HGS Bulletin
Houston Geological Society
Volume 49 Number 6
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The Bulletin
Houston Geological Society

Volume 49, Number 6 February 2007

In Every Issue

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Thanks Joan!

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About the Cover: Cover: Reefs of Southwest Madagascar. The white areas on the reefs fringing the barrier islands indicate damage (bleaching) caused by high water temperatures in 1998 and 2000. See the related article In the News on page ??. NASA image created by Jesse Allen, Earth Observatory, using data provided courtesy of the University of Maryland's Global Land Cover Facility. Can be viewed at http://earthobservatory.nasa.gov. Web site visited January 4, 2007.

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by ***Steve Brachman***

Thanks to All Our Volunteers

JOAN HENSHAW is retiring this month after giving 10 years of wonderful service to the HGS. She has truly been a joy to work with. DEBORAH SACREY, who is stepping down after many years as head of the Office Committee, has done a little detective work on Joan. We have included Deborah's thoughtful piece in this month's issue of the *Bulletin*.

The HGS is fortunate to have so many hard-working volunteers. One of the toughest jobs for our volunteer groups is organizing the monthly meetings. Many of us are familiar with the tremendous job that vice president ANDREA REYNOLDS and her committee do organizing the General Lunch and Dinner meetings, but we may be less familiar with the other groups that organize events. Andrea has provided the following information about the people and groups who organize and run our other technical programs and meetings.

We thank all those who volunteered their time to make the HGS successful this past year and ask those members who have a little time and energy to step forward this year and volunteer for a committee or project.

MIKE JONES, North American Explorationists, has been a lot of fun to work with. As a young professional with a lot of energy and enthusiasm he is a huge asset to the HGS. He has done an excellent job organizing luncheons and dinners and finding good speakers and exciting topics for those events.

FRANK WALLES and GARY COBURN, Northsiders, have been very active this year, and have really infused the Northsiders with a lot of energy. They have found some great speakers and some very popular talks this year. Other committee members who have contributed greatly are the new treasurer DAVID TONNER who handles the Texas Petroleum Geologists certificates, ALLAN SMITH who helps with meetings setup and always seems to have good ideas, and JANET COMBES who assists with the technical programs.

DANIEL BEABER, Environmental and Engineering, assumed the role of chairman this year and has aggressively pursued the task of making the group a more integral part of the HGS. Previous chair BRUCE WOODHOUSE and CHRISTINA HIGGINBOTHUM have been heavily involved with event planning.

DALE BIRD, International, and his committee have been very active and have assembled an excellent technical program. The Sheriff Lecture, very well organized by AL DANFORTH, sold-out. Board member BONNIE MILNE has added her energy to the mix and has been a tremendous asset.

In his job as treasurer-elect JOHN JORDAN has helped keep the meetings running smoothly. JEFF LUND has been a great help with the Legendary Fields Program and PAUL BABCOCK has been a veritable fountain of helpful ideas.

In addition to those mentioned, many more members have volunteered their time to make the HGS successful this past year. We thank them all and ask those with a little time and some energy to step forward this year and volunteer for a committee or a project. And the next time you attend a meeting or technical program, think about all those who worked to make the event possible. You may even want to thank them for their time, effort and service to the HGS. ■

HGS and GSH Have Moved

As of December 29, 2006, the new home for the Houston Geological Society (HGS) and the Geophysical Society of Houston (GSH) is at

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HGS *Bulletin* Instructions to Authors

All materials are due by the 15th of the month, 6 weeks before issue publication. Abstracts should be 500 words or less; extended abstracts up to 1000 words; articles can be any length but brevity is preferred as we have a physical page limit within our current publishing contract. All submissions are subject to editorial review and revision.

Text should be submitted by email as an attached text or Word file or on a clearly labeled diskette in Word format with a hardcopy printout to the Editor.

Figures, maps, diagrams, etc., should be digital files using Adobe Illustrator, Freehand, Canvas or CorelDraw. Files should be saved and submitted in .eps (Adobe Illustrator) format. Send them as separate attachments via email or on a diskette or CD if they are larger than 1 MEG each, accompanied by figure captions that include the file name of the desired image. DO NOT EMBED them into your text document; they must be sent as separate files from the text. DO NOT USE POWERPOINT, CLIP ART or Internet images (72-DPI resolution) as these do not have adequate resolution for the printed page and cannot be accepted. All digital files must have 300-DPI resolution or greater at the approximate size the figure will be printed.

Photographs may be digital or hard copy. Hard copies must be printed on glossy paper with the author's name, photo or figure number and caption on the back. Digital files must be submitted in .jpg or .eps format with 300-DPI or greater resolution at the printing size and be accompanied by figure captions that are linked by the file name of the image. The images should be submitted as individual email attachments (if less than 1 MB) or on CD or zip disk.

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The *Bulletin* is printed digitally using QuarkXPress. We no longer use negatives or camera-ready advertising material. Call the HGS office for availability of ad space and for digital guidelines and necessary forms or email to ads@hgs.org. Advertising is accepted on a space-available basis. **Deadline for submitting material is 6 weeks prior to the first of the month in which the ad appears.**

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No. of Issues	Eighth	Quarter	Half	Full	Full	Full	Full	Half	Quarter
10	$762	$1284	$2304	$4383	$5260	$7250	$7000	$6350	$2500
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$125 per 10 Issues – Send two cards ($25 for each additional name on same card)	(FULL COLOR) $6250 - 10 issues	(Black and editor's choice) add 15% to B&W cost

HGS Website Advertising Rates

The HGS Website is seen by many people each day. In recent months, we averaged about 47,000 visitors per month. You have a variety of options for advertising your company, your job openings, or your services on the Website. There are two sizes of ads on the home page, a 165x55 pixel logo along the right-hand border and a new 460x55 Banner ad across the top.

We also offer a Banner ad across the top of our monthly Newsletters sent to registered users of the Website. Job postings are available for $100 for 30 days on the Website but they must be geoscience jobs of interest to our members. Current HGS members may post their resumes at no charge. If you have a product or service available at no charge, you can post it in the Business Directory at no charge. Geo-related Business Cards and job openings may be posted directly by any registered user and members may post their own resumes. They will be activated as soon as practical.

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	Logo 165x55	Banner 460x55	Card (with link)	Business Card	Banner Ad (with link)	(Members only)	Posting
One year	$750.00		$60.00	$150.00	$2,000.00	Free	
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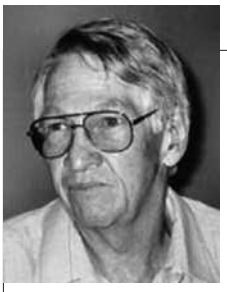

by ***Bill Rizer***
editor@hgs.org

Have You Been Reading the Governmental Update Section?

Probably many of you are aware of the "Governmental Update" column by Henry Wise and Arlin Howles that appears each month in the *Bulletin*. For those of you who have not read this column, make a point to take a look at it this month. Wise and Howles work very hard to find and present governmental goings-on at both the state and national level that have relevance to our community in general and geoscientists in the HGS in particular. This month they describe and summarize a large number of issues including the recent Bureau of Land Management ruling granting leases to Shell, Chevron and EGL Resources for oil shale test pilots in the Green River Formation in the Piceance Basin of northwestern Colorado. This effort is noteworthy because there is an estimated 800 billion barrels (or more) of oil equivalent locked in the shale. Unlocking this geochemically immature resource could mean energy independence for this country and all that would imply. The companies taking this risk should be applauded for their initiative and their trust that technology both old and new will make the oil shale economic.

…companies taking this risk should be applauded for their initiative and their trust that technology both old and new will make the Colorado oil shale economic.

Wise and Howles provide an extensive summary of the changes in the various House and Senate committees that resulted from the democratic victory in the November elections last year. They profile the new committee chairs and discuss what we can expect from them in the coming months. They then go on to discuss the lawsuit brought by the State of Massachusetts against the Environmental Protection Agency for changing its position in concluding that the EPA lacks legal authority to regulate greenhouse gasses. This suit is now being considered by the Supreme Court. Political observers will appreciate the questions asked and statements made by justices from the liberal, conservative and moderate factions of the court.

I'd also like to call your attention to an article by Alison Henning on the excellent community service work that she and other HGS members have done to clean up, map and document the Evergreen Cemetery, an abandoned and neglected cemetery just east of downtown Houston. They are working with Project RESPECT and 17 local teachers to provide the information they hope will result in an official designation for the cemetery as a historical landmark. A ground penetrating radar system and GPS units loaned by Rice University are being used to locate and map the true boundaries of the cemetery and the unmarked and long-buried graves that date back to the 19th century. The HGS's involvement in this project benefits the community in a number of ways; it helps recover a lost part of our rich history, it gives the teachers valuable hands-on experience in the scientific method that they can bring back to their classrooms and pass on to their students, and it demonstrates how the activism and skill of a few individuals can energize the HGS membership and other elements in the community to undertake a project that will benefit all of Houston. Alison, Steve Levine and all those who volunteered for this project are to be applauded. All of you out there with just a little free time and energy are encouraged to get involved in this and other programs sponsored by our society. We can make a difference! ■

In the News

by ***Bill Rizer***

Coral Reefs Worldwide under Stress

If you are like me you have probably heard something about coral reef systems under some sort of environmental stress, but may not be aware of how serious the problem really is. In fact, the coral reef ecosystem has been degrading for some time and is now in danger of collapse. An article published in *ScienceDaily* on December 13, 2006, describes how recent work by John Pandolfi on the history of reef ecosystems in Papua New Guinea demonstrates that the large scale die-offs of coral reefs occurring in the present day are unprecedented, at least in the past 11,000 years. The degradation of coral reefs worldwide is so advanced that Pandolfi et al. (2003) describe the situation as a crisis and conclude:

> "Regardless of the severity of increasing threats from pollution, disease, and coral bleaching, our results demonstrate that coral reef ecosystems will not survive for more than a few decades

In the News *continued on page 19*

Modern Terrigenous Clastic Depositional Systems

Leader: Walter J. Sexton, Athena Technologies, Inc., Columbia, South Carolina
Dates: April 13-20; May 12-19; September 22-29, 2007
Location: Begins in Columbia and ends in Charleston, South Carolina
Tuition: $2,500 (increases to $2600 one month prior to each start date), includes ground transportation to Charleston, water transportation, guidebook, beach cookout, modern core workshop, lunch on the fluvial day, and CD-ROM
Limit: 27
Content: 5.6 CEU

Who Should Attend
Geoscientists and engineers who need to understand the sedimentology, facies architecture, and sequence stratigraphy of modern terrigenous clastic depositional systems in tidal estuarine, incised valley, shelf, shoreface barrier island, fluvial and alluvial environments.

Field Seminars

Clastic Reservoir Facies and Sequence Stratigraphic Analysis of Alluvial Plain, Shoreface, Deltaic, and Shelf Depositional Systems

Leader: Thomas A. Ryer, The ARIES Group, LLC, Katy, TX
Date: April 22-28, 2007
Location: Begins and ends in Salt Lake City, Utah
Tuition: $1,800 (increases to $1,900 after 3/23/07), includes field transportation, lunches in the field, guidebook
Limit: 15
Content: 5.0 CEU

Who Should Attend
Exploration and development geologists, geophysicists, reservoir engineers, log analysts, and managers of exploration and development programs who want a better understanding of the facies variations that control the distribution of clastic reservoirs.

April Education Opportunities with AAPG!!

Short Courses

Basic Well Log Analysis

Dates: April 23-26; July 24-27, 2007
Locations: Denver, CO (April); Austin, TX (July)
Tuition: $1095, AAPG members; $1,195, non-members (increases to $1195/1295 after 3/26/07, for April course, and after 6/26/07, for July course); includes course notes, refreshments, and a copy of Basic Well Log Analysis by George Asquith and Daniel Krygowski, with Neil Hurley and Steve Henderson
Content: 2.8 CEU
Instructors: George B. Asquith, Texas Tech University, Lubbock, TX; Daniel A. Krygowski, Chevron, Houston, TX

Who Should Attend
Geologists, engineers, geophysicists, and other professionals with a need to understand the responses of common logging measurements to subsurface conditions, and become familiar with basic openhole well log interpretation techniques.

Basic Petroleum Geology for the Non-Geologist

Dates: April 24-26; August 28-30; September 18-20; December 4-6, 2007
Locations: Houston, TX (April, August and December), Denver, CO (September)
Tuition: $1195 (increases to $1295 one month prior to each course date), includes the textbook "Nontechnical Guide to Petroleum Geology, Exploration, Drilling and Production", course notes, various maps and glossaries, and daily morning and afternoon refreshments.
Content: 2.1 CEU
Instructor: Norman Hyne, The University of Tulsa, Tulsa, OK

Who Should Attend
Train your staff! This course is for anyone who could benefit by an overall perspective of petroleum geology, exploration, drilling and production to be more productive in their job. It is a non-technical course, so anyone can take this course.

This is a joint course with AAPG and The University of Tulsa Continuing Engineering and Science Education Department
Please note – if paying with a check, please make check payable to The University of Tulsa, CESE (applies to this course only)

AAPG GEOSCIENCE EDUCATION

For further information, please contact the AAPG Education Department
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Monday, February 12, 2007

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

Cost: $28 Preregistered members; $35 non-members & walk-ups

The HGS prefers that you make your reservations on-line through the HGS website at www.hgs.org. If you have no Internet access, you can e-mail reservations@hgs.org, or call the office at 713-463-9476 (include your name, e-mail address, meeting you are attending, phone number and membership ID#).

A Legend in the Making: Nansen Field, East Breaks, Deepwater Gulf of Mexico

by ***Ramazan Yilmaz***

Nansen Field was discovered in May 1999 by Kerr-McGee Corporation and Ocean Energy and fast-tracked to first production in January 2002. Named after the great Norwegian explorer, zoologist and humanitarian Nobel peace prize winner of 1922 Fridtjof Nansen, the field is located in the western Gulf of Mexico in East Breaks Block 602, approximately 160 miles southwest of Houston.

The field was initially characterized as a "bright spot" with a Class 3 AVO anomaly-supported gas field;, but after the first several wells were drilled, numerous gas/oil contacts were discovered with significant downdip oil potential in sands thickening to the south. The amplitude anomalies turned out to be large gas caps on top of considerable oil legs. The reservoirs are associated with structural traps consisting of three stair-stepping NNE–SSW trending normal fault compartments containing Pliocene/Pleistocene turbidite sand reservoirs with very good sand quality. Despite the drilling of approximately 30 dry-tree and subsea wells in the initial exploitation phase, no downdip oil/water contacts have yet been penetrated.

The pre-drill reserve estimate was about 117 MMBOE; the current estimate for both the NW Nansen and Navajo subsea tie-backs is about 225 MMBOE. The field, at a water depth of 3650 ft, produces from a Truss SPAR design facility with a capacity of 40 MBOPD and 250 MMCFD. Currently, 9 dry-tree wells and 6 subsea wells produce oil and gas at 19 MBOPD and 105 MMCFGPD. Recently identified prospects to the south could add an additional 55 MMBOE to the Nansen total estimated ultimate recovery. The Pliocene/Pleistocene deepwater reservoirs still have great potential with ever expanding opportunities resulting from using new and advanced high-quality seismic data and 3D visualization techniques. ■

The Pliocene/Pleistocene deepwater reservoirs still have great potential with ever expanding opportunities resulting from using new and advanced high quality seismic data and 3D visualization techniques.

Biographical Sketch

Ramazan Yilmaz works for the Gulf of Mexico Deepwater Development business unit of Anadarko Petroleum, where he is assigned to the Nansen Field as a development and production geophysicist. He earned a BSc in geological engineering from the Technical University of Istanbul (ITU) and an MSc in structural geology from the Center for Tectonophysics, Texas A&M University. Ramazan has 10 years of industry experience in development, production and exploration geoscience.

His BSc involved field mapping turbidite facies in the northern fold and thrust belt of the Black Sea foreland basin. His MS thesis focused on deformation, faulting, fault structures and shale smear effects on fault sealing capacity in outcrops of interbedded sands and shales of the Eocene Carrizo Formation. He has worked for the National Oil and Gas Company of Turkey mapping carbonate facies in the Miocene passive margin platform of the Taurus Mountains in southern Turkey. He worked as a geoscientist for Schlumberger from 1998 to 2004. Ramazan joined Kerr-McGee Oil and Gas Corp. in 2004 and now works as a Senior Development Geophysicist for Anadarko Petroleum. His responsibilities include interpretation, mapping and characterization of reservoir sands in Nansen Field as well as looking for infill and nearby exploration and/or development opportunities to extend Nansen Field's life beyond 2021.

Wednesday, February 14, 2007

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

Lunch meetings are $30 per person (until the Tuesday before the meeting); $35 for late registrations and at the door - no shows will be billed. Register online at http://www.sipes-houston.org/.

SIPES
Luncheon Meeting

by ***Steve Blanke***
Anadarko Petroleum

Vernon Field—Waking a Sleeping Giant in North Louisiana

Discovered in 1980, Vernon Field, in Jackson Parish, Louisiana, languished as a small tight-gas field for two decades until its potential as a giant was fully realized just five years ago. This field now has more than 250 wells and proven reserves exceeding 1.8 trillion cubic feet. From its discovery until 2000, it was held by at least five different companies, and along each stage of its development, it revealed a bit more of its potential.

Initially, Vernon field was believed to represent a simple stratigraphic pinchout of Lower Cotton Valley sandstones against regional southerly dip. Existing seismic data was sparse and of poor quality; individual pay intervals were not seismically resolvable. However, a limited number of 2-D lines hinted at divergent dips south of the northern sand limit, suggesting the possibility of an expanded stratigraphic section in the Lower Cotton Valley. In 2000 a more favorable price environment resulted in accelerated field development, during which a number of wells were found to have pay intervals partially faulted out. These new data prompted a large 3-D survey over the field that defined it as a prolific tight gas reservoir producing from Lower Cotton Valley sands at a depth of 12,000 to 15,500 feet along a growth-faulted anticlinal trap.

Finding other giants like Vernon…will require careful analysis of often sparse data, the willingness to drill an adequate pilot program to fully assess the resource, and aggressive optimization of drilling and completion practices.

More sleeping giants such as Vernon likely exist in this seemingly mature petroleum province. Finding them will require careful analysis of often sparse well and seismic data, the willingness to drill an adequate pilot program to fully assess the resource, and aggressive optimization of drilling and completion practices. ■

Biographical Sketch

Steve Blanke is the exploration manger for the West Texas/ Mid-Continent Exploration Team, Anadarko Petroleum Corp. After graduating with degrees in geology and environmental studies from the University of Kansas in 1980, Steve began his career with Sun Oil Company in Shreveport, LA where he worked in the northern Louisiana area. Over the next 15 years, he did extensive work for Sun and Oryx in numerous basins, including the East Texas and North Louisiana salt basins, the Bend Arch, the San Joaquin basin, most of the Rockies basins, and the offshore Gulf of Mexico. In 1996, he began working for Union Pacific Resources, where he concentrated on the Jurassic plays of east Texas and in north Louisiana, including Vernon Field. The merger of UPR and Anadarko in 2000 brought Steve to Houston, where he has been involved in exploration and development of a number of unconventional resource plays, including the Bossier and Lower Cotton Valley plays in east Texas and north Louisiana. He also has been involved in developing and applying a uniform risk and resource evaluation procedure for Anadarko's worldwide exploration portfolio. In his current position as exploration manager his focus has been on shale gas, tight sands and other unconventional resource plays.

The 6th PESGB/HGS African Conference
Second Announcement and Call for Papers

AFRICA'S PETROLEUM SYSTEMS : FROM OUTCROP TO DEEPWATER

Cape Town Convention Centre , South Africa
11-13 September, 2007

Two days of talks PLUS Field Trips

***Talks (11/12th) will include*:**

- Late Ordovician Reservoir Geometry from Outcrop, N Africa (BP)
- Comparison of Niger Delta and G. of Mexico Plays (Chevron)
- Tertiary Tectonostratigraphy and Petroleum Systems of Africa (K.Burke)
- The Santonian Event and its Petroleum Effects (W. Bosworth)
- Northern Red Sea Plays (Hess)

Post-Conference Events planned include:

Full screening of Seb Luning's film on Petroleum Geology of Libya (13th)
One day 'tourist geology' field trip to the Cape of Good Hope (13th)
Three day field trip to the famous Tanqua Karoo outcrops (12th-15th)

Further Abstracts (circa 200 words) are invited and should be sent as soon as possible, and no later than March 2007, to Duncan Macgregor at duncan.macgregor@neftex.com or duncan.macgregor2@ntlworld.com. Extended abstracts are normally written once your paper is accepted and are issued on a conference CD.

Pre-registration will be available April 1st, further details will be listed in the PESGB newsletter and website. For sponsorship opportunities and associated exhibition space please contact Jennie at the PESGB office on (44) (0) 20 7408 2000, jennie@pesgb.org.uk or visit www.pesgb.org.uk

The conference is sponsored/co-organised by PetroSA and supported by the Geological Society of South Africa and the Petroleum Agency of South Africa. Convenors include Ray Bate, Duncan Macgregor, Varsha Singh, Sumesh Naidoo, Jean Malan, Al Danforth, Ian Poyntz, Steve Henry

PESGB PetroSA Geological Society of South Africa GSSA Join GSSA! Conferences, short courses. GB & SAJG online. Stimulate change!

Monday, February 19, 2007

HGS Joint International and North American
Dinner Meeting

The H.E.S.S. Club • 5430 Westheimer
Social Hour 5:30-6:30 p.m.
Dinner 6:30 p.m.

Cost: $25 Preregistered members; $30 non-members & walk-ups

The HGS prefers that you make your reservations on-line through the HGS website at www.hgs.org. If you have no Internet access, you can e-mail reservations@hgs.org, or call the office at 713-463-9476 (include your name, e-mail address, meeting you are attending, phone number and membership ID#).

by ***Lawrence A. Lawver*** *and* ***Lisa M. Gahagan***
University of Texas at Austin,
Institute for Geophysics
Jackson School of Geosciences
Austin, TX

Arctic Tectonics: Animations to Seismic Refraction, the Impact of Whaling Captains and UNCLOS on Arctic Research

University and College Students Please Note: the first 14 students can attend for free, compliments of Swift and ConocoPhillips. Additional students will be charged the emeritus rate, half the regular member rate. Students are encouraged to call the HGS office in advance of the meeting they wish to attend and to make a reservation; but walk-ins are also accepted at events. Students will need to identify themselves and provide school name and ID.

Tectonically, the Amerasian Basin of the Arctic Ocean is in many ways the last unknown in the global system. In the Eurasia Basin of the Arctic Ocean, to the east of the Lomonosov Ridge, Karasik (1973) was the first to identify very slow spreading, Cenozoic-age magnetic anomalies that connect to the North Atlantic spreading center. In about 1970, Irv Tailleur and Warren Hamilton deduced a rotational opening of the Canada Basin about a pivot point in the Mackenzie Delta based on matching geological histories of the Alaskan Arctic margin and the Canadian Arctic Islands. Aerogeophysical data collected by the Naval Research Laboratory in the 1990s did not find easily correlatable magnetic anomalies in the Canada Basin as hoped. A simple rotational opening of the Amerasian Basin is hampered by the large Chukchi Borderland including the Northwind Ridge northwest of Alaska and the Mendeleev and Alpha ridges to the west of the Chukchi Cap. The two ridges are thought by many to be manifestations of a hot spot that formed either before, during or after the Amerasian Basin opened. If the ridges formed after the basin opened they are not a problem to a rotational opening.

The tectonic history of the Amerasian Basin is not just an important tectonic problem; it is also a legal problem since Russia has filed the first claims to an extended economic zone based on arguments that the basin is largely continental.

All these features have recently become important not only as tectonic problems but also in a legal framework. The United Nations Convention on Law of the Sea (UNCLOS) Article 76 allowed exceptions to the standard 200 nautical mile exclusive economic zone (EEZ). The Russians filed the first claims to an extended EEZ in the Arctic under the idea that the Lomonosov, Alpha and Mendeleev ridges are all continental and that much of the remainder of the Amerasian and the Eurasian basins is continental. They have even asserted that the Amerasian Basin formed by "oceanization of continental crust" and therefore virtually all of the Arctic Ocean belongs to one of the five bordering, claimant nations.

In summer 2006, scientists at the Institute for Geophysics undertook a seismic refraction experiment to study the crustal structure of the Northwind Ridge, Chukchi Cap and Mendeleev Ridge. Previous cores taken along the Northwind Ridge recovered sediments as old as Cambrian, so at least parts of the Chukchi Borderland are believed to be continental. Aerogravity data indicate that while much of the Chukchi Cap may be continental, substantial parts may be extended continental crust; the 2700 m deep, 15 km wide Chukchi Trough that separates the Chukchi Cap from the Northwind Ridge appears to be some form of rift.

The 2006 season for seismic work along the Alaskan margin turned out to be a difficult one for acquiring the necessary permits. In the recent past very little seismic work has been done but upcoming lease sales have prompted a number of companies to undertake substantial **International Dinner** *continued on page 15*

Thanks Joan!

Joan Henshaw is retiring this month after 10 years of service to the HGS. Joan was born Joan Allen on October 1st, 1936 in Georgetown, a little north of Austin, Texas. She was an only child, but was raised by a father who tried his best not to spoil her. She grew up in Houston and Austin. Joan married in 1956 and had three girls, Debra who is one of the top sales people at Channel 11; Brenda, a marketing representative for Diamond Offshore Drilling, and Vicki, a home care specialist in Orlando, Florida. Joan has seven grandchildren.

She continually worked while raising her children, first as a group secretary and then as a private secretary to one of the life insurance agents at Connecticut General Life Insurance Company. She then worked for Randalls in the Group Insurance Department. She left there to work at Southern States Log Library for eight years. When Southern States and Gulf Coast log libraries merged in 1996, she applied for the position of HGS/GSH Office Manager, which had just become available. The team responsible for hiring Joan was Jeff Lund, Jim Ragsdale and Deborah Sacrey, then the Office Management Committee c hair.

You might call Joan a real "survivor" because in less than a year after coming to work for the HGS, her apartment building burned to the ground and she lost virtually everything she owned. The HGS helped raise money and goods to try to make her world whole again. A year later she was diagnosed with Hodgkins Lymphoma. She managed to get through the Chemo and radiation therapies and still do her job for the HGS/GSH.

Her biggest challenge now is to sell her condo and move to Lake Jackson to be with her long time friend, Jack, whom she has known for 45 years. Retirement is going to be difficult for Joan, a very active person who has loved working with many of the HGS members in various capacities during her 10 years at the office helm. We will all miss her. ■

HGS Joint International and North American Dinner Meeting continued from page 13

seismic reflection surveys in both the Beaufort and Chukchi seas. The Alaska Eskimo Whaling Commission (AEWC) has established itself as the arbitrator for seismic permitting. There is even talk of a seismic noise budget that will set seasonal limits to the total amount of seismic noise allowed in a given area. This presentation will cover these issues as well as the primary focus of the tectonic history of the Arctic Ocean. ■

Biographical Sketches

Lawrence Lawver is a senior research scientist with the Institute for Geophysics, an organized research unit within the Jackson School of Geosciences at the University of Texas at Austin. He returned to Texas in 1983 after receiving his BS in Geophysics at Stanford, a PhD from Scripps Institution of Oceanography and stints at the USGS in Menlo Park and MIT. His work at the USGS involved geothermal studies in Alaska with Art Lachenbruch and John Sass. He felt that in order to decipher the thermal history of Alaska, he first had to understand its tectonic history. His research at the University of Texas at Austin covers a wide range of plate tectonic problems with interests in the Southern Oceans, Southeast Asia and the Arctic. Lawver was the chief scientist on *USCGC Healy* this past summer where he and others from UTIG placed sea ice seismometers on the ice and then used a ship-based seismic source to determine the crustal structure of the Chukchi Borderland and Mendeleev Ridge.

Lisa Gahagan is the project manager of the Plates Project, an industry funded consortium to develop plate tectonic databases and use plate tectonics to support research at the Jackson School of Geosciences. Lisa received her BS in geology from Tulane and her MS from UT Austin.

Tuesday, February 20, 2007

The Sofitel Hotel • 425 Sam Houston Pkwy. East
Social 11:15 a.m., Luncheon 11:30 a.m.

Cost: $30 Preregistered members; $35 non-members & walk-ups

The HGS prefers that you make your reservations on-line through the HGS website at www.hgs.org. If you have no Internet access, you can e-mail reservations@hgs.org, or call the office at 713-463-9476 (include your name, e-mail address, meeting you are attending, phone number and membership ID#).
Qualifies as 1.0 CEU for Texas State Geoscientists

HGS Northsiders Luncheon Meeting

by ***Andrew Mehlhop*** *and* ***Robert W. Stancil***
Anadarko Petroleum Corporation

Vernon Field—Catalyst for North Louisiana Exploration

Vernon gas field, in Jackson Parish, Louisiana, was originally discovered in 1967 with a Cadeville (Upper Cotton Valley) producer. A sub-commercial gas discovery in 1980 led to recognition of a vast resource in the Jurassic Lower Cotton Valley. Five different companies owned the field and 17 Lower Cotton Valley wells were drilled prior to Anadarko Petroleum Corporation's purchase of 8 MMCFD of production in late 1999. Anadarko's success in developing the Bossier Sand resource in East Texas and much improved product prices paved the way to increasing Vernon production to a peak rate of 350 MMCFD in 2004. Anadarko operated roughly 10 rigs continuously and drilled over 332 producing wells in the field between 2000 and 2006. Vernon is now one of North America's giant tight gas fields with over 4 Tcf of original gas in place with an estimated 1.8 Tcf recoverable.

The Lower Cotton Valley tight gas play will continue to be a focus for exploration along the northern Gulf Coast…as HTHP and other technological breakthroughs unlock additional reserves.

Vernon Field is a tight gas reservoir producing from Lower Cotton Valley sands at a depth of 12,000 to 15,500 feet along a growth-faulted anticlinal trap in Jackson Parish, Louisiana. The initial discovery well, Hodge-Hunt Co 3-1 was drilled in 1967 to a depth of 10,996 ft in the Upper Cotton Valley formation. From 1968 to 1988 the well produced 2.36 Bcf gas and 160,873 bbls of condensate from a 10-foot thick Cadeville sand. The Cadeville is the first sand below the tight Knowles limestone, a regional top seal for the over-pressured Cotton Valley below. Nine additional Cadeville tests were drilled in the vicinity of Vernon by 1979. In July 1980, Anschutz drilled the first Lower Cotton Valley test in the field, the Davis Brothers Lumber #1, which flowed 427 MCFD and 105 MCFD from two zones with no fracture stimulation. First production from the Lower Cotton Valley sands at Vernon field began in February 1982 when Crystal Oil & Gas drilled 12 Lower Cotton Valley producers from 1982–1984, reaching a peak production of 50 MMCFD. Only 3 additional wells were drilled in the field after prices dropped during the mid-1980s and the expensive fracture treatment costs burdened project economics.

With improved prices and improvements in High Temperature and High Pressure (HTHP)completion technology in the late 1990's, Anadarko purchased Vernon Field in December, 1999. At that time the field had 17 producing wells and a total production of 8 MMCFD with an estimated remaining potential of 230 Bcf. Since that time, the Lower Cotton Valley at Vernon has exceeded those early expectations with over 400 Bcf gas produced and over 1.5 Tcf of reserves added through drilling. The true potential of the over-pressured Lower Cotton Valley was unlocked allowing Vernon field to grow from 7400 acres in 1999 to 25,000 Held by Production acres today with individual peak well rates exceeding 25–30 MMCFD and Estimated Ultimate Recoveries of 1.5–27 Bcf/well.

So what makes Vernon such a prolific field? The key lies in the details revealed by analyses of data in the large modern geological, petrophysical, geophysical and geochemical database that identified trap and seal integrity as critical factors. The basal member of the Lower Cotton Valley formation includes the Jurassic Bossier shale which is a prolific oil-prone marine source rock of unknown thickness locally in the Vernon area. The Bossier source rock was rapidly buried under 1000 to 3000 feet of Cotton Valley prograding deltaic sequences and upper stacked shore facies or blanket sands. The rapid burial phase occurred in response to active salt withdrawal and associated growth faulting during the late Jurassic. Vernon is unusual in that the salt withdrawal and subsequent growth faulting ceased prior to deposition of its top-seal, the Knowles limestone. The structural trap, fault seal and top seal remained intact at Vernon while nearby structures probably leaked hydrocarbons due to continual salt withdrawal, fault reactivation and seal breaching throughout the Lower Cretaceous. At the end of the Lower Cretaceous, Vernon field was probably a 300 million barrel oil field with 20–30% porosity and a clearly defined oil-water structural contact. Vernon was subsequently buried to its current depth and the field passed into the gas window cracking the remaining

Northsiders Luncheon *continued on page 19*

HGS Northsiders Luncheon Meeting continued from page 17

kerogen in the Bossier source rock and the original oil in place to gas. Average porosity today in the Lower Cotton Valley at Vernon is 7% with streaks of 10–12 % locally. Vernon is structurally complex with two main growth faults and several satellite fault blocks that all deliver sweet gas production with no significant H_2S or CO_2. At a gradient of 0.9 psi/ft and greater, the extreme overpressure allows a high-rate of commercial gas production.

During the last five years, Anadarko increased its drilling efficiency from 200 to over 500 feet per day using new bit technology. Vernon is currently down-spaced to a 40 acre pattern; however, a six-well 20-acre pilot drilling program was conducted in 2005 with encouraging results. The well tests found original bottom-hole pressures in many zones and tested an average initial production rate of 4 MMCFD or about 70 % of the parent 40-acre offsets. The entire field is under central compression lowering line pressure from 1100 psi to 400 psi, reducing liquid loading and stabilizing the current production at 265 MMCFD. Further development plans for Vernon include over 100 20-acre infill drilling locations, over 200 probable or possible locations for further field delineation and over 100 Lower Cotton Valley re-frac opportunities. In addition to the prolific Lower Cotton Valley and Bossier sand reservoirs, Vernon has also produced gas and condensate from shallower zones in the field including the Upper Cotton Valley, Calvin, Hosston and James formations. The Lower Cotton Valley will continue to be a focus for exploration along the northern gulf coast from East Texas to Mississippi as this multiple TCF tight gas play unlocks additional reserves through HTHP technological breakthroughs in the future. ■

Biographical Sketch

Andrew Mehlhop received both his BS and MS degrees in Geology from the University of North Carolina at Chapel Hill. His master's thesis involved an outcrop study of the structural deformation in Devonian turbidites in Virginia and West Virginia. Upon graduation, Andrew worked in gold exploration for Appalachian Resources, Inc., in the Precambrian and Cambrian accreted terranes of the Carolina Slate Belt. In 1997 he joined Anadarko where he has worked a variety of projects including Hugoton, Deepwater GOM, Canada (McKenzie Delta and offshore Nova Scotia), and International (Africa, India and Indonesia). Andrew currently serves as Anadarko's manager of G&G for the Eastern Gulf Coast.

In The News continued from page 7

> unless they are promptly and massively protected from human exploitation."

A major report, the Status Of Coral Reefs Of The World: 2004, documents an exhaustive study of this world resource conducted by the Global Coral Reef Monitoring Network and the International Coral Reef Initiative, with contributions from 240 scientists and officials from 98 countries. The report concludes that coral reefs may well be the most endangered ecosystem on the earth. According to this study, edited by C. Wilkinson, 20% of the world's coral reefs have been effectively destroyed and are not likely to soon recover, 24% of the world's reefs are under imminent risk of collapse through human pressures and a further 26% are under a longer term threat of collapse.

While the extent and health of coral reefs varies naturally, the current crisis is largely the result of pressures from human activities such as pollution, overfishing, rising sea temperatures and acidity. The increase in atmospheric CO_2 leads directly to an increase in acidity as the ocean waters take up more of the greenhouse gas. If high enough, this acidity could soon impede the ability of corals to grow carbonate skeletons, leading to complete collapse of the population locally if not worldwide.

The consequences of this crisis are likely to be severe. Coral reefs contribute $375 billion dollars each year to the global economy and represent a significant portion of some third world countries' income from tourism (Wilkinson, 2004). Moreover, coral reefs are an integral part of the marine ecosystem at the base of the food supply of a great many people around the world. Despite the importance of this resource the response of governments has been varied, from a serious effort by Australia to save and protect the Great Barrier Reef to what can best be described as a weak effort by the United States despite the fact that the Gulf and Caribbean have been hit particularly hard, with an 80% loss of coral cover from 1975 to 2001.

Pandolfi, John M., Roger H. Bradbury, Enric Sala, Terence P. Hughes, Karen A. Bjorndal, Richard G. Cooke, Deborah McArdle, Loren McClenachan, Marah J. H. Newman, Gustavo Paredes, Robert R. Warner, Jeremy B. C. Jackson, 2003: "Global Trajectories of the Long-Term Decline of Coral Reef Ecosystems," *Science*, Vol. 301. no. 5635, pp. 955–958, 15 August 2003.

ScienceDaily, 2006: Coral Stress 'Like Never In History,' was visited last on January 3, 2007, can be viewed at http://www.sciencedaily.com/releases/2006/10/061003085821.htm

Wilkinson, C., Editor, 2004: Status of Coral Reefs of the World: 2004, Volume 1, Global Coral Reef Monitoring Network, Australian Institute of Marine Science.

In the News *continued on page 53*

Tuesday, February 20, 2007

New Location Cheddar's • 10601 Westpark Drive
(the southwest corner of Westpark and Beltway 8)
Social 5:30 p.m., Dinner 6:30 p.m.

Cost: $25 Preregistered members; $30 non-members & 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, meeting you are attending, phone number and membership ID#).

by ***Todd Johnson***
Eagle Construction & Environmental Services, L.P.

Hurricane Katrina Emergency Response

The 2005 Hurricane season was one to remember; the number and strength of the storms were incredible. Hurricanes Katrina and Rita were especially hard on the northern Gulf Coast, where the storms inflicted serious damage economically, socially and environmentally that will take decades to overcome.

…experience the tragedy unfolding

Louisiana bore the brunt of Katrina's winds and water surge, as did other areas of the Gulf. But new Orleans suffered the most because of the failures of the levy system that was designed to keep the city dry. When the storm surge breached the levies north of the city, New Orleans was inundated by a wall of water that overcame all the operative pumping systems.

This presentation tells the story of Katrina from a first responder's perspective. Through the images you will experience the tragedy unfolding and the rescues, recoveries, destruction and challenges we faced on a daily basis. ■

Biographical Sketch

TODD JOHNSON is the manager of Corporate Emergency Response for Eagle Construction & Environmental. Services, L.P. Todd studied fire chemistry at Tarrant County College, just north of Fort Worth and is certified in many aspects of hazardous materials handling and disaster relief. He has over 21 years of experience in hazardous materials emergency response, environmental remediation, natural disaster, firefighting and wastewater treatment management. His training in health and safety, hazardous and non-hazardous waste management and the handling of chemicals enables him to provide technical support and surveillance for all haz-mat emergencies.

Todd has been regional manager for an emergency response and remediation company where he was responsible for the operations, health and safety training of employees and the disposal process of hazardous and non-hazardous materials; project manager for recovery and cleanup efforts for natural disaster events,; project manager and/or site supervisor at numerous railcar leaks, high-pressure transfers, aircraft crashes, industrial fires and chemical releases. Todd is a member of the Texas TransCaer Board.

Wednesday, February 28, 2007

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

Cost: $30 with advance reservations, $35 for walk-ins, space available ($15 for Emeritus and Honorary).

The HGS prefers that you make your reservations on-line through the HGS website at www.hgs.org. If you have no Internet access, you can e-mail reservations@hgs.org, or call the office at 713-463-9476 (include your name, e-mail address, meeting you are attending, phone number and membership ID#).

HGS General Luncheon Meeting

by ***R.C. Vierbuchen***
ExxonMobil Exploration Company

Production of Global Hydrocarbon Liquids: Is There a Near-Term Peak?

An evaluation of global production history and the global resource base suggests that a peak in global liquids production, resulting solely from a resource-base limitation, is unlikely to occur in the next 25 years. Furthermore, it appears that Hubbert's (1956) method, made famous by his correct prediction in 1956 that U.S. Lower 48 oil production would peak in the late 1960s or early 1970s, is not readily applicable to forecasting global liquids production. The following observations support these conclusions:

- Estimates of the liquids resource base have increased over the last 50–100 years and are likely to continue to do so. Forecasts of an imminent peak in global production appear to underestimate major sources of growth in the resource base, particularly improved recovery and new capabilities that make otherwise marginal resources economic. Hubbert's analysis does not encompass the timing or the volume of these future increases in the resource base.
- Although annual global production has exceeded annual discoveries since the early 1980s, annual global reserve additions still exceed annual production because of reserve growth in existing fields.
- Advances in technology are increasing recovery, opening new producing areas and lowering thresholds, thereby changing estimates of the resource base and production outlook.
- Non-OPEC supply has grown steadily for the last 10 years and is expected to continue for at least the next 5 to 10 years, based on new development projects underway or planned. OPEC countries also have numerous opportunities to increase production.
- Nations with the largest liquids resources typically have production histories with long-term restraints and interruptions in production that are not envisioned in Hubbert's method.
- Sources of conventional liquids other than crude oil, such as condensate, natural gas liquids, gas to liquids and improvements in refining are increasing. They were not included in Hubbert's analysis.
- Production from "unconventional" sources, such as very heavy oil, bitumen and shale oil is growing, and is often overlooked in global forecasts of peak production based on Hubbert's method.
- The interactions among supply, demand and price cause demand growth to slow as supply tightens and bring on new sources of supply.
- Current tightness in liquid supply results from rapid demand growth and interruptions to supply, not from a decrease in supply.
- Many previous predictions of a peak in global production based on Hubbert's method, dating back to Hubbert's own prediction in 1969 for a peak in 2000, have been proved wrong.

Focus on the application of Hubbert's method to predicting global peak production has drawn attention away from important questions regarding the global liquids resource base, such as: (1) What improvements in technology are likely to provide the largest improvements in supply and supply cost? (2) What factors limit growth in global liquids supply, today and in the future? (3) What alternative methods can be used to better assess the global resource base and the multitude of factors that influence the rate of resource consumption? ■

Biographical Sketch

Richard C. Vierbuchen is Vice President, Caspian/Middle East Region, of ExxonMobil Exploration Company. He joined ExxonMobil in 1978 and has held numerous positions including research division manager, corporate exploration advisor, exploration manager of Imperial Oil, Canada, and of Esso, United Kingdom, and Exploration Director of ExxonMobil International Ltd. In his current job, he oversees exploration operations in the countries bordering the Arabian Gulf, and in Azerbaijan and Kazakhstan.

Prior to joining ExxonMobil, Dr. Vierbuchen received a PhD in Geology and Applied Geophysics from Princeton University. He also worked as a university professor and for several years as a geologist for the governments of Venezuela and Ethiopia.

NeoGeos News

Welcome to the HGS NeoGeos column! Our monthly feature will keep you updated on our upcoming events and provide insight into the petroleum industry from experienced geoscientists. The goal of NeoGeos is to help with the transition into the professional environment of Houston's geoscience community. This is accomplished by meeting regularly to socialize, network and volunteer with other professionals in the Houston area. Please contact our chairperson, Dianna Phu, at neogeos_houston@yahoo.com to join NeoGeos (www.neogeos.org).

As part of our continued mission to provide insight and transition into your new career as a professional geoscientist, NeoGeos is proud to present another interview series with highly experienced geoscientists and industry professionals. The purpose of these interviews is to provide young geoscientists with the opportunity to gain critical knowledge about the various paths available to them in the discipline they have chosen and how to navigate through those paths to a successful and productive career. Below is an interview conducted by Nigel Hicks that features Trish Plemons, Reservoir Engineer, BP America. Because reservoir engineers work closely with geoscientists in teams, we thought it was appropriate and important to gain her perspective.

Nigel: Trish, could you tell me a little about your background and education?
Trish: I graduated in 1989 from Texas A&I (now known as Texas A&M Kingsville) with a BSc in mechanical engineering. From 1989 to the present, I have worked for Exxon, Arco and BP, mostly as a reservoir engineer in the Permian Basin. During that time I spent about four years working on the commercial side of the business. As a reservoir engineer, I have worked in different geotechnical/engineering environments including primary and secondary recovery, gas and oil, in both deep and shallow reservoirs.

Nigel: What is your current position at BP and what are you working on?
Trish: I am currently working as a reservoir engineer on exploration projects in the deep Anadarko Basin. I work as part of an interdisciplinary team comprising geologists, geophysicists and petrophysicists who work on regional and local projects to better characterize proposed exploration prospects.

Nigel: Why did you join the oil and gas industry?
Trish: Well, I grew up around the petroleum industry in the Permian Basin and had family members who worked in oil and gas. It was very natural that I chose a career in the petroleum business as a reservoir engineer.

Nigel: Could you give me your thoughts on the future of the petroleum industry and the role of young folks just starting out?
Trish: I think the industry has changed quite a bit from when I started out and is changing right now. We are exploring and developing reservoirs in harsher and technically more challenging areas like deep, high-pressure and high-temperature regions of the Gulf of Mexico and onshore North America. The future of the industry lies in the importance of utilizing technology to reduce costs and unlock untapped reserves. In addition, I think the petroleum industry is slowly changing to an energy industry whereby more and more companies are embracing and exploiting means to produce and market alternative energy. As a result, more opportunities for employment and general changes in the types of jobs available will characterize the industry in the long term. Another interesting consequence of the changes will be the opportunities for mobility. No longer will people be working long term for only one company.

Nigel: In your opinion, what are the steps new hires need to take to ensure a long and successful career?

NeoGeos News *continued on page 41*

NeoGeos Etiquette Dinner

Sponsored by NeoGeos

Speaker: Ms. Randi Mays-Knapp, Professional Etiquette Instructor

Westchase Hilton • 9999 Westheimer Rd. • Houston TX 77042

Event Times: Thu 29-Mar-07 6:00 PM to Thu 29-Mar-07 9:00 PM

Join us for an interactive evening of etiquette instruction and learn the do's and don'ts of cocktail etiquette and formal dining.

You will be prepared for the many situations you may encounter throughout your career, including:

Dinner meetings • Company/Industry socials • Job interviews over lunch/dinner • Business lunches • and more!

Topics that will be addressed include:

Cocktail hour etiquette • How to enter/exit conversations • Safe topics of conversation

Table settings — which utensil to use when, which one is yours • Ordering from the menu — do's and don'ts • and more!

Legendary Fields

Lucy Plant and Laura Kamrath, Fugro Geoscience and Fugro Airborne Surveys, exhibitors and sponsor for the Legends Dinner.

On January 8, HGS with considerable help from the cosponsors—*Thank You Fugro Robertson, Sterling Bank and Knowledge-Reservoir for sponsoring the Special Dinner Meeting*—held one of our marquee events, the latest in our Legends Series, Three Legendary Giant Fields and their Discovery Stories. An in-depth review will be presented in the March *Bulletin*. Following are some faces in the crowd that attended that event.

Legendary Fields *continued on page 29*

Linda and Charles Sternbach enjoy the pre-dinner social hour.

Legendary Fields continued from page 27


Joe Bruso


Jose Alberto Aquino


Mike Mahaffie


Andrea Reynolds


Steve Brachman


Lee Billingsley


Jeff Lund


Dick Bishop


Mike Forrest


Dave Rensink, Craig Dingler, Steve Brachman


Lee Billingsley, John Amoruso


Larry Jones, Jeff Lund, Lee Billingsley


Rick Fritz, Dick Bishop


Bob Merrill, John Jordan


Bonnie Milne-Andrews, Nancy Englehart-Moore, Denise Stone

Geophysics for Community Service
Two Weeks of Field Work at Evergreen Negro Cemetery

by ***Alison Henning***

What were several geoscientists and a group of Houston area teachers doing in a derelict cemetery this past July? We were supporting our community using geophysics! In particular, we were using ground-penetrating radar (GPR) to search for unmarked graves as part of a larger effort to restore Evergreen Negro Cemetery, located in the Fifth Ward. HGS members have played a significant part in the success to date of this project

17 teachers from kindergarten through high school used the GPR and GPS data, along with ArcGIS software, to create an interactive map of the cemetery.

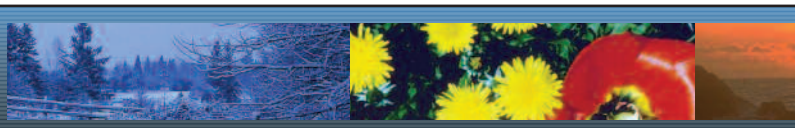
Figure 1. Seventeen Houston area K-12 teachers participated in the program.

Evergreen Negro Cemetery

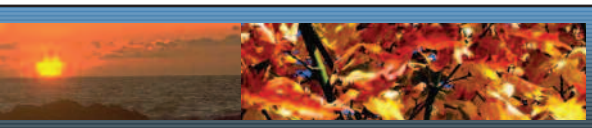
HGS has a long history of volunteer efforts at Evergreen Negro Cemetery, an abandoned cemetery located at the intersection of Lockwood and Market Streets just east of downtown Houston. Over the last few years, past-president Steve Levine has organized HGS volunteers to work at Evergreen through Project RESPECT, a local non-profit organization dedicated to restoring abandoned cemeteries. HGS volunteers have mowed the grass, removed trash and debris, and built and painted a fence around the perimeter of the cemetery.

Project RESPECT hopes to eventually have the cemetery designated as a historical landmark. Evergreen dates back to the late 1800's and represents an interesting chapter in Houston's history, just after the Civil War when this area is thought to have been part of a cotton plantation. In order to receive the historical designation, a great deal of data must be collected first. There are no existing records related to **Geophysics for Community Service** *continued on page 35*

February 2007



Sunday	Monday	Tuesday	Wednesday
	Members Pre-registered Prices: General Dinner Meeting .....$28 Nonmembers walk-ups..... $35 Env. & Eng. .....$25 Luncheon Meeting .....$30 Nonmembers walk-ups..... $35 International Explorationists .....$28 North American Expl. .....$28 Emerging Technology $25		**NOW you can make your reservations on-line at www.hgs.org**
4	5	6 **HGS Executive Board Meeting**	7
11 **AAPG-SEG-SPE Workshop** *Integrating Stress and Pore Pressure Predictions for Exploration, Drilling & Production* Page 46	12 **HGS General Dinner Meeting** by Ramazan Yilmaz *"A Legend in the Making: Nansen Field, East Breaks, Deepwater Gulf of Mexico"* Page 9 **AAPG Fourth Annual Winter Education Conference** Details at www.aapg.org	13	14 **SIPES Luncheon Meeting** by Steve Blanke *"Vernon Field—Waking a Sleeping Giant in North Louisiana"* Page 11
18	19 **Joint HGS International and North American Dinner Meeting** by Lawrence A. Lawver and Lisa M. Gahagan, *"Arctic Tectonics: Animations to Seismic Refraction, the Impact of Whaling Captains and UNCLOS on Arctic Research"* Page 13	20 **HGS Northsiders Luncheon Meeting** *"Vernon Field—Catalyst for North Louisiana Exploration"* Page 17 **HGS Environmental and Engineering Dinner Meeting** *"Hurricane Katrina Emergency Response"* Page 21	21
25	26	27	28 **HGS General Luncheon Meeting** by R.C. Vierbuchen *"Production of Global Hydrocarbon Liquids: Is There a Near-Term Peak?"* Page 23



GeoEvents

Thursday	Friday	Saturday
1 **North American Prospect Expo (NAPE)** *George R. Brown Convention Center*	2	3
8	9	10
15	16	17
22	23	24

Reservations:

The HGS prefers that you make your reservations on-line through the HGS website at www.hgs.org. If you have no Internet access, you can e-mail reservations@hgs.org, or call the office at 713-463-9476. **Reservations for HGS meetings must be made or cancelled by the date shown on the HGS Website calendar, normally that is 24 hours before hand or on the last business day before the event.** If you make your reservation on the Website or by email, an email confirmation will be sent to you. If you do not receive a confirmation, check with the Webmaster@hgs.org. Once the meals are ordered and name tags and lists are prepared, no more reservations can be added even if they are sent. **No shows will be billed.**

Upcoming GeoEvents

Wednesday-Thursday, March 7 & 8
GSH-SEG 2007 Spring Symposium
A Tribute to Dr. Tury Tanner

Monday, March 12
HGS General Dinner
Speaker TBA

Monday, March 19
International Explorationists Dinner
by Keith Campbell, Impact of Seismic Loop-Scale Depositional Models on Reservoir Architecture in a Heavy Oil Accumulation, Santos Basin, Brazil

Tuesday, March 20
HGS Northsiders Luncheon
Speaker TBA

HGS Environmental & Engineering Dinner
by John Larson, Resource Sequestration

Monday, March 26
North American Explorationists Dinner
by Bruce Hart, 3-D Seismic Imaging of Fault Related Porosity Development in Hydrothermal Dolomites, Trenton-Black River Interval, Saybrook, Ohio

Wednesday, March 28
Joint HGS-GSH Luncheon
by Dan Tearpock, Professional Practices as They Apply to the Petroleum Geosciences: The Practical Application of Ethics

Thursday, March 29
NeoGeos Etiquette Dinner

Geophysics for Community Service continued from page 30

Evergreen, so the site must be thoroughly investigated and documented; including surveying the boundaries, recording the locations of existing headstones and plots, and searching for evidence of unmarked graves.

There are several reasons to believe that there are numerous unmarked graves **Geophysics for Community Service** continued on page 37

Figure 2. Teachers Sandra Dillon, Francisca Enih and Jorge Olivares collect GPR data on the east side of the cemetery, with TA Jeremy Mardambek.

Geophysics for Community Service

continued from page 35

at Evergreen. First, the existing headstones are in various states of disrepair and some are barely visible above the surface. Standing water is often present in the cemetery after rain, and so there is the potential to bury headstones. Second, the cemetery catered to a fairly poor population, many of whom probably could not afford headstones at all. And finally, there are several large areas within the cemetery that contain no markers, but are surrounded by marked graves.

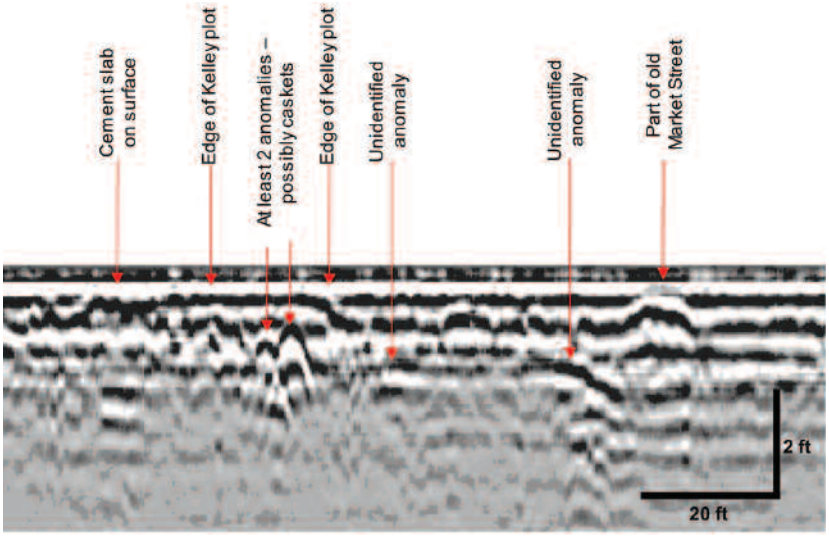


Figure 3. GPR profile collected at Evergreen Cemetery with 450 MHz antenna. Note that most anomalies are located within 2 feet of the surface. In addition to several graves, old Market Street is also visible on this section.

Ground-Penetrating Radar

Ground-penetrating radar (GPR) is an ideal method for locating unmarked graves because it is non-intrusive, meaning that it does not disturb the ground. GPR sends radar waves into the ground and records their reflections at the surface; so these data are collected by simply moving the GPR system across the ground. GPR is not commonly used for geological investigations in Houston due to the high clay and water content of the subsurface. However, several test lines were collected and the graves at Evergreen appear to be shallow enough (2–3 feet) to image with radar.

Rice University's Department of Earth Science loaned a pulse EKKO 1000 GPR system and several global positioning system (GPS) units to the project for use at Evergreen this past summer. From July 17–28, the department hosted a summer program for teachers to acquire GPR and GPS data at the cemetery. Seventeen teachers from area

Geophysics for Community Service continued on page 39

Geophysics for Community Service

continued from page 37

schools participated in the program, representing grade levels from kindergarten through high school (Figure 1). The group spent five days in the field and five days in the classroom. The teachers used the GPR and GPS data, along with ArcGIS software, to create an interactive map of the cemetery.

Field Program

Over the course of two weeks, the group collected 15 GPR profiles and over 300 GPS positions. The GPR profiles were acquired on both the west and east sides of the cemetery to look for subsurface anomalies that could represent unmarked graves (Figure 2). The profiles were located mainly in areas with few headstones, with several lines acquired over marked graves for calibration. We used a 450 MHz antenna (relatively high frequency and shallow penetration), as the graves appeared to be only 2–3 feet below the surface. The GPR data were displayed on screen in the field and interpreted in real-time. Anomalies were flagged and their positions recorded using the GPS. The group collected position data for all 294 visible headstones, the edges of plots, the boundaries of the cemetery, and the GPR anomalies. For each headstone, the name, birth and death dates, inscription and other information were recorded, if available.

Results and Conclusions

The GPR data were extremely high quality. Analysis of the GPR records suggests that there are numerous unmarked graves at the cemetery (Figure 3). Burials appear to be shallower (~2 ft) on the east side than on the west side (~3 ft). We are still actively interpreting these data.

The headstone data were analyzed to learn some of the history of the cemetery. The first marked burial was John White in 1887 on the east side of the cemetery. The majority of burials on the east side took place from 1887 to 1920. These burials appear to be fairly systematic, occurring mainly in east-west lines beginning at the south side of the cemetery and moving northward. GPR anomalies also occur in linear patterns. The majority of burials on the west side took place from 1927 to 1939 and appears to be less systematic. The first (documented) burial on the west side took place in 1900. The final marked burial was Elizabeth Green on the east side in 1984, but the last one before that was in 1950. Most marked burials occurred between 1928 and 1929. Research indicates a 1928 pneumonia and influenza outbreak in Texas and a 1929 flood of Buffalo Bayou that may have contributed to the higher number of burials.

The teachers also viewed aerial photographs of the area from 1930 and 1956, as well as a recent photo. The 1930 photo shows a road parallel to Market Street that runs through the middle of the cemetery from west to east. By 1956, the road appears to be gone. It appears that the road was the old Market Street, which originally ran through the cemetery and was later diverted around it (Market Street currently jogs south of the cemetery). GPR records indicate anomalies at this location, possibly due to greater compaction of the soil. Market Street was probably not paved at the time it ran through the cemetery.

Analysis of the map data also allowed us to calculate the current area of the cemetery. While the site was originally thought to cover about 20 acres, our study indicates the cemetery is much smaller, approximately 4.7 acres.

The teachers experienced the process of science first-hand by collecting and analyzing data, and then organizing these data into a map that can be used by various groups in the Houston area. The final map was given to Project RESPECT to support their cemetery restoration efforts. This work illustrates just one way that we as geoscientists can help our community. ■

Acknowledgements

This project was supported by a grant from the Texas Higher Education Coordinating Board. Woody Jones, Dale Sawyer, Jim Foradas and Jeremey Mardambek provided invaluable support to this project.

On The Lighter Side *Geological Wit and Witticisms*

*by **Charles E. Revilla,** Member Emeritus, HGS*

The Steady-State Library©

Two readers of mature years write that their problem is not how to fill their bookcases; on the contrary, their offices are lined from floor to ceiling with cases crammed with periodicals, and more keep coming in. What to do with the things?

Well, if you quit paying your dues, eventually the periodicals will cease to arrive; but this is a drastic action that forfeits memberships and leaves a library that gets progressively further out of date. A far better procedure is to set some period of time, say 25 years, back of which all files are ruthlessly weeded out. After all, who needs to know what geologists had to say in the olden times.....? Earlier AAPG *Bulletins*, for example, which weigh about 10 lb. a year, can be removed from the shelves, bundled securely, and used as doorstops, boat anchors, or blocks on which to set the family car while on a European vacation. If you share the widespread belief that back files such as these are rare and bring high prices, check it out with your friendly used-book dealer. The chances are that you'll end up as the first in your neighborhood to have an AAPG boat anchor.

Thus shelf space is made by removing old periodicals as fast as new ones are added. Of course the cutoff time can be varied to taste: for the journal of the state academy of science, as an example, it might be 25 days, or even hours, instead of 25 years. Indeed, with a little experimentation it should be possible to establish an exactly even balance, thus realizing that ultimate dream of book-haunted man: the steady-state library.

A former petroleum geologist writes: "I noticed in your column the novel uses for old AAPG *Bulletins*. While in New Orleans I found one geologist who raised his furniture on stacks of the *Bulletin* to combat the periodic flash floods in his neighborhood. In his words, it was the best use he had found for them"... A respondent of unknown affinities, who just may be in the used book business, sends a list of prices at which dealers offer the AAPG *Bulletin* for sale. These look very generous, but (a) long runs are quoted, like 1917-1962, rather than shorter ones previous to 1945, and (b) the prices given are what you pay if you want to buy, not what you get if you want to sell...Two graduate students, one literate and the other not, suggest that surplus bulletins should be given to deserving graduate students, like themselves.

I should make it clear, incidentally, that in the original suggestion the AAPG *Bulletin* was chosen merely as an example, not as the only publication that would qualify for the dubious purposes mentioned. (Indeed, anyone that submerged a pre-1945 file of that periodical would be drowning two items of deathless prose by your present correspondent). It's easy to think of other publications whose back files would be even more worthy of saturation. Pick your favorite!

Ed. notes: *We wonder if and/or why someone with stroke at any of the many levels of government local, state or federal, hasn't implemented such a practical, space-saving idea to date?*

NeoGeos News *continued from page 25*

Trish: New hires need to understand they have to be a little patient with training courses. Similar to when I started, new hires are often eager to get started on their technical careers and try to learn everything at once by loading up on internal and external training courses. But time spent learning new techniques is wasted if you do not use the information you just learned. By the time you need to use that skill, too often you find that you have forgotten what you learned and have to take the course again. I am a believer in "just in time training," whereby you get the training you need when you need it.

It is important that new hires network with senior people within and outside of your company. That is one way to learn from those with experience and to establish the all important network needed for that day when you have to find a new job.

Finally and most importantly, new hires should take responsibility for their own career. They should not be lulled into a false sense of security when they finally "get the job." You still need to be very proactive in developing your career and not rely on your company to take care of that for you.

Nigel: Trish, what is your overall advice to young geoscientists?
Trish: To know what is going on within your company and keep abreast of the company's direction and decision making. This means you must begin to understand the business side of the petroleum industry while you develop your technical skills. The technical work you do is used to make business decisions; new hires should learn how that works and take ownership of their role in that process. Their careers will greatly benefit from that understanding!

We welcome your comments and suggestions — please contact Nigel Hicks (nigel.hicks@bp.com) or Amanda Beardsley (amandagb@rice.edu) with your feedback. ■

Government Update

*by **Henry M. Wise, P.G.** and **Arlin Howles, P.G.***

TBPG News

New Rules Adopted

The Texas Board of Professional Geoscientists (TBPG) has amended two of its rules, effective December 12, 2006. The first makes firm registration mandatory for all firms offering to engage or engaging in the practice of professional geoscience for the public in Texas that do not meet any exemptions in §1002.252. For more information go to: http://www.tbpg.state.tx.us/Proposed%20851%2030%20Firm%20Registration.pdf

The second allows an exemption to the continuing education requirement for license holders experiencing long-term physical disability or illness. For more information go to: http://www.tbpg.state.tx.us/Proposed%20851%2032%20CE%20program%20_3_.pdf

AGI Government Affairs Monthly Review (November 2006)

Expectations for the New Congress

Legislation of interest to the Earth science community, such as offshore drilling, pipeline safety legislation, the reauthorization of the National Cooperative Geologic Mapping program, the NOAA Organic Act and the National Competitiveness Investment Act (NCIA), which would double the funding for the National Science Foundation over 5 years, are all likely to be stalled. The Senate's offshore drilling bill may have a slim chance of passage, and pipeline safety may move forward because of the recent problems with low-pressure pipelines in Prudhoe Bay, Alaska. Congress was able to pass legislation on the nuclear energy treaty with India, a lame duck priority of the President, before adjourning in November.

The 110th Congress will run from January 3, 2007, to January 3, 2009. The Democrats have indicated that energy and education will be top priorities. They would like to reduce U.S. dependence on foreign oil, eliminate subsidies for oil and gas companies, enhance the development of alternative energy resources, provide relief to consumers for high energy prices and increase conservation, particularly through increasing vehicle gasoline standards. It is also quite likely that any offshore drilling legislation introduced in previous congresses will not be on the agenda in the 110th, while climate change initiatives may be considered.

With regards to education and science, the Democrats want to make the research and development tax credit permanent and allow tax breaks for college tuition. The Higher Education Act, the No Child Left Behind Act (NCLB) and the National Science Foundation are all scheduled for reauthorization in 2007. The 110th Congress may consider these laws and possible changes to them laws in relation to the 20 policy suggestions on research and education provided in the 2005 National Academies (NAS) Report on U.S. innovation and competitiveness, titled "Rising Above the Gathering Storm." The NAS Report generated a bevy of new bills on innovation and competitiveness in the 109th Congress; however, none of these bills came close to passage. While the Democrats do not have a separate platform for science and engineering, they mention the importance of these disciplines in their economic growth platform. In general, the Democrats favor the 20 policy suggestions made in the NAS report, though exactly how to implement these policies will require further consideration. Regardless of which party is in the majority, Earth science issues related to natural resources and natural hazards, which ultimately affect U.S. economic growth, the vitality of the workforce and security, will remain important in the 110th Congress.

Congress Panel Members of Interest

The following are party ratios (D–R) and the new Democratic members of Senate committees of interest to the Earth science community in the 110th Congress (Note that the committee ratios are the same as those for the 108th Congress,, when the parties were separated by the same 51 to 49 advantage):

- Commerce, Science and Transportation (12–11): Thomas R. Carper, Del.; Claire McCaskill, Mo. and Amy Klobuchar, Minn.
- Energy and Natural Resources (12–11): Blanche Lincoln, Ark.; Bernie Sanders, Vt. and Jon Tester, Mont.
- Environment and Public Works (10–9): Ben Cardin, Md.; Bernie Sanders, Vt.; Amy Klobuchar, Minn. and Sheldon Whitehouse, R.I.

Senate: The following is some background information on the new Democratic leaders and committee chairs who will take over when the 110th Congress convenes on January 3, 2007:

- **Majority Leader:** Harry Reid (D–NV), 66, is characterized as a straightforward hard worker, who prefers quiet compromise rather than publicized, loud debates. He is strongly opposed to the Yucca Mountain Nuclear Waste Repository project, he supports brownfields legislation and he supports improvements to the Clean Air Act, Safe Drinking Water Act, Endangered Species Act and Clean Water Act. He has been known to support the interests of ranchers and miners regarding land-use rights, given the needs and interests of Nevada. Reid firmly believes that the nation needs to take necessary steps toward foreign oil independence while providing **Government Update** *continued on page 45*

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citizens with temporary relief from high energy prices. As a critic of the NCLB, he advocates for improvements to the bill. He has supported the NCIA in a bipartisan fashion with the rest of the Senate leadership. Reid was born in Searchlight, NV. His father was a hard-rock miner. He received a BA in political science from Utah State University and received a law degree from George Washington University.

- **Assistant Majority Leader:** Richard "Dick" Durbin (D–IL), 62, is a good debater, often a spokesman for the Democratic party and very knowledgeable about Senate rules and procedures. He supports the farming community and promotes the use of ethanol for energy. Recently he opposed the Senate bill on offshore drilling in the Gulf of Mexico because he would like to see a comprehensive energy plan that promotes conservation with energy exploration. Durbin has repeatedly offered legislation to increase vehicle energy efficiency standards, he has fought against the Department of Defense regarding wind farms in Illinois and he has been a leader on legislation to channel record oil company profits to Americans and to make it illegal for oil companies to alter supplies to drive up prices at the pump. On education issues, Durbin has targeted unfair lending practices for college tuition, has criticized cuts to student aid programs and in his bill titled "Reverse the Raid on Student Aid" has supported reduction of interest rates on student loans and other incentives. Durbin was born in East St. Louis, IL. He received his BS in international affairs and economics and his law degree from Georgetown.

- **Budget:** Kent Conrad (D–ND), 58, is a moderate and fiscal conservative who has worked tirelessly for reductions to the federal budget deficit, particularly targeting foreign debt. Conrad supports energy efficiency, clean coal technology, biofuels and wind energy. North Dakota has been estimated to have the greatest potential for wind power in the nation. He also favors releasing oil from the strategic petroleum reserves to moderate price fluctuations and providing incentives to energy companies to produce more oil domestically. His ideas are spelled out in legislation he introduced in 2006 called the Breaking Our Long-term Dependence, or BOLD, Energy Act. Conrad has some concerns about the NCLB and believes the objectives of the act will require more funding. He was not among the 40 senators who co-sponsored the NCIA and he has not supported previous competitiveness legislation. Conrad was born in Bismarck, ND. He received an BA in political science from Stanford and an MBA from George Washington University.

- **Appropriations:** Robert Byrd (D–WV), 88, has been in Congress longer than any other member and knows the rules and procedures very well because he authored many of them. Born into poverty, he has become one of the most powerful senators in the country over his 47 years of service, although his age and health are becoming more of a concern. The 110th Congress will mark his third chairmanship of the Senate Appropriations Committee. Byrd introduced the Climate Change Strategy and Technology Innovation Act with Senator Ted Stevens (R–AK), which would commit $4 billion over the next 10 years to expand technology research on climate change and create an administrative structure designed specifically to deal with the issue. He has not been a co-sponsor of any of the competitiveness legislation introduced by the 109th Congress, but he did support the NCLB. He would like to see more funding for the NCLB Act and for other education programs, including the Byrd Scholarships for higher education. Byrd was born in North Wilkesboro, NC. He received his BA in political science from Marshall University and his law degree from American University.

- **Appropriations Subcommittee on Commerce, Justice and Science:** Elected to Congress in 1976, Barbara Mikulski (D–MD) is known as a tough and persistent negotiator, a hard worker and a strong supporter of science. She is a senior member of the Appropriations Committee and most likely to assume the chair for the science subcommittee. Mikulski does not have a stated opinion on energy policy on her web site; however, she has opposed legislation to open additional areas to offshore drilling in the past. On the environment, Mikulski has fought to reduce air pollution, clean up water pollution and wetlands, and protect national health and drinking water. She is a leading defender of the Chesapeake Bay, allotting $20 million each year to mitigate pollution in the area. Mikulski strongly supports NASA and the National Institutes of Health, both of which have facilities in Maryland. She has been working hard to double the National Science Foundation budget and has been a strong supporter of the National Competitiveness Investment Act and other competitiveness legislation. Mikulski was born in Baltimore, MD. Although she initially wanted to be a chemist, she shifted majors in college and received her BA degree in sociology from Mount Saint Agnes College and an MSW from the University of Maryland.

- **Energy and Natural Resources:** Jeff Bingaman (D–NM), 63, has been described as cerebral, logical and unselfish. He prefers to have policy discussions rather than publicity events. Bingaman helped to write the Energy Policy Act of 2005 and works well with his fellow statesman, Senator Pete Domenici (R–NM), who is the chair of the committee for the 109th Congress. Bingaman would like to have additional incentives in U.S. energy policy, such as tax benefits for conservation and more alternative energy options. Both New Mexican senators support the national energy laboratories within the state and elsewhere. Bingaman has opposed new offshore drilling **Government Update** continued on page 47

GEOSCIENCE JOBS & PERSONNEL AVAILABLE!

Job Seekers: During the past year, the HGS Jobs Hotline website has averaged over 30 positions per month. New ads are being posted almost every day!

Employers: Post your job listings, and get a large response from qualified candidates, for your ads. Our website averages nearly 11,000 website "hits" per month.

Current Jobs page at: http://www.hgs.org/en/jobs/search.asp

Contact info: Peter Welch – Chairman, HGS Personnel Placement Committee
(713) 862-2287 peter-welch@sbcglobal.net

Joint SPE/AAPG/SEG Workshop

Integrating Stress and Pore Pressure Predictions for Exploration, Drilling, and Production

11 - 13 Feb 2007
Galveston, Texas USA
Venue—Moody Gardens Hotel and Convention Center

The first in a series of joint workshops between SPE, AAPG, and SEG, this event is designed to foster better communication among the petroleum engineering community and geologists/geophysicists. The program committee, chaired by Professor Jean-Claude Roegiers, from the University of Oklahoma, has developed an inclusive set of interactive sessions designed to inform and educate this critical audience. Carefully selected case studies and technical presentations that cross disciplines will foster improved integration of the knowledge base and best practices for these two sets of stake holders. The sessions will begin with a scene setting shared by representatives from the three organizing societies, it will then move to technical presentations, case studies, and breakout sessions that begin at a basin perspective, move to the reservoir level, and finally focus in on wellbore issues.

SPE International — Society of Petroleum Engineers
AAPG — American Association of Petroleum Geologists 1917
SEG

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legislation. He is a strong advocate for nuclear energy, clean coal and tougher vehicle emissions standards. Bingaman supports science through competitiveness legislation, including the NCIA, and also supports training students to work in technology-related fields. He was born in El Paso, TX, but grew up in the mining town of Silver City, NM. His father was a science professor at Western New Mexico University, and his mother taught in the public schools. He received an BA in government from Harvard and a law degree from Stanford.

- **Commerce, Science and Transportation:** Daniel Inouye (D–HA), 82, has been described as a very private man and a quiet negotiator. He has been in Congress longer than Hawaii has been a state, serving as its territorial legislator initially. He is the third most senior senator behind Senators Byrd and Kennedy. He has a close working relationship with Senator Ted Stevens (R–AK), partly because of their common interest in meeting the needs of their native American constituents and partly because they have served together for a long time as the senior senators from the two newest and only noncontiguous states. Inouye has supported legislation to increase offshore drilling in Alaska. Inouye supports science, particularly ocean and geologic sciences related to the needs of the Hawaiian Islands. He is also a strong supporter of competitiveness legislation, including the NCIA. Inouye was born in Honolulu, HI. He wanted to become a surgeon, but lost an arm while serving in the U.S. Army during World War II. After spending some time in recuperation with future Senator Bob Dole, Inouye received an BA in government from the University of Hawaii and a law degree from George Washington University.

- **Environment and Public Works:** Barbara Boxer (D–CA), 65, is considered one of the most liberal and outspoken members of the Senate and a strong advocate for the environment. She opposed the Energy Policy Act of 2005 and opposes more offshore oil drilling. She supports environmental protection and toughening standards for water and air quality. She would like to make sure that polluters pay for the clean-up of Superfund sites and other polluted areas. She supports the California plan to reduce carbon emissions and plans to introduce similar legislation in the Senate. She has already teamed up with Senators Jeff Bingaman and Joe Lieberman (I–CT) to ask President Bush to work with Congress on climate change legislation. In addition, Boxer and the Democratic party have created two new subcommittees on climate change with the Environment and Public Works Committee. Boxer supports science and has cosponsored competitiveness legislation, including the NCIA. Boxer is also an advocate for education and supported the NCLB, though like many Democrats in the Senate, she believes the act is significantly underfunded. Boxer was born in Brooklyn, NY. She received a BA in economics from Brooklyn College.

- **Health, Education, Labor and Pensions:** Edward Kennedy (D–MA), 74, has held office in Congress for 44 years. Kennedy has a plan for energy independence by 2020 on his web site. He has opposed legislation for more offshore drilling in the past. He supports investment in alternative energy sources and stricter regulations on mining and gas companies. Kennedy helped to craft the NCLB, but has since criticized what he considers neglect on the Administration's part to provide promised resources to support testing requirements. He cosponsored the NCIA, meant to improve funding for science research and education. He was born in Boston, MA, the youngest child of the famous Kennedy family. He received an AB in government from Harvard and a law degree from the University of Virginia.

House: The following is some background information on the new Democratic leaders and committee chairs who will take over when the 110th Congress convenes on January 3, 2007:

- **Speaker of the House:** Nancy Pelosi (D–CA), 66, is the nation's first female leader in Congress and the most powerful woman in U.S. history because she will be third in line to the presidency. She has been an effective party activist and she has the reputation for an uncanny ability to unify a disparate group with competing interests. Pelosi's agenda for the 110th Congress is the House Democratic party agenda. On energy, the Democrats have developed a "New Direction for America's Energy Policy" to punish gasoline price gouging, eliminate tax breaks and incentives for oil companies, enhance investments and incentives for biofuels, enhance investments and incentives for alternative energy resources and promote energy conservation, particularly through improved vehicle efficiency. The tax break for geological studies for oil exploration would be targeted for elimination and the Democrats would generally target other incentives for larger oil companies rather than incentives for smaller companies. On science and education, the House Democrats have developed an "Innovation Agenda" to keep America competitive in the 21st century. The agenda includes creating an educated and skilled workforce in science, engineering, math and technology; investing in sustained federal research and development initiatives that promote public-private partnerships, and achieving energy independence in 10 years. Some specific goals to achieve this agenda include doubling the budget of the National Science Foundation; creating regional centers of excellence in research; making college tuition tax-deductible and providing scholarships for students in science, math, engineering and technology; and providing incentives for science, engineering, math and technology teachers who are or will be teaching in grades K through 12. Pelosi was born in Baltimore, MD. Pelosi received her BA in government from Trinity College in D.C.

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International Oil Conference and Exhibition

Veracruz, Mexico, 28–30 June 2007

The International Oil Conference and Exhibition in Mexico is being organized by CIPM, AIPM, AMGE, AMGP, and SPE. These Societies welcome your paper proposal submission to this, their second collaboration for an exciting event in Veracruz, Mexico, 28–30 June 2007.

ORGANIZERS

CIPM - Colegio de Ingenieros Petroleros de México
AIPM - Asociación de Ingenieros Petroleros de México
AMGE - Asociación Mexicana de Geofísicos de Exploración
AMGP - Asociación Mexicana de Geólogos Petroleros
SPE - Society of Petroleum Engineers

This three-day event will offer over 200 technical papers and will address the topics listed below.

- Deepwater Development and Production Issues
- Field Development of Heavy and Extra-Heavy Fields
- Characterization and Production Optimization of Turbidite Reservoirs
- IOR/EOR, Optimal Well Placement, Data Mining and Water Management Issues in Mature Fields
- Reservoir Engineering of Fractured Reservoirs

Rodolfo Camacho Velázquez, Program Committee Chairperson, invites you to submit a paper proposal online at http://manuscripts.spe.org/ams/cgi-bin/main.plex.

The submission deadline is 12 January 2007.

HGS Welcomes New Members

Effective January 1, 2007

ACTIVE MEMBERS

Kyle Baier
Steve Blanke
Stanley Clowers
Anne Covault
Jacob Dunstan
Daniel Hamilton
Sean Murphy
Kathleen McColgin
Keishi Nakashima
Brenda Reilly

ASSOCIATE MEMBERS

Paul Casey
Mitzie Kerns

Welcome New Members

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- **Appropriations:** David Obey (D–WI), 68, is a proponent of fiscal discipline and has tried to curb the Administration's spending on occasion. He is noted for his intelligence, "irascible disposition" and legislative skill. Obey chaired the Appropriations Committee for nine months in 1994 and was able to help ensure that all of the budget bills became law by the start of the fiscal year. Since then, every budget appropriations cycle has been completed after the start of the fiscal year. Obey called for action on global warming on Earth Day 2006 and has criticized the censorship of NASA climate scientist James Hansen. Obey was born in Okmulgee, OK. He received a BS and an MA in political science from the University of Wisconsin.

- **Education and Workforce:** George Miller (D–CA), 61, has the keen ability to cooperate with parties that hold competing interests. He has also been called a "liberal firebrand" whose priorities include education and the environment. Miller has worked with current Chairman John A. Boehner (R–OH) on the House Education and Workforce Committee to reduce hostility and make the committee more productive. He helped create the House version of the Higher Education Act and the NCLB. Miller was born in Richmond, CA. He received a BA in political science from San Francisco State University and a law degree from the University of California, Davis.

- **Energy and Commerce:** John Dingell (D–MI), 80, has the longest tenure in the House of Representatives and is a firm believer in congressional oversight. During his 51-year congressional career, he has served as Chairman of the Energy and Commerce Committee for 14 years before the Republican party became the majority. He supports the continued development of ethanol and other biofuels. Dingell helped write the 1990 Clean Air Act and is also a strong supporter of the Clean Water Act. He is also known for his support of wildlife conservation. John supports efforts to sustain the Great Lakes; the National Oceanic and Atmospheric Administration's Great Lakes Environmental Research Laboratory is located in Ann Arbor. Dingell was born in Colorado Springs, CO. He served in the U.S. Army during World War II. He received a BS in chemistry and a law degree from Georgetown University.

- **Resources:** Nick Rahall (D–WV) has served in the House for 30 years and has focused on coal and water resources throughout his tenure. He has supported mine health and safety incentives, clean coal technology, coal liquefaction for transportation fuel and many conservation programs. Rahall works closely with the U.S. Army Corps of Engineers on water resource programs as a leading member of the Transportation and Infrastructure Committee. He has received awards from environmental groups for his work. He cosponsored the National Cooperative Geologic Mapping Act of 1992; however, he was not a co-sponsor of the re-authorization of this act in the 109th Congress. He helped to establish the Center for Environmental, Geotechnical and Applied Sciences at Marshall University in 1993. Rahall was born in Beckley, WV. He received a BA in political science from Duke University. Rahall represents the 3rd district of West Virginia. The area is also known as the "coal district" because it is home to five of the ten top coal-producing counties of the state, including Boone County, the largest producer.

- **Science:** Bart Gordon (D–TN) has worked with current Chairman Sherwood Boehlert (R–NY) to create an atmosphere of cooperation and nonpartisan accomplishment in the House Committee on Science. Besides becoming the chairman of the House Science Committee in the 110th Congress, Gordon will continue to be a member of the House Energy and Commerce Committee. He is a strong advocate for alternative fuel measures to decrease the nation's dependency on oil. He opposes locating nuclear waste storage facilities in Tennessee. Gordon sponsored three bills at the end of 2005 that would have implemented many of the recommendations of the National Academy report "Rising Above the Gathering Storm." He is a strong advocate for increased funding for science and engineering, particularly a doubling of the budget of the National Science Foundation over 5 years. Gordon's web site provides a list of science and math resources from federal agencies for teachers and students in grades K through 12. Gordon was born in Murfreesboro, TN. He received a BS from Middle Tennessee State University, served in the Army Reserve and received a law degree from the University of Tennessee.

For more information on these and other members of Congress, please visit www.house.gov or www.senate.gov. Each chamber contains a list of its members with links to their individual websites.

GAO Report on Priorities for the 110th Congress

On November 17, 2006, the Government Accountability Office (GAO) released a report titled "Suggested Areas for Oversight for the 110th Congress." The follow six policy recommendations affect the geoscience community.

- **Strengthen Efforts to Prevent the Proliferation of Nuclear, Chemical and Biological Weapons and Their Delivery System (Missiles).** According to the President, proliferation of weapons of mass destruction and missiles poses "the greatest threat before humanity today." Over $8 billion has been given to the Department of Defense (DOD) and the Department of Energy (DOE) since 1992 to help mitigate this threat. Congressional oversight must prevent failure in the form of waste or, at worst, an attack on the nation. The **Government Update** continued on page 50

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GAO recommends that the following actions occur: 1) DOD and DOE must integrate nonproliferation programs for efficiency, 2) Congress must evaluate U.S. support and development of nonproliferation actions of nations and regimes, and 3) the DOD and State Department must manage Proliferation Security Initiative activities and use international collaboration on issues out of U.S. control.

- **Ensure Fair Value Collection Efforts of Oil Royalties Produced from Federal Lands.** While oil and gas production rose 90 percent and 30 percent respectively between 2001 and 2005, revenues collected by the Minerals Management Service (MMS) have only increased by about 8 percent since 2001. This discrepancy is partly due to royalty relief provisions given to oil and gas companies from the MMS. These provisions could result in up to $60 billion in revenues from oil and gas production that the U.S. Treasury is losing. GAO recommends the following oversight actions to ensure collection of revenues based on a fair market value: assessment of 1) data accuracy of oil production volume, price and royalty rates, 2) impacts of royalty relief on U.S. economy and 3) whether or not provisions adjust to changing market conditions.

- **Ensure a Strategic and Integrated Approach to Prepare for, Respond to, Recover and Rebuild from Catastrophic Events.** Hurricane Katrina and the threat of an influenza outbreak have illustrated the need for strategic disaster management. Risk-based disaster preparation and response can help save lives and prevent damage before it occurs. Lessons learned from past disasters indicate that federal coordination with foreign nations, nonprofit organizations and other levels of government is crucial. This coordination and the billions of dollars given to alleviate the impact of disasters require astute congressional oversight on catastrophic disaster management. The GAO recommends that Congress have a clear assessment of 1) leadership, roles and responsibilities, 2) the capacity for the nation to prepare, respond, recover and rebuild, 3) the extent of risk-based management use by specific federal and state organizations, 4) federal assistance to disaster management and 5) private catastrophe insurance and the National Flood Insurance Program.

- **Ensure the Adequacy of National Energy Supplies and Related Infrastructure.** The Energy Information Administration estimates that U.S. energy demand could increase by about 30 percent over the next 20 years. Recently, existing energy resources have become strained and less stable with oil imports rising to about 60 percent. The GAO recommends the following policy in order to effectively address U.S. energy needs. Congressional oversight must 1) assess risks, benefits and implications of our increasing dependency on external energy markets, 2) examine the Nuclear Regulatory Commission licensing process for new power plants, 3) assess the implication of the DOE's research and development portfolio, 4) evaluate the development of the renewable energy market and 5) evaluate programs that encourage energy efficiency and reduced energy demand.

- **Assure the Quality and Competitiveness of the U.S. Education System.** As the U.S. faces increasing economic competition from foreign nations, a shift toward increased educational efforts to ensure competitiveness and innovation so that citizens can fill the U.S. workforce in the future is necessary. The GAO recommends that Congress performs assessments on 1) efforts to close achievement gaps among disadvantage populations in K–16+ education, 2) the ability of education programs to meet future workforce requirements, 3) efficiency and effectiveness of programs designed to promote access to and affordability of postsecondary education and 4) the balance of immigration policies, relating to student or work visas and homeland security.

- **Examine the Costs, Benefits and Risks of Key Environmental Issues.** Balancing the long-term sustainability of natural resources and the environment with U.S. social and economic needs will be a challenge. The GAO report states that policy-making has been hindered primarily by a lack of clear information on environmental health hazards and the economic benefits of environmental protection. Therefore, the agency recommends that Congress 1) provide oversight to evaluate the implementation of environmental laws and the economic benefits and efficiency of existing environmental programs, 2) identify where more information is needed to better assess the state of the environment and activities to fill knowledge gaps, 3) evaluate the costs and benefits of alternative approaches to achieving environmental outcomes and 4) determine whether amending current legislation could improve sustainability.

The full GAO report is available at:
http://www.gao.gov/new.items/d07235r.pdf.

Supreme Court Hears Arguments on Climate Change Case

The Supreme Court heard one hour of oral arguments in the case of Massachusetts v. Environmental Protection Agency on November 28, 2006. The case requests the Environmental Protection Agency (EPA) to regulate greenhouse gases, specifically exhaust emissions from new cars, as part of the Clean Air Act. Chief Justice John Roberts and Justices Antonin Scalia and Samuel Alito spent much of the time asking Jim Milkey, an assistant attorney general for Massachusetts, whether the state had enough legal standing to bring the case forward. In particular, the justices wanted to know if the state would experience any imminent

harm from greenhouse gases, which would give the state the appropriate legal standing.

When Gregory Garre, the deputy U.S. solicitor general representing EPA took the floor to present the government's defense, Justices Anthony Kennedy, David Souter, Stephen Breyer and Ruth Bader Ginsburg spent much of the time asking why the EPA had changed its ruling on the regulation of greenhouse gases. Garre insisted the Supreme Court should not order EPA to reexamine its decision unless Massachusetts can show the regulations would help to offset climate change. This statement ignited a series of questions from the justices about how effective EPA regulations would be in altering the effects of climate change in Massachusetts. A decision in this case is likely to rest on the votes of Justices Stevens and Kennedy, with Roberts, Scalia and Alito favoring the EPA and Souter, Breyer and Ginsburg favoring Massachusetts. Transcripts of arguments and other details are also available from the Supreme Court web site at : http://www.supremecourtus.gov/

Congressional Briefing on "Stern Review: The Economics of Climate Change"

On November 13, 2006, the Environmental and Energy Study Institute sponsored an informative congressional briefing on "The Stern Review: The Economics of Climate Change." A flood of attendees packed themselves into a Rayburn House conference room to hear the highlights of this report from the United Kingdom, which compares the economic costs of taking action to address climate change versus those of inaction. Julian Braithwaite, Counselor for Global Issues, Lauren Faber, Environmental Advisor, and David Thomas, First Secretary on Energy and Environment, from the British Embassy summarized the report.

According to Faber, the Stern Review reports about 430 ppm of carbon dioxide equivalent in the atmosphere today with a projected 2-ppm rise each year, which would result in a 2°–3° global temperature rise over the next 50 years. If no action to address climate change is taken, Stern projects 5%–20% reduction in gross domestic product each year. Yet, if international efforts are made to stabilize the atmosphere between 450 and 550 ppm carbon dioxide equivalent, requiring a 25% decrease in emissions compared to current levels, a 1% reduction in GDP each year would result. Therefore, for every $1 the global economy invests in actions to mitigate climate change, it will save $5.

Thomas summarized Stern's three policy recommendations, including pricing carbon in the form of trade, tax or regulation, continued research and development, a five-fold increase in funding for a variety of carbon-reducing technologies and the incorporation of efficiency, awareness and education into any economic strategy. Stern reports that the world is already locked into climate change for the next 20–30 years. Therefore, both adaptation and mitigation are needed. Braithwaite concluded with an outline of future policy plans for the United Kingdom. A statutory emissions target will be designated for 2050. New climate change institutions, including one in the Parliament will be implemented. Experts will produce an energy white paper for government strategy on energy policy, and the European Union will seek a dialogue with the United States. However, Braithwaite stated that his nation only emits 2% of the world's carbon, therefore, "The UK is one small part of a bigger equation to promote an international framework."

The presentations from this briefing and the complete Stern Review are available at the EESI web site: http://www.eesi.org/briefings/2006/Energy&Climate/11.13.06_stern_report/11.13.06%20stern_report.htm

Congressional Seminar on U.S. Perception of Climate Change

On November 28, 2006, the American Meteorological Society's Environmental Science Seminar Series held a congressional seminar titled "The Divide between Values and Behavior: Exploring American Perceptions of Global Warming and the Environment." The seminar featured Dr. Anthony Leiserowitz, research scientist at Decision Research and principal investigator at the Center for Research on Environmental Decisions at Columbia University, and Dr. Matthew Nisbet, assistant professor at the School of Communications at American University.

Leiserowitz presented statistics from surveys of a national representation of adults portraying American views about climate change. His results illustrated that Americans perceive climate change as a moderate threat that is distant, lacks urgency and therefore is not a high priority. Americans generally support policies to reduce greenhouse gases but oppose taxes on carbon or gasoline. Certain segments of the population react very differently to the issue of climate change and Leiserowitz divided these populations into five groups. The two smallest and most extreme groups are the alarmists and naysayers. Alarmists tend to view climate change as a catastrophically high risk, while naysayers contend that climate change poses little or no risk for a variety of reasons. Alarmists generally represent more disenfranchised portions of the population with lower incomes, primarily minorities and women. Naysayers are generally more conservative and have higher incomes, primarily white men from the business sector and/or religious right. Because public knowledge on climate change is limited and sometimes confused, Americans often rely on images, emotions and values to make decisions about climate change. Therefore, Leiserowitz says, strategic images or messages that play **Government Update** *continued on page 52*

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into certain values should be used to engage Americans on the issue of climate change. Because different groups hold different values, each necessitates a different strategy for presenting climate change.

Matt Nisbet asserted that to successfully affect an audience on any science policy issue, including climate change, one must identify which segment of the public the audience falls into, determine which frames resonate with this audience, develop heuristics, such as catch phrases or symbols, to portray this frame, and identify the best communication channel to target the public.

Seminar summaries and presentations are available at the AMS web site: http://www.ametsoc.org/seminar

Climate Change in the News: Lawsuit and United Nations Conference

On August 14, 2006, in San Francisco, CA, the Center for Biological Diversity, Friends of the Earth and Greenpeace file a suit against the Bush Administration for violating the Global Change Research Act of 1990. This law requires a national scientific assessment of climate change and its effect on the environment every four years. The last assessment, produced during the Clinton Administration, predicted increased intensity of storms, floods and drought and a two- to threefold increase in heat-related deaths. Following this assessment, the Bush Administration has spent $2 billion in research to produce 21 reports from 13 different agencies. However, it has failed to generate a comprehensive national science assessment. Environmentalists have accused the Administration of suppressing a crucial coherent synthesis on climate change and are asking the court to demand that the Climate Change Science Program and Office of Science and Technology Policy produce a second national assessment.

This lawsuit comes at the end of a two-week United Nations climate change conference in Nairobi, where international experts are collaborating to create a global agenda for controls on greenhouse gas emissions. Britain and other nations have urged the U.S. to reform its energy policies and adopt limits on carbon emissions. Pressure to reform is also coming from within the U.S. where the Supreme Court began hearing arguments from 12 states and a coalition of environmental groups that are suing the Environmental Protection Agency for failure to regulate carbon emissions and comply with the Clean Air Act. Senator John Kerry (D–MA) has backed advocacy groups in its lawsuit charging the government for not providing a national climate science assessment required for informed and effective policy making. He stated that it is "the right time to push Washington" on this major issue.

Climate Change Assessment Requested by the USGS

The Climate Change Science Program (CCSP), a consortium of federal agencies performing climate science, has established a synthesis and assessment (S&A) program as a part of its strategic plan, mandated by the U.S. Global Change Research Act. There are 21 S&A products to be administered by 13 federal agencies over a five-year period covering a wide range of climate topics. The goal of these products is to provide an objective assessment of the state of the science, and its impacts on policy and decision-making for important societal issues pertaining to climate change.

The United States Geological Survey is the Department of the Interior's representative to CCSP and is responsible for three S&A programs: "1.2 Abrupt climate change," "3.4 Past Climate Variability and Change in the Arctic and at High Latitudes" and "4.2 State of Knowledge of Thresholds of Change that Could Lead to Discontinuities in some Ecosystems and Climate-Sensitive Resources." The first two programs have a draft prospectus that is now available for public comment. The third program will be available for public comment in a few months. Please visit the program links below and provide public comments for the first two programs by December 7, 2006.

S&A product 1.2:
http://www.climatescience.gov/Library/sap/sap1–2/default.htm

S&A product 3.4:
http://www.climatescience.gov/Library/sap/sap3–4/default.htm

S&A product 4.2:
http://www.climatescience.gov/Library/sap/sap4–2/default.htm

BLM Approves Oil Shale Testing Leases in Colorado

Higher oil prices have resulted in a push to explore unconventional oil reserves. The prospect of as many as 800 billion barrels of shale oil in Colorado's Piceance Basin, part of the Green River Formation of Colorado, Wyoming and Utah, has sparked the interest of Chevron USA INC., EGL Resources INC. and Shell Frontier Oil & Gas Inc. On November 15, 2006, the Bureau of Land Management (BLM) announced its plans to grant the three companies oil shale testing leases in the area after it approved environmental studies indicating that the project would lead to "no significant impact on the human environment." Companies will be required to monitor groundwater and minimize vegetation clearing which serves as habitat for migratory birds. These 10-year leases over 160 acres illustrate BLM's interest in spurring advances in extraction. All three companies are currently testing new technologies that would separate hydrocarbons from formations by heating shale underground. The leases are short-term so that companies can demonstrate the efficiency and economic viability of this extraction method.

Report Questions "Peak Oil" Problem

A recent report from the Cambridge Energy Research Associates (CERA) asserts that geophysicist M. King Hubbert's "peak oil" theory is based on unfounded beliefs that often lead to confusion in energy policy discussion. The report, "Why the 'Peak Oil' Theory Falls Down," argues that peak oil advocates fail to consider new kinds of reserves and technological advances. They estimate remaining oil quantity based on proven conventional reserves that only account for about 1.2 trillion barrels, while CERA estimates that about 4.82 trillion barrels of oil exist worldwide in conventional as well as unconventional reserves. Given that 1.08 trillion have already been produced, the report concludes that 3.74 trillion barrels remain and no evidence exists for any peak before 2030.

The press release and link to the report (subscription required) are available at the CERA web site:
http://www.cera.com/aspx/cda/public1/news/pressReleases/pressReleaseDetails.aspx?CID=8444

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Global Warming and the Next Ice Age

Every so often an article appears in the popular media about how scientists say that the current global warming will cause a new Ice Age. This has caused considerable confusion and a level of skepticism in the public about whether the "scientists" know what they are talking about. I have personally heard this argument from several geologists. An article in *Science* by Weaver and Hillaire-Marcel (2006) attempts to trace the history of this claim and assess its accuracy.

Most of the claims apparently invoke the idea that abrupt climate change is the historical norm and that global warming could precipitate a scenario whereby melting ice sheets in the Northern Hemisphere cause a massive influx of cold water into the North Atlantic that shuts down the AMO (Atlantic Meridional Overturning), the North Atlantic component of global ocean overturning circulation. As a result, Europe suddenly cools, glaciers begin to grow and advance, and a new Ice Age results.

These claims ignore much of what is known about the formation of glaciers. For glaciers to grow and advance, there must be

> "a change in seasonal incoming solar radiation (warmer winters and colder summers) associated with changes in Earth's axial tilt, its longitude of perihelion, and the precession of its elliptical orbit around the Sun. These small changes must then be amplified by feedback from reflected light associated with enhanced snow/ice cover, vegetation associated with the expansion of tundra, and greenhouse gases associated with the uptake (not release) of carbon dioxide and methane."

The current levels of CO_2 argue against long-term permanent snow on the land through August, a prerequisite for glacial growth and advancement in the Northern Hemisphere. In fact, most current models predict that the next Ice Age will not occur for another 50,000 years (Berger and Loutre, 2002).

Berger, A. and M.F. Loutre, 2002: "An Exceptionally Long Interglacial Ahead?" *Science* 23 (August 2002), Vol. 297. no. 5585, pp. 1287–1288, DOI: 10.1126/science.1076120.
Weaver, Andrew J. and Claude Hillaire-Marcel, 2006: "Global Warming and the Next Ice Age," *Science* (16 April 2004), Vol. 304. no. 5669, pp. 400–402, DOI: 10.1126/science.1096503.

Congress Extends Tax Credit For Research

Just before the holiday break congress extended a tax break to industry for research and development (R&D). First enacted in 1981 and extended 11 times since then, the tax credit is intended to foster innovation in American companies. The new bill provides a tax credit for any increase in R&D above the previous year, expanding the earlier more restrictive regulations that required an increase in the ratio of R&D spending income over previous years to qualify (Kintisch, 2006).

Kintisch, Eli, 2006: "Congress Extends Tax Credits for Industry," *Science* (15 December 2006), .Vol. 314, no. 5806, p. 1666, DOI: 10.1126/science.314.5806.1666b

The Business Case for Using the HGS Website

The HGS Website has become a critical part of the way that the HGS does its business. Members are using the Website more than ever to learn about, register and pay for HGS talks and other events on-line. Key articles from the *Bulletin* are now available on the Website and the full monthly *Bulletin* has been available for download from the Website in PDF format for several years. Recently, features have been added to the HGS Website that allow new members to join and to pay their dues and for. Hopefully, we will soon be able to vote for Society officers and Board members on-line.

Some members may not appreciate how important it is to use the Website for these activities. We are the largest local geological society in the World but do our business with only 2 office staff members along with members who volunteer to help. The way we used to do HGS business—by phone, mail, and e-mail-has become increasingly inefficient and costly.

This month's "Webnotes" is intended to explain how to use the Website more easily and to help the Society serve its members more fully.

Why register for events and pay on-line on the HGS Website?

- It's easier and simpler for you!
- You ensure that you are charged the right price
- You know exactly what you are signing up for, when and where is it being held and you can read or print a summary of the event
- You have a physical record of your reservation. You also have a record of all HGS events for which you are registered and that you have already attended
- You can change, cancel or pre-pay your reservation and you can register guests
- You walk directly into your event without having to sign in

Why registering and paying for events on-line is good for the HGS?

- It's easier and simpler for us too!
- It saves the HGS money and time
- It let's us know how many attendees to plan for and how many have already paid
- It makes our record-keeping simpler, faster and less expensive

Why should members update their on-line user profile once a year?

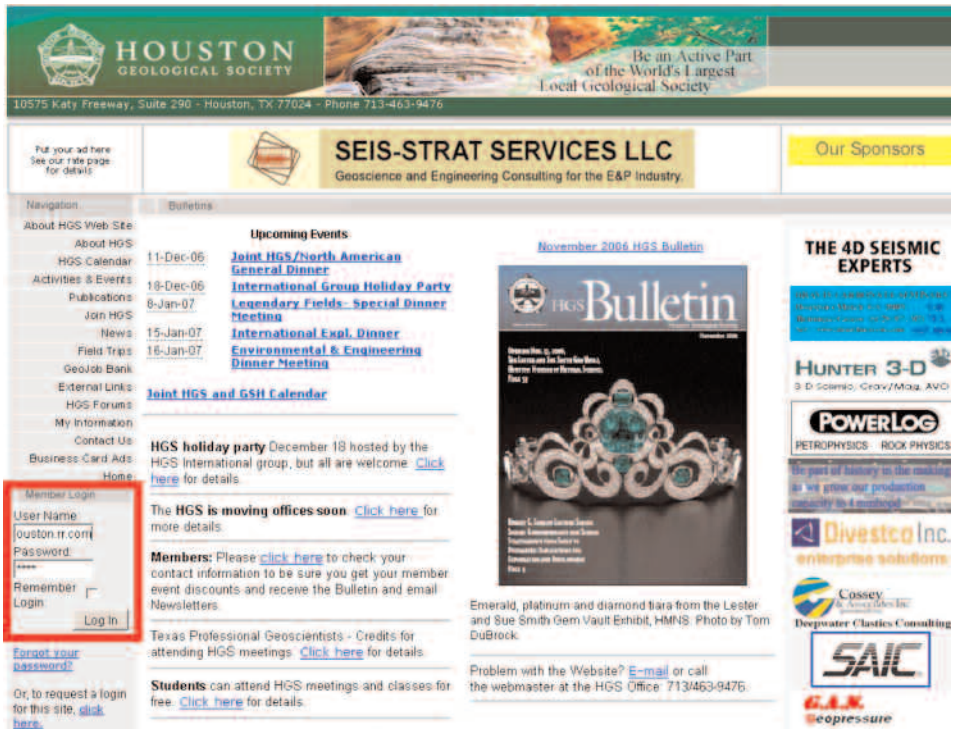
- To ensure that you get HGS e-mail announcements
- So other members and business associates can contact you
- Because everyone changes internet providers, employers and phone numbers more often than ever

Let's briefly go over how to make using the Website as easy as possible.

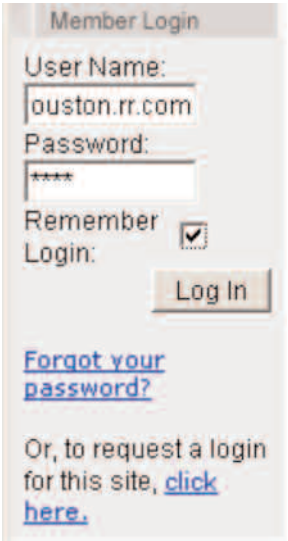
Logging On and Remembering Your Password

Let's face it: passwords are a pain to remember because we all have so many these days! The HGS Website makes passwords painless because you really only have to enter it once.

When you first enter the HGS Website (www.hgs.org), go to the login area on the left-hand side of the front page.



Enter your User Name and Password. Check the box to the right of Remember Login, then click Log In. The Website will remember your User Name and Password unless you choose to log out and there's really no reason to do that.



Webnotes *continued on page 56*

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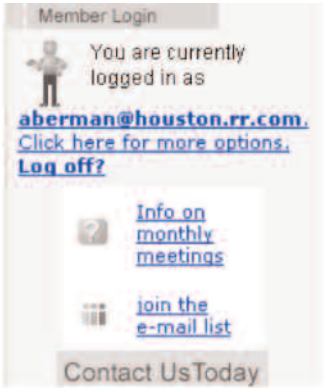
Viewing Your User Profile

If you are have previously registered your information on the HGS Website, you can view your profile by selecting "My Information" from the Website front page Navigation Area.

Site Registration and Updating Your User Profile

Now that you're logged into the HGS Website, you will see something like this in the login area:



Click on "Click here for more options" and you will be taken to the User Page. You can do a lot of things from here but, for now, the important things are registering your information if you are a new member or have never set up a profile, or updating your profile.

This will take you to your User Profile where you can see the information you previously entered and make any changes.

When you have made your changes, go to the bottom of the User Profile area and click "Submit Information."

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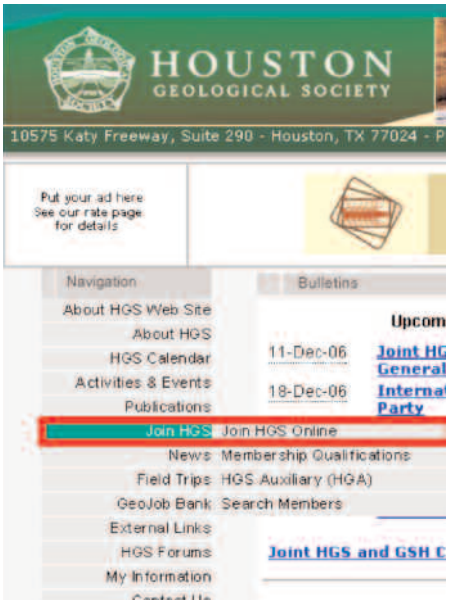
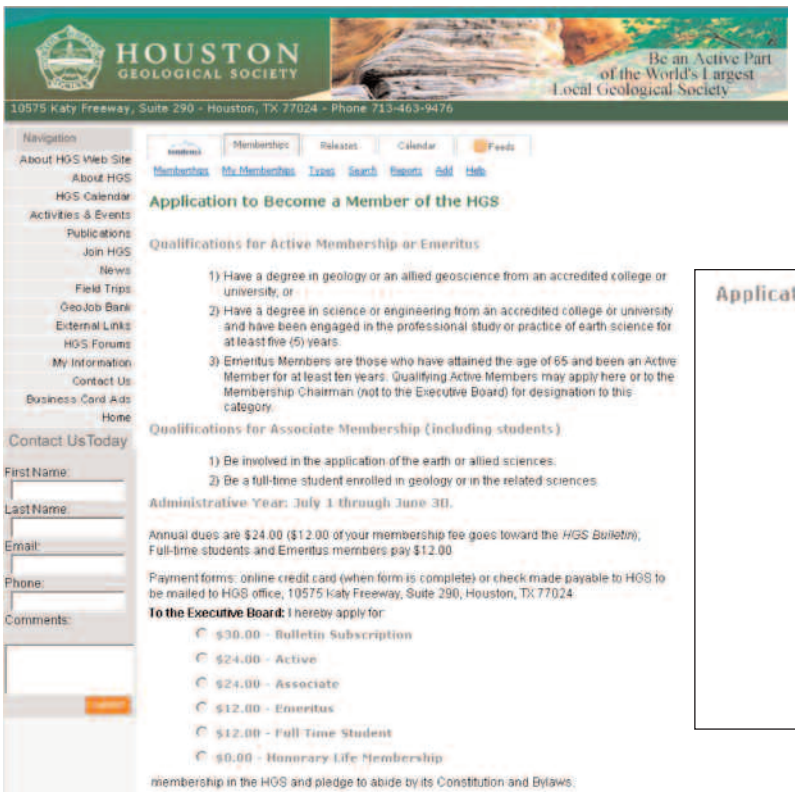
Becoming an HGS Member On-line

Growing our membership is the life blood of the organization and now people can become HGS members and pay their dues on-line. In the Navigation Area on the front page of the Website, select "Join HGS".



This will take you to a page that explains membership requirements, allows new members to apply and to pay their dues.



More tips and suggestions for using the HGS Website are coming in future editions of "Webnotes"!

Application to Become a Member of the Houston Geological Society

Qualifications for Active Membership

1) Have a degree in geology or an allied geoscience from an accredited college or university; or
2) Have a degree in science or engineering from an accredited college or university and have been engaged in the professional study or practice of earth science for at least five (5) years.

Qualifications for Associate Membership (including students)

1) Be involved in the application of the earth or allied sciences.
2) Be a full-time student enrolled in geology or in the related sciences.

Annual Dues Expire Each June 30. (Late renewals – $5 re-instatement fee)

Annual dues are $24.00; full-time students and emeritus members pay $12.00.

Mail this application and payment to:

Houston Geological Society
10575 Katy Freeway, Suite 290 • Houston, TX 77024
Telephone: 713-463-9476 Fax: 713-463-9160

Payment method:

☐ Check, ☐ VISA, ☐ MasterCard, ☐ American Express, ☐ Discover

Card # _____

Expiration Date: _____ Card I.D. _____

(Card I.D. – 3 or 4 digit number on front or back of card)

To the Executive Board: I hereby apply for ❑ Active or ❑ Associate membership in the Houston Geological Society and pledge to abide by its Constitution and Bylaws. ❑ Check here if a full-time student.

Name: _____
Address: _____

_____

Home Phone: _____ *Spouse's Name:* _____
Email: _____
Job Title: _____
Company: _____
Company Address: _____

_____

Work Phone: _____ *Fax Number:* _____
Circle Preferred Mailing Address: Home Office
Professional Affiliations:

❑ Active AAPG Others: _____

Professional Interest:

❑ Environmental Geology
❑ International E&P
❑ North American E&P (other than Gulf Coast)
❑ Gulf Coast E&P (onshore & offshore)

Membership Directory Preference:

❑ CD Rom
❑ Printed

School _____
Degree _____ *Major* _____ *Year* _____

School _____
Degree _____ *Major* _____ *Year* _____

School _____
Degree _____ *Major* _____ *Year* _____

Earth Science Work Experience _____

_____

_____

Applicant's Signature _____ *Date* _____

Endorsement by HGS member (not required if active AAPG member)

Name: _____

Signature _____ *Date* _____

Membership Chairman _____ *HGS Secretary* _____

rev. 2/7/2006

As a HGA member you are invited to join

GeoWives

2006–2007 dues are $7.50

make check payable to *GeoWives* and mail to:

Sara Nan Grubb

11212 Memorial Drive • Houston, Texas 77024

Please provide the following

Name: _____

Sreet Address: _____

_____

City/State/Zip: _____

Telephone: _____

email: _____

I will help plan a GeoWives activity ☐

I will serve on a committee ☐

Notification / Phone Committee ☐

Courtesy / Hostess ☐

My home is available for a meeting ☐

HGA *and* GeoWives **News**

January 29 Fashion Show

The Houston Geological Auxiliary will join with other petroleum auxiliaries for a spectacular and entertaining fashion show by Talbot's on January 29 at the Junior League. Attendance should be over the top. Congratulations to chairperson Linnie Edwards and her committee for organizing the luncheon and choosing such a fine setting to host this event.

Game Day and Luncheon

February 12

Junior League, 1811 Briar Oaks Lane, Houston

On February 12 the ladies will return to the Junior League for our own auxiliary's annual Game Day and Luncheon. Do not miss the fun. Call in your reservations early. Watch for your invitation in The Eclectic Log, our own calendar and information source.

More events are ahead through May. Come out and enjoy these outings with your officers and chairpersons who take pride in planning events for your pleasure. Support their efforts and attend all activities.

December Luncheon

Photos from our December luncheon are shown here. The fresh young faces and enthusiastic performance of the award-winning Dulles Honor Choir provided Broadway-style music that cheered us all. Many door prizes made everyone feel lucky. One table seemed to monopolize the prizes—you know who you are! The final treat was a book signing by our debuting author Ray Blackhall.

*by **Donna Parrish***

You are invited to become a member of

Houston Geological Auxiliary

2006–2007 dues are $20.00

Due by July 15th 2006

Mail dues payment along wtih the completed yearbook information to

Sally Blackhall, 8714 Sterling Gate Circle, Spring, Texas 77379

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
Email Address	Home Fax	

Please choose a Committee Assignment

☐ Fall Event	☐ Yearbook	☐ SOS	☐ Membership
☐ Christmas Event	☐ Spring Event	☐ Notification	☐ Game Day
	☐ May Luncheon	☐ Courtesy	

Our author and president, Ray and Sally Blackhall

Above: The enthralled group

Right: Lucky winners

Professional **Directory**

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