still in Japan. The cease-fire had been signed and we unloaded and turned in all our arms and then went to Korea the next day."

Cutter served with the 546th Engineer Fire-fighting Co. that protected Pusan-area military

continued on next page

continued from previous page  
depots. "My main duties were training, conducting military fire inspections and paying our Korean labor force. I needed a duffel bag to haul the Korean won [unit of currency], not because they were paid so well, but because of the inflation of the currency. . . The worst fire developed in early December 1953 on a hilltop residential area in central Pusan. We needed 15 hours to bring it under control. In the process, hundreds of homes, several military depots and the Korean Communications Zone headquarters were destroyed."

After the cease fire, 3,766 American prisoners-of-war, most of whom had been captured during the first few months of the conflict, were repatriated. Army 1st Lt. James Fouret Geol E '51 MSc Geol '55, a platoon leader in a combat engineer company, remembers Korea as a place of "snow, cold, rain, mud, dust and smell." But his richest memories are, in effect, a personal closure of the war. "The processing of American POWs after the cease fire and returning with them aboard the USS General Walker. And, finally, docking at San Francisco."

A number of Mines men have since returned to Korea. Army 1st Lt. John R. Rairden III Met E '51, who had served with the 13th Combat Engineer Battalion in the Iron Triangle, saw that a prosperous nation had emerged from the battlefields. "It was fascinating to revisit the region that had been the central front [Iron Triangle] during the Korean War. Everywhere we went, we were amazed at all the construction that has taken place during the last 40+ years. We got a warm feeling that the sacrifices from 1950-1953 have been vindicated!"

Army 1st Lt. Norman R. Zehr E M '52 MSc Min '56, who was an aviator with the 40th Division during the war, recalls the gratitude of the Korean people. "On my first return trip [a business trip] back to Korea in 1973, I was asked by our distributor if I had ever been to Korea. Then names like Chorwon, Kumhwa, etc., came out. He had served in the ROK Army. At each customer call where the companies were managed by former ROK

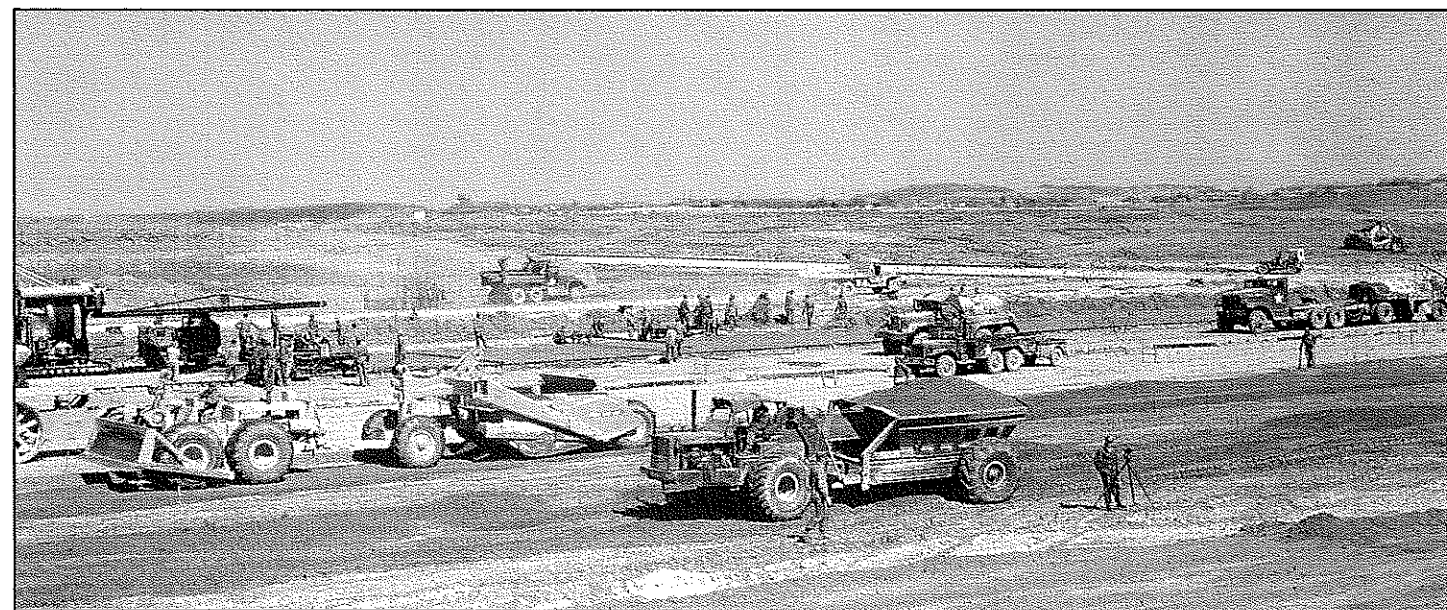
officers, I could hear him telling them that I had been there before. Each one thanked me. At dinner a few nights later he stood up, welcomed me back to Korea, and said on behalf of himself and the Korean people that he wanted to thank me. How did I respond? I didn't do very well.

"My final reaction was that the South Koreans appreciated what the United States and United Nations had done for them. After seeing what Korea looks like now, and hearing how the Koreans felt about it, I was satisfied that it had been a worthwhile effort."

Although political constraints had prevented all-out victory in Korea, it is now clear that the conflict did much to shape geopolitics in the second half of the 20th century. As the first direct confrontation between the free world and international communism, the Korean War ushered in the 40-year-long Cold War and was the precedent for a series of military stands that helped bring about the eventual fall of international communism.

Nowhere are the effects of the Korean War more evident than on the Korean Peninsula itself. Little can be said about the Democratic People's Republic of Korea, which remains a closed communist state, one of the world's most suppressed and deprived societies and a threat to world peace. In stark and telling contrast, South Korea is now the world's 11<sup>th</sup>-strongest economy and remains a staunch American ally. And the 380 students and graduates of the Colorado School of Mines who served in the U. S. military during the time of the Korean War did their share to bring all that about.

Steve Voynick is a freelance writer from Leadville, Colorado. His most recent book is Climax: A History of Colorado's Climax Molybdenum Mine. During 1964, Voynick served with Charlie Battery, 4th Bn., 76th Artillery (7th Infantry Div.) at Munsan-ni, Republic of Korea. ■



U.S. troops construct a parking apron at K-6 Air Base, Korea, in 1953.

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# CSMAA AWARDS



## Melville F. Coolbaugh Award

Awarded to an alumnus or friend of Mines who has made an outstanding contribution toward improving the image and enhancing the reputation of Colorado School of Mines.

**R**alph L. Hennebach Met E '41, Medalist '64, Hon D Eng '90, this year's recipient of the Melville F. Coolbaugh Award, was recognized for his continued support of the Alumni Association and his generosity to the School. As chairman and chief executive officer for American Smelting and Refining Company Inc. (ASARCO), he employed many Mines graduates.



In 1944, Hennebach served in the U. S. Navy. In 1965, he won the CSM's Distinguished Achievement Medal and in 1983, won the Charles F.

Rand Memorial Gold Medal from the American Institute of Mining, Metallurgical and Petroleum Engineers (AIME).

Hennebach spent his 43-year career with ASARCO beginning as a chemist/assayer and retiring in 1985 as company chairman.

Along with ASARCO he established the Hennebach Visiting Professor in Humanities in 1991, which provides funding to bring exceptional humanities and social science talent to campus. Recently, he gave an additional \$145,000 toward that program.

## Young Alumnus Award

Based on service and potential to Mines and the Alumni Association, this is awarded to a CSM alumnus who received his or her degree no more than 15 years prior to the date of the award and is no more than 40 years old at the time of the award.

**M**elissa Haller Stowe BSc Geop '93, a marketing representative for TGS-NOPEC Geophysical Co. in Houston, receives this year's Young Alumnus Award. Since graduation, she has supported the school by attending college fairs in the Houston area as an alumni admissions representative. She is well suited for this position because while attending Mines, she served as a student ambassador.



Until recently, Stowe was also Houston section leader. She did an excellent job of organizing events for alumni from a variety of age groups including involving more young alumni. She worked hard putting together programs, keeping people informed and reporting on the success of those events.

Stowe also was the Dallas coordinator for two years. In May she was appointed to the CSMMAA board of directors as southwest regional director.

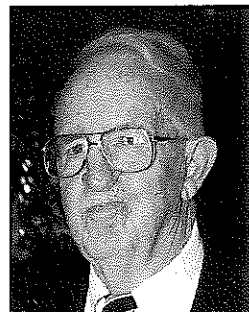
"I have enjoyed representing CSM

and the CSMMAA," says Stowe. "The contacts are invaluable, and it's just plain fun. My thanks to the board for recognizing my contributions."

## Outstanding Alumnus Award

Awarded to an alumnus and a member of the Alumni Association who has contributed meritorious service on behalf of the Alumni Association.

**R**obert T. Reeder EM '49, MSc Min Ec '76, Hon Mem '86 was chosen to receive the Outstanding Alumnus Award because he is always ready to work on any project for the advancement of the Alumni Association.



Reeder served in the line of Alumni Association offices beginning February 1980, becoming president in 1983. Since then, he has been an active member of the Past-Presidents Committee.

Reeder was chairman of his 50th class reunion committee last year. He also contributed to the search for the new president of the School, with emphasis on the view from alumni. In the late 70s and early 80s, he presented a continuing education course through the Association on coal mining, which helped the Association financially. Throughout the years he has served on the Association's membership committee and still participates in the annual membership phonathon.

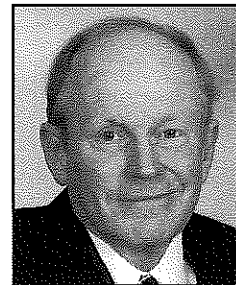
Reeder spent 27 years in the mining industry and 13 years running his own consulting company. He also taught mining engineering at CSM and was department chair for mining engineering at University of Wisconsin-Platteville.

"Ironically, I was the one who made the motion to have this award back in 1978," says Reeder, who served three years on the Alumni Association board of directors before becoming a CSMMAA officer.

## Honorary Membership Award

Awarded to an individual who has rendered distinguished service to the CSM Alumni Association and/or the Colorado School of Mines and who is of good moral character and in good standing professionally.

**J**ohn U. Trefny is vice president for Academic Affairs and dean of faculty at Colorado School of Mines. Prior to his present appointment, he served as a professor of physics and physics department head at CSM. He received his undergraduate degree from Fordham University and his Ph. D. from Rutgers University. He held appointments at Cornell University and Wesleyan University before joining CSM in 1977.



Trefny has been active in pre-college education, serving from 1986 until recently, as coordinator of teacher enhancement programs at CSM. During this time, he and his colleagues developed the largest college-based program in Colorado for the professional development of K-12 teachers in science and mathematics. Partnerships have been formed between Mines and several nearby school districts.

Trefny also has helped maintain Mines' involvement in Colorado Alliance for Science and currently serves on the executive board of the statewide organization.

Trefny was recognized by the Colorado Association of Science Teachers through the "Friend of Science Education" award in 1990 and received the "Excellence in Science Teaching Award" in 1992.

"I'm absolutely delighted and honored to be considered an honorary member of the Alumni Association," says Trefny. "I've been associated with the School for 23 years and I'm more and more impressed with this insitution with every day that goes by. I'm very proud of it."

# Reunion 2000

## Class of 1940

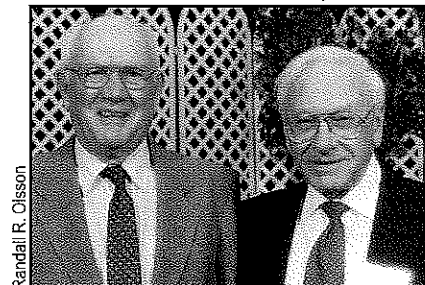


Front row from left: Dick Sullivan, Howard Schmuck, Pres. Ted Bickart, Paul V. Fillo. Middle row: Fillmore Peavey, Al Hoyl, Walt Heinrichs, Dub Warren, Stuart Hussey. Standing: Ted Goudvis, Bob Knapp, Russell Badgett Jr., Bill Mueller, Marv Gantz.

The Class of 1950 received silver diplomas at commencement, which many alumni attended. CSM awarded 191 bachelor of science degrees, 55 masters and 11 doctorates.

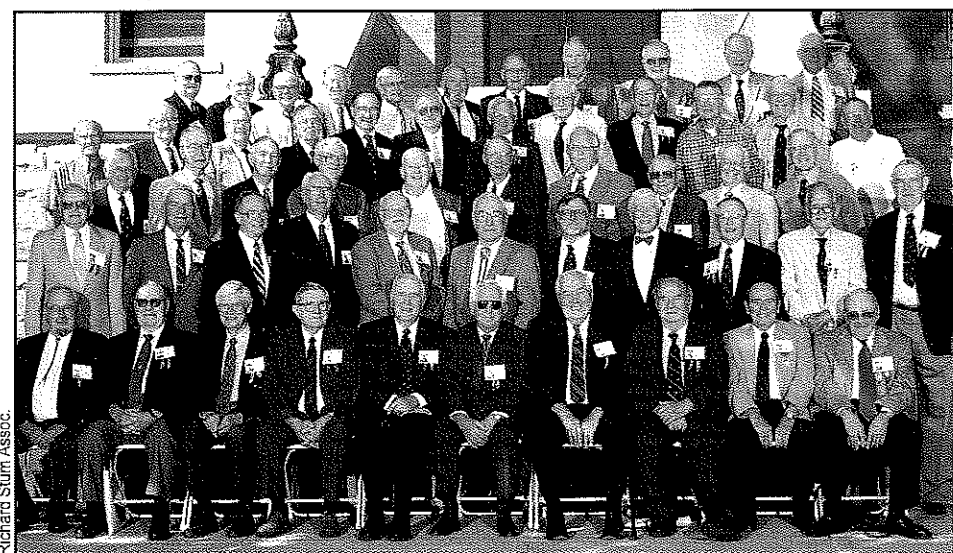


## Class of 1945



Louis E. Gaspar (left) and Del Low.

## Class of 1950



Front row from left: Hermann Hofmann, Niles Grosvenor, Walter Chapman, L. Luke Fournier, Don Andrews, Wendell Scott, Richard Siegfried, Andy Keleher, George Miller, Carl Watson. Second row: Keith Comstock, Ted Schassberger, Dennis Gregg, Martin French, Edward Warren, John McIver, Casey Endacott, William Hommel, Art Dickinson, Cleveland Dear Jr., Henry Otto. Third row: Dave Caldwell, Floyd Burnside, William Payne, Don Herron, John Jameson, Donald Johnson, Roger Nelson, Bill Bessinger, John Wyatt, Gerald Bond. Fourth row: Lou Landers, Jack Warren, Henry Ehringer, Fred Rice, Larry Barrett, Donald Ashe, John Petrocco, Bill Hasbrouck, Marvin Hewitt, Paul Hinds, Douglas Benton, William Young. Fifth row: Steve Booth, Jim Murphy, Ben Slothower, Tyler Brinker, John Newhouser, Dick Martin, Lynn Brown, Herb Waterman, Jack Quinn, John Weyler, Glenn Poulter.



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## Class of 1955



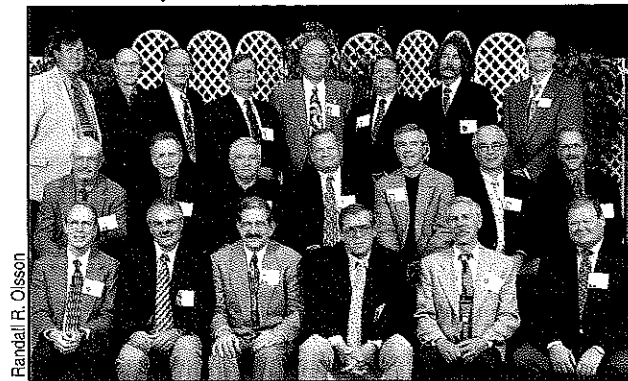
**Front row from left:** Chet Norstrom, Don Wienecke, Harry M. Conger, Don Thorson, John P. McKenzie, Chet Love, Howard Wittenberg, Parks Bunn. **Standing:** Charles Stewart, Tom Ise, Frank Blakeslee, Will Danker, Bob Hohne, Fred Gruberth, Borbert E. Smith, Jack Gallagher, John Austin, Dick Dreith, Frank Akiyama, Bill Harvey, Dean Laudeman, Dick Stallings, Lew House, Don Wagner, Gail Penfield '56, Patrick Thomas, Wallace MacLean

## Class of 1960

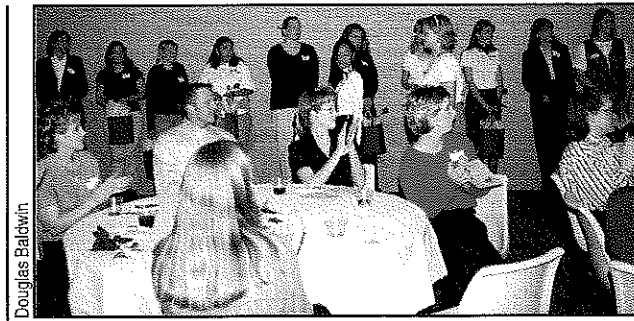


**Front row from left:** Ken Lerner, Jack Evers, John B. Smith, Les Meltzer, Gail Loper, Dennis O'Neil, John R. (Bob) Smith, Walter Knudsen. **Middle row:** Richard Daniele (white moustache), Dave Gilbert, Bill Samuels, Bill Engle, Paul Harrison, Bob Cederstrom, Dave Watson, Roger Osborne, Jerry Ingelritzt, Judge Holmes. **Standing:** Vic Vickery, Ed Crabtree, Joe Goldhammer, Jack Frost, Jim Montgomery, George Kane, Ed Rapp, Bruce Heister, Ed Wing, Wes Hoagland, Joe Reese, Glenn Walton, Tony Pegas, Jon Kirkpatrick.

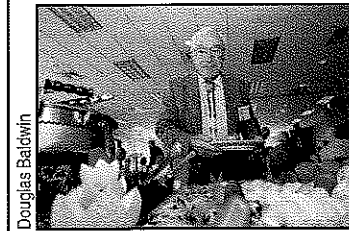
## Class of 1965



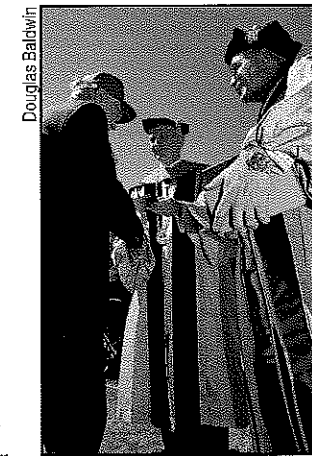
**Front row from left:** Bob Barday, Jim Huddleston, Rich Hichman, Bob Woodbury, Lothar Klingmuller, Rober Abel. **Middle row:** Ernie Bradley, Bill Wilson, Orlie Gallegos, Jack McCartney, Jeff Babcock, Frank Erisman, John Weber. **Standing:** Barry Quackenbush, Bill Wilson, Herb Price, John Zak, Michael Cruson, Lloyd Elkins, Marvin Erickson, John Turley.



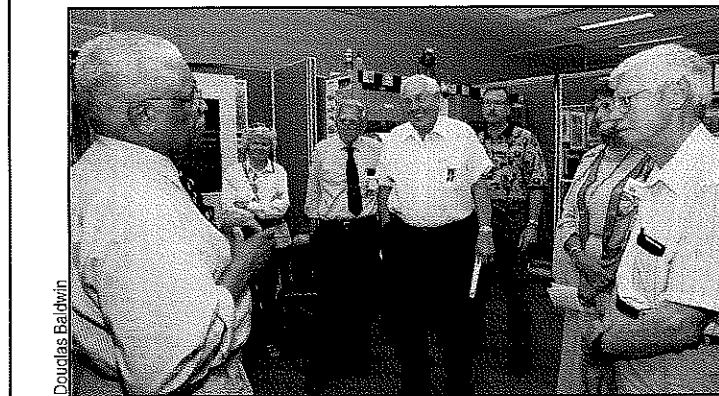
Commencement included The Continuum honoring women graduates.



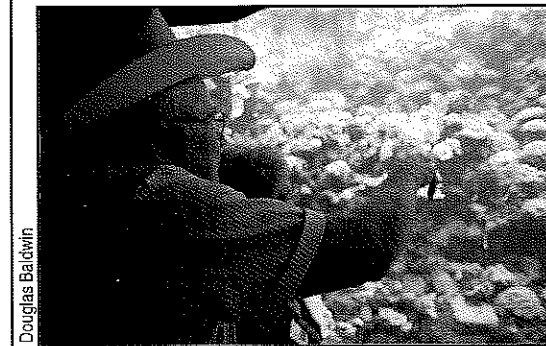
John D. McIver Met E '50 serves himself during his class breakfast.



Pres. Ted Bickart presents a member of the Class of 1950 with a silver diploma while Frank Erisman Met E '65 looks on.



Alumni and their families had fun touring the Earthquake Center in Golden...



...and Ocean Journey in Denver.

## Class of 1970



**Front row from left:** Bob Bills, Bill Bearson, Steve Schwochow. **Middle row:** Bruce Craig, Charley Crew, Robert Nichols. **Standing:** Steven Heller, Tim Haddon, Craig Garrett, Randy Roper.

## Class of 1975



**Front row from left:** Dave Lee, Joe Garbee, George Puls, Kirk Nobis. **Middle row:** Damian Friend, Kay Lee, Bill Warfield, Cathy Cutrell, Rich Bohling. **Standing:** Paul Shattuck, Keith Brownlee, Henry Kolego, Jim McCune, Bill Reitze.

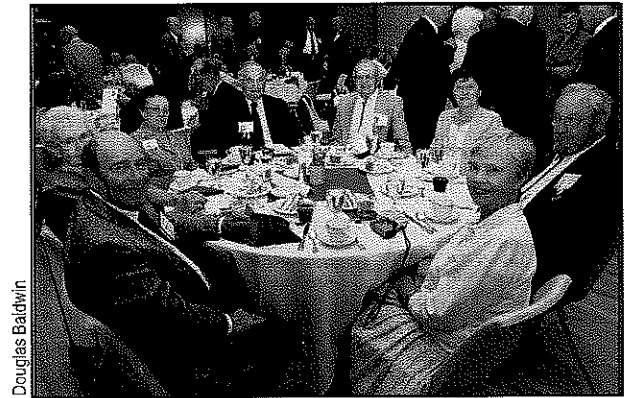
## Class of 1980



**Front row from left:** Steve Patton, Frank DeLuca, Rebecca Miller Nicholson, Gerald Kelton, Len Seymour, John Gould, George Sharpe. **Middle row:** Chuck L'Herueux, Greg Merrion, Pat Lavergne, Gail Myer, James Ferguson, Bob Morgan, Jean-Jacques Newey. **Standing:** Steve Smith, Russ Fontaine, Bruce Hansen, Patriuck Smyth, Debi Lawless, Brian Rothkopf, Don Einarson, Steve Lowe.



Friedhoff Hall was readied for the All-Alumni Dinner Saturday night.



Alumni, spouses and friends sat at tables of eight during the dinner.



Reunion classes presented Pres. Ted Bickart with a check for \$2,317,224.



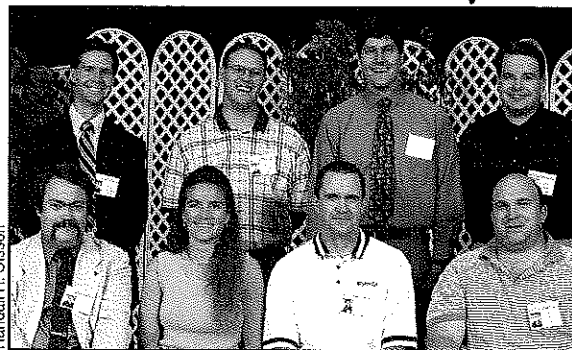
More than 300 people attended the all alumni dinner Saturday night.

Class of 1985

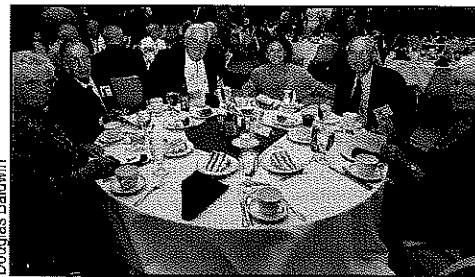


Front row from left: George Wayne, Darren Hadley, Colleen Wilkinson, Jeff Anderson. Standing: Brian Smith, Scott Clark, Jeff Styers, Paul Anderson.

Class of 1990



Front row from left: Terrill Ray, Anna Duda, Jeff Fodor, Allen Schultz. Standing: Ward Whiteman, Wayne Costa, Larry Krahl, Eric Jensen.



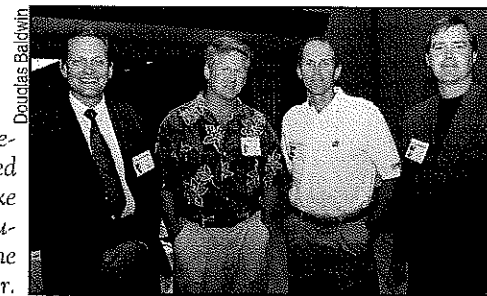
Douglas Baldwin



Douglas Baldwin

Dave Coolbaugh Geol E '43, EM '47, DSc Geop '61, left, shares a laugh with Kenneth Fenwick EM '36 and his guest, Mary Martensen.

Class of 1980 celebrants included from left, Mike Fink, James Ferguson, Pat Lavergne and Gail Meyer.



Douglas Baldwin



Mines marbles, the latest from the Miner's Pick, went on sale for the first time during Reunion 2000. The marbles, each a spherical triangle approximately 7/8 inch tall, come five to a velour bag, four blue and one white. They sell for \$10 per bag plus \$1.50 for shipping and handling.

CSMAA Mines Marbles ORDER FORM

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City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone \_\_\_\_\_

Quantity	Unit Price	Total
	\$10/bag of 5 Mines marbles	
	Merchandise Total:	
	Sales Tax: 7.3% (Colorado only)	
	Postage & handling	\$1.50
	TOTAL (payable to CSMAA)	

Return form and check or money order to:  
CSMAA Mines Marbles  
P.O. Box 1410  
Golden, CO 80402

1939  
E.R. Pedersen EM is retired in Selma, Calif.

1943  
Ted P. Stockmar PE is retired and lives in Denver.

1948  
James L. Bowen PE is retired in Bakersfield, Calif.  
Robert H. Freeman EM has retired from Eastern Enterprises.

1949  
William H. Bashor Jr. PE is retired in Castle Rock, Colo.

Marvin H. Estes Met E is vice president, Risk Management Services, Inc., in Wheat Ridge, Colo.  
Harold B. Overstreet EM is retired and lives in Attalla, Ala.  
William W. Sabin PRE is retired and lives in Montrose, Colo.

1950  
Carl N. Bidinger PE is a retired area superintendent from Unocal Corp. He lives in Sun City, Ariz.  
B.M. Dincef PE is retired and lives in Istanbul, Turkey.

Lt. Gen. Howard W. Leaf Geop E has retired from the U.S. Air Force and lives in Brandywine, Md.  
David H. McMurrin Geol E, MSc Pet '59 is retired and lives in Tyrone, N.M.  
William F. Ward PRE is retired in Golden, Colo.

1951  
Elmer F. Kessler Geol E is retired and lives in San Saba, Texas.

John D. Noll EM is president and chief executive officer of John D. Noll Co., Inc. in Santa Clara, Calif. He lives in San Jose, Calif.

Joseph H. Sullivan Geol E is executive director of County Taxpayers League in Sacramento, Calif.

1952  
Charles A. Champion Geol E, MSc Pet '62 is retired president of Tower Petroleum Corp. He lives in Corona del Mar, Calif.

Thomas H. Riley Geol E is a retired chief executive officer for Plenum Co. in Los Gatos, Calif.

1953  
Thomas Ryan Met E is retired in Hamden, Ct.

1954  
Garth L. Hayes Geol E is retired and lives in Eianora Heights, New South Wales, Australia.

Sidney B. Peyton EM is retired in Bellevue, Wash.  
Robert A. Metz Geol E is principal of R.A. Metz Associates. He lives and works in Tucson, Ariz.

Louis L. Phannenstiel PRE has retired from being a consultant with Raytheon Engineers & Constructors. He lives in Littleton, Colo.

Richard D. Ridley PRE is a home missionary for the Assemblies of God in East Greenwich, R.I.

1955  
Frank M. Akiyama PRE is retired and lives in Co-

lumbia, Md.  
1956  
Richard E. Church Geol E is retired in Denver.

Robert G. Mentan PRE is a key accounts client manager for Enron Energy Services in San Ramon, Calif.

John F. Sulzbach EM is principal of International Management Services in Redwood City, Calif.  
John J. Zeman PRE is a financial adviser for AXA Financial, Inc. in Clayton, Mo.

1958  
William C. Bagby PE owns Bagby and Co. in Houston.

James B. Mollison Geol E has retired as president of South Dakota Concrete Products Co. He lives in Pierre, S.D.

1959  
John H.W. Haig PRE is retired in Overland Park, Kan.

James M. Link Geol E is retired and lives in Denver.  
John I. Myung Geop E is a mining consultant for Myung & Associates, Inc. in Houston.

Frank J. Ucciardi EM has retired from Consol Energy and lives in Pittsburgh, Pa.

1960  
R. Glenn Vawter PE is an executive with TRW Environmental Safety Systems in Las Vegas.

1961  
W. Gordon Peters EM is president and general manager for Trapper Mining Inc. in Craig, Colo.

1963  
Martin C. Kuhn Met E, MSc Met '67, DSc Met '69 is principal/chairman for Minerals Advisory Group LLC in Tucson, Ariz.

Carl M. Edstrom Met E is a laboratory manager for Montason Technologies in Denver. He lives in Arvada, Colo.

John W. Peters EM is manager, mining operations for Morrison Knudsen Corp. in Las Vegas.

Charles B. Travis Geol E is senior engineer/scientist for Apex Environmental, Inc. in Aiken, S.C.

David L. Seymour MSc Geol is president of Asian Phoenix Resources Ltd., in Victoria, British Columbia, Canada. His e-mail is diseymo@attglobal.net.

1964  
Lee P. Berti PRE, MSc CPR '66, DSc CPR '68 is vice president for The Continuous Learning Group Inc. in Coraopolis, Pa.

Thomas P. Hansen PhyE is lead engineer for the Federal Aviation Administration in Denver.

Ronald B. Mellor PE is operations superintendent for Talisman Energy Ltd. in Littleton, Colo.

Barrett E. Sleeman EM is president of Omicron Technologies Inc. in Vancouver, British Columbia, Canada.

1965  
Duane N. Bloom DSc Geol is retired from Earth

Sciences. He lives in Golden, Colo.

Rev. Dale W. Peterson Geop E is quality assurance manager at Hebron Bible College in Rynfield, South Africa. His e-mail address is peterson@global.co.za.

1966  
Richard N. Kemp Geop E is a regional aviation trainer for the National Park Service in Fairbanks, Alaska.

Robert W. Murray PRE is owner and corporate leader of Webb, Murray & Associates Inc. in Houston. He lives in Seabrook, Texas.

David B. Percy Geol E is president of Dave Percy & Associates in Midland, Texas.

1967  
Hans A. Meinardus DSc Geop is retired and lives in Sugar Land, Texas.

1968  
William S. Davis Jr Geop E is retired from Penzoil in Houston.

Thomas S. Elliot PE is senior management advisor for Equinox Oil Co. in The Woodlands, Texas.

Henry J. Smith III Geop E is owner of Henry J. Smith Consulting in Ramah, Colo.

Gerald S. Willett EM is chief technology officer of Assoc. Financial Group Inc. in Los Angeles.

1969  
George W. Conradt Geol E is president of Cordilera Engineering Inc. in Salt Lake City, Utah.

David L. Lundquist Chem E is program manager for Lockheed Martin Missiles and Fire Control in Orlando, Fla.

Jay A. Spickelmier Met E is retired from ASARCO Inc. and lives in East Helena, Mont.

Harry V. Temple Jr. PE is a prosthodontist and Rosalyn I.R. Temple Math E is his financial manager in Boston. They live in Winchester, Mass.

1970  
Larry J. Compton PE is president and general manager of VECO Rocky Mountain Inc., a division of VECO Rapley Inc. He lives in Littleton, Colo.

Robert E. Deister BSc Chem is a quality management consultant for Deister Consulting Co. in Kingwood, Texas.

James S. Herb Met E is vice president of Michigan Wire Processing Co. in Lowell, Mich.

Frederick E. Kastner MSc Pet is retired and lives in Cody, Wyo.

Roman Z. Pyrih MSc Chem, PhD Chem '74 is president of Geochemical Ventures International. He lives and works in Golden, Colo.

Barry L. Sauve BSc Geop is senior geophysical scientist for Exxon Exploration Co. in Houston.

James M. Bell Geop E is a geophysicist for Lariat Petroleum in Tulsa, Okla.

Clifford W. Stratton Jr. BSc Pet is vice president of BATAA Oil, Inc. in Greeley, Colo.

Jerry Thompson BSc CPR is senior vice president of development for Citgo Petroleum Corp. in Tulsa, Okla. He lives in Bixby, Okla.

Paul E. Thompsen BSc Met is director of metallurgy for KVAERNER E&C in San Ramon, Calif.

1972

Richard Cadle BSc CPR is director or engineering GTL for Arco in Plano, Texas.

John C. Vanko BSc Geop is senior technology engineer for Black & Decker Inc. in Timonium, Md.

1973

Raul E.F. Alvarado BSc CPR is a managing partner, electronics and high-tech Europe, for Andersen Consulting. He works in Madrid, Spain and lives in Mendham, N.J.

Jefferson D. McKenzie BSc Min is an independent consultant and lives in Salt Lake City, Utah.

1974

Shamseddin "Shane" S. Mohammadi BSc CPR, MSc CPR '75, PhD CPR '81 is president of PetroInternational in Sargar Land, Texas. He lives in Irvine, Calif.

Robert G. Parkinson BSc Met is manager of process technology for GST Steel in Kansas City, Mo.

Thomas H. Plate BSc Min took early retirement from Consol Inc. to look for new opportunities in the western United States.

1975

Steven A. Barker BSc CPR, MSc CPR '75 is a professional engineer with CH2M Hill in Richland, Wash.

Larry S. Jaycox BSc Min is division manager for industrial division, JR Engineering, Ltd. He lives in Pueblo, Colo.

Steve A. Lambert BSc Pet is business coordinator for Unocal Indonesia and lives in Sugar Land, Texas.

Robert N. Mohn BSc CPR is load processing engineer for BP Amoco Chemicals in Alvin, Texas. He lives in Houston.

David E. Perkins BSc Geop is a Stardust Spacecraft Systems engineer for Lockheed Martin Astronautics. He lives in Morrison, Colo.

Andrew P. Schissler BSc Min is senior project manager for RAG American Coal Co. in Englewood, Colo.

Raj Sharma BSc CPR, MSc CPR '77, PhD CPR '81 is director for EPIN Systems PVT Ltd., in Jaipur, India. His e-mail is raaj\_sharma@hotmail.com.

1976

T. Arthur Palm BSc Min is vice president of Mencon in Price, Utah.

Craig W. Smith BSc Geol is principal consultant for Cap Gemini America Corp. in Englewood, Colo.

1977

David W. Ashcom MSc Min has been promoted to associate by Camp Dresser & McKee Inc., a global consulting, engineering, construction and operations firm.

Michael K. Decker BSc Geol is president/owner of Black Diamond Energy, LLC in Englewood, Colo.

William A. Sargent BSc Pet is Alaska region project development manager for Phillips Petroleum Co. in Bellaire, Texas.

Christopher C. Traeger BSc Geop, Geop E is president of TRACO International in Ventura, Calif.

Wayne G. Zeornes BSc Geop is senior staff geophysicist for Apache Corp. in Houston.

1978

Richard G. Dillon PE is vice president/senior consultant for International Reservoir Technologies in Lakewood, Colo. He lives in Littleton, Colo.

Sonia Swartz BSc Geol is corporate development program manager for the Idaho Power Co. in Boise, Idaho.

Michael R. Tolliver BSc Min is mine maintenance superintendent for OCI Wyoming, LP in Green River, Wyo.

Janice D. Williams BSc Geol is senior director, environmental and regulation for Fluor Global Services-Hanford in Richland, Wash. She lives in Pasco, Wash.

1979

N. Jose J. Gutierrez MSc Geop is vice president of the World Mining Congress. He lives in Durango, Mexico.

Ronald L. Shook Jr BSc Geop is exploration manager-Brazil for Unocal Corp. in Sugar Land, Texas.

Scott T. Wilson BSc CPR is vice president of Western Hub Properties in Houston. He lives in League City, Texas.

1980

Ken Altschuld MSc Geol is owner of Altschuld Oil, LLC in Englewood, Colo. He lives in Castle Rock, Colo.

Brooke L. (Simmons) Bell BSc Pet is senior management analyst for the City of Aurora, Colo.

Brian E. Hughes BSc B E is an engineer with Hatch Mott McDonald.

Roger G. Eustance BSc Geol is senior vice president for the Stratum Group LP. He lives in New York City.

David F. Mayer BSc Pet is reservoir management engineer for Aera Energy, LLC in Bakersfield, Calif.

1981

Keith L. Elliott BSc CPR is senior engineer for TriHydro Corp. in Laramie, Wyo. He lives in Buena Park, Calif.

Joseph A. Farinelli BSc Min is a longwall man-

ager for MIM in Trier, Queensland, Australia. His e-mail is Jafari@gld.mim.com.au.

Clinton L. Harman BSc Pet is owner of Clinton Lee Harman Co. in Houston.

Colin Nisbeth CPR is president and CEO of Brazos River, an oil and gas company focused on exploring and producing from deep, complicated structures in south Louisiana. After resigning as vice president of Shell Capital, he arranged for Brazos River to purchase production, seismic and acreage in three giant, mature fields along the Gulf Coast. Nisbeth is growing the company to be a major producer by acquiring and redeveloping mature fields previously owned by major oil companies.

Kevin J. Ryan BSc Min is senior project engineer for CDM Engineers & Contractors Inc. in Reno, Nev.

Marc A. Tidquist BSc Min is a senior project engineer for Anglogold North America in Elko, Nev. He lives in Spring City, Nev.

1982

Donnie R. Enns BSc Geop is new ventures manager for Europe and the Middle East for Occidental Oil and Gas Corp. He lives in Sugar Land, Texas.

Michael J. Foley BSc Geop is head of the commercial division of Shell Petroleum Development Co. of Nigeria, Ltd.

W. Charles Kelly BSc Pet, MSc Min Ec '84 is owner of Kelly Dream Builders LLC in Granbury, Texas. He lives in Benbrook, Texas.

Kevin A. Sparks BSc CPR, MSc CPR '83 is senior scientist at Quantum Catalytics in Fall River, Mass. He lives in Scituate, Mass.

Eric W. Wieduwilt BSc Geop is a civil engineer for Pima County and Mitzi (Rejeske) Wieduwilt BSc Geol '83 is a teacher for Amphitheater Public Schools. They live in Tucson, Ariz.

1983

Mobashir Noman Ahmad BSc Geop is installation engineer for Kamputech, Inc. in Eatontown, N.J.

Gregory A. Bruce BSc Min is senior mine engineer for Pasmenco, Clinch Valley Mine, Thorn Hill, Tenn.

William A. Burgett MSc Geop is president of Decision Advantage Consulting in Houston.

Jeffrey S. Samuels BSc Min is mining manager for Ilvka Resources Inc. in Green Cove Springs, Fla.

1984

Bobby D. Brady Jr. BSc Pet is area manager for Fidelity Exploration and Production, Inc. in Denver. He lives in Littleton, Colo.

Robert W. Knight BSc CPR is marketing manager for Atlantic Richfield Corp. He lives in Sterling Heights, Mich.

Howard W. McCarthy BSc Pet is senior engineer for RTW in Denver. He lives in Aurora, Colo.

Jeffrey K. Warmann BSc CPR is operations manager for Williams Refining LLC in Memphis, Tenn.

1985

John D. Harkrider BSc Pet is a drilling consultant for Apex Petroleum Engineering. He lives in Englewood, Colo.

Michael E. Kalinski BSc Geop is a senior staff engineer at GeoSyntec Consultants in Huntington Beach, Calif.

Gary L. Pratt BSc Math is chief information officer at Northern Kentucky University. He lives in Newport, Ky.

Stephen M. Struna M Eng Pet is vice president and general manager of BP-Amoco Canada. He lives in Calgary, Canada.

Richard S. Tallman BSc Geol, M Eng Geol '93 is a self-employed business consultant in Denver.

1986

Patricia M. Howard BSc Chem is a test and evaluation engineer with Geo-Centers in Stafford, Va.

Christopher E. Kensel BSc Min is vice president of Blue Chip Engineering Inc. in Plover, Wisc. He lives in Wisconsin Rapids, Wisc.

Ruth Stinson MSc Min recently joined PBS&J as division manager for geoscience and air quality services in the central United States geographic region. She is located at the company's Dallas office. PBS&J is an employee-owned firm that provides a broad range of planning, design, environmental, civil engineering, transportation and construction management services.



Steven J. Van Howe BSc Pet is a production engineer for Burlington Resources in Houston.

1987

Linda A. Battalora BSc Pet, MSc Pet '88 a patent attorney and litigator with Victor F. Boog & Associates, PC in Lakewood, Colo. She resides in Denver with her husband, Robert W. Foote, and their Boston terrier, Ivan (the Great!).

Dan Donoho BSc Geop and Jill Kristan BSc CPR '88 were married May 15, 1999 at Saint Mary Church in Pueblo, Colo., followed by a reception at the Pueblo Union Depot. The newlyweds honeymooned in London and Paris. The wedding was attended by Joe Kristan BSc Met '93, MSc Met '97, Dave Beck BSc Eng '88, Buzz Davis BSc Geop '86, Eric Gardner BSc Phy '85, Catherine (Reasoner) Gardner BSc Geop '85, Jeff Hemphill BSc Phy '86, Dave Wilson BSc Geop '84, Jean (Rickert) Wilson BSc Geop '86, Tim Lane BSc Geop '88 and Sue (Hollingsworth) Williams BSc Geop

1987

1987

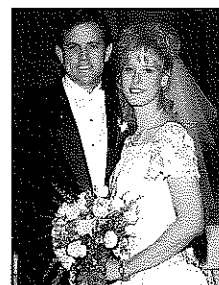
1987

1987

1987

1987

1987



'87. Dan is chief geophysicist for Resource Solutions LLC and Jill is chief engineer and director of business development for Nexus Resources Inc. They live and work in Denver.

1988

Erin J. Nelson BSc Geol is an environmental engineer for King County in Seattle.

Raymond M. Sadowski MSc Geochem was promoted to principal by Camp Dresser & McKee Inc., a global consulting, engineering, construction and operations firm. He is an environmental engineer with 30 years of experience, specializing in management of large-scale natural resource and environmental programs. He is a member of the Academy of Hazardous Materials Management and the Society of American Military Engineers.

John A. Karachewski PhD Geol is senior project hydrogeologist for Weiss Associates, Lawrence Livermore National Laboratory. He lives in Walnut Creek, Calif.

Randal D. Strauss BSc Geol is managing director of the international division of Istari Group in Lincoln, Neb.

Todd M. Versaw BSc Math is a consultant for Microsoft Corp. in Redmond, Wash. He lives in Seattle.

Thomas A. Zalan PhD Geop is a formation evaluation specialist for Chevron Corp. in Malongo, Angola. His home is in Bakersfield, Calif.

1989

James B. Nelson BSc Geol is manager, CAD/GIS services for Harvard University. He lives in Newburyport, Mass.

Geoffrey Newel Smith BSc CPR is an area construction engineer for Anheuser-Busch in Houston. Steve Sparkowich BSc Met is senior product engineer for Wah Chang in Albany, Ore. He specializes in titanium and niobium alloys.

1990

Silverio J. Colalancia BSc Met is finishing unit manager for Alcan Aluminum Corp. in Terre Haute, Ind.

Dale R. Loveland Jr. BSc Eng is a process superintendent for Degussa Corp. and Elizabeth Cook-Loveland BSc CPR '91 is a process and controls engineer for Onyx Engineering in Corpus Christi, Texas. They live in Portland, Texas.

Judith A. Schenk BSc Geol is a hydrologist for HRS Water Consultants Inc. in Lakewood, Colo.

1991

Richard C. Ginder BSc Eng is a field engineer for Granite Construction Co. in Wilmer, Texas.

Steven W. Johnston BSc Eng, PhD Mat Sc '99 is a research scientist at National Renewable Energy Laboratory in Golden, Colo. He got married in April.

1992

Andrew P. Espenscheid BSc CPR is a photolithography engineering section manager for Motorola Inc. in Austin, Texas.

Todd W. Griess BSc Eng is an electrical engineer for Woodward. He lives in Lakewood, Colo.

1993

Alison Thomas Begeman BSc Geop is a user education specialist for Landmark Graphics in Englewood, Colo.

Dean R. Bell BSc Pet is Gulf Coast measurement operations manager for Schlumberger in Lafayette, La.

Robert W. Bogle Hydrogeol is a geologist for Slawson Exploration Co., Inc. in Denver.

Michael J. Carstens BSc CPR is a plant engineer for Archer Daniels Midland in Frankfort, Ind.

Christopher M. Hougland BSc Met is production manager for AccuRay. He lives in San Jose, Calif.

Heather L. Sebastian BSc Eng is a consultant for Sage Construction Co. in Denver.

Christopher T. Settje BSc Eng is a design engineer for Seagate Technology. He lives in Broomfield, Colo.

Douglas M. Stevenson MSc Chem is a pharmaceutical scientist for Neways, Inc. and lives in Santaquin, Utah.

Friends of George MSc Pet '93 and Katerina (Papakonstantinou) Vassilellis MSc Geop '98 hosted a get-together in Bakersfield, Calif., to celebrate the upcoming birth of their first child, Damianos, born Feb. 13. Beth BSc Pet and Joe Nahama MScPet '90 hosted an alumni get-together to celebrate the impending birth of the first child of The baby, Damianos, was born Feb. 13.

1994

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in San Anselmo, Calif.

Eric J. Mulder BSc CPR is a plant supervisor for ChemDesign and lives in Worcester, Mass.

Koon Eiong Tan BSc Min, MSc Min Ec '97 is a junior trader for Statoil. He lives in Norway.

Bichun Zu BSc CPR, MSc CPR '96 is a consultant for Multiphase Solutions Inc. in Houston.

1995

Ian David Lindsay BSc Eng is a superintendent for Kiewit Construction in Danbury, Conn.

Dong-Hoon Min PhD Phy is a research engineer for Samsung Electro-Mechanics Co., Ltd. in Seoul, South Korea.

Tim Saenger BSc Phy is senior photo process engineer for Texas Instruments in Dallas.

Richard M. Wenzel BSc Geol is a scientist with Catlin Engineers & Scientists in Wilmington, N.C.

1996

Troy B. Dinkel BSc CPR is a nuclear engineer for Knolls Atomic Power Laboratory in Ballston Spa, N.Y.

Esther Fueng MSc Geop is sole proprietor of Alaska Data Services. James Fueng MSc Geop is project geophysicist of Kennecott Exploration. They live in Chugiak, Alaska.

Jennifer R. Glenon BSc Met, MSc Met '98 is a quality engineer for Western Forge in Colorado Springs, Colo.

Nicholas F. Hernandez BSc CPR is field engineer for Sperry-Sun Drilling Services in Everett, Wash.

Craig T. Sakata BSc Eng is a mechanical engineer for Johns Manville Corp. in Littleton, Colo. He lives in Golden, Colo.

1997

Rebecca R. Conner Rowley BSc CPR is a process engineer for Texas Instruments, Inc. and lives in McKinney, Texas.

Michael D. Rod BSc CPR is a self-employed consultant in Littleton, Colo.

Derek T. Webb BSc Geol and Melanie (Maynard) Webb BSc Econ '99 work for Level 3 Communications Inc. Derek is a project planner and Melanie is an access planner. They live in Golden, Colo.

1998

David A. Buell BSc Phy, M Eng Met '99 is a research assistant at University of California-Santa Barbara and lives in Goleta, Calif.

Jason H. Carmichael BSc CPR is software integration and build engineer for Nortel Networks Inc. in Richardson, Texas.

Jason P. Gilger BSc Mat & Comp Sci is a network operations center engineer for High Speed Access Corp. in Denver. He lives in Golden, Colo.

Larry J. Johnson BSc Eng is a consultant for -1BI Group in Aurora, Colo.

S. Thyda Som BSc Eng is marketing engineer for Agilent Technologies in Colorado Springs, Colo.

Umair A. Syed BSc Eng is a drilling service engi-

neer for Anadrill-Schlumberger in Youngsville, La.

Kyle Yearous BSc CPR is process engineer for Formosa Plastics Corp. in Point Comfort, Texas.

Michael Young BSc Eng is a mechanical engineer for ELX/Washex Challenge and lives in Wichita Falls, Texas.

1999

Talgat K. Abdullaev BSc Pet is employed by Atakent. He lives and works in Almaty, Kazakhstan. He can be reached at tabdulla@excite.com or talgatt777@yahoo.com.

Joseph Paul Anaya BSc Eng is a team leader for Coors Brewing Co. and lives in Denver.

Joseph S. Anderson MSc Min Ec is in the U.S. Army.

Eiichi Arai Geop E is a geophysicist for the Metal Mining Agency of Japan. He lives and works in Tokyo. His e-mail is earai@mmapj.go.jp.

Ben Bayer BSc CPR is a process engineer for Motorola.

Russell A. Brain BSc CPR is a 2<sup>nd</sup> lieutenant in the U.S. Army.

Rex L. Brown BSc Chem is a police officer for the Lafayette, Colo., police department and lives in Fort Lupton, Colo.

Samuel M. Brubaker BSc Eng is plant engineer for Holnam, Inc. in Morgan, Utah.

Alfredo A. Chambilla-Quispe M Eng Min is a mining engineer for Minera Aurifera Retamas S.A., in Lima, Peru.

Desa R. Corwine BSc Eng is an engineer for JR Engineering, Ltd. in Englewood, Colo. and lives in Golden, Colo.

Christopher L. Crowley BSc Eng is an engineer-in-training for Shephard-Wesuitzer, Inc.

Mohan B. Dangi BSc CPR is a chemist for Great Western Inorganics in Arvada, Colo.

Wei Deng MSc Math & Comp Sci is a consultant for Geographic Information Technology, Inc. in Englewood, Colo.

Michael F. Dupra MSc Min Ec is a commander in the U.S. Army.

Trevor B. Eaves BSc Phy is spacecraft ground controller for Lockheed Martin Astronautics in Denver.

Luke E. Erikson BSc Math and Comp Sci is a programmer analyst for NHELP in Aurora, Colo.

David B. Graham BSc CPR is a chemical engineering intern for Particle Measuring Systems in Boulder, Colo.

David W. Grauel MSc Min Ec is a personnel programmer analyst for the U.S. Army and lives in Dumfries, Va.

Justin Gregg BSc Phy is a hardware engineer for SEAKR Engineering in Englewood, Colo.

Matthew T. Halker BSc Pet is a facilitator/engineer for Vastar Resources Inc. in Houston.

Ryan Zach Hall BSc Eng is a 2<sup>nd</sup> lieutenant in the U.S. Air Force.

Peter D. Harriman BSc CPR is a facility engineer for BP Amoco p.l.c.

Christopher A. Jarratt BSc Eng is a 2<sup>nd</sup> lieutenant and an air battle manager for the U.S. Air Force at Tyndall Air Force Base in Florida.

Greg S. Jenkins BSc CPR is the owner of Hydraulics Inc.

Steven T. Kendrick BSc Pet is a drilling engineer for BP Amoco p.l.c.

Aaron J. Kullman BSc Geol is a geoscientist for Exxon Mobil Inc.

Stefeny B. Lewis BSc Geop is a 2<sup>nd</sup> lieutenant in the U.S. Army.

Adam N. Locke BSc Eng is a consulting engineer for Brockman Engineering Inc. in Morrison, Colo.

Daniel J. Mar BSc Eng is a hydrologist for Texas Instruments Inc.

Gregory D. Metcalf BSc CPR is a consultant for Multiphase Solutions in Houston.

Kevin P. Murphy BSc Eng is an engineer for Raytheon Co.

Paul Murry MSc Geop is a geophysicist for PGS Reservoir Processing in Houston.

Rungrote Nilthong PhD Phy is a professor in Thailand.

Andrew L. Olson BSc Geol is a 2<sup>nd</sup> lieutenant in the U.S. Army.

Kemily (Patterson) Palmer BSc Eng is a design engineer for Johnston Engineering and lives in Golden, Colo.

Mark J. Pavol BSc Eng is a graduate student at Colorado School of Mines.

Mark J. Pietrak BSc Pet is a 2<sup>nd</sup> lieutenant in the U.S. Army.

Desidera L. Quintana BSc Eng is a buyer in procurement for Bechtel Corp.

Jonathan Sabar BSc CPR is a software developer for Gold Systems Inc. in Boulder, Colo. He lives in Denver.

Carrie A. Salimeno BSc Eng, BSc Econ is an engineer with the transportation projects group for Conoco, Inc. in Billings, Mont.

Amer Syahremy Saifuddin BSc CPR works for Petroluam Nasional Berhad in Selangor, Malaysia. His e-mail is Rhemy2@hotmail.com.

Cedar Simmons BSc CPR, BSc Chem is a field engineer for Schlumberger in Laredo, Texas.

Pat Sullivan BSc Eng is a structural engineer for Gillans Inc. in Denver.

Lkhagvadorj Tumuv BSc Met and Mat Eng is a graduate student at Colorado School of Mines.

Leah M. Wolf BSc Geol is associate engineer for Montgomery Watson Mining Group in Steamboat Springs, Colo.

Jenny R. Wolfschlag BSc Eng is a field engineer for Randall and Blake Inc. in Littleton, Colo.

Shane Wylie BSc Eng is a hardware engineer for ICMB Prime Team in Clearfield, Utah. ■

# Dinosaurs Were Here

Prehistoric footprints in the Dakota Hogback give visitors a glimpse of an ancient past. CSM faculty and alumni work to preserve them.

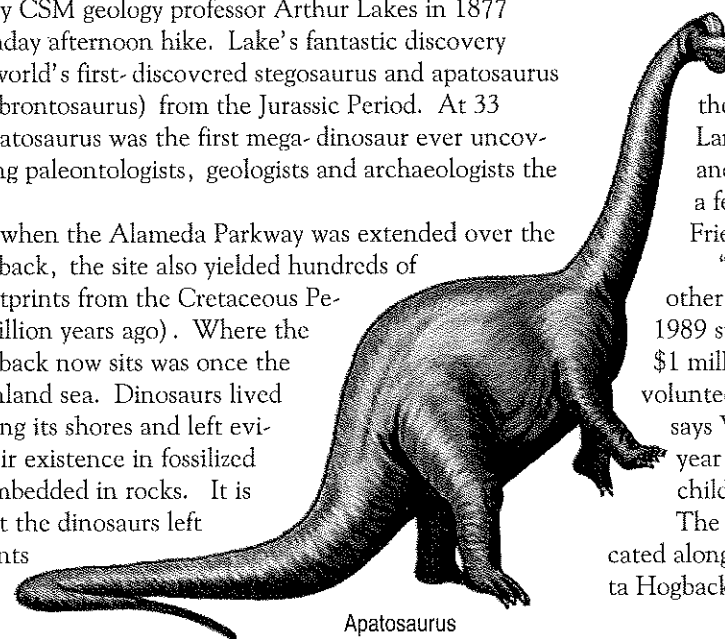
By Maureen Keller

Imagine a terrifyingly strange world where the only sounds are those made by nature, with creatures so huge their movements make the ground shake, and where in place of the Rocky Mountains, a flat, tropical plain meets an inland ocean. This is the Colorado of 150 million years ago, the age of the dinosaur, the Jurassic Period made familiar to all by Michael Crichton. Hollywood is at it again with the recent release of Disney Studio's *Dinosaur*, a feature-length film that brings the prehistoric age to life through animation. Extinct for millions of years, the dinosaur has never been more popular.

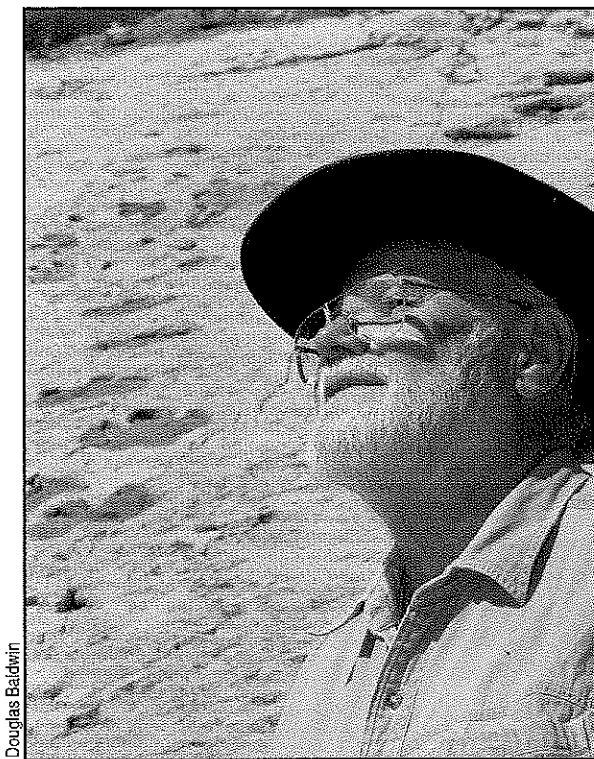
As wonderful as today's technology is at recreating the ancient past, it still can't beat the real thing. And that's what we have in Colorado, practically in CSM's backyard. A treasure-trove of fossilized dinosaur bones and footprints located along the Front Range of the Rocky Mountains near Morrison, Colo., brings thousands of students, scientists and tourists to the area each year to see the prehistoric evidence for themselves.

Dinosaur Ridge, as the area was named in the 1980s, was discovered by CSM geology professor Arthur Lakes in 1877 during a Sunday afternoon hike. Lake's fantastic discovery yielded the world's first-discovered stegosaurus and apatosaurus (also called brontosaurus) from the Jurassic Period. At 33 tons, the apatosaurus was the first mega-dinosaur ever uncovered, exciting paleontologists, geologists and archaeologists the world over.

In 1930, when the Alameda Parkway was extended over the Dakota Hogback, the site also yielded hundreds of dinosaur footprints from the Cretaceous Period (100 million years ago). Where the Dakota Hogback now sits was once the edge of an inland sea. Dinosaurs lived and died along its shores and left evidence of their existence in fossilized footprints embedded in rocks. It is believed that the dinosaurs left their footprints in the sand along the



Apatosaurus



Ed Warren '50 spends much of his free time volunteering at Dinosaur Ridge where fossilized bones and preserved footprints make it a unique site.

beach not long before a nearby now-extinct river flooded, covering the impressions with silt. In addition to footprints, there is evidence of roots from an ancient mangrove-like swamp.

For many years after its discovery, the geologically world-famous site remained unnamed, unmarked, yet easily accessible to all who were interested. For many, the temptation to collect fossils was too great and some even went so far as to chip whole footprints from the rocks. In the mid-1980s, a group of interested parties, including Bob Weimer, CSM professor emeritus and Virginia Mast, CSM geology museum curator, founded Friends of Dinosaur Ridge, whose mission is to preserve and protect the area that is now designated a National Natural Landmark. Ed Warren Geol E '50, Hon Mem '85 and Andy Taylor PhD '74 joined the volunteer group a few years later. Warren is currently president of Friends. Taylor is on the board of directors.

"It's a labor of love," says Warren about his and the other volunteers' activities with the Friends. Since its 1989 start-up, the group's assets have grown to just under \$1 million with one full-time paid director and 130 active volunteers. "Upwards of 100,000 people visit each year," says Warren, predicting 200,000 to 300,000 visitors per year in the near future. "Last year we had 4,000 school children in May alone."

The most easily accessible parts of Dinosaur Ridge are located along the Alameda Parkway that loops around the Dakota Hogback and are well marked with 17 interpretive signs.

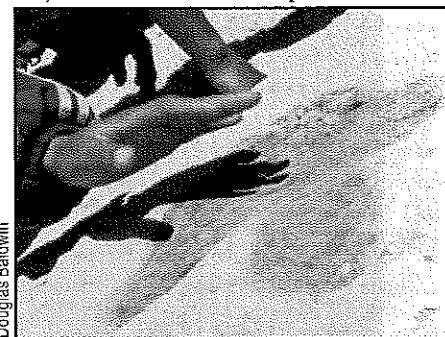
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The more adventuresome can hike a two-mile trail over the Dakota Hogback. About six times a year, the Alameda Parkway access is closed to traffic and guides are stationed along the road to give visitors further insights. A recently purchased bus—brightly painted with scenes from the Cretaceous Period—takes visitors to the site from the visitors center located at the northeast end of the ridge. Future plans include closing the road to traffic permanently, says Warren. The ridge would then be accessible only by bicycle, foot or bus.

The most remarkable sight along the Alameda Parkway is found at Stop 4 on the east side of the ridge. "About one hundred million years ago, the Rocky Mountains rose, pushing the plains up to a 45-degree incline," Warren explains. Highway construction then exposed the face of those slanted rocks.



People love to compare their hand size to dinosaur footprints.

The footprints, which are eroding, have been darkened so that they can be more easily discerned. Solar panels illuminate the site at night. Three hundred and six footprints have been mapped and measured so far.

In addition to erosion, Warren says, "Vandalism is our biggest problem." Fences have been erected around the footprints although researchers, including some college students, are allowed to study the area up close. Money raised by Friends of Dinosaur Ridge has gone toward erecting numerous signs, building a podium for use by guides and establishing and expanding the visitors center.

A former residence purchased by Jefferson County, on property that abuts the ridge,



In a recent promotion of Disney's new movie Dinosaur, the Denver Post, Disney, KYGO radio and Frontier Airlines sponsored a "name the van" contest for Dinosaur Ridge's new vehicle. The winning entry was "Vanosaur" and the winner received a trip to Disneyland and four passes to the screening of the movie.

What the visitor sees at Stop 4 are tracks from Cretaceous dinosaurs, probably ornithomorphs, an ostrich-like carnivore and theropods, an herbivore. Two sets of theropod footprints—one large, one small—run side by side, possibly that of mother and offspring.

serves as the visitors center and includes office space and a gift shop with dinosaur-related merchandise including plaster casts of footprints. Future plans include building a new center, somewhat in the shape of a stegosaurus, with spines atop the roof and a head protruding from the front of the building. The stegosaurus is an appropriate symbol because not only was it first discovered at Dinosaur Ridge, it has since been named Colorado's state fossil. The new center, when built, will be noticeable from the C470 highway.

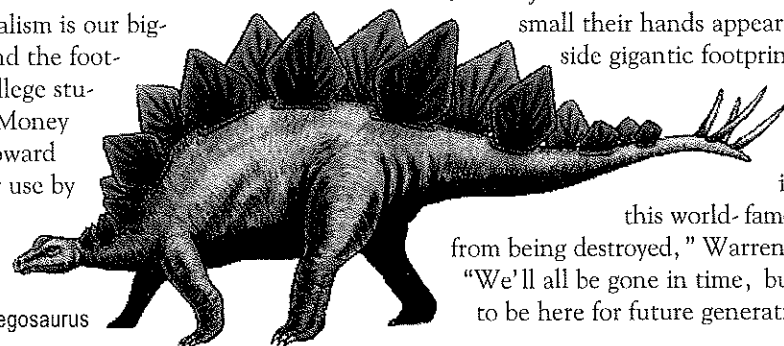
Dinosaur Ridge has special programs throughout the year including Elderhostel lectures (led by Warren) and summer science day camps for children 11-13 co-sponsored by CSM. In the spring, bus loads of school children also visit to watch eagles, hawks and falcons migrating north overhead because the ridge sits beneath a raptor migration corridor.

Preserving Dinosaur Ridge is important for many reasons, says Warren. The site not only gives visitors a unique and remarkable glimpse of the past, it is both free and easily accessible. The thousands who visit can walk right up to the rocks and feel the smoothness of embedded, fossilized dinosaur bones

from the Jurassic Period and marvel at how small their hands appear resting inside gigantic footprints from the Cretaceous Period.

"Our focus is in keeping

this world-famous area from being destroyed," Warren says. "We'll all be gone in time, but we want it to be here for future generations." ■



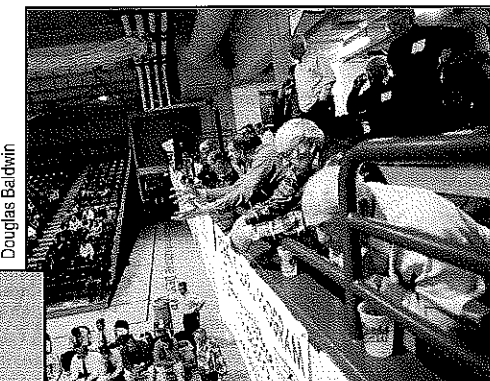
Stegosaurus

The Colorado School of Mines Alumni Association has sections and contacts throughout the world. They are involved in various activities that include social and athletic events, student recruitment, scholarships, and university and community service.

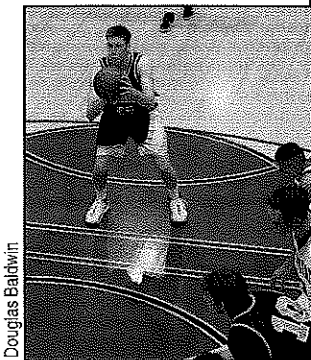
All alumni are welcome to join in the action. Call (800) 446-9488, ext. 3959 for more information

## Metro Denver Region

Forty-two Miners attended the Feb. 22 game against Metro State at its Denver campus and participated at the between-games buffet. The Oredigger basketball team gave the Roadrunners (the eventual National Division II champion) a real battle before losing by 10 points.

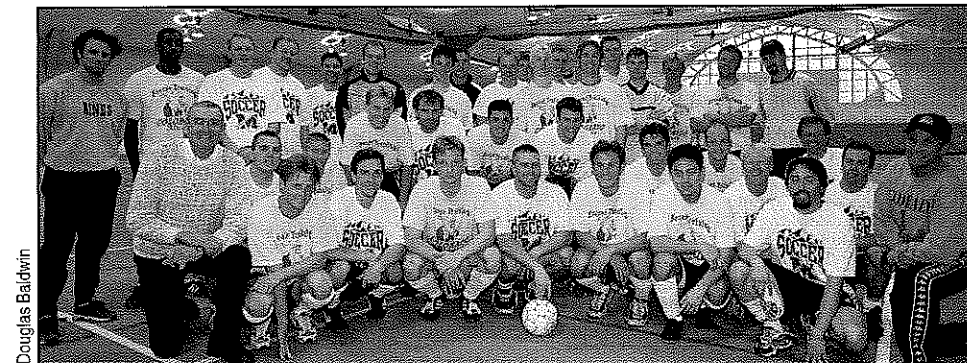
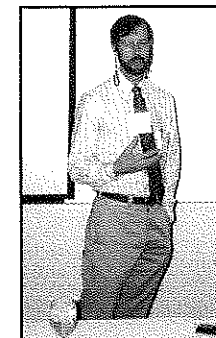


Douglas Baldwin



Douglas Baldwin

Jim Gusek BSc Min '73 (left) gave a presentation on the passive treatment of acid rock drainage during the Denver section luncheon at the Metropolitan Club in March.

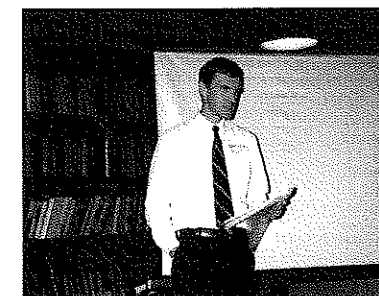


Douglas Baldwin

Although postponed for a day because of snow, the Alumni-Varsity Soccer Match took place April 2 and was a lot of fun. Fifteen alumni players gave their all, but couldn't keep up with the varsity juggernaut coached by Frank Kohlenstein.

## Central Region

### Kansas/Missouri



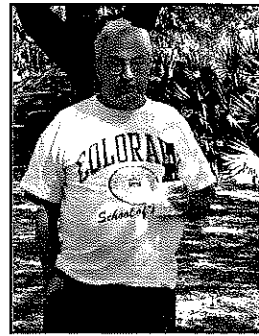
Blase Leven MSc Geol '89 (right) and Jim Daniels Geol E '51 hosted the Mines women's basketball team to a buffet after their game in Hays, Kan., against Fort Hays State.

**Gulf Coast Region**

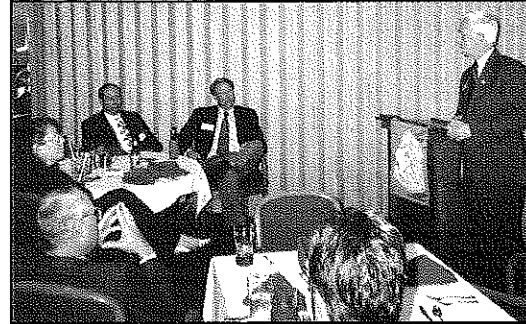
Bone Valley (Lakeland area), Florida



More than 75 people attended the annual CSM picnic in central Florida April 9 including, at left, John C. Yost EM '42 and his wife Louise (standing) and Jack Whittaker EM '38. At right, Hermann A. Hofmann Geol E '50 enjoys a beer. The event was organized by A.L. "Judge" Holmes Geol E '60.



**Houston, Texas**



CSM President Ted Bickart (standing) addresses alumni at a reception hosted by Melissa Stowe BSc Geop '93 at the Met Sports Club in downtown Houston April 6. Seventeen Miners attended.

**New Orleans and Baton Rouge, La.**



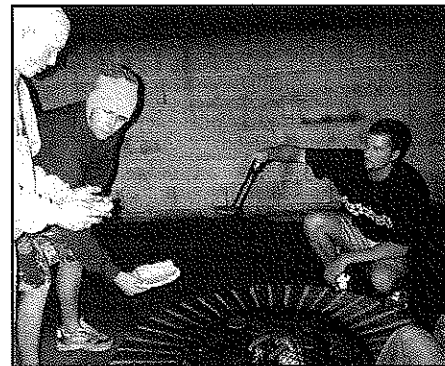
Louisiana section coordinators Steve Anderson BSc Geop '75, Miles Barrett BSc Geop '78 and Julie White BSc CPR '93 hosted two events April 7. In New Orleans (left), a luncheon meeting included special guest Bobby Kurtz, an incoming freshman this fall, and his mother. A dinner meeting in Baton Rouge included two incoming freshman and their parents. At right, CSM President Ted Bickart and White show off a painting done by White's father as a graduation gift.



**West Region**

California-Los Angeles Basin

Barbara Ringhofer BSc CPR '82 and Randy Ollmann BSc Eng '98 organized alumni attendance at The Pacific Collegiate Swimming Championships in Long Beach, Calif. in March. After the meet, Ollman hosted an alumni-team party at his home in Bellflower, Calif.



Host Randy Ollman serves up a burger.

**Ride the CSMAA Float at Homecoming this Fall**

A few alumni have expressed interest in joining a band for Homecoming, but more are needed. New plans are to have a band ride on the Homecoming float. If you are interested in playing, singing or directing, please contact Bob Pearson PE '59 at (303) 273-3959, (800) 446-9488, ext. 3959 (8 a.m. to 5 p.m., MST) or e-mail rpearson@mine.edu.

**18 Student-Athletes Make RMAC All-Academic List**

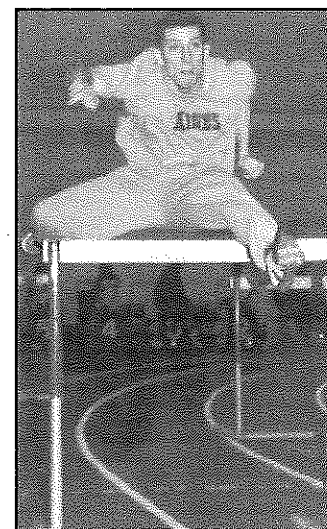
By Jeff Duggan  
Sports Information Director

Colorado School of Mines had 18 student-athletes named to the Rocky Mountain Athletic Conference's Winter 1999-2000 All-Academic List.

To be named to the RMAC's All-Academic Team, a student-athlete

must have a 3.2 or better cumulative grade point average, be a starter or key reserve on their team and must have been a student at their school for at least two consecutive semesters.

ATHLETE	SPORT	YEAR	MAJOR	GPA
Charity Garrison	Women's Track	JR	Chemical & Petroleum Eng.	3.877
Leslie McCandless	Women's Track	SO	Chemical & Petroleum Eng.	3.562
Tiffany Mensing	Women's Track	SO	Chemical & Petroleum Eng.	3.741
Emilie Moreshead	Women's Track	SR	Mechanical & Civil Eng.	3.257
Michelle Roberts	Women's Track	SR	Engineering Physics	3.860
Brandon Desh	Men's Track	SO	Civil Eng.	3.468
Paul Fisher	Men's Track	SR	Mechanical Eng.	3.824
Ben Lengerich	Men's Track	SO	Mechanical Eng.	3.823
Patrick Ryham	Men's Track	SR	Civil Eng.	3.870
Geoff Streit	Men's Track	JR	Petr. Eng. & Economics	3.776
Nate Mascarenas	Wrestling	JR	Mechanical Eng.	3.234
David Sedarsky	Wrestling	SR	Engineering Physics	3.307
Jody Trantham	Wrestling	JR	Mechanical Eng.	3.360
Mindi Harman	Women's BB	SR	Civil Eng.	3.294
Kristin Dillard	Women's BB	SR	Chemical & Petroleum Eng.	3.854
Jennifer Rupp	Women's BB	SO	Mechanical & Civil Eng.	3.316
Jennifer Schmidt	Women's BB	JR	Civil Eng.	3.728
Sam Handsborough	Men's BB	JR	Chemical & Petroleum Eng.	3.284



Eric Stellmon will compete in the 400 hurdles at NCAA II Outdoor Track & Field Nationals.

**Four To Compete at Outdoor Nationals**

Colorado Mines' Dayven Johnston, Eric Stellmon, Jim Beideman and Ben Lengerich have qualified to compete at the NCAA II Outdoor Track & Field National Championships in Raleigh, N. C. May 25<sup>th</sup>-27<sup>th</sup>.

A junior out of Colorado Springs, Johnston will run the 400-meter dash, having qualified with a time of 47.49 seconds. He will also compete on the 4X400-meter relay team along with Stellmon, Beideman and Lengerich.

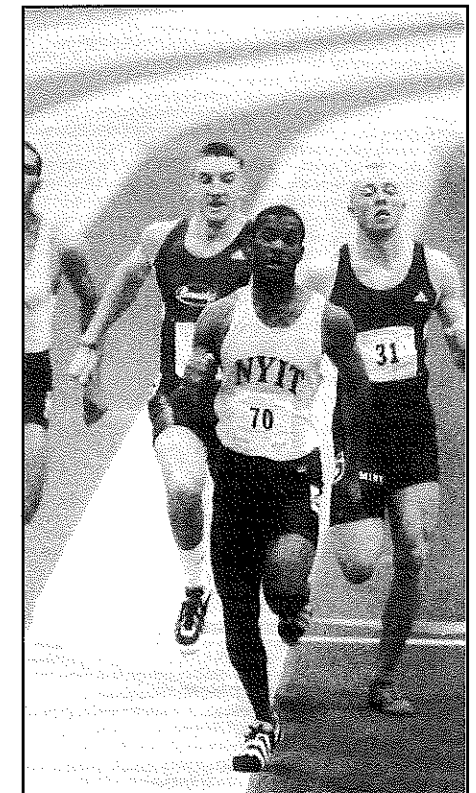
Stellmon, a senior from Aurora, Colo., will run the 400-meter hurdles after qualifying with a time of 52.24 seconds.

— Jeff Duggan

**Swimmer, Sprinter and Wrestler Go To Nationals**

Mines was represented at the NCAA II Nationals in swimming, indoor track and field and wrestling nationals this winter. Freshman Brooks Masterson represented the swimming team, junior Dayven Johnston the indoor track and field team and junior Jody Trantham the wrestling squad.

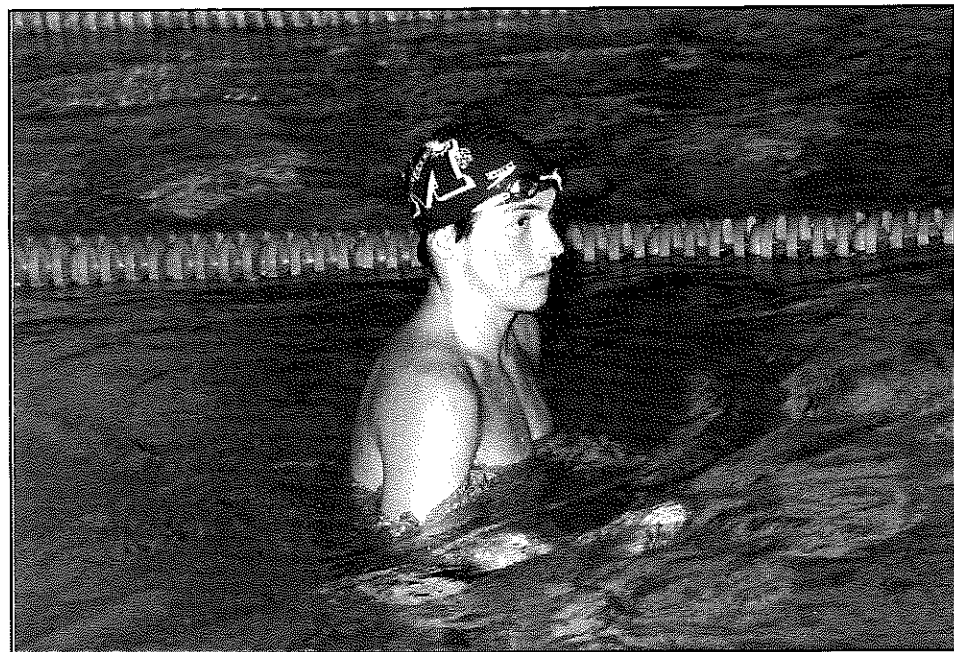
Masterson (Greeley, Colo.) earned Honorable Mention All-American Honors by placing in the 500 freestyle, the



Dayven Johnston (No. 31) at Indoor Nationals

200 freestyle and the 200-yard butterfly at Division II Nationals in Buffalo, N. Y. March 8<sup>th</sup>-11<sup>th</sup>.

Johnston finished fifth in the 400-meter dash at the NCAA II National meet in Boston and garnered All-American laurels as well. He will compete in the NCAA II Outdoor Track & Field Nationals at the end of May.



Brooks Masterson earned Honorable Mention All-American honors at NCAA II Swimming Nationals.

*continued from previous page*

Trantham represented Head Coach Dan Lewis' wrestling team in the 149-pound weight division at NCAA II Wrestling Nationals at South Dakota

State University in Brookings, S. D. Trantham (Eagle River, Alaska) also earned Second Team NCAA II All-Academic honors for the 1999-2000 season with his 3.36 cumulative GPA.

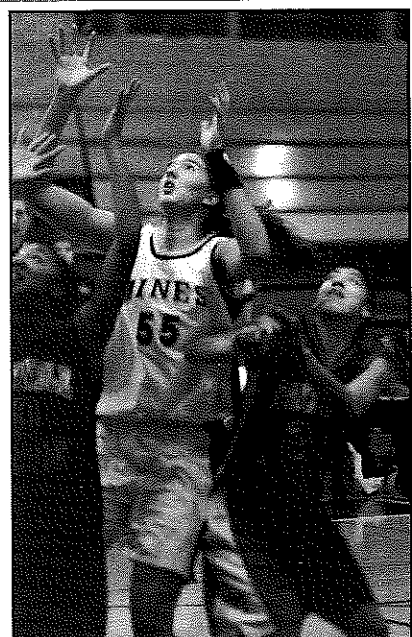
— Jeff Duggan

**Kim Good Is Named RMAC Women's Basketball Freshman of the Year**

Kim Good, a 6'5" center on the Lady Orediggers basketball team, was named the Rocky Mountain Athletic Conference's Women's Basketball Freshman of the Year for 1999-2000.

A freshman out of Fort Benton, Mont., Good finished her freshman season second in the RMAC with 2.31 blocked shots per game (60 blocks, 26 games) and 11<sup>th</sup> in the conference in rebounding with 6.8 boards per contest. Good's single-season total of 60 blocks and single-game total of 11 swats (February 18<sup>th</sup> vs. Chadron State College) both set new Lady Orediggers all-time records.

— Jeff Duggan



Kim Good, the RMAC's Women's Basketball Freshman of the Year for 1999-2000.

**39 YEARS AGO**

**Dec. 14, 1961**

**Miners Lose Cliffhanger In Four Overtimes, 80-79**

The Colorado School of Mines two-man basketball team lost to the Black Hills Normal five-man squad Friday 80-79 in four overtimes.

The Miners were reduced to two players in the final extra period after eight team members were sent to the bench with five fouls. The officials called 48 fouls on the 10-man traveling squad—two short of the maximum.

Despite the lack of personnel, the Miners pulled within one point, then forced the home team to freeze the ball to pull out the somewhat hollow victory at Spearfish, S.D.

The score was tied 56-56 at the end of regulation play. The Miners trailed 31-23 at halftime but, blocking well off the weave, were able to pull even and force the game to its extended finish.

The first overtime ended 62 all, the second at 66 all, and the third at 70 all. It was during the third extra session that the whistle cut into the number of players the Miners could put on the floor.

The team started the final session with four players. After 12 seconds, Steve Harvey was sent to the bench, leaving only Dick Walker, Ken Ancell and Boyd Watkins on the floor. With two minutes remaining, Walker joined the majority on the bench.

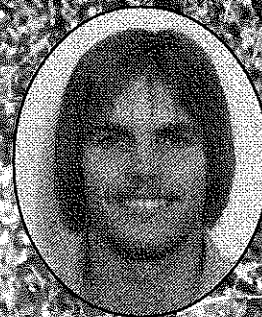
Ancell and Watkins, both of whom had four fouls, shifted into what Coach Jimmy Darden called a "man for men" defense—each in a stationary position on either side of the Yellowjackets' basket.

Trailing 80-77, Watkins stole the ball, dribbled the length of the floor past all five defenders and sank a lay-up.

Black Hills Normal went into a stall and neither defender was able to foul deliberately in an effort to get the ball—that would have left only one Miner in the game and no one to put the ball in play.

The Miners hit 29 of 64 shots during the hour-long game for an average of 46 percent. Normal hit only 18 of 56 shots for 32 percent.

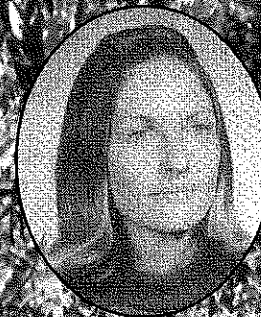
**The Barb Family Tree**



George Newman



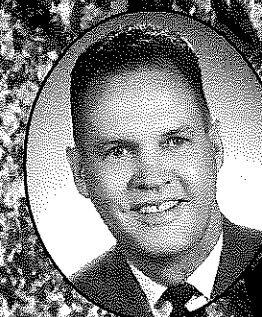
Anthony Barb



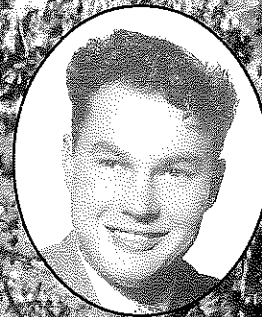
Deidra Barb



Tanya Barb



Denver Barb



Richard Fulton



Clark Barb

The Barb family and their in-laws have sent four generations to The Colorado School of Mines. Clark F. Barb PE '25, MSc Pet '28, Hon Mem '64 spent his career at Mines. After graduation, he joined the faculty as an instructor, then became professor and finally head of the petroleum department. His field camp sessions were legendary and nicknamed "the Barb Death March." Barb retired as professor emeritus in 1963, but in 1977, just months before his death, he returned to lead one last field session at the age of 80.

Clark's son Denver M. Barb PE '43 graduated from Mines and then went to work for, and ran for many years, his wife's family business, Auto Service and Supply Co. in Limon, Colo. He worked in the retail side of the oil and gas business. He retired recently and now lives in Yorba Linda, Calif.

Bette Barb Fulton, Clark's daughter, married Richard Fulton PE '50. After graduation, Fulton worked for Ball & Associates, setting up natural gas storage

reservoirs underneath Tokyo. He spent most of his career working for Mississippi River Transmission Corp., from which he is retired and he and Betty live in Chesterfield, Mo.

Clark's grandson, Anthony R. Barb, BSc Pet '74 initially worked for Arco, drilling in the Peruvian jungles, later returning to Limon to run the family business. Clark's granddaughter, Deidra L. Barb BSc Pet '79 worked for Getty after graduation and later KN Energy as a reservoir engineer before joining her brother at Auto Service and Supply Co./Colorado Gifts in Limon. A third grandchild, Denise Barb Newman, is married to George Newman BSc Min '78, who is chief financial officer for an oil and gas exploration firm, Thommasson Partner Associates, Inc., Denver.

A great-granddaughter, Tanya Barb (future BSc Pet '01), is currently a junior at Mines. ■

## Haynes '56 Dates Ruins Using Geological Data

Geoarchaeology, the science of applying geological knowledge to archaeo-



Haynes at an excavation site in 1975.

logical problems, is the niche that C. Vance Haynes Geol E '56 has made his specialty. His work in the field led to his being named to the National Academy of Sciences in 1990. According to the NAS web site, "Haynes has made major contributions to the reconstruction of paleo-environments in western North America and eastern North Africa and to the understanding of processes and human implications of climate change."

Haynes began at Mines in 1949, but interrupted his education to serve in the U. S. Air Force. He was stationed in Alaska. "I was on three or four days, then had as many days off. It gave me the chance to do lots of reading and meet lots of people including geologists Troy Pewé and David Hopkins and paleontologist Otto Geist," says Haynes. "I became more and more interested in Quaternary climate change and archaeology. After I left the service, I spent more time with archaeologists helping them with geology. Geoarchaeology was a new field. At that time there were only about four in the whole country."

Haynes returned to Mines after his military service and graduated in 1956. He then began working on lunar geology for the Martin Co. in Denver. "I was trying to determine what properties we knew about the moon so that equipment could be designed that could operate on the lunar surface. [See *Mines Magazine*, December 1961 and January 1962]. It was before the space program really got going," he says. During that time, Haynes met Spencer Titley Geol '51,

who convinced him to continue his education at the University of Arizona. Haynes then earned a PhD in geosciences from UA and began working in its radiocarbon dating laboratory.

In 1984, a fire occurred on the battlefield at Little Big Horn in Montana and afterward, a Montana archaeology student noticed artifacts that had previously been hidden by grasses. "I had a colleague in the National Park Service," says Haynes, "and he called me out to help determine the geochronology of Deep Ravine, where 26 bodies may still lie buried." Using metal detectors, a group of volunteers put together an up-to-the-minute survey and then plotted it in three-dimensional space. "It helped me to work out the geology of the area."

A year later, Haynes surveyed another Custer battlefield on a privately owned piece of land along the Yellowstone River. A huge battle took place there in 1873 between Custer's 7<sup>th</sup> Cavalry and various bands of Indians. Because the land is privately owned, few people know where it is so it is one of the few sites left un plundered. "I'm putting together a book on it," Haynes says.

Last July, Haynes retired from his position as Regents Professor at UA, but he is far from idle. Currently he is working in the Sahara looking for geologic evidence of climate changes during the late Pleistocene era. "The Sahara is probably the driest place on the planet with less than 1 milliliter of rain per year," he says. "Until a few years ago, it was not thoroughly explored." Because the area has been unpopulated for thousands of years, archaeological sites there are undisturbed.

## Griffith '82 Is A Surgeon

Patricia Griffith BSc CPR '82 is an orthopedic surgeon with a solo practice in Clarksville, Miss. The small southern town, an hour south of Memphis, Tenn., bills itself as the "home of the blues." Surrounded by farms producing cotton, soy beans and rice, the area is economically impoverished and was vis-

ited by President Clinton last fall. Griffith finds herself there after a series of career decisions that took her from the food industry to the operating table.



"I was interested in chemical engineering because I wanted to work in the food industry," Griffith says. She chose to attend CSM because she was offered a Board of Trustees scholarship. While at Mines, Griffith took off a semester to attend Oregon State and study food science. While there, she ran track. At CSM she also ran track, but was the only woman on the team.

After graduation, Griffith worked as a chemical engineer for Duncan Hines in Cincinnati, Ohio, then Celestial Seasonings Tea Co. in Boulder, Colo. In Boulder, she took biology classes at University of Colorado, discovered an interest, and applied to medical school.

Initially, Griffith wanted to be a cardiologist. She earned her medical degree from Loyola University in Chicago. While looking for a research project, she became interested in orthopedics, in part because she is a runner. "I worked in the gait laboratory which does computer modeling of people's walking gait," she says. Chicago is the headquarters of the Academy of Orthopedic Surgery and Griffith volunteered there and decided to pursue sports medicine. After graduation she did a sports medicine fellowship in Jackson, Miss., and eventually set up practice in Clarksville.

Griffith still runs, competing in three or four races—usually 5Ks—a year. She likes to cook, an interest that originally led her to food science, and says her part of Mississippi is wonderful for gardening because of the rich, fertile soil.

## Tamm '66 Is Mayor of Small Town in Oregon

Much to his surprise, Paul Tamm PRE '66, has entered the world of poli-

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tics in his retirement. He is in his second term as mayor of Oakland, Ore., population 875. It's an unpaid position that requires about half his time and it's no walk



in the park. "The politics in this town are vicious," he reports. "I'd never lived in a small town before and had no idea how nasty the politics could be." With such a small population, a few people can have an inordinate influence. During his first two-year term, he survived an attempted recall.

Tamm and his wife Betty retired in 1992 after 22 years with Chevron Corp. Betty worked for more than two years as Oakland city recorder, but resigned because of a hostile city council. "The council was so dysfunctional they took about half a year to replace her," Tamm says, during which time nothing got done. "I watched it all unfold and I didn't see anybody coming forward to run against the incumbent mayor. I had made a big investment in this community, building a nice retirement home, and I didn't want things to continue as they were. So I ran for mayor."

The vote was very close, Tamm says, but he won. Because the city was facing two large utilities projects—upgrades of the water and sewer systems—he ran on an engineering platform. "Because of my engineering background, I stressed that I was best qualified to shepherd those projects along." Since his election, Tamm has gotten bond issues passed overwhelmingly to help finance the projects and has solicited federal and state grants to pay for the rest.

Another project of note is the conversion of an historic 1910 schoolhouse into a community center and municipal office complex. Supporters have already raised \$320,000 toward the \$1 million project. Tamm says the city has an application pending for an additional \$650,000 in grants that he expects to be

awarded soon. If they pull this off, he says, the project will be completed with the city only having to contribute about 12 percent of the cost. "That's one project I'll really feel good about," Tamm adds. Tamm's accomplishments to date gained him the 1999 Leadership Award from the Oregon Mayor's Association.

One of Tamm's toughest challenges as mayor was with the chief of police, who was named in a sexual harassment complaint. The investigation and subsequent turmoil leading to the chief's departure also led to the attempted recall of the mayor. Tamm survived the recall and was re-elected, but his opposition stacked the council against him.

Problems remain. For example, after a deadlock over which company to hire for the water upgrade, Tamm proposed flipping a coin to decide the choice. He gained the approval of a majority of council, but the losing party has since threatened a lawsuit claiming the procedure was capricious. "Things are never dull in this job," Tamm says.

Tamm's term ends in November and he is undecided whether to run for re-election.

## Mandel '53 Owns, Runs Colorado Trout Ranch

The Cross D Bar Trout Ranch, owned by Dick Mandel PE '53, encompasses 800 acres in the Wet Mountains (first range due west of Pueblo, Colo.) on the east side of the Sangre de Cristo Mountains. Thirteen years ago, Mandel opened the land for limited fishing. Today, the ranch is "one of the most reasonable private fishing clubs in the whole state," he says, with family membership at \$1,150 plus \$150 yearly dues. Facilities include a guest house, an authentic Sioux tipi that sleeps four or five, cabins, camp sites, an RV park, a general store, planned activities for children, fly-fishing instruction and equipment rental.

"The east side of the Sangre de Cristo



mountains are the most picturesque," says Mandel. His ranch sits in a mountain valley at about 9,200-9,300 feet and has four lakes. "The trout do extremely well in these waters. There's an over-abundance of natural food for the trout. Our fish are 100 percent wild trout, never artificially fed." The Cross D Bar supports both Trout Unlimited and the Federation of Fly Fishers (conservation organizations) and is committed to the philosophy of "catch and release." However, fishermen can keep the fish they catch in one of the lakes.

The fishing club has 55 members, mostly from Colorado, but also from Texas, Louisiana and other places. Members can park their RVs for free in the membership area. "Some of our members have not moved their RVs for 10 years," Mandel says. "They consider it a second home. Other members bring their RVs in spring and remove them in the fall." During the summer season, Mandel barter arrangements where he provides space and utilities in exchange for a couple's services such as taking care of the store and doing odd jobs. "I have two or three couples on the ranch at all times."

Mandel, who is semi-retired from the oil business although he still works in Denver and maintains a home there, spends about 50 percent of his time at the ranch during the summer. In addition to its recreation facilities, the Cross D Bar is a working cattle ranch. Mandel has a herd of 30 to 40 mother cows and leases grazing land to other ranchers.

Every year in June, the Cross D Bar hosts a free outdoor event for disabled

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 people around the state. Mandel created the Cross D Bar Recreation Foundation, a not-for-profit tax-exempt organization, to provide outdoor recreation for the disabled. "It now hosts seven or eight pro-bono events during the summer," he explains. The June event draws between 75 and 100 disabled participants for a weekend of camping, fishing, picnicking and fun. About 50 volunteers run the event.

"There are minimal outdoor recreational facilities in Colorado or the Rocky Mountain region that encourage the disabled, severely handicapped or blind persons to gain the knowledge, skills, confidence and self-reliance to help them overcome their psychological and physical barriers," Mandel says. "The Foundation opens another world of nature, helping them explore their own capabilities and learn they can succeed far beyond their own expectations." Fishing is very therapeutic, he adds. "Once a fish is on the line, you can think of nothing else but bringing the fish in."

### Barry '91 Chooses Ministry Over Oil

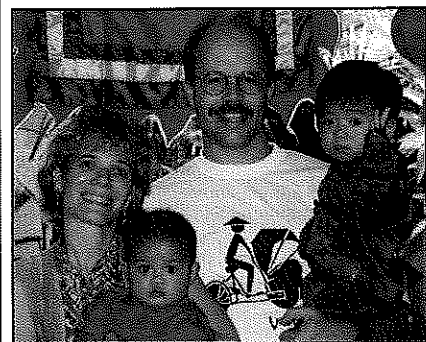
After seven years as a petroleum engineer, **Barry Thomas BSc Pet '91** went through a soul-searching process to determine what it was he really wanted to do. He enjoyed engineering and had attended Mines because he was analytical and good at mathematics and science. But what he really wanted was to help people. That realization led him to Quail Springs Church of Christ in Oklahoma City, where Thomas is now the small-groups minister.

At first, Thomas thought it would be difficult to find such a position. "Not many churches were interested in someone with a petroleum engineering degree," he says. Thomas had been working for Anadarko Petroleum since graduation, moving from Kansas to Oklahoma to Texas. He heard about the opening in Quail Springs and decided to apply. "I told them I thought I was a long

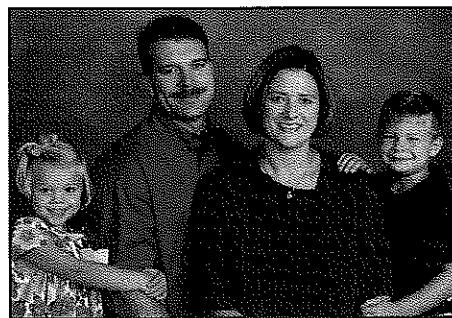
shot," he says. "They asked why and I said, 'I don't have a Bible degree and I have no full-time ministerial experience.' They replied, 'We're looking for someone with a heart for God, a passion for small groups and strong leadership skills.'" Thomas was in.

Those who attended Mines with Thomas will no doubt remember him. He was student-body president, student-body vice president, played on the football team, ran track, was a McBride Honors student and was a resident adviser. He married fellow Mines' student Lori Decker while still in school. Lori transferred to and graduated from Met-

### Oglesby '80, '88 Adopts Two Vietnamese Children



*Chris Oglesby BSc Geol '80, MSc Geol '88 and his wife Ellie Edelhoff have adopted two Vietnamese children, Grace Thanh Duyen, left, born July 21, 1999 and Samuel Khanh Binh, born Oct. 5, 1998. "Ellie and I are still adjusting to parenthood," says Oglesby. "Adopting a baby and a toddler at the same time has really changed our lifestyle, i.e., we used to sleep a full night, read a good book and exercise. These are now distant memories, but we wouldn't change a thing!" Oglesby is a consulting petroleum geologist with Maxus Southeast Sumatra in Jakarta, Indonesia. Recently, he has been involved in several development drilling projects and the discovery of two small oil fields. The past three years, he and his wife have traveled extensively throughout Asia. His e-mail address is caoglesby@hotmail.com.*



*The Thomas family: from left, Hannah, 3½, Barry, Lori and Caleb, 5.*

ropolitan State College in Denver and became a high school mathematics teacher. She currently is a full-time mother but is attending University of Central Oklahoma to earn a master's degree in mathematics.

Thomas has been an assistant minister now for nearly two years and he has found fulfillment. "The real difference is motivation," he says. "I feel like I'm making a difference in people's lives and that is what keeps me going." He describes his job as providing ways for members of his church to spiritually mature. "I would like, at some point in time down the road, to get some sort of Bible education," he says. But right now, with two youngsters and a wife in school, he has his hands full.

### Biddle '66 Helps Resolve Conflicts Without Litigation

In our increasingly litigious society, retired attorney **Art Biddle MET E '61**, is looking for a better way to resolve disputes. He thinks he's found that way in Conciliation Ministries of Colorado (CMC). He has been executive director of the Denver-based group since last summer.

CMC's mission is "to promote Biblically-based responses to conflict through the education of Christians and the provision of Christian dispute resolution services." Although the processes CMC uses are Biblically-based peacemaking principles, they are practical and anyone can use them. The cases that go to CMC involve family, marital, business,

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 church, employment, commercial, construction, real estate and interpersonal disputes.

CMC is a nonprofit corporation that uses training and materials developed by Peacemaker Ministries, an international ministry headquartered in Montana.



The application of Biblical peacemaking principles in a mediation "allows parties the opportunity to resolve substantive issues and also to deal with underlying personal issues that often exist, like anger, jealousy or selfishness," Biddle points out. "Litigation is a sure way to kill a relationship, whereas a relationship can often be restored through Christian mediation." Mediation and arbitration is also usually quicker and less expensive than litigation.

By way of example, Biddle tells of a case involving one man who slandered another. The slandered party went to a lawyer who recommended he sue for \$500,000. Both men were Christians, however, and they got the pastors of their churches to participate in a mediation conducted by a trained mediator. "Both substantive and personal issues got resolved," says Biddle. "The slanderer admitted he was wrong and asked for forgiveness, which was granted." The case was settled without litigation and the men's relationship was restored.

One hundred years ago, churches frequently played a more active role in mediating disputes among their members, says Biddle, though in modern times they have gotten away from doing that. "Our vision is to help equip and train church leaders in Biblical peacemaking so they are better prepared to prevent and resolve conflict in their congregations and communities. We'd like to work ourselves out of a job."

Since the 1970s, Biddle has been working to help people resolve conflicts.

As an attorney for Amax Inc., he worked on gaining environmental permits for a controversial copper mining project in northern Minnesota and a molybdenum project near Crested Butte, Colo. These projects garnered significant opposition from the local community and environmentalists. "We took a positive proactive approach" he says. "We would do the project right and get the local communities, environmentalists and government agencies involved in the planning from the beginning." The molybdenum mine was never built after an investment of nearly \$100 million, but the project, with Biddle's help, won Amax several national envi-

ronmental awards. It also became the model for an award-winning government/industry planning process called the Colorado joint-review process.

Biddle can be reached at 303-481-4241 or ATBiddle@aol.com.

### Tuttle '81, '88 Travels World Studying Water

The United States Geological Survey (USGS) employs many CSM graduates including **Michelle Tuttle MSc Geochem '81, PhD Geochem '88**, who has worked there for 22 years. Her specialty is aqueous geochemistry and her projects have taken her as far away

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### Wolfe '84 Helps Break Stereotype of Engineers

*By Johanna Bean*

Chemical engineer **Brenda Wolfe [BSc CPR '84]** has this message for girls: "We're not that nerdy image of engineers. We're smart. We're successful. We have families. We have a lot of different personalities."

Wolfe is passionate about engineering—and about turning girls on to a profession that's not necessarily a career track for girls. As a founding member of the Society of Women Engineers (SWE) Pikes Peak Section, Wolfe has a forum for her message. The local section has made outreach to girls and boys a focus of its work. Wolfe, 37, is married and has two sons. She has served as past president of the section and representative to the national SWE council, and now is the section's diversity champion.

Wolfe figures she's probably the only female chemical engineer in Colorado Springs [Colo.]. The city has lots of high-tech company engineering jobs, but few for chemical engineers.

Wolfe, a Colorado Springs native, attended Mines on a volleyball scholarship. (She continues to officiate high school games.) After graduating, she worked in the chemical industry in Utah and Texas, returning to



Colorado Springs in 1988. In 1990, she went to work for what is now Svedala Industries Inc., a heavy equipment manufacturer.

Wolfe has worked in a variety of roles, most often helping customers solve engineering problems using Svedala equipment or parts.

Not long after returning to the Springs, Wolfe and about a dozen others organized a local SWE section because, "most of us work with men," Wolfe says, laughing. "You've just got to talk to women sometimes."

Wolfe says she's proud of the efforts the section has made in talking to students about engineering. "We picked what we were good at," she says. "We've done a good job at becoming a resource for questions about women and engineering."

*Reprinted with permission from Colorado Springs Gazette*

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as Africa and Russia. Currently, she is working on four projects in the United States.

In Norman, Okla., Tuttle is studying an aquifer to learn how leachates from the landfill interact with pore water and minerals in the sediment. The project should help scientists understand bioremediation processes that happen as naturally occurring bacteria break down the organics in the leachate from the landfill.

In the Humboldt Basin in Nevada, Tuttle studies an area with gold and base metal mineralization. "We're trying to get a feel for how different deposit types and their state of development contribute metals to the streams," she explains. The study compares surface and ground water flowing through mineralized, non-mined areas with that flowing through mined areas. Because metals naturally occur in mineralized areas, their contribution to the undisturbed landscape needs to be assessed, Tuttle says.

A third project takes Tuttle to Kentucky and the Appalachian basin, a coal-mining area where the coal has high arsenic contents. How did arsenic get into the coal, what is the magnitude of contamination, and is it harmful to humans are questions the study hopes to answer. "The human health aspect is not yet known," Tuttle says. "But too much arsenic in an ecosystem is generally a problem."

Tuttle's fourth project involves acid-mine drainage in West Virginia. She is studying the sulfur geochemistry of coal-bearing strata to determine the source of the sulfur and to predict where the acid-generating pyrite will be the highest. Such knowledge will enable scientists to make predictions about whether or not areas where mining has taken or will



take place will produce acid-mine drainage.

### O'Malley '42 Raises Horses in Ireland

A love of 19th century novels and horses led Ward O'Malley EM '42 to the Irish countryside 30 years ago. The native New Yorker raises Irish draught horses for jumping and hunting. He lives on a 30-acre horse and cattle farm in County Tipperary and, at the age of 81, still plays polo three times a week during season.

O'Malley began his college career at Princeton, where he learned to play polo, but finished at Mines because he dreamed of gold mining in Peru. After graduation, he entered the U. S. Army and served under General Patton in World War II. Following the war, he did get to Peru to mine gold, then returned to the United States to earn a master's degree in geology from Stanford University. He became an oil geologist and moved to Teheran, Iran. There, he met and married his wife Catherine and took up polo again.

"Polo made my 10 years in the Middle East much more interesting because my wife and I met locals, not just expats," he told *Polo Quarterly International* during a 1998 interview. Before he left that part of the world in 1966, he saw an ad that said "Come hunting in Ireland."

"So I did just that, instead of retiring to Florida like all the other old Americans," he told the magazine.

O'Malley does not consider himself retired, though. He breeds, shows and



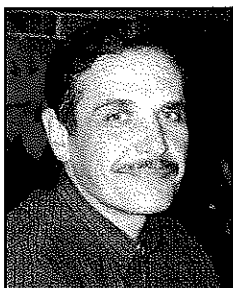
O'Malley (center) and his wife, Catherine, load two of his horses into a horse trailer.

sells horses and in his spare time, he hunts and plays polo.

### Tulk '73, '74, '79 Keeps Changing Careers

"My career is an example of the diverse paths a student may pursue with a Mines education,"

says Tom Tulk BSc Math '74, MSc Math '74, PhD Min Ec '78. After graduation, Tulk developed an interest in operations research and joined Stearns-Rogers. There he met senior vice president Harry McNeill EM '24, Medalist '61, who offered him the opportunity to pursue a PhD while working full-time. "At Stearns-Rogers I established an operations research group that focused on computer simulation models, optimization and engineering economics," he says.



After five years as an engineer, Tulk says he "had an urge to acquire an understanding of the non-engineer psyche." He began working with Native American tribes during the energy boom of the 1980s. "In addition to an 'Evelyn Woods-type' course in humanities, I assisted tribes in developing their vast energy and natural resources. The experience sharpened my skills in engineering, finance, negotiating and dealing with bureaucracies." He worked with more than two dozen tribes including Seminoles in Florida and Canadian bands near the Arctic. Tulk's work with Indian tribes also led to an invitation by the United Nations to negotiate coal-development agreements in mainland China.

The mid-1980s brought a downturn in the energy industry so Tulk migrated to the environmental industries. Since 1984, he has worked out of his home as a consultant. "After two years of consulting in the permitting and siting of hazardous waste facilities, I began one of the more excit-

ing chapters of my career," says Tulk. "I became a trash man. By chance, I discovered the economic potential of landfills. Presenting the concept of a large, regional, rail-served balefill (a landfill that only accepts baled waste) to my Mine's graduate school advisor, Hunter Swanson, a company was formed." Swanson and Tulk permitted and established one of the nation's largest (a 3,000-acre site) waste facilities.

For his next career, Tulk sought something free of permits and compliance regulations. He became interested in multimedia and computer-based training (CBT), which led to the founding of a company that produced education and training courses delivered via CDs and the Internet. "My interest in education also led to creating college curricula in the fields of environmental law, ethics and compliance," Tulk says. "Today, I continue to consult with corporations and Indian tribes on a variety of issues and am pursuing interests in a .com banking company." He is developing infrastructure for community banks that will make it possible for them to compete with large banks. He also is doing investment-recovery consulting for the U. S. Post Office, does mine audits using Global Positioning Equipment (GPS) for litigation support and teaches managerial economics to MBA students at University of Phoenix.

When Tulk gives presentations to elementary and high school classes, he emphasizes the importance of excelling in all of their courses of study. "I challenge the students to name a class or subject area that I have not used in my career," he says. "For them, the need to understand and integrate all subject areas will become increasingly important to their careers."

For relaxation, Tulk works out and rides motorcycles. Once he hopped on his bicycle and rode from his home in Denver to Lawrence, Kan., just for fun. His daughter is a May graduate of University of Colorado and his son is a CU student. ■

### FERN EARL BARB

Fern Barb, wife of professor emeritus Clark F. Barb, PE '25, MSc Pet '28, Hon Mem '64 and "mother" to many Mines students, died Jan. 13 at the age of 102. She was part of three different centuries.

Mrs. Barb was born on a Kansas farm. After graduating from high school, she taught grades one through 12 at a country school.

In 1920, the Barbs married and the next year, they moved to Golden so he could attend Mines. Mrs. Barb stayed at home to raise their three children: Denver, Shirlee, and Bette. Through the years, she rented the basement of her home, 1427 East Street, to many CSM students.

In 1990, Mrs. Barb moved to Limon, Colo. and lived independently until 1993 when she entered the Prairie View Nursing Home, where she died. She is survived by her three children, four grandchildren and six great-grandchildren. (See Family Tree, page 38.)

### NEEL NETWON BECKNER

Neel N. Beckner PE '42 of Grand Junction, Colo., died Feb. 18 at the age of 80.

A native Coloradan, Beckner was raised in Eaton, Colo. After graduation from Mines, he married Jeanne Mengel.

Beckner enlisted in the U. S. Navy as an engineering officer aboard the battleship USS Nevada. After World War II, he went to work at Phillips Petroleum Co. until his retirement in 1982. After retirement, he took over the petroleum technology department at Colorado Northwestern Community College in Rangely, Colo.

Beckner was an active member of the Alumni Association and also a member of Sigma Alpha Epsilon and St. Matthew's Episcopal Church.

Beckner is survived by his widow, sons Brian and Charles and a brother.

### CHARLES R. CRISS

Charles R. Criss PE '39 died at his home in St. Paul, Minn. Oct. 15 at the age of 88.

Criss worked as a petroleum engineer for Stanolind Oil and Gas Co. and for 15 years before his retirement in 1977, he was with the Securities and Exchange Commission in Washington, D. C.

Criss attended Antioch College in Ohio before graduating from Mines. He also received a master's degree in meteorology from California Institute of Technology in 1943. From 1942-46, Criss was in the U. S. Army.

In 1937, Criss married Florence Large. He is survived by her, daughter Jeanne Matlock and a granddaughter.

### MILTON E. DANITSCHKE

Milton E. Danitschek PE '40 died Dec. 22 at the age of 81.

After graduation, Danitschek served in the Marine Corps as a fighter pilot in the Pacific during World War II and was part of the invasion force on Iwo Jima.

After the war he became a petroleum engineer and worked for Mohawk Oil and then spent 20 years with Tosco Oil.

He is survived by sons Mark and Stephen, four grandchildren, two great-grandchildren, a brother and three sisters. Danitschek was a member of his church and was Scout master of Boy Scout Troop #154 in Bakersfield, Calif.

### EDWARD G. "NED" FISHER

Edward G. Fisher, professor emeritus and former head of the CSM Department of Humanities and Social Sciences from 1941-1971, died Dec. 17 in Calgary, Canada, at the age of 88.



### RICHARD W. HALEY

Richard W. Haley PE '56 died in Houston March 20 after a brief illness. He was 65 years old.

Haley was born in Bakersfield, Calif. and raised in Tulsa, Okla. After graduation from Mines, he earned a degree from Harvard Business School in 1959.

Haley then served as an officer in the U. S. Army Corps of Engineers. During his career he worked for ARCO, General Crude, Mobil, Gold King Production and most recently as president of Riada Corp. He was an active member of the CSM Alumni Association and a member of Beta Theta Pi.

Haley is survived by his widow, Catherine, daughter Sally Gladden, son James W., a sister and two grandchildren. In lieu of flowers, the family requests contributions to CSM or Harvard.

### VIRGINIA HEROLD

Virginia Herold, CSM librarian for 36

years, died last year.

Herold joined the Mines library staff in 1940 and became head librarian in 1956. She developed the library into one of the leading technical libraries in the mineral resources field. She saw the library grow from 36,000 bound volumes and 700 periodicals to 170,000 volumes and more than 1,750 periodicals and serials.

Herold earned bachelor's and master's degrees in library science from University of Denver. During World War II, Herold was base librarian at the La Junta, Colo., Army Air Force Base and was an Army librarian in France. She was active in many professional organizations and also in historical and environmental groups.



**ROUHOLLAH KARUBIAN**

**Rouhollah "Richard" Karubian PE '36** died Feb. 10 from complications from Parkinson's disease. He was 87 years old.

Karubian was president of Iran Geothermal Development Corp. in Beverly Hills, Calif. and a member of Beta Theta Pi.



According to his widow, Karubian had "charisma and strength. His life reflected his dynamic nature and positive attitude."

Karubian is survived by his widow of 60 years, Toubia; children Vita, John Farhad and Guitta; and eight grandchildren.

**EARLE L. KNAPP**

**Earle L. Knapp Met E '37** died Feb. 23 in Lee's Summit, Mo. He was 84.

Knapp worked for Armco Steel Corp. for 41 years. He had been a member of the Ararat Shrine Temple since 1979. In 1938, he married Dorothy A. Hooe, who preceded him in death after 43 years of marriage.

Knapp is survived by sons Ed, Tom, Larry, Jon and Greg, daughter Melanie Stover, nine grandchildren and seven great-grandchildren.

**JAMES L. KYLE**

**James L. Kyle PRE '66, MSc CPR '68** of Torrance, Calif., died of heart failure last November.

Kyle was retired after 26 years with Unocal. All of his assignments were in the Los Angeles area.

At Mines, Kyle participated in Blue Key,

Theta Tau, Press Club, Inter-fraternity Council, E-Days committee, A. I. Ch. E., soccer, student council and Kappa Sigma. He served as house president his senior year in addition to being senior class president.

In Los Angeles, he worked as a volunteer usher at the Coliseum for University of Southern California games and the Rose Bowl for more than 20 years.

Mines was an important part of Kyle's life. He kept in close touch with many of his Mines friends over the years. He was a great man for a laugh and lots of fun.

**JAMES W. MARTIN**

**James W. Martin**, Mines engineering professor from 1973 to 1988, died April 4 at the age of 77.

Martin was born and raised in the copper mining towns of Lourium and Calurnot in Michigan's upper peninsula. He earned a bachelor's degree from Michigan College of Mining and Technology in 1944 and was awarded the college's Board of Control Silver Medal in 1971 for industry achievements.

After graduation, he served in the U. S. Army, then with the Marine Corps 6th Division in the Pacific during World War II. In 1946, he married Katherine Reymann of Catonsville, Md.

Martin attended Massachusetts Institute of Technology graduate school for two years, then became a research engineer with Bucyrus-Erie Co., in Milwaukee. He completed his master's degree in mechanical engineering at University of Wisconsin in 1950.

Martin worked for Bucyrus-Erie for 25 years, finally serving as vice president. According to his family, it was an exciting time for Martin, a period of worldwide expansion and product developments. The world's largest walking dragline, "The Big Muskie," was designed and built by the company during this period.

In 1973, Martin joined the Mines faculty and taught until his retirement. He served as department head for three years.

After retirement, Martin was president of Martin Consultants Inc., a family-operated mining engineering and equipment-design business.

Martin was a member of American Society of Mechanical Engineers, American Society of Automotive Engineers, Society of Mining Engineers of AIME and Rocky Mountain Coal Mining Institute. He was a Registered Professional Engineer.

Martin is survived by his widow and five children.

**HARRY L. MCNEILL**

**Harry L. McNeill EM '24** died Jan. 2 at the age of 99. He was a faithful member of the Alumni Association and was generous to the School. He also contributed to *Mines Magazine* when it published technical articles. McNeill was retired from Stearns-Rogers. He was class agent for the Class of 1924 and was a member of Sigma Nu.



As recently as 1998, McNeill wrote an article for *Mines* on progressive mineral reduction with classification grinding and air lift concentration, a process for which he was awarded a U. S. patent.

**DONALD O. RAUSCH**

**Donald O. Rausch EM '54, PhD '59, Medalist '78**, of Broomfield, Colo., died Aug. 23 at the age of 73.



Rausch, a native of Portland, Ore., served in the Navy during World War II. He began his mining career as an underground contract miner in 1949. In 1951 he married Anna Howsman.

Rausch's mining career included being president and chief executive officer of Western Nuclear, Inc., vice president of mineral resources for NL Industries, and mining engineer for Kennecott Copper Corp. and Dravo Corp.

Rausch was an active member of the American Institute of Mining, Metallurgical and Petroleum Engineers serving as vice president, president, and director during the 1970s. He also was a member of the Masons, Elks and Society of Manufacturing Engineers and was director of CSM's research institute.

He is survived by his widow, son Philip, daughters Kathy Giardinelli and Christine Bullock, a brother and five grandchildren.

**WALTER EDWARD REDMOND**

**Walter Edward Redmond EM '40** of Denver died March 20 at age 82. His body was donated to the State Anatomical Board at the University of Colorado Health Sciences Center.

The Denver native married Myrle Nasimbene in 1940. After graduation from Mines, *continued on next page*

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he held management positions with Gates Rubber in Denver and Elizabethtown, Ky.

Redmond is survived by his widow, daughters Myrlynn Sjogren and Nancy Schumacher, five grandchildren and a great-granddaughter.

In lieu of flowers, contributions may be made the Alzheimer's Association, 789 Sherman St., Denver, CO 80203.

**JACOB SHUTEK**

**Jacob "Jack" Shutek Met E '56** of Chesterfield, Mo., died March 1999.

While at Mines, Shutek was a member of Sigma Nu, Blue Key and Theta Tau. While still a student, he married his wife Patty, who worked at the CSM Research Foundation.

After graduation, Shutek went to work for Kaiser Aluminum and ended his career as vice president of Carridon, Inc. He and his family lived in seven states and in London. His entire career was spent in the aluminum industry.

Shutek is survived by his widow, sons Gordon and Eric and four grandchildren.

**MICHAEL A. SIDES**

**Michael Allen Sides BSc Pet '81** died Oct. 31 in the Egypt Air crash off the coast of Rhode Island. He was 40.



After graduation from Mines, Sides earned a master's degree in environmental engineering from Stanford University in 1986. He worked for Kerr-McGee as a petroleum engineer in Lafayette, La., and Houston. He then worked as an environmental engineer for Harding Lawson & Associates in Oakland, Calif. At the time of his death, he also was teaching an engineering class at a community college. For the last 10 years of his life, he lived in Concord, Calif. with his loving companion, Carol White.

Sides was an accomplished musician who played the piano and trombone. He was an avid hiker, camper, skier and general outdoors buff. His attitude toward life was "work hard and play hard—which he did very well!" says his sister, Marilyn Yeager.

In the six weeks preceding his death, Sides fulfilled two life-long dreams. He visited Nepal and climbed to the 18,000-foot base camp of Mount Everest. He then visited New Zealand, where he went down a

level-four rapids on a boogie board

**WILLARD R. SLATER**

**Willard R. Slater Geol E '40**, who helped oversee the creation of the California State Water Project, died March 5 at the age of 84 in Sacramento, Calif.

After graduation, Slater remained grateful to CSM for the support of colleagues and teachers. After retiring in 1977, he created the Slater Energy Research Endowment Fund at CSM. "He's always looked at the Colorado School of Mines as his best friend," said daughter Diane Price.

Slater worked for the Los Angeles Water Department, Texas Oil Co., U. S. Army Corps of Engineers and U. S. Bureau of Reclamation before joining California Department of Water Resources in 1952. He worked in the water-quality branch and later served as supervising engineer and chief of the central district's operating and maintenance branch.

After his retirement, Slater became involved in importing antique European furniture. His wife of 53 years, Emma Marie, died in 1994.

Survivors include daughters Diane Price and Patricia Ribbel, sons Michael, Mark and Richard, 10 grandchildren and 10 great-grandchildren.

**HARVEY W. SMITH**

**Harvey W. Smith EM '49** died Aug. 20 at home in Scottsdale, Ariz. after a long illness.

Smith was an Army veteran who served in both World War II and the Korean War, leaving the service as a captain. He met his future wife, V. Lee, in Pasadena, Calif. and a few weeks later, got accepted at Mines. He proposed and Lee joined him shortly thereafter in Golden. They were married for 53 years.

During the Korean War, Capt. Smith, as professor of military science and tactics at CSM, taught ROTC. In 1958, he started a mining engineering consulting business in Scottsdale.

"We have always been proud of his accomplishments at Mines," says his widow. "He was a fine man and good engineer, well respected in the mining industry in Arizona and the Southwest."

Smith is survived by his widow, sons Dana and Harvey, daughters Loralee J. Banker and Gypsy, a sister and three grandchildren.

**ALICE BYRNE VAN HORN**

Alice Byrne Van Horn, wife of **Richard Van Horn Geol E '47**, died of pneumonia Feb. 20 in Denver. She was 79.

Many Miners may remember her as the beautiful brunette who sold tickets at Golden Gem Theater, tended fountain at Alpine Drug Store and was hostess at the Golden Hotel between 1937 and 1942. She was also an actress in the Mines theater group and a member of the Dames Club. Most of her life was devoted to raising her five children.

Mrs. Van Horn always made an effort to be outgoing and helpful. When she worked at Alpine Drugstore, many CSM foreign students got their medications there because she had the patience to work her way through their sign language and hard-to-understand English. Mr. Van Horn remembers a CSM alumnus he'd never met before who learned the couple had moved to Salt Lake City. "He made the effort to locate me to inquire about Alice," Van Horn said.

**WILLIAM L. ZEIHNER**

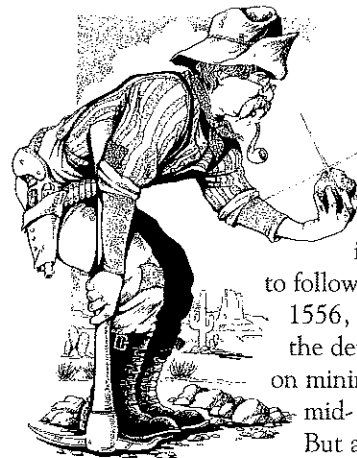
**William L. Zeiher Met E '49** of Hibbing, Minn. died in a duck-hunting accident last October at the age of 78.

Zeiher was retired from U. S. Steel International Inc. He had been assistant superintendent.

The native of Minnesota began his college career at University of Minnesota, but after two years he joined the U. S. Navy where he attained the rank of aviation radioman First Class. Following military service, he attended Mines. He and his wife, Katherine, had four children. ■

**Also In Memoriam**

Rasit Ceylan Geol E '50	Unknown
Bernard Dunn Met E '37	3/3/00
David W. Frazer, Sr. Met E '50	1983
Royal C. Pixler Met E '50	1997
Robert T. Parks BSc Geol '70	Unknown



## Early 1900s Handbook Tells Mining Professionals EVERYTHING They Need To Know

By Robert Sorgenfrei

**D**e Re Metallica is a tough act to follow. Published in 1556, it remained the definitive book on mining until the mid-18<sup>th</sup> century. But after it became outdated, there was nothing to replace it. The need for a comprehensive text became acute after 1867 when Columbia School of Mines, followed by other mining schools established throughout the 19<sup>th</sup> century, began to turn out graduates. By the turn of the century, American mining schools had produced more than 1,000 degree-holding mining engineers. These graduates traveled the world applying professional practices learned at American mining schools. The need for a handbook in the field was apparent, but who would fill it?

Robert Peele was a professor of mining engineering at Columbia School of Mines and he recognized the need for a comprehensive text on all aspects of the profession. In 1913, he submitted an outline of a proposed book, *Mining Engineers' Handbook*, to leading professionals and invited them to contribute chapters. World War I intervened, however, and the book wasn't published until 1918 by John Wiley & Sons.

The book quickly became known simply as *Peele* and would serve generations of mining engineers worldwide. From the beginning, *Peele* was recognized as a break-through text that filled in a major gap in the technical literature of mining engineering. *The Mining & Scientific Press* began its favorable review: "This is the book that the mining engineers have been awaiting for many years. The civil engineers have their *Trautwine*, the mechanical engineers their *Kent*, the electrical engineers their *Pender*, but the mining engineers have had nothing. The textbooks on mining were

elementary compilations mostly of a general nature, and wholly unsuited to the purpose for which this new volume is designed. John Wiley & Sons have placed the mining world under obligations through their initiative in meeting so great a want, and they have been fortunate in securing the services of Mr. Peele as the guiding editorial spirit to translate the conception into achievement."

*Peele* retailed for \$5 and was originally issued as a one-volume work. However, it soon became apparent that its 2,375 pages were unwieldy and too thick for the binding, which split and broke apart after only a little use. *Peele* was reissued as a two-volume set with more than 1,000 pages in each volume. This solved the problem of split binding. First editions of *Peele* in the one-volume format are rare because so few have survived intact. At the last library book sale, a copy of the one-volume first edition in very poor condition sold at auction for around \$100. The second edition, published in 1927, can be found in both the one- and two-volume formats, but again, the one-volume book is rare. All editions are bound in maroon-colored cloth with gilt stamped lettering on the spine. *Peele* by itself is gilt stamped on the front cover. The first two editions are about seven inches tall with gilt edges. At about an inch and a half thick, the two-volume editions are about the size of large modern paperback books. The third edition, without gilt edges, is about an inch taller than the previous editions. This book was designed to travel easily.

Mining engineering has been described as the "most polyglot of all the professions." Indeed, an old-school mining engineer was at times a CEO, personnel director, lawyer, geologist, metallurgist, surveyor, chemist and mechanical, electrical and civil engineer all in one. The chapters in *Peele* reflect this eclecticism. No other engineering handbook covers so varied a subject matter, from geology to

all aspects of engineering to law to payroll and personnel management. When looking at the book, one realizes no single author could have written it. The subject matter is too diverse. But using the profession's best and brightest, *Peele* was able to turn each contribution into a coherent piece that discussed virtually all that was known about mining engineering at the time.

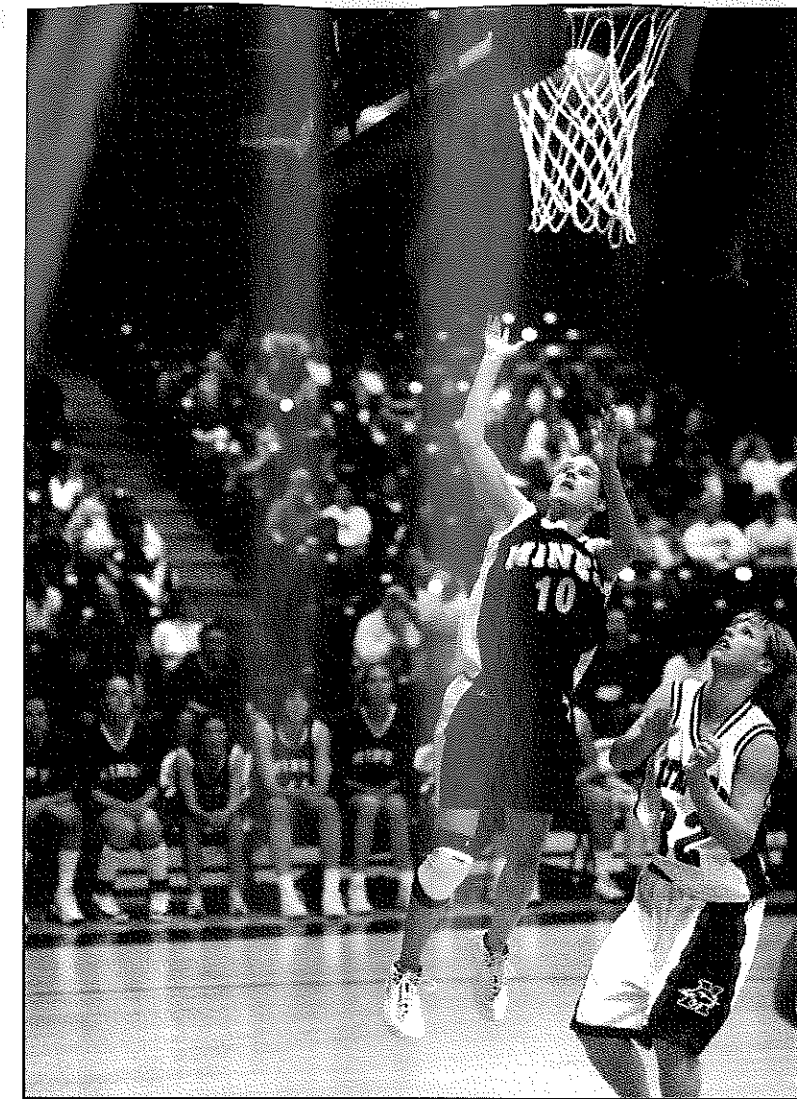
The attention to detail is amazing. For example, the chapter "Prospecting and Exploration," tells one how much food is needed for each man per month on an expedition: 42 lbs. flour/commmeal/hardtack, 27 lbs. bacon, 7 lbs. beans/split peas, 5 lbs. sugar, 4 lbs. dried fruits, 3 lbs. butter, 2 lbs. canned milk, 2 lbs. cheese, 2 lbs. tea/coffee, 3 lbs. salt/pepper/mustard, 3 lbs. baking powder, and one bottle of lime juice.

Even in such a comprehensive work, there had to be limits: recipes were not included.

Under "Special Problems of Mine Labor," advantages and disadvantages of using particular racial and ethnic groups as labor are discussed in stereotypical ways that would be unacceptable today. This section was dropped in 1941.

*Peele's Mining Engineers' Handbook* traveled the globe with generations of mining engineers. The third and last edition was published in 1941, a year before *Peele's* death. The book finally went out of print in the 1950s after many reprints. It is still a proud part of many professional libraries and is still sought after by students and newly trained mining engineers. Certain sections describing aspects of mining practice and technique are still valuable. It is an historic testament to the old-school mining engineer: that jack of all trades who roamed the world running every aspect of a mine operation.

Robert Sorgenfrei is librarian/archivist of the Russel L. & Lyn Wood Mining History Archive, Arthur Lakes Library. ■



## Amy Bollinger Is One for the Record Books

By Jeff Duggan, CSM Sports Information Director

**A**my Bollinger, a standout women's basketball player for the Lady Orediggers since 1996, graduates in May with a degree in computer science. During her four years here, Bollinger made her mark as one of the most prolific women's basketball players ever to set foot in Volk Gym.

Bollinger played in 99 games, starting 72, during her four-year career. As the starting point guard, she became only the fifth Lady Oredigger ever to score 1,000 points (1,018). Bollinger also finished as the career leader in assists (339), assists per game (3.39), three-point field goals made (85) and free throws made (260). Her career average of 10.0 points per game ranks her fifth all-time and her 220 steals is the second-best career total.

No other CSM women's basketball player has ever so selflessly dished out assists like Bollinger. During her senior campaign, she set new single-season bests for assists with 117 (10 against Palm Beach Atlantic) and assists per game with 4.50. She leaves CSM as the career leader in assists with 339-94 ahead of the second-place player. Her career assists-per-

game-average of 3.32 also tops the charts.

This year, in which she earned Second Team All-Rocky Mountain Athletic Conference accolades, Bollinger made a career-high 68 steals and improved her career total to 220—a total that is second all-time at Mines. Bollinger, who was also a Second-Team All-RMAC selection following her sophomore season, hauled in 255 rebounds during her career, including nearly 200 on the defensive side of the court.

After completing her eligibility as a basketball player, Bollinger joined the CSM softball team this season as an outfielder. Originally from Olathe, Colo. Bollinger was a three-sport star in high school. She played four years of basketball (three times all-conference), four years of volleyball (three times all-conference) and was a four-time all-conference soccer player.

Bollinger hails from a family that includes 15 brothers and sisters with two of her siblings also attending CSM.

In addition to her athletic prowess, Bollinger made the Colorado Mines' Honor Roll during the Fall of 1999. After graduation, she will work for Great West Life. ■

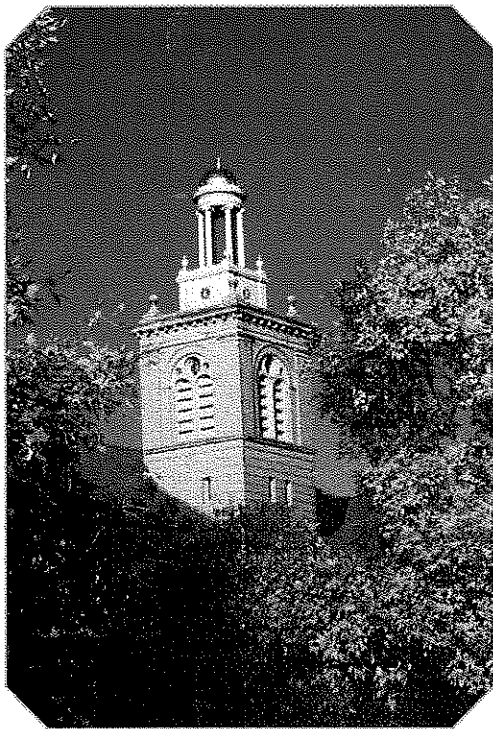


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