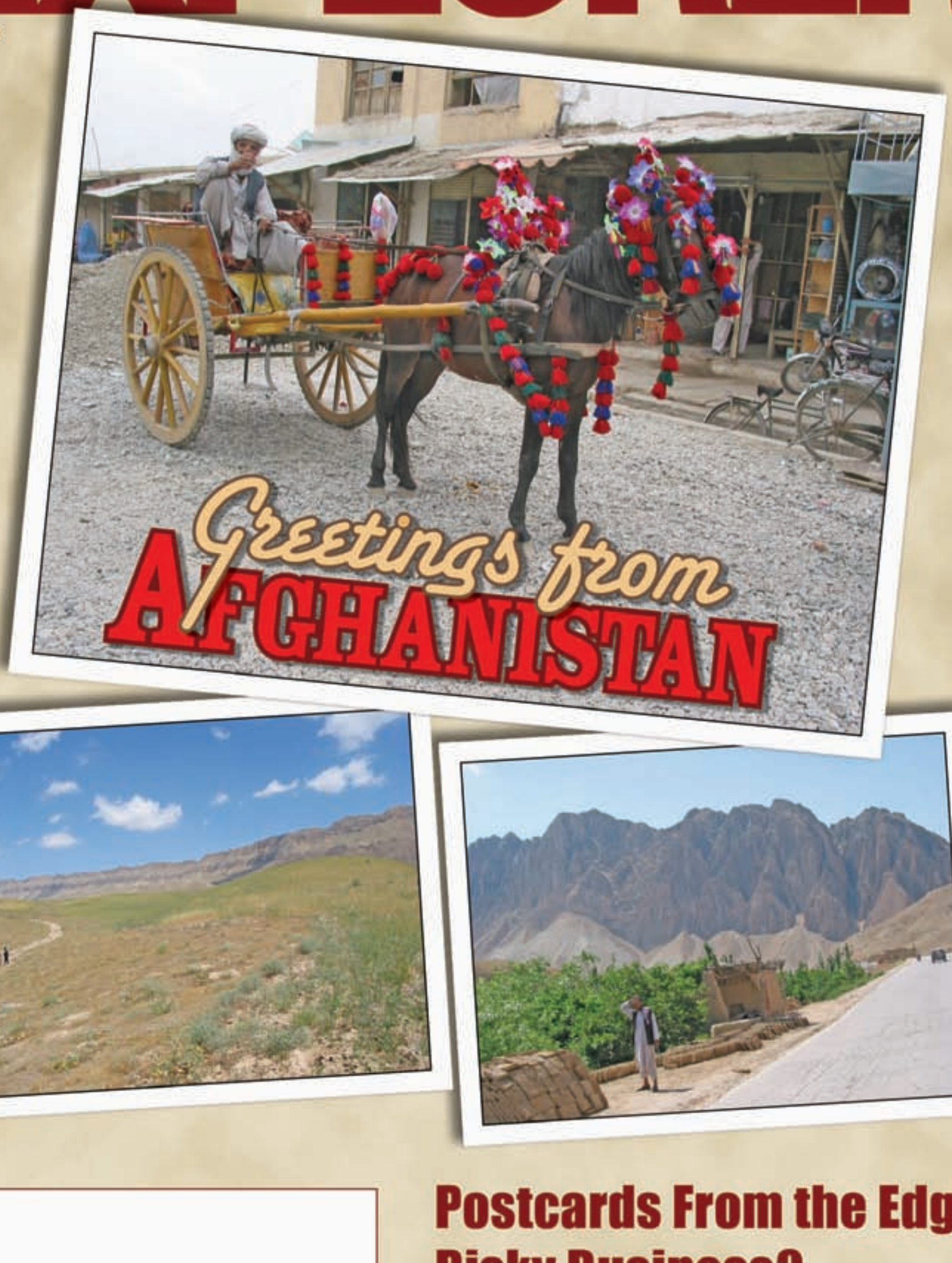
AAPG AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, AN INTERNATIONAL ORGANIZATION

EXPLORER

JULY 2006



Postcards From the Edge: Risky Business?

See page 14

Vol. 27, No. 7
July 2006

AAPG EXPLORER

On the cover: After 9/11 geologists from the U.S. Geological Survey were given a specific and perhaps difficult mission – explore, study and assess the resource potential of Afghanistan. Their findings have turned some heads; Afghanistan promises to have plenty of potential. Finding people willing to accept the challenge of finding the oil and gas may be just as difficult as the first step. See story on page 14. Photos courtesy of the U.S. Geological Survey; cover design by Rusty Johnson.

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PRESIDENT'S COLUMN

Execution Tops List Of Broad Goals

By LEE T. BILLINGSLEY

First, I want to thank the membership for electing me president effective July 1. I will try to live up to the trust and confidence you have shown in me.

By way of introduction, even though I now have a new title with AAPG, I am keeping my "day job." I have worked the past 28 years as a prospector and developer of (sometimes-elusive) hydrocarbons. I am an end-user of many of the products and services offered by AAPG.

Since 1998 I have been vice president of exploration for Abraxas Petroleum Corp., a San Antonio-based, publicly traded E&P company. I thank Abraxas for generously allowing me to serve as president, and I hope other companies also will realize the long-term benefits of professional contribution and allow their employees to serve AAPG or other societies.

* * *

On behalf of the 2006-07 Executive Committee (EC), we thank the outgoing members from the past year:

❒ Pete Rose was a most active and engaged president. He did not shrink from any challenge. As committee members and members-at-large suggested concerns to Pete, he addressed those concerns by appointing committees, consulting the EC and, finally, gaining EC decisions. He put much heart and soul into the job to improve the organization for its members. Pete, you succeeded.

Pete took me under his tutelage and prepared me for my upcoming year. I intend to do the same for our new president-elect, Will Green. At least Will may not have to constantly answer the question, "Did he play baseball?"

❒ Steve Veal served as our globetrotting vice president. He provided much needed global perspective, started a new student initiative (Barrel Award) and set up our new London office.

❒ Clint Moore, treasurer, initiated a new budget process and exhibited greater budget control and reporting than any treasurer (including myself) in recent memory. He seemed to enjoy taking care of the Association's money.

❒ Don Clarke had one of the busiest years as chairman of the House of Delegates (HoD) and member of EC. He guided the legislation creating the VP/Regions and VP/Sections through the HoD.


Billingsley

* * *

Over the past two years, the EC has instituted numerous changes that have required the AAPG staff to adjust their workflow to the new programs and services. In fairness to our staff, they need time to "catch their breath."

Consequently, I see this coming year as one of execution of AAPG's existing plan.

On paper, we have outstanding goods and services, but we can improve our execution. Vince Lombardi was a famous football (not soccer) coach of the Green Bay Packers in the 1960s. He would not let his team learn new plays until they perfected the old ones. Consequently, their offense was simple, almost predictable – but they became champions because they executed the plays so well.

Not a bad model for us to follow this coming year.

The broad goals for the EC for this coming year are:

✓ Guide headquarters staff, including an operational review of business directorate.

✓ Review mission statements, leadership and execution for all committees. Monitor progress and redirect, as needed.

✓ Improve and expand services and products to members by adding Distinguished Instructor; establishing committee to solicit E&P Notes for BULLETIN; increasing educational offerings; and considering some of the swell ideas that come from members and committees.

✓ Prepare AAPG corporate structure

See **President**, next page

Matson, Braunstein Award Winners Announced for Houston Meeting

Technical winners have been announced for the best paper and poster presentations at April's AAPG Annual Convention in Houston.

The winners will receive their awards at the opening session of the next annual meeting, set April 1-4 in Long Beach, Calif.

The winners are:

George S. Matson Award

The best paper award goes to Steven H. Brachman, with Pogo Producing in Houston, for "Integration of 3-D Seismic With Geologic Knowledge Can Detect Non-Amplitude Combination Traps and Discover New Pay Zones in the 600 BCF Mature Play, Northern Lafourche Parish, Louisiana."

The paper was part of the session on "Recent Discoveries and Play Openers: Mature Basins."

Jules Braunstein Award

The best poster award goes to George W. Shurr, Thomas Haggar and Sarah A. Chadima, for "Exploration Strategies for Ultra-Shallow Microbial Methane on the Eastern Margin of the Williston Basin."

Shurr is with GeoShurr Resources, Ellsworth, Minn., and Haggar and Chadima are both with the South Dakota Geological Survey, Vermillion, S.D.

The poster was part of the session on "Ultra-Shallow Gas Accumulations." ❑

Members Can View Climate Card Online

Last year, AAPG past president Ray Thomasson brought a card of "A Geological View of Climate Change and Global Warming" to the Public Outreach Committee with the idea for AAPG to publish it in large quantities and make it available to members to give to the public as an explanation in layman's terms explaining AAPG's climate change policy.

The card was conceived by Thomasson and Bill D. Pollard, of Fort Worth. Additional edits were made by Lee Gerhard, past president of the AAPG Division of Environmental Geosciences and editor of AAPG Studies *#47 Geological Perspectives of Global Climate Change*. The audience for the card was expected to be geologists who would use it to talk with the non-scientific public about global climate change, Thomasson said.

Due to the scientific nature of the card, the Public Outreach Committee referred the card to the AAPG Editor Ernie Mancini for technical review. He asked the Publications Committee to assist with this review.

The reviewers made several recommendations to improve the cards. The authors revised the cards and resubmitted them for publication, and the cards were again sent out for peer review. The reviews on the revised cards are mixed.

At a May meeting, the Executive Committee, chaired by then-president Peter R. Rose, voted in agreement with a proposal by the Publications Committee and Mancini to involve the full membership in the review process for this card, to get members' input on the card's content before it is put before the public, and to ensure that the card's content and concept is supported by the AAPG membership.

AAPG presently has a Position Statement on Climate Change Policy, adopted in 1999 during Thomasson's AAPG presidency, that states: "Geologists who study past climate variations understand that current climate warming projections fall well within documented natural variations in past climate. Therefore, for scientific reasons, the American Association of Petroleum Geologists does not support placing a carbon tax upon fossil energy sources as a tool to reduce carbon dioxide emissions, nor do we support any implementation of the Kyoto Protocol prior to Senate ratification."

The card concludes with the statement, "All of the principal causes of climate change are beyond the control of human beings."

The card is viewable on AAPG's Members Only Web site accessible via www.aapg.org. There also is a discussion board there for you to give your thoughts.

The discussion will close Oct. 1. ❑

President

from previous page

for global expansion, including international offices, as warranted.

✓ Increase ACTIVE membership (see below).

✓ Increase student awareness of careers in geosciences, especially in the energy industry.

✓ Have fun interacting with staff and members.

* * *

Now you know generally what to expect from your EC leadership. What do we expect from you the members?

AAPG needs more ACTIVE members. The following are some actions each of you can take to be an ACTIVE member:

✓ If you are an Associate member but qualify for Active status, upgrade your membership.

✓ Supplement your membership by joining one of our divisions: DPA, EMD and DEG.

✓ If you are a DPA member, respond to GEO-DC's Action Alerts.

✓ Recruit one new AAPG member. (They can apply online at www.aapg.org.)

✓ Join an AAPG committee and actively contribute.

✓ AAPG's Web site has a list of committees, their mission statements and chairpersons. Contact the chair and ask to be a member.

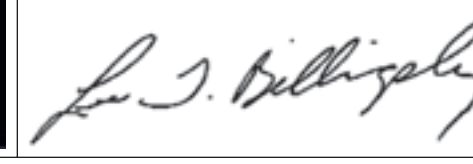
✓ Plan to attend the Annual Convention in Long Beach, Calif., next April and/or the International Conference in Perth, Australia, this coming November.

✓ Treat yourself to field seminars, short courses or educational conferences.

✓ Present an oral or poster paper at a convention; teach a short course; submit a BULLETIN or Special Publication article; become an associate editor of the BULLETIN; or make another technical contribution.

Petroleum Geologists have a vital role in supplying the world with one of life's critical ingredients, energy. And I firmly believe that Petroleum Geologists are more effective when they are ACTIVE members of a professional association like AAPG. So please join us.

Till next month,



2006-07 Executive Committee Seated

Billingsley Takes Helm of AAPG

Lee T. Billingsley, vice president of exploration for Abraxas Petroleum Corp. in San Antonio, on July 1 assumed the leadership of the Association's Executive Committee as president for 2006-07.

Billingsley, a native of Spokane, Wash., holds a master's in geology from Colorado School of Mines and earned bachelor's and doctorate degrees from Texas A&M.

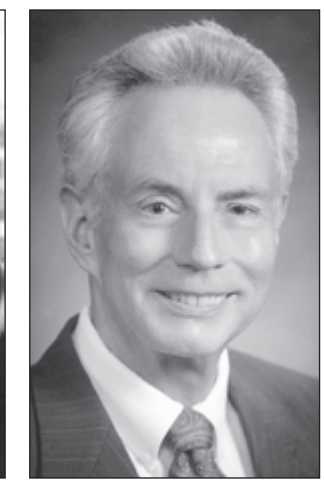
He began his career as an exploration geologist with Tenneco in Denver, later joined American Quasar and was a consultant as he pursued his doctorate. He then joined Monterrey Petroleum in San Antonio before forming Sandia Oil & Gas Corp.

He took the Abraxas post in 1998.

Joining Billingsley on the Executive Committee is **Willard R. "Will" Green**, a Midland, Texas, independent, who recently was voted president-elect by the AAPG membership. Green will serve as president in 2007-08.

Billingsley

Dolson



Green

Martinsen

Party

Mancini

Jones

Others recently elected to the 2006-07 Executive Committee are:

❒ Vice president – **John C. Dolson**, exploration adviser, TNK-BP, Moscow, Russia.

❒ Treasurer – **Randi Martinsen**, Department of Geology & Geophysics, University of Wyoming, Laramie, Wyo.

Remaining on the committee are:

❒ Secretary – **J. Michael Party**, division exploration manager for Wagner & Brown, Midland, Texas, who is completing his two-year term.

❒ Editor – **Ernest Mancini**, of the University of Alabama, Tuscaloosa, who is serving the third year of a three-year term.

Also joining the Executive Committee is **Larry Jones**, of Spartan Petroleum Corp. in Houston, who serves as this year's chairman of the House of Delegates. ❑

Variety of Audiences Targeted

Science Center Has Policy Goals

By LOUISE S. DURHAM
EXPLORER Correspondent

Perhaps nothing offers politicians in the nation's capitol a better opportunity to grandstand than rising energy prices, particularly gasoline.

Political posturing can reach absurd levels. A price-gouging investigation? A $100 gasoline rebate? *Really*?

Clearly, the need to educate and formulate energy policies based on reality and science has never been greater – and another organization is stepping up to the plate to help make a difference.

The newly established Center for International Energy and Environmental Policy (CIEEP) at the University of Texas at Austin was created to bring a science and engineering perspective to energy and related environmental issues. CIEEP will analyze existing policies, assess areas where policies are needed and develop policy options.

First, CIEEP will identify relevant industry issues that are at the forefront by going out to those people who have a vested interest in issues pertaining to energy and the environment and asking them to name their priorities.

"A theme of the center is that we seek priority topic suggestions from industry and then in Washington with a couple of key agencies in the energy business like Department of Energy and Department of the Interior," said Chip Groat, founding director of CIEEP. "Then we'll do the same thing with staffers from a couple of congressional committees that are in the energy business.

"Not only will we analyze and develop policy options," Groat said, "but an overall goal for this is to find better ways to educate people who shape opinions in this country about energy, including lawmakers and the media.

"It's policy not just for policy's sake, but for people who spread the word and take the action."


Groat

"So it's policy not just for policy's sake," Groat noted, "but for people who spread the word and take the action."

Projects to Tackle

Given that Texas is the nation's largest producer of oil and natural gas and home to corporate headquarters of myriad energy companies, it's significant that the CIEEP effort will kick off in Texas with the private sector.

"They're the ones that produce the energy and who often are misunderstood and misinterpreted," Groat said. "We want to be sure those interests are represented when we formulate studies.

"Following the initial contact with the appropriate executives from a group of different sizes of energy industry companies, a luncheon will be held to get further input on their thoughts," Groat continued. "This will be followed with a workshop in the fall to flush out and expand on some of the things we've heard."

CIEEP has been formulating some ideas of its own to throw into the mix.

One of the topics being considered focuses on the resiliency of oil and natural gas systems with regard to abrupt interruptions in the supplies of natural gas, oil and refined products by political action, terrorism or natural hazards. Such events could have a catastrophic impact on the U.S. economy.

This is a particularly timely issue given that the concern over possible supply interruptions already has resulted in a significant "fear premium" tacked onto the price of crude oil.

(Even so, President Bush recently gave the order to stop filling the Strategic Petroleum Reserve as one of the supposed quick fixes for rising gasoline prices.)

Another topic capturing CIEEP's interest is access to federal lands and the OCS. The focus would be on areas considered the most prospective for significant new oil and gas resources rather than the entire federal domain. The onshore focal point would be the western United States, concentrating on oil and gas but including coal, oil shale and geothermal energy sources.

"This will be done in the traditional way of digging out and analyzing information to see what was proposed to increase access and what was supposedly implemented by the Energy Act of 2005," Groat said, "and then determine what actually happened.

"For instance, have permits speeded up? Have there been fewer environmental entanglements to slow things down? To the degree that has happened," Groat asked, "have we actually seen increased activity on federal lands, or are we talking about it and nothing is happening?"

User-Friendly

This type study at a university has the added advantage of providing an opportunity for students going into government and the private sector to acquire first-hand experience in researching a policy issue rather than just reading about it.

The outcome from the projects that CIEEP ultimately undertakes will be tailored to the audience it's intended to inform.

In other words, there will be no thick technical reports to languish on someone's shelf.

"In some cases, we may create a Web site or host workshops, or, in some instances, we may do a briefing on the Hill," Groat said. "Or we may go to industry meetings and present.

"The products from the studies will be designed to meet the needs of a variety of audiences." ❑

Students Conduct A Host of Projects

Java Provides Complex Classroom

By BARRY FRIEDMAN
EXPLORER Correspondent

Geologists know that the East Java Basin in Indonesia is a region affected by the intersecting Indo-Australian and Pacific plates that produce complex faulting and rotation – in short, a good geological possibility in a country filled with good geological possibilities.

And where there are geological possibilities, there is the petroleum industry. And often academia. And sometimes students from different lands simply trying to understand one another over a dinner of frog leg soup.

Recently, Chevron, under the auspices of retired geologist and AAPG member Tom Heidrick, professor Eric Frost and a team of students from San Diego State University (SDSU), joined professors and students from Gadjah Mada University in Yogyakarta, Indonesia, to study this region – and brought with them a fancy new tool in the search for oil and gas.

It was, more to the point, a search for the best way to search.

What they discovered in the ground was almost as important as what they discovered about each other.

AAPG member Eric Peterson, who has a master's in geology at San Diego State University and specializes in bathymetric and Landsat imagery, says this area in Indonesia was chosen to perform a preliminary geologic investigation for Chevron and to give students from the two countries a chance to perform thesis work on a host of projects.

Peterson believes that, specifically, this central region of Java has not been extensively studied because of the apparent lack of hydrocarbons and difficulty in mapping with extensive jungle and agricultural cover.

As such, the tool they brought with them (new software called GeoMapper) allowed for digital field mapping of outcrops, picture locations, sample locations and other geologic information – replacing, if you will, the notebook and the ball-point pen.

Accordingly, rock samples, oil seeps, extensional dike systems, compressional folds and thousands of strike/dips were found and documented using new computer-based mapping.

A Whole New World

Taken as a whole, Indonesia's future potential depends on whether you think its barrel is half full or half empty.

According to the Indonesian Petroleum Association, as first reported in the *Asia Times*, the bad news is the country already has extracted 75 percent of its proven oil reserves and existing discoveries will decline by 50 percent over the next 10 years; the good news is that it is estimated that nearly 10 billion barrels of proven and potential oil reserves remain.

Similarly, while Indonesia has nearly 180 trillion cubic feet of proven and potential gas reserves – one of the world's largest natural gas reserves – most of it is currently exported unprocessed because of a lack of refining or distribution capacity to use it at home.

As much for the discovery of oil and gas, though, this venture was an opportunity for students of two vastly different cultures to work together – regardless of the tools used.

"It was the farthest any of us had ever been from home," Peterson said, who called Indonesia's geology "amazing and very complex."

"We saw active volcanoes (such as Merapi, which was erupting at press time), a mud volcano and the sites where early man (Homo erectus) had been excavated by archeologists," he said. "We ate food that you would have a hard time finding in the U.S., such as durian fruit or a bowl of spicy frog leg soup. We saw ancient Hindu temples like Prambanan in Yogyakarta," now nearly destroyed by May's disastrous earthquake in Central Java. (See related story, page 11.)

> *"We were part of a team and our main purpose for being there was to get a job done, but along the way we became a family."*

Another student from SDSU, AAPG member Jennifer Pérez, said the experience was more than just geologic.

"We were part of a team and our main purpose for being there was to get a job done, but along the way we became a family," Pérez said. "It was a large cultural shock living and working

See **Mapping**, page 12

Photos courtesy of Dharmawan Samsu, Indonesian AAPG student chapter oversight committee.

AAPG student chapter volunteers, coordinated by the student chapter at the Universitas Gadjah Mada (UGM), helped to prepare and distribute emergency relief supplies to victims of the recent Java earthquake.

Student Members Give Aid

Java Temblor Devastating

Editor's note: In the early morning hours of Saturday, May 27, a 6.3 magnitude earthquake struck about 15 miles offshore Indonesia's Yogyakarta region of Central Java, resulting in over 5,700 deaths with more than 36,000 people injured and 600,000 homeless.

The region most seriously affected by the earthquake lies on the Bantul plain that lies south of the city of Yogyakarta, where the Universitas Gadjah Mada (UGM) is located.

AAPG student chapters, coordinated by the student chapter at UGM, have been very active in assisting earthquake victims. With 55,000 students, UGM is one of Indonesia's largest and the UGM chapter has been active since 2000. They mobilized relief activities the day following the earthquake.

This report is by Julianta Panjaitan, AAPG student chapter president, written nine days after the devastating earthquake.

By JULIANTA PANJAITAN

The AAPG student chapters, coordinated by the student chapter of UGM, have done as much as possible within its capacity to help the earthquake victims since the day following the earthquake.

Damage Survey and Victims Evacuation

Since the day after the earthquake, the UGM chapter, assisted by volunteers from other AAPG student chapters in Indonesia, have been surveying the locations that were damaged or destroyed, and sent student chapter volunteers to the damage area for distribution of emergency supplies and assist the victims, including evacuation.

Coordination posts were established at Pundong, Bantul and at the geological field campus in Bayat area, Klaten.

Geological Research: Cause of the Earthquake

The geology students and the members of UGM student chapter also were entrusted by the Indonesian Institute of Sciences to research the cause of the earthquake.

We conducted measurement of fracture orientation and collected data to build the Rose Diagram.

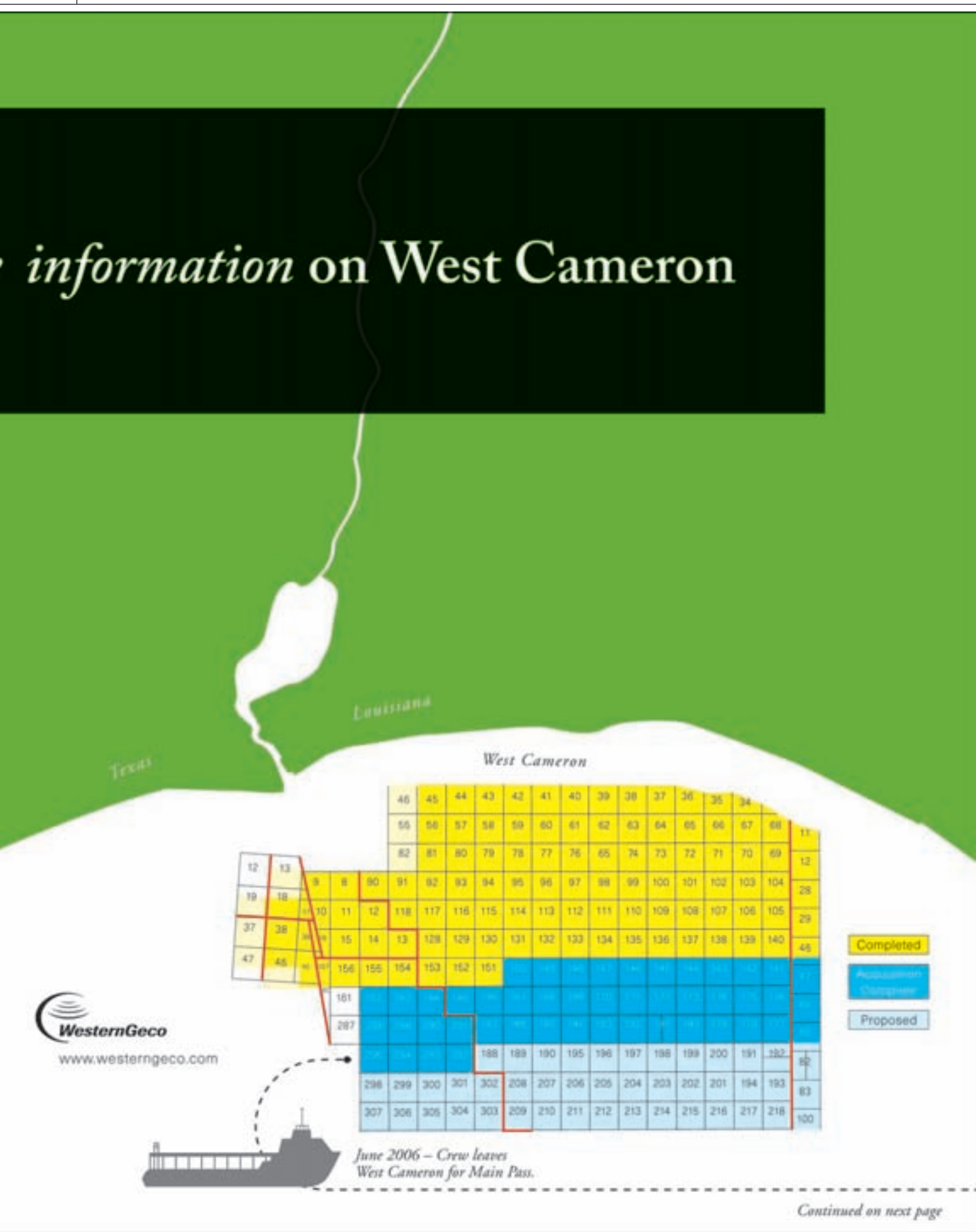
The students supplied information to the public about the phenomenon of earthquakes for broadcast by Radio Sonora of Yogyakarta and students provided site lectures.

We also shared information through posters and leaflets about earthquake anticipation.

Emergency Aid Collection, Distribution

Within one day after the earthquake the AAPG student chapter members

See **Student Chapters**, page 13



Mapping

from page 10

in Java for a month, because resources that we take for granted here in the United States are not always available in Java. Washing clothes, making phone calls, getting something to eat are all done differently there, and it took some getting used to."

As importantly, she said of the international effort, "we found that while the concepts of geology are the same, the way we learn and apply it in different regions of the world is something we needed to adapt to."

Specifically, Pérez said that there is "a need for digital field mapping in large projects.

"However, the existing technology is somewhat lacking in capability to use this technology in remote places," she said, "especially when you are working toward a common goal with people who are not present in the field and who must also use your data."

She and Peterson both believe that being able to share the data digitally is key.

Peterson says the majority of the Indonesian students focused on stratigraphy while he focused on structure.

"The students created some beautiful stratigraphic columns, which helped in the overall subject of my thesis paper, which discussed the tectonics and stratigraphy of the East Java Basin."

Pérez, too, was impressed by her Indonesian counterparts.

"The Indonesian students are quick learners," she said. "I found that out when we first got there and our task was to teach them the software that we had just learned a few days prior at Berkeley (California). They picked it up quickly and did a good job, even though we, their teachers, were still learning it ourselves."

A Profitable Partnership

It was, by all accounts, one of those industry-academic ventures that worked.

"Both Chevron and the students profited from this collaboration," Peterson said. "Chevron received a basin evaluation for the onshore East Java Basin, which included geochemistry, porosity, stratigraphy, paleontology, geologic maps, fold analysis, etc. The students got to experience what a petroleum company looks for when doing fieldwork."

The software – used to determine whether digital mapping was effective as a tool in the field – worked on mapping over digital imagery, such as digital satellite images or digital contour maps, and plots the map data in the accurate location using GPS. The promise is that mapping digitally produces a clean image that doesn't have to be transferred from paper to computer post-mapping (a clean image is made by GeoMapper that can be edited later if needed).

The result, Peterson said, was a more efficient compilation of data.

The software, or something like it, may in the future replace the need for pencils and paper and erasers – but if the experiences in Indonesia are to be duplicated, collaboration will still be the most important tool.

One more thing, Peterson said, will be the key to future successes:

"Don't get the computer wet." ❑

Photos courtesy of Eric Peterson

New software allowed students from San Diego State University to produce digital field mapping of outcrops and other geologic information in Indonesia's East Java Basin (left), where they were joined by Gadjah Mada University students in Yogyakarta (right).

Hundreds of rice sacks and other necessary support items were organized and prepared for distribution by AAPG student chapter volunteers for the Java temblor victims (left). UGM student Julianta Panjaitan (center, pointing to map) provided information to a BP team doctor on the earthquake's fracture orientation (right).

Student Chapters

from page 11

launched an initiative to ask support for collecting emergency supplies to help the victims, broadcasting a request for support via their yahoogroups e-mail system. This initiative gained the support of BP Indonesia's employee organization, members and former members of the UGM AAPG student chapter and other Indonesian AAPG student chapters.

The student chapter also has shared its treasury funds and collected donations from other sources.

Through cooperation with Geological Engineering Student Association from the UGM faculty of engineering, this initiative gained further support and funds from Schlumberger, PT Aneka Tambang, Tbk., and PT Newmont.

Equally important, this initiative also has received donation support from our UGM professors, students and the corps of alumni of the school's geological engineering department.

Instead of giving direct cash payments, funds were used to procure fundamental needs that support life, such as rice, instant noodles, canned foods, sugar, cooking oil plus other emergency logistical supplies such as blankets, tents, sleeping mattresses, clothes and underwear, etc. The UGM Student Chapter formed a command post on campus with a coordinating team to support the organization of the procurement and distribution of these items for the needing quake victims.

The chapter is thankful for the support given by other student volunteers. For example, the AAPG student chapter of the Universitas Brawijaya sent 11 members, while the AAPG student chapter of the Institute Technology Surabaya provided two members to the relief volunteers.

Dharmawan Samsu, of BP and the oversight committee adviser of the Indonesian AAPG student chapters, also helped the students with donation audit process and gave support to the student members.

Final examinations forced a break in students' relief activities. We will resume our activity after the exams toward the full recovery of Yogyakarta and the surrounding areas. ❑

For more information on this subject, visit the AAPG Web site.

Photos courtesy of U.S. Geological Survey

U.S. Geological Survey geologists got some help from "our Afghan friends" when they visited the country to determine its resource potential – and even the horses were happy.

Geology Might Reshape Economic Landscape

Afghan Study Boosts Resource View

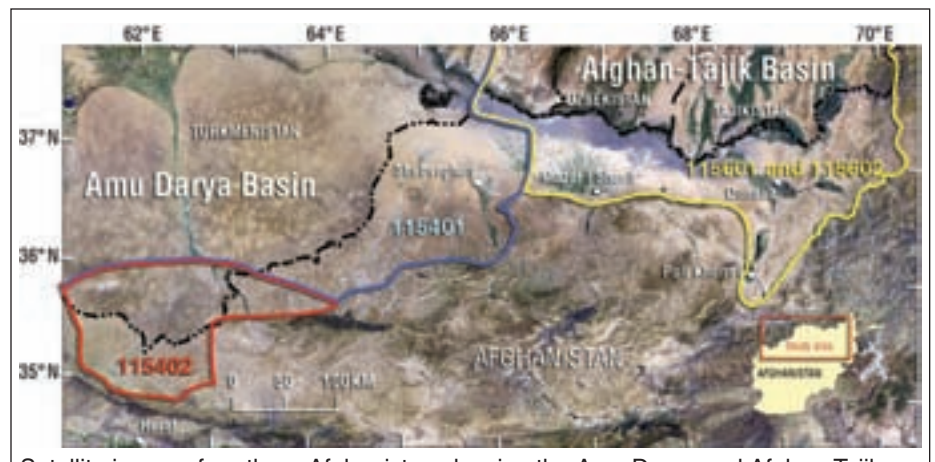
By PAT BLAKE
EXPLORER Correspondent

A March announcement that the U.S. Geological Survey had identified undiscovered oil reserves 18 times the amount originally thought in a certain location and three times the amount of natural gas there likely caused many a Pavlovian response.

Whetted appetites may have dried a bit with the realization of the potentially lucrative site's location: northern Afghanistan.

While such a knee-jerk reaction may be inaccurate, this battle of perception is central to the Afghan struggle for reconstruction. The newly formed government is banking on the work of USGS geologists as a pivotal leg in its strategy to reshape its image, attract investors and thereby resuscitate its economy.

Geology takes center stage in the northern reaches of the Islamic Republic of Afghanistan where risk, reward and the creation of a new marketplace all hang in the balance.



Satellite image of northern Afghanistan showing the Amu Darya and Afghan-Tajik basins, as well as the Amu Darya Jurassic-Cretaceous (115401), Kalaimor-Kaisar Jurassic (115402), Afghan-Tajik Jurassic (115601) and Afghan-Tajik Paleogene (115602) total petroleum systems. (National Geospatial Intelligence Agency)

Getting Started

In the fall of 2001 – after the United States entered Afghanistan and the sting of 9/11 was still new – the U.S. State Department approached the USGS, asking for ideas to revitalize the Afghan economy. The response would yield one of the most concentrated efforts of USGS expertise.

"We proposed the oil and gas assessment of the north – knowing that there was potential there – a water project, a coal assessment and a hazards project, including landslides and earthquakes," recalls Craig Wandrey, USGS project chief. "Because of the last 20-plus years of war, the Afghans don't have a lot of developed industry of any kind. They have no real energy infrastructure. They have a lot of mining operations that have been going on for hundreds of years, but they are on a very small scale.

"The idea of doing this assessment was to help the Afghans define their resource base," he said, "and determine what they had that we could help them develop into industries."

Teaming with Afghan's Ministry of Mines and Industry, the crew recruited Afghanis who were adept in oil and gas assessment, including geologists, geophysicists, geochemists and petroleum engineers. Although skilled with a solid foundation in the geosciences, the mostly Russian-schooled scientists had suffered a long break in training during more than two decades of war.

The assessment process itself would go a long way in advancing the Afghan knowledge of contemporary geological practices.

First Findings

This new look at undiscovered oil reserves began with a base of seismic data and detailed geologic information gathered by the Afghanis during Russian occupation. The Afghan-USGS team took the exploration two steps further by surveying the sub-basin of the Amu Darya Basin and the Afghan-Tajik Basin, areas that had never before been assessed.

Samples of oil and core from northern neighbor Tajikistan broaden the geological scope.

The geologic elements amassed, according to the USGS assessment report, include "source-rock presence, maturation, petroleum generation and migration; distribution and quality of reservoir rocks; and character of traps and time of formation with respect to petroleum migration."

A greatly improved ability to analyze source rock gave the team a more accurate picture of the petroleum system than what was imagined a generation ago.

"Though the Russians and Afghans recognized source rocks, there was very little work done with the source rocks in the '70s and '80s in that part of the world," Wandrey explained. "We collected a lot of oil and gas samples and source rock samples and were able to analyze them here at our labs using the latest techniques. That gave us a better handle on what the rocks were, particularly in the Afghan-Tajik Basin."

Using data collected over a two-year period, the assessment team identified four petroleum systems:

✓ Accumulations of undiscovered natural gas were pinpointed in Upper Jurassic carbonate and reef reservoirs.

✓ Potential crude oil in Cretaceous to Paleogene carbonate reservoir rocks was estimated in the Afghan-Tajik Basin.

✓ Undiscovered petroleum in the region was estimated at 1.6 billion barrels; approximately 15.6 trillion cubic feet of natural gas; and 562 million barrels of natural gas liquids.

These levels may pale in comparison to Saudi Arabia's quarter of a trillion barrels of oil reserves and the Russian swells of proven natural gas. But for Afghanistan,

See **Afghanistan**, page 18

Work in Afghanistan for the USGS geologists often meant checking the operations at remote gas wells (left), and experiencing the local culture (right).

Past Climate Determination Is Tricky

Paleo Markers Can Be Deceiving

By LOUISE S. DURHAM
EXPLORER Correspondent

Geology 101 teaches that the past is the key to the present.

This premise, however, depends on accurate interpretation of the past.

Accuracy becomes particularly important in paleoclimate analysis, which can be highly challenging because stratigraphy doesn't always record the complete story.

Geologists historically have visited the outcrops making interpretations based on certain types of paleoclimate indicators, e.g., evaporites. Error is introduced when the climate being interpreted is assumed to apply for longer periods of time or to a broader area than it actually does.

Furthermore, merely keying in on certain paleoclimate markers fails to provide a picture of the complete suite of climate variability actually occurring.

Indeed, relying on the geographic occurrence of a single climate indicator in a certain area as evidence of past climate is rife with spatial and temporal generalizations.

"Geologic interpretations of past climate commonly do not occur at the time scale that climate actually varies," said Martin Perlmutter, team leader of reservoir and seal prediction at Chevron. "This problem causes our interpretations of paleoclimates to be averaged at best and misleading at worst. Subsequent calibration of quantitative paleoclimate models to these interpretations wouldn't be very useful.

"It's like claiming the only thing you need to know about Houston weather is that the average temperature is 68 degrees and the humidity is 77 percent," Perlmutter said. "All past periods have had highly varying climates that don't always leave the most easily interpretable patterns.

"Many people think the mid-Cretaceous, because of the high CO_2, was supposed to be less variable and more equable," Perlmutter said, "and, indeed, it was a lot milder.

"But when you look at the range of paleoclimate indicators and run climate models at the right temporal scale, it had the same amount of variability as today," he noted. "There were regions that varied from rainforests to deserts, and likely polar regions with annual snowfalls at certain points in the climate cycle."

Eccentric Orbits

In fact, Perlmutter has a presentation planned for the upcoming AAPG meeting in Perth that will show:

✓ How large the variability was for the Cretaceous and the Permian periods.

✓ What this means for those who are modeling and interpreting climate.

✓ How this information is useful for predicting reservoirs and source rock potential.

Most paleoclimate analyses are resolved only for mean annual conditions at no less than the scale of eccentricity. Eccentricity causes the orbit of the earth around the sun to periodically vary from elliptical to almost circular with periodicities of about 100,000 years and 400,000 years.

However, the greatest changes in insolation – the amount of solar radiation reaching the earth – occur seasonally at the scale of precession, which has approximately 20,000-year cycles. These precession cycles can cause Northern and Southern hemisphere insolation to be about 10,000 years out of phase.

"Hot summers and cold winters in one hemisphere correspond to mild summers and mild winters in the other," Perlmutter noted. "The pattern reverses itself over a precession cycle so that similar climatic successions in the opposite hemisphere, and their associated sediment yield cycles, will be 10,000 years out of phase as well."

Until the Plio-Pleistocene, glaciation was unipolar and precession-scale eustasy tended to track the insolation cycle of the glaciated hemisphere, according to Perlmutter. As a result, similar climatic successions in opposite hemispheres would have had sediment yield cycles with markedly different phase relationships to glacioeustasy.

Large polar glaciers have long been recognized as the cause of cyclic, global sea level fluctuations. But the occurrence of glaciers through time, particularly short-lived ones, may well have been underestimated.

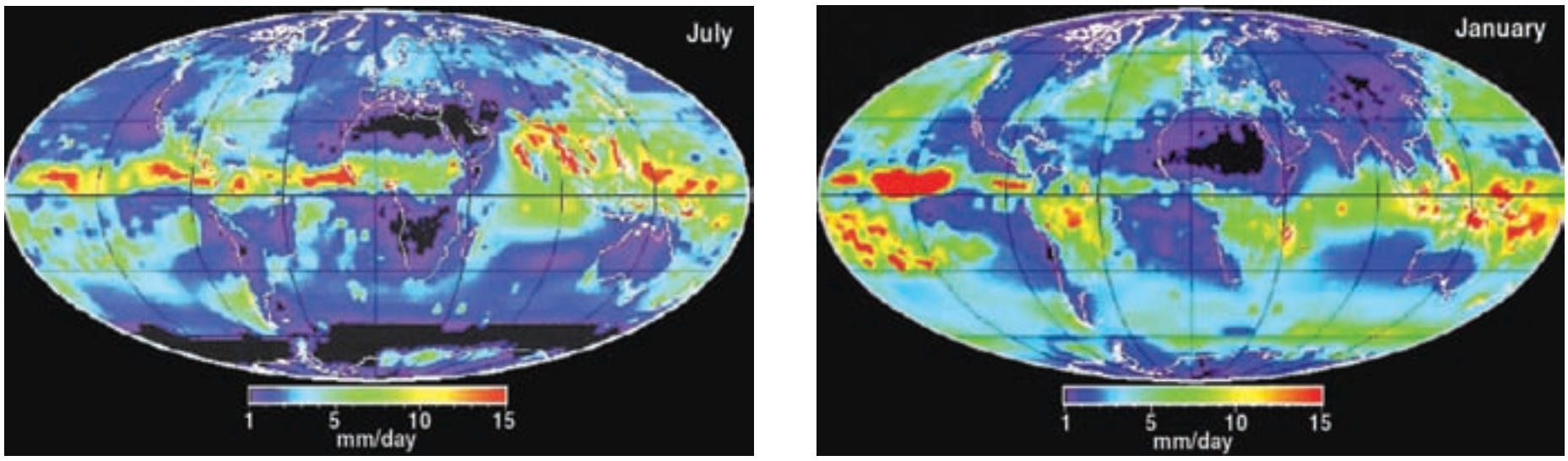
Direct evidence, such as moraines and striations, may have been eroded or

continued on next page

Martin Perlmutter will present the paper "High Frequency Paleoclimate Analysis: Impact on Climate Research and Exploration Strategy" at 2:50 p.m. on Monday, Nov. 6, during the AAPG International Conference and Exhibition in Perth, Australia.

Perlmutter's paper is part of the session on "Paleoclimates: Is the Past the Key to the Future?"

His co-author is Thomas Moore, with PaleoTerra, Bollingbrook, Ill.



Images by Legates and Wilmott, courtesy of Martin Perlmutter

Annual average does not always tell the present climate story, as shown in this example; some regions have large differences in seasonal rainfall – a factor often overlooked.

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reworked through time or even amalgamated by later, larger glacial events. Also, stratigraphy doesn't always clearly yield information on small, rapid sea level changes.

Preservation Bias

When it comes to paleoclimate interpretation, preservation bias caused by the climate cycle itself plays a key role.

For example, some locales are exceedingly wet and then very dry. The question becomes one of whether it is more wet or more dry.

"The Sahara desert may be a good example of preservation bias," Perlmutter said. "Ten thousand years ago, the Northern Hemisphere summertime was warmer than present with a lot more rainfall.

"The active Niger River drainage area was bigger, and there were a lot of lakes in the areas we consider a desert today," he noted. "Now, because it's so dry, active dune fields have eroded most of the lake beds.

"In another few thousand years, there may be few or no lake beds preserved at all," Perlmutter said. "So, if a geologist comes along in three million years and observes the remaining paleoclimate indicators, the interpretation is likely to be that the Sahara region was dry all the time when, in fact, the significant wet period just wasn't preserved.

"Calibrating a climate model to the geologic record has to be done with the right perspective," Perlmutter added. "If it's done based on misinterpretation of the past because of what hasn't been preserved in that location, then you'll get a climate model that's not useful for hindcasts or forecasts."

In the oil industry, climate information can be useful to predict distribution of sand deposits for potential reservoirs.

"If we destabilize climate in a big way with alternating wet and arid cycles, the dune fields that are created at one point in the cycle get flushed out during the rainier part of the cycle," Perlmutter said. "Basically, you get the sand coming out in a big pulse, and it's more concentrated. It's not distributed through the stratigraphic record but focused in one or two particular units.

"That's what we're trying to look for," he added, "some of these major climate changes that switch back and forth and pump sand out."

This must then be referenced back to the sea level phase, i.e., whether the sand was pumped out at high stand or low stand. Perlmutter noted there are different potential reservoir locations depending on the phase relationships of the sediment and sea level. ❑

Afghanistan

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which trucks in diesel from Pakistan to fuel generators that deliver part-time electricity to only 6 percent of the population, the find is nothing short of a boon.

To Secure an Economy

A large donor community is aiding the Afghan government in taking giant steps forward in reconstruction.

In the petroleum sector, the Asian Development Bank is rehabilitating a few existing wells with the intent of drilling and increasing the current production levels. The potential identified by the Afghan/USGS team may come online within two to five years for oil and twice as long for the natural gas.

"The oil play is relatively shallow and undeveloped in Afghanistan, (and) slightly developed in Tajikistan," Wandrey said. "It is economically easier to develop that shallow oil resource because it requires less of an infrastructure. It still requires seismic and drilling to prove out the plays, but it is something that can develop in the nearer term, perhaps than gas.

"For deeper resources and the gas, it might extend out to 10 years," he added. "They need new pipelines. They need a new gas plant. Presently the gas primarily supplies a 28-megawatt power plant near Mazar-i-Sharif, and a fertilizer plant. There domestic supply is somewhat limited. But there is certainly an opportunity to provide power for other industry in much larger power plants."

Although the brunt of fighting is confined to the southern part of the country, security remains a prime concern in the north as well. The country is still in the process of removing landmines at the same time it is striving to better its police force and its army.

"Many questions still arise regarding potential setbacks in the political development of Afghanistan, and business risk assessments still have to include major security issues," according to the Afghanistan Investment Support Agency Web site.

"However, little doubt remains today that regional integration can be fully developed over the next 10 to 15 years," it continues. "In fact, the dramatically rising international demand for natural resources and its expected benefits for the region's economies are its main drivers."

The need for improved security and lack of infrastructure has not held back the economy, which is growing by more than 100 percent per year.

"The first year I went there, the streets were pretty deserted," recalled Wandrey, who has made the trip to Afghanistan five times since 2002. "Our Afghan friends talked about how important security was for the people who had basically gone back to their villages.

"The security that was provided by the United States and other international security forces went a tremendous distance toward reinvigorating the economy," he said. "Now when we go to Mazar, the streets are packed. There are shops everyplace. Business is booming for them and things are certainly improving."

The transformation in the people of Afghanistan is a reminder that this is not only a project of economy but one for humanity as well.

"You see signs of change everywhere. Children are laughing and playing on the streets; men are playing sports. None of this was allowed under the Taliban," Suleman Fatimie, vice-president of the Afghanistan Investment Support Agency, recently reported to *fDi Magazine*. "The fact that we have this working, functioning office, the fact that we're talking about economic development rather than war – that is enormous progress."

Putting It Together

The economic promise for an Afghan future lies in hydrocarbon development, exports and investment from the foreign and private sectors, according to a development plan unveiled in London last year.

The environment for hydrocarbon exploration was greatly enhanced in December when a "hydrocarbons law" was approved by the Afghan cabinet. The World Bank helped draft the regulation that gives the Afghan government full ownership of oil and gas wells, but allows foreign investment in exploration through shared-production agreements. A similar "Minerals Law" was approved in July 2005.

The World Bank furthered the Afghan cause by commissioning a study by Gustavson & Associates to update the reserve estimates in the country's major discovered fields in the north.

"There is a lot of potential in the deeper Jurassic reservoirs. These are carbonate reservoirs, and some of them are quite significant," says Ed Moritz, executive vice president of Gustavson & Associates.

"The biggest hurdle is trying to find a market for the gas primarily," he said. "We're talking about a fairly impoverished country, and you're going to have to have significant investments to bring this gas onstream.

"The key question is, 'What are you going to do with the gas in terms of use? Are you going to generate it for electricity, are you just going to use it for local energy consumption or for certain industrial purposes?'

"If you can come up with some good solutions for the use of the gas," he said, "then I think everything else will fall into place."

Putting all the pieces in place is the mission of the Afghanistan Investment Support Agency and its "one stop shop for investors." The process to register a business to operate in Afghanistan is streamlined and straightforward via the online agency (www.aisa.org.af).

"We are inviting the private sector to join the government to explore and extract resources, both for domestic use as well as for international sale," says Ashraf Haidari, first secretary for the Afghanistan Embassy in Washington, D.C. "We have a mineral's law, an improved legal environment and a one-stop shop for investors. The environment is right and the government is very receptive.

"Without the private sector, we would be unable to exploit those resources. We neither have the human resources nor the technical capacity. All we know is that we have those resources and we need the private sector – especially the energy sector – to come and help us exploit it." ❑

Message Becomes Muddled

Peak Oil Doesn't Mean No Oil

By DAVID BROWN
EXPLORER Correspondent

Some people who believe in Peak Oil look very worried.

They say that society, governments, nations have to act today to avoid an economic disaster in the future.

But they have a problem.

How do you sound an alarm without sounding alarming?

"I don't think you can," said Robert L. Hirsch, senior energy program adviser for Science Applications International Corporation (SAIC) in Arlington, Va.

"You can't have an alarm that's full of qualifiers," he noted.

Peak Oil theory says the world's conventional oil production will reach a maximum limit and then begin declining steadily.

Believers put that peak in production anywhere from one year to 25 years away.

A few think the peak might have happened already.

Many are now worried about rapidly rising oil demand that threatens to outrun oil supply, about political constraints on oil production in addition to physical constraints.

They worry about a past lack of attention at the national level.

"We've been stuck on stupid for 30 years when it comes to energy policy," said Randy Udall, director of the Community Office for Resource Efficiency in Aspen, Colo.

Almost every Peak Oil believer expects a painful transition for society when oil abundance disappears.

Peak Oil doesn't have to cause catastrophic consequences: "... It isn't a question of running out. It's a question of oil prices being more volatile and trending up over time."

Just how painful is open to debate.

You could have an apocalypse later.

Or, you can have ...

Apocalypse Now

Several leading proponents of Peak Oil appear in the 2004 documentary *The End of Suburbia*, a film that was shown to AAPG Foundation Trustee Associates at the group's meeting last fall.

In it they discuss the ramifications and likely aftermath of a peak in world oil production.

The documentary also touches on the end of long-distance trucking and the highway system, a permanent economic depression, severe food shortages and the destruction of suburban home values – in general, on topics that make the Bible's Book of Revelation seem way too optimistic.

Stephen B. Andrews is a Denver energy consultant and co-founder of the Association for the Study of Peak Oil and Gas-USA.

Andrews appears briefly in *The End of Suburbia,* and he concurred that the documentary is alarmist in tone.

"I'm much less certain than a lot of people about what the economic impacts and the social impacts (of Peak Oil) will be," he said.

He expects a world production peak within 10 years, but not a sharp decline immediately afterward.

"In scenario planning, I really think you have to pick a certain date. I pick 2015. There's nothing certain about that, except the date. We're going to get there," Andrews said.

"In the world of Peak Oil prognosticators, that would put me in the middle of the road. A number of people believe we already have peaked. I don't believe that's true," he added.

For the public, the idea of Peak Oil has become muddled with the alarmist belief that the world is running out of oil.

"The way to talk about Peak Oil without sounding alarming is to say that we're not running out," Udall observed.

"At the moment you get to Peak Oil you have a bigger (producing) resource than you've ever had, and more than you'll ever have in the future.

That's why it's a peak," he said.

Peak Oil doesn't have to cause catastrophic consequences, in that view.

"It isn't a question of running out. It's a question of oil prices being more volatile and trending up over time," Udall noted.

Breaking Away, Starting Over

Hirsch served as project lead for the 2005 SAIC report "Peaking of World Oil Production: Impacts, Mitigation and Risk Management," prepared for the U.S. Department of Energy's National Energy Technology Laboratory.

That evaluation has become known as "the Hirsch Report," and it presents Peak Oil as a risk-management problem – but one without an easy solution.

Take the challenge of increased fuel efficiency, Hirsch said.

"The vehicle fleets in the United States and the rest of the world are very large," he explained. "It takes a long time to make a dramatic difference."

Modernizing the rail system and converting locomotives from diesel to electric power would require a huge build-up in electric generation, a massive amount of capital and many years of effort, Hirsch noted.

"Ultimately I think that's a good idea and it's one way to go, but the

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magnitude of the timescale involved is enormous," he said.

Problems like that trouble Hirsch, because he thinks serious mitigation efforts should start at least 20 years before Peak Oil occurs. That would lessen the most serious effects of declining production.

If mitigation begins 10 years before Peak Oil, there would be 10 years of world energy problems.

Without mitigation, serious energy problems – if not a world energy crisis – would persist for 20 years or more.

"If you're in a decline situation and you have increasing demand around the world ... what you're going to have is oil prices increasing, and the $3 (per gallon gasoline) complaints are going to be much worse, because you're talking about $6 gasoline or $8 gasoline," Hirsch said.

At higher price levels, governments will be tempted to intervene with price controls, ultimately dampening gasoline production, he added.

"Then you'll have $6 a gallon gasoline. But you won't be able to get any," he said.

Hirsch acknowledged the conundrum in calling for mitigation 20 years before a Peak Oil event no one can predict with certainty.

"The best thing to do is to recognize that we have a very serious problem," he said, "and it's better to err on the side of doing things too early rather than too late."

All That Jazz

Recently, Peak Oil proponents have broadened their focus beyond the world's oil supply. Escalating oil demand could cause near-term disruptions and make the peaking effects much worse, they say.

They also view geopolitics as a serious and growing threat to world oil production.

"I think the other half of the drivers – the non-geologic-limit drivers – are right now more significant in many regards," Andrews said.

He noted that many oil-producing countries have problematic politics, in Latin America, Africa, Russia, Asia and the Middle East.

"When you look at the fact that they have the oil and they hold the keys to determining how much and how fast oil will be produced in the future, it really isn't that hard to say we could be hitting a peak in production in the timeframe I've suggested," he said.

Udall sees more bad news that's good for unconventional energy resources.

"The good news on the unconventionals is that most of them are in the Western Hemisphere. But there are problems with unconventionals. They are never going to come onstream in a fast way. And they are very expensive," he said.

He called the expense of developing Canada's tar sands "mind-boggling" and referred to oil shale as "the world's worst fossil fuel." The problem with Venezuela's heavy oil resource is that it happens to be in Venezuela, he said.

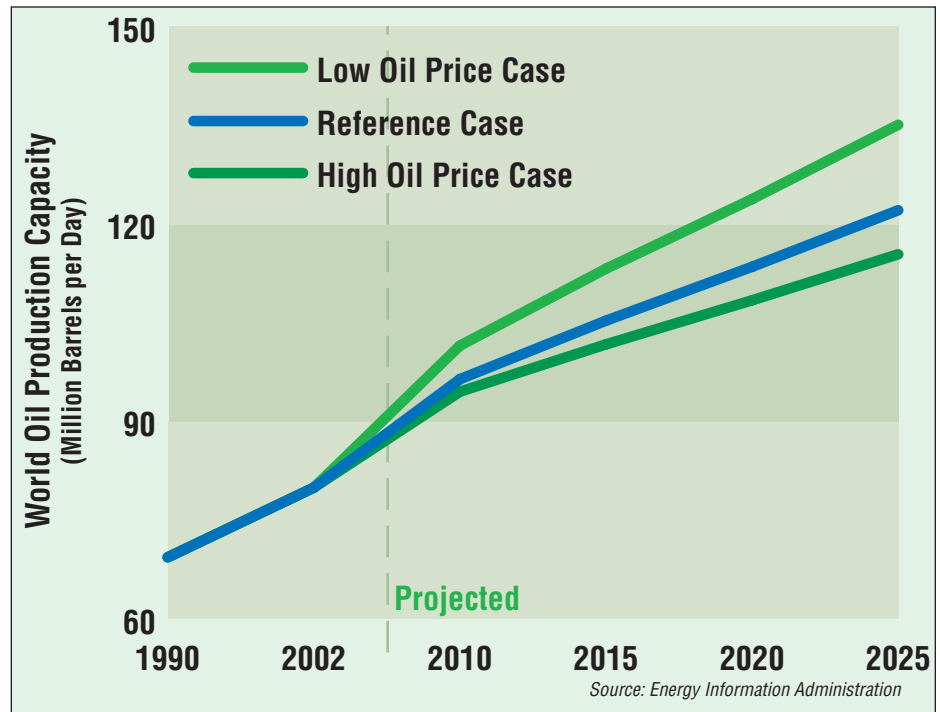
To Udall, Peak Oil is a reality waiting to happen – anyone should be able to do the math of production declines and oil replacement rates.

"It's just arithmetic now," he said.

So he's puzzled that the oil industry hasn't shown more interest in Peak Oil.

"It's interesting to me that among the petroleum community there's so much

See **Peak Oil?** next page



Source: Energy Information Administration

Debate over Peak Oil focuses on if and when a peak in world oil production will happen.

You could ask another relevant question: At what level might Peak Oil occur?

Peak Oil proponents have started drawing lines for projected maximum output.

A favorite limit is around 90 million barrels per day.

"It's going to be really tough for world production to go above 90 million, 92 million barrels a day," said Randy Udall, head of a community energy agency in Colorado.

Others project a maximum close to 100 million barrels a day.

According to the U.S. Department of Energy, world oil production totaled 79.65 million barrels/day in 2003, about 82.09 million in 2004 and an estimated 84.01 million in 2005.

In addition to crude oil, those numbers include natural gas plant liquids, other liquids and refinery processing gain.

The DOE's Energy Information Administration issues an annual projection of world production. A new one is due in July.

Its most recent projection puts world oil production between 115.5 million and 135.2 million barrels per day in 2025.

The message from EIA:

No near-term peak in sight.

– DAVID BROWN

HQ Location Report Accepted

The AAPG Executive Committee voted 6-1 to accept a report by the ad hoc Headquarters Location Committee recommending the AAPG administrative center remain in Tulsa.

The committee, consisting of past president Marlan Downey, chair; past AAPG deputy executive director Don O'Nesky; and Doug Ratcliff, concluded:

✓ Relocation of the head office from Tulsa would involve major expense at the time of relocation and significant increases in yearly operating costs.

✓ Relocation would be a major financial blow to the AAPG Foundation and would lessen funds available to support the Association's mission.

✓ Relocation of the Tulsa office would not appear to offer any significant improvements to member services.

✓ Membership services are becoming more "virtual," and improvements require new equipment and processes, not location change.

AAPG headquarters, Tulsa, Okla.

Focusing on costs and financial benefits of various courses of action, the committee included expense comparisons, forecasted personnel and pension costs and considered AAPG's financial standing as well as the financial impact on the AAPG Foundation, which owns buildings where the Association is housed and also funds various AAPG activities.

Sister societies' activities and demographics also were explored, as well as their approach to satellite offices.

The committee also studied opening of offices outside the United States, noting "there appears to be substantial benefits to AAPG opening international offices, but it most likely will require a re-organization of AAPG that will involve the House of Delegates."

The report also said there are legalities that must be attended to in opening international offices – stating "AAPG cannot go to a foreign country, take out a checkbook, rent a building, hire staff and begin operations in a foreign country" – and provided a due diligence checklist of considerations.

The committee was formed in December by then-president Peter R. Rose, who wrote "the Executive Committee frequently has been asked about relocating the Tulsa HQ, usually to Houston," and that "in light of the current global energy transition" needed to be addressed. ❑

Peak Oil?

from previous page

resistance to this idea that depletion is a daily foe," Udall said.

"Petroleum geologists deal with depletion every day. That's job one," he noted.

The China Syndrome

As one indication of future energy trends, Hirsch observed that China expects world Peak Oil to occur in 2012.

And what are the Chinese doing?

"They're out paying top dollar for oil reserves and production and pipelines around the world," he said.

Some people expect market forces to smooth over the economic effects of Peak Oil. Energy starts costing more, people start using less energy, where's the worry?

"Anybody who says that hasn't really thought about the problem," Hirsch said. "Nobody has looked at an abrupt, forced change. We're talking about something that has never happened before."

Hirsch studied several countries where oil production is already in decline. He thinks a sharp peak followed by a serious world oil production drop-off could be possible.

"In many of those cases, the declines were sharp to very sharp," he said. "Think of the North Sea, for instance."

To get their message across, Peak Oil proponents have started spreading more information and less alarm.

"If you get the 'running out' idea off the table, you can say that global oil production has been increasing for 150 years. How much longer can that continue to happen?" Udall asked.

For Hirsch, the real challenge lies in generating public attention and public action.

"Along comes this thing that feels like an abstraction," he said. "How do you elevate that to a priority?"

False predictions of Peak Oil in the past make that task even more difficult.

"We thought oil production was going to peak several times before, so that now we're somewhat conditioned by false alarms," Hirsch commented.

"It's like the boy who cried 'Wolf!'" he said, recalling what happened at the end of that story:

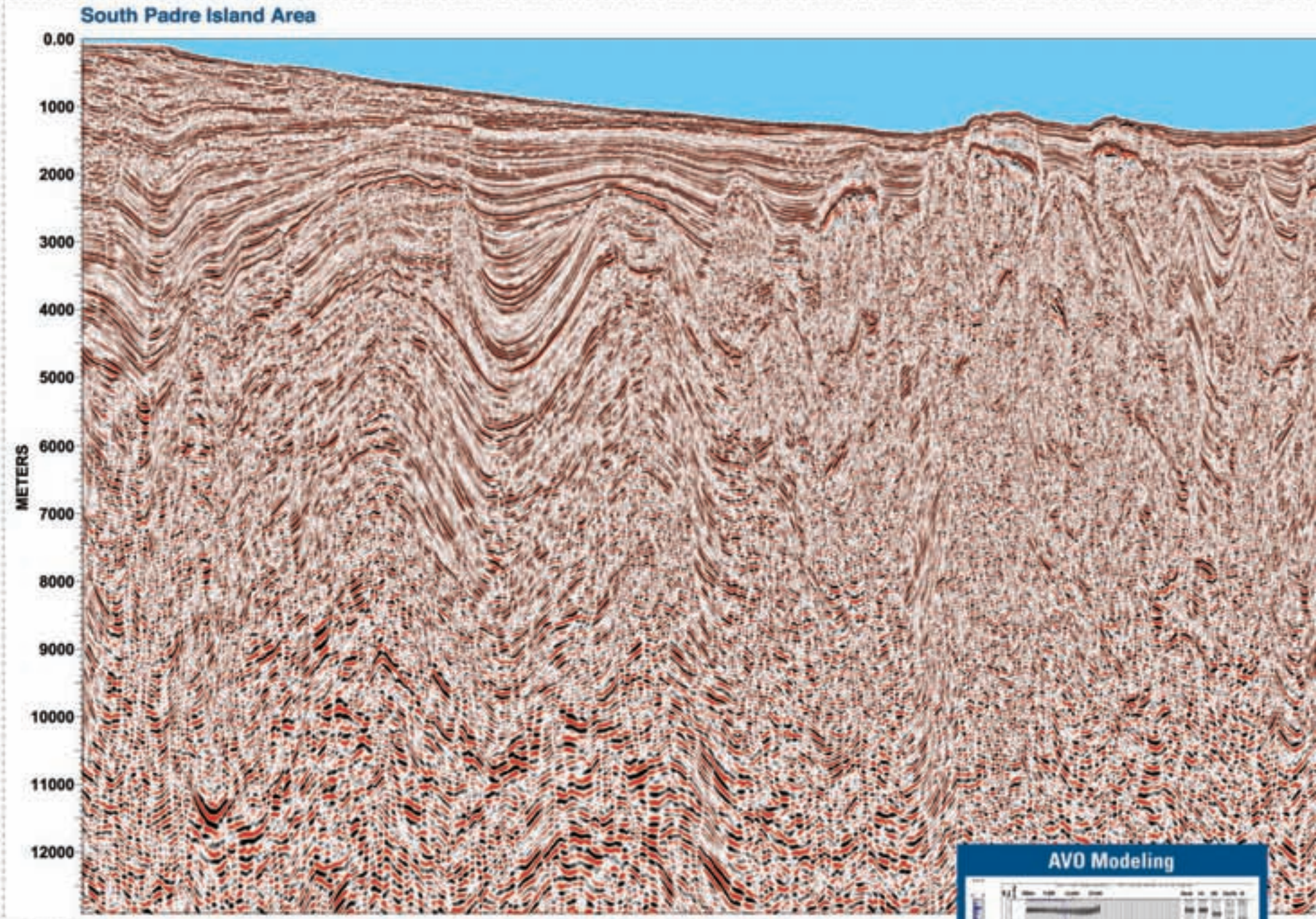
"The wolf finally came." ❑

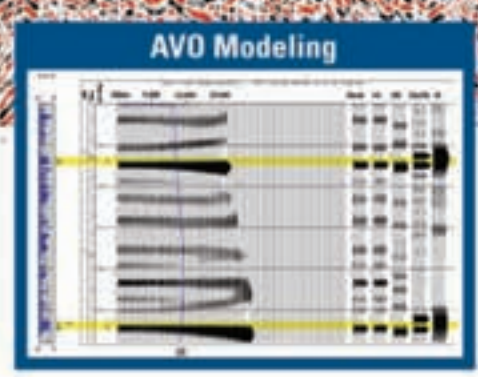
GOING TO THE WESTERN

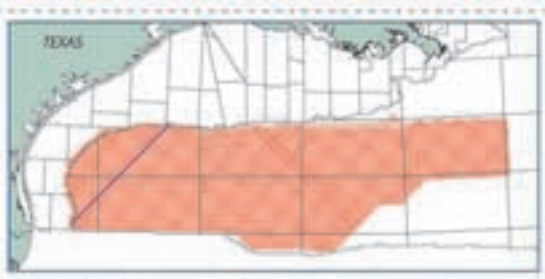
TGS' PHASE 45 CAN HELP

TGS' regional exploration data products continue to help guide explorers to the right places within the Western GOM lease sale area. Phase 45 provides several products including two new Kirchhoff and Wave Equation Depth volumes as well as an in-progress depth interpretation project. Combining these new volumes with the many other integrated regional products offered by TGS strengthens the explorer's confidence in the interpretation before going to the lease sale.

For more information please contact a TGS representative at 713-860-2100.







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Some Getting 'Spruced Up'

Turbidite Outcrops Get Attention

By LOUISE S. DURHAM
EXPLORER Correspondent

If you've never had a close-up encounter with a deepwater turbidite, perhaps it's time.

In fact, you may be surprised at the ready accessibility of some really fine outcrops of these type of rocks.

They're in northeastern Mexico, just a quick hop from Houston via plane, followed by a four-hour drive that traverses about 150 miles.

Yes, it's slow going on not-so-good roads, but look at it this way: At 35 mph, you can kick back and enjoy the scenery – and the final destination is rewarding indeed.

"Many companies are interested in the outcrops, which show spectacular slumping and debrites (debris flows) in thin-bedded turbidite sequences," said consulting geologist Steve Cossey, an AAPG member who specializes in deepwater sediments. "In fact, the best outcrops in that area of Mexico are mainly slumped, thin-bedded turbidites."

Why does this matter?

One reason is that the Paleocene-Eocene Chicontepec formation exposed in the road cuts is partially equivalent to the deepwater Wilcox exploration going on in the Gulf of Mexico, according to Cossey. He noted the Chicontepec holds some of Mexico's largest oil reserves – perhaps as much as 12 billion barrels – and more than 40 fields currently produce from it.

"There are some huge fields located just a three-hour drive south of the outcrops," Cossey said. "And there are a few wells producing maybe 30 miles away."

The cover of the October 1996 BULLETIN showed an impressive and important nine-meter high outcrop near Huejutla, Hidalgo, Mexico, but recently the area has become overgrown with native flora – overgrown, that is, until a team led by a Colorado geologist decided to clean and restore the area.

Photos courtesy of Steve Cossey

Exposing the Exposures

Cossey, president of Cossey and Associates Inc. in Durango, Colo., first became excited about the outcrop area after seeing some impressive photos of the exposures included in a thesis by Mark Bitter, another AAPG member who worked the area in 1984 while earning his master's degree at the University of Kansas. One of the thesis outcrop photos graced the cover of the October 1996 AAPG BULLETIN.

During Cossey's initial trip to this part of Mexico in 2004, he was joined by Bitter, now with Marathon Oil, to scout out the latter's old field locations.

Today, Cossey leads field trips to the area to accommodate geologists, geophysicists and engineers who are dealing with slumped reservoirs or thin-bedded reservoirs. As many as 16 outcrops are on a typical itinerary.

His most recent field trip in May of this year was undertaken for a Norwegian company and included participants from Houston as well as Norway, an apt testimony to just how far some folks will travel for this experience.

An earlier trip hosted a corporate group from Australia.

To add to the area's lure, some of the rock exposures are getting a facelift of sorts.

"Some of the best outcrops from

See **Outcrops**, page 28

The outcrop site before clean-up crews arrived (left), and after. The Paleocene-Eocene Chicontepec formation exposed in the road cuts is partially equivalent to the deepwater Wilcox exploration going on in the Gulf of Mexico. The Chicontepec holds some of Mexico's largest oil reserves – perhaps as much as 12 billion barrels.

Outcrops

from page 26

Mark's thesis are somewhat overgrown," Cossey noted. "After several trips down there and getting to know the locals, I realized that for a reasonable cost I could get a team of 'campesinos' (workers who specialize in clearing the highly vegetated countryside) with machetes and other basic equipment to clean and restore the outcrops to their former glory.

"The first step is to get the machetes and chop, and then shovel the debris that's fallen down the road cut over the years," Cossey said. "We'll get the vegetation off first and then see if we can scrape back with shovels and get the surface weathering off the outcrops. Some outcrops are so overgrown it would be years before weed killer would take effect."

Parking areas will be created near the exposures so trip participants can avoid the potential hazards of standing in the road.

The project is moving swiftly, with one outcrop already rejuvenated and another about one-half completed as of the end of May. Several other roadside outcrops have been identified for "restoration" and will be worked on in the coming months.

Fringe Benefits

It is noteworthy that the effort overall is about more than geology per se.

The focus area is a relatively poor locale, which is off the beaten path southwest of Tampico. It's a mix of Mexican and Indian culture and home to the Huasteca Indians, many of whom speak only their native Náhuatl language.

Cossey envisions that sprucing up the outcrops might be a way to promote geo-tourism in combination with the cultural experience of the Huasteca Indians. Visiting groups of geologists would provide valuable tourist income to help the local economy.

The local leaders clearly are pleased already.

The mayor of the town of Atlapexco, Ing. Joel Nochebuena Hernández, turned out with other dignitaries for a ceremony at the one already-completed outcrop. Cossey and his assistant, Juan Ampacun Robledo from the Tampico Tourist Board, handed out certificates of appreciation to the mayor, assistant mayor and other officials whose approval was key to implementing a project of this kind in rural Mexico.

Following the event, a Huasteca regional newspaper included an article about the project and the ceremony. ❑

GEOPHYSICAL CORNER

Technique Improves Deep Imaging

(The Geophysical Corner is a regular column in the EXPLORER, edited by Bob A. Hardage, senior research scientist at the Bureau of Economic Geology, the University of Texas at Austin. This month's column is titled "High Resolution P-P Imaging of Deepwater Near-Seafloor Geology.")

By BOB A. HARDAGE
and PAUL E. MURRAY

Multicomponent seismic data have unique value for studying near-seafloor geology in deepwater environments. When properly processed, P-P (compressional) and P-SV (converted-shear) images made from 4-C seismic data acquired in deep water with seafloor sensors show near-seafloor geology with amazing detail.

This article is the first of two that describe how improved imaging of near-seafloor, deepwater strata can be achieved with conventional multicomponent seismic data.

This article focuses on P-P imaging; next month's article will focus on P-SV imaging.

* * *

In deepwater multicomponent seismic data acquisition, there is a large elevation difference between source stations (an air gun at the sea surface) and receiver stations on the seafloor.

Conventional processing of deepwater 4-C seismic data involves a wave-equation datuming step that transforms the data to a domain in which sources and receivers are on the same depth plane. This step effectively removes the water layer and allows the data to be processed as if the source was on the seafloor.

This adjustment of source-receiver geometry also allows deepwater multicomponent data to be processed with software already developed for shallow-water environments where marine multicomponent data acquisition technology was originally developed and applied.

An example of a good-quality, deepwater P-P image of near-seafloor geology made with this wave-equation datuming approach is shown as figure 1a. This image shows local geology associated with a fluid-gas expulsion chimney that extends to the seafloor.

If a person wishes to study near-seafloor strata, a new approach to P-P imaging of deepwater multicomponent seismic data is to not eliminate the large elevation difference between sources and receivers but to take advantage of that elevation difference.

The objective is to process deepwater multicomponent data similar to the way vertical seismic profile (VSP) data are processed, because VSP data acquisition also involves large elevation differences between sources and receivers (figure 2).

Users of VSP technology know VSP data provide high-resolution images of geology near downhole receiver stations. That same logic leads to the conclusion that deep-water multicomponent seismic data processed with VSP-style techniques should yield higher resolution images of geology near deep seafloor receivers.

The P-P processing illustrated here can be done with either 2-C or 4-C seafloor sensors. The fundamental requirement is to acquire data with a sensor having a hydrophone and a vertical geophone.

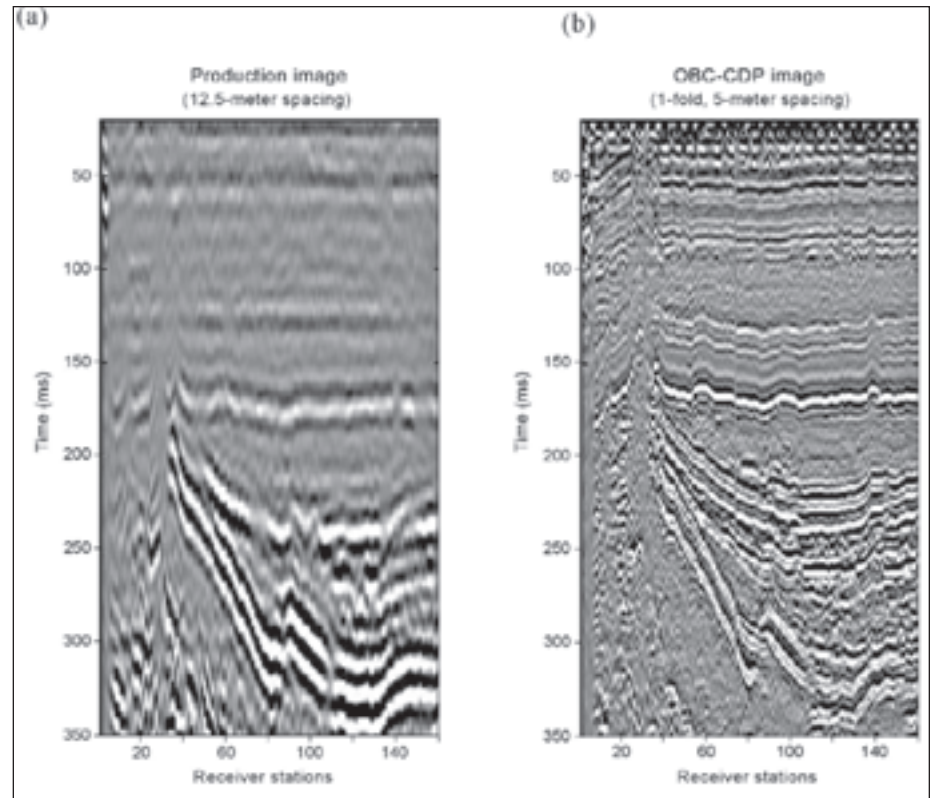


Figure 1(a) – Standard production processing of deepwater 4-C OBC seismic data along a profile that traverses a seafloor gas-expulsion chimney. 1(b) Improved resolution of near-seafloor geology using VSP-style concepts for processing deepwater OBC data. Both images are flattened to the seafloor.

The seafloor hydrophone response (**P**) and the seafloor vertical-geophone response (**Z**) are combined to create downgoing (**D**) and upgoing (**U**) P-P wavefields as:

$$D = P + Z/\cos(\circ)$$
$$U = P - Z/\cos(\circ)$$

"$\circ$" defines the incident angle at which the downgoing compressional wave arrives at the seafloor. Once this wavefield separation is done, deepwater multicomponent seismic data are defined in terms of downgoing and upgoing wavefields, just as are VSP data.

Having access to downgoing (**D**) and upgoing (**U**) wavefields means sub-seafloor reflectivity can be determined by taking the ratio **U/D**. This reflectivity wavefield is then segregated into stacking corridors, and data inside these corridors are summed to create image traces just like VSP data have been processed for the past 20-plus years.

Figure 1b shows a P-P image made with this technique using the same deep-water data displayed in figure 1a. The improvement in resolution is obvious.

* * *

Applying this VSP-style imaging technique to deepwater multicomponent seismic data is proving to be invaluable for gas hydrate studies, geomechanical evaluations of deepwater seafloors and other applications where it is critical to image near-seafloor geology with optimal resolution.

Every seismic data-processing technique, however, has constraints and pitfalls. Two principal constraints of the technology described here are:

✓ There has to be a significant difference between the elevations of sources and receivers. The technique is not appropriate for multicomponent seismic data acquired in shallow water.

✓ The improvement in image resolution over that of production processing of marine multicomponent seismic data diminishes as the image space extends farther (deeper) from the receivers. At significant sub-seafloor depths, production-style, wave-equation-datuming-based, P-P imaging (figure 1a) is equivalent or superior to the VSP-style imaging described here.

* * *

Information about this technology is available at www.beg.utexas.edu/indassoc/egl/.

WesternGeco provided the seismic data used in this research. Research funding was provided by Minerals Management Service (Contract 0105CT39388) and DOE/NETL (Program DE-PS26-05NT42405).

(Editor's note: Hardage and Murray are both with the Bureau of Economic Geology in Austin, Texas.) ❑

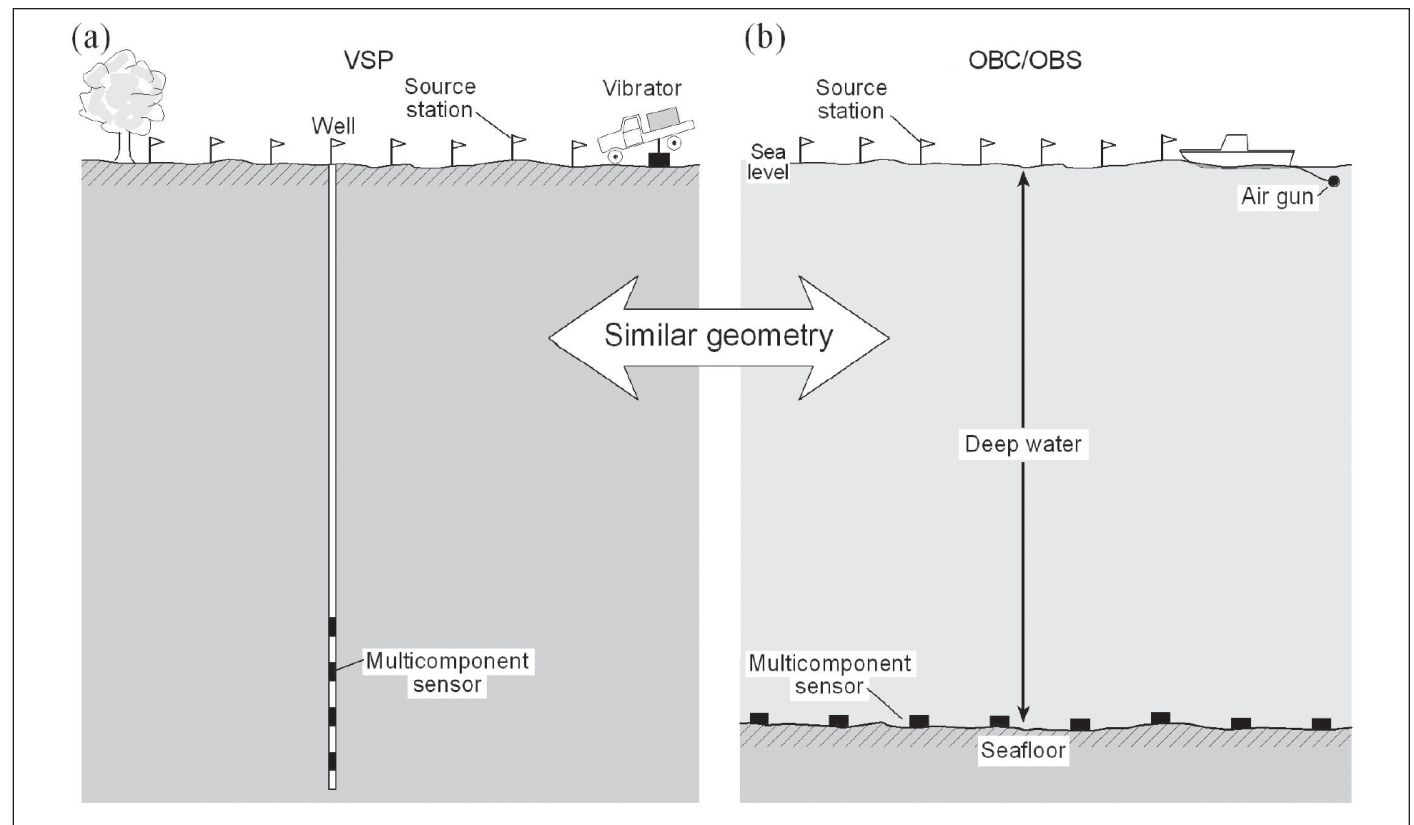


Figure 2 – Illustration of similar source-receiver geometries used for acquiring (a) VSP data and (b) deepwater OBC/OBS seismic data.

REGIONS AND SECTIONS

(Editor's note: Regions and Sections is a regular column in the EXPLORER offering news for and about AAPG's six international Regions and six U.S. Sections.

News items, press releases and other information should be submitted to the EXPLORER/Regions and Sections, P.O. Box 979, Tulsa, Okla. 74101.

Contacts: For Regions, Dana Patterson Free, at 1-918-560-2616, or e-mail to dfree@aapg.org; for Sections, Donna Riggs, at 1-918-560-2612, or e-mail to driggs@aapg.org.

This month's column was provided by Donna Riggs.)

AAPG's six U.S. Sections and six international Regions are self-governing entities of the Association.

Each AAPG member is assigned to one of these according to your mailing address, the country you live in or by individual choice. Election of House of Delegates and Advisory Council representatives is based on Active member population either in an affiliated society or in a Section/Region.

If your mailing address is other than the area where you wish to be affiliated, information can be entered in your AAPG member record to reflect your area of choice.

If you have questions or wish to make changes to your record, contact Donna Riggs (see above).

Printed here, for your reference and use, is a listing of Section/Region presidents.

U.S Sections

Eastern: President (through fall 2006) – **Peter MacKenzie**, MacKenzie Land & Exploration, P.O. Box 166, Worthington, Ohio 43085-0166; telephone 1-614-785-1682; fax 1-614-785-1682; e-mail pete@mackex.com.

Vice President (president fall 2006-07) – **James A. Drahovzal**, Kentucky Geological Survey, 3315 Coldstream Dr.*, Lexington, Ky. 40517-2860; telephone 1-859-257-5500, ext.175; fax 1-859-257-1147; e-mail drahovzal@uky.edu.

Upcoming Section meetings are Oct. 8-11, in Buffalo, N.Y., and Sept. 16-18, 2007, Lexington, Ky.

Gulf Coast (GCAGS): President (through fall 2006) – **Barry E. Wawak**, Core Lab,127 E. Bayou Shore*, Lafayette, La. 70508; telephone 1-337-837-8616; fax 1-337-837-9070; e-mail barry.wawak@corelab.com.

Vice President (president fall 2006-07) – **Gloria D. Sprague**, Crossroads Exploration, Suite 640, 615 Leopard, Corpus Christi, Texas 78476; telephone 1-361-882-7600; fax 1-361-882-7604; e-mail gsprague@usawide.net.

Upcoming meetings: Sept. 25-27, Lafayette, La., and Oct. 21-23, 2007, Corpus Christi, Texas.

Mid-Continent: President (through fall 2007) – **Alan L. De Good**, American Energy Inc., 1233 Autumn Dr.*, Goddard, Kan. 67052; telephone 1-316-263-5785; e-mail alan@americanenergies.com.

Next meeting: Sept. 9-11, 2007, Wichita, Kan.

Pacific: President (July 2006-June 2007) – **Michael David Wracher**, Venoco Inc., 6267 Carpinteria Ave., Carpinteria, Calif. 93013; telephone 1-805-745-2272; fax 1-805-745-1846; e-mail mwracher@venocoinc.com.

Next meeting: Concurrent with the AAPG Annual Convention, April 1-4, Long Beach, Calif.

Rocky Mountain: President (spring 2006-fall 2007) – **Steven Schamel**, GeoX Consulting Inc., 1265 Yale Ave., Salt Lake City, Utah 84105-1535; telephone 1-801-583-1146; fax 1-801-583-1356; e-mail geox-slc@comcast.net.

Next meeting: Oct. 6-9, 2007, Snowbird, Utah.

Southwest: President (through spring 2007) – **Craig W. Reynolds**, Cobra Oil and Gas Corp., P.O. Box 8206, Wichita Falls, Texas 76307-8206; telephone 1-940-716-5100; fax 1-940-716-5170; e-mail craig@cobraogc.com.

President-Elect (spring 2007-08) – **Jeff A. Jones**, Van Operating Ltd., P.O. Box 1352, Albany, Texas 76430-1352; telephone 1-325-762-3353; fax 1-325-762-3359; e-mail jeffjones@wtconnect.com.

Next meeting: April 22-24, 2007, Wichita Falls, Texas.

International Regions

All terms begin on July 1, end on June 30

Africa: President (2005-07) – **Deborah E. Ajakaiye**, 1534 Castle Court, Houston, 77006; telephone 1-713-355-3315; fax 1-713-355-3328; e-mail deadok@houston.rr.com.

Asia/Pacific: President (2005-08) – **Herman Darman**, Brunei Shell Petroleum Co., TSX/4, Jalan Utara, Seria KB 3534, Brunei Darussalam; telephone 673-337-4275; fax 673-337-5179; e-mail herman.darman@shell.com.

Canada: President (2006-08) – **Warren G. Workman**, Workman Energy Ltd., 517 30th Avenue SW, Calgary, Alberta T2S 0P4, Canada; telephone 1- 403-269-9550; fax 1-403- 262-3748; e-mail wworkman@apexenergy.com.

Europe: President (2005-07) – **John R.V. Brooks**, Brookwood Petroleum Advisors, Cobleigh, Sheets Heath Lane, Brookwood, Surrey GU24 OEL, England; telephone 44-1483-473-285; fax 44-1483-473-005; e-mail jrvbrooks@supanet.com

Latin America: President (2005-07) – **Carlos Jorge De Abreu**, UFRJ, Rua Des Luiz Guimaraes 70, Bloco 3, Ap 805, Cond. Santa Monica, Barra da Tijuca, 22793-261 Rio de Janeiro, Brazil; telephone 55-21-9987-7598; fax 55-21-2598-9487; e-mail abreu@geologia.ufrj.br

Middle East: President (2006-09) – **Abdulkader M. Afifi**, Saudi Aramco, Box 2689, Dhahran 31311, Saudi Arabia; telephone 966-3-874-7253; fax 966-3-873-2663; e-mail abdulkader.afifi@aramco.com

(Address is not the company address.)*

Colombian Conference Set Sept. 24-27 in Cartagena

Plans are firming for the IX Simposio Bolivariano, Petroleum Exploration in the Subandean Basins conference, to be held Sept. 24-27 at Cartagena, Colombia.

Conference organizer Dirceu Abrahão, of Petrobras Colombia, said the conference is limited to 700 people. Sponsors include the ministries of geology, mines and hydrocarbons and Ecopetrol.

For further information see www.simposiobolivariano.com, or the International area of www.aapg.org.

EC Action Impacts Halbouty, Two Other AAPG Awards

Three AAPG honors and awards were affected by changes by AAPG Executive Committee actions taken in May.

Headed by then-president Peter R. Rose, the Executive Committee changed and amended the Michel T. Halbouty Memorial Human Needs Award to become the Michel T. Halbouty Outstanding Leadership Award, which is now considered AAPG's second most distinguished award. The Sidney Powers Memorial Award is AAPG's most distinguished honor. Formerly, Honorary Membership was the second-ranking honor.

The new Halbouty award is for "exceptional leadership demonstrated and extraordinary service to the petroleum geosciences and the association."

The action taken noted that the Powers Award and the Halbouty Award are mutually exclusive – those receiving the Halbouty Award will not be considered for the Powers Award and those receiving the Powers Award will not be considered for the Halbouty Award. Past presidency is not a prerequisite for this award.

Also, Honorary Membership is automatically bestowed upon the recipient of the Halbouty Award if not already received.

The committee also voted to change the name of the Journalism Award to the Geosciences in the Media award. The Journalism Award came under scrutiny last year after Michel Crichton was the recipient for his fiction books *Jurassic Park* and *State of Fear*.

A complete description of the Halbouty Outstanding Leadership Award and other honors can be viewed via www.aapg.org. ❑

WashingtonWATCH

Mood 'Hostile' In Nation's Capitol

By DON JUCKETT
GEO-DC Director

As many members already are aware, the U.S. House of Representatives during consideration of the federal government's 2007 budget has appropriated approximately 25 percent of its 2006 budget for oil and natural gas R&D.

While few of us, as taxpayers, believe that growing the deficit is good for tomorrow's taxpayers, the climate in which the House actions has proceeded reflects both the unpopularity of the oil and gas industry in Washington and the tendency of elected officials to play to popular themes in the eyes of their constituents.

The impacts of this action, if sustained in the Senate appropriations process, will be far reaching!

The obvious loss will be the research that has been focused largely on recovery of domestic resources. The less obvious will be the potential of severely reduced services through organizations, like the Petroleum Technology Transfer Council, which has serviced the domestic producing community for a number of years.

Even more insidious in these times when there are serious concerns about availability of future work force for the industry is the impact on students in petroleum geology and engineering schools. Preliminary estimates indicate that as many as 30-40 percent of those individuals stand to lose support that comes through DOE research programs.

Because of persistent high gasoline prices, the oil and gas industry is a popular target for punitive, if not downright silly, legislative proposals. In the eyes of many knowledgeable consumers as well as producers this reflects the real need for making a sustained effort to ensure that elected officials obtain some level of understanding of the workings of the industry as a whole.

For many, the present hostile atmosphere in Washington is, to say the least, off-putting. It is perhaps one more reason in your very busy existence to discount any thoughts you may have had about engaging Washington types to impart information or concerns about the current state of energy affairs.

Not hostile: GEO-DC Director Don Juckett, left, greets David Curtiss at the Houston AAPG convention.

I would reflect somewhat the contrary view that this is the very time when it is critical to stand up and be seen as important members of the industry – not as apologists, not as defenders, but as professionals with a stake in the future of the economic well being of society.

* * *

In doing background for this column I turned up an AAPG EXPLORER July 2002 interview by Ken Milam with an AGI Congressional Science Fellow (CSF) by the name of David Curtiss. David had the following observations when asked, "What can geologists do when their professional interests and politics intersect?"

✓ "Letter-writing can be helpful, but personal involvement can be even more effective."

See **Washington**, page 44

PROFESSIONAL NEWS BRIEFS

Bobby H. Bammel, to senior petroleum geophysical and geological consultant-geosteering, Saudi Geophysical & Environmental Consulting, Dhahran, Saudi Arabia. Previously professor of earth science, East Texas Baptist University, Marshall, Texas.

Bennett L. Bearden has been named Most Outstanding Professor of the Year by the Birmingham School of Law. Bearden, adjunct professor at the Birmingham School of Law since 1994, also is director of the Petroleum Technology Transfer Council Eastern Gulf Region, University of Alabama, Tuscaloosa, Ala.

Bill Blount, to senior staff geologist, El Paso Exploration and Production, Houston. Previously senior exploration geologist, ExxonMobil Development, Houston.

Thomas Buerkert, to geophysical adviser-exploration Americas West Africa, Hess Corp., Houston. Previously senior geophysicist-Trinidad & Tobago asset team, BHP Billiton Petroleum, Houston.

Edward Cazier, to geology manager-Nyagan, TNK-BP, Moscow, Russia. Previously director of economics and valuation, TNK-BP, Moscow, Russia.

Timothy L. Clarey has been named the 2006 "Distinguished Graduate" of Bay City Western High School, Mich., for his achievements during a combined career as a petroleum geologist and college professor. He is a professor at Delta College, University Center, Mich.

Steve Dorobek, to lead geologist, Maersk Oil and Gas, Copenhagen, Denmark. Previously professor and M.T. Halbouty Chair, department of geology and geophysics, Texas A&M University, College Station, Texas.

Jeanette Bauman DuBois, to exploration geologist, Berry Petroleum, Denver. Previously senior geologist, Enduring Resources, Denver.

Robert N. "Bob" Erlich, to exploration manager-Latin America new ventures, BP, Houston. Previously general manager-Peru, Burlington Resources, Houston.

Joseph M. Evensen, to geochemist, Shell EP Solutions, Houston. Previously senior research geologist, ExxonMobil, Houston.

Lee C. Gerhard received the Kapitsa Medal, the Medal of Honor and the Chilingar Medal from the Russian Academy of Natural Sciences, U.S. Branch, when he addressed a group at the University of Southern California School of Engineering about climate change science.

Andres Gongora, to senior geoscientist, Origin Energy, Perth, Australia. Previously geologist, Antares Energy, Perth, Australia.

Andrew Hoover, to senior production geologist, Maersk Oil and Gas, Copenhagen, Denmark. Previously senior geologist, Shell International E&P, Houston.

Gerhart Hunter, to senior explorationist, Phoenix Exploration, Houston. Previously managing director, TROG E&P, Waller, Texas.

C.Y. McCants, new ventures manager-Southeast Asia, Petrofac, Kuala Lumpur, Malaysia. Previously senior executive geologist, Petrofac, Kuala Lumpur, Malaysia.

(Editor's note: "Professional News Briefs" includes items about members' career moves and the honors they receive. To be included, please send information in the above format to Professional News Briefs, c/o AAPG EXPLORER, P.O. Box 979, Tulsa, Okla. 74101; or fax, 918-560-2636; or e-mail, smoore@aapg.org; or submit directly from the AAPG Web site, www.aapg.org/explorer/pnb_forms.cfm.)

WWW.UPDATE

Web Offers Easy Dues Payment

By JANET BRISTER
AAPG Web Site Editor

It's the beginning of another fiscal year at AAPG, which means a time of renewal – for us, and also for you.

There are those within AAPG who have yet to renew their membership this year. And guess what? It's time!

Don't forget: To make it easy, simple and quick you may use the AAPG Web site to pay your dues.

Just go to the home page and enter "Members Only." Log in, as needed, and just under the "Welcome, AAPG Member!" you'll find a list.

At the top of that list is "Pay Dues" – and that takes you right into the online dues payment system.

By the way, if you don't pay your dues by the end of the month, this is the last EXPLORER you will receive.

Join! Contribute!

You'll find several other options on this list, too, including the opportunity to join one of the AAPG divisions.

Since both the Energy Minerals Division and the Division of Environmental Geosciences only require you be a member of AAPG in order to join their division, you can select either of these and immediately be division members.

If you are already a member of one of our three divisions, these options already are pre-selected for you.

Those interested in joining the Division of Professional Affairs may learn more about it on its Web site: dpa.aapg.org.

Another option you may exercise while in this same dues payment area is the opportunity to contribute to the AAPG Foundation, which provides financial support for Distinguished Lecturers, grants, courses, field seminars and much more that is AAPG.

Here, you may simply contribute to the general fund or you may select from one of the many named grants.

Of course, you might click on "Pay Dues" and have a nice little message indicating you do not owe any dues at the present time. That's a nice surprise for those who forget if they already paid that annual fee or subscription.

A Word about RSS

We've mentioned it before and it may still be a bit of an intangible element to grasp; however, as new browsers are released, they are supporting RSS feeds.

An RSS feed is a simple tool that Web editors maintain to alert frequent visitors to their sites about recent updates.

Let me remind you that AAPG has RSS feeds on its main site as well as in the members-only BULLETIN access area. *Search and Discovery*, AAPG's online science magazine (e-zine, if you will) also supports RSS.

If you visit aapg.org at least once each week, you'll want to check the RSS feed. This may save you a bit of time, and that's always a good thing.

Good browsing! ❑

Fisher Named Chair of Trustees

William L. Fisher, dean of the Jackson School of Geosciences at the University of Texas at Austin, has been named chairman of the AAPG Foundation Board of Trustees.

Joining Fisher as Trustees officers are:

✓ **John J. Amoruso**, Houston, vice chair.

✓ **James A. Gibbs**, Dallas, secretary.

✓ **William E. Crain**, Danville, Calif., treasurer.

Previously announced as new Trustees were **Marlan Downey**, Dallas, and **William E. Gipson**, Houston.

The new term began July 1.

* * *

The AAPG Foundation has announced the awarding of three major grants, including $100,000 funding to produce classroom materials to accompany a four-part television series in 2007.

The four-part "Faces of the Earth," television series is to be aired by the Science Channel/Discovery Communications in 2007 with plans for worldwide distribution.

The American Geological Institute, which is heading up the ancillary materials development and was the recipient of the grant, is part of a consortium of project backers, which include the ExxonMobil Foundation ($2.5 million); the Jackson School of Geosciences at the University of Texas ($350,000); and the U.S. Geological Survey ($50,000).

Also, AAPG Datapages received $113,000 from the Foundation for enhancing and adding to the Association's electronic, scientific database.

The AAPG Foundation also granted $75,000 to the AGI Foundation's William L. Fisher Congressional Geoscience Fellowship Endowment, providing Washington, D.C., experience for young geoscientists.

* * *

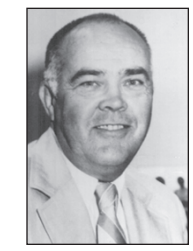
Two new members have joined the Foundation Trustees, bringing total group membership to 266. They are:

✓ **David Blanchard**, Devon Energy International, Houston.

✓ **Stewart Chuber**, Fayette Exploration Co., Schulenburg, Texas.

Chuber joins the group as he provides funding to establish the newest AAPG Foundation-endowed Digital Products university subscription, for Stanford University, his alma mater. ❑

IN MEMORY



Lewis

James O. "Jim" Lewis Jr., past president of AAPG and of several other geologic groups, died June 2 in Houston. He was 83.

Lewis, a longtime consulting geologist, was AAPG president in 1989-90 and was made an AAPG Honorary Member in 2004. He was a charter member of the Division of Environmental Geosciences, a lifetime and distinguished member of the Division of Professional Affairs, an A.I. Levorsen award winner and active as a leader for several AAPG committees and events.

He also was president of the Houston Geological Society (1968-69) and the Society of Independent Earth Scientists (1967-68), and held honorary life memberships in both groups.

* * *

James Dan Burke (AC '38)
Austin, Texas, January 2005
William Wathen Charles Jr., 90
Calgary, Canada, April 11, 2006
Mark Andrew Cocker, 52
Houston, April 19, 2006
Ernest Kurt Espenschied, 72
Danville, Calif., April 20, 2006
Thomas Wilson Ferebee Jr., 58
Dhahran, Saudi Arabia, Dec. 30, 2005
William L. Hamilton Jr. (EM '64)
Oklahoma City, Dec. 15, 2005
William Van Harlow Jr. (AC '59)
Amarillo, Texas, April 3, 2006
Guy Wilson Joyce (AC '53)
Conroe, Texas
James Otis "Jim" Lewis Jr., 83
Houston, June 2, 2006
Robert David Mapes Jr. (AC '54)
Houston
Carl Robert Piette, 69
Shepherd, Mont., Nov. 16, 2005
Gardner Murl Pittman, 83
Lubbock, Texas, April 5, 2006
Charles B. Stone, 81
Corpus Christi, Texas, May 16, 2006
Royce Craig Weisinger, 75
Conroe, Texas, Jan. 6, 2006

(Editor's note: "In Memory" listings are based on information received from the AAPG membership department. Age at time of death, when known, is listed. When the member's date of death is unavailable, the person's membership classification and anniversary date are listed.)

MEMBERSHIP AND CERTIFICATION

The following **candidates** have submitted applications for membership in the Association and, below, certification by the Division of Professional Affairs. This does not constitute election, but places the names before the membership at large. Any information bearing on the qualifications of these candidates should be sent promptly to the Executive Committee, P.O. Box 979, Tulsa, Okla. 74101. (Names of sponsors are placed in parentheses. Reinstatements indicated do not require sponsors.)

Membership applications are available at www.aapg.org, or by contacting headquarters in Tulsa.

For Active Membership

Colorado
Wingerter, Jeffrey H., RDG Oil & Gas, Denver (reinstate)

Louisiana
Gremillion, Grant Gregory, Murphy Exploration & Production USA, New Orleans (W.D. Perkins, R.J. Chassaniol, R.L. Johnson)

Oklahoma
Combs, Douglas W., Chesapeake Energy, Edmond (reinstate); **Self, Dale C.**, Chesapeake Energy, Oklahoma City (J.L. Sharp, J.V. Hogan Jr., K.M. McCollum)

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Oklahoma
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Petition Candidacy Rules Under Study

By PETER R. ROSE
AAPG Advisory Council Chair

As a professional society that wishes to select its officers in a dignified way, free from the raucous traditions of secular partisan politics, AAPG entrusts the evaluation of possible nominees for elective office to its Advisory Council (AC) and Executive Committee (EC).

AAPG members can know that all officer candidates listed on the official ballot have been privately vetted – their strengths and weaknesses, pros and cons, discussed and assessed in comparison with other potential nominees – in the formal process by which their representatives on the AC recommend, and on the EC, approve, the annual list of official candidates for AAPG office.

Accordingly, during the "campaign year" AAPG voters are routinely presented with only candidates' experience, qualifications, AAPG service records and short personal essays as to why candidates accepted the nomination for AAPG office.

AAPG's Bylaws allow any Active member to run for elective office as a petition candidate, in opposition to the two candidates regularly selected by the AC and the EC. For 31 years following the approval of AAPG's Constitution and Bylaws in 1970, no one sought office as a petition candidate. Since 2001, however, there have been four petition candidates.

With this experience, the AC leadership feels that it is timely to review the process.

This is not written in response to the election result just realized.

* * *

Current election rules are perceived to provide a petition candidate with two advantages:

✓ First, he/she is able to "cherry-pick" – that is, to appraise his/her already-announced opponents before deciding whether to run against them.

✓ Second, to bypass the vetting process of the AC and EC.

AAPG members who agree to run for office are making substantial personal sacrifices in time, money and family obligations. Depending on the office, successful candidates have necessarily committed to one to five years of service, which commonly consumes 20 percent to 100 percent of the officers' annual time, beyond their regular jobs. It is a lot to ask of any AAPG member.

Unsuccessful candidates spend nearly a year in the vain pursuit of a volunteer AAPG office. Losing is no fun. But now consider the situation of two nominees whose official candidacies have been announced, and who learn a month or so afterward that a third candidate, nominated by petition, has entered the contest.

Three important changes have occurred:

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1. The odds of winning have now changed, from roughly one in two to about one in three.

2. Withdrawing from the race, even though it might be entirely rational, is awkward and likely to be perceived negatively.

3. The contest has inescapably become more partisan.

Most AAPG leaders do not wish to do away with the right of members to run as petition candidates – the convention can provide a useful remedy. But most members:

✓ Want candidates who have broad-based support within the Association.

✓ Want to be sure that no candidate has an unfair advantage over another.

✓ Want all AAPG voters to be as fully informed as possible.

✓ Want candidates who are not playing out personal agendas on an AAPG stage.

* * *

So how can we achieve such common-sense goals, while retaining the desirable right of all Active members to seek elective office as a petition candidate?

What kinds of Bylaws amendments and changes to election policy would accomplish these aims?

In the article on this page are suggestions for reforming AAPG's petition candidacy process. Many emerged during a session at AAPG's Leadership Conference in Galveston, Texas, chaired by Steve Sonnenberg, titled, "Commonsense Modifications to AAPG's Election Procedures."

There may be some overlap among them, and some may be unnecessary or even undesirable. Most would require amending AAPG's Bylaws. They are reviewed here in the interest of stimulating thoughtful discussion among AAPG members, who are urged to provide timely input to their Advisory Council representatives or officers so as to assist the AC as it develops Bylaws recommendations this fall for the House of Delegates and Executive Committee to consider for submittal to the House next April at the 2007 Annual Convention in Long Beach, Calif.

The 2006-07 Advisory Council will be pondering such issues as it considers AAPG election policy this summer and fall. I invite input from all interested members to contact me at: Peter R. Rose, Chair, Advisory Council, 3405 Glenview Ave., Austin, Texas 78703; or e-mail to prose@roseassoc.com. ❑

Suggestions – Comments Invited

1. Goal: Broad-Based Support for Petition Candidates.

The number of signatures required to qualify as a petition candidate should be more than the 50 now specified, and at least 50 percent should come from several other Sections or Regions.

2. Goal: No Perceived Advantage for Petition Candidates Over Official Candidates.

In order to run as a Petition Candidate, a member must have:

✓ Applied to the Advisory Council (AC) to be nominated for a specific office.

✓ Inquired of and been informed by the president that he/she had not been officially nominated.

✓ Obtained the necessary petition signatures during a 30-day period following the close of official nominations, during which the names of all official nominees are kept strictly confidential.

3. Goal: AAPG Voters Should Be Well-Informed About Possible Candidates.

The term "Petition Candidate" will appear in all official AAPG election materials referring to such a candidate, including ballots.

4. Goal: Candidates Should Not Have Prevailing Personal or Partisan Agendas.

Petition candidates must gather all endorsing signatures personally. In order to prevent the appearance of a conflict of interest or other impropriety in the Executive Committee or Advisory Council, EC and AC members may not themselves run as petition candidates against those they have participated in nominating, nor may they solicit signatures for or publicly support a petition candidate running against EC-approved candidates they have participated in nominating.

– PETER R. ROSE

READERS' FORUM

"AAPG" and Global Warming

It was frustrating to me, as I read the June Readers' Forum, to see the letters concerning the name of our organization and the stance the AAPG has taken on global warming.

Apparently, many non-Americans feel that AAPG should change its name by, at least, dropping "American," because the name is unacceptable in some parts of the world due to "a very narrow-minded government."

I, for one, am tired of people decrying America – or, worse yet, apologizing for America to the rest of the world. I am proud of being an American geoscientist and of the rich heritage that has made the AAPG such an outstanding organization.

How far shall we go to appeal to every geoscientist in the world? Free membership? Application-free membership? Making the permanent home of AAPG in some anti-American stronghold such as Paris or Teheran? Banning American membership?

Editor's note: Letters to the editor should include your name and address and should be mailed to Readers' Forum, c/o AAPG EXPLORER, P.O. Box 979, Tulsa, Okla. 74101; or fax (918) 560-2636; or e-mail to forum@aapg.org. Letters may be edited or held due to space restrictions.

Before we make changes to this organization to appeal to "narrow-minded" internationalists, let us carefully examine what we are losing by making these changes. Is it worth increasing our membership if we have to show we're ashamed to be American?

In fact, I believe the AAPG should serve to strengthen America's reputation abroad by retaining its name and continuing to be such a strong scientific organization.

As for the issue of global warming, I notice that usually it's writers from outside the oil community who are upset with the AAPG's political stance. The AAPG is part of and helps to sustain the oil and gas industry. I believe it to be the foremost scientific organization in the industry to comment on global warming, an issue which greatly involves the industry.

I am proud of the AAPG for taking an open-minded approach to the examination of anthropogenic causes of global warming. Despite the obvious political stance of the left that humans are destroying the world, we must be sure that global warming is not a natural, cyclical phenomenon before we take draconian measures to prevent further global warming.

The study of global warming and its causes must be taken up by objective, scientific organizations throughout the world, not by politicians of the third world and of the left who see this as an opportunity to further their causes. I am glad the AAPG is one such objective and scientific organization.

Am I alone in being proud of the AAPG as it stands? I think not!

Ron McWhorter
Spring, Texas

I commend AAPG for its award to Michael Crichton despite the protests from James Evans and Steven Boyer (June "Readers' Forum"), both full of passionate intensity rather than rational argument. Page-turners like Crichton's encourage public interest in earth science; education follows interest.

On May 31, dozens of Washington, D.C., demonstrators demanded immediate resignations from the heads of NOAA and the National Hurricane Center for daring to doubt a supposed link between severe storms and global warming (GW). Although these particular protesters were non-violent (this time), Crichton's novel rightly warns against just such hyper-green evangelists.

Evans and Boyer imply that AAPG members already have been told "all we need to know." Lacking appropriate "expertise," geologists must gratefully and humbly accept the latest version of whatever our climate modeling colleagues have definitively proved. For AAPG, "pronouncements on global warming … represents (sic) malpractice" (Boyer). If such certainty is assured, there seems little point in funding further GW research and AGU should cancel their conference on "Global Warming, the Next Ice Age and Climate Prediction Uncertainties."

AAPG has never been a "lobbying group for the energy industry," (Evans), nor a "petroleum industry lobbying arm" (Boyer). Despite Hollywood stereotypes, the petroleum industry geoscientists I know are hard-working, dedicated individuals, committed to finding and producing hydrocarbons efficiently, safely and with minimal environmental impact and some of the finest persons I have ever known. One friend uses limited

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vacation time to drill water wells for impoverished Third World villagers. Other AAPG members provide for the vital transportation, heating and cooling needs of the entire world, including professors and protestors flying to forums and driving to demonstrations.

This may not be common knowledge in Bowling Green and Tacoma, but in Houston we know better.

David J. Hall
The Woodlands, Texas

I was astounded by the letters from members James E. Evans and Steven Boyer. I was not surprised to learn that they are teaching in some capacity at "schools of learning," and not working in our profession.

I have been a geologist for 49 years and a member of AAPG for 44 years. I learned in my first freshman geology course about climate change throughout geologic time with several glacial periods with inter-glacial periods in between. The earth is obviously in an inter-glacial period. We are all well aware of these facts.

"Global warming," as depicted in the news media and politics, is not subscribed to by competent scientists. It is extremely doubtful that human activity has any effect on the earth's very slight warming in the last few centuries. If we are entering a full-blown inter-glacial period, there is not anything that anyone can do about it, and it will not affect anything for centuries.

AAPG is an international scientific organization, and not a lobbyist group for the energy industry, although most of us work in that industry, hence the name American Association of PETROLEUM Geologists. Possibly Evans and Boyer should join a group that does not depend on scientific facts. Our members are well-read, informed citizens and have expertise in matters of climate change and anything else in the geologic past.

As to Michael Crichton receiving the Journalism Award, I think that is outstanding. His book, *State of Fear*, should be read by everyone. It has many footnotes with an extensive bibliography. In non-fiction, one should also read two books by Patrick Michaels, *The Satanic Gases: Clearing The Air About Global Warming* and *Meltdown*.

Donald Neal Collins
Evergreen, Colo.

I have two questions.

The first, based on the Jim Evans' letter on global warming (June EXPLORER), suggesting that any commentary on GW by the AAPG is akin to lobbying: As many AAPG members are employed by petroleum companies, doesn't it behoove those members to illuminate the subject of GW to the extent that if, through their specialized areas of study, which includes water temperature, content, density, evaporation and resulting sediment erosion and deposition based on changes thereof, they could ameliorate or even refute the extremely severe consequences the more rabid adherents of GW proclaim are in the immediate offing, the result would be more akin to setting the record straight rather than lobbying as it is the attitude of extreme GW vocalists that would, if allowed free rein, bury the oil industry in Boot Hill, not Capitol Hill?

A quote Jim's article contained from the U.S. National Academy of Sciences suggested "the understanding of climate change is now sufficiently clear to justify nations taking prompt action … at reasonable cost." I have heard nothing emanating from the Kyoto Conference relative to the United States that even hints at reasonable cost.

Two other quotes, one by President Bush, the other by the White House – " … That an increase in greenhouse gases caused by humans is contributing to the problem (GW)," and "Clear evidence of human influence on the climate system" – are rather innocuous statements that are undoubtedly true. Every time a child is born and each time we breathe we contribute to GW. The quotes accept a truth, but in no way quantify the human contribution. That is the arena of our doubt.

My second question relates to the constant usage by the media of the two words, BIG OIL. I would really like to know exactly how much oil is produced in the United States by Shell, BP, Chevron and Mobil as a percentage to all other operators. I suspect but don't really know that Big Oil is really an independent.

David Callaway
Houston

It's All in a Name

The May EXPLORER story on coal gas said about the word methane: "But watch your language. Those in the know call it coal seam natural gas. For a lot of people, methane has a bad connotation."

For a lot of ignorant and rather superstitious people, I'd say. Methane is the simplest of the paraffin series of hydrocarbons, some of the others being ethane and propane, which also commonly occur in crude oils with high gas/oil ratios.

What's more, oxygen and nitrogen and carbon dioxide and sulfur dioxide, to name the more common ones, are also "natural" gases, which nobody can deny. So why has only methane been called that?

In all likelihood it originated during the famed Gaslight Era of the 1890s, when

See **Forum**, next page

Save $$$ – Register for Perth by Aug. 1

Everyone interested in saving money on their registration for the upcoming AAPG International Conference and Exhibition in Perth, Australia, has an important deadline coming their way.

Register by Aug. 1 and save as much as $280 (members) or $330 (non-members) in registration fees.

The Perth international conference will be held Nov. 5-8 at the Perth Convention Exhibition Centre. The theme is "Reunite Gondwana – Realize the Potential."

For more information on the meeting and to register, go online to www.appg.org/perth/index.cfm.

Washington

from page 33

✓ "Stay engaged."

✓ "Grassroots-level involvement is important."

✓ "Don't rely on the geoscience community to fight your fights – each individual must make it happen."

Those observations are more poignant today than they were four years ago when David was a CSF here in Washington working for U.S. Rep. J.C. Watts, R-Okla.

* * *

At the recent AAPG Annual Convention in Houston, the Division of Professional Affairs and the Government Affairs Committee agreed that the Washington office needed a communication link that was more consistent with the rapidity that events were unfolding in Washington.

Last month the AAPG home page added a GEO-DC link.

Go to www.aapg.org/geoDC. The link will take members to a menu where they can check on:

✓ Current Washington events that impact members.

✓ Action Alerts.

✓ AAPG position papers.

✓ Governmental Affairs Committee and DPA activities.

There also is a link that permits you to subscribe to or opt-out of Action Alerts broadcast messages, plus a feedback facility "Tell Us What You Think."

I am pleased that several AAPG members already have discovered this link and have provided feedback. Thank you for your interest.

With this AAPG home page link the GAC will change its procedure for broadcasting Action Alerts. Instead of receiving an Action Alert broadcast with files attached, AAPG members on the Action Alert list will receive a short issue-oriented e-mail containing a link to the Action Alert page of the AAPG Web site. The Web site contains all of the background material, the recommended action, editable response draft material and the address of the target organization where AAPG members can express their opinions.

The response page provides a direct e-mail link to the individual office or agency that is the subject of the Action Alert. It also permits you to copy the draft material to your own computer and send your concerns through your own server.

* * *

Finally, I want to take this opportunity to introduce David Curtiss once again to the Washington arena. David will be providing GEO-DC with support on legislative issues in addition to his duties as manager of international strategy and development/senior adviser to the director at the Energy and Geoscience Institute (EGI) at the University of Utah.

He has been with EGI since 1995 developing applied research programs for the international petroleum industry. In this effort he works and negotiates with scientists, companies, foreign governments and institutes. In 2001 and 2002 he was the American Geological Institute's Congressional Science Fellow working for then-Rep. J.C. Watts Jr. (retired).

David holds a bachelor of science (geological sciences) from Wheaton College; master of earth resource management from University of South Carolina; and master of business administration from the University of Utah.

(Editor's note: Don Juckett, head of AAPG's Geoscience and Energy Office in Washington, D.C., can be contacted at djuckett@aapg.org; (703) 575-8293.)

Forum

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methane synthesized from coal was used to light city streets. It was logically called "synthetic gas." So when methane was found underground, was produced by wells and the science of organic chemistry was still in its infancy, it was called "natural gas" to differentiate it from manufactured methane.

Methane also has some other names. It's been called "marsh gas," which when ignited by lightning creates "swamp fire." And it's produced in large volumes every day by cattle in feedlots. A name for that I will leave to your discretion.

Robert H. Paschall
Bishop, Calif.

Obvious

The April Explorer pointed out some potential reasons why AAPG membership isn't growing globally. However, I'd suggest the most significant reason is obvious; it's the *American* Association of Petroleum Geologists.

Many international colleagues I have spoken to have mentioned that they thought it was a wholly American organization.

Jason J. Beall
Aberdeen, Scotland

The Role of Workstations

Regarding the role of workstations and geology (February EXPLORER): Thank you for the article.

Digits are a tool, a way to better display and systematically represent what we think of a geoscience problem. Computers help us see and display how inaccessible rocks look.

For a better observation, workstations should be a processing and displaying tool rather than an "interpretive" tool. Computers and workstations should not think for you. They should help see clearer through the haze of overburden and noise.

Nazim Louni
Lawrence, Kan.

CLASSIFIED ADS

POSITION AVAILABLE

Pine Mountain Oil and Gas, Inc, located in Abingdon, Virginia, is currently interviewing qualified applicants for the following position:

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If interested in this challenging position with a fast-growing company, send a resume to Manager, P.O. Box 2136, Abingdon, VA 24212.

* *

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To Apply: Applicants must send a letter of application, resume, brief statement of professional goals with an emphasis on research objectives, and names and addresses of three professional references to: Ms. Charlie Rourke, Dept of Geology and Geological Engineering, Colorado School of Mines, 1516 Illinois Street, Golden, CO 80401. Review of applications will begin no later than September 1, 2006.

CSM is an EO/AA employer and is committed to enhancing the diversity of its campus community. Women, minorities, veterans, and persons with disabilities are encouraged to apply.

* *

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* *

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* *

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* *

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DIRECTOR'S CORNER

It's a Happy New Fiscal Year!

By RICK FRITZ

AAPG just had its fiscal year's end and we are happy to report that we had a good year financially.

Fiscal year 2005-06 was very productive and we had numerous milestones. I thank Pete Rose and his Executive Committee for their support and leadership.

We are looking forward to working with new president Lee Billingsley and his Executive Committee: Will Green, president-elect; John Dolson, vice president; Randi Martinsen, treasurer; Michael Party, secretary; Ernie Mancini, editor; and Larry Jones, chair of the House of Delegates (page 6).

I also am executive director for the AAPG Foundation, and I want to thank Jack Threet and the Foundation Trustees for their support of programs that help members and the general public. Jack Threet is stepping down as chairman of the Trustees to become the co-chair, with Larry Funkhouser, of the Foundation Campaign Committee. Bill Fisher accepted his election as the new chairman of the AAPG Foundation Trustees (see related story, page 36).

* * *

During the last three years we have added a significant number of new programs, including the Geoscience and Energy Office in Washington, D.C. (GEO-DC), and several new conferences. This year we plan to focus on improving the products and services we already provide.

This year we plan to focus on improving the products and services we already provide.

One of the goals set by new AAPG President Billingsley this year is to update the numerous position papers developed over the past few years by the Division of Professional Affairs Governmental Affairs Committee and approved by the Executive Committee and the boards for the three AAPG Divisions. This year we will be asking for member comments as we update the papers.

The first position paper that we will review is global climate change (see related story. page 4). In Washington, D.C., and elsewhere AAPG is often asked its position. The recent debate about AAPG's Journalism Award to Michael Crichton for writing *Jurassic Park* and *State of Fear* sparked a healthy debate inside and outside of AAPG.

AAPG, through DPA, has established a comprehensive position paper on global climate based on sound science. AAPG members have the unique ability to place global climate change in the context of geologic history. Admittedly, most geologists are not experts in climate, but many are experts concerning the environs and climates in the strata they are working. There are a few who do work on global climate change and provide excellent scientific data.

Timing is another factor that needs to be considered. The reality is that hydrocarbon usage probably is a temporary phenomena in the world's history. In the next 100 years hydrocarbon usage should plateau unless we are able to tap the huge resources trapped in methane hydrates. What will the anthropogenic effect be during those years and what will happen when we decrease usage over time?

As a result of these discussions, AAPG is considering a conference in the future on global climate change.

* * *

Another area for discussion is reserves evaluation. AAPG and the Division of Professional Affairs are in the process of developing courses for reserves evaluation. A conference on "Reserves and Resources" is planned in Washington, D.C., in the spring of 2007, held jointly with several sister societies.

* * *

There are a number of other position papers that will be reviewed this year. These include:

✓ United States and Canadian Atlantic Outer Continental Shelf Resources.
✓ Preservation of Geological and Geophysical Data.
✓ Licensure.
✓ National Petroleum Reserve-Alaska Access.
✓ Arctic National Wildlife Refuge Access.
✓ United States National Energy Supply.
✓ U.S. Land Withdrawals.
✓ Tax Reform.
✓ Natural Gas Supply Concerns.
✓ Reformation of the Endangered Species Act.
✓ Reformation of the Clean Water Act – Wetlands Access.
✓ Offshore OCS Access.
✓ Research and Development Needs of the Domestic Petroleum Industry in the 21st Century.

The current papers are available at www.aapg.org. We will establish a response area on the Web as each paper is reviewed.

We welcome your future input.

* * *

Clearly, this is going to be another busy year, and we are excited about the opportunities.

Happy New Fiscal Year!

'Compelling' Incentives

DPA Adds Reasons to Be Certified

By RICHARD G. GREEN
DPA President

The Division of Professional Affairs (DPA) represents Certified Petroleum Geologists and is involved with professionalism, leadership, ethics, education and current political matters. DPA has over 3,100 members and is a leader in many AAPG efforts, including our new office in Washington, D.C. (GEO-DC), and many other initiatives.

We often are asked by non-members what DPA does for them – or given the excuse the membership forms are too time-consuming to complete.

I can now say we have several new and compelling reasons to join.

❒ If you are a licensed geoscientist in Alabama, Texas, Kansas or any other state that requires professional development hours (PDH) or continuing education (CEU), DPA has a new category of membership termed Board Certified Geologist, which also requires these hours.

Soon we will have a form online at the AAPG Web site available to all DPA members to track activities that qualify for these hours. With this easy-to-use form, DPA member geoscientists can keep track of pertinent educational activities. Members can then apply to DPA for Board Certified Status, or forward this form to applicable state licensing boards.

We currently are "beta-testing" this product, and Rick Ericksen has submitted this form to the Licensing Board in Texas for its review.

We especially invite AAPG members who are not DPA members but who are licensed in states requiring continuing education to join the DPA and take advantage of this service.

To speed the process, Mike Party led an initiative to simplify our membership application form. Those are now available – and they should help qualified geologists more easily join our division.

❒ For the last several years DPA has provided seminars on topical subjects at the annual conventions. We recognize the need for AAPG and DPA to fill training and continuing education voids in the industry, and soon we will offer courses on a variety of technical subjects at AAPG Section meetings with reduced prices for DPA members.

DPA realizes members have time constraints at the annual convention, and we hope that by moving some technical training courses to the Section meetings we can provide another tangible benefit to membership at locales closer to home.

We will continue to have DPA sponsored seminars at the annual and international conventions, and we're proud to have Scott Tinker delivering his presentation on ethics this fall in Perth, Australia, at the upcoming International Convention and Exhibition.

❒ I urge all of you to read "Washington Watch," which is Don Juckett's monthly column in the EXPLORER concerning our GEO-DC office. (This month see page 33.)

Events in Washington directly affect our industry, AAPG membership and potentially your job, whether you work in the United States or internationally.

At this writing, U.S. politicians are again practicing demagoguery about gasoline prices while pretending the adverse atmosphere they created is not a major factor in the problem. DPA is presenting our AAPG position papers and stressing support for:

✓ Access for drilling in an environmentally sound manner.
✓ Common sense environmental regulation.
✓ Funding for geologic and engineering education and inclusion of geologic history concerning global temperatures, CO_2 and climate change in the models used to predict the future (incredibly this is not done today in the computer models).

Don is doing an excellent job of keeping AAPG informed on pending legislation and allowing AAPG to provide accurate scientific data to our elected representatives and other interested parties.

If you are interested in political issues and agree or disagree with our positions, then join DPA and get involved. In our cyclical petroleum industry, many jobs have been lost due to apathy by geologists who chose not to get involved locally, nationally and politically. DPA will not be apathetic during this business cycle, and we will advocate for your profession.

We also will work closely with Don, and I look forward to this year serving DPA as your president.

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Finally, I want to thank Deborah Sacrey, DPA's immediate past president, for working with me during the learning process that is the president-elect job. I intend to work closely with new president-elect Tom Ewing to keep our many initiatives moving forward during the coming year.

Please contact me with any DPA issues, questions or concerns you may have during this year at 4600 Greenville Avenue, Suite 160, Dallas, Texas 75206; or by e-mail to Rgreen@LaRocheltd.com.

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