AAPG AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, AN INTERNATIONAL ORGANIZATION

EXPLORER

JULY 2007

Faces of Earth

See page 11

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July 2007

AAPG EXPLORER

On the cover: "Faces of Earth," a four-part, high-definition TV series that explores how the forces of nature made – and remade – this planet premieres this month on the Science Channel. The much-anticipated series tells its story via dramatic photography, state-of-the-art technology and through the eyes of many AAPG members. See story, page 11. The cover's photograph, a reminder of Earth's dramatic beauty, is the east flank of Utah's Laramide age San Rafael Swell; the steep dipping sandstone cliffs consists of the Jurassic Navajo, Kayenta and Wingate Formations. Photo by Thomas C. Chidsey Jr., a source for the stories on pages 12 and 16.

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Photo courtesy of NASA

Which way is up? Ah, a trick question – and not something that bothered astronaut and AAPG member Jim Reilly (bottom) and space shuttle *Atlantis* crew member John "Danny" Olivas (top right) as they worked on the International Space Station during their June mission. Among other tasks, Reilly helped connect power, data and cooling cables; released the launch restraints from and deployed the four solar array blanket boxes; and released the cinches and winches holding the photovoltaic radiator.

PRESIDENT'S COLUMN

Diverse EC Prepares Agenda for 2007-08

By WILLARD "WILL" GREEN

Happy New AAPG Year!!

We began a new fiscal year on July 1 and have new leaders throughout the organization ready and willing to serve as volunteers. Thanks to all of you. You are the lifeblood of our organization.

* * *

Your new Executive Committee is in place (see page 4) with eight members – the largest in our history. John Armentrout (Pacific Section) and John Hogg (Canada Region) are vice presidents, serving Sections and Regions, respectively; Ted Beaumont (Mid-Continent Section), secretary; Randi Martinsen (Rocky Mountain Section) returning for the second year as treasurer; Gretchen Gillis (Gulf Coast Section) beginning a three-year term as elected editor; Marty Hewitt (Canada Region), chair of the House of Delegates; Scott Tinker (Gulf Coast Section), president-elect; and yours truly (Southwest Section) as president.

This year's Executive Committee registers several records: It's the first EC with two vice presidents, two women and two Canadians – and the first president elected as a petition candidate.

We will work well together.

* * *

Retiring from the Executive Committee is President Lee Billingsley, who moves on to chair the Advisory Council. A year ago Lee foresaw the "coming year as one of execution of AAPG's existing plan," in order to give staff some relief from the pace of the previous year.

Green

As fate would have it, new opportunities were presented and the pace accelerated.

John Dolson, vice president living in Moscow, Russia, was our contact for expanding membership in Russia. John provided much valuable background information on many issues considered by the EC.

Mike Party, my fellow Midlander (Midland, Texas), completed his second year as secretary, serving diligently. Larry Jones, chair of the House of Delegates, successfully guided the graduated dues proposal through the HoD.

Last, but far from least, Ernie Mancini leaves the EC after three years as editor. Ernie could be counted on for reasonable, compassionate deliberations. Ernie moves on to the Research Committee.

We owe these guys a rousing round of

See **President**, page 6

'08-09 Candidates Named

Officer candidates for the 2008-09 term have been announced by the AAPG Executive Committee.

Candidate biographies and individual information will be published on the AAPG Web site and inserted in an upcoming EXPLORER.

The president-elect winner will serve as AAPG president in 2009-10. The terms for both vice president-sections and treasurer are two years.

Ballots will be mailed in spring '08.

The slate is:

President-Elect

❒ **John C. Lorenz**, Geoflight LLC, Edgewood, N.M.

❒ **Ronald A. Nelson**, Broken N Consulting, Cat Spring, Texas.

Vice President-Sections

❒ **David H. Hawk**, Energy Analysis and Answers/Consultant, Boise, Idaho.

❒ **W.C. "Rusty" Riese**, BP Americas, Katy, Texas.

Treasurer

❒ **Edith C. Allison**, U.S. Department of Energy, Washington, D.C.

❒ **Kay L. Pitts**, Aera Energy LLC, Bakersfield, Calif. ❑

'07-08 Executive Committee Seated

Will Green Takes Helm of AAPG

Willard R. "Will" Green, an independent geologist and head of Green Energy Resources in Midland, Texas, on July 1 assumed the presidency of AAPG.

Green, a native of San Angelo, Texas, holds bachelor's degrees in geological engineering and petroleum engineering from Texas A&M University and a master's in geology from the University of Texas at Austin.

He began his career with Shell Oil, working as a geologist in Denver, Roswell, N.M., Midland and Houston. In 1976 he joined GeoQuest International as senior geologist in Houston, and in 1977 joined BHP Petroleum (Americas) in Midland as division exploration manager.

He joined Forest Oil, also in Midland, in 1986, and in 1989 formed Green Energy Resources.

Joining Green on the Executive Committee is **Scott W. Tinker**, director of the Bureau of Economic Geology, University of Texas at Austin and Texas State Geologist who was voted president-elect.

Tinker will serve as AAPG president in 2008-09.

Others recently elected to the 2007-08 Executive Committee are:

❒ Vice president (Regions) – **John Hogg**, exploration vice president, MGM Energy, Calgary, Canada (two-year term).

❒ Vice president (Sections) – **John M. Armentrout**, Cascade Stratigraphic, Clackamas, Ore. (one-year term).

❒ Secretary – **Edward A. "Ted" Beaumont**, independent geologist, Tulsa.

❒ Editor – **Gretchen M. Gillis**, executive editor, books, Schlumberger, Sugar Land, Texas.

Remaining on the committee is **Randi S. Martinsen**, who will complete the second of a two-year term as treasurer.

Also on the new committee is **Martin D. "Marty" Hewitt**, division manager, business development, Nexen Petroleum Intl., Calgary, Canada, who assumed the chairmanship of the House of Delegates. ❑


Green


Tinker


Hogg


Armentrout


Beaumont


Gillis


Martinsen


Hewitt

Climate Comments Considered

The Executive Committee is considering member comments on the new AAPG Position Statement on Global Climate Change that has been proposed to replace the present statement.

The present AAPG Position Statement is being reconsidered following the nearly year-long discussions, leading to the sense of the leadership that it is not supported by a significant number of our members and prospective members.

Ninety-three comments on the proposed climate change position were posted in a members-only discussion on the AAPG Web site during the month of May.

A general taxonomy of the nature of the comments is:

✓ Agree Completely – 6
✓ Agree With Edits – 26
✓ Disagree – 6
✓ Keep Previous Statement – 18
✓ AAPG Should Have No Position – 18
✓ Other – 19

("Other" was considered when general statements were made with no specific opinion expressed on the statement.)

The comments are available for member review at www.aapg.org.

The proposed statement was crafted by a select ad hoc committee and has been unanimously recommended by that committee.

The AAPG Executive Committee and the ad hoc committee invited member comments.

The comments are under consideration by the EC in consultation with DPA and DEG leadership, and will ultimately lead to an approval of a final policy statement.

This position statement is one component of AAPG's effort on the topic of Global Climate Change. The EC will appoint a standing committee on the topic, and they will manage an ongoing Web forum that contains both information and discussion.

The issue was on the agenda for the June 30 Executive Committee. EC actions will be reported in the EXPLORER and on the AAPG Web site. ❑

President

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applause for their dedication and many hours of participation for our organization.

* * *

During April and May I recruited chairs for 14 of our presently authorized 40 committees. Committee chairs roll over after three years. Members have been most willing to serve and that has been a gratifying experience for me.

* * *

My goals for the 2007-08 year are:

✓ Move the annual Leadership Conference from February to August to more closely coincide with new terms of officers/leaders. (This is a done deal.)

✓ Extend the life of the AAPG/DPA Geoscience and Energy Office (Geo-DC) beyond it's presently authorized existence (6/30/08). A recommendation will be forthcoming from the Geo-DC Board of Governors in early 2008.

✓ Continue the development and implementation (with EC approval) of the proposed programs of the Petroleum Education and Research Consortium: Petroleum Grants for Geoscience, Petroleum Professionals of Practice and Chair of Petroleum Geoscience.

✓ Complete efforts to develop a new partnership to enable the continuation of the work of the Petroleum Technology Transfer Council under a new organizational structure.

✓ Complete revision of all position papers and post on Web site.

✓ Continue worldwide membership growth and expansion of services in order to become indispensable to all petroleum geologists.

✓ Accomplish a net increase of 1,000 Active/Associate members during fiscal 2007-08.

✓ Implement the graduated dues structure.

✓ Continue to simplify the membership application process.

✓ Complete Tactical Operations review cycle with the review of the communications directorate.

✓ Strengthen liaisons between committee chairs, committee managers and EC members.

✓ Establish new committees as needed – especially the Imperial Barrel Award Committee, to build on the wildly successful competition at the Long Beach annual meeting.

✓ Attend all six Section meetings, the European Region meeting in Athens, the International Petroleum Technology Conference in Dubai and others.

✓ Enjoy the camaraderie of interacting with fellow members of the world's largest and greatest geoscience organization: the American Association of Petroleum Geologists.

Adios 'til next month,

Will Green

Commitments to Exploration

Starting Over? Start Smart

Editor's note: Many experts believe that many opportunities are present for those explorers who are ready to go hunting for the big targets that spell success – but even if you're ready, getting started isn't an easy task. Fortunately, these moves have been done before – and some who are in the midst of taking the big step took time to share their experiences with the EXPLORER.

Something New: The Timing Was Perfect

By DAVID BROWN
EXPLORER Correspondent

They say when one door closes, another door opens.

Four experienced managers at Burlington Resources didn't hesitate when ConocoPhillips acquired their company in March 2006.

ConocoPhillips began to make a lot of changes, so they headed straight for the door marked Exit.

"We decided that was a good opportunity to go out and try our own thing," said Dick Wilken.

Before the merger, Wilken was Burlington's exploration manager-western U.S. unconventional resources.

Today, he's the president of Marquette Exploration LLC in The Woodlands, Texas, an exploration start-up founded in partnership with ENCAP Investments last year.

Wilken and three of his co-workers put the company together to work Lower 48 unconventional gas plays.

"All of us have 17 to over 25 years' experience. Individually and on teams, we've had quite a bit of success. We felt pretty strongly we could do it on our own," he said.

Wilken, a geophysicist, earned a geology degree at the University of Iowa, then moved to the University of Oklahoma for graduate studies. He began his career with Conoco in 1990.

Other partners in the new venture are:

✓ Jerry Zieche, vice president of exploration. Zieche, an AAPG member and 27-year industry veteran, started his career with Precision Well Logging. He was Burlington's exploration manager-eastern U.S. unconventional resources.

✓ Trey Shepherd III, vice president of land. Shepherd began his career 25 years ago in the land department of Atlantic Richfield Co. He was senior staff land adviser for Burlington's Lower 48 Exploration group.

✓ Terry Huchton, vice president of operations. Huchton joined Superior Oil as a production engineer in 1982. He was a senior project reservoir engineer for Burlington.

One thing the company founders discovered right away: Money wasn't going to be the problem.

"There's a lot of money out there right now chasing experienced management teams," Wilken said. "It real quickly went from 'Can we do this?' to 'What kind of deal can we get?' We got offers from everyone we talked to."

The Explorers

Marquette aimed at exploration from the start. The company even took its name from an explorer, Father Jacques Marquette, the Jesuit missionary who discovered and explored the Mississippi River.

"As opposed to an acquire-and-exploit kind of start-up, we're a pure exploration company. We're actively leasing in several different plays we've identified," Wilken said.

The company actually does have a little production, which it got "almost by accident" in a land acquisition, he explained.

With an emphasis solely on unconventional plays in the Lower 48 states, Marquette is "exclusively looking for gas – we're focused on looking for shale gas and tight sands," Wilken said.

New companies today face a high-cost environment and shortages of everything from trained people to rig time.

There's also a real battle for attractive leases, according to Wilken.

"Costs are up," he said. "But more than costs, our biggest concern is that competition for leases is very intense. Being the size we are, we're worried about some of the larger companies getting into our plays."

When Marquette prepared to open its doors it was gifted in exploration talent but seriously lacking in business support.

But that turned out not to matter so much, either. Wilken said the company turned to outside providers for necessary services.

"We discovered as we went along that we were able to outsource basically everything, which has allowed us to almost have a virtual oil company," he explained. "I think that's a pretty good model for a start-up."

That support includes just about anything an oil company might do in the field.

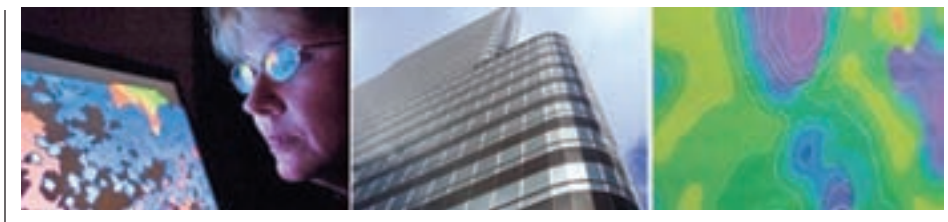
"We hired an operations company that does everything from staking a well to selling the gas, if we want them to, as much or as little of that as we want," Wilken said.

"They have regulatory staff. They have marketing, petroleum engineers, completion engineers," he added.

Drawing on the heft, capability and influence of a larger company also benefits Marquette, Wilken noted.

While a tiny independent might have trouble securing drilling-rig time and crews, the operations company drilled 150 wells last year and has good

See **Marquette**, page 10



Getting Into Deeper Waters – With Purpose

By DAVID BROWN
EXPLORER Correspondent

It's not a "little fish" kind of exploration start-up.

Cobalt International Energy LP of Houston plans to go after some of the biggest fish in the world, in some of the deepest waters explored.

Jim Farnsworth, Cobalt's president and chief operating officer, puts it bluntly:

"The greatest value in the E&P chain comes from finding the big discoveries," he said.

Cobalt was founded in December 2005, on nothing more than a wish, a dream and $500 million in funding from Carlyle/Riverstone and Goldman Sachs Capital Partners.

It was designed as a global, big-target, deepwater explorer from the git-go – the company takes its name from the dense cobalt blue of offshore deep waters.

"Clearly, this is a very different kind of company," Farnsworth said.

"We do believe that the highest multiples come from the exploration phase," he added.

Farnsworth, an AAPG member, earned a degree in geology at Indiana University and a master's in geophysics from Western Michigan University.

After joining BP in 1983, his assignments at that company included deepwater Gulf of Mexico production manager, vice president of Gulf of Mexico exploration and vice president of North America exploration.

He took early retirement as BP's vice president of worldwide exploration and technology, and became Cobalt's president in February last year.

Other key employees are:

✓ Joseph Bryant, chairman and chief executive officer. A 29-year veteran of the oil and gas industry, Bryant was president and chief operating officer of Unocal Corp.

✓ Samuel Gillespie, vice chairman. Gillespie served as senior vice president and general counsel for both Mobil Corp. and Unocal.

✓ James Painter, executive vice president, exploration. Another AAPG member, Painter ran the deepwater Gulf of Mexico program at Ocean Energy Inc. He was senior vice president of exploration and technology at Unocal.

Bryant put the idea of Cobalt together and attracted its management team.

He has praised the idea of a virtual oil company, noting that Cobalt outsources almost every one of its non-core, non-exploration functions.

Geology First

On its Web site, Cobalt lists 10 key concepts of the company's exploration philosophy. Those include:

✓ Our deep regional and sub-regional understanding is essential to developing and retaining a competitive advantage.

✓ Our strategy is to maintain a deep portfolio in a manageable number of key, quality basins.

✓ Geology is understood as a first principle, and only then are the geophysics applied.

Cobalt relies on an in-depth knowledge of its potential exploration areas, with geology the fundamental starting point, according to Farnsworth.

"The reason that's on our Web site is that we hold to it quite deeply," he said.

And he means it. Farnsworth expresses the views of an unconditional and committed explorationist.

In part, that's simple economics.

It costs $1 to $4 to get to a barrel of oil through exploration, compared to $10 to $15 per barrel to produce that oil through development work, he noted.

This basic belief in exploration even guided the company's search for investing partners.

"It was important to me when we started Cobalt that we had not only sufficient funding, but also the right kind of funding," Farnsworth explained.

He said he wanted "intelligent investors" who would understand the company's commitment and approach to exploration.

So far, Cobalt has limited its focus to prospects in the deepwater Gulf of Mexico and offshore Africa. In last August's western Gulf of Mexico lease sale it put down more than $33 million on two dozen blocks.

"We are not a large company in terms of number of people, so we have to stay focused," Farnsworth said. "We feel like we can compete with anybody in those areas."

Since the company started, exploration in deepwater has become even more mind-crushingly expensive. Day rates for ultra-deepwater drillships have climbed to the $500,000 level.

"We recognized that rig rates were high and were likely to stay that way. It definitely focuses your mind on having great prospects to drill," Farnsworth said.

"We're in a very high-cost environment right now," he added. "You have to have a deep understanding of the basins where you're exploring."

One of Cobalt's objectives is to do exploration well. That would put it in select company, Farnsworth said.

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Cobalt

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Farnsworth

"There aren't many companies who do exploration well. You have to have the right people, right data and the know-how ... It's tremendously competitive," he observed.

That's especially true in the Gulf of Mexico, which Farnsworth called "a robust basin" with plenty of opportunities left – and lots of companies looking for them.


Painter

Cobalt has a staff of about 25 geologists and geophysicists. Farnsworth said he was adamant about hiring quality people.

"Once you attract really good people, other good people want to come work with you," he noted.

With BP, Farnsworth found he had good weeks and bad weeks.

"When you're starting up a new company, you almost have good minutes and bad minutes," he said.

After a year and a half, Cobalt now is ready for the next step, Farnsworth said, when the serious hunt begins.

"Next year we'll be drilling, so we're not really in the start-up phase any longer," he said. "I'm not moving the furniture around the office now."

And about leaving one of the world's supermajors?

For Farnsworth, no regrets.

"My biggest surprise," he said, "is how much fun it's been working in a smaller company." ❑

Start-Ups Find Strength in Being 'Nimble'

With so much money pouring into upstream oil and gas, start-up companies have discovered the practice of investor shopping.

ReoStar Energy Corp. of Fort Worth decided to shop in Europe.

European investors "tend to have a longer time horizon than the Americans who are looking at the next quarter. They're looking at a timeframe of three to five years," said Scott Allen, the company's chief financial officer.

ReoStar was founded earlier this year as an acquire-and-develop operation with production and acreage in the Barnett Shale, holdings in the Fayetteville Shale, a Corsicana enhanced recovery project and a gas gathering system.

It's now a publicly traded, OTC-listed company. Allen estimated ReoStar's assets at about $75 million.

Going public gave the start-up a way to raise capital for new opportunities, he said.

"There's a tremendous amount of money being put in place in the oil and gas business," Allen said. "The challenge is to differentiate yourself from other companies that are just going out and buying acreage, and then finding out you've drilled a $50 million dry hole."

While other start-ups outsource everything possible, ReoStar is looking at the opposite choice as a cost-savings measure.

The company is "investigating insourcing what has traditionally been outsourced to the service companies," going so far as to buy its own workover rig, according to Allen.

It's also keeping tight control on costs and being selective in new investments.

"One of the analogies we have around here is that it's a lot like sitting at a bus stop," Allen said.

An opportunity is like a bus that shows up, and the company has only a short time to decide whether or not to take it.

"Our strategy is to be nimble," he said, "so we can get on the correct bus when it comes along."

– DAVID BROWN

Marquette

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access to rigs.

"It gets back to what I was saying about a virtual oil company. It allows people like us to have ideas and capital, and to focus on developing those projects," Wilken said.

"When you talk to the venture capitalists," he said, "there's a lot more money out there than there are ideas."

People Who Need People

Not that outsourcing so much was a simple task.

"There's no list anywhere" of support providers for an oil industry start-up, Wilken said. "I spent a lot more time on that than I thought I would."

If the oil and gas industry today presents numerous challenges for a start-up company, it also provides opportunities for a nimble and skilled competitor.

As Wilken sees it, Marquette's biggest advantages are "the speed at which we can move. And the fact that we have a very experienced landman, petroleum engineer, geologist, geophysicist.

"Plus," he said, "we've hired another geologist.

"We're all very experienced. A lot of companies don't have enough personnel to pursue all the ideas they'd like to, so there's some opportunity for us right now," he said.

Despite the industry's shortage of qualified professionals, Marquette had no problem in attracting interest from potential staff, according to Wilken.

"We hired people we used to work with and know," he said. "It's all about the people. We're in a position where we have more people who'd like to come and work with us than we are able to add right now."

After a year on their own, Wilken and his colleagues have successfully completed the initial steps in starting a new exploration company.

As a trailblazer – "I get people calling me all the time who are thinking about doing this," Wilken said – he has a couple of pieces of advice.

✓ First, "if you're going the private equity route, talk to as many private equity companies as you can. Talk to people who've dealt with them before," he advised.

"Are they going to be in your office every day? Are you going to be running the company, or are you going to be working for them?"

✓ Second, build up a network of business support for those necessary tasks beyond your expertise.

"From our point of view, the outsourcing model is really working well, from a cost standpoint and for the efficient use of our time," Wilken said.

✓ Finally, recognize a basic fact: You aren't just going exploring.

You're going into business.

"The biggest surprise to us," he said, "was the amount of non-oil-and-gas things that came up." ❑

AAPG Foundation Supports TV Series

‘Faces of Earth’ Set for July Debut

By VERN STEFANIC
EXPLORER Managing Editor

“Faces of Earth,” a much-anticipated, high-definition television series produced by the American Geological Institute with support from the AAPG Foundation, makes its debut this month on the Science Channel.

“Faces of Earth” is a four-part series exploring the forces of nature that have made and constantly remake Earth – shown via state-of-the-art computer graphics, aerial photography and production techniques that are as educational as they are dazzling.

The premiere episode will air at 9 p.m. (EDT/PDT) on July 23. The Science Channel is available through cable and satellite services.

The story is told by and through the eyes of several geologists and other geoscientists – including many AAPG members.

A portion of the series was shown in April before the opening session in April at the AAPG Annual Convention in Long Beach – to enthusiastic applause.

The four parts of the series and their air dates (all at 9 p.m. EDT/PDT) are:

✓ “Assembling America,” which is “a traverse across North America, exploring how the land we see today is the result of hundreds of millions of years of Earth’s processes interacting. Monday, July 23.

✓ “Shaping the Planet,” which is a global look at how the Earth works - from the greatest depths of the inner Earth to the surface we live on – where “the dynamic processes are revealed where they impact humans directly - from Ethiopia to Italy to Tibet.” Thursday, July 26.

✓ “Building the Planet,” which explores the planet’s birth and evolution. “Follow geoscientists as they learn how each part of Earth interacts together through time, protecting us from solar winds to the energy and mineral resources that drive our society.” Thursday, Aug. 2.

✓ “A Human World,” which explores the relationship between humans and Earth, showing how the planet has defined and shaped our civilizations, and how humans have interacted with the planet. Thursday, Aug. 9.

AGI will use the series’ footage and animations to create educational ancillary materials for the classroom, including DVDs showing geoscientific phenomena and their causes and effects, as well as interviews with geoscientists.

The AAPG Foundation, one of seven sponsors for the series, contributed $100,000 to the project specifically toward “taking the next step” in providing a public outreach mechanism for the series.

AAPG Foundation Trustee Chairman Jack C. Threet said the Foundation bequest “represents about a third of the cost of developing, producing and distributing the ancillary materials and was a major factor in bringing in the other two-thirds of the necessary funding.”

The ancillary materials include:

✓ A DVD of the four “Faces of Earth” episodes with three soundtracks – the original narration, Spanish narration and narration linked to instructional materials.

✓ Instruction materials consisting of career vignettes, lessons and trade books for middle and high school students, with hands-on and field-based science activities.

✓ A CD-ROM, offering content similar to the DVD but intended for school settings without DVD capability.

✓ A Web site to feature access to educational environments according to the viewer interests, including public policy.

✓ Printed educational materials to be made available via the Discovery Channel stores and other outlets.

Other sponsors along with the AAPG Foundation are the AGI Foundation; Discovery Communications; ExxonMobil; the Jackson School of Geosciences at the University of Texas at Austin; Rive Gauche International Television; and the U.S. Geological Survey.

For information on the Science Channel go to www.science.discovery.com. ❑

Shale Potential to be Tested

Gas Powering Utah Activity

By LOUISE S. DURHAM
EXPLORER Correspondent

Utah is a happening place, where the industry action just keeps escalating.

"We're seeing record drilling permits in Utah, mainly for tight gas," said Tom Chidsey, petroleum section chief at the Utah Geological Survey (UGS). "Just last year, more than 2,000 drilling permits were issued, with most of these in the Uinta Basin area for gas.


Chidsey

"In fact, out of the 1,057 wells spudded in 2006, 656 were in Uintah County in the eastern Uinta Basin where the tight gas is," Chidsey noted. "They're going mainly for Wasatch and Mesaverde tight gas at depths from 7,000 to 10,000 feet."

The 2006 permit numbers contrast markedly with earlier times. For instance, 253 drilling permits were issued in 1990 and 673 in 2000.

The presence of gas held hostage by tight sandstone reservoirs was recognized in this region years ago, but getting it out of the ground economically was not an option. Today, favorable commodity prices and advanced technology have vastly altered the economics of producing this resource.

Utah is the tenth largest producer of natural gas by state in the United States, according to the UGS, and most of it comes from the Uinta Basin, which produced more than 19 BCF in November 2006. Of this total, 14.1 BCF originated in the eastern part of the Basin at Natural Buttes field, which is the largest natural gas field in Utah.

Not to worry, there's plenty left.

Estimates from the U.S. Geological Survey reveal that the Uinta Basin harbors reserves of more than 16 TCF of undiscovered, technically recoverable resources.

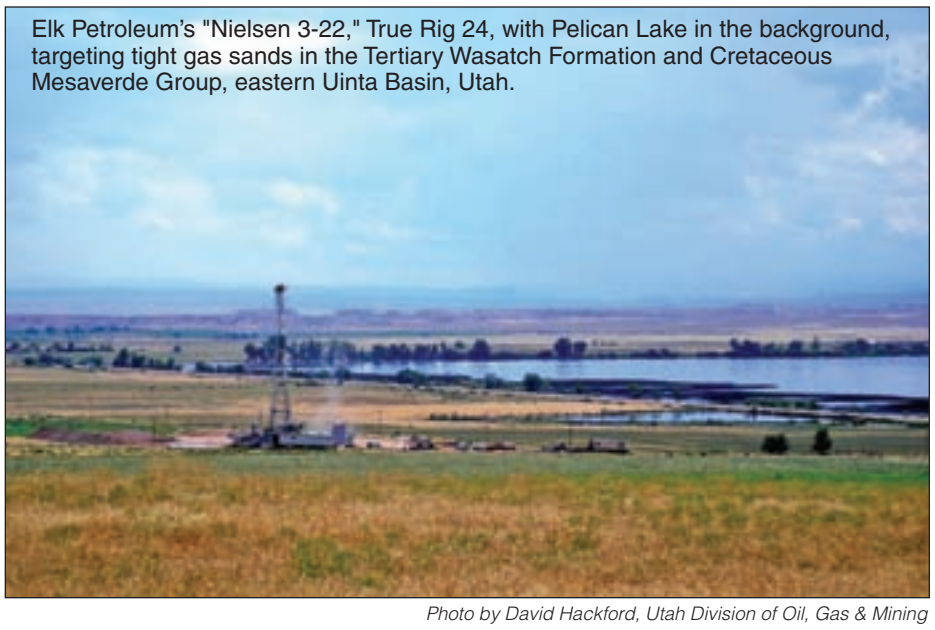
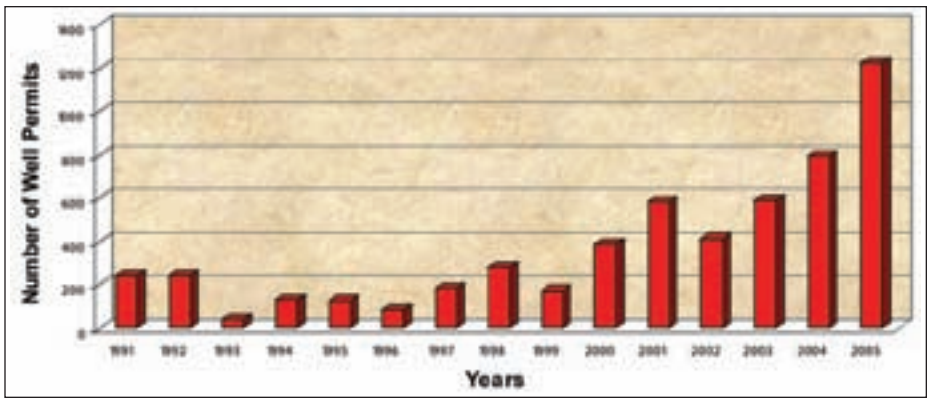

Elk Petroleum's "Nielsen 3-22," True Rig 24, with Pelican Lake in the background, targeting tight gas sands in the Tertiary Wasatch Formation and Cretaceous Mesaverde Group, eastern Uinta Basin, Utah.

Photo by David Hackford, Utah Division of Oil, Gas & Mining



Shale Gas Activity

If tight gas sandstones fail to excite you, another option is to take a look at shale gas, which also has the potential to become the next big thing for the prospectors.

Only a few years ago, there was plenty of talk about shale gas prospectivity but nothing to show for it. Some old wells – think mid-1960s – drilled into the shales, but operators lacked the expertise and technology to complete them to get good gas production.

Any production was serendipity for the most part, coming up the pipe as "add-on" gas.

The continuing speculation and rumors about the shales' potential

continued on next page

continued from previous page

productivity encouraged consultant and AAPG member Steve Schamel to approach the UGS in 2004 seeking its support to undertake a study of shale gas in the state.

"There had been a few discoveries early on that no one had done anything with," Schamel said, "and some consultants were out looking at possibilities for clients, but none of this information was being reported. So I proposed a project to the Survey to systematically look at the characteristics of these shales in the state."

Schamel's proposal was approved, and the results of the ensuing study have been published by the UGS.

The effort included a look at analogs of producing gas shales such as the Barnett, the Lewis shale in the San Juan and others to determine which shales had potential and for what reason.

"A lot of the shale in Utah is not prospective because it hasn't reached a high enough degree of thermal maturity," Schamel said. "It's too late now because it's being eroded away. In fact, many of these shales are close to the surface and not being buried."

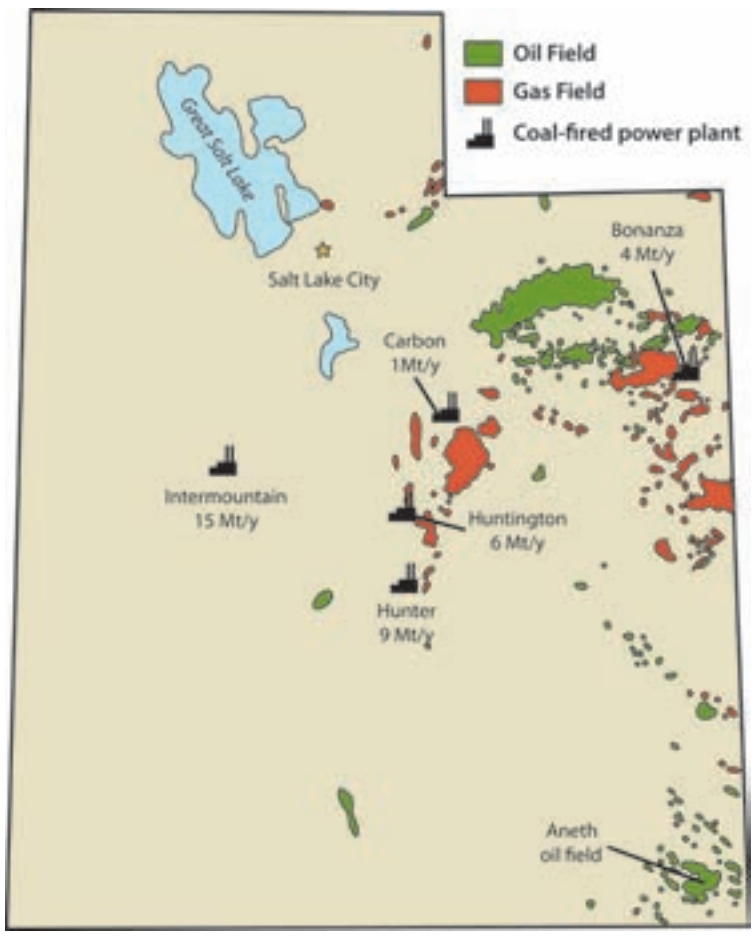
The good news is a few areas harbor shales that hold considerable promise for gas production. In fact, Schamel identified several organic carbon-rich shale units that appeared to have strong potential for commercial exploitation. These include:

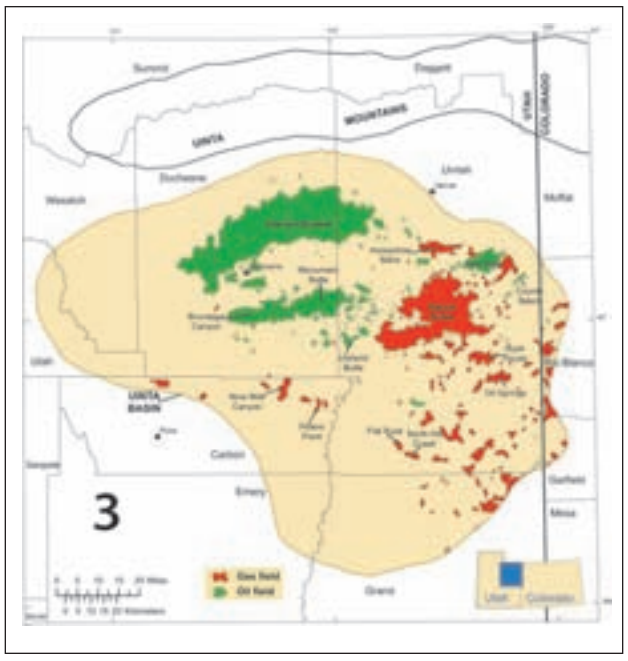
✓ Several intervals of the 3,000-3,800 feet thick Mancos Shale of the Upper Cretaceous in the southern and central Uinta Basin.

✓ Black Shale intervals of the

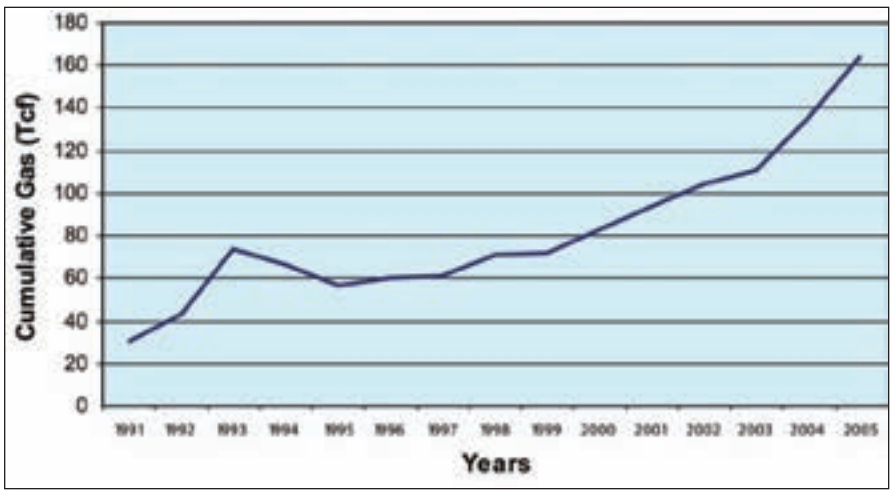
See **Utah Activity**, next page

Photo courtesy of Steve Schamel





Above, a Prairie Canyon member of the Mancos Shale forming low cuestas east of Green River, Utah. The top of the mesa is supported by the basal sandstones of the Blackhawk Formation. The graphics to the left and below show the general locations of oil and gas plays in Utah, including a closer look at targets in the Uinta Basin – of all of which are keeping Utah on the industry's production map.



Left: Tom Chidsey standing at Desolation Canyon in the southern Uinta Basin, with outcrops of Tertiary Green River and Wasatch Formations, and Cretaceous Mesaverde Group – major hydrocarbon producers in the basin. Photo by Craig D. Morgan, Utah Geological Survey. Above, Utah's record of gas production.

Utah Activity

from previous page

Pennsylvanian Paradox Formation in the deeper northeast half of the Paradox Basin.

✓ Manning-Doughnut Shale identified as Mississippian-Pennsylvanian boundary age, east of the Wasatch Front.

It is noteworthy that shale gas potential will comprise one of many topics to be included in the upcoming AAPG Rocky Mountain Section meeting, to be held Oct. 6-9 in Snowbird, Utah. A number of papers, posters, short courses and three field trips will be presented dealing with recent gas and oil developments in the region.

'Sitting Tight'

Prior to Schamel's study for the UGS, a few wells were producing "add-on" natural gas from wells completed in specific intervals of the Mancos. He noted several other Uinta Basin wells currently are producing natural gas from the Mancos Shale, but well records are being held confidential.

"The Mancos Shale gas play is now established, at least in the Prairie Canyon and Lower Blue Gate members," Schamel said. "I anticipate that this play will expand very rapidly in the next few years.

"There's a well about to be drilled for gas in the Manning Canyon shale," he added. "I think before the end of the year someone will know if it has real potential for shale gas."

There's also considerable buzz among the prospectors over a couple of wells drilled by Delta Petroleum in its Greentown project in the Paradox Basin – but mum's the word from Delta.

"The company hasn't come out and said they're testing in the Black Shale units," Schamel noted. "They've just described them as clastics, so I'm reserving judgment until I know what they actually completed in.

"One figure I saw looks very much like a profile through the Paradox Formation of the individual shale units," he added. "It's likely the shales, but it could be the sands, because in that part of the basin there are some thick sandstones.

"Delta is being very cagey, sitting tight on the well report."

Chidsey noted "we're getting a lot of inquiries about the discovery." ❑

Demonstration Being Monitored

Corralling CO_2 A Win-Win for Oil

By LOUISE S. DURHAM
EXPLORER Correspondent

Given the ongoing debate about the causes of global warming, there's at least one generally accepted fact: "Greenhouse" gases present in the atmosphere prevent heat from escaping into space.

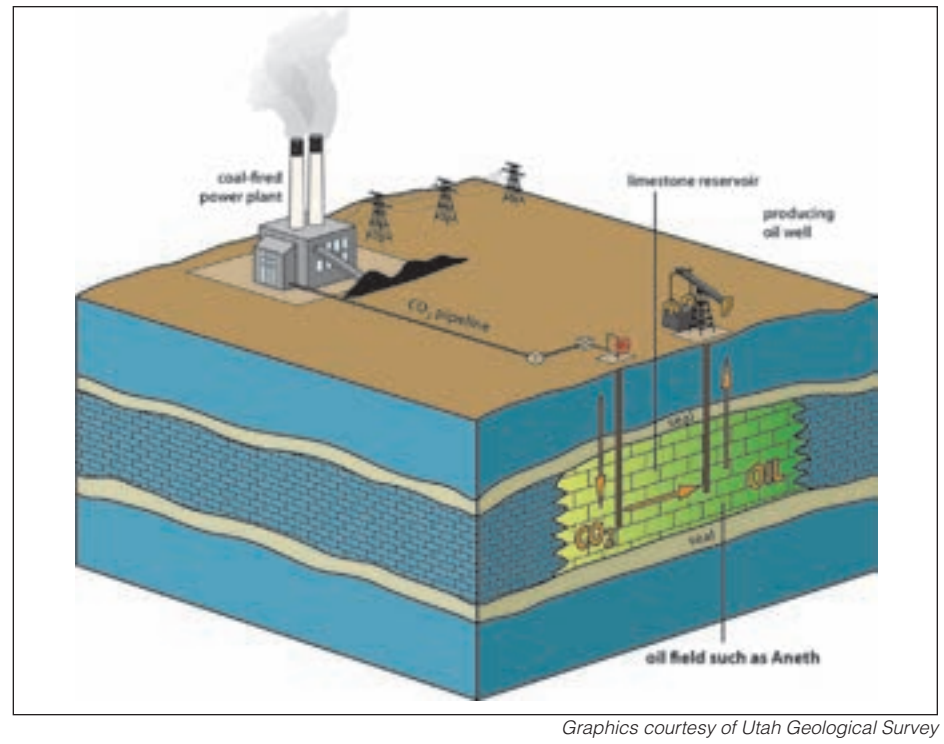
Without this greenhouse effect, of course, the earth would be a mighty cold place, no doubt unsuitable for most life forms.

Carbon dioxide (CO_2), which is a naturally occurring non-hazardous component of the atmosphere, is also a greenhouse gas. But unnatural buildup of CO_2 – such as that from coal-fired power plants – is thought to have the potential to increase the greenhouse effect and is generally viewed as a threat to the equilibrium of the carbon cycle that has operated for millions of years.

The Utah Geological Survey (UGS) is a partner in a federal government-funded effort to evaluate available technologies to capture and to reduce greenhouse gas emissions in the southwest United States via carbon sequestration, i.e., CO_2 storage, principally in underground geological formations.

"We're in the Southwest Regional Partnership (SWP) for carbon sequestration," said Tom Chidsey, petroleum section chief at the UGS, "and there are partnerships all over the country."

Chidsey was chairman of the 2003 AAPG Annual Convention in Salt Lake City.



Graphics courtesy of Utah Geological Survey

Utah's Aneth field has produced more than 425 million barrels of oil, but an additional 15,000 barrels per day – a 140 percent increase – may be recovered via CO_2 flooding.

"The Southwest Partnership is one part of a huge thing, with major funding from the federal government," Chidsey continued. "There are groups such as state surveys, federal laboratories (U.S. Department of Energy) and universities all over the place working on this problem."

Separation Anxiety

The UGS has been investigating permanent, safe geological storage, or sequestration, of CO_2 for the past six years. The studies determined the gas can be sequestered in:

✓ Large fold of rock (anticlines like the San Rafael Swell).

✓ Coalbeds.

✓ Deep saline aquifers, particularly near power plants.

Carbon dioxide also can be stored in the state's many aging oil and gas fields, where it can be injected into the partially depleted reservoirs after production ceases.

In fact, a UGS study concluded as much as 1.8 billion tons of CO_2 could be sequestered in oil and gas fields in Utah.

When it comes to oil reservoirs, there's a whole other side to this story.

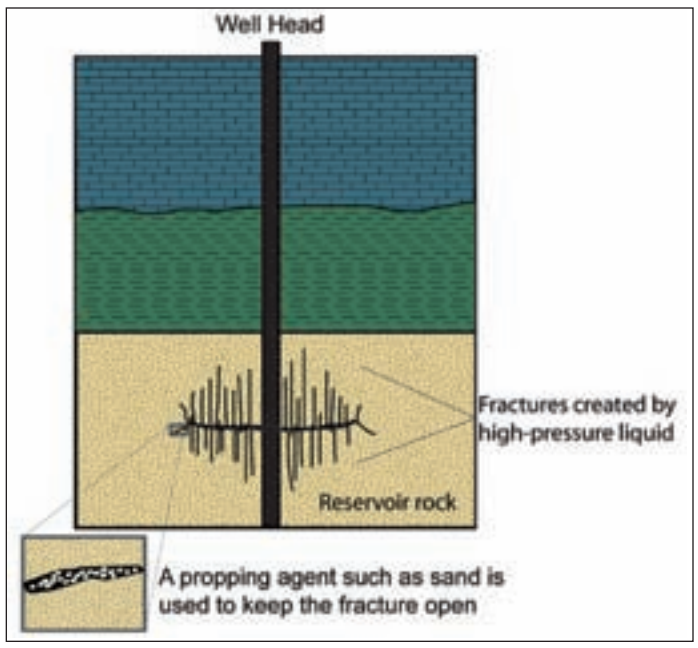
"The point of what we're doing there," Chidsey said, "is to try to increase oil production and sequester CO_2 at the same time."

Once a reservoir is produced to the max, as much as 60 percent or more oil may be retained within the pores of the reservoir rock by a combination of capillary, gravity and viscous forces.

Carbon dioxide is soluble in oil, and when dissolved in oil it decreases the viscosity, allowing it to flow more readily and thereby allowing the previously trapped oil to be produced.

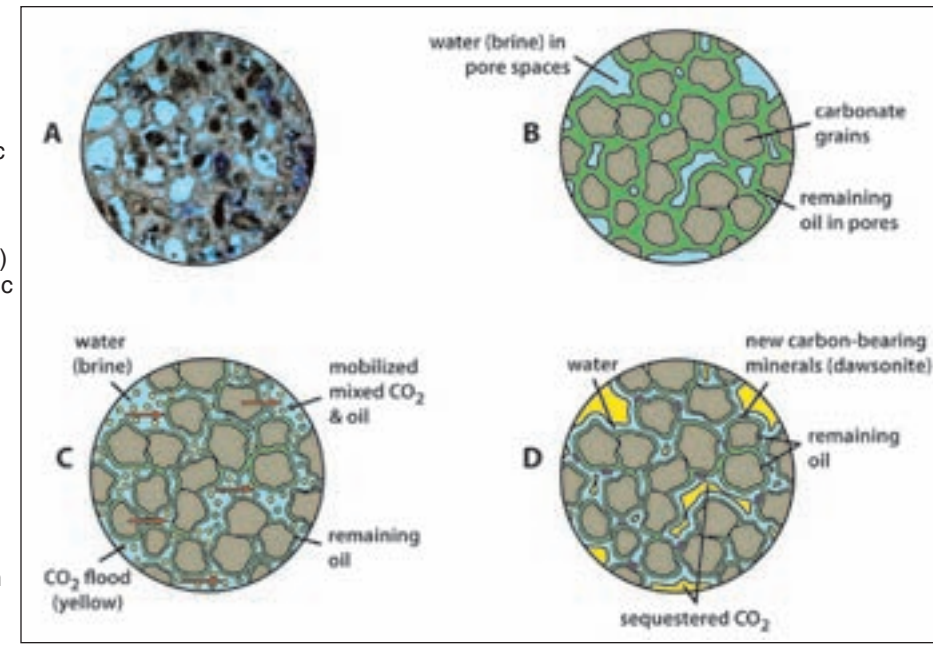
The produced CO_2 can then be separated from the oil and re-injected into the reservoir for permanent storage.

See **Sequestration**, page 18



Left: A schematic diagram of hydraulic fracturing in a tight gas sandstone.

Right: (A) Microscopic view of pores (blue areas) from the limestone reservoir rock at Aneth field; (B) schematic microscopic view of pores containing water (brine) and unproduced oil; (C) same diagram, now showing injected CO_2 and now-mobile oil mixed with CO_2; (D) carbon dioxide stored as a gaseous state and dissolved in brine.



Sequestration

from page 16

The hydrocarbon reservoir has an indigenous barrier to escape – the seal.

Questions

This miscible displacement form of enhanced recovery has been used for many years in numerous fields, including the Aneth field in southwestern Utah's San Juan County.

The CO_2 is transported via pipeline from a natural source in Colorado.

Aneth has produced more than 425 million barrels of oil, and an additional 15,000 barrels per day may be recovered via CO_2 flooding. This would result in a 140 percent increase in the production rate, the UGS reported.

The unknown in this attractive scenario is the ultimate fate of the CO_2 at Aneth or other fields over time. To that end the SWP is conducting a demonstration project to attempt to answer a number of questions:

✓ Will the CO_2 leak through seal rocks along unknown faults or natural fracture systems into important ground water aquifers or to the surface?

✓ Will it leak through the cement behind the casing of old oil wells?

✓ What are the long-term effects of CO_2 in contact with the seal rocks?

According to the UGS, the operator at Aneth has expanded the CO_2 enhanced oil recovery program into portions of the field that have not been previously subjected to CO_2 injection. This will provide the opportunity to monitor the movement of the CO_2 from the beginning.

Hydrocarbons have been stored in naturally occurring reservoir traps for millions of years. Chidsey said the UGS is optimistic the demonstration will show that CO_2 also can be stored safely in mature fields like Aneth, thereby reducing its presence in the atmosphere while simultaneously increasing oil production. ❑

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Idea: Extended Drilling

Reach Out and Touch Some Oil

By LOUISE S. DURHAM
EXPLORER Correspondent

Oh, the irony of it all.

Groups both pro and con battle passionately over offshore drilling in many regions of the United States – and they battle so intensely that perhaps everyone is overlooking an obvious solution.

While the mere suggestion of installing drilling platforms in environmentally sensitive offshore areas such as California, Florida, etc., triggers a major freak-out among many elected officials – and others – a technology exists to tap some of the close-in offshore resources by drilling from an onshore location.

Is it possible that everyone can be happy?

The technology is called extended reach drilling (ERD), and it enables long horizontal offsets to be drilled to sites that might otherwise be inaccessible.

Perhaps the best known ERD success story can be found in southern England's BP-operated Wytch Farm field, which reportedly is the largest onshore oil field in western Europe. The field actually lies underneath Poole Harbor stretching out to sea beneath Poole Bay in the Dorset Coast region, which is one of the most environmentally sensitive areas in the United Kingdom.

At the Wytch Farm field, long-reach deviated wells are drilled in a radial pattern from a camouflaged central well pad onshore to locations several miles out into scenic Poole Bay. In fact, a well reached within less than 2,000 feet of a seven-mile departure, according to Tom

Bjorklund

Bjorklund, research scientist in the geosciences department at the University of Houston.

During the recent AAPG Annual Convention in Long Beach, Calif., Bjorklund's poster presentation on using ERD to develop California OCS reserves left no doubt he's on a mission to get the word out about the potential for this technology.

"I wanted to get information out to the public more," Bjorklund said, "because (in) all of the discussions in Congress last year about offshore drilling, they kept talking about 200, 100, 50 miles offshore.

"The discussion was missing the possibility of a large potential from zero to seven miles offshore that could be developed without offshore rigs or platforms," he noted. "This was not included in all the talking.

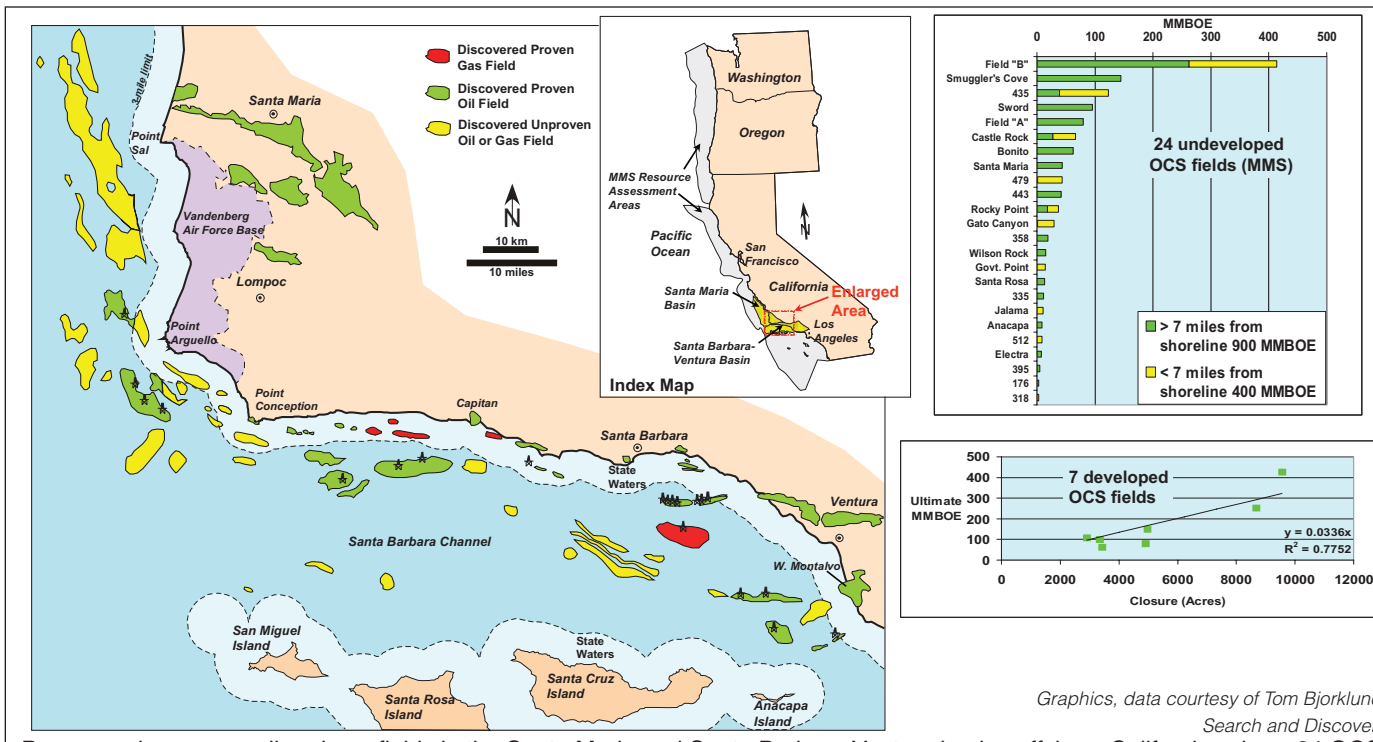
"My point is to get this particular subject out as part of the dialog in offshore drilling," he added. "The use of ERD to develop the offshore resources of the United States should be considered in the formulation of a rational, knowledge-based energy policy."

By the Numbers

The volumes of oil and gas awaiting recovery offshore California are huge.

"Discovered and undiscovered conventionally recoverable oil and gas resources of the Pacific OCS region are estimated to range from 14 to 19 billion BOE, according to the MMS," Bjorklund noted.

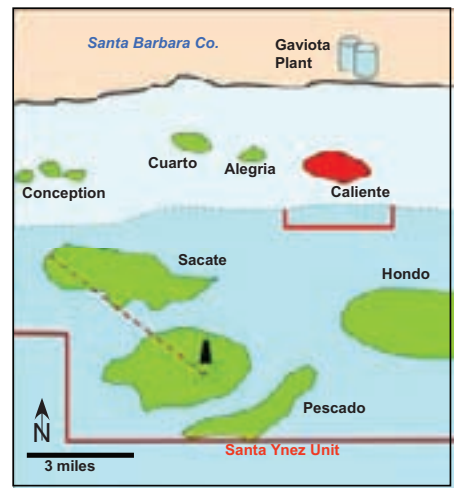
See **Extended Reach**, page 22



Graphics, data courtesy of Tom Bjorklund, Search and Discovery

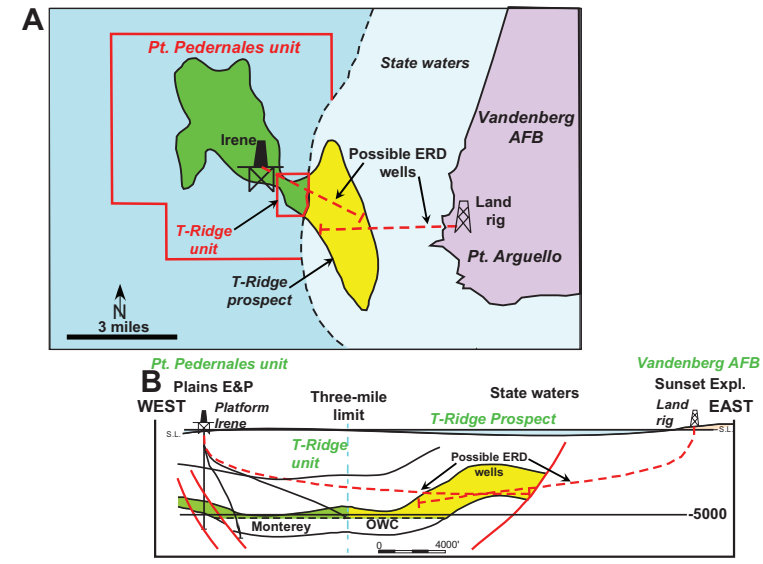
Proven and unproven oil and gas fields in the Santa Maria and Santa Barbara-Ventura basins offshore California, where 24 OCS fields (chart; yellow areas in federal waters) have been discovered but remain undeveloped due to federal and state drilling restrictions. Limited published data indicate that at least five prospects entirely in state waters remain unevaluated (yellow areas in state waters). The total reserve potential of all undeveloped fields and prospects may range from 1.5-3.4 billion BOE. The graph immediately above, right, shows a linear regression analysis of the ultimate reserves in seven offshore fields producing mainly from the Monterey Formation, and the closure areas of the fields.

Completed ERD project



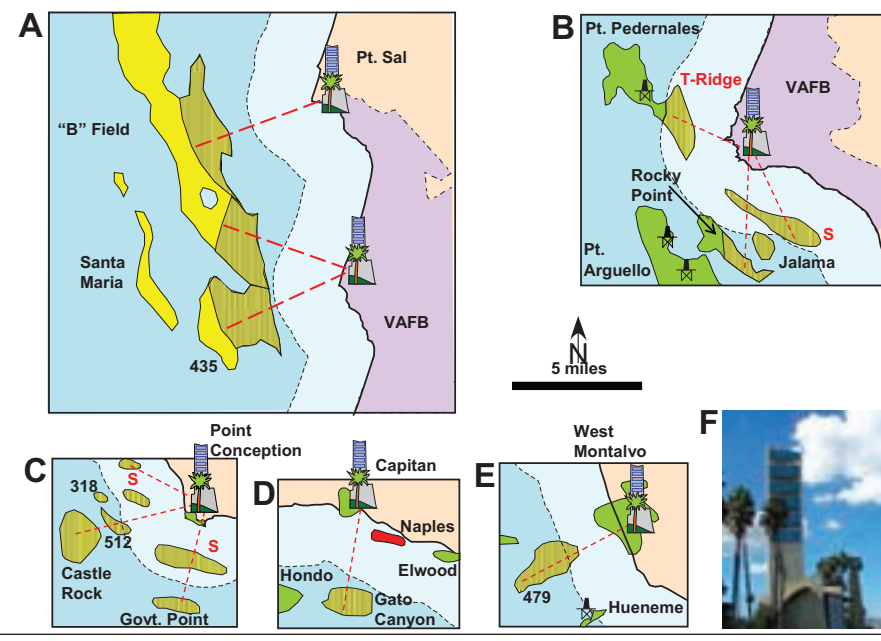
Since 1999 ExxonMobil has drilled 15 ERD wells from Platform heritage into the Sacate Field; the 15th well reaches over five-and-a-half miles (red dash line) and is the longest ERD well in North America.

Proposed ERD project



Plains E&P has announced plans to use ERD from Platform Irene in its Point Pedernales United to develop the T-Ridge prospect in California state waters. The ERD reach is expected to be about four miles, to develop the fractured Monterey Formation.

Possible ERD projects



The total reserve potential of these sites ranges from 500 to 1,000 MMBOE. Shown are the plan possibilities for North Vandenberg Air Force Base (A); South Vandenberg AFB (B); Pt. Conception (C); Capitan (D); and West Montalvo (E). The image is of the man-made Grissom drilling island near Long Beach, Calif., showing how the use of camouflaging can enhance the visual impact of operations in urban areas.

Photo courtesy of Coast Geological Society

Fractures in the Monterey Formation exposed on a wavecut platform along the California coast near Santa Barbara. The industry and local residents historically have had a delicate relationship, but an AAPG member believes use of extended reach drilling technology could make safe development of the area's rich potential possible.

Extended Reach

from page 20

"In the Santa Maria and Santa Barbara-Ventura basins in the California OCS, 24 offshore fields have been discovered with reserves of 1.3 billion BOE, but remain undeveloped because of federal and state offshore drilling restrictions," he said.

"The highside potential – including prospects in state waters – may reach 3.4 billion BOE."

Bjorklund said the potential exists to develop between 500 and 1,000 MMBOE from onshore sites, assuming ERD wells can develop reserves within seven miles of the California coast.

The numbers from a completed ExxonMobil project at Sacate Field are telling.

Since 1999, the company has drilled 15 ERD wells at Sacate, using Platform Heritage at the adjacent Pescado Field. The platform is located in 1,075 feet of water in the Santa Barbara channel, eight miles off the coast.

The 15th well drilled reaches more than five and one-half miles from the platform and is the longest ERD well in North America, according to Bjorklund.

(Recent reports show that ExxonMobil has gone beyond the seven-mile mark at its Sakhalin 1 project.)

He noted the field has produced over 18 MMBO and 15 BCFG. Estimated ultimate recovery is pegged at 106 MMBOE.

The list of environmental benefits using ERD technology to develop Sacate is noteworthy:

✓ Fewer wells required.
✓ No additional platform needed.
✓ Reduced noise and visual impact.
✓ Reduced air emissions.
✓ Reduced impact on marine biology and habitats.

So Close, and Yet So Far

Companies are on the move to try to navigate the tedious process of acquiring leases and permits to develop other areas offshore California using ERD.

For example, Plains E&P reportedly has applied to the State Lands Commission for a lease to implement development of the T-Ridge prospect in state waters.

Sunset Exploration also has proposed a competing project to develop the T-Ridge structure via ERD from an onshore site at Vandenberg Air Force Base and has signed a letter of intent to participate in the project with ExxonMobil, according to Bjorklund.

He noted the horizontal departures of a well to develop fractured Monterey formation on the T-Ridge structure from either onshore or Plains' Platform Irene would be about four miles – and the payoff likely would be impressive.

"Based on 3,000 acres of closure," Bjorklund said, "the potential of the T-Ridge prospect may range from 40-100 MMBOE."

A list of only a few possible onshore drill sites to tap into unproven OCS reserves within seven miles of the California coastline, along with possible reserves in state waters, reveals some impressive reserve potential numbers:

✓ North Vandenberg Air Force Base: 230-470 MMBOE.
✓ South Vandenberg Air Force Base: 110-220 MMBOE.
✓ Pt. Conception: 110-210 MMBOE.
✓ Capitan: 30-60 MMBOE.
✓ West Montalvo: 40-90 MMBOE.

There's far more to ERD than simply having an existing site to use as a well kickoff point to reach an otherwise inaccessible area. In fact, considerable upfront evaluation is a must-do.

"Each site has to be investigated in detail," Bjorklund said, "to know if it's economic, practical, whether the resource can be exploited from onshore.

"That's a story in itself." ❑

Poster on *Search and Discovery*

Tom Bjorklund's complete poster, "The Case for Using Extended Reach Drilling to Develop California OCS Reserves From Onshore Locations," is available online at *Search and Discovery*, AAPG's online journal.

Search and Discovery has been striving to provide the latest geoscientific information for the past six years.

Anyone can access the online library and no password is needed. All articles are posted in two format versions: HTML and PDF for ease of use.

Bjorklund, a research scientist in the geosciences department at the University of Houston, presented the poster during the recent AAPG Annual Convention in Long Beach, Calif.

To log on to *Search and Discovery* go to searchanddiscovery.net, where you'll find access to a vast number of geosciences papers, posters and articles from around the world.

And if you have a scientific presentation that you think would make a good addition to *Search and Discovery*, call John Shelton at 1-918-560-2640, or e-mail your article to him at jws@aapg.org. ❑

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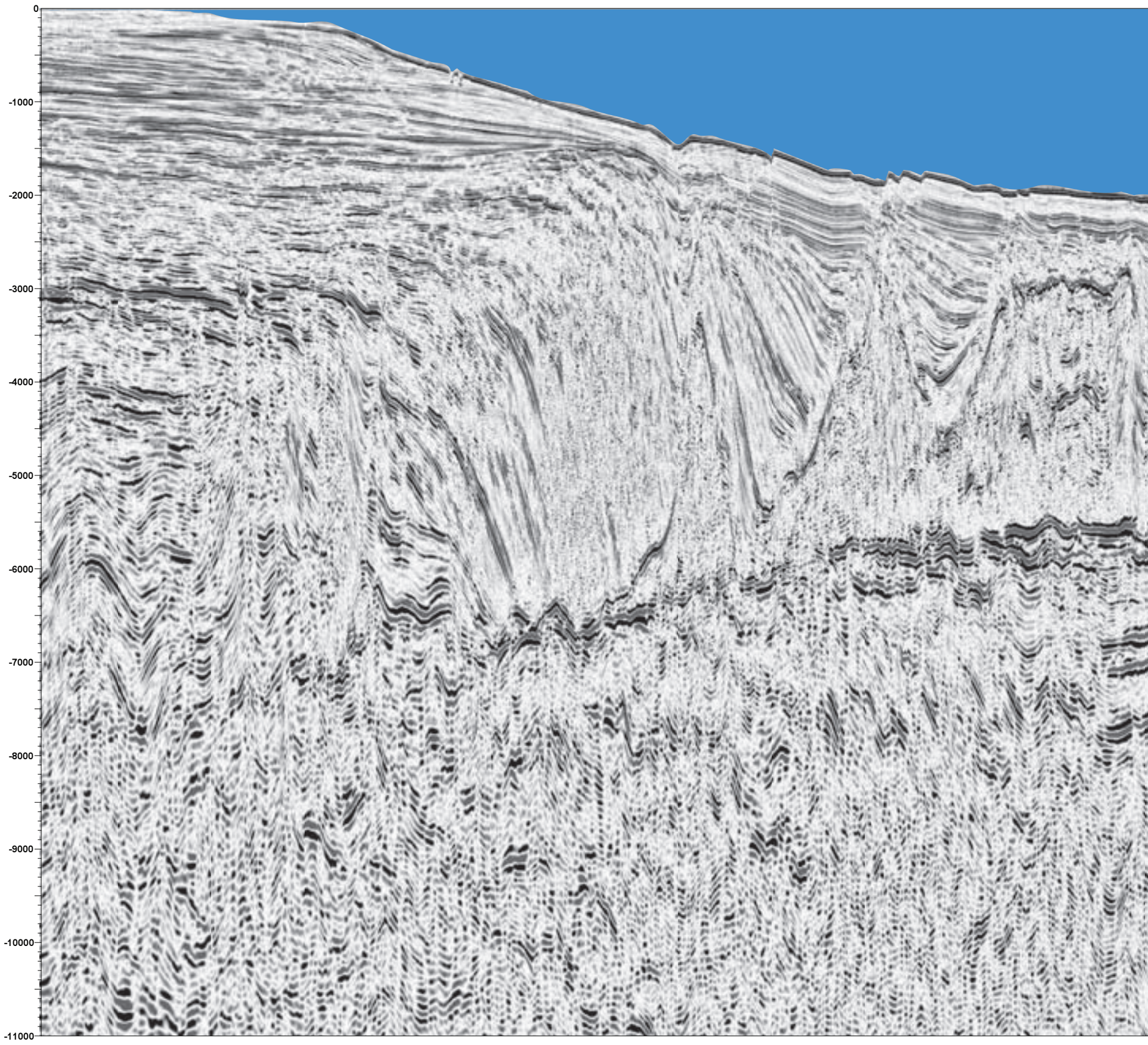
2007 SANTOS BASIN



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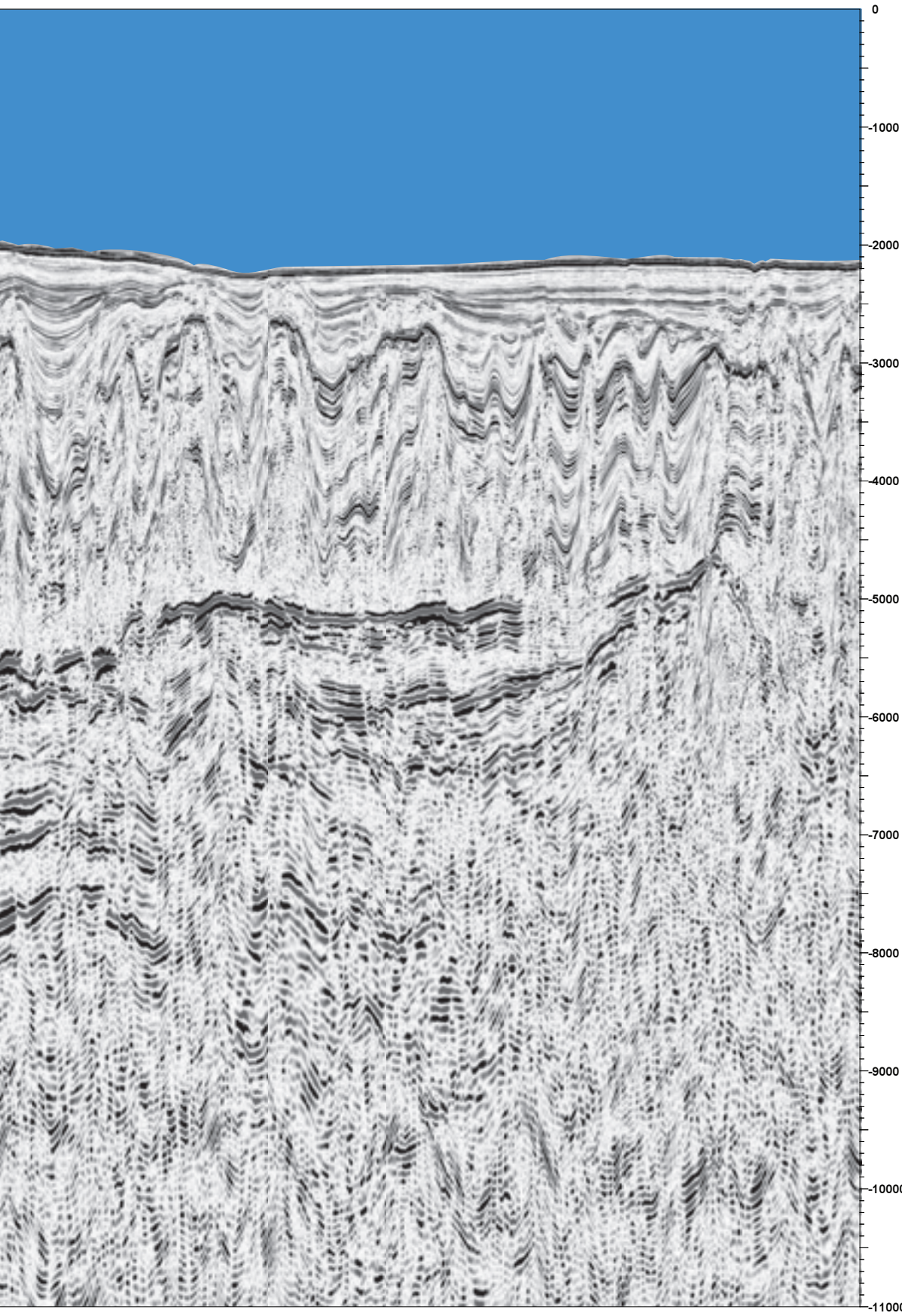
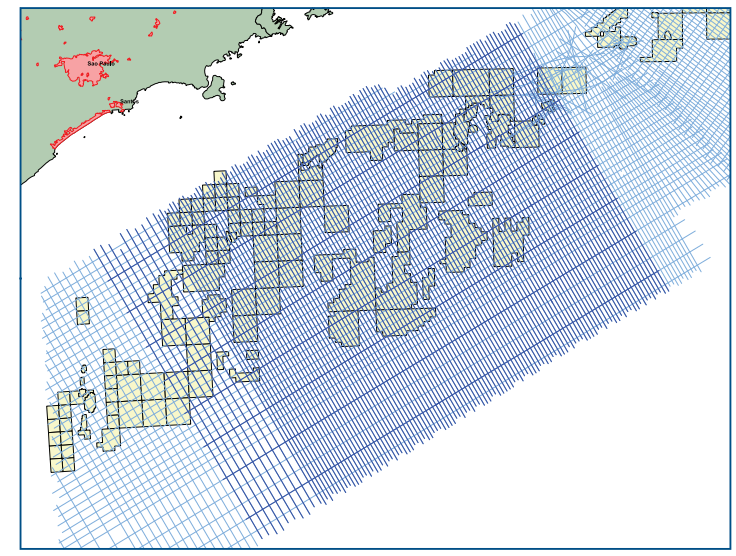
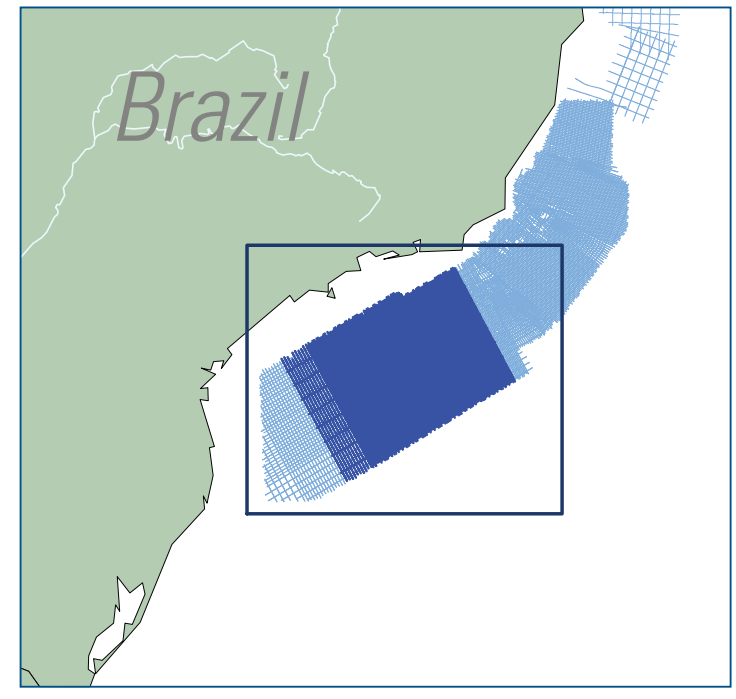




In anticipation of Brazil Round 9, the WesternGeco/TGS Brazil Alliance has processed 44,000 kilometers of non-exclusive 2-D seismic data in the Santos Basin utilizing Pre-stack Depth Migration. Wave Equation and Kirchhoff Migrations have been produced. Please contact TGS or WesternGeco for a data presentation.



Kim Abdallah 713.860.2120

TGS

Johnson's Artistic Touch

His Talented Hands Create AAPG's 'Face'

AAPG's graphics designer Rusty Johnson; his "Abe Lincoln Bobble-Head" captured a first place award in the Caricature Carvers of America's national competition last year.

By SUSIE MOORE
EXPLORER Staff Writer

Ever wonder what it would be like to meet a modern-day Frederic Remington or Charles Russell?

Just walk into the office of award-winning woodcarver, designer and artist extraordinaire J.H. "Rusty" Johnson at AAPG headquarters and you will find out – quickly, but in keeping with the artist himself, quietly.

"Modest" doesn't begin to describe the quiet and unassuming Johnson because, as is the case with many artists, he lets his work speak for itself.

And what a tale his work can tell.

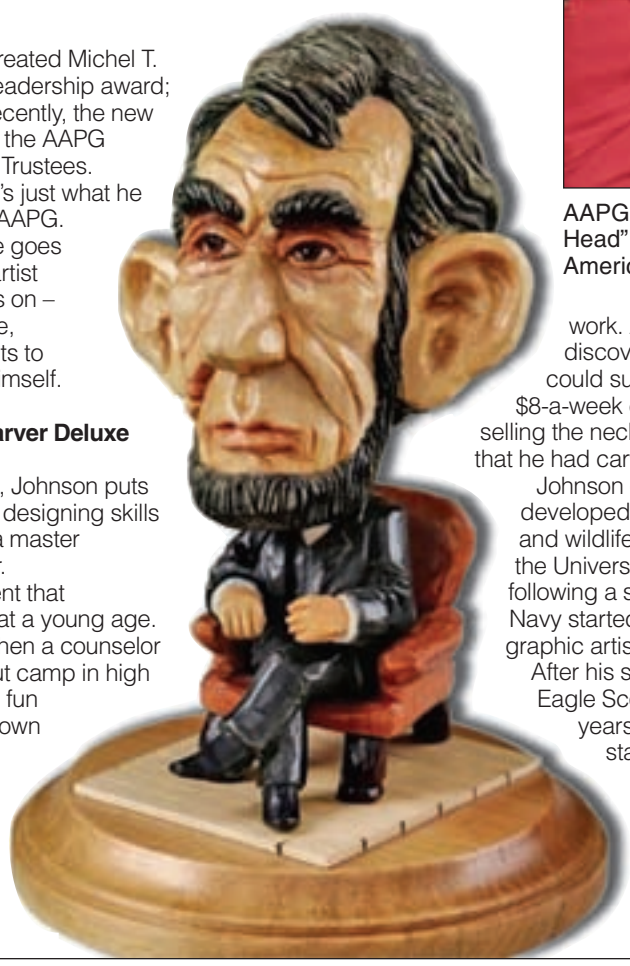
You may not recognize his face, but Johnson in many ways provides "the face" of AAPG, because for the past 22 years he has been AAPG's graphic designer.

That means that for the past two decades he has been the creator and the creative touch responsible for the "look" of AAPG. That includes EXPLORER and BULLETIN covers, AAPG logos, special publication slipcovers, various PowerPoint presentations and, in his "spare" time, t-shirts for the AAPG General Store.

Other notable AAPG designs of Johnson include the Fred Dix Plaza plaque at AAPG headquarters in Tulsa; the AAPG Explorer award, which was based on a cover he once created for the EXPLORER; the newly created Michel T. Halbouty Leadership award; and most recently, the new neckties for the AAPG Foundation Trustees.

And that's just what he creates for AAPG.

When he goes home, the artist switch stays on – except there, Johnson gets to create for himself.



Woodcarver Deluxe

At home, Johnson puts his creative designing skills to work as a master woodcarver.

It's a talent that developed at a young age. Johnson, when a counselor at Boy Scout camp in high school, had fun carving his own neckerchief slides.

Others noticed. And others liked his work. And Johnson discovered that he could supplement his $8-a-week counselor pay selling the neckerchief slides that he had carved.

Johnson eventually developed a love of nature and wildlife, studied art at the University of Tulsa and following a stint in the U.S. Navy started his career as a graphic artist.

After his son became an Eagle Scout about 10 years ago, Johnson started carving seriously – no more neckerchief slides.

"I found woodcarving was a way I could have a creative outlet – one I enjoy and can do when I retire," he said, "and I found I was good at it.

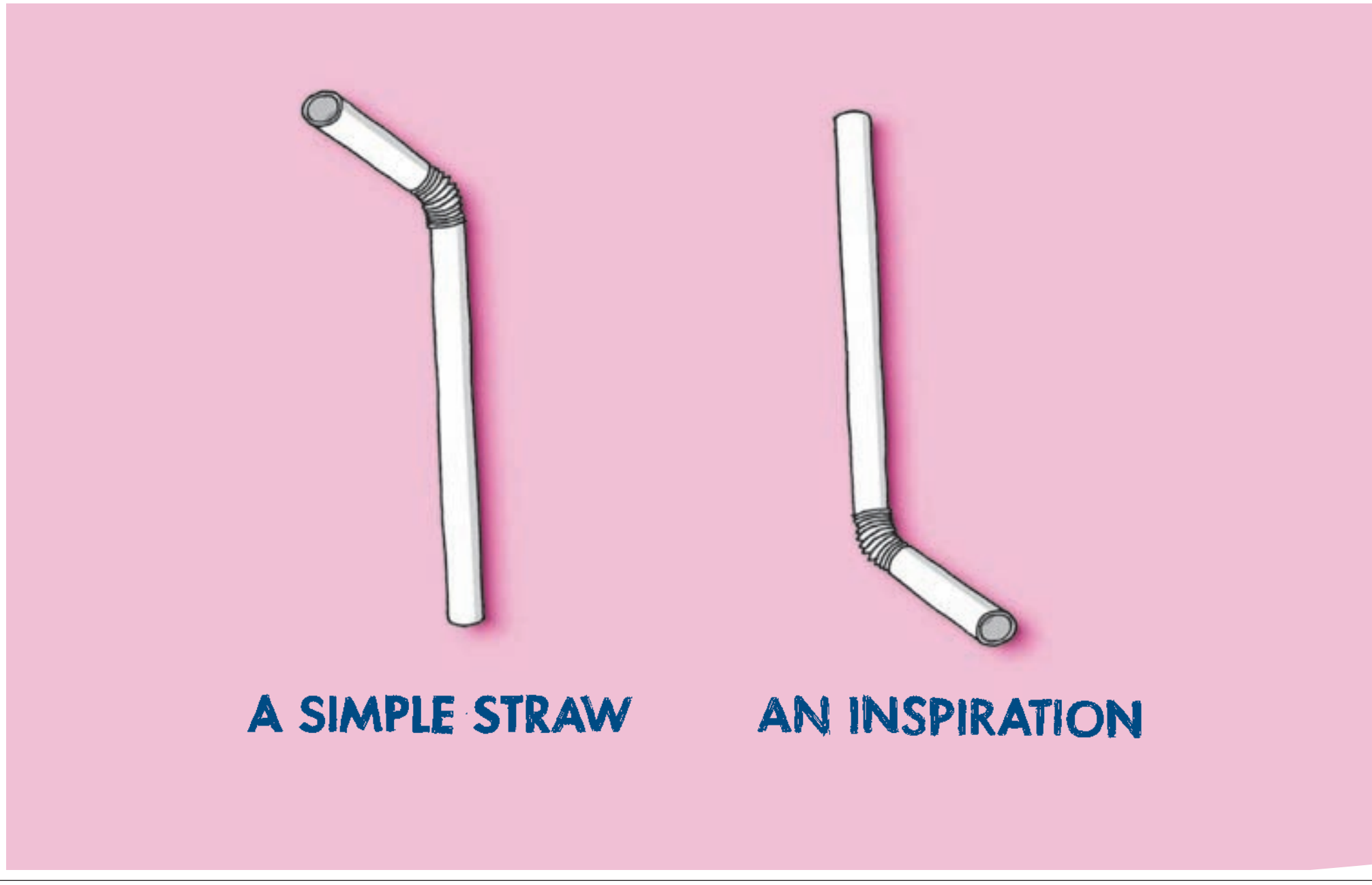
"Woodcarving poses a creative challenge," he added, "more than a production challenge."

For him, it wasn't a sophisticated approach; for years – right up until joining the Eastern Oklahoma Woodcarvers Association (EOWA) in 1998– Johnson was using a Swiss Army knife to carve.

"I was working on a complicated piece and getting nowhere so I joined the EOWA to learn about other tools I could use to carve," Johnson said.

"I also picked up a lot of technical help and tidbits by surrounding myself with other wood carvers, folks who knew what the heck they were doing."

continued on next page






Cast of characters: Johnson's award winning carvings also include (from left) Saint Nickolas – second place Woodcraft national Santa carving contest; Mark Twain – second place CCA miniature category 2005; Troll – fourth place CCA 2005; and Welcoming Committee – third place CCA 2003.

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'It's A Zen Thing'

At that point his life-long study of art began to manifest itself in his work.

Influential artists to Johnson include: Charles Russell, Winslow Homer, Frederic Remington with Michelangelo being his all-time favorite.

"Russell's work inspires the human element for the 'old West,'" Johnson said, "and Remington was a wonderful illustrator."

And, like most artists, choice of palette for Johnson is critical.

"I mostly use basswood because of it's fine grain. It doesn't split, it's semi-soft and it takes detail well," Johnson said.

"Certain woods, such as cypress knees and driftwood, will dictate what you carve. It's what's in the wood trying to get out that requires you to be one with the wood," he said. "It's a Zen thing."

Johnson has a unique edge in woodcarving. He basically creates "wood caricatures," and he prides himself on his woodcarvings being his own design, his own pattern.

This is not surprising since he has been sketching caricatures and cartoons on paper for years.

"The hardest part about carving is the working in three dimensions," Johnson said. "You're subtracting from the piece of wood, and you can't put it back on."

Award-Winning Work

Johnson says he dedicates two to 10 hours per week on woodcarving, averaging about 20 hours per project.

Johnson has obtained countless awards for his woodcarvings – including several on a national level. Ask him about it sometime, and you'll find out he's been judged to be among the country's best.

But you'll have to ask. And even then, that modesty thing kicks in.

For example, when asked how many national, regional and local awards he has received, Johnson quietly replied, "Shoeboxes full. Too many to count, really."

That's it – but his creations are nothing short of remarkable.

From the two-inch square piece of wood that he carved into a Mark Twain miniature, to the much larger "Welcoming Committee," Johnson's humor, love of nature and designing expertise are exuded on the faces of his wooden caricatures.

Consequently both pieces won national awards from the Caricature Carvers of America.

Even in his leisure time, Johnson seeks out inspiration for his wooden creations. For example on a recent trip to Italy he visited San Francesco a Ripa, a small church in Rome, in search of Gian Lorenzo Bernini's masterpiece *Ecstasy of Blessed Ludovica Albertoni*.

"For me, seeing it was the artistic highlight of the trip," he said.

And then he turned his creative touch on yet another EXPLORER.

And the artist was once again quietly creating one more reason for AAPG members to smile. ❑

Preparing for the Challenges Ahead

Basin Modeling Hedberg Draws 200

By JOHANNES WENDEBOURG

Basin modeling traditionally has been used in oil and gas exploration to estimate source rock maturity and to determine charge – but in recent years, the range of basin modeling applications has expanded.

Today, the applications include such areas as:

✓ Reservoir property prediction.
✓ Pore pressure prediction.
✓ Seismic velocity analysis.
✓ CO_2 sequestration.

This diversity was showcased at the AAPG Hedberg Research Conference on "Basin Modeling Perspectives: Innovative Developments and Novel Applications," held in May in The Hague, Netherlands.

The conference, co-organized by AAPG and TNO (Geological Survey of the Netherlands), assembled nearly 200 basin modelers from around the world – a record attendance for a Hedberg conference, but not altogether surprising in that the last conference dedicated to basin modeling was back in 1999 in Colorado Springs (AAPG/Datapages Discovery Series 7, 2003).

About 45 percent of the participants were from industry, 40 percent from academic and other R&D institutions and 15 percent from vendor companies.

Due to the overwhelming number of submitted abstracts, the conveners decided against holding open discussions or breakout sessions, instead increasing the time available for extended poster sessions – 43 oral and 90 poster presentations were grouped in nine sessions.

The session themes reflected the broadness of today's basin modeling approaches, covering:

✓ Rock and fluid properties.
✓ Geodynamics and heat flow.
✓ Structural and salt deformation.
✓ Integration of geophysical data and methods.
✓ CO_2 sequestration and rock interaction.
✓ Novel methods in flow modeling and uncertainty and risk quantification.
✓ Integrated basin modeling studies.

The lively discussions and fruitful exchanges of ideas during the poster sessions continued post-session, at the receptions and the conference dinner. The overall open atmosphere during the conference was very enjoyable and stimulating.

Challenges Ahead

Bruce Levell, Shell's vice president of exploration new ventures, said in his keynote address that exploration is going to be more technically challenging for international oil companies because remaining accessible basins are becoming more complex and targets becoming deeper, with higher technical risks and higher associated costs.

The conference clearly demonstrated

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Hedberg A Model of Success

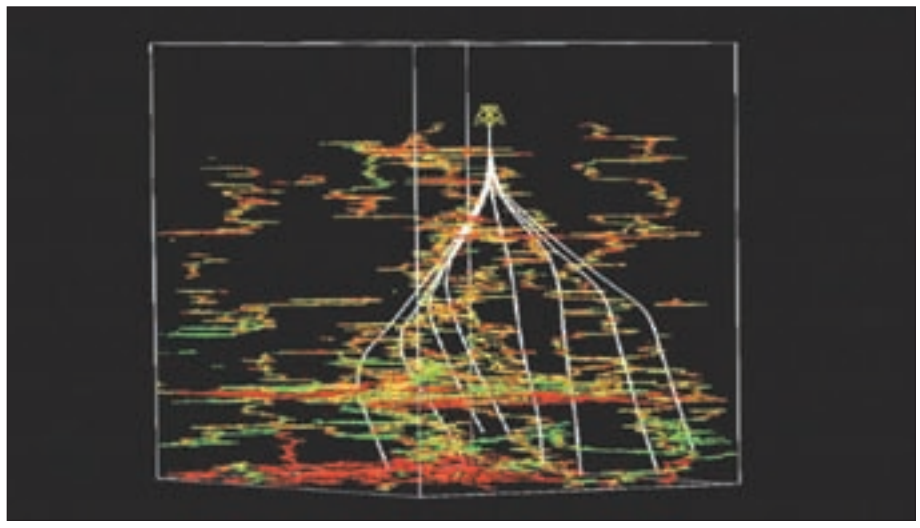
What makes a conference successful?

According to this Hedberg's organizers, it was the "excellent cooperation among the organization committee members" that paved the way.

"Numerous teleconferences over the two-year period helped to select session chairmen, to fine tune the program and to review about 150 abstracts that were initially submitted," said Organizing Committee member Marek Kacewicz.

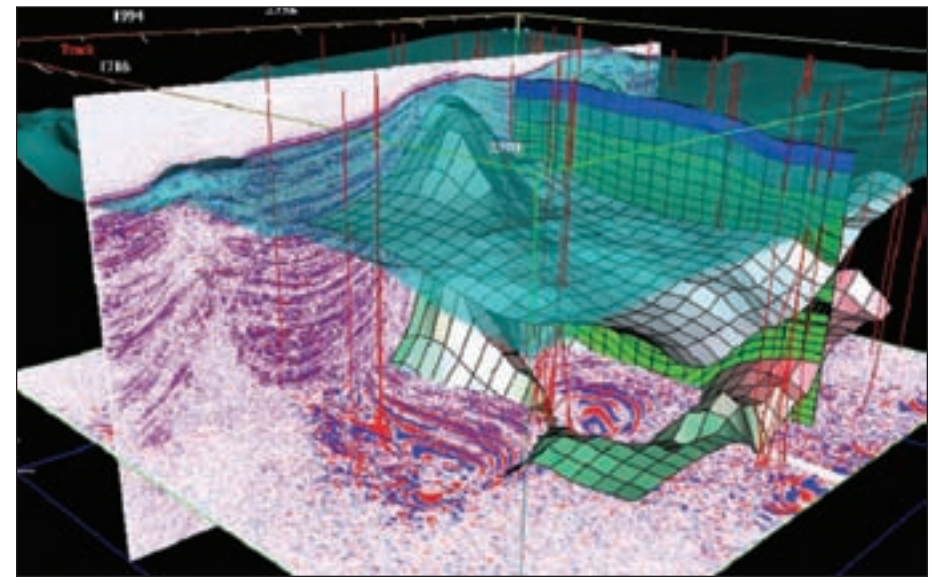
"The time difference between the Netherlands, the United Kingdom and the United States often forced us to wake up at 4:30 a.m. to participate in the discussions," he added. "It was fun!"

The organizing committee included Hanneke Verweij, TNO (Geological Survey of the Netherlands); Stephan Duppenbecker, BP; Sierd Cloetingh, Free University Amsterdam; Marek Kacewicz, Chevron; Gareth Yardley, Shell UK; and Johannes Wendebourg, who is program manager-petroleum systems analysis, Shell NL, The Hague. ❑



Graphics courtesy of Marek Kacewicz, Chevron (left); and Gareth Yardley (Shell UK)

An integration of high resolution basin modeling with seismic inversion led to a better description of rock properties and to better predictions of hydrocarbon charge in the Gulf of Thailand.



3-D seismic grid of the Gulf of Mexico mini-basin overlain by temperature grid of basin model that was used to determine porosity of key reservoirs and maturity of source rock.

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that basin modeling is prepared to meet those challenges; it has become an integrated component of the exploration process, and a primary vehicle for integrating different data types and for evaluating the interdependencies of subsurface physical and chemical processes that affect rocks and fluids.

This was particularly evident from the large interest in the sessions on rock and fluid properties, and on integrating structural geology and geophysics with basin modeling.

It also was clear, however, that prediction of temperature, maturity, pore pressure, porosity or fluid properties is highly dependent on the availability of good calibration data and a thorough understanding of the processes involved. In many cases only a range of uncertainty or the relative importance of key parameters can be realistically expected.

Heat flow, source rock type and kinetics – as well as timing of petroleum expulsion and migration versus structure formation – are the main uncertainties addressed by basin modeling.

New types of calibration data such as isotope analysis of rocks and fluids, fluid inclusions, seismic attributes or experimental insights into rock and fault mechanics were demonstrated to constrain model outcomes such as:

✓ Charge directions and magnitude.
✓ Column heights.
✓ Reservoir and hydrocarbon fluid properties.
✓ Present-day P-T distribution.
✓ Timing and magnitude of past thermal and stress events.

The next clear challenges for basin modelers are the identification and handling of key uncertainties, quantitative models for rock property evolution and the ability to model in complex structural settings. ❑

(Editor's note: Abstracts of all presentations are accessible on the AAPG Web site and a post conference volume with selected papers is planned.)

GEOPHYSICAL CORNER

How Can You See What's Hidden?

(The Geophysical Corner is a regular column in the EXPLORER, edited by Bob A. Hardage, senior research scientist at the Bureau of Economic Geology, the University of Texas at Austin. This month's column deals with "looking into hidden places.")

By BOB HARDAGE

Numerous oil and gas accumulations are beneath rock layers that effectively hide a reservoir by causing downgoing seismic raypaths to bend away from the geology that confines the hydrocarbons.

How do we look into such hidden places?

There are two requirements for analyzing a "hidden" reservoir with seismic technology:

✓ First, a seismic wavefield must illuminate the target.

✓ Second, the wavefield that is backscattered from this illumination must be converted into an image.

Much seismic research has been done to develop algorithms that create images from backscattered wavefields. Our objective in this article is to focus on the issue that has been less emphasized, which is:

"How do you illuminate a hidden target?"

* * *

We will approach the problem from a simple point of view.

Imagine that you are trying to find your car keys in a dark room with a hand-held spotlight. If you think the keys are underneath the chair, it may do no good to illuminate the chair with the spotlight pointed down from a high position. Instead, you have to lower the spotlight (the illuminating source) and your eyes (the backscatter receivers) so that the hidden area beneath the chair is first illuminated, and then is imaged.

A geological equivalent to this "find the hidden keys" problem is illustrated in figure 1, where a reservoir is hidden beneath a geological interval that does not allow it to be imaged with surface-positioned sources and receivers.

If a well is near the hidden target, a method now being developed and applied by some companies involves the acquisition of vertical seismic profile (VSP) data with downhole receivers. Such a VSP data-acquisition concept is shown in the figure.

For the geology illustrated here, surface-positioned sources and receivers cannot image the reservoir target. The VSP source-receiver geometry shown in figure 1 helps in that the receivers are moved to deep positions where they can better image the hidden target; however, the sources are still on the Earth surface and are not illuminating beneath the geology that distorts the raypaths.

To illuminate the reservoir, the source also has to be lowered – just as was the light source that was used to illuminate beneath the chair to find the car keys.

* * *

This source repositioning is done mathematically, not by lowering a real source down a well (which is one option). The concept that is implemented is described in figure 2.

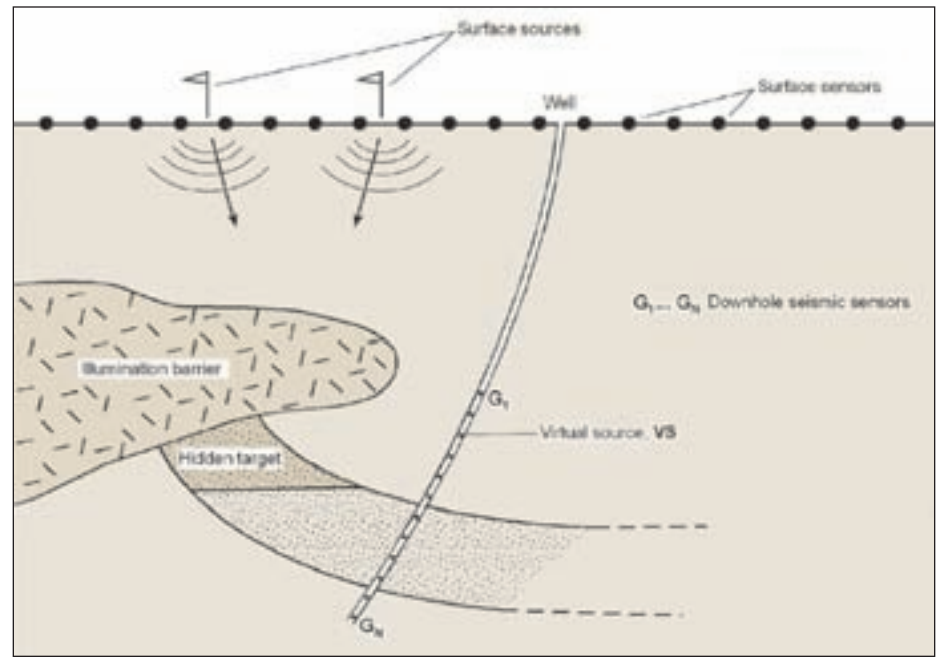

Figure 1 – A "hidden target" problem that challenges surface-based seismic technology.

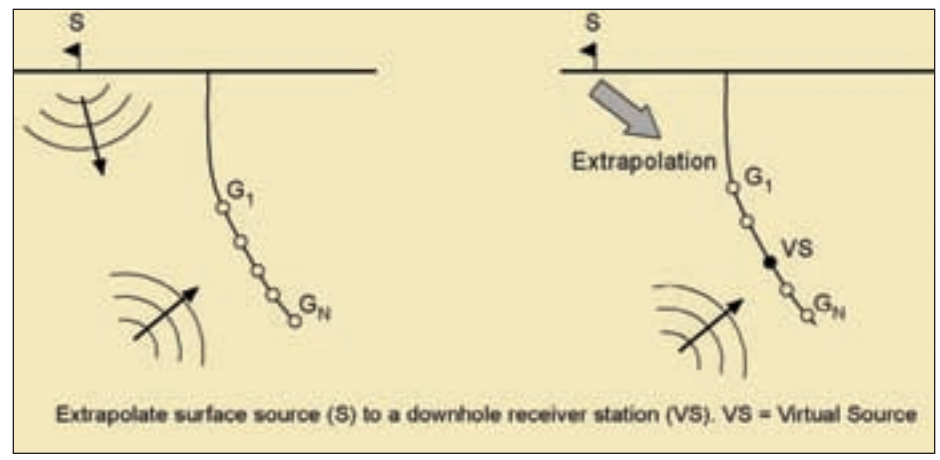

Figure 2 – Receivers can be placed at deep positions to better image a hidden target if a well bore is available (left). A surface-based source **S** can then be mathematically transposed to a deep-position by wavefield extrapolation and become a virtual source **VS**.

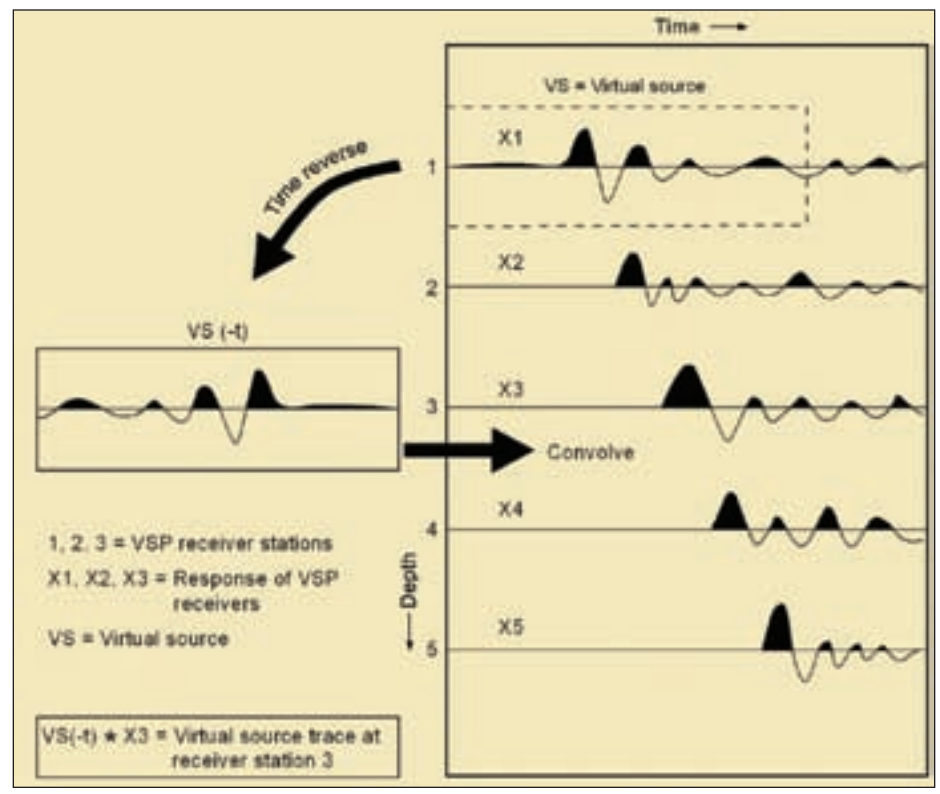

Figure 3 – A ton of mathematics involved in the extrapolation of surface source S to a deep virtual source VS (figure 2) is summarized by this diagram. First, time reverse the surface-source data trace X1 acquired at the intended virtual-source position. Second, "convolve" this reversed-time trace with all other data traces (X2, X3, etc.) produced by the surface source to transform these traces into data that are equivalent to data that would be produced by a source positioned at station X1. You now have a deep source to go with the deep sensors, and you are starting to look into hidden places that cannot be seen with surface-positioned sources and sensors.

In the left diagram, we have a source-receiver geometry similar to the VSP geometry shown in figure 1; in the right diagram, VSP surface-source **S** is repositioned to one of the downhole geophone stations by wavefield extrapolation.

The lower position of this new *virtual source* **VS** now allows a different imaging strategy to be implemented.

Although it requires numerous mathematical equations for most geophysicists to explain the procedure, the process of repositioning the source from the Earth surface to a deep borehole location can be illustrated with the graphic shown in figure 3. In this figure, data traces X1 through X5 are the VSP data acquired with the surface-positioned source.

In figures 1 and 2, we positioned our virtual source at the third receiver station, but here we arbitrarily select VSP receiver station **1** as the location for the downhole virtual source. The original VSP data are next converted to data that would be produced as if the source was at downhole station **1** by:

✓ Time reversing the data trace recorded at station **1.**

✓ Convolving this time-reversed trace with all of the other data traces.

If you do not know what the mathematical process of "convolving" means, it is not important because your friends in the seismic data-processing community do. For this discussion, we will indicate convolution at receiver station **3** by using an arrow to show the mathematical movement of time-reversed trace X1 across data trace X3.

This mathematical process also is called cross-correlation, which may be a more familiar term.

Once this cross-correlation is done at all receiver stations, we have created data that are equivalent to data acquired with a deep illuminating source at station **1** and deep imaging sensors at all other stations.

Initial results by those who practice this imaging technique confirm you can often see into places that are hidden from surface-based sources and receivers.

* * *

Shell has a powerful patent on this virtual-source concept that some companies are interested in licensing. No doubt intellectual property owned by others will come into play also. Some contractors are working to develop equivalents to what has been described here.

My purpose is not to promote anyone's business or intellectual property, but to alert you to an emerging and valuable seismic technology that will allow you, in some cases, to image geology that is difficult to see with other imaging strategies.

Check with your favorite borehole seismic contractor about their ability to "look into hidden places," and inquire what they know about "virtual source" imaging and "seismic interferometry," which are terminologies used by some when referring to this technique. ❑

WashingtonWATCH

Members Make Congressional Visits

By DON JUCKETT

This year's successful Congressional Visits Day (CVD) drew double the number of AAPG participants over 2006, representing twice as many states as well.

AAPG members from Texas, Ohio, California and West Virginia made the excursion to Washington, D.C., to meet with elected representatives and their staff from about 12 offices. As a group we met with staff from the House Resources Committee and the Senate Resources Committee.

CVD is sponsored by science-oriented organizations under the umbrella of the Institute of Electrical and Electronics Engineers.

The AAPG participants presented a carefully tuned message on three science and technology priorities for the organization.

Making the most of Congressional Visits Day: from left, Don Juckett, U.S. Rep. Mike Conaway (R-Texas) and AAPG President Will Green.

✓ The first message related to AAPG support for **preserving geological and geophysical data for the public good**.

The AAPG members explained that over many years the petroleum sector has invested billions of dollars in acquisition of geological and geophysical data. Significant amounts of data are at risk. These data remain valuable not only to future petroleum exploration but also to basic and applied research, natural hazard mitigation and environmental remediation.

Members made an appeal to fund the Energy Policy Act of 2005 (EPACT 05) mandate that includes a provision to preserve geological and geophysical data.

✓ The second message members pointed out was that AAPG recognizes the **importance of maintaining a strong domestic petroleum industry**, and that AAPG supports the need for a **continuing effort in research and development to aid in sustaining its economic viability**.

They politely and carefully articulated the role of the independents in the domestic arena.

They highlighted the value of focused research and development and illustrated with personal examples how technology produced by those programs can make a significant contribution to sustaining the domestic petroleum industry.

They pushed for a restoration of a strong federal role in research and development, and requested restoration of the Department of Energy programs in oil and natural gas research.

✓ The third message pointed out that **secure global oil and gas supplies requires a qualified and well-trained oil and gas work force**. Without immediate recognition and action by government and industry this work force will not be available in the future.

To staff and members, this message was particularly timely because the work force training initiatives highlighted in the National Academy of Science study "Rising Above the Gathering Storm" were getting a lot of attention during that period of time. The Academy's study is largely silent on the geosciences, so the funding is likely to be focused elsewhere.

Recognizing that, Congress (in EPACT 05) mandated that the Academy undertake several studies to insure analysis of the future work force needs of the energy related and extractive minerals related professions was available.

AAPG members urged Congress to take a strong leadership position to boost geoscience and engineering literacy in primary and secondary schools, and to consider a new federal initiative to support the university departments educating and training the next generation of geoscience workers through teaching and research.

They noted that in the 2007 budget DOE eliminated the funding that supports more than 150 geoscience graduate students across the country.

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DEG, DPA Elect Officers for 2007-08

Both the Division of Environmental Geosciences and the Division of Professional Affairs have announced their election results for the 2007-08 term.

Election results for AAPG's third division, the Energy Minerals Division, were announced in the June EXPLORER.

Division of Environmental Geosciences

The AAPG Division of Environmental Geosciences has announced the following election results:

❒ President-elect (2007-08; president 2008-09) – **Rebecca Dodge**, University of West Georgia, Carrollton, Ga.

❒ Vice president – **Hannes E. Leetaru**, Illinois State Geological Survey, Urbana, Ill.

❒ Secretary-Treasurer – **Nancy J. (Anne) Fix**, Battelle-Pacific Northwest National Laboratory, Richland, Wash.

The new officers will assume office on July 1 and serve on the DEG Executive Committee with **Charles G. Groat**, University of Texas at Austin, as president.

Also on the committee are **Gerald R. Baum**, Lewis Petro Properties Inc., San Antonio, editor; and **Jane S. McColloch**, West Virginia Geological and Economic Survey, Morgantown, W.Va., past president.

Division of Professional Affairs

The AAPG Division of Professional Affairs has announced the following election results:

❒ President-elect (2007-08; president 2008-09) – **Rick L. Ericksen**, Mississippi State Board of Registered Professional Geologists, Jackson, Miss.

❒ Vice president – **Valary Schulz**, Wynn Crosby, Plano, Texas.

❒ Secretary – **Debra Rutan**, Crown Quest Operating, Midland, Texas.

The new officers will assume office on July 1 and serve on the DPA Executive Committee with **Thomas E. Ewing**, Frontera Exploration, San Antonio, presiding.

Also on the committee are treasurer, **Michael R. Canich Jr.**, Equitable Production, Pittsburgh, Pa., and **Richard G. Green**, Saxon Oil, Dallas, past president. ❒

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They urged support for vocational training and safety programs to allow the safe and reliable delivery of oil and gas to world markets, citing the role of the Petroleum Technology Transfer Council.

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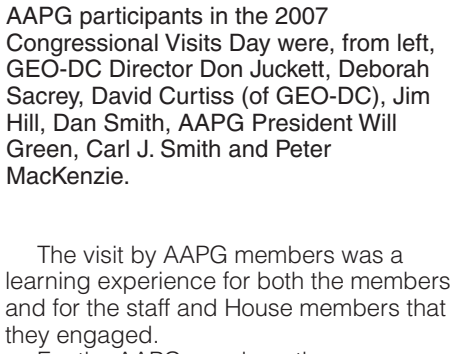


AAPG participants in the 2007 Congressional Visits Day were, from left, GEO-DC Director Don Juckett, Deborah Sacrey, David Curtiss (of GEO-DC), Jim Hill, Dan Smith, AAPG President Will Green, Carl J. Smith and Peter MacKenzie.

The visit by AAPG members was a learning experience for both the members and for the staff and House members that they engaged.

For the AAPG members the experience began with a series of briefings with representatives of the federal agencies who highlighted where and how the budgets for the agencies were spent on science related issues.

As I listened to the AAPG members I discovered that perhaps the messages from the Congressional interns had much greater impact and conveyed much more content through their discussions of what was important when they talked with constituents. It was clear that the intern's messages were heard and heeded as AAPG members worked their way through the next day of visits with staff and members.

It is always difficult to measure the real success of a visit to Washington to project your message. One indication that you have made an impact is the number of follow up inquiries that CVD participants receive and that I get as the result of the visit.

It also surprised staff that AAPG is doing its part to address these problems by exploring new approaches with our members.

The message that AAPG wants to be a resource to you with respect to energy issues in every way possible was well received. ❒

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

Lecture Season Off To Early Start

Call it bonus coverage.

AAPG's Distinguished Lecture program gets off to an early start this year with three international tours scheduled to take place in August.

Specific lecture dates are yet to be announced, but the speakers will be offering talks in Latin America, Europe, Australia and New Zealand.

AAPG's DL program, funded in part by the AAPG Foundation, was developed to expose students, young geologists, college faculty members and members of geological societies to current information, research and thinking, both domestically and on an international level.

The complete slate of 2007-08 speakers and abstracts will be announced in the August EXPLORER and is available online at www.aapg.org.

Touring in August will be:

❒ **Jose Luis Massaferro**, exploration adviser for Repsol YPF Exploration and Production, Madrid, Spain and Buenos Aires, Argentina, will be lecturing in Latin America.

His talk is on "Three-Dimensional Seismic Imaging of Carbonate Reservoirs and Systems."

❒ **Peter McCabe**, formerly with the U.S. Geological Survey in Denver but now with CSIRO Petroleum in North Ryde, Australia, will be lecturing in Australia and New Zealand. He will be offering three talks:

✓ "Distribution of the World's Oil and Gas Source Rocks in Space and Time – Perspectives for Exploration in Frontier Basins."

✓ "World Oil and Gas Resources – How Much is Left and Where Will It Be Found?"

✓ "Deltaic Systems and Super-Systems – Controls on Petroleum Accumulation."

❒ **John Walsh**, lecturer and associate professor for the Fault Analysis Group at the School of Geological Sciences, University College, Dublin, Ireland, will be on tour Europe. He is offering two talks:

✓ "The Growth of Fault Systems on Different Time Scales: Reconciling the Long-Term Growth and Earthquake Behavior of Normal Faults."

✓ "The Structure, Content and Growth of Fault Zones Within Sedimentary Sequences."

Specific dates and locations will be published when available on the AAPG Web site.

For more information contact Karen Dotts at AAPG headquarters, 918-560-2621; or kdotts@aapg.org. ❒

INMEMORY

Robert Keith Aaker, 84
Littleton, Colo., April 26, 2007
H. Marvin Douglass, 83
Wichita, Kan., Dec. 7, 2006
William Davis Frazell, 94
Lafayette, La., March 25, 2007
Walter Barmore Fulton Jr., 82
Laurel, Miss., March 19, 2007
Howard Russell Green, 79
Conroe, Texas, Jan. 14, 2007
Deane Earle Kilbourne, 87
Midland, Texas, Dec. 30, 2006
Bill C. Largent, 77
Houston, March 5, 2007
Peter Hotchkiss Masson (EM '50)
Houston
William Claude Miley, 85
Houston, April 27, 2007
Richard Kevin O'Connell, 82
Casper, Wyo., Nov. 28, 2006
Walter Sanford Plant Jr., 81
Norman, Okla., November 2005
Joseph Lucien Pritchett, 84
Lafayette, La., Feb. 26, 2007
William Johnston Sanderson (EM '47)
Edmonton, Canada.
George O. Scott, 84
Wexford, Pa., May 5, 2007
Jerry Macon Sides, 72
Houston, April 3, 2007
Booth Barrington Strange (EM '58)
Houston
Roy Wilbur Turner, 91
Marysville, Calif., August 2006
Horace Edward White Jr., 76
Austin, Texas, April 15, 2007
James W. Wiggins, 85
Carthage, Mo., Jan. 26, 2007
Charles Joseph Worrel, 86
San Antonio, Sept. 4, 2006

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

PROFESSIONAL NEWS BRIEFS

Jon Connick, to manager-GIS services, Nexen Inc., Calgary, Canada. Previously lead-geospatial projects group, Nexen Inc., Calgary, Canada.

Mark H. Elliott, to vice president-geology and exploration, Southwest region, Rex Energy Operating, Midland, Texas. Previously senior geologist, Cimarex Energy, Midland, Texas.

Syed Tariq Hasany, to senior geologist, Schlumberger, Almaty, Kazakhstan. Previously deputy chief geologist, Pakistan Petroleum, Karachi, Pakistan.

Martin D. "Marty" Hewitt, to division manager-business development, Nexen Petroleum International, Calgary, Canada. Previously group leader-Weyburn development, EnCana Oil and Gas Partnership, Calgary, Canada. Hewitt is the AAPG House of Delegates chairman.

John R. Hogg, to vice president-exploration, MGM Energy, Calgary, Canada. Previously manager-new ventures and frontiers, ConocoPhillips, Calgary, Canada.

Eugene M. Kim, to gas QR basis analyst, Citadel Investment Group, Chicago. Previously senior supply analyst, Wood Mackenzie, Houston.

Jay McGregor, to senior geologist, Houston Energy, Houston. Previously senior geologist, LLOG Exploration, Houston.

Edward B. Picou Jr. has been honored by his alma mater with induction into the Louisiana State University College of Basic Sciences Hall of Distinction, where he joins three AAPG past presidents and fellow AAPG Foundation trustee associates Robey Clark, Frank Harrison and Grover Murray. Picou, a micropaleontology consultant, past AAPG treasurer and an AAPG Honorary Member, resides in New Orleans.

Shaun Richardson, to director-exploration, BG Exploration & Production India, Mumbai, India. Previously general manager-business development, BG Exploration & Production India, Mumbai, India.

Deborah King Sacrey has been awarded the Distinguished Service Award by the Society of Independent Professional Earth Scientists. Sacrey is president of Auburn Energy, Houston.

Bill Schrom has been named a finalist in the Ernst & Young Entrepreneur of the Year contest. Awards will be given in November in Palm Springs, Calif. He is chief executive officer, Geotrace, Houston.

Roger Slatt has been appointed to the ultra-deepwater advisory committee, U.S. Department of Energy. Slatt, an AAPG Honorary Member, is professor and head of the Department of Geology and Geophysics at the University of Oklahoma, Norman, Okla.

Stephen A. Sonnenberg has been named professor and Charles Boettcher Distinguished Chair in Petroleum Geology and Geological Engineering at the Colorado School of Mines, Golden, Colo. Sonnenberg, a past AAPG president, previously was a Denver independent.

Randy W. Wells, to asset team manager, Southwestern Energy, Houston. Previously exploration manager-Texas Gulf Coast, Anadarko Petroleum, Houston.

Bob Yeats has been honored by his friends and former students by an endowed professorship in his name in earthquake geology and structural geology at Oregon State University, Corvallis, Ore., where Yeats is emeritus professor of geology.

Freddy Y. Yip, to senior geologist, Plains Exploration & Production, Houston. Previously senior staff geologist, Chevron, Houston.

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

REGIONS AND SECTIONS

‘Challenging’ Program Set for Athens

The official technical program and registration announcement has been mailed and registration is now available for Athens 2007 – a conference that promises to be a significant meeting for both the profession and the science of geology.

The AAPG European Region Energy Conference and Exhibition will be held Nov. 18-21 in Athens, Greece – the first joint venture meeting between AAPG and the AAPG European Region.

The sessions and exhibition will be held in the Megaron International Conference Centre in the heart of Athens.

The meeting’s theme is “Challenge Our Myths,” which will include three main areas: Regional, Technical and a Management Forum on “Energy Supply and Demand Perspective on Current Dynamics.”

The entire technical program will offer 348 technical presentations – 228 oral papers in five concurrent sessions and 120 full-day posters.

Some of the technical program highlights include:

✓ A session on “Untraditional Theories and Ideas in Global and Large Scale Geology,” which will examine the basis for the concept of subduction zones.

✓ Updates on recent exploration and production within key petroleum regions in the Mediterranean, North Africa, Middle East, Caspian, Black Sea, Russia, North Sea, Norwegian Sea and the Barents Sea.

✓ Updates on carbonate and clastic reservoirs, structural geology, heavy oil, unconventional resources and resource estimation.

✓ A look at the energy supply and demand picture.

Greece’s multi-dimensional history and culture will provide the setting for a number of social activities, including visits to:

✓ Classical and historical locations in and around Athens – including the Acropolis and Agora – as well as sites away from Athens including Cape Sounio and Delphi.

✓ Archaeological and Byzantium museums, as well as art galleries such as the National Gallery and Vorres Gallery.

✓ High-tech displays at the Hellenic Centre, planetarium and Olympic Complex Centre.

✓ Nearby islands of Aigina and Spetses.

✓ Vineyards and wineries in Attica.

Registration and other meeting details are available online at www.aapg.org/athens.

Check out the program for more information – scientific, geographic and cultural – on all that Athens has to offer.

And here’s a good reason to not delay in registering: Those who register by Sept. 19 can save a lot on registration fees – for Active members, a savings of $275 over onsite registration. ❑

Abstracts Sought for San Antonio

The gathering of abstracts has begun for the next AAPG Annual Convention, which will be held April 20-23 in San Antonio.

The meeting’s theme is “Deliver the Conventional; Pursue the Unconventional.” Abstracts, which should be submitted online at www.aapg.org/sanantonio, are due Sept. 27.

The convention’s technical program will be built around 12 areas that include:

✓ Hydrocarbons from Shale and Coal.

✓ Deepwater Slope to Basin Systems.

✓ Sedimentology and Stratigraphy.

✓ Reservoir Characterization and Modeling.

✓ Hydrocarbon Systems and Basin Analysis.

✓ New and Expanded Plays in North American and Global Basins.

✓ Environmental Concerns Related to Resource Development.

✓ Alternative Energy.

✓ Student Presentations.

For either exhibition space or sponsorship opportunity details contact Marvetta McNeel at 1-918-560-2692; or e-mail to marvetta@aapg.org. ❑

WWW.UPDATE

What Do You Want to Learn?

By JANET BRISTER
Web Site Editor

A good way to give the membership what it wants is asking the members some key questions:

What do you want to know? What do you want to learn?

Did you attend a course somewhere other than through AAPG that stood out?

The Education Committee, co-chaired by Donna Anderson and Laura Wray, wants to hear about it – and the AAPG geosciences department is making it easier for the AAPG membership to tell them.

"In short we were asked to find a streamlined online submission system for potential instructors to submit their course proposals to AAPG," said Jim Blankenship, AAPG's geosciences director. "The site that is now active meets those needs and will allow for course proposals to go directly to the Education Committee for evaluation quickly and efficiently."

Forms are now available through the Web site for submitting ideas for a class or seminar. If you have an idea for a topic you would like to learn about, this is the place to go: www.aapg.org/education/proposals/.

"We want to encourage members (and non-members, for that matter) to submit proposals for new courses that can be offered up to the membership at large," Blankenship noted.

"AAPG is an organization led by members who seek to give something back to the profession," he said, "and our continuing education program is part of that process.

"If members are interested in teaching a short course or field seminar we want to know about it."

Also, if you know someone who is a great teacher on a certain topic, or if you are someone who would like to teach a course or field seminar, you can use one of these forms.

Do Your Homework, Choose Your Format

Before making a submission you can review the guidelines covering the different venues of instruction.

Also explained are the criteria used by the Education Committee for topics and venues selected.

Using these criteria you may choose to propose a concept that is a generalization of the subject matter you'd like to see covered.

You may also make a more specific request through the Course or Seminar Proposal forms. In these forms you will provide the who, what, where, when and how details about the topic.

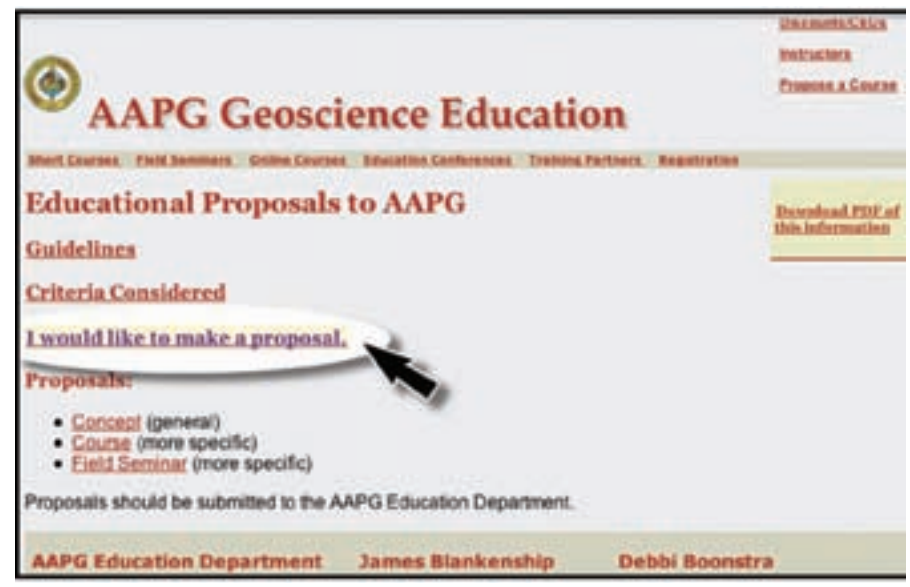
The "who" may be yourself or someone who you would recommend.

Of course, just because you've submitted something through one of these forms doesn't mean your idea will be accepted; but content is what feeds the educational offerings. Your ideas may be the very seed to lead to the next amazing experience for a novice in the field or groundbreaking seminar ideas for colleagues who need to brush up on some of their skills and knowledge.

Information provided is available as PDFs for download, or the online forms may be used.

To save time you might be wise to download the PDFs of the information and the forms. Then you can collect the information requested and return to the site to enter the answers to the questions.

Good browsing! ❑



Got a good idea for an AAPG short course or seminar? AAPG wants to know about it – and a click on the AAPG Web site (above) makes it an easy process.

Ned Frost a Double Winner

Student Meeting Awards Announced

Student awards for technical papers and posters presented at both last year's AAPG International Conference and Exhibition in Perth, Australia, and this year's Annual Convention in Long Beach, Calif., have been announced by the Convention Organizing and Student Chapters committees.

Included in the list is a rarity: One student, Ned Frost, University of Texas at Austin, won first place in separate categories at both the Perth and Long Beach meetings.

Awardees are:

2006 International Conference and Exhibition

Best oral presentation:

❒ "Ichnofabric Analysis, Event Stratigraphy and Paleoenvironmental Reconstruction: Late Miocene Strata, East Cape by Te Araroa, New Zealand," Nikki Tonkin, Memorial University of Newfoundland, with co-authors K.A. Campbel and M.R. Gregory, both of the University of Auckland.

"Runner-Up" recognition goes to "Ice-Sheet Dynamics of the Late Palaeozoic Glaciation in West Australia and Oman: Constraining Palaeogeographic and Sedimentological Models with Provenance Analysis," by Joe R. Martin, University of Manchester, with co-authors Jonathan Redfern, University of Manchester, and Brian P.J. Williams, University of Aberdeen.

Best poster presentation

❒ "Platform-Margin Trajectory as a Control on Neptunian Dike Distributions, Devonian Reef Complexes, Canning Basin, Western Australia," by Ned Frost, University of Texas at Austin; Dan Carpenter, ExxonMobil Upstream Research Co.; and Charles Kerans, University of Texas at Austin.

Two posters tied for runner-up honors. They are:

✓ "Leakage Conditions of Rock Salt: Solid Bitumen-Impregnated Rock Salt from the South Oman Salt Basin," by Johannes Schoenherr, RWTH Aachen University, Ralf Littke, Technical University of Aachen; Peter Kukla, RWTH Aachen University; Jean-Michel Larroque, Shell EP International; and Mark Newall, Petroleum Development of Oman.

✓ "Multiple Provenances: The Role of the Hinterland Sediment Composition on Predicting Reservoir Quality – An Example from the Western Lake Eyre Basin, Central Australia," by Saju Menacherry, Tobias H.D. Payenberg and Simon C. Lang, all with the University of Adelaide.

2007 Annual Convention

Shell Best Oral Presentations:

❒ First place – "Geologic Modeling of Frasnian and Famennian Carbonate Platforms, Canning Basin, Western Australia," by Ned Frost, University of Texas at Austin.

❒ Second place – "Contrasting Upper Devonian Foreslopes of the Canning Basin: Examples From Retrograding Frasnian and Prograding Famennian Platform Flanks," by Ted Playton, University of Texas at Austin.

❒ Third place – "Avulsion Clusters in Alluvial Basins: Statistical Tools for Quantifying Sand-Body Distributions and Implications for Reservoir Modeling and Interpretation," by Elizabeth Hajek, University of Wyoming.

Shell Best Poster Presentations:

❒ First place – "Playa Esqueleto and Other Outcrops – Braided, Conglomeratic Submarine Channels: Upper Cretaceous Rosario Formation, Baja California, Mexico," by Ian Kane, University of Leeds.

❒ Second place – "Controls and Timing of Structural Inversion in the NE Atlantic Margin," by Adrian Tuitt, University of Edinburgh.

❒ Third place – "Normal Growth Fault Evolution in the Columbus Basin, Trinidad," by Ulrike Freitag, Imperial College.

Schlumberger Outstanding Student Chapter Winners:

❒ University of Indonesia at Jakarta.

❒ University of Oklahoma.

Outstanding Student Chapter honorable mentions went to San Diego State University, Western Michigan University, Moscow State University and Brawijaya University.

Jim Hartman Service to Students Award:

❒ Martha Lou Broussard, Houston.

(Presented to honor long-term support of AAPG student members and significant contributions to their development.) ❑

FOUNDATION UPDATE

Foundation Donors

The names that appear here are of those who have made donations to the AAPG Foundation in the past month – predominately through adding some additional monies on their annual dues statement.

To these people, and to those who have generously made donations in the past, we sincerely thank you.

with your gifts, the AAPG Foundation will continue its stewardship for the betterment of the science and the profession of petroleum geology.

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ExxonMobil Foundation
Robert Nathan Ginsburg
Robbie Rice Gries
In memory of Indu Meshri
H.C. Jamison
In memory of Stanley D. Conrad
Jeffrey Tyler Jones
Reuben Joseph Klibert Jr.
Richard A. Kopp
James Ross Markello
Michael James Murphy
Kazuo Nakayama
Ronald Alan Nelson
Daniel Joseph O'Meara Jr.
Naomi Osman
Lynden Abe Penner
Van Price
Jonathan Constable Reeve
Juan Rogelio Roman-Ramos
Wayne Alvin Schild
In memory of Raymond Frisby, Leon Vesely, Philip Raveling, William Stuart and Thomas Jones
Jennifer Erin Tang
Nicholas William Taylor
William Martin Whiting
In memory of Robert Osbonne and Frank X. Bland
James E. Wilson
In memory of M. King Hubbert
William Wolodarsky
Marvin David Woody

Allan P. Bennison Distinguished Lecture Fund
John A. French

James A. Gibbs Family Fund
Glenn Ray Breed

Grants-in-Aid Fund
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Amanda Lynne Baker-Fortenberry
Charles Samuel Bartlett Jr.
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Gerald Leverne Bell
Grosvenor Brown
Jeffrey C. Bulsa
Holly Darlene Burke
Stephen Douglas Caffery
Philip H. Close III
Kathryn L. Coffman
In memory of William J. Coffman
Tony L. Cole
JoAnn B. Conard
Kevin P. Corbett
Helen V. Curiel-Mitchell
Edward G. Dobrick
In memory of Jean Funkhouser
Raymond A. Donelick
Joseph Andrew Dunwoody
In memory of John Kilkenny
Nancy L. Engelhardt-Moore
Thomas Edward Ewing
ExxonMobil Foundation
Leo F. Fay
Linda A. Finch
Lawrence W. Funkhouser
In memory of Frank X. Bland
Douglas LaVern Garrard
M. Charles Gilbert
In memory of Hugh Hunter
Robert Nathan Ginsburg
In memory of Robert Dill
Edward Jon Graham
John Roy Griffin
Scott Arthur Griffths
George A. Grover Jr.
Gary James Hampson
Donald C. Hartman
In memory of Bill Hughs
John E. Hollberg
Teresa Eileen Jordan
Walter P. Kleweno
In honor of J.M. McMurray
Reuben J. Klibert Jr.
Martin Arthur Kopacz
Carmen B.E. Krapf
James Ross Markello
Joseph Michael McKniff
Joseph Garrett Minke
Arthur C. Mullenax
Michael James Murphy
Mark Preston Nibbelink
James Joseph Parr
In memory of Bob Sneider
Van Price
Russell E. Quick
Timothy M. Ross
Brian Gerard Ruskin
Wayne Alvin Schild
In memory of Raymond Frisby, Leon Vesely, Philip Raveling, William Stuart and Thomas Jones
Robert William Scott
Euan Colin Shand
Denise M. Stone
Janine Mary Sturdavant
In honor of Robert Weimer
James D. Suydam
Jennifer Erin Tang
Charles William Welby
James Edward Werner
William L.M. Wilsey
Herbert Arthur Young

continued on next page

Digital Subscription Total Rises Again

The number of AAPG Foundation Digital Products University Subscriptions has risen again thanks to three gifts – one from a Foundation Trustee, one from a new member of the Trustee Associates and one from a group that wants to honor their alma mater:


Gipson

✓ Trustee Bill Gipson, a consultant in Houston, provided a "generous" donation to help fund university digital subscriptions for Southern Methodist University, Dallas, and Trinity University, San Antonio.

Gipson made the donations in honor of international industry giant and AAPG member Roy Huffington, of Roy M. Huffington Inc., Houston, who received the Michel T. Halbouty Human Needs Award in 1991; and Trinity University professor emeritus Ed Roy, an AAPG Honorary Member who also was awarded the Public Service Award in 2006 and the Distinguished Educator Award in 2004.


Hurley

✓ Neil Hurley is a new Trustee Associate, and he and his wife, Debra Nishida, provided the funding for a university digital subscription at the University of Southern California, in memory of Richard Stone.

Hurley, a longtime former educator and past AAPG elected editor who received AAPG's Distinguished Service Award in 2006, is now with Schlumberger in Boston.

✓ Three AAPG members, Art Beall (Fairview, Texas), Jim Meyerhoff (Krescent Energy, Houston) and his wife Lisa, and Trustee Associate John


Beall


Jim and Lisa Meyerhoff


Shelton

Shelton (Tulsa), joined together to provide funding for a university subscription at their alma mater, Baylor University.

This month's gifts bring the number of endowed Digital Product University Subscriptions to 33 in the United States and one international (Kazakh National Technical University).

The digital products university subscriptions offer a win/win for the university, faculty and students by providing a gift in perpetuity of the more than 600,000 pages of maps and geological information of AAPG's Digital Library collection.

This gift allows the university library systems to use their budget funds for other expenditures, and it directly benefits students with four generations of geoscientists' scientific experiences and achievements.

For more information about the program contact Rebecca Griffin in the Foundation office, at 1-888-945-2274, ext. 644.

* * *

In other Foundation news, the Trustee Associates have another new member. He is:

❒ **William D. DeMis**, Marathon Oil, Houston.

DeMis and Hurley's joining brings the Trustee Associate membership to 264. ❑

continued from previous page

James Joseph Zambito IV

Gustavus E. Archie Memorial Grant
Joseph Martin Finneran
Steven Maurice Goolsby

Marilyn Atwater Memorial Grant
Maryann L. Malinconico

Herbert G. Davis and Shirley A. Davis Named Grant
Herbert G. Davis

Fred A. and Jean C. Dix Named Grant
Steven Maurice Goolsby

Eastern Section Named Grant
James McDonald

Norman H. Foster Memorial Grant
Steven Maurice Goolsby

Robert K. Goldhammer Memorial Grant
Younis K. Altobi
David Lilburn Homan
Benjamin J. Kessel
Barbara A. Tillotson
Ramon H. Trevino
Michael Ross Vandrey

Grants-in-Aid Committee Named Grant
Janet Bauder Thornburg

Bernold M. "Bruno" Hanson Memorial Environmental Grant
Monty Joe Gist

John E. Kilkenny Memorial Grant
Joan Roberts Barminski
Frank Cressy
In memory of John Kilkenny

Gretchen Nakayama Memorial Grant
Peter Schwans

Ohio Geological Society Named Grant
John L. Forman
Amy Lee Lang
James McDonald

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Mark Alan Pasley

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Arthur Paul Baclawski
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John William Bedford
Perry W. Bilyeu
Jason G. Blake
James Younger K. Blevins
John Forsyth Brint
Jeffrey C. Bulsa
Jennifer Lynn Burton
Stephen Douglas Caffery
Michael G. Clemenson
Philip Henry Close III
John Charles Cole
W. Kevin Coleman
JoAnn B. Conard
James Scott Crompton
Paul H. Daggett
Steven Laurance Davidson
Ricky Ray Davis
Raymond A. Donelick
Marc Dupuy Jr.
William George Elton
ExxonMobil Foundation
Earl Clifford Fawcett
Charles T. Feazel
Linda A. Finch
Matthew Franey
John Joseph Gillespie
Angelica Lizzette Gonzales
Larry Dee Gore
Scott Arthur Griffiths
Kathleen W. Haggar
Wesley Hansen
Melissa K. Harrell
Gerald Edmund Harrington
John O. Hasting Jr.
Richard Charles Heaton
Suzanne Kay Heskin
Terry L. Hollrah
In memory of Robert W. Sabaté
William Calvin Hood
Don Dennis Irwin
David C. Jennette
Michael Dean Karvelot
Walter P. Kleweno
In honor of J.M. McMurray
Reuben J. Klibert Jr.
L. Michael Kozimko
Max Allen Krey
Charles W. Landmesser
Kurt Matthew Ley
Lance Robert Lindwall
Paula Louise MacRae
Kenneth Mark Mallon
Wayne Dudley Martin
Louis J. Mazzullo
William Ray McAllen
James A. McCarty
Thomas A. McClurg
Amanda K. Melkert
James Thomas Michael
In memory of James F. Michael
Shannon E. Morrison
Robin L. Petrusak
Chase Savage Reid
John Cecil Rhodes
Peggy Joyce Rice
Jon Anthony Richards
Michael P. Roberts
James Kirk Roche
Nancy Marie Rodriguez
Louis Jay Rothenberg
In memory of David Rothenberg
Robert L. Scamman
John Christian Scheldt
Wayne Alvin Schild
In memory of Raymond Frisby, Leon Vesely, Philip Raveling, William Stuart and Thomas Jones
John Joseph Schneider
Robert Alan Seltzer
In memory of E.K. Espenschied
Douglas Jay Seyler
In memory of L.A. Curry
Eugene A. Shinn
Kevon Michael Smith
John Frank Sobehrad
Daniel Spancers
Theodore Richmond Steinke
Anthony Edgar Stephenson
John Rolland Stewart
Stephen J. Szydlik
Jennifer Erin Tang
Ronald E. Tepley
Jon Louis Thompson
William R. Thurston
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In memory of John Richart
Richard Howard Vaughan
John Patrick F. Welch
Randall Wade Wells
Joann E. Welton
Richard Lee Whitney
Mike Robert Williams
Chunshou Xia
Gregory P. Yvarra

Publication Pipeline Fund
Gerrit Wind

Eugene F. Reid Dibblee Fund
Jeffrey M. Rayner
In memory of Bud Reid

E.F. Reid Scouting Fund
William A. Keller
Jeffrey M. Rayner
In memory of Bud Reid

L. Austin Weeks Memorial Fund
Paul H. Dudley Jr.
In memory of George McBride ❑

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

California
Cranham, Gregory Thomas, Hargis & Associates, Lakeside (J.T. Williams, M.R. Eggers, E.R. Hering III)

Colorado
Robin, Bill S., self-employed, Wheat Ridge (S.G. Reid, J.E. Goolsby, S.M. Testa); **Wunderle, Marcus Scott**, Kodiak Oil & Gas, Denver (J. Catlin, R. Cunningham, G.M. St. Clair)

Georgia
Bartley, Julie K., University of West Georgia, Carrollton (R. Dodge, T. Chowns, D.M. Bush)

Illinois
Schickel, Thomas J., Shell E&P, Urbana (M.T. Cisar, L. Li, H.E. Leetaru); **Thornhill, Steven E.**, Landmark, Naperville (reinstate)

Louisiana
Voorhies, Coerte A. Jr., consulting geologist, Lafayette (reinstate)

Ohio
Justice, John Matthew, Ohio Environmental Protection Agency, Dayton (K.E. Strickland, D.E. Harmon, B. Richard)

Texas
Adamson, Larry F., Broad Reach Exploration, Houston (A.G. Harding, J.T. O'Kelley, S.J. Ward); **Bagwell, T. Dale**, Dominion, Houston (reinstate); **Blyskal, Stephen Carl**, Texas Crude Energy, Houston (reinstate); **Carter, Ralph Walker**, E.N. Patton Oil Company, Abilene (A.D. Frizzell, D.G. Morris, R.C. La Seur); **Moore, Dennis Oliver**, Baker Hughes, Corpus Christi (J.M. Party, O.R. Hopkins, G.D. Sprague); **Vance, David Bryant**, Arcadis US, Midland (S.P. Tischer, M.A. Jacobs, A.J. Reed)

Virginia
Hackley, Paul Christopher, U.S. Geological Survey, Reston (P.D. Warwick, J.L. Coleman, R.C. Milici)

Canada
Jarrell, James Laurence, Ross Smith Energy Group, Calgary (D.G. Harris, P. Hayes, D. Seto)

England
Olajide, Kehinde Julius, Baker Hughes Inteq, Milton Keynes (W.B. Odufisan, V.A. Braimah, T.I. Alaribe)

India
Gupta, Harsh K., National Geophysical Research Institute, Hyderabad (C.B. Foster, C.C. McGowen, H. Darman); **Shrivastva, Chandramani**, Schlumberger, Navi Mumbai (G. Gillis, M. Vallikkat Thachaparambil, W. Moedjiono)

Nigeria
Ali, Muhammed Sarki, NNPC, Nigeria, Lagos (A.O. Akinpelu, A.A. Adesida, N. Omorodion); **Bako, Mazadu Dader**, Nigerian National Petroleum, Lagos (N. Omorodion, M.A. Agbuza, A.A. Adesida); **Falade, Oladipo Oluwaseun**, Shell Petroleum Development-Nigeria, Port Harcourt (I.T. Preye, J.F. Olimma, K.O. George); **Falowo, Abiola Queen**, Nigerian National Petroleum, Lagos (A.O. Akinpelu, A.A. Adesida, N. Omorodion); **Gwong, Elisha Gyang**, Nigerian National Petroleum, Lagos (A.O. Akinpelu, A.A. Adesida, N. Omorodion)

Oman
Chaiyathed, Somkiat, PTTEP Oman Company, Muscat (S. Pradidtan, S. Tanprasat, J.K. Warren)

Qatar
Darwish, Abdul Aziz A., Qatar Petroleum, Doha (R.B. Koepnick, B. Groeneweg, S.S. El Kurdy)

South Africa
Cessford, Anthony John, retired, Cape Town (reinstate) ❑

Certification

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

Petroleum Geologist

Pennsylvania
Douds, Ashley Shannon Burns, Equitable Production Co., Wexford (L.J. Morris, D.R. Fowler, M.R. Canich)

Texas
Stoneburner, Richard Kelty, Petrohawk Energy Corp., Kingwood (D.K. Skidmore, R.G. Green, V. Schulz)

Petroleum Geophysicist

Louisiana
Fogarty, Michael A., consultant, Berwick (R.C. Walther, R.B. Pinney, D. Sacrey)

Just Ask, Then Tell

The Personal Touch Gets Results

By VICKI BEIGHLE
AAPG Membership Manager

AAPG currently is enjoying a nice increase in our membership numbers, both domestically and internationally, but the increase could be even nicer if members would realize a simple truth:

Inviting others to join AAPG is easy – and effective.

Nothing works quite as well as personal contact when it comes to attracting new members to AAPG.

But don't just take our word for it. Listen to one of our members who is among the top AAPG recruiters in the world.

"Recruiters just need to learn to ask people (to join)," said John Dolson, last year's AAPG vice president who is a geologist for TNK-BP in Moscow, Russia – and consistently one of the top recruiters in AAPG's Recruitment Reward and Recognition (RRR) program.

"Just get them the (application) form or (Web site) link and tell them honestly why you personally joined, stayed a member and why the person you are recruiting would benefit from membership," he suggested.

AAPG's membership program was created to emphasize the importance of one-on-one recruiting and to recognize and reward the members who work toward this achievement.

Participation in the program is easy: Just sign your name in the recruiter's block on an Active application form and give it to a colleague who is not an Active AAPG member.

Each new member that you recruit is worth points for you in the RRR program.

The more members you recruit, the more points you get; the more points you get, the better AAPG becomes. It's a win-win situation for all.

And while the program is not a "contest" – RRR is an on-going program allowing recruiters to accumulate points for as long as they wish – there are tangible rewards, too based on your number of points, such as beautiful one-of-a-kind mineral and fossil specimens, like fossil fish, polished ammonites, petrified wood book ends, onyx bowls, amethyst geodes and megalodon shark teeth.

Or, you can simply take an AAPG Bookstore voucher of equal value.

Just Ask 'Em

Getting started may not be as difficult – or intimidating – as you fear. After all, you're simply asking people to join you in the world's greatest geoscience organization, right?

How hard can it be?

"I recruit for AAPG because I truly believe this is the best geological society in the world," Dolson said, "and the network of lifetime friends and colleagues you develop keeps you technically up-to-date and enriches your life."

Dolson's approach?

"I e-mail them directly, or sit down over some coffee or lunch or other social events and simply ask them to join, often after one of our local talks or a professional meeting.

"In TNK-BP, we have, as a corporation, written articles in our technical magazine (Innovator) about the importance of belonging to professional societies and participating as leaders," he continued. "We do this to develop our staff as truly international members of a global community, as well as encouraging advancing language and technical skills. But in the end, it is the personal discussion of what it has done for me and my career and network of friends that makes the biggest difference."

Dolson has a more personal reason for favoring the approach, too.

"It is how I was brought into AAPG," he said, "and I believe that's how most people are drawn to it – someone asks them. After they join I also try to find ways to get them active in local talks, meetings and conventions, so they begin to develop that broader network of knowledge and contacts."

Details and more information on the RRR program can be found online at www.aapg.org/recruit/.

You can have wonderful rewards, and you can help AAPG become even better.

What are you waiting for? ❑

READERS' FORUM

A Response

There are five reasons why we wish that past-president Pat Gratton had not written the letter that appeared in last month's "Readers' Forum":

✓ It breaks with the considerate and justified tradition that AAPG past presidents should refrain from publicly criticizing sitting Executive Committees.

There are plenty of effective avenues whereby past leaders can make their displeasure known to current leadership privately. We do not recall any public criticism directed at Mr. Gratton or his EC by AAPG past presidents during FY2004-05.

✓ It lacks objectivity.

While Mr. Gratton fairly recognizes the efforts of AAPG's immediate past treasurer to identify uncertain logistical issues in the Graduated Dues proposal in his published and verbal opposition, he fails to acknowledge also the offensive and demeaning comments pertaining to ethical standards of non-U.S. members, and to the full legitimacy of those who may elect graduated dues provisions.

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

✓ By not acknowledging these demeaning aspersions to the ethics and standing of overseas members, Mr. Gratton appears either to share the views of the past treasurer, or to tolerate them.

✓ Freedom of speech is simply not an issue here – the immediate past treasurer has been able to say (and publish in official AAPG organs) whatever he wanted to about the Graduated Dues proposal.

✓ It ignores the right and duty of any organization to defend itself.

It is clearly in AAPG's interest to attract qualified new overseas members. Aspersions regarding the ethics or full standing of overseas members who utilize the Graduated Dues options, especially when they have been published in AAPG's official organs by a member "trading" on his past position as an AAPG officer, could very well discourage future applications for membership. At its first opportunity, the EC quite properly condemned those aspersions and implications as not being AAPG's official views.

This was not piling on – it was sound management.

Based upon our own recent experience, we think there is far too much sectional partisanship in AAPG's affairs. Bringing styles of secular partisan politics into our governmental processes harms the comity and productivity of this otherwise splendid professional organization.

Peter R. Rose
Austin, Texas

R.R. "Robbie" Gries
Denver

Robert D. Gunn
Wichita Falls, Texas

M. Ray Thomasson
Denver

(Editor's note: The signers of the letter are past AAPG presidents.)

An Image Idea

A few years ago, I was asked by a Midwestern petroleum company to assist them in providing information on climate change, global warming and carbon dioxide credit trading.

The company contact person started sending me literature about dinosaurs and other mass life-extinction episodes in the geological record for my comments. Then came the carbon dioxide and intra-galactic orbital patterns over the past 300 million years, the Antarctic ice cap and other exotic and irrelevant subjects.

The irrelevance gave me the feeling that I was either providing material for that person's high school offspring, or was being used for some other mysterious objective unrelated to the scientific pursuit and intent of the contract.

To protect my own consulting record and professional integrity, I finally explained that the company was on the wrong track, and that the pros and cons of climate change and global warming will persist as long as predictive models can be tweaked to support the modelers' diverse positions on the subject. Therefore, the important thing to do is to take a positive action that would be beneficial to the company and create a complimentary image at the same time.

One such positive project, I proposed, is the reclamation of the Sahel region of Africa to control the dust and aerosols that create annual invasions of hurricanes exported to America with devastating multi-billion dollar damage to homes, land and other human habitats – as well as offshore rigs and installations.

One single project would require – at the most, from start to finish – about $100 million. This is a drop in the bucket compared to the billions and billions of losses every year that would be ameliorated by this reclamation.

But the best part is that the reclamation would create arable and stock grazing land, benefit the local population with decent incomes, provide financial returns on investment, ameliorate global warming by carbon dioxide sequestration, accumulate enough carbon credit to cover the total U.S. emissions and, most

continued on next page

DPA

from page 46

This newsletter includes articles, columns and letters on all topics related to professional affairs.

✓ Publishes career guides and other materials that can help all AAPG members in developing their professional practice.

✓ Has a very active Government Affairs Committee, which works with the GEO-DC office (see page 32) to represent U.S. energy geoscientists in Washington, D.C. This committee drafts position statements that are approved by both the DPA and AAPG and guide the DC office. The GAC also sponsors "instant response e-mails" to let members provide their own input into proposed regulation or legislation.

* * *

Along with our incoming executive committee, including **Valary Schulz**, vice president; **Rick Ericksen**, president-elect; **Mike Canich**, treasurer; and **Debra Rutan**, secretary, I invite you to look into and join the DPA, and help us be of better service in promoting the interests of professional energy resource geoscientists, both in the United States and globally. ❑

continued from previous page

significantly, project an enviable true image of constructive pursuit for the company.

If one company does not want to undertake this project, a consortium of petroleum companies would share the benefits and share the credit of the image they acquired.

Alas, with a closed mind and fixation on disproving the global warming issue, the company to whom I provided this advice not only ignored my proposal, but also withheld payment of my final consultation invoice.

Worse, I am quite certain that my services to that person, and my constructive suggestions to his company never reached the higher levels of the decision makers.

Certainly there are solutions – but with this kind of attitude, it is no wonder that the industry's image is worse than it ever was.

How the industry will deal with this image problem is anybody's guess, but my own expectations are not very high unless substantive, positive and constructive action is taken, either individually or by a group of companies.

My proposal is doable and, as Dan Smith wrote in a 2003 President's Column in the EXPLORER, it is "that which no one can do until someone does it."

Let's see someone do it.

George Doumani
Washington, D.C.

Dues Collection Centers

This outgoing AAPG administration has been a success altogether; they have performed well in many aspects – AAPG committees have been reorganized to perform more effectively, and AAPG now has made its position very clear on the "controversial" climate change issues with provisions for more research and discussions.

However, the one issue that I wanted to be addressed is the method of dues payment for the Nigerian (and probably the entire African AAPG) membership. Since when I became the first president of the AAPG student chapter at Ahmadu Bello University Zaria in 2005, our challenge had always been membership renewal and dues remittance. This makes the future of many chapters in Nigeria hanging.

The AAPG Africa Region president has always helped to convey dues for members to the AAPG; I suggest the AAPG should establish dues collection centers – probably at international conferences of affiliated societies in the region. This, I believe, will reduce the long list of lost members that we have.

Aminu Isyaku Abdullahi
Kano State, Nigeria

CLASSIFIEDADS

BUSINESS OPPORTUNITY

Caribbean Basins, Tectonics and Hydrocarbons (CBTH)

CBTH is an eleven-member industry consortium at the University of Texas at Austin working on a six year long regional compilation and synthesis of geologic and geophysical data from the Caribbean region with emphasis on the petroleum systems of the underexplored offshore areas. Phase I is focused on the northern South American-southern Caribbean margin and will end in August, 2008. Phase II will focus on the northern Caribbean, Bahamas, southern Gulf of Mexico and eastern Mexico and will begin in September, 2008, and end in 2011. We welcome late buy-ins for Phase I products that include original segy seismic data, GIS database of compiled information, integrative maps of offshore basins, and bound atlases including all products from years 1 and 2 of the study (late buy-in deadline: August 15, 2007). For questions, maps of study areas, product samples, downloads of project proposals and deliverables for Phase I and Phase II, please visit the CBTH website at:
http://www.ig.utexas.edu/research/projects/cbth

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MISCELLANEOUS

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DIRECTOR'S CORNER

Pace Picks Up Without Pause

By RICK FRITZ

Once more we are at the start of a new fiscal year for AAPG – and once again it arrives after an extremely busy year for AAPG.

We started out the year building a new Business Plan and restructuring AAPG's committees.

The new Business Plan was built from the recently revised strategic plan with a focus on member services worldwide. For the first time in AAPG's history all parts of AAPG were asked to develop a basic business plan – basically stating their purpose, current reality, goals and action items to obtain those goals.

Every committee and each Section and Region was asked to go through this process. As a result we have an extremely comprehensive Business Plan.

We are in the final stages of editing and restructuring the document to make the format consistent and readable – and then it will be posted on the Web.

We also restructured the Corporate Advisory Committee into a "board" format, whereby we present new ideas for development.

The new Corporate Advisory Board is led by Bobby Ryan of Chevron, and it now plans a mid-year meeting plus teleconference to review and develop new programs.

* * *

There are six goal areas of the strategic plan – the following is a short summary of programs and activities developed this past fiscal year related to those goals:

✓ Advance the Science.

Fritz

Under the guidance of our previous editor Ernie Mancini, the AAPG BULLETIN continued to improve and provide members with great technical information. This year, based on a proposal by President Lee Billingsley, Ernie developed a new set of procedures that will ensure we have E&P Notes in the BULLETIN on a regular basis.

AAPG's digital geology program continues to add new products and services. Especially exciting this year is the number of talks and poster sessions that have been added to *Search and Discovery*. Also, all members now have the opportunity to use our new geographic search engine for BULLETIN articles.

Of course, a lot of the feedstock for future technical publications, hardcopy and digital, comes from presentations at the successful Perth International Conference and Exhibition and the Annual Convention at Long Beach.

✓ Continuous Professional Development.

AAPG's education program has been very popular this year – especially our Fall and Winter Education Conferences.

We also held three very successful Hedberg conferences: In October we held a conference in Veracruz, Mexico, on "Heavy Oil Origin, Prediction and Production in Deep Waters," hosted by the Asociación Mexicana de Geólogos Petroleros; a strategically important conference on "Understanding World Oil Resources" was held in Colorado Springs, Colo., in November 2006; and in this past May a very successful conference on "Basin Modeling Perspectives: Innovative Developments and Novel Applications" was held in The Hague, Netherlands (see page 28).

Finally in February 2007 the first joint SPE/SEG/AAPG workshop on "Integrating Stress & Pore Pressure Predictions for Exploration, Production and Drilling" took place in Galveston, Texas.

✓ Public Awareness and Understanding.

This was the first full year of operations for the AAPG GEO-DC office, our primary outreach vehicle with the United States' leadership. In addition, the Public Outreach Committee this year is in the process of developing a dynamic Web site that will help the public know about AAPG.

One of our more dynamic develops in this area is the formation of the ad hoc committee on global climate change, which developed a basic statement on global climate change. The Executive Committee then solicited and received comments concerning the statement.

These responses will be used by the new Global Climate Change standing committee to develop a final statement (see page 6).

✓ Membership and Membership Services.

This year we had two major programs initiated for membership – the corporate group membership program and the graduated dues program.

Both programs have the promise of significantly increasing Active membership.

✓ Financial Stability.

We were budgeted in FY06-07 to have a financial loss of just less than $6,000; by the end of the third quarter we had reversed that loss, and AAPG is projected to be well into the black.

This will be the third year in a row that we have been on the positive side of the ledger.

✓ Worldwide Presence.

Global development continues to be one of the highlights of this year's activities. This year we initiated AAPG's first international office in London, and the Executive Committee approved an office in Bahrain.

Both offices are designed to break-even in three years with the development of new AAPG services especially short courses and workshops.

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As you can see, it's been a very busy year – and there does not appear to be any slowdown in new programs or services.

A very wise lady once told me that "there is no rest for the wicked – and the righteous don't need any."

I guess we can take our pick!

'Networkers and Shapers'

DPA Stands for Professionalism

By THOMAS E. EWING
DPA President

When AAPG was formed in 1917 the founders included a Code of Ethics at the head of the Constitution (Article IV). In 1965, the Association formed a Division of Professional Affairs to uphold that code and to promote professional development by launching a program to certify petroleum geologists.

Today, the DPA includes some 3,100 certified members. Most of them are certified petroleum geologists, but a few are coal geologists and a growing number are certified petroleum geophysicsts.

We are found worldwide, although some 85 percent of our membership is in the United States.

How do we define ourselves?

As part of my preparation for becoming president, I sat down to define my vision, at least, for DPA. This is what I came up with:

❒ We are the community within AAPG that focuses on the professional practice of *energy resource geoscience* (aka "petroleum geology") and upholds the AAPG Code of Ethics. As such we form the "inner core" of AAPG that makes it a *professional* society and not just a *scientific* society.

Ewing

We are proud to form that "core" – 3,100 strong – and invite all AAPG members to join with us.

❒ We are geoscientists who are committed to standards of competence, to ethical behavior and to professionalism – a commitment best expressed through *certification*. We come together to improve our knowledge of issues affecting the practice of our profession. And we come together to guide all AAPG members to improve their knowledge and practice as well.

❒ We actively inform ourselves and all AAPG members about the externalities that impact our profession – particularly government legislation and regulatory policy.

We *represent our profession* in engaging with lawmakers and regulators regarding matters of professional practices and professional concern.

Put another way, DPA is the group for "networkers and shapers" within AAPG.

As networkers, we hold to high standards of practice, and want to meet and do business with people with a similar commitment.

As shapers, we want to build the profession into a better place, to improve the overall standards of professional competence and ethical behavior, and to represent our community in government affairs.

The large number of AAPG presidents and executive committee members over the years that previously has served in DPA leadership is ample evidence for DPA's importance in shaping the Association.

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To fulfill its vision, DPA continues to certify petroleum geologists, petroleum geophysicists and coal geologists. We want every AAPG member who qualifies for certification to apply!

In particular, we are looking to AAPG's increasing international membership, and want to develop ways and means to certify geoscientists and provide services worldwide.

DPA also:

✓ Introduced a program of "Board Certification" to recognize members' commitment to continuing training and education.

✓ Offers short courses at sectional and national AAPG meetings.

✓ Has offered several luncheon courses on ethics and workshops on professional career development have been offered in recent years.

✓ Sponsors forums on topics of professional interest, such as land access, balancing environmental and business concerns and career development. We will look to develop additional opportunities for DPA members to meet and network.

✓ Publishes a newsletter, the *Correlator*, three or four times a year, available on the Web and in hard copy.

See **DPA**, page 45