AAPG AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, AN INTERNATIONAL ORGANIZATION

EXPLORER

DECEMBER 2005

What do *you* see?

Story, page 30

Vol. 26, No. 12
December 2005

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On the cover: Some see a majestic mountain vista; some see an amazing exposure. Best yet, some see a bridge between the worlds of academia and industry. It's the Opal Mountain Range, Kananaskis Country, Alberta, Canada, which exposes the Mississippian Rundle Formation imbricated in the hanging wall of the Lewis thrust. This single exposure offers examples of fault-bend, fault-propagation and detachment folds – classes of structures described in the new AAPG Seismic Atlas (Studies in Geology # 53). See story, page 30. Incidentally, this site is visited in structure field trips offered by Harvard University (see http://structure.harvard.edu). Photo by Joachim Mueller.

CONTENTS

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PRESIDENT'S COLUMN

Accounting A Part Of AAPG Change

By PETER R. ROSE

Over the past two years there has been a quiet revolution in the way that AAPG's Tulsa headquarters manages its finances and evaluates its activities.

While I have been extremely busy getting ready for an extended tour of Central and Eastern Europe and the Middle East (in addition to my regular load as AAPG president), I asked AAPG Treasurer Clint Moore to explain more about these important changes and how they will improve our ability to better serve our membership.

So, imitating the immortal Ed McMahon of the old Johnny Carson "Tonight Show," heeeeeeeeere's Clint!

* * *

As an AAPG member, you might ask, "How do AAPG's finances impact me?"

The answer is simple: "As AAPG becomes financially stronger (and more efficient), it can provide more services that benefit all members."

As I've served as AAPG treasurer for the past 17 months it has become clear that every program, every service, every function of this great organization has a monetary value associated with it. Especially in a non-profit organization, the collection and spending of every single dollar matters!

So for any conscientious treasurer, "the buck stops here."

How many "bucks" stop here? This year, AAPG will collect and expend a $13 million budget, while managing $14 million in our accumulated savings investment fund.

Also, over $30 million in the AAPG Foundation and over $10 million accumulated in the AAPG pension fund are overseen separately from AAPG by their respective managements.

Within the 2005-06 AAPG annual budget:

✓ Convention revenues generate $4.6 MM.

✓ Membership dues generate $1.8 MM.

✓ Education generates $1.5 MM.

✓ Advertising (EXPLORER et al) generates $1.3 MM.

✓ Publication sales generate $.9 MM.

Together, the above represents about 80 percent of the revenue side of the budget.


Rose

On the expense side, 58 great employees' salaries and benefits cost over $5 MM; conventions operations are $2.8 MM; and BULLETIN costs are $1 MM. The remaining third of the expense side of the budget is spent on a myriad of essential operations expenses, such as office overhead, IT, accounting, legal, insurance, postage, etc.

Before my 2004-05 year as treasurer began, I reviewed the previous budget. Then, I decided to reach back to my business school days, to propose and apply "Zero-based Budgeting" (*Zero-based Budgeting*, Phyrr, 1973, published by Wiley Publishing) to the annual AAPG budget process so we could give everyone a clearer picture of the cost vs. benefit of every program and every committee. ZBB requires every manager to analyze every program and service-budget request in terms of:

✓ A detailed purpose of the expenditure.

✓ How many members does it directly impact, and which groups.

✓ How does it fulfill AAPG's Strategic Plan.

✓ What impact would occur if the request were cut by 50, 75 or even 100 percent.

No yearly inflation-adjusted budget rollover is to be accepted in the future without this full review.

Thus, beginning last February, the entire HQ leadership team underwent the daunting "ZBB" process, with the final budget and ZBB analysis presented to the new Executive Committee on July 1. This was followed by a weekend-long meeting in late July,

See **President**, next page

AAPG Officer Candidates Listed

Seven candidates are vying for positions as AAPG officers for 2006-07.

The list includes six people selected and approved as candidates by the AAPG Executive Committee (with Advisory Council input), plus one petition candidate.

Candidates for officers are:

President-Elect

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

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

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

Vice President

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

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

Treasurer

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

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

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

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

President

from previous page

where the Executive Committee and staff completed a re-evaluation of the critically important program and committee structure, and reorganized it from both a structural and management standpoint. As a result, every manager, committee chair and department head knows exactly the costs vs. benefits of their program, and thereby can lead and manage more effectively.

Clearly, this level of detail and analysis would not have been possible were it not for the critical authorization by Past President Steve Sonnenberg's Executive Committee in FY 2003-04, of our new iMIS/Great Plains Financial Accounting and Management Information software, with initial rollout of the system and the beginning of the implementation starting just nine days after I took office. Unlike our former mainframe-based custom-built software system, this friendly, modern PC-based system, with its more flexible analysis and report-generating capability, produces much greater analytical detail on a real-time basis and thus gives us much improved tracking and understanding of our intricate finances.

The more detailed information of this new system also allowed us to address an age-old problem within AAPG – the "overhead allocation" that historically had been applied to our income-generating programs and services. Recognizing that past overhead allocations had been too broad as well as misapplied only to revenue-producing products and services, HQ management and the outside auditors could now better identify "real" overhead (especially occupancy costs), and more accurately apply them to the specific cost centers, thereby altering the burden of overhead on those cost centers. Thus, we now have a much more accurate method of overhead cost allocation, which has resulted in a fairer burden of overhead on all programs and services. For example, our education offerings now cost less because the overhead is lower. Generally, you now can be more confident that the costs associated with your favorite AAPG products or services are more accurate, which should result in better management practices to control costs and price our services more fairly.

Another major financial challenge that we've faced has been addressing our growing employee pension expense, primarily caused by poor stock-market performance these past few years, which impacted the reserves backing the pension plan. Federal pension laws required AAPG – and numerous other employers – to make up the resulting shortfall in unfunded value, which had rose millions of dollars since 2000. Since our employees are a precious resource (second only to our members), and their pension plan is a very important benefit to many of them, we wanted to be both fair and cost-effective. So, over the FY 2002-04 period, we made a $2 MM infusion to the pension-fund, bringing it into compliance with the liabilities, with the funds ultimately coming from our $14 MM in accumulated savings investment funds. We've also lowered the pension-formula multipliers, altering the plan benefits, which will result in returning the annual pension expense to more historic levels. This should place the plan on a more sound financial basis for years to come.

Inevitably, Sarbanes-Oxley-styled laws probably will be enacted for non-profit organizations like AAPG, which will present new financial challenges to future leadership. In anticipation of that day, we established an AAPG Audit Committee, composed of three officers – president-elect, vice president and treasurer – to work closely with AAPG's independent outside auditors, who will begin a review of our financial processes and procedures in anticipation of the day when such regulations are applied to AAPG.

Just as immediate past President Pat Gratton during his term instituted more extensive continuity between the president, president-elect and all candidates for president-elect, President Pete Rose began an analogous process in which the sitting treasurer begins to inform and train the future candidates for treasurer, one of whom will succeed him/her. So I have met with and communicated with both candidates, Randi Martinsen and Bill Morgan, since last June, and we will be working even more closely together during the last half of FY 2005-06.

It has been an exciting experience to serve as your treasurer these past 17 months. We've addressed and found solutions to many significant and long-standing financial issues that have challenged AAPG for years, and I'm confident that the Association is now well prepared as we face an uncertain financial world in the years ahead. AAPG members also can be confident that their Association is positioned to steward its resources effectively in the coming years for their benefit.

I want to thank presidents Pat Gratton, Pete Rose and their respective Executive Committees for their commitment and support in addressing all the financial issues facing the Association. Rick Fritz, David Lange, Bryan Haws, auditor Paul Hartog and the entire HQ leadership team have embraced these many reforms enthusiastically, for which I am deeply grateful. It has been a great team effort by everyone.

Finally, I also want to thank the membership for giving me the opportunity to be your treasurer, and thus be in a position to help "make it happen." I will conclude my service as AAPG treasurer next July with a great sense of satisfaction. Thank you for the opportunity to serve!

– CLINT MOORE

* * *

Rose's Recommended Reading:

Measuring America: How an Untamed Wilderness Shaped the United States and Fulfilled the Promise of Democracy, by Andro Linklater, Walker Publishing Co. (2002). A well-written description of how the U.S. land surveying system was created, beginning in 1785 in Ohio Territory, and how its westward extension throughout the American frontier in the 19th century facilitated a potent and revolutionary idea – that land might be widely owned and traded, thus laying a key foundation of free-market economics in America and providing the basis for widespread land ownership among the American populace.

Read it, you'll like it!

Onward!

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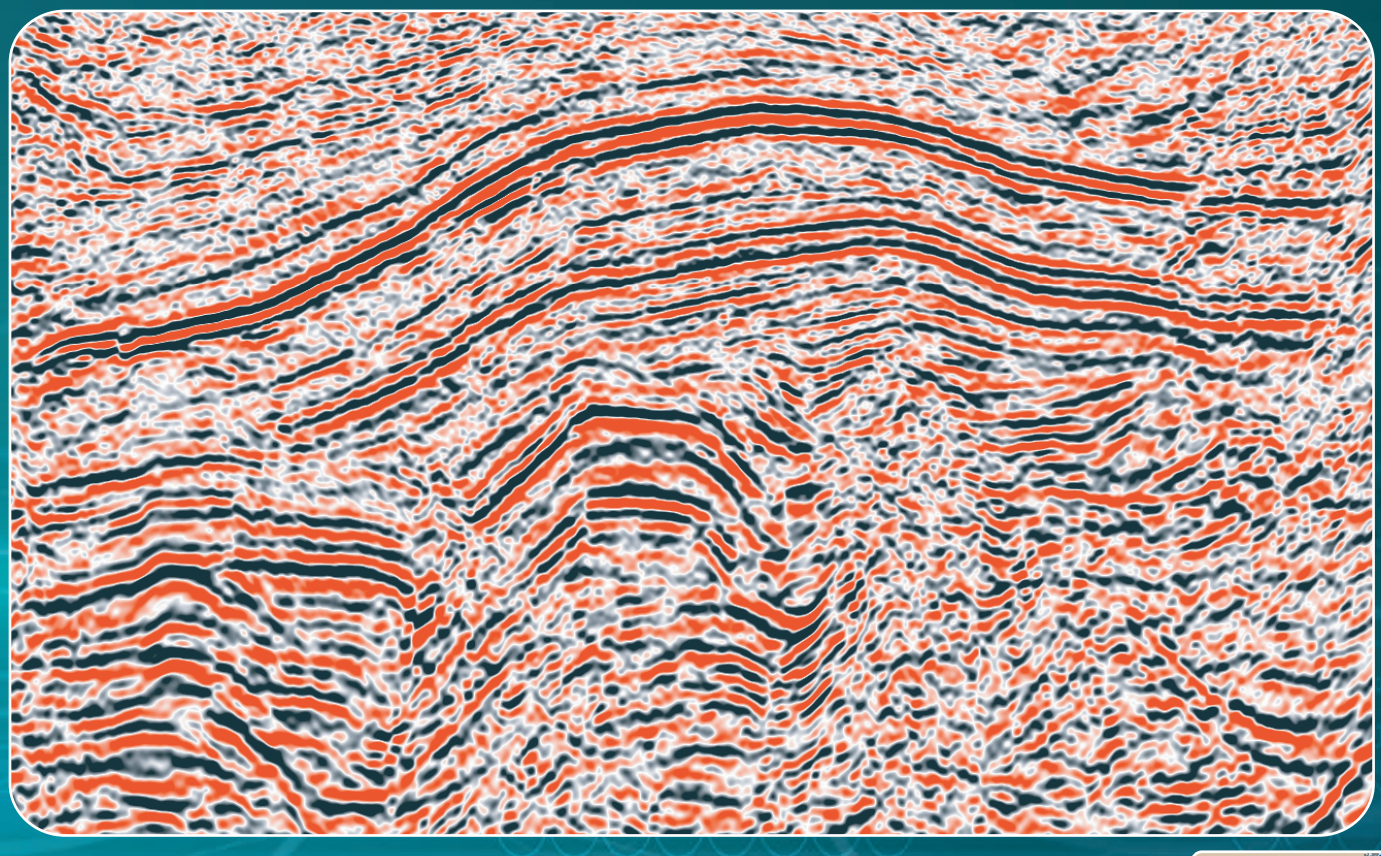

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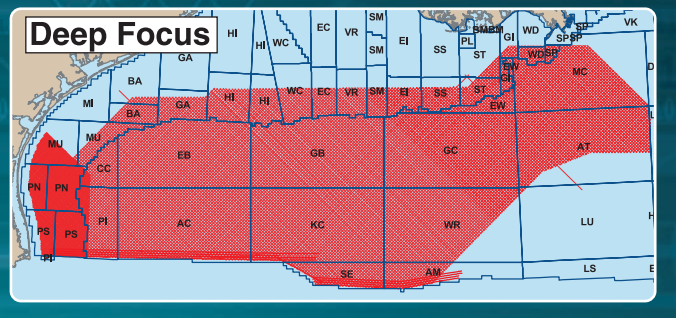

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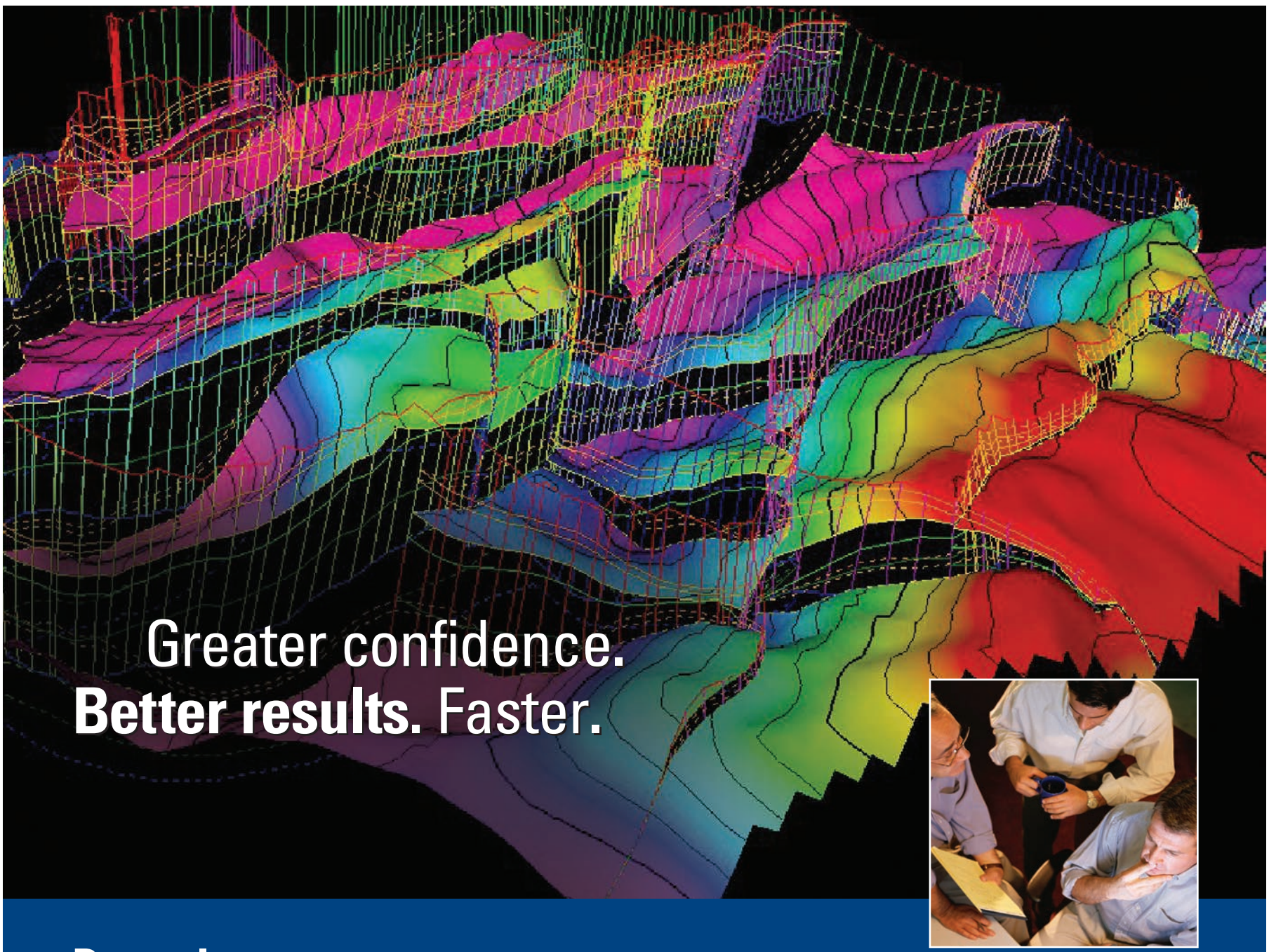

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Rose visited nine international sites in November.

AAPG President Visits Eight Nations

AAPG President Peter R. Rose completed a 27-day, eight-nation tour in late November, meeting with a number of geoscientists (including some AAPG members), ministry officials and students in Europe, Russia and the Middle East.

The trip included 12 major addresses and a number of luncheon talks and other meetings aimed at affirming AAPG's support of its membership goals and growth in Central and Eastern Europe, and building closer ties with our growing European Region.

The tour also included attendance at the International Petroleum Technology Conference in Doha, Qatar, sponsored by AAPG, EAGE, SEG and SPE, which was designated as an AAPG Middle East Region meeting.

John Brooks, AAPG's Europe Region president, accompanied Rose on the European portion of the tour and also made presentations in Oslo, Norway and Kiev, Ukraine.

AAPG Region representatives served as facilitators during the European and Russian legs of the trip. They included:

✓ Sigrund Heiberg and Sigrunn Johnsen – for Stavanger and Oslo, Norway.
✓ Istvan Berczi, Hungary.
✓ Ewa Zalewska, Poland.
✓ John Dolson, Russia.
✓ Vlasta Dvorakova, Czech Republic.
✓ Alex Kitchka, Ukraine.
✓ Wolfgang Nachtmann, Austria.

Rose's trip included seven university stops that allowed talks with faculty and students, as well as meeting with various industry and government ministers, including meeting H.E. Dr. Ibrahim Baher Al Olom, Iraqi oil minister.

A presidential tour of the Pacific Rim region is being planned for spring 2006. ❑

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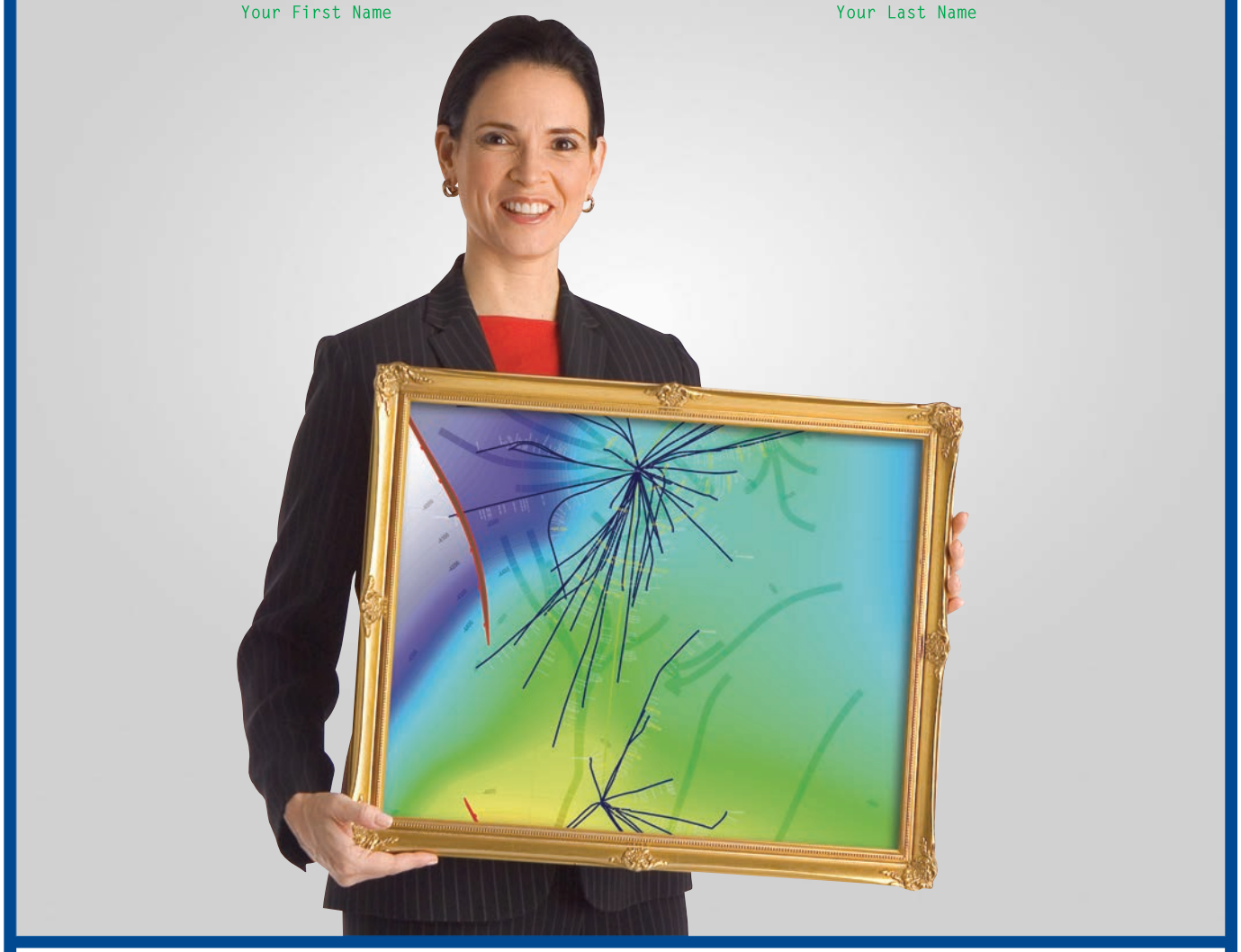

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Former DOE Official Named GEO-DC Head

Donald A. Juckett, consultant and director of Far East Energy Corp., has been named director of the AAPG Geoscience and Energy Office in Washington, D.C. (GEO-DC), which was initiated in mid-November.

Juckett will head the GEO-DC initiative, with the goal stated by AAPG President Peter R. Rose "to become a recognized, informed and responsible member of the community of non-governmental organizations in Washington that is recognized for its ability to educate government, media and other NGOs with respect to energy policy and short-term events, as well as to substantively contribute to energy-related projects funded by government and non-government organizations."

GEO-DC is located in AGI's office in Alexandria, Va., and will be governed by a board comprised of the current and immediate past presidents of AAPG; the current DPA president; the chairman of the DPA's Government Affairs Committee; and five other AAPG members who will have alternating two- or three-year terms, appointed by the four permanent positions mentioned previously.

Thus, the first board of governors consists of Peter R. Rose, Patrick J.F. Gratton, Deborah Sacrey, Carl J. Smith, Reggie Spiller, Lee Gerhard, John Armentrout, Ray Thomasson and James Gibbs.

Rick Fritz, AAPG executive director, serves as non-voting secretary and coordinator of activities with the GEO-DC office and the governance board.

Juckett retired in 2003 from the U.S. Department of Energy, serving as director of the Office of Natural Gas and Petroleum Import and Export Activities in Washington, D.C. Prior to joining DOE he worked for 14 years with Phillips Petroleum in various research and research management positions.

A full report on the GEO-DC initiative will appear in the January EXPLORER. ❑

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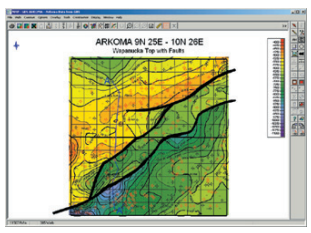

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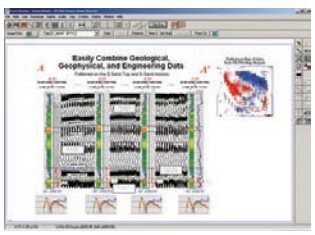

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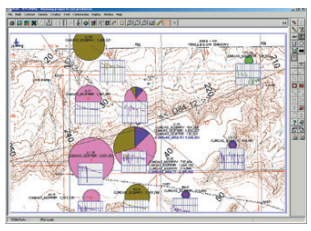

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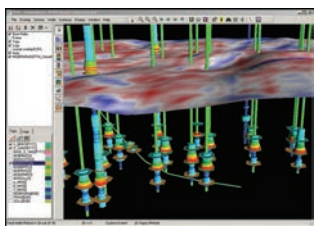

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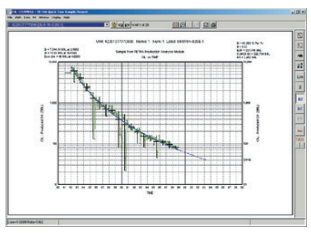

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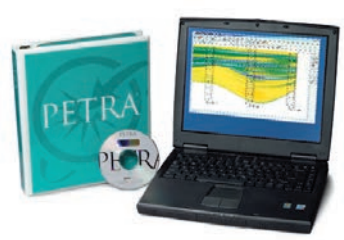

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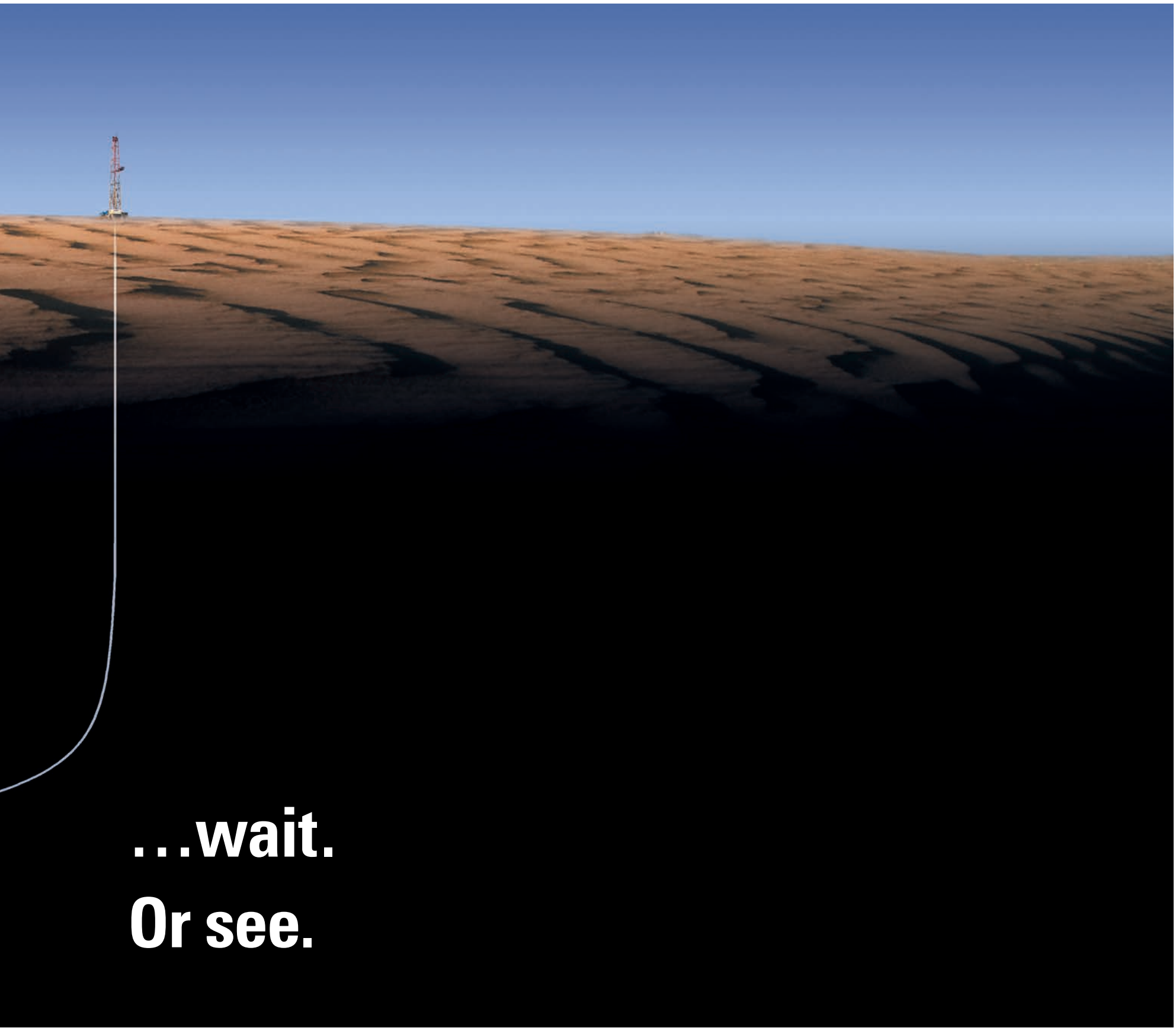

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A Rescue Plan for Shallow Gas

MHT Has Seismic Implications

By LOUISE S. DURHAM
EXPLORER Correspondent

There's a major effort under way aimed at slashing drilling costs while simultaneously reducing the environmental impact from drilling oil and gas wells.

The initiative is being spearheaded by the Department of Energy (DOE) via its Microhole Technology Program (MHT), which involves developing technologies associated with drilling wells less than 4.75 inches in diameter using coil tubing drilling rigs that are relatively small and easily mobilized.

The drill motor and bit are deployed on the end of tubing coiled around a spool.

According to DOE, MH technologies have the potential to lower the cost of drilling shallow to moderate depth holes for purposes of exploration, field development and long-term subsurface monitoring.

In fact, the agency estimates microhole technology conceivably could reduce the exploratory drilling costs by a third or more and chop at least 50 percent off the price of development drilling.

The DOE awarded funding for six projects in the MHT program last year and has since awarded the second round of projects, which will be managed by the DOE Office of Fossil Energy's National Energy Technology Laboratory (NETL).

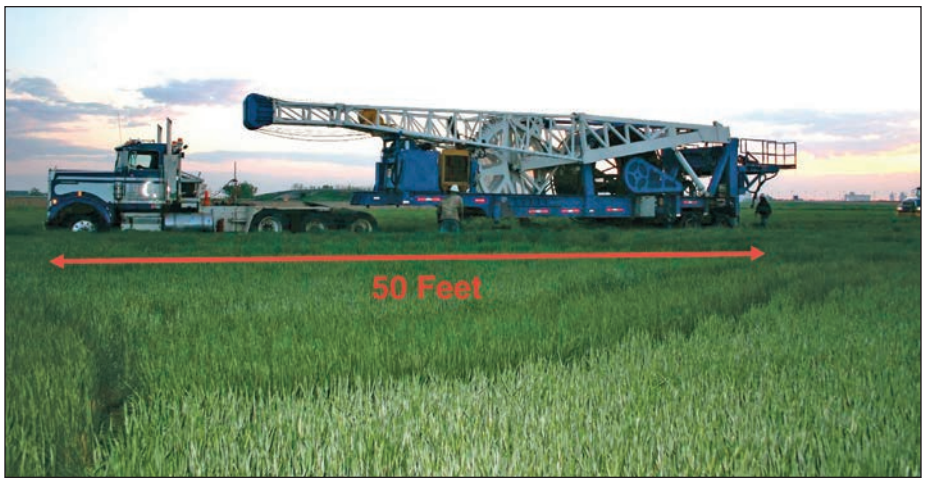
This latest round of ventures includes field demonstrations and also technology development with the intent to take microhole technology closer to commercial application and widespread adoption by the domestic oil and gas industry.

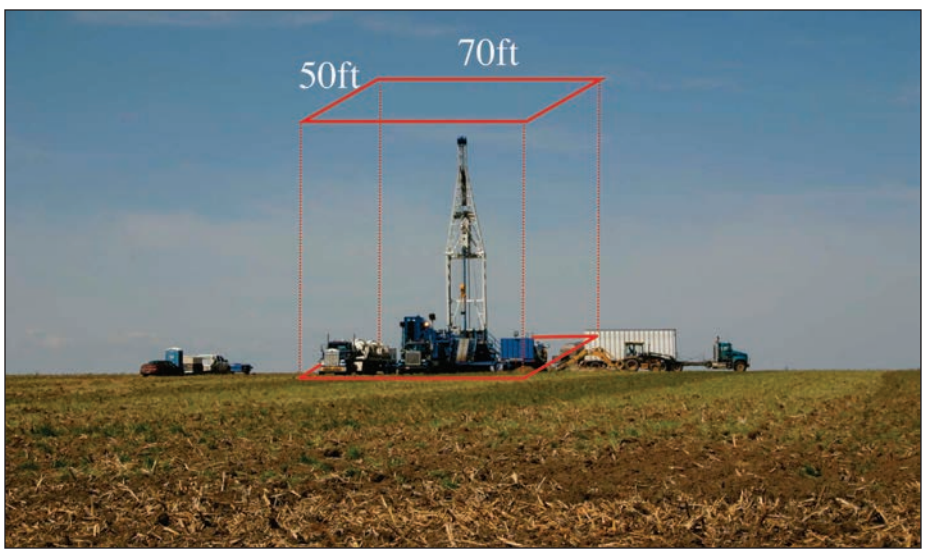
The total funding for the second round of projects is close to $14.5 million, with $7.7 million coming from DOE and $6.8 from industry partners (see related story below).

Industry commitment and participation is noteworthy given the decline in industry-sponsored research and the operators' tendency to use the time-proven technologies rather than risk failure using advanced methods.

Faster, Faster

The MHT program's overall goal, according to DOE, is to develop cost effective technologies that enable:





Photos courtesy of Gas Technology Institute

Size matters – and in this case, the smaller the better. These shots are from a successful field test of microhole technology in shallow, low-margin natural gas fields in Kansas and Colorado, where the crews moved in, rigged up, drilled and moved out in a single day.

✓ Development of shallow (<5,000 feet), currently uneconomic oil and gas resources.

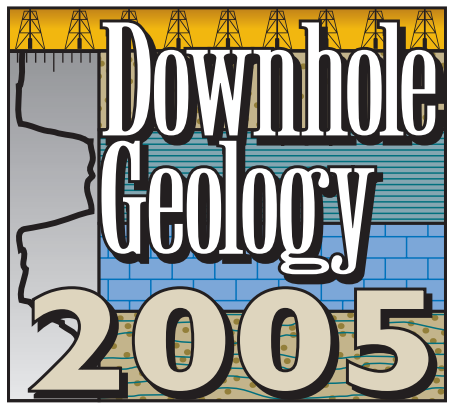
✓ Acquisition of high resolution, real time reservoir imaging without interrupting production.

✓ Reduced environmental impact via lower volumes of drilling fluid, smaller operational footprint and pad/extended-reach drilling.

"The whole focus for microhole technology is mature fields," said Roy Long, technical manager for the oil E&P program at NETL. "After using the best drilling and production available, there will be an estimated 407 billion barrels of onshore discovered oil remaining.

"Of this, 218 billion barrels are at 5,000 feet or less, which is significant," he said, "because at 5,000 feet a lot of things become possible, like high speed drilling."

Coil tubing drilling applications using fast bottom hole assemblies are commonplace in Canada, according to Long.



"Around Calgary, they're drilling as many as three 3,000-foot holes a day, and that's a lot of footage," he said. "The key to make coil tubing drilling work is speed; there are some assemblies capable of getting more than 400 feet an hour.

"As more asset managers look at shallow gas, we're seeing coil tubing drilling beginning to migrate into the Lower 48, which is one goal of the program," Long said. "Coil tubing drilling is long past due.

"Any coil tubing rig can move onto existing well bores," he noted. "With the ability to drill quickly, operators begin to accept the higher day rates for a coil tubing rig. It allows them to get reserves they haven't tried to get before."

(New) American Frontiers

Recent successful field testing demonstrated the applicability of MH drilling technology in shallow, low margin gas fields in Kansas and Colorado. The testing is under the auspices of the Gas Technology Institute, which received funding during the recent second round of the MHT program awards.

The wells are being drilled by Rosewood Resources, Dallas.

In times of very low oil and gas prices, e.g., the 1980s, these fields were not economically viable, said Kent Perry, executive director of exploration and production research at GTI. He emphasized that the minimal environmental footprint and fast drill time using MHT, coupled with the low cost, positions this technology as a viable

See **MHT**, page 22

Show Me the Money: DOE Funds Micro Projects

The Department of Energy earlier this year awarded funding for projects that are designed to push microhole technology closer to commerciality and widespread adoption by the U.S. oil and gas industry.

The initiative involves developing technologies associated with drilling wells smaller than 4.75 inches in diameter and related downhole micro-instrumentation.

The total value of the projects is nearly $14.5 million, with DOE providing $7.7 million and industry partners contributing $6.8 million.

DOE officials say that the industry cost share of about 47 percent demonstrates the petroleum industry's strong commitment to these advanced technologies and suggests strong future support for their commercialization and adoption.

Funded projects in addition to Geoprober Drilling (see related story page 12) are:

❒ Gas Technology Institute (Des Plaines, Ill.) – A proposal to field test a next-generation microhole coiled tubing rig – the MOXIE experimental rig, fabricated by Coiled Tubing Solutions (Dallas).

❒ Confluent Filtration Systems (Houston) – Development of a new elastic-phase, self-expanding tubular technology called CFEX, intended to develop self-expanding well casings to any diameter.

❒ Tempress Technologies (Kent, Wash.) – Development of a small, mechanically assisted, high-pressure waterjet drilling tool to help overcome the limited reliability, power and torque of small-diameter drill motors.

❒ CTES (Conroe, Texas) – Improving the performance and reliability of microhole coiled tubing drilling bottomhole assemblies while reducing the cost and complexity associated with drilling inclined/horizontal well sections greater than 2,000 feet.

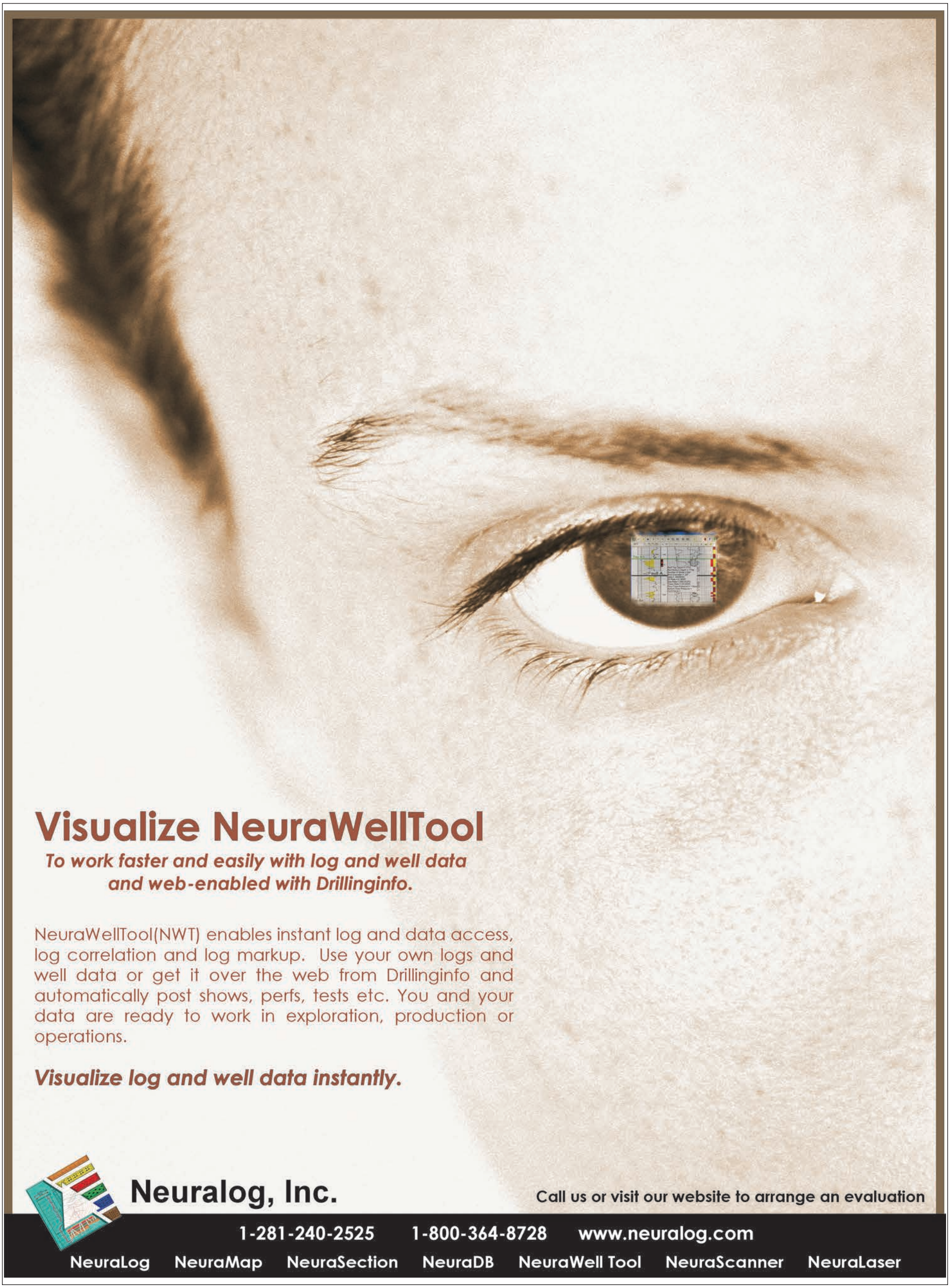
❒ Technology International Inc. (Kingwood, Texas) – Development and testing of a high-power turbodrill to deliver efficient power at relatively high revolutions per minute and low bit weight.

❒ Ultima Labs Inc. (Houston) – Combining existing technologies for measurement-while-drilling (MWD) and logging-while-drilling (LWD) into an integrated, inexpensive measurement system to facilitate low-cost coiled tubing drilling of small-diameter (3.5 inches) wells at depths shallower than 5,000 feet.

❒ Baker Hughes Oilfield Operations (Houston) – Creating a wireless system to help steer drilling in a microbore by a downhole bidirectional communication and power module and a surface coiled tubing communication link.

❒ Gas Technology Institute (Des Plaines, Ill.) – Designing, developing and evaluating a counter-rotating motor drilling system for reducing costs associated with drilling wells targeting unconventional gas.

❒ Confluent Filtration Systems (Houston) – To prove and develop a concept for a self-expanding, high-flow sand screen that could be constructed from a wide range of materials. Plans call for ultimately deploying the technology in a demonstration well. ❑



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A Cheaper, Faster 'Finder Well'

Microhole Getting in Deep Water

By LOUISE S. DURHAM
EXPLORER Correspondent

There's considerable buzz about the U.S. Department of Energy's microhole technology (MHT) program, which is focused on developing a suite of technologies capable of drilling wells with casing less than 4.5 inches in diameter using coil tubing drilling rigs.

One of the program's goals is to develop shallow (<5,000 feet) gas resources that currently are uneconomic.

However, Geoprober Drilling in Houston is at work on a project that stretches the depth limitations significantly.

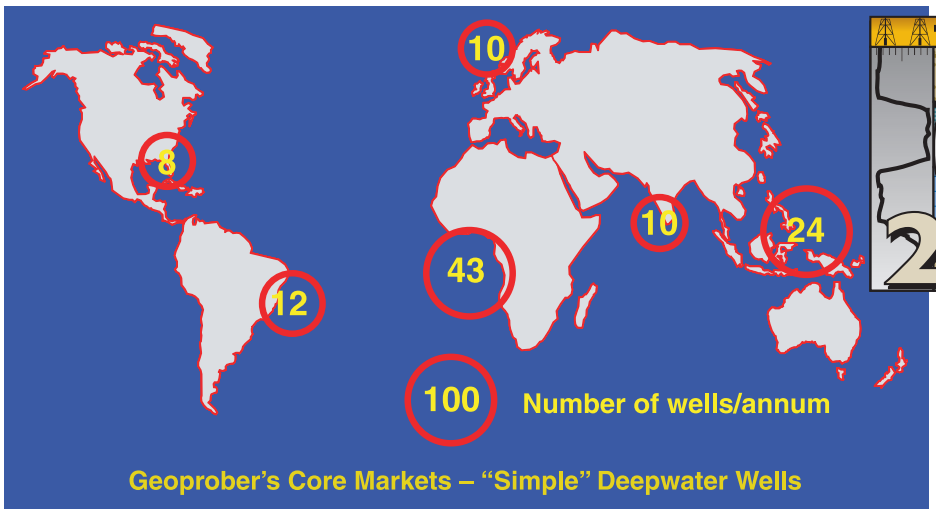
The Geoprober project is one of 10 included in the DOE's second round of awards in the MHT program, and it's focusing on the deepwater environment. In fact, the objective is to demonstrate that it's possible to drill simple deepwater, shallow microhole exploration wells for far less cost than current conventional methods.

The Geoprober effort is being funded to the tune of $1 million from DOE and $4.26 million from other sources.

Expectations for deepwater coil tubing MH drilling technology are high.

"The Geoprober project is limited by a total depth of 17,000 to 20,000 feet," said Colin Leach, U.S. director at the company. "So if we're in 7,000 feet of water, then we can go maybe 10,000 feet below the mudline.

"This is significant for exploration, because if you can target wells to about 20,000 feet, this accounts for a lot of wells in deep water," Leach said. "Even though we're limited by water depth of 10,000 feet, there are plenty of wells 6,000 to 8,000 feet below the mudline in the Gulf of Mexico and also in such places as West Africa, Brazil and the Far East."



Graphic courtesy of Geoprober Drilling

Time is Money

Conventional drilling in deep water requires a large riser of 21 inches in outside diameter, Leach noted. Adding other bits and pieces brings it up to as much as 50 inches, and it takes a large drilling vessel to accommodate maybe 7,000 feet of that size riser pipe.

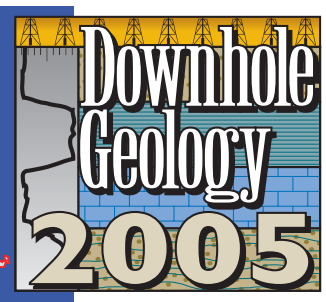
This presents an added problem today given that conventional large deepwater drilling rigs are in scarce supply. A microhole "finder well," however, requires a considerably smaller rig.

"Besides the lower cost, we have a means of being able to establish a deepwater well much quicker than with a conventional approach," Leach said. "A well that takes 25 days conventionally, we might drill in 12 days, leading to considerable cost savings of perhaps 59 percent.

"A conventional $14 million well, we could maybe drill for $6 million," he said.

"We're talking about exploration wells," he noted, "and not production wells, which would have to be larger to flow better.

"From a geologist's point of view, we can provide data the same as one would get from a large well but at much less cost," Leach added. "We have the option to use the Halliburton Anaconda (smart pipe/CDT) system, which we think will be able to provide very high baud rate communication to and from the logging tools."



Another advantage of the MH technology is the limited well design, i.e., any hole size is okay for the reservoir as long as it's only 4.75 inches. This translates into few design loops to worry with.

The Geoprober MHT project entails the drilling of three demonstration wells:

✓ A land well to integrate the drilling and logging tool assemblies.

✓ A test of the "anchor" portion of the drilling system in shallow water.

✓ An offshore well that will combine the achievements of the first two wells but stop short of finding hydrocarbons.

The project is currently in the "phase one" land stage, which includes funding from Chevron and Statoil, Leach noted.

The plan is to wrap the three demo wells by September 2006, and Leach envisions spudding the first commercial well sometime in 2007.

He noted it will be a full-blown exploration well on a geologic prospect.

"We think this (MHT) is going to change the whole paradigm in terms of deepwater exploration," Leach said. "All we have to do is show it works – and we're confident it will." ❑

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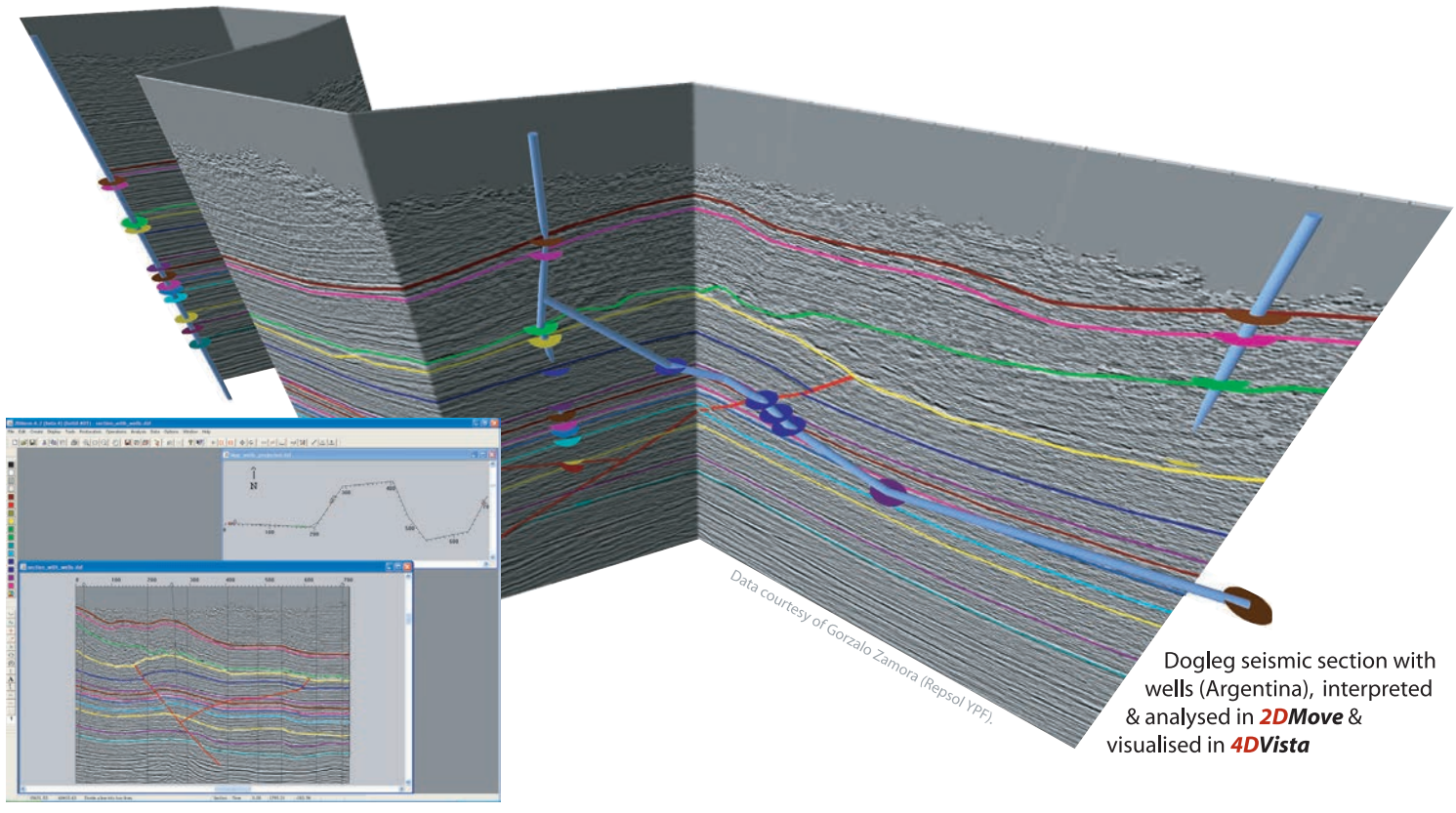

Data courtesy of Gorzalo Zamora (Repsol YPF).

Dogleg seismic section with wells (Argentina), interpreted & analysed in *2DMove* & visualised in *4DVista*

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Geothermal Resource Plentiful

Canada Looks to Tap Aqua Power

(Editor's note: This is the first of a two-part report on geothermal energy potential, this month focusing on how Alberta's geothermal resources may dwarf the province's oil and gas reserves.)

"We have a huge resource endowment that's untapped, combined with a huge oil and gas infrastructure."

By SUSAN R. EATON
EXPLORER Correspondent

When oil and gas wells approach their final days – as water cuts increase at the expense of oil and gas produced – the cost of electricity to produce these marginal wells can become prohibitive. Viewed by many as a liability, the warm water that's co-produced with oil and gas may be transformed into an asset, extending the commercial lives of stripper wells.

Geothermal waters found in the Western Canadian Sedimentary Basin (WCSB) represent a new form of abundant and cheap energy that's sequestered in underground aquifers. The renewable energy stored in these subsurface aquifers is sufficient to power geothermal heat pumps and heat exchangers to generate electricity.

The Alberta Geological Survey (AGS) and the Alberta Research Council (ARC) have teamed up to study the technical and economic feasibility of harnessing Alberta's low temperature (10 to 40 degrees Celsius) to medium temperature (40 to 140 C) geothermal resources. Preliminary estimates suggest that – given current technologies – the potential energy locked in Alberta's geothermal waters is on the order of two to five trillion barrels of oil equivalent.

According to Rick Richardson, manager of the AGS, even one percent of the energy contained in the subsurface aquifers could dwarf the remaining oil and gas reserves in the WCSB.

"We have a huge resource endowment that's untapped, combined with a huge oil and gas infrastructure," said Richardson, who was the EMD technical program vice chair for the 2005 AAPG Annual Convention in Calgary. "The Earth is always producing heat and transferring it into aquifers."

The study, he added, will focus on non-potable and saline underground aquifers.

"We're trying to match the geology to the technology," he said. "You can't just do it anywhere – there has to be an end user with fairly substantial heating and cooling needs."

Creating Assets

At present, there are more than 30,000 heat pump installations in personal residences and commercial facilities across Canada.

At Springhill, Nova Scotia, heat pumps extract energy from 18-degree C waters in a flooded coal mine to heat and cool a nearby industrial complex. According to Natural Resources Canada's Office of Energy Efficiency, the Springhill geothermal project offsets the need for oil-fired electrical power generation, creating an annual energy savings of $45,000.

During the 1980s and 1990s, the Geological Survey of Canada pioneered the study of geothermal resources across Canada, describing the WCSB as the largest "accessible" warm water resource in the country. According to the Survey, many of the basin's subsurface geological formations have adequate porosity and permeability to yield both hydrocarbons and warm waters.

Temperatures in the WCSB correspond with depth, increasing on average about 3.3 degrees Celsius for every 100 meters.

Richardson points to the WCSB's large number of abandoned and orphaned wells, considered liabilities by many, saying, "We're trying to turn oil and gas infrastructure into assets."

The Viking Formation, one of many prolific oil and gas reservoirs in Alberta, is buried – from east to west – between 1,000 to 3,000 meters. Correspondingly, the Viking's geothermal aquifers range in temperature from 33 to 99 C.

According to Richardson, the Viking Formation has been penetrated by 189,000 wells to date – 60,000 of these wells are producing, 100,000 wells are abandoned and 20,000 suspended.

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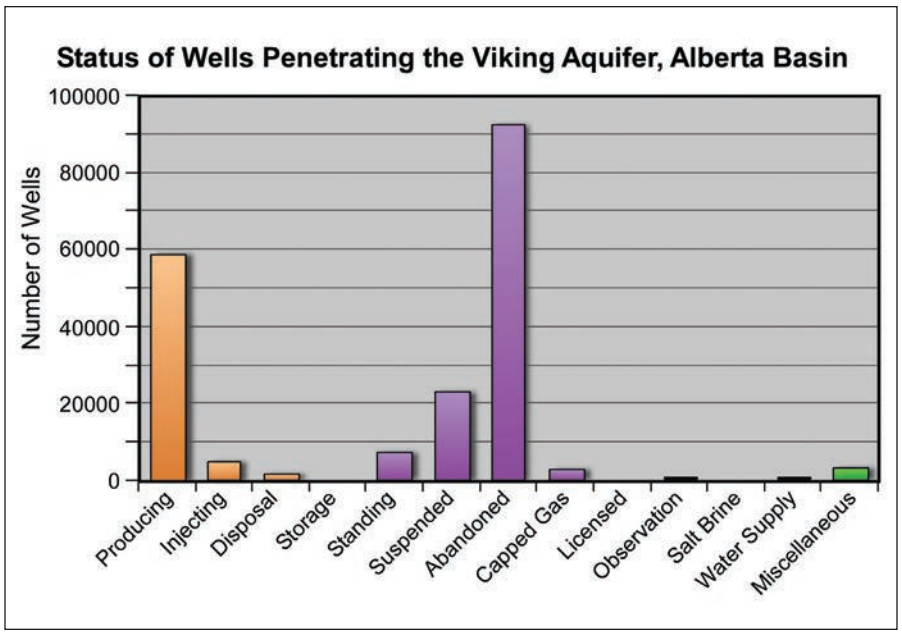
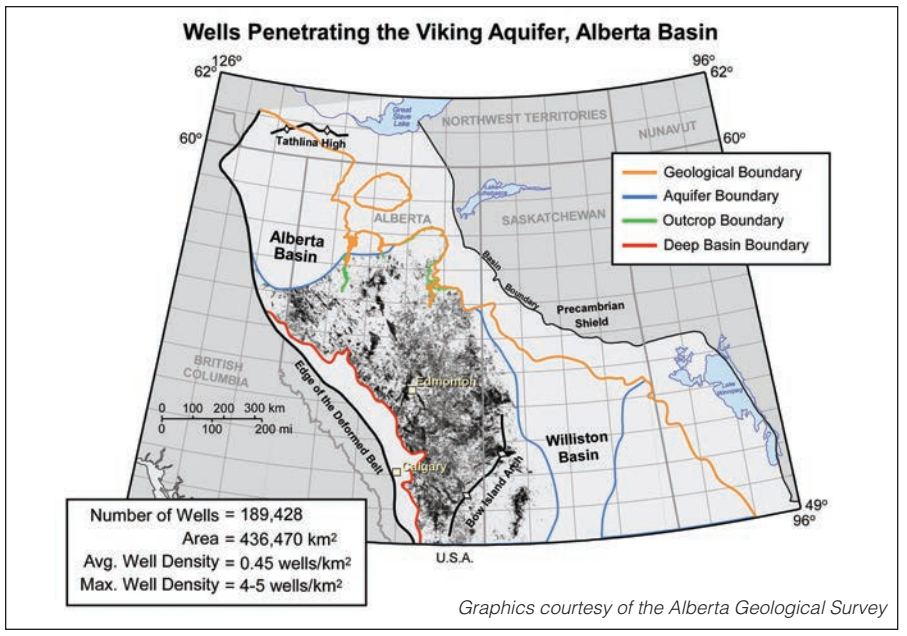




Graphics courtesy of the Alberta Geological Survey

continued from previous page

Historically, the economics of geothermal energy projects failed due to the high costs associated with drilling and completing wells.

"We believe that this project is viable at the moment, but the question is timing," said Ian Potter, an engineer and ARC's director of Sustainable Energy Futures.

There are many unknowns, Potter added, including the condition of the province's boreholes and the replenishment rate of energy (or heat) in subsurface aquifers.

"We don't want to find that we've just killed our heat source," Potter said.

Taking the Next Step

Potter's mandate is to examine technology gaps in geothermal energy extraction and conversion.

"We're taking heat pump technology to the next level," he said. "And, there's a role for hybridization of technologies."

One new technology that Potter will evaluate is Arizona-based Deluge Inc.'s Natural Energy Engine™, a non-combustible engine that uses geothermal energy, essentially replacing conventional diesel- or gasoline-powered pump jacks at wellheads.

The engine contains high-pressure, liquefied carbon dioxide that is heated and cooled, causing expansion and contraction – this change in volume pushes and pulls on a piston, creating mechanical energy.

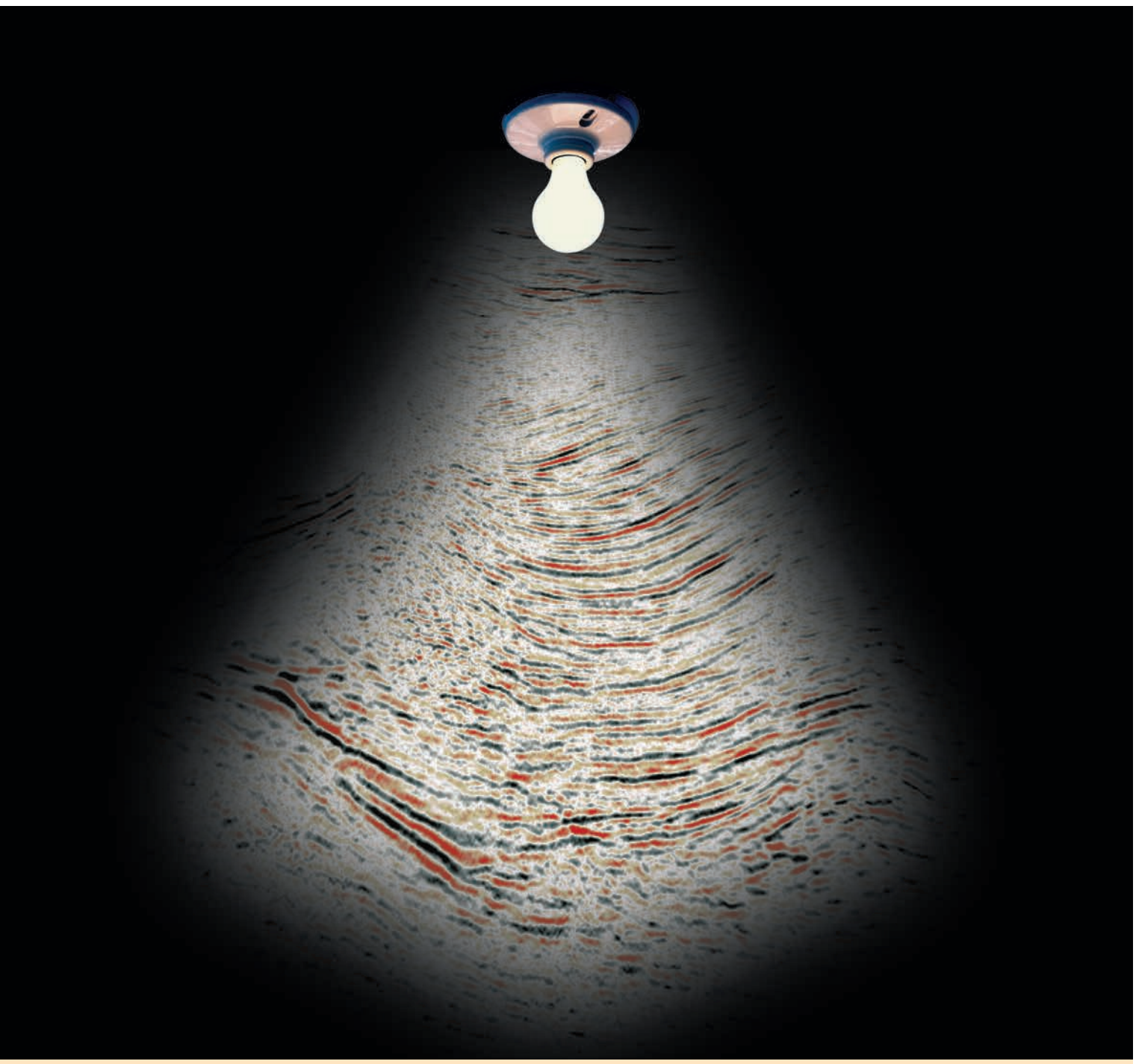
In September, Deluge won the 2005 Outstanding Technology Development award from the U.S. Federal Laboratories Consortium for field-testing its engine at the Naval Petroleum Reserve near Casper, Wyo. Deluge demonstrated that its engine was capable of pumping an oil well at depths ranging from 120 to 480 meters, with power to spare.

In addition to petroleum producers, other suitable end users for direct use geothermal energy include:

✓ Hospitals.
✓ New housing subdivisions.
✓ Industrial research parks.
✓ Municipalities.

"The role of the ARC is to showcase the natural resources of the province," Porter said. "It's the start of a new business in Alberta."

(Editor's note: Next month, a look at geothermal energy applications, including use in a car in the United States.) ❑



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High Risk, High Potential

Tactical Tips for Deep Gas Targets

By LOUISE S. DURHAM
EXPLORER Correspondent

Just like the overall "Old Faithful" Gulf of Mexico, exploration activity in Louisiana's long-productive coastal transition zone and adjacent shallow waters is a gift that keeps on giving.

Today, however, it's not the usual historically prolific targets shallower than 15,000 feet that are luring the operators. Instead, they're licking their collective chops over a whole new region: the deeper horizons harboring sizeable unexplored structures thought to contain, for the most part, enormous deposits of natural gas.

According to the U.S. Minerals Management Service, various reports and publications have reported five deep gas discoveries so far this year in the shallow water (less than 1,000 feet) Gulf.

But these deep, pricey wells virtually shout RISK in capital letters, requiring exceptional drilling expertise and a heap of confidence in the geoscientists' efforts to accurately identify the drilling target – and there are no guarantees.

Look, for instance, at the Shell Oil Joseph well, which reportedly hit total depth at 25,000+ feet at High Island Block 10 off the Texas-Louisiana coasts early in the summer. The well is awash in rumors – none of them celebratory at this point, e.g., dry hole, possibly productive from a portion of a 300-foot sand section, etc.

Because those in the know aren't talking, everyone else is left to speculate.

Providing still more thrills for those onlookers who thrive on uncertainty is the ExxonMobil Blackbeard deep gas well, which is anticipated to bottom out possibly as deep as 38,000 feet after a year of drilling: Mum's the word on the progress of this deep effort, at least for now.

Shallow water-deep gas is an attractive exploration target in south Louisiana.

The complex deep structures being probed by the drill bit encompass an array of fault systems and a host of ethereal salt and shale deposits. Not surprisingly, the indigenous reservoir systems are complicated.

Until now, seismic data to image these structures have been lacking both in quantity and quality. Fortunately for the prospectors, that's changing rapidly with a rash of acquisition programs and new technology (see related story, page 12).

But it's going to take more than good data to make this play a success, and a number of experts are focusing considerable effort on making it happen.

In fact, new techniques to reveal exploration opportunities in Louisiana's coastal and shelf areas was the topic of a paper that was slated for the September GCAGS meeting in New Orleans that was canceled by Hurricane Katrina.

"The deep plays are analogous in many aspects to the stratigraphically younger deepwater plays in the present day Gulf of Mexico," said co-author Fangjian "Jack" Xue, at Schlumberger Data and Consulting Services in Houston. "To gain a better understanding of the deep prospectivity of the south Louisiana transition zone, regional studies of the Miocene production trends have been integrated with high quality, deep-targeted 3-D seismic data, relevant publications from the industry and academia, and proprietary analysis and interpretation techniques."

Xue noted the study indicated the structural and stratigraphic framework of the area is characterized by a regional detachment surface at approximately 5.2 seconds (about 22,000 feet) under sand-rich Tertiary sediments. Above this detachment surface, syndepositional salt movement and associated growth fault systems have created extensive structural deformation.

"The lowstand system tracts dominate the section below 12,000 feet," Xue said. "The complex evolution history of the interaction between salt tectonics and slope sedimentation resulted in stacked reservoirs, high density of traps, multiple play types and abundant migration pathways in the deep section.

"The excellent geological conditions, together with relatively high pressure, created numerous, highly productive deep targets through most of the study area."

Given the challenge of the high potential/high risk aspect of the deep opportunities, the paper's authors determined special tactics are needed to minimize risk and maximize potential.

These tactics include:

- ✓ Sand-rich sequence identification.
- ✓ Accurate fault mapping.
- ✓ Hydrocarbon-bearing prediction.
- ✓ Multi-target penetration. ❑

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Oil Search Ltd Uses GeoMechanics to Reduce NPT from 30% to 3%

According to Jon Rowse of Oil Search, "GMI are adding significant value to our projects. We would like to get GMI involved even earlier in the process and are considering forging an even closer relationship by placing a GMI specialist in our offices."

Case Study: Accurately quantifying geomechanical stresses in Papua New Guinea has been the key to successfully predicting problems related to borehole stability and reducing associated non-productive time (NPT) for Oil Search Ltd. Over the course of 12 projects, geomechanical issues such as stuck pipe, fluid loss, and wellbore breakout have been successfully eliminated or managed. In the first project, SE Moran 1X, the well delivery team minimized geomechanically induced problems and so reduced NPT from 30% (historical average) to 3% (best ever achieved).

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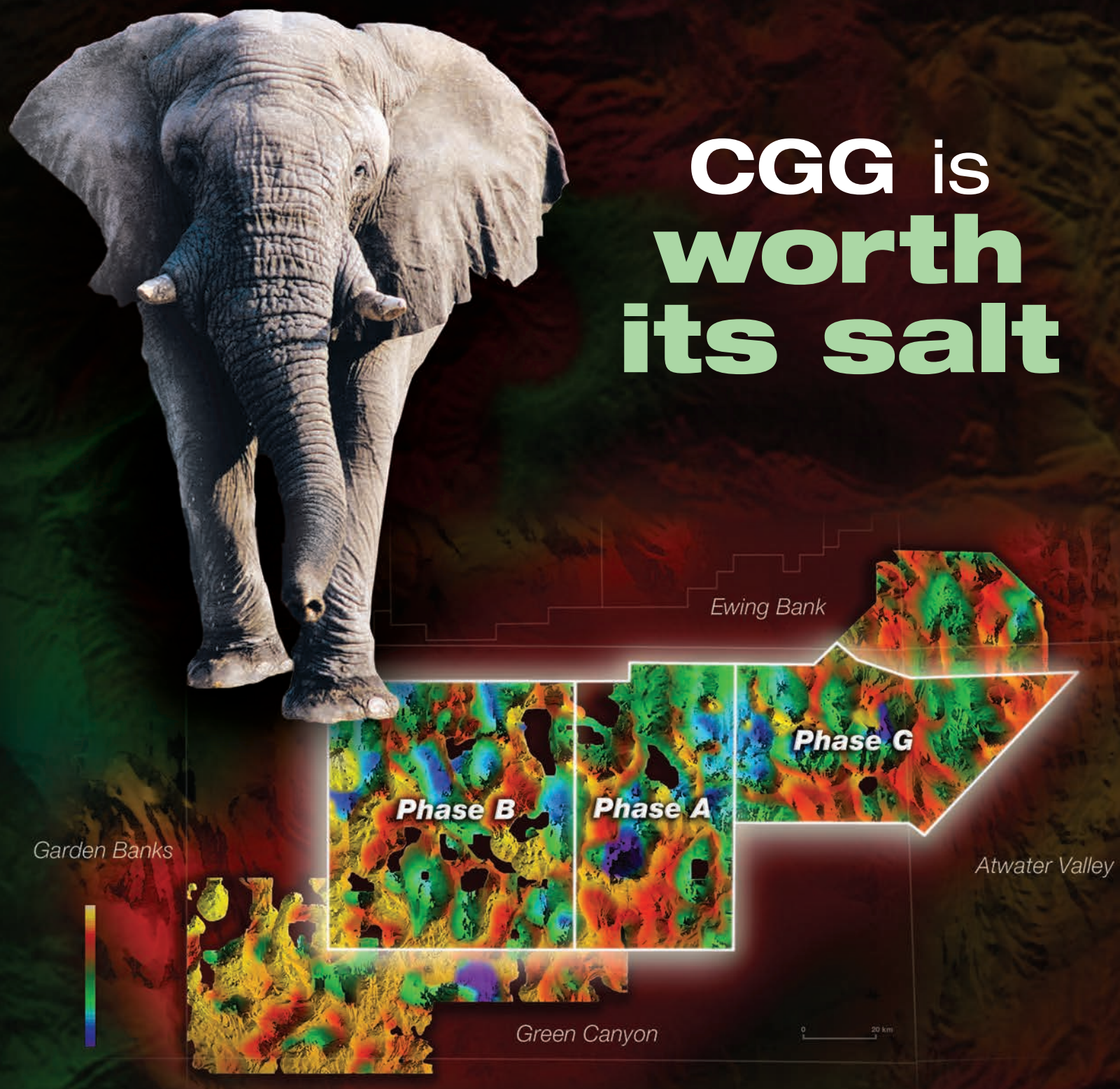

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LOOK TO CGG

Staying the Course While Politics Sizzles

$$ Bonanza! What Happens Now?

By DAVID BROWN
EXPLORER Correspondent

On September 30, the major oil companies completed their most successful fiscal quarter in years.

Talk about embarrassing.

By now the story is familiar, and not just to stockholders or those in the industry: Six of the companies – BP Group, Chevron, ConocoPhillips, ExxonMobil, Shell and Total – reported combined net revenue of $36.6 billion.

ExxonMobil by itself had a three-month profit of $9.92 billion, although that included a special profit of $1.62 billion in change it found under the sofa cushions.

Public and political outrage followed those financial reports, even though profit margins for the industry overall ran about 6 percent to 8 percent, nothing spectacular.

Still, unexpectedly high prices for crude oil and natural gas, combined with a recent surge in the price of gasoline, left the big oil companies sitting on a mountain of cash.

What will they do with all that money?

If your answer is "lots more exploration," you could be disappointed.

OK! Here's Our Plan

Major oil companies have long-range spending plans that don't change because of quarter-to-quarter financial fluctuations.

Those plans aren't adjusted much even for year-to-year fluctuations.

"All their projects are multi-billion-dollar, multi-year projects. You can't have a knee-jerk reaction," said Fadel Gheit, senior vice president for oil research at Oppenheimer & Company in New York City.

When big corporations pile up extra cash, they tend to improve their balance sheets by paying down debt.

They also can start or expand stock buy-back programs, which will spread future revenues and earnings over a smaller number of shares. Future per-share earnings go up, comparatively.

ExxonMobil bought back 91 million shares of its own common stock in the third quarter of 2005, at a cost of $5.54 billion.

"First of all, (big oil companies) have reduced their debt to the lowest level ever. The next thing to do is to buy back their stock, and that is what they are doing," Gheit said.

David Nissen is director of the program in international energy management and policy at Columbia University's Center for Energy, Marine Transportation and Public Policy in New York City. His career has included serving in a senior position with Exxon's Corporate Planning Department, and also with Chase Manhattan's Corporate Lending Group.

Nissen recalled reading a recent statement from ExxonMobil about the company's strategy.

"What the guy said was, Exxon has a long-term plan. They invest in good times and bad," he recalled.

When oil dropped to $10 a barrel, Exxon continued to invest in long-range projects to meet its goals. It pursues projects in the same way at higher oil prices.

"Their story was, they didn't cut back then and they aren't going to splurge now," Nissen said.

Explore? Sure. Where?

What will the big oil companies do with their cash?

"I'm not going to predict what's going to happen, because I don't know," Nissen said.

One thing they will do, and are doing right now, is to spend more on exploration.

Don't get excited.

Major oil companies aren't isolated in their market. When they make more money because of higher oil and gas prices, you can be sure their exploration costs are going up, too.

So the big oil companies have announced spending increases to cover higher day rates for drilling, higher supply and equipment costs, higher service company fees, higher everything.

In this case, spending more money on exploration doesn't mean more exploration.

"Oil companies just can't wait to drill more holes in the ground and shoot more seismic," Gheit said. "It's not as simple as that.

"Do you really think oil companies would rather have cash earning two or three percent, rather than investing in a very lucrative business?"

One obstacle Gheit sees for the oil majors is a lack of good territory to explore.

"Where does Exxon go? You have to have an opening," he observed. "Russia is closed. The Middle East is closed. Venezuela does not want to see our faces."

Gheit blames the U.S. government

continued on next page

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Microsoft	3.1	9.7	32
The Coca-Cola Co.	1.3	6.0	21
Procter & Gamble	2.0	14.8	14
General Electric	4.7	41.6	11
ExxonMobil	9.9	92.6	11
ConocoPhillips	3.8	48.7	8
IBM	1.5	21.5	7
Chevron	3.6	51.1	7
Wal-Mart	2.8	76.8	4

Source: Bloomberg News

continued from previous page

and U.S. policies for part of that problem.

"Why? Because of bad politics, bad policies, everything," he said.

And for all its importance, the oil and gas industry receives startlingly little attention and support from government, he said.

"The Interior Department is not sufficiently staffed to release Federal lands fast enough for the industry to drill," Gheit said.

"The government is taking enough from these companies in taxes and in royalties. Why can't they use that to hire more, qualified people?" he asked.

Nissen noted that many attractive exploration areas are in the hands of sovereign foreign governments with their own national oil companies. Negotiating any kind of entry deal can be frustrating.

"At $10 a barrel those are no fun," he said. "And at $60 a barrel, they don't need you."

Another Buying Spree?

There are always those who hope that the big oil companies will do something madly, magnificently silly with their cash.

Just kidding.

Who can ever forget Exxon's Intelligent Typewriter Division? Or Mobil's takeover of Montgomery Ward, the consumer goods retail and mail-order company?

"At one time, Exxon bought the world's leading company in word-processing software," Nissen recalled. "It was criminal, because they destroyed the word-processing company."

Chances of similar, goofy investments by the oil majors today are just about nonexistent, according to Nissen. The industry has learned to focus on what it knows.

"People have gotten a lot smarter about what their core competencies are, in all industries," he said.

What should the big oil companies do with their cash?

If your answer is "buy other oil companies," you won't be disappointed.

Gheit foresees another round of "strategic acquisitions" in the industry.

Nissen acknowledged connections between oil company mergers and good financial times in the industry, especially times of high stock prices.

"The first order of connection is, companies buy other companies when they think it adds value. And it's cheap to do it when they think they can do that with stock," he said.

Part of the public wants major oil companies to invest in developing energy alternatives to oil and gas.

In solar, wind and other alternative energy investments, there's a cultural divide between European-based big oil companies and U.S. companies, according to Nissen.

He considers it a question of core competencies for American firms.

"If you finally succeed in making solar equipment, for instance, you are making either power plants or, collaterally, something like wallboard or appliances," he said. "That's what General Electric does."

But the large energy companies in Europe have a social basis for backing renewable or alternative sources, Nissen observed.

"Europeans do it because European cultures want their companies to be (technology and product) champions," he said.

Takeaways and Turnabouts

What the major oil companies definitely don't want to do with their cash is give it up to higher taxes and other government takeaways.

"This is capitalism. This is not communism, for heaven's sake. Money is going to go where it is treated best," Gheit said.

"If we start tinkering with a Windfall Profits Tax, all these countries will start taxing these companies at a higher rate," he predicted.

In Gheit's view, countries where major oil companies operate will look at any Windfall Profits Tax in the United States and say, "Why aren't we getting that money?"

They will then raise their production taxes, royalties and other takeaways to reduce the major companies' profit levels.

Talk about taxing away profitability drives Gheit a little bananas.

"When (Venezuela President Hugo)

See **Profits**, page 22

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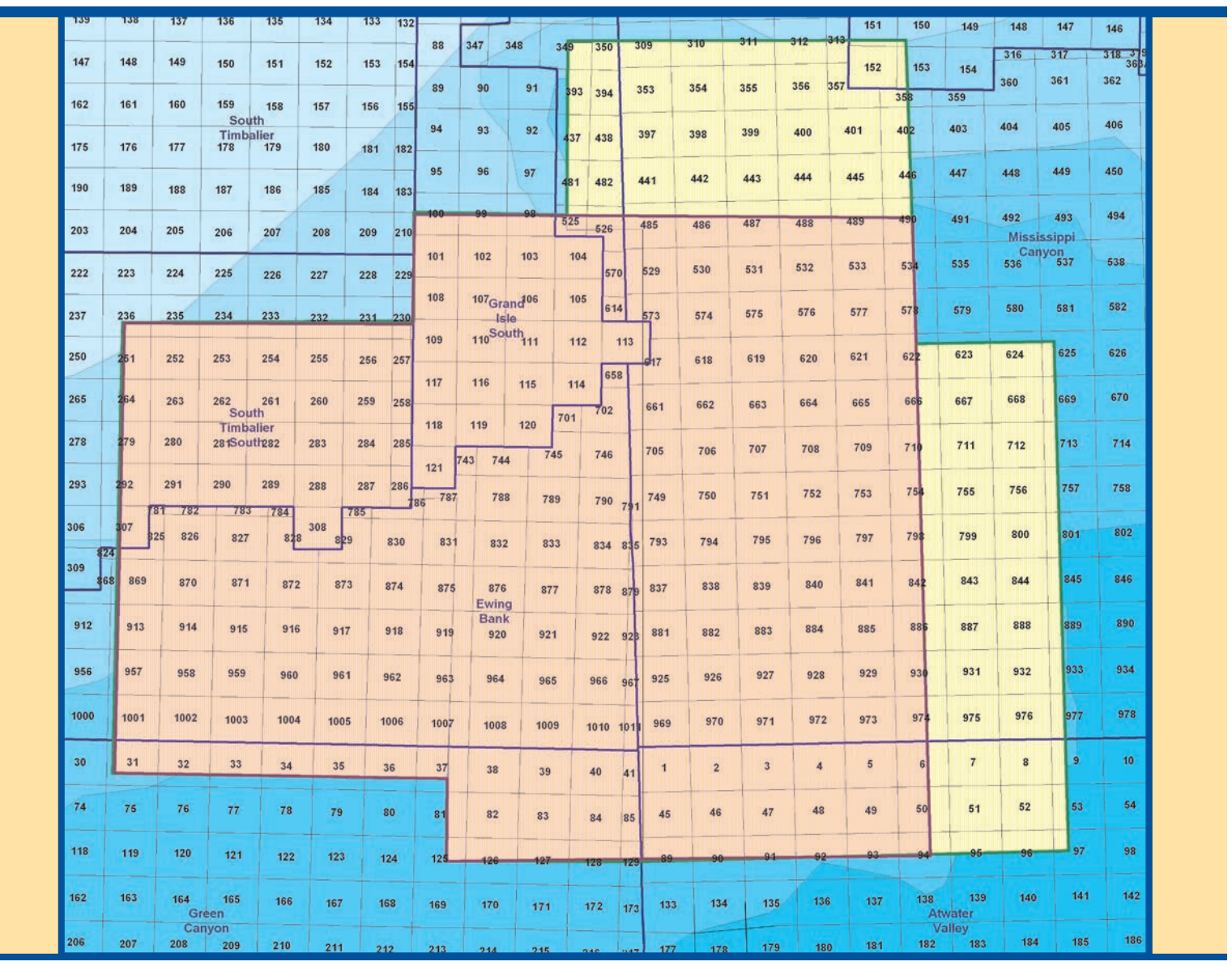

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NOGS, GCAGS Moving Ahead – In Absentia

Katrina Recovery to Take Awhile

By LARRY NATION
AAPG Communications Director

Like everyone else in southern Louisiana and Mississippi, geologists are getting their lives back together, making do – and looking forward to the day when normalcy returns.

Because of the depth and nature of the ruin left in the wake of Hurricane Katrina, it's going to be awhile.

Ed Picou, past AAPG treasurer and native Louisianan, said in early November the devastation is reminiscent of the scene he witnessed in war-wracked Korea as an officer in the U.S. Army Corps of Engineers in the mid-1950s.

"I've never seen anything like this in my life," Picou said. "Sheetrock, spoiled carpets and all kinds of other tree and soured flood debris are stacked along the sidewalks, awaiting a front-loader to scoop it up and take it away. Tons of it.

"Everything is in shades of brown and gray. All the vegetation is dead. It is like a sepia photograph of a Civil War scene.

"It's the same as Mardi Gras," he continued. "It must be witnessed to be understood, because it just can't be explained."

In mid-November there was still spotty land telephone service, no electricity for stoplights and the central business district is still mainly deserted with trailer-mounted electricity generators roaring in the streets to provide power for the clean-up effort. The Internet service is inconsistent because of the lack of electricity.

Photo by Tom Bergeon. GCAGS

Cars and houses were displaced by waters flowing in a half block from the levee break in Lakeview. Lake Pontchartrain dropped four inches and equilibrated at max flood at three feet above sea level. This photo was taken about five weeks after Katrina hit on Aug. 28.

But still, the New Orleans Geological Society is planning its comeback, and the Gulf Coast Association of Geological Societies is making plans for 2006.

NOGS President Brett Hampton is working by phone and e-mail from his relocated Shell office in Houston with the society's Board to bring activities "back to life." He and GCAGS President Tom Bergeon, also with Shell, carpool together to their Houston offices.

Hampton said the NOGS office is in good shape and the records are intact, although the Web site was down for about two months.

The goal is to try to get together an informal social gathering before Christmas, publish a newsletter in January, find a new venue (The Fairmont suffered extensive damage) and hold a meeting in February.

The problem, Hampton noted, is the dispersal of the membership. But the network is beginning to re-form as NOGS members, expatriated in such places as Houston, Lafayette, Baton Rouge and Covington, begin to reconnect as they find each other.

Hampton and Bergeon accepted AAPG's invitation for NOGS members and the GCAGS board to use the AAPG Emergency Relief Message Board at www.aapg.org to help reconnect the society and section members. Members are invited to post contact information or other messages.

Shortly after Katrina, GCAGS canceled the New Orleans meeting originally scheduled for three weeks after the hurricane hit. Bergeon said cancellation insurance was carried and AAPG is assisting GCAGS in making claim on $80,000 in coverage.

To add insult to injury, Hurricane Rita, which gridlocked a threatened Houston, occurred over the weekend before the GCAGS Convention would have been held and many transplanted New Orleanians evacuated for a second time.

Bergeon said the full *Transactions* for the planned talks will still be published in both CD and hard copy and will be available online via the Texas Bureau of Economic Geology at www.gcags.org.

continued on next page

continued from previous page

Planning is already under way for the 2006 GCAGS meeting, to be held Sept. 25-27 in Lafayette, La.

Meanwhile, like many other displaced geologists, New Orleans ex-pats Bergeon and Hampton have moved their families to Houston, the kids are in school there and they make weekend trips back to the Crescent City to make repairs, clean up and take care of personal business.

Also, there are uncertainties about what companies are coming back to New Orleans and who is not. While word on the street is rife, few official announcements were being made 45 days after Katrina.

Most expect some announcements shortly, with late spring 2006 the best bet for most to be able to return to New Orleans offices. Shell announced in early November that the bulk of its operations including Production would go back in that time frame, with Exploration centralizing in Houston.

While the huge cleanup effort continues, hope remains eternal.

For instance, Picou's photo appeared on the front page of the *Times-Picayune*, New Orleans' major newspaper that published daily in the midst of the rubble and devastation.

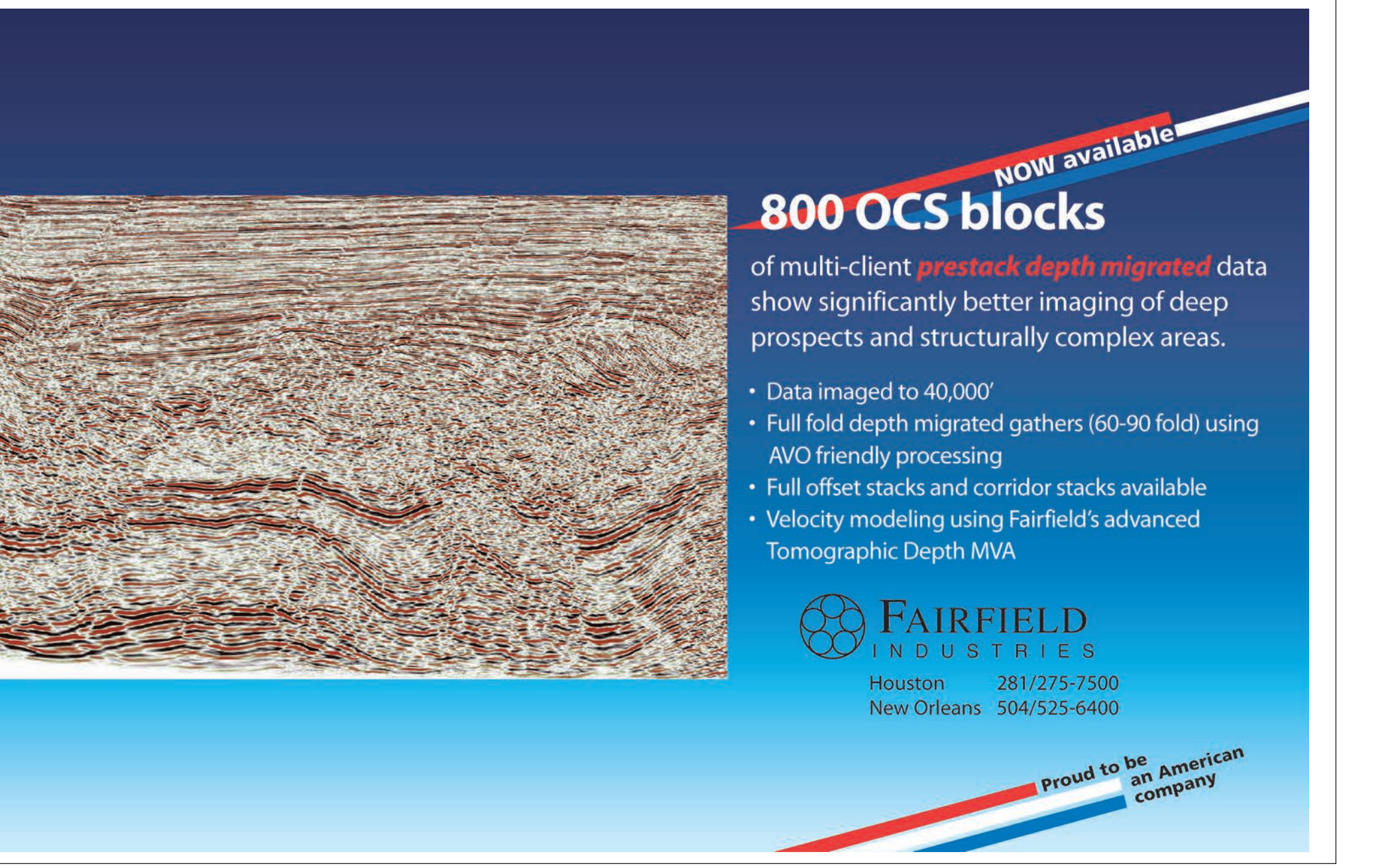
Picou's home suffered some tree and roof damage, as did most buildings, but escaped any flooding. Just a few blocks to the south, floodwaters were eight-nine feet deep.

The photo showed Picou sweeping off his sidewalk after mowing his lawn, with flowers blooming in the background – a scene that would ordinarily not attract attention.

But in New Orleans after Katrina, that's front page news. ❑

Photos courtesy of DigitalGlobe

Satellite views, before and after, showing Katrina's impact: Top left and right, Biloxi, Miss.; bottom left and right, New Orleans.



Paris Technical Awards Announced

Technical awards for best paper and poster presentations at the AAPG International Conference and Exhibition, held last September in Paris, have been announced.

The winners will receive their awards April 9 in Houston during the opening session at the AAPG Annual Convention.

They are:

Gabriel Dengo Memorial Award
(best international paper)

❒ **Marek Kacewicz**, exploration and exploitation technology, Unocal Corp., Sugar Land, Texas, for "Toward a Common Earth Model: Combining Seismic Inversion with Basin Modeling."

The paper was part of the session on "Advances in Basin and Petroleum System Modeling."

Ziad Beydoun Memorial Award
(best international poster)

❒ **Denis Marchal** and **Misael Alvear**, both with Petrobras, Caracas, Venezuela, and **Jean-Marc Daniel**, with the Institut Francais du Pétrol, Rueil Malmaison, France, for "4-D Analog Modeling of Transpressional Structures Growing in a Rheologically Heterogeneous Medium: Methodology, Main Results and Reference Models."

The poster was part of the session on "Faults and Fractures in Modeling and Flow." ❑

Profits

from page 19

Chavez said that two years ago, we called him a crazy communist. Now, guess what? We're borrowing his plan," he said.

Any move to an additional profits tax will discourage exploration, not encourage it.

About the only thing that will lead to a meaningful, industry-wide increase in exploration is a change in management perspectives.

Investment plans and strategies do change, although fairly slowly, and not in response to one or two years of good or bad results.

They come when management believes the game has changed, especially in terms of future payouts. And there are signs of changing attitudes.

Nissen said he recently attended a high-level conference to discuss exactly those kinds of changes.

"The peak (in oil production), whenever it comes, signifies a shift in market power and not a disappearing resource," Nissen said. "Will the character of the market shift? Yes. Will there be a shift in market power? Yes.

"All of that is happening, and it will continue to happen," he added.

What should the big oil companies do with their money?

If your answer is "lots more exploration," you could be disappointed – but maybe you won't be.

The industry's response to that question will take shape not in the next few months, but over the course of the coming years. ❑

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MHT

from page 10

option to recover oil and gas from marginal fields like these.

The field testing aptly demonstrated the efficiency of microhole technology: The test crew moved in, rigged up, drilled, rigged down and moved out within a day, with minimal environmental impact, according to GRI.

The tests thus far have concentrated on Niobrara chalk reservoirs, drilling open holes as much as 4.75 inches in diameter at depths of 1,000 to 3,000 feet.

"The Niobrara represents a Tcf of gas just made economic," Long said, "and this is just one little area in Kansas and Colorado. Think of all the shallow, tight gas drilled through for years that was uneconomic."

Seeing Something More

It is noteworthy that while microhole technology is slowly but surely becoming essentially a no-brainer for shallow, tight gas, its potential value extends beyond natural gas.

It could, according to GTI, have substantial impact of the production of the vast domestic oil shale resource as well.

There's more going on here, however, than just drilling faster, cheaper boreholes.

"We see a real future for all this in imaging," Long said. "There are a lot of problems trying to see complex reservoirs, so the idea is to improve the seismic resolution we're doing using designer seismic.

"We punch a lot of holes 2.75 inches and smaller, or the minimum size to get the new technology geophone systems, accelerometers below the surface," Long said. "It's a new way to interpret seismic called vertical seismic profiling, which has been around for some time, but we're drilling a hole especially for it.

"Typically it's done in an existing hole, but it can be very expensive to shut a well in and then get data," Long noted. "And, ideally, you should have the equipment there all the time."

In fact, DOE anticipates that over the long haul, MHT applications will include drilling dedicated wells for continuous reservoir monitoring to allow:

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✓ Low impact, high resolution imaging of targets beneath environmentally sensitive locales.

✓ Passive seismic imaging to take advantage of noise associated with naturally occurring seismic events. ❑

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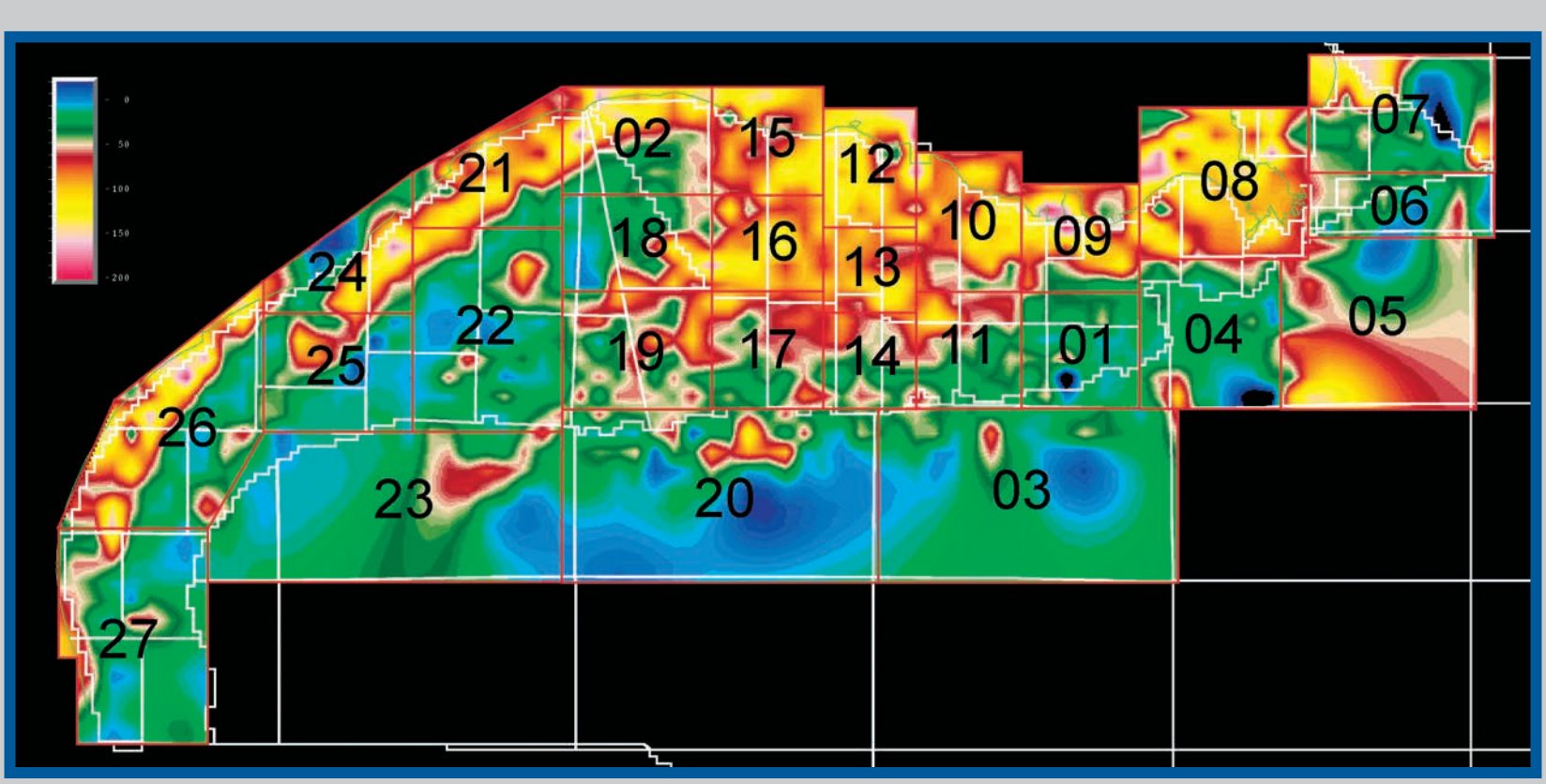

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GEOPHYSICAL CORNER

Balance Between G&G is Critical

(The Geophysical Corner is a regular column in the EXPLORER, edited by Dallas consulting reservoir geophysicist Alistair R. Brown. This month's column is the finale for Brown's tenure as column editor.)

By ALISTAIR R. BROWN

Everyone is a product of their own experience. Hence geophysicists tend to favor geophysical methods and geologists tend to favor geological methods. It's only natural.

However, we all know that the search for and development of oil and gas involves both disciplines. We all need to be geoscientists. We all need to meld geophysics and geology in an effective manner. We need to be integrated.

I regularly have cause to admonish a course student of mine for "over-geologizing" the solution. He or she imposes a geological concept or model on the seismic interpretation rather than "letting the data speak."

The majority of seismic interpreters come from a geological background, so they have to learn the intricacies of geophysics. With modern 3-D data there is a lot more to learn than there used to be. We have to appreciate the value of seismic amplitude, the resolution of the data, how to recognize data defects, the precision of workstation autotrackers, the complexities of seismic horizon identification and the mystifying plethora of seismic attributes.

* * *

In a prospect in Latin America, a high amplitude was identified as a turbidite sand that had been recognized in a nearby well. The amplitude was mapped manually to indicate a prospective area of useful size.

The geologically-oriented interpreter made the map look like a turbidite because he had seen one before (figure 1). He showed the map to his exploration manager and they agreed to drill a well at the location indicated.

A more detailed geophysically-oriented analysis of the high amplitude was then undertaken. All the data was used, the tracking was performed with a high-precision autotracker and the horizon amplitude was extracted to produce a horizon slice.

A simplified version of this is shown in figure 2.

Note that the initially-proposed drilling location is now found to be in a local amplitude low, indicating that the turbidite sand here is thin or absent. Clearly the well needs to be relocated, as we believe that amplitude is a measure of porosity-thickness.

* * *

Many seismic interpreters take a formation top on a log, measured in depth, convert it to time and pick at that exact position on the seismic section. A simple synthetic seismogram constructed from a sonic log using a Ricker wavelet may be used as an aid. These conventional approaches neglect errors caused by seismic velocity, hole conditions, tuning effects, data phase and data polarity.

All these issues, and others, make the seismic-to-well tie quite complicated.

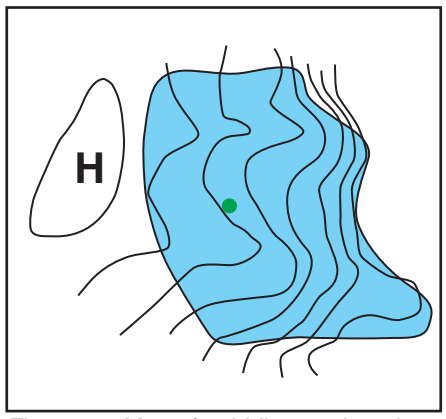


Figure 1 – Map of turbidite sand made from seismic amplitude with some interpretive smoothing. Well is located slightly updip of center of sand body.

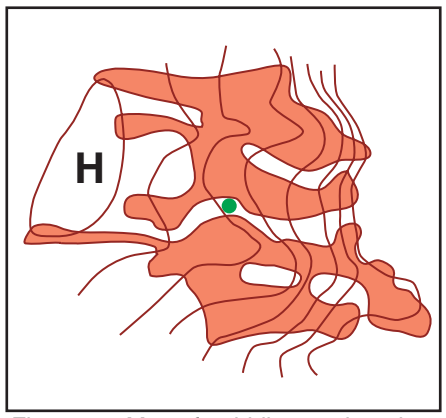


Figure 2 – Map of turbidite sand made from detailed analysis of seismic amplitude. Note the four flows and that the well is now targeting a gap in the turbidite.

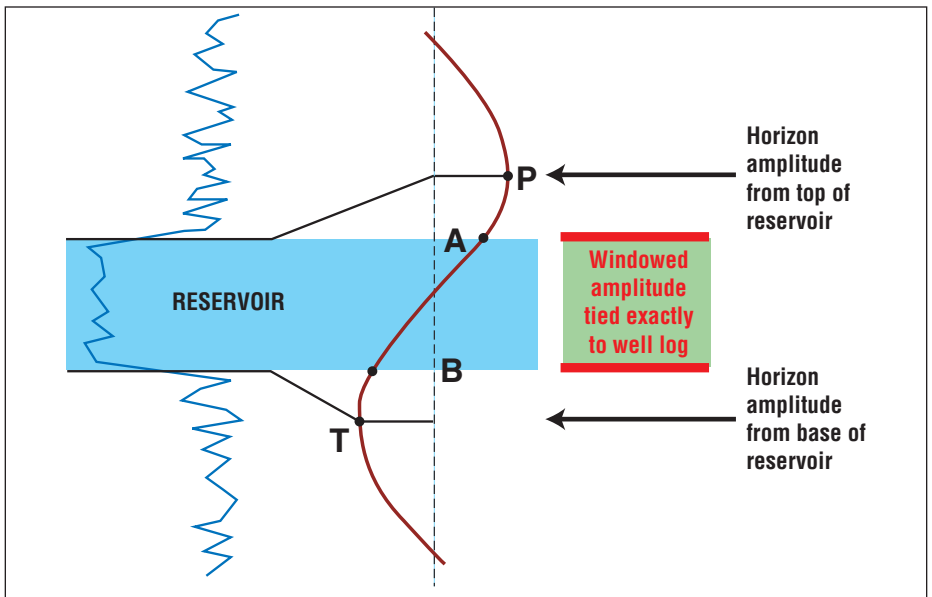


Figure 3 – Well-to-seismic tie for a reservoir less than one quarter of a wavelength thick. Note that the top and base amplitudes are outside the reservoir thickness based on an exact depth-to-time tie.

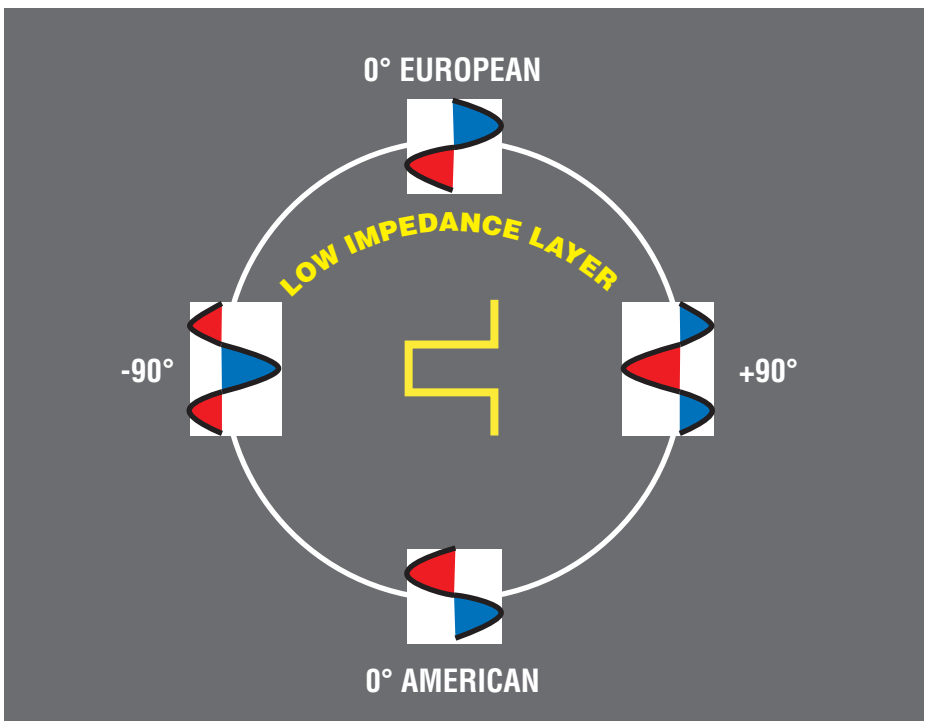


Figure 4 – Phase Circle showing seismic character for the top and base reflections of a low impedance layer, such as a hydrocarbon sand.

The velocity function normally comes from a well velocity survey or a vertical seismic profile in the well being tied or in a nearby well. Errors of measurement and lateral variations mean that the velocity used is rarely exactly right. The phase and the polarity of the data are significant uncertainties, but first let us consider that the data really are zero phase and of known polarity.

The reservoir we wish to study in this example has good contrast at top and base, so tying the well should be simple. If the reservoir is less than quarter-wavelength in thickness (as they so often are), the reflections from top and base cannot get close enough together so they are both mislocated (figure 3). The top reflection is early and the base reflection is late.

The diagram in figure 3 is drawn for perfect velocity, but we still do not use a simple depth-to-time tie to pick the top of the reservoir on the seismic data. An understanding of tuning effects tells us we must pick the reservoir top at point P rather than point A. This is not only geophysically correct, but point P is where the amplitude is to be found for studying the internal fabric of the reservoir. The other relevant amplitude for studying this reservoir is from the base reflection at point T.

Let me give an example of how we could over-geologize the interpretation here. We want an amplitude to characterize this reservoir and we have accurate picks on the top and base of the sand. We spot the top and base on the seismic, A and B as shown, and then extract a windowed amplitude such as Average Absolute Amplitude or RMS Amplitude over this interval.

Note that the window, which exactly ties the reservoir, completely misses the two relevant amplitudes from top and base! The best amplitude to characterize this reservoir is Composite Amplitude, made by absolute value summation of the horizon amplitudes from P and T.

* * *

This tie is further complicated by data phase and polarity. Interpreters should not rely on nominal zero phase data being actually zero phase. Nor should they rely on the data polarity being "normal" for the region of the world where they are located (American or European). We should check these out by scrutinizing the character of high amplitude reflections whose geological nature we understand.

It is the responsibility of every seismic interpreter today to assess as thoroughly as possible the phase and polarity of his or her data before a final well-to-seismic tie is established.

Suppose the high amplitude reflections being used are a gas bright spot. The sand generating the bright spot must then be a low impedance zone relative to the embedding shale, so the relevant phase circle is shown in figure 4. Note that we are considering top and base reflections together. Note also that there are two versions of zero phase (American and European polarity), which are opposite from each other. These are equally useful for interpretation, but it is critical to understand which we have. The issue is further complicated by the all-too-common 90-degree phase data. Other phase conditions also exist.

Knowledge of phase and polarity permits us to predict the character of the reservoir top (for example) and thus to make a meaningful well tie. If the determined phase is significantly non-zero, then phase rotation of the data is probably a good idea. Phase rotation is easy; recognition of phase errors by today's seismic interpreters is more difficult. Zero phase data is the easiest to work with, and the co-location of time and amplitude is a big advantage. ❑

WWW.UPDATE

vCard Convenience Comes to AAPG Web Site

By JANET BRISTER
AAPG Web Site Editor

Have you ever received an e-mail with a vCard attached? You know, it's like a business card carrying all the contact information from the sender but it's electronic – "virtual!"

The Internet Mail Consortium (IMC), in realizing that contact information is important, came up with a standardized format for such data – and out of that evolved the vCard, a handy container carries the personal information typically found on a business card. It is delivered not only in e-mail but telephone applications, PDAs (Personal Data Assistants), pagers, Web browsers and more.

AAPG is capitalizing on the vCard for our members who use these electronic tools. Now, when you look up a fellow member in the AAPG Directory, you may click on the vCard icon and download that member's contact details so you can readily merge the data into your address book.

Only one vCard may be downloaded at a time, and this is definitely one of those features that will be available only to members of AAPG.

Good Things Come To Those Who Wait

A feature that I appreciate in a Web site is being able to get a print-friendly version of the copy being reviewed.

It is a version of the page's information without its usual clutter of navigation tools, advertisements, disclaimers at the top or bottom, path lines by which you arrived to this location.

Well, there you spot on the page this wonderful little button or link that says "Print this page" or "Printer friendly version." So, you click it.

Amazingly, you are now viewing the copy with the graphics that you were interested in. No ads. No navigation tools, etc.

My reaction? Appreciation and relief. It's appreciated that the viewer gets only what is needed. And the viewer doesn't have to "kill a tree" to get it.

It's a small thing, but soon when you print a page from aapg.org you will get only the page's content. (No special print-friendly button required.) No "extras" that clutter the content you seek. All of the newly added pages will incorporate this enhancement. As time permits all of the current pages will have this feature, too.

Good browsing! ❑

Planning Under Way For London APPEX

Plans are under way and exhibitors are beginning to line up for the sixth APPEX London Prospect and Property Exposition, to be held March 6-9.

Built on the success of last year's event, the 2006 exposition again will offer a superb exhibition composed of upstream opportunities, coupled with a conference program showcasing the latest in UK and global industry activities and hydrocarbon potential – all presented in a true business atmosphere.

The conference will be held at the IBIS Hotel, Earl's Court in West Brompton, London – the third year the conference has been held at the site.

One of the attendees will be Ronald Egusquiza, who heads the promotion and planning department for PeruPetro.

Why? Because of the success PeruPetro has experienced at previous APPEX London meetings.

"APPEX is the bridge between Latin America and Europe," Egusquiza said, "and PeruPetro has taken this advantage to let the industry know about the competitive license contract, new model of contract and new reduced scheme of royalties in Peru."

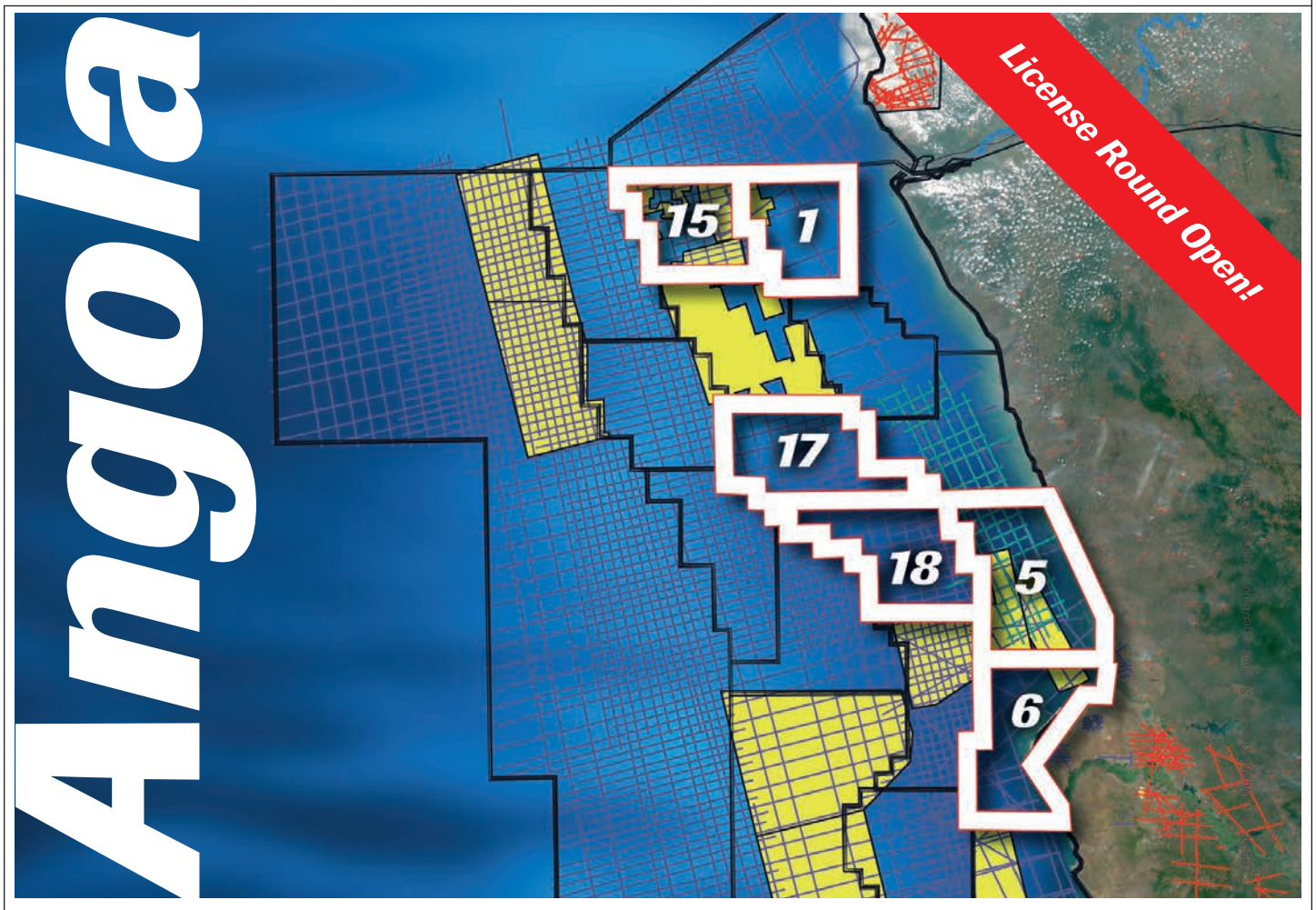
He said his company's goal at APPEX London is "to get in contact with companies looking for international opportunities."

Has that goal been achieved?

"Yes, it was the last two times we participated in APPEX" that PeruPetro signed agreements to deliver SEG-Y and LAS data, Egusquiza said.

APPEX London is operated by AAPG with endorsement from the Geological Society of London, the Energy Institute, the International Association of Oil and Gas Producers and the UK Department of Trade and Industry. IHS is the industry sponsor for the APPEX Global Perspectives Forum.

Updated forum information – including exhibition and registration details – will be available on the AAPG Web site at www.aapg.org. ❑



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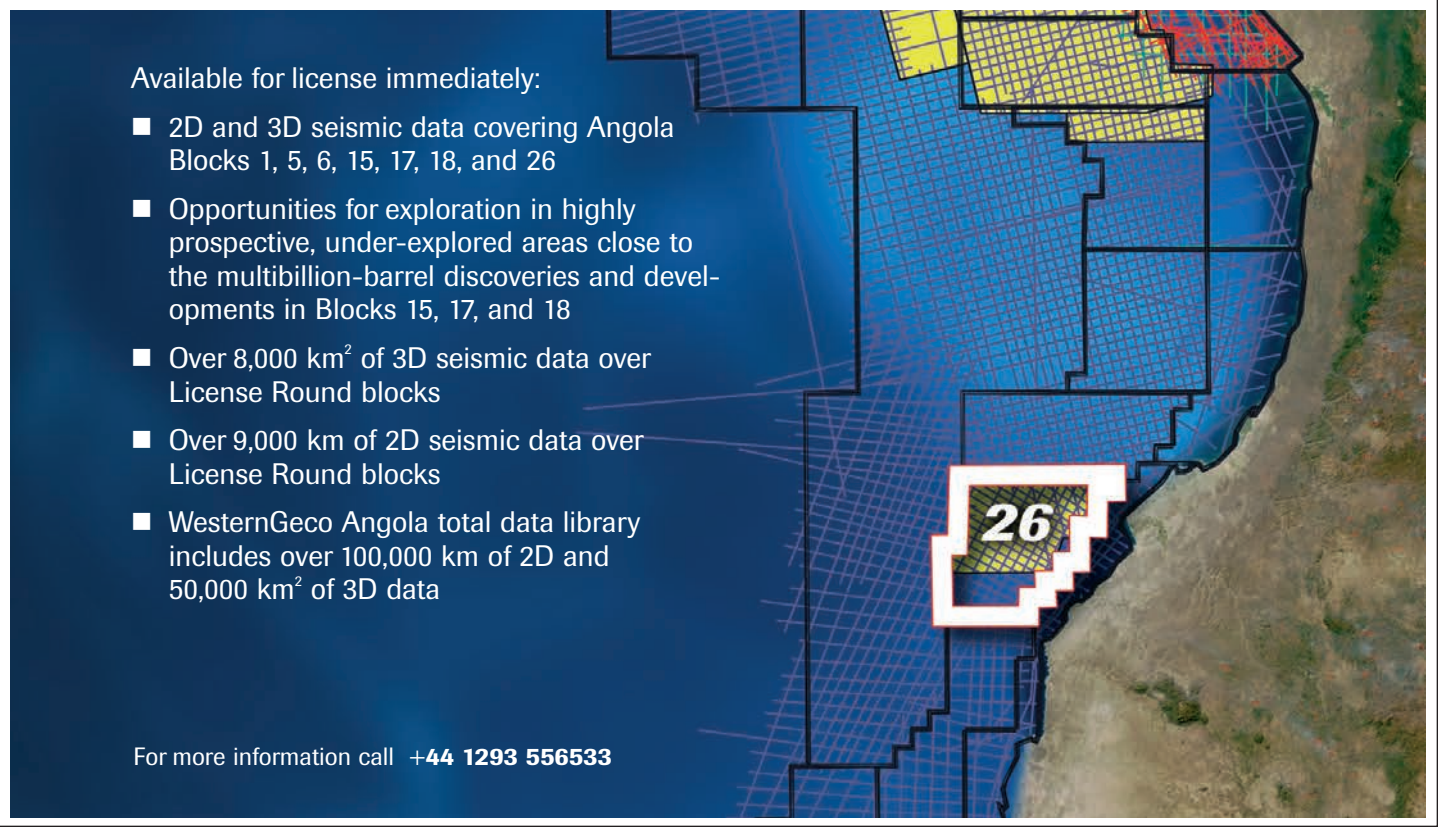

LOOKINGBACK

Rules for Finding Oil Still Apply

(Editor's note: AAPG members Sam Bibler and his partner Les Harrington formed a partnership in the early 1950s and explored the Williston Basin and Northern Rockies for four decades. Both died in 2002 within two months of each other. In going through some papers, Bibler's daughter, Carol, found some of Sam's thoughts on exploration he wrote around 1960 and passed them on to the EXPLORER. Those principles still apply).

A geological prospect is never dead. There is always another well or another play hiding in it somewhere, waiting to be found through review or extension of the previous work.

By SAM BIBLER

The basic rules for finding oil and gas were formulated so long ago that most of them have been forgotten. A review of these rules would be in order for many contemporary exploration managers.

A would-be oil or gas finder should:

❒ Play the subcrops. The truncated edge has all the structural advantages of the undisturbed portion of the formation plus a tremendous stratigraphic trap potential not present anywhere else.

Most important of all, the subcrop may be recognized 10 miles, 100 miles or even 500 miles from a hot spot and therefore sometimes permits a "trend" play in a low-priced acreage area.

❒ Exhaust the trends. Many modern geologists think of trend plays as beneath the dignity of a scientist. Others believe that anything as simple as a trend must have been worked to complete extinction by someone else.

Both viewpoints are wrong.

As for the first one, if oil or gas can be found by a simple method, so much the better. As for the second, this same assumption that "someone else already has done it" may also have been made by that "someone else." Therefore the trend may pick up immediately beyond that one "marginal" well.

❒ Work the hinge lines, either structural or depositional. Today's hinge lines may prove to be tomorrow's production trends. The structural hinge line is suggested by an abrupt and continuous change in contour spacing. The depositional hinge line can be detected by an abrupt change in isopach contour spacing, either in the objective horizon or adjacent to it.

❒ Stay in multiple pay areas as much as possible. A wildcat area with three pay zones is not just three times as good as an area with one pay zone, but actually many times better. The reason for this is the psychological factor. A dry hole often means the end of exploration in an area for many years. A successful well results in about three more attempts. Therefore, each additional pay zone increases the probable rate of development of the area by a factor of three.

❒ Work the stratigraphic prospects rather than the structural ones. The smallest independent in the business can work a complex stratigraphic problem as correctly as the greatest major. However, the smallest independent cannot seismograph 100 miles of bush line in search of a structure. Only a major can do that.

❒ Plot the acreage on the geology or the geology on the acreage. Many a good deal is overlooked because it is assumed that the acreage is unavailable. No geologist can work to the best advantage if one disregards the acreage. It is surprising how much geological merit comes to mind once the acreage has been found to be available. The subconscious mind automatically eliminates geological thinking concerning acreage, which appears to be "gone."

❒ Try to place the company where the geologist thinks they should be even though this may not always be where "they" think they should be.

Certainly the person on the ground knows the geology and economics of his own province better than someone who lives a thousand miles away. One should sell their convictions to the company rather than expect them to choose wisely from a number of impartial presentations.

❒ Concentrate efforts on a few likely areas or formations and become an expert in them before going too far afield.

❒ Don't waste time by keeping a set of regional structure maps posted to date. It is doubtful that this is good procedure, regardless of the size of office staff. There is something about a regional structure map that stifles imaginative thinking. The inference is that "it is all mapped so where else can one look."

❒ Review every year of previous geological work and prospect reports. It is surprising how rapidly one's perspective grows. It is surprising also how rapidly exploration and market economics change.

A geological prospect is never dead. There is always another well or another play hiding in it somewhere, waiting to be found through review or extension of the previous work.

(Note: Looking Back column author Marlan Downey will return next month.) ❒

DEG, DPA List Officer Candidates

Two AAPG divisions have announced officer candidates for 2006. The Energy Minerals Division candidates were announced in the November EXPLORER.

Candidates are:

Division of Environmental Geosciences

President-Elect

❒ Donald E. Clarke, Lakewood, Calif.

❒ Charles G. (Chip) Groat, Austin, Texas.

Vice President

❒ Michael A. Jacobs, Midland, Texas.

❒ Gregory A. Minnery, Midland, Texas.

Editor

❒ Gerald (Jerry) R. Baum, Baltimore.

❒ Dibyendu (Dibs) Sarkar, San Antonio.

Division of Professional Affairs

President-Elect

❒ Thomas E. Ewing, San Antonio

❒ Daniel J. Tearpock, Houston

Vice President

❒ Suzanne Cluff, Denver.

❒ John R. Hogg, Calgary, Canada.

Treasurer

❒ Michael R. Canich Jr., Pittsburgh.

❒ Jeffrey A. Jones, Albany, Texas.

EMD Announces Technical Awards

The Energy Minerals Division has announced its technical award winners for the best presentations at the AAPG Annual Convention in Calgary. The winners are:

❒ Frank Kottlowski Memorial Award (best paper) – W.C Riese, G.K. Arp, A. Sanford, G. Snyder and W.L. Pelzmann, for "Methane Seeps, Public Hazards and Seismicity: Hydrocarbon System Analysis of Coalbed Methane in the San Juan Basin as a Tool to Understanding."

❒ President's Certificate for Excellence (oral presentation) – G. Ulrich, Mark Finkelstein, J. Weber and R. DeBruyn, for "Active Biogenesis of Methane in Wyoming's Powder River Basin."

❒ Best Poster Award – H.H. Roberts, R.H. Fillon and L.M. Casthles, for "Shelf-Edge Deltas, Linked Downslope Deposits and Gas Hydrates: High and Low Sea Level Responses, Northern Gulf of Mexico."

❒ President's Certificate for Excellence (poster presentation):

✓ M. Cameron, S.R. Bereskin, J. Kieschnick and R. Suarez-Rivera for Facies Architecture and Lithologic Heterogeneity: A Precursor to Productivity in the Barnett Shale-Newark East Field, North Central Texas."

✓ T. Nardin, H.R. Feldman, J.P. Irish, D. Jannette and D. Heyser, for "Subsurface Facies Calibration of Large-Scale Fluvial-Estuarine Point Bars in the McMurray Formation, Syncrude North Mine, Alberta."

✓ T. Nardin, H.R. Feldman, J.P. Irish, D. Jannette and D. Heyser, for "Quantification of Reservoir Heterogeneity in 50-Meter-Thick Estuarine Point Bar Facies – McMurray Formation, Syncrude North Mine, Alberta." ❑

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Description

Hydro Oil & Energy, Global Exploration, is responsible for all technical evaluation within exploration in Hydro. The unit has about 100 employees. Core areas are at present: Norway, Gulf of Mexico, Canada, West Africa, Libya, Iran, Russia. Geophysical Operations serves all Oil & Energy units with seismic data acquisition, data processing, data management, data purchase, sales and trade as well as geohazard surveys. We are looking for specialists with PSDM competence and/or good general knowledge within processing of seismic data.

Areas of responsibility/Role

- Perform internal PSDM processing projects with good interaction with interpreters
- Perform internal and follow up external processing projects
- Evaluate seismic data for quality improvements/reprocessing
- Act as geophysical specialist and advisor and represent Hydro in technical meetings with licenses and suppliers
- Assist in planning and following up of acquisition of geophysical data

Qualifications

- Higher University degree within geoscience (MSc or higher) with excellent grades and up to 10 years experience.
- Good knowledge of modern geophysical work methods and processes, including PSDM
- Team worker and ability to deliver integrated products with enthusiasm, flexibility and a positive mindset
- Drive and scientific integrity with a technical overview and focus on success-critical factors
- Fluent English (written, spoken and presentation skills)

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For more information about the job, please contact

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Rigmor M. Elde, Tel.: +47 55 99 69 98, Mobile +47 95 17 94 26
HR contact: Steinar Vigdal, Tel.: +47 22 53 94 37, Mob.: +47 90 77 78 42

Please visit our Web site www.hydro.com for more details and link to our electronic application system.
Deadline for applications is 31.12.2005

Courage, respect, cooperation, determination and foresight are Hydro's core values.

Author is Something Harvard, Texaco Have in Common

Fault, Fold Atlas a Teaching Tool

By BARRY FRIEDMAN
EXPLORER Correspondent

He's a Harvard guy. And, he's a Texaco guy.

And for him, the twain has met.

The divide between industry and academia in the fields of hydrocarbon exploration and earthquake detection is narrowing, according to John Shaw, co-author of the AAPG *Studies in Geology 53: Seismic Interpretation of Contractional Fault-Related Folds,* an AAPG seismic atlas.

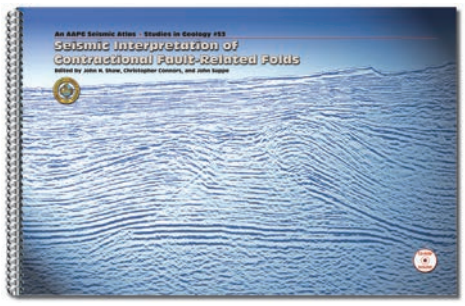
It's about time.

As high-quality data became more available from industry and academia over the past two decades (though spread out in respective file cabinets and data bases), a resource was needed to both compile and interpret that vast, often unwieldy information.

"The idea for the book arose between co-editor Chris Connors and me while we both worked at Texaco," Shaw said. "Much of our time was spent sitting side-by-side with seismic interpreters helping to guide their structural analyses.

"We both prepared materials," he added, "and this soon became compiled into an industry short course on fault-related folding techniques."

Shaw, who is now the Harry C. Dudley Professor of Structural and Economic Geology at Harvard, explained that his atlas is divided into two sections – one part textbook, one part independent case studies.



To that end, he says, Studies 53, which was supported by several companies, " ... is used by E&P professionals involved in the interpretation of seismic reflection data for trap delineation and reservoir characterization, and supervisors who evaluate structural interpretations to assign and reduce drilling risks."

As for the emphasis on contractional fault-related folds, Shaw maintains that it is these types of structures that form the majority of the large hydrocarbon traps in both organic and passive-margin fold and thrust belts worldwide.

Teach Your Children

Shaw, if you will, is something of a midwife in the field, maintaining an academic research group that regularly collaborates with the oil and gas industry.

"The atlas exemplifies that there is a benefit to industry-academic cooperation," he said. "If anything, it couldn't be produced by industry alone and it couldn't have been produced by academia alone."

And considering that natural hazards and energy prices have been in the news of late, the earth sciences, he says, are now on the "front burner" and universities and businesses have no other choice but to work together.

Chronicling the changes in the industry over the past 10 years, Shaw said that "to the extent possible, my co-editors and I have tried to write this book from an industry as well as academic perspective.

"I was very impressed by how influential Bert Bally's seismic atlas (the *Seismic Expression of Structural Styles, AAPG Studies 15*) had been to the industry, having had the benefit of taking an AAPG short course from him while I was a graduate student."

His effort, he says, was an attempt to "follow the pioneering and successful approach of Bally's work with a modern treatment of structural analysis techniques and excellent seismic examples from around the world."

More than just the quality and quantity advances in seismic data filling up the transom, there were other reasons he embarked on the project.

Shaw points to an industry where the work force was losing more members than it was replacing and a situation where "interpreters rarely seem to have time to learn new techniques."

Additionally, where there was new hiring in the industry, companies were staffing positions with young scientists that had little experience interpreting seismic.

"Thus, our goal for the book was to provide both experienced and new seismic interpreters with a condensed but thorough treatment of the subject of fault-related folding that could be offered in short-course format or serve as a companion while they sat at the workstation."

Everybody Get Together

For those thinking of buying homes in Los Angeles, for instance, Shaw's goal wasn't just an academic exercise.

"One of the most important insights gained by the earthquake hazards community over the past decade is that many faults besides the San Andreas pose a significant hazard to the residents of southern California," he said.

"In particular, blind-thrust faults, such as the source of the destructive 1994 Northridge (M 6.7) earthquake, can pose a substantial hazard, given their proximities to urbanized areas and large components

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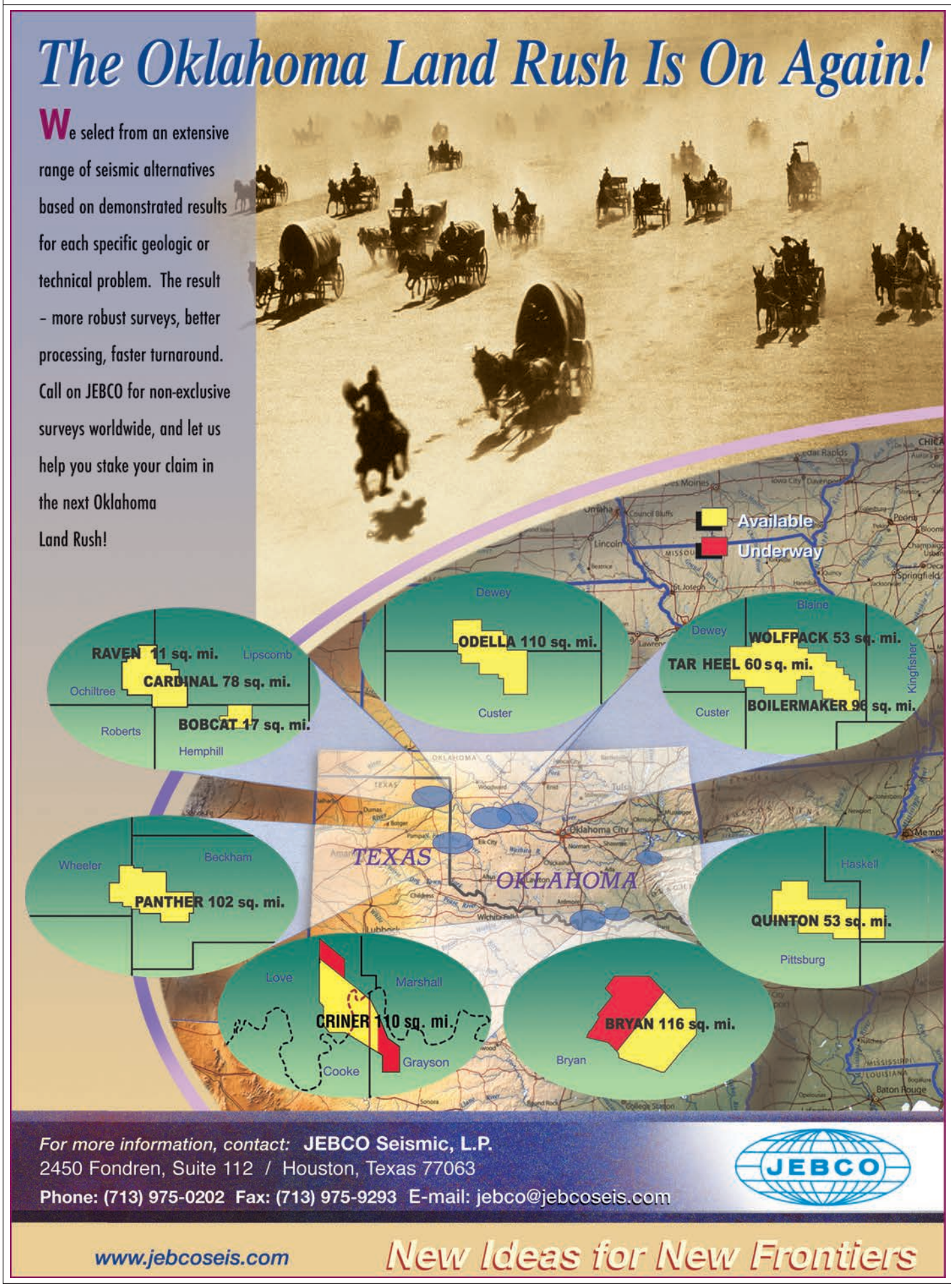

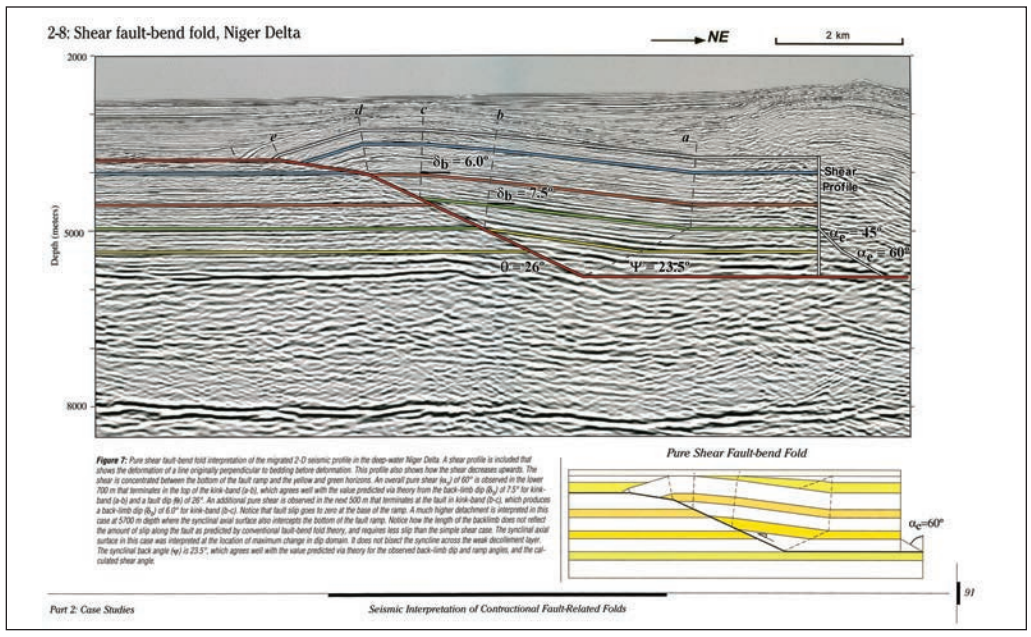

Photo courtesy of John Shaw

An example of the information and style of AAPG's Studies in Geology 53 (left); above, John Shaw in the field, making academic studies practical.

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of vertical ground motions they generate during ruptures," he said.

Shaw believes the best way to study these sources is by using seismic reflection and well bore data, including that which has been acquired by the industry.

"One of our important roles in the seismic hazard community is using our familiarity with industry data and interpretation techniques to help study and assess these concealed earthquake sources," he said.

He points out that this has led to the development with the Southern California Earthquake Center of what's called the Community Fault Model (CFM), a 3-D representation of all of the known faults in southern California deemed capable of generating large earthquakes.

"The CFM is a clear example of how industry methods can be extended to address another important earth science problem," he said.

So People, Get Ready

So does he have a prediction for the big one? No ... only to say:

"Certainly the scientific community is well aware that the southern segment of the San Andreas fault is overdue for a major rupture. The prospect of events on other major strike slip or blind thrust systems close to the city of Los Angeles also raises dire concerns."

But he adds, "People are stuck on earthquake prediction," wanting to know the exact time and place, "but the real progress has been made in the prediction of the hazards of an earthquake.

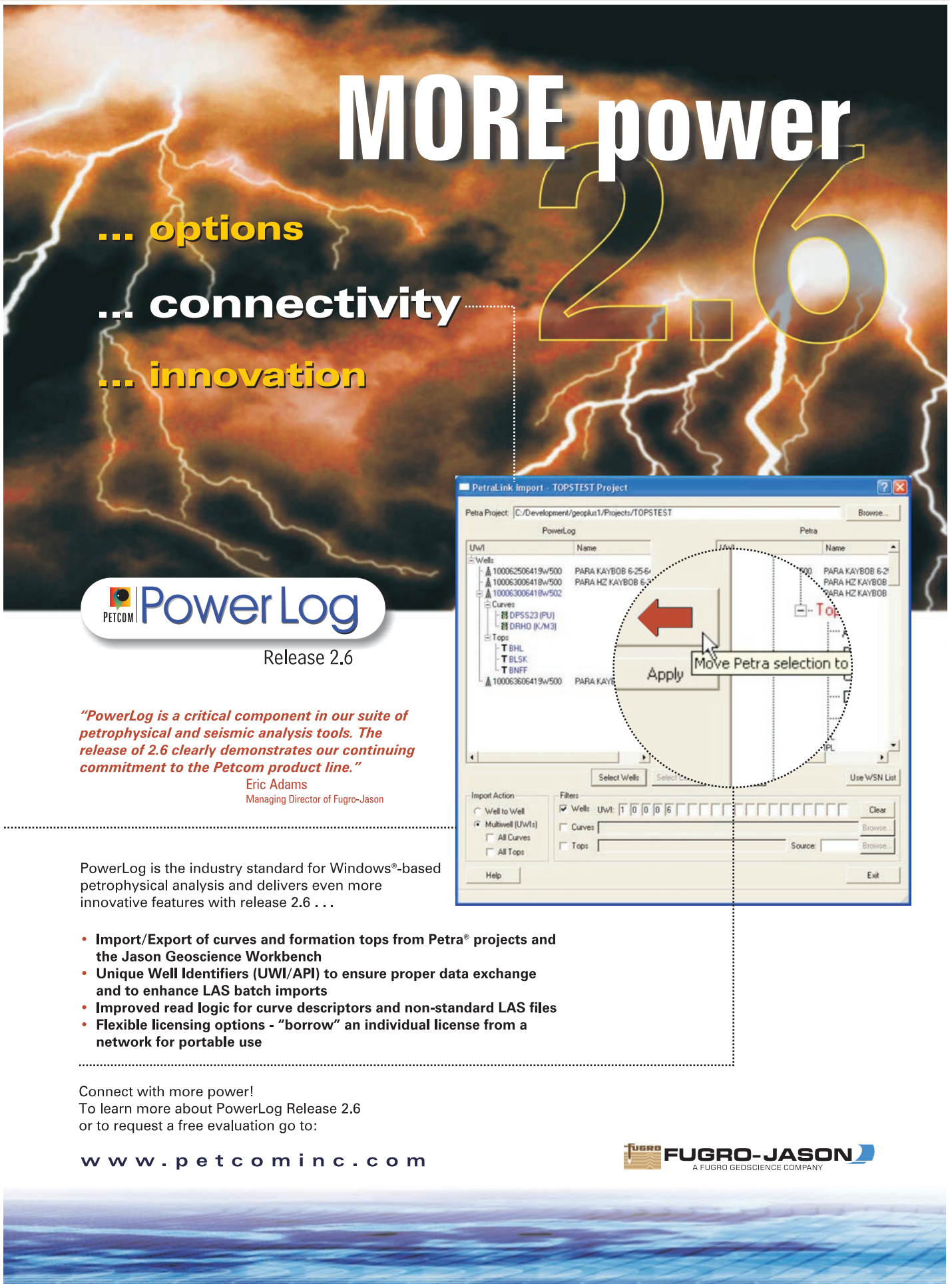
"The goal of the seismic hazard community is to ensure that when California or the Pacific Northwest is struck by an event that we have seen recently in Indonesia, Taiwan, Turkey and Pakistan, we have done as much as possible to limit the loss of life and property."

Shaw, however, says that while Studies 53 can be used as both a guide for hydrocarbon exploration and earthquake detection, "The book is clearly focused on seismic interpretation techniques that are applicable to industry problems, from an industry perspective.

"Certainly the techniques and methods can be applied to other structural problems, such as investigations of earthquake faulting," he said, "but the book was largely written by and for the industry.

"One of the things that I enjoyed most about having the book published is using it in industry short courses," he said. "I have taught courses of this kind for many companies around the world in the past few years, and always enjoy, and learn a lot from, these interaction with industry scientists."

(Editor's note: Studies 53 is available via the AAPG Bookstore, $69 members, $84 non-members.) ❑



MEETINGS OF NOTE

Editor's note: Meetings listed here are sponsored by AAPG or an affiliated group. An asterisk denotes a new or changed listing. For further information on these listings contact the AAPG convention department (convene@aapg.org)

Also, a comprehensive list of earth science meetings is maintained by the American Geological Institute on its Web site, which can be accessed via a link from AAPG's Web page (www.aapg.org).

2006 U.S. Meetings

* Feb. 2-3, NAPE-North American Prospect Expo (AAPL), annual event, Houston.

* Feb. 10-12, AAPG Leadership Conference, Galveston, Texas.

April 9-12, AAPG Annual Convention, Houston.

May 1-4, Offshore Technology Conference, Houston.

* May 7-10, Pacific Section, annual meeting, Anchorage, Alaska.

May 14-16, Southwest Section, annual meeting, San Angelo, Texas.

* June 10-13, Rocky Mountain Section, annual meeting, Billings, Mont.

* June 21-24, Society of Independent Earth Scientists (SIPES), annual meeting, South Lake Tahoe, Nevada.

Sept. 24-26, Gulf Coast Association of Geological Societies, annual meeting, Lafayette, La.

Sept. 24-27, Society of Petroleum Engineers, annual meeting, San Antonio.

Oct. 1-6, Society of Exploration Geophysicists, annual meeting, New Orleans.

Oct. 8-11, Eastern Section, AAPG, annual meeting, Buffalo, N.Y.

Oct. 18-22, AAPG Foundation Trustee Associates, San Antonio.

Oct. 22-25, Geological Society of America, annual meeting, Philadelphia.

2006 International Meetings

March 6-9, APPEX London Prospect and Property Exposition, London.

March 27-29, Middle East Geosciences Conference and Exhibition (GEO), Manama, Bahrain.

May 15-17, Geological Association of Canada and Mineralogical Association of Canada, annual meeting, Montreal, Canada.

May 26-June 1, Canadian Society of Petroleum Geologists, annual meeting, Calgary, Canada.

* June 2-5, European Association of Geoscientists and Engineers, annual meeting, Vienna, Austria.

* Nov. 5-8, AAPG International Conference and Exhibition, Perth, Australia.

Nov. 21-23, PETEX, London, England.

2007 U.S. Meetings

* April 1-4, AAPG Annual Convention, Long Beach, Calif.

* April 30-May 3, Offshore Technology Conference, Houston.

* Sept. 9-11, Mid-Continent Section, annual meeting, Wichita, Kan.

* Sept. 23-28, Society of Exploration Geophysicists, annual meeting, San Antonio.

* Sept. 30-Oct. 3, Society of Petroleum Engineers, annual meeting, New Orleans.

* Oct. 6-9, Rocky Mountain Section, annual meeting, Snowbird, Utah.

* Oct. 9-14, AAPG Foundation Trustee Associates, annual meeting, Maui, Hawaii.

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Updated 'Pay Per View' Offers Speedier Options

By GERALD BUCKLEY
AAPG Production Manager

AAPG's Datapages has introduced an updated "Pay Per View" Web site, designed to provide users with a fast and effective way to search the AAPG archives.

The site is at http://payperview.datapages.com/.

"The site gives members and non-members a great way to perform a quick and free search of the archives," said AAPG Geosciences Director Jim Blankenship. "From there it's easy to purchase one or more documents from the search results."

While the site is newly updated, Datapages has been selling site licenses and pay per view access to the archives for several years.

One compelling new difference, however, are prepaid accounts.

"There are over 200,000 articles in this archive dating back to 1917 to the present, and 16 different publishers – with more coming," said Datapages Marketing Manager Ron Hart. "The likelihood of this site containing at least a few really good articles of interest to someone researching a prospect or play is extremely good.

Why subscribe to a journal or book when you can buy only the best papers - one at a time?

Hart said Datapages' customers asked for a way that would be "easy to search for and purchase all those hard to find articles at a discounted rate with a prepaid card.

"This was the logical next step," he said. "So, now it is easy for the small company or the independent to tap into the same content as the majors and pay for only what they need to get the job done."

The new site provides searchable results from the AAPG BULLETIN and special publications, the CSPG and the SEPM's JSR, as well as the Ardmore, East Texas, Houston, New Orleans and Panhandle geological societies (among several others).

Datapages is always looking to digitize other publisher's archives (with a revenue sharing option). For more information contact Hart at (918) 560-6429; e-mail to rhart@aapg.org. ❑

DEG Announces Calgary Winners

Awards for the best DEG paper and poster presentations at the AAPG Annual Convention in Calgary have been announced. The winners are:

❒ Bernold M. "Bruno" Hanson DEG Excellence of Presentation Award (best paper) – **Robert J. Finley**, Illinois State Geological Survey, Champaign, Ill., for "An Integrated Program to Assess Illinois Basin Geological Carbon Sequestration Potential."

❒ DEG Best Poster – **Mark Thurber**, Walsh Ecuador, Quito, Ecuador, for "Canopy Bridges Allow Arboreal Animals to Traverse Pipeline Corridors." ❑

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* **Oct. 14-16, Eastern Section**, annual meeting, Lexington, Ky.

* **Oct. 21-23, Gulf Coast Association of Geological Societies**, annual meeting, Corpus Christi, Texas.

Oct. 28-31, Geological Society of America, annual meeting, Denver.

2007 International Meetings

May 25-31, Canadian Society of Petroleum Geologists, annual meeting, Calgary, Canada.

* **May 23-27, Geological Association of Canada/Mineralogical Association of Canada**, annual meeting, Yellowknife, Canada. ❑

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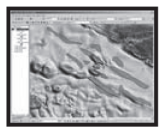
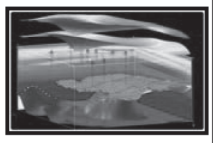

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PROFESSIONAL NEWS BRIEFS

Samuel S. Adams has received the Ian Campbell Award from the American Geological Institute in recognition of contributions to the profession of geology. Adams is a consultant in Lincoln, N.H.

Jeff Aldrich, to consulting senior geoscience adviser, PetroSA, Cape Town, South Africa (two-plus year assignment). Previously president, Energy Resource Advisers and chief geologist, Forest Oil International, Denver.

Joel Alnes, to general manager of exploration-deepwater Gulf of Mexico, Chevron, Houston. Previously vice president-exploration, Unocal, Jakarta, Indonesia.

Joachim E. Amthor, to principal carbonate geologist, Qatar Shell Research and Technology Center, Doha, Qatar. Previously senior production geologist, Petroleum Development Oman, Muscat, Oman.

Lisa Ashabranner, to geologist-geohazards assessment team, Shell International E&P, Houston. Previously geologist, Phillips Petroleum, Houston.

Steve Bachtel, to staff geologist, ConocoPhillips, Houston. Previously exploration geologist, ExxonMobil Exploration, Houston.

Brian C. Ball, to geologist, Chevron, Midland, Texas. Previously consultant geologist, Pure Resources/Unocal, Midland, Texas.

Michael J. Baranovic has received the William B. Heroy Jr. Award for distinguished service from the American Geological Institute. Baranovic is with Shell Oil, Metairie, La.

Paul Basan, to manager-petrophysics, RPS Group, Woking, England. Previously manager petrophysics, Energy Scitech, Woking, England.

Andrei Belopolsky, exploration geoscientist, BP Exploration, London, England. Previously geoscientist, BP E&P Technology, Houston.

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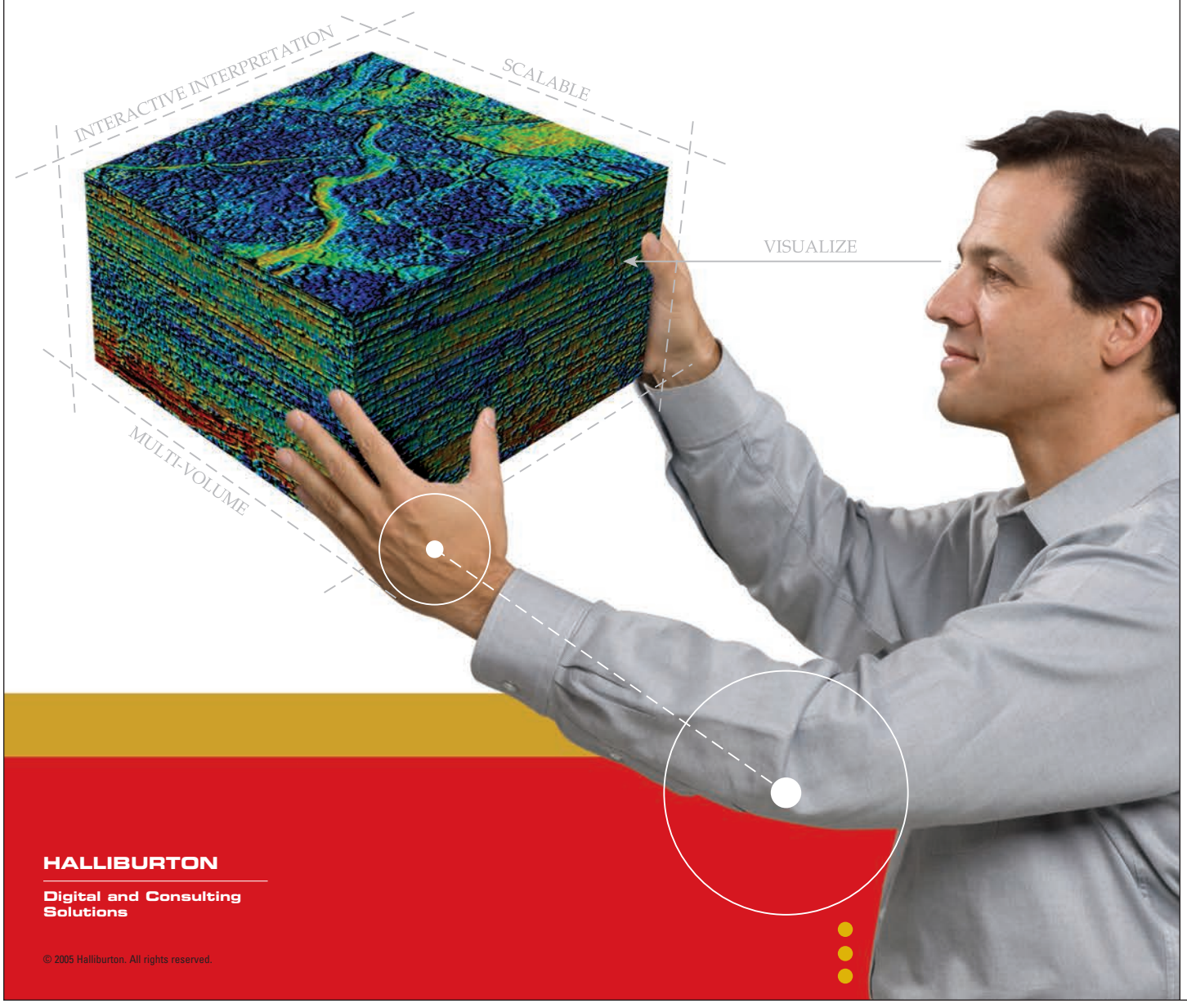

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Eduardo A. Berendson, to senior geologist-carbonate reservoir modeler, AgipKCO (ENI Group)-Kazakhstan North Caspian Sea, The Hague, Netherlands. Previously senior geologist-deepwater appraisal and development, ENI Indonesia, Jakarta, Indonesia.

Gregg H. Blake, to senior staff geologist-new ventures, Murphy E&P International, Houston. Previously principal geologist, Unocal, Sugar Land, Texas.

David C. Blanchard, to general manager and managing director, Devon East Zeit Petroleum, Cairo, Egypt. Previously country manager, Devon Syria, Damascus, Syria.

Jeffrey Bush has been named to the *Denver Business Journal's* annual "Forty Under 40," recognizing outstanding local professionals for their leadership, accomplishments and community involvement. Bush is president of CSI Recruiting, Denver.

Skye A. Callantine, to senior geophysicist, Chesapeake Energy, Oklahoma City. Previously senior geophysicist, ConocoPhillips, Puerto La Cruz, Venezuela.

George Covington has retired as an exploration geologist from Unocal/Chevron. He resides in Sugar Land, Texas.

Peter W. Cramer, to manager-seismic technology, ConocoPhillips, Houston. Previously exploration manager-Gulf of Mexico, ConocoPhillips, Houston.

Mary Cubanski, to advanced senior geophysicist, Marathon Oil, Houston. Previously principal consulting geophysicist, Veritas Exploration, Houston.

Michael J. DiMarco, to principal regional geologist, Shell International E&P, Houston. Previously consultant geologist, Unocal, Sugar Land, Texas.

Devon Dowell has formed ADC Petroleum and is president of Dowell Energy, Houston. Previously with Imagine Geoscience, Katy, Texas.

Jeff Faber, to geologist, EnCana Oil & Gas (USA), Dallas. Previously geologist Bass Enterprises, Forth Worth.

William L. Fisher has been appointed dean of the Jackson School of Geosciences. Fisher previously was chairman of the Department of Geological Sciences, University of Texas at Austin, Texas.

Bill Francis, to regional manager-Permian Basin, Encore Acquisition, Fort Worth. Previously geoscience manager-northern region, Encore Acquisition, Fort Worth.

Gerald M. Friedman has been awarded the Legendary Geoscientist award from the American Geological Institute. Friedman is a Distinguished Professor of geology at Brooklyn College of the City University of New York, Brooklyn.

Ken Frost, to mergers and acquisitions team leader, Berry Petroleum, Bakersfield, Calif. Previously senior evaluation geologist, Berry

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Petroleum, Bakersfield, Calif.

Gerald Grunau, to vice president-exploration, United Resources, Austin, Texas. Previously staff explorationist, Vintage Petroleum, Tulsa.

Matt Hall, to geophysicist, ConocoPhillips Canada, Calgary, Canada. Previously consultant, Red Brick Consulting, Calgary, Canada.

Steve Hansen, geology domain champion-BMP, Schlumberger, Kuala Lumpur, Malaysia. Previously ID geologist, Schlumberger, Houston.

Syed Tario Hasany, to deputy chief geologist, Pakistan Petroleum, Karachi, Pakistan. Previously senior geologist, Pakistan Petroleum, Karachi, Pakistan.

Randy J. Johnson, to geoscientist, Callon Petroleum, Houston. Previously geoscientist, Callon Petroleum, Natchez, Miss.

Henry M. Lieberman, to senior geological adviser-Africa new ventures, Occidental Oil & Gas, Houston. Previously staff geologist-new ventures, Murphy Exploration & Production International, Houston.

Larry Miller, to area geologist, Hunt Petroleum, Houston. Previously geological adviser, Eni Petroleum, Houston.

Tur Nugroho, to senior geologist, Santos Sampang, Jakarta, Indonesia. Previously senior geophysicist, Unocal Indonesia, Jakarta.

Kingsley Ojoh, to executive general manager-geosciences and reservoir engineering, Elf Petroleum Nigeria, Port Harcourt, Nigeria. Previously with El Petroleum Nigeria, Saga Express, Roissy, France.

David Pocknall has received a Distinguished Service Award from the American Association of Stratigraphic Palynologists. Pocknall is team leader-EPTG geological services, BP, Houston.

Bill Robbins, to geophysicist, Erskine Energy, Houston. Previously geophysicist, Total E&P, Houston.

Joseph Schwab, to geologist, Chevron, Midland, Texas. Previously consulting geologist, Pure Resources, Midland, Texas.

Daniel T. Seamount Jr. has been reappointed to a six-year term as the geologic commissioner for the Alaska Oil and Gas Conservation Commission, Eagle River, Alaska.

Rick Snyder, to exploration manager, Continental Resources of Illinois, Mt. Vernon, Ill. Previously senior exploration geologist, Continental Resources, Mt. Vernon, Ill.

Nick Steel, to vice president-exploration, BG Trinidad & Tobago, Port of Spain, Trinidad. Previously deputy exploration general manager, Rashid Petroleum, Cairo, Egypt.

George W. Troutman, to senior geologist-western region, Forest Oil, Denver. Previously senior staff geologist, onshore-western United States, Dominion E&P, Oklahoma City.

Suyog S. Uttekar, to tech support engineer, Reliance Infocomm, New Mimbai, India. Previously project engineer, Tata Institute of Fundamental Research, Mumbai, India.

Robert M. Wentz, to geological adviser, ConocoPhillips, Houston. Previously geological adviser, ConocoPhillips Canada, Calgary, Canada.

(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.)

❑

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www.aapg.org/perth/

'07 Long Beach Organizers Open for Session Proposals

The deadline is coming fast to make suggestions for technical sessions at the 2007 AAPG Annual Convention.

Organizers are accepting suggestions for oral and poster sessions, field trips, short courses and even session chairs or trip leaders – but they must arrive by Dec. 12.

The 2007 annual meeting will be held April 1-4 in Long Beach, Calif.

The planning committee is very interested in receiving suggestions "of a global nature that will appeal to the vast majority of attendees." Things to remember:

✓ California's prolific hydrocarbon systems span a broad spectrum, from deepwater clastic giants to complexly deformed structures in active tectonic settings.

✓ Many established fields successfully operate under stringent regulatory guidelines.

✓ Committee members hope to link many of the sessions to field examples, taking advantage of California's world-class outcrops and accessible field operations to provide analogs and examples with global applicability.

Send suggestions via e-mail to Jon Schwalbach, general technical program chair, at jon_schwalbach@oxy.com. Submittal of a suggestion does not guarantee inclusion in the program.

And remember, the deadline for submitting suggestions is Dec. 12. ❑

IN MEMORY

Sneider

Robert M. Sneider, independent geologist and 2001 recipient of the AAPG Sidney Powers Memorial Award, died Oct. 29, just three weeks after the death of his wife, Ramona. He was 76.

Sneider, a New Jersey native, received his bachelor's and master's degrees from Rutgers University and served in the U.S. Army in Korea as a front line combat engineering officer. He returned to the University of Wisconsin and received a doctorate in economic geology and mining engineering, then went to work for Shell Oil after meeting Gustavus E. Archie, who became his friend and mentor over his 17 years at Shell.

In 1974 he and a Shell associate formed Sneider and Meckel Associates, and through the 1970s he was involved in projects that resulted in the discovery of over a dozen new fields, including the giant Elmsworth deep basin gas area of western Canada in conjunction with Canadian Hunter Exploration.

In 1981 Sneider founded Robert M. Sneider Exploration. His son, John, is a geologist and partner. Two other children are also involved in the oil industry.

Sneider taught many continuing education courses for AAPG; served multiple stints as a distinguished lecturer; and served on the Geophysical Integration and Education committees and was chairman off the Reservoir Development Committee.

In addition to the Powers award, Sneider received AAPG honorary membership and the Distinguished Service Award.

A Trustee Associate of the AAPG Foundation, Sneider established the Gustavus E. Archie Memorial Grant and the Gustavus E. Archie Memorial International Grant.

* * *

Longtime AAPG field seminar lecturer Tor H. Nilsen died Oct. 9 at his home in San Carlos, Calif. He was 64. (See Spotlight on Education, page 37.)

* * *

Victor Oppenheim, the 1988 AAPG Human Needs Award winner honored largely for his work among indigenous people of South America, died Oct. 30, one day before his 99th birthday.

From 1929 through the mid-1940s, working as geologist for Paris-based Ludovick Barreau, Oppenheim explored for oil and minerals in South America. In the process he not only became an empathetic expert on the indigenous people, he also made a geologic map of each country – by foot, in canoe, on horseback or on a mule. His 1944 composite map of South America made him the only 20th century geologist to have single-handedly mapped an entire continent.

In 1935 he published *Petroleum Geology of Gondwana Rocks of Southern Brazil* in the AAPG BULLETIN, offering the politically charged conclusion that petroleum would not be found in Gondwana rocks, thus steering Brazilian exploration in the correct direction.

Roy Lee Ingram, 84
Chapel Hill, N.C.
Oct. 3, 2005

Tor H. Nilsen, 64
San Carlos, Calif.
Oct. 9, 2005

Robert Earl Park, 78
Casper, Wyo.
Sept. 2, 2005

Robert M. Sneider, 76
Houston
Oct. 29, 2005

Marvin Livingston Stone (EM '50)
Kerrville, Texas

Robert A. Ulstrup, 77
Houston
Sept. 15, 2005

William Joseph Whaley, 80
Las Cruces, N.M.
Sept. 30, 2005

Roy Alan Worrell, 78
Kingwood, Texas
Sept. 29, 2005

(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.)

SPOTLIGHT ON EDUCATION

Be sure to check out your AAPG 2006 Education Catalog, which arrived with this issue of the EXPLORER – and start now in finding and choosing the courses you will attend in 2006.

We'll continue to highlight some of our newest offerings in upcoming columns, but for this month we want to shine the spotlight in a different direction.

Tor Nilsen, one of our most prominent field seminar leaders and long-time AAPG member, died on Oct. 9 after a long and brave battle with cancer.

His last course with us was this past April, and he was to have been teaching for us again the very week he died.

The following is an excerpt from an obituary written for him by his good friend and colleague, Art Sylvester.

* * *

Tor was born in New York City on Nov. 29, 1941. He earned his bachelor's degree in geology from City College of New York in 1962, and his master's and doctorate in geology from the University of Wisconsin at Madison in 1964 and 1967, respectively.

Tor's principal expertise was in depositional systems analysis, stratigraphic analysis and the relationships among tectonics, eustacy and sedimentation. During his 38-year career, he was employed by Shell Development Co., the U.S. Army Corps of Engineers, U.S. Army Map Service, U.S. Geological Survey, RPI Pacific and Applied Earth Technology. Since 1991 he was an independent consulting geologist based in northern California, working on many varied projects both in the United Sates and around the world.

He published more than 300 geological papers, books and abstracts, including a recent reclassification of strike-slip basins, and an extensive treatise and guidebook for the giant Midway-Sunset oil field in California's San Joaquin Valley. He taught numerous short courses and field seminars for the petroleum and mining industries, including two AAPG field seminars, one on Turbidite Systems in California since 1984, and a second on Exploration in Strike-slip and Rift Basins (with Arthur Sylvester) since 1989.

He is survived by his wife, Paula Jefferies-Nilsen; sons Anton and Erik; and daughters Siri and Brit. ❑

AAPG Foundation Names New Campaign Coordinator

Kathy Wright has joined the AAPG Foundation staff as fundraising campaign coordinator. She has served as an executive director for two nonprofit organizations and as a board member for several others.

Her fundraising experience includes work with capital campaigns, special events, fundraising plan development and grant writing.

Wright is a member of the Association of Fundraising Professionals and has led fundraising training sessions. She holds a bachelor's of business administration from the University of Wisconsin-Madison and a master's of human relations from the University of Oklahoma. ❑

FOUNDATION UPDATE

The AAPG Foundation Trustee Associates elected new officers during the group's recent annual meeting in Branson, Mo.

Elected were:

❒ Chair – **Kenneth Masters**, consultant, Conroe, Texas.

❒ Vice chair – **Lee Backsen**, Andex Resources, Houston.

❒ Secretary-Treasurer – **John D. Edwards**, University of Colorado, Boulder, Colo.

The Trustee Associates also announced the group's next meeting will be Oct. 11 - 15, at the Westin La Cantera Resort in San Antonio.

In other Foundation news, past AAPG president **Richard S. Bishop** has joined the Foundation Trustee Associates. Formerly with Exxon, he is now retired in Houston.

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Kent Miner Hall
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Yves Adrien Helfenbein
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In memory of Roy Alan Worrell
Djibo Issoufou
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In memory of Robert E. Megill and J.R. Jackson Jr.
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In honor of James W. Fambrough and Valary L. Schulz
John Harris Marshall Jr.
In memory of John Forman
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Jerome Nicholas Namy
In memory of George Donnelly
Larry Nation
Linda Jane Noyes
Harry Ptasynski
In memory of Tor Nilsen
Thomas Walsh Rollins
In memory of J.R. Jackson Jr.
David Andrew Shaw
Saikhansambuu Shinensambuu
Arthur Tremaine Smith
Robert M. Sneider
Neil S. Summer
Bruce David Trudgill
Edward J. Valek
Chaoqing Yang

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In memory of Eugene F. "Bud" Reid

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In memory of Jack G. Klatt

Grants-in-Aid Fund
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In memory of Kenneth Keller

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Howard A. Johnson
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- Well Completions & Interventions
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REGIONS AND SECTIONS

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

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

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

This month's column, a look at the current state of affairs for the Canada Region, was prepared by Warren Workman, president of the Region.)

The Canada Region has a number of initiatives under way and is seeking new volunteers to stand for the House of Delegates and the Region's Executive Committee in the coming year.

The Region's main purpose is to support the role and recognition of Canada Region members in the AAPG and promote the AAPG in Canada. The Region also reviews and recommends approval of new AAPG applications in concert with Canadian HoD members.

Canada Region members have had a long-standing volunteer and contribution role in the AAPG. The Region also strives to make itself relevant and vital to its members.

The current membership of the Canada Region includes 1,023 Active, Emeritus, Life and Honorary members; 462 Associate members; and 74 Student members.

* * *

An opportunity exists for increased Active membership in the AAPG by Canadian geologists, as there is an increasing number of Canadian-based exploration and production companies with foreign operations. Obviously, AAPG's international focus provides even more value to these potential Canadian members both in the terms of knowledge and contacts.

Active participation by the AAPG within the Region is demonstrated with AAPG's support of the continuing education computer laboratory at the University of Calgary with a start-up contribution.

Through the efforts of the Canada Region, and with our local Calgary society the Region has just undertaken the 2005 AAPG Annual Convention with high-profile Region members Bob Dick, Marty Hewitt and John Hogg (general chairman) playing significant roles in bringing AAPG back to Canada for the first time since 1992.

The conference was a success for AAPG, the local society and the Canada Region.

Student outreach is another Region focus, and AAPG has several outreach programs that allow the promotion of careers and knowledge in petroleum geology. The Region plans to continue to spotlight these opportunities to Canadian universities and encourage establishment of new student chapters and membership, especially outside the core of Alberta and Saskatchewan. The "graying" of the ranks of Canadian petroleum geologists represents an ongoing challenge for the replacement of those retiring members to serve our society.

Most recently, the Canada Region hosted the golf tournament affiliated with last June's AAPG meeting in Calgary. As a result the Region now has funds to promote some independent initiatives, and the Region must work and co-ordinate with the CSPG (Canadian Society of Petroleum Geologists) in these initiatives.

(Several ideas are under consideration, but the Region would welcome any suggestions from its members.)

In order for the Region to best represent the members it is important that as many members as are qualified become Active members. The Region has identified that a significant number of AAPG Associate members also are registered as Professional Geologists (P. Geol.) in Alberta. A proposal is being brought before the AAPG Executive Committee by the Canada Region to waive the application process on a one-time basis to allow the change of status to Active for those Associate members who hold the P. Geol. designation.

Currently the executive committee of the Canada Region is Warren Workman, president (403-269- 9550); Michael Clegg, vice president/treasurer; Robert (Bob) Phelps, secretary-foreman; John Hogg, past-president; and Robert (Bob) Mummery, Advisory council representative.

The House of Delegates representatives are Bill Haskett, Katherine Bergman, Syed Hasan, Dave Scott, Dean Potter, Ken Corruthers, Paul English and Marty Hewitt.

Please contact any of the above about opportunities to serve the AAPG community in Canada, or with any suggestions you have. ❑

It's Time to Submit Perth Abstracts

Abstracts are now being accepted for the next AAPG International Conference and Exhibition, which will be held Nov. 5-8 in Perth, Australia.

The meeting's theme is "Reunite Gondwana – Realize the Potential," and 10 main themes have been announced for presenters to consider:

✓ Successful Management and Decision Making.

✓ Petroleum Systems Elements and Evaluation Techniques (two sub-categories).

✓ Gondwana Evolution and Petroleum Systems Elements.

✓ Exploring and Developing … (several regional sub-categories).

✓ West Australian Basins IV.

✓ Southeast Asia Pacific LNG Resources and Development Plans.

✓ Maximizing Value from Mature Petroleum Assets.

✓ Integrating New and Emerging Technologies – Seismic Innovation.

✓ Integrating Petroleum Development with Environmental Issues.

✓ Non-Conventional Hydrocarbon/Energy Resources.

The abstract deadline is **Jan. 18**, and they must be submitted online at www.aapg.org/perth/. Those who cannot submit online should contact Sandy Hensley at 1-918-560-2641, or e-mail to shensley@aapg.org.

More information is available online at www.aapg.org. ❑

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We hope you will consider joining fellow geoscientists on the island of Mallorca next spring for an examination of the latest techniques for predicting carbonate reservoirs and their impact on current oil and gas exploration and production. This workshop-style conference will focus on predictive stratigraphic reference models of carbonate reservoirs and how they encourage integration of disciplines, techniques and methodologies. An optional post-conference trip to Mallorca and its sister island Menorca will provide an opportunity to look at the classic Upper Miocene carbonate platform deposits and geometries. While most speakers will be invited, we are nevertheless soliciting abstracts for additional presentations. Please go to the official conference Web site, www.aapg.org/mallorca, and follow the instructions for on-line submission; or you may contact Arve Lønøy, Technical Progrom Co-Chair, directly at Arve.Lonoy@hydro.com.

Your proposed presentation should fall under one of the following broad topics:

A focus on different specific stratigraphic intervals (e.g., Aptian, Cenomanian-Turonian, Paleocene, Eocene, Oligo-Miocene), combining both outcrop analogue and high-resolution seismic

Stratigraphic framework controlled diagenesis

Burial diagenesis

Rock typing: fact or fiction?

Modeling (stratigraphic, diagenetic, reservoir)

EUROPEAN REGION

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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

Arizona
Ogunjobi, Oluwaseyi, Mesa (N. Omorodion, B.A. Koledoye, A.R. Ojelabi)

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Nevada
Madrid, Raul John, Victoria Resources (U.S.), Elko (F.G. Poole, J.G. Price, T.G. Theodore)

Texas
Blair, Keith Robert, Gastar, Houston (reinstate); **Butler, Denise Marie**, Shell International E&P, Houston (D.E. Schwartz, C. Pirmez, B.E. Prather); **Fortier, Gary Stephen**, El Paso Production, Houston (J. Rava, T.L. Davidson, D.A. Rodgers); **Holtz, Mark**, Bureau of Economic Geology, Austin (reinstate); **Horkowitz, Kathleen O.**, BP E&P, Houston (R.P. Mullin, D.M. Butler, P.A. Santogrossi); **McDaniel, Bret Allyn**, Dominion E&P, Houston (C.A. Edmonds, R.E. Goings, T.W. Auld); **Moon, Brad**, BP, Houston (T.P. Cronin, T.L. Patton, W.A. Donaldson); **Ortega, Orlando J.**, Shell Oil, Houston (S.E. Laubach, C.J. Minero, R.A. Marrett); **Prickett, Charles B.(Brad)**, Flagstone Development, Plano (reinstate)

Australia
Osman, Naomi, Australian Worldwide Exploration, North Sydney (E.R. Matthews, D.R. Eyles, B.N. Atkins)

Canada
Hargreaves, Anne Catherine, Canadian Stratigraphic Services (2000), Calgary (R.A. Fink, M.B. Innes, G.H. Cave); **MacDonald, Robert William**, EnCana Corp., Calgary (C.L. Neufeld, R. Gardner, R.J. Fife); **Thomson, Anne**, Penn West Energy Trust, Calgary (reinstate)

England
Cleverly, Robin William, UK Hydrographic Office, Taunton (A.K. Williams, N.P. Press, D.G. Roberts)

India
Singh, Udai Pratap, Oil & Natural Gas Corp., Mumbai (K. Palakshi, R.K. Upadhyay, B.B. Tokhi)

Malaysia
Hollomon, Gregg Allen, Talisman Energy, Kuala Lumpur (reinstate); **Lagraba P., Javier O.**, Schlumberger, Kuala Lumpur (reinstate)

Morocco
Chakor Alami, Abdelwahid, ONHYM, Rabat (H. Jabour, M. El Mostaine, M. Zizi); **Ouazzaba, Mouloud**, ONHYM, Rabat (H. Jabour, M. El Mostaine, M. Zizi)

Netherlands
Daniels, Jim, Shell International E&P, Assen (C.A. Visser, P.J. Lawry, J. Pennell)

Nigeria
Igbokwe, Smart Ugwunnaya, Shell Petroleum Development, Nigeria, Port Harcourt (M.B. Ozumba, J.U. Agbo, C.I.C. Ugwu); **Onyejekwe, Chike Chukwudi**, Shell Petroleum Development, Port Harcourt (M.B. Ozumba, C.I.C. Ugwu, O. Agwunobi)

Pakistan
Hamood, Ozair, OMV Pakistan, Islamabad (M. Najeeb-uz-Zaman, N. Ahmad, K.M. Javaid)

Saudi Arabia
Al-Qahtani, Jarallah A., Saudi Aramco, Dhahran (A.Q. Hameda, I.A. Al-Ghamdi, M.O. Al-Amoudi) ❑

Certification

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

Petroleum Geologist

Alabama
Panetta, Brian, University of Alabama, Tuscaloosa (B. Bearden, E. Mancini, J. Benson)

Oklahoma
Alletag, Gregg Steven, Barite Rose Energy, Oklahoma City (G. Medina, W.M. Smith, G.J. Rowell)

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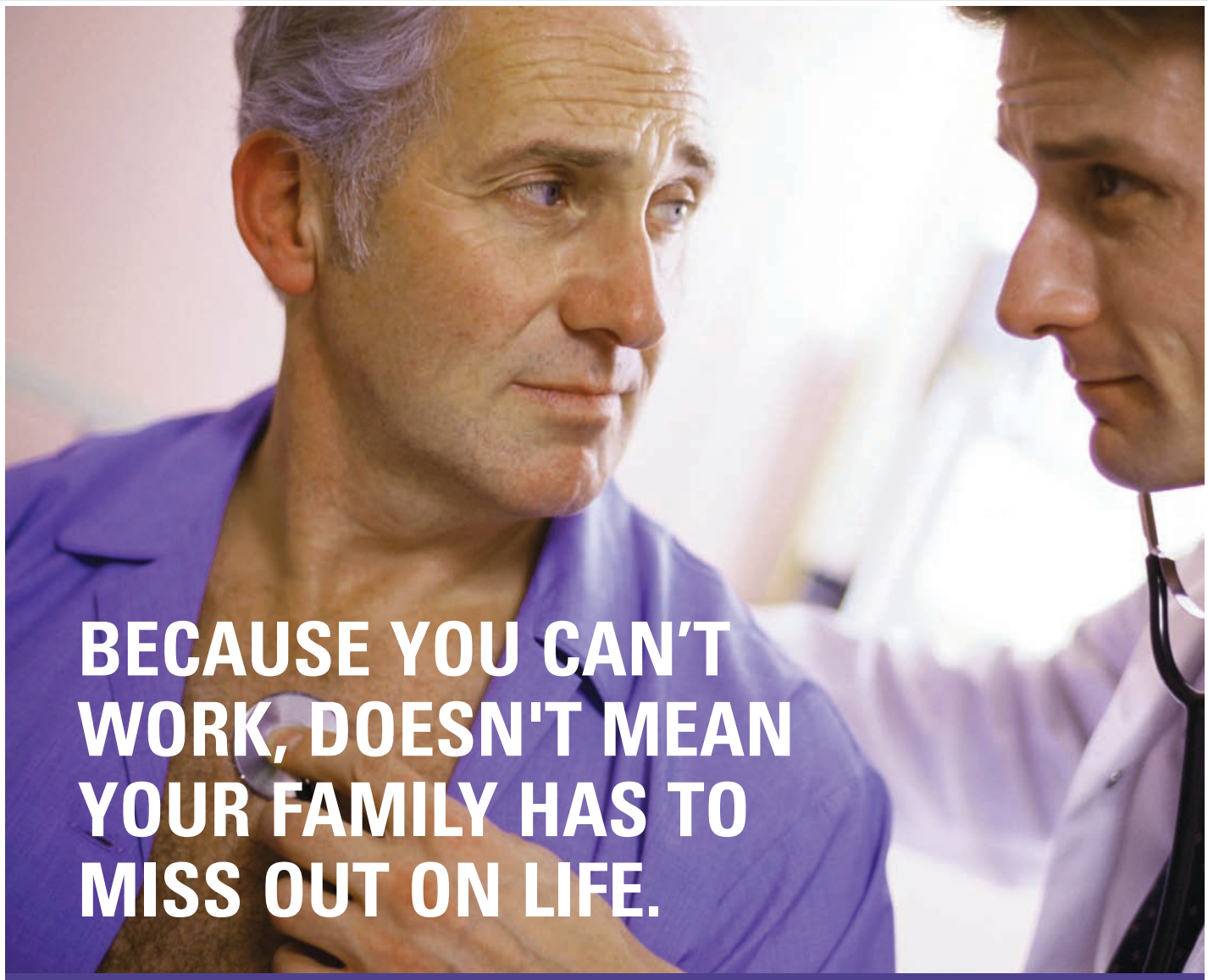

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GEOCARE Benefits

READERS' FORUM

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

Another Reason …

Regarding Richard Green's "10 Reasons Petrol Prices Will be High" (October EXPLORER): While all are valid, and all have been used to explain current high energy prices by the media and industry pundits, the number one reason was left unstated.

Since 2000, when the government effectively left the NYMEX to self-regulate itself through changes in the Commodity Futures Modernization Act, energy commodities have charted an upward unabated course to current prices. This momentum picked up steam after 9/11 and the Enron meltdown later that year.

At that time the energy commodity trading markets began a new evolution, and with many traditional players exiting the business because of regulation, the commodity trading boards were actively soliciting new players into the trading markets. While some of the large natural gas and oil producers have moved to the forefront, it is the financial houses and investment banks and funds that have moved to the head of the class. Both entities are well financed and view commodity trading in a totally different light than seen prior to 2001.

Further, NYMEX has happily accommodated the change, encouraging what now is nothing more than a big game of Texas Hold 'em. Over 400 energy hedge funds are now in operation, national and international, as compared to only 10 in 2003, and 75 in January of this year. Billions of dollars are leaving the consumer pocketbook, and much of it is not going to the industry that is entrusted to explore for more supply.

As a reward, the petroleum industry becomes suspect to a greater degree and is saddled with the windfall profits label once again.

The NYMEX likes to tout "price transparency" as the winner in this game, but price transparency is no greater now than it was prior to 2001, and liquidity has not improved, despite the added players. The natural gas contract on the NYMEX has the distinction of being the most volatile commodity in the world. Domestic natural gas supply is now incorrectly tied to global oil pricing. The market price is no longer being set by the physical supply of gas.

Is this good for our industry? Time will tell. If the dollar regains its strength, and high volatility and resultant prices impact U.S. and worldwide demand to an appreciable degree, our industry will be subject to yet another cyclic price ride which many of us have experienced before.

The real unknown is whether global demand and the growing global economy will persist …

If it's all about the almighty dollar, the speculative funds, investment houses and banks win. M. King Hubbert made the 1956 prediction that U.S. oil will peak in 1970. He also stated that "our ignorance is not so vast as our failure to use what we know."

Well, the speculative side has taken that statement to heart, and is using what we have known all along to their benefit. "Taking it to the bank," so to speak.

Dave Gruber
Mason, Mich.

… And Another View

After over 50 years in the oil business – 33 with major oil companies, two with small companies and over 20 years as a consultant – I am completely disgusted with present management of big oil companies. They tell us high prices are the result of increase costs to them for imported oil and damage from hurricanes. Then ExxonMobil has the highest net profits in their history, Shell has tremendous profits and ConocoPhillips net is up 89 percent.

Why are profits so big? According to them, it is because of high oil and natural gas prices. These costs to companies result in their higher prices to us, but why such huge profits to the companies? Who sets the prices they charge? Their management does. Not only do they cover all their higher costs, they make more profits than any other time in their history.

I have given a number of talks to various organizations, Rotary, Kiwanis and church groups on why the prices had to rise to cover costs; now I can't explain it. I am through trying to explain why these companies are making more money at the expense of the rest of American citizens.

Maybe the government can hit them with big taxes and not listen to their phony explanations.

Fred Haeberle
Delaware, Ohio

Pseudo Environmentalists

Regarding David Gallaher's Readers' Forum comment (October EXPLORER) that "Like evolution, the data for global warming is overwhelming. If this data were a prospect, we would have drilled it years ago": Not we, but you would have drilled the lowest, most impermeable, no source rocks, worst conceived dry hole imaginable.

When … hopeful world changers mangled environmental matters to suit their political ambitions (to socialize the world with their one-world government) they didn't nullify everyone's common sense or muddy up beyond recognition what nature's laboratories teaches or leaves in history's tracks. In the face of 15 years of accumulated scientific proof that humans don't cause global warming – or cooling – tenaciously they hang on, disinforming and propagandizing for what little they hope to get from their discredited theories.

These pseudo environmentalists

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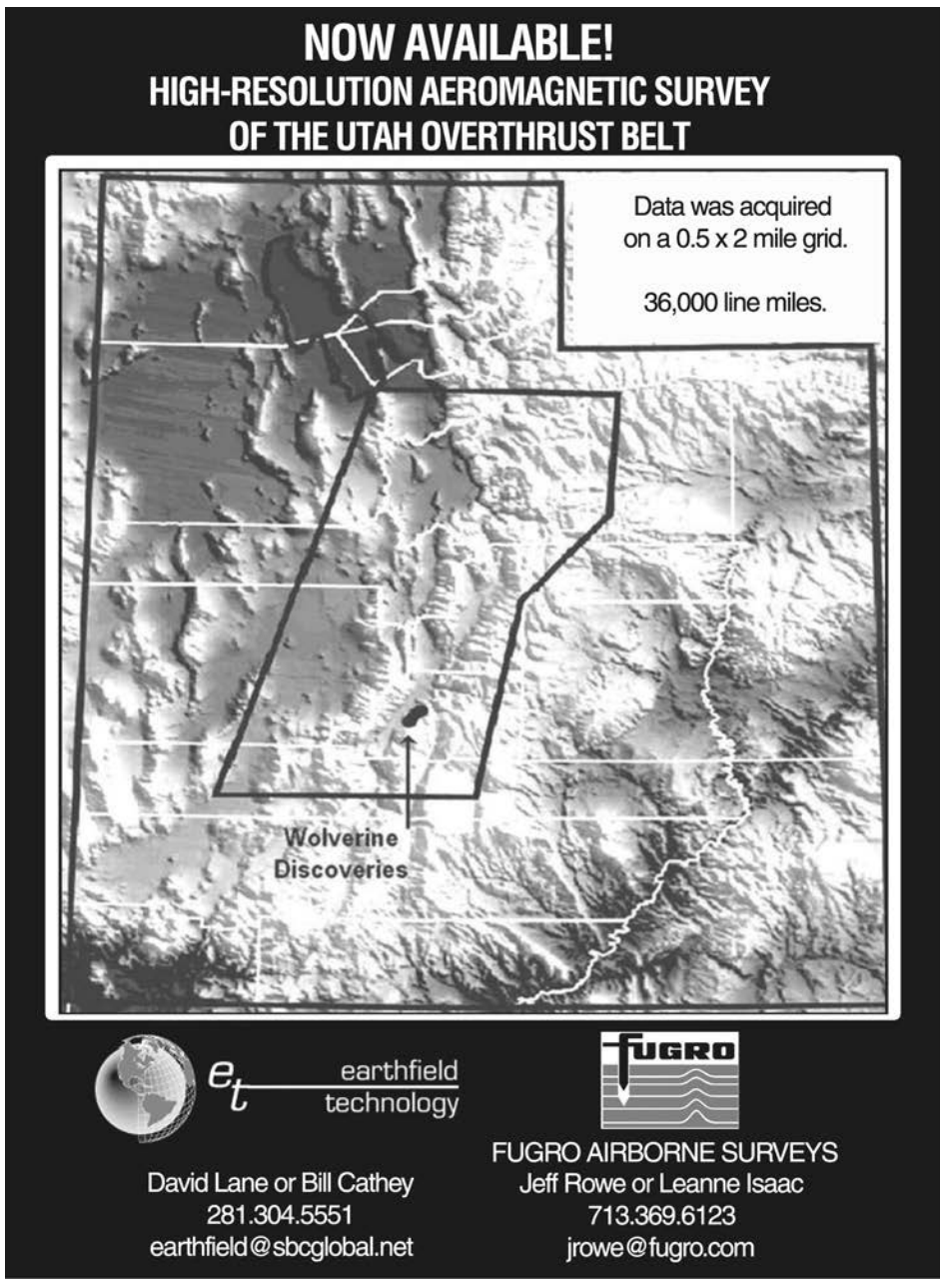

FUND ESTABLISHED TO HELP SUSAN LANDON

Susan Landon, an Honorary Member of AAPG, editor of Memoir 59 and recipient of the AAPG's Distinguished Service Award, suffered a traumatic brain injury while skiing on February 22. Comatose for several weeks after the accident, Susan has struggled to regain her health, both mental and physical. She is wheelchair-bound and dependent on nursing help to turn in bed, eat and exercise. While the prognosis seems good that Susan eventually will be able to walk and resume an active life, she will continue to need physical, occupational and speech therapy for at least a year, and possibly for many years.

Susan is currently at Learning Services, a rehabilitation facility in Lakewood, Colo. She could be there for six months or more depending upon the rate of her recovery, and she will continue to require special care and therapy even when she goes to her home or to another temporary home until she can manage safely on her own.

It now seems likely that she will have expenses of $500,000 not covered by insurance over the next five years. Many of her friends have asked how they could assist financially.

A *tax-deductible gift* to help Susan can be made through the National Transplant Assistance Fund (NTAF), a nonprofit organization dedicated to helping people who experienced catastrophic injuries. Ninety-six percent of each check goes to pay Susan's medical and related expenses, either directly or as a reimbursement.

Checks may be made payable to NTAF Midwest/West Brain Injury Fund, with IN HONOR OF SUSAN LANDON in the memo section of the check. The address is:

NTAF
3475 West Chester Pike, Suite 230
Newtown Square, PA 19073

For more information, please go to catastrophicfund.org or call NTAF at 800-642-8399.

Matt Silverman and Robbie Gries

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

Arizona
Ogunjobi, Oluwaseyi, Mesa (N. Omorodion, B.A. Koledoye, A.R. Ojelabi)

Colorado
Johnson, Reed A., self-employed, Castle Rock (R.T. Bartshe, R. Knappe, T.A. Gognat); **Rens, Debra Sue**, Whiting Petroleum Corp., Denver (M.D. Sonnenfeld, S.P. Gardner, C.M. Hawkins); **Reppe, Calvin Clark**, ATC Associates, Centennial (reinstate); **Stucker, Gordon F.C.**, Noble Energy, Denver (reinstate)

Nevada
Madrid, Raul John, Victoria Resources (U.S.), Elko (F.G. Poole, J.G. Price, T.G. Theodore)

Texas
Blair, Keith Robert, Gastar, Houston (reinstate); **Butler, Denise Marie**, Shell International E&P, Houston (D.E. Schwartz, C. Pirmez, B.E. Prather); **Fortier, Gary Stephen**, El Paso Production, Houston (J. Rava, T.L. Davidson, D.A. Rodgers); **Holtz, Mark**, Bureau of Economic Geology, Austin (reinstate); **Horkowitz, Kathleen O.**, BP E&P, Houston (R.P. Mullin, D.M. Butler, P.A. Santogrossi); **McDaniel, Bret Allyn**, Dominion E&P, Houston (C.A. Edmonds, R.E. Goings, T.W. Auld); **Moon, Brad**, BP, Houston (T.P. Cronin, T.L. Patton, W.A. Donaldson); **Ortega, Orlando J.**, Shell Oil, Houston (S.E. Laubach, C.J. Minero, R.A. Marrett); **Prickett, Charles B.(Brad)**, Flagstone Development, Plano (reinstate)

Australia
Osman, Naomi, Australian Worldwide Exploration, North Sydney (E.R. Matthews, D.R. Eyles, B.N. Atkins)

Canada
Hargreaves, Anne Catherine, Canadian Stratigraphic Services (2000), Calgary (R.A. Fink, M.B. Innes, G.H. Cave); **MacDonald, Robert William**, EnCana Corp., Calgary (C.L. Neufeld, R. Gardner, R.J. Fife); **Thomson, Anne**, Penn West Energy Trust, Calgary (reinstate)

England
Cleverly, Robin William, UK Hydrographic Office, Taunton (A.K. Williams, N.P. Press, D.G. Roberts)

India
Singh, Udai Pratap, Oil & Natural Gas Corp., Mumbai (K. Palakshi, R.K. Upadhyay, B.B. Tokhi)

Malaysia
Hollomon, Gregg Allen, Talisman Energy, Kuala Lumpur (reinstate); **Lagraba P., Javier O.**, Schlumberger, Kuala Lumpur (reinstate)

Morocco
Chakor Alami, Abdelwahid, ONHYM, Rabat (H. Jabour, M. El Mostaine, M. Zizi); **Ouazzaba, Mouloud**, ONHYM, Rabat (H. Jabour, M. El Mostaine, M. Zizi)

Netherlands
Daniels, Jim, Shell International E&P, Assen (C.A. Visser, P.J. Lawry, J. Pennell)

Nigeria
Igbokwe, Smart Ugwunnaya, Shell Petroleum Development, Nigeria, Port Harcourt (M.B. Ozumba, J.U. Agbo, C.I.C. Ugwu); **Onyejekwe, Chike Chukwudi**, Shell Petroleum Development, Port Harcourt (M.B. Ozumba, C.I.C. Ugwu, O. Agwunobi)

Pakistan
Hamood, Ozair, OMV Pakistan, Islamabad (M. Najeeb-uz-Zaman, N. Ahmad, K.M. Javaid)

Saudi Arabia
Al-Qahtani, Jarallah A., Saudi Aramco, Dhahran (A.Q. Hameda, I.A. Al-Ghamdi, M.O. Al-Amoudi) ❑

Certification

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

Petroleum Geologist

Alabama
Panetta, Brian, University of Alabama, Tuscaloosa (B. Bearden, E. Mancini, J. Benson)

Oklahoma
Alletag, Gregg Steven, Barite Rose Energy, Oklahoma City (G. Medina, W.M. Smith, G.J. Rowell)

Shale Gas:
Source Rocks as Reservoirs
www.humble-inc/shgas.html

Do you know someone who should be reading the EXPLORER?

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Lawyer?	Banker?	Secretary?
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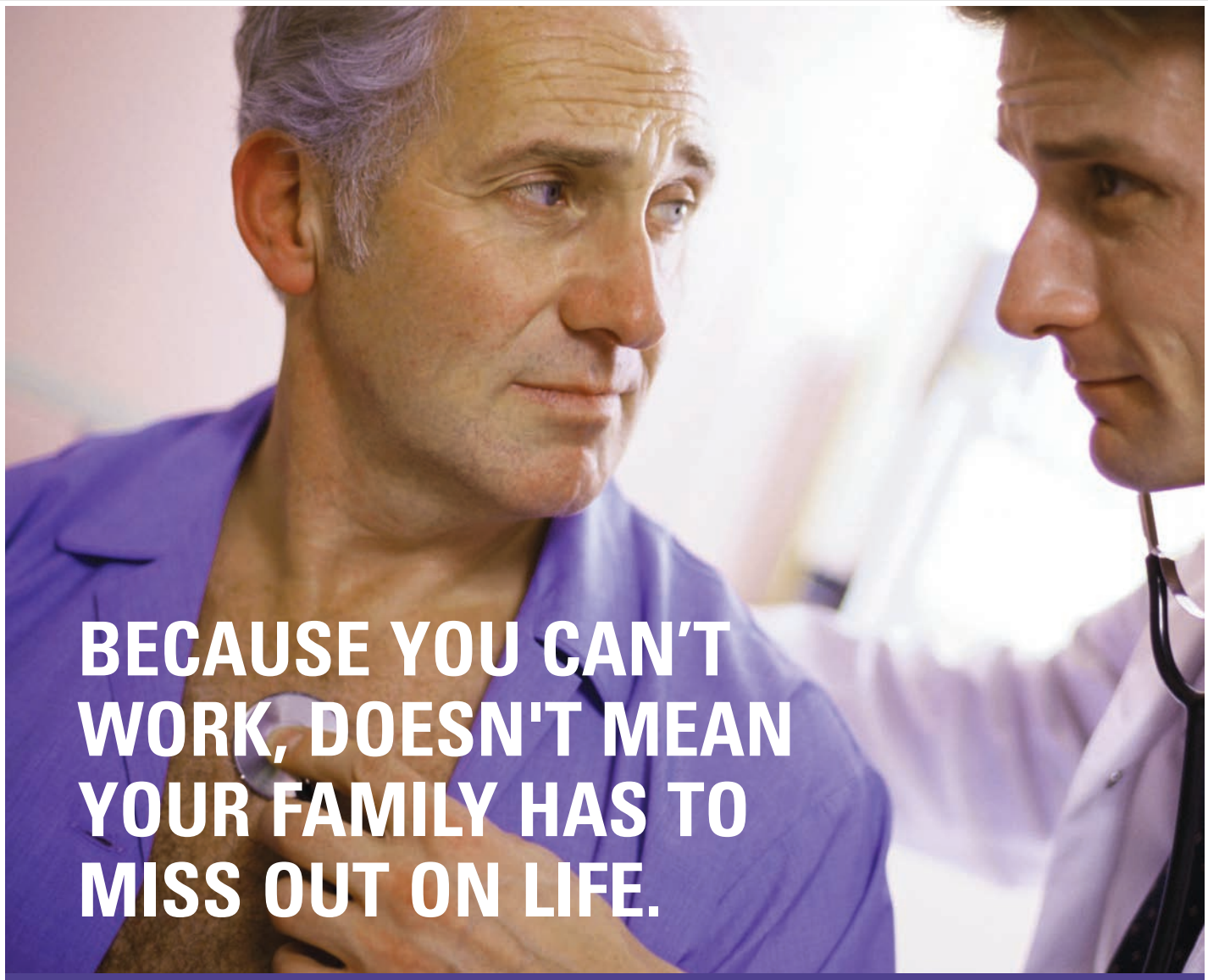
Contact AAPG at (918) 584-2555 for information.**



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GeoCare Benefits Disability Income Insurance Plans, P.O. Box 9006, Phoenix, AZ 85068, Email: geocarebenefits@agia.com. The Disability Income Plan is underwritten by New York Life Insurance Co. (51 Madison Ave., New York, NY 10010). All coverage is subject to approval by New York Life.

*Commissioners Disability Table 2003 ©

GEOCARE Benefits

continued from previous page

(world socialist is more accurate) have caused lots of very costly damage. Consumers pay through the nose for their follies. The sooner they are completely discredited, the better off humanity will be. People will continue to use cost-effective fossil fuel in a non-polluting manner while expensive alternates will fall by the wayside. The storms and disasters will continue. The globe will continue to warm and cool as the sun directs. But the parasites that would bring global misery and tyranny to the people will be silenced, their impossible dream of socialism's false peace will be stymied – until they find another "environment" issue to try again. Their persistence does not have any limits.

Toby Elster
Wichita, Kan.

The Debate (Continued)

From my home in the United Kingdom I have found the discussion about evolution and creation in AAPG's EXPLORER interesting. In the UK, such a type of correspondence simply would not occur. To that end, I applaud the willingness of AAPG to allow the discussion.

AAPG's *raison d'etat* is to help in the matter of finding and winning hydrocarbons. This issue is not addressed directly in this debate about biological origins of life. If evolution, whereby living forms produce descendents with permanent modification rather than a temporary adaptation that can later be reversed (which I would label as micro-evolution), did not occur, then we need another explanation for the fossil record, the rocks and hydrocarbons.

I have never felt that the most usual explanation for the origin of oil (biogenesis, followed by primary migration followed by secondary migration) is anything other than a wish list. There are too many problems with each stage of the explanation. The idea of an abiogenic origin removes some of these problems, but introduces alternative problems.

So does not our professionalism require us to put away any theophobia about the subject and ask the question as to whether a creator of some sort is responsible for the rich variety of hydrocarbons just as much as for the rich variety of biological life?

John Matthews,
Dorset, England

Regarding your story on the creationism debate (September EXPLORER):

The article missed a very important point: While there are creation theorists who are precommitted to a particular interpretation of scripture and who will twist science to fit it, Intelligent Design (ID) doesn't do so. It is an *evolutionary* theory and should be treated as such. It accepts that species changed over time; it simply questions the adequacy of standard mechanisms to explain all we're learning about life's marvels.

American cosmologist Ed Harrison speculated that the universe's exceptional fine-tuning for life might be due to its creation by aliens from another universe, but he wasn't labeled a religious nut for doing so. ID proponents are merely asking for the same treatment. Academic fairness cuts both ways.

ID proponents aren't being "disingenuous" when they decline to identify the designer. Many of them believe the designer is God, but that's not something science can determine. They are simply staying within the bounds of what science can infer. The activity of a designer might be detected, but the designer's identity would be outside science.

On the other hand, it is disingenuous for us scientists to pretend that only creation proponents mingle their religious views with their science.

When Carl Sagan says, "The cosmos is all there is, all there ever was, or ever will be," he's not speaking as an astrophysicist. Could he prove this famous statement *scientifically*? That is, by studying the universe, could he determine what lies beyond it?

We all have a religion – that is, a metaphysical belief system – and it can be tricky to discern when it is creeping into our science. However, we all need to guard against mixing it with our science, or we cannot object when others do so.

Let's keep *all* religious statements out of science and out of the schools, not just one kind. If we did so consistently, much of the pressure on lay Christians to discredit science would vanish, and much of the current "debate" would vanish with it.

Scott E. Robinson
Houston

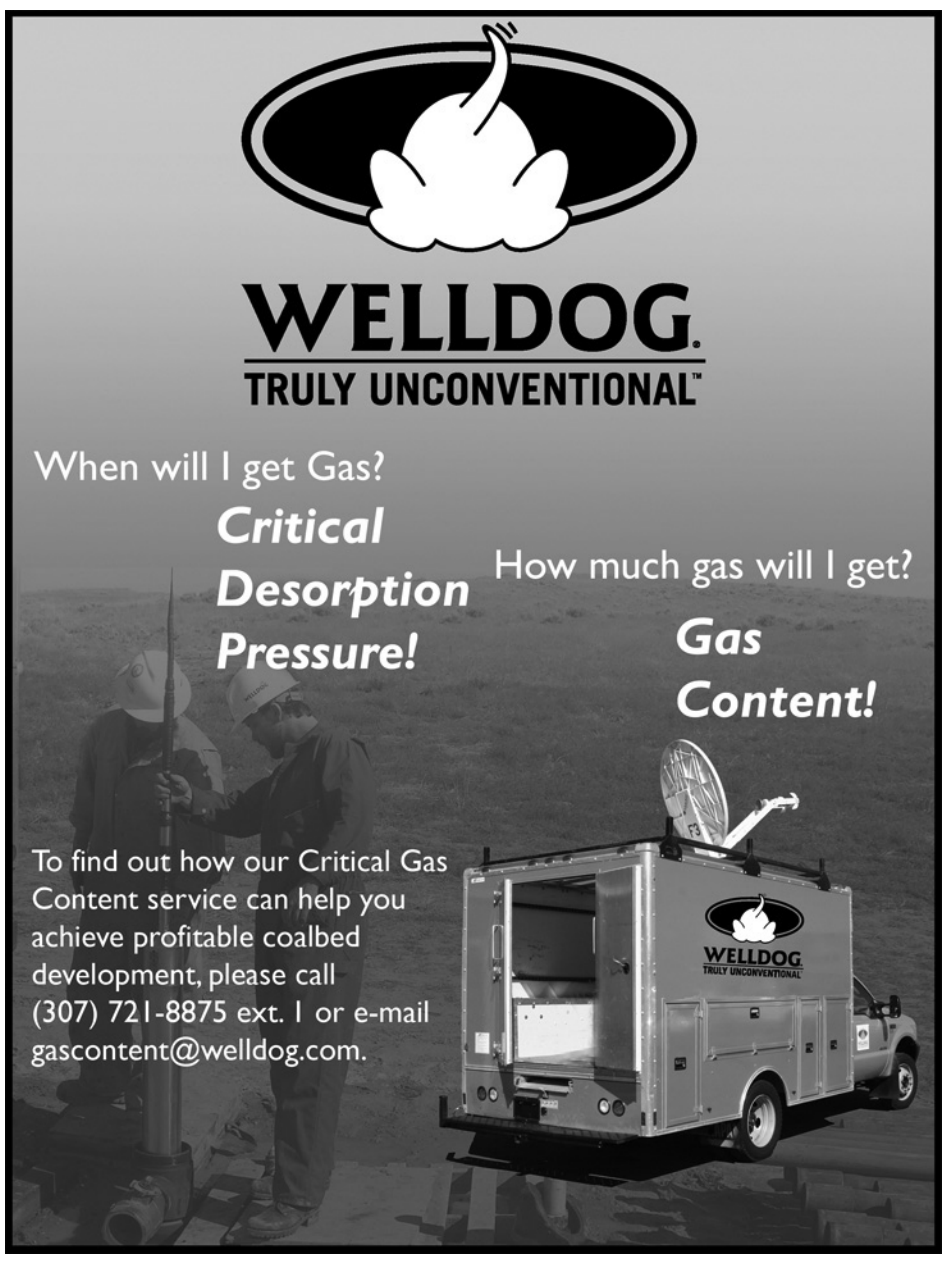
Go on, AAPG EXPLORER, and lose your way as a publication medium of a serious scientific organization by giving house room to the sad debate between the obscurantist creationists/intelligent design backwoods folk and the enlightened forward thinking scientists whose insights daily unravel more of the majesty of natural evolution.

If the broad mass of American public really believes what the old fables teach, instead of listening to what enlightened science tells them, there is no way forward for them and they will rot in perpetual ignorance and seal their own fate. Ignorance and rejection of reality equals catastrophe.

Modern science may yet help to find a way to overcome the threatening energy shortages with the coming rundown of global oil resources and the consequent demise of the oil based global economy. Hoping, praying and "Waiting for Godot" will not!

Why not give the "Rundown of the Hydrocarbon Resource" proper house room! That would be a topic for urgent and proper debate. Or are you afraid to look reality in the eye, like your religious obscurantists?

Walter H. Ziegler
Chardonne, Switzerland



CLASSIFIEDADS

POSITION AVAILABLE

Schlumberger-Doll Research
Carbonate Research Geologist

Schlumberger-Doll Research (www.slb.com/research), in Cambridge, Massachusetts, USA, seeks an experienced carbonate geologist with industry recognition to lead research within a geology and petrophysics research group. The candidate will be expected to bring a thorough knowledge of petroleum industry carbonate sedimentary and diagenetic processes for the purposes of building integrated carbonate solutions using advanced petrophysical measurements and reservoir modeling tools. The candidate will be involved in developing and evaluating new measurement tools and modeling software specifically for carbonate applications and participating in client carbonate oilfield case studies. Ph.D. in carbonate sedimentology/stratigraphy required. At least ten years of oilfield experience necessary (e.g., direct employment or work in industrial consortia). Candidate must have experience in carbonate petrography, geochemistry, and diagenesis; carbonate sequence stratigraphy, subsurface correlation, and reservoir model building; and working knowledge of oilfield petrophysical measurements.

Email your resume to:
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CHARLES T. MCCORD, JR.
ENDOWED CHAIR OF GEOLOGY
Department of Geology and Geophysics

The Department of Geology and Geophysics at LSU invites nominations and applications for the Charles T. McCord Jr., Endowed Chair of Geology. We seek an individual that will develop a strong externally-funded research program centered around research relevant to petroleum geology, and who will complement existing faculty expertise in sedimentary geology and geophysics. The successful candidate will be expected to further develop LSU's ties with the petroleum industry, supervise graduate student research, publish in highly ranked journals, and teach undergraduate and graduate courses in his or her area of specialization. **Required Qualifications:** Ph.D. in geological sciences or other relevant disciplines; record of published research in topics of relevance to the petroleum industry. **Additional Qualifications Desired:** petroleum industry experience. This appointment would normally be made at the rank of Full Professor. However, exceptional candidates at the Associate Professor level will be considered.

The Department of Geology and Geophysics consists of 21 tenured and tenure-track faculty members covering a wide range of expertise, and offers B.S., M.S., and Ph.D. degrees in geology. The Department has excellent facilities, a strong record in research and graduate training, an ongoing industry-funded M.S. degree program in Applied Depositional Geosystems, and a strong alumni base within the petroleum industry. The successful candidate will have an opportunity to participate in the hiring of three additional endowed chairs in sedimentology, geophysics, and stratigraphic palynology in coming years, and will become part of a broader geosciences community within LSU, which includes faculty within the Department of Petroleum Engineering, the Department of Oceanography and Coastal Sciences, and the Louisiana Geological Survey. For more information, see our web site: http://www.geol.lsu.edu.

The review process will begin December 1, 2005, and continue until candidate is selected. Nominations or inquiries should be directed to Professor Mike Blum, McCord Search Committee Chair, at 225-578-5735 or mike@geol.lsu.edu. An offer of employment is contingent on a satisfactory pre-employment background check. Applicants should send a copy of their curriculum vitae (including e-mail address), a statement of their research and teaching interests, and the names, addresses, phone numbers, and email addresses of at least three references to: McCord Chair Search Committee, Department of Geology and Geophysics, Louisiana State University, Ref: Log #0508, Baton Rouge, LA 70803.

LSU IS AN EQUAL OPPORTUNITY/EQUAL ACCESS EMPLOYER

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SIMON FRASER UNIVERSITY
Department of Earth Sciences
Assistant Professorship in Petroleum Geology

The Department of Earth Sciences at Simon Fraser University invites applications for a tenure track Assistant Professorship in Petroleum Geology commencing September 1, 2006. A PhD is required, and previous research, teaching and industry experience is desirable.

We are seeking applications from candidates with a strong background in geology and geological methods relevant to hydrocarbon exploration and reservoir evaluation, rather than specialization in geophysical methods. Expertise in carbonate successions is desired, but this preference will be a minor factor in the final selection of the candidate.

The successful candidate will develop strong collaborative ties with the oil and gas industry and supervise both graduate and undergraduate students. Teaching responsibilities will include an introductory and advanced undergraduate course in Petroleum Geology or some related subset, and a graduate level course in the appointee's field of expertise. Eligibility for registration as a professional geoscientist (P.Geo) with the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) is desirable.

For additional information about this position, see http://www.sfu.ca/earth-sciences/

All qualified candidates are encouraged to apply; however, Canadian Citizens and permanent residents will be given priority. Simon Fraser University is committed to the principle of equity in employment and offers equal opportunities to qualified applicants. The position is subject to final budgetary approval by the University.

Under the authority of the *University Act* personal information that is required by the University for

See **Classifieds**, page 44

Independent Oil and Gas Exploration Company is Seeking Experienced

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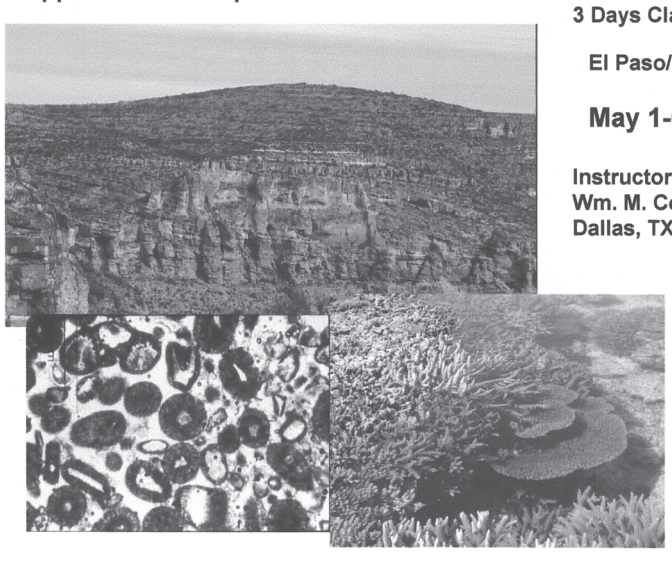
CARBONATE FACIES, DIAGENESIS & SEQUENCE STRATIGRAPHY - Applications to Exploration & Production



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Merrion Oil & Gas is looking for a geologist / geologic engineer / reservoir engineer to work in Farmington, New Mexico, focusing on acquisition and exploitation opportunities, primarily in the Rocky Mountain region.

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Outstanding schools and world class facilities
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Time to do it and 360 days of sun to do it in
Oh… and no hurricanes, earthquakes, tornados, or locust plagues

Are you intrigued? Are you intriguing? If so, inquire within.

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George Sharpe - Manager, Oil & Gas Investments
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505-324-5314
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The University of Texas at Austin
invites applications and nominations for the position of

Dean,
John A. and Katherine G. Jackson School of Geosciences

Effective September 1, 2006

The Jackson School is a newly founded academic unit that includes one of the largest geoscience programs in the country. With an endowment of over $366 million, the school provides an unprecedented opportunity for its leader to have a major impact on the field of geoscience well into the future. The school includes the Department of Geological Sciences, the Institute for Geophysics and the Bureau of Economic Geology and employs 33 full-time faculty and approximately 100 research scientists. The department currently serves just under 200 undergraduate majors and approximately 170 graduate students.

We seek a visionary leader with proven scientific and administrative skills who will work with the faculty and research scientists to develop the Jackson School to its full potential as one of the world's top institutions in the geosciences and who will represent the school effectively to the university administration, to the state and national political leadership, and to the public.

Preferred qualifications include: (1) distinguished scholarship, with a strong research record and experience in academia, including teaching; (2) administrative experience that demonstrates vision, managerial ability, communication skills and ability to develop programs; (3) creative leadership capable of creating synergy within the school and interfacing with other programs within the university; and (4) commitment to balancing academic and research excellence with the diverse broader missions of units within the school.

Applications and nominations should include a letter describing the applicant's qualifications and potential interest in the position. Applicants should also include a description of relevant experience and accomplishments, *curriculum vitae*, and the names and addresses of six references (references will not be contacted without the candidate's permission).

Send applications and nominations to:
Dr. Sharon Mosher, Chair, *Dean Selection Committee*
Department of Geological Sciences
Jackson School of Geosciences
1 University Station C1100
University of Texas at Austin
Austin, TX 78712-0254

THE UNIVERSITY OF TEXAS AT AUSTIN
JACKSON SCHOOL OF GEOSCIENCES

Review of applications will begin December 1, 2005, but applications will be accepted until the position is filled.
The University of Texas at Austin is an Affirmative Action/Equal Employment Employer. Women and minorities are encouraged to apply.

PETROLEUM GEOSCIENCES
THE PETROLEUM INSTITUTE
ABU DHABI, UNITED ARAB EMIRATES

Positions
The Petroleum Geosciences Program of The Petroleum Institute, Abu Dhabi, United Arab Emirates (UAE) is seeking outstanding candidates to begin August 2006. Appointments at Assistant Professor, Associate Professor, and Professor will be considered, depending on qualifications.

Geoscience Educator. Successful candidate will be primarily responsible for coordinating content of multiple sections and teaching introductory geoscience courses, supervising undergraduate laboratories, and teaching other undergraduate courses as needed. Research opportunities exist, but research will not be a main responsibility. Ph.D. in a relevant area of geoscience and five years of university-level teaching are required. Candidates must have strong interpersonal, communication, and organizational skills. A commitment to excellent teaching is required. Petroleum industry experience and a background in sedimentary geology are advantageous.

Successful applicants for the following possible positions will teach undergraduate and graduate courses, develop an active research program that impacts the UAE petroleum industry, and engage in institutional service work. Opportunities exist to work with PI industry stakeholders in research. Ph.D. in a relevant area of geoscience from a first-rank university is required. Teaching experience and petroleum industry experience are desirable for all positions. Experience with carbonate rock systems is also advantageous.

Reflection Seismology. Candidate must have expertise in seismic acquisition and processing, with skills in advanced processing, seismic inversion, seismic imaging, and multi-component analysis, or in seismic interpretation, including interpretation of seismic attributes.

Petroleum Geoscience. Candidates must have expertise in petroleum exploration, development, and reservoir management, and with modern integrated geoscience software applications. Applicants with experience in geoscience systems computer modeling will be given special consideration.

Petroleum Institute

The Petroleum Institute is a small, highly focused, teaching and research institute that offers educational programs that will lead to B.Sc., M.Sc., and Ph.D. degrees in engineering and petroleum geosciences. The Petroleum Institute is four years old and is committed to becoming a world leader in geoscience and engineering education and the premier petroleum-related educational institute in the Middle East. Many laboratories with up-to-date analytical equipment and computer hardware and software exist, and faculty have the ability to equip similar new laboratories to support teaching and research. The graduate program likely will begin in 2006. All classes are in English.

Salaries are competitive, not taxed by the UAE, and are supplemented with an accumulating end-of-service bonus after three years. The compensation package for faculty includes a housing allowance, utilities, a home furnishings loan, an interest-free automobile purchase loan, annual leave travel, educational assistance for dependents, and subsidized medical care.

Abu Dhabi, the capital of the UAE, is a modern, cosmopolitan city of more than 600,000. Theaters, art exhibitions, and music concerts provide cultural opportunities. Citizens comprise a moderate Muslim society with freedom of religion, and women are respected and are free to dress in western clothes without coverings.

This is an unusual opportunity for self-motivated geoscientists to help build a world-class teaching and research institution. Additional information is at www.pi.ac.ae/. Interested candidates should send an application and their résumé to mkassim@pi.ac.ae. Applications from qualified females are particularly invited. Please submit a hardcopy application only if unable to submit electronically to:

Faculty Recruitment Coordinator-Petroleum Geosciences Program
Petroleum Institute
P.O. Box 2533
Abu Dhabi, United Arab Emirates

Candidates are encouraged to submit an application as soon as possible and no later than **15 January 2006**, although applications will be considered until vacant positions are filled.

GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES
GULF COAST SECTION OF SEPM

CALL FOR PAPERS

56th ANNUAL CONVENTION
LAFAYETTE, LOUISIANA
September 25th – 27th, 2006

HOSTED BY THE
LAFAYETTE GEOLOGICAL SOCIETY

Come on down and pass a good time in Lafayette, Louisiana, the Heart of Acadiana and Cajun Culture! We guarantee good food, good music, and of course a good show! We are pleased to announce our convention theme, **"Visualize the Possibilities."** Lafayette is host to the Louisiana Immersive Technologies Enterprise (LITE), a state-of-the-art 3-D visualization center currently under construction in the University of Louisiana Research Park. Their new 3-D Immersive Auditorium will be showcased as an integral part of the convention. We thus invite submission of abstracts for presentations related to all facets of Gulf Coast geology and technology, and especially encourage submission of abstracts related to visualization methods and technology. So come on down to "Visualize the Possibilities" firsthand and experience the "joie de vivre" of south Louisiana.

THEMES FOR SUBMISSION

Presentations on all aspects of Gulf Coast geology are welcome.
We especially invite presentations with the following themes:

3-D Visualization Technology and Methods — **Gulf Coast Case Histories**
Salt and Faults — **Sub-Salt Environments** — **Deep Water Systems**
Onshore Trends and Exploration — **Seafloor and Shallow Mapping and Hazards**
Coal Bed Methane — **Tight Gas Sands** — **Outcrop Studies and Analogues**
Impact of Natural Disasters — **Environmental and Coastal Studies**

HOW AND WHEN TO SUBMIT:
Abstracts of proposed presentations must be submitted in standard format (250 words or less; no figures or references) by **January 16, 2006**. Please visit the GCAGS 2006 website, www.gcags2006.com, for further instructions and downloadable template for submission. **Oral, poster, visualization, or core presentations** will be accepted, with notification of acceptance on or before February 20, 2006. Authors with accepted abstracts must submit a paper of <11 pages, or an extended abstract with key figures of 2-4 page length by April 11, 2006 to be published in the *Transactions* volume.

ABSTRACT DEADLINE: JANUARY 16, 2006!
Questions should be directed to James Willis at gcagstech@msn.com or 337-394-3979.

Classifieds

from page 42

academic appointment competitions will be collected. For further details see: http://www.sfu.ca/vpacademic/Faculty_Openings/Collection_Notice.html

Applicants are requested to submit curriculum vitae, a statement of research and teaching interests, and the names and addresses of three referees. The closing date for applications is February 1, 2006.

Applications or requests for further information should be directed to:
Dr. D.A. Allen, Chair
Department of Earth Sciences
Simon Fraser University
8888 University Drive
Burnaby, BC. V5A 1S6
Phone: 604-291-4657
Email: easchair@sfu.ca

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Curtin University of Technology, with campuses in Australia and Malaysia is widely recognised as a leading teaching and research institution. Curtin aspires to be a leading edge, world-class university of technology.

The Western Australian Energy Research Alliance (WA:ERA) of Curtin University of Technology, CSIRO Petroleum and the University of Western Australia provides research and technology-based solutions to the global oil and gas industry. Applications are invited from women and men who share the University's values, ethics, international outlook, value diversity and have an informed respect for the indigenous people.

Curtin offers attractive salaries and conditions of employment.

Eligibility
Applicants must address and meet all essential criteria and be eligible to work in Australia for the duration of the appointment.

Applications
To apply and learn more about this position, please visit www.jobs.curtin.edu.au or call (+618) 9266 1234 (24 hour answering machine) to obtain position descriptions and selection criteria.

Closing date: 5pm, Friday 24 February 2006.

Curtin reserves the right to appoint by invitation.

Senior Lecturer/Associate Professor
Department of Petroleum Engineering
Division of Resources and Environment
(Full-time, Fixed-term – 3 Years) REF: 4097

Based at the Bentley campus Perth, Western Australia.

To enhance its capabilities in the areas of petrophysics and reservoir characterisation within WA:ERA, Curtin seeks an Senior Lecturer Associate Professor with a demonstrated track record of high quality work in petrophysics and log interpretation, who will be based in the Department of Petroleum Engineering.

The successful candidate will develop and lead a research program in petrophysics, encompassing the development of formation evaluation methods and workflows, with particular relevance to the needs of the WA and Australian petroleum industry.

A PhD in a relevant field is desirable. A demonstrated track record of high quality work in petrophysics and log interpretation, together with previous industry experience in petrophysical evaluation are prerequisites for this position. The initial appointment term is three years with a possibility of an extension for another two years subject to a performance review and funding.

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KING FAHD UNIVERSITY OF PETROLEUM & MINERALS
Dhahran, Saudi Arabia

EARTH SCIENCES DEPARTMENT

Shaikh Al-Amoudi Petroleum Geology Chair

The Earth Sciences Department at King Fahd University of Petroleum & Minerals (KFUPM) (http://www.kfupm.edu.sa/es) at Dhahran, Saudi Arabia, is inviting applications for the recently established Shaikh Al-Amoudi Petroleum Geology Chair.

The candidate for the position should have considerable professional experience in an academic and/or industry-based setting, with a record of accomplishments. He is expected to have a strong research focus, preferably in the area of reservoir characterization and basin analysis with application to petroleum exploration and development sectors. He should have proven track record of conducting high-quality, leading-edge geologic exploration and development research applicable to the present and future needs of the petroleum industry in Saudi Arabia. The successful candidate is expected to strengthen the Earth Sciences program at KFUPM by teaching at the undergraduate and graduate levels, supervising M.S. and Ph.D. students, establishing collaborative links with industry and developing a vigorous externally funded research program. Preference will be given to the candidates with experience in Mesozoic and Paleozoic petroleum systems in the Middle East.

The application for the position should include an updated CV, statement of research interests, a detailed 5-year research plan, and an account of how their research career and proposed research are relevant to petroleum geology, a statement of teaching philosophy, plus names and addresses, including the e-mails of 5 referees.

The anticipated starting date for this position is January 15, 2006. Applications will be accepted until the position is filled.

SALARY AND BENEFITS

Two-year renewable contract, competitive salary based on qualifications and experience, free furnished housing with free essential utilities and maintenance, and free medical care at KFUPM Clinic. Subject to University policy, the appointment includes the following additional benefits: round-trip air tickets to Dammam for the faculty and up to three of his dependents; tuition fees for school-age dependent children enrolled in local schools; local transportation allowance; two-month paid summer vacation, end-of service benefits, and free access to recreation facilities. KFUPM campus has a range of teaching and research support facilities such as an extensive library acquisitions and library databases, computing facilities, smart classrooms, and research and teaching laboratories. The campus is within a very short distance from the cities of Dammam and Al-Khobar.

Candidates should send their CV/Resume, copies of their degree, diplomas, transcripts, and the application forms (can be obtained from the site: http://www.kfupm.edu.sa/fpa/) to the following address :

Dean of Faculty & Personnel Affairs
DEPT. REF.No. ES-2005
KFUPM Box 5005, Dhahran 31261, Saudi Arabia
E-mail: faculty@kfupm.edu.sa Fax: +966-3-860-2429 or 860-2442

Please always refer to the above DEPT. REF. No. in all correspondence
For more information, please visit the following links:

KFUPM Web Site: http://www.kfupm.edu.sa *Deanship of Faculty & Personnel Affairs: http://www.kfupm.edu.sa/fpa* *Earth Sciences Department: http://www.kfupm.edu.sa/es*

DIRECTOR'S CORNER

A Focus on Service to Membership

By RICK FRITZ

As I was preparing to write this column about AAPG's change in primary focus from finances to service, I was amused by all of the proverbs and sayings about money.

One of my favorites is "Two can live as cheaply as one, but for only half as long." Another saying is "the buck stopped before it got to me!"

After 9/11 and the following decline in investment returns, AAPG took a "hit" on finances. This is due to many factors, including the increased cost of developing meetings, increased pension expenses and, of course, revenue from investments, which are part of AAPG's income stream.

Needless to say, our primary area of focus became the budget; however, after numerous cuts and adjustments plus the addition of new revenue streams, we are back on target.

Last year we expected a loss of almost $300,000, and instead we have turned it around with a gain of over $200,000. I say "we" very widely as it was indeed a team effort of the leadership and staff. The budget for this fiscal year, 2005-06, is in the black, and this is supported by our incoming financials.

I once heard someone say that "money doesn't grow on trees, you have to beat the bushes for it." We have been "beating the bushes" and, of course, it is critical that we run AAPG as efficiently as possible. We just prefer the primary focus to be on service rather than finances.

There are numerous quotes about money and service, but perhaps Arthur F. Sheldon, a master salesman and teacher, says it the best as "He profits most who serves the best."

* * *

The "All Member Survey" clearly shows that members generally feel that AAPG provides good service – but we want to be the best.

It is important to note in discussing service that during the past six years we have cut staff while at the same time we have increased the number of products and services. This has placed a strain on our human resources. Now that we are back on even financial keel we are building a comprehensive service plan as part of the overall strategy and as a key component of the new comprehensive business plan.

The following are three new service programs that the AAPG Executive Committee recently approved:

✓ The first is a special service program to the AAPG **Sections and Regions**.

For the first time this year we will have a staff member totally dedicated to "grassroots" support of AAPG members. The design is for this position to be a two-way communicator between members and staff – finding the needs of the membership and making the Section and Regions leadership, as well as the affiliated societies, aware of AAPG services.

✓ The second is a **marketing** plan.

A key part of this plan is investigating the needs of AAPG members through each stage of a career in geosciences. This will help us better understand the products and services that we should produce.

The first phase of the membership marketing plan was presented at the Membership Workshop held last month. The plan includes one dedicated staff person who will focus on marketing and sales.

AAPG has many new benefits that need to be communicated effectively to the membership. The marketing plan is about providing timely information about the benefits of AAPG membership.

✓ A third part of the service plan is the development of an AAPG **Service Center**.

Although this plan is still under construction, the idea is to provide a central calling center to answer most incoming questions at headquarters. This will require special training of several AAPG staff, and one person dedicated to the management of the Service Center.

Please note that all three of the above plans are made easier by the installation of our new association management software, which the AAPG Executive Committee approved last year.

As Albert Einstein said, "In the middle of difficulty lies opportunity." Financially, AAPG is as good as ever, and now we can focus on the most important things for our members.

We always are looking for ways to improve. Please let us know how we can better serve you.

Houston Courses Set

DEG Appreciates Grant for Journal

By STEVEN P. TISCHER
DEG President

As stated in the September EXPLORER, AAPG Executive Director Rick Fritz and President Peter Rose initiated 2005-06 as the "Year of the Divisions," and one of the benefits to the three Divisions is the availability of AAPG Foundation Grants for projects deemed commendable by the Foundation Board.

The Division of Environmental Geosciences is very grateful for the grant awarded by the Foundation for expenditures to publish our quarterly journal, *Environmental Geosciences*.

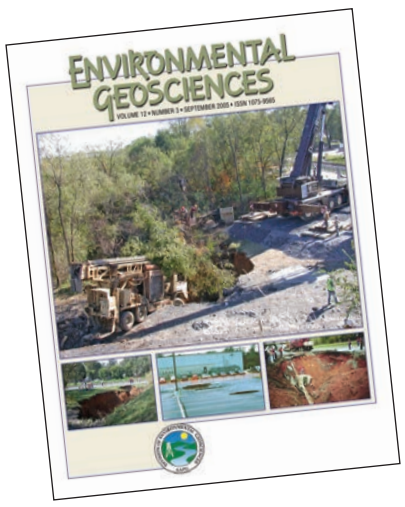
The Foundation Grant will allow the DEG editor and Executive Committee to determine if additional manuscripts will be added to *Environmental Geosciences*. Other potential uses for the grant monies will be special publications deemed worthy by the Executive Committee.

Again, I wish to sincerely thank the AAPG Foundation for the substantial grant for use to defray publication costs of our respected journal.

* * *

The DEG will have two short courses available at next year's AAPG Annual Convention, set for April 9-12 in Houston.

✓ The first of the courses is titled "ASBOG (National Association of State Boards of Geology) Review – Professional Geoscientists' Exam Review." This short course will assist a geologist, geophysicist and/or soil scientist with identifying materials to study and become familiar with to be able to pass the Professional Geoscientists' Exam. Once you pass the exam, the Texas Board of Professional



Geoscientists awards the successful candidate as a licensed Professional Geoscientist.

The following states or protectorate have requirements for geoscientists to be able to be licensed to practice: Alabama, Arizona, Arkansas, California, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Kansas, Kentucky, Maine, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, North Carolina, Oregon, Pennsylvania, South Carolina, Texas, Utah, Virginia, Washington, Wisconsin, Wyoming and Puerto Rico.

The next ASBOG exam for geologists in Texas will be offered on March 3, and the registration deadline for the March exam is January 17, 2006.

Visit http://www.asbog.org/ or http://www.tbpg.state.tx.us/ to get more information about the ASBOG exam.

✓ The second short course will be "Field Safety Leadership Seminar," a one-and-a-half day field course that will teach the attendees to prepare a health and safety plan for a field trip.

The attendees will receive the Field Safety Leadership Manual that has been successfully taught at ExxonMobil for several years.

I hope you will be able to attend both of these important short courses set for Houston.

* * *

There always are opportunities to volunteer your service to the DEG, including:

✓ Continuing Education, Geohazards, Health and Safety and the Programs committees all need volunteers to assist with the important work they do for the DEG.

✓ The Continuing Education and Programs committees need a chair or vice-chair to guide and to make recommendations on how to move suggested ideas into the future.

Please review the responsibilities for each of these DEG committees on our Web page at http://deg.aapg.org/committees.cfm. I hope you will step up and be counted, and contribute your valued service to the DEG! ❑

DEG Announces 2005 Awardees

The Division of Environmental Geosciences has announced its award winners for 2005.

Award winners will be honored at the DEG luncheon during the AAPG Annual Convention in Houston.

The DEG award winners are:

❒ President's Award – Charles G. "Chip" Groat.

❒ Research Award (2) – Craig Bethke and James Otton.

❒ Teaching Award – Kerry Sublette.

❒ Public Outreach Award– John D. Kiefer.

❒ Certificate of Merit awards (5) – Kenneth D. Vogel, Mary L. Barrett, Charles Chris Steincamp, Susan Eaton and Paula Sillman.

❒ Corporate Award for Excellence in Environmental Stewardship – ExxonMobil (for the Health and Safety Field Manual).

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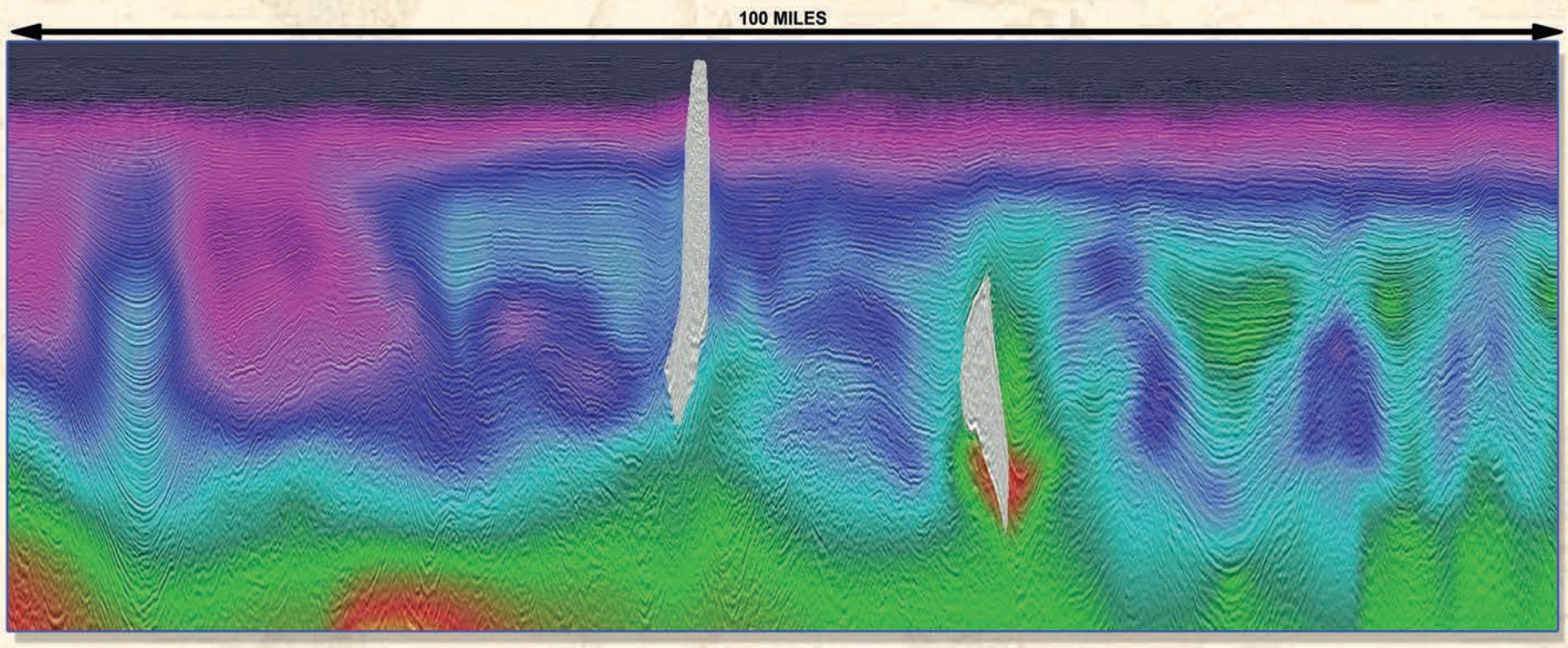
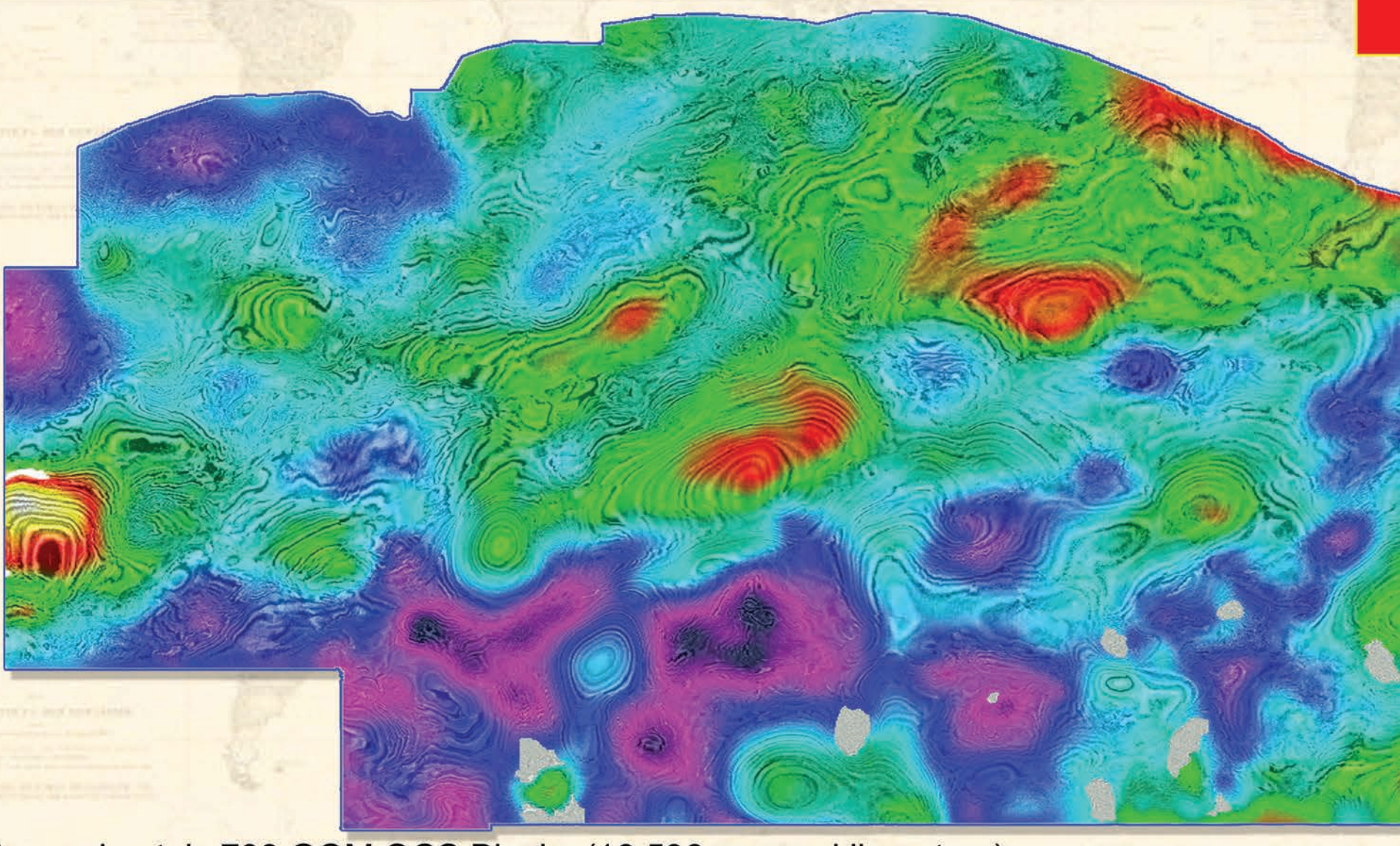
XLine Stack With Migration Velocity Overlay

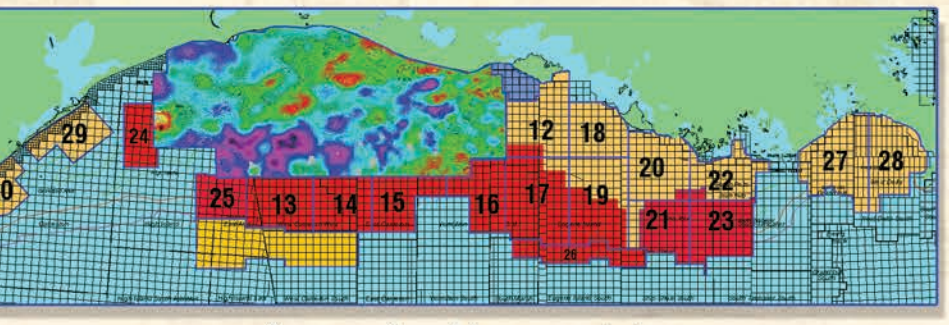




Approximately 793 GOM OCS Blocks (16,596 square kilometers)

3D PRESTACK DEPTH MIGRATION

cause severe seismic ray path distortion.



Areas 1 - 11 complete.

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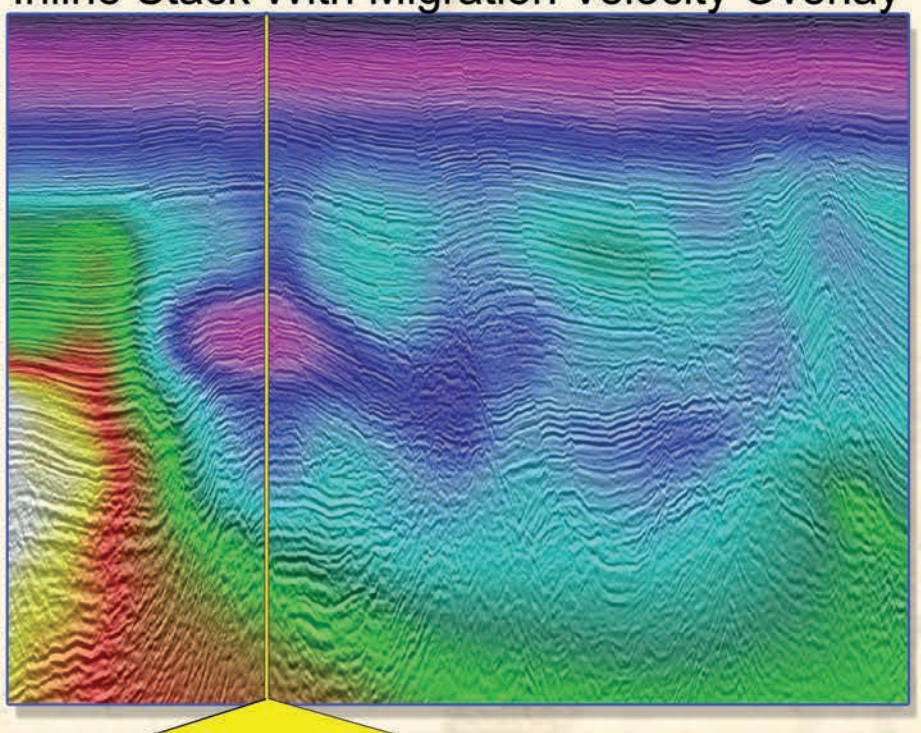
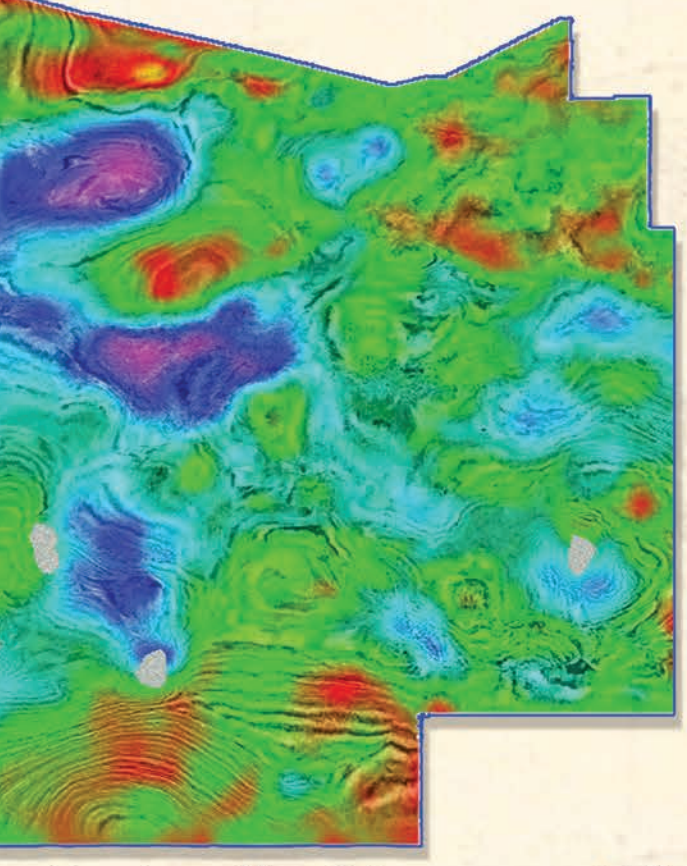
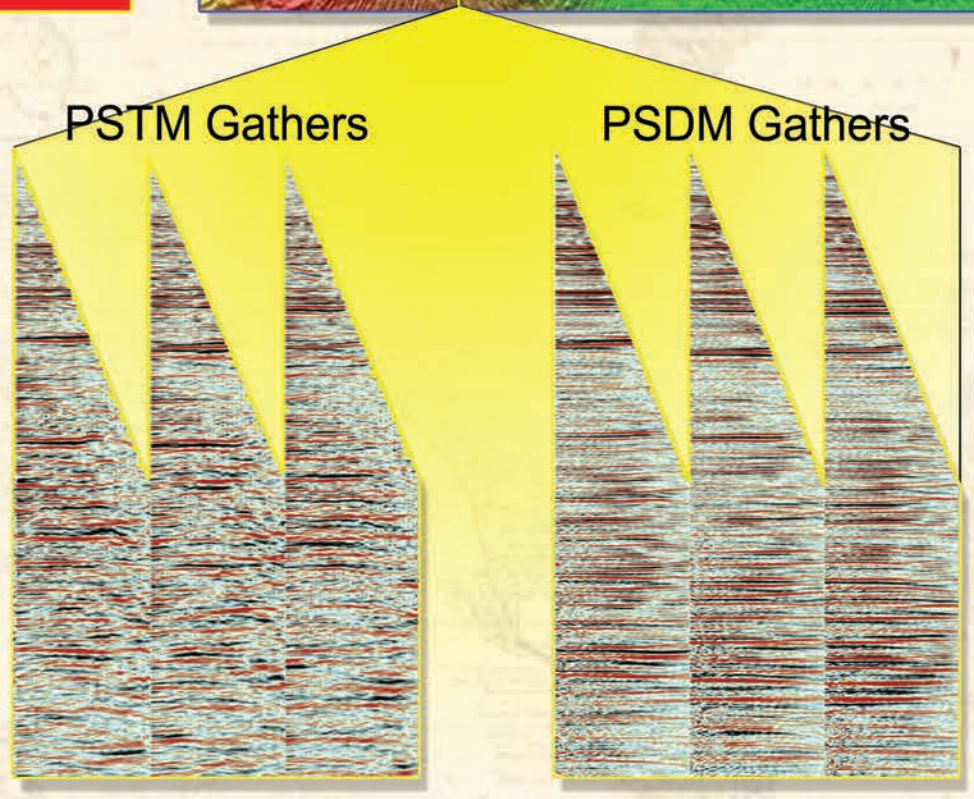


Depth Slice with Velocity Overlay at 11,000 feet





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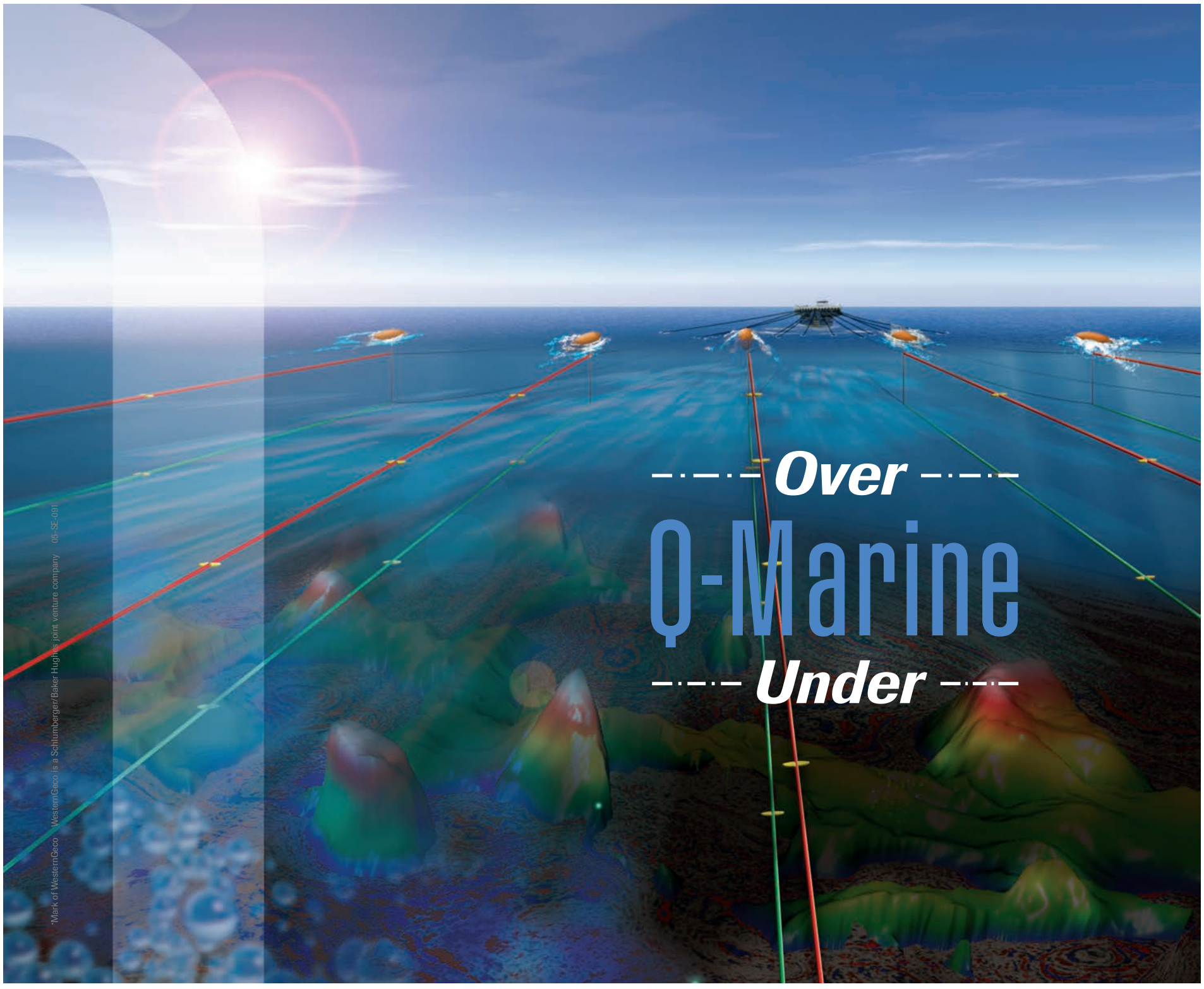

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