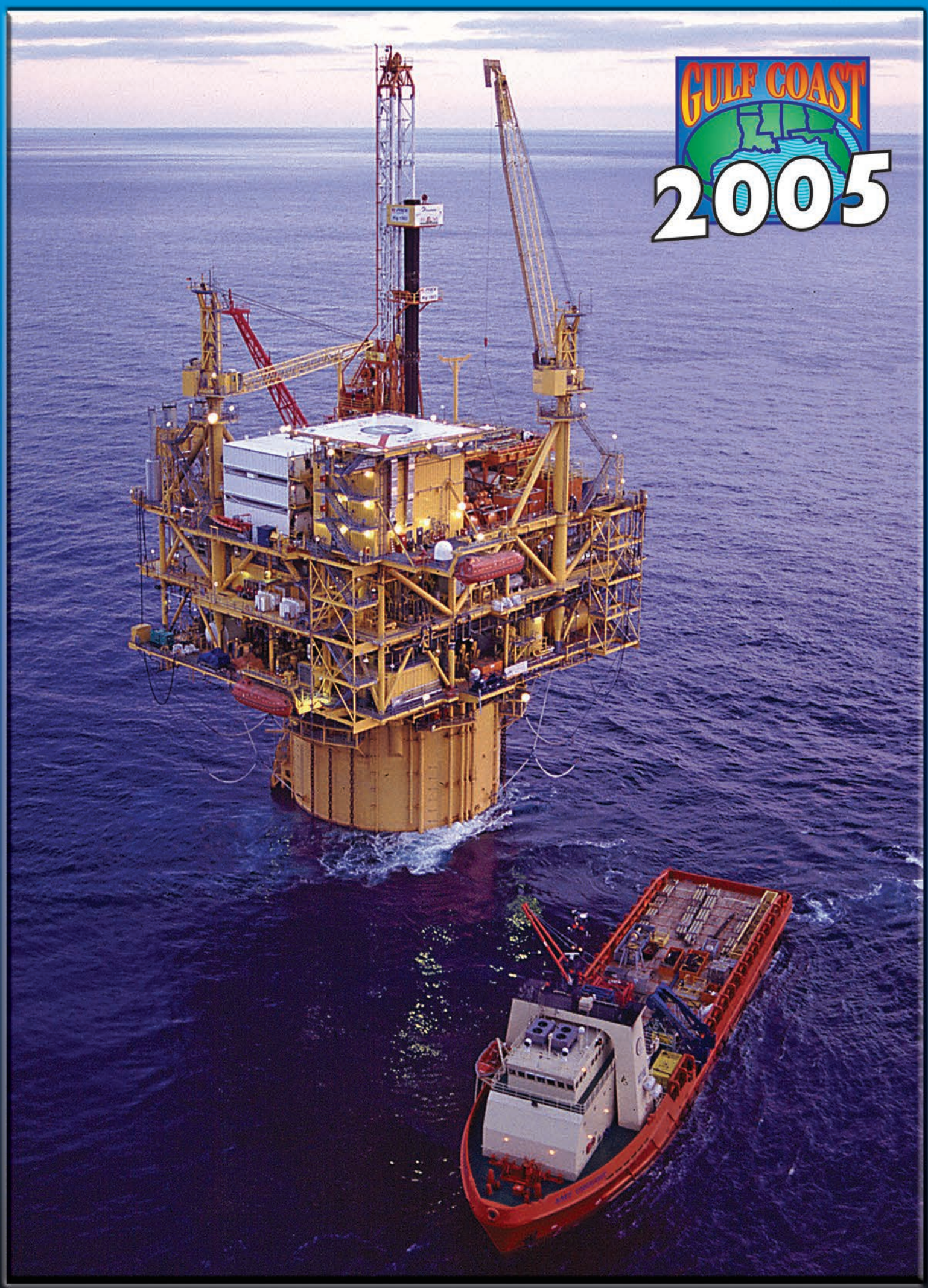
AAPG AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, AN INTERNATIONAL ORGANIZATION

EXPLORER

SEPTEMBER 2005



Gulf of Mexico: So Vital to So Many

Vol. 26, No. 9
September 2005

AAPG EXPLORER

On the cover: Devils Tower, located in 5,610 feet of water on Mississippi Canyon Block 773, approximately 140 miles southeast of New Orleans, is an example of activity in the Gulf of Mexico, a region that continues to play a vital role in the world's energy picture – and the emphasis of this month's EXPLORER. Devils Tower is operated by Dominion Exploration & Production; the host platform is poised to accept subsea tiebacks from the Triton and Goldfinger discoveries. Photo courtesy of Dominion Exploration and Production.

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PRESIDENT'S COLUMN

Reserve Estimate Training Endorsed

By PETER R. ROSE

Ordinarily I tend to be skeptical of crusty old folks who are always claiming that "the younger generation is going to hell in a hand basket." Such attitudes often seem to just go with getting old and set in your ways.

Lately, however, I've been hearing some recurrent and disturbing reports about decay of key geotechnical skills in younger geologists, geophysicists and reservoir engineers from quite a few knowledgeable, experienced and objective E&P professionals – men and women I know and respect. And these reports resonate with my own recent experience.

Let me give you a personal example.

From 1984 to 2003 I used a course exercise in which class participants were given a page-sized map covered with about 40 elevations and asked to prepare a contour map faithful to a geological model (pinnacle reefs, thrust-sheets, karst surfaces, listric faulting, etc.) described at the top of the page. There were 12 geological models; each student got only one, to contour overnight and bring back to class where all the maps would be displayed in all their variety.

The next morning I would announce the additional fact that the contour values for all 12 maps were identical.

The exercise was intended to demonstrate the inherent variations involved in contouring – that no contour map represents a unique solution and that there is an envelope of uncertainty around every contour interpretation – and the exercise accomplished its intended purpose very well.

But beginning in about 1995 (about the time workstations began to be widely used), I began to notice that an increasing number of geologists and geophysicists (some with as much as five years of experience) did not know how to contour data. Understand, please – it wasn't that they did not have the skill or imagination to draw a map that reflected a given geological "style" – it was that they couldn't draw a contour map at all!

* * *

Trading notes with experienced friends who teach and consult with many E&P companies worldwide, I heard similar disturbing experiences:

✓ Maps of reservoirs, based on data from directionally drilled wells, in which the thickness calculations were done incorrectly (TVD or TST vs. TVT), resulting in erroneous estimated reserves.

✓ Development geologists and reservoir engineers who didn't know the difference between isopach and isochore mapping, so their calculated trap volumes were overstated or understated significantly.


Rose

✓ Geotechnical and engineering staff (not entry-level novices) who were unable to map – and correctly calculate – net pay in a reservoir.

My engineering colleagues, especially those involved with reserves auditing and consulting, relayed analogous accounts (such as engineers who were unable to calculate routine reservoir parameters without resorting to computer programs) – all suitably sanitized, of course, so as to protect the good names of their clients.

Now, most E&P professionals know that getting the geology, geophysics and reservoir engineering right is just the first part of getting the reserves right. Other considerations such as economics, project completion and deliverability schedules and interpretations of U.S. Security and Exchange Commission (SEC) requirements also play substantial parts. And, sad to say, ethical lapses by staff and management have occasionally influenced official reserves reports inappropriately. But it all starts with the subsurface geotechnical picture and related reservoir engineering.

It's also true that fuzzy definitions and standards continue to contribute to inconsistent reserves usage, as well as archaic concepts and standards currently enforced by the SEC.

Regardless, when a publicly held company announces a substantial reserves write-down, public confidence in our E&P industry is damaged. And in

See **President**, next page

AAPG Officer Candidates Listed

Seven candidates are currently slated to vie for positions as AAPG officers for 2006-07.

Additional petitions for candidacy must be submitted prior to Oct. 15.

Candidates for officers are:

President-Elect

❒ **Willard R. "Will" Green**, an independent/consultant with Green Energy Resources in Midland, Texas (petition candidate).

❒ **G. Warfield "Skip" Hobbs**, Ammonite Resources, New Canaan, Conn.

❒ **Peter M. Lloyd**, retired, formerly with Schlumberger, teaching for Heriot Watt University, Falicon, France.

Vice President

❒ **John C. Dolson**, TNK-BP, Moscow, Russia.

❒ **John C. Lorenz**, Sandia National Laboratories, Albuquerque, N.M.

Treasurer

❒ **Randi S. Martinsen**, University of Wyoming, Laramie, Wyo.

❒ **William A. Morgan**, ConocoPhillips, Houston.

The president-elect winner will serve as AAPG president in 2007-08. The vice president will serve for the 2006-07 term and the treasurer will serve for 2006-08.

Candidate statements and biographies are available online at www.aapg.org, and will appear in the January issue of the EXPLORER. Official campaign guidelines are available online.

Houston Deadline Looms

Time is running out on submitting abstracts for the 2006 AAPG Annual Convention, to be held April 9-12 at the George R. Brown Convention Center in Houston.

The deadline for submitting abstracts, which must be done online, is Oct. 4.

The meeting's theme is "Perfecting the Search – Delivering on Promises," and the technical program features the following areas:

✓ Successful Business Strategies.

✓ Learning From Exploration and Exploitation Successes, Failures and Mistakes.

✓ Giant Fields of the World, Their Implications and What They Have to Teach Us.

✓ Perfecting the Search for Unconventional Plays and Technology.

✓ Integrating Geology, Geophysics and Engineering to Deliver Success.

✓ Reservoir Characterization and Modeling.

✓ Stratigraphy and Petroleum Systems.

✓ Structure and Tectonics.

✓ Play Openers and Where They Are Leading Us.

✓ Delivering Resources and Environmental Quality for a Sustainable Future.

Abstracts for all sessions should be submitted online through www.aapg.org/houston/.

President

from previous page

these times of rising prices we should not be surprised if future write-downs generate calls for increased government scrutiny. That would constitute one of Bazerman and Watkins' (2004) *Predictable Surprises*, last month's recommended reading. So it's in our interest as E&P professionals to do what we can in our areas of expertise and influence to help make things better.

That is why more than 20 members of AAPG (led by the Division of Professional Affairs, represented by Dan Tearpock) and the Society of Petroleum Evaluation Engineers (SPEE, led by Ron Harrell and Richard Miller) have been working together over the past 15 months to explore and delineate programs that might lead to more reliable reserves estimates in our profession.

AAPG and SPEE representatives met on July 19 in Houston with seven corporate members of AAPG's Corporate Advisory Committee to identify and discuss initiatives and priorities that AAPG's various E&P friends would actively support. What emerged from this workshop was overwhelming support for enhanced practical training, based on real case histories, contributed by the companies, designed by AAPG and SPEE professionals and delivered via standard in-class training sessions (and eventual Web site offerings) to E&P professionals worldwide.

In addition, AAPG representatives will soon be participating in a joint initiative with SPE, SEG, WPC and SPEE to develop consistent, well-founded and universal reserves definitions, and cooperating to develop mutually supporting educational programs designed to improve the consistency and quality of reserves estimates.

* * *

As long as I am on the subject of reliable and consistent measurement of oil and gas reserves, I want to comment on another aspect of the whole reserves mess: I urge the adoption of probabilistic (as opposed to deterministic) expression of reserves throughout the E&P industry.

To be sure, regardless of whether predictions are expressed deterministically (single-value forecasts) or probabilistically (as ranges of values that correspond to perceived probabilities), they are still estimates, thus subject to the vagaries of nature, human error and various biases. But probabilistic estimating, now widely adopted by the "E-part" of E&P, has five important advantages:

✓ Forecasting accuracy of estimators can be measured, so estimators can be accountable.

✓ Use of statistical principles results in greatly improved estimating quality.

✓ Proven "reality-checks" can pre-detect errors before drilling takes place.

✓ It is faster, more efficient, and results can be directly entered into E&P portfolios.

✓ It promotes more realistic communication of uncertainty to decision-makers and investors.

One simple remedy would facilitate the transition to probabilistic methods for the entire E&P industry – for members of all professional geotechnical and engineering societies to specify that when they use the term "proved" they are explicitly affirming 90 percent confidence in their estimate, regardless of the SEC definitions of "reasonable certainty" (whatever that means!). This would immediately allow measurement and accountability, (example: "90 of my last 100 proved reserves estimates are on track to deliver at least the reserves I forecast"). The eventual consequence leads to the adoption of full probabilistic expression of reserves and resources throughout the E&P world.

* * *

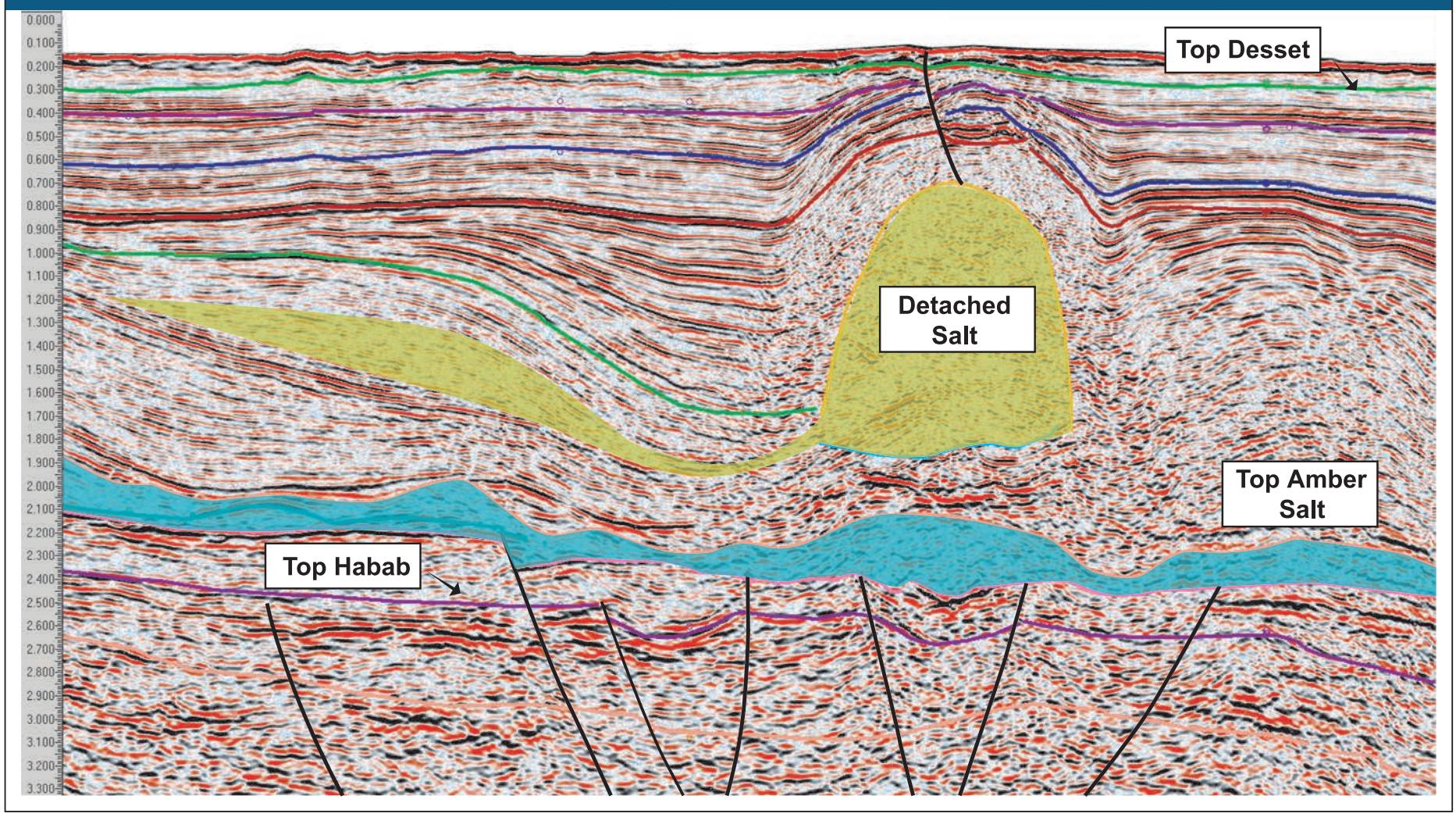
Recommended Reading*: The Smartest Guys in the Room: The Amazing Rise and Scandalous Fall of Enron*, by Bethany McLean, Peter Elkind, Penguin Books, 2003.

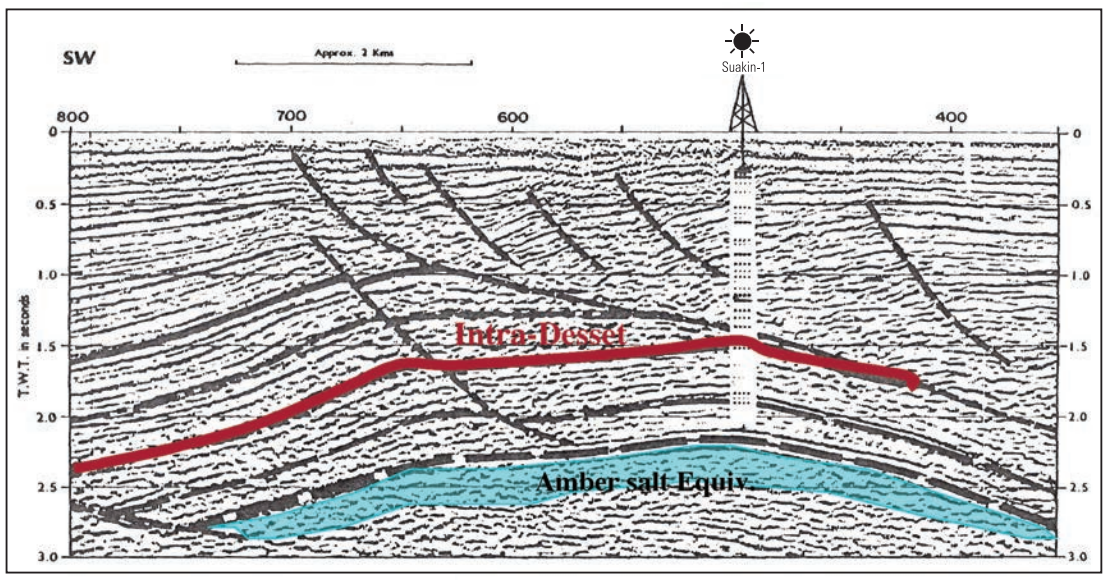
This is a well-documented and fascinating (if depressing) account of the rise and fall of Enron written by the investigative journalists "who were there" – and a useful cautionary tale for all corporate professionals.

Read it, you'll like it!

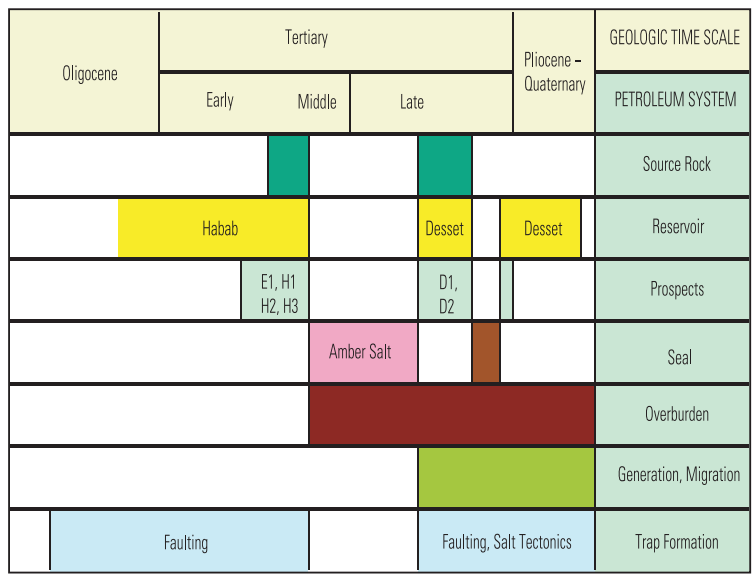
OPPORTUNITY IN ERITREA

EXAMPLE - CENTRAL ZULA BLOCK





Suakin-1 Well Seismic Line



Tertiary Petroleum System

Eritrea is offering attractive and negotiable licensing terms for the block. TGS has created a data room at its Houston office to display seismic data, well logs and an interpretation report related to the project. To schedule a presentation of the data, please contact:

Richard Horscroft
TGS-NOPEC Geophysical Company | 2500 CityWest Blvd., Ste. 2000, Houston, TX 77042 | Tel: +1 713-860-2111 | Email: richard@tgsnopec.com

And, More Leases Are In the Pipeline

Gulf Activity 'Healthy As Ever'

By LOUISE S. DURHAM
EXPLORER Correspondent

Despite soaring demand for hydrocarbons, continuing high commodity prices and much grumbling at the local gas pump, opposition to offshore drilling remains vocal, vehement and voracious for many coastal areas.

Fortunately for the anti-drilling yet energy gorging folks, a few select southern coastal states not only allow but encourage drilling in what has become the backbone of the domestic industry: the Gulf of Mexico, aka the Old Industry Workhorse.

And the old horse is still going strong.

Written off by many as the Dead Sea not so long ago, this expansive hydrocarbon-rich region has come roaring back to life like never before. And it just keeps going and going, providing the United States with 25 percent of its gas supply and kicking out 25 percent of the total domestic oil production.

"The Gulf of Mexico has seen sustained activity for a long period of time, though admittedly with highs and lows," noted Kevin Guilbeau, senior vice president and general manager of the GOM at Dominion Exploration and Production. "Each time through history when it's been said the play in the Gulf is over, the basin has managed to regenerate itself – mainly through new technology – to develop new prospects.

"I think it's as healthy as ever now."

Devils Tower, a deepwater success story approximately 140 miles southeast of New Orleans. The Gulf of Mexico continues to be the U.S. oil industry's shining star.

Photo courtesy of Dominion Exploration and Production

GULF COAST 2005

Active Participants

Dominion's offshore business unit, which is active onshore south Louisiana and both shallow and deep water, has been a player on the Gulf shelf since the 1950s (as CNG Producing Co. prior to the Dominion acquisition in 2000). The recent Central Gulf Lease Sale 194 in March is testimony to its enthusiasm for the region.

The company's participation in the sale resulted in 25 accepted high bids, plus one other in the Eastern Lease Sale, which occurred simultaneously. The highest bid accepted on a tract in Sale 194 was $21.1 million by Dominion and Stone Energy Corp. for West Cameron 132 in shallow water.

In fact, the MMS reported 57 percent

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Gulf Activity

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of the tracts receiving bids were in less than 200 meters of water, indicating a continuing interest in shallow water areas, according to Chris Oynes, Gulf of Mexico Regional Director at the agency.

Standing alongside Dominion holding a total 25 accepted high bids is Focus Exploration, a low profile yet long active player in the Gulf.

"We and all our employees have worked the offshore Gulf of Mexico for 30 years," said geologist and CEO Don Crider. "We started when it was 2-D data and little well control, when deep water had no blocks leased and over the years we've worked all the areas.

"We generate all types of plays and sell to everyone in the industry," he added.

The low profile stems from the company's usual practice of selling their prospects to other companies who then bid them in their own name, Crider noted.

More To Come?

If Dominion's planned activity is any harbinger of Gulf action overall for '05, it's shaping up to be a doozey of a year, indeed.

The company anticipates it not only will participate in about 25 total GOM wells in '05 but also will participate in the completion of as many as 22 previously drilled deepwater development wells.

Due to the larger than usual number of deepwater completions for the year, capital outlays for the Gulf may surpass the $400-$450 million average spent annually in the region over the last five years, according to Guilbeau.

The big reason for the current excitement over the Gulf is two-fold:

✓ The shelf's deep gas play.

✓ The deep structural play, or emerging trends play, in the deep water.

"Usually, when a company goes into a basin for the first time, they look for the really big structures," Guilbeau said. "In the Gulf, these were hidden for a long time because they were deep and partly obscured by salt.

"Industry is now starting to image these very large structures, for example, Thunder Horse, and there's been a string of discoveries in the ultra deep water the last few years," he noted. "These discoveries have occurred in the deeper Tertiary plays in the Miocene through Eocene – and possibly as old as the Paleocene."

In fact, the MMS reported 14 new deepwater (>1,000 feet) startups and 12 new deepwater discoveries for 2004. Oynes noted this was the tenth year of sustained expansion of deepwater production.

The MMS noted that available publications and news releases indicate there have been six announced discoveries thus far for 2005 in deep water, where three known fields have begun production and an additional seven are expected to go on line before year end. There have been six discoveries announced in the newer shallow water deep gas play as well.

A Whole New World

The rush to tap into potentially huge hydrocarbon deposits in ever-deeper subsurface structures reflects the belief of many industry experts that there's a whole new Gulf under the old one – just lying in wait for the drill bit.

Results of challenging projects such as the shallow water ExxonMobil Blackbeard well drilling for deep gas in South Timbalier 168 likely will go far to help prove this out.

The Blackbeard prospect covers multiple blocks in the South Timbalier and Ship Shoal areas offshore Louisiana. The well, which was spudded in February, will be one of the few exploration wells to penetrate the ultra-deep zone below 25,000 feet on the shelf.

Blackbeard's target depth is reported to be 32,000 feet, or even as much as 38,000 feet – a mind-boggling seven-plus miles – and it's predicted to take roughly a year to drill.

Don't expect any updates as it progresses, however; the operator and partners have opted to keep it a tight hole.

continued on next page

Results of Central GOM Lease Sale 194

Top Five Companies Based on Total Number of High Bids Accepted:

Company	Total High Bids	Sum of High Bids
Dominion Exploration & Production Inc.	25	$ 52,300,892
Focus Exploration LLC	25	$ 10,176,565
Murphy Exploration & Production Co.	22	$ 27,685,175
LLOG Exploration Offshore Inc.	22	$ 34,859,680
Energy Partners Ltd.	21	$ 14,817,037

Top Five Companies Based on Highest Total Bonus Accepted:

Company	Total High Bids	Sum of High Bids
Dominion Exploration & Production Inc	25	$ 52,300,892
LLOG Exploration Offshore Inc.	22	$ 34,859,680
Murphy Exploration & Production Co.	22	$ 27,685,175
Spinnaker Exploration Company LLC	18	$ 16,145,075
Energy Partners Ltd.	21	$ 14,817,037

Data provided by Minerals Management Service

To date, only 6.5 percent of about 3,200 deepwater leases in the Gulf of Mexico have been drilled – and in the next four years more than 3,600 deepwater leases are set to expire. Will the expiration dates and subsequent availability of numerous potentially high quality leases redefine Gulf activity? Stay tuned.

Photo courtesy of Dominion Exploration & Production

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Blackbeard is being drilled using Rowan's Scooter Yeargain jackup rig, which is designed specifically to withstand the high pressures and temperatures of the ultra-deep environment. While a high-tech powerful rig such as this is de rigueur for a Blackbeard-type project, most any type rig is considered premium property these days.

With demand for these assemblies increasing globally both on land and water, the issue of rig availability looms large for operators most everywhere these days, particularly the challenging deepwater environment.

"The deepwater rig market has really tightened up, affecting everyone," Guilbeau noted. "And it's especially tight for rigs capable of drilling in ultra-deep water."

Deep, and Otherwise

A particularly noteworthy aspect of the GOM is that it offers operators the best of both worlds.

"The shelf contains mature plays, but because of the existing infrastructure they offer a quick turnaround for a discovery," Guilbeau noted. "You can get a discovery on production much faster than in the deep water, and this leads to quick cash flow.

"But we look to the deep water to grow our reserve base," he continued. "It's less mature, and there are larger fields to be found there."

Information gleaned from the MMS indicates there soon will be a host of opportunities opening up in the Gulf.

This relates back to the near-stampede to acquire leases during the period between 1995 and 1998. As it shakes out, many of these leases were never tested, which is a common occurrence.

In fact, it's reported only 6.5 percent of the roughly 3,200 deepwater leases assigned between 1996 and 2000 have been drilled.

Now, the lease holders are faced with lease term expirations, meaning there likely will be numerous potentially high quality leases becoming available over the next few years.

The bulk of this activity will occur from 2006 to 2007, when 2,527 deepwater leases are set to expire, according to the MMS. An additional 1,077 expirations are on tap for 2008-09.

At press time, much attention was focused on the Western Gulf Lease Sale 196, set for Aug. 17.

"We're in the middle of preparing for the Texas sale right now," said Mike Scherrer, geophysicist and president of Focus. "And we think activity in the Gulf is just going to continue to expand for a number of reasons, including increasing technology in drilling and completions.

"As we see high prices continue, a lot of prospects known about over the years that maybe at $2 gas weren't economic, now are," he said.

Given the not-so-long-ago mass exodus of companies and personnel out of New Orleans to become a part of the vibrant energy scene in Houston, it is noteworthy that the Crescent City is once again becoming a hot spot for oil and gas as the kind-of jumping off place for the rash of activity in the Gulf.

In fact, Guilbeau made the point that most of the top bidders in Sale 194 have a big base in New Orleans, where Dominion houses its offshore business unit. ❑

4,000 Facilities Affected

Hurricanes' Thunder Felt in Gulf

By PAT BLAKE
EXPLORER Correspondent

The 2005 hurricane season plowed into the Gulf of Mexico with a destructive zeal reminiscent of the record-setting number of gales just a year earlier – never a good omen for the vital Gulf drilling operations that provide so much of America's energy.

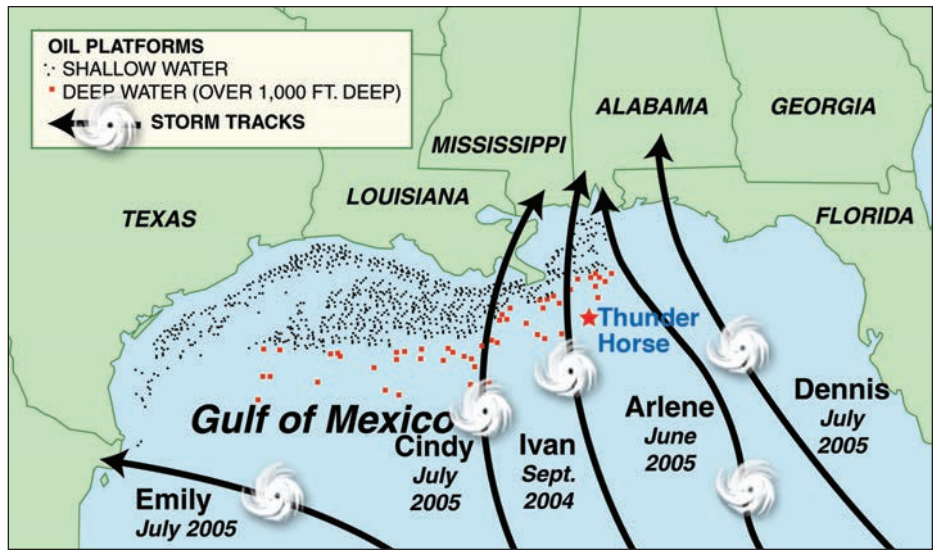
During June and July seven tropical storms already had tracked across the Atlantic, bringing the total for those two months to a new record high.

To date, Hurricane Dennis posed the greatest threat for offshore petroleum interests and residents of the surrounding Gulf area. As the earliest Category 4 hurricane ever confirmed in the Caribbean basin, Dennis ripped through the island countries of Haiti and Cuba, taking 32 lives in its furry. Once ashore in the United States, it would claim another five victims.

While Dennis was still four days out of the Gulf, evacuations of some 4,000 offshore oil and gas facilities – roughly 35,000 people – were initiated.

Meanwhile in Mississippi Canyon Block 778, about 150 miles southeast of New Orleans, the Thunder Horse semi-submersible platform was revving up to come online. Jointly owned by BP and ExxonMobil, Thunder Horse is the Gulf's largest oil and gas facility. Once fully operational, it is expected to generate 250,000 barrels of oil and 100 million cubic feet of gas every day.

With mooring lines anchored and hook-ups in place, the crew had completed most of the preliminary steps necessary to turn up production, save for the telemetry system. Now with Hurricane Dennis cutting a destructive course directly toward the Gulf, the order was given to shut in the wells and evacuate the facility.



EXPLORER graphic by Rusty Johnson

America's growing reliance on the Gulf of Mexico for energy needs makes the annual hurricane season a treacherous time for the entire country.

Heeding the Call

The brute force of Hurricane Dennis smashed into the Florida Panhandle on July 10 as a Category 3 storm with torrential rains and high winds that uprooted trees, downed power lines and caused widespread flooding. Offshore facilities remained relatively unscathed, though, with the eye of the storm tracking over deep water roughly 120 miles east of the path Hurricane Ivan forged in 2004.

In contrast to Dennis, 150 platforms and 10,000 miles of pipeline were in the direct path of Ivan, which destroyed seven platforms and significantly damaged 24 others. The 2004 tempest wreaked havoc underwater, too, by triggering mudslides in the Mississippi River delta that damaged at least 13 pipeline systems. Another four large-diameter pipelines were shut in from other causes due to Category 4 Ivan.

Four months later, all 17 of these pipelines were still shut in and 16 of the 24 platforms remained off production.

Adding insult to injury, the steep downturn in production took its toll at the pump. U.S. oil imports reached a 30-year high due in large measure to Ivan and his sibling storms that unleashed their fury on the Gulf. Production capacity in this region that generates 30 percent of all oil and 10 percent of natural gas purchased by Americans was dramatically cut from shut-in wells due to the storm.

Throughout the country, the per-gallon cost at the pump was soon climbing to well over $2.

There may be some consolation in that Hurricane Dennis did not further slow the still recovering Gulf production

See **Hurricanes**, page 14

Photo courtesy of Minerals Management Service

No, Hurricane Dennis didn't cause Thunder Horse to list, although the timing of the incident may have caused some to jump to that conclusion.

Hurricanes

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– but just as platform and pipeline operators were breathing a sigh of relief at Dennis' uneventful, open-water passing, a reconnaissance plane spied the unmanned Thunder Horse severely listing at a 20-degree angle.

Not since the P-36 in Brazil several years earlier had a platform tilted at such a steep descent. In the case of Thunder Horse, the natural assumption was that it was sent listing by the wrath of Hurricane Dennis – but that assumption, according to the U.S. Department of the Interior's Minerals Management Service, is most likely a premature one.

"Hurricane Dennis passed very far to the east of Thunder Horse. Based on the mid-ocean data that we have seen from Dennis, I think that the only tie between the Thunder Horse listing and Hurricane Dennis is that the Thunder Horse was evacuated for Hurricane Dennis," says Chuck Schoennagel, MMS deputy regional director. "I don't think the storm itself had anything to do with the listing. That is still part of the investigation."

Watch for statements from BP, the U.S. Coast Guard and the MMS regarding the ongoing investigation into the cause of the Thunder Horse listing. At this point, one of the few certainties is that if the telemetry had been in place prior to the evacuation, there would be a better chance of pinpointing the cause and precise timing of the listing.

After days of pumping out water from the flooded platform, the Thunder Horse righted itself. It was designated as seaworthy and storm-safe just in time for the next Gulf event: Hurricane Emily.

Lessons Learned

Regardless of the cause, it is, at the very least, a fortunate coincidence that the Thunder Horse platform was unmanned at the time of listing. At the MMS "Offshore Hurricane Readiness and Recovery Conference" held a few weeks after the incident, the recent Gulf events made a dramatic backdrop for discussions on how to prepare for the unpredictable during the stormy season.

"Our primary message was that we were not happy that four semi-submersibles broke loose during Hurricane Ivan," Schoennagel reports. "We think (operators) need to go back and look at how those are moored. They've addressed part of it by adding GPS systems, so if one broke loose, it could be tracked at all times.

"We have several studies that have been initiated to look at what occurred as a result of Ivan, and that's where we'll learn the lessons."

In addition to mooring procedures, the MMS is scrutinizing the design of pipelines in mudslide-prone areas and the fastening down of drilling units on fixed and floating production facilities.

In the meantime, platform and pipeline operators in the Gulf of Mexico will likely do as their onshore neighbors and brace for a hurricane season that is expected to generate a total of roughly 18 tropical storms, with nine of those potentially morphing into hurricanes and five to seven of those into major hurricanes. Such water-spawned violence generally occurs in 25-year cycles, according to the National Oceanic and Atmospheric Association.

The U.S. Atlantic Coast and Gulf of Mexico currently are at the crest of that cycle. ❑

Energy Advocates Honors AAPG With Top Award

AAPG has been named Outstanding Association of the Year by the Energy Advocates, a Tulsa-based organization formed in 1974 that provides information to the public and aims to improve the industry's image.

The award will be presented at the International Energy Policy Conference to be held in early September in Denver.

Past AAPG Secretary Charles Mankin, of the University of Oklahoma, will be a speaker at the conference. ❑

Many Causes; Any Solutions?

Wetlands Get Scientific Response

By LOUISE S. DURHAM
EXPLORER Correspondent

Now you see them, now you don't.

This is perhaps as good a way as any to describe the highly precarious state of Louisiana's vanishing wetlands.

These fragile lands are disappearing at the rapid clip of 35 square miles each year. In fact, more than one million acres have vanished since the turn of the century, and the experts predict another 1,000 square miles will be gone by 2050 if some drastic prevention efforts are not initiated.

A number of forces have combined to create the problem. The many culprits who shoulder the blame include Mother Nature – e.g., natural subsidence – and human contributions such as artificial levees that prevent sediment and fresh water from replenishing the starving marshes.

The disappearing coast is cause for considerable angst both on the home front and the national scene for those folks who are in the know about this issue.

Indeed, the region has enormous impact on the entire country:

✓ The wetlands offer protection for the pipelines, roads and varied infrastructure that enable the transport of more than 25 percent of the oil and gas consumed in the United States.

✓ Eighty percent of the oil and gas produced offshore passes through the area.

✓ Thirty percent of the nation's fisheries catch originates here.

✓ The world's largest port system is sited here.

On the local front, these vital wetlands also provide protection from hurricanes and storm surges for more than two million people living in the coastal zone, which includes New Orleans. Considering the devastation that recent storms such as Ivan caused for numerous Floridians, any increase to the vulnerability of this already-fragile area can make for some sleepless nights for the citizenry.

Goal: Public Awareness

To bring national attention to the problem, Louisiana launched a privately funded public awareness campaign a few years ago. The effort had a goal to convince the country that it is in its best interest to ante up the $14 billion needed to rehabilitate and save the coastal region.

Although the lofty goal is still far from being attained, funding from various sources has been acquired. Perhaps the most noteworthy sum appears slated to come via the energy bill recently passed by the U.S. Congress.

See **Coasting**, page 18

GCAGS Offers Coastal Sessions In New Orleans

The special session on "Restoring America's Coastal Heartland" is part of the technical program set for this year's Gulf Coast Association of Geological Societies annual meeting, set Sept. 25-27 at the Hyatt Regency in New Orleans.

This year's meeting theme is "Gulf Coast Geologic Gumbo – A Recipe for Success." The coastal restoration and processes symposium represents a first-of-its-kind event for GCAGS, and some of the talks scheduled for the four sessions are:

✓ Major World Delta Variability and Wetland Loss.

✓ A Revised Delta Cycle Curve for the Holocene Deltaic Deposits of South Louisiana.

✓ Backbarrier and Sea Level Controls on Tidal Prism and Impacts on Barrier Islands.

✓ An Improved Ocean Observing System for Coastal Louisiana.

✓ Modeling Future Changes in Barrier Island Wetlands on Galveston Island, Texas.

✓ Rebuilding the Louisiana Coastline: How Long Can We Wait?

✓ Meteorological Influences of Coastal Processes on Fecal Coliform Pollution in the Mississippi Sound.

✓ Understanding Subsurface Contributions to Subsidence in Coastal Louisiana.

The symposium will end with a panel discussion on "Predicting Subsidence for the 21st Century: Understanding of Contemporary and Future Subsidence Processes and Rates."

Complete meeting information can be found at the GCAGS Web site, accessible via www.aapg.org.

LOOKINGBACK

Mentors Give Lasting Gifts

By MARLAN DOWNEY

Perhaps a review – and awareness – of the past may make us better geologists in the future.

* * *

I had an unusual feeling the other night in Calgary when Larry Woodfork presented me with the Petroleum History Foundation's Colonel Drake Award as Legendary Explorer. I spent some quiet time later thinking about my sensations on receiving the award. Any reasonable person would have pumped their fist in exultation, flashed a "V" for victory sign, or perhaps attempted a one-armed push-up on stage.

I found myself at the podium thinking of all the marvelous people whom I have worked with … many departed. I thought of what they might have said if present.

I like to think they might have taken a parental pride in seeing their teachings, their guidance and their wisdom successfully transmitted to my generation.

It's nice to receive awards, of course, but perhaps many of you (like me) are the lucky surviving stand-in for a score of ghostly mentors.

It's our turn now to give a hand to the next generation of geologists.

Perhaps the AAPG could consider a high-level award to recognize those remarkable people in industry and academia who have been mentors to us all.

We rarely give posthumous awards, but perhaps it is appropriate to recognize the families of mentors – and remind ourselves of what we owe to others. ❑

Coasting

from page 16

It is reported that Louisiana has been tagged to receive $540 million over the course of four years to apply to the wetlands problem, courtesy of this new legislation. While far short of the sum estimated to be necessary to restore and preserve the coastal region, some high-level folks are optimistic there may be more to come at some future date.

Indeed, Sen. Mary Landrieu, D-La., noted receipt of the lesser, short-term monies would not stand in the way of seeking further funding at some point.

Shedding Some Light

Anticipation and excitement over potential funding from the federal government and other sources has been building for some time, and this, in part, kick-started the initiative to organize a symposium – Restoring America's Coastal Heartland – to be held at the upcoming GCAGS meeting in New Orleans (see box page 16), according to Miles Hayes with Research Planning Inc.

Hayes is a co-convener of the two-day program, along with Mark Kulp and Shea Penland.

The symposium's intent is two-fold, according to Kulp.

"We wanted to make clear to the public and to the science world at large that this is a problem," he said, "and we wanted to bring to light the really good science that's taken place in response to the problem, and what we've learned and how we may actually be able to deal with some of these issues."

The program is divided into four main sessions:

✓ Cradles of Civilization: River Deltas, from 8:10-11:50 a.m. on Monday, Sept. 26.

✓ Processes That Shape Our Coasts, from 1-4 p.m. on Monday, Sept. 26.

✓ The Emerging Role of Geologists in Coastal Restoration, from 8:20 a.m.-noon on Tuesday, Sept. 27.

✓ Understanding Subsidence in Louisiana: Rates, Processes and Research Needs, from 1-4 p.m. on Tuesday, Sept. 27.

"Session One will set the stage for the geological setting of the Delta," Hayes said. "Then Session Two will look at the dynamics and processes that take place along the Delta front such as how tidal inlets function, and there will be a couple of papers on the impact of recent hurricanes.

"There will be some detail data on near-shore areas like Ship Shoal," Hayes noted. "A project some engineers are putting together now is to derive sand from some place or other and build barrier islands, and one of the primary sources would be Ship Shoal.

"The geological background is key to planning a restoration process that works."

The program's second day will kick off with a look at the varied aspects of faulting, e.g., what's causing the faulting and the impact of faulting on restoration. The afternoon session will get down to some individual restoration issues, Hayes said, such as projects for marsh restoration.

Hayes said a couple of restoration projects already have begun but noted everyone anticipated more money would be in the restoration coffers by now.

When queried about funding reported to be in the pipeline via the new energy bill, he noted:

"It's a political football." ❑

Evolution Foes' Argument Intelligently Designed

Is Science Losing Creation Debate?

By DAVID BROWN
EXPLORER Correspondent

Science is about to lose the public debate between evolution and creationism in the United States.

Here are five reasons why:

1. Public support for creationism has been growing steadily while belief in evolution declines.

According to the results of a Harris Interactive Poll released in July, 54 percent of U.S. adults do not think human beings developed from earlier species, compared to 46 percent in March 1994.

In the same period, the number of adults who believe humans developed from earlier species dropped from 44 percent to 38 percent, according to the poll.

2. The creationist movement is well funded, politically savvy and extremely well organized.

Creationism draws support from national organizations, including the Institute for Creation Research in California, the Discovery Institute in Seattle and Answers in Genesis in Kentucky.

"They have a very effective public relations machine. We're doing everything ad hoc, with no budget," said AAPG member Lee Allison, an evolution supporter and former Kansas State Geologist who chairs the Kansas State Energy Council.

Also, dozens of community-based, grassroots creationist groups across the United States are working to thwart the teaching of evolution in public schools.

EXPLORER graphic by Rusty Johnson

3. Creationists have shown the patience for the long, slow process of changing the perspective of the courts.

Legal rulings against teaching creationism in public schools and placing evolution "warning stickers" on textbooks caused problems for creationists.

As the courts evolve toward more conservative and less secular, judicial decisions may become, and probably will become, more favorable to the creationist outlook.

4. Creationists now use the broadest possible public media to promote their beliefs.

In the United States, support for creationist ideas is broadcast 24 hours a day, seven days a week, on religion-based television and radio networks.

At best, scientific explanations of evolution are broadcast from 4:30-5 p.m. every other Saturday, on a UHF station from your local college.

5. Pro-creation forces have introduced the concept of fairness in science teaching, arguing that schools should teach all viewpoints on biological development.

That tactic is working brilliantly.

In the Harris poll of 1,000 U.S. adults, 23 percent said public schools should teach only creationism, while 12 percent said schools should teach only evolution.

But a substantial majority, 55 percent, said schools should teach all views: evolution, creationism and Intelligent Design (ID).

That group, according to a Knight Ridder Newspaper report, includes the president of the United States.

"I think that part of education is to expose people to different schools of thought," President George Bush added at an Aug. 1 question-and-answer session with the media at the White House.

Intelligent Design

"Intelligent Design, as far as I can tell, is really a gussied-up version of an idea that was first presented in the 19th century," said Les McFadden, chair of the Department of Earth and Planetary Sciences at the University of New Mexico in Albuquerque, N.M.

ID supporters would say "if you found a watch, after even a cursory examination you'd know it must have been created," he said.

In the same way, proponents of ID claim that life is so complex, it could not have occurred by accident and without design.

Critics of ID see it as an attempt to put a scientific and non-religious face on creationist ideas – an effort to bring creationism back into public school classrooms under a different name.

When ID proponents speak in public, "they say, 'We don't know who the

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intelligent designer is, and it's not really important,'" McFadden observed.

"Well, they're being totally disingenuous," he added. "I don't think they're being honest about their deeper beliefs."

Keith Miller, a research assistant professor in the Department of Geology at Kansas State University, holds deeply fundamentalist Christian beliefs.

He's a sharp critic of creationism and ID, even though he believes the universe is the direct creation of a divine creator.

"That is a perfectly legitimate theological understanding, and one that I share. That's something not necessarily in the scientific understanding. I believe that God is involved at all times," he explained.

"Then there is the idea that God intervenes to interrupt cause-and-effect processes," he said. "Ultimately, that is where the problem is."

According to its critics, ID operates along the following lines:

ID proponents spread their ideas through books and in papers published almost exclusively outside of peer-reviewed journals.

They often pursue obscure arguments that link several subject areas, for instance, biology, paleontology and information theory.

When mainstream science hasn't offered a complete explanation for a specific phenomenon, supporters of ID offer that as an indication of divine intervention.

Critics call this approach "the God of the Gaps."

"They are essentially looking for gaps in our current scientific understanding and then using them as evidence of divine action. That is an effort that has failed, historically," Miller observed.

"To say on principle that something cannot be explained is really deferring to our ignorance. Most of the specific critiques the intelligent design community have provided have been thoroughly debunked," he said.

"Pillars of Creation," from the Hubble telescope.

Photo courtesy of NASA, ESA, STScI, J. Hester and P. Scowen (Arizona State University)

Scientists opposed to ID also see it as undermining the public's opinion of and understanding of science.

"What it really comes down to, and what they want to incorporate in public education, is this idea that science is atheistic and naturalistic," Miller said. "They are pulling the rug out from under the fundamental methodology of science."

McFadden agreed.

"I simply say this: Intelligent Design, no matter what else you might think, ultimately relies on supernatural intervention and not science," he said.

"What they're trying to do," he added, "is change the epistemology of science from naturalism to saying, 'Why don't you let the supernatural into scientific explanations?'"

Creationism in Kansas

Michael Padilla, an administrator at the University of Georgia, currently serves as president of the National Science Teachers Association.

He believes the resurgence of creationism is a major problem for science teachers in the United States.

"I think it's a big problem because these nouveau-creationists are working at the policy level in Kansas and other places," he said. "Their arguments are becoming more refined."

Calls for fairness in teaching evolution and opposing concepts present an especially difficult challenge for educators, according to Padilla.

"The problem is that many Americans who don't have a scientific background resonate with this fairness idea. And I don't think we are handling it very well," he said.

"I think it appeals to the basic American ideal of fairness. It appeals to the public belief that there is a God, and that God created the world," he added.

Padilla worries that evolution supporters take the wrong approach when they respond to creationists with confrontation, rebuke and even ridicule.

"That's the wrong way to do it," he said. "You just can't be in everybody's face like that."

Creationists gained a majority on the Kansas State Board of Education and tried to change the state's standards for school science classes in the late 1990s.

That attempt came to halt when they lost the majority in the subsequent school board election.

"They're pouring a lot of resources into Kansas because they see us as being kind of a bellwether. It's heartland America," Allison said.

"If they can get this through here, they can use it as kind of a model for the rest of the country," he added.

Allison said each of 10 geographical districts in Kansas elects a representative to the school board. The 10 members serve four-year terms, with half elected every two years.

"In 2002, a couple of candidates ran very low-profile races and upset incumbent, pro-science board members," he said, and in 2004, more vocal and open supporters of creationism won seats.

Consequently, creationists regained majority control of the board.

"Since then, they've pretty much publicly laid out their plan, and they're stepping through it," Allison said.

The school board appointed a committee to revise the state's science

See **Science Wars**, next page

Science Wars

from previous page

standards for schools, and the new standards were reviewed nationally with very favorable feedback, according to Allison.

At that point, the board rejected the standards proposed by its own committee and decided to hold hearings on the issue of teaching evolution, he said.

Leading scientists, creationists and ID proponents were invited to give testimony and answer questions, Allison said.

The mainstream scientists didn't show up.

"We boycotted, and we convinced everyone around the state and the nation to boycott," Allison said.

Many felt the hearings were an attempt "to prove that evolution is a science in crisis," opening the door to teaching opposing views, he explained.

"The scientific community decided there was no use going there. They (creationists) already have the votes on the school board," Miller said.

Evolving Viewpoints

Today's situation in Kansas leaves evolution supporters hoping for a reversal in the 2006 school board elections.

Recently, the board decided to vote on new science standards at its October meeting and also chose to define evolution as an unguided process, according to Allison.

"They've redefined science with their definition, which is that evolution is unguided. When you define evolution as unguided, you deny the religious belief of many people who believe that nature is guided by the hand of God. That's a fairly radical step," he noted.

"When you talk to some of the really conservative board members, they say you can't accept evolution and believe in God at the same time," he said.

Creationists often refer to evolution science as Darwinism or neo-Darwinism, painting it as antithetical to Christian beliefs. They argue that evolution should never be taught as scientific fact.

An example of that approach appeared in a newspaper opinion piece, "Teach the Controversy," written by Rick Santorum and published earlier this year.

"In the science classroom, public schools should not teach intelligent design and they should certainly not teach biblical creationism," Santorum wrote.

But, he noted, "Darwin wrote about his theory of evolution at a time when evidence was weak.

"In recent years, evidence of the complex circuits, miniature machines, sophisticated feedback loops and digital information inside the cell has enabled scientists to poke holes" in evolution science, Santorum stated.

"For all these reasons, Darwin's theory of evolution should not be taught as absolute fact in the science classroom," he wrote.

Santorum, of course, is neither a scientist nor an educator, but is a U.S. senator from Pennsylvania who holds an M.B.A.

Another evolving viewpoint of creationism is the belief in subtle guidance.

In this view, God has subtly but directly intervened in the history of life for a specific purpose, including the development of human beings.

Cardinal Christoph Schonborn, a leading Catholic theologian, seemed to embrace both intelligent design and divine guidance in an article published in the *New York Times* in July.

"Evolution in the sense of common ancestry might be true, but evolution in the neo-Darwinian sense – an unguided, unplanned process of random variation and natural selection – is not.

"Any system of thought that denies or seeks to explain away the overwhelming evidence for design in biology is ideology, not science," he wrote.

Long-Term Solution

Many scientists ignore the conflict between evolution and creationism, saying "This debate has nothing to do with science. Why should scientists be involved?"

In the end, science can't distance itself from popular debates.

Whether or not genetics is subject to divine intervention, there's a growing conflict over human intervention. Think genetically altered plants, stem-cell research and cloning.

And the creationism controversy plays into a broader, ongoing debate in science, between gradualism and various concepts of catastrophism.

Miller, the mainstream scientist and unswerving Christian, believes a better public understanding of science will provide the answer.

"That is where my optimism lies. There is a way to move forward, and that way is better education," he said.

"That's not a six-month solution, or even a five-year solution," he added. "It's the long-term solution." ❑

For Further Investigation ...

The following Web sites contain information related to evolution, creationism and Intelligent design.

✓ Talkorigins.org – http://www.talkorigins.org

✓ Discovery Institute Center for Science and Culture – http://www.discovery.org/csc/

✓ Answers in Genesis – http://www.answersingenesis.org

✓ National Academies of Science – http://nationalacademies.org/evolution/

✓ Understanding Evolution – http://evolution.berkeley.edu

✓ National Center for Science Education – http://www.ncseweb.org

✓ National Science Teachers Association – http://www.nsta.org/evresources

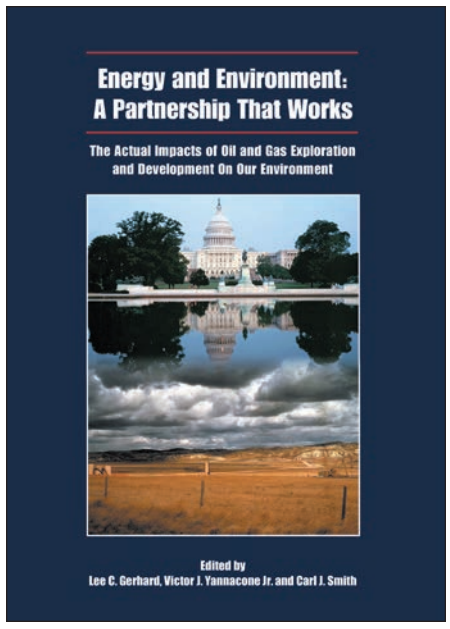
✓ The Panda's Thumb – http://www.pandasthumb.org/

✓ Kansas Citizens for Science – http://www.kcfs.org

✓ Kansas Coalition for Science – http://www.coalitionforscience.org

✓ New Mexico Coalition for Excellence in Science and Math Education– http://www.cesame-nm.org

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



Decision-Makers Targeted

Booklet Tailored for Public

A 48-page booklet produced by AAPG, "Energy and Environment: A Partnership That Works," is being distributed to key U.S. decision-makers and the public via affiliated societies, making the point that "there is no reason why society cannot simultaneously enjoy adequate energy supplies and a safe and clean environment."

Subtitled "The Actual Impacts of Oil and Gas Exploration and Development on Our Environment," the four-color booklet is drawn from presentations made at the AAPG President's Conference on National Issues held in Washington, D.C., in late 2002.

Editors Lee C. Gerhard, Victor J. Yannacone and Carl J. Smith were also principles in the planning of the conference, which was held at the Reserve Officer Association Building across the street from the U.S. Capitol. It included presentations on supply and demand issues, industry environmental practices and impact and evidence of environmental responsibility – with the intent to bring a view of rational science into the policy debate.

The booklet reflects the conference presentations, which were highly visual, with short, to-the-point briefings that attracted management from three regulatory agencies.

Then-AAPG President Dan L. Smith opened the Washington meeting and also wrote the introduction and the conclusion for the booklet. He states that geologists fully appreciate their role as stewards of the earth – and as environmentalists they deploy the science and technology responsibly to provide the energy that provides for civilization.

Gerhard, who spearheaded the project, noted the booklet – and the Washington presentations – targets a non-scientific audience, and every page includes a photo or full-color graphic.

Topics include:

✓ A synopsis of energy needs production and resources (updated with 2005 numbers) by Pete Stark of IHS Energy.

✓ Conventional and alternative energy resources, by Charles Mankin, of the University of Oklahoma.

✓ Environmental evolution of the petroleum industry, by Gerhard and William F. Lawson.

✓ Current practices, by William Harrison, of the Kansas Geological Survey.

✓ Exploration and production in an urban environment, by Don Clarke, of Lakewood, Calif.

✓ An overview of how Canada handles environmental matters, by John Hogg, of EnCana Corp. in Calgary.

In a cover letter to decision-makers and society presidents, AAPG President Pete Rose wrote "Most Americans are unfamiliar with the process of exploration and development of energy resources. They still harbor images of 1920s forests of derricks, unsightly production facilities and contaminated surroundings. But petroleum exploration and development have progressed greatly and continually over the past 80 years, as America changed, environmental consciousness increased, and technology permitted environmentally compatible access to petroleum regions, onshore and offshore."

He wrote "the booklet outlines modern petroleum exploration and production methods, illustrating how the high-technology industry of today works in harmony with preservation of scenic and intrinsic values of our public lands."

The booklet also was distributed along with the Global Climate Change poster (November 2004 EXPLORER) at the National Conference of State Legislators held in Seattle in August.

A downloadable PDF file of the booklet is available on the AAPG Web site at http://www.aapg.org/energy_summit/index.cfm. The printed booklet is available upon request by contacting the AAPG communications department at 800-364-2274 (U.S. & Canada only), others 918-584-2555, Ext. 634. ❑

New Dates Picked For Perth Meeting

New dates have been announced for the 2006 AAPG International Conference and Exhibition in Perth, Australia.

The meeting has been changed from an October date to Nov. 5-8.

Watch future EXPLORERs and go online to www.aapg.org for details about the meeting as they are announced.

THE DEEP SEE EFFORT

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TGS' commitment to exploration seismic in the Gulf of Mexico continues to grow with the recent expansion of the regional Deep Resolve program. The Deep Resolve and Sophie's Link Programs now total over 600 OCS blocks and are designed to provide explorationists the tools needed to successfully assess hydrocarbon opportunities from 3,500 feet to 35,000 feet. Long Offsets, long record lengths and state of the art pre-stack time and pre-stack depth migration processing techniques are being utilized to improve your odds for drilling success. The standard seismic volumes are also upgraded with corridor volumes, work-station ready well log packages and synthetic seismograms.

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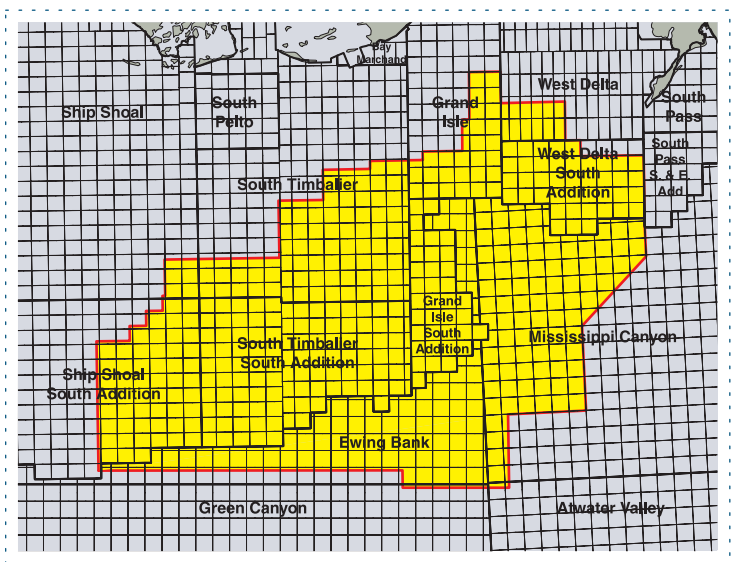

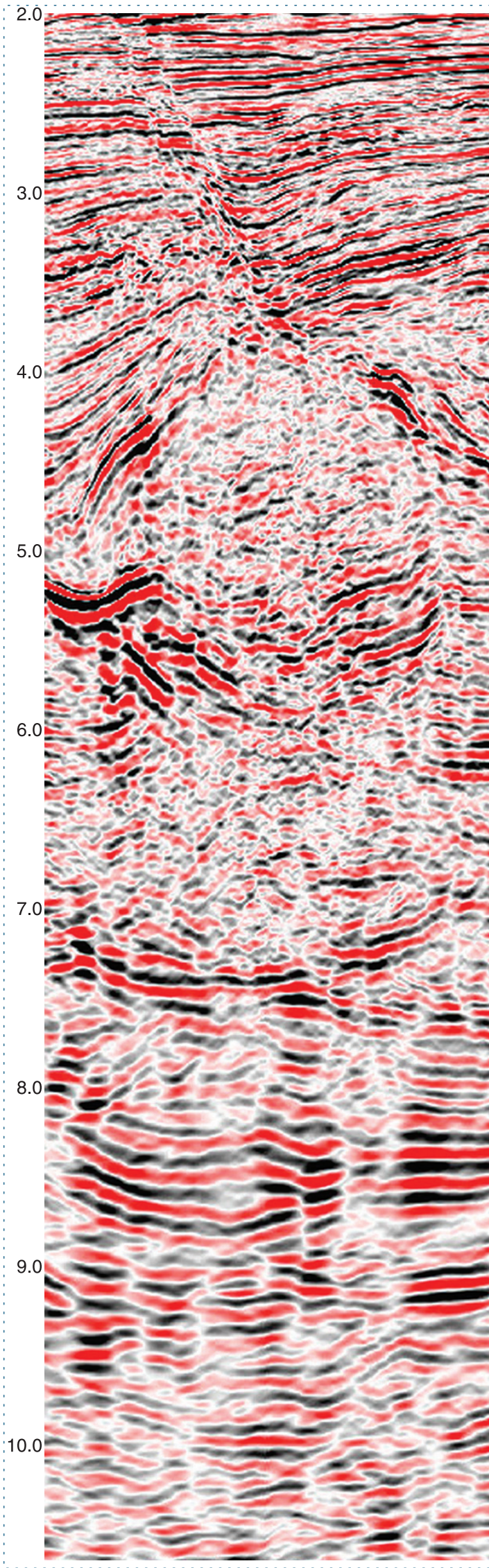

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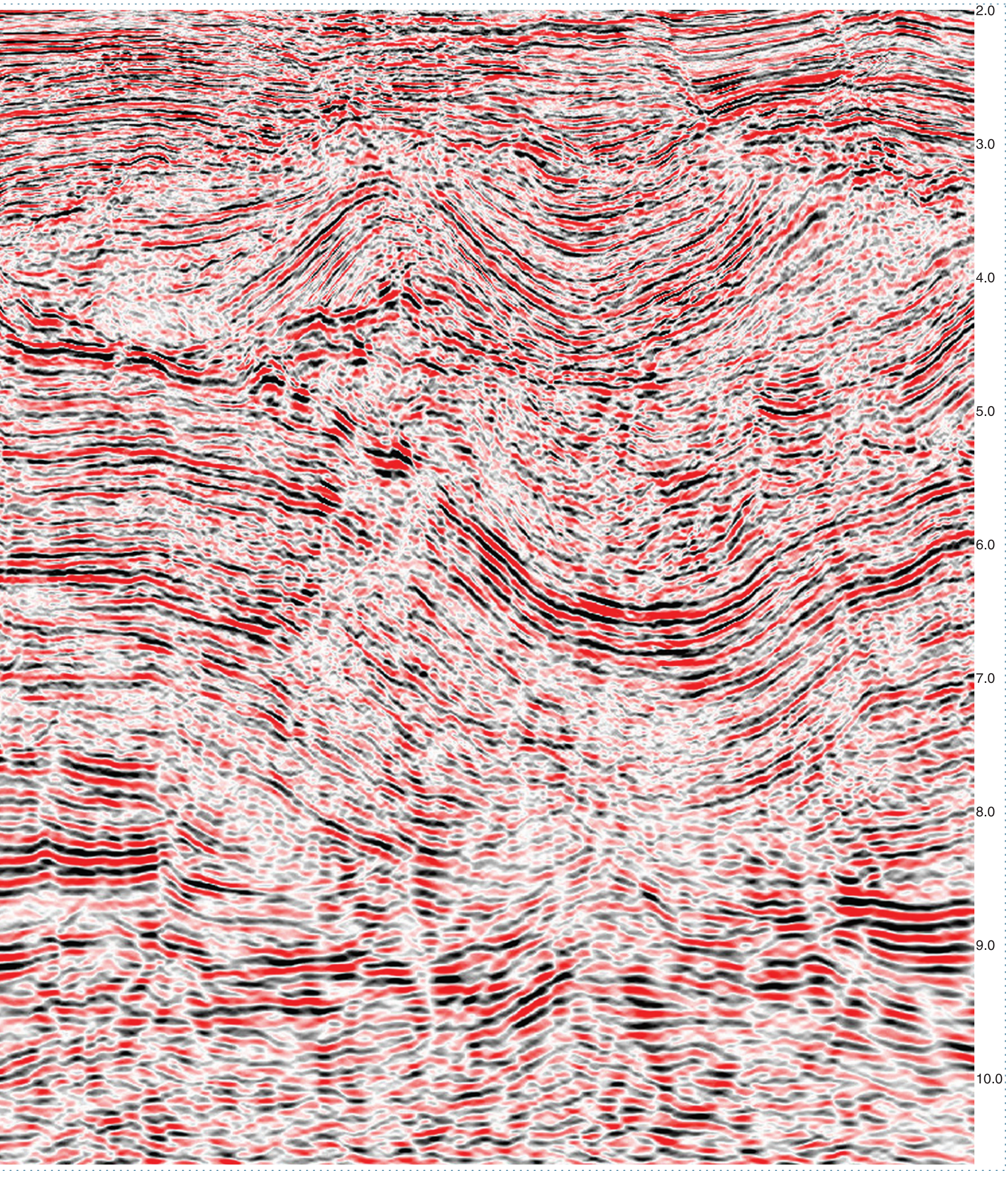
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Summer Field Work Expands Horizons

Camps Get to the Core of the Matter

By BARRY FRIEDMAN
EXPLORER Correspondent

Here's a good reason to major in geology: Have you seen the starting salaries lately?

Here's another good reason:

The summer programs are interesting, educational and fun, and you get to play in the dirt.

Unfortunately, for the past 10 or 15 years even that wasn't enough to provide an attractive career option for many students. Geology department numbers had dwindled, and the eternal struggle between the theoretical versus the practical – should a university prepare a student for scholarship or for work? – shaped the debate on how to reverse the trend.

The battle for geology departments became one of survival.

"There was an ongoing concern," says Rick Chamberlain, senior engagement manager with Strategic Decisions Group's Oil and Gas Practice, "that there weren't enough young people coming into the industry."

AAPG member Chamberlain had – and has – more than a passing interest in this. He's a strong advocate of forming and maintaining creative and effective programs to attract younger people to the profession, and he's a guest instructor at the Iowa State University/University of Nebraska-Lincoln summer geology field camp who for the past two years has joined the ISU/UNL faculty in June for a week of applied geology exercises this summer in the Bighorn Basin.

His student-based focus comes from the same fear that many academic and AAPG leaders feel: Without new students, academic departments could die, and the profession would have no future.

Geology students experience the thrill of fieldwork during their summer camp exercises in the Bighorn Basin.

Photos courtesy of Rick Chamberlain

Chamberlain cites figures that started several years ago regarding the "graying" of geology, which indicate the current average age for an industry geologist is 48; relatively few geologists between the ages of 25 and 35 can be found.

"We experienced a double whammy," he said of the suggestive trends. "People were looking to retire and nobody was there to back them up.

"The fundamental failing," he said, "was not communicating what jobs were available."

Or perhaps it was the fact that not very long ago everyone *did* know what jobs were available, and the move away from geology – particularly petroleum geology – reflected not a mistake, but a choice.

But now, he says, the situation is getting attention, because "industry is talking out loud."

And apparently the world of academia – both faculties and students – has listened.

Which brings us back to summer camps.

Changing Course(s)

Erik P. Kvale, director of the Iowa State University/University of Nebraska, Lincoln geology field camp and Indiana University researcher, says that environmental curricula was added in the early 1990s to many of the camps and university departments for a practical reason:

That's where "many of our students were finding work."

"This is important," he said, "because if the departments and the field camps do not acknowledge that a number of students will get a job in environmental fields, then they're not doing their job to help train them."

Ironically, it is the potential for new jobs that is again influencing some changing priorities, this time back toward oil careers.

In the past, the vicissitudes of the industry forced many to consider the longevity of a career as a geologist, but Chamberlain believes, as many do, that higher energy prices are here to stay.

As are the jobs.

Chamberlain says students are being hired out of programs with salaries as high as $80,000 per year.

It is now, for Chamberlain and Kvale, a different world.

"When Rick and I were students," says Kvale, "there was not a lot of talking about jobs in the environmental field. Now the opposite is true.

Kvale wants to dispel the notion, however, that there's any friction between

See **Sumer Camps**, page 30

Having the whole exploration experience: Outdoor work is great, but then comes the next step of a prospect development exercise.

Summer Camps

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the two areas of study.

"I don't know a geologist who's not an environmentalist."

Kvale says his summer camp program is designed for students to think in a "broader, three dimensional way." He cites their field camp exercises in channel facies modeling and the mapping of carbonate fracture permeability as proof that this is no longer your father's geology.

In addition, there are exercises in the interpretation of topographic maps, structural geology, the linking of surface geology to petrophysical logs, sequence stratigraphy and biostratigraphy, oil and gas prospecting and core analysis.

Also participating in the instruction is Howard White, a sedimentologist with the Houston-based worldwide exploration technology group of Kerr-McGee. White, a 34-year AAPG member, works with students during the core analysis and sequence stratigraphic exercises.

To underscore the growth and maturity of summer field camps, Kvale says, "I didn't look at a rock core until I took a job as a professional geologist."

A Practical Approach

Based out of a permanent field station in northern Wyoming in the Bighorn Mountains at the mouth of Shell Canyon (about 18 miles east of the town of Greybull), Chamberlain says the ISU/NU summer camp site is a special place.

"Erik knows the area," he says of his friend, and then laughs about a University of Texas field team that came up and got their vans stuck on a bentonite haul road during an intense rain storm.

During the six-week camp, students work in the Bighorn Basin and then traverse through Yellowstone Park and the Teton Mountain Region – typically hiking three or more miles per day.

"The goal," he says, "is to give them a stronger practical background."

Jon Reis, a junior at Iowa State University, said this new hands-on, more complete geological field camp experience solidified his decision to enter the profession.

"I had never really done any work in the field or had the chance to see what we had learned in class."

One of the highlights Reis mentioned was presenting his oil well project.

"This is a particularly long week for students," says Chamberlain, "with long days in the field and late nights preparing their maps and reports."

And the results?

"Last year, we drilled the hole (via the computer) and it came up dry," says Chamberlain.

"This year, our well generated a $16-million profit."

"At the camp we learned great working skills," he said. "We learned to work individually on projects, but we had to also learn to work in groups."

For all the talk about the new face of the young geologist, there is a cautionary note – and perhaps some of that resistance still lingers – from ISU geology and atmospheric science department chair Carl Jacobson:

"Many people are still excited by the traditional parts of geology (stratigraphy, structure, Earth history). Opportunities to work with these facets of geology is much greater in the oil and gas industry than in environmental fields. Geologists in the environmental fields spend a substantial amount of time worrying about regulatory issues. My impression is that geologists in the oil industry spend more of their time on the science than on business/regulation."

Nevertheless, Kvale and Chamberlain believe this expansion of traditional thinking in both the camps and university curricula is the way to go – even if it involves changing students' DNA.

"I think the things that have proven to be the most challenging for our students have been the physical demands of the field work and the difficulty of collecting data and interpreting it," Kvale said. "It seems that many students are great memorizers but have a hard time analyzing and interpreting data.

"Our camp really focuses on less memorization and much more on the data acquisition and interpretation," he said. "We are not a traveling field camp."

As the industry grows (and the profits increase), these field camps will be where many students get their first taste of the real geologic world.

To hear Jacobson tell it, "You can't bring it alive from classroom instruction alone." ❑

DLs Offer Varied Programs

10 Speakers Ready For Lecture Tours


Al-Qassab


Bhattacharya


Doglioni


Esteban


Flemings


Larter


Latimer


Markello


Milliken


Rowan

By VERN STEFANIC
EXPLORER Managing Editor

Ten speakers have been announced for this year's Distinguished Lecture program, which will once again cover the world with talks that offer a broad variety of topics, ranging from deepwater exploration to heavy oil production to river deltas on Mars.

The DL program, funded in part by the AAPG Foundation, will offer seven domestic and three international speakers this season.

Last season's slate of eight domestic speakers visited 123 groups and a total audience of 9,166; the six international speakers made 25 visits to a total audience of 1,237, making the total attendance for the year 10,403.

AAPG's Distinguished Lecture program was developed to expose students, young geologists, college faculty members and members of geological societies to current information, research and thinking.

Remaining on track this year is the continuation of the intersociety lecturer effort – a cooperative program that presents an opportunity for cross-discipline lectures.

The AAPG-SEG Joint Distinguished Lecture – fourth in the series – will be given by AAPG member **Rebecca Latimer**, geoscientist and team leader for stratigraphy and geostatistics services, Chevron Energy Technology, Houston. Her topic is "Uses, Abuses and Examples of Seismic-Derived Acoustic Impedance Data: What Does the Interpreter Need to Know."

In keeping with the alternating logistical responsibilities for the intersociety lecturer, Latimer's tour will be coordinated by AAPG.

And as also in past years, support for several specific tours comes directly from the AAPG Foundation's Distinguished Lecture Fund. They are:

❑ The **Allan P. Bennison Distinguished Lecturer** – An international lecturer who makes a U.S. tour, is funded by contributions from the late Allan Bennison, a long-time Tulsa geologist.

This year's Bennison lecturer will be **Steve Larter**, professor of geology at the University of Newcastle, UK; Canada Research Chair at the University of Calgary, Canada; and co-director of the Alberta Ingenuity Center for Insitu Energy. His topic is "From Deepwater Exploration to Tar Sand Production: Bugs, Biodegradation and the Origin of Heavy Oil."

❑ The **J. Ben Carsey Distinguished Lecturer** – A domestic tour, provided by contributions from J. Ben Carsey Jr., of Houston, to establish a named lecturer in memory of his father, who served as president of AAPG in 1967-68.

This year's J. Ben Carsey lecturer is **Kitty L. Milliken**, senior research scientist at the Jackson School of Geosciences, the University of Texas at Austin, Austin, Texas. Her topics will be:

✓ "Linked Mechanical and Chemical Processes in the Diagenesis of Sandstones."

✓ "Reservoir Quality Assessment: Petrography as a Tool for Deciphering Kinetically-Dominated Systems and the Need for Petrographic Education."

❑ The **Haas-Pratt Distinguished Lecturer** – A domestic tour, provided by contributions from the late Merrill W. Haas, in honor of famed geologist (and Haas' mentor) Wallace Pratt. The funding is granted for emphasis on a specific case history application of geology in a discovery.

The Haas-Pratt lecture will be presented by **James R. Markello**, reservoir supervisor/reservoir adviser, ExxonMobil Research, Houston. His lectures are:

✓ "The Carbonate Analogs Through Time (CATT) Hypothesis – A Systematic and Predictive Look at Phanerozoic Carbonate Reservoirs."

✓ "Integrated Research for Carbonate

continued on next page

VGP Seeking High Visibility This Year

By SUSIE MOORE
EXPLORER Staff Writer

For more than 30 years, AAPG's Visiting Geologist Program has been sending qualified, professional geologists to colleges and universities around the world to speak to students about the future of petroleum geology.

And this year is no different.

In fact, Chuck Caughey, the VGP acting chairman, said he wants to improve the program's visibility this year, and has announced an ambitious set of goals for the 2005-06 season:

✓ Utilize alumni and AAPG Student Chapters to increase contacts on campus, distribute VGP brochures and set up a booth at the AAPG/SEG Student Expo (Oct. 6-8, Houston).

✓ Involve AAPG affiliated societies and international Regions to generate opportunities for VGP visits to universities in their areas.

✓ Increase VGP visits by adding Active members to the volunteer list.

✓ Broaden VGP visits to include major U.S. and international universities that may have been missed in previous visits.

✓ Coordinate with the Student Chapter, Student Expo, Student Focus and Grants-in-Aid committees to improve the effectiveness of AAPG student programs.

"There is no better way to present the advantages of AAPG to students than learning from the experiences of a fully professional AAPG member," Caughey said.

"VGP introduces the 'real world' of geoscience careers," he said.

And visits by professional geoscientists provide an opportunity for faculty and administrators to find out what the industry needs in academic courses and field experiences.

"Even more important is VG interaction with students," he said, "who learn about the career paths available in geology and geophysics and how to prepare for their future."

"Having a VG to discuss the tangible and intangible benefits of membership is important to bridging the gap between student and active AAPG membership," he added.

Finding volunteers for the program hasn't been a problem, Caughey said, but he quickly added that there is always room for one more.

"We need to multiply our efforts to reach enthusiastic AAPG members who would like to help students prepare for rewarding careers in geosciences," Caughey said.

To volunteer your time, arrange for a speaker or get more information on the VGP go online to http://www.aapg.org/education/vgp/, or contact Mike Mlynek, student affairs coordinator, at students@aapg.org. ❑

continued from previous page

Reservoirs – It is the Business Question That Mandates the Multi-Disciplinary Integration."

❑ The **Roy M. Huffington Distinguished Lecturer** – An international tour, provided by contributions from the Huffington family in honor of the oilman-geologist.

The Huffington speaker will be **Mateu Esteban**, external adviser-carbonate geology, Repsol-YPF, Madrid, Spain, whose third DL tour will visit western Europe this spring. His talk is "The Burial of Carbonate Reservoirs (The Rest of the Story.)"

❑ The **Dean A. McGee International Distinguished Lecturer** – Provided by contributions from Kerr-McGee, which annually supports international speaking tours.

This year's McGee lecturer is **Carlo Doglioni**, professor at the University of Roma La Sapienza (Italy), who will tour central Asia and eastern Europe between Oct. 10-21. His topic is "Global Tectonic Asymmetries and Applications to Europe."

This year's list of domestic Distinguished Lecturers also includes:

❑ **Janok P. Bhattacharya**, professor at the University of Houston. His topics are:

✓ "Applying Deltaic and Shallow Marine Outcrop Analogs to the Subsurface."

✓ "Martian River Deltas and the Origin of Life."

❑ **Peter B. Flemings**, professor of geosciences, the Pennsylvania State University, University Park, Pa. His topic is "Overpressure, Hydrocarbon Entrapment, Seafloor Venting and Slope Stability: The Dynamic Flow Regime Beneath the Seafloor."

❑ **Mark G. Rowan**, president, Rowan Consulting, Boulder, Colo. His topics are:

✓ "Collisional Fold-and-Thrust Belts Detached on Salt."

✓ "Salt-Sediment Interaction During Diapir Growth."

This year's other international Distinguished Lecturer is:

❑ **Hisham M. Al-Qassab**, chief geologist-reserves assessment division, Saudi Aramco, Dhahran, Saudi Arabia. He will tour in the Middle East region this fall, and his tour will be subsidized by Saudi Aramco. His topic is "Developments in Geological Reservoir Modeling; Status, Challenges and the Road Ahead."

For more information on the tours or the program contact Barb Davis (bdavis@aapg.org) in the education department at AAPG headquarters; go to the AAPG Web site (www.aapg.org); and watch for monthly updates in the EXPLORER. ❑

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 domestic 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.)

September is annual meeting month for four AAPG Sections:

❒ Sept. 11-13 – Mid-Continent Section, in Oklahoma City.

❒ Sept. 18-20 – Eastern Section, in Morgantown, W.Va.

❒ Sept. 24-26 – Rocky Mountain Section, at the Snow King Resort, Jackson, Wyo.

❒ Sept. 25-27 – Gulf Coast Association of Geological Societies, in New Orleans.

Last month's column provided details of the Mid-Continent and Eastern meetings – this month, the spotlight is turned on the month's later gatherings.

Rocky Mountain Section Meeting

The Section will hold its annual meeting Sept. 24-26 at the Snow King Resort in Jackson Hole, Wyo. Like the gatherings of fur trappers in the early 1800s, this modern-day Rocky Mountain Rendezvous – hosted by the Wyoming, Nevada and Idaho local affiliates – offers professionals a chance to prepare themselves to meet the challenge of securing our country's energy needs.

It all begins with Saturday's Environmental Forum, "How the Federal Land Use Planning Process and Other Regulatory Programs Impact Oil and Gas Exploration and Development on Public Lands," followed by the opening/awards session.

A variety of sessions are offered Sunday and Monday, including:

✓ The multi-part "Mega-Session: Increasing the Supply of Rocky Mountain Natural Gas" highlighting CBM and the economic, technical and geologic aspects of this challenge.

✓ Exploration Challenges of the Great Basin and Utah Hingeline, featuring talks about activity generated by Wolverine's central Utah discovery.

✓ Geologic Developments in the Rockies.

✓ Resource Plays.

✓ Advanced Technologies for Exploration and Production.

The Exhibit Hall will be filled by vendors demonstrating the latest in a range of products and services, and social events include Saturday evening's Welcoming Reception, Sunday afternoon's Icebreaker in the exhibits hall and Sunday evening's BBQ dinner and western dance.

Sunday's All Convention luncheon features Robert Smith, who will relate the exciting story behind the evolution of the Yellowstone hotspot.

Guests will have the opportunity to visit the renowned National Museum of Wildlife Art, as well as tour Grand Teton National Park by raft or van.

For additional information visit http://www.wyogeo.org.

GCAGS

The Gulf Coast Association of Geological Societies' annual meeting, "Geological Gumbo – A Gulf Coast Recipe for Success, will be held Sept. 25-27 at the Hyatt Regency Hotel in New Orleans.

The New Orleans Geological Society will serve as hosts for the Section's 55th annual gathering.

Highlights include:

✓ The opening session and awards ceremony at 4 p.m. on Sunday, Sept. 25, featuring keynote speaker Robert Ryan Jr., general manager-global exploration, Chevron Corp. Following the session will be the icebreaker.

✓ A first-time special event: "Restoring America's Coastal Heartland – A Symposium on Coastal Processes and Restoration." (See related story, page 16.)

✓ The Arnold Bouma Turbidite Symposium, honoring Bouma's career.

✓ Technical presentations on such topics as case studies, emerging trends and new concepts from onshore to deep water.

✓ The All Convention luncheon on Monday, Sept. 26, featuring David Kerstein, Helis Oil and Gas.

For details, go online to www.gcags2005.com. ❒

AAPG has created a Web site to include information from and for international regions.

Just go to the AAPG home page and click on "International" for quick links to AAPG's international activities, including international contacts, regional AAPG officers and embedded links to local geoscience societies and chapters.

If an international society or chapter wants a quick link to your site, just contact the AAPG officer in your region; they'll want to promote international participation and build international membership in the AAPG.

The Web site also has quick links to learn how to be more involved with AAPG on an international basis, as well as what geoscience activities are going on in your region.

Updating your local activities online is easy, too. Just click on "International Regions Committee" for easy access to the contact information in your region (usually it will be the AAPG officer in your region). You also can use the Web site for international communication within the organization.

It is just another way for AAPG to help provide more information, news and activities, because geology knows no borders.

- PETER KAHN
Vice Chair, International Regions

WWW.UPDATE

BULLETIN Served up Digitally

By MICHAEL JONES
AAPG Webmaster

Are you missing your printed BULLETIN?

There may be several reasons: Poor postal service, an unreported change of address, pranking teens who targeted you for mischief, co-workers who swiped it from your desk.

Or, you might ask yourself: Did I select the "print" option on my AAPG dues statement?

Oops. On July 1 all AAPG membership began accessing the AAPG BULLETIN in electronic format unless they requested it to be delivered in a printed format.

To read it online you must go to http://www.aapg.org/members_only/, log on and click the gold button labeled "AAPG BULLETIN Online." Here you will find the current issue plus two years for your perusal.

Easy! (What a short article *this* was!)

Wait! There's More …

Unfortunately, in some cases it is *not* that easy.

Headquarters has received some calls from members for whom the "magic" gold button simply does not work. In every case thus far, the reason relates to security software in place on the member's own computer.

In this day when a computer worm (similar to a virus) can ravage the Internet in days, attacking even computers that are not used for e-mail and which, in some cases, may not even have anyone logged in to them, it pays to have what is known as a "personal firewall."

A personal firewall is software that runs right on your computer, much like antivirus software, and protects your computer from attacks that antivirus software does not. (See the end of this article for personal firewall options.)

A personal firewall can be beneficial to have running, even if you are within a protected network (such as the firewall-protected network within a business).

You see, in a world where laptops are becoming almost as common as desktop machines, it is very possible for someone to use that computer in a hotel or at home – unprotected – and infect that laptop. Then, unintentionally, they bring the malevolent software back inside the protected network.

Loosen Up!

The problem with personal firewall software occurs when the settings become too strict to allow access that is needed to use a particular service on the Internet … like, for example, AAPG's BULLETIN.

We already know about cookies – AAPG's Members Only area will not allow you to log in unless you have allowed cookies to be saved by aapg.org. The BULLETIN and BULLETIN Archives, however, are not housed at aapg.org, but reside at another domain.

Since Web cookie settings can be applied to individual Web sites (or domains) it is entirely possible to have cookies enabled for aapg.org and not the BULLETIN serving domain, which would mean that you could log in to Members Only but would not be able to properly access the BULLETIN articles.

Cookies can be blocked by all of the major browsers, but they also can be blocked by firewall software.

If you experience these kind of problems, double-check both your browser *and* your firewall software to make sure they are allowing cookies to be saved by both aapg.org and the outsourcing machine.

Web cookies take up very little space on your hard drive, are free of viruses or spyware, harmless to your computer and most often helpful (for AAPG, they allow us to remember who you are so you can stay logged in as you browse our site).

We recommend allowing cookies outright for specific sites and being careful about what other sites' cookies you block.

Come Again?

Occasionally we find a member who can access the BULLETIN Archives, but not the current BULLETIN. When you call up a Web server, it sees some basic information about you, through headers.

Headers provide basic information to the server about your computer – including a number required to respond to your machine. Think of them as "caller ID" on a telephone; when your phone rings, you see some basic information about the phone that is calling you.

One of these headers is called the "referer header." The referer header tells the Web server which Web site the visitor just came from. This is generally used by Web server administrators to identify, for example, which search engines people are using to find aapg.org, or what other sites might have linked to one of our pages.

In the case of the BULLETIN, this server is using the referer header to determine who is coming to there from AAPG's site. The problem is some people consider this an invasion of their privacy, and so some firewall software can be

continued on next page

PROFESSIONAL NEWS BRIEFS

Terry Axtmann, to chief geoscientist, Mid-America region, ConocoPhillips, Houston. Previously principal geologist, Permian development, ConocoPhillips, Houston.

Jim E. Barclay, to senior staff geologist, Burlington Resources (Canada), Calgary, Canada. Previously vice president-exploration, Southpoint Resources, Calgary.

Wallace Bayne, to Oxy Colombia, Bogotá, Colombia. Previously senior geophysical adviser, Oxy California Resources, Bakersfield, Calif.

Timothy Berg, to senior geophysicist-Clair phase 2, BP Exploration, Aberdeen, Scotland. Previously senior geophysicist, BP America Production, Houston.

Jim Blagg, to senior geophysicist, Veritas DGC, Houston. Previously minerals specialist, New Mexico State Land Office, Santa Fe, N.M.

Mark C. Boehm, to senior geological adviser, Occidental Oil & Gas, Houston. Previously senior geological specialist, EOG Resources International, Houston.

James "Jim" Booth, to senior regional geologist, Shell International E&P, Rijswijk, Netherlands. Previously senior exploration geologist, Brunei Shell Petroleum, Brunei Darussalam.

Robert Chanpong, to chief geoscientist, Occidental Petroleum (Qatar), Doha, Qatar. Previously senior geological adviser, Occidental Oil and Gas, Houston.

Marc Croes, to geophysicist, Transworld Exploration and Production, Houston. Previously consulting geophysicist, Kingwood, Texas.

F.I. "Ric" Frasse, to executive vice president-LNG supply, GS Caltex, Seoul, South Korea. Previously Asia region manager-global gas, Chevron, Singapore.

Charle Gamba, to exploration manager, Occidental de Colombia, Bogotá, Colombia. Previously head of geosciences, Occidental Petroleum (Qatar), Doha, Qatar.

Ismet Tarik Gozoren, to president and chief executive officer, MiTa-Teknopark, Beykoz/Istanbul, Turkey. Previously geological specialist, Saudi Aramco, Dhahran, Saudi Arabia.

Gerald K. Greer, to geologist, Carl E. Gungoll Exploration, Houston. Previously senior staff geologist, Citation Oil & Gas, Houston.

Joseph W. Hakkinen, to senior consultant-geosciences, Marathon Oil, Houston. Previously vice president and general manager, Marathon International Petroleum and Marathon (Qatar), Dubai, UAE, and Doha, Qatar.

Stephen Hamm, to geoscience project manager, Sovereign Oil & Gas, Houston. Previously geophysical consultant and geoscience specialist with Schlumberger DCS, Villahermosa, Mexico.

Michael D. Kuykendall, to senior staff geologist, domestic exploitation, Vintage Petroleum, Tulsa. Previously staff geologist-Caspian region, ConocoPhillips, Houston.

Roger McRae has received his California Professional Geologist license. McRae is a staff geologist with WZI, Bakersfield, Calif.

Kevin McVey, to senior explorationist, Woodside USA, Covington, La. Previously senior geological adviser, Noble Energy, Houston.

Douglas Neese, to general manager, Kerr-McGee Offshore Petroleum, Port of Spain, Trinidad & Tobago. Previously geological consultant-international exploration, Kerr-McGee, Houston.

Robert A. Phelps, to exploration manager, Valiant Energy, Calgary, Canada. Previously with Caribou Resources, Calgary.

John Ratliff, to enterprise engineer, Network Appliance, Austin, Texas. Previously systems architect, Sun Microsystems, Austin, Texas.

Hector San-Martin, to senior geoscientist, Petronas Carigali, Kuala Lumpur, Malaysia. Previously consulting geologist, Houston.

See **PNBs**, page 46

continued from previous page

configured to block this header. In order to access AAPG's current BULLETIN online, you will need to make sure you do not have this header blocked.

"How do I do this?" you may ask.

Our online FAQ has the details you will need to get everything working properly.

Log in to AAPG's Members Only area and look for the phrase "FAQs and Helps" near the top of your screen. If you click there and cookies are not enabled for aapg.org, you will see instructions on how to enable them.

Once your cookies are straightened out, click the FAQs and Helps link again, and in the "Frequently Asked Questions for Members," find "Why can't I get logged into the BULLETIN/BULLETIN Archives?" This will help you configure your firewall software to allow the referer header to pass to the receiving machine.

"The only secure computer," it has been said, "is one that's unplugged, locked in a safe and buried 20 feet under the ground in a secret location." We want to feel reasonably comfortable that our computers are safe, but we don't want to go that far!

Make sure you know what your security software is "protecting" you from – it may be protecting you from accessing some of the great benefits you are entitled to as a member of AAPG.

Personal Firewall Options

✓ Some free personal firewalls for Windows that we have mentioned before include Kerio Personal Firewall (http://www.kerio.com) and ZoneAlarm (http://www.zonelabs.com).

✓ A retail alternative that is showing up quite a bit recently is Norton Personal Firewall (http://www.symantec.com/sabu/nis/npf/), which is included in the Norton Internet Security suite as well as being sold as a stand-alone product.

✓ Windows XP and Mac OS X have built-in firewall software, though it is not as robust as third-party software.

Good browsing! ❑

FOUNDATION UPDATE

A new member has been added to the AAPG Foundation Trustee Associates. He is:

❒ George Bole, consultant, Houston.

Foundation (General)
William R. Almon IV
Joel R. Alnes
John J. Amoruso9
In memory of John M. "Jack" Parker
Seymour R. Baker
Edward A. Banaszek Jr.
Rui Jorge F. Baptista
Jeffrey Ross Barkley
John R. Barwin
Michael Alan Belowich
Don Gehr Benson Jr.
Justine Ann Boccanera
George Robert Bole
David Francis Boneau
Alexander E. Booth
John A. Bova
Hilary James Brook
I. Philip Buch
Paul George Bunkers
Daniel Burggraf Jr.
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Michael Bailey Steed
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Pabla Natalia Tognoli
Edwin Leslie Trice III
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David Paul Zook
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Carlos E. Macellari

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Matching gift from Wayne A. Schild
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Olav Malvik
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Theojares Juan E. Reyes
William F. Ripley
In memory of Zuhair Al-Shaieb
Stuart Carl Strife
Steven Hunter Tennant
Joy Deann Griffin Thomas
Linda Joyce Tollefson
Mari Ann Vice
Richard Hensler Voris
William Cruse Ward
In memory of Robert Goldhammer
George Chia-Chi Yao

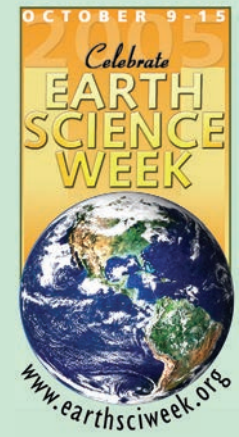
E.F. Reid Scouting Fund
Robert J. Weimer
In memory of John M. "Jack" Parker
❒

Earth Science Week Set Oct. 9-15

Earth Science Week 2005 will be celebrated Oct. 9-15, built around the theme "Geoscientists Explore the Earth" and focusing on earth science careers.

First organized in 1998, ESW is an annual event that spotlights the geosciences and their importance to the public. It is organized by the American Geological Institute with support from the U.S. Geological Survey, the U.S. National Park Service and the AAPG Foundation.

AGI said the "Geoscientists Explore the Earth" theme was selected to highlight the important work that geoscientists do every day, and to educate the public about the career types within the geosciences.



Events are being planned in all 50 states as well as in Argentina, Australia and Canada. A number of AAPG affiliated societies have activities planned.

AGI also has created and collected materials from other organizations to put together an Earth Science Week kit for school or home use for students of all ages, as well as a Planner's Information Kit. Also, photo, drawing and essay contests are being sponsored through AGI.

For information on this year's ESW, see www.earthsciweek.org.

SPOTLIGHT ON EDUCATION

Coming soon: The official announcement of the 2006-07 slate of AAPG short courses and field seminars, which will include a number of new offerings as well as some long-time favorites.

Watch for the catalog of courses (with full descriptions and instructors) on the AAPG Web site as well as included with the October EXPLORER.

In the meantime, don't forget that this February AAPG will be holding the third annual Winter Education Conference in Houston, so keep an eye on the ads and our Web site for details.

Incidentally, the "education conference" format has proven itself to be such a success that next year we'll be adding a Fall Education Conference as well – a "themed" conference dealing with "Deep-Water Exploration."

* * *

Interactive Online Learning

For those who prefer independent study, don't forget about the selection of online courses, especially the Interactive Online Learning modules, developed in association with the American Geological Institute and the Bureau of Economic Geology at the University of Texas at Austin.

There are 20 individual modules currently available for geoscientists and engineers, all of them game-based, self-contained studies that lead a student through the material in approximately 1.5 - 2 hours.

The training approach is termed a "guided investigation" of the data. Each module includes some concisely stated background information that sets the stage for an exercise. Additional in-depth information and references also are available on demand.

Most of the modules use data from the same field – the Stratton Field in south Texas, which has a fluvial depositional environment – for continuity between the modules.

All modules have the same format and "feel," the exercises are interactive and many of the graphics are animated. After an exercise is finished the "expert" solution is displayed for participants, who then can revisit their own interpretation.

Modules are multidisciplinary and range from basic to slightly advanced, depending on the participant's background and designed for new hires and managers or supervisors taking on new duties.

Modules are individually priced, but discounts are available for multiple-course purchases.

Check the Web site at http://www.aapg.org/iolcourse/index.cfm for details and to view a module demonstration. ❑

GEOPHYSICAL CORNER

Constraining Seismic Interpretation With Aeromagnetic Data

(The Geophysical Corner is a regular column in the EXPLORER, edited by Dallas consulting reservoir geophysicist Alistair R. Brown.)

By JOHN W. PEIRCE

Magnetic data traditionally have been used to map basement faulting, allowing geoscientists to have a better understanding of the structure of the overlying sedimentary section. Recent advances in acquisition, processing and interpretation techniques, however, have made it possible to map intra-sedimentary faulting and fractures as well.

HRAM (high-resolution aeromagnetic) data are acquired by flying a plane with a magnetometer approximately 100-150 meters from ground surface over an area of exploration interest on a grid with line spacing of 200-800 meters. When flying close to the ground, the magnetometer senses magnetic variations caused by basement crystalline rocks, as well as the subtle variations from the sedimentary section, near surface geological signals and cultural noise from wells, pipelines and other ferrous structures.

The processing and interpretation of HRAM data becomes a task of integration with all available data. At this point the magnetic data show a general distribution

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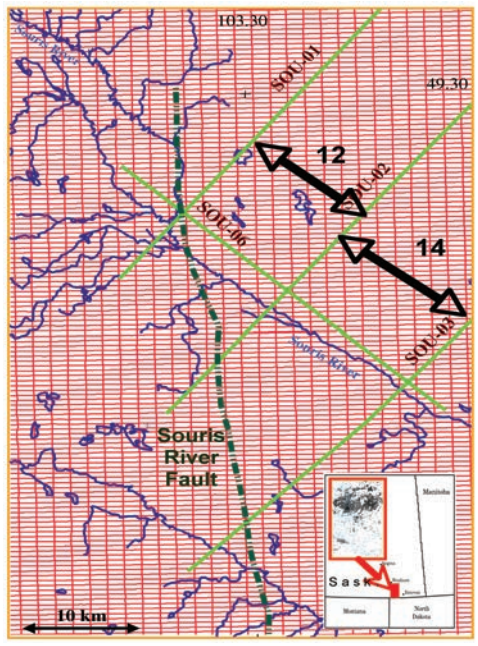

Figure 1 – Index map for project, with the study area shown in red (inset). The inner inset shows the distribution of wells in the area, including the Weyburn Field. The red lines show the HRAM data (500 x 1500m line spacing), and the light green lines show the 2-D seismic data being correlated. The drainage is shown in blue and the interpreted Souris River Fault is shown as a dark green dashed line.

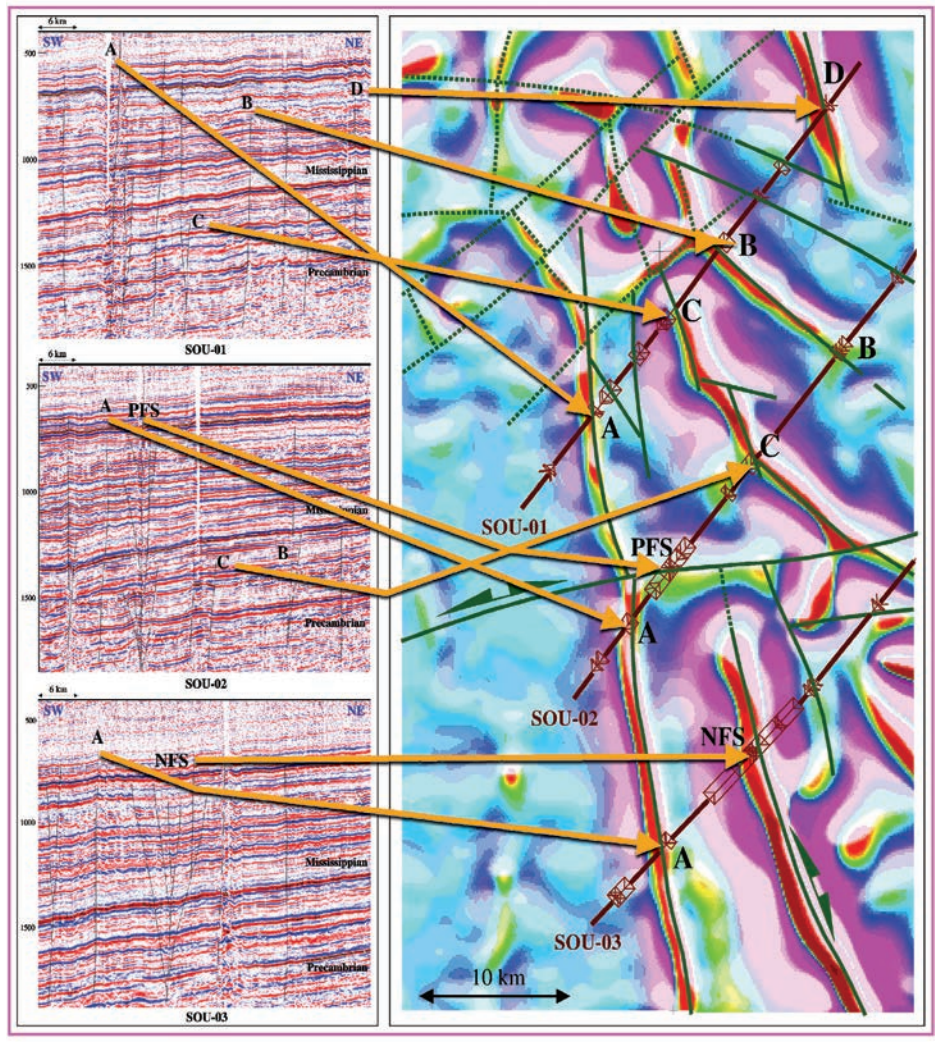

Figure 2 – The map on the right shows a shallow filter of the HRAM data (reds are highs and magenta colors are lows). The four seismic lines are shown in dark brown and the fault locations as picked on a seismic workstation are indicated. Panels of seismic lines SOU-1, 2 and 3 are shown on the left, with interpreted faults labeled by letters A-D and PFS (positive flower structure) and NFS (negative flower structure).

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of magnetic properties demonstrating broad regional trends.

It is important to highlight as much structure as possible through interpretive processing. This is accomplished through various filters, creating a montage of several maps. The processing geophysicist uses the power spectrum of the data and available regional geological control to choose different filters to highlight signals of interest.

The result is a set of enhanced magnetic anomaly maps that highlight lineaments that are due to geological features in the basement and in the sedimentary section, separated by wavelength (longer wavelengths mean deeper sources; shorter wavelengths mean shallower sources).

Further perspective can be added by calculating magnetic depth solutions to see faults and structural grain, and by displaying these in a 3-D visualization cube with the seismic data.

There is strength in numbers; the ambiguity of separate interpretations drops dramatically with each constraint from a different type of data interpretation that we include. HRAM data continually prove useful in mapping basement faulting as well as understanding the structural grain of the sedimentary section:

✓ When interpreting scattered 2-D seismic lines there can be many choices for fault correlation. By combining the available geology and the HRAM data with the seismic fault picks, one particular correlation often becomes compelling.

✓ When interpreting small 3-D surveys it is often hard to make a rational fault map without the regional structural perspective that HRAM can provide. Identifying wrench faults on seismic can be especially challenging because the vertical offset can be small and variable, but the fault can be of a major scale.

* * *

In the IEA Weyburn CO_2 sequestration project, a large amount of 2-D seismic data was made available to the project for mapping regional scale faults in the area.

The purpose of the mapping was to assess the security of the Geosphere as a container for the injected CO_2 gas. The concern about leakage relates to some impurities in the injected gas, which would be detrimental to the environment if they leaked to the surface.

Because the faulting patterns were somewhat complicated and the seismic data were relatively widely spaced (figure 1), we used GEDCO's proprietary HRAM data as an additional constraint to resolve the spatial aliasing of the fault correlations.

Figure 2 shows three seismic lines and one filtered version of the magnetic data. There are at least six faults imaged on these three lines, and there is no straightforward correlation of the faults between the lines.

The situation is made more complicated because the seismic expressions of the individual faults vary from line to line.

Using the HRAM data – as enhanced by filtering to emphasize shallow signal – the preferred correlation is shown in figure 2, with fault A being the same on all three seismic images and following the distinct magnetic signature of the fault. This previously unknown fault is now called the Souris River Fault, because it offsets the flow of the Souris River from its southeasterly regional flow into a short southerly leg for about 10 kilometers.

The fault is clearly present at the basement level on depth migrated seismic processing, and it penetrates through the entire section to the surface, as evidenced by the course of the Souris River.

In addition to demonstrating the utility of using HRAM data to constrain ambiguous seismic interpretations, this project also demonstrates clearly that some basement faults penetrate throughout the section in southeastern Saskatchewan – an important finding for the IEA CO_2 sequestration project.

Although there is no evidence that this fault is a leakage path from the reservoir to the surface, the possibility of other basement to surface faults exists, and each must be tested for gas leakage to ensure the integrity of the reservoir as a long-term storage container.

(Editor's note: John Peirce is with GEDCO in Calgary.)

Deadline Nears For GEO 2006

The call for abstracts deadline is approaching for GEO 2006, the seventh Middle East Geosciences Conference and Exhibition, to be held March 27-29 in Manama, Bahrain.

The meeting's theme is "Meeting E&P Challenges to Energize the World." Proposed technical session themes include:

✓ Giant Fields of the Middle East.

✓ Arabian Platform Hydrocarbon Systems.

✓ Geosciences of Carbonate and Clastic Reservoirs.

✓ Advances in Geophysical Techniques.

✓ Technology for Exploration and Production.

The abstract deadline is Sept. 21. All abstracts must be submitted online. For more information go to www.aapg.org/geo2006/abstracts.cfm.

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
Simon, Grigore, Newmont Mining, Denver (M. Scherer, M.B. Patterson, G.E. Yoder)

New Mexico
Ritcherson, Pilar R., Yates Petroleum, Artesia (D.B. Codding, J.F. Humphrey, R.W. Podany)

Oklahoma
Woods, Sharon Diane, Dominion E&P, Oklahoma City (R.D. Shipley, J.M. Rohr, M.A. Thomas)

Tennessee
Cathey, William Blair, Cathy's Creek Farms, Columbia (reinstate)

Texas
Akinyele, Monsur Adio, CNAEP, Houston (A.A. Adeogba, G.N. Okeke, C.W. Hollister); **Behnken, Fred H.**, Kinder Morgan CO_2 Production, Midland (A.B. Wilson, M.A. Raines, R.M. Altany); **Boothe, Bradley M.**, Denbury Resources, Plano (W.D. Barber, C.P. Doubek, R.L. Stinson); **Bosco, Michael John**, Schlumberger/Indigo Pool, Houston (W.K. Matthews, K.A. Frew, V.M. Moore); **Bridges, Alison Diane**, Noble Energy, Houston (T. Romig, R. Braddock, F.J. Senz); **Landis, Charles R.**, BPM Minerals, Houston (W.G. Dow, B.J. Cardott, N.B. Waechter); **Shaw, Thomas Howard**, Unocal, Sugar Land (M.W. Andreason, D.J. Venable, J.F. Blickwede); **Tyshkanbayeva, Aigul K.**, Chevron Corp., Houston (R.T. Mooney, R.A. Garber, M.W. Quearry)

Canada
Bend, Stephen Leonard, University of Regina, Regina, (reinstate); **Chen, Dongqing**, Alberta Geological Survey, Edmonton (R.J.H. Richardson, M.B.E. Buschkuehle, F.J. Hein); **Sanchez-Rico Castejon, Maria**, Admiral Bay Resources, Toronto (C.J.N. Knight, G. Birrell, S.A. Tedesco)

Germany
Karnin, Wolf-Dieter, independent, Burgdorf (J.E. Clever, M.G. Jentsch, J.K.E. Piske)

India
Mahapatra, Shishir Kumar, Cairn Energy (India), Chennai (S. Sarkar, N.K. Senapati, J. Rath); **Rajkhowa, Mukunda Madhab**, Oil & Natural Gas Corp., Rajahmundry (D. Ghosh, A. Banerjee, L. Kaini)

Indonesia
Santoso, Hendro Santoso, PT Caltex Pacific Indonesia, Chevron IBU, Duri (R.J. Withers, W.F. Robinson, G.W. Jacobs); **Syavitri, Dewi**, Trisakti University, Jakarta (C.A. Caughey, E.A. Berendson, B. Situmorang)

New Zealand
Pollock, Rosalie Miranda, Institute of Geological and Nuclear Sciences, Lower Hutt (B.D. Field, J. Kaldi, G. Browne)

Nigeria
Ajah, Gerald Eze, Nigerian National Petroleum, Benin City (K.O. Ladipo, M.A. Agbuza, B.I. Jev); **Rahaman, Morufu Adenrele O.**, Obafemi Awolowo University, Ile-Ife (A.O. Akinpelu, N. Schneidermann, M.B. Ozumba); **Soetan, Akanbi Afolami**, ChevronTexaco, Lagos (A.R. Ojelabi, O.E. Ajao, A.O. Adeyemo)

Scotland
Coker, Gertrude Obianuju, Shell International E&P Solutions, Aberdeen (N. Schneidermann, N. Omorodion, K.O. Ladipo)

Sudan
Mageed, Imam A., Petrodar Petroleum, Khartoum (L.M. Bernstein, K.M. Idris, M.Z. Awad)

Certification

The following are **candidates** for certification by the Division of Professional Affairs.

Petroleum Geologist

Alabama
Mancini, Ernest A., University of Alabama, Tuscaloosa (P.R. Rose, L. Billingsley, J.M. Party)

Texas
Wiley, Michael A., consultant, Canyon Lake (P.R. Rose, J.A. Gibbs, J.O. Lewis)

IN MEMORY

Donald Chamberlin Beard, 79
Houston, Oct. 20, 2004
Robert Bruce Bower (AC '55)
Columbus, Ohio
Gene A. Bowman, 83
Houston, July 4, 2005
Donald J. Brammer, 79
Jay, Okla., April 29, 2005
John B. Carrier, 92
Surprise, Ariz., June 20, 2005
John Anthony Dunn, 78
Georgetown, Texas, July 2004
Yorke John Gunn, 83
Amarillo, Texas, Jan. 8, 2005
Edward Haddad (AC '55)
Norman, Okla.
Ernest G. Hoskins, 82
Bakersfield, Calif., April 19, 2005
Don F. Hugus (AC '62)
Ridgeland, Miss.
Eldred Dean Johnson, 73
Casper, Wyo., June 15, 2005
James Davis Kolb, 76
Tyler, Texas, June 12, 2005
Wilbert Irwin Oden, 79
New Orleans, Feb. 15, 2005
Grant Carl Parsons, 85
Arcadia, Calif., May 8, 2005
I.D. Simpson Jr. (EM '49)
Prairieville, La.
Clyde Weldon Turner, 89
Midland, Texas, April 23, 2005
William James Vaughn Jr. (AC '49)
Midland, Texas

(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.)

Rising Energy Prices Bring Opportunities To Discuss

By LARRY NATION
AAPG Communications Director

Oil prices. Wow.

In the middle of August, prices were setting new highs almost every day.

At press time, the price was over $66 a barrel.

With oil prices reaching record highs, even the most casual observer is aware of how the industry is affecting them – mainly in their pocketbook.

Your friends will certainly have read about the "why" of the price rise:

✓ Supply disruptions due to hurricanes (see page 12).
✓ Sliding inventories.
✓ Refinery snags.
✓ Worries over Iran's nuclear ambitions.
✓ Change in Saudi Arabia leadership.
✓ Worries over OPEC supply abilities.

So why isn't the high oil price causing the soaring inflation we saw in the late 1970s and early '80s?

William Poole, president and CEO of the Federal Reserve Bank of St. Louis, provides some insight.

"Experts say that high demand for oil, not supply disruptions, is driving the current price surge. For instance, global oil consumption in 2004 grew at a faster rate than it had in 25 years, led by rapid increases in China, India and the United States. Thus, past high oil prices were a driver of economic weakness, while the recent surge in oil prices is being driven by the world economy's strength," Poole said.

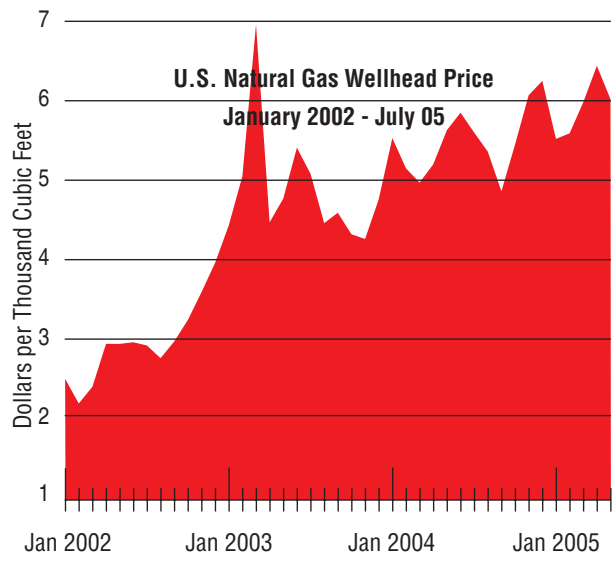
"Also, while the nominal price of oil is at record levels, the real price of oil (the price adjusted for inflation) is nowhere near a record."

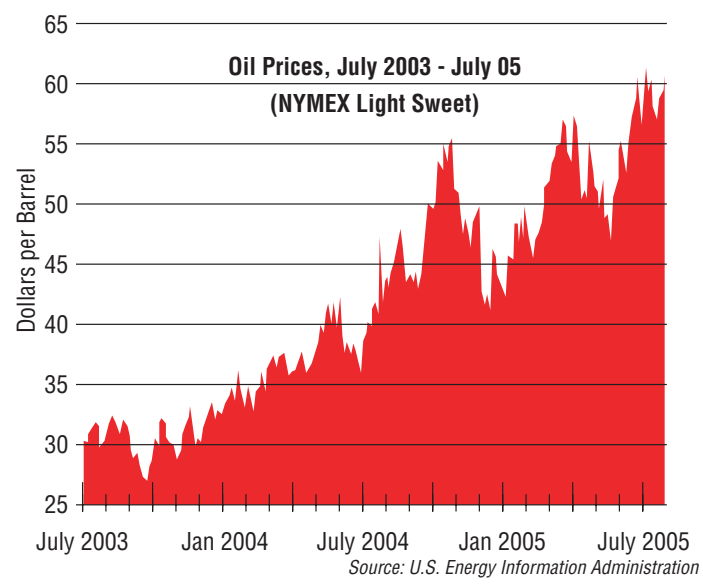
Poole noted that even with U.S. crude averaging above $53 a barrel for the year to date, in real terms prices are still below the $80 a barrel average of 1980, after the Iranian revolution.

The "real" oil price peak occurred in April 1980, with a real-term price of $93 per barrel. "Thus," he said, "the current oil shock has been less of a shock than previous ones.

"At current levels, oil prices probably will not derail the economic recovery," he said.

The question is if oil prices will remain at current levels. ❑





Source: U.S. Energy Information Administration

READERS' FORUM

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 approiatness and/or space restrictions.

A Recommendation

Regarding Peter Rose's President's Column in the July EXPLORER:

At the end of his article Rose recommends a controversial book, "The Skeptical Environmentalist," by Bjorn Lomborg (1998, Cambridge University Press, $18.50). He calls it "the most important book I have read in the last five years, this is a thoroughly documented, commendably well-informed and remarkably objective and insightful look at almost all well-known claims regarding 'The World Environment.' Lomborg's basic, overpowering conclusion: 'Things are not getting worse, they're getting better.'

"Read it, you'll like it. Onward!"

(In fact,) Lomborg's book has been heavily criticized by the majority of the world's leading experts on water resources, biodiversity and climate change. In addition to the Internet, many critical reviews of this book have been published in *Scientific American*, *Nature*, *Science* and other scientific journals. The experts' conclusion, as summarized at http://www.ucsusa.org/global_environment/archive/page.cfm?pageID=533, is that "… Lomborg's book is seriously flawed and fails to meet basic standards of credible scientific analysis … Lomborg consistently misuses, misrepresents or misinterprets data to greatly underestimate rates of species extinction, ignore evidence that billions of people lack access to clean water and sanitation, and minimize the extent and impacts of global warming due to the burning of fossil fuels and other human-caused emissions of heat-trapping gases."

Not to mention that Lomborg himself has admitted having no scientific training or expertise comparable to those he contradicts with his statements.

My personal opinion is that works of questionable scientific value should not be endorsed by the AAPG. Misuse of scientific evidence is an ethical issue and, in order to stay in line with its own statement of purpose, AAPG must speak up against and not recommend such books.

Radu Girbacea
Bakersfield, Calif.

Rose Responds

(Editor's note: The following is AAPG President Pete Rose's response to the previous letter.)

Indeed, Bjorn Lomborg's "The Skeptical Environmentalist" has been criticized by some scientists, most of whom were recognized already to be heavily invested in the "anthropogenic school of global warming."

Scientists whose "oxen are being gored" are prone to dismiss critical general review papers as "being unscientific." Among those generalists of us, however, who still maintain an open mind, Lomborg's opus is valuable precisely because it provides an enormous amount of well-presented data gleaned from diverse, putatively objective international sources, covering a broad range of "world environmental crises" that have been widely publicized by the environmental lobby. Topic after topic, his conclusions are the same: Evidence of bias is all too common, and things are, overall, getting better, not worse. An interesting Web site that presents comparable views is http://www.john-daly.com/.

Frequent, but nebulous, claims that a "majority or consensus" of international scientists disapprove of published scientific opinions challenging various aspects of the anthropogenic school are increasingly being dissected and debunked by knowledgeable authorities. One of the latest (2004) is climatologist Patrick Michaels ("Meltdown: The Predictable Distortion of Global Warming by Scientists, Politicians and the Media"). Read it, you'll like it!

Progress in science has historically depended upon objective and transparent gathering of data, leading to interpretations tested in the crucible of open debate – not upon claimed majorities of opinion. When scientists go crusading, science – as well as the world community that would like to trust it – suffers. Scarce economic resources get prioritized improperly.

AAPG does not have an opinion about the "Skeptical Environmentalist," but I thought it brought a calm and welcome new voice to the debate; in any case, I'm certainly pleased that somebody is actually reading some of my recommendations!

Fault Cults

I was amused by your story "Earthquake Study Goes Nucleation" (July EXPLORER). I've lived in California most of my life. I'm familiar with the state's major faults, I gave a talk on the San Andreas Fault System (SAFS) at the joint AAPG-GSA regional meeting in Los Angeles in 2001 and I have known no one who died in a quake. I have felt a few tremors myself and have survived to tell the tale.

I find the preoccupation with the SAFS, and only the SAFS, of the U.S. Geological Survey and other authorities at least to be seriously misguided. During my life southern California has been hit hard by the Santa Barbara earthquake in 1925, the so-called Long Beach quake in 1993, the San Fernando earthquake in 1972 and the Northridge earthquake in 1994. Bad news, all of them, but the folks at Cal Tech and the USGS continue to inspire headlines about "the next big one of the San Andreas fault."

The USGS's map of earthquake frequency in southern California shows the area along the south side of the western Mojave Desert to be the least seismically active on the SAFS. That 120-kilometer-long stretch is the closest one to the Los Angeles Basin, which poses the question: "Why is the SAFS a major threat to Los Angeles?"

Also, it's not quite true that " … so little is known about the origins of earthquakes." They almost are certainly caused by build-up of strain in earth's crust caused by the stress of crustal movements until, like a stick that's bent by hand, the strength of the rocks is exceeded, and POP! goes an earthquake.

Two things that are really unknown are:

✓ The rate at which stress is produced.

✓ How the mishmash of rocks along a 100-kilometer-long segment of a fault ranging from solid granite to alluvial fill will react to that stress.

It's nice that, in an area near Paso

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Robles, Mark Zoback says the crust "… slips about a centimeter or half-inch in each of these magnitude 2 earthquakes." Magnitude 2 quakes we can live with, and the indicated release of strain suggests that the area is not building up to "the next big one."

Regarding the San Andreas fault cult, namely all those genuinely talented geologists and geophysicists whom apparently give no consideration to our state's other great faults: The USGS's poorly written and even more poorly illustrated Professional Paper 1515 dealt only with the SAFS. Why couldn't that paper have been titled "California's Great Seismically Active Faults"? Consider the Hayward and Calaveras faults in the Bay Area, one of which has cracked UC-Berkeley's football stadium. How about the Malibu and San Gabriel frontal and Inglewood-Newport and San Jacinto faults in southern California, all of which pose a clear and present danger? Not to mention the active Sierra Nevada and Owens Valley faults, which fortunately are distant from major centers of civilization.

Now, regarding earthquake prediction: We must stop thinking as earth scientists and think as human beings. I will flat-out say that informing the public: "There is a 90 percent possibility of a major quake in southern California within the next two weeks" would create one of the greatest panics in American history.

So what should we do? That's easy. Educate the public about the nature of earthquakes, for the dual purpose of relieving people's fears and of telling them how to prepare for a quake. The public's fears are founded primarily on ignorance. They don't know that more people die every year on roads and highways in California than have died in all of the state's earthquakes in historic times ...

I'd prefer to tell people what we know about earth's crust, what's going on down there and, as best we can, why. Also tell the public that "the longer the time since the last earthquake, the shorter the time until the next one," and tell them how to prepare for it.

Robert H. Paschall
Bishop, Calif.

Moral Decay

I am an AAPG Active member and have come to respect and admire the professionalism and integrity the organization continually reflects and portrays especially regarding subjects such as ethics and professional conduct – at least until today. Unfortunately, my starry-eyed view of AAPG's morals and ethics changed dramatically today as I read with dismay the article about abiogenic gas and *Playboy* magazine (August EXPLORER).

I realize the writer and potentially many others like him (think) the promotion of such filth as *Playboy* magazine might seem cute, innocent or, to give him the benefit of the doubt, an objective commentary. However, how can a director of an organization who supposedly promotes the utmost ethical (and hopefully moral) standards, in good conscious portray support for a magazine that exploits and degrades women (the gender of which makes up a large portion of the AAPG membership), and thereby condone one of the largest areas of moral decay in America's society today?

Does the writer honestly believe that just because a magazine like *Playboy* writes articles of technical interest, that it justifies AAPG's support for the publication of pornography?

In my view as a professional geologist and a Christian, the comments on *Playboy* are insulting and in poor taste, and by no means belong in any AAPG publication.

John Michaels
Red Bank, N.J.

(Editor's note: The EXPLORER is a news magazine with lively editorial discussion. Wit and humor are often used in our columns and editorials to make it interesting to readers.

Playboy*, with a circulation of over three million in the United States and 4.5 million worldwide, contacted AAPG about the conference as they are doing a serious article on the subject. We believe most of AAPG members would find this worthy of noting, and the brief article was informing them of this fact – in what we hoped was an appropriate manner – for the information being communicated. As for the moral judgments about* Playboy*, we'll leave that to the readers.)*

The Debate (Con't)

There are 19 major world religions and thousands of smaller ones. At least 500 creation stories are known. Yet, the "creationist" theory of Southern fundamentalists within the United States has dominated your correspondence columns.

This being so, it is time to put the current controversy in its proper context. A culture of biblical interpretation is common to a particular geographical area within the United States. A significant part of the oil and gas industry is located in this region. The exponents of creationism are likely to come from this region.

Since the AAPG membership includes a very considerable body of professionals from not only other geographic areas of the United States but from other countries that, for the most part, are unlikely to agree with this parochial view, the subject ought to be put to rest.

David W. Edgerley
Queensland, Australia

As a biologist member of the AAPG with a special interest in organic evolution, I have a few words to offer on the evolution controversy. The troubling episodes are basically between Christian fundamentalists and a select few scientists who are theophobic. It need not be and has not always been so ...

Both warring factions have one thing in common: They have abandoned philosophy. For theophobians, philosophy is replaced by Gnostic speculation: for Christian fundamentalists, it is replaced by sacred scripture.

Both factions harm science – the Protestant faction by ignoring it and the theophobic scientists who pervert it. The greatest harm to any institution is when it comes from within.

Our concern as scientists should not be focused outside our ranks but rather within; science is in decline and it started years ago. It so disturbed the great geophysicist M. King Hubbert that it was the subject of his address as the retiring president of the Geological Society of America. His lecture needs reviewing: "Are We Retrogressing in Science?" (1963, GSA Bulletin, v. 74, p. 365-378).

John Morony
Del Rio, Texas

I am fortunate enough to have both a strong background in geology and a testimony of revealed religion. The two diverse backgrounds do not conflict …

God, by whatever name, is an eternal being. He is not measured by time, nor is He limited by it. The Judeo-Christian doctrine tells us that Adam and his wife Eve chose to leave the garden and to become mortal beings governed by time. We are their descendants, and are subject to time.

Genesis' description of the creation talks about events that occurred during eternity, before Adam and Eve chose to leave the garden. The author tries to describe eternity in terms that men and women can

See **Forum**, next page

PNBs

from page 37

Patricia A. Santogrossi, to consultant deepwater geoscientist, Statoil UK, London, England. Previously chief geologist, Knowledge Reservoir, Houston.

Yoram Shoham has been appointed to the board of directors, Veritas DGC, Houston. Shoham is an oil and gas industry consultant in Houston.

Jerome L. Spring, to senior geoscientist, Canadian Forest Oil, Calgary, Canada. Previously with Pioneer Canada, Calgary.

Edilberto Tadiar, to principal geophysicist, Santos Asia Pacific, Jakarta, Indonesia. Previously principal geophysicist, Santos Ltd., Adelaide, Australia.

Stephen M. Testa, to executive officer, California State Mining and Geology Board. He is the current president of the American Geological Institute, and previously president, Testa Environmental, Mokelumne Hill, Calif.

(Editor's note: "Professional News Briefs" includes items about members' career moves and the honors they receive. To be included, please send information 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.)

Forum

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understand. However, God has no such limitation and does whatever he decides, in whatever sequence he prefers. Eternity is one great summation of events, not a series of events …

I remember getting my M.A. in 1966 with a complete knowledge that continents were fixed in place, having been told that by some very respected teachers at Stanford and UCLA. They were wrong, but that doesn't change the fact that they were good men and women. The author of Genesis may also have gotten some details wrong, but that's because he was a good man who tried to explain the eternities to time-governed men.

By the way, I have learned a much different definition of faith from one EXPLORER letter writer: Faith is not to have a perfect knowledge of things. If I know something I have no cause to believe it, for I know it. When I have faith I hope for things that are not seen, which are true. A little bit like a geophysicist.

Gary F. Player
Cedar City, Utah

Creationists argue that while evolution is a messy theory full of logical holes and missing links, creationism explains Earth history in a consistent and clear way straight from the mouth of God. A reading of the Bible proves otherwise. Biblical scholars have shown Genesis through Deuteronomy were written by a number of authors over a considerable span of time...

I suggest these variations and contradictions, as obvious to the ancient editors as the modern reader, illustrate the Bible was never intended to be a history book or a scientific reference, but rather a guide to morality and an attempt to explain what it means to be human, written within a sophisticated literary culture fully capable of employing complex and non-literal stylistic devices.

A June 2005 Harris Poll reveals 55 percent of Americans feel creationism should be taught in our public schools. To those wishing public schools to teach the Biblical version of Earth history, my question is: Which one?

Bill Raatz
Houston

A Really Big Bang

Regarding "Disaster Had Ripple Effect" (April EXPLORER): The biggest volcanic explosion was the Tambora explosion in April 1815, about 500 kilometers east of Bali. The effect was more global than other natural disasters, including Europe's "year with no summer" in 1816.

In 1816 Europe's cold and wet weather contributed to a disastrous harvest as crops rotted in the field. Famine, food riots, grain hoarding and government embargoes resulted. These cold, moist weather patterns may have contributed to the typhus epidemic of 1816-19 in Europe, and the cholera outbreak of 1816-17 originating in Bengal and spreading throughout the world.

Food riots broke out in France and Switzerland. In Ireland, a cold rain fell for 142 out of 153 days during the summer and 65,000 people died of hunger and from an ensuing typhus epidemic. After spreading to other parts of Europe, the epidemic ultimately killed 200,000 people – and it all started with a volcanic eruption.

According to the best available evidence, Mt. Tambora before the eruption was a volcanic cone 4,000 meters high and 60 kilometers in diameter at sea level, densely blanketed in forest. After the eruption, more than 1,000 meters of the mountain's height collapsed or was obliterated; a caldera nearly six kilometers in diameter whose rim was 2,950 meters above sea level was formed.

On the Volcanic Explosivity Index (VEI), Tambora rates a 7, one of only four in the last 10,000 eruptions to do so. For comparison, the famous Krakatoa blast was VEI 6 and the May 1980 Mt. St. Helen's blast was VEI 5.

Rovicky Dwi Putrohari
Jakarta, Indonesia

CLASSIFIEDADS

POSITION AVAILABLE

U.S. Geological Survey Mendenhall Postdoctoral Research Fellowship Program

The U.S. Geological Survey (USGS) invites applications for the Mendenhall Postdoctoral Research Fellowship Program for Fiscal Year 2007. The Mendenhall Program provides opportunities to conduct research in association with selected members of the USGS professional staff. Through this Program the USGS will acquire current expertise in science to assist in implementation of the science strategy of its programs. Fiscal Year 2007 begins in October 2006.

Opportunities for research are available in a wide range of topics. The postdoctoral fellowships are 2-year appointments. The closing date for applications is December 1, 2005. Appointments will start October 2006 or later, depending on availability of funds. A description of the program, research opportunities, and the application process are available at http://geology.usgs.gov/postdoc. The U.S. Geological Survey is an equal opportunity employer.

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Search Reopened: SEDIMENTARY GEOLOGY, UNIVERSITY OF WYOMING

The Department of Geology and Geophysics (http://home.gg.uwyo.edu) invites applications for a tenure-track, assistant professor position in sedimentology/stratigraphy. Higher rank (associate professor) is possible with appropriate qualifications. Ph. D. is required at time of appointment, August 2006. We seek an individual who shows the potential to develop an internationally recognized, externally funded research program, will be involved in the undergraduate and graduate teaching mission of the department, and will build on departmental strengths in sedimentation, energy research, seismology and structural geology. Specialty is open, but may include such diverse fields as quantitative basin analysis, seismic stratigraphy, carbonate sedimentation, paleoclimate reconstruction, physical sedimentology and sediment transport. The Department is home to the Institute for Energy Research (http://www.ieronline.org/) and the University has a strong and long-standing commitment to energy-related research in the geosciences.

Applications should include a statement of research and teaching interests and accomplishments, curriculum vitae, and the names and contact information of three references. Review of completed applications will begin November 1, 2005. Send an electronic copy of your application to Ms. Carol Pribyl at cpribyl@uwyo.edu; if you have additional application materials to send, please direct them to Sedimentary Search Committee, Dept. of Geology & Geophysics, University of Wyoming, 1000 E. University Ave., Dept. 3006, Laramie, WY 82071.

The University of Wyoming is an equal opportunity/affirmative action employer.

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Tenure Track Position in Petroleum Geosciences 2005TFL003

The Department of Geosciences at Texas Tech University invites applications for a tenure track position to begin in Fall 2005. The position will be filled at the assistant professor level; a Ph.D. in geological sciences is required at the time of appointment.

We seek a person with research and teaching interests in scientific aspects of hydrocarbon exploration and production (E&P). The area of specialty is open, but we seek a person with practical E&P research experience either as petroleum industry geoscientist or in an industry-academic research consortium. A working knowledge of industry-standard, computational data processing and interpretational tools would be a plus. The successful candidate is expected to establish an innovative, externally funded academic research program that would complement existing programs in geology, geophysics, and geochemistry in the Department. The candidate will be expected to develop upper division and graduate courses in her/his specialty, supervise M.S. and Ph.D. student research, and assist with freshman geology courses. Opportunities exist for participation in programs with petroleum and civil engineering.

Review of applicants will begin on October 1, 2005. Applicants should submit a letter of application, a description of teaching philosophy and research objectives, curriculum vitae, and names and contact information, including e-mail addresses, of at least three professionals who will write letters of recommendation. Applications should be sent to the search committee: Petroleum Geosciences Search Committee, Department of Geosciences, MS 1053, Texas Tech University, Lubbock, TX 79409-1053

Our web site (www.gesc.ttu.edu) describes the laboratories, facilities and current research programs in the Department, and guidelines for promotion and tenure. The Department houses equipment for stable isotope analysis, x-ray diffraction, and ICP elemental analysis, TEM and SEM, and a thin-section preparation facility with technician. Geologic interpretational/modeling software packages such as Geographix Discovery, SMT Kingdom Suite, and GoCAD, as well as GIS packages, are available in the computer labs of the department. Additional analytical and computational tools may be acquired in the near future.

Texas Tech University is an equal opportunity/affirmative action institution.

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Pevehouse Chair in Geosciences - An Endowed Position in Petroleum Geology and Geophysics Texas Tech University

The Department of Geosciences at Texas Tech University invites applications and nominations for the Pevehouse Chair in Geosciences. The purpose of this endowed position is to support education regarding the origin, exploration, and recovery of hydrocarbons. A Ph.D. in geosciences or closely allied field is required at the time of appointment. The ideal candidate should have demonstrated research abilities and experience regarding geologic and economic aspects of hydrocarbon exploration and production. The chair holder is expected to conduct an externally-funded research program in his/her specialty, teach graduate and undergraduate courses, and maintain ties with the petroleum industry. The position is expected to be filled at the tenured full professor level.

Texas Tech is one of the four major state-supported multi-disciplinary universities in Texas. It consists of ten colleges, Graduate School, School of Law, Health Science Center, with about 29,000 students enrolled. The Department of Geosciences consists of seventeen faculty, eleven in solid earth science and six in atmospheric science. The solid earth specialties cover major areas of geology, geochemistry, and geophysics. The atmospheric group specializes in severe storms, wind energy, and airborne hazardous substances. At present, the department has about 70 undergraduate majors and 40 graduate students. The department computer labs have geologic interpretational/modeling software packages such as Geographix Discovery, SMT Kingdom Suite, and GoCAD, as well as GIS packages. Research labs include facilities for stable isotope analysis, x-ray diffraction, and ICP elemental analysis, TEM and SEM, and a thin-section preparation facility with technician. There are many opportunities for multidisciplinary research. In addition to Geosciences, the successful candidate has the opportunity to work with the Petroleum Engineering Department which maintains facilities to conduct core

See **Classifieds**, page 49

Classifieds

from page 47

analysis, experiments on drilling fluids, cements, enhanced recovery technologies, and reservoir simulation. Petroleum Engineering also has a nuclear magnetic resonance imaging lab and an artificial lift research lab that consists of a 4100 ft test well, with circulation equipment and automated well control equipment. Geosciences and Petroleum Engineering conduct joint research through the Center for Applied Petrophysics and Reservoir Studies.

Lubbock is a community of about 200,000 people, located on the Southern High Plains of Texas, in proximity to major oil industry in the Permian Basin. The altitude and semi-arid climate of the region are conducive to outdoor activities. Lubbock hosts frequent musical, theatrical, and sporting events, and offers numerous options for shopping and dining. The cost of living index is low compared to national norms.

Review of applicants will begin December 1 and continue until the position is filled. Applicants should submit a letter of application, curriculum vitae, a statement of teaching and research interests, and names and contact information (including e-mail address) of at least 3 professional references. Applications should be sent to:

Dr. Thomas Lehman
Pevehouse Chair Search Committee
Department of Geosciences
Texas Tech University
Lubbock, TX 79409-1053

Send questions regarding the position to tom.lehman@ttu.edu. Details about the Geosciences Department, its faculty, and research facilities may be found at www.gesc.ttu.edu, and the Petroleum Engineering Department at www.pe.ttu.edu.

Texas Tech University is an equal opportunity/affirmative action institution.

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Research Associate
UNIVERSITY OF TEXAS AT AUSTIN

The Bureau of Economic Geology, Jackson School of Geosciences, The University of Texas at Austin, is seeking a full-time Research Associate for work in facies architecture and sequence stratigraphy of clastic depositional systems.

Requirements include a Ph.D. in geology or geological sciences with focus on clastic reservoir systems. Demonstrated expertise in stratigraphy and sedimentology, ability to conduct research in the description, characterization, and modeling of clastic deposits, and experience in outcrop and subsurface data sets.

Additional requirements include willingness to travel extensively (international and domestic) to carry out intensive outcrop work, ability to interact with an integrated outcrop-based clastic facies research group, strong desire to work in a research environment, and ability to help lead and maintain an externally funded research program. Candidates must have excellent oral and written communication skills and the ability to disseminate research findings at annual consortium meetings and professional meetings.

An established record of scientific publication is preferred.

Learn more about the Bureau of Economic Geology at http://www.beg.utexas.edu. For a complete job description, go to http://utdirect.utexas.edu/pnjobs/ and follow instructions to apply for job number #050729010708 using your on-line resume. Women and minority applicants are encouraged to apply. Security-sensitive position; conviction verification conducted on applicant selected. Equal Opportunity/Affirmative Action Employer.

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Research Scientist in Carbonate Geology and Reservoir Characterization,
UNIVERSITY OF TEXAS AT AUSTIN

The Bureau of Economic Geology, Jackson School of Geosciences, at The University of Texas at Austin seeks someone with a Ph.D. in geosciences, with at least 5 years of postgraduate experience, preferably in a combination of industry and academia, to lead and conduct quantified research on the spatial distribution, flow characteristics, and modeling of non-matrix pore space in carbonate reservoirs for the purpose of improving carbonate reservoir models. Additional requirements are an established record as an independent researcher, excellent oral and written communication skills, and proven ability to disseminate research findings at professional meetings and in technical journals.

The applicant should possess the strong background needed to conduct research in characterization of carbonate depositional and diagenetic processes and in modeling fluid flow in non-matrix pore systems as these influence activities of reservoir modeling and characterization. Send statement of research interests, resume, publications, letters from at least three references, plus any job-related supplemental information, to Jenny Turner, Administrative Associate, Bureau of Economic Geology, Jackson School of Geosciences, The University of Texas at Austin, University Station, Box X, Austin, TX 78713-8924.

Learn more about the Bureau of Economic Geology at http://www.beg.utexas.edu. For a complete job description, go to http://utdirect.utexas.edu/pnjobs/ and follow instructions to apply for job number #050726010702 using your on-line resume. Women and minority applicants are encouraged to apply. Security-sensitive position; conviction verification conducted on applicant selected. Equal Opportunity/Affirmative Action Employer.

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COLORADO SCHOOL OF MINES
DEPARTMENT OF GEOLOGY AND GEOLOGICAL ENGINEERING
RESEARCH PROFESSOR OF STRATIGRAPHY/SEDIMENTOLOGY

Applications are invited for a 2-year (minimum) position in the field of Stratigraphy/Sedimentology at the research professor level. This position is funded through the Chevron Center of Research Excellence (CoRE). The CoRE effort is a multi-year, industry-funded project that is focused on integrated stratigraphic-structural studies. The successful candidate will be required to take a leading role in Phase II of this program, which focuses on syn-sedimentary structural controls on deepwater sedimentation patterns.

Qualifications: Applicants must have a Ph.D. in stratigraphy/sedimentology. Preference will be given to applicants with specialties in deepwater clastic systems and reservoir modeling. Experience with petroleum-related research studies and/or petroleum industry experience would be highly advantageous. The successful candidate must demonstrate strong interpersonal and communications abilities, and provide a record of successful collaborative research experiences.

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 October 15, 2005.

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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THREE FACULTY POSITIONS
DEPARTMENT OF GEOLOGY
UNIVERSITY AT BUFFALO, SUNY

The Department of Geology at the University at Buffalo is building on sustained growth in research productivity and teaching in its core areas of environmental geology, volcanology, and integrated tectonics and stratigraphy. We invite applications for three tenure-track faculty positions:

1. Nanogeochemistry, Biogeochemistry, or Geomicrobiology (Rank: Assistant Professor). We seek a scientist who studies aqueous / microbial / rock interactions at the nano-scale and who will integrate with our existing strength in hydrogeology. Research topics might include identification, characterization, and study of the reactivity of nanoparticles or nanostructures in the environment, or examining the interactions and biogeochemical processes associated with microbes and minerals. Researchers interested in applying nano-scale geochemistry to environmental problems are particularly encouraged to apply. Search Committee Chair: Dr. Richelle Allen-King. Application target date: Oct. 15, 2005.

2. Remote Sensing (Rank: Assistant or Associate Professor). We seek a broadly trained geoscientist who employs an array of airborne and space-based remote sensing tools to address geological questions that complement and integrate with one or more of our existing research strengths. Areas of particular interest include geohazard evaluation, assessment of water or petroleum resources, and climate change. Search Committee Chair: Dr. Marcus Bursik. Application target date: Nov. 1, 2005.

3. Hydrogeophysics or Environmental Geophysics (Rank: Assistant Professor). We seek a scientist with demonstrated ability to apply geophysical techniques to the shallow subsurface and who will integrate with our existing strength in hydrogeology. Researchers with expertise in GPR, ER, or seismic, and an interest in extracting geologic and hydrologic data from complex datasets for the purpose of characterizing or remediating contaminated geologic systems are of particular interest. Search Committee Chair Dr. Richelle Allen-King. Application target date: Nov. 15, 2005.

We expect faculty to develop and maintain innovative, extramurally funded research groups. Successful applicants for these positions must have a Ph.D. degree at the time of appointment and a demonstrated potential to publish or otherwise disseminate results of research and a commitment to effective teaching. Teaching duties will involve undergraduate and graduate level courses in the candidates' specialties. More information about our department can be found at: http://www.geology.buffalo.edu. The University at Buffalo is an Equal Opportunity Employer/Recruiter. We committed to the importance of a diverse faculty. Women and minorities are particularly encouraged to apply.

Send applications to Robyn Wagner by email to rlwagner@buffalo.edu or post to Department of Geology, 876 Natural Sciences Complex, University at Buffalo, Buffalo, NY 14260. Applications should state clearly the position applied to and include (1) a curriculum vitae, including published research and grant support, (2) a statement of research goals, (3) a statement of teaching experience and interests, (4) selected reprints, and (5) the names and contact information of at least three references. Applications should be complete by the target dates given above, when we will begin our review of candidates, which will continue until the positions are filled.

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BOOKS. Rare and out-of-print books and periodicals on geology and related sciences. Large stock on all phases of the oil industry, domestic and foreign covering geology, history, engineering, logging, geophysics, etc. Catalogs available. The Hannum Company. Box 1505-B, Ardmore, OK 73402. info@hannum.cc

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The Edinburgh Research Partnership

Edinburgh Collaborative of Subsurface Science and Engineering

Joint Research Institute

Six new posts have been created to support the Edinburgh Collaborative of Subsurface Science and Engineering Joint Research Institute (*ECOSSE*). We seek individuals with an excellent track record of achievement and innovation. You will become a member of one of the largest associations of geological, geophysical and engineering researchers in the UK, joining existing 5/5* units.

The Edinburgh Collaborative of Subsurface Science and Engineering (***ECOSSE***) is a Joint Research Institute that is part of a £24M investment in the new "Edinburgh Research Partnership" between Heriot-Watt University and the University of Edinburgh. ***ECOSSE*** combines expertise from the School of GeoSciences at the University of Edinburgh, the Institute of Petroleum Engineering at Heriot-Watt University, the British Geological Survey, and the Scottish Universities Environmental Research Centre. ***ECOSSE*** covers all fields in subsurface science and engineering, including: oil and gas recovery; groundwater quality; gas hydrate studies; the science and technology of carbon storage; and natural and anthropogenic hazards associated with subsurface engineering constructions. In its first collaborative research programme ***ECOSSE*** will address specific issues in carbonate reservoirs, seismic imaging of the subsurface, and petrophysics. Additional thematic programmes will be pursued later.

Chair of Carbonate Geoscience at Heriot-Watt
The specific field of specialisation for this Professorship position is open. You could be a Geologist, a Geophysicist, or an Engineer. Most importantly, you will bring to the post exciting ideas for creating an internationally-leading research team that will address the wide span of issues associated with carbonate rocks. Salary will be within the professorial range. Ref: 98/05/ECOSSE.

Four Lectureships: 2 at Heriot-Watt and 2 at Edinburgh

Geoscience/Geo-engineering at Heriot-Watt
You will complement and enhance the existing research groups in the Institute of Petroleum Engineering, as well as make a key contribution to the ***ECOSSE*** research programme. Although the area of specialism is open, we will particularly welcome applications from candidates with expertise in: the analysis of sedimentary rocks, the development of petrophysical methods, the use of flow simulation, and the application of geomechanical approaches. Ref: 99/05/ECOSSE.

Petroleum Engineering at Heriot-Watt
You will complement and enhance the existing research groups in the Institute of Petroleum Engineering, as well as make a key contribution to the ***ECOSSE*** research programme. Although the area of specialism is open, we will particularly welcome applications from candidates who are interested in examining the relationships between geoscience and drilling, or geoscience and production. Ref: 100/05/ECOSSE.
Salary for the above 2 posts: £27,989 to £35,883 p.a.

Reactive Flow Geochemistry at Edinburgh
With fundamental skills in the geochemistry of fluid-rock interaction, you will already have, or be developing, an international reputation in computational modelling of reactive flow. At Edinburgh you will lead and innovate in the modelling of reactive-advective-diffusive flow in porous and fractured media, applicable to waste disposal, hydrocarbons and CO2 storage. Ref: 3004792NA.

Carbonate GeoScience at Edinburgh
You will have expertise and an outstanding research record in any branch of carbonate geoscience, preferably in carbonate sedimentology (depositional and porosity systems, diagenesis and fluid flow, fractures and seals), with direct application to hydrocarbon industries. Ideally you will have a strong track record in collaborative research with both industry and academia. Ref: 3004785NA.
Salary for the above 2 posts: £27,989 to £35,883 p.a.

HERIOT WATT UNIVERSITY

THE UNIVERSITY OF EDINBURGH

Research Fellow in Experimental GeoScience at Edinburgh
You will bring a strong technical understanding of modern rock and mineral physics/chemistry experimental studies, a proven research record, and extensive practical experience of innovative laboratory studies at elevated pressures and temperatures. Ref: 3004789NA.
Salary £27,116 to £35,883 p.a.

To receive application details concerning positions at Heriot-Watt please contact the Human Resources Office, Heriot-Watt University, Edinburgh EH14 4AS, Tel +44 (0)131 451 3475 (24 hours), Minicom (0)131 451 8212, **Email hr@hw.ac.uk**, quoting the appropriate reference number. Additional information on these posts can be found at **www.erp.ac.uk/ecosse**

To view further details or to apply for a position at the University of Edinburgh please visit **www.jobs.ed.ac.uk** or alternatively telephone the recruitment line on Tel. +44 (0)131 650 2511, quoting the appropriate reference number.

For further details about the Edinburgh Research Partnership please see http://www.erp.ac.uk

The deadline for the receipt of applications for all posts is 30 September 2005.

ecosse

DIRECTOR'S CORNER

Digital Fund a Naming Opportunity

By RICK FRITZ

Two of the strongest allegiances for most people are their alma mater and professional society. One's alma mater is often a discussion around the water-cooler, as individuals discuss their sports teams, academic accolades or successful alumni.

Professional societies do not have sports teams (although staff can play a mean game of volleyball), but there often is a spirit of camaraderie among members of professional societies that is a key aspect to networking.

The AAPG Foundation has combined these two key allegiances – school and professional society – to offer a new funding opportunity called the "Digital Products University Subscription Fund." This fund is designed to provide students and faculty at your favorite university with essentially all of AAPG's digital data. This is accomplished through a gift that forms an endowment that will allow your school to have access to this data in perpetuity.

The cost of the endowment is $12,500, and can be donated by an individual or a group of individuals. The grant can be named after the individuals providing the funds or it can be named after someone you want remembered – such as a favorite professor.

The beauty of the program is that every time a student or faculty member logs into the AAPG Datapages system, there is an acknowledgement page that thanks those who made it possible and/or who you want to honor. These pages typically receive thousands of hits through the course of a year.

"Naming opportunities" at a university, such as a chair, typically require major donations in hundreds of thousands of dollars. The Digital Products Fund endowment provides a significant naming opportunity for those of us who would like to do something significant for our alma mater.

For example, Digital Products University Subscription endowments have been established at the following schools:

✓ Oklahoma State University, in memory of Paul McDaniel, endowed by a group of his friends and OSU alumni.

✓ Louisiana State University, in honor of Rufus J. LeBlanc Sr., endowed by John Shelton.

✓ Miami University of Ohio, in honor of Robert H. Nanz Jr., endowed by John Shelton.

✓ University of Illinois, in memory of Harold W. Scott, Harold R. Wanless and George W. White, endowed by alumni and spearheaded by Jack Threet.

✓ Rice University, endowed by Martha Lou Broussard.

Establishing the endowment is as easy as a phone call or e-mail. In fact, as I was writing this column, past AAPG President Dick Bishop called to commit to an endowment for the University of Houston.

If you would like more information on this new program please contact Rebecca Griffin in the AAPG Foundation office by telephone at 1-918-560-2644 (or, for domestic and Canada, 888-945-2274, Ext. 644), or by e-mail at rgriffin@aapg.org.

* * *

Plato said that "all learning has an emotional base." This is a great opportunity to provide a significant instrument of education based on the allegiance and emotion you feel for both your alma mater and professional society.

Rick

Digital Products University Subscription Fund

The first sponsored data program organized by AAPG was from 1993 to 1996, when AAPG's digital subsidiary, Datapages, Inc., and six industry leaders provided $900,000 to digitize the entire publications archive of AAPG. We became the first upstream publisher with a 100 percent digital archive. Anadarko, Conoco, Exxon, Marathon, Mobil, and Texaco provided the necessary seed money to make the first phase of growth possible and establishing AAPG as the preeminent leader in online upstream publishing. Since that time, AAPG/Datapages has captured and converted nearly 450,000 published pages.

The following is available for the Digital Products University Subscription Fund:

1. All AAPG publications from 1917 through present
2. *Journal of Sedimentary Research* 1931 through present
3. *Journal of Petroleum Geology* 1978 through 2002

Gulf Coast USA Group

4. GCAGS (Gulf Coast USA) *Transactions* 1951 through present
5. New Orleans Geological Society
6. East Texas Geological Society
7. Lafayette Geological Society

Mid-continent & Southwest USA Group

8. Tulsa Geological Society*
9. Oklahoma City Geological Society*
10. Panhandle (Amarillo) Geological Society
11. Ardmore (OK) Geological Society
12. Kansas Geological Society*
13. Fort Worth Geological Society*
14. Dallas Geological Society* Canadian Group
15. Canadian Society of Petroleum Geologists*

Rocky Mountain Group

16. Wyoming Geological Association*

International Group

17. Indonesian Petroleum Association*
18. Circum Pacific Council of Energy and Mineral Resources *

* Asterisk denotes collection "in process"

Ideas Welcomed

DEG Has Opportunities for Service

By STEVEN P. TISCHER
DEG President

AAPG's three divisions – Environmental Geosciences (DEG), Professional Affairs (DPA) and Energy Minerals (EMD) – have been given a great opportunity by our parent organization with the announcement that 2005-06 is the "Year of the Divisions."

President Pete Rose and Executive Director Rick Fritz started the initiative by announcing that the AAPG Executive Committee, the executive director and the division executive committees will have monthly conference calls to coordinate ideas and projects for the benefit of all.

The inaugural conference call in early July discussed the current position and status of scheduled projects each division is planning to pursue. During the call, Rick announced that the divisions may submit proposals to the AAPG Foundation requesting grants for specific projects. This will be an excellent opportunity for the divisions to fund projects deemed worthy by their respective executive committees.

The second divisions meeting was an all-day workshop in Dallas on Aug. 5, which provided the opportunity for Executive Committee attendees to discuss best practices and ways to "team" on projects to benefit all members of the AAPG.

Thanks to this face-to-face meeting I am sure wonderful new ideas and improved services will be realized and passed on to our respective memberships.

* * *

If you have an idea for a Foundation grant proposal for our division I recommend that you contact your Section's DEG Advisory Board member. If you are an international member, please contact one of the At-Large Advisory Board members. The names and contact information for the DEG Advisory Board may be found at: http://deg.aapg.org/officers.cfm.

* * *

The DEG has two new ad hoc committees:

❒ The **Geohazards Committee** is chaired by Douglas C. Peters.

I know Doug will really appreciate discussing any requests about participating on the Geohazards Committee. This committee will have ample opportunity to review how geohazards affect energy infrastructure around the world.

❒ The **Health and Safety Committee** is co-chaired by Kevin M. Bohacs and Stephen R. Oliveri.

Both of these gentlemen co-authored a field health and safety manual that will be published by AAPG and available for purchase later this year. They both look forward to discussing field health and safety points with you, and would appreciate volunteers to assist them on their committee.

* * *

The ad hoc **Programs Committee** and the **Continuing Education Committee** are in need of leadership.

The former Programs Committee Chair Steve Veal did a tremendous job lining up DEG sessions at the international meetings – but he had to take office as AAPG vice president!

The Continuing Education Committee provides members with the knowledge necessary to conduct professional activities. This committee is DEG's presence in the development of continuing education, academic curriculum, K-12 and professional development education opportunities, and should coordinate with the AAPG continuing education efforts.

If you are interested in serving the DEG on either of these committees, please contact me at your earliest convenience.

* * *

There are other opportunities to volunteer your service to the DEG – for example, consider the **Liaison Committee**, chaired by Chris Steincamp.

The Liaison Committee's mission is to maintain contact with federal agencies and Congress as appropriate, to:

✓ Inform the membership regarding laws, proposals and issues affecting geologists and their ability to provide earth resources to society.

✓ Inform federal agencies about scientific issues pertaining to laws and regulations.

Individual members conduct liaison with specific societies or working groups and are responsible for coordination and communication with those groups, including joint sponsorships, seminars and technical programs. Other duties include working closely with the DPA's Government Affairs Committee.

Chris looks forward to inquiries from volunteers wishing to assist him on the Liaison Committee.

* * *

Now is the time to step up, and volunteer your service to the division of your choice. The "Year of the Divisions" means opportunities abound over the next year.

I hope you will step up, be counted and contribute your valued service to one of your divisions! ❑