



**UCLA**  
**Earth & Space**  
**Sciences**

Alumni  
Newsletter  
2001



## Greetings from the Chair:

While I am more comfortable in this job after a year, I still find myself on the learning curve. Just as the academic year was coming to a close in early June, I underwent bypass surgery. Vice Chair **Peter Bird** stepped in and took care of everything while I was recuperating. The Department was in excellent hands, and I want to express my sincerest thanks and deep appreciation for all Peter did to keep everything on track.



Last year I referred to the great changes the Department will experience in the next few years. Those changes have begun to occur. **Ted Reed** and **Wayne Dollase** are now officially retired, and **Orson Anderson** intends to retire at the end of the academic year. **Jon Davidson** has gone to his new post in England, and **Mark Harrison** is off to Australia for the next four or five years on a combination of sabbatical and leave, but will return to UCLA often enough to remind us that he's still part of the family. **Charles Marshall** has made his resignation official—we had hoped he might return from his new post at Harvard, but it is not to be.

On a brighter note, three new faculty members have joined us—**Kevin McKeegan** and **Ed Young**, both cosmochemists, and **Brian Horton**, a sedimentologist. A great deal of effort went into recruiting last year, and all of the searches produced excellent prospects. **Emily Brodsky** has agreed to join us—she is a geophysicist with broad interests in things going on in the crust—earthquakes, volcanic eruptions, faulting, and fluid flow.

**Ashwin Vasavada**, a planetary scientist involved with Galileo observations of Jupiter, is our new Rubey Assistant Professor. **Francis Nimmo**, also a planetologist, with strong interests in Mars, will soon become an Adjunct Assistant Professor. I am optimistic that we'll soon have three others on board in the areas of mineral physics and planetology. Another piece of good news is that we've been authorized to search for a new faculty member in geology. We'll look broadly in the areas of geobiology/paleontology and igneous petrology/geochemistry for the best person. There is excitement in the air as we anticipate the contributions of our young and energetic new faculty; we extend a warm and enthusiastic welcome to all of them, and wish them success.

This year we had a wonderful Distinguished Alumni Lecture by **Joe Straus** of the Aerospace Corporation. Our next Distinguished Alumni Lecturer will be **Charles Elachi**, Director of the Jet Propulsion Laboratory. His lecture, "*Space and Earth Exploration, 2000 and Beyond: Opportunities and Challenge*," is scheduled for Thursday, April 25, 2002, so please be sure to mark it on your calendars. Speaking of alumni, your response to our request for news was overwhelming; thank you, and please continue to provide us with more updates on your activities.

I'll end here with a brief mention of **Carl Max Hammond**, a space scientist and alumnus who died in the terrorist attacks on September 11, 2001 (see page 6). We are proud to have had Max as part of our family, and we will remember him fondly.

Best wishes for the new year,

A handwritten signature in blue ink that reads "Gerald Schubert". The signature is written in a cursive, flowing style.

Gerald Schubert  
Professor and Chair





*Franky Telles with Professor Richard L. Weiss, Director of the CARE Program, after explaining his poster with the aid of a beachball model of Mars.*

## ***E&SS Undergraduate Franky Telles Honored***

Franky Telles, one of our undergraduate students in the Geology Program, has been selected to participate in the UC Leadership Excellence through Advanced Degrees in Science Program (UC LEADS). This fellowship provides eighteen UCLA upper-division undergraduate students with educational experiences that help prepare them to assume positions of leadership in industry, government, public service, and academia. It is anticipated that UC LEADS Scholars will be highly motivated to pursue a doctoral degree, and hoped that most will choose to do so at the University of California. This is a two-year opportunity for Franky that will provide resources to conduct research and travel, in addition to offsetting registration fees during the academic year.

Franky has already begun work in the field of planetary science under the mentorship of Professor David Paige. He worked here at UCLA last summer, and participated in the Center for Academic & Research Excellence (CARE) 2001 Scholars Summer Research Program, presenting a poster on his work with Dave Paige on August 29th, titled, "Making the Mars Global Database." This study involves the development of a relational database, the Mars Global Database (MGD), which will classify all of the information received from the Mars Global Surveyor. The database will help scientists build better geomorphologic models of the red planet. The USGS, Malin Space Science Systems, and Jet Propulsion Laboratory all have Mars databases, but none has a classification scheme for the information. The 60,000 images are currently classified by region only, making geomorphologic study nearly impossible. For example, scientists trying to locate the number of canyons within Valles Marineris, would have to review thousands of images before locating the correct ones. The MGD data will be stored within a supercomputer cluster, which will house the relational database. The addition of a search engine will enhance the ability to locate information easily and quickly. When completed, the MGD will be on the Internet for public usage. □

***On the cover:*** Snow-capped Mount Adams looms in the distance as participants in the ESS C160/C260 Field Seminar study the geology of Mount St. Helens from the ash-covered rim of the 1980 eruption crater. The seminar took place in September of 2001, and was led by professors Jon Davidson and Clarence Hall. It introduced students from UCLA and the University of Durham, UK, to various aspects of Western US geology, focusing on the Cascades magmatism. Photo by graduate student John Hora.

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*Joe M. Straus, left, with  
Chair Jerry Schubert,  
who introduced him  
at the lecture*



system that provides global cloud cover, meteorological, and space weather data—and future instruments will monitor the Earth’s upper atmosphere and ionosphere. The Defense Support Program is a space-based early warning satellite system that has also been

## ***Distinguished Alumnus Joe M. Straus***

A hearty “Thank you!” goes to **Joe M. Straus**, PhD ‘72, for delivering the Earth and Space Sciences Department’s **2001 Distinguished Alumni Lecture** on Thursday, May 3rd. Joe is senior vice president of the Aerospace Corporation’s Space Systems Group, which works directly with the Air Force to develop military satellites, their launch vehicles, and their ground control and support networks.

In his lecture, titled “*Military Space Systems and Some Civil and Scientific Applications*,” Joe described three

spacecraft systems, all developed for military use, that also provide information applicable to civil and scientific interests. The Global Positioning System, developed to provide accurate user location on and near the Earth, is evolving into a global utility that will provide time and frequency standards worldwide. It has been used for such varied applications as attitude determination of aircraft and spacecraft, tracking of trains, trucks, and taxis, and monitoring the Earth’s ionosphere. The Defense Meteorological Satellite System is a low-altitude satellite

used to detect forest fires and volcano eruptions.

Among the many alumni, faculty, staff, and students of the Department who came to enjoy the reception and lecture, were **James Duncan**, BS ‘94, and most of the students in the Advanced Placement Physics classes he teaches for the WS Hart School District. It was inspiring to see the teacher-student interactions between James and the intelligent young people from his classes. We hope some of them apply to UCLA! □

## ***E&SS Goes to the AAPG/GSA Alumni Get-Together***

Imagine our excitement when the Department of Earth and Space Sciences was invited to represent UCLA at the Alumni Get-Together of the joint meeting of the American Association of Petroleum Geologists and the Geological Society of America, on April 10, 2001, at the Sheraton Universal Hotel’s Roof Garden! **Lauri Holbrook** (BS ‘84), the Department’s Student Advising Officer, and **Barb Widawski**, Alumni Coordinator, couldn’t resist the opportunity to see and talk with old friends, so we didn’t hesitate to volunteer to host a table. We were not disappointed—the Bakersfield area was well represented by **Boyd Getz** (MS ‘82), **Joe Nahama** (BS ‘87), **Rod Nahama** (BA ‘55), and **Bob Countryman** (MS ‘77), who served as Operations Chair for the conference. Also on the Conference Committee were **Kathy Marsaglia** (PhD ‘89), from the University of Texas, serving as Poster Chair, and

**Gene Fritsche** (PhD ‘69), from Cal State Northridge, as Technical Chair. There’d been a symposium on Southern California Geology in Gene’s honor, as well as a field trip and oral session in memory of **Perry Ehlig** (BA ‘52, PhD ‘58). **Allen Glazner** (PhD ‘81) came from the University of North Carolina, Chapel Hill, to deliver his paper, and **Robert Paschall** (BA ‘38) came from Bishop to deliver his. We also enjoyed the company of **Jack Van Amringe** (MA ‘57), **Tom Redin** (BA ‘52), **Russ Simonson** (BA ‘34, MA ‘36), **Steve Lipshie** (PhD ‘84), **Frank Denison** (BS ‘73), **Bruce Blackerby** (PhD ‘65) **Ian Moxon** (BS ‘82), and **Steve Richardson** (BS ‘82)—not to mention old friends, **Duane Bindschadler** and **Gene Kaula**. □



*Joe Nahama*



*Rod Nahama*



*Steve Richardson*



*Gene Fritsche*



*Steve Lipshie*



*Frank Denison*



# Discovery of Liquid Water at Earth's Surface 4.3 Billion Years Ago

Mark Harrison

*E&SS Geochemistry Professor Mark Harrison and Steve Mojzsis, a former UCLA postdoctoral scholar in Mark's laboratory—now an Assistant Professor of Geology at the University of Colorado at Boulder—with their colleague Robert Pidgeon, a Professor of Applied Geology at Curtin University of Technology in Perth, Australia, published the cover paper in the January, 2001 issue of Nature. Publication of their discovery of evidence that liquid water existed at or near the Earth's surface 4.3 billion years ago received wide news coverage and interest.*

## **Why is this discovery so important?**

This is the first documentation that a hydrosphere existed during the first five percent of Earth's history. Since liquid water is assumed necessary for the origin and propagation of life, this result raises the possibility that a biosphere could have arisen on Earth more than 400 million years earlier than presently known.

## **What is the nature of the evidence?**

We found a distinctive oxygen isotopic signature in mineral grains that were dated to be as old as 4.3 billion years. The telltale sign is the ratio of the very common  $^{16}\text{O}$  to the much rarer and heavier  $^{18}\text{O}$ . If a rock has been to the Earth's surface and interacted with cold water, it will contain significantly 'heavier' oxygen—that is enriched in  $^{18}\text{O}$ —which is precisely what we have found in these ancient grains.

## **Exactly what minerals did you look at?**

We only looked at the mineral zircon ( $\text{ZrSiO}_4$ ), because it alone has the characteristics to preserve this record. Zircons are forever! First, it can be precisely dated using the uranium-lead method, so we know within a few million years when it formed. Second, it is very good at holding on to its original oxygen isotope composition, even under elevated temperature conditions in the crust.

## **How do you make the measurements?**

We used UCLA's high-resolution ion microprobe—the only instrument in the world on which both of these measurements can be made. The microprobe shoots a beam of ions—charged atoms—at the sample, which releases

its own ions that are then analyzed in a large mass spectrometer. We can aim the ion beam at specific microscopic areas of a sample and analyze them without destroying the object.

## **Where were the zircons found?**

The zircons come from a seemingly unique outcrop in the outback of Western Australia. This sandstone formed about three billion years ago when sediment that eroded from much older rocks coalesced in a basin. At least one of the source rocks was as old as 4.3 billion years—and maybe as old as 4.4 billion years.

## **Why 4.4 billion years?**

Because a second group of researchers reported a zircon that old from the same Australian outcrop—in the same issue of *Nature* in which we reported our results!

## **Did the two groups know about each others' work?**

Not until publication—which is all the more curious, because one member of each research group are colleagues in the same university department. Maybe they should have lunch together more often!

## **Do you have more work to do or is this now an established fact?**

This is not a smoking gun! We think our interpretation of these results is the best and simplest explanation, but we need to follow up with more measurements. However, discovering zircon grains as old as 4.3—or 4.4—billion years makes possible a number of experiments that weren't otherwise feasible. One such experiment that comes to mind is determining the terrestrial plutonium/uranium ratio.

## **Isn't plutonium man-made?**

For the first couple of hundred million years of Earth's history, there was a fair bit of natural plutonium floating around. We may be able to use these old zircons to figure out how much there was, and knowing that would allow us to determine the age of the atmosphere. But we will need several hundred of these tiny old grains to make that measurement. Thus far, we've only identified about a dozen—so we have a heap of work ahead of us.

## **You mentioned that liquid water is necessary for the origin of life.**

### **What else is required?**

There are two other ingredients, but we're virtually certain that they existed from the time of planetary formation. The first is an energy source—the Sun. The second is a source of organic raw materials, which we find in primitive meteorites that have been hanging around since the beginning of the solar system. So the only missing ingredient for knowledge of when life may have started on Earth was when liquid water appeared. It now seems that within a scant 200 million years of the Earth's formation, all of the conditions for life on Earth appear to have been met.

## **What are the broader implications of this work?**

If conditions for life were established very early on Earth, this suggests that such conditions might not be uncommon in the universe. If it happened so early on, why couldn't it happen elsewhere in the universe as well? Life may not be so difficult to form when these three conditions are met! □





*Class of 2001—Bottom Row: Kristin Ebert, John Duhl, Alex Matiella, Jessica Block, Shirley Baher, Joyce Tang, Natalie Caciagli, Nyssa Roeth, Prof. Ray Ingersoll, Teresa Lassak. Row 2: Matthew Affolter, Student Affairs Officer Lauri Holbrook, Tung-Shin Hsu, Patrick Lam, Kari Cooper, Prof. Mary Reid, Ann-Sophie Provost, Daniel Nesbitt. Row 3: Christopher Dueñas, Leloba Pahl, Michael Taylor, Prof. David Jackson, Prof. An Yin, Timothy Ancheta, Masataka Tsunetani, Heather Lin, Katharine O’Keeffe. Row 4: Prof. John Rosenfeld, Prof. Paul Davis, Prof. Peter Bird, Prof. Wayne Dollase, Prof. Gary Axen, Prof. Mark Harrison, Lisa Gilley, Eric Cowgill, Prof. Heidi Houston, Prof. Craig Manning, Vanessa Meier, Josh Sussman, Paul Day.*

## Honors and Awards—2001

### **John & Frances Handin Scholarship**

Presented to undergraduates for scholastic excellence, this scholarship was endowed by Department alumnus John W. Handin (BA ‘42, MA ‘48, PhD ‘49) and his wife, Frances.  
Michael Fleishman

### **Joseph Murdoch Scholarship**

Awarded to undergraduates for academic excellence, this scholarship honors the memory of distinguished Department faculty member, Joseph Murdoch.  
Lorraine Leon

### **Eugene Waggoner Scholarship**

Awarded to undergraduates for academic excellence, this scholarship honors the memory of Department alumnus Eugene B. Waggoner (BA ‘38, MA ‘39).  
Kristin Ebert    Mary Kairouz

### **Walter Harris Summer Field Award**

Conferred for scholastic excellence to summer field students, this award honors the memory of Department alumnus Walter Stephen Harris (MA ‘58).  
John Duhl    Teresa Lassak

### **Clem Nelson Summer Field Award**

Conferred for scholastic excellence to summer field students, this award is supported by Professor Emeritus Clem Nelson’s former field students and associates.  
Matthew Affolter    Christopher Dueñas  
Maria Alejandra Matiella



# 2000-2001 Earth & Space Sciences Degrees

## Doctor of Philosophy

- Shirley Alice Baher *Subsurface Structure and the Relationship to Northridge Earthquake Damage in Santa Monica* (Professor Davis) *Geophysics & Space Physics*
- Kari Melissa Cooper *Time Scales of Magma Generation, Differentiation, and Storage: Constraints from  $^{238}\text{U}$ - $^{230}\text{Th}$ - $^{226}\text{Ra}$  Disequilibria* (Professor Reid) *Geology*
- Eric Saxon Cowgill *Tectonic Evolution of the Altyn Tagh-Western Kunlun Fault System, Northwestern China* (Professor Yin) *Geology*
- Tung-Shin Hsu *Statistical Evaluations of the Association between IMF Triggering and Substorm Expansion Phase Onset* (Professor McPherron) *Geophysics & Space Physics*
- Paul Andrew Kapp *Tectonic Evolution of the Qiangtang Terrane, Central Tibetan Plateau* (Professor Yin) *Geology*
- Emil Lawrence Kepko *Transient Convection in the Earth's Magnetosphere and the Generation of  $\text{Pi}_2$  Pulsations* (Professor Kivelson) *Geophysics & Space Physics*
- Heather Ann Lin *Aqueous Geochemistry at Subduction Zone Conditions: Experimental Constraints* (Professor Manning) *Geology*
- Thomas Paul O'Brien III *Empirical Analysis of Storm-Time Energetic Electron Enhancements* (Professor McPherron) *Geophysics & Space Physics*
- Ann-Sophie Provost *The San Andreas Fault: A State of Stress Analysis in Central and Northern California* (Professor Vidale) *Geophysics & Space Physics*

## Master of Science

- Natalie Carmen Caciagli  *$\text{CaCO}_3$  Solubility at 500-800°C and 5-16 kbar* (Professor Manning) *Geology*
- Lisa Danielle Gilley *Timing of Left-Lateral Shearing and Prograde Metamorphism along the Red River Shear Zone, China and Vietnam* (Professor Harrison) *Geology*
- Michael Halford Taylor *Distributed Eastward Extension of the Tibetan Plateau: A Perspective from Rift-Bounding Faults in Central Tibet* (Professor Yin) *Geology*

## Bachelor of Arts

Nyssa Noelle Roeth *Earth Sciences*

## Bachelor of Science

- Timothy David Ancheta *Engineering Geology*
- Jessica Lorraine Block *Geology*
- Paul Patrick Day *Geology*
- John Martin Duhl *Geology*
- Paul Anthony Gutierrez *Geology*
- Lori Ann Heitzhaus *Engineering Geology*
- Anthony Hicke *Engineering Geology*
- Maria Alejandra Matiella *Geology*
- Miles McMonigle *Geology*
- Vanessa Lynn Meier *Engineering Geology*
- Daniel Jesse Nesbitt *Geology*
- Katharine Michelle O'Keeffe *Geology*
- Leloba Van Netta Pahl *Engineering Geology*
- Josh Todd Sussman *Geology*
- Joyce C. Tang *Geology*
- Masataka Tsunetani *Engineering Geology*



## In Memoriam

**Victor V. Botts** (BA '55) passed away May 9, 2001, in Petaluma, California, at the age of 68. Following graduation, Vic worked in the petroleum industry in California. By the early 1960's his interest had turned to mercury mining, which he pursued in California and Nevada. He eventually became manager for the Nevada operation for Placer Dome. While in Nevada, Vic served as a member of the Humboldt County Planning Commission, and was elected to serve as a member of the Humboldt County Board of Commissioners. In 1987, he moved to Papua New Guinea to manage the development of the Porgera Gold Mine. In 1994, Vic became managing director for Placer New Guinea; during the time between 1990 and 1993, 100 metric tons of gold were produced. Vic retired in 1995, and moved to Rohnert Park, California. [by Edward W. Hudson]



*John DeGrosse*

**John DeGrosse** died suddenly and accidentally on a Fourth of July, 2001, fishing outing with his grandson, Josh, in the Western Sierra where he had retired to Camp Nelson east of Porterville in 1980. Johnnie had run the Department thin section lab for over a third of a century after World War II. At UCLA, he transformed his prior experience as a skilled machinist of metals to that of a machinist of brittle materials, such as rocks and minerals. Beyond making thin sections and polished sections for students and faculty, he helped to fashion precision devices that enabled much of the high-pressure research in the Department and the then Institute of Geophysics that otherwise would have been very difficult to carry out. These included carefully shaped and oriented minerals and rocks for experiments in the rock deformation lab, non-metal bases for precision comparison dilatometers for physical petrologic studies of the conditions of crystallization of deep-seated rocks and minerals (including diamond), and carefully oriented slices of aragonite for experiments on the kinetics of transformation of aragonite to calcite that placed severe limits on conditions in subduction zones. There is little doubt that John DeGrosse was one of the best in the world in his niche! He is sorely missed by those he helped. [by John Rosenfeld]



**Carl Max Hammond** (PhD '93) was a passenger on United Flight 175 that left Boston for Los Angeles at 8:00 am on Tuesday, September 11, 2001. Flight 175 was the second aircraft to hit the World Trade Center in the terrorist attack that none of us will be able to forget. Max was flying to LA to attend a meeting, planning to return to Boston on Friday. Max last visited the Department on September 16, 1999 to participate in the symposium in celebration of Margy Kivelson's 70th birthday and election to the National Academy of Sciences. He presented a paper that all recall as witty, informative, instructive, and moving. Ironically, he

discussed an anti-terrorist project being carried out using a wave tank that he and alumnus Greg Crawford (PhD '93) had constructed at the Stanford Research Institute, where they were on the scientific staff. Max discussed the importance to our country of defending ourselves against "asymmetrical threats," in which a small group of people can cause massive and costly destruction. In February of this year, Max followed Greg Crawford to the Mitre Corporation in Massachusetts. Both of them worked on classified projects, so we know little of the details, but we do know that they both found their work fulfilling and challenging. Max had purchased a house on a large piece of land in New Hampshire and was looking forward to spending time working on his classic cars. Max is survived by his parents, Carl and Sue Hammond. His friends and colleagues remember him as a very kind, considerate, gentle, talented, and hard-working person, and his loss will be greatly felt.

[by Greg Crawford, Margaret Kivelson, and Feng Wang]

**Robert Herron** (BA '46) died in Santa Barbara about three years ago. He had been a marine resources consultant.

[by Robert Paschall]

**Don Higgs** (PhD '51) died in 1990. He had retired from the Shell Oil Company after a distinguished career in their Research Center in Houston, Texas. [by Herb Mann]

**Andrew James MacMillan** (BA '37) was born on August 5, 1914 and died July 4, 1997. He had been retired from Texaco.

**Don Preston** (BA '52) died in December, 1999, of colon cancer. He spent much of his career with the Shell Oil Company, subsequently teaching at an Oklahoma college. Don's major interests were structural geology and computer applications. Don and his wife Annette retired to Fredericksburg, Texas, where he maintained interest in a variety of activities until his death. [by Herb Mann]

**Eugene W. Vind** (BA '53) died on May 6, 2000, at the age of 73 in Reno, Nevada, of cancer after a prolonged illness. After graduation, Gene started a distinguished 32-year career with the Ohio Oil Company (later to become Marathon Oil). His first postings as a Petroleum Geologist were in Utah and Montana. Transferred to Guatemala in 1957, he began a 21-year period of international travel which took him to Australia, Argentina, and England, where he worked in various managerial capacities. In Tripoli, Libya, from 1974 to 1978, he was Senior Vice President of Oasis Oil Company, an operating company comprised of three major companies. Gene retired from Marathon in 1983 as Exploration Manager for North America and Canada. He retired to Reno with his wife Lois, where they enjoyed Gene's passion for fly-fishing and golf. In addition to Lois, he leaves behind three sons—David, Clayton, and Jeff, their wives, and six grandchildren. [by Wayne Fitkin]



*A very special "Thank You" to all of our 2000-2001 donors . . .*

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*Sincere apologies for missing Norm  
& Trudi Wagner on this page last year.*

**ROBERT & JEANETTE PASCHALL  
GIFT ANNUITY**

Robert Paschall and his wife Jeanette donated \$30,000 in the form of a Charitable Gift Annuity to UCLA, with the money—after their deaths, designated to go to the Department of Earth & Space Sciences.



*Robert Paschall*

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or call Arwen Duffy at 310-206-5378  
or Liz Maldonado at 310-206-1773.*



# Alumni News

## 1932

**Jerome J. O'Brien**, BA (BS '34 from USC), attended UCLA on a baseball scholarship. Jerry worked his way up to Chief Geologist for the Sunset Oil Company; started his own company, the Shamrock Drilling Company, using a revolutionary portable type of rig. Jerry was appointed Director of Oil and Gas for the Department of the Interior and Energy in 1961. He still maintains an office and goes to work every day, at the age of 95!



Jerome J. O'Brien in Huntington Beach, California, 1935

## 1938

**Robert Paschall**, BA, and his wife Jeanette live in Bishop, where he regularly bicycles and occasionally goes on hikes in the Sierra Nevada. We saw him at the Alumni Get-Together of the AAPG/GSA joint meeting (see page 2), where he gave a talk titled "Lateral Shortening in the Transverse Ranges Minimizes the Roles of the San Gabriel and San Andreas as Strike-Slip Faults." Robert later presented a poster display on the Owens Valley fault at the UC White Mountain Research Station's open house on Labor Day. He expanded the poster into a paper published in the South Coast Geological Society's October 2001 guidebook on the Owens Valley.

## 1939

**Joseph W. Kean Jr.**, BA, at the age of 84, is retired from both his distinguished military career and his subsequent teaching career, and now finds himself having to concentrate on health problems.

**Harold Sullwold**, BA (MA '40, PhD '59), is concentrating on his golf handicap! He meets frequently with Tom Dibblee and other local geologists at the Santa Barbara Club, and is a director of the Tom Dibblee Foundation along with several others, including Bruin alumni **John Crowell** (MA '46, PhD '47), **Dick Faggioli** (BA '47, MA '53), and **Hollis Record** (BA '57). Some of you may remember Harold's "Andy Cline" cartoons, which appeared in the *Pacific Petroleum Geologist*, starting in 1948—we have included one

here, for your enjoyment. He compiled a book of them in 1983 that is still available—we'd be happy to pass on inquiries.

## 1941

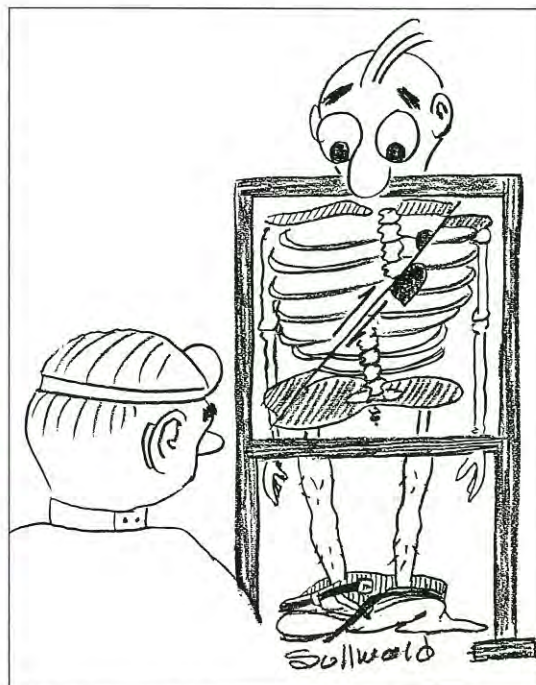
**Bob G. Maynard**, BA (MA '47), commanded an infantry platoon, company, and battalion in combat against the Japanese in WWII. He also fought in New Guinea and the Philippine Islands, and was decorated with a Silver Star during combat on Luzon, in the Philippines. Bob's career as an exploration geologist (after receiving his GI Bill MA) included successful work in California,

America. We are pleased to have Bob say, "During my entire career I felt that the technical education I received at UCLA was the equal of any and superior to most other universities." Bob celebrated his 82nd birthday this year.

## 1942

**Edward L. Russell**, BA, has been retired since 1979 from Chevron, where he worked in the Economics Department. It was a little "ecological niche," doing industry forecasting of oil and gas production and LPG production for the various major states, plus the provinces of Canada. He and his wife Helen "of Troy—she's a graduate of USC" have done a lot of sailing and traveling since then. They've moved into Oakmont Gardens, a retirement residence in Santa Rosa, and were planning a cruise

to the Mexican Riviera on the Sea Princess in October. He says that it's not like cruising the Whitsunday Islands of Australia in his chartered sailboat, "But what the heck—been there, done that!" . . . "I wish I were young again! In fact, I wish I were 70 again!" He hopes to have time to "play radio" (he's an Extra class Ham), maybe do a little painting, and play his electric keyboard.



Much is revealed in Andy Cline's X-ray

Colorado, Wyoming, Utah, and foreign assignments in Australia, Africa, and South



**J. Douglas Traxler**, BA (MA '47), is semi-retired as an independent geologist. He spends some time at the Mountain View Golf Course and attending San Joaquin Geological Society meetings, has been married for 56 years, and is still in good health at 82 years of age.

### 1943

**Kenneth H. Arnestad**, BA (MA '50), has been retired from the Lockheed Martin Company as a senior specification engineer since 1990—"retirement just gets better and better."

### 1948

**Chet Baker**, BA, is now retired from Amoco, for which he worked in the US and Egypt. He had formerly worked for Conoco in the US and Egypt, for Aramco in Saudi Arabia, and for Richfield in Bakersfield. **Mason Hill** was manager when Chet was working in the Cuyama Valley as a micropaleontologist from 1949 through 1952. Chet says that he is still happily married to Evelyn, who used to be a grade school teacher in Inglewood, California.

### 1949

**Takeo Susuki**, BA (MA '51) was honored along with other former Nisei (second generation Japanese-American) baseball players at Nisei Baseball Recognition Day at Dodger Stadium for their prewar-era baseball playing. In a pre-game ceremony, the Los Angeles Dodgers presented them with a trophy with a baseball on top. When Takeo was introduced, it was shown up on the big screen scoreboard—see the photo, right.

### 1950

**Kenneth Hsü**, MA (PhD '54), retired from the Swiss Federal Institute of Technology, Zurich, in 1994. He is President of Fengshui Water Technology, Ltd., for which he invented an integrated hydrologic circuit to replace dams and reservoir lakes in water management. Of course, we remember him as the presenter of the inaugural Distinguished Alumni Lecture in 1998, titled "*Why Isaac Newton Wasn't Chinese.*" Ken was awarded the Penrose Medal of 2001 (the highest award of the Geological Society of America) and was planning to be at the Boston GSA on November 4th to accept the award, where he hoped to "meet old buckeye friends."



*Kenneth Hsü*

### 1951

**Norman Bradley**, BA, has been retired as a civil engineer and geologist for the Los Angeles County Flood Control District for a number of years. He has four children as well as four grandchildren, and is a member of AEG, AGU, and ASLE.

**Roy Copp**, BA, returned to geology after a career at the Montreal Stock Exchange. He worked at the US Geological Survey since 1960, and retired in 1985 to develop an independent consulting firm with branches from Angola to Zanzibar. Of all the awards and accolades Roy has received, he says he was most honored by the UCLA "Watch-Your-Step" Award.

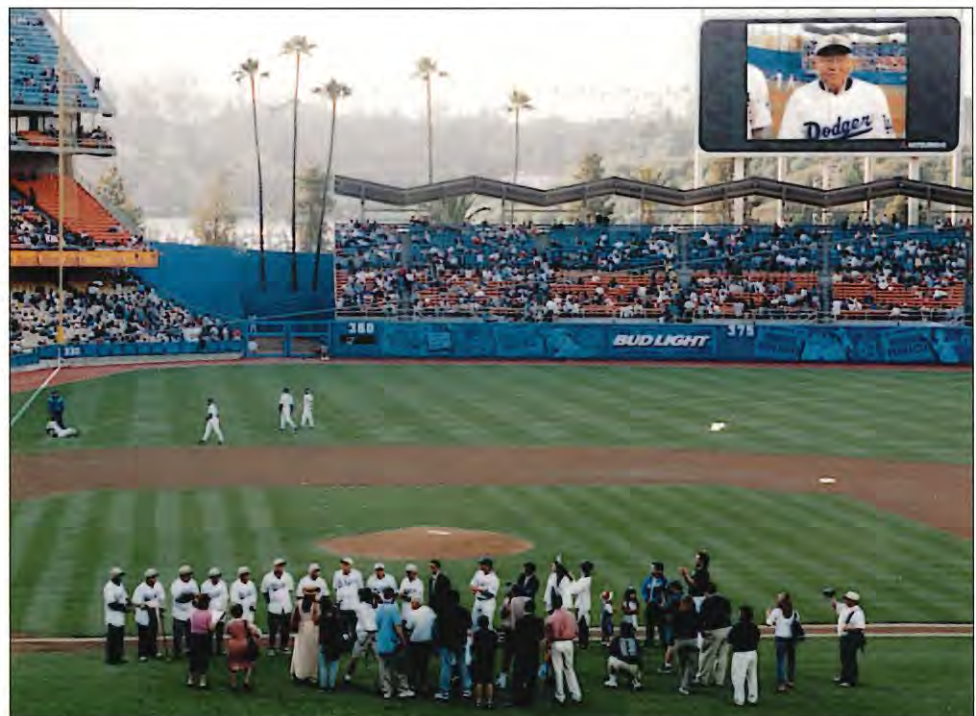
### 1952

**Donald R. Lindsay**, MA, is retired from Shell Oil Company and Occidental Petroleum. He was first attracted to geology upon seeing Dolores Del Rio sacrificed to the volcano in "*Bird of Paradise*" in 1932, and wonders if any of his UCLA classmates had a similar experience!

### 1953

**Don Hagen**, BA (MA '57), still lives on a lake near Sandpoint, Idaho, and is healthy enough to windsurf, swim, hike, mountain bike, ski, and play tennis, as well as sing in a classical choir, and take a trip or two to foreign lands each year.

**William F. Hubbard**, BA, is retired from the Marathon Oil Company, and now serves on various town boards and boards of non-profit charitable organizations. Bill's ninth grandchild was recently born.



*Takeo Susuki on the big screen at Dodger Stadium*



Left to right:  
 Don Pettit,  
 Richard Blackie,  
 Richard Wilson,  
 Gene Vind, and  
 Wayne Fitkin  
 ready to head  
 home from  
 Summer Field—  
 Mineral Hill,  
 Nevada, 1952



### 1958

**Wayne Fitkin**, BA, sent this photo of **Don Pettit** (BA '54), **Richard Blackie** (BA '53), **Richard Wilson** (MA '55), **Gene Vind** (BA '53), and himself all packed and ready to head home from Summer Field camp in Mineral Hill, Nevada, in 1952. Wayne tells us that he and Gene had meticulously packed the Jeep, but they were restricted to driving it at no more than 45 miles per hour, because they were having clutch trouble. Pettit, Blackie, and Wilson preceded them through the Agricultural Check Station at the California border, where they told the officers that the Jeep due to arrive shortly was carrying a case of oranges (which they were not). Naturally, when they arrived at the station, the Jeep was subjected to a search, and Gene and Wayne had to unpack and then repack everything!

**Ed Kiessling**, MA, is retired from CDMG, and has been supplying city and community colleges with geologic literature surplus from his colleagues.

**Dave Weide**, BA, also earned a PhD in Geography, "which in 1974—after Putnam's death—had taken over the role of Geomorphology . . . tradition has it that in Britain, Geomorphology is a 'geographic' subject rather than a 'geologic' subject." Dave is currently a Full Professor of Geology and Geography at the University of Nevada, Las Vegas. He has been there now for 28 years. His research interests include areal geologic mapping, "Having published something like 20 Geologic Quadrangle maps for the USGS," and urban geologic hazards—"Here in Las Vegas they include: flash floods, extremely bad swelling soils, slope stability as the burgeoning population spills upwards onto the alluvial fan surfaces." His current projects include geologic mapping of the urban corridor (12 Quadrangles) from Las Vegas to "State Line," and geologic causes of global climate change—and he attended the 2001 conference on the latter in Edinburgh, Scotland.

### 1960

**Ralph O. Bass**, MA, took early retirement from Conoco Exploration in '81, after 21 years working in various locations. He continued working Permian Basin geology until the '86 oil crash, then retired to field trips, college courses, perusal of the literature, closely watching the stock market, and lifting weights. He's currently trying to catch up on global geology and the cosmos!

### 1961

**Allen Hatheway**, BA (MS '66, PhD '71 University of Arizona), retired Professor of Geological Engineering at the School of Mines, University of Missouri-Rolla, was appointed Chief Editor in October of 2001 of the combined journal "*Environmental & Engineering Geology*," published by AEG and GSA. Allen and his wife Dina spend half their time at Big Arm, Montana and contemplate moving there from Rolla, Missouri. Allen has constant forensic duty in site and waste characterization, especially involving cleanup

of coal tars at former manufactured gas works. He was the Richard H. Jahns Lecturer for GSA in Year 2000, had five papers, and led the Joplin field trip at AEG in St. Louis, in October.

### 1963

**Stanley S. Beus**, PhD, is a missionary for the Church of Jesus Christ of the Latter-day Saints and teaching geology at Brigham Young University in Hawaii.

**Alexander Tary**, BS (MA '69, UC Riverside), retired from being a geologist with the US Forest Service in 1993. He spends time as a school bus aide for the Shasta County Office of Education. His elder daughter graduated from the University of Oregon and is in graduate school at the University of Washington's languages program; his younger daughter graduated from UC Davis in '99. He's had the pleasure of working with **Allen Hatheway** (BA '61; MS '66, PhD '71, University of Arizona) and **Richard Wischart** (BS '68, MS '71), with whom he maintains contact to this day.



## 1965

**Charles Blount**, PhD, and his wife Rose moved to Grand Junction, Colorado, where they have a mini-ranch with pasture grass growing and a horse barn under construction. He is retired, but plans to keep active doing geological field work on volcanics exposed on Grand Mesa.

## 1966

**Richard Slade**, BA, has 35 years of groundwater experience in California, the past 18 years of which have been with his consulting practice in hydrology. He and his wife live in Encino; he plays golf and enjoys traveling and wine.

**Raymond Waldbaum**, BS, moved to Sonoma County after 32 years of engineering geology in Southern California. His first clue that geology is practiced differently in Northern California was when the contractor building his house couldn't understand why he wanted his house foundations embedded into bedrock all the way around. After working as an engineering geologist up there, and seeing subdivisions built on landslides, Ray says he "realized that the wine and bed and breakfast businesses are much safer ways to make a living than engineering geology."

## 1968

**Richard Wischart**, BS (MS '71), went on to earn an MS from UC Berkeley in Civil Engineering in 1976, and is now a civil engineer with the US Forest Service—he does foundation investigations for air tanker bases in the western US. His wife is a criminal investigator for

the Forest Service, his oldest daughter is a junior studying biology at UC Davis, his youngest daughter is in the 3rd grade, and his son is in between.

## 1969

**Eugene Fritsche**, PhD, is a Cal State University Northridge Professor Emeritus. He received the first ever Pacific Section, SEPM, Lifetime Achievement Award, and led a field trip sponsored by the Pacific Section last April, during the joint AAPG/GSA meeting, on "*Transverse/Peninsular Ranges Connections—Nine Lines of Evidence for the Incredible Miocene Rotation.*"

## 1971

**Brian Mertz**, BS, has retired from the US Air Force where he worked in geodetics and geophysics. He now does friction testing of Wyoming's roads for the Wyoming Department of Transportation.

## 1972

**Scott W. Prior**, BS (MS '74), has his own business—Prior Consulting Services; he does 3D-seismic interpretation, exploration geology, and geophysics. He recently interpreted 3D data on the Wilmington Field in Long Beach Harbor.

## 1973

**John H. and Dorothy Z. Oehler**, PhDs, are still married after 32 years. They both took early retirement from Conoco last year after 27-year careers in international exploration. John is now pursuing a life-long interest in becoming a novelist (adventure stories with a healthy dose of history and

modern science). His first novel is completed, and he has an agent to represent it. Dorothy is studying classical guitar, and has set up a consulting company (Oehler Research and Consulting); and they have both taken on selected consulting projects for their former employer, Conoco.

## 1974

**Bonnie Bloeser**, BA (MS '78), is a reservoir management and surveillance geologist for Aera Energy LLC (an ExxonMobil and Shell company merger for California production). She recently returned from a New Zealand adventure, kayaking, trekking and cycling with her kids. Bonnie says she would enjoy hearing from all of you who worked in Bill Schopf's lab in the 1970's—she can be reached by email at [bbloeser@aeraenergy.com](mailto:bbloeser@aeraenergy.com).

**Gordon Moir**, PhD, does 3D geologic computer modeling using stochastic object-based and geostatistical technologies for ExxonMobil Upstream Research—he's been working on large projects in the Norwegian North Sea and in Qatar.

## 1976

**Dwight L. Carey**, DEnv, is president of the Environmental Management Associates, Inc., which does natural resource environmental regulatory consulting (energy projects).

## 1978

**Stephen Ehrenberg**, PhD, has lived in Stavanger, Norway for the past 15 years, where he works for Statoil (the state oil company of Norway). He does techni-

cal service projects in clastic and carbonate diagenesis. There has been time for the occasional scientific paper, and he spent January to March of 2001 onboard the JOIDES Resolution in the Coral Sea, working 12-hour shifts as a sedimentologist for Leg 194 of the Ocean Drilling Program.

**Kata McCarville**, BS, is director of Information Technology Services at the South Dakota School of Mines & Technology. She is also a PhD student there, studying avian paleontology, and has been doing quite a bit of work with their Museum of Geology. Her PhD field area is in the Pleistocene lake sediments in Christmas Valley of southeastern Oregon—the area is usually called Fossil Lake, and it is an historically significant locality. Her advisor, James E. Martin, has collected in the area for more than 10 years, and the collection now includes ~50,000 specimens. Up to half of those may be avian fossils, of which very few have been identified—so there remains plenty of work for Kata to accomplish! In addition, she hopes to begin using imaging techniques such as high resolution CT scans in paleontology. Her daughter Kelia will be 10 this month, and is an avid swimmer with the Rapid City Racers team. Her son Jameson is 6, and enjoying the pleasures of kindergarten where he is "learning everything he will ever need to know." Kata is looking forward to the 1978 Field Camp's 25th Reunion in 2003, where she hopes everyone will have to refer to her as "Dr." McCarville!



## 1979

**Rod Trice**, CPh, is now a financial advisor for Merrill Lynch. He had been Chief, Space Operations Branch, US Space Command during a 22-year career in the US Navy.

## 1980

**Christian C. Finch**, PhD, is an adjunct professor at Hillsborough Community College in Florida. He recently spent three weeks in southern Spain, and says the geology there is glorious.

## 1982

**Steven C. Swanson**, MS, is senior exploration geologist in the Louisiana Gulf Coast for Petro-Hunt LLC. He and his family traveled to Leipzig, Germany, this summer to attend several performances of the Dallas

Youth Orchestra, which toured Germany and the Czech Republic. Steve's daughter plays the flute in the orchestra. His grandfather, Alfred Szendrei, was one of the founders and principal conductor of the Mittel Deutscher Rundfunk Sinfonie Orchester, Leipzig Choir and Opera Company during the 1920's and 1930's. Steve met with the orchestra directors, attended the opening concert, and got a guided tour of the places where his grandfather performed and taught music.

## 1983

**Bruce Barraclough**, CPh, does space and planetary science at Los Alamos, where he helped build instrumentation for several NASA missions (Cassini, Lunar Prospector, Genesis,

ACE, and Ulysses); he also works on defense missions.

**Jeff Knott**, BS (MS '92, Cal State LA; PhD '98, UC Riverside) and **Diane Clemens-Knott** (BS '84; PhD '92, Caltech) are both academics now; Diane has been an associate professor at Cal State Fullerton, specializing in petrology and isotope geochemistry since 1991, and Jeff was an environmental geologist at UNOCAL until he started as an assistant professor with an academic specialty of geomorphology at Cal State Fullerton in August. Their sons Alex and Sam are 8 1/2 and 2 1/2 years old.

**Joy (Chen) Kwong**, BS (MS '85), owns a mail-order Christian bookstore called Teddy Herman, while stay-

ing at home with her two daughters, ages 5 and 3. She and her husband Eddie, a UCLA alumnus, expect their third child in March.

**Paul Rydelek**, PhD, is an associate research professor at the University of Memphis. While at UCLA, he worked in the NSF sponsored Antarctic program directed by the late Professor Louis B. Slichter and later by Professor Leon Knopoff. He collected gravimetric data for his PhD thesis in geophysics at the South Pole—a land mass in Antarctica has been named after him (Rydelek Icefalls) in recognition of his service there. Paul's present interests involve the physics of the earthquake process, statistics of seismicity, stress diffusion, and tidal studies.

## 1984

**John Phillips** (MS, PhD '87) made his first space flight at the age of 50 on the space shuttle Endeavor, which was launched successfully April 19, 2001. As a mission specialist, John served as the flight engineer during launch and landing. John received his undergraduate degree from the US Naval Academy, and is a naval aviator



*John Phillips wields the IMAX camera on the space shuttle*

with more than 4,000 flight hours and 250 carrier landings to his credit. His doctoral advisor in the Geophysics & Space Physics program at UCLA was Chris Russell. John wrote his dissertation, "Interplanetary Magnetic Fields' Effects on the Interaction of the Solar

Wind with Venus," using observations from the Pioneer Venus Orbiter satellite. John worked at Los Alamos National Laboratory before being selected as an astronaut in 1996, and has written more than 150 scientific papers on the plasma environments of the sun, Earth, other planets, comets, and spacecraft. Once in orbit, John was coordinator for two space walks, controlled the Common Berthing Mechanism, operated the IMAX cameras onboard the space shuttle (look for the film to be out around next April), and assisted with a range of other Endeavour operations.



## 1985

**Steve Defibaugh**, BS, works for Block Environmental. His consulting includes the design of remediation systems for UST sites. He has a wife, three kids, and a mortgage!

**David A. Ferreira**, BS, does environmental assessment and engineering services for Harding ESE. His class of '85 continues to distribute "The Yearly Intrusion" to their graduating classmates.

**Karen Loomis**, BS (PhD '90, Stanford) and her husband George are enjoying the condo they bought in Santa Barbara immensely—no more carrying their surfboards and bikes up three flights of stairs! Karen works for Tetra Tech, Inc., a worldwide environmental consulting firm, mostly studying contaminated sites at Vandenberg Air Force Base. She analyzes groundwater and soil data, and writes reports to characterize the groundwater and soil contamination at various sites so that eventually remediation systems can be designed to clean them up.

**Eric Rehwoldt**, BS (MS '89), works for Schnabel Engineering Associates, based in Gaithersburg, Maryland. He has done geological engineering consulting on the building design development of new US consulates and embassies in Istanbul, Turkey and Sofia, Bulgaria.

## 1986

**David Bissiri**, BS, works for Norcal Geophysical Consultants, Inc., doing environmental geophysics—which translates into "looking for buried stuff that pollutes."

## 1990

**Denise A. Battles**, PhD, is an associate professor of Geology and associate dean for research and budget of the College of Science and Technology at Georgia Southern University. She was married in 1995 to Michael T. Mills, also a Georgia Southern faculty member. Denise is spending the year as a fellow of the American Council on Education, a higher education leadership development program which allows the fellow to be hosted for an academic year at another college or university—so she has been in the President's Office at Auburn University for the year.



*Fabio Minervini, his wife April, and their son Massimo*

## 1991

**Fabio Minervini**, BS, and his wife April had their first baby in March of 2000—a boy named Massimo. Fabio works at England Geosystem in Irvine with fellow alumnus **Mike Higuchi** (BS '88).

## 1993

**Wendy Bohrson**, PhD, has been an assistant professor at the Department of Geological Sciences of Central

Washington University since 1998, and is also director of the Office of Undergraduate Research there.

## 1994

**Paul Belasky**, PhD, has a tenure-track position teaching geology and paleontology at Ohlone College in Fremont, California. He does field work in Mexico and Nevada, and travels to Brazil, Scotland, and Russia.

## 1995

**Gavin Chan**, BS, is a doctoral student at the Department of Earth and Planetary Sciences at Washington University, St. Louis. He works as a graphic and research assistant—his general research area is in microbial geochemistry, and he applies thermodynamic modeling to study changes in high-temperature ecosystems owing to microbe-fluid-rock interactions.

## 1996

**Christopher McGinness**, BA, and **Alexis Walker** (BA, '97) are married to each other, and have a beautiful daughter, Emma. Alexis is enrolled in law school

with an eye toward practicing environmental law. Chris is very much in demand as a senior computer programmer and has been able to choose from a variety of tempting promotions.

## 1998

**Peter Rumelhart**, PhD (MS '94) and **Laura Maley**, MS '97, were married in March, and bought a house in Houston. Pete works for ExxonMobil. His assign-

ments have been varied, and he has worked in areas ranging from South Texas to Trinidad to West Africa. Right now he's working on a Regional Nigeria Team, trying to understand the evolution of the entire Niger delta. Laura still works for BP, and is on a geohazards team in the Gulf of Mexico, though she hopes to be transferred to an exploration team soon. She has been to London, Angola, and Calgary with the company in the last year or so. They both enjoy living in Houston—Pete plays beach volleyball, and they do birding in the bayous by the coast. There are plenty of chances to talk about old times with ex-UCLA types there.

## 2000

**Elizabeth Catlos**, PhD, just started as an assistant professor at Oklahoma State University's School of Geology. Liz bought herself a brand new house, with a brand new tree planted in the yard, and started settling in—once her furniture finally arrived from LA.

**Atoka (Kumagai) Eguchi**, BS, has had many changes in her life since graduating from UCLA—even her name has changed, as she was married last October, after returning to Japan.

**Lori Heitzhaus**, BS, started work at Leighton and Associates, a geotechnical firm in Irvine, last April. She's enjoying work and learning a lot, and says they haven't told her to take a hike yet! She will marry Scott Burson next summer—no sooner because, "Planning a wedding and starting a career don't go well together."



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1. You have ever responded, "yes" to the question, "What have you got in here, rocks?"
  2. You have ever taken a 22-passenger van over "roads" that were intended only for cattle
  3. You have ever found yourself trying to explain to airport security that a rock hammer isn't really a weapon
  4. Your rock garden is located inside your house
  5. You have ever hung a picture using a Brunton as a level and your rock hammer as your hammer
  6. Your collection of beer cans and bottles rivals the size of your rock collection
  7. You consider a "Recent event" to be anything that has happened in the last 20,000 years
  8. Your photos include people only for scale and you have more pictures of your rock hammer and lens cap than your family
  9. You have ever been on a field trip that included scheduled stops at a gravel pit and/or a liquor store
- And the #1 sign you might be a geologist . . .
10. You have ever uttered the phrase "Have you tried licking it?" with no sexual connotations involved

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Paul Sroka '70  
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Ofra Stauber '84  
Robert Stoddard '55  
John Swegle '66  
Thomas Tahara '66  
Richard Tanner '79  
Barry Temple '82  
Patricia Teston '96  
Gary Thompkins '60  
Mark Tippetts '72  
John Todhunter '53  
Jack Tompkins '46  
John Truhlar '58  
Stanley Uehara '66  
Edward Uren '52  
Mathilda Van Zele '56  
Jane Vanderaarst '84  
Donald Walls '59  
Suzanne Wardenaar '73  
Cindy Windham '86  
Clarence Winge '71  
Vivian Woo '93  
Yuyao Xu '93  
George Yonkman '57  
William Young '53  
Susan Yudovin '79  
Martha Zabel '47