Welcome alumni and friends to the 2006 edition of the *G-Hawker,* and first, let me thank you all. With so many of you working with us to help the Department and its students, it is clear that G-Hawks are a loyal and generous group. Your time, ideas, reputation for excellence, and financial support have made a great difference for us. I am grateful for all you have done for the Department of Geology over the last year.

Over recent years, G-Hawks have done much to make us proud to be members of the same KU flock. It is almost impossible now to go to a national meeting in our field and *not* see a current faculty member, student, or alum receiving an award, breaking new ground in our field, or exerting a leadership role in the geosciences. This reputation for excellence helps us every day in attracting the best students, garnering support from the University, industry, and funding agencies. G-Hawks are a successful bunch, and that fact continues to impact the Department's current success and augment its reputation. Since the last edition of the *G-Hawker,* much has changed in the University and in the Department. We now have a new dean, a new provost, and a new director of the Kansas Geological Survey. These changes undoubtedly will provide the Department with new opportunities.

Our geology courses continue to have an impact on large numbers of KU students. More than 4,000 students enroll in our courses each year. This ensures that the majority of KU undergraduates have an understanding of our field when they graduate. At the same time, the number of majors in geology also is increasing, with 84 undergraduate and 72 graduate students currently enrolled. Job placement for these students is the strongest in recent memory, with most students able to have their choice of positions in the various areas of the geosciences. This group is a strong one, with current students winning large numbers of grant and award competitions (see page 33).

Last year, we welcomed two new faculty into the Department. Dave Fowle contributes to our programs in geobiology and hydrogeology (see page 8). Mike Taylor builds his program around studies of the structural geology and geomorphology of tectonically active mountain belts through remote sensing and fieldwork. At the same time, the Department has successfully expanded its technical support staff by hiring Zach Wenz for rock and sample preparation work and Jason Ash for computer support. In addition, we have two other new faculty members coming in. Paul Selden was hired as a distinguished professor doing research and teaching in invertebrate paleontology; Paul will join us in the middle of the year. Alison Olcott studies fossils and geochemical signatures of very old rocks to contribute to understanding of the origin and evolution of life on Earth, and sedimentology and ecology of very ancient systems. She will be joining the Department next year.

To accommodate all of the recent growth, the Department expanded into new lab space in the Multidisciplinary Research Building on west campus. This is a beautiful new facility, and I invite you all to come to Lawrence to see it. This move, however, spreads us out into four separate buildings, further fragmenting the Department and its students. The Geology Associates Advisory Board and Department faculty have identified this as one of the major challenges currently facing the Department; one that ultimately we hope to remedy by bringing all faculty and students back together into the same or adjoining space in the central part of campus. There is cause for optimism that we can meet this challenge head on and, with your help, continue to advance the Department into its next level of success.

As you read this 2006 edition of the *G-Hawker,* I think that you will agree—this is a great day to be a G-Hawk!

Bob Goldstein, Chair

Fall 2006

Dan Stockli and Jen Roberts at the welcome barbeque for new students

In This Issue

Features

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Cover Photo: SEM image of an endolithic biofilm community growing on and weathering a partly serpentenized harzburgite. Width is 230 micrometers.

Photos courtesy of: Cynthia Keeffe, inside cover; David Fowle, pp. 3, 8; Catherine Evans, pp. 5, 6, 10, 21; Kansas Geological Survey, pp. 7, 38; Tony Walton, pp. 20, 21, 22; Douglas Walker, pp. 20–22; Doug Koch/KU University Relations, p. 22; Scott Adams, p. 23; Eric Vogl and Lisa Bush, p. 28; Duane Sackett, p. 29; Douglas Strickland, p. 31; Illinois State Geological Survey, pp. 36, 37; Dan Merriam, p. 37.

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FACULTY

ROSS A. BLACK, Associate Professor; PhD, University of Wyoming, 1990; geophysics, reflection seismology.

J. F. DEVLIN, Associate Professor; PhD, University of Waterloo, 1994; hydrogeology/contaminant transport.

DAVID A. FOWLE, Assistant Professor; PhD, University of Notre Dame, 2000; geomicrobiology, aqueous geochemistry, limnology.

ROBERT H. GOLDSTEIN, Merrill W. Haas Professor and Chair; PhD, University of Wisconsin, 1986; sequence stratigraphy, diagenesis, fluid inclusion studies of carbonates.

LUIS GONZÁLEZ, Associate Professor; PhD, University of Michigan, 1989; stable isotopes, carbonate geochemistry, and diagenesis, paleoclimate.

STEPHEN T. HASIOTIS, Associate Professor; PhD, University of Colorado at Boulder, 1997; paleontology, ichnology, sequence stratigraphy, terrestrial paleoecology.

ROGER L. KAESLER, Professor of Geology, Director and Sr. Curator, Museum of Invertebrate Paleontology, and Director, Paleontological Institute; PhD, University of Kansas, 1965; micropaleontology, paleoecology, quantitative morphologic studies.

DIANE KAMOLA, Associate Professor; PhD, University of Georgia, 1989; sequence stratigraphy, basin analysis, clastic sedimentology.

BRUCE S. LIEBERMAN, Associate Professor; PhD, Columbia University, 1994; paleontology, Cambrian radiation.

GWENDOLYN L. MACPHERSON, Associate Professor; PhD, The University of Texas at Austin, 1989; hydrogeology.

CARL D. McELWEE, Professor; PhD, University of Kansas, 1971; physical hydrogeology, geophysics.

JENNIFER ROBERTS, Assistant Professor; PhD, The University of Texas at Austin, 2000; microbial hydrogeology.

DON W. STEEPLES, McGee Distinguished Professor and Vice Provost; PhD, Stanford University, 1975; shallow seismic reflection, crustal analyses, and microearthquake recording.

DANIEL STOCKLI, Associate Professor; PhD, Stanford University, 1999; thermochronology, structural geology.

MIKE TAYLOR, Assistant Professor; PhD, University of California, Los Angeles, 2004; neotectonics and continental deformation.

GEORGE TSOFLIAS, Assistant Professor; PhD, The University of Texas at Austin, 1999; geophysics, hydrogeophysics, ground-penetrating radar.

WILLIAM R. VAN SCHMUS, Union Pacific Resources Professor; PhD, University of California at Los Angeles, 1964; geochemistry, meteorites, geochronology.

J. DOUGLAS WALKER, Professor; PhD, Massachusetts Institute of Technology, 1985; structural geology, geochronology, tectonics.

ANTHONY W. WALTON, Associate Professor; PhD, University of Texas at Austin, 1972; sedimentology of siliciclastic and volcaniclastic rocks.

MUSEUM OF INVERTEBRATE PALEONTOLOGY

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EMERITUS FACULTY

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LOUIS F. DELLWIG, Professor Emeritus; PhD, University of Michigan, 1954; structural geology, geology of evaporites.

WAKEFIELD DORT, Jr., Professor Emeritus; PhD, Stanford University, 1955; geomorphology, Pleistocene geology, archaeological geology.

PAUL ENOS, Distinguished Professor Emeritus; PhD, Yale University, 1965; carbonate geology.

WILLIAM W. HAMBLETON, Professor Emeritus and Director Emeritus, KGS; PhD, University of Kansas, 1951.

WILLIAM MERRILL, Professor Emeritus; PhD, Ohio State University, 1950; sedimentology, stratigraphy.

RICHARD A. ROBISON, Professor Emeritus; PhD, University of Texas at Austin, 1962; paleontology.

ALBERT J. ROWELL, Professor Emeritus and Sr. Curator, Museum of Invertebrate Paleontology; PhD, Leeds, 1953; quantitative methods in geology, paleontology, Antarctic geology.

PALEONTOLOGICAL INSTITUTE

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JASON ASH, Information Specialist I, 2006.

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ZACH WENZ, Research Technician, 2005–present.

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TIMOTHY R. CARR, Sr. Scientist, KGS.

JOHN H. DOVETON, Sr. Scientist, KGS.

GISELA M. DRESCHHOFF, Principal Investigator.

EVAN K. FRANSEEN, Sr. Scientist, KGS.

LEE C. GERHARD, Sr. Scientist Emeritus, KGS.

JOHN GOSSE, Associate Professor, Dalhousie University.

JOHN W. HARBAUGH, Professor Emeritus, Stanford University.

LEONARD KRISHTALKA, Director, Natural History Museum & Biodiversity Res. Ctr.; Professor, Ecology & Evol. Biology.

ROLFE MANDEL, Sr. Scientist, KGS.

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RICHARD MILLER, Associate Scientist, KGS.

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SUSAN E. NISSEN, Assistant Scientist, KGS.

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THOMAS N. TAYLOR, Distinguished Professor, Ecology & Evolutionary Biology; Curator, Natural History Museum and Biodiversity Res. Center.

W. LYNN WATNEY, Sr. Scientist, KGS.

DONALD O. WHITTEMORE, Sr. Scientist, KGS.

New Geobiology Program to Unearth Unknown Worlds

Microbes play a major role on Earth. They help cycle carbon and nitrogen and have the potential to protect against erosion, aid in methane-gas production, clean up oil spills, and render toxic heavy-metal mine waste harmless. Left to their own devices, however, they may also release toxic compounds into the atmosphere, soil and water, causing contamination.

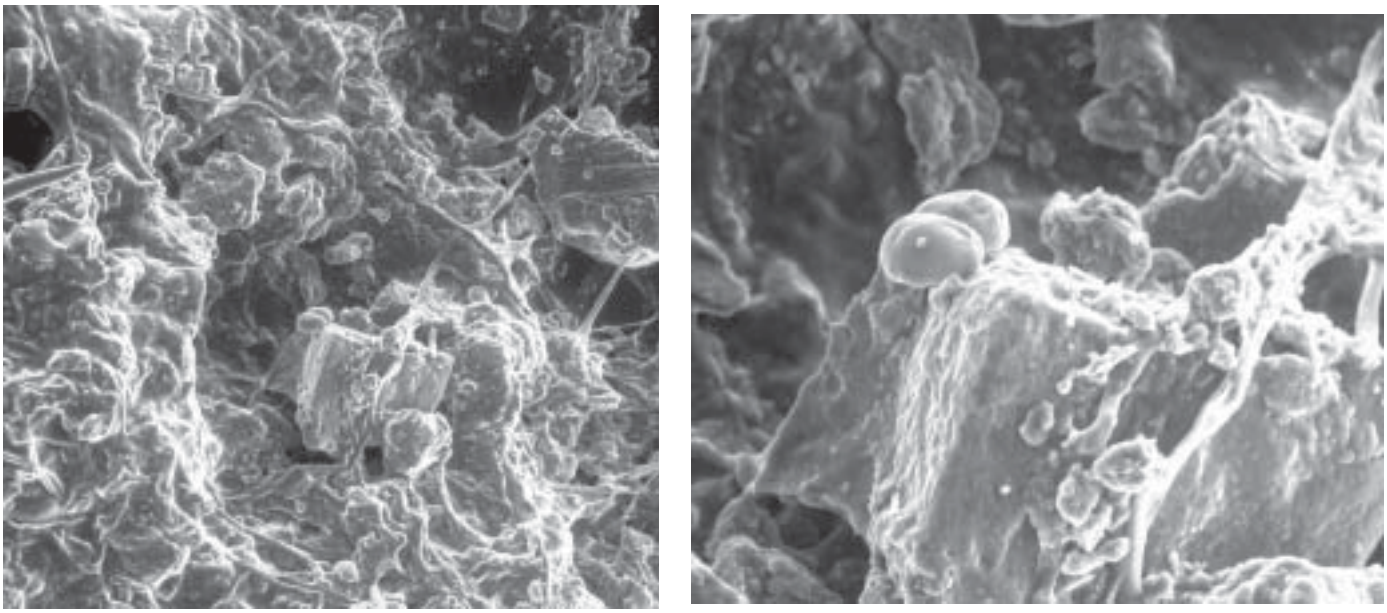
No one is even close to knowing everything helpful or harmful microbes do or what good deeds they could do if put to work by humans. But over the past couple of decades scientists have become increasingly aware of how vital they are, not just from a biological perspective, but a geological one as well.

That's where geobiology comes in. A recently defined multidisciplinary field, geobiology explores interactions between the biosphere, geosphere, atmosphere, and hydrosphere through the integration of a variety of disciplines—geomicrobiology, geochemistry, sedimentology, biochemistry, paleontology, environmental geology, and oceanography, just to name a few. Many compelling discoveries have already been made in this burgeoning research area that has a great potential for many more, and KU scientists are working toward establishing a leadership role in this pursuit, capitalizing on integration with already strong programs in the Department. Several geology faculty members, from a variety of specialties, are exploring new scientific avenues and helping students appreciate the implications of what's being uncovered.

"My expectation is that we are on our way to being the top program in the country or at least being among the top few," said Department Chair Bob Goldstein. "If we look at one of the future directions in the geological sciences where there is potential for major advances, the integration of biology in geologic processes is certainly right up there. For years we treated reactions in the upper couple of kilometers of the crust as purely chemical and physical. More and more it appears that many of these reactions are biologically mediated."

Key among the Department's researchers with an emphasis in geobiology are Professors Jennifer Roberts, Luis González, and David Fowle. Roberts explores bacterial interactions with minerals, hydrogeology, and geochemistry. Her research focuses broadly on microbe interactions with minerals and the geological and ecological implications of those interactions in subsurface environments. She is doing research in three separate but interrelated areas—microbial attachment to mineral surfaces, nutrient-driven microbial silicate weathering, and low temperature precipitation of dolomite.

González, whose areas of emphasis include stable isotope geochemistry, carbonate geochemistry, and diagenetic processes, uses isotopic and elemental



SEM images of an endolithic biofilm community growing on and weathering a partly serpentenized harzburgite

chemistry of carbonate minerals for paleoenvironmental and paleoclimatic reconstructions. He is currently researching paleoclimate and paleo-environmental conditions using carbonate minerals in speleothems from Jamaica, Venezuela, and Nepal, and carbonate and clastic strata from the Americas and China. In his stable isotope laboratory, he and his students apply stable isotope techniques to the study of modern and ancient processes and environments.

Fowle examines how bacteria influence the ways in which metals cycle through the environment. His investigations include quantitative geochemical modeling of bacterial metal-sorption reactions; biomineralization and its effects on contaminant mobility in the subsurface; bioavailability and diagenesis of metals in aquatic ecosystems; microbially promoted mineral dissolution; and biogeochemical interactions in wetlands and soil systems. He also explores the linkages in microbial ecology, using culture and molecular-based techniques, and iron and trace-element cycling. His work on metal cycling in the environment is in high demand by the mining and energy industry.

"If you want to predict what's going on, you have to understand the ecology as well as the geochemistry," he said. For example, researchers may use incubators in the field to study microorganisms before bringing the organisms back to the lab to see if they act the same way there that they did in the field. Then it's back to the field for more observation.

"Things are not always as they seem," Fowle said. "There may be 20,000 microbes in an environment but maybe only 10 or 20 are doing most of the work." In terms of the ecology, Roberts said, "we need to find out who's eating whom."

Because of its multifaceted nature, geobiology also ties in to the research and teaching of many other faculty members in a Department already strong in paleontology, sedimentology, and geochemistry.

"The strength of our program is diversity," Roberts said. "We don't just have a group of researchers doing the same thing. We're not cutting out any of our traditional strengths in paleontology and sedimentology, as some programs are, but building on them in complementary areas of geobiology. By including microbial aspects of paleontology and sedimentology we have a deep time aspect to our program that others lack."

"One of the more exciting aspects of this new program is the degree to which it advances through interdisciplinary research," Goldstein said. "More than half of the faculty in the Department are involved and

Jennifer Roberts in her laboratory in the Multidisciplinary Research Building

are contributing to this program, working with the three key faculty members on active research, publications, student supervision, and grants. The research also brings in faculty collaborators from other KU departments."

Geobiology is broader than the study of geomicrobiology and goes beyond the boundaries of geology. As the name implies, biology is an important component, and geobiologists are sharing their work and exchanging ideas with scientists in other disciplines, such as molecular biology and environmental engineering.

In the area of environmental geology, Rick Devlin, who specializes in hydrogeology and geochemistry, is working with Roberts and George Tsoflias on a field project whose goal is to evaluate the effect of subsurface microbial activity on groundwater flow in a gasoline-contaminated groundwater plume. He also emphasizes aspects of geobiology in the classroom. In his contaminant transport course, students learn how bacteria in the subsurface are responsible for the degradation of many common groundwater and soil pollutants, and in his environmental geology course, geobiology is examined in the context of pollutant attenuation and the relationship between Earth's environment and the origin of life on the planet.

Addressing issues related to oil and gas exploration, Goldstein, González, and Roberts are studying how methane-generating microbes cause the mineral dolomite to form. Their work has generated great interest from the oil industry, as it may hold the key in predicting the distribution of porosity in dolomitic oil and gas reservoirs.

In paleoecology, Steve Hasiotis has incorporated the expertise of Roberts in identifying the microscopic

structures left behind by microbes in ancient rocks. In his research he interprets the environment in ancient terrestrial and aquatic ecosystems.

Examining the preservation of microbial fossils, Tony Walton and Hasiotis are working together to study microbial trace fossils in basaltic glass—endolithic microborings—primarily from Hawaii. Goldstein, Hasiotis, Roberts, and student Govert Buijs have recently published their results on microbial borings in Permian brachiopods, concentrating on the ways in which similar microbial trace fossils could be preserved in extraterrestrial samples. And although really out there, an extraterrestrial angle provides a flashy perspective into the preservation of ancient microbial remains. Roberts, Goldstein, and student Jim Adamski have just joined forces to publish a new paper in the journal *Astrobiology* on how microbial cells can be trapped in fluid inclusions in minerals and preserved intact over long periods of time.

Bruce Lieberman's emphasis is paleontology with a primary focus on the evolutionary history of life preserved in the fossil record. His research concentrates on how the different types of geological forces influence evolution, and when and why rates of evolution vary through time.

"In these respects, paleontology is one of the core disciplines of geobiology," Lieberman said. "One of the fundamental patterns we see in the fossil record is the important control that earth history (be it plate tectonic change or climatic change) plays in influencing evolution and the history of life. In effect, the lesson from the fossil record is that the history of the Earth and the history of life are inextricably linked."

Like the field of geobiology itself, the study of geobiology at KU is still in the early stages, but it is developing rapidly. This year the Department advertised for a new faculty member to expand the group. With a one-word, twenty-letter title that encompasses four disciplines—paleobiogeochemistry—the position description exemplifies the wide-open opportunities in geobiology. At the end of 2007, Alison Olcott, now at the University of Southern California, will fill that position. An organic geochemist specializing in lipid biomarkers and compound-specific isotopic analyses, she is interested in using the chemical fossils of organisms to address the co-evolution of the Earth and its biosphere. Her research will add yet another dimension to the program and will complement the programs in paleontology and sedimentary geology.

"Life for most of the geologic record is dominated by microbes to the exclusion of metazoan life forms," Goldstein said. "That means that through our new program in geobiology, we have an exciting new opportunity to examine the origin of life on the planet and its evolution. Alison Olcott will be a key figure in doing this."

Students are an important component of the geobiology program at KU, and developing an effective curriculum of courses will be essential.

"A major goal in the future is for us to put together field course work in geobiology," Roberts said. "We want to combine applied techniques with fieldwork and train students to do what they're going to do in the work world while still teaching the basic science."

"Students can use the experiences they've had if they go to work for oil companies, the EPA, or museums," Fowle said. "It's a real opportunity for them to be exposed to things that will get them jobs in any field."

Fowle, who collects microbial DNA, emphasizes the importance of both fieldwork and laboratory analysis for students as well as researchers. Geochemical analyses are indispensable when determining what microbes are or were living in a geological system and what processes they affected. Paleoenvironmental reconstruction provides clues about modern microorganisms as well. Sedimentary rocks are loaded with information about past interactions between the biosphere, geosphere, and atmosphere.

Geobiology presents countless opportunities to explore microscopic macrocosms that have previously gone undetected. By tying into its existing strengths and creating new opportunities, KU is setting up to be a leader in this new and growing field. And there's no risk of running low on research subjects, because as Roberts pointed out, "microorganisms are everywhere."

Luis González' laboratory in the Multidisciplinary Research Building

Multidisciplinary Research Building Encourages Interaction, Collaboration

Well stocked with apparatus, from pipettes to mass spectrometers, the Department of Geology laboratories in KU's new Multidisciplinary Research Building (MRB) are arenas of innovative research. The 106,000-square-foot building, located on West Campus, has 45,000 square feet of laboratory space, including three geology labs that total approximately 5,000 square feet. They are staffed by Luis González, Jen Roberts, and David Fowle, who also have office space in the building. An additional staff member, Alison Olcott, will be joining the geobiology team in MRB next fall.

Luis González is director of the Keck Stable Isotope Laboratory, which opened in 2004 and moved to MRB in 2005. The lab includes two mass spectrometers, one to analyze carbonate minerals, water samples, and dissolved gases, and the other to analyze bulk organic matter in solid and liquid samples. Roberts and Fowle use their geomicrobiology labs to culture and store microorganisms and explore how those organisms function in geological and hydrological settings.

"We are very pleased to have the geobiology group in the Multidisciplinary Research Building," said George Wilson, associate vice provost for research. "They bring a high level of enthusiasm for research and some uniquely complementary approaches to the characterization of biological systems."

Not only does MRB provide state-of-the-art research opportunities for the faculty, but the labs are a draw for attracting the best and brightest students. Several graduate students who work with the geology faculty are also able to use the state-of-the-art facilities for their own research.

"You can't put a price on a good lab facility as advertisement," Fowle said. "Students see their research won't be hindered by the facilities. They see a large stable isotope lab or geochemistry facilities and know that KU is really set up to take care of them."

MRB facilitates individual research projects and at the same time provides for interaction between specialists in a variety of disciplines. To encourage communication, the building's offices are clustered together around informal open commons areas where researchers can eat lunch and congregate. Whiteboards and corkboards line the halls, allowing for writing and display during impromptu discussions. Other KU scientists currently in MRB are in the fields of bioinformatics, bioanalytical chemistry, pharmaceutical chemistry and engineering and medicinal chemistry.

"The building is set up so information can be transferred from discipline to discipline," Roberts said. For example, a pharmaceutical chemist in the building is investigating the use of microbes for vaccines, which relates to work Fowle and Roberts are doing with microbes. If they had been in separate facilities, they may never have realized that and would not have been sharing ideas and research findings.

Another benefit of having a conglomeration of research labs in one location is that standard equipment, such as microscopes, can be easily shared. That means funding and grant dollars can be stretched further, leaving more money available for specialized equipment.

The three-story building, which opened in December 2005 and was formally dedicated in March 2006, is the most recent addition to a planned expansion of KU's research infrastructure. It is located on Becker Drive southwest of 19th and Iowa. When fully occupied, MRB will house up to 200 scientists, post-docs, graduate and undergraduate students, technicians, and support staff.

Although the new facility draws faculty and students away from the core of the Department in Lindley Hall, it has provided much-needed research and office space for a growing department and serves as a showcase for just what facilities are possible for a top program in the geosciences.

Multidisciplinary Research Building

Wichita KU Grads Reflect on the State of the State's Oil and Gas

When oil started flowing from the El Dorado Field in 1915 local towns shared in the profit, but none benefited more than Wichita. Already thriving in the early 1900s, Wichita and its astute business community had the foresight to see the opportunities in oil and gas. A Wichita firm, Wichita Natural Gas Company, had drilled the initial well in the area and much of the oil money flowed into Wichita banks and companies.

Nearly a century later, through ups and downs in the industry, Wichita remains an oil-and-gas production stronghold in the state. Recently, we asked two long-standing Wichita independent oil producers to reflect on the state of the industry in Kansas. Walter "Innes" Phillips (BS '55), president of Pintail Petroleum Ltd, is from a family with a long history in oil and gas production. His father, Lee Phillips, operated Lee Phillips Oil Co., and his grandfather, L. E. Phillips, co-founding Phillips Petroleum. A. Scott Ritchie (BS '54) whose father, Andy Ritchie, was also active in the Wichita oil scene, is chairman of Ritchie Exploration, Inc. and winner of the first G-Hawker Legacy Award (see pg. 25). Even as they contemplated the issue, oil prices continued to fluctuate.

"In 2005 and 2006 the 'boom' has been on and geologists are in big demand," Phillips said. "There are fewer places to prospect today since the booms in the WWII years and the 1970s and 1980s when most of the larger fields that produce conventional oil and gas reserves in the eastern three-fourths of the state were developed. Now the emphasis is on unconventional coal bed methane, the deeper pays in southwest Kansas and the small 'pimples' in the old heavier density drill sites in central and eastern Kansas. There has been a huge increase in stratigraphic plays and fracturing plays as the oil price has tripled."

"The industry is very active and most geologists are fully employed," Ritchie said. "The lack of recent graduates entering the field coupled with a rapid rise in drilling activity has created a shortage of available well-site geologists. It will be difficult for new oil operators to enter the business because of the extreme shortage of drilling rigs, service company availability, and the difficulty in obtaining production equipment."

Kansas oil production peaked in the mid 1950s. In 1956 the state produced a high of 124,204,000 barrels. By 1998 it had sunk to 29 million barrels, according to the Kansas Geological Survey. By 2005 that had risen to nearly 34 million barrels. Although production is still well below what it was 50 years ago, the substantially higher prices per barrel are making smaller producing wells and exploration profitable again. Technical innovations and the restructuring of companies, however, have changed the face of the industry.

"Fifty years ago major companies and larger independents with large staffs held much of the leased acreage and supported the drilling of many wells," Ritchie said. "Much of this drilling was on a 'nearly' random basis because early seismic surveys were considered largely unreliable. Today the majors and large publicly owned companies are gone. Smaller independents dominate exploration using modern seismic methods and employing smaller staffs. We are experiencing significantly increased levels of exploration activity, much of which is based on the 3-D seismic surveys refining subsurface mapped prospects."

Phillips agrees that 3-D seismic techniques have made a major impact. "The advent of really good 3-D seismic results have contributed to the success of the drilling program of the last few years," he said.

As has always been the case when it comes to oil and gas, the future of the industry is influenced by a variety of unpredictable factors that make forecasting difficult.

"When this 'boom' is over, there will still be opportunities but they will be quite limited for Kansas oil geologists," Phillips said. "There will be operator opportunities as long as the price remains high and the government encourages 2 to 3 barrel-of-oil-per-day wells. We will suffer if costs continue to rise or the price goes back down."

"Present oil and gas pricing is needed to sustain the very expensive exploration drilling activity of today," Ritchie said. "If we maintain high prices, explorationists will continue to look for oil and gas in the relatively undrilled areas of Kansas. This should be sustainable for the next decade and probably beyond."

Robert Sawin / Kansas Geological Survey

Jan van Sant: A Decade and Beyond with AGI Foundation

A year before retiring as senior vice president of technology for Pennzoil Exploration & Production Company in 1996, Jan van Sant (MS '58, PhD '63) was already looking ahead to a continued productive career in the geosciences. In 1995 he took on the executive directorship of the American Geological Institute Foundation (AGIF), the principle source of funding for endowments and education programs of the American Geological Institute (AGI). Just over a decade later, Van Sant is still reaping the rewards that come with supporting educational, scientific, and charitable activities.

"Successful fundraising totaling about $8 million has enabled AGI to develop and implement several important K-12 and other Earth science education programs," Van Sant said. "Working closely with geoscience leaders in industry, academia, and government has been especially interesting also."

As executive director, Van Sant oversees the business aspects of AGIF and coordinates and assists fundraising activities by the 60 to 70 trustees on behalf of the Foundation. Fundraising for an endowment to support a geoscience congressional fellow in Washington, D.C. has been challenging, Van Sant said, and is now close to its $2 million goal. This fellowship, the " William L. Fisher Congressional Geoscience Fellowship Endowment" was named in honor of fellow KU graduate Bill Fisher (MA '58, PhD '61). Fisher is secretary of AGIF, past dean of the Jackson School of Geosciences and professor in the Department of Geological Sciences at the University of Texas–Austin, and former director at the Texas Bureau of Economic Geology.

Van Sant also sees promise in the AGI education programs, including the middle and high school Earth science curricula programs now being taught in 49 states. A K-5 teacher-training program was also launched this summer. In another program, AGIF is partially supporting AGI's four-part TV series with Discover Communications. The series, entitled "System Earth," is scheduled to premier April 2007.

"Retirement offers a person time to give back to his or her profession." Van Sant said. "Supporting geosciences for the future is very important and rewarding."

Welcome David Fowle

Having taken a circuitous route by way of chemistry, biochemistry, the geological sciences, and civil engineering, David Fowle considers himself a latecomer to the field of geobiology (see page 3). Through his investigations in a variety of related fields he recognized that microbes affect geologic processes strongly, and he then became interested in researching how bacteria influence metal cycles in the environment. Last spring he arrived at KU as assistant professor in the Department, where he explores the microbial world in his prestine new lab in the Multidisciplinary Research Building on West Campus and teaches classes in the Department.

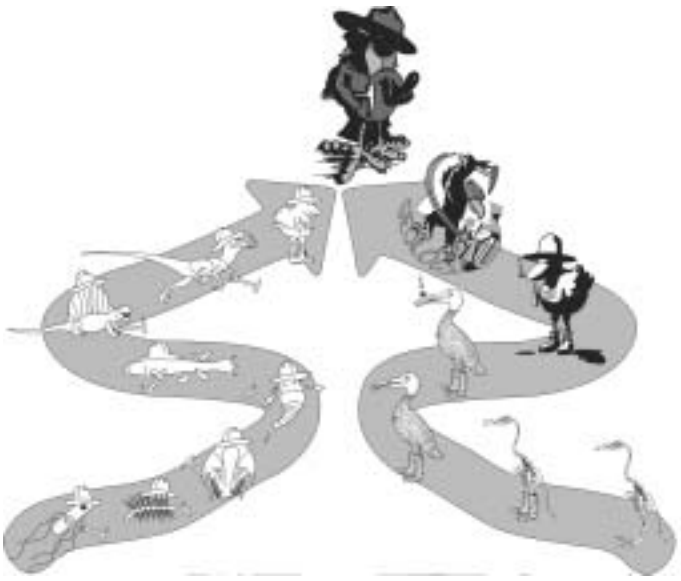
About coming to KU, Fowle said, "it was an easy choice. I wanted to come to a place where my intellectual needs were met and nourished. I get to do my own research and interact with students all day long. Through teaching we touch a lot of students. That's good for us and good for the planet. We are living in a world where everyone needs to know about how what we do affects our environment." In relation to his work in geomicrobiology, Fowle also is interested in deep history of the planet, ecology, economic geology, and environmental remediation.

Away from the office, lab, and classroom, Fowle pursues his interest in wine and winemaking, although even that he can connect tangentially with his work. "My long term goal is to have my own vines," he said. "There's a natural tie to geology because you have to know about soils." Another favorite pastime—travel—is also a good fit with his chosen profession. One of his preferred destinations is his field site in Indonesia. Fowle earned his BS in chemistry at the University of Western Ontario, his MS in geological sciences and his PhD in civil engineering and geological sciences at the University of Notre Dame, and was a postdoctoral fellow in the University of Wisconsin's Department of Geology and Geophysics. He came to Kansas from his native Canada, where he was assistant professor at the University of Windsor for five years. While there, he was awarded one of the coveted Canada Research Chairs in Biogeochemistry, so KU's success in enticing him to leave that says a great deal about the potential of the Department's program.

Evolution of the G-Hawk?

Did the G-Hawk evolve from *Hesperornis regalis* via *Jayhawkornis kansasensis*, as the renowned R. C. Moore implied in the 1930s, or were its ancestors trilobites, fish, and dinosaurs as a visionary T-shirt designer speculated at the dawn of the 21st century?

In Moore's favor, documentation proves his hypothesis is based on scientific investigation. Moore unveiled the *Jayhawkornis kansasensis* in a 1932 article in *The Compass*, but as he stated, "the ancestral Jayhawk bones" were first discovered in 1870 by Professor O. C. Marsh in the Cretaceous of western Kansas. Moore's avian revelations culminated with the first-known published rendition of the G-Hawk in *The Compass* in 1940. Sadly, none of Moore's G-Hawk research or original specimens have been located, and the only known early published description of the G-Hawk was in the 1940 *Compass* article where Benedict P. Bagrowsi briefly noted, "since the Jayhawk is the symbol for the students and graduates of K.U., the G-hawk represents those K.U. students who have had 20 or more hours in geology, mining, engineering, etc. The Drawing of the G-Hawk was made by Dr. R. C. Moore."



Two competing theories on the evolution of the G-Hawk are the T-shirt hypothesis (left) and the "Hesperornis/Jayhawkornis" hypothesis (right).

Some have suggested a collection of extensive field drawings by Moore mysteriously disappeared under suspicious circumstances, leaving even his most avid supporters unable to quash widely circulating rumors that Moore actually fabricated rather than excavated the G-Hawk. What did Bagrowski mean when he wrote, "The Drawing of the G-Hawk was made by Dr. R. C. Moore?" Moorites maintain the "drawing" was based on paleontological evidence. But others aren't so sure. Could Moore merely have been "drawing" on his own imagination?

The rival "T-shirt" theory of G-Hawk evolution was first presented to the scientific community in 2000. Published on the back of a Department of Geology T-shirt, it is considered by many in the academic community to contain evolutionary gaps, but it has its share of backers. Allegedly based on shakier scientific evidence than the "*Hesperornis/Jayhawkornis*" hypothesis, the "T-shirt" hypothesis has a small but devout following that believes the G-Hawk descended directly from a pipe-smoking dinosaur rather than a bird.

Whatever the G-Hawk's origin, considerable sartorial evidence published on Department T-shirts during the past two decades suggests the G-Hawk may have survived extinction and evolved into several new species, most of whom wear sunglasses. (Could that be an indication of global warming or ozone layer depletion?) However, as with the Loch Ness Monster and Big Foot, sightings of in-the-flesh (or feather) G-Hawks continue to elude all but the most faithful and hallucinatory G-Hawkers. A G-Hawk has yet to be captured on film or in digital form.

Never having seen a living G-Hawk himself, R. C. Moore left Jayhawkers and G-Hawkers with something to contemplate when he wrote, ". . . the fossil remains of the Rock Chalk bird do not permit accurate determination of the size of the brain case, and we cannot, therefore, tell definitely whether there has been considerable development or decline in intelligence during the course of evolution from '*Hesperornis*' to '*Jayhawkornis*.'"

There is no evidence Moore ever discovered which direction the *Jayhawkornis* brain—and by extension, the G-Hawk brain—was developing, and the rise of the G-Hawk's intellectual prowess was left for future generations to verify. Please report any fossil finds, live sightings, or other proof that could help put this controversy to rest.

Twins work well as a team—and as individuals

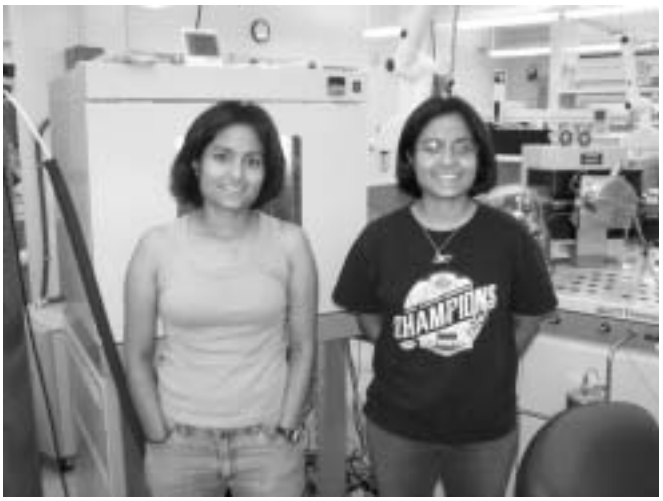
On a steamy July day in Kansas Celina Suarez' thoughts are on China. Her twin sister Marina will be traveling there in two weeks, but Celina and five other KU students are on hold, hoping NSF funding comes through so they can make the trip too.

If both Suarez sisters go, China will be one more leg on a scientific journey they began together while digging up fossils on the playground in first grade. From their native San Antonio, where both did their undergraduate work in geology at Trinity University, Celina and Marina came to Kansas by way of Temple University in Philadelphia, where they got their master's degrees, and Crystal Geyser Quarry in Utah, where they spent two summers doing field work.

While in Utah, Marina met Greg Ludvigson, then a newly arrived associate scientist at the Kansas Geological Survey. He was interested in her research and later introduced her to KU geology professor Luis González at a GSA meeting. The association ultimately led her to a Research Assistant position with González and the two-and-one-half week trip to the Gansu Province of China with him and Ludvigson to explore Cretaceous climates.

Although not necessarily planning on pursuing PhD's at the same university, Celina and Marina both liked the research potential they found at Kansas. For her dissertation, Marina is studying Cretaceous climate by looking at strata in formations in Utah, Oklahoma, Texas, Mexico, and now China. She is a relative newcomer to some of the geochemistry methods she is using, which makes the job interesting and challenging. Celina has more experience with geochemistry, which she enjoys, but also puts paleontology, paleoecology, and taphonomy on her list of favorites. Analyzing the geochemistry of rare-earth elements and trace elements in dinosaur bones from the Yellow Cat Member, the lowest member of the Cedar Mountain Formation in Eastern Utah for her dissertation research, she is hoping to determine what the environment was like when dinosaurs were there. She likes the work but sometimes finds it hard to crush bones to obtain samples. Growing up wanting to keep all dinosaur bones in "pretty condition," she can't quite get past it. Whenever possible, she picks her samples from around the edges to keep the bulk of the bone intact.

Marina and Celina are in sync. Early on they both developed a passion for vertebrate paleontology. "I never grew out of that second-grade dinosaur phase,"



Celina and Marina Suarez

Celina said. "My goal in life was to grow up and find a dinosaur." Marina nods. In Utah as part of their research at Temple University, they helped interpret a bird-like species of dinosaur discovered at the Crystal Geyser Quarry Site. Not far from the quarry is the newly discovered Suarez Site, named in recognition of all their hard work. "It's strange to say Suarez Site," says Celina. It sounds almost wrong to her.

Despite their similarities, Celina and Marina want to be recognized for their dissimilarities, too. Sometimes their research has overlapped but their dissertations are taking different directions. Marina plays flute, Celina trumpet, Marina wears glasses, Celina contacts, Marina is left handed, Celina right. One of the things that attracted them to KU was that their individual differences and interests were emphasized on a visit to check out the graduate program in geology. Upon their arrival they were handed separate itineraries instead of one for the two of them. "We were treated as two people rather than as a unit," Marina said. They liked that.

In the future both sisters want to stay in academia. Marina would like to teach at a smaller school with research opportunities. Celina also would like to do research and "get students interested in doing their own research." But that's a ways away. Their immediate plans are focused in a different direction—on a different continent.

Late in the afternoon on that steamy July day the call finally comes. Two weeks later the Suarez sisters are bound for China. In this case, being able to travel as "a unit"—one made up of two individuals with two different perspectives—is a good thing.

Faculty Update

Ross Black
Associate Professor

Over the last several years I have been working on regional gravity modeling projects in California and Nevada, mainly looking at the relationship between regional tectonic features and geothermal resources. With the help of Danny Stockli and George Tsoflias, we have extended our studies to include shallow seismic reflection and ground penetrating radar surveys. Lines shot this summer targeted active fault scarps developed in alluvial fans in Nevada. The preliminary results are very exciting. They indicate that we can make detailed images of complex listric normal faulting and extensive antithetic faulting, reminiscent of Gulf Coast growth faulting, within these fans. They also indicate that seismic stratigraphic principles can be applied to the interpretation of these features. If these results are proven out we will have a powerful new tool in the interpretation of tectonic history and the evaluation of earthquake hazards in many environments involving tectonic uplift and coeval sedimentation. In addition, the general structural results are of great interest to smaller, regional geothermal power companies developing resources in the area.

Teaching-wise, I continue to offer Geophysics, Seismic Exploration, Geophysical Data Analysis, History of the Earth, and an occasional seminar. Since Don Steeples has become more and more active in the provost's office each year, our geophysical offerings are currently limited in relation to what they could be.

J.F. Devlin
Associate Professor

My first graduate student, Michelle Dambacher, defended her MS and passed with honors in the fall of 2005. Pete Schillig started his master's program in the fall of 2005 and stepped into a project begun by me, George Tsoflias, and Mike McGlashan, a geophysics student. Peter is measuring changes in groundwater velocities over time using a newly developed groundwater velocity probe, the PVP. The geophysicists are attempting to use ground-penetrating radar to detect associated aquifer changes. The experiment is being conducted in the field at a site north of Toronto, Canada, with help from the University of Waterloo and support from NSF. The research has indicated that GPR and PVP measurements are detecting porous media changes, possibly associated with the development of bubbles in the aquifer. The coming year will see a laboratory experiment conducted to test this hypothesis.

In the laboratory, Huang Bei continues to work with trichloroethene, testing the general applicability of the kinetic iron model (KIM). The model was originally tested with nitroaromatic chemicals by Melissa Marietta, who completed her BS in 2005. In 2006, her work was picked up by Meagan Davidson, Jaqueline Grunau, and Nicole Taylor, three undergraduate students needing research experience. These three collaborated to complete needed experiments and update a database newly created for the research data. In the summer of 2006, Ian Bowen, a chemistry major, began to work in my laboratory. Ian's research will evaluate the effects of anion mixtures on the reactivity of granular iron, continuing work published in *Environmental Science and Technology* in 2005. The work will lead to a BS thesis.

In the classroom, 2006 has been a very busy year. In the spring I taught Environmental Geology for the first time and had approximately 90 students. The lectures were very well received, and I tried out a new method of stimulating class discussion using playing cards with considerable success. Over the summer, I worked with Pete Schillig on developing a new field trip for Geomorphology. We made two scouting trips into Missouri and Arkansas to find sites that show off karst. I think we have some fantastic spots to visit. The remainder of 2006 promises to be exciting and busy. Here's hoping we can pause once in a while to enjoy it!

Wakefield Dort, Jr.
Professor Emeritus

I enjoyed teaching. It was demanding, stimulating, exhilarating, but frustrating. For me, full-scale teaching and research efforts were incompatible. And I yearned to do research—field research. I was a field man. Therefore, I welcomed retirement. Now, with teaching duties essentially gone, and with my coronary problems controlled, I can devote all my time and energy to research activities. The plan was to focus full time on completion of reports on old projects for which data collection in the field was more or less complete—years and years of accumulated backlog. But new studies are popping up!

Current effort aims to complete an Atlas of Historical Channel Changes of the Kansas River and Tributaries. Compilation has proceeded through two years, largely because I have insisted on undertaking the formatting chores myself. The present scope of this project would have been impossible without access to the hundreds and hundreds of draftings, maps, and historical air photos that have filled my office space for many years. Sometimes it pays handsomely to be a squirrel! And, as should have been foreseen, work on this compilation has led to spin-off recognition of processes, events, and consequences that have heretofore been overlooked—or ignored. It is an impoverished study indeed that does not yield new, but unexpected offshoots. The Atlas should be issued by the Kansas Geological Survey in December and will be followed

at once by two GSA meeting reports and at least one journal paper (already largely written) detailing fundamental spin-off discoveries.

As for the rest of the backlog, I'm planning two paper sessions and a field trip for next spring's GSA sectional meeting in Lawrence on Plains fluvial geomorphology and presentation of brand new discoveries of local glacial deposits much older than the classical "Kansas." The Kansas Water Board, Kansas Water Office, and Kansas Geological Survey are "demanding" that I complete a report on the history of the Neosho River. The Kansas Water Resources Institute wants me to address the historical background of the sedimentation that is destroying the big Kansas reservoirs. And that says nothing about range-front faulting in Idaho, mosaic-collapse faulting in Nebraska, and . . . . Whew! I'd best get at it.

Paul Enos
Distinguished Professor Emeritus

When folks wonder why I'm still poking around in geology, the stock answer is "Geology is too much fun to quit." I retired (in 2003, after 5 years at half time/half speed) with many irons still in the fire. Most are growing cold, but if I live long enough, I hope to finish them. The hottest iron in the years before and after retirement involves the evolution of Triassic platforms in south China, following the end-Permian extinction of carbonate-secreting critters. I joined forces with Dan Lehrmann, University of Wisconsin–Oshkosh, who wrote his KU dissertation on one such platform, with funding from NSF and ACS/PRF for field work in 1998-2001. Thanks to Dan's frenetic writing while on sabbatical (and my editing), we have multi-author papers in press with *Geology*, *AAPG Bulletin*, and *Palaeo*[3]. I also finished a summary of Triassic stratigraphy of the area that has been at low heat since 1996; watch for GSA Special Paper 417 at your local newsstand.

Former Jayhawker Al Fischer published his seminal paper on the Lofer cyclothems in Austria in the KGS "golden volume" in 1964, presenting, among other pioneering results, an idealized deepening-upward cycle. Subsequently, numerous papers on shoaling-upward cycles have invoked Fischer's Lofer cycle, but ignored the reversed deepening vector. While on sabbatical in Erlangen, Germany in 1995-1996, I set out to see for myself. This is an ongoing, low-heat project that fulfills old dreams of fieldwork in the Calcareous Alps and partaking of Loferites and Fischer plots. Oh, yes, Fischer was right more often than not; deepening-up cycles are more common than shoaling-up, a few do both (symmetrical), most are incomplete, and almost half are laterally discontinuous. Lots of headaches for cyclostratigraphers.

Other works in progress include Kaw River flood deposits, some Pennsylvanian tidal channels at Lone Star Lake, incised valleys in the Bonner Springs Shale, paleosols of the Supai Group in the Grand Canyon, and puzzling over "fossil nests" in the Brownville Limestone (Walter Schoewe's term; a stop on Moore's field stratigraphy) with Dan Merriam. And Carol and I spend a lot of time with our young grandchildren.

David Fowle
Assistant Professor

It has been a hectic, but pleasant few months since my arrival in the Department in January. The Jayhawk community has been very supportive, and I am looking forward to meeting all of our alumni and friends. My days have been spent getting my laboratory setup in the Multidisciplinary Research Building, Room 150 (come by and see us anytime), writing grant proposals, and ensuring all of my students finish their research at the University of Windsor. Two of my master's students graduated in May including Arne Sturm, who has decided to join my group at KU to pursue his PhD in geomicrobiology. Another former student, Karla Leslie, has decided to transfer into our MS program here at KU rather then continue on in Canada.

Research is already being conducting in the lab with results recently presented at the Ecology and Limnology of the Malili Lakes conference (Jakarta, Indonesia), Mineralogy Association of Canada Meeting (Montreal, QC) and the International Mineralogy Association meeting (Kobe, Japan). This fall I am very excited to teach Environmental Geology and senior/graduate level Geochemistry. Recent world events, including the tsunami in Indonesia and, of course, hurricane Katrina, will provide some compelling case studies for the students in Environmental Geology. In the Geochemistry class I look forward to building the foundations in geochemistry that our students need to succeed in their careers in geology.

Bob Goldstein
Department Chair and Merrill W. Haas Professor

Last year was one of the more varied and enjoyable since I arrived at KU twenty-one years ago. I continue to serve as Department Chair, and I do admit to enjoying many aspects of the job. Working with a large number of loyal alumni, excellent students, hard-working staff, and enthusiastic faculty makes every day different and most days ones in which I go home feeling as if I have done some good for the students, faculty, or Department. I have to admit to getting some selfish pleasure from the success of students and faculty colleagues around me, and there certainly is no shortage of that.

Research and teaching also has been going well, although at a slightly diminished pace since I started as Chair. In addition to teaching classes in Stratigraphy and Carbonate Depositional Systems last year, the high point of the year, as far as teaching was concerned, was co-leading a field course, with my friend and colleague Evan Franseen, to West Texas and New Mexico for a great group of students

from KU and playing host to a group of faculty and students from the University of Puerto Rico.

I had some excellent graduate students finish up last year, including Govert Buijs, who worked on porosity evolution in the Hugoton; Qi Lianshuang, who worked on 3-D reservoir characterization of St. Louis reservoirs, co-chaired with Tim Carr; and Juli Emry, who worked on build-and-fill sequence stratigraphic architecture in Pennsylvanian reservoir analogs, co-chaired with Evan Franseen. Quite a few research papers were published with my students spanning the spectrum of sequence stratigraphy, fluid inclusion, and diagenesis research. I was particularly proud that former PhD student Anita Csoma and I were recognized for the best paper in Journal of Sedimentary Research, and kudos go to Anita for all of her hard work.

Finally, this was one of my favorite field seasons in Spain in years. My wife Cindy, Evan Franseen and his family, the group from AAPG, and two enthusiastic students made it a great experience.

Bob Goldstein and Steve Hasiotis

Luis A. González
Associate Professor

This last year was full of excitement. Early in the semester I attended and presented a paper at the Earth Systems Processes 2 conference in Calgary. My students and colleagues presented papers at the Geological Society of America meeting in Salt Lake City, and we attended the American Geophysical Union meeting in San Francisco. In April I was the keynote speaker for the 22nd Annual Symposium of Caribbean Geology at the University of Puerto Rico at Mayagüez.

The W. M. Keck Paleoenvironmental and Environmental Stable Isotope Laboratory became fully functional in the early fall of 2005 and productivity quickly ramped up. KU Geology faculty and graduate students as well as colleagues in other departments, such as Geography (Bill Johnson) and Ecology and Evolutionary Biology (Sharon Billings and Joy Ward), have been making extensive use of the facility. We had several users from the University of Nebraska, Wichita State, Baylor University, and the University of Iowa. In February we hosted Dr. Hailu You, visiting scientist from the Chinese Academy of Geological Sciences in Beijing. The laboratory moved to its new home in the Multidisciplinary Research Building (aka Mr. B) in January and was fully functional within a week of moving! Additions to the laboratory continue.

My graduate students continue to be productive and make progress toward their completion. Vionette DeChoudens (PhD) continues her experimental work on aragonite-calcite precipitation and is in the stages of completing several manuscripts. Mike Bruemmer (PhD) has generated an impressive and challenging chemostratigraphic data set for the Iola and Pawnee cyclothems (Pennsylvanian central Kansas). Aisha Al-Suwaidi (MS) continues work on paleosols and high-resolution chemostratigraphy of the Ruby Ranch Member of the Cedar Mountain Formation and should be finishing in 2006. Emily Tremain continues her work on phosphate oxygen isotopes of vertebrate fossil assemblages of the Mussentuchit Member Cedar Mountain Formation. Marina Suarez (PhD) is working on paleosols or freshwater deposits and early meteoric diagenetic cements of a variety of Aptian-Albian units from Utah, Oklahoma, Texas, Mexico, Colombia, and China as part of the continuing work by colleague Greg Ludvigson (KGS) and myself on the mid-Cretaceous paleohydrology. Celina Suarez (PhD) will expand her MS thesis work on REE taphonomy, and incorporate molecular and isotopic techniques. More recently I became formal co-advisor to Julie Retrum (PhD) who is working on the paleoclimatology and paleohydrology of the Pleistocene Fossil Lake in Oregon. She has generated an exciting magnetic susceptibility data set and soon will be adding ostracode stable isotope and elemental geochemistry. Undergraduate honor student Rebecca Totten started working in my laboratory in December 2005 and has been involved in various projects. Rebecca, Emily, Celina, and Marina, make up my “twinkly dinosaur eyes” team.

This year there was cause for major celebration as Stacy Rosner my first Kansas graduate student completed her masters thesis research, successfully defended, and is now gainfully employed with ENCANA in Denver. She produced a superb high-resolution carbon and oxygen isotopic series on two stalagmites from Venezuela.

Steve Hasiotis
Associate Professor

To date, 2006 has been very busy with new challenges. My students and I attended numerous national and international meetings and publish many papers in international peer-reviewed journals. Several of them attended the Kansas Academy of Sciences and won awards for their presentations! I was invited to present a paper at a special meeting in July in Reading, England, in honor of the late Roland Goldring, one of the first champions of the study of continental trace fossils and a major advocate of my

research in continental ichnology. This summer, I continued my paleontologic and geologic research in Wyoming, Colorado, and Utah on Mesozoic and Cenozoic rocks.

The two most important things I did this past year were to take on the editorship of the SEPM international peer-reviewed journal PALAIOS and to take over the first part of field camp from my great friend and mentor, Roger Kaesler. Edie Taylor, a paleobotanist in the Department of Ecology and Evolutionary Biology, agreed graciously to be my coeditor. Jill Hardesty, the hardworking, right hand to Roger Kaesler, the Treatise on Invertebrate Paleontology, and the Paleontological Institute, became managing editor. Roger encouraged us to bring PALAIOS to the Geology Department. We have been changing the format, style, and look of the journal—following the editorial style of Roger, who was planning to be the PALAIOS copy editor before he became ill.

As for field camp, Roger's illness precluded him from participating one more year to mentor me. Filling Roger's shoes is a tall order. However, his great encouragement provided me with confidence. Field camp was great this year, and we did a lot of fantastic mapping, section measuring, paleoenvironmental interpretation, and correlation exercises. I was blessed with the help of two great teaching assistants—TJ Dewayne and Cody Buller. Snowflake, my 150 lb. white Alaskan Malamute, became the next honorary field camp dog. In the tradition of the Kaeslers, Rowells, Waltons, and Van Schmuses, my wife and two daughters joined me at field camp to make this summer complete and to continue the grand KU tradition of families spending part of their summer at field camp. (See page 21 for a story about Steve's encounter with a rattlesnake.)

Diane Kamola and Doug Walker

Diane Kamola
Associate Professor

I've been teaching both Sedimentology and Surface Processes and Sequence Stratigraphy. The Sedimentology and Surface Processes enrollment continues to be high, and we offer two lab sections. We offer a number of field experiences to the students as well as a two-week flume-lab in Learned Hall. We travel to outcrops near the Lawrence area to see various depositional settings such as (clastic) fluvial deposits within an incised valley fill, and a (carbonate) oolitic shoal.

Sequence Stratigraphy had a large enrollment (10 students) and included a week long field trip to Utah for a series of field exercises in marine shoreface strata of the Upper Cretaceous Blackhawk Formation. We started our exercises by looking at simple parasequence development (barrier island and strandplain deposits), and worked our way through more and more complex strata (including stacked incised valley fills) with a focus on sequence development.

Hayet Serradji, one of our international students, started fieldwork on the Dakota Sandstone in southwestern Colorado. Hayet and I spent some time in the field in early February looking at the Dakota across western Colorado. The Dakota Sandstone in this area is dominated by deltaic and fluvial deposits, many of which show rapid lateral facies changes. Hayet will complete a depositional analysis and a sequence stratigraphic interpretation of this unit. Two of my other graduate students, Mustapha Zaater and Andrew Madof, defended their theses on the Upper Cretaceous Mount Garfield Formation in western Colorado. Both completed detailed sequence stratigraphic studies on nearshore strata. Mustapha is currently with Statoil, and Andrew has since started work towards a PhD.

I continued my research in the Piceance Basin, looking at the Cretaceous Mesaverde Group (Mount Garfield/Iles and Hunter Canyon/Williams Fork formations). My research focuses on both facies and sequence stratigraphic analysis as well as the late stage development of the Cretaceous foreland basin. Stratal patterns in both formations are interpreted to provide insight into the accommodation history and tectonic development of this foreland basin.

Bruce S. Lieberman
Associate Professor

Aspects of this academic year have been good, but the year has been sorely tempered by the departure from campus of my good friend and mentor, Roger Kaesler, who has been seriously ill. Life at the university and department are just not the same without his wit and wisdom. Because Roger has been gone I have filled in as acting director of the Paleontological Institute/Treatise and the Paleontological Museum. I have started work on my NSF grant to study several Burgess Shale type faunas from the Middle Cambrian of Utah. Thanks to the project I was able to bring in a new post-doctoral fellow, Jonathan Hendricks, who received his PhD from Cornell University; Jon has been doing excellent work, and it's been great to have him around.

I am also continuing my research on my NASA grant studying the nature of the end Ordovician mass extinction.

Associated with this research I recently concluded filming a program for *National Geographic*, which is supposed to air this fall. Other public outreach included interviews for an article in *Geotimes* and in the *KU Alumni* magazine (on the teaching of evolution in Kansas). I also had the pleasure of organizing and co-chairing a short course on "Paleobiogeography" with my former student Alycia Stigall Rode, who is now an assistant professor at Ohio University; it was held at the past GSA meeting and associated with this we had a co-authored edited volume published by the Paleontological Society.

Finally, I recently returned from the International Palaeontological Congress in Beijing, China, where I gave an invited keynote presentation at one of the symposia. It was great to go to China, see the Great Wall, and interact with outstanding colleagues from around the globe. I am happy to report that KU had an excellent presence at the meeting.

Gwen Macpherson
Associate Professor

I continue investigating near-surface weathering and water-rock reactions at the Konza Prairie LTER site, studying ground-water chemistry and ground-water flow in the shallow limestone aquifers there. In the KU Plasma Analytical Laboratory, all systems are go, despite a major repair this year needed after an episode of overheating and subsequent melting of electrical lines in one instrument. I've hired two new students who are in training for the field and lab work for the Konza project, since the previous two graduated. One of the graduates, Kim Kissing, completed her honors-in-geology project on the daily oscillations in water levels at the Konza Prairie and concluded that the pattern is most likely the result of vegetation using the ground water. She also finished a pilot project measuring boron isotope ratios in Konza ground water, and using boron isotopes to investigate seasonal recharge and weathering sources looks very promising. For the 25 undergraduate students and seven graduate students who were privileged to use the "BTV," I want to let you know (are you sitting down?) that it has been "retired!" I'm having some of the best parts of the setup transferred to a replacement vehicle, so the tradition of a portable hydrogeology lab in a marginally useful vehicle will continue!

"'The desert is beautiful,' the little prince added. And that was true. I have always loved the desert. One sits down on a desert sand dune, sees nothing, hears nothing. Yet through the silence something throbs and gleams. . . . 'What makes the desert beautiful,' said the little prince, 'is that somewhere it hides a well.'" —Antoine de Saint-Exupery, *The Little Prince*.

Carl McElwee
Professor

Fall semester of 2005 was a busy time. I taught Field and Laboratory Hydrogeology and Environmental Geology while doing research on hydraulic tomography. The Field and Laboratory Hydrogeology course is fun to teach because it is hands on and people get to see how theory is manifested in the field. However, it is challenging to get a new experiment ready to go each week. Last fall we started offering the Environmental Geology class at the Edwards Campus in Overland Park one evening a week for three hours. We had about thirty-five students complete the course. Fieldwork and data analysis for the hydraulic tomography research project funded by SERDP was fairly intense and resulted in presentations at the Midwest Groundwater Conference, the SERDP Technical Symposium, and the fall AGU meeting in San Francisco.

Spring semester I taught Physical Hydrogeology and continued research on hydraulic tomography. Brett Engard finished his thesis in early March and took a job with a consulting firm near San Francisco. He did a great job on the hydraulic tomography and received honors on his thesis. We have recruited two new students to continue work on hydraulic tomography. One, Brian Wachter, came in July 2006 and the other, Ben Ramaker, in August. After ending the semester, my wife and I took a trip to China the first two weeks of June to celebrate our fortieth wedding anniversary. Highlights of the trip included a three day cruise on the Yangtee River, the Three Gorges Dam, the terracotta warriors, the Forbidden City, and the Great Wall.

Jennifer Roberts
Assistant Professor

It's been another busy year in the world of geomicrobiology. Luis González, David Fowle and I moved our labs to the new Multidisciplinary Research Building. We now have about 7,000 square feet of shared space in a state-of-the-art facility. Now that the kinks have been worked out, the data is flowing and everyone is enjoying the opportunity to interact with lab neighbors in organic, pharmaceutical, and medicinal chemistry as well as chemical and petroleum engineering.

The students have had a very productive year despite the interruption created by moving the lab. PhD student Ezra Kulczycki has made substantial headway in his research linking Cu-scavenging compounds to mineral weathering and methane oxidation by methanotrophic microorganisms. He recently submitted his first manuscript to *Geobiology Journal* for review and will present his data at the fall AGU meeting. Paul Kenward, also a PhD student, has begun working on newly funded research by Shell Oil, with co-PIs Luis González and Bob Goldstein, to investigate the role of methanogenic microorganisms on low-temperature dolomite formation and porosity preservation. We presented some of his early data in April in the "Recent Advances in Carbonate Diagenesis" session, co-convened by myself and Bob Goldstein, at the AAPG Conference in Houston. Bob and I also co-authored a manuscript by another PhD student, Jim Adamski, which was published in August 2006 in

Astrobiology. We lost two of our lab members in May to employment; Post-doctoral associate, Brena Mauck accepted a faculty position at the College of St. Mary in Omaha, Nebraska, and BS student Emily McWilliams began as a staff geologist at Professional Service Industries. We welcomed MS student Melissa Marietta to the lab in August. She is co-advised by David Fowle and continues research in Panama investigating heavy metal release from pressure treated lumber.

A.J. (Bert) Rowell
Professor Emeritus and Senior Curator Emeritus, Natural History Museum

Dislocating your neck at c4-5 is not an optimal way of ensuring an active retirement! I was sufficiently careless to do that in the middle of the day while driving 70 mph in cruise control some three and a half years ago. No other vehicle, no booze nor any 'banned substance' involved. It was seemingly the consequence of old age, proximity to lunch, and most significantly, falling asleep! I have, however, been extremely blessed and with the expert help of surgeons, physicians, nurses, therapists, and an array of guardian angels, normally masquerading as family and friends, have made an extraordinary recovery. I still limp and use a cane, Antarctic fieldwork is definitely out, but Paul Enos no longer offers to take me for a spin in a wheelchair around the hospital grounds, and it is no longer necessary for Dick Robison to scratch my nose, as he once did in the early days while I was paralyzed.

Professional activity has been modest. I try to catch the Thursday afternoon seminars and marvel at the interesting work our colleagues are doing. Last year we sent all known specimens of Lower Cambrian 'snail-like' mollusks from the Antarctic to Uppsala University for John Peel to study. The mollusks are an odd bunch, typically five or six times as large as those of comparable age known from other continents. Alumna Peg Rees and I collected the majority of the 'snails' from a small series of outcrops at the head of Beardmore Glacier in the mid 1980s. More recently, I finished reviewing a fascinating 200-page manuscript biography of Raymond C. Moore by a KGS colleague. Hopefully, the published version will be available at the GSA Regional meeting next April in Lawrence. If you really want to know about Ray Moore, warts and all, this is the book to buy!

Don Steeples
McGee Distinguished Professor of Geophysics
Vice Provost for Scholarly Support

The vast majority of my time has been spent on University-wide space issues trying to squeeze 1,100 faculty members into space occupied by 1,000 five years ago. I still teach "Earthquakes and Natural Disasters" in the spring semester with an enrollment of about 750 students in a single lecture room in Budig Hall. George Tsoflias has managed to keep our shallow seismic research program going with only minor input from me on a weekly basis. George and I have another year of funding left on an $820,000 grant for automating shallow 3-D seismic surveying.

Dan Stockli
Associate Professor

It's been a great year for me and my steadily-growing family and research group. I am delighted to report that I was granted tenure and promoted to associate professor. Much of the credit goes to my colleagues, my fantastic research group of graduate students, and particularly my wife, Lisa, who supports and tolerates my many research endeavors and travels. During the past year my research group once again racked up many frequent flyer miles for several NSF-funded research projects. Two of my PhD students, T.J. Dewane and Chris Hager, spent almost three months in central Tibet. I didn't join them this time since Lisa and I had our first child, Alice, in April of 2005. In the fall of 2005, I undertook two trips to Europe for research and talk engagements that took me to Italy and Switzerland (pseudotachylyte project in the western Alps) and Germany (collection of samples from the continental deep drilling project—KTB). In the spring of 2006, my PhD student, Eugene Szymanski, spent three months in Saudi Arabia, hosted by the Saudi Geological Survey. I joined him for a couple of weeks before flying to Egypt for a week of field work in the Gulf of Suez. One of my MS students, John Lee, and I took several trips to USGS and State Survey core libraries for our NSF-sponsored landscape evolution of the Colorado Plateau project. I ventured into the field twice with geophysics colleagues Ross Black and George Tsoflias, investigating an active normal fault system in western Nevada using ground-penetrating radar and reflection seismic methods. In my spare time, I taught thermochronology short courses, organized an NSF EarthScope workshop, and presented numerous papers at conferences.

My (U-Th)/He laboratory is constantly expanding, analyzing well over 2,000 samples a year. Running the laboratory while being on the road frequently would not have been possible without the help of my excellent post-doctoral researcher and laboratory manager, Stephanie Brichau. The laboratory continues its involvement in countless collaborative academic projects and has managed to make inroads with several oil companies and geothermal consortia. Our research has also continued to focus on development of new thermochronometric methods funded by NSF, KU, and industry. MS student Terry Blackburn deserves particular mention, since his innovative research contributed greatly to the development of rutile, garnet, and magnetite thermochronometry. This effort will significantly grow over the next years with the expansion of the laboratory through a KU-sponsored second He extraction line dedicated to helium diffusion experiments. In early 2006, we were fortunate to add an ICP-MS to the laboratory,

further increasing our analytical repertoire, capabilities, and capacities.

On the teaching front, I revamped the laboratory section of Mineralogy and Structure of the Earth (with help from GTA Blackburn) by integrating a semester-long mineral research project. While very much enjoying teaching at the tradition-steeped Cañon City KU field station, I have taken students to western Nevada for the final two weeks of field camp the past three years. The students tackle a research-style (digital) mapping project in volcanic and sedimentary rocks and enjoy a weekend field trip to Yosemite. In the spring of 2006, Tony Walton and I co-organized a Volcanology field trip to eastern California and western Nevada with generous support from the Geology Department and KU Endowment.

Mike Taylor
Assistant Professor

The last year has been very exciting. I taught two courses for the first time: an upper division course in Neotectonics and Introduction to Geology. The neotectonics class covered fault mechanics, and the students visited the San Andreas Fault. The focus of the field trip was to understand the along-strike variation in structural complexity associated with the plate boundary. Introduction to Geology was a very different experience with almost 300 students. The volume of students made the course a challenge, but it proved to be very rewarding. It's always exciting to engage new students about a topic that all of us in KU geology are passionate about.

It's been an exciting year for research. I traveled to the GSA Backbone meeting in Mendoza, Argentina to present a paper on the kinematic linkage between active strike-slip tectonics and retroarc thrust belts. The meeting was also a great opportunity to scout out new projects in the Pre-Cordillera region of Argentina where active thrust faults present a significant earthquake hazard.

Colleagues from the University of Arizona, Danny Stockli, and I are initiating a new research project in western Tibet. This summer we documented the existence of a low-angle normal fault system that is likely active and slipping at a low-angle. To understand these enigmatic structures we plan to initiate a short course between KU and the U of A. The idea is to teach students how to map active low-angle normal faults in regions of overthickened crust. It has long been speculated and predicted from geodynamic models that the development of low-angle normal fault systems and extensional "metamorphic core complexes" is favored in high-elevation regions characterized by hot, overthickened crust. Despite widely held views on their development, geologic evidence demonstrating a direct linkage between the "core complex" mode of extension and overthickened crust is scarce because the best studied detachment systems of the North American Cordillera are no longer active. We believe southern Tibet is the best place in the world to investigate this mode of extension in regions of hot and thick crust. Our plan is to train outstanding structural geologists well versed in Cordilleran geology as well as their active modern day analogues in Asia.

George Tsoflias
Assistant Professor

The past year brought continued growth and successes on many fronts. Three years have already passed since I joined the University of Kansas, and I am very proud to report the graduation of my first three MS level students. Gerard Czarnecki developed innovative methods for automating the acquisition of ultra-shallow 3D seismic data. Anthony Hoch and Jon Jarvis investigated the polarization properties of ground-penetrating radar (GPR) waves for the remote characterization of fractures. They all did outstanding work that is being published in top-tier scientific journals. Gerard and Jon just started their careers in the oil industry in Houston, and Anthony is continuing for his PhD under my supervision.

In ongoing and new research with my seven students and KU colleagues and collaborators, we are investigating a number of interesting projects. We employ GPR to characterize flow in fractured formations and to monitor bacterial activity in a contaminated porous aquifer. We also use high resolution seismic and GPR to image active faults in the Eastern California Seismic Zone, and to improve near surface statics in exploration seismic data in Saudi Arabia. More developments and new capabilities are incorporated to our automated 3D seismic acquisition instrumentation and we are taking our GPR technology to Kansas Department of Transportation projects for high resolution subsurface imaging. We are also taking our seismic and radar expertise (and cool ideas) to the Polar Regions to study ice sheets in Greenland and Antarctica and their role to climate change. Geophysics just seems to be finding its way into many diverse and challenging projects, which is what makes being at KU so much fun. Another unique and rewarding experience last year was teaching the introductory course Earthquakes and Natural Disasters which had a record enrollment of 984 students, all attending class in a single auditorium! No disasters associated with the course itself, but it was distressing to see the events of hurricane Katrina unfold in real time.

Randy Van Schmus
Union Pacific Resources Distinguished Professor of Geology

During the past year I continued my phasing into retirement, although that did not mean I had much time at home. I taught two courses in the fall semester (Honors Historical Geology and Optical Mineralogy Lab) and continued my research. I was fortunate to attend and present

papers at two international conferences back-to-back in early November. The first was Gondwana 12 in Mendoza, Argentina, where I enjoyed meeting several of my Brazilian colleagues for relaxing dinners after the daily sessions. Mendoza is also a nice place for wine, but don't tell Bob about that! I then continued on to Recife, Brazil, for another meeting where I presented a keynote paper at the northeast regional meeting of the Geological Society of Brazil and visited with more of my colleagues. During the spring semester I divided my time between writing research reports and cleaning up some analytical work, supervising landscaping at home, and traveling to visit friends and relatives in Wisconsin, England, and California. I also carved out a little spare time to pursue my interests in genealogy, model railroading, stamp collecting, and fixing up a few (Edna says too few) things around the house.

Fall 2006 will be my last semester for teaching, and it looks like I have a good crew for my graduate-level Geochronology course (one last time). We plan to visit Philadelphia for GSA and hope to see many friends there, especially at the KU alumni reception. Next year I will let you know how it feels to be fully retired after 40 wonderful years at KU.

Doug Walker
Professor

This has been a very busy year on the cyber-infrastructure front. The NAVDAT project (navdat.org) saw a big shakeup when our old programmer left. As it turned out, we got a fantastic replacement in Jason Ash. The college agreed to pitch in funding for the position that will grow to a 50% split over the next two years. NAVDAT was also selected for renewed funding from NSF—we were lucky because the panel reviewing the project had a success rate well under 10%! The EarthChem (www.earthchem.org) project also got off the ground. This NSF-funded work unites the NAVDAT, GEOROC (Max Planck/Otto Hahn Institute, Germany), and PetDB (Lamont-LDEO/Columbia) databases into a larger, seamless system. We ran a couple of workshops and have gotten a basic search interface in place. Much more work is in the future for this, and we will hire an additional programmer in the fall of 2006.

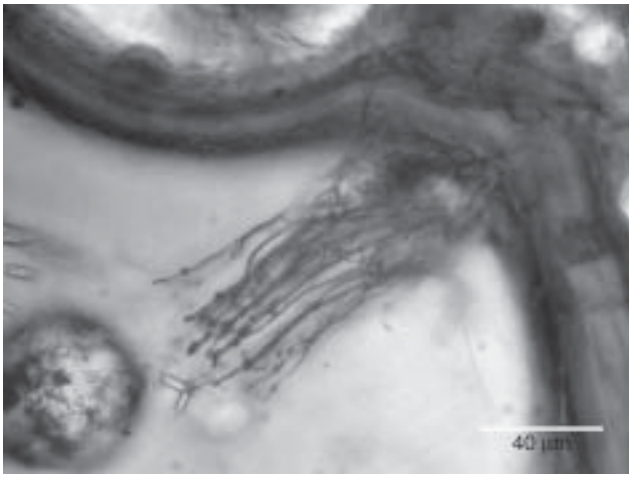
Field geology continues to advance with new digital techniques. We introduced a new wireless network into the system over the summer (see Field Camps on page 22). Jason Ash and Ian Rowell helped set that up. I also gave several presentations on the whole digital mapping front, including one at a NSF sponsored workshop in the spring and an invited one at a Penrose conference in Durham, England. A consortium of research groups (UNAVCO group, Arizona State, Idaho, UT Dallas, and KU) submitted a large facility proposal for field instrumentation, and the KU system is the cornerstone of the field systems.

Lastly, geochronology and isotope geochemistry work in the IGL lab progressed well. We have continued work on a variety of projects, especially a big effort supporting the Holocene bison migration work. Several visitors have come into the lab as well. The lab will also start a big collaborative project working with pharmaceutical chemists on calcium uptake of various compounds in an attempt to figure out how to fight diseases such as osteoporosis.

Tony Walton
Associate Professor

I continue my renewed excitement in teaching with Volcanology, Petroleum Geology, Field Investigation (the two-week introductory course in field geology), Terrigenous Depositional Systems, and Introduction to Geology. Of particular interest is the course I co-taught with Tim Carr from the KGS and Don Green of Petroleum Engineering. In this course, each team of engineering and geology students describe an oil or gas reservoir, match its production history with a numerical simulation, consider different reservoir management steps, and make recommendations to the company on various issues.

For research, I continue to investigate aspects of alteration of basalt glass. Recent papers investigate mass balance of the alteration process and effects of alteration on strength of ocean islands. (They can be pretty weak!) Future papers will consider behavioral aspects of organisms that bore into basalt glass and contact metamorphism associated with intrusions into basalt bodies.



Microscopic borings, about 1 micrometer diameter, extending into basalt glass from the Hilina Slope of Hawaii. Sample courtesy of Michelle Coombs, USGS. Photo by Tony Walton.

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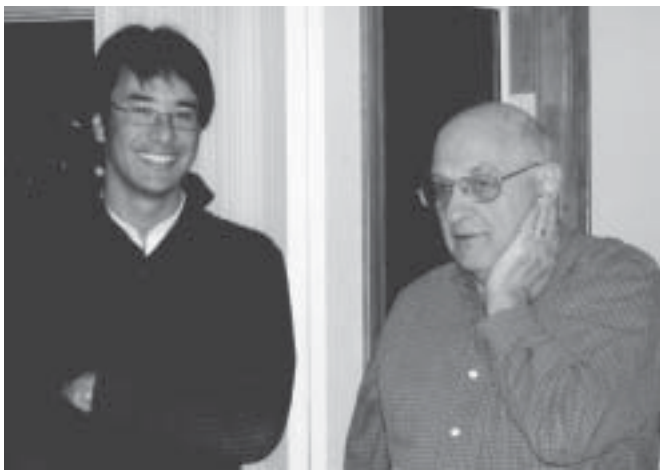

Mike Taylor and Ernie Angino

Field Camps 2006

This is the first time since I came to KU that Roger Kaesler did not organize or teach the undergraduate field camps (Geology 560 and 561). Steve Hasiotis, Danny Stockli, and I were on our own to take care of logistics and prepare materials for the students, as well as to work with the Department chair to make sure that the camp was maintained (like having the phones and water turned on at the right time). Things went pretty smoothly, although I did leave one student completely off the roster and was shocked when Department technician Ian Rowell asked me whether I checked out the vehicles or needed brunton compasses for the camp. There were so many things that Roger just took care of that we are still learning.

The first course (560) was taught by Steve Hasiotis around the field station in Cañon City, Colorado. The group (sixteen students from KU, one from Allegheny College, and one from Colorado) was great and was involved in many worthwhile learning experiences. The exercises that Roger and Steve developed went over well with the students. Dan and I taught the second course (561) to fourteen students. I was only there only for the first week, but used this time to teach the students how to use the field computers and GIS software on a project south of Cañon City. The group went to Nevada for the last two weeks. We have been going to the same area for the last three years (near Dyer, Nevada), and the KU camp is putting together a fine map of a research area that had not been previously studied. This is providing the students with real-world experience in mapping and establishing stratigraphy in a new area. We had a new twist with the mapping this year in that we set up a wireless network for use in the field. Dan, the TAs, and I could chat with the students and look over their maps wherever they were in the field.

At the end of the summer, Tony Walton led the Geology 360 class and took twenty-four beginning geology students through Kansas, Colorado, Utah, and Wyoming to learn about regional tectonics and sedimentary facies, geomorphology, lithology, and geologic history. The three undergraduate TAs, Katie Nold, Jacqueline Grunau, and Alec Wagoner, were former students in the course. Students examined many types of rocks, viewed different terrains and learned rudimentary field techniques. More importantly, they came to know each other as friends and classmates for the next three years, and they learned about geology as a course of education and as a profession. The course gets much support from donations to the Geology Associates program for travel, admissions, and camping fees.

TA Chris Hager standing by the wireless network setup. Students communicated computer-to-computer through a router powered by batteries and solar panel.

Aubrey Collie examines pyroxene andesite on Mount Washburn in Yellowstone National Park on the Geology 360 field trip.

Students in the Temple Canyon area south of Cañon City.

More information on the field camps can be found at the Department of Geology website (http://www.geo.ku.edu/~geology/fieldActivities/fieldMenu.html) and at a mapping website (http://tectonics.geo.ku.edu/mapping/mapping_web_page.html).

—J. Douglas Walker, Field Camp Director

Students map recessional moraines and landslides at Fremont Lake, near Pinedale, Wyoming.

Geology 360 students sit on an outcrop of Fencepost Limestone bed south of Wilson Lake, Kansas, making a geologic map of Cretaceous rocks.

Snake Bites Steve, Snake Dies

Steve Hasiotis and his rattlesnake.

Last summer Steve Hasiotis had the extraordinary experience of being bit in the back of the calf by a 3.5-ft-long prairie rattlesnake during the last week of the first session at the Cañon City camp.

"As I walked up a trail with my white Alaskan Malamute, Snowflake, the rattler struck me from behind without a warning," Steve said. "'WAPP' was the sound of the snake striking my leg and knocking me down. After that, she decided to rattle to let me know she'd struck me and was ready for a second helping of Greek. After a few choice words while she recoiled for another strike, I picked up a fist-sized granite gneiss and hit her, breaking her neck in two places. 'Well that's that,' I thought. However, despite her broken neck, she tried to strike me again. I pulled my buck knife from its sheath, yelled a few more choice words, and cut off her head."

Steve located the bite marks on his calf, but only after he'd skinned the rattler were the TAs able to convince him to go to the emergency room of the Cañon City hospital. There the bite was determined to be dry, but Steve was kept for observation because other dry bites have turned out badly due to poison eventually working into the blood stream. After 12 hours in the emergency room and only 1.5 inches of swelling in his leg, he was released. The doctors told him the Benedryl® he took for allergies likely saved him even more trouble.

According to Steve there are two morals to this story: 1) the second in line gets bit by the rattler, and 2) the venom of a Greek is stronger than that of a rattler. Drop by Steve's office sometime if you want to see the rattlesnake that bit a Greek and died.

KGS Study Brightens Future for Hugoton Field

Of all the state's natural resources, the Hugoton natural gas field is among the most important. Discovered in southwestern Kansas in 1922, the Kansas and Oklahoma parts of this field have produced more than 34 trillion cubic feet of natural gas from more than 12,000 wells. It's the largest natural gas field in North America.

Eighty years after its discovery, the Hugoton remains the 600-pound gorilla of Kansas natural gas production. In 2005, the Hugoton produced more than 200 billion cubic feet of gas, more than half of the gas produced in Kansas that year. The total value of the state's natural gas production in 2005 was $2.8 billion, and the biggest share came from the Hugoton. The field has long been a major souce of royalties, tax revenues, and other income generated in 14 counties of southwestern Kansas.

But like many of the older fields in the state, the Hugoton is showing its age. Annual production in the 1960s was regularly around 600 billion cubic feet. Even as late as 1995, with higher prices and drilling deregulation, the field produced 465 billion cubic feet of gas. Today's production is about half that, and pressures from the field have dropped steadily.

Because of the field's importance to the state, the decline in production and pressures, and the huge amount of data from decades of intensive drilling and production, the Hugoton is a prime candidate for the kind of research that might extend its life. That's why the Kansas Geological Survey, in the late 1990s, proposed the first comprehensive field-wide study of the Hugoton. The study began with funding from the Survey, the Kansas Legislature, and a consortium of industry partners.

"The information we've been able to take from studying the Hugoton will not only enable operators to extend the life of this reservoir, it has applications for understanding reservoirs of similar age and architecture in other parts of the world, such as the Persian Gulf," said Survey geologist Martin Dubois, one of the leaders of the Hugoton study.

Much of the information from the project is available electronically (go to http://www.kgs.ku.edu/Hugoton/index.html and http://www.kgs.ku.edu/HAMP/index.html). Survey researchers also are publishing a major paper on the modeling of the field in an upcoming memoir from the American Association of Petroleum Geologists, and are at work on a bulletin.

Over the past five years, working with ten industry partners, the researchers have developed a three-dimensional model of the reservoir. The team includes seven Survey scientists, four consultants, and three support staff. Three of those researchers are working on degrees in the KU Department of Geology. Dubois and Alan Byrnes are both pursuing PhDs, and Nathan Winters is a master's student.

"No model of the Hugoton existed at the field scale because the field is just so large and much of the information about it was proprietary," said Dubois. "With the cooperation of industry partners and a strong technical team, we've been able to develop this model for the first time."

— Rex Buchanan, Associate Director for Public Outreach, Kansas Geological Survey

Harrison named KGS Director

William Harrison has been appointed director of the Kansas Geological Survey and state geologist. He joined the Survey in 1997 as deputy director, was named chief geologist in 2000, and has been interim director and state geologist since 2004.

From 1975 to 1984, Harrison held joint appointments in the Oklahoma Geological Survey and the School of Geology and Geophysics at the University of Oklahoma. He also has held management positions with Lockheed-Martin, EG&G and Atlantic Richfield and was an exploration geologist with Shell Oil Company in Houston and New Orleans.

Photo by Doug Koch / KU University Relations

Harrison has a bachelor's in geology from Lamar State College of Technology in Texas, a master's in geology from the University of Oklahoma, and a doctorate in organic geochemistry from Louisiana State University in Baton Rouge.

Geology Associates: A Note from the Chair

It seems that a day doesn't pass without news directly linked to geology and other earth sciences. Petroleum and gasoline supplies and their cost, worldwide demand for metals, global warming, natural disasters (e.g. earthquakes, tsunamis, hurricanes and volcanoes) and the ongoing debate about evolution versus creationism, a.k.a. intelligent design, are but a few common, but globally relevant, examples. The news itself may be good or bad, but the ultimate impact is the same for the field of geology and earth science: a need for better information yields opportunity in nearly every discipline, with unprecedented demand for highly skilled earth scientists.

The KU Department of Geology has traditionally offered a strong and balanced program of courses and majors that produce well-rounded graduates capable of excelling on any career path they may choose. To meet increased recent demands for diverse and high quality graduates, the Department has attracted larger student enrollment, has created several new faculty positions, and is utilizing several Kansas Geological Survey staff for part-time teaching. The Department has also established leadership positions in new and rapidly evolving scientific fields such as microbial ecology/ paleoecology and molecular biogeochemistry.

While the above successes are extremely satisfying, to sustain performance at the highest level, the Department must continue to attract and retain top faculty and students, and it must provide an environment that enables the faculty and students to do their best work. Thus, new opportunities have also created challenges in the form of pressures for additional space and equipment, additional need for student support and ultimately, future employment needs.

KU Geology Associates and the Geology Associates Advisory Board are helping the Department achieve their objectives in many ways, including:

- Making financial contributions, either personal or through employers
- Advising the Department on curriculum
- Advising students on career opportunities and offering employment to Department graduates
- Communicating industry expectations on graduate qualifications and credentials
- Communicating with the University on matters such as the urgent need for faculty replacements and additional classroom, lab and office space
- Searching for major donors for a building expansion project
- Reaching out to Department alumni
- Establishing a G-Hawk Legacy Award for outstanding contributors to the Department (see page 25)

I urge each of you to consider how you can best help on a personal level, and to actively participate in the KU Geology community. Your contributions will enable the Department to continue producing highly competent graduates who help create a better world for current and future generations.

—Scott Adams

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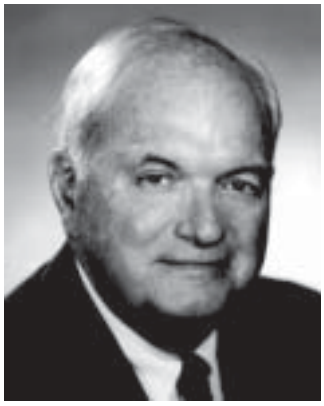
Ritchie Receives First G-Hawk Legacy Award



The newly christened G-Hawk Legacy Award isn't given out every day. Or even every year. It's a special award created by the Geology Associates Advisory Board (GAAB) and the Department for extraordinary people, whenever they might come along.

A. Scott Ritchie is one of those extraordinary people. At the Geology Associates Advisory Board meeting last October, Ritchie (BS '54) was presented with the first Legacy Award "for exceptional dedication and generosity to the University of Kansas Department of Geology."

"This award is only given occasionally to someone who has made exceptional and sustained contributions to the Department of Geology in terms of time, effort, and dollars." said GAAB Chair Scott Adams. "The Legacy Award is not given on a regular basis because contributions of this magnitude don't happen all of the time. Scott has served for many years on the Geology Associates Advisory Board, and he has been a tireless and forceful advocate for the Department at the University and State level."

Ritchie has been an active member of the Geology Associates Advisory Board since 1989 and has been a liaison with the Kansas Geological Survey through his activity on its advisory board.

"During that time, Scott has provided thoughtful advice and leadership for the board and for the Department and helped them progress," Department Chair Bob Goldstein said, "He has helped in many significant ways."

In 1989, Ritchie and his wife Carol endowed a geohydrology fund that has assisted in the hiring of new faculty and provided support for students interested in groundwater studies. Now the Ritchies have endowed a distinguished professorship in stratigraphy that will be used to hire and retain top-notch experts in that field.

"Individual professors will come and go, but the Chair will endure, hopefully for generations," said Adams.

Ritchie is chairman of Ritchie Exploration, Inc., an oil and gas exploration and production company. He is also president of Highland Ranch Co., a cattle ranching operation in the Flint Hills and owns and operates several Pizza Hut franchises. He has served as national president of the Society of Independent Professional Earth Scientists and president of the Kansas Independent Oil and Gas Association (KIOGA) and is a recipient of the Fred Ellsworth Medallion given by the Kansas Alumni Association and the Erasmus Haworth Distinguished Alumni Award presented to outstanding KU geology graduates with distinguished careers. The Ritchies are long-time supporters of academic scholarships, the Kansas Honors Program, the KU Endowment Association, the KU Alumni Association, KU athletics, and the arts.

The name "G-Hawk Legacy Award" was chosen to honor benefactors who forge legacies that will benefit students for generations to come. In recognition of his legacy, Ritchie was presented with a stylized pyramid to symbolize the enduring nature of his contributions. An inscribed plaque bearing Ritchie's likeness is on display in Lindley Hall along with a glass pyramid engraved with R. C. Moore's G-Hawk.

Two G-Hawkers Honored

William L. Adams (BS '51) was named a Fort Worth Oil Legend at the Texas Alliance of Energy Producers' in June 2006. He is former chairman and CEO of Union Pacific Resources.

Brad Birkelo (MS '87) has been elected treasurer of the Society of Exploration Geophysicists (SEG). He is an owner of Digital Prospectors, Inc., and manages its Houston office.

Geology Associates Give Back

Eric (MS '80) and Lisa Vogl (BS '81, journalism)

Eric and Lisa Vogl love to travel, and Eric's job at ExxonMobil has provided many opportunities to do just that. His work has taken him to every continent except Antarctica and landed the Vogls in a number of locations. Even before his ExxonMobil days, Eric Vogl was on the move. After growing up in Delaware and Massachusetts and a graduate of the University of New Hampshire, he headed west to Kansas for graduate school, where he met Lisa, a native Kansan.

"I came to KU because it offered the opportunity to obtain an advanced degree from one of the premier geology departments in the country," Vogl said.

Vogl said he "stumbled into geology" after organic chemistry class made him realize his original choice, chemistry, wasn't for him. In geology, he "loved the idea of being able to observe in the field what we were taught in the classroom." At KU, he said, "Dr. Angino certainly influenced me most. He was always there for help and advice yet encouraged independent thinking and personal growth by allowing me to learn from my mistakes."

After KU, Vogl started with ExxonMobil in Lafayette, Louisiana, transferred to New Orleans then Houston. Between 1993 and 1999 he supervised an exploration team responsible for Gabon, Zaire and Congo (at the time), and Equatorial Guinea, coordinated Exxon's effort to enter Venezuela, took on a management position that handled Northern South America exploration (Venezuela, Colombia, Trinidad), and was a European advisor responsible for ExxonMobil exploration operations in the Netherlands, Germany, and France. In 2000 he was assigned to London as area manager responsible for Continental Europe and North Africa and was able to travel to the Netherlands, Germany, Italy, Egypt, and Algeria. In 2002 he returned to Houston and in 2004 moved to his current position at ExxonMobil Development Company as geoscience manager responsible for ensuring a sound geoscience basis for new developments in Canada, the U.S., South America, Norway, Italy, Chad, Australia, Papua New Guinea, and Indonesia.

Lisa worked in the hotel business then helped coordinate several major fund-raising efforts for the March of Dimes. She then became a full-time homemaker when their children, Kyle, Derek, and Jennifer were born, and she enjoys jazzercise, aerobics, and church and school volunteer work. In his spare time, Eric volunteers for the United Way, coaches youth baseball, fishes, collects mineral and stamps, and occasionally plays golf.

Because Vogl sees his education at KU as "instrumental in getting me where I am today," he feels it is important to support the Department. "Even with today's escalating tuition costs there is not always enough to maintain the national leadership position of the Department. Geology requires fieldwork, field camp, instrumentation, building expansion—all very costly items."

Lisa Bush (BS '01)

Meeting up with a bear is Lisa Bush's most memorable experience of her KU career. At Field Camp 2000 a black bear came into camp every night for nearly three weeks. Bush encountered it one Friday night when she was alone in one of the cabins on the hill. Hearing something outside she raised the shutter and found herself eye to eye with the bear standing on its hind legs. The authorities finally scared it away from camp by shooting it with a harmless rubber bullet, but they didn't want to move it

too far because a larger brown bear a few miles away could have then taken over the territory.

"I feel it is important to support the department because it supported me with scholarships for field camp, employment, and in general, even through a divorce," Bush said. "Lindley was my "home away from home" for three years.

At KU, Bush switched her major from mechanical engineering to environmental geology after taking Geol 101 as an elective. "I found studying something of substance more to my liking than the theoretical nature of engineering," she said. " I also felt comfortable with the geology staff. All of the professors and even grad student TA's were very knowledgeable and helpful."

The professors who influenced her most were Ernest Angino who was "always available with insight on preparing for a career in geology as well as being a wealth of incredible tales," and Carl McElwee, who guided her in practical hydrologic fieldwork that helped get her started in her current position with Environmental Resources Management–Rocky Mountain.

Bush's office is in Overland Park. ERM–Rocky Mountain does remediation and monitoring of ground water and soils for clients in the Voluntary Cleanup Program of KDHE and MDNR, among many other things. With the regional office in Denver, Bush is sometimes "paid to sit in the Rockies watching other people work or water pumping from a well."

Besides geology, her interests include making yarn and spinning. She has completed two years of a six-year course to earn a Master Spinner Certificate in Belleville, Ontario, Canada, which includes summer class work at Loyalist College and homework throughout the year.

Duane (MS '61) and Peggy Sackett

In his support of the Geology Department, Duane Sackett prefers to give for long- term equipment and supplies, so that many students can benefit.

"I was exposed to a good education, and hopefully absorbed some of it," he said. "It enabled me to do alright out in industry, and I feel that we need to give back to the department so that others can have similar opportunities. Exxon's matching grants have been a great way to maximize our donations, and we

try to help them spend their money! Especially in the tight years this was a great help." Duane and his wife, Peggy, also support their undergraduate schools, as well as a three-instructor geology department in a small college in their home town.

Duane Sackett retired from Exxon in 2000 after nearly 38 years of service. Since that time, he has set up his own company and does part time consulting/ contracting, mainly with ExxonMobil. "It keeps my hand in the business, and keeps me out of trouble at the house!" he said.

Sackett picked his major after enjoying a freshman geology course. Another perk to majoring in geology for him was the basic requirement list. "Not a lot of math was required at that time!" he said. In graduate school at KU his memories include being manager of the city league softball team at field camp and the graduate students playing frisbie on the walk in front of Lindley Hall after dinner. And after he received his MS and it was time to move on, his KU academic connections paid off. "Dr. Dellwig helped me get my first job," he said.

Since his retirement, he and Peggy manage to get in two or three trips a year, often to the Kansas City area to visit the grandkids. They also like to spend time walking the dog on trails near their home, usually covering several miles a day.

Donors of the Geology Associates Program Contributions from July 1, 2005 through June 30, 2006

The Department extends its appreciation to all G-Hawks for their generous support.

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Recent PhD graduate Lianshuang Qi, now at Chevron, Diana and Scott Adams and MS student Jessica Poteet at the AAPG annual convention in Houston

Recent MS graduate Juli Emry, currently at ExxonMobil, and husband Jason at the Houston G-Hawk Reception

Geology Life Associates

All alumni and friends of the Department of Geology at the University of Kansas become Geology Associates when they make a donation to the Department. Many of these individuals have contributed to funds established by the University of Kansas Endowment Association to provide support for various special purposes and activities of the Department. The category of Geology Life Associate has been established to provide special recognition in gratitude to those Associates who have donated $5,000 or more since the Geology Associates organization was formed in 1968. This list will be published in each issue of the G-Hawker in order to repeatedly convey our thanks for the generosity of these men and women.

Note: If you do not see your name here and believe it should be, please contact Bob Goldstein (gold@ku.edu) or Liz Gravatt (egravatt@ku.edu) so that we may correct our records.

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Haworth Awards go to Bowring and Strickland

Sam Bowring, PhD '85

Sam Bowring, winner of the Academic Haworth Award, is one of the leading isotope geochronologists in the world. His work is widely regarded as the cutting edge in dating of the stratigraphic record. If the age of a major period boundary has been revised, it is likely that Bowring and his research group did the job.

Bowring was responsible for defining and dating the terrain of the oldest (greater than 4 billion years) rocks in continental North America, the Acasta Gneisses of the Northwest Territories, Canada. He continues to work on dating ancient Archean terrains and to study the early crustal history of the Earth. He was responsible for precise absolute calibration of several time-stratigraphic markers in the Phanerozoic time scale. One of the world's leaders in U-Pb geochronology, he conducts research that is truly interdisciplinary, and his interactions have been important in solving hard-rock, tectonic, and stratigraphic problems. He is involved in national and international coordination of high-precision and high-accuracy geochronology through a consortium known as Earth Time.

Now professor of geology at MIT, he credits his time at KU for helping him get where he is today and said Randy Van Schmus and Pat Bickford were two people at KU who influenced him most. "I very much appreciate the intellectual freedom I was given at KU by my advisor Randy Van Schmus who was always there for me when I needed help but who also allowed me to find my own way," he said.

"I am very honored to receive this award and am pleased to be recognized by the people who taught me so much while at KU," Bowring said.

"Sam was a very motivated, independent, and highly stimulating student and in his own way taught me many things during the course of his research," said Randy Van Schmus. "Thus, the academic association was a valuable two-way street."

Doug Strickland, '79

Industrial Haworth Award winner Doug Strickland was introduced to the Basin and Range area of Utah by KU professors Dick Robison and Bert Rowell 30 years ago and has been exploring for oil and gas resources in it ever since. His persistence paid off in a big way in 2003 when his significant contributions led to the discovery of the Covenant Field.

After doing PhD work at KU from 1976–1979, Strickland worked for Chevron in western Utah, investigating the Overthrust Belt where the Covenant Field was eventually discovered. He maintained his interest in the field after he left Chevron in 1981. In 1999, as exploration manager for Wolverine Gas and Oil, he convinced Wolverine to farm in 80,000 acres from Chevron. With three others, he reconstructed the stratigraphy, structure, and petroleum systems. He showed the prospect to 65 companies before a deal to finance the drilling was finally made. The discovery well hit pay on December 24, 2003.

Strickland is on the Geology Associates Advisory Board and won the Explorer of the Year Award in 2005 from the Rocky Mountain Association of Geologists. He is currently developing new exploration concepts and plays and attributes his success to many people from KU and others he met along the way.

"Bert Rowell became a mentor to me in my career goals, and I am thankful to Tony Walton and Roger Kaesler for their patience and good advise," Strickland said. "Lee Gerhard, a KU graduate, directed my masters work in Colorado. KU graduate students who encouraged me were David McBride, Ted Beaumont, Joe McGee and Barry Richards. I have several other mentors in my life including Bob Gernant, Norm Foster, Sam Cerny, and Sid Jansma, Jr."

"Receiving the Haworth Award is an honor and highlight of my career," he said. "The heritage of the award humbles me. I thank the Geology Department past and present for this award."

Degrees Awarded December 2005 – May 2006

Graduate Degrees

Govert Joan Arie Buijs PhD
"Carbonate Diagenesis of Pennsylvanian and Permian Cyclic Strata from the Hugoton Embayment, Western Kansas, USA"

Lianshuang Qi PhD
"Integrated Geostatistical 3D Modeling and Simulation of Mississippian St. Louis Carbonate Reservoir Systems in Kansas"

Galo Aristides Salcedo PhD
"Regional Sequence Stratigraphy and Depositional Environments on Morrowan (Lower Pennsylvanian) Reservoir Sandstones, Southwestern Kansas"

Wesley Matthew Brown MS
"Stratigraphy, Depositional Environments, and Coal-Bed Natural Gas Resources, Cherokee and Marmaton Groups (Atokan-Demoinesian, Middle Pennsylvanian), Northeastern Kansas"

Gerard P. Czarnecki MS
"Automated 3-D Ultra Shallow Seismic Reflection Data Acquisition Using a 2-D Geophone Array"

Michelle Lynn Dambacher MS
"Permeability Versus Surface Reactivity on the Longevity of Granular Iron Reactive Barriers"

Bradley Dean Didericksen MS
"Middle Miocene to Recent Faulting and Exhumation of the Central Slate Range, Eastern California Shear Zone"

Julienne Ruth Emry MS
"Controls on Build-and-Fill Architecture of the Argentine Limestone and Associated Strata in Northeastern Kansas and Development of a First-Cut Method for Evaluating Limestone Aggregate Durability"

Brett Ryan Engard MS
"Estimating Aquifer Parameters from Horizontal Pulse Tests"

Debra S. Jennings MS
"A Paleoenvironmental Analysis of Morrison Formation Deposits, Big Horn Basin, Wyoming: A Multivariate Approach"

Steven Daniel Sloan MS
"The Combined Use of Shallow Seismic Reflection and GPR Techniques at a Field Site Near Clay Center, Kansas"

Samuel R. Teeters MS
"Use of Lithofacies Architecture for Stratigraphic Interpretation of the Fluvial Rock Springs Uplift, Wyoming, Exposure of the Fort Union Formation"

Christopher Ryan Tincher MS
"Cenozoic Volcanism and Tectonics of the Queen Valley Area, Esmerelda County, Western Nevada"

Amanda D. Wilson MS
"Trace Metal Mobility in Tropical Rainforest and Adjacent Grassland Soils, Central Panama"

Mustapha Zater MS
"High-Frequency Sequence Stratigraphy of the Corcoran Member, Mount Garfield Formation, Upper Cretaceous, Eastern Book Cliffs, Colorado"

Undergraduate Degrees

Emily Allison Laut	BA
Randall Scott Ackerman	BS
Keith Eric Beisner	BS
Meagan Caroline Davidson	BS
Mark Dallas Hadley	BS
Kimberly Rae Kissing*	BS
Melissa Lee Marietta*	BS
Emily A. McWilliams*	BS
James Michael Snow	BS
Benjamin Lewis Vrbas	BS

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2005–2006 Grants and Awards to Students

Kenneth Bader
- Panorama Grant, given by the KU Biodiversity Research Center & Natural History Museum: $700

John Counts
- Research Grant, given by the Geological Society of America: $2,000

Rachel Dvoretsky
- Scholarship, given by the Kansas Geological Foundation: $700
- Research Grant, given by the Geological Society of America: $2,000
- Grant-in-Aid of research, given by the American Association of Petroleum Geologists: Merrill W. Haas Memorial Grant

Natalie Givens
- Scholarship, given by the Southwest Section of the American Association of Petroleum Geologists: $1,000
- Scholarship, given by the Dallas Geological Society: $1,000
- Scholarship, given by the Desk & Derrick Association: $1,500
- Scholarship, given by EnCana: $3,000

Kimberly Kissing
- Travel Grant, given by the South-Central Section of the Geological Society of America: J. Michael Young Opportunity Award

Nazim Louni
- Research Grant, given by the Geological Society of America: $500

Brian Platt
- Research Grant, given by the Geological Society of America: $3,000
- Panorama Grant, given by the KU Biodiversity Research Center & Natural History Museum: $626

Jessica Poteet
- Scholarship, given by the Kansas Geological Foundation: $1,000
- Scholarship, given by ChevronTexaco: $2,000
- Scholarship, given by the Desk & Derrick Association: $1,500

Julie Retrum
- Research Grant, given by the Geological Society of America: $2,000
- Panorama Grant, given by the KU Biodiversity Research Center & Natural History Museum: $700
- Third Place Winner of the Eugene Dehner Award for PhD Student Oral Presentations, for the paper “Neoichnological Experiments with Freshwater Ostracodes” (co-authored by KU Faculty Steve Hasiotis and Roger Kaesler)
- First Place, 2005 G-Hawk Student Symposium
- Grant-in-Aid of Research, given by Sigma Xi: $800
- Leaman Harris Award, given by the KU Biodiversity Research Center & Natural History Museum: $1,000

Ben Rocke
- Scholarship, given by the Kansas Geological Foundation: $500

Jeff Schroeder
- Research Grant, given by the Geological Society of America
- Grant, given by the White Mountain Research Station

Stephen Schurger
- Best Poster Award, given by the Energy Minerals Division, for "Integrated Subsurface Carbon Sequestration and Enhanced Coalbed Natural Gas Recovery Using Cement-Kiln Emissions, Wilson County, Kansas" (co-authored by K. David Newell, Timothy R. Carr, KU Department of Geology adjunct faculty, and James G. Blencoe)

Steve Sloan
- Scholarship, given by the Kansas Geological Foundation: $500 Fall/$750 Spring
- Scholarship, given by the Society of Independent Professional Earth Scientists Foundation: $2,000
- Scholarship, given by the Society of Exploration Geophysicists: $1,500
- 2005 Society of Exploration Geophysicists Annual Meeting Travel Grant, given by the Society of Exploration Geophysicists

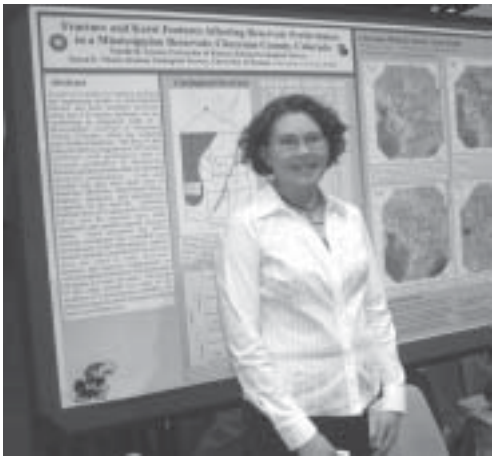
Jon Smith
- Second Place Winner of the Eugene Dehner Award for PhD Student Oral Presentations, for the paper "Morphologic and Paleoenvironmental Implications of Adhesive Meniscate Burrows (AMB), Paleogene Willwood Formation and Other Continental Deposits" (co-authored by KU Faculty Steve Hasiotis and Roger Kaesler)
- Dissertation Fellowship 2006-2007, given by the KU Graduate School: $14,000

Celina Suarez
- Research Grant, given by the Geological Society of America

Eugene Szymansky
- Grant-in-Aid of research, given by the American Association of Petroleum Geologists

Sarah Tsoflias
- Research Grant, given by the Geological Society of America

MS student Stacy Rosner and her advisor, Luis González, at the Masters hooding ceremony



MS student Natalie Given presenting the results of her research at the AAPG annual convention

Field camp scholarship recipients at the 2006 Honors Banquet, from left: Brittany Meagher, Jacqueline Grunau, Hayet Serradji, Jared Jevons, Travis Glauser, Will Scriven

2006 Honors Banquet

The Department of Geology faculty, staff, and students met for the annual Honors Banquet on May 13, 2006. The following honors, fellowships, scholarships, and awards were announced:

Jan F. & Mary Van Sant Geology Excellence Award
Daniel F. Stockli

Erasmus Haworth Honor Awards
Outstanding Undergraduate Student
Kimberly R. Kissing
Emily A. McWilliams
Outstanding Master's Student
Terrence J. Blackburn

W. A. Tarr Award
Melissa Marietta

Association for Women Geoscientists Scholarship
Rebecca Lynn Totten

Summer Support
Roscoe G. Jackson Graduate Research Award
Michael Christie
John Counts
John Lee
Brian Platt
Joseph Patterson Scholarship
Terrence Blackburn
Terrence Dewane
Rachel Dvoretsky
Christian Hager
Jon Jarvis
Nazim Louni
Julie Retrum
Jon Smith
August L. Selig Summer Research Grant
Aisha Al-Suwaidi
Kenneth Bader
David Burnham
Jeff Schroeder
Celina Suarez
Eugene Szymanski
Emily Tremain

Graduate Scholarships
Angino Geochemistry Scholarship
Michael Bruemmer
Marina Suarez
Chevron Fellowship
Christopher J. Lipinski
Lloyd Henbest Scholarship
Curtis Congreve
Brian Wachter
Frederick T. Holden Scholarship
Justin Fairchild
Markella Hoffman
Melissa Marietta
Rebekah Ost
Benjamin Ramaker
Melissa Wolfe
Bill & Carolyn Holland Scholarship
Christopher Lipinski
H. A. & Elsie Ireland Scholarship
Terrence Dewane
Christian Hager
Jeff Schroeder
Dean A. McGee Scholarship
Rachel Dvoretsky
Paul Kenward
Leo M. & Robert M. Orth Water Resources Scholarship
Peter Schillig
Joseph Patterson Scholarship
Zachary Casey
Michael Christie
John Counts
Vionette DeChoudens
Bethiah Hall
Anthony Hoch
Jon Jarvis
John Lee
Karla Leslie
David LoBue
Lindsay Mayer
Michael McGlashen
Kimberly Montague
Kelly Peterson
Hayet Serradji
Arne Sturm
Celina Suarez
Shelby Walters
James A. & Rowena E. Peoples Scholarship
Ezra Kulczycki
Brian Miller
William Rittase
Catherine Shirvell
Steve Sloan
Eugene Szymanski

Undergraduate Scholarships
Lloyd Henbest Scholarship
Rebecca Totten
Frederick T. Holden Scholarship
Tobey Billinger
Cynthia Blanton
Carolyn Coyle
Jenny Faber
Jared Jevons
David Meagher
Dean A. McGee Scholarship
Robert Brewer
Cody Buller
Kyle Gorynski
Jacqueline Grunau
David Hillix
Andrew Hollenbach
Amber Lyons
Brittany Meagher
Ben Meisner
William Scriven
Steven Sutlick
Alec Waggoner

Geology 360 Scholarships
Bradley Memorial Scholarship
Amanda Hunninghake
Lloyd Henbest Scholarship
Andrew Hollenbach
Kyle Gorynski
H. A. & Elsie Ireland Scholarship
Rebecca Smedlund
Roy & Freda Lehman Scholarship
Cynthia Blanton
Aubrey Collie
Carolyn Coyle
Garrett Johnson
Elisheva Patterson
Cole Taylor Roe
Wyatt Urban
Ray P. Walters Scholarship
Tobey Billinger

Field Camp Scholarships
Louis F. & Bets Dellwig Field Camp Scholarship
Robert Brewer
Ryan Brumbaugh
Allan Hemmy
David Hillix
Brittany Meagher
Imogene Herndon Scholarship
Jacqueline Grunau
Hayet Serradji
Ray P. Walters Scholarship
Travis Glauser
Katrina Hansen
Jared Jevons
Ryan Mathis
William Scriven

John Chapman Frye (1912-1982)
Geologist, Researcher, Teacher, Administrator

by Dan Merriam (BS'49, Ms'53, PhD'61)

John Chapman Frye, Quaternary/Tertiary geologist extraordinaire, helped set the stage for the flourishing programs in geomorphology and groundwater at the University of Kansas. The origins of modern-day environmental geology owe much to his research and his program at KU. Frye was a triple threat in teaching, research, and administration. He had all the qualities of the classical field geologist—talent, imagination, and determination—and ranks in with the best of the researchers. He was a superb teacher, his administrative skills were topnotch, and he had a winning way with people. His research on the Pleistocene geology of Kansas and on the Ogallala Formation provided the foundation for decades of further research.

Frye's own education was the keystone to his later success. As a student he had been motivated by Ralph W. Whipple at Marietta College to study geology and graduated with his AB degree in 1934. He did his graduate work at the State University of Iowa where he was granted his masters degree in 1935 and PhD in 1937. His graduate work was under the direction of the renowned A.C. Trowbridge. His Masters thesis was "Geology of a Portion of the Lower Muskingum Valley, Ohio" and his dissertation was "Additional Studies on the History of Mississippi Valley Drainage." Upon completion of his graduate studies at Iowa, Frye headed for Kansas to start a long and distinguished career in the geosciences.

Frye's Years at Kansas

In 1938 Frye arrived in Lawrence where he was employed as geologist with the U.S. Geological Survey Ground Water Division and assigned to the USGS/KGS Cooperative Groundwater Program in Kansas. He transferred from the federal survey to the state survey side of the program in 1940. With his new assignment at the Kansas Geological Survey, Frye also was appointed assistant professor in the KU Department of Geology. He advanced rapidly to associate professor with tenure in 1945 and full professor in 1952. Not surprisingly, he concentrated his teaching efforts on Pleistocene geology, groundwater, and geomorphology, subjects he pursued as a student.

John Chapman Frye in the early 1950s. His distinct signature is shown in the inset.

Whenever possible, Frye would hold class at a once-a-week evening meeting with refreshments at his home. His favorite teaching method was to assign each student a subject to be presented—each student in turn—at the next meeting. A general class discussion followed each presentation (with pertinent, pointed questions by Frye); that assured maximum participation by everyone. Among the classes Frye taught were Advanced Physical Geology, Groundwater Geology, Pleistocene Geology, and Geomorphology. In the summer of 1946 he handled the KU Colorado Field Camp, which included both undergraduates and graduates, and he supervised those students taking Special Field Problems.

Frye did not seek graduate students, but they naturally gravitated to him. There were few students during the wartime years so his first graduate student, Stan Davis, finished in 1951. Davis concentrated on Quaternary geology and groundwater in the Kansas River Valley in the Topeka area. He was followed by Bill Carlson who also worked in the Valley (1952), then W.L. Brown, who had a Pleistocene groundwater problem in British Columbia, Canada (1953). Al Dufford also was working in the Kansas River Valley (1953) just down stream from Davis' area. I (Dan Merriam) was Frye's last student at KU and worked on a Tertiary stratigraphic problem in the Piceance Basin in northwestern Colorado (1953). We were all masters candidates.

Frye developed a research team with different backgrounds and interests to work with him. This cadre included Byron Leonard (biologist/paleontologist), Ada Swineford (petrologist), and Claude Hibbard

(vertebrate paleontologist), as well as a host of Survey employees with varied backgrounds. Student projects also contributed to his overall research plan. Frye, with his co-workers, published extensively on Kansas, and in particular, on the High Plains, some 87 scientific contributions all told. One thing he insisted on was that he be allowed time in the field, usually one month each year, and he made the most of this commitment. He was an astute observer and took meticulous annotated field notes so that a locality did not have to be revisited.

Frye's crowning publication in Kansas was the classic *Pleistocene Geology of Kansas* (1952), co-authored with A. Byron Leonard as KGS Bulletin 99. His *modus operandi* was to publish ideas and data as they became available and later compile them into a major summary publication as he was working his way down through the stratigraphic column. He followed this strategy also with *Stratigraphy of the Ogallala Formation (Neogene) of Northern Kansas* (1955) co-authored with Leonard and Ada Swineford.

Frye in typical field dress on a Pleistocene field trip (early 1950s).

Among his many assets, Frye's knowledge of the Plio-Pleistocene geology of the High Plains in western Kansas, the present river systems, and the glaciated country in northeastern Kansas, truly was amazing. One Friday afternoon I gave him the maps and data for our Pliocene Ogallala study and on Monday morning he returned the completed manuscript to me. With a minimum of editing (Frye was an excellent writer) and a quick review, it was off to the presses.

Another one of Frye's talents—a flare for administration—led to his advancement at the Kansas Geological Survey. He was organized and highly efficient, allowing maximum results with a minimum of time and effort; he always got the most out of his budget and people for the money available—the mark of a good administrator. In 1941, when R.C. Moore departed for service with the U.S. Army Corps of Engineers in WWII and Ken Landes left for the University of Michigan, Frye was named assistant director and assistant state geologist-in-charge.

In fact, Frye was the de facto director while Moore was in the service. He was officially named executive director in 1946, making him state geologist and executive director of the KGS, which reflected his true position. Moore retained the title state geologist and director of research. As executive director, Frye concentrated mainly on Pleistocene geology, county mapping with emphasis on water resources, groundwater, and geomorphic studies, subjects he emphasized in his teaching. Other aspects of Kansas geology were not neglected, however, and he contributed to mineral-resource studies for wartime industries during WWII and, with R.C. Moore, compiled a mineral resource map of Kansas in 1942.

Unfortunately for The University of Kansas, Frye's achievements there led to his appointment as head of the Illinois State Geological Survey. He did, however, leave behind a foundation in environmental geology that remains strong today.

The Illinois and GSA Years

In 1954 John Frye was named chief and state geologist of the Illinois State Geological Survey (ISGS), which at the time was the largest and best funded state survey in the United States. At ISGS he maintained his commitment to support fundamental research and supply basic data for applied problems. He also was appointed professor of geology at the University of Illinois, Urbana-Champaign. With his colleagues at Illinois, he continued his studies of the Pleistocene. He championed environmental studies and in 1963, as a result of working with urban problems in the Chicago area, was one of the first to use the term "environmental geology."

Frye in a typical office pose in his "office uniform" (1970s).

Frye built on his reputation and increased the studies in water, increased staff when possible, added

equipment, and oversaw building of a new core/sample facility with additional laboratory space. Under his administration, a new state geologic map was published in 1967. He religiously continued his field studies and research with his long-time Kansas colleague, Byron Leonard and was a dynamic force for change. In addition to his geologic research, Frye wrote on the environment, mining industry, stratigraphic nomenclature and policy, survey annual reports, high-level nuclear wastes and waste management, and water-resource planning. In his memoriam, H. B. Willman listed 171 publications of Frye not including 25 published abstracts, 14 published committee reports, field trip guides, and miscellaneous popular items.

On his retirement from ISGS in 1974, Frye became executive director of the Geological Society of America in Boulder, Colorado. He remained there for eight years until his second retirement. Not surprisingly, he put his administrative skills to work and dramatically turned around the financial health of the GSA while supporting new GSA initiatives such as the Decade of North American Geology (DNAG).

Frye's accomplishments have been acknowledged broadly by his peers. His undergraduate institution, Marietta College, awarded him an honorary Doctor of Science degree in 1955. He was elected to the National Academy of Engineering in 1971. He served on the advisory committee to the Secretary of the Interior for the U.S. Geological Survey and, in 1972, received the Department of the Interior Public Service Award. He was elected vice president of the Society of Economic Paleontologists and Mineralogists (1965-66), president of the American Association of State Geologists (1960), president of the American Geological Institute (1966), and president of the Illinois Academy of Science (1962-63). In 1990, the Geological Society of America established the John C. Frye Memorial Award for the best environmental paper published by GSA or by one of the state geological surveys.

Private Life

John Frye was born of Scottish heritage in Marietta, Ohio on 25 July 1912. His father was a construction engineer and his mother a homemaker; he was an only child. He married his childhood sweetheart Ruth L. Heizer in 1936. Getting married and attending university was difficult at best in the Great Depression, but the Frye's managed; they were careful with money and prudent, traits that lasted their lifetimes. They had three children, Sally Jean (Schwarzlose), John Douglas, and Terri Ruth (Toedter). The premature death of their son John Douglas was a tremendous loss for the family and particularly for John. In 1982 Frye died following a short illness just a few months after his retirement from GSA.

Frye was a gentle soul but firm and in some ways rather quiet and bashful. But beware, below that demeanor was a determined and effective director who would make sure that the desired goals of any project were accomplished; he was persuasive.

"Those of us who only knew of John Frye admire his career as scientist, administrator, and public servant," Robert Bergstrom wrote in "In Memoriam" following Frye's death. "Those of us who knew him personally feel the same admiration and will also miss him as a warm, caring friend."

"John Frye assum[ed] his characteristic stance . . . a stance that was commanding without being aggressive, a stance at once indescribable but familiar to all who know him well," wrote Byron Leonard in "A Better Friend Hath No Man."

John Frye requested no tributes be published to him, a difficult request to honor for such a worthy and productive scientist. I do not feel bound by his request.

Pen-and-ink sketch of Frye by R. C. Moore (probably from the early 1950s).

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Merriam, D.F., 2002, Exploring for petroleum in the Flatlands: history of oil and gas exploration in Kansas: Oil-Industry History, v. 3, no. 1, p. 56-71.

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Acknowledgments

I thank Sally Jean (Frye) Schwarzlose for sharing information about her father and family, and reading a preliminary copy of the manuscript. Bill Hambleton, former Director of the KGS, read a preliminary draft of the manuscript and offered helpful insights into John Frye the man, the administrator, and the academician. Janice Sorensen of the Kansas Survey, as usual, applied her magic in finding out-of-the-way literature; Jim Merriam digitized and enhanced the illustrations. Barbara Brodersen, geology librarian at the University of Iowa, kindly supplied information on Frye's academic work there. Jon Goodwin and Charles Collinson at the Illinois State Geological Survey were very helpful in providing information on Frye's tenure there. Don Hattin of Indiana University provided information on his uncle Ralph Whipple and read the final version of the manuscript. The thoughtful and complete memorial of John Frye by Bo Willman of the Illinois State Geological Survey served as an excellent source of information, especially for Frye's time at Illinois.

Did you know?

Four KU buildings are named for KU geologists: Haworth Hall (Biology), Moore Hall (Geological Survey), Hambleton Hall (Geological Survey), and Foley Hall (Biological Survey).

Three Chairs of the Department of Geology were also State Geologist and Director of the Kansas Geological Survey: Erasmus Haworth (1892-1920), Raymond C. Moore (1920-1939; 1941-1942; 1952-1954), and Frank C. Foley (1954-1963).

Over most of its 140 year history, the Department of Geology has occupied four buildings on the KU campus: Fraser Hall 1866-1886 (razed in 1965), Snow Hall 1886-1909 (razed in 1934), Haworth Hall 1909-1945 (razed in 1970), and since 1945 in Lindley Hall. Now its faculty and students are spread out into four buildings all at the same time, Lindley Hall, Nichols Hall, Moore Hall, and the Multidisciplinary Research Building.

Department of Geology chairs Lowell Loudon and Robert Dreyer were both licensed pilots.

Five KU geologists—S. W. Williston, Erasmus Haworth, Walter Schoewe, Mark Jewett, and Dan Merriam— have been president of the Kansas Academy of Science, the oldest state academy west of the Mississippi River and second oldest in the US.

Two former faculty members, John Imbrie and Al Fischer, are members of the National Academy of Science, and two former students, Hollis Hedberg and Norman Newell, are known to have been elected to the Academy.

In 1958, R. C. Moore was among the first four KU faculty to be named a distinguished professor; the others were E. Raymond Hall (Zoology), T. H. Clewe (Human Reproduction), and Charles Michener (entomology).

1942

ALLEN, CHARLES M., 7821 E. 76th St., Tulsa, OK 74133. BA '42. Retired as general natural gas geologist advising on governmental and industry affairs.

LEY, ROSS H., 6335 W. NW. Hwy. #1211, Dallas, TX 75225. BS '42. Still go to exercise three times a week. Nobody today would ever guess that I went to the Army's Judo School as a second Lieutenant in 1942 and could jog forever. Haven't done anything in the oil business for a number of years.

1945

HAYWARD, O. T., 7820 Tallahassee, Waco, TX 76712. BS '45. Retired professor of geology, Baylor University.

SWIFT, DORIS BREWSTER, 4134 E. 31st St., Tulsa, OK 74135. BS '45. Since I was a housewife and mother of three, I have no professional news to report. For the last four years I have lived in the Oklahoma Methodist Manor and love it! No meals to worry about, no house to clean, or yard/garden to fill my time. Now I am free to do as I like, which means I have almost completed my fourth book about "Life on Mississippi Street." This one covers the four years of my working career as a geologist in the main office of Stanolind Oil & Gas Co. in Tulsa. The book will be available about Christmas time. It ends with my marriage to Paul Swift and begins with my first days at work at Stanolind. It is hard to realize all of it took place over 50 years ago—especially since I don't feel old!

1947

JEWELL, ELIZABETH TRIPP GILKISON, 2228 Seawall Blvd., #313, Galveston, TX 77550.'47. Retired.

1948

HOLLAND, JR., F. D. (BUD), 2303 8th Ave. N. Grand Forks, ND 58203-2969. BS '48. Most geology Jayhawks probably know that since the untimely death of Jim Parks, my 1940s classmate and field partner, I have taken over the reworking of his manuscript on the life of Doc Laudon. Hurrah! To be published by the Univ. of Wisc.–Madison. Look for *Bushels of Fossils, The Influential Life of Lowell Robert Laudon (1905-1993)—Teacher, Geologist, Paleontologist, and Mentor*. It's full of anecdotes of the adventures of this popular and fun-loving professor while he was teaching at Tulsa, KU, and UW and on field trips. I've been working on Cretaceous shark teeth from North Dakota with two more learned former students. Also Mardi and I drove with son, Del, to Alaska in July 2004 and took a cruise up the Inland Passage to Alaska in July 2005 to celebrate our 60th wedding anniversary. In October we'll attend the reunion of my WWII destroyer-minesweeper shipmates (as we do each year).

MEEK, MARILYN, 7021 Verde Dr., Kansas City, KS 66109. BS '48. Retired.

1949

FAIRCHILD, PAUL W., 110 Calypso Dr., Lakeway, TX 78734. BS '47, MS '49. Retired petroleum geologist.

HALL, H. H. (HUB), 836 N 1917 Rd., Lecompton, KS 66050. BS '49. Hardly noteworthy, but I'm motoring again on a new hip, which may let me get to a few outcrops.

MUELLER, JAMES N., Condo Tecalai #117, Apdo. #412, San Carlos, N. Guaymas, Sonora Mexico 85506. BS '49. Hey! I'm not really lost! Moved to Phoenix in '51 and started a "Gem & Mineral" shop. Handled a wide variety of mineral specimens and equipment for cutting and polishing gems. Sold business in '77 and became a gem wholesaler specializing in sapphires (and all colored gems) traveling extensively to Hong Kong, Bangkok, and Sri Lanka. Retired in 1986 and moved permanently to San Carlos, Mexico—320 miles south of Tucson.

1950

ELLIS, ROY G., 8539 Rosalie, St. Louis, MO 63144. BS '50. My wife and I have lived in St. Louis since 1956. We celebrated our 50th anniversary in 1999. Atlas Tool manufactured lawn mowers, garden equipment, and snow blowers. Working for them gave me the opportunity to express my mechanical ability, and I came up with a number of patents. When Atlas sold out and moved in 1986, I turned my hobby of building furniture in my basement into a full time job. At present my interests involve hikes in the parks, reading, and throwing a line in the lake hoping for a fish for supper.

EVANS, JANE KEITH, 5914 Cable Ave., Madison, WI 53705. BA '50. Retired.

EVANS, L. RICHARD, 5914 Cable Ave., Madison, WI 53705. BS '50.

Retired professor of engineer, Wisconsin. Licensed, photogrammetric engineering. Second career with Mass Mutual Live Ins., Co. and Financial Services.

HARBAUGH, JOHN, BS '48, MS '50. First some family notes: my eldest granddaughter is a Foreign Service officer with the State Department in Washington, the middle granddaughter is completing a PhD in Botany at UC Berkeley, and the youngest is spending her senior collegiate year as an exchange student in Santiago, Chile. As for me, after my wife Josephine's death in 1985, I was a bachelor for 15 years until I had the good fortune to marry Audrey Wegst in 2000. Audrey received a PhD in nuclear medicine at KU and later was a professor in the Department of Radiology at KU's Medical School in Kansas City. (How's that for a KU-connected family!) Audrey and I divide our time between two houses, a colonial-style house in Fairway, Ks., and a Tudor house at Stanford. I took emeritus status at Stanford in 1999, but have remained professionally active since. For several years Dan Merriam and I have studied the evolution of the drainage system in Kansas. Working with digitized terrain data in the form of hillshade maps, we obtain stunning and revealing displays of the Kansas landscape. On the commercial side, I manage our Harbaugh oil and gas royalty trust in Oklahoma and the Texas Panhandle, where the focus is on deep gas in the Anadarko Basin. Middle son Dwight, who graduated in geology at Stanford thirty years ago, helps me with the work. I should add that Dwight's older brother Robert at one time had inclinations toward geology, but instead became a physician, trained in neurology at Mayo Clinic, and has practiced in Santa Barbara for twenty-five years. His younger brother Richard has had no pretensions toward geology, and is a remodeling contractor in Pan Alto. To each his own.

KLEIHEGE, BERNARD W., 2803 S. Meade St., Denver, CO 80236. Retired Exploration Manager of USA for Prodeco Exploration Inc.

MITCHELL, PORTER H., 9977 South Falcon Creek Dr., Littleton, CO 80130. BS '50. Just enjoying retirement and pursuing hobbies—golf, model trains, and antique cars. Have a 1923 Model T roadster and 1930 Model A Ford Coupe with rumble seat. Have a grandson—senior in high school interested in geology and geophysics (possibly his preference).

SMITH, KENNETH T., 207 Dove Hollow Tr., Georgetown, TX 78678. BS '50. Retired vice president of E&P, Sinclair Oil Corp.

THALMAN, ALBERT L., 2322 Twin Creek Ln., PO Box 900, Newcastle, OK 73065. BS '50. Retired petroleum geologist.

ZINSER, ROBERT W., 20431 Meadowood Dr., Sun City West, AZ 85375. MS '50. Retired manager with Sun Oil Co.

1951

ADAMS, WILLIAM L., 4404 Ridgehaven Rd., Ft. Worth, TX 76116. BS '51. Retired, former chairman & CEO of Union Pacific Resources.

CONROY, RICHARD L. "DICK," 3523 Crow Valley Dr., Missouri City, TX 77459. BS '51. We alternate our summers between W. Canada & E. Canada—This summer Eastern. We have 5 grandchildren—2 in college and next year there will be 4. Berry & I still enjoy good health.

FLOTT, ELGIN L., 1105 Timberlane Dr., Sabetha, KS 66534. BS '51. Retired from insurance & oil.

HAMBLETON, WILLIAM W., 1312 Raintree Pl., Lawrence, KS 66044. PhD '51. Have authored several papers with Dan Merriam on historical figures in Kansas geology, and I've done other papers on geology and landscape art and portraiture in art. Since 2002 have chaired Endacott Society Lecture Program (named for Paul Endacott, president of Phillips Petroleum Co., who funded retirees quarters in Adams Alumni Center.) Program over the past year included Tim Carr, forecast of energy needs; Kay Kent, director of Lawrence Dept. of Health and Environment; Dan Merriam, legacy of Raymond C. Moore; Saralyn Reece-Hardy, director of Spencer Art Museum; Bill Lacy, director of Dole Center; Sandra Wiechart, holidays on trail with Lewis and Clark; Dan Rockhill, the new architecture; Roy Creek, 82nd Airborne, memories of parachute landings in Normandy; and Dr. Leonard Krishtalka, director of the Natural History Museum.

HELMERS, MURRAY E., 7841 La Sobrina Dr., Dallas, TX 75248. BS '51. With oil & gas prices moving slightly closer to their real value, it's hard to lay down the rock hammer and "slide rule." So, at 73, Kathy and I are still participating,

drilling from Wyoming to New Mexico, Kansas to Texas. Still loving every minute of the exciting search—even the dry holes. Life is good! Three kids (40–50 yrs.), 5 grandkids (5–28), and two great grandkids (5–6). Even made it to the field camp reunion last year. Rock Chalk!

KREBS, PAUL H., 15419 Long Rd., Houston, TX 77044. Left Aramco in 1955. Formed Gaslog, Inc., was active 'til 1985 in mud logging and real estate. Purchased real estate, put in four small subdivisions in East Harris Co., Tex.

SHOWALTER, RICHARD, 7810 E. Mineral Dr., Centennial, CO 80112. BS '51. Back to Denver, exploration manager (US) for Canterra 1982-1986. Retired for good 1986. Really enjoyed petroleum geology exploration, etc. KU had, and I assume still has, top grade geology staff.

1952

JAMES, RICHARD H., 1723 Hammond Dr., Emporia, KS 66801. BS '52. Retired, general dentistry.

1954

BEAM, RICHARD, 4105 Steven Dr., Edmond, OK 73013. BS '54. Dick & Idell enjoy retirement in Edmond, OK. Their daughter Linda lives nearby in Oklahoma City. They have two grand-daughters, both married, one living in Austin, Tex., and the other in Denver, CO. One great grandson born in July, 2005. Dick actively plays bad golf and Idell enjoys tennis. They belong to several social dinner and dance clubs. What spare time they have is spent taking care of their little acre, birds, and Maxine the golden retriever.

DOUGLASS, LEE S., 604 Church St., Eudora, KS 66025. BS '54. Our family of 8 children are scattered far and wide. One of our 8 died at 16. Kirk is at Cottonwood in Lawrence, KS. Toby, wife Pam, and 5 girls are in Gardner, Ks. He drives for FedEx. Debbie and husband Bob are in Nepal and have presented Christ there for 14 years. Deb is a KU graduate in the field of Journalism. She is writing curriculum for children. Deepak is 12 and Sarita is soon to be 14. Sarah also attended KU, where she met her husband Alan Albright who passed away of cancer in 2005. He had his Masters in Aerospace Engineering from KU. Their two sons, John Alan & Matthew Lee, are both students at Texas University in Dallas Tex. Stephen is in Houston area. Our youngest daughter is Rachel whose husband Greg Hunt, is working in Lenexa, Ks., as mechanical engineer designing heavy cranes & such equipment. They have 3 children, Ethan, 8, Zachary, almost 5, and Elizabeth Lauren, soon to be one year old. Nathan, our youngest son, is in Special Forces in Baghdad, Iraq. Lee & I are fine. Working on writings!

DOUGLASS, M. R., 42 Shadow Ln., Destrehan, LA 70047. MS '54, BS '53. Helped form, and part owner of, UADA Energy LLC. Drilling and producing company exploring south Louisiana on shore.

HATTIN, DONALD E., 3485 S. Inverness Farm Rd., Bloomington, IN 47401. PhD '54, MS '52. On Aug. 25th, Marge and I attended my 60th high school class reunion in our hometown, Scituate, MA. This year also marked publication of my new book *Tales of a New England Boyhood: Scituate, Massachusetts, 1931-1946*. I am still active in the Dept. of Geological Sciences at IU, and continue service as Scholarship Committee Chairman of the Indian Society of Mayflower Descendants. As a life member of the Indian Railway Museum I am a qualified trainman, but spend most of my time there on restoration of steam locomotive No. 11. Marge and I are avid antique hunters and occasionally find a real gem at antique malls or country auctions. Marge is active in several interest groups of the University Women's Club, in Tri Kappa (a philanthropic organization), and a bridge group. Our oldest child, Sandy, continues her extensive volunteer work at the Tibetan Cultural Center, and is already making preparations for the next visit (2007) of the Dalai Lama. In January, we flew to Denver to attend a surprise birthday party for son Ron's fiftieth! Our youngest, Donna, is working in Denver on advertisements and "staging" (upgrading) homes prior to sale on the real estate market.

KRUEGER, ROY R., 310 S. Main, Russell, KS 67665. BS '54. Retired consulting geologist.

NICHOLAS, RICHARD (DICK) L., 3813 Grenville Dr., Charlottesville, VA 22903. MS '54. Retired chief geologist of Shell Oil Co.

RITCHIE, A. SCOTT, Ritchie Exploration, Inc., 8100 E. 22nd St. North, Bldg. 700, Wichita, KS 67226. BS '54. Ritchie Exploration still actively searching for new reserves—mostly in western Kansas. My son, Scott III, runs the

company, and Carol and I run to fish, hunt, and travel.

1955

DENNY, L. M. (MICK), L.M. Denny–Consulting Geologist, 306 W. Wall, Ste. 807, Midland, TX 79701. BS ’55. Still looking for oil!

HALL, TOM, 15145 Pawnee Cir., Leawood, KS 66224-3832. BS ’55. Nothing new to report this year.

LITTELL, CHARLES R., 506 Copperstone Box 687, Hugoton, KS 67951. BS ‘55. Retired optometrist.

SCHWARZ, KENNETH A., PO Box 226, Sackets Harbor, NY 13685. Graduate work 1954-55, then mandatory military service in USAF 1955-58. Proud of four children: 1) John, pilot with Delta Airlines, Los Angeles. 2) Ken Jr., master blacksmith, Colonial Williamsburg, Va. 3) Ted, aircraft mechanic with U.S. customs in New Orleans, La. 4) Maria, chiropractor in Salina, Ks. I’m active in community activities, especially Barbershop Chorus in Watertown, NY, and Sackets Harbor area cultural Preservation Foundation, which is attempting to secure funds for restoring an 1839 Stone Military Hospital at Madison Barracks. Also, I help my wife, Pat, in various floral beautification projects in Sackets Harbor in anticipation of judging by “America in Bloom” dignitaries in July 2006. Interested in learning more about the local battles of the war of 1812. Have contributed several geologic articles to local newspapers about fossil and glacial history of area.

SMITH, RICHARD D., Range Oil Company, 125 N. Market St., Suite 1120, Wichita, KS 67202. BS ’55. President, Range Oil Company, independent oil producer. Involved in exploration and production activities in Central Kansas.

1956

BERRY, GEORGE F., 806 Lynwood Ln., Broken Arrow, OK 74011. BS ’56. Retired reservoir engineer.

BROWN, MARY K., 4796 River Rd. S., Salem, OR 97302. BA ’56, BS ’53. Retired housewife.

FRANKLIN, WILLIAM E., 8017 Fontana Prairie Village, KS 66208. BS ’56. Wife: Marjorie, BS Aeronautical Engineering. Fifty-year reunion: 2006.

HALLIDAY, ROBERT (BOB), 6954 Camino Nuevo Mejico, Las Cruces, NM 88007. BS ’56. Retired VP of engineering, Redlands/LaFarge PLC.

HODSON, WARREN G., 411 Liberty Lake Dr., Vestiva Hills, AL 35242. MS ’56, BS ’53. Retired USGS supervising hydrologist.

LAUKEL, QUINN C., 4938 Forest Bend Rd, Dallas, TX. 75244-6511. MS ’56. Retired but still working with investments.

RICHARD, JAMES C., 15500 Wrand Dr, Yukon, OK 73099. BS ’56. President of Richard Exploration Co., Inc. We are still active in business and investments.

1957

KLEIN, GEORGE DEVRIES, SED-STRAT Geoscience Consultants, Inc., 17424 W. Grand Pkwy S., Suite 127, Sugar Land, TX 77479-2564. MA ’54. Since Oct. 1, 2005, consulting has been non-stop and I’m booked up until the end of 2006. Right now 2007 looks good too. The great thing about living in a digital world is that I can work internationally without leaving Houston! Since Oct. 1, I have completed consulting work in south Texas, Portugal, Syria, Canada, and Russia and am starting a project in the Gulf of Mexico offshore. I just hope this lasts! Also, completed tour of duty as Chair of the 2006 AAPG Matson Award Committee at the AAPG meeting in Houston last April.

LAUGHLIN, DWIGHT JAMES, 9747 Canyon Country Ln., Escondido, CA 92026. MS ’57, BS ’52. Retired general manager, Water Districts.

SMITH, JAMES T., #54 Rolling Wood Dr., Houston, TX 77080-7618. BS ’57. Semi-retired from USGS (14 yrs.), US State Dept. (16 yrs.), and Bechtel Group (~10 yrs.) as consulting hydrological hazmat remediation engineer. Worked on various nuclear sites—3-mile Island; So. Tex Nuclear; Port Gibson, Miss, monitoring GW radiation. Various superfund remediation—Talara, Peru; Billings, Mont.; Ottawa, Canada; Crosby, Tex.; Malinkrop, St. Louis, Mo.; Exxon sites (Alaska and others). Project geol. engineer on Falcon Dam (US/Mexico) and Amistad Dam—two largest international reservoirs. Last few years have been remodeling large home on 2.5 acres, wooded area in West Houston. A real chore, but really enjoyable. Also, still expanding classic auto collection—latest is 1982 Euro-Mercedes SL500 convertible. Oldest is 1946-49 Buick. Kids are all scattered

and doing well, we still meet in Las Vegas, Nev., 3-4 times a year where we have a nice condo on the strip across from the New York Casino. Haven't won much, but also not a loser. Wife (Kate) stays in Vegas for National Senior bowling Association tournaments twice yearly. She wins some without me along. Just her, kids & grandkids out on "the strip." Hope to hear from some in the 1956-58 era classes. As a reformed Korean Veteran there weren't very many of us then.

1958

BROWN, WILLIAM G., 1208 Sleepy Hollow Rd., Waco, TX 76712. MS '58. Family: wife, Claretta; 3 children (one deceased); 4 grandchildren (2 boys, 2 girls), 2 step grandchildren); 2 step great grandsons. Professional: 23 years with Chevron Oil. Geological consultant. I was the coordinator of Chevron Corp. Structure School, 1975-1980; 16 years with Baylor University as a professor. Areas of interest: 1. Rocky Mountain Faceland (Wyoming); 2. Southern Oklahoma: Ardmore Basin, Wichita Mt., Arbuckle Mts., Criner Hills, Arkoma Basin.

DUBAR, JULES R., 2700 Thrush Rd, Charlottesville, VA 22901-8815. PhD '58. Celebrated 83rd birthday June 30th. Still doing some yard work and working on a manuscript about my cat, "Conversations with Ratu." Exercise each day for about 1½ hours and stay limber. Our son, Scott, is now studying art in Richardson, Va., at Virginia Commonwealth University. Our daughter, Nicole, and her girls, Selena and Ariana, are still in Fort Worth, Tex. but expect to move nearby Vienna, Va., this summer. Nicole's husband has already taken a job in D.C. My wife Susan remains a housewife and bridge player. She seems in good health and can still drive me to and fro when needed. My book *Never Piss into the Wind* continues to sell slowly.

KLAPPER, GILBERT, 1010 Eastwood Rd., Glencoe, IL 60022-1125. MS '58. Retired from The University of Iowa after 30 years of teaching and research, but still continuing with writing papers on Devonian conodonts. Several publications are in press. Looking forward to receiving the next issue of the *G-Hawker.*

1959

HOWARD, LEONARD W., 6209 Boca Raton, Corpus Christi, TX 78413. MS '59. Wife, Barbara; 2 sons, 1 daughter, 5 grandsons, 4 granddaughters. I am a retired independent petroleum geologist, and also retired army major. I'm enjoying playing tennis, fishing and gardening. I raise plumeria; I am a Texas Master Gardener, and also volunteer at the Corpus Christi Botanical Gardens in the Plumeria Exhibit. Barbara and I will celebrate our 53rd wedding anniversary in July. We've had many interesting travels—Africa, India, Japan, Thailand, Central and South America, New Zealand, and a seven-day rafting trip in the Grand Canyon. We plan to do more traveling.

McMANUS, DEAN A., 4545 Sand Point Way NE, #808, Seattle, WA 98105. MS '56, PhD '59. As a result of the publication of my book, *Leaving the Lectern: Cooperative Learning and the Critical First Days of Students Working in Groups*, I was honored to be invited by the dean of the Graduate School to visit the KU campus in October 2005, where I had the great pleasure of being hosted by the Department of Geology and the Center for Teaching Excellence (CTE). I enjoyed a very full day of formal and informal talks about teaching and learning with faculty, graduate students, and post docs and dearly appreciated the kindness shown me, particularly by Bob Goldstein, chair of the Department of Geology, and Dan Bernstein, director of the CTE.

O'CONNOR, HOWARD G., 4223 Wimbledon Dr., Lawrence, KS 66047-2034. MS '59. Retired from KGS; was a Senior Geologist specializing in geohydrology. Worked till I was 66, but been retired now for 17 years. Slowing down some but I'm still kicking! Son, Robert, lives in Lawrence and I see or talk with him daily. Daughter, Peggy, RN, just moved from Bixby, Okla., to Lees Summit, Mo., where she and her husband both work at Truman East Medical Center. It's now just a 58-minute drive to visit them rather than four hours to Oklahoma. Most fun I have now is with a group of retirees in a writing class. We write about anything we want. I'm writing mostly about my life and family and am working on a biography of my wife, Virginia, now. One short story recently about the "South Lawrence Trafficway—Baker Wetlands" was published in the Journal World and I received complimentary phone calls from the mayor and a KU Vice Chancellor plus an invitation to do a thirty-minute radio talk show interview. Still enjoying life at 83!

REESE, DALE O., 6816 Roundrock, Dallas, TX 75248. MS ’59. Petroleum geologist.

RISBECK, JOHN S., 11220 County Rd. 3040, Rolla, MO. 65401. BS ’59. Retired mining engineer.

STEWART, KEITH E., 1125 Via Tornasol, Aptos, CA 95003. BS ’59. A retired senior engineering inspector with the City of Fresno. Registered Geologist, State of California, #3414. Worked for a private testing laboratory in soils lab field sampling and testing soils. Worked as a surveyor and engineering inspector for a private engineering firm. Spent the last twenty-three years of employment with the city of Fresno as an engineering Inspector. Retired in 1998 as senior engineering inspector and moved near the beach in Aptos, CA. Now playing golf three days a week and volunteer with the California Highway Patrol. Life is good!

1960

DODSON (ANDERSON), BARBARA J., 1306 N. Northshore Blvd., Wichita, KS 67212. BS ’60. Still happily retired. Enjoying hobbies and a little traveling. Two great grandchildren.

MICHELSON, JAMES E., PO Box 194, Hazelhurst, WI 54531. MS ’60. Retired & live in northern Wisconsin and southern Florida.

PIVONKA, JIM, PO Box 751, La Crosse, KS 67548. BA ’60. Retired, strategic issues management.

1961

ADAMS, LARRY W., 12080 E. Nunn Rd., Athol, ID 83801. MS ’61, BS ’60. Still working part-time in Geoenvironmental projects throughout Southern California. Enjoying living with wife (Alice) on 22 acres (Sage Creek Ranch) in N. Idaho, where we board horses & tend to our horses, etc. Two daughters and 7 grandchildren now live in N. Idaho. Another daughter & 3 grandchildren will likely be living here soon.

ANGINO, ERNEST E., 4605 Grove Dr. Lawrence, KS 66049-3777. PhD ’61, MS ’58. Enjoying retirement and doing research on Polar (Antarctic) postal history and meter postal history—now writing papers on preceding subjects. Science is now a hobby. Traveling and enjoying grandkids. Aging gracefully (I think). Still active in local (Lawrence) affairs and activities. Enjoy keeping up with former students of geology and of geochemistry. Also active with Midland Historical Railway in Baldwin, KS. “Big boys–big toys.” Playing with trains is fun!

BEBOUT, DON, 800 W. 38th St., Apt. 11103, Austin, TX 78705. PhD ’61. Retired geologist, now potter.

DAVIS, JOHN C., 918 Jersey, Box 353, Baldwin City, KS 66006. BS ’61. Geologist, petroleum engineer. Chief geologist with Heinemann Oil GmbH; University Professor, Montan Universität–Leoben.

FAY, ROBERT O., 4303 Oxford Way, Norman, OK 73072. PhD ’61. Married Helen Scobe in 1966. We have 5 great-granddaughters, ages 5-14. I work full-time on bibliography of the Gulf-Ouachita astrobleme belt and basin. I have been with the Oklahoma Geological Survey for 50 years.

FISHER, WILLIAM L., 8705 Ridgehill Dr., Austin, TX 78759. PhD ’61, MS ’58. Winding up a term as dean of the newly launched Jackson School of Geosciences. Returning to teaching and research for a few more years.

HAYS, JAMES K., 1437 S. Boulder, Ste. 1030, Tulsa, OK 74119. MS ’61. President of Sullivan & Co.—exploration & producers.

LINEBACK, JERRY A., 21 Spencer St., Apt. 402, Lebanon, NH 03766. MS ’61, BS ’60. Carol Harlow and I were married in February 2006. I am transitioning from employment with the Kansas Dept. of Health and Environment to semi-retirement and living in New Hampshire. Carol works for the Thayer School of Engineering at Dartmouth College in nearby Hanover, NH, in the area of leadership giving.

MARSHALL, RICHARD T., 22944 Armadillo Rd., Garfield, AR 72732. BS ’61. Enjoying retirement on Beaver Lake, northwest Arkansas, and occasionally collect and study conodonts and ostracods (avocationally) and doing much volunteer work with Arkansas Archaeological Survey. Appointed commissioner in February on Benton County (Arkansas) Historic Preservation Commission, and just returned from training program in Baltimore. Wife, Faith, is realty broker here. Life is good at the lake!

MERRIAM, DAN, 538 Lindley Dr., Lawrence, KS 66049. PhD ’61, MS ’53, BS ’49. I retired from the KGS in 1997 as a senior scientist (emeritus) and from Wichita State University as a distinguished professor (emeritus), but I am still

active. I was fortunate during the year to attend several meetings—International Association for Mathematical Geology in Toronto; GSA in Salt Lake; Kansas Academy of Science in Wichita—and to present a paper at each. At the IAMG meeting I was very surprised and pleased when it was announced that I was made an Honorary Member, the first and only one in the Association. I was a charter member, which was formed at the International Geological Congress in Prague in 1968 during the occupation of Czechoslovakia by the Russians. I made a presentation at the Endicott Society, a KU retiree's organization, in September on Raymond C. Moore. I am writing Moore's biography, which should be published in 2007. Also, with Paul Enos, we are organizing a session in Moore's honor at the GSA's South-Central/North-Central Section meeting, which will be held at KU next April (contributions welcome). I continue to edit the IAMG international journal, Natural Resources Research, and a book series for Springer Publishing. On the fun side of things, I finished (with help) two papers now on the KGS website. Check them out: "Kansas Artistic Geologists and Illustrators" with Bill Hambleton and John Charlton and "Kansas Geology as Landscape Art" with John Charlton and Bill Hambleton (http://www.kgs.ku.edu). I have two articles in this issue of the *G-Hawker*—one on John C. Frye, and a notice of the death of a colleague, friend, and classmate Gary Lane. I am writing an article for the next *G-Hawker* on the first one hundred years of geology at KU, and I have been honored by being named the Department's Historian.

1962

EMERY, PHILIP A., 4475 C.R. 25, Mt. Home, AR 72653. MS '62, BS '60. Last fall I did some consulting work for Rio Grande Water Cons. Dist. and expert witness work for a Denver law firm (re: San Luis Valley). This spring I taught a geology short course for ASUMH (Arkansas State University–Mt. Home).

KEIM, JACK D., 3804 Stockade Ct., Lawrence, KS 66049-2144. BS '62. Starting 4th year of retirement from P.I. at KU—life is grand; however, retirement isn't for sissies because you are busier retired than when you worked—don't figure. Happy trails!

LaMONTAGNE, KIRSTEN (KISE) KRUEGER, 1488 S. Washington St., Denver, CO 80210. BS '62. After 36 years in the foothills outside of Denver (Evergreen & Lookout Mountain), I succumbed to being a flat-lander and moved to Denver. I enjoy the neighborhood and have adjusted more easily than I thought. I can finally have flowers and trees that the elk and deer don't devour. I have also sold my beautiful home in Taos, New Mexico—sad for us all, but the maintenance of two homes was too much for the amount of time we were using it. At this point of my life, I am trying to simplify. I work part time at a fine art/gifts and jewelry store in Cherry Creek and still do way too much volunteer/service work, but it keeps me out of the bars! Enjoy having my kids & grandkids in Denver and am traveling to all the exotic places I can—India is on the short list, if they could keep out of trouble!

POOSER, WILLIAM K., 8521 S. 99th E. Ave., Tulsa, OK 74133. PhD '62. Retired from Occidental Oil & Gas (oil & gas exploration).

SIESSER, WILLIAM G., Vanderbilt University, Dept. of Geology, Nashville, TN 37215. BS '62. Bill retired from Vanderbilt University in August 2004. He spent 25 years in the Geology Department there, retiring as professor of geology, emeritus. After a few months of planning, he and his wife Lynne rented their house and left the USA for a year of traveling overseas. Those interested may follow their adventures on: www.billandlynne.blogspot.com. Bill is now back at Vanderbilt, writing the Calcareous Nannoplankton chapter for an upcoming micropaleontology textbook.

1963

BALDWIN, A. DWIGHT, 6 Fairchild Dr., Durham, NH 03324-1946. MA '63. Retired professor at Miami University, Geology Dept.

BONDURANT, CHARLES E., 587 Oxen Trail, Fredericksburg, TX 78624. MS '63, BS '62. Built retirement home outside Fredericksburg, Tex. Still work with small oil & gas company in San Antonio. Really enjoy the Texas Hill Country.

HARRIS, LEAMAN, 656 Touchmark Ct., Edmond, OK 73003. MS '63, BS '60. After 14 years I retired as an Env. Engineer from Tinker Air Force Base in 2003. Earlier I worked in oil and gas exploration for Exxon, Getty, and other oil companies. For seven years I was employed by the USGS. During the Vietnam campaign I served as a navigator-bombardier in the U.S. Air Force on B-52 and C-141

aircraft. The biggest change for Judy and I is our move from a 3500 sq. ft. house and a one-acre lot to a 2300 sq. ft. house and a small lot in a retirement center where all the maintenance and yard work is provided. I keep in touch with the earth sciences by serving on the board of the KU Natural History Museum and Biodiversity Research Center. Promotion of my scholarship fund managed from that center is another way I stay involved. It is dedicated to preserving and maintaining biodiversity and mitigating human impact. I am pleased that a current geology PhD candidate, Julie Retrum, is a recipient of that scholarship. My tour as a weekly correspondent with my hometown newspaper *The Edmond Sun* came to an end, but I continue to submit articles. I was recently elected president of the Resident Council at the retirement center, so that should make things interesting for the next few months! Judy is a partner in a business that promotes breastfeeding. I help with some of the administrative work. My son Samuel is plant engineer for a Purina Pet Foods plant in Ft. Dodge, Iowa. My son Douglas is an engineer with General Motors Corporation in Pontiac, Mich. My daughter Sarah is an office manager for the Health Sciences Center in Oklahoma City.

REAMS, MAX W., 6 Castle Coombe Dr., Bourbonnais, IL 60914. MS ’63, BS ’61. I am in a very exciting time at Olivet Nazarene University. Reorganization of academic structure changed my position from responsibility for all the sciences, math and engineering to just geology and chemistry. For next year we’ve added a geography program and have hired a hydrogeologist (we’ve added four physical science faculty in the past 3 years as enrollment is booming). It’s more fun to focus on fewer things. I’m training as a life coach, focusing on faculty. I’m taking my children and grandchildren on a geology field trip to Colorado (fun!).

SCAFE, DON, 11220-73 Avenue, Edmonton, AB, Canada T6G 0C6. MS ’63. Currently edit and produce the quarterly newsletter of the streetcar preservation society in Edmonton. Photo historian of the society year round and drive streetcars during the summer. Function as “Mr. Grunt” in the home garden and help the executive chef in the kitchen. Keep the wine cellar stocked. Plan and execute “Magical Mystery Tours” to surprise the social director. The most recent tour celebrated 16,000 days of marriage! Life is good and superior to the alternative.

1965

NIVEN, DAVID, 99 Raptor Pt., Golden, CO 80403. BS ’65. Recovered nicely from heart attack last Sept. & suited up for most of the ski season. Also bounced back from torn rotator cuff & am golfing again. Ran some rivers in Ore. & toured coastal British Columbia & Vancouver Island this summer. Wife retires next year—then look out!

SMEDLEY, GARY, 3435 Cedar Heights Dr., Colorado Springs, CO 80904. MS ’65, BS ’63. Wife, Judy; 4 children (Susan, Christine, Steve, Kelly). Oil exploration and development in USA and overseas.

VINCENT, DOUGLAS A., 1050 Dover Mansion; Yukon, OK 73099. MS ’65, BS ’62. I was enjoying retirement in Tucumcari, NM in 2002 & 2003 when my wife’s cancer came back in March 2003. She died in Nov. 2003. I sold the house in New Mexico in late 2004 and moved to Blanchard, Okla. (SE of Oklahoma City); then bought a small home in Yukon, Okla., in March 2005. Came out of retirement and started working full time for Oklahoma Corporation Commission in September 2005. I started out prospecting for oil & gas in 1964 (oil company), then worked at cleaning up leaking UST oil & gas plume sites (environmental companies) from 1989-2002 and now I’m experiencing oil & gas from a regulator’s view point. The next job will be pumping gas at a service station. Daughters Gay Lynn, 38, and Judi, 35, doing well. Have three grandchildren, Spencer Dodd, 19, Drew Reinke, 16, and Grace, 12. It’s good to be busy again.

1966

FRANKS, PAUL C., 2720 S. Cincinnati, Tulsa, OK 74114. PhD ’66, MS ’56. Just completed a 3-week visit to Scotland. Visited Siccar Point (Hutton’s type locality for angular unconformities) as well as Isle of Lewis (Lewisian gneiss) and Nairn (Nairn granite) among other localities.

SAUERACKER, PAUL R., 1728 Sycamore Ave., Merrick, NY 11566. MS ’66. Married to Nancy for over 40 years. Three wonderful children (Sharon, Paul & Nancy) and four grandchildren (John, Alex, Peter & Matthew). Chairman, president & CEO of Minerals

Technologies, which is a supplier of industrial minerals, primarily calcium carbonate and talc to the paper, construction and polymer industries, and for health care products. Sales of $1 billion per year.

1967

SCOTT, ROBERT W., RR 3 Box 103-3, Cleveland, OK 74026. PhD '67. I enjoy teaching "History of the Biosphere" at the University of Tulsa. Following up co-hosting the 7th International Congress on Rudists in 2005 in Austin, Tex., editing of the proceedings for SEPM is nearly complete. In a different direction, the International Geological Correlation Project on Cretaceous Oceanic Red Beds holds its final meeting in Beijing. Deep-water red beds indicate global changes in oceanic water mass oxygenation.

1969

GOGEL, TONY, 9904 Cherokee Ln., Leawood, KS 66206. MS '69, BS '68. Tony decided to enter semi-retirement in June 2005. He still continues to consult on a periodic basis with a small Chicago firm. However, his principal focus is completing projects around the home. He doesn't understand how he got as much done as he did when he was working, as his days are "more than full." Tony & Celeste ('68) are in training for the Breast Cancer 3-Day Hike, scheduled for September 15-18, 2006 in Kansas City. They'll complete 60 miles in three days and have raised more than $8,500 for the Susan B. Komen Fund. Celeste is a 14-year survivor of the disease! Kids, Mike, Matt ('93), and Erin ('97) are all doing great in their vocations. Now have three grandkids and one on the way. Life is great!

LINS, THOMAS W., 2301 Solera Sky Dr., Henderson, NV 89044. PhD '69, MS '50. Retired professor of geology at Mississippi State Univ. Wife, Mary Pitchford Lins, MA in English at KU, 1968.

1970

MORGAN, CHARLES O., 1300 Alpine Dr., Boulder City, NV 89005. PhD work 1968-1970. Retired hydrogeologist.

1971

ELLIOTT, MARY ANN, 2406 Camarie, Midland, TX 79705. BA '71. Son Cris is back from Iraq (2nd tour). Honorable discharge as Sergeant. Transferred to Texas National Guard and finishing his studies at Baylor. Son Tom is environmental geologist, Midland, Tex. Daughter Carrie is a geologist with the USGS in Columbia, Mo. Mary is still teaching 8th grade earth science, only 4 more years! Yeah! Bob (MS '73) is examining oil and gas titles for clients and still drilling wells in Delaware Basin. Also working on Barnett Shale gas play in Hudspeth County, Tex.

GILMORE, JOHN B., 1757 So. Jasmine, Denver, CO 80224. MS '71. Retired engineering geologist.

1972

BRETTHAUER, HENRY H., 1727 River Pointe Loop, Eugene, OR 97408-5924. BS '72. I retired from Chevron Corp as an explorationist, working Nigeria Deepwater. Formed Bretthauer Consulting LLC and worked as a consultant from March to December 2005 for Murphy Oil Corp. My wife, Ardith, and I moved to Eugene, Oregon, in 2005 to be with her parents, our son (Eric), and her sister and husband. Retirement is great! I'm not sure how I had time for office work, as I am so busy doing things with the family.

KSIAZEK, DAVID A., 122 Little Ridge Rd., Berkeley Lake, GA 30096. BS '72. Residential homebuilder.

PODREBARAC, THOMAS J. (TOM), 6425 Westheimer #2316, Houston, TX 77057. BS '72. MS 1976 at Univ. of Utah under Dick Robison and Alan Ekdale. Employed in oil and gas industry in Houston since October 6, 1975. Worked for Cities Service/Occidental, Total/Energen, and Bellwether/Mission Resources. Now working development geology offshore Gulf Coast Texas and Louisiana and onshore in southern Louisiana for Hunt Petroleum in Houston. Hobbies include backpacking, bicycling (especially in the MS 150 ride from Houston to Austin), and reading about the old cars I'll get when I retire.

1973

ADAMS, DIANA BANDLER, 8002 County Rd. 140, Salida, CO 81201. BS '73. See Adams, Scott D. ('75).

ELLIOTT, ROBERT G. (BOB), 2406 Camarie, Midland, TX 79705. MS '73. See Elliott, Mary Ann ('71).

TOWNSEND, VICKI BRYANT, 13902 Briar Place Dr., Houston, TX 77077. BA '73. Homemaker and volunteer in public schools.

1974

PERKINS, THOMAS W., 13120 Arboretum Ave., Bakersfield, CA 93314. MS '74. I tried to retire, failed, and went back to work as a senior geologist after becoming a senior citizen. Both of my children are in college. Ted is training to be a commercial pilot and Leia wants to be a graphic artist. I never reported this in the *G-Hawker* before, so I should now mention that I got remarried 25 years ago to a wonderful woman named Maxine who is the mother of our two children. I had no children with Setsuko (my first wife, who was with me at KU).

1975

ADAMS, SCOTT D., 8002 County Rd. 140, Salida, CO 81201. MS '75, BA '73. Chairman of KU Geology Associates Advisory Board. Retired to Salida, Colo. after 31 years with Chevron. Scott is becoming more active in his hobby of building and playing guitars, and climbing Colorado's "fourteeners." Diana is also an active hiker and is dedicating more time to her metal-smithing hobby.

PENLEY, GARY, 289 Cottonwood Lake Dr., Divide, CO 80814. MS '75. Gary and his wife, Karen, live high in the Colorado Rockies, right on the 9200-foot contour. It's like living in a picture postcard. Gary has finished book number four, and number five is well underway. Life is good.

SIMMS, JOHN, 1003 Mike Ave., Tahlequah, OK 74464. MS '75. John still teaches geology at Northeastern State University in Tahlequah, OK. Fay (MA Biology '73) teaches an occasional paleontology course, works at NSU library. Son Alex received his PhD in Geology from Rice University in May 2006. Alex is teaching at Oklahoma State University. He and his wife, Andrea, have two sons, Nathan (2004) and Jerad (2006). Both John and Fay enjoy their grandsons! Son James (Jim) received his JD in May 2006 from University of Oklahoma Law School. He plans to enter oil and gas title law after the bar exam.

1976

ALTIZER, SCOTT, 696 Fisherman's Bend, Mount Pleasant, SC 29464. BGS '76. Living in Mount Pleasant, SC, near Charleston, on the fault line. Sixty miles west of the Gulf Stream. Enjoying life as a parrot head. My time is filled with the challenges of coastal living, preparing for the eventual evacuation when a category 4 storm arrives, coaching little league baseball (my youngest is 10, a pitcher, 3rd baseman, and catcher, and he's a redhead to boot; my oldest is a senior this fall at KU, no rocks for her, she's a socio-anthro-enviro-ologist, they write their own degree description now, huh, and my middle one is 17, and I hope she's headed for the navy, 'cause we can't handle her), my other job, real estate development, and enjoying sunrises out of the Atlantic, with my wife, in bed.

COCHRAN, MICHAEL H., Kansas Dept. of Health & Environment, 1000 SW Jackson St., Topeka, KS 66612. BS '96. My wife, Susan K. Cochran, is the soft lines manager for the Topeka Sears store. We have been married 23 years. I serve as a board of directors member for Ground Water Protection Council, which is an organization of state underground injection well regulators. Also serve as one of 6 state members on the US Environmental Protection Agency National Underground Injection Control Technical Workgroup. I am chief of the geology section of the Kansas Dept. of Health & Environment. This section regulates the storage of hydrocarbons in salt caverns, injection wells, water well contractors, and water well construction and abandonments.

REYNOLDS, DANIEL M., 9106 Autumn Chase, Wichita, KS 67206. BGS '76. SIPES National Foundation President, 2004; SIPES National Board Vice President 2003-2005; AAPG DPA Mid-Continent advisor 2005-2007. Wife, Carol (28 years); daughters, Alison & Dana.

1977

GEARHART, DALE, 4693A Opu Rd., Kalaheo, HI 96741. BS '77. My wife, Jere, and I moved to Kalaheo, Hawaii this past April. We live in a yellow house on Opu Rd., which is 1.6 miles inland on the south central coastline of Kauai. I brought my rock/fossil collection from Texas, where we lived the past 26 years. I have some Arkansas Quartz crystals on my front lanai. We live in a former pineapple plantation housing development, which is primarily inhabited by Japanese plantation workers. Chris, our oldest, completed his Masters at San Diego State University in May. Our two daughters are in college in Fort Worth, Tex. Aloha and well wishes to the 1977 class of KU geologists.

HANSEN, DIANA THOMAS, 5704 Waterview Dr., Arlington, TX 76016. BS '77. Daughter, Katrina, is a senior at KU majoring in geology. I just finished my 13th year of teaching. My husband works for Daimler Chrysler.

HOPKINS, ROBERT, 709 Harold Ave., Salina, KS 67401. MS '77, BS '75. Self-employed in environmental and petroleum geology.

KERDOLFF, KATHY, 71295 St. Charles St., Abita Springs, LA 70420. BA '77, BS '75. Believe it or not, we bought Matt Totten's place in Abita Springs one month before Katrina (Aug. 29, 2005). The Abita House was supposed to be a weekender! Now it's the real house! Mark (Hanan; BS '78) stayed in Houston for 4 months; Kathy commuted to Baton Rouge. Both are back to work in New Orleans. Guess the city is slowly moving forward.

KILIAN, RANDALL K., 1102 W 36th St., Hays, KS 67601. BS '77. Loving every minute of looking for $70/barrel oil! Going on 30 years of exploring.

SALLER, ART, 4827 Kirkwall Dr., Sugar Land, TX 77479. BS '77. Geologist with Chevron.

STANLEY, GEORGE, 1900 Alvina Dr., Missoula, MT 59802-3659. PhD '77. It was professionally a busy year for George. He was on sabbatical leave to China, Germany, Hungary, and Japan during 2006, continuing research in paleontology. He was elected as a fellow of the Japanese Society for the Promotion of Science as well as a fellow of the Geological Society of America (2005-2006). The Smithsonian Institution also bestowed to him the title of Research Associate, for his research endeavors with the National Museum of Natural History. Appointed this year as Director of the University of Montana Paleontology Center, he continues teaching part-time and directing activities of the new Center. He and his wife Barbara enjoy camping, canoeing, and hiking in the Rocky Mountains of Montana with their dog Rocky.

1978

CARNES, JOHN C., PO Box 8369, Wichita, KS 67208. BGS '78. Geologist & mineral buyer as general partner in Rock Chalk Royalties, Ltd.

HANAN, MARK, 71295 St. Charles St., Abita Springs, LA 70420. BS '78. See Kerdolff, Kathy ('77) above.

HOLEMAN (ARGO), BECKY, 11229 Ranch Elsie Rd., Golden, CO 80403. BS '78. Working in information technology support.

LUCENTE, MICHAEL, LMP Exploration, 615 North Upper Broadway, Corpus Christi, TX 78477. MS '78. I have been married to my beautiful wife, Linda, for 31 years. We have 3 fantastic children. Maria, 26; Michael, 24; Rebecca, 22. Maria attained a Master's degree in counseling and is a school counselor in Richardson, Tex. Michael is a skilled mechanic and owns/operates an automobile repair shop, Mike's Mobile Auto Service. Rebecca is attending Rice University in Houston on a full academic scholarship toward a PhD degree in Chemistry. We have lived in Corpus Christi, Tex., since 1980. I have somehow survived the ups and downs of the oil business and have many new field discoveries to my credit. I formed LMP Petroleum in 1993 and have never looked back. I look very fondly at my years at KU and feel that I was given a great education. Thank you KU.

SMITH, JERRY, 550 W. Central, #1006, Wichita, KS 67203. BS '78. Independent petroleum geologist.

1979

ENGLEMAN, MARY, 18 Lakeside, Wichita, KS 67207. MS '79, BA '76. Husband, Andy Kemmer, and I still have Canyon Energy, Inc. Sent our first kid off to college this year—Dodge is on the golf team at Stanford. Callie is a junior and Riley a 6th grader.

EVANS, GRANT, 1807 Stone Meadows Ln., Houston, TX 77094l. BS '79. Exploration Manager with El Paso Exploration and Production.

JORDAN, DAVID P., 5220 Cobble Creek Rd., Salt Lake City, UT 84117. BS '79. Consulting petroleum geologist.

JORDAN, JEFFREY M., 7002 S. Lewis Ct., Littleton, CO 80127. MS '79, BS '77. Senior cost engineer with Project Time & Cost, Inc.

KIENE, WILLIAM E., Fagatele Bay National Marine Sanctuary, PO Box 4318, Pago Pago, American Samoa, 96799. BS '79. My interests in coral reefs took me to post-graduate degrees in Australia, post-doctoral research in Germany and the Smithsonian in Washington,

D. C., coral reef conservation research in Papua, New Guinea, and Indonesia, and program management positions at UCLA and now in American Samoa. My wife and I have a 1-year-old daughter.

LaFON, NEAL, 1475 Ward Cir., Franktown, CO 80116-9405. Petroleum geologist.

PRATHER, BRADFORD E., Shell International E&P, Room 2010D, 3737 Bellaire Blvd., Houston, TX 77025. BS '79. Currently work in R&D for Shell International in Houston. In my spare time I work with our local Boy Scout troop planning and running high adventure trips, which gives me the opportunity to lecture them on crossbedding, and Cretaceous shoreface sequences. They love it! Right. I am looking forward to a campus visit with my son and working with the Geology Associates Advisory Board this fall.

WALLACE, RON, 3650 Garrards Crossing, Roswell, GA 30075. MS '79. Working with the student members of AIPG in different areas of geology. Have visited a landfill, demonstrated surface geophysical methods at a few remediation sites. Planning on visiting a geotechnical lab, maybe a rock quarry, and a few remediation sites. Want to demonstrate drilling and installing monitoring wells. Helped teach a class on slug testing (not the biological type). Holly & I still take one of our dogs to senior centers, children's hospitals, assisted living facilities, and nursing homes.

1980

DUBOIS, MARTIN, 408 Settlers Dr., Lawrence, KS 66049. MS '80. 2006 has been an eventful year for our family. Jackie graduated in meteorology from OU in May, was married in June, and began graduate work in meteorology at OU in early June where she is funded by an American Meteorological Society Fellowship. Along the way she received the John Wooden Citizen Cup and the Wilma Rudolph Award, both national student athlete awards. Leslie finished her second year at Tulsa law school on the Dean's list and did an internship in Indian and environmental law in Anchorage this past summer. She earned 3rd place in a national court competition (NNALSA) in February. She plans to be married in December, topping off a big year in the Dubois family. Compared to our daughters, Twyla and I have a pretty boring life. Twyla put on a great wedding for Jackie and is in the planning stage for Leslie's. I was the lead on a 2.5-year project involving 6 KGS scientists, 3 consultants, and 10 industry partners that was completed in June. We built a 108 million cell geologic and engineering model of the giant Hugoton gas field, covering 10,000 sq. mi. We're going to take it easy in 2007.

SLAWSON, CRAIG, 29383 Mystic Ct., Evergreen, CO 80439. BS '80. While toiling in tech for years, I have re-engaged with former O&G exploration passions, and it still amazes me that opportunities abound in plain sight.

TURMELLE, TOM, 5908 East 113th St., Tulsa, OK 74137. BS '80. For the past 5 years I have been working as an acquisitions geologist with Vintage Petroleum. With Vintage being acquired by Occidental Petroleum, I recently accepted a position with Warren American Oil Company. This fall both of our daughters, Claire (20) and Constance (18) will be attending the University of Oklahoma.

1981

BRADY, DOUGLAS C., 129 Canterbury Ln., Crossville, TN 38555. BS '81. Geologist for the State of Tennessee.

SKINNER (BLADES), ELIZABETH (BETSY), Box 172, 56 Norske Trail, Allenspark, CO 80510. MS '81. Living in our mountain paradise (Rocky Mountain National Park is our "backyard)") with my husband, Lee. We welcome all visitors and have enjoyed the company of our adult children (we have 6 between us). In addition to conducting vocal health workshops and research in that area, I am busy writing 3 books (one in my academic field; two in fiction/non-fiction literature). Life is good!

VOGL, ERIC G., 6006 Blackstone Creek Ln., Kingwood, TX 77345. MS '81. Kyle (19) will be entering his sophomore year at U Texas in Austin, majoring in electrical engineering. Derek (14) will be a freshman at Kingwood High School. Jennifer (11) will enter sixth grade at Riverwood Middle School. Lisa (BS Journalism, KU '81) continues to volunteer at the schools and successfully manage the home front. I have responsibility for all projects currently under development, from the geoscience perspective, in North and South America, Europe,

Chad, Australia, and Indonesia. Travel schedule takes me to Norway, Calgary, Halifax, Jakarta, and Melbourne.

1982

FORAN, DAVID A., 65 Viewcrest Dr., Kansas City, KS 66101. BS ’82. Chemist with the FDA.

ROBINSON, CHUCK, Schwab-Eaton, P.A., 8615 W. Frazier, Wichita, KS 67212. Director of surveys with Schwab-Eaton, P.A.

1983

FULLER, DAVE, 1703 Village Park Ln., Lake Oswego, OR 97034-3771. BS ’83. Natural gas marketer, vice president of Constellation Energy.

KOPASKA-MERKEL, DAVID C., 1300 Kicker Rd., Tuscaloosa, AL 35404. PhD ’83. I am working in petroleum geology again, but this time in siliciclastics, not carbonates. I’m helping with a regional analysis of untapped potential so my ignorance of sandstone diagenesis probably can’t do too much harm. In non-geological news, I have two new chapbooks of poetry out in the last year and two small books of nursery rhymes retold as humorous, hard-boiled detective stories coming out soon.

1984

ROYLANCE, MICHAEL H., CMR 402/Box 357, APO AE 09180. MS ’84. I am still in the Department of Defense Dependent Schools system. We are currently going into our 18th year living overseas. The past 5 years have been in Germany, where I have been teaching science to 6th graders, a job I really love. In 2005 I traveled back to Washington, D.C. with my wife who represents DoDDS as the recipient of the Presidential Award for Excellence in Mathematics and Science Teaching. We had a memorable week being feted at many events and getting to meet President Bush. It was the highlight of my career.

WALTERS, ROBERT (BOB), 1003 Allen Ct., Lawrence, KS 66049. MS ’84, BS ’62. Retired manager of research facilities at KU Center for Research.

1985

HAGEMAN, STEVE, Dept. of Geology, Appalachian State University, ASU Box 2856, Boone, NC 28508-2944. BS ’85. I am now a tenured associate professor in the Department of Geology at Appalachian State University in Boone, NC. I have settled into a very pleasant part of the Blue Ridge Mountains of western North Carolina. I am taking a sabbatical during the fall of 2006 as a Fulbright Fellow at the Rudjer Boskovic Institute in Croatia. In the summer of 2007 I am hosting the 14th Meeting of the International Bryozoology Association (www.iba.appstate.edu). Ask for a G-Hawk discount!

ROARK, CLAY, PO Box 2939, Wichita, KS 67201. Vice president of exploration & development, Koch Exploration–Canada Corp.

WHITE, LEE H., 4921 E 88th Pl., Tulsa, OK 74137. BS ’85. Network security engineer with Global Data Systems.

1986

KILLEN, DAVID, 11611 Melody Garden, Cypress, TX 77429. MS ’86, BS ’83. Senior project manager/environmental consultant with Malcolm Pirnie, Inc.

1987

BLACK, BRIAN ALLEN, 3050 Chelsea Ln., Acworth, GA 30102. BS ‘87. Avast! Yet another year has flown by and have I taken advantage of it to improve myself? Ah, if only it were true! Goal this year is to keep in mind Wordsworth’s “The World Is Too Much With Us” and Kipling’s “If.” We just got back from a trip to England—wandered over to Robin Hood’s Bay (at low tide an eroded dome of Jurassic with interesting bits-and-bobs, at high tide a very picturesque village) and clambered about Whitby Abbey, rode steam trains (saw the Sir Nigel Gresley—just another steam engine to me, but, apparently, to the enthusiasts on the train, a precious, and rare moment!) and enjoyed the North Yorkshire Moors. Everyone’s moving along—Kieran starts kindergarten and Analise starts Pre-school, already! Nothing much to report this year, hope everyone’s doing well and having lots o’ fun reading their bedside poetry! Swing by http://gwxp.sytes.net—who knows, someday I may actually update the contents!

CROXTON, NEIL M., 701 4th St. Wakefield, KS 67487. BS ’87. I’m still married to Toni and still run a little field geology office for KDOT. We cover the north-central and northwest parts of the state. The feds want KDOT to use more geophysics in our investigations, so I’m finally getting to use my

background there. I give lots of talks for KDOT and at highway engineering conferences around the country. And I still hike a lot and take one backpacking trip every year with Pete Aniello.

KUKUK, MICHAEL, 14517 Mastin, Overland Park, KS 66221. MS '87, BS '83. Founded Aquaterra in February of 2002 with two partners. The firm has grown to over 40 people with 5 offices in the Midwest. Family: wife (Laura, 22 years) and 4 children, ages 21, 17, 11, and 9. Kyle, our eldest child, is a junior in Civil Engineering at KU.

1988

HAVENHILL, ASHER, 5662 W. King Snake Dr., Tucson, AZ 85742. BS '88. Physicist/software engineer with Raytheon Missile Systems.

COOK, KATHRYN ELAINE, 8927 Rene St., Lenexa, KS 66215. BS '88. Well, I'm still living with the same people after 10 years. We moved from California back to Kansas 7 years ago. We have 2 children, Nick (14) and Bridgit (5). I do a lot more traveling than I used to. I help with Hurricane Katrina relief work. I've also been to Utah, Oklahoma, Kentucky, Colorado, Missouri and Nebraska for the last few years. Like everyone else, explaining what I do for a living is difficult—I only do traditional geology work about 40% of the time. The remainder is project specific requirements that range from asbestos removal oversight due to an exploded acetylene canister to escorting the State to confirm that radiation removal is sufficient to meet state regulations. Well, enough for now. Until next year.

EVENSON, RON, Belair Excavating, 1798 Hagemann Dr., Batavia, IL 60510. MS '88. Carolyn and I have moved to the Chicago area to manage an excavating/grading office. I have two boys, Garrett (10) and Graeme (8), who are busy with hockey and baseball.

JOHNSGARD, SCOTT KENNETH, ExxonMobil Exploration Company, Mail Code CORP-GP3-650B, PO Box 4778, Houston, TX 77210-4887. MS '88. I have worked in upstream geoscience and computing support with ExxonMobil (previously Exxon) for 18 years since completing my MS degree at KU. I have held job positions in Midland, Tex., and London, England, as well as many different assignments in Houston, Tex. I am currently responsible for stewarding a worldwide play-based hydrocarbon resource assessment database using Arc/GIS (a geographic information system). I am also involved in mentoring new-hire employees and in recruiting geoscience graduate students interested in careers in geoscience computing. Even after 18 years, Carol and I both still miss the beauty of Kansas. My son, Scotty, now 20 years old, will be completing his junior year at Texas A&M University as a chemistry major and music minor. I try to get out and bang on rocks whenever time allows, and I stopped at several of my favorite Kansas outcrops during a road-trip to Nebraska to visit my parents this past summer.

KIRCHNER, KYLE, AMEC, 3800 Ezell Rd., Ste. 100, Nashville, TN 37211. BS '88. The winds of change have touched the Kirchner family once again. In the spring of 2006 we moved from the Chicago area to Franklin, TN (south of Nashville). My daughters, Kaila (12) and Christine (10), are quite excited about living in the same neighborhood as Carrie Underwood. My wife, Cynthia, will be teaching 7th grade math and science at the same middle school the girls will be attending. Guitar picking is now taking a front seat to hunting mineral, rock, and fossil specimens.

1989

ANDERSON, JIM, 16526 Timberland Dr., Omaha, NE 68136. MS '89. We had a great time visiting Bob Goldstein and KGS staff in June 2006. Hard to believe it has been 17 years. I continue to work in programming with Farm Credit Services of America in Omaha. I have made the transition from mainframe to server-based programming. I still love rocks and trains. Ten-year-old daughter Lexi loves to collect rocks. Son Matt is 7. I have been married to wife Laraine almost 13 years.

1991

BALLENGER, ERIC, 330 Grant Ave., Geneva, Il 60134. BS '91. Married with 2 children, Jake and Anna. Been employed w/Allied Waste for 11 years. Prior to that I worked at EMCON environmental and performed environmental consulting work for 5 years. Most of my work involves landfill monitoring programs and remediation projects as well as obtaining permits for landfills.

1992

ANDERSON, WILLIAM T., 3095 Bird Ave., Miami, FL 33133. BA '92. I just got tenure at FIU, and our first

child was born on March 7, 2006—Ariel Freeman Anderson.

COLGAN, PATRICK M., 10867 Pine Valley Ct., Allendale, MI 49401. MS '92. Kelly and I are both working at Grand Valley State University. I was recently promoted to associate professor in the geology department. I have been doing research and teaching in glacial geomorphology and glaciology. My current research includes mapping of sedimentology projects in Michigan and cosmogenic exposure dating of moraines in Tibet. Health problems have kept me out of remote fieldwork lately, but I have been doing lab geochemistry and collaborating with researchers in China.

GERSTENBERGER, MATT, 24 Fitzherbert St., Alicetown, Lower Hutt, New Zealand 5010. BS '92. I am back in New Zealand and at GNS (the equivalent of the USGS in NZ) and will finally be staying here permanently after too much moving around. My work is primarily with the National Hazard Mapping Program, where I help to keep the seismic hazard maps progressing and also work with various time-dependent hazard initiatives and developing of tests for hazard/forecast information. I remain heavily involved with my work in California, so hopefully I can continue to run into people at meetings in the States. My wife Marie-Odile and I have our first child due in December, so things keep getting more exciting.

HANNA, STEFANIE SUE TAUNTON, 6199 Crescent Rim Dr., Ozawkie, KS 66070. MS '92. Stay at home mom.

WOJCIK, KRZYSZTOF M., 3315 Brinton Trails Ln., Katy, TX 77494. PhD '91. Petroleum geologist with Shell International Exploration & Production.

1994

KUEBLER, KARLA, Washington University–St. Louis, One Brookings Dr., Box 1169, St. Louis, MO 63130. BS '94. One year of graduate school down! I'm looking at olivine alteration in Martian meteorites (& terrestrial analogs) by electron microprobe & Raman spectroscopy.

1995

CUNNINGHAM, KEVIN, US Geological Survey, 3110 SW 9th Ave., Fort Lauderdale, FL 33315. PhD '95. Geologist.

JEFFERSON, ROBERT, 2820 E Colorado Ave., Denver, CO 80210. MS '95. Over the past year I've gotten married, moved to Denver, and accepted a new position. It was definitely a busy year!

LUCZAJ, JOHN, 2743 Durham Rd., Green Bay, WI 54311. MS '95. I began working as an assistant professor of Earth Science at the University of Wisconsin–Green Bay this past year, and it has been wonderful. We just bought a house in December 2005 and are settling in with our daughter, Jenny, who is almost 2 years old now. I am continuing my research on water-rock interaction in Midcontinent sedimentary rocks and some other neat local topics.

1996

KLEINER, SCOTT, 4425 NE 25th Ave., Portland, OR 97211. BA '96. I am living in Portland, Ore., with my wife, Amy, and son, Samson, who was born 1/30/06. I recently made a career shift and work at an ad agency.

SMITH, GEOFFREY, 4800 Queal, Shawnee, KS 66203. MS '96, BS '85. Senior manager for Environmental Health & Safety with AT&T.

STEINLE (BOYD), ANDREA S., 7181 McIntyre Ct., Arvada, CO 80007. MS '96, BS '90. The family and I are still loving life in Colorado, plus I had the great pleasure of recruiting some very talented interns and new hires to come work at EnCana. It's wonderful to see that KU's Geology program is still strong and highly regarded by the petroleum industry!

1997

EVANS, KEVIN R., 1733 S. Fairway Ave., Springfield, MO 65804. PhD '97, MS '89. After 7 years of working with the US Geological Survey in Menlo Park, CA, I returned to Mo. in 2001. I now teach at Missouri State University, where I have an active research program in meteorite impact structures.

1999

FRANKLIN, STEVE, 3133 N. Doris Ln., Appleton, WI 54911. MS '99. Chemistry teacher, Appleton West High School.

2000

CUNDIFF, JESSICA, 10 Wendell St. #21, Cambridge, MA 02138. MS '00. Paleontologist & curatorial assistant, Dept. of Invertebrate Paleontology, Museum of Comparative Zoology, Harvard Univ.

MURRAY, SARA, 269 W. Cheyenne, Gardner, KS 66030. BS ’00. Married to Leo. We have 3 children: Autumn (4), Leo Jr. (3), and Hudson (5 mo.). I will start home schooling this fall and am excited for our own little geology field trips!

2002

HEATH, W. SCOTT, 2931 South Dinwiddie St., Arlington, VA 22206-1405. MA-Museum Studies ’02, MS ’01. Not much to report. The “new” job is still going quite well. I now have a half-dozen or so articles in our journal, including at least one humor piece that was a lot of fun to write.

VINSON, MICHAEL, 13903 Bay Gardens Dr., Sugar Land, TX 77478. BS ’02. PhD candidate at Rice University.

2003

ANDERSON, ALLYSON K., 313 Graceland, Houston, TX 77009. I’ve been working as a petrophysicist for the past 2 of 3 years at ExxonMobil. In late August I will be taking a sabbatical for one year to work for a member of Congress as a congressional staff member from Sept. 1, 2006 through Sept. of 2007. This is a position that I was awarded through the American Geological Institute’s Congressional Science Fellowship Program. Other recent activities include coordinating and organizing women’s leadership events at AAPG and GSA. I am vice-chair of a new committee of AAPG called Prowess, which focuses on women’s recruitment, retention, and leadership issues.

BLAIR, JASON D., 7715 N. 80th Ave., Omaha, NE 68122. MS ’03. I have been working with the Omaha District Corps of Engineers since leaving Lawrence in 2004. My wife, Gabriella (MA, Geography ’04) and I welcomed our first child, Noah, into the world March 3, 2005 and are eagerly awaiting the arrival of our second baby in December 2006. Life couldn’t be better!

KOZUCH, MARIANNE, 2511 NW 6th St., Gainesville, FL 32609. PhD ’03. Chemist at the Center for Environmental and Human Toxicology (Univ. Florida).

2004

CENTENO, JUAN PABLO, 712 Palmer Ave., Glenwood Springs, CO 81601. MS ’04, BS ’01. Geologist with Pason Systems, USA.

CHAIKIN, DANIEL, 14426 Kentley Orchard Ln., Cypress, TX 77429. MS ’04. Geophysical processor with Veritas, DGC.

DILLETT, PETER, 5505 Windward Bay Ct., Bakersfield, CA 93312. MS ’04. My wife Rachelle and I are going on 2½ years here in Bakersfield. The big news for our family this year was the arrival of our first child! Anthony Michael Dillett was born on May 20th and has kept us pretty busy ever since. Rachelle is still working out of the house for a marketing research firm in Wisconsin, and I am still with Chevron. We are having a great time on the west coast with the other Bakersfield Jayhawks and look forward to seeing our other KU friends in the future. All the best!

ELDER, ROBERT, 571 E 1000 Rd., Baldwin City, KS 66006. BA ’04. I am currently a graduate student in Museum Studies at KU. I am conducting research with Dr. Larry Martin on *Longisquama insignis*, a small Triassic archosaur discovered in 1969.

HIEMSTRA, ERIK, 26714 Twilight Grove Ln., Cypress, TX 77433. MS ’04. This has been an exciting year for myself and my new wife Christy (Pulliam, who received her BS in Geology in ’01 and her MBA in ’03, both from KU). Thank you field camp for allowing us to meet. I recently moved from ChevronTexaco in Bakersfield, Calif., to join ConocoPhillips as a diagenesis specialist in Houston. Christy just started with Marathon Oil Company in June as an HR Consultant and works primarily with the Permian Basin Asset Teams. This has been our busiest year from a travel standpoint. Business travel and vacation have led us all across the US as well as to more distant places like the Bahamas, Italy, Spain, France, and Qatar. The newest addition to our family is a golden retriever puppy. We named her Kansas Jayhawk. Rock Chalk Jayhawk!

LINGOR (O’NEAL), KIMBERLY, 3100 W 22nd, Apt. F15, Lawrence, KS 66047. BS ’04. Lab technician at Magellan Analytical Laboratory Services.

2005

HUGHES, BRIAN, 1101 W. Stevens, #253, Santa Ana, CA 92707. MS ’05. Environmental staff consultant with CH2M Hill.

Memorials

N. Gary Lane, MS '54, PhD '58, died January 14, 2006. He received his AB from Oberlin in 1952 and completed his masters thesis "Environment of deposition of the Grenola Formation (lower Permian) in southern Kansas" at KU. After a year on a Fulbright in Tasmania, he returned to KU where he completed his doctoral dissertation, "The monobathrid camerate crinoid family: Batocrinidae" under the direction of Raymond C. Moore. Gary was on the UCLA department of geology faculty from 1959 to 1973 before joining the geology faculty at Indiana University where he was chair of the department from 1984 to 1987 and remained for the rest of his career. He published nearly 100 papers besides books and *Treatise* articles. Most of his works were on crinoids, with some on stratigraphy, including Part T, Echinodermata 2, vol. 1-3, Cronoidea for the *Treatise.* He was president of the Paleontological Society in 1987–88 and received the Raymond C. Moore Medal from the Society of Sedimentary Geology (SEPM) in 1995. From KU, he received the Haworth Graduate Award in 1954 and the Haworth Distinguished Alumni Award in 1979. After retiring in 1994, he continued his research on crinoids and collected in the Gobi Desert of China. He married Mary R. Rooney in Lawrence in 1958. She survives along with three children, Charles, Ann, and Susan, and three grandchildren.

Bernard Lewis, BS '55, died January 8, 2005 in St. Augustine, Florida. He was a geologist for Shell Oil Company from 1953 to 1957 and the U.S. Army Corps of Engineers in San Francisco for 32 years. After retiring from the Corps, he moved to St. Augustine where he was a realtor for 10 years and was an avid sailor. He is survived by his wife, Karen; daughter, Ginevra Anuszkiewicz; and son, Ashley Carter.

Emmet Coleman Barney, MS '59, died Jan. 11, 2006 in Fayetteville, Arkansas. He received his bachelor's degree from the University of Arkansas in 1957 before completing his master's at KU. He worked in the petroleum industry in Montana, Wyoming, Colorado, Texas, and Arkansas and was a U.S. army veteran of the Korean War. Emmet is survived by his wife, Diana; daughter, Rebecca Goff; sons, Roy Stuart Barney and Robert Barney; and six grandchildren.

Eugene E. Barr, BS '48, died April 26, 2205 in Plano, Texas, where he was a geologist. He is survived by his wife Helen; sons, Eugene E. Barr and Roger W. Barr; daughter, Libby Smith; and six grandchildren.

David M. Delo, MA '28, died October 31, 2004 in Seminole, Florida, two months shy of his 99th birthday. He graduated from Miami University of Ohio in 1926 and earned a PhD from Harvard in 1935. He was a founder and later president of the National Association of Geology Teachers and the first executive director of the American Geological Institute. (After teaching in several Midwest colleges and universities and holding administrative positions in Washington, D.C., during and after World War II, he became president of Wagner College, on Staten Island, N.Y. in 1952. From 1958 to 1971 he was president of University of Tampa. He is survived by his wife Estelle; son, David Michael; and daughter, Diana Marie Betts.

Charles Philip Kaiser, MA '45, PhD '46, died Sept. 29, 2006 in Bartlesville, Oklahoma. He was a retired VP-Europe for Phillips Petroleum, an adjunct professor of geology at WSU, and had worked for the Kansas Geological Survey. He is survived by is wife, Velma, children, Phyllis Brenneisen, Jean Frankel, Joseph Kaiser, Sara McShane, and Jon Kaiser, two stepchildren, two sisters, and 14 grandchildren.

Jack Menish, BA '40, died January 25, 2002.

Looking for Lost G-Hawks

About 200 former geology students are listed below, and they're all lost as far as the alumni database is concerned. Please look over this list to see if you recognize anyone among the missing. If you have news about these former students—addresses, name changes, employer name and address, or death notices, please let us know. We'd love to retrieve them from the land of the lost.

1932–1940

Frank H. Alexander, BS '40, MEng
Ralph E. Hinkel, BA '32
Frank Wood Jones, '32
Charles S. Rohrer, BS '34, MEng
Howard Winn, BS '39

1941–1950

Ted Beaver, BS '50
Robert M. Castator, BS '49
James D. Chappell, BS '41, MEng
Glenn B. Helmick, BS '42
Albert J. Hanners, '43
Walter L. Hurt, '48
Robert James Mann, '45
Ernest E. Pelzer, '50
George H. Spivey, '50

1951–1960

Neal R. Alleman, BS' 52
Roger Arbour, '60
Allen N. Bates, '57
Charles E. Beardslee, '60
William L. Brown, MA '54
John Vincent Combi, '56
Victor C. Cope Jr., BS '56
Darrell E. Davis, MS '59
Thomas L. Downs, BA '56
Robert John Emmanuel, '51
James Ray Fasbender, '54
William Gordon George, '57
Randall Kay Graber, BS '52
Lewis Donald Gurman, '60
Julian W. Hawryszko, MS '57
Robert W. Heil, BS '59
Lonnie J. Hopkins, '59
George R. Huebner, BS '57, MEng
Gerald Arlo James, '54
William K. Johnston, '56
Robert H. Kuckelman, BS '53, MEng
Jean Lacasse, '60
Donald Lee Lamar, '53
Arthur David Lapadat, '60
Arthur A. McGinnis, BS '51, MEng
Jack Morelock, '55
Mary Jo Moyer, BA '57
Fred Charles Myers, Jr., '51
Jesus Ojeda-Rivera, '59
Dale Romaine Olson, '54
Reed H. Peterson, '51
Donald D. Pizinger, BS '58
George W. Plant, BS '52
Homer U. Ries, '51
Herman Ewers Simpson, '59
Charles J. Sloanaker, MS '51
John Willis Strickland, '51
Robert Lowell Tedrick, BS '60
Verna Mae Torres, '60
Patricia (Morgridge) Tucker, BS '56
Cleo E. Vague, BS '51
Ivo George Vonderwell, '59
Dwight E. Waddell, '59
Ned Wellborn, BS '53
Jay D. Whiteford, BS '54
Wayne P. Wright, BS '51
William A. Wycherley, '54

1961–1970

Ibrahim Abd El Wahid, MS '63
Jimmie Dean Bowman, '61
Eugene O. Bowser, '61
David S. Brumbaugh, '68
Dean K. Bryson, '63
Earl H. Budke Jr., '68
John J. Coble, '68
Anthony E. Corcoran, BS '64
David E. Epp, BS '63
Faramarz Frouzan, '63
Robert Jacob Garrecht, '64
Karl Lesley Geller, '67
Carolyn Lee Griffin, '68
Reginald V. Hicks, MS '62
Peter W. Huelsenbeck, '64
John Huh, BA '68
Suresh M. Jamkhindikar, PhD '69
Philip M. Knighton, '66
Robert Clement Koch, '64
Miriam Larson, BS '69
Paul Lerner, '64
Tommy R. McKellar, MS '62
Mustafa A. Mitwalli, '61
Harry W. Mueller III, '68
Theodor Neague, '69
Tomohide Nohara, '67
Albert F. Noonan, '70
Jin Sang Oh, '67
Yacoub Ahmad Qandil, BA '59, MS '61
Charles G. Roberts, '69
Richard Harvey Roda, '63
Luis R. Rodriguez, MS '65
Malcom B. Roy, MS '66
Tyson D. Runnels, BS '69
Dennis Wayne Slater, '69
Paul Lewis Steineck, '63
Bruce Allan Thompson, '61
Thomas L. Teer, '69
Howard C. Thornton, Jr., BA '67
Clyde T. Williams, BA '62

1971–1980

Yacoub Y. Alhajji, '74
Gholamhosien Bangali, '73
Faustin Bangole Yenvou, BS '75
Carlos A. Belfort, '71
Bipinkumar Bhatt, '74
J. Dennis Brewer, '80
Jean M. Bridges, BS '70, MS '74
Andra D. Cohran, '72
Roy E. Cox, '76
Jafar Dirin, '73
Maria B. Edwards, '74
Abdurrazak A. Endisha, BS '79
Susan L. Fezie, '76
James Hontos, '73
Dale D. Hudson, BS '74
Daniel T. Jenkins, '76
Edward L. Leanhard, BS '79
Sandra R. Malmberg, '80
James E. Mathewson, '75
Stephen McGie, '79
Marvin B. McKinney, '73
J. Peter Mills, MS '65, PhD '74
Adam Morawski, BS '77
Francois R. Nguene, MS '78
Yaw Ntiamoah Agyakwa, '79
Adeleke Odutola, BS '72
Kyle D. Parker, '80
Robert E. Plump, BGS '75
Maryette Hanson Rogers, '75
Sigfrido P. Santiago, '72
David F. Schmidt, '76
Takeshi Setoguchi, '71
Ali Seyrafian, MS '78
Lyle R. Silka, '74
Betty Jean Socha, '76
Benja Songsirikul, MS '78
Robert H. Teifke, MS '72
Elizabeth Trainor, '75
Michael C. Whisler, '80
Robert S. Woods, '78
David T. Wilson, BS '73
Leonard L. Woolsey, MS '71

1981–1990

Talat Younis Abdullah, MS '84
Zulkifly Ab Rahim, BS '85
Keyvan Aliabadi, '89
Gregory Bown Andersen, '82
Cihat H. Basocak, '81
Victoria Bennett, '90
Barbara Biggers, '85
Carol Dixon Brinton, '81
Jeffrey A. Burk, '84
Mehemmed A. Busifi, BS '82
Edward Le Carper, '85
Scott Dennis Coon, '83
Randy Louis Corey, '81
Bruce A. Cox, '82
Richard James Cox, '81
Troy Randal Curran, '85
David C. Daniel, '82
Rodziah Haji Daud, BS '86
Pablo Alfonso Delgado, '86
Ute Doring, '90
Mary Wier Dossett, '83
Rene Christine Elwood, '81
Brett Edward Engel, '83
Usama M. Fergiani, '82
Eric D. Goldman, '86
Mark Wayne Grommesh, '82
Alexander Hagens, '89
Donald H. Harrison, Jr., '81
Jason C. Heath, '90
Dennis G. Hitz, '81
Chris R. Hoffman, BS '83
Hann Chen Huang, '80
Steve Kuoyi Huang, '82
Dan R. James, '82
Robert M. Joeckel, '86
Jeffrey Lee Jones, '89
Susan C. Kent, '81
David Alan Kvam, '82
Mastura Abdul Malik, BS '86
Jeffery Scott McCoy, '83
Andrea Lou McEachern, '82
Kevin Earl McFarland, '82
Kamal T. Moghadam, '85
Muftah Giuma Mohamed, '83
Ali Muftah Mshirab, '82
Russell King Murphy, BS '83
Soheila Nasseri, BS '83
Rebecca D. Oswald, '83
George C. Outlaw, '83
Mitch R. Powers, '90
Reyes Jacobo Quesada, '86
Kim G. Rightmire, '87
Charles E. Schabel, '82
Monsef A. Swedan, BS '81
Chandra D. Tiranda, BS '88
Milos Velechovsky, MS '85
Michael A. Wheeler, '84
Stephen E. Wiseman, '81
Di Zhou, PhD '85
Mark Hamilton Ziegler, '81
Timothy J. Zolnowski, '81

1991–2000

Todd Alan Campbell, '91
Tyan-Ming Chu, PhD '96
Aaron W. Cox, '95
Joseph John Keeling, '92
Gale Leanos, '94
Margaret S. Mills, MS '92, PhD '94
Stephanie Ann Ruegnitz, '92
Alan Wade, MS '92

Coming Events

AAPG 2007
April 1–4 Long Beach, CA

Alumni reception on Monday, April 2, 2007. See convention program for specific time and location.

GSA 2007
October 28–31 Denver, CO

Alumni reception on Monday, October 29, 2007. See convention program for specific time and location.

AAPG 2008
April 20–23 San Antonio, TX

Alumni reception on Monday, April 21, 2008. See convention program for specific time and location.

GSA 2008
October 5–8 Houston, TX

Alumni reception on Monday, October 6, 2008. See convention program for specific time and location.

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