The Bulletin
Houston Geological Society

Volume 46, Number 7 March 2004

contents

In Every Issue

about the cover: Jon Norman (HGS member) provided the cover photograph and is the second, 3rd Annual Cover Photo Contest Winner. Jon entitled this photograph the "Marin County Surf." This photogrpah was taken by Jon Norman on the northwest bluff of Marin County California, just northwest of the Golden Gate Bridge. Jon used a Nikon "N" series camera and 100asa speed film.

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Technical Meetings

Other Features

page 15

page 31

page 47

page 49

President's Letter

by Craig M. Dingler

An Optimistic Future for Exploration Geologists

Student Opportunities and a Demand for Consultants

Is there another boom on the horizon for petroleum geologists? For those who attended Lane Sloan's talk at the January general dinner meeting, you no doubt left with your soul uplifted by his description of the opportunities that will unfold in the petroleum exploration industry in the years ahead. For those of you who missed the entertaining and informative presentation, Sloan developed two main themes. The first is that the petroleum industry has a bad reputation with the public and this makes it hard to find new graduates to hire. It is also hard to retain qualified personnel who can go to another industry or business sector and work in better, more stable conditions and situations. The second theme is that the average age of professionals working in the petroleum industry is "50-something." Over the next 20 years the number of geologists leaving the petroleum business through retirement and other means will exceed the number of new recruits coming into the industry. Despite advances in productivity, it will be difficult for medium and large, American-based oil companies to find sufficient exploration staff to discover and replace petroleum reserves.

The market for experienced geologists will be great because of this diminished supply and increased demand both for energy sources and for energy finders.

That's the bad news. The upside to all of this, as you may infer, is that in the coming decade there will be many available positions in the oil and gas industry. There will also be opportunities to manage significant projects and quickly advance up the career ladder.

Sloan's message was relevant to the HGS Foundation scholarship recipients who attended that evening and for their professors too. Graduates who enter the petroleum industry and persevere for a few lean years should find satisfying careers. Likewise, geology departments that survive the near-term, should see increased enrollments as jobs for graduates begin to materialize and students again look at career possibilities in the field of geology.

The aging of petroleum industry personnel seems particularly problematic. A couple of days before Sloan's presentation I attended a meeting of the Engineering, Scientific, and Technology Council of Houston (ECH) where leaders from local scientific and engineering professional societies described their society activities, successes and problems. Not surprisingly, those groups associated with the petroleum industry (such as the SPE) reported problems similar to those of the HGS. What was surprising was that almost all other groups also reported difficulties recruiting and retaining younger professionals. Low enrollment for majors in the physical sciences and engineering seems to be a trend in all colleges and universities. The only group without this problem was the telecommunication engineers and they have their own problem with jobs being outsourced overseas!

When geologists retire *en masse* around 2020, economists and others predict that world oil production will reach a crest and then begin a slow (?) decline; that is, we will have reached "Hubbert's peak."[a,b] Some geoscientists believe world-wide maximum production could be reached as soon as 2010[c] and perhaps even this year.[d] Concurrently, the economies of emerging nations will place increased demand on petroleum supplies.

The market for experienced geologists will be great because of this diminished supply and increased demand both for energy sources and for energy finders. Newly retired geologists with experience, contacts and business acumen should be able to proceed without pause into

President's Letter *continued on page 7*

President's Letter continued from page 5

lucrative consulting arrangements, especially those with international experience. We may, as one fellow at the dinner meeting pointed out, finally be able to charge lawyer's rates for consulting before we retire for good!

Is this all just a pipe dream? Perhaps. Some industry leaders believe technology will be our saving grace and push the peak in petroleum production far into the future.[e] There are many variables that must be considered in quantitatively calculating future world oil supplies. Qualitatively and conjecturally, political and cultural influences may be just as important. A growing reliance on oil from the Middle East, especially from Saudi Arabia with about 25% of the world's known reserves, is a huge wildcard especially with the current fragile political situation.

For now, however, we are left perplexed by layoffs and limited employment opportunities within the petroleum exploration sector despite the relatively high prices for oil and natural gas (as I write this, oil is at $34.98/bbl and natural gas is at $5.57/mcf). We look ahead to a bright future for our younger colleagues and ourselves. ■

[a] Edwards, John D., 1997, Crude Oil and Alternate Energy Production Forecasts for the Twenty-First Century: The End of the Hydrocarbon Era. *AAPG Bulletin*, v. 81, no. 8, p. 1292–1305.

[b] Schollnberger, Wolfgang E., 1998, Projections of the World's Hydrocarbon Resources and Reserve Depletion in the 21st Century. *HGS Bulletin*, v. 41, no. 3 (November 1998), p. 31–37.

[c] Campbell, Colin J. and Jean H. Laherrère, 1998, "The End of Cheap Oil," *Scientific American*, March 1998.

[d] Deffeyes, Kenneth S., 2001, *Hubbert's Peak: The Impending World Oil Shortage*. Princeton Univ. Press. 208 pp.

[e] Decrane, Alfred C. Jr., "Cheaper by the Gallon," *Executive Speeches*, June/July 1996.

Have some information related to this topic you would like to share? Have a different point of view? Why not start a Forum Topic on the HGS Website? Go to http://www.hgs.org and follow the links!

November 14, 2003
Houston Geological Society
W.L. and Florence W. Calvert Memorial Scholarship Fund
10575 Katy Freeway, Suite 290
Houston, Texas 77204

To the Scholarship Committee and Board:
I am honored to receive the W.L. and Florence W. Calvert Memorial Scholarship and I am writing to express my gratitude to the Houston Geological Society for granting me the award. The support from this award will allow me to balance my commitment to both family and academic pursuit throughout both the Fall and Spring semesters of the 2003–2004 school year.

The award of $3,100, in two disbursements, makes a significant contribution to offset my reduced teaching stipend this year. I plan to apply the money specifically to purchase equipment that is necessary for the completion of my dissertation project and to apply to other school related expenses.

This year I am facing some of the greatest challenges of my life; the first being my comprehensive examinations to enter doctoral candidacy and the second, though certainly not of lesser importance, is the addition of my son to our family. The Calvert Memorial Scholarship will help me to succeed.

Thank you once again and please know how much this scholarship is appreciated.

Sincerely,
Suzanne Pierce, PhD Aspirant
John A. and Katherine G. Jackson School of Geosciences
University of Texas at Austin

Monday, March 8, 2004

Westchase Hilton • 9999 Westheimer
Social 5:30 p.m., Dinner 6:30 p.m.

Cost: $25 Preregistered members; $30 Nonmembers & Walk-ups

Make your reservations now on-line through the HGS website at www.hgs.org or by calling 713-463-9476,or by e-mail to Joan@hgs.org (include your name, e-mail address, meeting you are attending, phone number and membership ID#).

HGS General
Dinner Meeting

*by **Paul M. Basinski***
El Paso Production Company
Houston, TX
John C. Lorenz
Sandia National Laboratories
Albuquerque, NM

Coal-bed Methane Overview, Southern Raton Basin, New Mexico and Colorado

The Raton Basin, with an estimated 10 TCF coal-bed methane (CBM) resource base, is one of the premier, on-going plays in North America and is currently producing 200+ MMCFG/D from over 1500 wells. In 1999, El Paso Production began development on its 648,000 mineral acres in Vermejo Park Ranch, New Mexico and Colorado, Southern Raton basin. In the process, El Paso has amassed a robust geotechnical database including 47,000 feet of continuous core, 310 Platform Express/ECS/ELAN log suites and hydrochemistry data on 400+ producing wells. In addition, El Paso is in the third and final year of a collaborative DOE-funded field, geological, engineering and laboratory study with Sandia National Laboratories, Albuquerque, NM, focusing on the fracture-related "plumbing" system.

The Raton Basin, with an estimated 10 TCF coal-bed methane, is currently producing 200+ MMCFG/D from over 1500 wells.

Geotechnical insights into this complex CBM play, employing an integrated, data-driven approach, suggest that the basin has undergone a polytectonic history. The maximum horizontal compressive stress during Laramide deformation, created by overthrust indentation into the basin from the west, was generally east–west as recorded by the majority of surface and subsurface natural fracture strikes. Present-day horizontal compressive stress measured by stress-anisotropy logs trends north–south, suggesting a relationship to Rio Grande extension and affecting the design of reservoir stimulations and the placement of wells. Local anomalous structural domains occur within this overall pattern creating structural enhancement of production with reservoirs containing discreet gas content, water chemistry, bottom hole pressure gradients and production profiles. Regional and local gas saturation variation also occurs in both lateral and vertical dimensions with geostatistical studies showing greater similarity in production characteristics in the east–west direction than in the north–south direction. Coked coals, igneous sills and gas-charged, tight sands may also serve as reservoirs, contributing to total non-CBM gas-in-place considerations. ■

Biographical Sketch

Paul M. Basinski is a consulting geologist in the Coalbed Methane Division, El Paso Production Company, Houston, where he directs both unconventional gas new ventures and geotechnical activities on the company's 648,000 acre Southern Raton Basin Vermejo Park Ranch CBM project in NM and CO.

Paul began his career with Chevron USA, Denver, in 1979 where he worked the northern Rockies as an exploration geologist. After a western U.S. exploration position with Tesoro Petroleum, Denver, Paul joined Grace Petroleum, Denver and then Oklahoma City, where he discovered 14 fields in the Rockies, Michigan Basin, Gulf Coast and Permian Basin as a district geologist. With the sale of Grace to Samson and Sonat in 1993, Paul moved on to work unconventional gas in the San Juan Basin for Burlington Resources, Farmington, New Mexico, as a geological advisor. Paul was involved in the overpressured and underpressured Fruitland Coal plays as well as tight sands. Paul and his teammates completed a basin-wide Cretaceous Dakota sand analysis that opened up a virgin exploration fairway exceeding 700 square miles with three discoveries. In 1998, Paul joined Burlington's new International Division, Houston, where

HGS General Dinner *continued on page 13*

HGS General Dinner continued from page 11

he conceived and implemented the first corporate-sanctioned West Africa regional exploration play and helped secure participation in a six well commitment on 5.4 million acres in deepwater Gabon.

Paul received a BS in geology from the State University of New York, Buffalo, in 1975 and an MS in geology from Mackay School of Mines, University of Nevada, Reno, in 1978. He is a licensed geologist in Wyoming, Texas and Utah and an AAPG Certified Petroleum Geologist. Paul is also a member of RMAG, WGA, CSPG, SEG, SPWLA and SPE. Paul has published numerous papers on subjects including unconventional uranium deposits, fractured carbonates, tight sand neural network "sweet spot" prediction and integrated unconventional gas studies with recent focus on collaborative natural fracture analyses in the Raton Basin with Sandia National Laboratories, Albuquerque, New Mexico.

Monday, March 15, 2004

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Cost: $25 Preregistered members; $30 Nonmembers & Walk-ups

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International Explorationists Dinner Meeting

by ***William A. Ambrose,*** *Bureau of Economic Geology, University of Texas at Austin*
Coauthors: ***Khaled Fouad, Rebecca Jones, Mark Holtz, Shinichi Sakurai, and Edgar Guevara*** *(BEG, UT Austin);* ***Javier Meneses-Rocha, Leonardo Aguilera, Lino Miranda, Roberto Rojas, José Morales,*** *and* ***José Berlanga*** *(Pemex, México);* ***Suhas C. Talukdar*** *(Consultant);* ***and Tim Wawrzyniec*** *(University of New Mexico, Department of Earth and Planetary Sciences)*

Upper Miocene and Pliocene Gas and Oil Plays in the Macuspana Basin, Southeastern México

The Bureau of Economic Geology and Pemex Exploración y Producción conducted an integrated study of the geological, geochemical and play framework of the upper Miocene and Pliocene in the Macuspana basin, Mexico, using a variety of well, core and 2-D and 3-D seismic data (Fig. 1). Structural controls for the plays consist of deep-seated faults that tap Mesozoic thermogenic gas sources, areas of intense shale diapirism and folding and areas with structural inversion that could enhance trapping and reservoir productivity. Early Neogene thrusting south of the basin triggered evacuation of Oligocene shale along northwest-dipping listric faults in the eastern and southeastern margin of the basin. These faults are associated with large-scale rollover structures and thick (>500 m) upper Miocene shoreface and wave-dominated, deltaic complexes. Traps occur as both four-way and three-way structural-stratigraphic combinations. Reservoir seal is provided by a 100- to 300-m lower Pliocene transgressive shale. Downdip pinch-out of reservoir-quality shoreface sandstones is a key risk factor in the upper Miocene in the onshore part of the basin. In contrast, the offshore, upper Miocene section consists of deep water slope systems downdip of an inferred clastic-carbonate source associated with the Yucatán Platform. Thin, calcareous, turbidite sandstones lapped onto a major turtle structure, potentially providing updip-porosity pinch-outs.

Fig. 1. (a) Location of the Macuspana Basin, with structural elements. (b) Well control and distribution of 3-D surveys and principal 2-D seismic lines used in the study.

Trap formation and enhancement in the southern basin margin are linked to late Miocene-to-Pliocene inversion.

A second phase of extension in the early Pliocene formed a set of broad, southeast-dipping listric faults in the western basin, controlling thick accumulations of stacked Pliocene shoreface deposits. Sandy Pliocene shoreface depocenters formed in shale-withdrawal sub-basins, primarily in the northwestern part of the basin. Trap formation and enhancement in the southern basin margin are linked to late Miocene-to-Pliocene inversion. Unlike in the more productive upper Miocene, reservoir seal is a major risk factor in upper and middle Pliocene reservoirs having few thick upper bounding shales. **International Explorationists** *continued on page 17*

International Explorationists continued from page 15

Three petroleum systems (Mesozoic, Paleogene/Lower Neogene and Upper Miocene/Pliocene) contributed to the hydrocarbon accumulations and to hydrocarbon generation and migration in the basin. Principal Upper Jurassic/Lower Cretaceous source rocks generated wet thermogenic gases and oil. Secondary, lower Tertiary source rocks generated predominantly dry, biogenic gases. Mixtures of the two gas types are common. Numerous deep-seated growth faults and other faults serve as pathways for Mesozoic-sourced hydrocarbons. Surface seeps and abundant gas shows suggest that hydrocarbons are being generated today. ■

This study was published in the September 2003 Bulletin of the American Association of Petroleum Geologists (volume 87, number 3, p. 1411–1435). AAPG members can access the text and figures at the AAPG website: http://www.aapg.org/.

Biographical Sketch

William A. Ambrose received a Bachelor of Science degree in 1979 and a Master of Arts degree in geological sciences from the University of Texas at Austin. While at the University of Texas, he worked on sedimentological studies of lower Pennsylvanian coal-bearing strata in the southern part of the Illinois Basin.

His research interests have focused mainly on clastic sedimentology and stratigraphy applied to the characterization and development of energy. Ambrose joined the Research Planning Institute in 1984 and was involved in regional subsurface studies of the Yegua and Vicksburg Formations and the Wilcox Group in the Texas Gulf Coast. In 1987 he joined the Bureau of Economic Geology and was initially involved in studies of co-production of gas and hot brine from the geopressured Frio Formation in Galveston County. In 1988, his research interests took a new direction by evaluating the coalbed methane potential of major Rocky Mountain basins, with emphasis on the San Juan basin. Since 1992 Ambrose has pursued international oil and gas studies, including the Bureau's first international reservoir characterization project in the LL-652 Area of Lake Maracaibo, Venezuela, as well as six other oil and gas projects in Venezuela, the Cooper basin in Australia and several regional play-analysis studies of the Gulf Coast in Mexico, ranging from the Burgos to Macuspana basins.

Ambrose has been active in various geological and geophysical societies and is currently the councilor for the Gulf Coast section of the Energy Minerals Division of AAPG. His contact information is email: william.ambrose@beg.utexas.edu, telephone: 512-471-0258, address: Bureau of Economic Geology, The University of Texas at Austin, University Station, Box X, Austin, TX, 78713-8924.

Thursday, March 25, 2004

Petroleum Club • 800 Bell (downtown)
Social 11:30 a.m., Lunch 11:30 a.m.

Cost: $30 Pre-registered (see deadline below) members, affiliates, and guests; $33 Non-members and walk-ups.

Make your reservations by telephone, Fax, or e-mail to Mrs. B. K. Starbuck-Buongiorno by 12:00 Noon, Tuesday March 23, 2004.
Telephone: (713)651-1639, Fax: (713)951-9659, e-mail: bkspee@aol.com

SIPES
Luncheon Meeting

by ***Daniel Bendig***
Independent
Consulting Geologist

Under-explored Plays in the Northwestern Appalachian Basin: Opportunities for the Independent?

The first drilling for petroleum in the Appalachian basin occurred in 1859 with Drake's well in Pennsylvania. Since then thousands of wells have been drilled with most to depths of less than 4,000 feet. Reservoirs have been discovered and produced from the Cretaceous, Devonian, Silurian, Ordovician and Cambrian. Reservoirs include carbonates and clastics generally deposited in shallow marine conditions. Structural, stratigraphic, or fracture/solution-enhanced stratigraphic traps are documented. Source rocks are believed to be primarily Silurian and Ordovician.

Discovered reserve estimates for the basin are 36 TCF of gas produced and 8 TCF of gas remaining to be produced.

Early exploration focused on Cretaceous and Devonian traps some of which were enhanced by nitro-fracturing. In the 1970s and 1980s the Silurian Medina–Clinton sandstones were extensively drilled for gas. More recently Ordovician Trenton–Black River carbonates with enhanced solution porosity are targeted. In addition, Upper Cambrian Rose Run sandstones of the Knox Formation are being drilled in Ohio. These are erosional remnants trapped along the Knox Unconformity. Other Cambrian reservoirs are found in structural traps and stratigraphic pinch-outs along regional highs. Discovered reserve estimates for the basin are 36 trillion cubic feet (TCF) of gas produced and 8 TCF of gas remaining to be produced. The USGS estimated total undiscovered reserves are 70 TCF of gas and 54 million barrels of oil.

In the northwestern portion of the Appalachian basin (Ohio and western Pennsylvania) only about 70 wells have reached the base of the Cambrian section. In comparison, thousands of wells have been drilled to at least the Ordovician. Similarly, there are hundreds of producing fields in the post-Ordovician section and about 30 producing Cambro–Ordovician fields. One explanation given for this situation is the difficulty in identifying deeper traps and the predicted poor quality of the reservoirs. Both of these problems are real but the use of modern exploration and production tools along with higher product prices should produce commercially attractive prospects.

In the Cambro–Ordovician section three under-explored plays exist. These are the basal Cambrian Mount Simon Sandstone trapped in pinch-outs or across basement highs, Cambrian sandstones trapped in anticlines and Ordovician Trenton–Black River limestones in fracture-enhanced structural/stratigraphic traps. Each of these plays is proven in the basin. The Mount Simon produces in western Pennsylvania, the Knox in eastern Ohio and the Trenton–Black River in New York and central Ohio. The USGS has not quantified the undiscovered field sizes for the Mount Simon. For the Knox the USGS estimates minimum, median and maximum gas fields of 3, 8 and 250 BCF, respectively. For the Trenton–Black River estimated minimum, median and maximum gas field sites are 3, 18 and 750 BCF, respectively. With average drilling depths between 5,000 and 10,000 feet and gas values above $4 per thousand cubic feet, these reservoirs are interesting candidates for exploration by independent operators. ■

Biographical Sketch

Daniel Bendig has a MSc degree from the University of London in stratigraphy, an MA degree from SUNY at Buffalo in geology and a BS degree from the Ohio State University in physics. He is a member of the AAPG (DPA Certified Petroleum Geologist), a member of the HGS and SIPES. His career has been as a geophysicist with a major working in Houston, Indonesia, England and Scotland. He is now an independent working on the petroleum potential of the Appalachian Basin.

Wednesday, March 31, 2004

Petroleum Club • 800 Bell (downtown)
Social 11:15 a.m., Lunch 11:45 a.m.

Cost: $25 Preregistered members; $30 Nonmembers & Walk-ups

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Joint HGS / HAPL Luncheon Meeting

*by **Bill Moody***
Manager of Exploration
Swift Energy Company

Old Dogs, Old Tricks—New Successes: Successful Re-development of the Lake Washington Field

Swift Energy Company (Swift) acquired the Lake Washington field in March 2001. Lake Washington Field is located in Plaquemines Parish, Louisiana about 60 miles due-south of New Orleans. Swift Energy's team of geoscientists working on exploration and further development of Lake Washington Field has employed only-tried-and-true subsurface geological methods to increase production from nearly 700 BOEPD at the time of acquisition to more than 11,000 BOEPD at year-end 2003.

Located along the Louisiana coast, Lake Washington Field was originally discovered in the 1930s and is around a shallow piercement salt feature. Since inception, the field has produced approximately 350 MMBOE. Swift Energy operates approximately 15,500 gross acres (12,900 net acres) in the field. Since acquisition, Swift's geoscientists have employed old-fashioned geological methods of multiple-level subsurface maps at close intervals, combined with numerous correlation sections, fault plane maps and net sand maps which have enabled the company to book reserves at a faster pace than originally anticipated. Although several older generation 2-D seismic lines have been acquired in the field they proved to be of little use in defining the close-in-type prospects that have been exploited. Swift has drilled a total of 90 wells since the acquisition of which 71 wells have been completed. This is a success rate of almost 79 percent! The wells drilled since 2001 have intersected 58 different pay zones, with current completions targeting 25 different sands. The average net pay per completion has been approximately 138 feet.

Swift's current plans call for the drilling of an additional 25–30 wells in 2004. Approximately 85% of the drilling to date has targeted reserves above 6,000 feet. The upcoming year will have numerous wells set up for the 6,000 feet to 9,000 feet depth range as well. ■

Biographical Sketch

William C. "Bill" Moody, Jr. is currently manager of exploration and development for Swift Energy Company which is headquartered in Houston, Texas.

Bill began his career with Texaco, Inc. in 1973. He also worked at Florida Gas Exploration Company, Eason Oil Company and as a consultant. Bill joined Swift in 2001. He was instrumental in bringing the Lake Washington field to Swift as an acquisition candidate. Bill has spent most of his career exploring in South Louisiana and the Texas Gulf Coast. He has conducted numerous field studies on salt domes located in Texas and Louisiana.

Bill earned a BS degree from the University of South Alabama and an MS degree from the University of Wisconsin. He is a member of the Houston Geological Society, AAPG (Certified Petroleum Geologist), Alabama Geological Society, Lafayette Geological Society, New Orleans Geological Society and the Petroleum Landman's Association of New Orleans.

The Houston Chapter of the Society of Independent Professional Earth Scientists (SIPES) announces the newly elected members of its 2004 Executive Committee and its 2004 National Directors.

The Executive Committee members are as follows:
J. Phil Martin, Jr., Chairman;
Wulf F. Massell, Chairman-Elect,
Jeannie Mallick, Secretary; Larry Rairden, Treasurer; and
James L. Allen, Past Chairman.

The National Directors are
Raymond Blackhall and Paul W. Britt.

2003–2004 Outstanding Student Awards

These outstanding students were selected by the geology department faculty of their respective universities. The students were presented checks and commemorative plaques at the January General Dinner Meeting.

Outstanding Student Award

Donnie Buckalew
Lamar University

Donnie was born and raised in Port Neches, Texas and has been attending Lamar University since 1997. Donnie has been on both the President's and the Dean's list at Lamar. He has collected and studied Eocene marine fossils of the South Texas Rio Grande River Valley as an independent study project performed for Dr. James Westgate. In 2003, Donnie was awarded the HGS Outstanding Student Award. At the present time, Donnie and others are investigating the feasibility of a joint project with the Russian Federation regarding platinum-group metals in ultramafic rocks from the United States and Russia. Upon completion of research on Montana's Stillwater Complex they hope to confirm or present new evidence on the origin of this platinum deposit. Donnie also teaches introductory geology labs at Lamar. He is currently President of the Lamar University Geological Society. For the past 20 years Donnie has been employed as a corrosion engineer and is a member of the National Association of Corrosion Engineers. Upon graduation, he plans to pursue a Master's degree in civil engineering and to obtain a P.E. in engineering.

Outstanding Student Award

Paul Burgess
University of Houston

Paul is a senior geology student at the University of Houston pursuing studies in structural geology. Paul accompanied Dr. Mike Murphy to northwestern Nepal for two field seasons in the summers of 2002 and 2003 and is now combining structural field data with satellite-interpreted data to complete a senior honors thesis that addresses the eastward extent of the active Karakoram fault system into the Tibetan plateau. Paul's interest in geology stems from his fascination with the outside world; he first acquired a taste for geology while earning the geology merit badge at a Boy Scout ranch in the Davis Mountains of West Texas. Paul spends much of his time out-of-doors. He is an Eagle Scout and worked as a ranger/outdoor guide at Philmont Scout Ranch in Cimarron, New Mexico during the summers of 2001 and 2002. His interests include fly-fishing, backpacking, rock-climbing and mountain biking. He also enjoys playing mandolin and guitar. Paul plans to pursue a doctorate degree in structural geology and he looks forward to using remote sensing and geomorphology techniques to enhance his understanding of continental tectonics.

Outstanding Student Award

Courtney Harmon
Texas A&M University

Courtney Harmon recently graduated Magna Cum Laude from Texas A&M University in December 2003 with a Bachelor of Science degree in earth sciences, a minor in geology and a Texas Secondary Education teaching certification. While at Texas A&M she participated in the University Honors Program and was one of only 27 graduates this term to be awarded Foundation Honors. She also stayed busy as an active member of the Texas A&M Geology & Geophysics Society, Aggie Leaders of Tomorrow, Aggie Recruitment Committee and Alpha Phi Omega (a co-ed national service fraternity). Courtney now works full-time for the Texas A&M Athletics Academic Department as a Learning Specialist assisting student-athletes with learning disabilities. In the Fall of 2004, she will begin graduate work at Texas A&M pursuing a Master of Science degree in geography with an emphasis on geomorphology. Courtney aspires to use her geoscience degrees in a career with the National Parks Service or continuing on to a doctoral degree. In her free time, Courtney enjoys camping, crafts, dancing and listening to Texas country music.

Outstanding Student Award

Lynn Holik
Sam Houston State University

Lynn is a senior at Sam Houston State University majoring in geology with a minor in geography. In addition to being a full-time student, she is also a wife and mother of 9-year-old twin boys and

Outstanding Student Award *continued on page 25*

Outstanding Student Award continued from page 23

works as an employee of the Harris County District Attorney's Office. Lynn has been very active within the Geology/Geography department at Sam Houston having served as secretary of the Sam Houston Association of Geology Students and as president of the Gamma Chapter of Gamma Theta Upsilon. She is also a member of the Golden Key Club. In addition to her club activities, Lynn is a student teaching assistant for physical geology labs and participates in trace fossil research with Dr. Chris Baldwin. In March 2003 she traveled to Spain for a nine-day geological field tour to study ancient turbidite fan complexes and deltaic stratigraphic sequences. She recently completed the development of a virtual reality field trip of Death Valley, California using GIS and 3-D visualization techniques. Her research interests include micro-organisms in subsurface environments, geomorphology and karst issues. Lynn will graduate with her Bachelor of Science degree in December 2004.

Outstanding Student Award

Jennifer Rohrer
Stephen F. Austin State University

Jennifer Rohrer was born and raised in Houston, Texas and moved to Nacogdoches three years ago to finish college. She has just graduated from Stephen F. Austin State University with Bachelor of Science degrees in geology and chemistry. Jennifer will be entering the graduate program at SFA in the Spring beginning thesis research in geochemistry. Outside of her studies Jennifer likes to travel and spends as much time as possible outside camping, hiking, mountain biking, playing disc golf and walking her white German Shepherd, Zeus.

Outstanding Student Award

Jennifer Tang
Rice University

Jennifer is a senior geology and anthropology major at Rice University. She is an honor roll student and a recipient of the University's Eugen Merten Memorial Prize in Geology & Geophysics. After studying abroad in Melbourne, Australia during the Spring of 2002 she supports student international experiences as a Rice Student Ambassador and as a Study Abroad Peer Advisor. She also holds a part-time job as an office assistant in the Earth Science Department. In the past she has worked as an REU intern at the MIT Haystack Radio Astronomy Observatory developing water vapor models to compensate for radio-wave propagation delay and as a field assistant for the USGS in Long Island, NY. Her outside interests include participating in Rice's Campanile Orchestra and in college musicals. After graduation Jennifer plans to work as a summer geoscience intern at ConocoPhillips and then go on to earn a Master's Degree in geology with a focus on sedimentology and stratigraphy.

Outstanding Student Award

Alka Tripathy
University of Texas

Alka majored in geology at the University of Texas at Austin and graduated in December 2003 with honors and special departmental honors. She will begin pursuing her Master of Science degree in geology at the University of Texas in January 2004 where she will focus on structure and tectonics. While at UT she has received many honors including the McCammon Scholarship, Guy E. Green Endowed Presidential Scholarship, Wayne Franklin Bowman Endowed Presidential Scholarship and Yager Undergraduate Field Scholarship. Additionally, she is a member of Phi Beta Kappa and has served as an officer in several campus organizations, including the Natural Sciences Council, Phi Beta Kinsolving and the Hindu Students Council. In addition to activities around campus, Alka has worked for Dr. Jim Connelly for two years processing samples for high-precision U-Pb geochronology, whole-rock analysis and LA-ICPMS analysis. In her free time, Alka enjoys dancing, reading and traveling.

Academic Liaison Committee Adds Resources and Goes on the HGS Website

Article and photos by Arthur E. Berman

Have you ever been asked to give a presentation on geology and geophysics for your children's school, a scout troop or a group of people who are not trained in science?

It should be easy, right?

Those who have accepted the invitation know that it can be a frustrating and difficult task. Many of the ideas and concepts that we as earth scientists take for granted are somewhat abstract or even esoteric to those outside our field. Sometimes an idea seems simple enough, but it's just hard to find a diagram that explains it clearly and concretely.

A series of PowerPoint® presentations are now available on the HGS website called HGS Petroleum Exploration Methods Parts I – IX. These cover all aspects of the origin of basins and petroleum, migration, trap and seal.

Help is available through the HGS's Academic Liaison Committee!

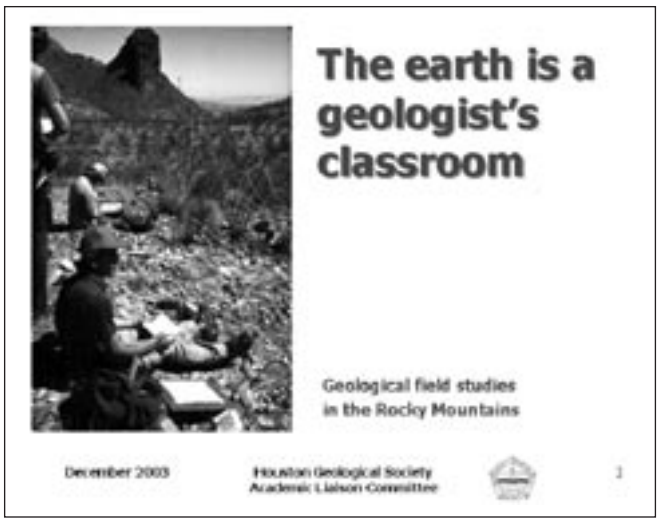
The Academic Liaison Committee of the HGS is responsible for providing resources and representatives to make the job of explaining geology to others, both children and adults, more manageable. Like all HGS committees, the Academic Liaison Committee is made up of volunteer members of our Society. The Academic Liaison Chairperson gets regular requests from area primary, middle and secondary schools, mainly about careers in geoscience. Universities and the business community submit requests for speakers and workshops on earth science topics including the petroleum and energy industry, environmental geology, hydrology and aerospace. These groups along with teacher associations, area museums and foundations come to the Academic Liaison Committee for support for diverse activities including job fairs, meetings, conventions, lectures and slide presentations.

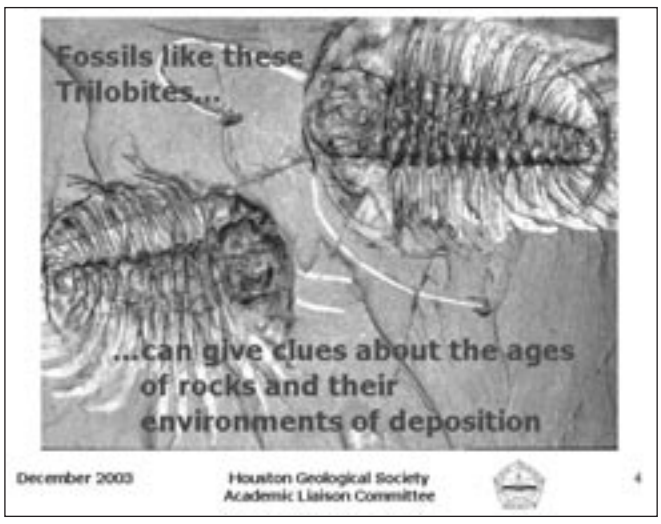
The resources provided by the Academic Liaison Committee have recently been expanded and many are available on the HGS Website. In the past the Academic Liaison Commitee had a mineral and fossil collection along with some maps and geologic time scales to supply committee volunteers and HGS members. New resources for the Academic Liaison Committee fall into three categories:

- New and expanded PowerPoint presentations
- *Earth Inquiry* Web-based teaching modules
- Updated Texas State maps.

PowerPoint Presentations

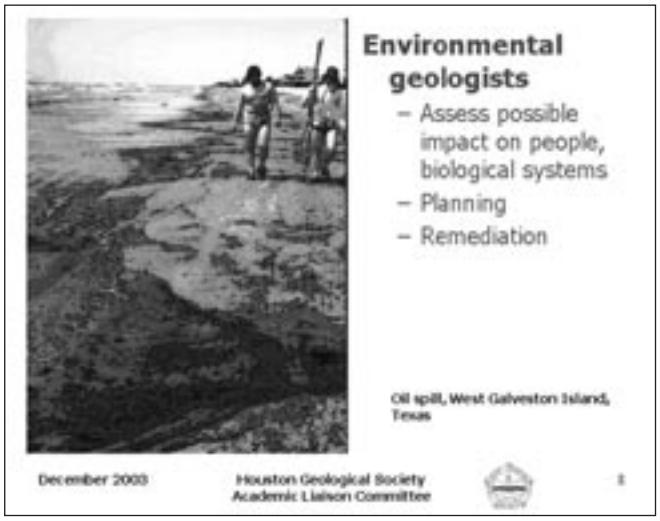
About three years ago Bill Dupré, then Academic Liaison chairman, and Inda Immega, long-time Academic Liaison volunteer, put together a series of **Academic Liaison Committee** *continued on page 33*

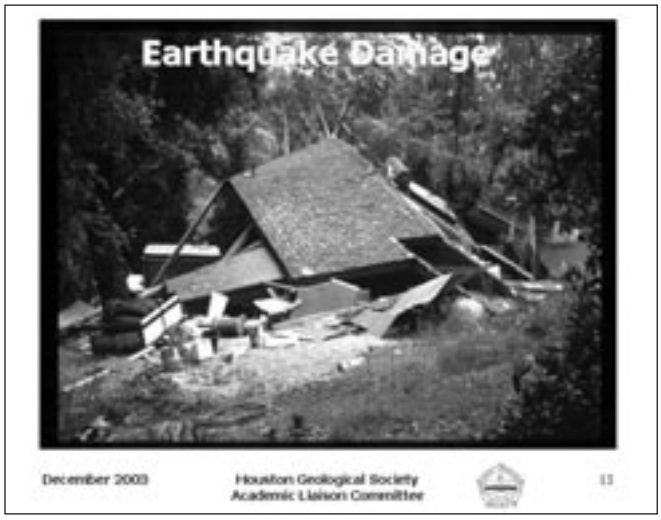




Example slides from Earth Science Presentations

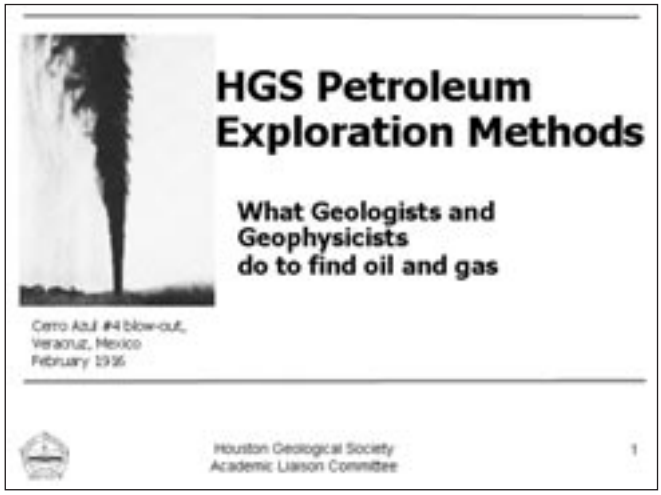
Academic Liaison Committee continued from page 31

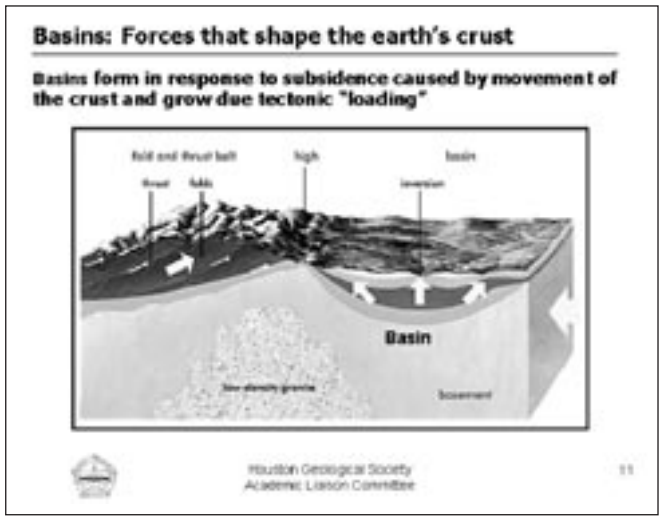




Example slides from Earth Science Presentations

CDs that included PowerPoint presentations about what geologists do. These presentations were an important step forward because now many resources could be sent by mail or picked up at the HGS office.

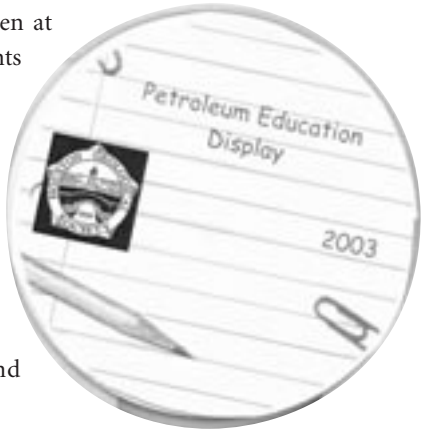




Example slides from HGS Petroleum Exploration Methods Parts I–IX

The Academic Liaison Committee has updated and improved those presentations that Dupré and Immega made to meet the needs of different age and interest groups. They are now called *Earth Science Presentations*. These presentations address what geology is and what geologists do.

A series of PowerPoint presentations are now available on the HGS website called *HGS Petroleum Exploration Methods Parts I–IX*. These cover all aspects of the origin of basins and petroleum, migration, trap and seal. They also cover practical aspects of mapping, seismic acquisition and processing, drilling and coring and the history and uses of petroleum.



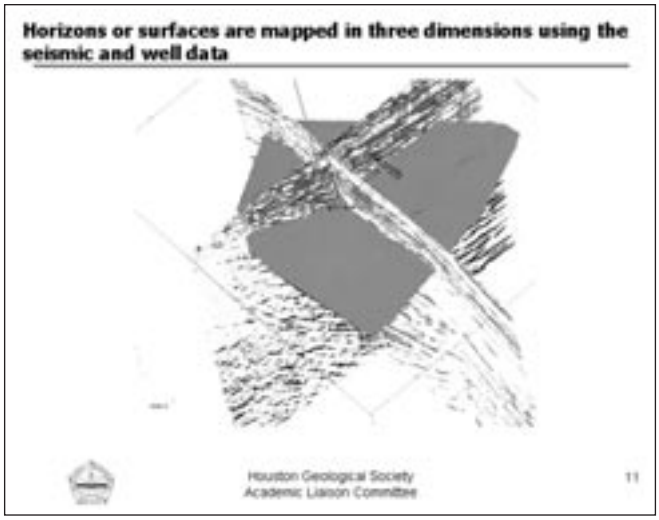
Many recent technical talks given at HGS meetings or sponsored events are now included in the Academic Liaison Committee resource base. For instance, the talks given by HGS members at the recent CAST convention at the Reliant Center are included in the archives along with the HGS booth displays put together by Jennifer Burton and Andrea Reynolds.

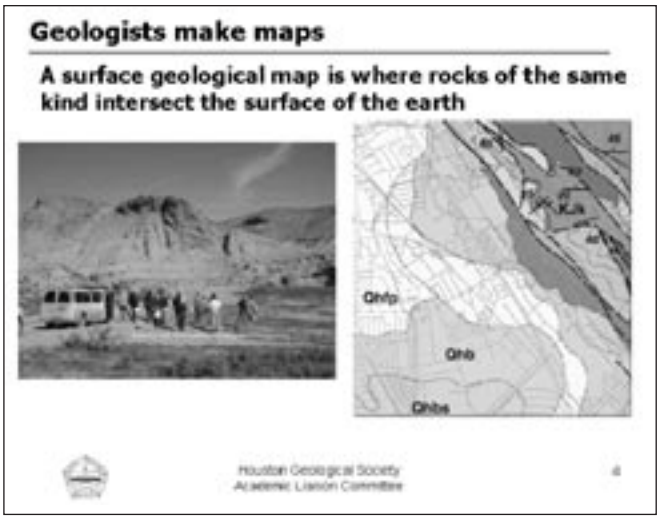
All the PowerPoint presentations mentioned in this article are now available on the HGS Website under "Presentations". See **Webnotes** (p.41) for specific instructions on how to view and download these resources.

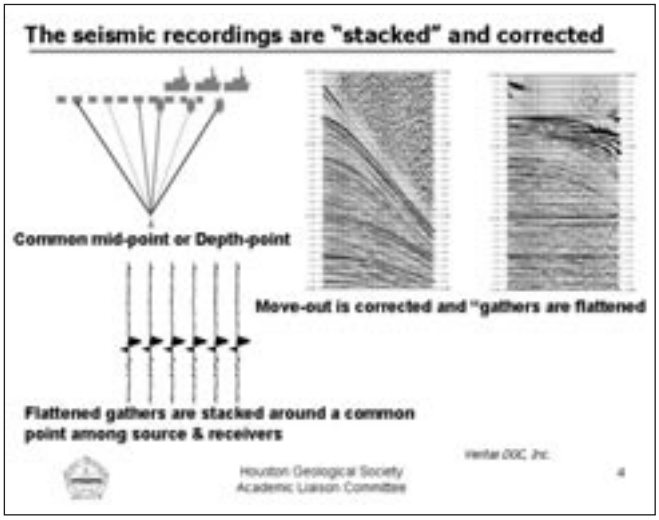
Earth Inquiry

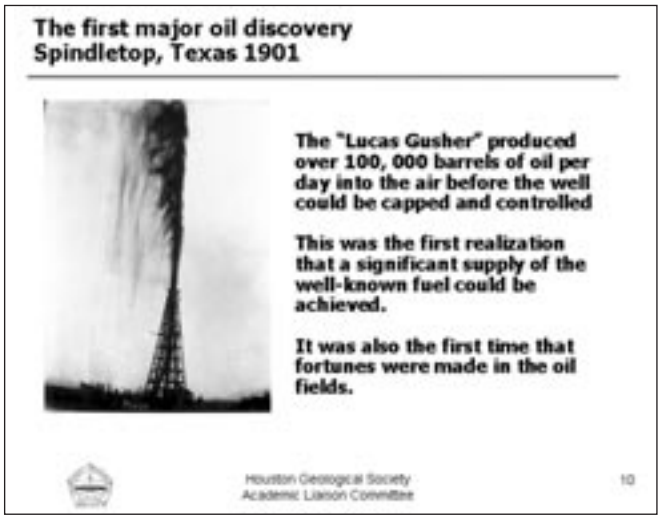
The HGS has purchased six *Earth Inquiry* series on earth science. A tremendous amount of geological data is now public domain and accessible on **Academic Liaison Committee** continued on page 34

Academic Liaison Committee continued from page 33

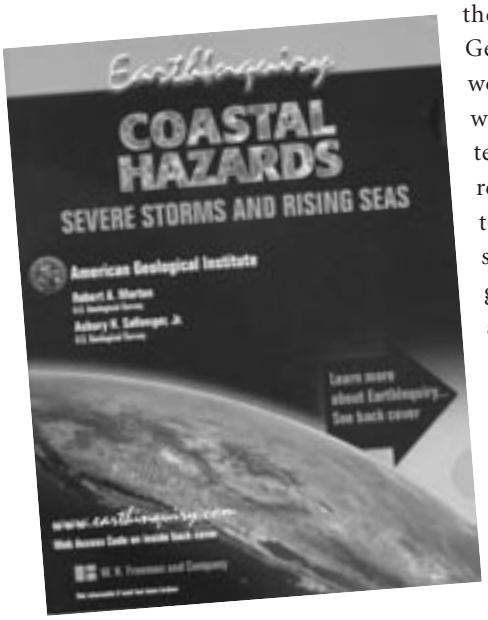








Example slides from HGS Presentation Archives



the Web. The American Geological Institute (AGI) working in collaboration with experienced geology teachers has combined resources with instructors to create *Earth Inquiry*, a series of Web-based investigation activities that allow students to develop understanding and scientific skills. Each module consists of a full-color work book and Web-delivered scientific information. *Earth Inquiry* allows students to analyze national and local data in order to explore real-world geological phenomena. It is an interactive series that provides students with a direct way of exploring and working with on-line data as a means of developing a better understanding of geological concepts.

Earth Inquiry topics currently available to HGS members include:

- Recurrence Interval of Floods
- Mineral Uses and Consumption
- Earthquakes and Plate Boundaries
- Long-Term Climate Change
- Coastal Hazards:
  Severe Storms and Rising Seas
- Monitoring and Mitigating Volcanic Hazards

Each module includes a work book that explains the activity and guides both instructor and student through the process of data collection and analysis. **Academic Liaison Committee** continued on page 37

Members on the Move

Stew Chuber will be honored at the annual AAPG Convention April 17-21, 2004 in Dallas. The AAPG House of Delegates is naming him a Distinguished Member of the AAPG House of Delegates and the AAPG is awarding him Honorary AAPG Membership.

Jim Work was recently appointed as Managing Director, Chief Executive Officer and General Manager of the Western Desert Operating Petroleum Company (WEPCO) in Alexandria, Egypt where he is responsible for day-to-day management operations. WEPCO finds and develops oil and gas prospects in Egypt. It is a joint venture of EGPC, the state oil company of Egypt, and IPR Transoil Corp., a Dallas-based oil company.

Jim is a Certified Petroleum Geologist and a Texas State Professional Geoscientist with a 30-year career in finding oil and gas reserves in the United States, Latin America and the Middle East with Cities Service Oil Co. (Citgo), Occidental Petroleum, Denison Mines Ltd., Trend Energy and Triton Energy.

Patrick Keenan has been named President of GeoMechanics International, Inc. (GMI), an oil and gas technology company providing proprietary geomechanics technologies and consulting services for drilling, production and completion operations. Keenan, with 29 years of international and US experience, has held a number of senior management positions, including CEO of Coherence Technology Company and VP Worldwide Operations for NUMAR. Most recently he was VP Business Development at Core Lab.

Jim Fulcher has a new position. He became a Senior Geologist, Deep Water Exploration, Gulf of Mexico, for Nexen Petroleum, Dallas effective October 1, 2003. He was previously Geological Advisor, DW GOM Exploration, Kerr-McGee, Houston.

Academic Liaison Committee continued from page 34

Each investigation consists of an introduction and definition of objectives, a problem-definition portion, an approach or methodology part and an assessment phase. Activity alternates between work book and the Web. The *Earth Inquiry* Website allows access to current and dynamically changing data on, for instance, earthquake activity and seismic readings from recording stations all over the world.

The work books are short, generally about 10 or 12 pages, and present excellent diagrams and photographs to illustrate concepts. Topics are made relevant through references to the affect of geological forces on ordinary people.

Academic Liaison Committee *continued on page 39*

losses to critical facilities, transportation and utility lines, or indirect economic losses.

• These annual earthquakes losses in the United States are almost equal to the losses experienced from floods and hurricanes. (Annual flood losses totaled $5.2 billion during the 1990's, according to the National Weather Service.)

• Since 1884, there have been over 30 major earthquakes within the United States that have produced significant loss of life.

• In the United States, while most of the estimated losses (84 percent) are in California, Washington, and Oregon, the distribution of elevated earthquake risk is more widespread. In terms of vulnerability, Hilo, Anchorage, Reno, Portland, Seattle, Tacoma, Salt Lake City, Charleston, Provo, Las Vegas, Albuquerque, Memphis, St. Louis, and even New York, Newark, Atlanta, Boston, and Philadelphia are on the top 40 list.

• It is estimated that the average annual worldwide repair and reconstruction costs following earthquake damage is about $60 billion. This figure does not include the virtually inestimable cost in human lives.

length, and their slip rate, or average annual movement, down through the centuries has been about the same. But in the last century, the North Anatolian fault has been more active, with 12 major quakes to the San Andreas' two, and its magnitude-7.4 Aug. 17, 1999, quake was far more costly in terms of human life than anything California has experienced. There were more than 17,000 confirmed fatalities in the 1999 quake, 20,000 remain unaccounted for, and more than 1 million people fled their homes for extended periods.

Los Angeles Times, Calendar Section, 6 July 2001

We hear accounts such as...

BUFFALO, NY Many residents of New York State and the northeast United States woke this morning to the rumbling of an earthquake. According to the United States Geological Survey (USGS), the earthquake struck at 6:50 a.m. (EDT) today, approximately 15 miles southwest of Plattsburgh, New York. The USGS reported a preliminary magnitude of 5.1. Plattsburgh is located in New York State's Adirondack Mountain region, an area of relatively frequent seismic activity. Shaking was felt throughout New England, and as far west as Cleveland, Ohio; as far south as Baltimore, Maryland; and as far north as Quebec, Canada.

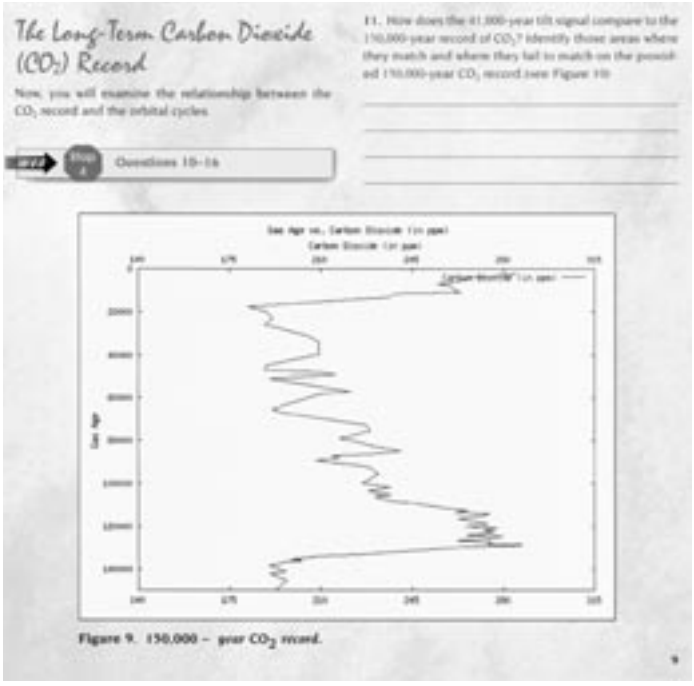
MCEER News Release, April 20, 2002, Research Foundation SUNY

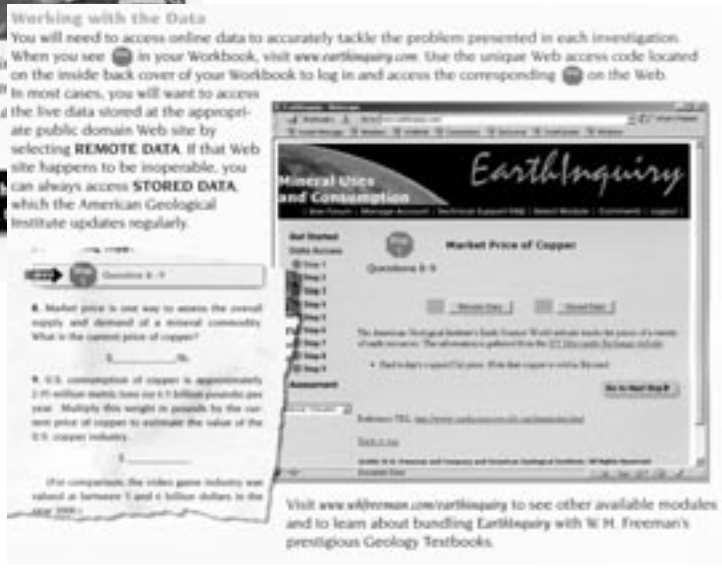
...and we see graphic pictures of these events

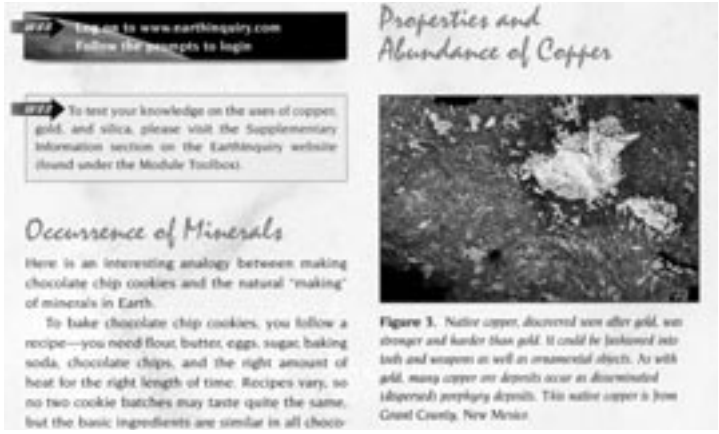
Figure 1 A *condominium build*
magnitude–7.4 *temt, Turkey Ea*
mission of ABS Consulting (www.

Log on to www.earth
Follow the prompts

2







Example Earth Inquiry Materials.

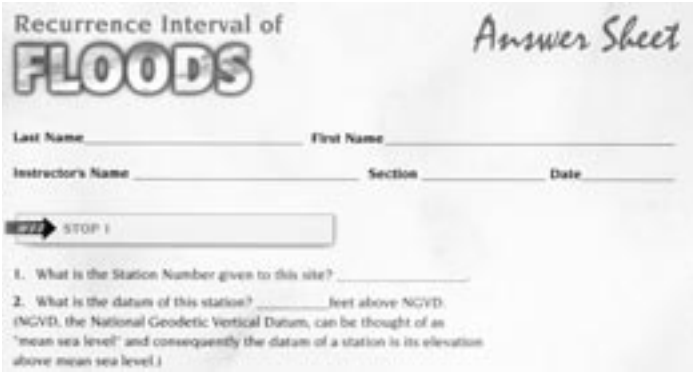
Academic Liaison Committee continued from page 37

Earth Inquiry work flow is sequential within the work book but interactive between the book and the *Earth Inquiry* Website where real data are presented for analysis. In these examples it is clear that the presentation style is both graphic and varied and composed in an attractive way that is designed for visual impact.

In this example (below) the topic of mineral price is addressed by examining real price data on the Website and then developing graphs and histograms in the workbook. This exercise is then followed by an explanation of the physical properties and abundance of the mineral in question, in this case, copper.

Similarly, flood, earthquake and volcanic activity is monitored at real stations through the Website and then made relevant through work book exercises and explanations.


NAME COURSE
INSTRUCTOR DATE
FROM THE AMERICAN GEOLOGICAL INSTITUTE and W. H. FREEMAN AND COMPANY
Earth Inquiry
Monitoring and Mitigating
VOLCANIC HAZARDS
Lead Author:
Tanya Furman
Introduction
Figure 1: Schematic diagram indicating the possible hazards associated with a volcanic eruption. (Modified from U.S. Geological Survey)


Recurrence Interval of
FLOODS
Answer Sheet
Last Name First Name
Instructor's Name Section Date
STOP 1
1. What is the Station Number given to this site?
2. What is the datum of this station? feet above NGVD.
(NGVD, the National Geodetic Vertical Datum, can be thought of as "mean sea level" and consequently the datum of a station is its elevation above mean sea level.)

New and Updated Map Resources

Over the years the Academic Liaison Committee collection of maps and other support material has become either worn or lost. The following new maps have been added to the resource base:

- New, full-scale geological maps of Texas
- Energy resource maps of Texas
- Tectonic framework of Texas, maps and text
- Mineral resource map of Texas.

Academic Liaison Committee Chairperson Sought

The chair of the HGS Academic Liaison Committee rotates every few years. Art Berman has been its chairperson for 3 years. He will become the *HGS Bulletin* Editor July 1 so the Academic Liaison Committee is conducting a search for a new Chairperson. Contact Art if you or anyone you know are interested in guiding that committee during the next few fiscal years (aberman@houston.rr.com). You or they need not be members of the HGS, but some level of membership is very much encouraged.

The Chairperson of the Academic Liaison Committee is responsible for directing requests for academic assistance to appropriate HGS members and volunteers who can provide the needed services. Requests come from area school districts, universities, scouting-related groups, business groups, teacher associations and museums and foundations for the support of diverse activities including job fairs, meetings, conventions, lectures and slide presentations.

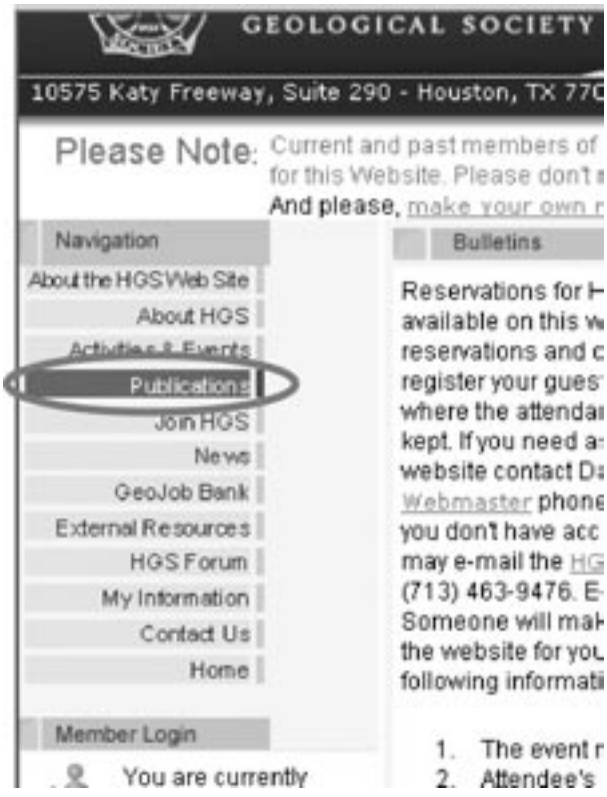
The Chairperson is also responsible for maintaining, updating and distributing resources and information necessary to meet these requests including mineral and fossil collections, slide presentations, geologic and other mineral and energy-use maps, displays, booth materials and teaching/project aids and materials. The Chairperson provides a monthly report to a Director on the HGS Executive Board summarizing committee activities and prepares and administers a modest annual budget provided by the HGS for maintenance of resources. ■

A FEW VACANCIES MAY REMAIN
FOR THE JUNE 5-13, 2004
GRAND CANYON GEOLOGY FIELD TRIP
CONTACT DAVE LAZOR AT
jdlazoroilngas@aol.com
FOR MORE INFORMATION

What's New on the HGS Website this Month?

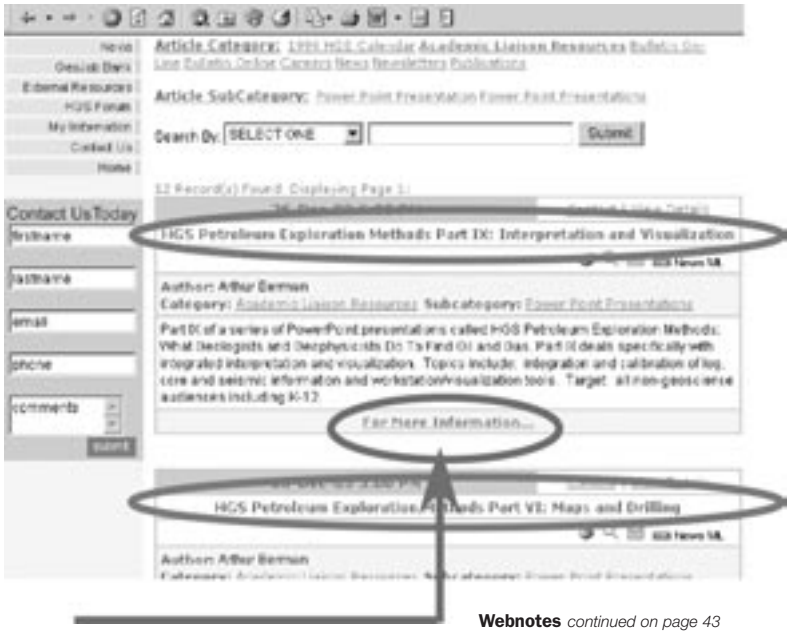
Instructions for Viewing and Downloading Academic Liaison/Educational Resource Presentations

1. Log on www.hgs.org and click "Publications."



2. When you reach the "Articles" page after clicking "Publications," click "Academic Liaison Resources" which lists only the PowerPoint presentations available for Academic Liaison resources. Scroll down to the presentation you want to view or download.

3. Click "For More Information" and scroll down to the PowerPoint Icon and click to download.



Webnotes *continued on page 43*

GeoScienceWorld to Launch On-line Access to Leading Journals in the Earth Sciences

Alexandria, VA

GeoScienceWorld (GSW) is an electronic research resource unprecedented in the earth sciences. GSW will deliver on-line the aggregated journal content of American Association of Petroleum Geologists, American Geological Institute, Geological Society of America, Geological Society of London, Mineralogical Society of America, Society for Sedimentary Geology and Society of Exploration Geophysicists as well as other earth science publishers and institutes. It will feature full text searches across the journals and will link among included journal articles and, where possible, other on-line journals. GeoRef, the premier bibliographic database in the geosciences, will be fully integrated into GSW, expanding the search capability to include nearly all geoscience literature. More detailed information about GeoScienceWorld (GSW) can be found at (http://www.GeoScienceWorld.org).

Note from Robbie Gries to HGS members:

GSW will also introduce a subscription for consultants for about $750-1,000 per year that designates a university in a developing country as the recipient. The consultant will then be treated like a faculty member of that university and have access to GSW including GeoRef. This is a great way to access a library knowing that hundreds of students and faculty will also have access. It is still a business expense because it provides a service to the consultant. Contact me for details! rrgries@aol.com and 303-296-3435.

Remembrance

Since the last report from the Remembrances Committee (December 2, 2003), our geological community has lost the following member:

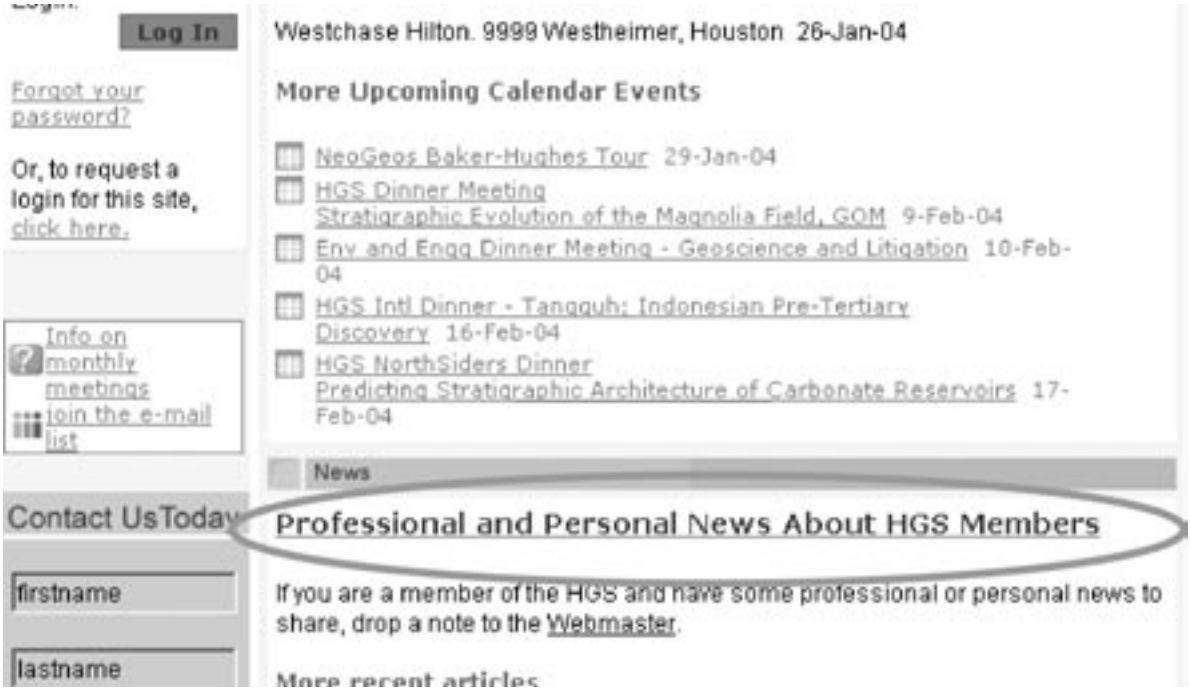
Thomas Hughes Philpott of Mandeville, LA died on Sunday, January 18, 2004. He is survived by his wife, June Kerlin Philpott, his son, A. Richard Philpott, his stepchildren, Dianna Drake, H. Warren Drake, Jr., Orie Kerlin Drake, Kerry Bosley Drake and de Sha Drake Bahlinger. He is also survived by a stepbrother, Jan Butts, and ten grandchildren. His son Stanley Philpott preceded him in death. A native of Chicago, IL, former resident of Metairie and Mandeville, LA for the past six years, Mr. Philpott was a graduate of the University of Oklahoma and an accomplished petroleum geologist. He worked for many petroleum companies in the Gulf Coast region and was also a successful independent geologist and consultant. Mr. Philpott was a founding member of the Gulf Coast Association of Geological Societies and was the recipient of its Lifetime Achievement Award for his dedicated service. He was past-president of numerous geological societies and institutions. ■

Wiley B. Harle passed away December 7, 2003, at the age of 79. Wiley served with the Army Air Corps during WWII. In 1950 he earned a BS in Geology from the University of Texas. Wiley was an Emeritus Member of the HGS. A memorial donation will be made to the HGS Undergraduate Scholarship Fund. ■

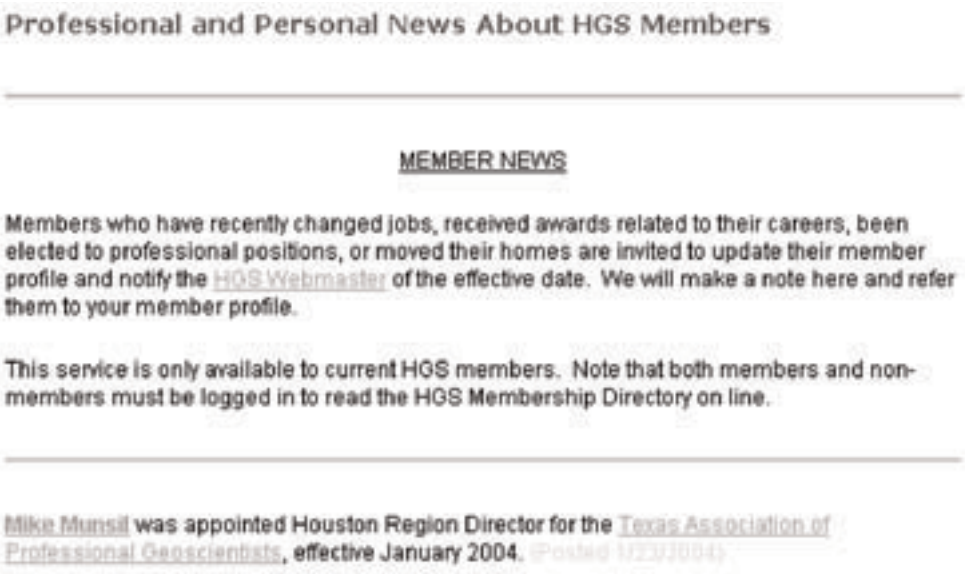
Webnotes continued from page 41

Instructions for Viewing Member News

1. Log on to www.hgs.org and scroll down to "Professional and Personal News About HGS Members."



2. Click "Professional and Personal News About HGS Members"



3. This brings you to "Member News." ■

Science Engineering Fair Of Houston

November 21, 2003
Houston Geological Society
10575 Katy Freeway, Ste. 290
Houston, TX 77024-1097

Dear Friends of SEFH:
This is to acknowledge your contribution of $1,250.00 to the 2003 Science Engineering Fair of Houston that was held on March 27-29, 2003, at the Reliant Arena & Exhibition Center. As you know, we are an all-volunteer organization that is recognized by the Internal Revenue Service as a 501(c) (3) not-for-profit educational organization. All of your contribution was applied to the normal operating costs that we incur each year for the fair.

From a financial point of view, 2003 was not a good year for us. The level of contributions was down about 25% and as a result, we were unable to award the 36 scholarships that we normally give to the Senior Division Place Award winners. While this was a major disappointment to these students, I am more concerned about our financial status for 2004. For several reasons, it became necessary for us to move our 2004 fair (our 45th consecutive fair) to the Brown Convention Center-March 25-27, 2004. At this point, I am just not able to estimate how much our operating costs will increase as a result of this move. We have already cancelled our annual awards dinner for 2004. The only thing I am certain of is that if we have another "off" year for contributions, we will have some really tough discussions to make for the 2005 fair. We no longer have a cash reserve to fall back on and there is no one to bail us out.

Sincerely,
Larry Spears

Geoscience Judges Needed for the 45th Annual Science Engineering Fair of Houston

by ***Jorden Dawne***

Geoscience judges are needed for the 45th Annual Science Engineering Fair of Houston (SEFH) on March 26, 2004, at the Brown Convention Center. The SEFH is sponsored by the Engineering, Science and Technology Council of Houston (ECH), University of Houston Downtown and the Houston Museum of Natural Science. Last year there were 1,324 student entries from 140 public and private schools representing the 16-county surrounding area.

With approximately 28,000 projects entered in the preliminary school/district fair competitions, more students participate in the judging process than any other science fair in the world.

Each year HGS gives a special award for each division of the SEFH. The divisions are: Junior (7th and 8th grades), Ninth Grade, and Senior (10th–12th grades). The Special Award consists of a plaque and books selected from HGS publications. HGS members are encouraged to volunteer for these judging positions, especially in the earth science category. Forms for volunteering can be found on the fair's Website: www.dt.uh.edu/academic/colleges/sciences/naturalscience/SEFH/. Contact Richard Howe at rghowe@pdq.net or 713-467-2900 for more information. Howe is also an HGS representative on the ECH and will be its president next year. In 2003 81 businesses, industries, technical societies, government agencies and educational institutions presented a total of 420 "Special Awards," fellowships and scholarships at the fair.

HGS also selects two summer interns for the Houston Museum of Natural Science from among Science Engineering Fair participants. Last year's interns were recognized at the HGS Guest Night in June. These internships are sponsored by the museum and HGS and are given through ECH. **Geoscience Judges Needed** *continued on page 47*

Geoscience Judges Needed continued from page 41

This year's president of the SEFH and also an EHC representative is longtime HGS member Claudia Ludwig. SEFH strongly believes that students learn how to use mathematics and science as well as learning the material in the classroom. With approximately 28,000 projects entered in the preliminary school/district fair competitions, more students participate in the judging process than any other science fair in the world. Major regional fair winners are eligible to compete in the international science and engineering fair to be held in Portland, Oregon later this year.

The two top 2003 individual project winners in both the Junior and Ninth Grade Division received special scholarships from the American Petroleum Institute. The four Grand Award winners received special scholarships from Shell Oil. SEFH provided three Teacher of the Year Awards and Toyota Motors selected one teacher for "The Toyota $10,000 Shopping Spree Award." Shell Oil also sponsored and hosted the annual Awards Banquet. Junior Division winners were eligible to enter the national Discovery Young Scientist Challenge competition. The four Grand Award winners represented SEFH at the annual International Science and Engineering Fair. ■

Earth Day April 22, 2004

by ***Glenn Lowenstein***
Environmental and Engineering Group

The HGS Environmental and Engineering Group will again be participating in the Houston area Earth Day festivals this year. In past years the HGS Environmental and Engineering Group has used the Earth Day events to raise awareness of the efforts of Houston area geologists to help clean and maintain the environment and to educate the public to geological studies.

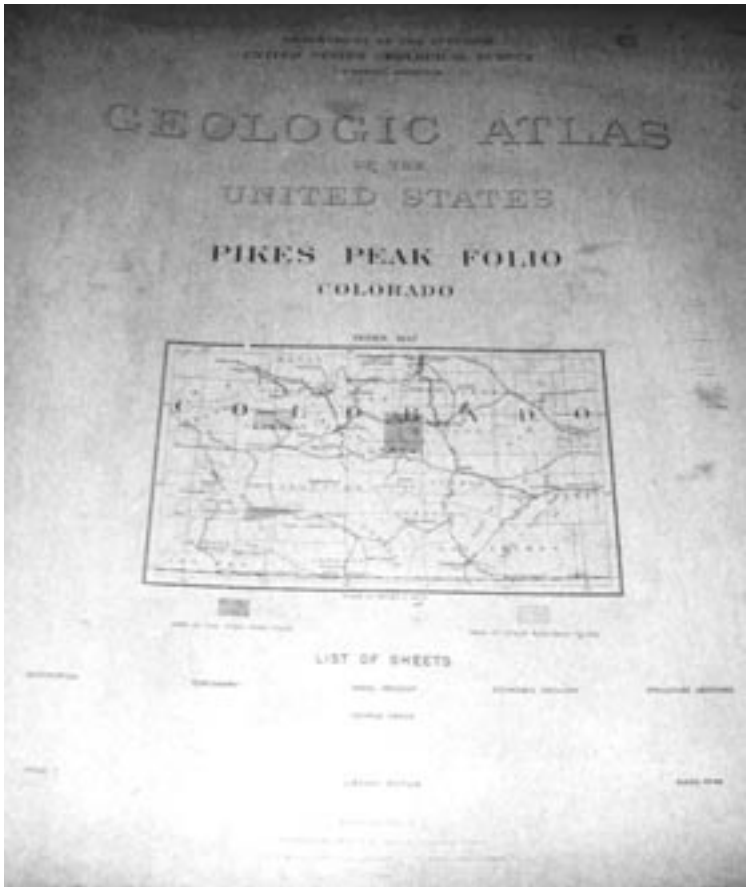
The HGS Environmental and Engineering Group is seeking volunteers to plan and participate in Earth Day activities. Interested individuals should contact Daniel Beaber at dbeaber@earthlink.net.

Donations of related materials including rock samples and environmentally related items (sampling equipment, demonstration materials, etc.) would also be greatly appreciated.

Transfer of USGS Folio Collection from Texas to Colorado School of Mines Geology Museum

Article and Photos by Arthur E. Berman

The HGS Academic Liaison Committee has successfully arranged donation of 33 original, valuable USGS Folios to the Colorado School of Mines Geology Museum in Golden, Colorado. The folios are early issues of geologic reports on areas throughout the Rocky Mountains including what are now national parks, important mining districts and areas of tourist interest. The folios cover areas as diverse as Yellowstone, Pikes Peak and the Bisbee Mining District and date from the early 1900s. Several of the folios are original editions.



USGS Pikes Peak Folio from early 1900s

I got a call in early September from Michael Jones, a geology teacher at Lee College in Baytown, Texas. He explained that a colleague of his at Lee College had a collection of old USGS folios and wanted to donate them but did not know the best way to accomplish this. Jones had gotten my name from the HGS because I am Chairman of the HGS Academic Liaison Committee.

Academic Liaison is a committee that is responsible for interactions between the HGS and academic institutions and groups requesting geoscience information. Typically the Academic Liaison Committee is involved with Houston area schools, job fairs, scout troops and companies seeking information on what earth scientists do and what earth science is about.

Jones referred me to Bob and Glenda Wright in Baytown. Bob is on the faculty in biological science at Lee College. Bob and Glenda had a collection of USGS folios that they had gotten from Bob's cousin Louis. Louis had kept the folios stored in a barn in East Texas for many years and had asked Bob and Glenda to help him locate a more appropriate place to keep and preserve them.

I visited Bob and Glenda at their home in Baytown. They had all the folios laid out on large tables. Bob had inventoried and organized

Transfer of USGS Folio Collection *continued on page 51*

Bob Wright

Paul Bartos (left), CSM Geology Museum Curator

Transfer of USGS Folio Collection

continued from page 49

the collection and determined that almost most of the documents were in excellent condition despite their long storage in cardboard boxes in an East Texas barn.

I suggested several universities in the Rocky Mountain region as possible recipients for the folios including the Colorado School of Mines, University of Colorado, University of Wyoming and University of Montana. I recommended the Colorado School of Mines because of its well-known Geology Museum and convenient location west of Denver (the fact that I am an alumnus may have also played some role in my recommendation).

CSM Geology Museum

I contacted Paul Bartos, Director (also a geologist!) of the CSM Geology Museum. Paul enthusiastically agreed to take possession of the folio collection. He added that the Geology Museum was at that moment moving into a brand-new building and that the donation would help showcase the opening.

It took several months to make all the arrangements, get the documents appraised and ship them to Colorado. At year-end 2003, however, the USGS folio collection had a new home at the Colorado School of Mines Geology Museum in Golden, Colorado. ■

HGA *and* GeoWives **News**

HGA

*By **Betty Alfred**, President*

What a delightful time we had February 16 at our Game Day. Daisy Wood and her capable and hard-working committee treated us to a most enjoyable day. Good company and games—and, as promised, a scrumptious buffet—Junior League style. Thanks for a job well done!

I am looking forward to the wearing of the "Green" Wednesday March 17. We will be meeting for luncheon at Vargo's and the program presented by the Tip Top Tappers Dance Team. It holds promise of being a winner. Please join us for the fun. Guests are welcome.

The Executive Board has named and approved the nominating committee for the HGA. Jan Stevenson will be the Chair and serving with her will be Millie Tonn, Audrey Tompkins, Margery Ambrose and Betty Alfred. They will be hard at work to get a slate of new officers to present to you.

Have a great spring! See you around.

GeoWives

Spring Tour

*By **Martha Lou Broussard***

The GeoWives Spring Tour will be on Thursday, March 11 to Independence and Brenham, Texas, departing from Memorial Drive Presbyterian Church promptly at 8:30 a.m. We will travel first to Independence to continue our study of Sam Houston at the historic Independence Baptist Church where Sam was converted and baptized in 1854. Nancy Lea, Sam's mother-in-law, resided in Independence, and his wife Margaret moved there after his death. Both Nancy and Margaret are buried in the churchyard.

Independence was settled in 1824 by John P. Cole, one of Stephen F. Austin's original 300 and we will tour his homestead and also view the ruins of the original Baylor University. Our last stop of the morning will be at the Antique Rose Emporium for a tour and an opportunity to purchase plants for our spring gardens.

After lunch in Brenham there will be time to tour the Brenham Heritage Museum or shop the many antique shops around the Courthouse Square. Our last stop will be at the Pleasant Hill Winery for a tour and tasting. We will return to Houston at about 5p.m., full of knowledge, food and wine and maybe with a few purchases!

Please send your check for $21 which includes transportation, entrance fees, lunch and snacks to Jean Alfred by March 8. HGA and HGS members are welcome. Hope to see you on the bus.

Please see our membership application on page 50.

You are invited to become a member of

Houston Geological Auxiliary

2003–2004 dues are $20.00

make check payable to *Houston Geological Auxiliary* and mail to:

Audrey Tomkins • 3007 Stalley • Houston, Texas 77092

HGA YEARBOOK INFORMATION

Last Name	First Name	Name Tag

Spouse Name	Name Tag	HGS Members Company

Home Phone	Business Phone	Business Fax
( )	( )	( )

Street Address	City	Zip

Birthday, Month, Day ONLY	Email Address	Home Fax
		( )