

AAPG **EXPLORER**

JANUARY 2011



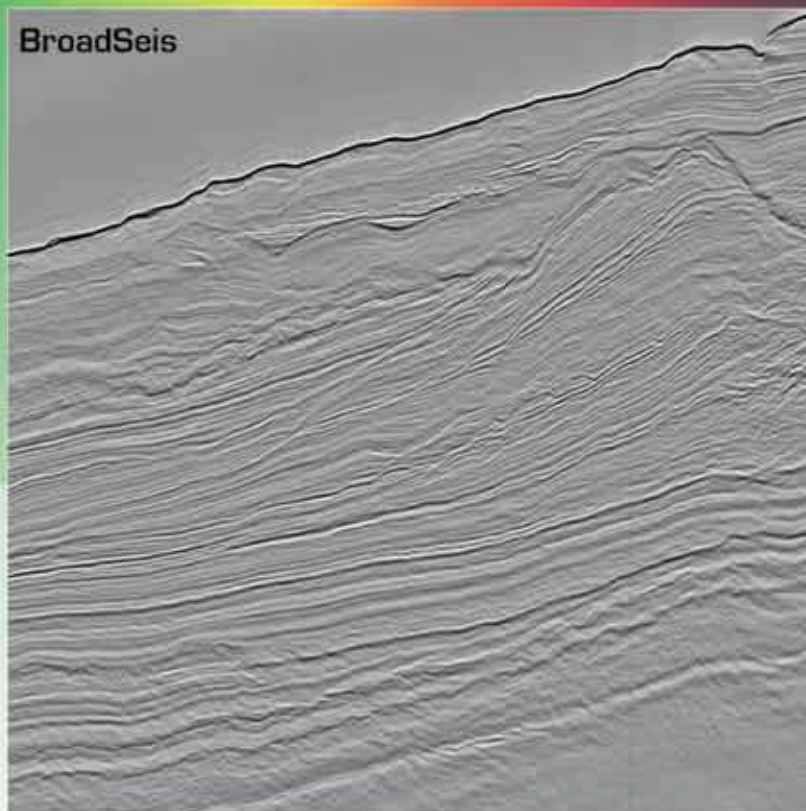
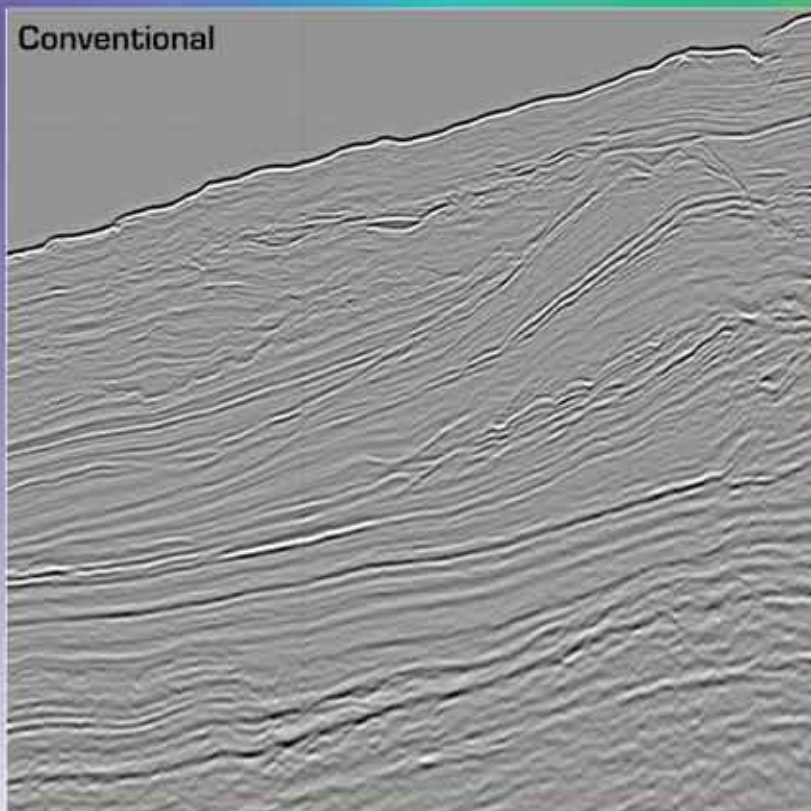
Coldplay

Geoscientists retrace history in Antarctica

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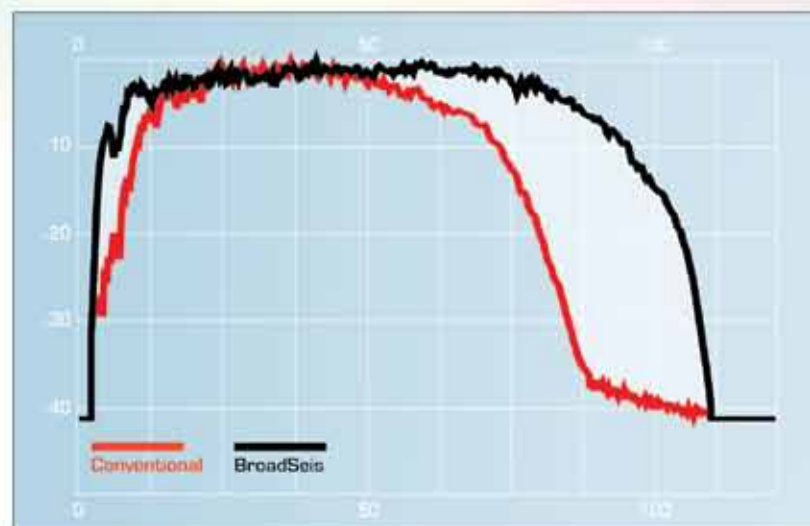
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PRESIDENT'S COLUMN

Ready for the Future – In 131 Years?

By DAVID G. RENSINK

Larry Nation, AAPG's communications director, sent me a press release about a study conducted by two University of California-Davis civil and environmental engineers, recently published in *Environmental Science & Technology*. Their study concluded that global oil will run out 90 years before the technology to replace gasoline and diesel fuel is ready.*

Their study, to quote the abstract, "establishes a probabilistic theoretical approach based on market expectations reflected in prices of publicly traded securities to estimate the time horizon until the appearance of new technologies related to replacement of nonrenewable resources, for example, crude oil and oil products."

They use the market capitalization of oil and alternative companies, the dividends paid by the oil companies and oil reserve replacement rates to determine when the technology will be available to replace gasoline and diesel fuel as transportation fuels.

Their calculations indicate the time when "renewable replacement fuels can be self-sustaining, at least from a market perspective," is 131 years in the future.

To many of us, their conclusion would seem faulty – even ridiculous. Biodiesel is already available and it could likely be commercially available within 131 years. It appears the technology for potentially commercial renewable fuels already exists.

Nonetheless, I think anyone who dares to speculate about technology development that far in the future deserves some consideration.



RENSINK

What the authors fail to appreciate is that the world has had an average estimated crude oil reserve life of 42 years every year since 1990.

* * *

A simple calculation indicates the authors expect the world to run out of oil in 41 years. The world's current rate of crude oil consumption is approximately 30 billion barrels of oil per year; therefore, they are using an estimate of approximately 1,230 billion barrels of world crude oil reserves.

This estimate is not very different from BP's published world oil reserves of 1,333.1 billion barrels as of 2009 (Statistical Review of World Energy 2010).

By BP's analysis, we have a reserve life of 44 years at current production rates.

I applaud the authors' desire to take a long-term and sustainable view of the world's energy situation. However, what the authors fail to appreciate is that, based on BP's statistics, the world has had an average estimated crude oil reserve life of 42 years every year since 1990.

During that period, approximately 540 billion barrels of crude oil have been produced. Through discoveries and reserve additions to existing fields, we

have managed to maintain a crude oil reserve life of about 42 years throughout that period.

Granted, crude oil is a finite resource, but the authors do not seem to grasp the difference between oil reserves and oil resource.

If their estimate of 131 years to development of a new commercial transportation technology is applied to the replacement of the internal combustion engine, that would seem to be a little more plausible. Electric vehicles are currently available for short trips, but we still generate 70 percent of our electricity from coal and natural gas. At this point, electric vehicles do not run on a renewable energy source. The biggest hurdles to the development of a commercial transportation system based on renewable fuels are long-haul trucks, trains and airplanes.

I hope the world will have that technology in 131 years. Until that occurs, crude oil and natural gas will continue to be an integral part of our energy requirements.

**Nataliya Malyshkina and Deb Niemeier; Future Sustainability Forecasting by Exchange Markets: Basic Theory and Application; Environmental Science and Technology (American Chemical Society); Nov. 8, 2010.*

Also In This Issue

Two special items are included with this issue of the EXPLORER.

► A special insert that provides information on the candidates for AAPG office is inserted between pages 12-13. The four-page insert includes biographical information on all six candidates for the next AAPG Executive Committee, plus their responses to the question of why they agreed to stand for national office.

► The official announcement for the AAPG Annual Convention and Exhibition, including a complete look at the technical program, special events and registration information, is included as a separate publication and mailed with this EXPLORER.

This year's ACE will be held April 10-13 at the George R. Brown Convention Center in Houston.

This year's theme is "Making the Next Giant Leap in Geosciences."

STAFF

AAPG Headquarters:
1-800-364-2274 (U.S. & Canada only),
others 1-918-584-2555

Communications Director

Larry Nation
e-mail: lnation@aapg.org

Managing Editor

Vern Stefanic
e-mail: vstefan@aapg.org

Communications Project Specialist

Susie Moore
e-mail: smoore@aapg.org

Correspondents

Courtney Chadney
Louise S. Durham
Susan R. Eaton

Graphics/Production

Matt Randolph
e-mail: mrandolph@aapg.org

Advertising Coordinator

Brenda Merideth
P.O. Box 979
Tulsa, Okla. 74101
telephone: (918) 560-2647
(U.S. and Canada only:
1-800-288-7636)
(Note: The above number is
for advertising purposes only.)
fax: (918) 560-2636
e-mail: bmer@aapg.org

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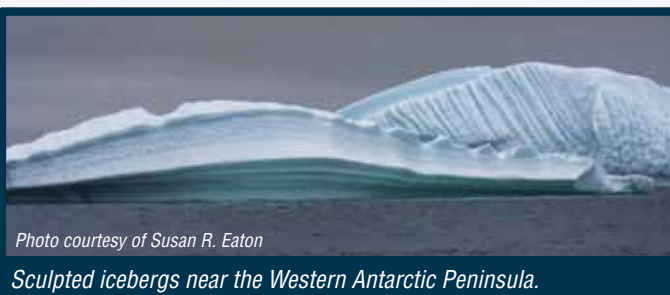


Photo courtesy of Susan R. Eaton

Sculpted icebergs near the Western Antarctic Peninsula.

ON THE COVER:

The MV Professor Molchanov at anchor near the Western Antarctic Peninsula, framed by the arch of a sculpted iceberg. AAPG member and EXPLORER correspondent Susan R. Eaton was among those spending time on the ship when she was selected for the Elysium Expedition, a geoscience research mission to Antarctica – where sights like these were a common bonus found throughout the trek. Story on page 12.

The Year of Macondo

Brazil Discoveries Set 2010 Pace

By KEN WHITE

It would appear the industry has emerged strongly from the recession problems of the previous year, with 2010 seeing a determined move into unconventional, new and exciting plays emerging – particularly off East Africa – multi-billion dollar deals being plentiful with national oil companies once again setting the pace, and mega reserves once again confirmed off the coast of Brazil.

Yet, despite all the positives, 2010 is most likely to be remembered for the disastrous Macondo blow-out in the Gulf of Mexico and the implications this raised for all sectors of the industry, probably for many years to come.

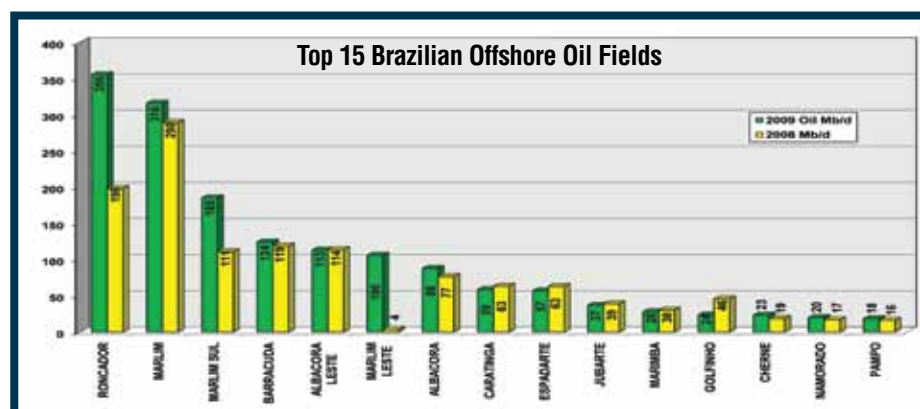
Oil prices proved less volatile than the previous year, remaining more or less within the desired OPEC range, which helped major global projects advance as capital expenditures improved.

For the industry, one of the more important positives to emerge in 2010 is that success rates have improved from 37 percent in 2009 to 41 percent, the result of technical advancements, the more focused allocation of budgets (a hangover from the previous recession year) and, in some cases, significant wildcat success.

Around the World

Of the top ten listing of discoveries ranked in each region by Bboe of oil and

Notable Discoveries of 2010			
Country	Operator	Well name	Location
Brazil	Petrobras	Libra	Santos Basin – Offshore Oil
Brazil	Petrobras	Franco	Santos Basin – Offshore Oil
Brazil	OGX	Waimea	Campos Basin – Offshore Oil
Brazil	OGX	Etna	Campos Basin – Offshore Oil
Brazil	OGX	Krakatoa	Campos Basin – Offshore Oil
Mozambique	Anadarko	Windjammer 2	Ruvuma Basin – Offshore Gas
Mozambique	Anadarko	Lagosta 1	Ruvuma Basin – Offshore Gas
Angola	Pluspetrol	Castana 1	Cabinda South – Onshore Oil
Ethiopia	Petronas	Genale B2X	Somali Basin – Onshore Gas
Azerbaijan	Socor	Umid	South Caspian Basin – Offshore Gas
Turkmenistan	CNPC	Agayry	Afghan-Tajik Basin – Onshore Gas
Iran	NIOC	Forooz 3	Rub' Al Khjali Province – Offshore Gas
U.S	BP	Mocondo	GOM – Mississippi Canyon



gas, five were in Brazil. But Petrobras did not have it all its own way though, with OGX Petroleo e Gas Ltda. accounting for three of these.

Nonetheless, it is Petrobras that claims the honors for the year's biggest find – its Libra discovery in the Santos Basin eclipsing all others by a significant margin.

The promise of East Africa finally came good with Anadarko making two potentially world-class discoveries in the deepwater Ruvuma Basin, and the company is already hinting at LNG possibilities.

Elsewhere in Africa, Pluspetrol made its first oil discovery in Angola (Castanha 1) while Petronas enjoyed success in Ethiopia (Genale B2X).

The remaining three 2010 top ten discoveries confirmed the emergence of central Asia, as these comprised one each in Azerbaijan, Iran and Turkmenistan.

The Iranian success proved frustrating, as it underlined the huge potential the country has but it comes at a time when the sanctions screw was turned harder – resulting in a mass withdrawal of international oil companies and service companies – while the engineering arm of the Revolutionary Guard pulled out of developing all

See Discoveries, page 6

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Deadline Looms for Milan ICE Abstracts

The call for papers deadline arrives this month for the next AAPG International Conference and Exhibition, which will be held Oct. 23-26 in Milan, Italy.

Abstracts for ICE must be received online by Jan. 20.

The meeting's general theme is "Following Da Vinci's Footsteps to Future Energy Resources: Innovations From Outcrops to Assets."

Seven specific technical themes will be offered:

► Carbonate Reservoirs: From Pores to Production – Aspects covered will include the stratigraphic analysis and sedimentology of carbonate sequences; the role of diagenesis, karst, faulting

and fracturing in carbonate reservoir performance and the latest developments in the seismic imaging and modeling of carbonate reservoirs and sequences.

► Where Africa Meets Eurasia: Exploration and Production in the Alpine-Himalaya Fold Belt and Foreland Basins – The tectonic evolution of the Alpine-Himalayan chain, its influence on sedimentation, diagenesis and reservoir and source development at a basin to prospect scale; the objective is to identify the factors that control prospectivity in different parts of the belt from the Appennines, Alps and Zagros through the mountains of central Asia to the Himalaya, using a variety of technologies, outcrop analogs and case studies.

► Rifts and Deltas – Focus will be on rift to drift tectonics, crustal stretching and heat flow, pre-salt plays, continental and lacustrine reservoirs and delta systems from shelf to basin floor.


► Advances in Integrated Geoscience Applications – A session on all aspects of geoscience and reservoir engineering as applied to conventional and unconventional resource plays with emphasis on the value of integration of disciplines.

► Reservoir Management: From Outcrops to Assets – New technologies and work models will be discussed, along with world-class reservoirs.

► Dynamic World of "Uncooperative Reservoirs:" The Geoscience of

Unconventional Resources – New technologies have made viable tight gas, oil shale, shale gas, coal-bed methane and geothermal resources providing fuel supply closer to consumers in Europe, India, Asia and the Far East. What makes these reservoirs special?

► Leading-Edge Technologies and the Future of E&P – The challenges of carbon management, new and leading-edge technologies in geoscience and reservoir engineering and future technological developments in the E&P industry.

To submit an abstract, or for more information go to aapg.org/milan2011/CallforAbstracts.cfm. 

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Discoveries from page 4

phases of the South Pars gas field.

Another notable success was Cairn's T8-1 wildcat offshore West Greenland – and although this was abandoned as a non-commercial gas discovery, it caused great excitement as it encountered gas in thin sands above the main objective, offering proof of a working hydrocarbon system in Baffin Bay.

Within unconventional operations, coalbed methane came to the fore with potentially commercial finds in two of the most prospective regions, Australia and China.

Looking Deeper

The 390 total discoveries recorded through November 2010 were almost equal to the number of discoveries reported through November 2009, but two factors uniquely characterize 2010 successes:


► The offshore dominates the discovery volumes, accounting for almost 89 percent of the 27.6 Bboe discovered to year-to-date.

This substantially exceeds the 76 percent of reserves contributed by offshore discoveries from 2005 through 2009.

► 2010 oil discovery volumes already exceed those reported in any of the prior six years.

Brazil's deepwater oil discoveries accounted for most of the 2010 oil reserve additions reported year-to-date.

If there was a disappointment it may be that a couple of important wells failed in the Barents Sea, an outcome made all the more significant, perhaps, given that Norway and Russia finally signed a preliminary deal over their disputed Barents Sea border, paving the way for a final delineation of a maritime area believed to be rich in hydrocarbons.

Also the termination of deepwater drilling in the Gulf of Mexico following the Macondo incident has resulted in the region hosting only seven finds – and as these were in the first five months of 2010, the region was otherwise primed to enjoy a bumper year. 

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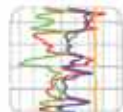
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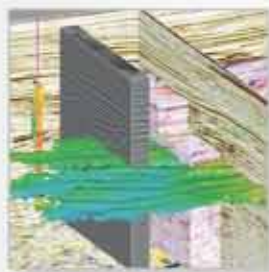
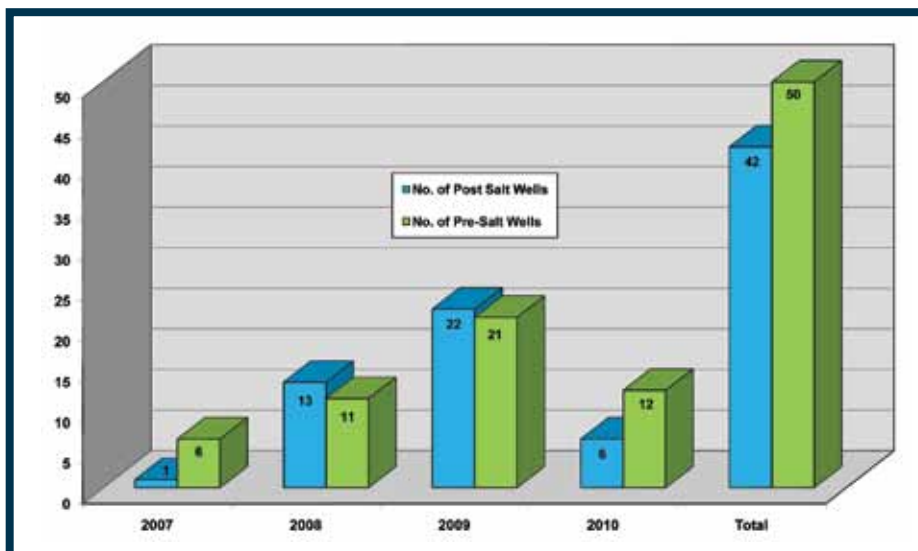
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Brazil – 2007 to 2010 comparison of offshore post salt to pre-salt.

Meanwhile, deepwater world forges ahead Tragedy Still Ripples in GOM

By LOUISE S. DURHAM, EXPLORER Correspondent

The disastrous deepwater tragedy in the Gulf of Mexico in April 2010 was akin to a shot heard round the world for the oil and gas industry.

However, deepwater drilling continues globally—albeit with an increased focus on safety considerations.

Offshore Brazil continues to grab most of the media's spotlight on activity—and successes—but offshore activity also is brisk in West Africa (see related stories, pages 18,32), Australia, Gulf of Guinea and the Mediterranean Sea, to name a few.

The glaring exception is the GOM, where the spill triggered not only a moratorium on new deepwater drilling but also toughened the regulations to acquire shallow water permits. This has caused a significant slowdown in the permitting process there.

Last year's deepwater moratorium was lifted in October, but industry leaders have noted that the government has not yet approved drilling of any new wells that would have been blocked by the ban.

Confusion and uncertainty abound to this day. For instance, it's become the norm for permitting requests for deepwater wells to remain on hold while the operators assemble and present additional information demanded by the Bureau of Ocean Energy Management, Regulation and Enforcement.

A number of industry experts reportedly predict that a rebound to the GOM activity levels of 2009 won't occur until possibly

2013—if ever. Adding insult to injury, the Atlantic seaboard and extreme eastern Gulf near Florida will remain off limits to drilling, despite the decision announced immediately prior to the Big Spill to allow exploration there.

Even the longtime annual crowd-drawing Central Gulf lease sale in March has been postponed, along with the Western Gulf sale in August.

Brazil's Treasures

The frustration and economic impact given all the uncertainty generated by the still-evolving new U.S. rules and regulatory requirements has some industry watchers speculating that the drillers appear to be on the cusp of at least a partial exodus from the GOM, which has been expected since the moratorium began.

The entire saga is now being dubbed in some industry quarters a "permatorium."

It's not that other countries are ignoring the implications of a large deep offshore spill. Some have tightened up requirements relative to safety, but the overall theme essentially is, "let's learn from it and move on."

Chief executive Jose Sergio Gabrielli at state-run Petroleo Brasileiro SA (Petrobras) in Brazil reportedly said it's too soon to draw conclusions from the Gulf spill, so it's

See *Offshore*, page 10

Still Interested – But ...

Despite the ongoing regulatory problems in the Gulf of Mexico, interest in the region remains high on the part of the large players as well as certain of the smaller ones who tend to zero in on the shallow water.

For example, Energy XXI recently agreed to ante up a cool \$1 billion to ExxonMobil to acquire a group of shallow water GOM fields. This was one of several asset purchases made by companies in these waters.

The deep environs beckon to the players with excessively deep pockets:

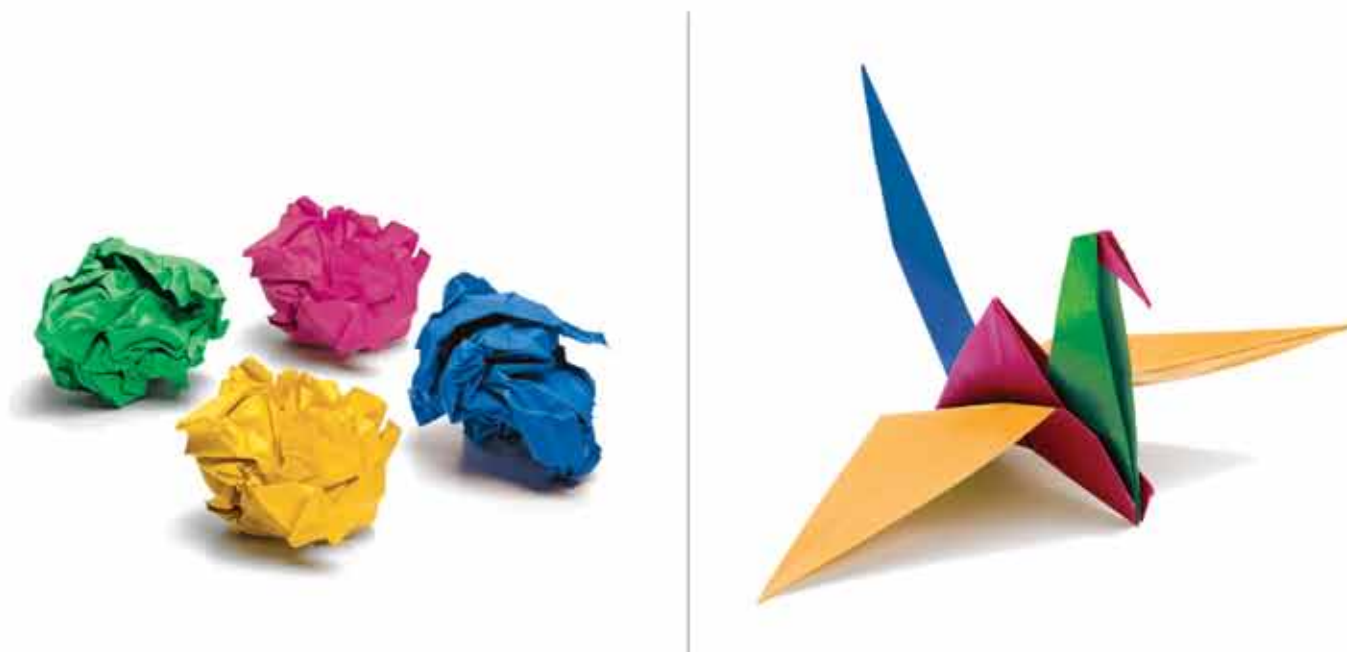
- ▶ Chevron, for instance, recently approved a multi-billion-dollar project to develop the deepwater Jack and St. Malo fields in the Lower Tertiary Trend.
- ▶ Shell, which has long been a big

player in the Gulf, is maneuvering through the new convoluted regulatory system as required in order to ramp up its activity, including its Appomatox discovery in the eastern area, which was announced shortly before the Macondo spill.

This good news, however, is tempered by the uncertainty that remains regarding when and how all of the weighty issues, including environmental, being discussed and reviewed by innumerable committees and panels will be resolved.

Any number of scenarios could ensue; new regulatory guidelines could be less stringent than operators fear, or they could be so harsh that the industry overall conceivably would engage in a major exodus from the Gulf. Stay tuned.

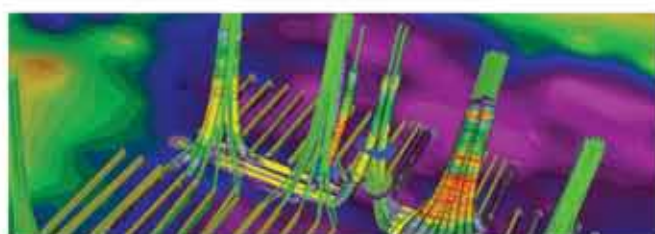
— LOUISE S. DURHAM



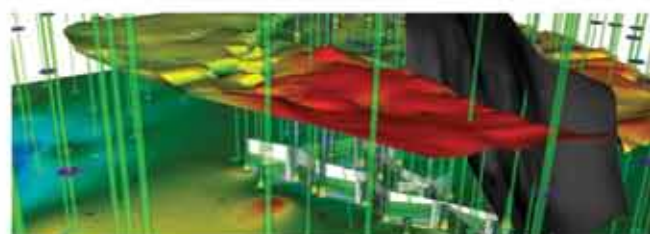
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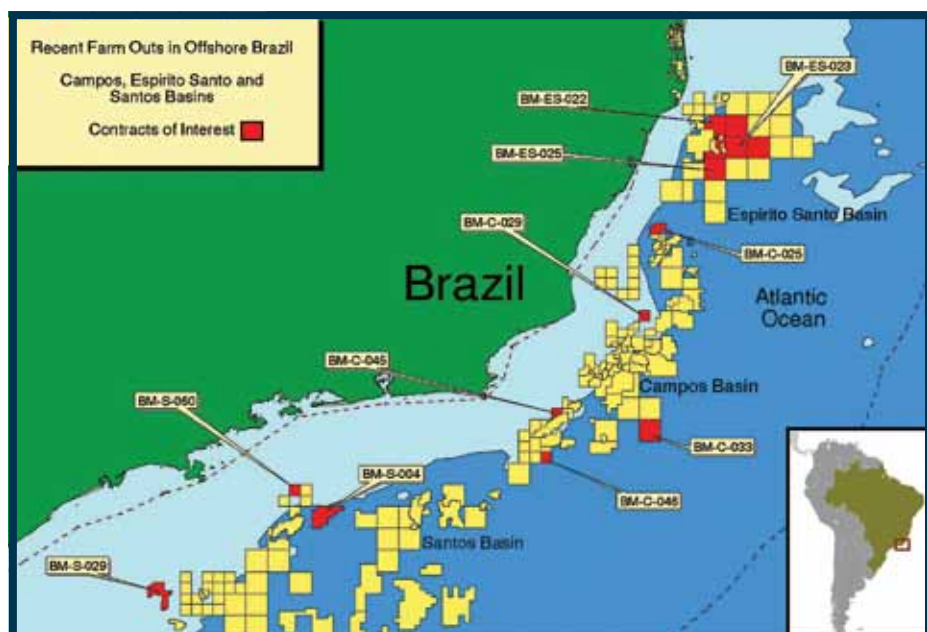


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Offshore from page 8

too early to say they're going to make any changes.

The fact that offshore drilling in other parts of the world is not just moving ahead but reportedly thriving bodes well for energy supplies.

IHS CERA has said that deepwater oil production has about doubled over the past five years and now tallies about five million barrels a day, or about 6 percent of the total crude output worldwide. It's expected to double again by 2020.

The global deepwater drilling scene includes numerous regions, with the most frenetic activity in Brazil, which some folks refer to as the next Saudi Arabia.

The excitement here began in 2007 when Petrobras and partners BG Group

and Portugal's Galp Energy announced results for the second pre-salt deepwater well at the Tupi field beneath 7,000 feet of water in the Santos Basin offshore southeastern Brazil. Test results indicated estimated reserves as much as eight Bboe for the field, making it the largest find worldwide since the 13 billion barrel Kashagan field in 2000 in Kazakhstan.

Tupi was followed by finds in various areas, including the nearby Campos and Espirito Santo basins.

In 2009, Brazil was producing 2.5 million barrels a day of crude oil, which was sufficient to meet its needs. This is a kind of milestone, considering that the large country once relied on sizeable crude oil imports to accommodate its significant energy appetite.

Going Deeper

The search for additional oil finds shows no letup, and money appears to be plentiful.

"Petrobras had a share sale about a month ago and raised 67 billion dollars," said Tom Liskey, regional manager for Latin America at IHS. "A lot of that money will go to Brazilian offshore and deepwater sectors; this is just an indication of what the potential is."

"Petrobras is actively looking for rigs, and a lot will have deep sea capability," Liskey said. "They've made clear in no uncertain terms they're going to move through with deepwater development."

Liskey said that Brazilian oil agency ANP has become more vigilant following the GOM spill and emphasized that Petrobras is very proactive. As an example, he mentioned they had an issue with a blowout preventer (BOP) while drilling in the Campos Basin using Sevan Marine's new hi-tech Sevan Driller rig, so the decision was made to halt operations and pull the BOP to review it before proceeding further.

"It's a dynamic play unfolding in Brazil, because Petrobras is also reaching out to industry and not shutting the door," Liskey noted. "They want to work actively along with the industry looking for solutions for the pre-salt."

The mix of players includes private companies, such as OGX. Liskey said the company has focused principally on the post-salt in the Santos Basin for the most part, where they struck a lot of evidence of oil with their wells.

"With no ANP round this year, you have companies that are either farming out or being bought out, and that brings new players in," Liskey said. "Brazil is luring people, and they're coming in."

Devon Energy, however, chose to exit the region in its relatively new strategy to focus on U.S. onshore. This was good news for BP, which is acquiring Devon's assets there.

"A company like BP sees Brazil as a key part of the future in its deepwater portfolio globally," Liskey noted.

"There's some interesting farmouts going on, and some of these farmouts have pre-salt potential," he said. "The post-salt is dynamic too, even in some of the deeper waters."

Far away in Australia, resources minister Martin Ferguson reportedly declared the government's intention to continue forging ahead developing oil and gas there. He emphasized the importance of doing so relative to energy security, jobs and the Australian economy.

When queried about all of the bustling activity in so many parts of the world versus the troubling scenario in the Gulf of Mexico, Liskey commented, "The simple fact is, the U.S. is still the biggest economy – and it still runs off oil and gas."



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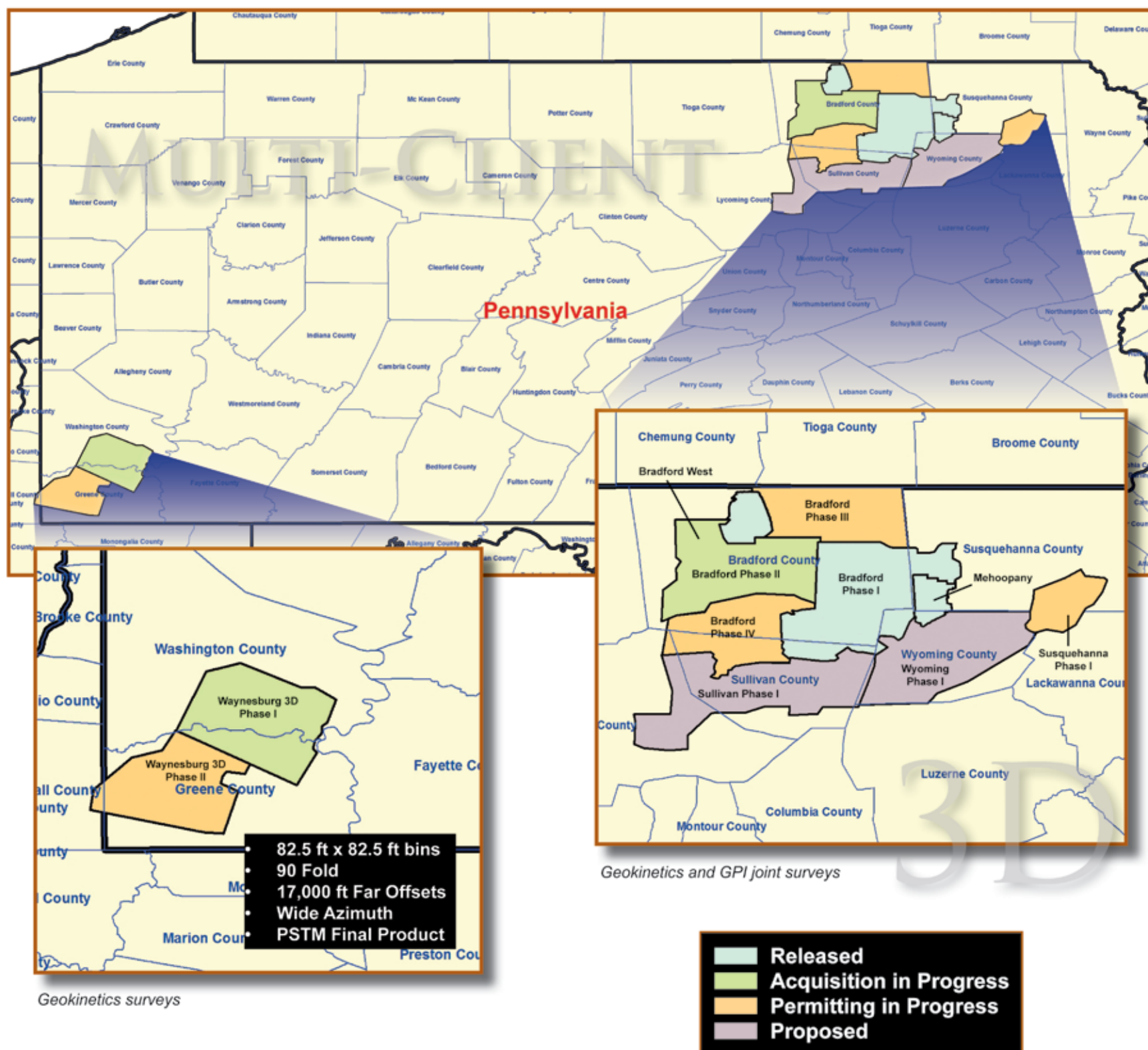
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Retracing the Route of the Shackleton Expedition

Geoscience Adventure in Antarctica

By SUSAN R. EATON, EXPLORER Correspondent

I began by assembling the basics for my field trip to Antarctica and South Georgia: surface geology maps, topographic maps, hiking boots, wool socks, a back pack and two digital cameras. My gear list soon ballooned to include a hydrophone, an Iridium satellite phone, a laptop computer, an Arctic-rated dry suit (which doubles as a survival suit), flares, an underwater camera housing, long underwear, a parka, mitts, hats and knee-high rubber boots.

Three hundred and fifty pounds (of equipment) later, I was rigged for a modern-day geology and geophysics field trip to the bottom of the world.

I was ready to tackle one of the harshest climates on Earth.

Last February and March I joined the scientific crew of the Elysium Visual Epic Expedition, participating in an historical voyage of exploration and discovery.

For 19 days, the Elysium Team – comprising 57 explorers from 19 nations – retraced the route of Sir Ernest Shackleton's Imperial Trans-Antarctic Expedition of 1914-17, a journey that went horribly sideways when the *Endurance* was crushed by ice and sank, precipitating one of the greatest survival stories of the 20th century.

Our mission was to undertake oceanographic studies and document impacts of accelerating climate change – both above and below the water – on the planet's last remaining frontier. During the past 50 years, temperatures in the Antarctic Peninsula have increased by 3 degrees Celsius, or more than twice the world's average warming trend. Because the Antarctic Peninsula has experienced the greatest temperature increase of any place on the planet, it's an ideal outdoor laboratory to study climate change.

Later this spring, the Maritime Museum in Greenwich, England, will host a photographic exhibit of the Elysium Expedition's epic images of Antarctica and South Georgia.

Other Elysium Expedition's deliverables – a feature film, a TV documentary, a photographic essay book and a permanent photographic archive – will be rolled out in 2014, during the centennial celebrations of Shackleton's epic journey.

Big Boots, Big Personalities

During my audition for a coveted spot in the Elysium Expedition, I pitched my vision of recreating the role of the ship's geoscientist, a century later, providing a unique perspective to the discussions of climate change, glaciology and oceanography. And I waxed poetically about the ground-breaking science conducted by geologists and geophysicists who had played key roles in Shackleton's numerous polar expeditions – these geoscientists mapped the mineral potential and glacial coverage of Antarctica, acquired numerous magnetic and gravity measurements, and were pivotal in advancing the geological and geophysical knowledge of Antarctica, the South Pole and South Georgia.

Surely, I argued, the expedition needed a modern-day geo-equivalent.

As it turned out, I had some big boots to fill – and some interesting personalities to follow.

During Shackleton's ill-fated Imperial

Antarctic Expedition – A Chance to Explore

Participation in the Elysium Expedition marked the confluence of my 30-year-long petroleum career and divergent life pathways. My degrees in geology, geophysics, biology and journalism, and my interests in photography, scuba diving and the environment all flowed seamlessly together amidst the backdrop of this mysterious, ice-clad continent and its frigid waters teeming with wildlife.

As university students and as newly-graduated petroleum and environmental geoscientists, we honed our skills by

mapping geological processes in the field, instilling a sense of awe and wonder through exploration of the world around us. However, some 20 or 30 years later, many geoscientists have lost this tactile, hands-on connection to exploration and discovery; the ability to conduct exploration is reduced to “office” geology and geophysics, and the review of computerized maps and financial reports.

Yet, amidst the backdrop of the harshest climate on earth, I had the privilege to work as a geoscientist in Antarctica and South Georgia.

Despite our vast body of scientific knowledge, I believe that there exist many out-of-the-box career development opportunities for earth scientists – both from a personal and scientific perspective – to explore and discover the planet.

The Elysium Expedition provided a chance to practice my professions and explore my passions while following in Shackleton's esteemed footsteps nearly a century later – what an incredible privilege and chance-of-a-lifetime opportunity.

– SUSAN R. EATON



Photo courtesy of Susan R. Eaton

Hillside full of penguins at Salisbury Plain, South Georgia. The colony is home to 300,000 King penguins.

Trans-Antarctic Expedition, James Mann Wordie of Glasgow, Scotland, was the expedition geologist and head of scientific staff. Wordie managed the expedition's team of scientists, including a physicist, a meteorologist and a biologist.

While stranded on Elephant Island for five months, Wordie became exceedingly popular, exchanging his tobacco rations for unique rock specimens that the men had collected. Apparently, geologists were just as quirky and passionate a century ago as they are today.

Reginald William James joined Wordie's scientific staff as a magnetic specialist and physicist. Today, we would call James a “geophysicist.” Like many of the men who participated in the trek, he joined serendipitously after hearing about the position at Cambridge University. His interview with Shackleton lasted all of five minutes, as James recalled:

“All that I can clearly remember of it (the interview), is that I was asked if I had good teeth, if I suffered from varicose veins and if I could sing.”

Shackleton's crew wrote, humorously:

“James had some wonderful electrical machines which none of us understood ... and a joke of ours, that annoyed him very much, was that he did not either.”

Following in Shackleton's footsteps, one hundred years later, the Elysium Expedition's two geoscientists are both women. I was joined by Toni Williamson, a Toronto-based, Australian geologist whose doctorate studies involved a paleo-environmental assessment of climate change during the Early Cretaceous System of Australia.

Expenses: Then and Now

The people have changed and the times have changed. The relative costs, however, of mounting an expedition to Antarctica are still epic.

In 1914, Shackleton purchased the *Endurance* for £11,600, and struggled to raise the £50,000 (current value £3.5 million) required for his expedition. In fact, Wordie personally donated money toward the purchase of fuel for the expedition. The *Endurance* departed England the day that World War I was declared.

My vision to participate in the expedition was widely supported through corporate partnerships, geoscience organizations, and by generous individual donors. The AAPG Foundation shared the vision of exploration and discovery, recognizing the benefits for AAPG's members and for the organization's educational and outreach programs.

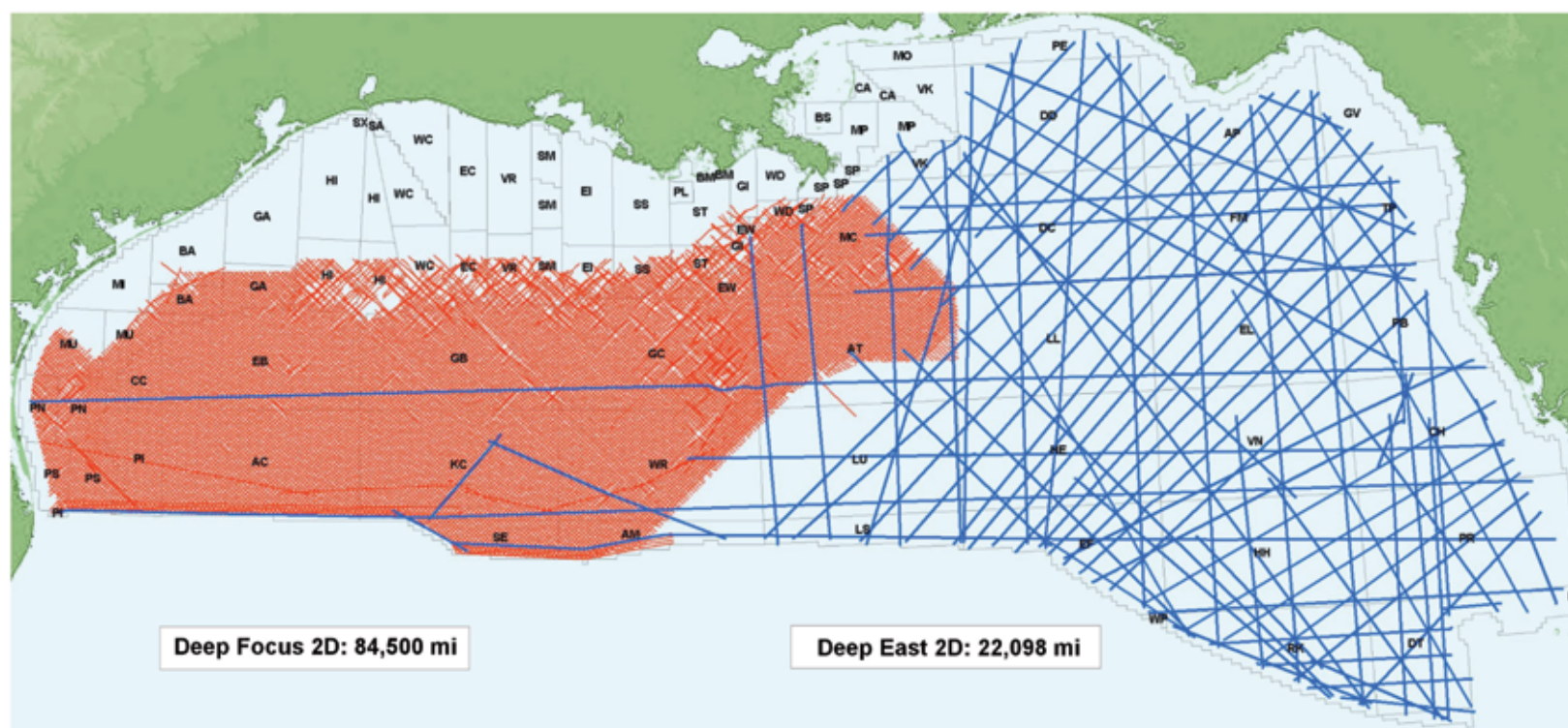
“Outreach and helping to make geology and geosciences interesting and relevant for students is a top priority for the AAPG Foundation,” said AAPG and Foundation Executive Director Rick Fritz. “This expedition certainly fulfilled that goal.”

I also received crucial financial support from other geoscience organizations, including the Canadian Society of Exploration Geophysicists Foundation, the Association of Professional Engineers, Geologists and Geophysicists of Alberta, and the Canmore Museum and Geoscience Centre.

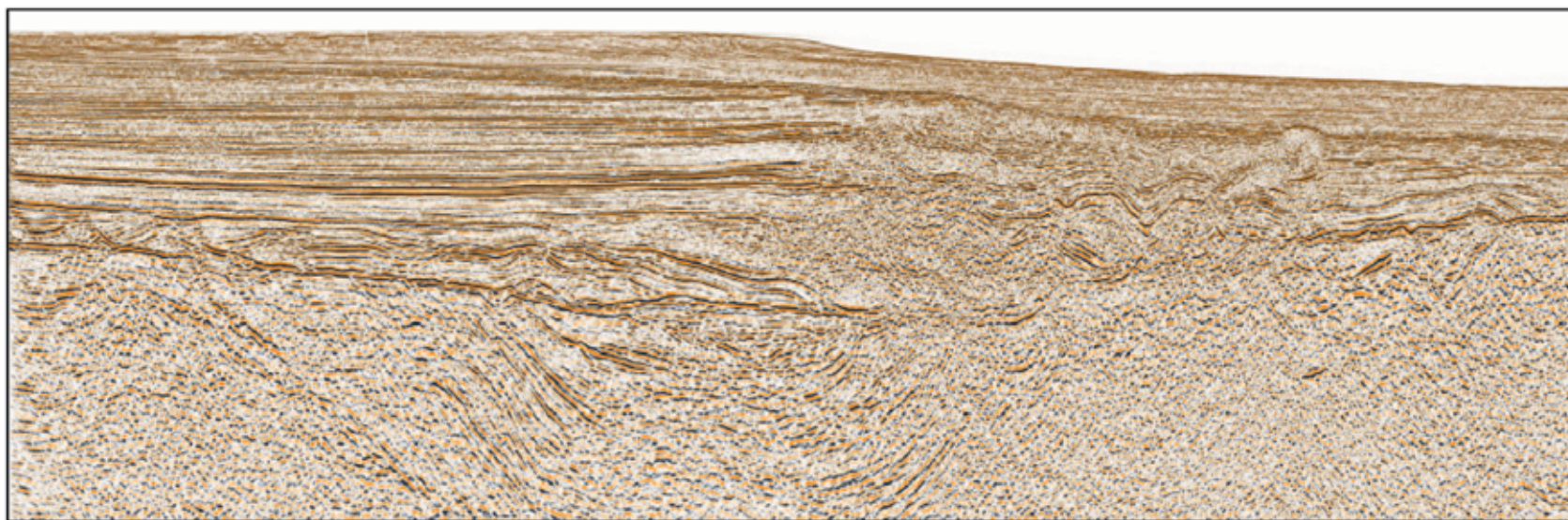
My Antarctic dispatches were published by the supporting geoscience associations,

[See Antarctica, page 14](#)

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Antarctica

from page 12

the Calgary Herald and by the earth science departments of Dalhousie University (my alma mater) and the University of Calgary, enabling readers to explore Antarctica and South Georgia with me.

The AAPG website also spread the story, by posting my dispatches from Antarctica.

The Dream Team

The Elysium story is not just mine, of course – it's a story of a diverse cast of explorers who brought with them their respective expertise, reputations and goals.

I worked alongside the world's preeminent scientists from the Australian Antarctic Division and the Woods Hole Oceanographic Institution, movie makers, photographers, artists, musicians, historians, scuba divers and explorers, including National Geographic's photographers-in-residence Emory Kristof and David Doubilet. Kristof is famous for discovering the *Titanic* with National Geographic's explorer-in-residence Robert Ballard. In 1977, he was the first to document the existence of hot water volcanic vents off the Galapagos Rift, and the unique life forms they support.

Kristof was there to investigate the shipwreck of the *Antarctic*, which sank in 1903 in 3,000 feet of water in the Weddell Sea. According to Kristof, remotely operated vehicles and autonomously operated vehicles would be needed to explore under the pack ice for the Antarctic.

South of the Antarctic, situated in 10,000 feet of water, lies the *Endurance*, Shackleton's three-masted barquentine. Discovery of the *Antarctic*, said Kristof,



Michael AW, Elysium Visual Epic Expedition leader, lends scale to surreal ice formations near the Western Antarctic Peninsula.

would provide the "proof of concept" for state-of-the-art technologies required to mount a multi-million-dollar expedition to find the *Endurance*.

Unusually heavy pack ice, however, prevented the *Professor Molchanov* – the expedition's oceanographic research vessel – from entering the Weddell Sea near Paulet Island.

Kristof's vision of exploration and discovery in Antarctica also included documenting the world's most southerly hot water vent. Located in an oceanic spreading centre, the hydrothermal vent is geographically close to the Antarctic.

Night after night, Kristof and I poured over seafloor maps and images that pinpointed the location of the deep sea vent, enthusiastically discussing how modern-day geophysical methods assist in ocean exploration.

Now Hear This!

I traveled to Antarctica with a few agendas of my own.

When contemplating a scientific expedition to Antarctica, every honest geophysicist needs to record the unique and diverse sounds of this polar region: glaciers calving into the ocean and grinding ice (growlers, bergy bits, ice bergs and pack ice). CGGVeritas shared my vision of exploration and discovery, and generously bought for me a special purpose built hydrophone – designed originally to record whale sounds – complete with a digital recording system, a waterproof headset and a software interpretation package.

With grandiose aspirations of breaking into the film industry, I hoped to use my acoustic recordings to collaborate with Eric Bettens, the Expedition's official musical

composer from Belgium, and with Leandro Blanco, a Spanish movie maker and underwater sound expert.

Equipped with my new hydrophone and 100 meters of cable, I set out to investigate the acoustic signatures of Antarctica.

The inaugural day for testing the hydrophone was gray and rainy. Steve Nicol, an oceanographer and krill expert from the Australian Antarctic Division, commented that – in 25 years of visiting Antarctica – it was the first time that he'd ever encountered rain.

On this day we were exploring Pleneau Bay, traveling through a spectacular area called the "Iceberg Graveyard." Originating in the Ross Sea, these icebergs were transported via the Circumpolar Current, eventually running aground in the shallows of Pleneau Bay.

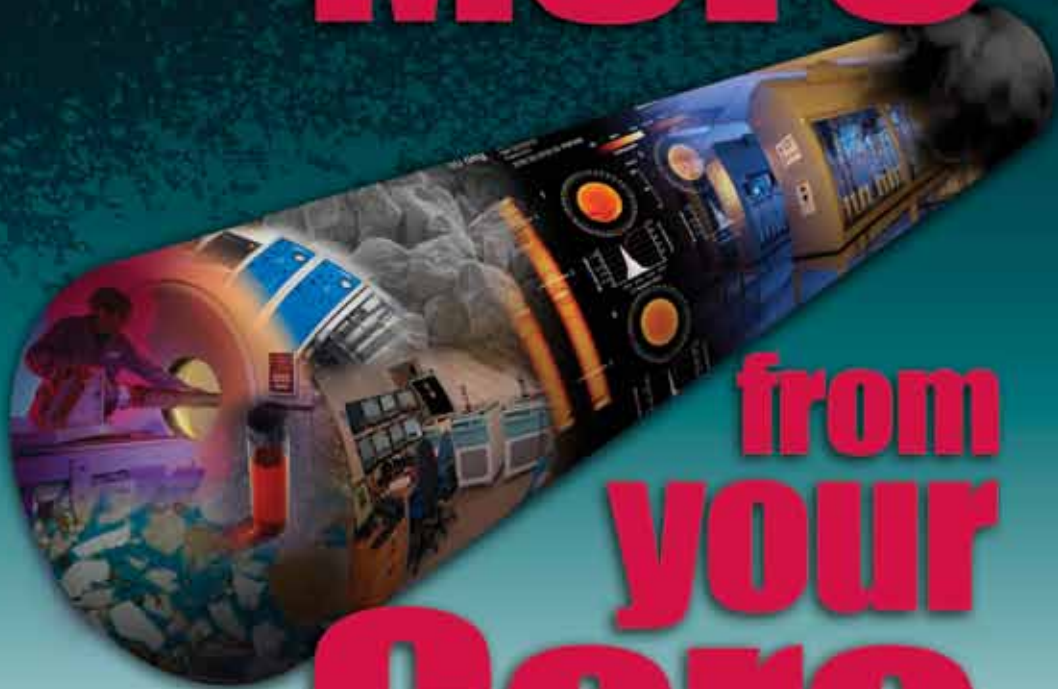
In addition to the trapped icebergs, Pleneau Bay was rimmed by massive glaciers cascading down to the ocean.

Cruising the coastline by zodiac, we were dwarfed by towering fortresses of blue ice heavily dissected by deep crevasses and, we were awestruck by the frequent claps of thunder as ice calved off the glaciers, crashing into the ocean.

Dressed for extreme snorkeling in Antarctica – with the hydrophone headset over my neoprene dive hood and a polar fleece hat over the hood for extra warmth – I began to record the otherworld sounds of capsizing icebergs, the grinding of a gin-and-tonic pack ice concoction, and the mini-tsunami waves precipitated by glaciers collapsing into the ocean. I was keen, as well, to record the songs and growls of Humpback whales and Leopard seals that we had spotted earlier near the zodiac.

[See Expedition, page 16](#)

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Photo courtesy of Michael AW

Official 2010 Elysium Visual Epic Expedition photo, taken at Elephant Island.

Expedition from page 14

I was just getting used to operating the hydrophone with my cumbersome dive gloves when Murphy's law intervened.

Ironically, I recorded the hydrophone's final sounds when it violently struck the zodiac's propeller – an especially horrible sound, because the hydrophone was worth about \$800.

I quickly hauled in the frayed remains and assessed the equipment situation – by my estimate, I now had about 95 meters of cable, minus the hydrophone.

In hindsight, I had misjudged the importance of the English-Russian translation between me and the zodiac driver: The first time I lowered the hydrophone into the ocean, I'd waved my arms wildly, pointing at the hydrophone and then at the zodiac's propeller. Apparently lost in translation, my attempts at universal body language had failed miserably, as the zodiac driver gunned the throttle without notice, abruptly ending my nascent experiment at recording the underwater sounds of Antarctica.

A Toast to Shackleton

Our pilgrimage to Shackleton's final resting place puts the loss of the hydrophone into sombre perspective.

We visited Grytviken, South Georgia, where the explorer died of a heart attack at a mere 47 years of age. An abandoned Norwegian whaling station, Grytviken is littered with whale vertebrae and rusting rendering tanks. Some 87,000 whales were processed before the station was abandoned in the 1960s.

Today, Grytviken is home to a British Antarctic Survey research station, and is populated by 13 Britons and countless King penguins, fur seals and elephant seals.

Shackleton died here on Jan. 5, 1922, shortly after the start of his Quest Expedition. We visited Shackleton's gravesite in a small cemetery surrounded by a white picket fence and patrolled by King penguins, enthusiastically toasting this great Irishman's accomplishments with Jameson Irish Whiskey. Respectfully, I poured the last dram of my whisky on his grave.

Running the gauntlet of Antarctic fur seals who lunged at us from hiding places in hummocky grass tussocks, we made the pilgrimage to Shackleton's memorial cairn and cross situated on an exposed hilltop at the entrance to Grytviken Harbour – in the lead was Jonathan Shackleton, an Irish organic farmer, author and cousin to Sir Ernest.

The memorial was erected in 1922 by George Vibert Douglas, the *Quest Expedition's* chief scientist and a Canadian geologist who later became a Carnegie Professor of Geology at Dalhousie University. Douglas was careful to point the white cross toward the Magnetic South Pole, which was discovered during Shackleton's Nimrod Expedition of 1909.

Secreted inside the cairn was a scroll bearing the stamp of the Royal Geographical Society. Jonathan Shackleton unfurled the scroll and, with an historical sense of place and purpose, read aloud the names of the *Quest Expedition's* crew to the Elysium Team of 21st century explorers who had been humbled by following in Shackleton's footsteps, 100 years later.

Editor's note: Next month, a closer look at the work done on the Elysium Expedition.

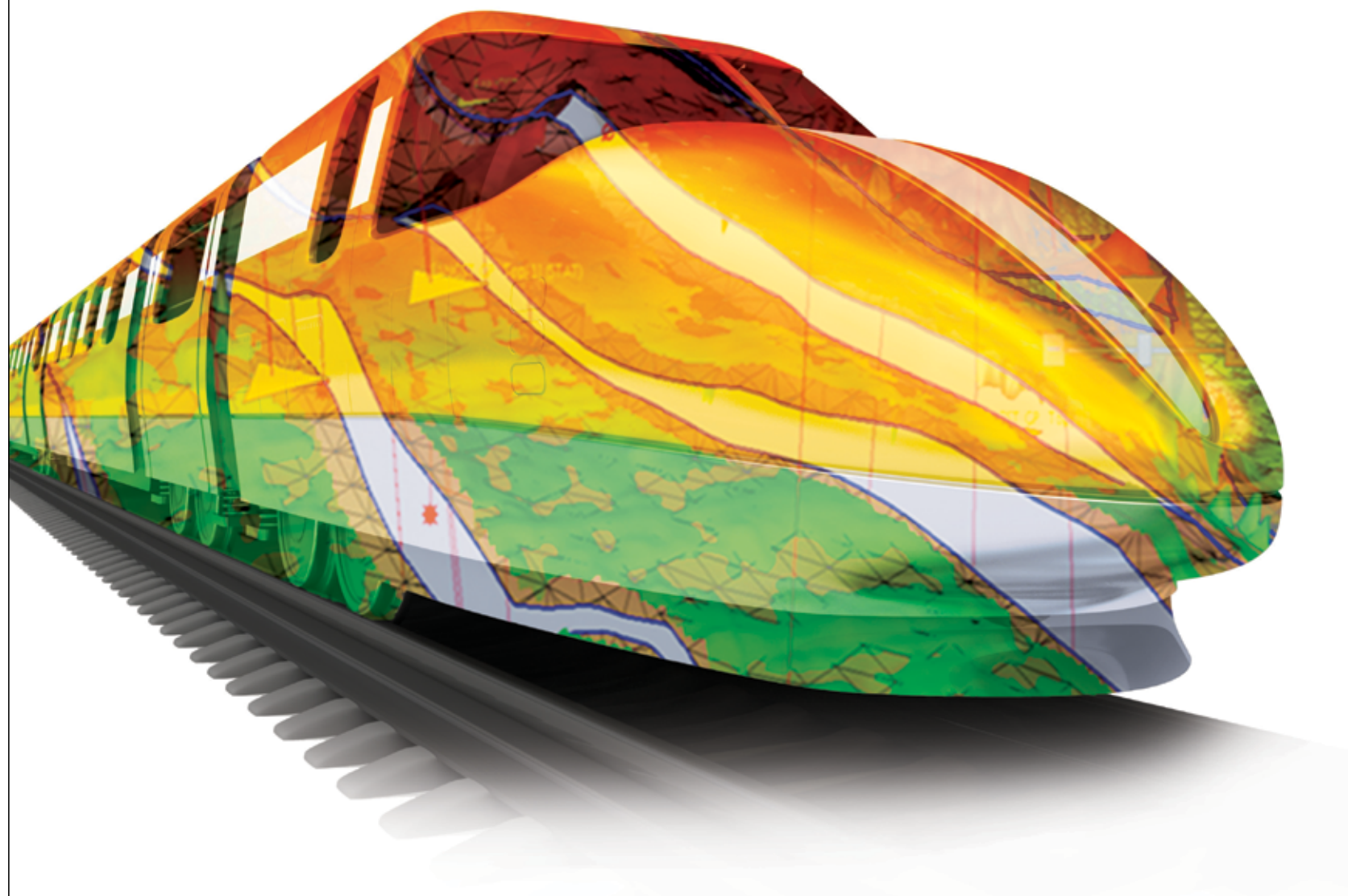


Photo courtesy of Stephen Henshall

Susan R. Eaton at Salisbury Plain in South Georgia, which is home to a colony of 300,000 King penguins.

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Photo courtesy of Tako Koning

Miradoura da Lua, near Luanda, Angola, where shallow marine Tertiary (Miocene) aged sediments of the Kwanza Basin outcrop. These sediments are stratigraphically equivalent to the Miocene and Oligocene turbidite channels that currently are producing about 1.5 million barrels of oil per day in the deepwater Lower Congo Basin.

A pre-salt play? Deep Plays in Angola

Angola's oil industry continues to benefit from new oil discoveries and ever increasing oil production, according to a paper presented at the Deepwater Offshore West Africa Conference (DOWAC) by AAPG member and Public Service Award winner Tako Koning. This conference was held November 14 - 18 in Abuja, Nigeria.

Koning's paper, "An Overview of the Geology and Geophysics of Angola's Oil and Gas Fields and Related Industry Activity," showed that in comparison to Nigeria, where one-third of its oil production is from the deepwater, two-thirds of Angola's

production is from the deepwater.

Accordingly, the deepwater oil play is vital to the long-term continuation of Angola's oil industry.

Koning stated that within the past decade Angola has almost doubled its oil production to two million barrels per day. He explained that the Angola success story is due to:

- World class petroleum working system, including excellent source and reservoir rocks.

- Superb seismic imaging, which has led to an approximate 80 percent drilling success rate in the Lower Congo Basin.

- Contractual stability – when a contract is signed between Sonangol, the state oil company and an oil company, it remains "fait accompli" during the life of the contract.

- Political stability – despite Angola's long civil war from independence in 1975 until 2002, Angola has experienced remarkable political stability with the same political party (MPLA) in power since independence

and with President Eduardo dos Santos being head of state since 1979.

Koning also mentioned the minimally explored pre-salt oil play in Angola has captured the interest of the global oil industry.

In Brazil's Santos Basin, giant size oil and gas discoveries continue to be made in the pre-salt sedimentary section. These discoveries will likely lead to Brazil's current oil production of two million barrels of oil per day doubling to at least four million barrels of oil per day. During Cretaceous time, Angola was juxtaposed against Brazil ("joined at-the-hip"), thus it is possible that Angola's oil production could likewise double if the play proves to be geologically and economically successful, he said.

The pre-salt play is not only relevant to Angola, but also is highly relevant to the deepwaters of Congo Brazzaville and Gabon.

Koning also showed that West Africa is an important supplier of crude oil to the United States, which remains as the world's largest oil importing country.

West Africa provides the United States with 15 percent of its import requirements.

Crude oil from West Africa is high quality low sulphur crude, he said, and is welcomed by refineries anywhere in the United States.



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2. Mexico – 1.1 million.
3. Saudi Arabia – 1 million.
4. Venezuela – 1 million.
5. Nigeria – 750,000.
6. Angola – 450,000.
7. Iraq – 450,000.
8. Algeria – 300,000.
9. Colombia – 250,000.
10. Kuwait – 200,000.
- * Others – 1.65 million.

Total imports – 9.050 million barrels of oil per day.

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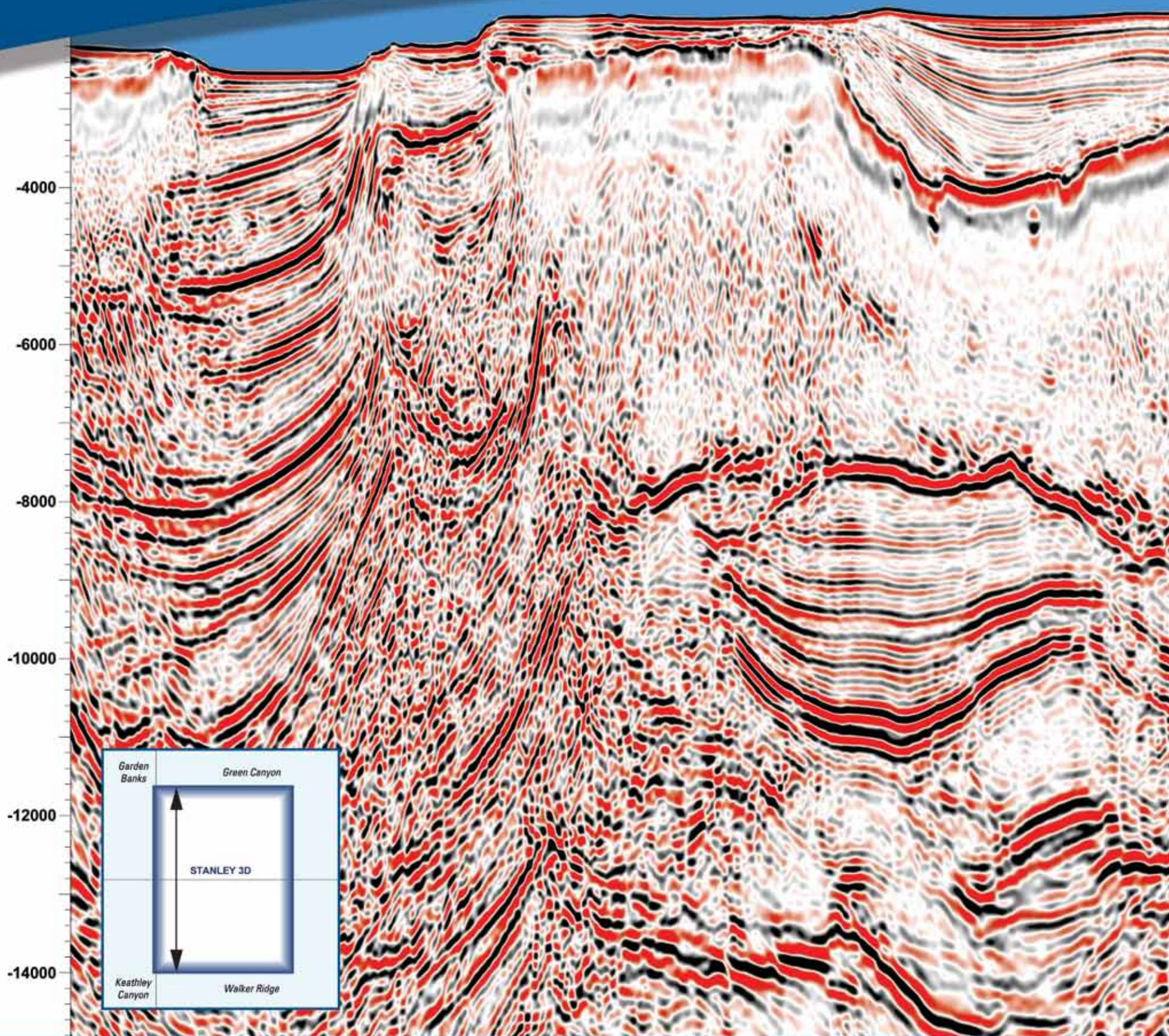


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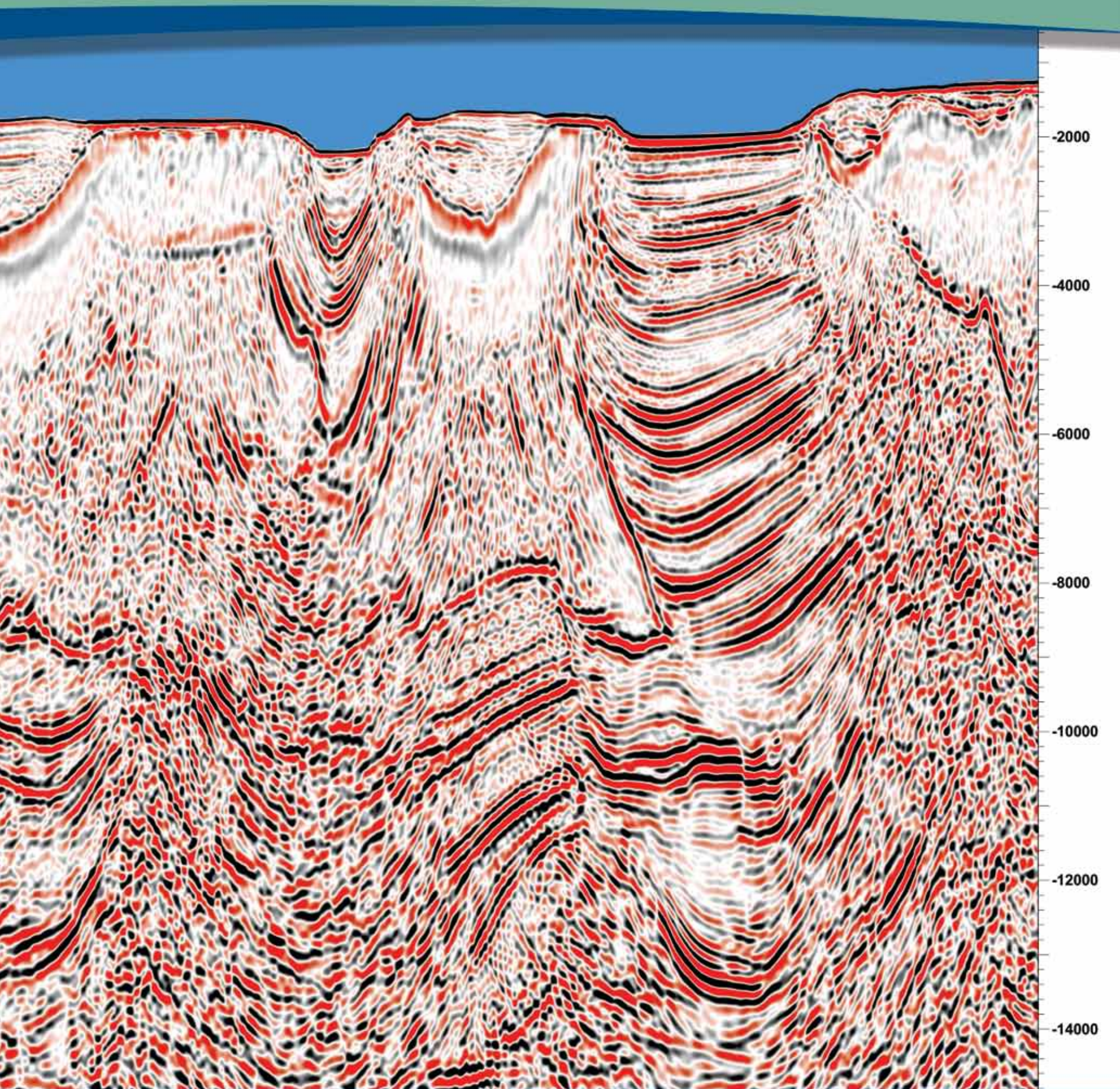
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Tours are, well, Distinguished

Lecturers Hit the Global Trail

By COURTNEY CHADNEY, EXPLORER Correspondent

Last year was the biggest and most successful year ever for AAPG's international Distinguished Lecture program – and officials are hoping this year will bring more of the same.

For the record, last year's program sent six lecturers to visit the Asia-Pacific, Middle East, and European regions, where they collectively gave 81 talks and had a combined attendance of 3,852 attendees.

This year? The international speakers start their tours in February, focusing on the Asia-Pacific and Middle East regions (see accompanying story, page 24).

"Our philosophy is to work toward a Distinguished Lecturer slate that is most appropriate to the specific needs of a given Region, preferably with as many local experts as possible."

AAPG's Distinguished Lecture program, funded largely by the AAPG Foundation, is the Association's flagship initiative for

spreading the latest in science, technology and professional information. Seven domestic speakers for this speaking season

were previously announced.

Distinguished Lecture Committee co-chairs Mark Cooper and Lee Krystinik have seen the international program grow since they each began lecturing as DLs in 1999. Joining the committee after their own tours, they have assumed leadership of the program, serving as co-chairs since 2007.

Krystinik, with Fossil Creek Resources in Arlington, Texas, believes the program provides multi-faceted importance within the geosciences community.

"DL provides new concepts and information applicable to each region, as well as a forum for discussion of these ideas," he said, adding that it also "provides an access point for students to interact directly with IDLs, who can place petroleum geosciences in a completely different light for students."

Think Global, Act Local

However, with goals so big and reaching all the way across the ocean, the program and committee face huge challenges every year to make sure of its growing success.

"To date our greatest challenges have been trying to expand the program into each of the regions within AAPG," Krystinik said. "Our philosophy is to work toward a Distinguished Lecturer slate that is most appropriate to the specific needs of a given Region, preferably with as many local experts as possible."

This would involve building each Region's sub-committees and filling them with active participants who would aggressively seek out names of potential local speakers and nominate them.

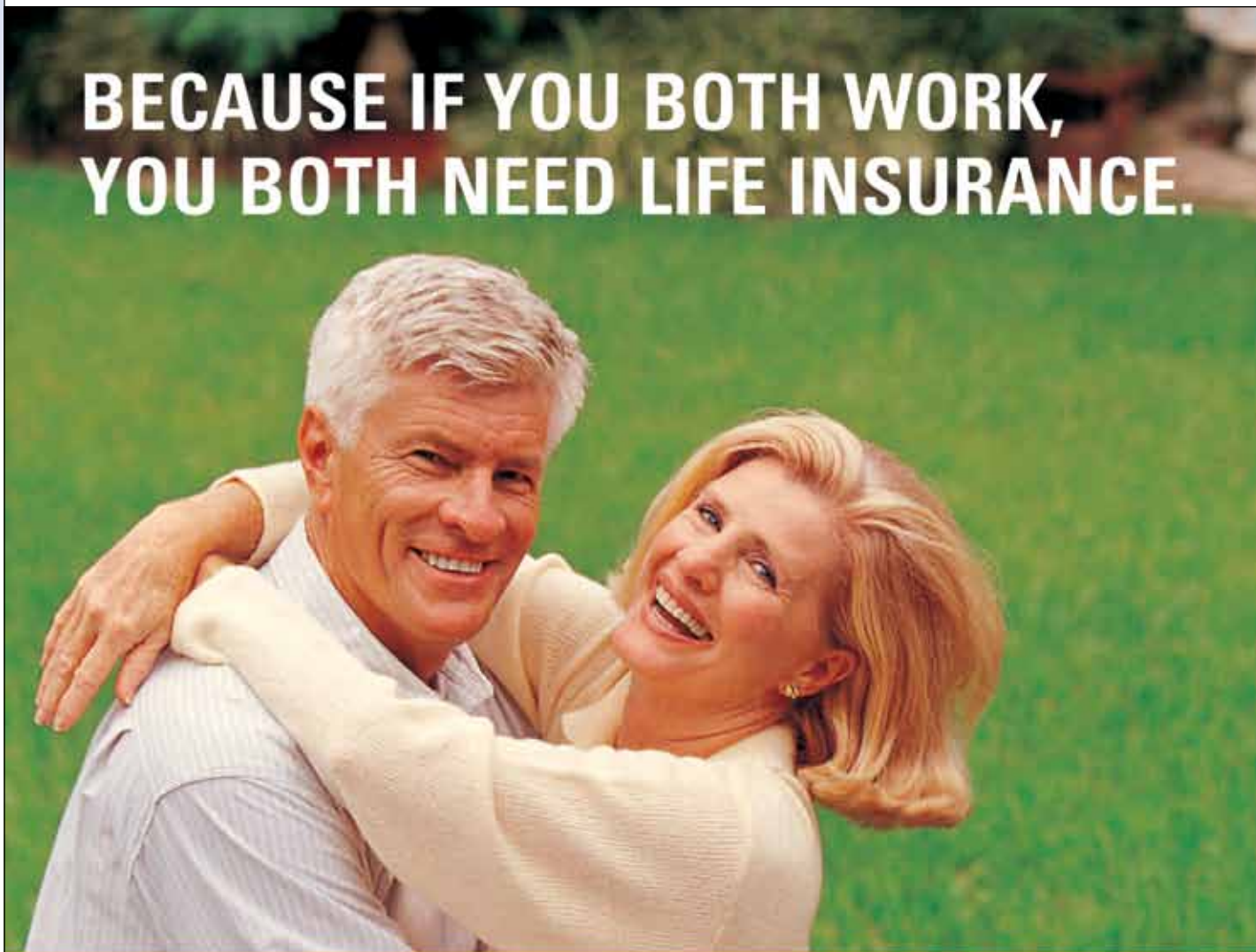
Right now, there are only approximately 55 to 60 committee members in charge of nominating DLs (this number includes both the domestic and international sides of the DL program) under several different categories, including:

- ▶ Future trends in energy/geology.
- ▶ Carbonates.
- ▶ Case histories.
- ▶ Unconventional resources.
- ▶ Geological record of climate change/applied environmental studies.
- ▶ Integrated hydrocarbon systems.
- ▶ Geophysics.
- ▶ General topic/paleontology.
- ▶ Geosciences and engineering.
- ▶ Reservoir quality characterization and predicting modeling.
- ▶ Siliciclastic stratigraphy/sedimentary.
- ▶ Tectonics and structure.

Expansion of the program, however, needs AAPG members from each Region to serve on the committee and nominate potential speakers.

"The individual regions have the opportunity and responsibility to provide this valuable service to their geological community," said Cooper, who is with Sherwood Geoconsulting in Calgary, Canada. "Without a high level of involvement it is impossible to provide the focused, region-specific programs that each region deserves," he added.

Cooper said being on the committee does not require a great deal of time, because "most geoscientists (already) are traveling to conventions, going to lectures or talks at societies for their own personal knowledge and benefit." The only thing



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Four Lecturers to Begin Tours

Four speakers have been named to this year's slate of AAPG international Distinguished Lecturers – and two of them will begin their speaking tours in February.

This year's international speaking lineup, funded by the AAPG Foundation, includes:

□ **Steve Dorobek**, carbonate sedimentologist and stratigrapher with BP America in Houston. His tour will begin in March, visiting groups throughout the Asia-Pacific Region.

He will offer two lectures:

▶ "Miocene to Recent History of the Southern South China Sea (Sunda Shelf): A Complex Record of Tectonics, Paleoclimate,



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Eustasy and Sediment Supply."

▶ "Cenozoic Carbonate Platforms Across the South China Sea: Controls on Their Initiation, Growth and Termination, and Implications for Petroleum Systems."

□ **Dale R. Issler**, senior research scientist



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Issler is this year's Dean A. McGee Endowment speaker. The lecture, made possible through a gift to the AAPG Foundation by the Kerr-McGee Corp., features a North American resident who



KUKLA

speaks to an international audience on a topic directly applicable to petroleum geology.

His tour to Asia-Pacific locales is slated for Feb. 11-26.

Issler will offer two lectures:

▶ "Integrated Thermal History Analysis of Sedimentary Basins Using Multi-Kinetic Apatite Fission Track Thermochronology: Examples from Northern Canada."

▶ "Quantitative Analysis of Petroleum Systems of the Beaufort-Mackenzie Basin, Arctic Canada: An Integrated Approach."

□ **Mohammed S. Ameen**, leader of the Structural and Rock Mechanics Group, Saudi Aramco, Dhahran, Saudi Arabia.

Ameen's tour of Middle East Region locales will be held Feb. 21-March 14. His lecture is titled "A Paradigm Shift in Understanding Fracture Origin and Fracture Influence on Deep Carbonate Reservoir Performance: A Study of Onshore Permian-Triassic Deep Reservoirs in Saudi Arabia."

□ **Peter Kukla**, with RWTH Aachen University in Aachen, Germany.

Kukla will be speaking to groups in the European Region. Details of his talk and specific dates are yet to be announced.

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UNFC Resource Classification

Date: 7 & 8 February 2011

Venue: Royal Society of Arts, London

Fee: Members - £400 / Non-Members - £475

Chairmen: David MacDonald – BP and Jim Ross – Ross Petroleum

Speakers: Charlotte Griffiths, UNFC

(confirmed) Sigurd Heiberg, Statoil

Per Blystad – Norwegian Petroleum Directorate, NPD

Daniel Trotman, Ernst&Young

Martin Hubbig, RWE

Stephen Henley – CRIRSCO

Jan Roelofsen, IHS

Samantha Meador, Shell

Website: <http://europe.aapg.org/category/events>

Registration: <http://www.registrationonline.org.uk/aapg/event359/reg.asp>



Speakers from page 22

one does differently as a member is to report back to their chair with the names of the outstanding lecturers that they have heard, that way they can be considered for nomination.

Global Growth Potential?

Looking for new speakers and new topics also can be a challenging part of the committee's job. To track current hot topics to lecture on, Krystinik credits his comrades.

"We depend greatly on the remarkably deep and diverse backgrounds of our committee members," he said, "as well as upon the outcomes of excellence of presentation judging from recent local, national and international meetings."

As for speakers, Krystinik explained how they look for people with "an established reputation as technical experts in their field, who are known for excellent presentation skills, have exciting new information to share and who would be good ambassadors for AAPG."

Both co-chairs say that despite appealing to an international audience they do not feel pressured to select controversial or provocative topics or speakers.

However, Krystinik did admit that sometimes the committee adds provocative talks to the mix for the benefit of science.

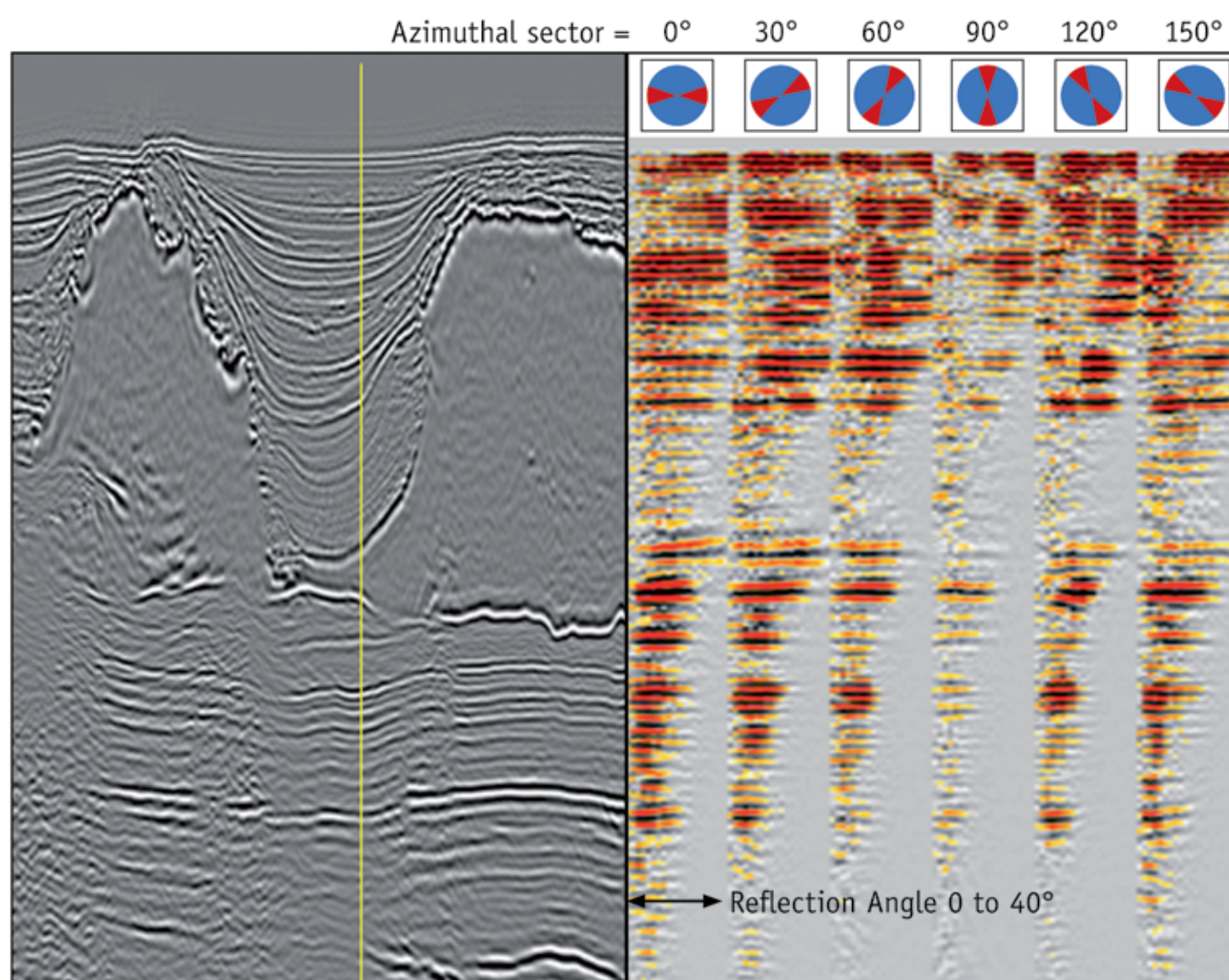
"Healthy, respectful debate helps move science forward and opens pathways for completely new science," he said.

Looking ahead, Lee hinted that the IDL program is on the verge of change – with a new emphasis on the creation of international regions and regional offices.

"As AAPG becomes an ever increasingly more global organization, penetrating more deeply into new regions and countries, our responsibilities in service and outreach will expand exponentially," he said.

"We foresee rapid growth in demand for more IDLs," Krystinik said, "and we are working with the regions to establish a tradition of active local committees to carry the effort forward at a whole new level."

Superior Imaging in Complex Structures



Stack data (left) with yellow line annotating the location of an RTM 3D gather (right), displayed in six azimuthal sectors.

Reverse Time Migration 3D Gathers

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Velocity Model Building with RTM

RTM CIGs, such as this example from a CGGVeritas WAZ survey in the Garden Banks area, are free of the migration artefacts typically seen when using ray-based algorithms. Such artefacts are due to multipathing issues in these methods, particularly in the vicinity of complex geologic structures. Using RTM for the entire model building process results in a more accurate velocity model and hence a better final image.

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A Whole Lotta Shakin' Going On

By BOB HARDAGE

Seismic contractors are continually searching for methods that will expedite seismic data acquisition – which is why several efforts have been made over the past three decades to develop procedures that will allow vibrators to shake simultaneously at different source stations, with the data being recorded by a common receiver grid.

The attraction of simultaneous-source shaking is that the clock time required for data acquisition across a prospect is reduced by a factor N, with N being the number of source stations where vibrators shake simultaneously.

The data that are acquired tend to be a complicated mixture of wavefields that have traveled from different source stations to each receiver station. In this original recorded state, the data are too confusing to be used to interpret Earth properties. In order to use simultaneous-source data for geologic interpretation, this complicated composite wavefield has to be segregated into the individual wavefields that were generated at each respective source station.

If the wavefield-separation procedure



HARDAGE

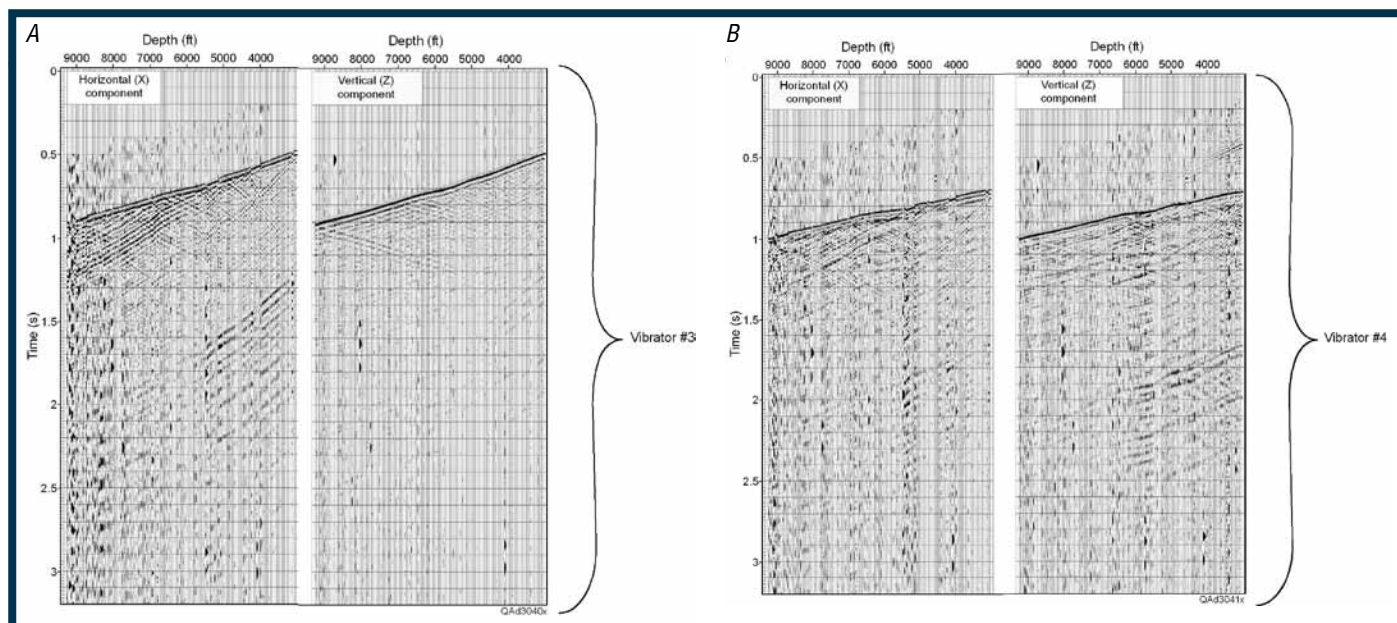


Figure 1 – A vertical seismic profile (VSP) test showing the responses of downhole vertical and inline horizontal geophones after wavefields generated simultaneously at five source offsets were segregated by the HFVS technique and assigned to their respective source stations. This display shows data assigned to only two of the five source stations.

is successful, the result is a set of data that is equivalent to data that would be acquired if a vibrator at each of the N source stations generated single-source data at different clock times.

In early applications, simultaneous-source techniques involved only two vibrator stations. The operational

procedures usually were that the vibrator at station A did an upsweep while the vibrator at station B did a downsweep; or the vibrator at station A worked with a phase shift that differed by 180 degrees relative to the vibrator at station B.

Although the segregated wavefields generated by these early methods were

often usable for subsurface imaging, the data contained more noise than desired, and these initial simultaneous-source concepts never became widely used.

A relatively recent technology

Continued on next page



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Continued from previous page

development known as the High Fidelity Vibroseis System (HFVS) is an important advance in the quest to acquire vibrator data simultaneously at several source stations. The technology was developed and patented by Mobil and is now offered by most seismic contractors. Several competing simultaneous-vibrator techniques have subsequently appeared on the scene through research by other oil companies and by seismic contractors.

There are two principal attractions of all of these simultaneous-source procedures – data quality is acceptable, and the number of simultaneous sources can be expanded to as many as six or eight distance-separated vibrators.

* * *

An example of the HFVS concept being tested in a vertical seismic profile (VSP) experiment is displayed as figure 1: Data from vibrators occupying five different offset source stations were acquired with the vibrators at all stations shaking simultaneously and then shaking individually.

The responses of the vertical and inline horizontal geophones at two of these stations are illustrated on the display after the patented HFVS methodology was applied to separate each individual wavefield from the composite wavefield. When these wavefields were compared against wavefields generated by vibrators shaking individually at each source station, only minor differences between simultaneous-source data and single-source data were observed.

Figure 2 shows an example comparing single-source data and simultaneous-source data acquired in this VSP experiment. The concept exhibited in these two figures shows that VSP data can be acquired from five source stations in the same clock time needed to acquire data from only one source station.

In many situations, this increased imaging capability provides critical data at attractive cost savings.

Although VSP data are used in this example, HFVS technology and its several competing equivalents were developed to reduce the cost of 3-D seismic data acquisition. Numerous examples demonstrating how each of the currently available simultaneous-source technologies applies to 3-D data acquisition are in the literature or can be provided by seismic contractors.

* * *

Simultaneous-source technology seems to be good enough to warrant discussions with seismic contractors about its use and the potential cost savings that may result.

There may be a small add-on fee for some simultaneous-source services if a seismic contractor has to pay a royalty to use the technology. Additional data processing also is required to break the composite wavefield into its individual source-station components such as the examples shown on figure 1 – but these data-processing costs are not significant.

Under some operating conditions, several of the simultaneous-source techniques that are now available are attractive both technically and economically. [E](#)

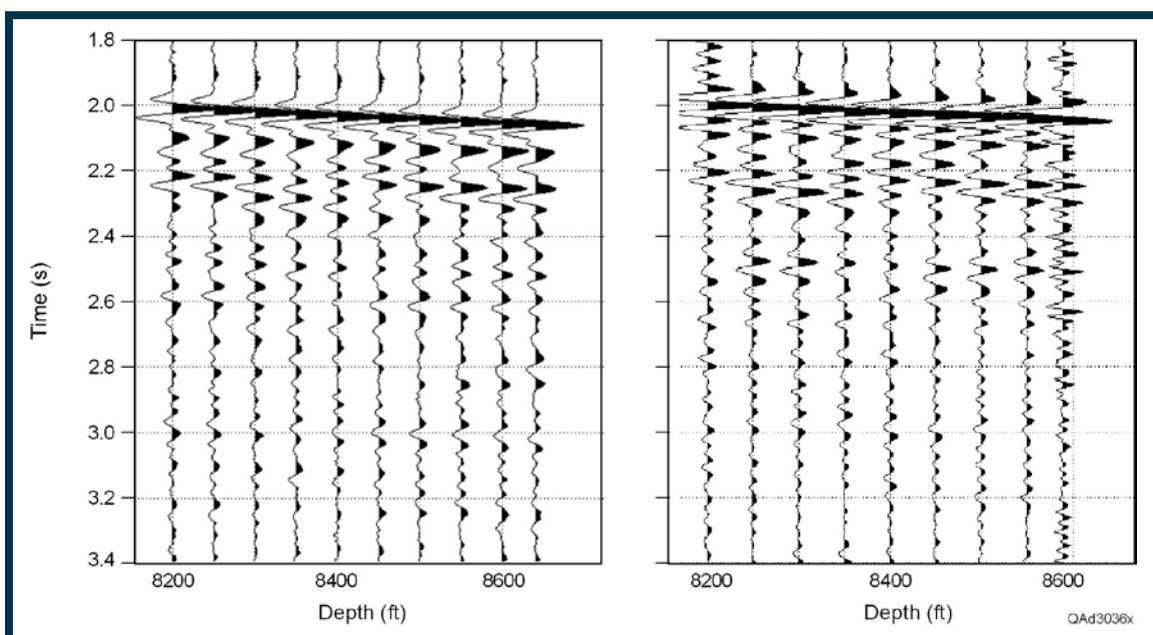


Figure 2 – Comparison of single-source VSP data (left) and simultaneous-source VSP data (right) produced by the HFVS procedure and generated at the same source station. The simultaneous-source data are sufficient quality to be used for many VSP applications.

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South Texas Eagle Ford Basin

Partial Map Detail

API	Operator	Lease	Well	County	Top Depth (ft)	Bottom Depth (ft)
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42918000000	HUMBLE OIL & REFINING	MAKES C. H. HALL	1	ATASCOSA	5420	7991
42918000000	SCURRY, GUSLEY T.	HEWLE, B.W.	1	ATASCOSA	7514	10024
42918000000	PAN AM PETRO CORP.	R. R. BIRDWELL	6	ATASCOSA	4325	7022
42918000000	SHELL OIL CO.	WYLLIE, GERTHA H.	1	ATASCOSA	5495	10010
42918000000	SHELL OIL CO.	ELUMARK, J.W.	1	SEE	10475	12245
42918000000	SHELL OIL	ROBERTS, A.S.	1	SEE	12540	10000
42123000000	TEXAS EASTERN TRUNK LINES	WABBE GAS UNIT	1	DE WITT	10007	10410
42123000000	SHELL OIL	BROWN, C.D. S.	1	DE WITT	12720	10000
42123000000	ARCO OIL & GAS	ARCO HORROR	1	DE WITT	10030	1479
42123000000	MOPCO, Corp.	BETTER	1	FRED	5540	4640
42143000000	ATA OIL PRODUCERS	YOGA, J.W. HART	1	FRED	5530	7210
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Partial Well Data

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WASHINGTON WATCH

A 'Real' Energy Policy?

By DAVID CURTISS, GEO-DC Director

A new year offers the chance for new beginnings – and that's what's happening here this month in Washington, D.C., as the Senate and House of Representatives convene the 112th Congress.

Deficits, soaring debt and persistently high unemployment dominate the headlines. But as I talk to AAPG members the frustration I hear frequently is the absence of a national energy policy.

Make that statement to congressional lawmakers or their staff and you'll get

a blank look. Clearly you haven't done your homework, they'll say, because nearly every Congress passes energy legislation: The Energy Policy Act of 2005 runs over 500 pages; the Energy Independence and Security Act of 2007 is more than 300 pages long.

How much more policy do you want? As you read those pages, however, the problem quickly becomes apparent – the legislation is light on strategy and heavy on tactics.

While it may have a theme – such as energy independence and security – it is hard to discern from the constituent parts what the desired outcome looks like and how these programs get us there.

Many of the programs are designed to benefit a legislator's constituents and home state. There is strong bipartisan support for biofuels, for example, because it benefits the American farmer. And passing legislation requires consensus.

So what becomes law is not necessarily what is best, but what legislators can agree on.

Consequently, tough decisions are deferred and resulting policy isn't comprehensive.



CURTISS

* * *

The process of developing a national energy policy is further complicated by the diverse and numerous participants in the U.S. energy sector – it is not a monolithic system. Instead, you have multinational corporations alongside mom-and-pop oil and gas producers, public utilities and start-up renewable energy producers all responding to supply/demand pressures in a highly regulated energy market.

Policymakers try to prompt desired behavior from energy producers and consumers through energy policy. But the intended policy outcome is frequently accompanied by unintended (and negative) consequences. You can't expect simple stimulus-response behavior in a complex market, especially when you're dealing with differing time horizons. As former Shell CEO John Hofmeister observed in "Why We Hate the Oil Companies," "[T]here is a basic conflict between 'energy time,' which is defined by decades, and 'political time,' which is defined by two- and four-year cycles."

Developing a coherent, far-sighted national energy policy is a major challenge – one further compounded by the partisanship that characterizes today's political discourse, which is why I found the following paragraph so interesting:

"Today, few issues in American political life are as polarized as energy policy, with both left and right entrenched in old worldviews that no longer make sense. For the better part of two decades, much of the right has speculated darkly about global warming



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Dr. James Edwards
Equinox Exploration Company
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Washington from page 28

as a United Nations-inspired conspiracy to destroy American sovereignty, all while passing off chants of 'drill, baby, drill' as real energy policy. During the same period much of the left has oscillated incoherently between exhortations that avoiding the end of the world demands shared sacrifice, and contradictory assertions that today's renewable energy and efficiency technologies can eliminate fossil fuels at no significant cost. All the while, America's dependence on fossil fuels continues unabated and political gridlock deepens, preventing real progress toward a safer, cleaner, more secure energy system."

The above is from the introduction to

Post-Partisan Power – how a limited and direct approach to energy innovation can deliver clean, cheap energy, economic productivity and national prosperity.

The report, released last October, is a joint effort by the American Enterprise Institute, Brookings Institution and Breakthrough Institute, a trio of think-tanks that spans the political spectrum. It is an effort to push beyond current thinking, and consider how to develop a strategy for our nation's energy future.

Their proposal has four elements:

► Invest in energy science and education.

Creating our energy future requires a significant investment of resources to fund energy research, and a commitment to public energy education from kindergarten onward and to train the next generation energy work force.

► Overhaul the energy innovation system.

Harness the creative talents and entrepreneurial spirit needed to discover and commercialize energy technologies through "regional energy innovation institutes." These institutes would foster public and private partnerships between companies, government and academia. Scale up the activities of the Advanced Research Projects Agency for Energy (ARPA-E) to conduct high-risk, high-reward energy research. Look at dual-use energy technologies that also have military application.

► Reform energy subsidies and use military procurement and competitive deployment incentives to drive price declines.

Focus on cost and performance of new energy technologies and stop subsidizing business as usual. Use incentives to drive down costs until new technologies become competitive with current technologies, use the scope and scale of the military to further reduce costs – and don't forget nuclear.

► Internalize the cost of energy modernization and ensure investments do not add to the deficit.

Scrap ineffective subsidies, redirect existing federal revenues and raise additional revenue to fund this innovation and make energy systems, such as the power grid, self-sustaining.

Are these four principles sufficient to create a new energy future? Probably not. But the focus on reducing costs so that alternative energy sources are commercially competitive without subsidy, and using military procurement to drive innovation and cost reduction are ideas worthy of consideration.

That such an ideologically diverse group could debate and agree on these principles suggests developing a national energy policy isn't a hopeless cause.

In fact, it points to the real task ahead: *Another round of energy legislation isn't the answer. Instead, we need a national dialogue that forges consensus on the energy future we are trying to build.*

Then, and only then, will energy policy have any hope of getting us there.

Resources: <http://thebreakthrough.org/blog/Post-Partisan Power.pdf>. 

CALL FOR ABSTRACTS

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Industry professionals and students are invited to submit abstracts to the AAPG 2011 International Conference & Exhibition. The technical program committee encourages abstracts that relate to any of the topics listed below. Final sessions and formats (oral or poster) are determined by actual submittals.

Proposed conference themes — Deadline to submit your abstract is 20 January 2011.

Theme I (main theme): Carbonate Reservoirs — From Pores to Production

Aspects covered will include the stratigraphic analysis and sedimentology of carbonate sequences; the role of diagenesis, karst, faulting and fracturing in carbonate reservoir performance and the latest developments in the seismic imaging and modeling of carbonate reservoirs and sequences.

Theme II: Where Africa Meets Eurasia — Exploration & Production in the Alpine-Himalaya Fold Belt and Foreland Basins

The Alpine-Himalayan fold-and-thrust belt and its associated foreland basins is one of the world's most prolific, and most complex, hydrocarbon provinces. It contains a wide variety of mature, emerging and still frontier plays in both clastic and carbonate regimes.

This theme will examine the tectonic evolution of the Alpine-Himalayan chain, its influence on sedimentation, diagenesis and reservoir and source development at a basin to prospect scale. The objective is to identify the factors that control prospectivity in different parts of the belt from the Apennines, Alps and Zagros through the mountains of central Asia to the Himalaya

using a variety of technologies, outcrop analogues and case studies.

Theme III: Rifts and Deltas

This theme seeks to address all aspects of rifted margin dynamics and related deltaic processes. Focus will be on rift to drift tectonics, crustal stretching and heat flow, pre-salt plays, continental and lacustrine reservoirs and delta systems from shelf to basin floor.

Theme IV: Advances in Integrated Geoscience Applications

This theme will cover all aspects of geoscience and reservoir engineering as applied to conventional and unconventional resource plays with emphasis on the value of integration of disciplines. Topics will range from global and basin scale assessment to petroleum system and play analysis to prospect generation and evaluation, reservoir modeling and management.

Theme V: Reservoir Management — From Outcrops to Assets

Sustaining production rates to meet the growing demand globally requires detailed reservoir characterization and effective

management of the discovered resources over the long term. Understanding reservoirs starts with fundamental field-based outcrop studies and subsurface analysis. New technologies and work models will be discussed along with world-class reservoirs in this theme.

Theme VI: Dynamic World of "Uncooperative Reservoirs" — The Geoscience of Unconventional Resources

New technologies have made viable tight gas, oil shale, shale gas, coal-bed methane and geothermal resources providing fuel supply closer to consumers in Europe, India, Asia and the Far East. These resources have induced dramatic strategic moves by a variety of companies to get into unconventional plays in new areas. What makes these reservoirs special is what will be addressed in this theme.

Theme VII: Leading-Edge Technologies and the Future of E&P

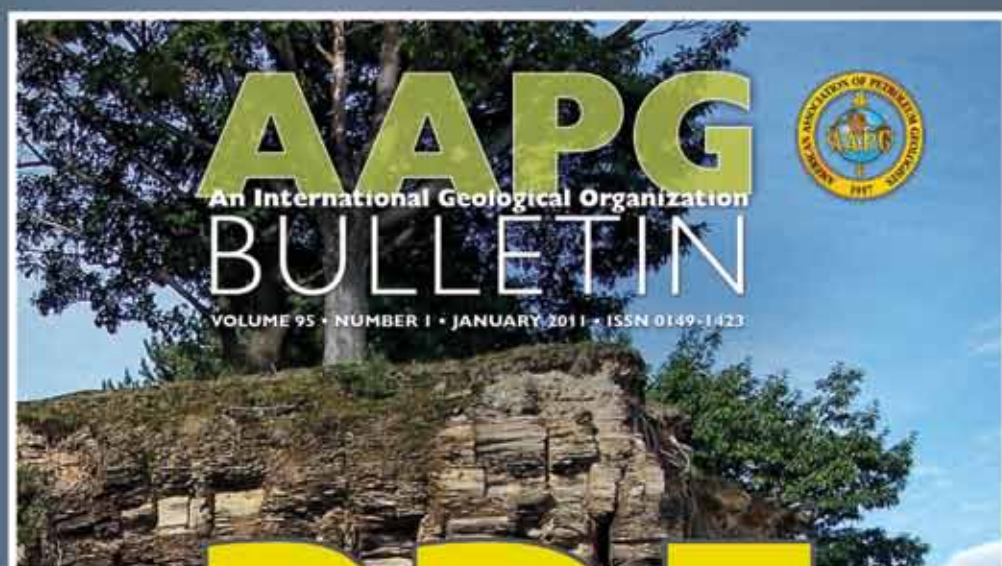
This theme includes the challenges of carbon management, new and leading-edge technologies in geoscience and reservoir engineering and future technological developments in the E&P industry.

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Understanding inversion tectonics

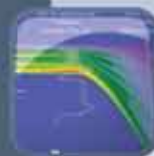
Gabriel O. Grimaldi and Steven L. Dorobek



Mesozoic tectonic inversion in the Neuquén Basin of west-central Argentina was investigated in a transpressional setting. Detailed mapping allowed the identification of two main fault systems: deep faults that affected basement and synrift strata and shallow faults that affected postrift and syninversion strata.

Improved understanding of the Marcellus Formation

Gary G. Lash and Terry Engelder



Wireline logs have helped provide a sequence stratigraphic framework of the Middle Devonian Marcellus Formation, Appalachian Basin, and have helped better understand the events that shaped the stratigraphic architecture in ways that could impact exploration and production.

Seismic expression of a debris apron

Xavier Janson, Charles Kerans, Robert Loucks, M. Alfredo Marx, Carlos Reyes, and Francisco Murguía



The steep-sided carbonate platform of the El Abra Formation was investigated through 3-D seismic to determine its architecture and the seismic expression of redeposited carbonates. It has the potential to have a large hydrocarbon accumulation in tectonically modified stratigraphic trap.

A supportive tool for exploration

Alfredo Marx, Carlos Reyes, and Francisco Murguía



The steep-sided carbonate platform of the El Abra Formation was investigated through 3-D seismic to determine its architecture and the seismic expression of redeposited carbonates. It has the potential to have a large hydrocarbon accumulation in tectonically modified stratigraphic trap.

Deepwater Confab Draws 800 to Nigeria

By CAROL MCGOWEN, AAPG Regions and Sections Manager

Four of the five past AAPG Africa Region presidents joined current Region President Nosa Omorodion in Abuja, Nigeria, for the third Regional Deepwater Offshore West Africa Conference (DOWAC).

About 800 participants from all over the world attended the meeting, with good reason: West Africa continues to be an oil and gas hotspot within the world's "golden triangle" for deepwater oil exploration and development – comprising the deepwater Gulf of Mexico, Brazil and West Africa.

AAPG was represented by Vice President-Regions Alfredo Guzmán, in addition to Omorodion and the past Region presidents.

As a backdrop to the DOWAC conference, Nigeria celebrated its Golden Jubilee 50th anniversary of independence. Giant banners commemorating the October 1 event were hanging from the headquarters building of the Nigerian National Petroleum Corporation in Abuja.

Earlier in the year, President Goodluck Jonathan signed into law the Nigerian Oil and Gas Industry Content Development Act. The law is expected to increase participation by Nigerians in the oil and gas industry through the required use of local raw materials, products and services, with the goal of increasing local capacity, industry knowledge and expertise.

The evolution of industry reforms and the future of investment in Nigeria was the theme of the conference Management Session.

Guzmán Notes Parallels

AAPG Vice President-Regions Alfredo Guzmán, speaking during the DOWAC Management Session, provided an interesting comparison of government and industry challenges impacting development of Mexico's deepwater potential. Similar to Nigeria, the Mexican economy – including its federal government – is heavily dependent on petroleum revenues.

Guzmán said that despite the enormous reserves originally predicted, significant production declines from Mexico's supergiant Canterrel Field began in 2005. Today, oil production has fallen by 800,000 barrels per day.

"It is impossible for one company (Pemex) to make the necessary capital investment needed to reverse the decline

and realize Mexico's deepwater reserve potential," Guzmán said.

As a result, Mexico began a reform of its energy laws in 2008. The reforms aim to increase investment in Mexico deepwater exploration and production from \$16 to \$22 billion USD over the next 15 years. Estimated potential reserves remaining in the deepwater Gulf of Mexico top 31.4 billion barrels of oil equivalent.

The new laws are expected to allow incentivized performance contracts in Mexico. Following the 2004 Perdido discovery well offshore of Galveston, Texas, the recent deepwater Perdido Foldbelt discovery in the Mexican GOM also spurred reforms to address trans-boundary hydrocarbon reservoirs.

– CAROL MCGOWEN

technology, plentiful petroleum reserves have become available. But demand security also is required to ensure the long-term capital investment needed to develop the world's deepwater reserves.

Alawami also reminded the audience that extreme market price volatility is damaging to producers as well as consumers. In fact, OPEC, the International Energy Agency and the International Energy Foundation are collaborating to better understand how investment speculation drives market volatility by studying the interaction between energy financial markets and the physical energy market.

She pointed out the recent gradual return to industry optimism resulted from massive capital investment worldwide. Considering the fragility of this global economic recovery, OPEC is carefully considering its actions in the months ahead – and Alawami encouraged other world government leaders to do the same.

* * *

DOWAC organizers envisioned a conference that sharpened focus on the deepwater potential of host country Nigeria, including deepwater West Africa activity from offshore Morocco down to Angola, plus other global case studies featuring the deepwater discoveries and challenges in West Africa, the Gulf of Mexico and offshore Brazil.

[Continued on next page](#)

AAPG GEOSCIENCES TECHNOLOGY WORKSHOPS

Focused Workshops to

The Geoscience of Exploring and Developing Tight Gas in the Middle East

24-26 January 2011 • Beirut, Lebanon

Volumes of gas in place in tight sand reservoirs are estimated to several hundred trillion cubic meters distributed globally. The Middle East contains a large percentage of these volumes with known accumulations found in the Ordovician/Silurian carboniferous sandstones and low permeability Jurassic carbonates. However, exploration results of the last 25-30 years suggest that successful appraisal and development of tight gas reservoirs requires a careful synthesis of many factors, both geologic and economic.

Tight gas reservoirs represent a challenge in terms of drilling, development and stimulation. This is due to the unconventional nature of these reservoirs in terms of their low permeability, high temperatures and high pressures. Consequently, improving recovery factors from the current percentage and driving down operating costs represent the major strategic challenges for R&D geoscientists and engineering teams in the industry. The development of low permeability gas reservoirs will give a substantial boost to the world's gas demand and reserves in the coming decades.

Tight gas is a prospect which to date, remains largely underexploited. Current conventional appraisal, testing, development and production techniques are not fully adapted for cost effective development and most of these accumulations remain untapped. Attend this GTW as we explore what the future holds.

Middle Eastern Mixed Carbonate/Evaporite Successions and Analogues

28 February-2 March 2011 • Abu Dhabi, UAE

Mixed carbonate/evaporite successions (such as the Khuff and Aab Formation) are the host of the world's largest hydrocarbon accumulations. In addition, mixed carbonate/evaporite basins have a high potential for source rock generation. Because of significant economic importance, there remains the need for further studies on the processes of formation of mixed carbonate/evaporite succession as a depositional system.

While carbonate deposition is linked to relative sea-level changes, biogenic production and paleogeographic changes, evaporite deposition is primarily controlled by net evaporation of seawater in a basin and reflux process. Formation of evaporites may be decoupled from relative sea-level changes and evaporites might occur during rise as well as fall of relative sea-level. In addition, later replacement and neomorphism of evaporites make an interpretation of the original depositional environments more difficult. Further, modern evaporite depositional environments, such as the coastal sabkhas of Abu Dhabi, might be limited analogues to the extensive evaporite systems of the past.

It is crucial to understand the interplay between carbonate/evaporite deposition in a modern sequence stratigraphic and diagenetic framework in order to understand changes in reservoir quality and build meaningful reservoir models.

Join us to revisit some known concepts such as sequence stratigraphy, sedimentology, diagenesis and reservoir modeling of carbonate/evaporite successions with eyes on unconventional thinking.

Register online at www.aapg.org/gtw

Why It Matters

By TAKO KONING

West Africa continues to be an oil and gas "hotspot" within the world's "golden triangle" for deepwater oil exploration and development – an area comprising the deepwater Gulf of Mexico, Brazil and West Africa.

The two mainstay areas of deepwater activity in West Africa continue to be Angola's Lower Congo Basin and Nigeria's Niger Delta Basin. The deepwater area continues to expand, however – northward and westward to Ghana, where the Jubilee oil field with reserves of about 1.8 billion barrels just started production.

Current oil production in West Africa (per Energy Information Administration) is:

* Nigeria – 2.4 million (barrels of oil per day).

* Angola – 2 million.

* Congo (Brazzaville) – 440,000.

* Equatorial Guinea – 320,000.

* Gabon – 245,000.

* Chad – 145,000.

* Cameroon – 75,000.

* Ivory Coast – 30,000.

* Congo (DRC) – 25,000.

* Mauritania – 10,000.

* Ghana – 5,000.

The total: 5.695 million barrels of oil per day from West Africa.

West Africa also is an important producer of liquefied natural gas.

DOWAC keynote speaker Mark Ward said improvements in fiscal terms could lead to a turnaround in Nigeria's drilling activity and commensurate oil production.

Collaboration Yields DOWAC

Convening so many of the AAPG Region's top elected leaders together for the third Deepwater Offshore West Africa Conference (DOWAC) symbolized the conference's stature and prestige.

A history of collaboration between AAPG and the Nigerian Association of Petroleum Explorationists (NAPE) led to the 2010 meeting.

NAPE and AAPG jointly organized the first DOWAC in Abuja, Nigeria, in 2004, with general co-chairs from each association heading the conference organizing committee – Bayo Akinpelu and P. Egele represented AAPG and NAPE, respectively.

Nahum Schneidermann (AAPG) and Gilbert Odior (NAPE) served as general vice co-chairs.

Others on that first DOWAC organizing committee included exhibition co-chairs Nosa Omorodion (AAPG) and Doja Ojelabi (NAPE). Schneidermann eventually became the first AAPG Africa Region president, and subsequently Ojelabi, Odior and Omorodion would be elected Africa Region vice president, president-elect and president number six, respectively.

The second DOWAC was organized in 2007 in Luanda – at the time, Angola was leading the continent with new discoveries

and rate of production.

The third DOWAC's organizing committee was led by general co-chairs Isaac Arowolo (NAPE) and James Agbenorto (AAPG Africa Region), who both served as presidents of their respective associations during the organizing year. General vice chairs for 2010, Jide Ojo (NAPE) and Nosa Omorodion (AAPG Africa Region) would ascend to the presidency of their groups during the conference year.

In fact, special events during the conference honored each organization's leadership traditions.

– CAROL MCGOWEN

Continued from previous page

One session, for example, featured technology advances and innovations and included case studies in reservoir evaluation challenges from the deepwater Gulf of Mexico.

And a lot of attention, of course, was on African activity.

For example, since Ghana's Jubilee Field discovery by Tullow Oil of UK in June 2007, industry players and the Ghana National Petroleum Corporation (GNPC) flowed first oil from the country in mid-December. The Jubilee Field is believed to hold some 1.8 billion barrels of light, sweet crude oil reserves.

In September, Tullow made a second light oil field discovery in the Tano Basin, Gulf of Guinea, estimated to hold between 70 million and 550 million barrels. Tullow has a 50 percent interest and operates with several IOCs and GNPC.

Prior to this discovery, Ghana's economy was fueled by mining for diamonds and gold. Ghana now faces the same two challenges heard throughout the third DOWAC – industry regulation and human resource development.

Other conference highlights included:


► On the industry regulation side, Alexandra Amoako-Mensah explained that Ghana's Minerals Commission has streamlined the licensing process. Amoako-Mensah, honorary general co-chair of DOWAC 2010, is current president of the Ghana Institution of Geoscientists and an eight-year board member of Ghana Minerals Commission.

On the human resource development side, GNPC is partnering with Ghana's universities to increase the number of graduates and skilled workforce needed to support Ghana's booming oil industry.

► AAPG Africa Region and sponsor

Niger Delta E&P did its part to prepare the future work force during the very first "AAPG/NDEP Mentor Minutes," where senior industry leaders and role models shared their career experiences and choices with young industry professionals and students.

AAPG mentors Guzmán and Bayo Akinpelu provided coaching in professional ethics and career strategies.

► During a breakfast meeting hosted by NAPE's University/Polytechnic Assistance Program, attended by nearly 100 students attending DOWAC, Guzmán discussed the importance of professional association membership to enhance career development, as well as AAPG's various programs to support AAPG student chapters and universities, such as IBA, Weeks Undergraduate Grants, AAPG Foundation Grants-in-Aid, Publications Pipeline university book donations, and Visiting Geoscientist Program. 

Enhance Your Career



Deepwater Reservoirs in the Gulf of Mexico

18-19 January 2011 • Houston, TX

This workshop is targeted at geoscientists and reservoir engineers who are actively involved in deepwater exploration, development, and technical studies. The goals of the Deepwater GTW include providing a forum that showcases integrated studies of deepwater reservoirs, affording ample opportunity for dialog and lively group discussions, and facilitating interdisciplinary innovation in these challenging environments. Each session will include an IPOD discussion (in-depth discussion on issues, problems, opportunities, and directions).

We are planning a full day of talks and discussions focused on pre-Tertiary (Paleogene) exploration and development, as well as a full day on the Miocene and Pliocene. Most presenters hail from either the asset teams or research teams of some of the most innovative deepwater operators. Academia and top service providers will also be well represented.

We are very privileged for 2011 to have the Society of Petroleum Engineers (SPE) as a co-sponsor of the Deepwater GTW!

Success in the Marcellus and Utica Shales: Case Studies and New Developments

23-25 May 2011 • Baltimore, Maryland

This workshop will take an interdisciplinary approach to analyzing case studies of Marcellus and Utica shales. Presenters will come from asset teams and research teams of current operators. The presentations and discussions will include basin geology, shale mineralogy, organic-matter type, gas geochemistry, structural style, along with discussions of emerging plays in southern Canada. Biogenic vs. thermogenic gas will be discussed, as well as an analysis of natural fractures and their role both in exploration and in completion / production. will discuss keys to "sweet spots." Each session will include an IPOD discussion (in-depth discussion on issues, problems, opportunities, and directions).

U.S. Shale Plays

2-4 August 2011 • Fort Worth, Texas

At last count, there were at least 20 serious shale gas plays in the U.S. Which ones have performed well? Which ones seem to have the most potential? How do they differ from each other, and what commonalities that allow you to prospect for "sweet spots" and to design effective hydraulic fracturing programs? What do we now know about the geochemistry of some shale plays that leads us to find areas that produce both gas and condensate / light oil? What are some of the new breakthroughs in technology that can help you develop a more efficient program that increases your return on investment? Compare and contrast shale plays, along with other resource trends, to develop an exploration and production approach that works for you and your organizational objectives. We will present case studies on plays and overview technologies used in new ways to give you powerful new tools in your shale play development.

INFORM – DISCUSS – LEARN – SHARE • THE AAPG GTW EXPERIENCE

For information on these AAPG GTWs, please log on to our website at <http://www.aapg.org/gtw>.

WHY I DONATE TO THE AAPG FOUNDATION:



Herbert Davis

Shirley and I have had a long experience with AAPG (since 1956) and with the Foundation (beginning with our joining the Trustee Associates in 1978). We have always thought the overall AAPG programs afforded geoscientists a great opportunity to continue their education, network with their peers, and volunteer to promote geology. We began donating to the Foundation in 1978 and have continued to this date. The most memorable contribution has been to our "Named Grant" for a geology student at Oklahoma State University. There were no scholarships in geology when I was a student at Oklahoma A&M (OSU) 1948-53. We consider it a privilege to support students in geology.



To give to the AAPG Foundation, go online to <http://foundation.aapg.org/donate.cfm> or mail to P.O. Box 979, Tulsa, OK 74101. Questions? Call 1-888-945-2274 Ext. 644.

FOUNDATION UPDATE

Programs Get Funding

By NATALIE ADAMS, AAPG Foundation Manager

The AAPG Foundation Board of Trustees approved financial support for two programs during its recent meeting in Tulsa:

► **AAPG's Datapages** received \$53,150 in funding to scan and capture three AAPG affiliated and associated society publications – specifically, the Four Corners Geological Society, Asociacion Colombiana de Geologos y Geofisicos del Petroleo (Phase 1) and Canadian Society Petroleum Geologists special publications.

The goal of Datapages is to gather all publications from all AAPG affiliated societies into a single literature database for upstream exploration and production geology.

Datapages now has thorough coverage in both the Gulf region (United States) and in the Rockies areas (both United States and Canada). The short- to intermediate-term goal is to begin collecting the literature of South America.

For more information go to aapg.org/datasystems/aapgprod.html.

► The **Tulsa Geoscience Center** received \$5,000 to help develop and evaluate a series of innovative geology and petroleum geology hands-on modules that are age specific and are designed to be used in any central geoscience educational facility for visiting field trips.

Also, thanks to a generous Trustee Emeritus donation, the **Geologic Map of**

California to Bay Area Teachers project received funding to carry that program forward in 2011. The project provides teachers with one 20- by 23-inch geologic map of California, accompanied by 10 laminated copies of the map at page size with a geologic column on the reverse side.

In addition, the teachers receive a two-page set of guidelines and sample questions to use with the maps.

To submit a proposal for funding, please go to foundation.aapg.org/funding.cfm.

* * *

Continued on next page

GIA Deadline Looms

The application deadline for the 2011 AAPG Foundation's Grants-in-Aid Program is Jan. 31.

The Foundation will be awarding \$181,000 this year to support geoscience students in their graduate studies. Graduate students are encouraged to begin the online application process immediately, as it involves multiple steps.

For more information, go to foundation.aapg.org/giaa/howto.cfm.

Students also are encouraged to review our restricted named and memorial grants to see the list of qualifications, at foundation.aapg.org/gia/names.cfm.

2011 Open Enrollment Course Schedule

Rose & Associates

Risk Analysis, Prospect Evaluation & Exploration Economics

Denver, Colorado	Calgary, Alberta	Houston, Texas
August 22 – 26	April 4 – 8	January 24 – 28
	September 26 – 30	May 9 – 13

Risk and Uncertainty Analysis for Unconventional Resource Plays

Denver, Colorado	Houston, Texas
February 22 – 23	May 2 – 3
	November 29 – 30

Play Based Exploration: Mapping, Volumetric and Risk Analysis

Houston, Texas
March 21 – 23
September 26 – 28

Register at: www.roseassoc.com/instruction Questions: allisonduinn@roseassoc.com Ph: 713/528-8422

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2011 AAPG/SEG SPRING BREAK STUDENT EXPO



See Web site for links to Expo **AGENDA**, host hotel, map, SEG Challenge Bowl details, short course descriptions, and poster guidelines, <http://geology.ou.edu>.

See Web site for links to Expo **AGENDA**, host hotel, map, SEG Challenge Bowl details, short course descriptions, and poster guidelines, <http://geology.ou.edu>

MARCH 9-11, 2011

- Private Interviews
- 2 Days of Short Courses
- Scientific Poster Contest
- SEG Challenge Bowl
- Company Booth Exhibits
- Door Prizes

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Find your perfect fit!

Short Courses

Challenge Bowl

Interviews

GEOSCIENCES STUDENTS

Go to <http://geology.ou.edu> and click on "2011 Spring Break Expo to register online! Submit resumes and abstracts to nchapin@ou.edu.

REGISTRATION OPENS JANUARY 3RD

COMPANIES

Review resumes and abstracts online. Booth space will be provided for company exhibits and rooms for private interviewing. Three sponsorship levels! Contact Niki Chapin to register, nchapin@ou.edu, 405-325-0360, or download the forms off our Web site and fax to 405-325-3140.

REGISTRATION OPENS JANUARY 3RD



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Jeffrey M. Rayner

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* * *

This month we'd like to highlight one of our Trustee Associates: **Michael S. Johnson**, who became an Associate in 2009.

Johnson has endowed a Digital Products Subscription for Ohio State University (his alma mater, '49) and created the Michael S. Johnson Named Grant, which will be awarded to a qualified geoscience graduate student studying at the school.

To endow a university subscription, or to establish a named grant, call the Foundation office, (918) 560-2674, or e-mail nadams@aapg.org.


And if you're interested in becoming a Trustee Associate, information can be found on the AAPG Foundation website at foundation.aapg.org.

The AAPG Foundation's five-year, \$35 million financial campaign is in the final phase. With over \$28.9 million raised, there is still a \$6.1 million gap to close.

There are two ways you can help: make a significant contribution, and/or involve your company.

Please consider adding a donation to the AAPG Foundation when you send in your dues statement.

To give online, go to <https://www.aapg.org/eDonation/Core/eDonation.aspx>.

To see the status of campaign pledges and contributions, and for a list of programs and projects supported, go to foundation.aapg.org. 

WHY I DONATE TO THE AAPG FOUNDATION:

“Recently, I received a 60-year Membership Certificate and was reminded what AAPG and the Foundation have meant to my career and to me personally. I support the Foundation because of its core focus: Financial assistance to students; transfer of knowledge through the Distinguished Lecture and Visiting Geoscientist Programs; and research and publications for use by this and future generations of energy explorers.

I urge members to make a new or enlarged gift to the Foundation as a part of the "Meeting Challenges and Assuring Success" Campaign to fulfill present and future needs of the membership.”



Bob Weimer



To give to the AAPG Foundation, go online to <http://foundation.aapg.org/donate.cfm> or mail to P.O. Box 979, Tulsa, OK 74101. Questions? Call 1-888-945-2274 Ext. 644.

Petroleum Technology Transfer Council



January & February workshops

Central/Eastern Gulf Region - Jackson, MS

1/11 The Role of Carbon Capture and Storage in Rejuvenating the Energy Portfolio of the Southeastern United States

Eastern Region - Evansville, IN

1/26 New Albany Shale: Lessons Learned in the Recently-completed RPSEA-GTI Research on the New Albany Shale Gas Project in Indiana and Kentucky

Rocky Mountain Region - Golden, CO

1/19 Completions and Stimulation for Geologists
2/8-9 Basic Well Log Interpretation

Texas Region - Farmers Branch, TX

1/20 Stimulations and Completions for Geologists

West Coast Region

1/19 Cementing - Sacramento, CA
1/26 Cementing - Bakersfield, CA
1/27 Cementing - Long Beach, CA

HQ Workshop

1/20 Exploring Alaska's Geology and Regulatory Landscape
*with DOE and the Alaska Support Industry Alliance, during Meet Alaska Conference - Anchorage, AK
1/24 GWPC Hydraulic Frac - Austin, TX

Visit www.pttc.org/national_calendar for more detailed information

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<http://techplace.datapages.com>



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CALL FOR ABSTRACTS

SUBMISSIONS DUE BY 15 FEBRUARY 2011

THE GEOSCIENCES EVENT FOR THE ARCTIC

Conference: 30 August - 2 September 2011
Exhibition: 30 August - 1 September 2011
World Trade and Convention Centre Halifax, Nova Scotia, Canada

www.3pArctic.com



**The Gulf Coast Association
of Geological Societies
CALL FOR PAPERS
61st Annual Convention
October 16-19, 2011
Veracruz, Mexico**



Hosted by the Asociación Mexicana de Geólogos Petroleros

The Asociación Mexicana de Geólogos Petroleros (AMGP) is proud to host the 2011 GCAGS Annual Convention to be held in Veracruz, Mexico. The meeting will run from October 16th-19th and will gather geoscientists from 13 affiliated geological societies from around the Gulf of Mexico and, more.

Our theme –“**Sharing Knowledge to Add Value**”– highlights the importance of sharing knowledge to maximize the value of the resources lying in the subsurface. GCAGS Transactions derived from annual conventions have long been recognized for gathering the best of geoscience from the Gulf Coast.

We invite geoscientists from all around the Gulf of Mexico to submit their contributions to the technical program as oral or poster presentations. This will be a great opportunity to exchange ideas.

Veracruz and AMGP are looking forward to have you in an unforgettable Convention.

PROPOSED TECHNICAL SESSIONS INCLUDE:

- Remaining potential in circum-Gulf of Mexico petroleum provinces
- Cenozoic sequence stratigraphic framework of the deep Gulf of Mexico and adjacent areas
- Climate change, geohidrology, geological risk, enviromental challenges, and sustainable development
- The Gulf of Mexico deepwater setting–Geology, economics, and technology
- New perspectives in fractured reservoirs
- Seismic imaging and interpretation of geologically complex areas
- Learning and teaching in the geosciences to meet new challenges
- Interaction between salt tectonics and sedimentation
- New concepts and methods in biostratigraphy
- Petroleum systems and oil quality controls in the Gulf of Mexico
- New approaches in sandstone reservoirs characterization and diagenetic modeling
- New insights into the geodynamic evolution of the Gulf of Mexico

SYMPOSIUM:

Jurassic reservoirs of the Gulf region: Stratigraphy, sedimentology, diagenesis, and modeling

HOW TO SUBMIT:

Abstracts (not more than 250 words) should be submitted for review online or via e-mail to the technical program chair. Papers should have application to Gulf Coast and Gulf of Mexico geology. Include your full mailing address, phone and FAX numbers, e-mail address, and whether you are submitting for oral, poster, or either (preferred).

Submit abstracts by February 4, 2011, as instructed on the website
www.gcags2011.com.

Notification of acceptance by March 4, 2011. All presenters, both oral or poster, must submit either a paper (10 to 12 published pages) or an extended abstract with key figures for review by April 22, 2011, for inclusion in the Transactions. Full instructions for authors will be posted at www.gcags2011.com.

ABSTRACT DEADLINE: FEBRUARY 4, 2011

Questions or ideas for the technical program should be directed to:

Juan Antonio Cuevas Leree
Technical Program Chair

juan.antonio.cuevas@pemex.com, Tel. +52(993) 3164588



DPA, GSL Reciprocity

A “mutual recognition of professional status” agreement has been announced by AAPG’s Division of Professional Affairs and the Geological Society of London.

The arrangement applies to Active AAPG members who hold DPA certification, and to Fellows of the Geological Society of London who have Chartered Geologist status.

Under the agreement, “fast-track systems” are now in place to help DPA

members quickly become chartered members in the London Geological Society, and for Chartered GSL members to have DPA certification.

Qualified AAPG members should contact Norma Newby, AAPG Divisions manager, at nnewby@aapg.org.

GSL fellows should contact Mohammed Jahangir, Fellowship Services manager, at mohammed.jahangir@geolsoc.org.

MEMBERSHIP&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 nor certification, 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.

Information included here comes from the AAPG membership department.

(Names of sponsors are placed in parentheses. Reinstatements indicated do not require sponsors.)

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

For Active Membership

California

Beagle, Peter Francis Jude, Horizon Well Logging, Arroyo Grande (G.N. Hummel, L.S. Sutfin, W. Gilmour); Brewster, David Pace,

Black Coral, Bakersfield (D.H. Suek, T.P. Lovseth, M.W. Longman); McWilliams, Cory, Chevron, Bakersfield (R. Fiore, M.J. Henning, L.E. Drennan)

Montana

Pantano, John, consultant, Butte (Z. He, S.G. Franks, J.W. Tucker)

New Mexico

Diede, Loren, D-D Consulting Services, Navajo Dam (P.E. Kondrat, J.M. Hornbeck, E.A. Pippin)

Texas

Leonardi, Janet, Nexen Petroleum, Plano (J.J. Galluzzo Jr., S.T. Quarles, J.T. Altum); Penfield, Glen T., Chicxulub Geosciences, Houston (reinstate); Townend, Edward, Ikon Science, Houston (G. Bull, P. Clegg, R. Lubbe)

West Virginia

Walker, Rachel Inez, Countrymark Energy Resources, Huntington (R.L. Sumner, M. Mastalerz, J.C. Hower)

Continued on next page



Stepping into the new decade of 21st century, PGCE.2011 still keeps our faith towards the fundamental philosophies behind the science of earth exploration, while embracing the evolution of the game-plan with the introduction of breakthrough technology.

This year, we would like to invite you to join us, to celebrate the spirit of innovation, and to explore new ideas and new ways in order to cater the needs of finding challenging discoveries.

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Continued from previous page

Australia

Menacherry, Saju, University of Adelaide, Adelaide (J.G. Kaldi, S.C. Lang, R.B. Ainsworth); **Willink, Louise Adine**, Roc Oil, Sydney (S.R. Greaves, D. Garrad, L.E. McLean)

Canada

Murtaza, Ahmed Golam, PetroKazakhstan, Calgary (A.M. Shamsuddin, N. Ahmed, A.N. Lodhi)

Egypt

Ragab, Adel Mohamed Salem, Suez Canal University, Suez (W.P. Bosworth, H.Z. El-Mowafy, A.M. Bakr)

England

Botsford, Andrew, PGS, Weybridge (M. Jameson, R.A. Borsato, R. Lamb); **Guderjahn, Charles G.**, BP, Sunbury (P.D. Carragher, C.A. Yeilding, A.J. Fraser)

Netherlands

de Coster, Amelia, WL Gore Surveys, Maastricht (F.J. Marcano, C.P. James II, N.M. Houghton)

Nigeria

Ogunleye, Michael Olaposi, Shell Petroleum Development, Port Harcourt (O.T. Obilaja, J.U. Agbo, C.A. Bakare); **Opene, Adaeze Ijeoma**, Statoil Nigeria, Lagos (G. O. Agunwoke, O. K. Ulu, O. F. Lawal); **Taiwo, Idris Babatunde**, Oando Exploration and Production, Lagos (A.O. Abiru, T.A. Lawal, O.A. Olawoki)

Norway

Hatlo, Vibeke Linda, Statoil ASA, Bergen (B.A. Tocher, A.K. Thurmond, J.B. Thurmond)

Oman

Bashir, Shams, PDO, Muscat (reinstate)

Pakistan

Daud, Farrukh, OMV Pakistan Exploration GmbH, Islamabad (M.R. Khan, O. Hamood, M.Z. Khan)

Republic of Korea

Huh, Sik, Korea Ocean Research and Development Institute, Kyonggi (G.H. Lee, K. Choi, P. Weimer)

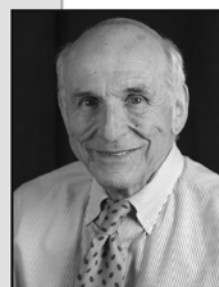
Russia

Selenev, Sergey Ivanovich, GPB Neftegaz Services B.V., Moscow (N.G. De Ath, S.J. James, D.A. Podboronov)

Uganda

Abeinomugisha, Dozith, Uganda Government, Kampala (E.N.T. Rubondo, P.K. Thuo, E.A. Kilembe)

WHY I DONATE TO THE AAPG FOUNDATION:



Michael S. Johnson

“The satisfaction of helping qualified students who have financial needs is one of the main reasons for participating in such a program.”



Johnson has established the Michael S. Johnson Named Grant, which awards an annual grant to a geology student at Ohio State University. Johnson also endowed the Digital Products Fund-University Subscription for Ohio State University, providing students with uninterrupted access to the entire AAPG Digital Library – over 850,000 pages of international, national, and regional libraries of petroleum and geology and geophysics information. Johnson joined the AAPG Foundation Trustee Associates in 2009.

To give to the AAPG Foundation, go online to <http://foundation.aapg.org/donate.cfm> or mail to P.O. Box 979, Tulsa, OK 74101. Questions? Call 1-888-945-2274 Ext. 644.

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Certification

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

Petroleum Geologist

Colorado

Gregory P. Smith, GPS Consulting Services, Fort Collins (D. McKenna, B. Nagel, S. Sonnenberg)

Louisiana

Stephen D. Caffery, LLOG Exploration Company, Lafayette

Oklahoma

Suzanne M. Rogers, Sandstone Energy Acquisitions, Oklahoma City (SIPES)

Texas

Aaron J. Adams, Anadarko Petroleum, The Woodlands (P. Gamwell, F. Rad, D. Behseresht); **Eleazar J. Benedetto-Padrone**, Ryder Scott, Houston (J. Broome, F. Castellan, P. Santogrossi); **Jeffrey A. Faber**, Encana, Dallas (C. Vavra, B. Rowland, B. Reinhart); **Wayne R. Harris**, CGG Veritas, Houston (F. Bifano, J. Dungan, K. Rovange); **Thomas L. Jones**, consultant, Yoakum (SIPES); **Jeffrey T. Kremer**, Brazos Gas, Dallas (SIPES); **Santiago M. Reynolds**, consultant, Houston (reinstatement)

Petroleum Geophysicist

Texas

Ralph W. Baird, Baird Petrophysical International, Houston (SIPES); **Kenneth R. Nixon**, CGG Veritas Services, Houston (J. Fiduk, J. Heppermann, G. Latimer)



DIVISION OF ENVIRONMENTAL GEOSCIENCES



Membership

If you already are a member of AAPG, but not a member of DEG, you are missing out on being a part of those keeping up to date on environmental issues and technologies that can affect all of the energy exploration and production industry! Through our technical journal (*Environmental Geosciences*), theme sessions at AAPG annual and international meetings, networking, and website, DEG helps professionals stay abreast of what they need to know in this rapidly changing field. JOIN NOW by going to http://deg.aapg.org/membership_form.cfm for an application.

If you aren't a member of AAPG and DEG, and your interests are in the area of environmental geosciences, NOW is the time to become a part of the largest energy resources society and its division responsible for that field of study and practice. See AAPG Membership Services at <http://www.aapg.org/member/index.cfm> for an AAPG application.

Membership in DEG is free for students who already are members of AAPG! Active and Associate membership is \$45 for U.S. members and \$55 for international members (includes international mailing of the journal). Any active and associate members joining before February 28, 2011 receive a full set of 2010 issues on CD of *Environmental Geosciences*.

Environmental Geosciences

DEG's technical journal, published quarterly, serves as our means of disseminating case studies and technologies related to the application of environmental geology to energy resources and their recovery. Special issues of the journal address such timely topics on energy and the environment as **carbon sequestration** and **shale gas development**.

Starting in July 2011, the journal is going entirely digital! DEG members will receive the journal as part of their membership on CD (once a year) and have on-line access to all articles as they are published.

Two divisions of the American Association of Petroleum Geologists—the Division of Environmental Geosciences and the Energy Minerals Division—are collaborating to bring current research studies on the Marcellus shale play from various scientific disciplines together into one or more special issues of the *Environmental Geosciences* Journal. We seek manuscripts regarding not only the geology, geochemistry, and reservoir characteristics of the Marcellus shale, but also water management and environmental assessment-targeted studies. Questions may be directed to Kristin Carter, *Environmental Geosciences* Editor-in-Chief at kr Carter@state.pa.us.



POST DOC AND PHD RESEARCH ASSISTANTSHIPS IN STRATIGRAPHY/SEDIMENTOLOGY CHEVRON CENTER OF RESEARCH EXCELLENCE DEPARTMENT OF GEOLOGY AND GEOLOGICAL ENGINEERING COLORADO SCHOOL OF MINES

The Chevron Center of Research Excellence (CoRE), an innovative academic-industry relationship that promotes world-class research and education (<http://www.ccore.mines.edu/>), invites applications for Post Doc and PhD Research Assistantships to begin in summer 2011. The successful applicants will participate in one of two funded projects: (1) quantitative outcrop characterization of deepwater distributive systems with an emphasis on 3D distribution of high reservoir quality fairways, or (2) quantitative outcrop characterization of a flood-plain dominated fluvial system with emphasis on connectivity and clustering of channel belts. These projects will involve extensive fieldwork in desolate, mountainous regions. Please contact Dr. David Pyles (dpyles@mines.edu) for more information about the research projects.

PhD Research Assistantships:

Applicants for fully funded PhD Research Assistantships must have an M.S. in geology or related field at the time of appointment. Preference will be given to applicants with specialties in outcrop characterization. To apply, follow the on-line application process at http://www.mines.edu/graduate_academic. Please clarify your interest in working with Dr. David Pyles and CoRE in your Statement of Goals. Applications must be completed by January 31.

Post Doc Positions:

Applicants for two-year Post Doc positions must have a Ph.D. in stratigraphy/sedimentology at the time of appointment. Preference will be given to applicants with specialties in outcrop characterization. Experience with petroleum-related research studies and/or petroleum industry experience will be advantageous. The successful candidate must demonstrate strong interpersonal and communications abilities, provide a record of successful collaborative research experiences, have a solid publication record, and have a willingness to travel internationally. Applicants must send a letter of application, résumé, brief statement of professional goals with an emphasis on research objectives, and names and addresses of three professional references to: Ms. Charlie Rourke, Dept of Geology and Geological Engineering, Colorado School of Mines, 1516 Illinois Street, Golden, CO 80401 (crouke@mines.edu). Review of applications will begin no later than February 2011.

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

CLASSIFIED ADS

POSITION AVAILABLE

Petroleum Exploration Geologist Newfield Exploration Tulsa, OK

Seeking Geologist, responsible for conducting detailed prospect analysis and play fairway assessments within the Mid-Continent Region plus the generation and presentation of prospect ideas and leads to management. This position would be located in Tulsa, OK.

The successful applicant will generate and update maps, logs, cross-sections and corporate databases with new tops, correlations, shows and other pertinent geological data. Develop regional, multi-county stratigraphic framework and subsurface correlations.

Minimum qualifications, ten years of experience, knowledge of Mid-Continent upstream oil and gas, experience with conventional and un-conventional plays, experience doing play-fairway analysis assessments. Send resume to kieflier@newfield.com.

Energy Science School of Earth Sciences The College of Arts and Sciences The Ohio State University

The School of Earth Sciences at The Ohio State University (OSU) invites applications for a newly established tenure-track position in Energy Science – broadly defined. We are seeking applicants with a doctoral degree and research interests who will address fundamental problems directly relating to energy in the drillable subsurface. Potential applicants will have interests in one, or several topical areas such as unconventional hydrocarbon resources, carbon chemistry, energy recovery and storage or geomechanical impacts on energy extraction processes. The candidate will have advanced capabilities in at least some of the following areas: 1) mathematical modeling of physical, chemical and biochemical transformations of carbon in the subsurface, 2) oil and gas formation/migration, 3) carbon migration, 4) mechanical properties of rocks (fracture modeling) in relation to reservoir development, 5) thermodynamics, 6) reflection seismology or 7) energy systems in basin analysis. We expect that this individual will develop strong collaborative links and funding opportunities with industries concerned with problems of the subsurface in addition to federal agencies.

The successful applicant is expected to have a developing record of research achievement through publications and external funding. Applicants from industry with such a track record of excellence are encouraged to apply. The new faculty member will be expected to contribute to the development, teaching, and enhancement of our education program in energy at the graduate and undergraduate levels. The new hire is expected to develop an independent research program in the area of energy science, and to generate external funds at a level that is appropriate for maintaining a research program at a major academic institution. We expect a strong effort to foster interactions with energy-related companies and to develop student opportunities in the energy area.

Applicants should submit a letter of application, curriculum vitae, and a statement of research interests and teaching philosophy. Candidates should arrange for three letters of recommendation to be sent under separate cover by the candidate's referees. Applications and letters should be sent to: Professor Frank W. Schwartz, 275 Mendenhall Laboratory, 125 South Oval Mall, School of Earth Sciences, The Ohio State University, Columbus, OH, 43210. The anticipated start date for the position is October 1, 2011. The position is open until filled. Information about the School of Earth Sciences can be found at <http://www.earthsciences.osu.edu>.

To build a diverse workforce Ohio State encourages applications from individuals with disabilities, minorities, veterans and women. EEO/AA employer. Ohio State is an NSF Advance institution.

Sedimentology/Stratigraphy

The Department of Geological Sciences at The University of Alabama invites applications for a tenure-track faculty position in sedimentology and stratigraphy, beginning August 2011. The position will be filled at the Assistant Professor level. Candidates must have a strong record of research and must have received their Ph.D. in Geology or a related field at the time of appointment. The successful candidate will be expected to teach introductory geology courses and undergraduate and graduate courses in sedimentology and stratigraphy, supervise student research projects at the master and doctoral levels, and establish a vigorous externally-funded research program in sedimentology and/or stratigraphy. The department has a broad range of geophysical, modeling, isotopic and geochemical research facilities available. Details regarding existing research programs, related department equipment and facilities are found at www.geo.ua.edu. For inquiries regarding the position, contact Dr. Delores Robinson, Chair of Sed/Strat Search Committee (dmr@geo.ua.edu) or Dr. Ibrahim Çemen (icemen@as.ua.edu), Chair of the UA Dept. of Geological Sciences.

Applicants should go to <https://facultyjobs.ua.edu> to electronically apply. When submitting an application, candidates must provide a research statement, teaching statement, curriculum vitae with contact information for at least three referees. Applications will be reviewed beginning January 14, 2011, and will continue until the position is filled. Prior to the hiring, the final candidate(s) may be required to successfully pass a pre-employment background investigation.

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RICE

Energy and Environment Faculty Position

Rice University
Department of Earth Science

The Earth Science Department at Rice University is accepting applications for a tenure-track position in Energy and the Environment. We are interested in applicants who bridge disciplines, and who can participate in Rice's emerging Energy and Environment initiative that has a focus on using hydrocarbon resources in a more sustainable fashion. This includes many aspects of traditional and nontraditional hydrocarbon exploration and reservoir characterization, as well as CO₂ management. We particularly encourage women and minority candidates to apply.

Successful candidates are expected to supervise graduate research and teach courses for undergraduate and graduate students. Details about the department and its facilities can be found at <http://earthscience.rice.edu>.

Although we anticipate hiring at the assistant professor level, well-qualified applicants at any level will be considered. Applications received by February 1, 2011, will receive the fullest attention.

Please send a CV, research and teaching statements, and names of five references to:
Search Committee Chair
Earth Science Department, MS-126
Rice University, PO Box 1892
Houston, TX 77251-1892

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DIRECTOR'S CORNER

Datapages Open to Individual Subscriptions

By RICK FRITZ, AAPG Executive Director

In writing this column, I am on a plane returning from Mexico City. This was the first time the Executive Committee met in Mexico City. The city is a beautiful place with impressive buildings and great museums. It also had some of the best restaurants I have ever visited. My mind may forget their names, but my stomach never forgets.

One of the items that was finalized at the meeting was a review of the AAPG Datapages member subscription process. This Datapages library is one of the largest petroleum geoscience digital libraries in the world. It contains all of AAPG's publications – including the special publications. In addition, over the past 10 years AAPG has offered to digitize the publications of Affiliated and Associated societies and those of the Sections.

Typically there is no cost to the contributing society for digitization. AAPG provides it as a service as long as their digits can be included as part of the Datapages library. In addition the contributing society receives a royalty each year for the Datapages industry subscriptions. To date AAPG has provided more than \$620,000 in royalties.

As a result, Datapages includes digital publication collections from more than 30 geoscience publishers – mostly Affiliated and Associated societies. Contributors



FRITZ

Datapages is a tremendous digital library; it can be a key asset for any geologist, geophysicist or engineer.

include the Canadian Society of Petroleum Geologists, Circum Pacific Council of Energy and Mineral Resources, Gulf Coast Association of Geological Societies, Geological Society of Trinidad and Tobago, Houston Geological Society, Indonesian Petroleum Association, Rocky Mountain Association of Geologists, Tulsa Geological Society and Wyoming Geological Association.

(Note: SEPM is included in the corporate subscriptions but has its own individual subscription program).

To date most of the subscriptions for the Datapages library are to corporations and university endowments through the AAPG Foundation. The monies from these subscriptions are used to add more digital publications into the system. There are a few subscriptions for individuals, but until now there was no online payment program to

make it easy to subscribe.

At an earlier meeting in San Antonio, the Executive Committee decided to provide the opportunity for all members to subscribe. Starting in January, any AAPG member can subscribe to the Datapages digital library for less than \$21 per month (\$295 per year).

For now, subscriptions will not be offered to non-members.

Please note this is an individual subscription only. Corporate subscriptions are available based on the number of users in the company.

The announcement concerning the new individual subscriptions will be made in January via e-mail. Members also can check online for the subscription. Individuals will be able to access the digits through an online payment process and your regular member password.

Sometimes I am asked, "Why doesn't AAPG just provide the Datapages library free to all members?"

► First, the Datapages collection is an ongoing digital program with regular expenses for personnel, equipment and software.

► Second, AAPG would risk losing the corporate subscriptions that support the digitization program and allows AAPG to add new publications.

► Third, other than the BULLETIN and Special Publications, AAPG does not own this data. It is owned by the various societies.

► Finally, there are serious tax implications to AAPG not-for-profit status if we start giving everything free (even though we would like to).

Datapages is a tremendous digital library and offers significant, fingertip information on fields, formations, geological processes, geophysical interpretation, etc. It can be a key asset for any geologist, geophysicist or engineer.

I hope you enjoy it.

DIVISIONS' REPORT

DPA Moves Forward With Business Plan

By DANIEL J. TEARPOCK, DPA President

First, I want to thank everyone who has stepped up to provide assistance in these first six months of the 2010-11 fiscal year to move the DPA Business Plan forward. The DPA held its mid-year meeting in Houston in November, and from all accounts the meeting was very successful – so thanks to everyone who provided input into this meeting.

Second, I'd like to provide to you the status of the DPA's key goals for this fiscal year.

► **An Expanded International Presence.**

As you read in my last column (October EXPLORER), we have established councilors in three AAPG regions. John Brooks (European Councilor) has been very busy on several fronts. The DPA has had reciprocity with the Geological Society of London (GSL) since 1995. In order to ensure that members of each society understand this reciprocity and can easily take advantage of it, John has been working with the GSL to develop a "Mutual Recognition of Professional Status Arrangement" between DPA and GSL.

(For more on this, see the related story on page 36 of this EXPLORER.)

John, as DPA vice chair for the next AAPG International Conference and Exhibition, slated this October in Milan, is developing a tremendous DPA program. Stay tuned for further updates on the DPA program for the conference.

Bob Shoup, a past DPA president and current Asia Pacific DPA councilor, is getting the DPA message of "Ethics and Professionalism" out in his region. You may know that Bob has developed a great talk called "Black Belt Ethics." In October he gave the talk to a group of young



TEARPOCK

professional members of SPE in Kazakhstan. He also gave the same talk in December in Bangkok, Thailand, to SEAPEX, Thailand SEG and the SPE Young Professionals.

► **Expand Overall DPA Membership.**

The Membership Committee and the DPA staff at AAPG headquarters are near completion of phases 1 and 2 of our current membership campaign – our largest membership campaign since Mike Party was DPA president in 2004-05. We are confident that we will reach our goal of 200 new members during the current fiscal year. At this time our membership campaign has generated 66 new DPA applications.

Consider DPA's motto, "Pride of Professionalism." It expresses that we strive for technical excellence as geoscientists, focusing on integrity while concerned with energy demands, its conservation, the environment of our nation and the world.

Deborah Sacrey, another DPA past president, stated in DPA's "Guiding Your Career as a Professional Geologist" manual that being a DPA member can be important for both professional and financial growth, as it focuses on professionalism in one's career as well as issues on ethics and career management through business aspects of the petroleum industry.

The additional credibility of becoming recognized by one's peers as a "certified" professional adds an additional boost to one's standing in the geoscience community.

If you have been thinking of joining the DPA but have just been putting it off, NOW is the time to shed that procrastination and consider becoming certified.

► **Gathering and Learning Events.**

The DPA will host a Town Hall meeting in Shreveport, La., on Feb. 9, spearheaded by Bill Meany, the DPA councilor from Shreveport. The gathering is both a social event as well as a learning experience. We will be discussing DPA's mission, its interaction with the AAPG and the petroleum industry.

Bill certainly can use assistance from local DPA members to make this a successful event; we are asking DPA members to support this important event and encourage each local Shreveport area DPA member to bring several AAPG members who currently are not DPA members to the Town Hall meeting.

Also, I will be giving two ethics talks during the first quarter of 2011. The first is Jan. 26 at the Houston Geological Society, followed by another in Jackson, Miss., on Feb. 10. These talks provide to all geoscientists – not just DPA members – an opportunity to reflect on an important part of our everyday career "Ethics and Professionalism."

We as geoscientists are constantly improving our core technical competencies; this is a given. It is one of the cornerstones of a successful career.

"Professional Responsibility" that leads to "Professional Reliability" is the second cornerstone to building confidence in ones products or services. Professional Responsibility encompasses the duties of geoscientists

to act in a professional manner; obey the law; avoid conflicts of interest; and put the interest of his or her clients or company ahead of and above their own interests.

These ethics talks also provide the attendees with one Professional Development Hour that may be required for a license by a state agency or certification by various societies.

► **U.S. Governmental Affairs.**

DPA's Governmental Affairs Committee (GAC) continues to define key issues important to geoscientists and to address these issues with policy makers. The GAC is currently working on two new AAPG statements – one on a national energy policy, and one on U.S. onshore access to BLM lands for exploration.

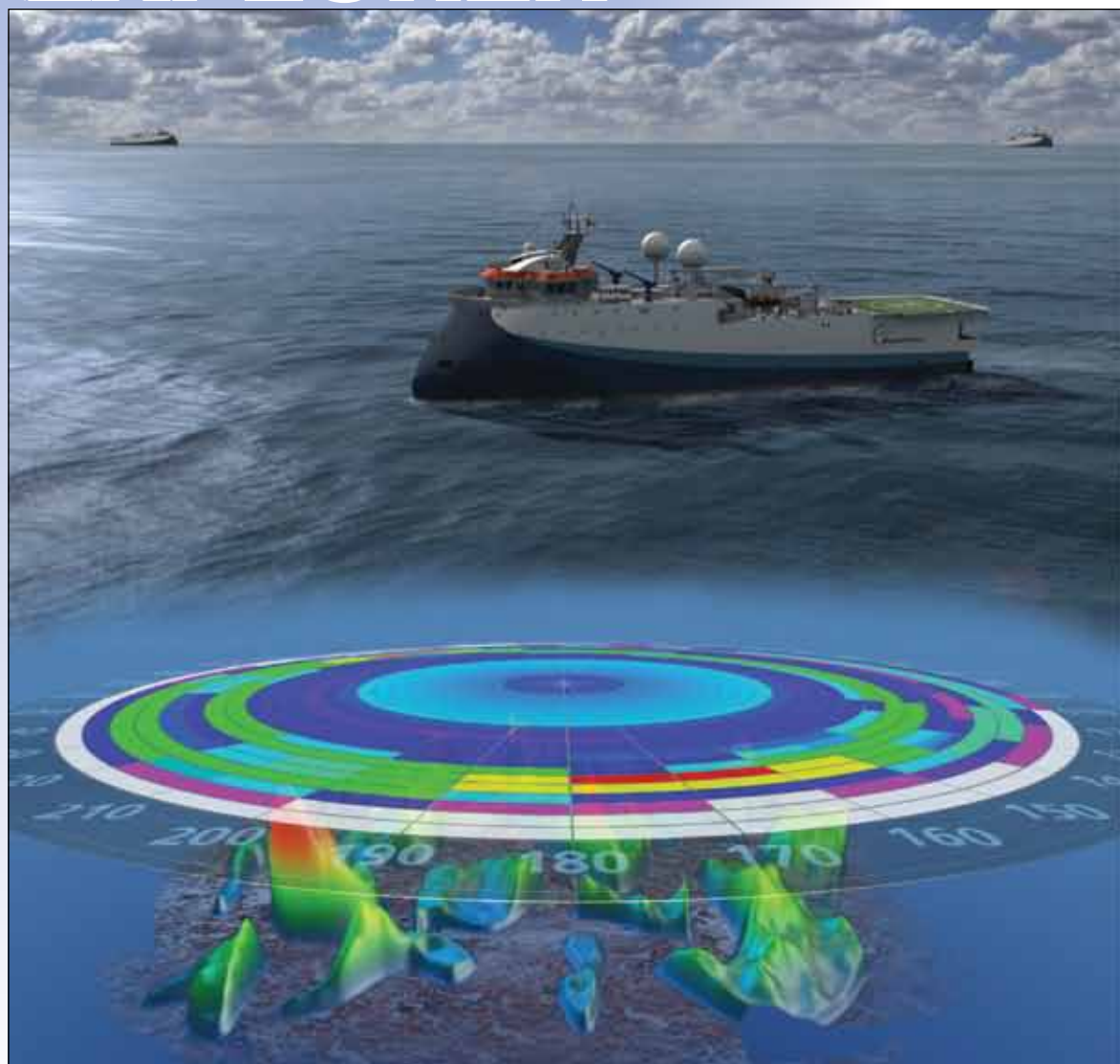
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As always, I encourage you to think Volunteerism!

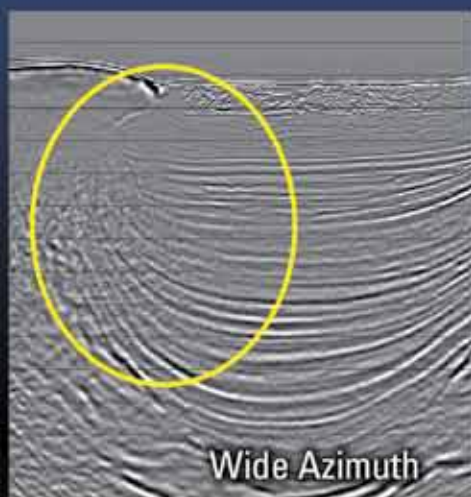
Think of all the good that the AAPG and DPA do for us and our industry. I could not imagine our industry without them. The society offers conferences, the BULLETIN, EXPLORER and Correlator for professional enrichment, information and the publishing of technical papers. The society provides a forum to debate our industry topics, network with fellow geoscientists and much more.

In order for AAPG to meet its purpose, "To foster scientific research, to advance the science of geology, to promote technology and to inspire high professional conduct," the society and its Divisions, the DPA, EMD and DEG, need volunteers who are excited and energized to give back to the geoscience community. [E](#)

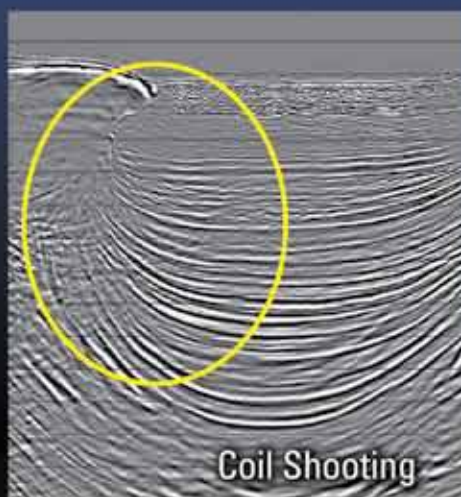




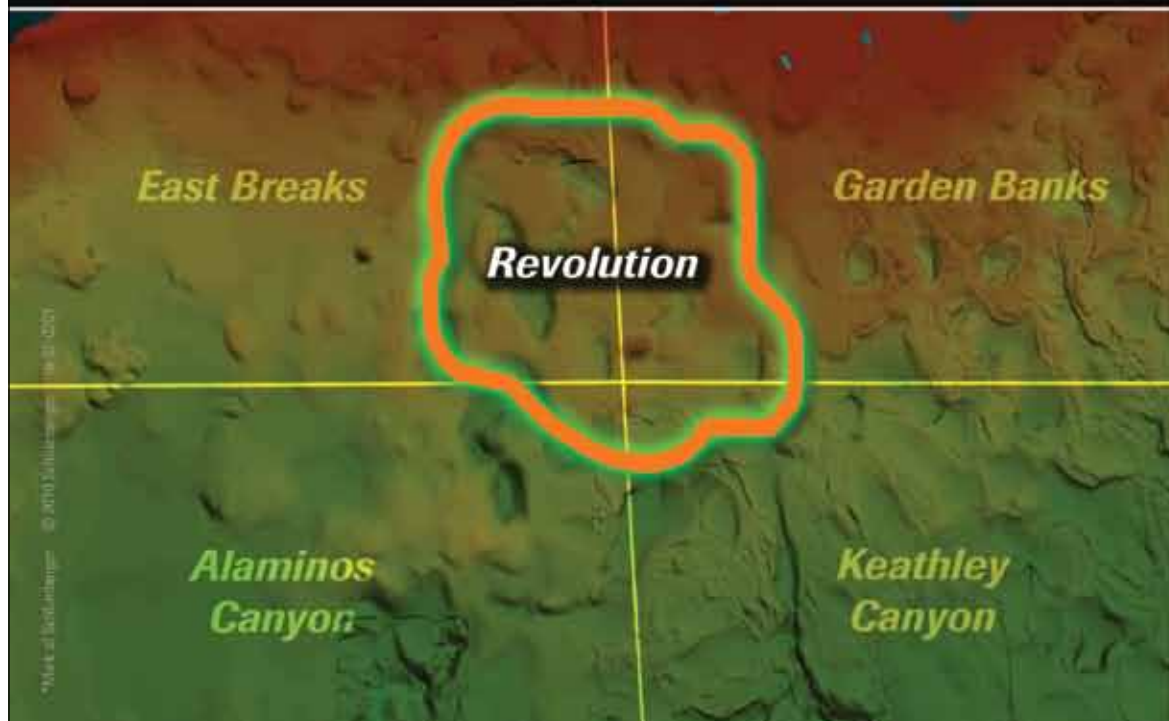
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- Kirchhoff and anisotropic RTM final volumes

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