

NAPE® '09 Special Edition

February 5-6, 2009

Hart Energy Publishing, LP

EXPO OVERVIEW

Winter NAPE Attendance Steady In Volatile Year

Deal-making and networking remain critical needs in any economic climate.

By Susan Klann, Managing Editor, *Oil and Gas Investor*

As it has every year since the first NAPE event 16 years ago, attendance at this year's NAPE is setting a new record.

"Right now attendance is up 5% over last year's figures, with booth sales expected to rise by the same percentage," says Robin Forté, executive vice president of



Attendance is expected to set another record in 2009.

(Photo courtesy of NAPE)

AAPL and NAPE Expo LP.

"Our outlook is for a strong NAPE. Historically, attendance at this event doesn't react negatively to lower commodity prices. We've had growth every year for 15 years. What we find is that for companies or individuals having a good year NAPE is a place of celebration, and for those experiencing tougher times, it serves as a revival and rebuilding venue.

"We find that NAPE fits the hand with whatever glove is needed at the time."

Last year 15,700 attendees registered for NAPE and 1,611 booths exhibited; for 2009 Forté expects as many as 1,700 booths, 16,000 registrants, and 900



Robin Forté, AAPL and NAPE Expo LP

(See *Expo Overview* on page 17)

NEW WEB RESOURCE

Hart's Unconventional Gas Center Website Launches With Robust Shale Data

By Lindsay Goodier, Online Editor, Hart Energy Publishing

Hart Energy Publishing has recently expanded its footprint in the unconventional gas arena by creating the most comprehensive web resource available. The Unconventional Gas Center (domain name UGCenter.com) presents the latest information, archives and bibliography on unconventional gas plays.

This new website profiles the most significant shale and tight-gas plays in North America and emerging shales around the world, as well as coalbed-methane plays and gas hydrates.

Information ranges from the latest company and well news, activity highlights, to production results and financial analysis. Additionally, the site offers more than two years of archived information previously produced by Hart Energy Publishing in the *Unconventional Natural Gas Report*, a weekly newsletter edited by Ann Priestman.

For easy navigation, the site offers quick links to the latest information on several key plays, including news,

maps, webinars, articles from the newsletter and from *Oil and Gas Investor* and *E&P* magazines, and other data.

Shales and tight-gas plays featured at the Unconventional Gas Center (UGCenter.com) include the Bakken, Barnett, Bossier, various Canadian shales, Cotton Valley, Fayetteville, Haynesville, Marcellus, Piceance/Uinta, Pinedale/Jonah and Woodford. The site also provides extensive current and historical information on coalbed methane and gas hydrates.

A subscription to the Unconventional Gas Center (UGCenter.com) includes access to the Activity Highlights Database, a comprehensive interactive global map that allows premium subscribers to search Eastern, Western, Midcontinent, Gulf Coast and International discoveries by basin, play, county and company.

To find out more about subscribing to the Unconventional Gas Center (UGCenter.com), contact Attrice Hunt at 713-260-6437 or ahunt@hartenergy.com. ●

DUG: Developing Unconventional Gas Set For April 6-8

Conference focuses on economics and technology strategies in the shale plays.

E&P companies may be fine-tuning their budgets and drilling plans to meet 2009's many challenges, but plenty of opportunities will command attention in the high-margin, tight-gas and shale plays.

At what price will these plays remain economic? How can technology drive production up and costs down? How are E&P companies dealing with the hurdles unique to each play? Learn about these issues and more at the 4th annual DUG, **Developing Unconventional Gas** in Fort Worth.

This popular event, sponsored by *Oil and Gas Investor* and *E&P* magazines, has been expanded to

(See *DUG* on page 8)

INSIDE THIS ISSUE

3	SCHEDULE OF EVENTS WEBINARS OFFER IN-DEPTH LOOK AT E&P, FINANCE, TECHNOLOGY ISSUES
4	PGS' CADDO III MULTI-CLIENT SURVEY OVERCOMES CHALLENGES OILANDGASINVESTOR.COM PAVES WAY FOR UPSTREAM INDUSTRY ONLINE
6	P2 PROVIDES E&P'S FLEXIBILITY TO MANAGE MARKET CYCLES INTERVENTIONLESS GAS-WELL COMPLETION
7	HEFTY POTENTIAL SEEN IN THE BAKKEN
8	BUYERS SEEKING SELLERS CAPITAL PROVIDER UPDATE
9	TIGHT CAPITAL MARKETS, LOWER PRICES SLOW A&D ACTIVITY
10	HAYNESVILLE SHALE
11	DRILLINGINFO PROVIDES TOP-FLOOR TO RIG-FLOOR SOLUTIONS
12	DRILL-BIT-FOCUSED NEW CENTURY SEES OPPORTUNITY AS A&D MARKET EVOLVES
14	CLICK HERE: A NEW SOURCE FOR HYDROCARBON DATA
15	THE RODMAN ENERGY GROUP FORESEES OPPORTUNITY IN 2009
16	WEATHERFORD APPLIES ITS CREDO OF TECHNOLOGY AND EFFICIENCY TO THE SHALE PLAYS
18	THE MIGHTY MARCELLUS

HydrocarbonSearch.com

Your digital oilfield.

Build better shale plays.



You need to understand your shale plays. Weatherford's extensive mud logging and core evaluation services, coupled with geosciences and reservoir engineering expertise, can help you better evaluate your prospects and prioritize development activities.

You need to drill and complete your shale plays. Weatherford's horizontal-well placement technology, coupled with completion, fracture stimulation and microseismic services, can help you better optimize well production.

You need to manage production from your shale plays. Weatherford's production and intervention products and services can help you better maximize life-of-well recovery.

To find out how we can help you build more value into your shale prospects, contact your Weatherford representative or visit weatherford.com.



Weatherford[®]
Build....



Produced by
Hart Energy Publishing, LP
1616 S. Voss, Suite 1000
Houston, Texas 77057-2627
713-260-6400
Fax: 713-840-8585
HartEnergy.com

EDITOR-IN-CHIEF
OIL AND GAS INVESTOR
Leslie Haines
713-260-6428, lhaines@hartenergy.com

EXECUTIVE EDITOR, OIL AND GAS INVESTOR
Nissa Darbonne
713-260-6429, ndarbonne@hartenergy.com

MANAGING EDITOR, OIL AND GAS INVESTOR
Susan Klann
sklann@hartenergy.com

SENIOR EXPLORATION EDITOR
OIL AND GAS INVESTOR
Peggy Williams
303-756-6824, previewpub@aol.com

FINANCIAL EDITOR
OIL AND GAS INVESTOR
Jeannie Stell
713-260-6427, jstell@hartenergy.com

EDITOR, A&D WATCH
Steve Toon
713-260-6431, stoon@hartenergy.com

EDITOR
OIL AND GAS INVESTOR THIS WEEK
Stephen Payne
713-260-6432, spayne@hartenergy.com

ONLINE EDITOR, OIL AND GAS INVESTOR
Lindsay Goodier
713-260-6443, lgoodier@hartenergy.com

CONTRIBUTING EDITOR
Stuart Smoller

CORPORATE MARKETING DIRECTOR
John Lauletta
713-260-6476, jlauletta@hartenergy.com

PRODUCTION DIRECTOR
Jo Pool
713-260-6404, jpool@hartenergy.com

ART DIRECTOR
Alexa Sanders

GRAPHIC DESIGNER
James Grant

PUBLISHER
Shelley Lamb
713-260-6430, slamb@hartenergy.com

REGIONAL SALES MANAGER
Bob McGarr
713-260-6426, bmcgarr@hartenergy.com

REGIONAL SALES MANAGER
Charlie Chase
713-260-6466, cchase@hartenergy.com

REGIONAL SALES MANAGER
Mitch Duffy
713-260-6457, mduffy@hartenergy.com

Hart Energy Publishing, LP

VICE PRESIDENT, HART PUBLISHING GROUP
Brion D. Palmer

VICE PRESIDENT, HART CONSULTING GROUP
E. Kristine Klavers

SR. VICE PRESIDENT & CFO
Kevin F. Higgins

EXECUTIVE VICE PRESIDENT
Frederick L. Potter

PRESIDENT & CHIEF EXECUTIVE OFFICER
Richard A. Eichler

Copyright 2009 Oil and Gas Investor/Hart Energy Publishing LP, Houston, Texas. NAPE Expo 2009—A Special Report is produced for distribution at NAPE Expo 2009, Feb. 5-6, 2009. The publication is edited by the staff of Hart Energy Publishing, LP.

SCHEDULE OF EVENTS

NAPE[®] Expo 2009

George R. Brown Convention Center, Downtown Houston

THURSDAY, FEBRUARY 5, 2009

7 a.m. - 6 p.m.

Exhibitor and Viewer Registration

8 a.m. - 6 p.m.

Expo Open

8 a.m. - 2 p.m.

Auction,

presented by The Oil & Gas Asset Clearinghouse

Grand Ballroom A, 3rd floor

11:45 a.m. - 1:15 p.m.

Lunch Buffet for Exhibitors and Viewers

Exhibit Hall A3, 3rd floor

11:45 a.m. - 1:15 p.m.

Industry Luncheon,

sponsored by Shell Exploration & Production

Grand Ballroom B, 3rd floor

Registration Required

5 p.m. - 6 p.m.

Reception for Exhibitors and Viewers

Exhibit Hall Floor

FRIDAY, FEBRUARY 6, 2009

7 a.m. - 1 p.m.

Exhibitor and Viewer Registration

8 a.m. - 4 p.m.

Expo Open

11:45 a.m. - 1:15 p.m.

Lunch Buffet for Exhibitors and Viewers

Served in Exhibit Hall A3, 3rd floor

4 p.m. - 7 p.m.

Exhibit Teardown

No teardown permitted during exhibit hours

UPSTREAM INFORMATION

Webinars Offer In-depth Look At E&P, Finance, Technology Issues

By Lindsay Goodier, Online Editor,
Hart Energy Publishing

The New Year has begun with many challenges in the oil and gas and financial industries, but in these challenges there are new opportunities. Hart Energy Publishing's editorial team is implementing new ways to keep E&P teams, business development experts, investors and financial players informed and educated through digital initiatives. One such initiative is webinars.

These interactive presentations, typically 45 minutes to an hour, feature two to four experts on each subject. Audience members can view speakers' PowerPoint presentations and listen to the conversation from the convenience of their own offices, or anywhere that they have computer and Internet access. They also can email their questions to the moderator, to be answered during the live format.

The beauty and flexibility of these webinars is that they give interested participants the opportunity to listen in later, or recommend this to colleagues, as each webinar is archived at OilandGasInvestor.com.

Oil and Gas Investor is continuing to build on the success of its webinar series, as each month, at least two webinars will be featured at OilandGasInvestor.com. The Bakken shale webinar aired in November has been the most popular in the series to date, featuring two operators and two service company speakers discussing the Bakken's technical merits, drilling activity and financial impact.

More than 1,000 live listeners and nearly 500 on-demand archive attendees have listened in—attesting to the E&P and financial industries' need to have information on critical issues delivered in this convenient format.

To register for an *Oil and Gas Investor* webinar, visit OilandGasInvestor.com. ●

Oil and Gas Investor Webinar Schedule

Feb. 10	Financial Tricks and Traps for Distressed E&Ps
Feb. 17	Buying E&P Assets from Bankruptcy: How to Get Ahead in the Line
Feb. 24	Bits, Fracs, Lifts: Permian Basin Production Costs
March 3	Seeking Proppant: The Outlook for Supply Capacity, Demand and Quality
March 17	Landowner/Public Perception of Shale Developments

Archived Webinars Available for Viewing

(Audio and slides are available at OilandGasInvestor.com on these topics.)

- The Bakken Shale
- More, Better: E&P Enterprise Valuation Under New Reserve-Reporting Rules
- Why The Haynesville Really Is That Good
- Seeing Through To Solutions: The Economic Downturn's Impact On The Energy Industry

E&P Technology Forum Broadcast Series

For those with a more technical focus, the editors of *E&P* magazine have scheduled these upcoming webinars. To register, visit epmag.com.

Feb. 11	Extended-reach drilling and multilateral technology
March 4	SCADA, data historians, and an emerging information ecosystem
March 18	Best practices for successful gas shale re-fracturing
April 15	Floating production solutions for the Arctic
May 13	Electromagnetics in oil and gas exploration

PGS' Caddo III Multi-Client Survey Overcomes Challenges

Quality planning is the key to quality data.

By Susan Klann, Managing Editor, *Oil and Gas Investor*

In 2007, PGS Onshore undertook a 456-square-mile, multi-client 3-D seismic survey known as Caddo III, which included part of the 90-year-old, geologically complex Cement Field in southwest Oklahoma. The challenges that had to be negotiated in conducting the survey, whether occurring up front or during the work itself, were significant. These challenges included convincing The Bureau of Indian Affairs (BIA) of the survey's benefits to its constituents, oilfield and town infrastructure that needed to be worked around, acquiring data over Lake Fort Cobb, and a pre-existing seismic survey that needed to be incorporated into the new data. And last but not least, the summer of 2007, lest anyone forget, was one of the rainiest seasons on record in Oklahoma.

Despite the obstacles, solutions were found for all of the problems, and the result was a high-quality survey that will aid exploration companies in both appraisal and development of the aging Cement Field and the discovery of new reserves.

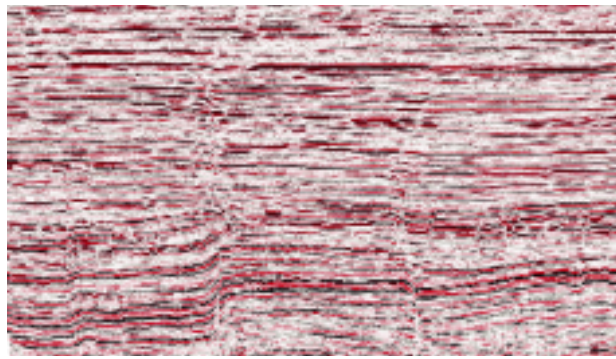
"Our goal was to acquire a survey in which petrophysical parameters would match geophysical attributes. We were successful because we recorded with robust parameters and maintained great uniformity," says Jim Bogardus, vice president of MultiClient Services for PGS Onshore, Houston. "We wanted to be certain that if there was a seismic anomaly, it was attributable to geology rather than to the acquisition results."

Planning was a vital component to the success of the Caddo III survey, beginning long before the first geophone was planted in the ground. PGS knew that a large percentage of the survey was under the jurisdiction of the Anadarko Agency of the BIA. The bureau originally believed that a seismic survey of this type would "condemn" the acreage they controlled to future exploration. In early 2003, PGS began laying the groundwork to convince the agency that the survey would actually prove very beneficial, but it took a court ruling in PGS' favor to get the permit for the survey granted later in 2003.

But the BIA is not complaining now. Prior to the 3-D survey, exploration companies would nominate 50 to 150 tracts of land per year for exploration. Now, almost 1,000 tracts are nominated annually.

Bogardus comments, "Previously, the agency had a half-day lease sale annually; now, it holds two, two-day sales annually. This is an example of the social action resulting from an educated citizenry. It's a win-win: opening previously unavailable lands to oil and gas exploration and providing lease and royalty revenue to Native American land owners."

Planning was also a critical component of navigating the complex and abundant infrastructure present



Stratigraphic detail as revealed through PGS Onshore's Caddo III survey.

in the area. Many speculative, or as PGS prefers, "MultiClient," surveys would have skipped over many of these areas, leaving gaps in the seismic coverage and adversely affecting data quality. Good planning allowed PGS to acquire data in Cement Field, close to oil wells, water wells, gathering lines and the like.

In the town of Anadarko, nervous land- and home owners were educated on the impact of seismic operations close to their valuable assets. PGS got on the town council docket to make sure it satisfied all community concerns and conformed to government requirements. These also included using peak particle velocity monitoring to ensure no infrastructure would be damaged.

Then, to further complicate this already difficult survey, the crew encountered record rainfall in 2007; the type of rain that shuts down seismic crews. More than 40 bridges were washed out in Caddo County alone, notes Bogardus.

The rain was not all bad for PGS, however. When it came time to acquire the data over Lake Fort Cobb (which also required extensive state and federal permitting), PGS brought in a shallow draft gun barge equipped with airguns (another type of sound generating device) and tightened up its parameters to maintain the data quality. "At that point, the flooding actually helped us because we were able to shoot farther up to the northwest where the lake is normally too shallow," Bogardus says.

Going the extra distance

To help achieve its desired distribution of coverage, PGS also bought out a competing survey acquired with less robust parameters and infilled the survey with additional source effort to bring it up to PGS' standards. "Our high standards also dictated that we overlapped earlier Caddo acquisition phases with over 16,000 feet of inline coverage, not the mile tie you typically see from other vendors. You could say we went the extra two miles to ensure better offset

sampling," says Bogardus.

The Caddo III survey involved a 5,824-channel active recording patch (16 lines of 364 channels), a 15,000-channel crew, 112 fold (redundancy in every bin), 55-foot bins, and 24,000-foot far offsets to achieve 1,032,192 pre-stack traces per square mile. These types of parameters are important because, "Whether imaging the steep dipping geology of Cement Field or subtle stratigraphy of the Anadarko Basin, we wanted near uniform coverage to ensure a quality image," notes Bogardus. "We needed the composition of the common depth points to have uniform sampling in terms of offset and azimuth."

Says Jeff Rutledge, an exploration manager with Marathon Oil Corp., a leading operator in Cement Field, "Whenever possible, Marathon uses 3-D seismic as an integral part of our E&P efforts in the Anadarko Basin of Oklahoma. The PGS Caddo III 3-D seismic data allows us to extract the structural and stratigraphic information needed for exploration in a wildcat area with very little deep well control. We are already seeing that a modern dataset with such even coverage and high fold is able to produce more information with detailed attribute work, which we will recalibrate as our drilling program proceeds."

Consultant Roberto Feige, of Integral Geophysics, based in Oklahoma City, has been advising and interpreting data from the Caddo surveys for clients such as Ward Petroleum of Enid for five to six years.

"The data is very good because of the effort the company put in acquiring detail using 55 x 55 bins versus the more common 110 x 110 bins. The main objective is the deeper Springer Sands at 18,000 to 22,000 feet, so you need all the quality data you can get." The data is being used for both ongoing development as well as exploration activity.

"This is our flagship survey at present," says Bogardus. The first Caddo survey took place in 2004, with completion of Caddo III in August 2008. "The value of this survey is in a company's ability to go from a discovery well to development with just one survey. The odds of success are greater because of its parameters, and it can shorten the drilling cycle time to improve economics. It puts a tool in the operators' hands."

What's next? PGS will merge the processing of Caddo III with the pre-existing Caddo 1 and II surveys, apply advanced processing technologies, and further tie the seismic data to wells using PGS Reservoir services and other of its capabilities.

In the case of Caddo III, not only quality technical specifications, but careful planning and the proactive management of a wide variety of potential problems led to success. ●

OilandGasInvestor.com Paves Way For Upstream Industry Online

By Lindsay Goodier, Online Editor, Hart Energy Publishing

OilandGasInvestor.com is the premiere source for market intelligence for the oil and gas industry. In 2008, the website was the Gold Winner of FOLIO: magazine's Eddie Award in the category of Best Business-to-Business Website for editorial excellence. The awards drew more than 2,800 entries from publishers throughout the U.S., which more than 100 expert judges spent weeks evaluating.

OilandGasInvestor.com provides a variety of searchable databases, breaking and daily news updates, video exclusives, blogs and eight years of editorial archives from the award-winning magazine. The site also offers a free, four-minute automated tour at <http://oilandgasinvestor.com/onlinetour>.

Subscribers to *Oil and Gas Investor* magazine receive automatic access to eight years of magazine archives, but an upgrade to a premium subscription gives users access to everything else the site has to offer, including exclusive videos and several searchable databases.

Among the searchable databases is Activity Highlights, a comprehensive, interactive global map that allows premium subscribers to search Eastern, Western, Midcontinent, Gulf Coast and International drilling activity and well discoveries by basin, play, county and company.

The Who's Who in A&D database brings contact information on the major E&P and financial players to premium subscribers' desktops. Users can find

the lead business-development contact for any company, as they seek partners for oil and gas drilling, buyers for property divestments or names of capital sources.

The Recent Financings database provides an inside look at recent industry debt and equity raises, deal terms and buybacks. Premium subscribers can keep a scorecard on how much capital E&P management teams have accessed for their target stocks.

Executive Stocks Transactions allows premium subscribers to view the most recent stock sales in the industry, enabling them to learn which energy company executives are divesting and at what price. ●



Gary M. Scott
Executive Vice President

David A. Fowler
President

Wesley A. Adams
Vice President



303 Air Park Rd
Midland, TX 79705
(432) 683-3791
simplexenergy.com

gscott@simplexenergy.com

dfowler@simplexenergy.com

wadams@simplexenergy.com

Expertise

Our mark of distinction is simplifying divestitures by providing complete service, from data gathering and package preparation, to marketing and closing.

Our many satisfied clients will tell you that a Simplex package "answers all the questions" and is unmatched in today's industry. We don't just prepare the information, we tell the story of your property clearly, completely, and effectively.

We believe information accuracy and completeness increases buyer confidence and yields better offers. After 100 successful closings since 2001 totaling just over \$313 million, our clients and buyers think we have the right idea. Try us on your next divestiture, you'll think so too.

Real numbers, real solutions. Simplex Energy Solutions, LLC.

P2 Provides E&Ps Flexibility To Manage Market Cycles

Products provide key support in critical areas for clients.

By Susan Klann, Managing Editor, *Oil and Gas Investor*

In 2009, customers of P2 Energy Solutions will benefit from many of the cross-company initiatives that were launched in 2008. "These changes further align our broad product portfolio, enabling all customer segments to leverage cross-enterprise E&P capabilities," says Bret Bolin, chief operating officer. P2 Energy Solutions has more than 80 years of experience providing solutions in the full cycle of land, financial, reserves, production management, business intelligence, map data and geospatial information systems.

Current market conditions highlight the critical areas where P2 Energy Solutions' products provide key support. Among the challenges for E&P companies, as commodity prices and the economy soften, are:

- using the best and most current technology available for operations to achieve scalable efficiency and cost-savings,
- managing flexible operations for small- to mid-size producers through periods of rapid growth and retraction, and
- protecting profitability during periods of falling prices while maintaining the ability to facilitate profitable growth when prices rebound.

The delivery options offered by P2 Energy Solutions ensure access to a full array of E&P solutions and support its customers in meeting the demands of today's uncertain environment.

Using technology for success

P2 Energy Solutions has several important and impactful product initiatives that will support its customers' technology goals and objectives.

In December 2008, the company rolled out Enterprise Land 3.0, which offers service-oriented architecture and robust land modules that streamline and expedite the end-to-end land management cycle. The modules are extensible and loosely coupled, which means they can function as stand-alone or integrated with other applications such as Excalibur, Enterprise Upstream and Tobin GIS Studio.

"The opportunity with this end-to-end single platform to manage information is to decrease the amount of effort required to manage back-office and land administration by over 25%," notes Bolin. "Many companies are focusing internally on business process improvements and system integration opportunities in the current environment to make sure they are prepared for rapid but controlled growth when prices rebound."

During 2008, P2 Energy Solutions continued to enhance its Enterprise Upstream Revenue and Production accounting offering through additional innovation in reporting and business intelligence capabilities, as well as continued improvements in

its service deployment model.

"We have a deliberate focus on extending management reporting capabilities, including Graphical Network Viewer, which allows users to view production activity within an innovative user interface. The GNV interface enables employees to more efficiently monitor unplanned changes or disruptions in production activity. We also continue to invest in broad-based improvements and cross-application drill-down functionality within our core Enterprise Upstream reporting suites."

In addition, P2 Energy Solutions' acquisition of Wellcore in September 2008 offers further efficiencies for customers. "This well life-cycle management application really helps companies plan and execute the end-to-end drilling process," says Bolin.

Wellcore extends from permitting and data gathering through to drilling, completion, and work-overs throughout the full well life-cycle to abandonment. "It offers a single seamless inter-departmental workflow process rather than the five or six different functions and manual- or spreadsheet-based processes that many companies rely on today."



Bret Bolin,
P2 Energy Solutions

Providing flexible solutions

P2 Energy Solutions' Excalibur software product line can be delivered via on-site implementation, hosting or outsourcing. "We recently combined our Excalibur software group with PFI, our outsourcing services business, to expand the delivery capabilities and service options for our customers. This combined delivery model supports over 220 customers that benefit from greater scale, product knowledge and cross-team capability," says Bolin. Jerry Rugg, senior vice president, is leading the combined group.

In the fall of 2008 P2 Energy Solutions released Version 5 of its Excalibur energy management system including Excalibur Report Studio, which provides Web-enabled technology and streamlined reporting solutions. This release enables core functional improvements to operational and business reporting, enabling flexible and customer-centric report setup and delivery across the business organization.

Improving customer operating performance

P2 Energy Solutions is committed to offering solutions to companies both large and small, and with different operational needs. Start-ups that have recently obtained funding or are eyeing property acquisitions benefit from P2 Energy Solutions' accounting back-

Users have benefited from 15% to 35% reductions in cycle times between identified drilling locations and first production, while also benefiting from more effective management of capital and operating costs.

Users have benefited from 15% to 35% reductions in cycle times between identified drilling locations and first production, while also benefiting from more effective management of capital and operating costs. "You can accelerate and better plan the drilling component," says Bolin. "We've also seen reduction of more than 20 to 70 days in the drilling cycle, which decreases the costs of unused equipment and employee down time."

Noting that "P2 Energy Solutions has products in place with 82% of the majors and large independents, 73% of the mid-sized companies and 81% of the small- to medium- sized market," Bolin says "we have staked a claim as the most comprehensive provider of E&P business information systems for companies of all sizes."

office infrastructure and applications. "P2 Energy Solutions has added 12 new logos in its outsourcing operations in the past nine months and foresees tremendous growth in the small- to mid-size provider space," notes Bolin.

In addition, the continued rise of shale and other unconventional resource plays has prompted a market alignment of P2 Energy Solutions software and Tobin data products to provide E&P customers a go-to-market solution that decreases the cycle time in planning, analysis and execution for entering these emerging plays. "We are combining both data acquisitions and process-oriented software applications to get out in front of resource plays like the Marcellus, Bakken and Haynesville shales. These include leveraging different capabilities spanning our suite of products, from Tobin Map Data to front-end tool sets including well planning, lease acquisition, GIS and AFE capabilities to support a rapid assessment and entry into these plays, with more seamless customer business-process capabilities."

To support many of these cross-product and customer-focused initiatives, P2 Energy Solutions has realigned several business functions, including Product Management and Customer Support, which previously were managed more independently. "In the service of this effort, we are leveraging our solutions to the benefit of customers and encouraging our employees to look at solutions in a broader context. As our customers look for more integrated and flexible service offerings, P2 Energy Solutions has evolved to provide both a best-of-breed product approach, coupled with the power and capability of an industry-leading 800-person team supporting our customer base."

The company's complete line of software, data and services will be represented at NAPE. "While at the expo, we look forward to discussing the current market challenges with attendees," says Bolin. ●

Interventionless Gas-Well Completion

Marathon plans to expand use of the technology.

By Stephen Payne, News Editor, *Oil and Gas Investor*

Marathon Oil Corp. participated in a successful step-out discovery well on the Brickyard prospect in the Anadarko Basin in Oklahoma, marking the world's first interventionless gas-well completion.

Cana No. 1-15H is a discovery well in the Woodford shale resource play in Canadian County and was drilled to a true vertical depth of 13,177 feet and horizontally for 4,090 feet, for a total measured well depth of 17,267 feet. The well flowed at an initial rate of 5.2 million cubic feet of gas per day.

Marathon is operator and holds approximately 57% interest. Other interest-owners include Questar Corp. and Cimarex Energy.

The Cana well is believed to be the world's first totally interventionless well completion using the EXcape completion-process technology developed by Marathon, BJ Services, GeoDynamics and Expro Group. Marathon was able to remotely perforate, fracture-stimulate and complete each interval for production, including setting and removing isolation devices. Based on the success of the completion, Marathon plans to expand use of the technology to future Woodford shale and Alaska Cook Inlet operations. ●

Hefty Potential Seen In The Bakken

The Bakken play has all the elements needed for a long and lustrous future.

By Peggy Williams, Senior Exploration Editor, *Oil and Gas Investor*

The Williston Basin's amazing Bakken play continues to grow. Developments to date, as impressive as they are, seem to be just the beginning.

In 1995 the U.S. Geological Survey (USGS) estimated that the Bakken contained 150 million barrels of recoverable oil. Once horizontal drilling and multi-stage fracturing unlocked the oil trapped in the formation, the estimates of the in-place oil that could be recovered skyrocketed.

The most recent USGS study concluded that the formation contains mean undiscovered volumes of 3.65 billion barrels of oil, 1.85 trillion cubic feet of gas (Tcf) and some 148 million barrels of natural gas liquids.

The survey assessed the geologic elements of the Bakken petroleum system, including distribution of the source rock, its thickness, organic richness, maturation, petroleum generation capabilities and migration. It also looked at the type of reservoir rocks, their distribution and quality, and the character of traps and time of their formation. The estimate represents undiscovered, technically recoverable oil and associated gas resources. The calculations do not consider the volumes that could be economically recovered from the Bakken, however. Instead, it lays out the scale of the formation's potential.

In general, the USGS concluded that undiscovered resources in the Bakken are in a continuous reservoir that includes all three members and that's present throughout the entire oil-generation window; an area that covers roughly 20,000 square miles in northeastern Montana and northwestern North Dakota.

Additionally, great volumes of oil have been expelled from the thermal kitchen and migrated through the Bakken siltstones and sandstones into areas in Saskatchewan and Manitoba.

North Dakota

North Dakota is the epicenter of Bakken action today. According to the North Dakota Industrial Commission, there are some 650 active Bakken permits and confidential wells within the state. Drilling activity stretches across Mountrail County and along the entire length of the great Nesson Anticline. Operators are probing many townships between the Nesson and the Montana state line. Both the north and south sides of the Fort Berthold Indian Reservation are extremely active, and drilling is under way on the reservation itself.

In North Dakota, the Bakken's tremendous productivity is related to its overpressuring. The high pressures are a result of hydrocarbon generation. The formation is laced with microfractures, created during the oil-generation process, and also with fractures caused by regional tectonic stresses. Another geologic situation that contributes to fractures in the Bakken is dissolution in the underlying Devonian Prairie salt. In areas where this occurs, the Bakken responds accordingly.

Certainly the most successful area to date has been Parshall Field. Wells in this accumulation, which occurs at the boundary of mature and immature Bakken sediments, are phenomenal. Bakken wells can make prodigious volumes of oil; quite a few wells have exceeded production of 100,000 barrels of oil in less than a year's time. Results of this magnitude are driving the play forward.

Furthermore, in North Dakota, the Bakken is underlain by sandstones that are part of its petroleum system. In North Dakota, excellent wells are being made in the Sanish sand and Three Forks formation. The Bakken petroleum source system actually extends 150 feet into the Three Forks, through the Bakken and into the base of the Lodgepole formation. Any reservoir

rock within this interval will be charged with oil and associated gas. An exciting aspect of the Three Forks is that it appears to behave as a separate reservoir from the Bakken, so Three Forks development could be additive to the Bakken.

Bakken wells can make prodigious volumes of oil; quite a few wells have exceeded 100,000 barrels in less than a year's time.

Montana's Elm Coulee Field

Montana's Bakken field, Elm Coulee, is the fifteenth-largest onshore U.S. field, according to the Energy Information Administration.

The reservoir at Elm Coulee is a fractured, silty dolomite. It occurs from 8,500 feet to 10,500 feet deep, and attains a vertical thickness of 8 to 14 feet. The porosity range is typically 8% to 10%, and permeability is 0.05 md. Oil saturations are 75%. Initially, the Bakken was developed on 1,280-acre spacing, and then second wells were drilled to bring spacing down to 640 acres. Initial per-well production rates range from 200 to 1,900 barrels per day.

Oil in place per section has been estimated at 5 million barrels at Elm Coulee. Primary recovery is expected to be between 10% and 18%. A well drilled on 640-acre spacing can recover as much as 500,000 barrels. Elm Coulee is a massive field, covering some 530 square miles. It will ultimately recover some 250 million barrels and 300 billion cubic feet of gas. To date, it has made 75 million barrels of oil.

Going forward, operators are looking at further infill drilling and enhanced recovery technologies. Work is also in progress to push the edges of the field outward. ●

TRISTONE CAPITAL

Tristone is one of the largest independent, global energy advisory firms with unmatched evaluation, advisory and execution capabilities.

global energy sector specialists

177 employees in 5 offices across 3 continents
 research coverage on 171 companies in 16 energy subsectors
 674 transactions valued over \$67 billion since 2001

Tristone Capital is a member of the ICF and the SIPC

INVESTMENT BANKING ACQUISITIONS & DIVESTITURES GLOBAL EQUITY CAPITAL MARKETS

www.tristonecapital.com

Buyers Seeking Sellers

In 2009 the pendulum swings to a buyers' market.

By Jeannie Stell, Financial Editor, *Oil and Gas Investor*

By all accounts, the financial fundamentals of oil and gas assets are undergoing drastic change. Nowhere is that more visible than at NAPE, where buyers and sellers meet to get deals done. With today's environment of undervalued assets and tight capital markets, dealmakers are working harder than ever.

"Last year, this was a seller's market," says David Fowler, president of Simplex Energy Solutions LLC. "Price trends were positive, capital was plentiful, and a real sky's-the-limit attitude seemed to prevail, from established industry players to an increasing number of new startups."

Energy Solutions, a Midland, Texas-based divestiture advisory firm focused on the Permian Basin, has closed 100 deals since its inception in 2001.

"The pendulum certainly has swung, a year later, into a real buyer's market," he says. "We know many independents sitting on cash right now, waiting to buy cheaper reserves as soon as they hit the market, whether from distressed situations or from the increasing number of people who have decided the time is right to retire and cash out."

But where are the sellers? "The missing ingredient here in January is asset product," says Fowler. "We seem to be in a lull before the storm."

Would-be sellers are holding back due to suddenly lower asset valuations, he says. Meanwhile, the price drop is too recent to drive distressed E&Ps to the market just yet. However, as the global economy worsens, buyers may see the current trickle of new deals become a small flood by the end of the first quarter.

Key deal-making factors

Three key factors should be considered when selling assets in this economic environment: price stability, timing and marketer mediation.

Most deliberate decisions to sell depend on the relative price stability of oil and gas. It's not so much the price level, per se, as the price uncertainty that affects decisions, says Fowler.

"The times with the most dramatic price changes slowed our business proportionately, as seen last fall, for example. In fact, too much uncertainty makes both sellers and buyers cautious and hesitant."

The good news: Fowler is seeing increased call volumes from potential sellers that were largely missing in November and December. So the price environment may be somewhat stabilizing. The bad news: the current price stabilization is hovering at a range (between \$35 and \$45 oil) that most industry insiders say is undervalued.

The second factor, timing, can often make or break the deal. "Sometimes we find the perfect buyer, but the timing is wrong due to budget issues, management issues or other parameters. Timing is a game changer," Fowler says.

The third key is active mediation. "For example, when Simplex acts as the go-between for a buyer and seller, we can keep emotions in check and the deal progress moving forward from start to close."

DUG Continued from page 1

a day and a half, April 7 and 8, and will be held in Fort Worth.

Join oil and gas colleagues from more than 400 companies to hear the opening keynote April 7: Andy Hopwood, vice president of BP America Inc., speaking on BP's views on North American gas markets and opportunities. BP is one of the top-tier producers of natural gas in North America, and it entered the Woodford shale play in 2008.

Luncheon keynote Andrew J. Littlefair will speak on the potential for developing new gas demand through natural gas vehicles. He is CEO of Clean Energy Fuels, the company co-founded by T. Boone Pickens to supply fleet vehicles throughout the U.S.

Along with its expansion this year to a day and a half, DUG offers an expanded focus on the Haynesville and Marcellus shales, the Deep Bossier, and emerging



David Fowler,
Simplex Energy
Solutions

Sometimes this one ingredient makes the difference between success and failure."

To help its clients find and close a sale, Simplex's strategy is to match its knowledge of a buyer's flavor of production, ideal acquisition size and general geographic location preference to a seller's assets.

So who are the buyers?

"Half the time, it's the last one you expect," says Fowler. "In the current situation, it's a bit more transparent who the buyers are. Just follow the money."

The profile of today's buyer, whether public or private, is the producer sitting on cash reserves with little or no debt, or who has significant and solid backing from established, recognizable capital providers, such as Natural Gas Partners, or banks with experienced oil and gas lenders, he says.

"We do expect surprises, however, and have learned to appreciate the creativity of folks who want to get a deal done."

Meanwhile, E&Ps seeking growth are increasingly turning to acquisition strategies instead of growing through the drillbit.

"Companies are squinting into their crystal balls to attempt to adjust their capital programs to operate within foreseeable cash flows," he says. "It seems that more producers are deciding that acquisitions make more sense than drilling, to minimize their costs per reserve barrel. Time will tell over the course of 2009, but right now, acquisition strategies have come to the forefront again."

Deal transaction signs of life

Also, starting into 2009, there appear to be signs of deal transaction life that, while anticipated, are occurring a little earlier than expected, he says. "We feel pretty confident right now about deal flow in the first half of 2009."

On the other hand, Fowler says some deals have a complex reserve potential that is best quantified by third-party engineering economics. If a buyer is a public company, those reserves must be quantified to pass securities scrutiny anyway. A proper third-party quantification of upside reserves (PDNP, PUD) is very useful to maximize returns, and cannot be overemphasized, regardless of the time and cost involved, he says.

Even when pricing, timing and negotiating triggers fall into place, some deals will require further work, and not all deals will get done, although Simplex boasts an 80%+ track record of deal closings.

"Sometimes we find that a deal requires creative deal structuring, or even an intentional delay in sale timing, in order to achieve the best interests of our client. Sometimes our suggestion is simply not to sell, but pursue another route." ●

shale plays such as the Eagle Ford, Utica, Muskwa and Chattanooga.

On April 8, keynoter John Pinkerton, chairman and CEO of Range Resources Corp., will share lessons learned from the company's Barnett shale success, and thoughts about the Marcellus, where Range hopes to nearly triple gas production in 2009.

Finally, Floyd Wilson, CEO of Petrohawk Energy Corp., will speak on the booming Haynesville shale, where some wells have made up to 28 MMcf a day, and its emerging Eagle Ford shale play.

Also new this year, two workshops on April 6 precede the main event. One is a day-long technical workshop on fracturing dense shales, featuring Dr. Ali Daeshy. The second is A&D-The Workshop for Developing Unconventional Gas. For more on the agenda and to register, go to www.hartenergyconferences.com. ●

Capital Provider Update

By Stephen Payne, Online News Editor,
Oil and Gas Investor

—Cadent Energy Partners LLC, Rye Brook, N.Y., closed its second private-equity fund, **Cadent Energy Partners II LP**, with \$473.3 million in commitments from its partners. The fund exceeded its initial target of \$375 million. Cadent invests across the energy industry, including E&P and oilfield services and equipment, typically making equity commitments of \$25- to \$50 million each.

—CSL Energy Fund LP, Greenwich, Conn., was launched by Charles S. Leykum to invest in small-to midcap public securities and selected private investments in the energy sector.

—Energy Ventures, Stavanger, Norway, closed its third venture investment fund, **Energy Ventures III**, with \$243 million in committed capital to invest in petroleum-related technology companies.

—FirstEnergy Capital Corp., Calgary, formed a new property A&D division, led by Brian F. Dunn and including Richard J. Matthews.

—Haywood Dorland Energy Capital LLC, Houston, has been formed by managing director and principal Steven (Steve) R. Pottle. The firm will focus on helping energy companies and project developers raise debt and equity financing.

—Invico Capital Corp., Calgary, launched an open-end mezzanine debt fund, **CanBridge Capital Fund LP**, which will hold a diversified portfolio of mezzanine-type debt investments in companies generally operating in the oil and gas, oilfield services and related manufacturing, and real estate sectors throughout western Canada. Invico subsidiary CanBridge Capital Corp. will be general partner and manager of the fund.

—Lime Rock Partners, Westport, Conn., has closed its fifth fund, **Lime Rock Partners V LP**, with \$1.4 billion in capital commitments.

—Natural Gas Partners, Irving, Texas, has closed **Natural Gas Partners IX LP** with total commitments of \$4 billion. NGP has managed more than \$7 billion of cumulative capital and made investments in more than 130 energy-sector companies.

—Rodman & Renshaw Capital Group Inc., New York, bought New York-based energy investment bank **COSCO Capital Management LLC**. Rodman Energy Group is now led by Cameron O. Smith, COSCO's founder and senior managing director, and it will include COSCO's other principals.

—Denham Capital Management LP, Boston, closed **Denham Commodity Partners Fund V LP** with a \$2-billion hard cap, exceeding the \$1.75-billion targeted commitment. Denham typically targets investments in the \$50- to \$250-million range in areas including energy infrastructure, natural resources, power and carbon, primarily in the U.S., Canada, South America and Europe.

—Simmons & Co. International, Houston, has raised US\$137 million (87.5 million euros) in Europe with the first closing of its inaugural private-equity co-investment fund **Simmons Parallel Energy LP**. The fund will focus on buy-out and growth capital co-investment opportunities across the energy sector and operate independently from the firm's existing corporate-finance and securities businesses. It will be led by fund managers Aaron D'Este and Richard Warren.

—The TCW Group Inc., Los Angeles, closed **TCW Energy Fund XIV** with a value of approximately \$2.6 billion, the largest alternative investment fund in the firm's history. The fund will make mezzanine and private-equity investments in energy and energy-infrastructure projects on a global basis. TCW also formed **TCW Energy Partners LLC** to invest in energy and infrastructure assets globally. The company offered 9.7 million units at \$20 each for a total \$194 million. ●

Tight Capital Markets, Lower Prices Slow A&D Activity

Buyers wait for the right time, opportunities in an uncertain market.

By Steve Toon, Editor, A-Dcenter.com

The present marketplace for upstream oil and gas assets is "very slow" as the only sellers are companies that must sell because of liquidity needs or to clean up their balance sheets, says A&D investment banker Rob Bilger, managing director with Tristone Capital.

"It's a very slow marketplace right now. A number of companies are looking at company acquisitions and merger potential because of relative valuations and a scarcity of quality properties on the market."

Bilger says Tristone was anticipating the most active A&D market ever for the fourth quarter as 2008 blazed along at a record-setting pace through the first three quarters of the year, with Tristone closing on transactions in the U.S. totaling more than \$7 billion through the first nine months. But that all changed when the credit markets went into turmoil in September.

"When the cost of capital increased and capital availability evaporated, the markets just shut down," he says. Tristone capped its year on Sept. 30 with an \$873-million cost-adjusted deal for Cordillera Energy Partners, which sold Buffalo Wallow and East Texas/northern Louisiana assets to Forest Oil Corp. That deal is the last significant A&D transaction that has closed, other than Statoil's joint venture with Chesapeake in the Marcellus.

In addition to a lack of capital availability for doing deals, he says the precipitous fall in commodity prices since the summer has left an enormous overhang of failed property sales. He estimates transactions valued at more than \$8 billion either failed or were pulled from the market in fourth-quarter 2008. "Companies could either continue their offerings with a major gap between seller expectations and what buyers were willing to spend, or they could pull the property."

That disconnect has left a fallout of frustrated sellers, some that had anticipated selling to take advantage of high commodity prices or beat an anticipated increase in capital gains rates, and those that need to sell to fund capital expenditures.

Bilger sees the asset drought lasting at least through the first quarter and possibly longer.

"It's all about capital right now—the lack of capital availability or the high cost of capital. We're seeing some debt offerings get done now, which is encouraging. A couple of companies have recently been able to raise substantial public debt."

Devon Energy Corp. raised \$1.2 billion in notes at 6% in January and El Paso Corp. raised \$500 million at 15% in December.

Debt markets "have opened up a bit from where we were just a couple of months ago," says Bilger, "but it's still a relatively high cost of capital. Banks are still reluctant to get aggressive with their lending for property acquisitions."

Renewed Activity

January brought renewed activity from potential sellers at Tristone. "These are companies that feel compelled to sell to fund either high-return capital projects that they wouldn't be able to otherwise or make debt repayments. These asset packages likely won't be available until the second quarter."

Companies will also soon face added pressure from banks as borrowing base redeterminations based on year-end reserves and price forecasts squeeze cash availability, but Bilger believes the fallout will be limited. "We're not going to have significant forced sales, but I do think there will be pressure from the banks to reduce debt and cut expenditures."

So will borrowing base redeterminations throw a flood of assets into the marketplace as cash-strapped companies look to raise additional funds?

"There's a mixed view on that. I've been told by a lot of people in the industry that we're going to be swamped this year with property divestitures, but we haven't seen it yet."

Those that do sell will first look to divest their conventional assets to focus their financial

resources in the new resource shale plays. "Companies are going to clean up their portfolios first by selling their non-strategic traditional assets and prioritize expenditures on their new resource plays because of higher rate of return drilling and the need to hold the leases."

Bilger notes a polar shift occurring in buyers and sellers.

"The private companies—especially the private equity-backed companies—were the big sellers the past couple of years. Buyers have been the more aggressive mid-size and large independents. Now those roles are reversing. The highly leveraged independents are going to be sellers going forward, and companies with access to private equity and some debt capacity are going to be the likely buyers."

He says Tristone is talking with private companies



Rob Bilger,
Tristone Capital

looking opportunistically at the marketplace and with well-funded independents and majors that have strong balance sheets. "There are definitely buyers out there looking for attractive strategic transactions. However, they want to be careful that they don't act too soon and that they wait for the right opportunity."

This environment could encourage companies to seriously consider mergers. With corporate valuations at their lowest levels in years, companies in strong financial positions see opportunities to buy companies to acquire attractive assets at a reasonable cost.

"They see synergies available by combining organizations and cost structures. It may be that the target company is over levered and doesn't have enough cash to exploit its assets, and the acquiring company with a stronger balance sheet can do so. There are certainly people looking at potential M&A transactions."

What will 2009 hold for the A&D market? If prices rebound and stabilize and the credit markets continue to improve, then the second half of 2009 could be quite active for A&D." ●



Onshore

North America and Transition
Zone Operations

Operational Efficiency
High Channel Count Crews
Customized Solutions

PGS has a proven track record of meeting our client's financial and geophysical needs.

Contact us for your next seismic solution.

North America Sales
Tel: +1 281 509 8200
onshoresales@pgs.com

A Clearer Image
www.pgs.com



Haynesville Shale Continues To Deliver

East Texas and North Louisiana serve up the superb Haynesville shale.

By Peggy Williams, Senior Exploration Editor, *Oil and Gas Investor*

In 2009's dour reality, one play remains at the head of most lists: the Haynesville shale.

The company that ushered the Haynesville onto the industry stage was Chesapeake Energy Corp. At present, Chesapeake has rigs working in Louisiana's Caddo, DeSoto and Sabine parishes. Mid-summer 2008, it entered a joint venture with Plains Exploration & Production Co. Chesapeake assigned Plains 20% of 550,000 net acres for \$1.65 billion in cash and \$1.65 billion in carried working interests.

The company currently holds nearly 500,000 net acres in the play, exclusive of Plains, and produces 65 million gross cubic feet of gas per day from 16 horizontal wells.

Chesapeake's massive acreage position could allow it to develop 14 trillion cubic feet (Tcf) in recoverable reserves, based on a 50% risk factor on 29 Tcf of unrisks reserve potential. At the close of 2009, the company planned to have 35 rigs at work in the Haynesville, an average of 25 to 26 rigs across the year.

"What makes the Haynesville so robust is the overpressured nature of the reservoir," says John Sharp, Chesapeake geoscience manager, Louisiana district.

Chesapeake's last four wells have posted production rates in excess of 10 million a day. Estimates of ultimate per-well recoveries have climbed from 4.5 billion cubic feet (Bcf) recoverable to 6.5 Bcf, and some wells are now close to 8.5 Bcf apiece.

At Nymex prices of \$5 per thousand cubic feet and assumed capex of \$7 million per well, the Haynesville can deliver a 20% rate of return. Chesapeake's calculations are that prices have to be below \$3.88 per thousand before returns on a 6.5-Bcf equivalent (Bcfe) well, even given an 80% first-year decline, drop below 10%. Chesapeake has improved its costs and sees potential for more efficiencies going forward.

Big issues in the Haynesville are mud-motor and measurement-while-drilling (MWD) tool failures, due to reservoir temperatures that range from 300 to 350 degrees Fahrenheit. Naturally, the failure rates of these directional tools bear heavily on costs and drilling times in the lateral holes. The availability of specialty proppant for completions is another trouble spot; on each well, Chesapeake typically fracs eight to 10 slickwater stages, with some 2.6 million pounds of proppant.

A firm that is enjoying a run of fabulous Haynesville wells is Petrohawk Energy Corp. The Houston-based company had a hefty position in North Louisiana's Elm Grove and Caspiana fields before the Haynesville burst forth. It completed its first Haynesville well in June 2008, and its first batch of wells came in at initial-potential rates between 15- and 28 million per day apiece.

"There are 30 miles between our farthest wells, and we have seen results improve with each well," says Dick Stoneburner, Petrohawk executive vice president and chief operating officer. In early December it announced completions with initial production rates between 21- and 28 million per day.

Petrohawk holds 300,000 net acres in the play. It currently runs 11

horizontal rigs and completes approximately four to five Haynesville wells a month. At year-end 2008, it expected to have 12 to 13 Haynesville wells on production.

It figures its acreage contains some 12 Tcf in potential resources. It recently upped its reserve estimates to 6.5 Bcf per well, and recovery potential to 50 to 60 Bcf per section.

Goodrich Petroleum Corp., Houston, began assembling its position in East Texas and North Louisiana in late 2003. It gathered a package of properties that targeted Cotton Valley and other standard-issue shallow zones. As a result, Goodrich's position in Bethany-Longstreet and Longwood fields, in DeSoto and Caddo

parishes, Louisiana, is in the heart of the Haynesville.

Early last year, Chesapeake and Goodrich struck a joint-venture deal, in which Chesapeake paid Goodrich \$173 million for deep rights on 10,200 net acres in North Louisiana, spread across Bethany-Longstreet and Longwood. Chesapeake, operator of the JV, has two rigs running at present and will add two more by the second quarter.

"Our basis in the acreage is extremely favorable; prior to the JV, our land costs were \$350 per acre," says Robert Turnham, president and COO. "When we apply Chesapeake's payment, we actually have a credit of \$2,500 per acre." In total, Goodrich owns 22,000 net Haynesville acres in North Louisiana. ●

What will the unconventional-gas

DEVELOPING UNCONVENTIONAL GAS

DUG

4th Annual Conference and Exhibition

April 6-8, 2009 • Omni Fort Worth Hotel • Fort Worth, Texas

Sponsored by:

Schlumberger

HALLIBURTON

NSAI NETHERLAND, SEWELL & ASSOCIATES, INC.



Presented by:

Oil and Gas
Investor

E&P

PipeLine and Gas
TECHNOLOGY

HART

Drillinginfo Provides Top-Floor to Rig-Floor Solutions

The company offers cost-effective, open-access information, applications and services on the web.

By Lindsay Goodier, Online Editor, Hart Energy Publishing

Drillinginfo, an Austin-based company founded in 1999, is quickly becoming an essential tool for exploration experts. The founders of Drillinginfo, prospect geologists, geophysicists, and petroleum engineers, responded to the fact that the high cost of oil and gas information services placed them beyond the reach of most independent oil and gas producers and professionals. The Internet presented an easy and affordable way for users to access this important information, and Drillinginfo was the first company to develop a web-based solution.

Roger Edmondson, vice president of marketing and planning for Drillinginfo, says the mission of the company is to “provide cost-effective open access to infor-

mation, applications, and services for technical professionals and corporate management in the upstream oil and gas industry. Over the past eight years, Drillinginfo has become a top-floor to rig-floor solution for the U.S. oil and gas industry.”

Today Drillinginfo.com has more than 3,200 subscribers, whose activities produce more than 90% of the domestic oil and gas in the U.S. There are more than 10,000 Drillinginfo users.

When users log onto Drillinginfo.com, they have access to more than 10 terabytes of data. The search function on the site is one of its greatest utilities, allowing users to locate information across the geographic area of interest. Users also have access to map

views of the search results to help them visualize the data and the trends they represent. Users can access historical data from Texas (TOPDI) as well as data from Louisiana, New Mexico and Oklahoma (ODI) available in digital format, plus production data and detailed well information.

Drillinginfo.com offers users economic calculators, well graphing tools, and DNA, a knowledge and document management tool. Drillinginfo also offers a unique mineral tract outline product, the LandTrac Unified Land and Exploration Suite, which provides users the ability to see existing mineral leases and open acreage across entire counties. This powerful tool is used to identify expiring leases and to develop leasing strategies.

In the current deep commodity-price and capital-markets downturn, Drillinginfo’s mission is to help producers maintain perspective and a comprehensive view of the industry. Through observation of users during the past two years of exploration and production activity, the leadership team at Drillinginfo has identified several industry trends.

“We’ve seen some of the smaller, independent producers who have developed prospects and developed into larger entities, and we’ve seen a huge transfer of wealth to mineral rights owners over the last year and a half,” says Edmondson. “The small independent oil and gas companies are still the life-blood of the industry, and the large companies rely on that to actualize the exploration efforts that are going on.”

Edmondson says Drillinginfo expects the industry to remain strong over the long term despite the near-term economic conditions. “We think this is still a healthy industry that is very accustomed to swings and volatility, and we’re taking steps to help our members adapt their businesses to the market conditions.”

Drillinginfo has also introduced a new series of research platforms that follow the trends of exploration in emerging shale plays. Recently, the company introduced the Barnett Shale Research Platform, which includes a 686-page report and two interactive web players that allow the user to interact with the data to manipulate its presentation.

A highlight of the Barnett Shale Research Platform is the GPA, or Graded Potential of Acreage. Based on proprietary methodology developed by Allen Gilmer, Drillinginfo’s CEO and co-founder, all the acreage in the play is graded for its potential to produce hydrocarbons. This allows corporate executives and business development managers to evaluate their holdings or their competitors’ holdings at a glance.

Edmondson says grading out the Haynesville shale play is the next report on Drillinginfo’s agenda.

Drillinginfo is excited to be a part of NAPE for the eighth year. You can find the staff at booth 2301. ●

landscape look like in 2009?

Featuring Keynote Speakers:



Andy Hopwood

Vice President, BP America Inc.
and Head of BP North American Gas



Floyd C. Wilson

Chairman, President and CEO
Petrohawk Energy Corporation



John H. Pinkerton

Chairman and Chief Executive Officer
Range Resources Corporation



Andrew J. Littlefair

President and CEO
Clean Energy Fuels

Plus, hear from companies including Southwestern Energy Company, Cabot Oil & Gas, CNX Gas, Gastar Exploration, Admiral Bay Resources, Bentek Energy LLC, Schlumberger and more.

Join more than 800 oil and gas professionals representing nearly 400 companies for what has become the leading forum for networking and discussion of unconventional-gas economic, geology, technology and exploration trends.

Registration and full agenda at
www.hartenergyconferences.com

Drill-Bit-Focused New Century Sees Opportunity As A&D Market Evolves

The company positions itself to benefit from the coming upcycle.

By Susan Klann, Managing Editor, *Oil and Gas Investor*

It is widely expected that out of this latest retraction in the oil and gas industry will emerge a rejuvenated A&D market, with its attendant opportunities for E&Ps having the necessary financing and the expertise to add value through the drill bit. One company positioning itself to benefit from a revived A&D market is privately held New Century Exploration Inc., of Houston.

Chief executive Phil Martin, a 30-year veteran of the industry, has started up and sold companies previously and was active in the A&D market through the '90s. He formed New Century in 1998 to focus purely on E&P, pursuing drilling and development for natural gas in the Gulf Coast. Since 2000, the company has expanded from just three producing properties to 40 in 2008.

Today the company has a large mix of exploration and development projects in Texas and Louisiana, many based on its 6,500-square-mile, 3-D database.



Phil Martin,
New Century
Exploration Inc.

Areas of activity include the Rodessa/Pettit/Cotton Valley/Deep Bossier; the Permian's Wolfberry; the Haynesville; and Gulf Coast trends. As the industry downturn intensifies, it is again eyeing acquisition opportunities with the aim of expanding its portfolio of larger, long-lived reserves, both in resource and conventional plays. A recent acquisition of \$100 million in East Texas reserves put New Century into shallow Rodessa and other proved locations with upside potential in the Deep Bossier.

New Century's formula for success is simple. Its team uses old-school experience and geoscience tech-

nology to identify and acquire properties where it believes value can be added through drilling and development. The company follows up with a harvest of value, either through production or sale. New Century funds its activities through a combination of cash flow and joint-venture capital. It hones in on technology applications and its business model is to use turnkey drilling arrangements to mitigate operational risk and more closely align participants' and vendors' interests.

"We are early adapters of technology," says Martin. "Use of technology, 3-D seismic expertise and reservoir management are key strengths for us." Further, the New Century team is a cohesive and experienced group, having been together for more than five years.

The company believes that applying new technology in mature areas can pay big rewards. Over the past five years, natural gas-focused New Century has drilled an average 20 wells annually and has posted a 70% success ratio. It is taking a fresh look at one old and prolific area just 50 miles from Houston, using new 3-D, frac and logging technology to exploit deeper reserves that have not been developed since the 1960s.

New Century has a large inventory of Gulf Coast prospects in Texas and Louisiana, ranging from shallow amplitude anomalies to deep high-potential Wilcox plays. Its estimated ultimate recovery (EUR) represents more than 800 billion cubic feet and 8 million barrels of oil. The company's prospects cover a wide range of risk and economics; it does not consider any that will not work at \$4/Mcf gas. Some 26 wells are planned for 2009 across its holdings.

"We are early adapters of technology. Use of technology, 3-D seismic expertise and reservoir management are key strengths for us."

— Phil Martin,
New Century Exploration

Today's commodity-price picture, however, has prompted a shift in focus to longer-term producing areas that are sustainable at today's prices. "We're changing direction to some extent," says Martin. "Over two years ago we began moving more into resource areas, and the longer-life basins."

In its first foray out of the Gulf Coast, it acquired a 12,000- to 15,000-acre leasehold in the Permian Basin Wolfberry trend and participated in five successful wells. More than 3,000 square miles of reprocessed 3-D data were pivotal to the outcome. The company also acquired a 12,000-acre leasehold in the Ark-La-Tex area that is in an early stage of evaluation.

Just this month the company acquired a 20,000-acre property in the Deep Bossier trend of East Texas which forms another new base of operations. The company was attracted to the area because of its multiple productive horizons

Bakken Shale: The Definitive Reference Book to the Hottest Shale Play in the US

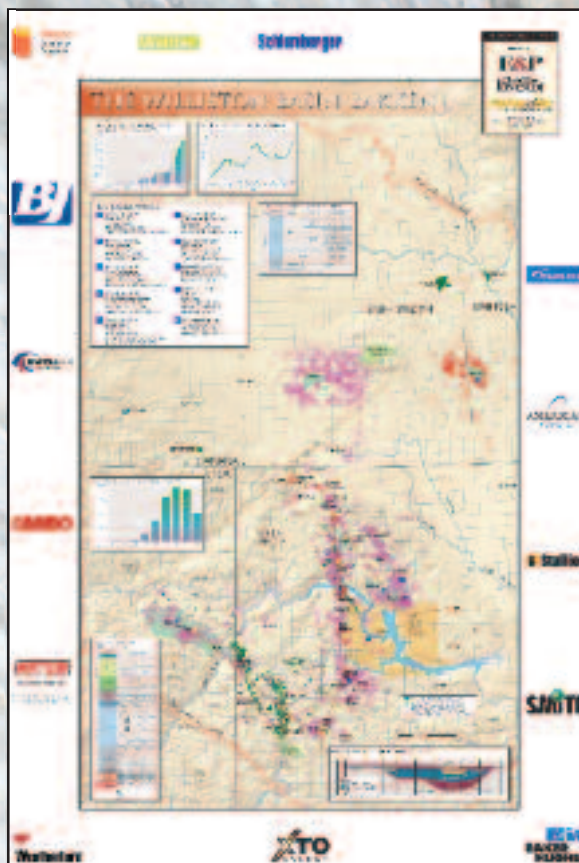
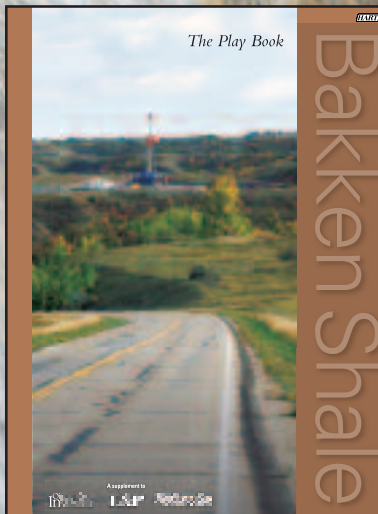
The **Bakken Shale Play Book** is your one source reference guide to the operators, technologies and infrastructure that make the Bakken Shale the most successful shale play in the US. Order your copy of this definitive reference book today.

The comprehensive book includes:

- Section 1 - **Bakken Overview: US and Canada**
- Section 2 - **Bakken Characteristics**
- Section 3 - **Key Players**
- Section 4 - **Key Technologies**
- Section 5 - **Infrastructure and Offtake**
- Section 6 - **Economics**
- Section 7 - **The Future**

BONUS! Purchase the **Bakken Shale Play Book** and receive the **Williston Basin Bakken map** with your order.

The Williston Basin Bakken map, measuring 24" x 36," shows where current U.S. and Canadian activity is taking place.



**ORDER TODAY.
SUPPLIES ARE LIMITED!**

Receive both the Bakken Shale Play Book and the Williston Basin Bakken Map for \$99.95, or purchase 5 or more books and pay just \$74.95/each.

3 easy ways to order:

Online: EPMag.com/bakkenplaybook

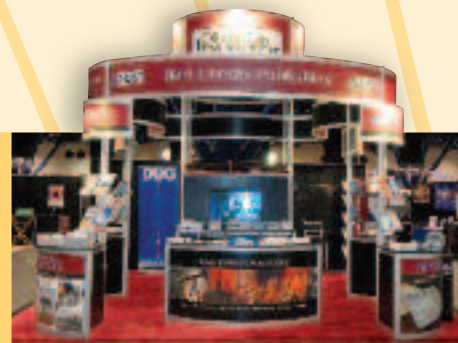
Phone: Contact Customer Service at
1-713-260-6442

Email: custserv@hartenergy.com

Top Five Things To Do at Winter NAPE 2009

1

Stop by the *Oil and Gas Investor* **Booth #3267** and watch live video interviews with key executives or live on the web at OilandGasInvestor.com.



Reach into the barrel at **Booth #3267** for a chance to win exciting prizes.

2

3

Take an online tour of OilandGasInvestor.com and the newly launched **Unconventional Gas Center** at **Booth #3267**.



Register for **DUG: Developing Unconventional Gas** Conference at **Booth #3267** April 6-8, Fort Worth, Texas.

4

5

Tell a friend to visit the *Oil and Gas Investor* **Booth #3267**.



CLICK HERE: A New Source for Hydrocarbon Data

A new, free website that applies sophisticated computer-science techniques to the masses of publicly available data launches at this year's NAPE.

By Peggy Williams, Senior Exploration Editor, *Oil and Gas Investor*

Open your computer, go to Google and type in hydrocarbonsearch. You will immediately be directed to HydrocarbonSearch.com, an innovative website launched by computer science professional and oil and gas operator Eser Chamoglu. It's free, it's unique and it may change the way you do business.

Computer-science expertise

HydrocarbonSearch is the brainchild of Chamoglu, who hails from a deep background in robotics, including stints on NASA projects, industrial robots, robotic cars, and specialty search engines. Most recently, the successful entrepreneur has turned his attentions to the oil and gas industry. He moved to Colorado in 2007 and started Eser Corp., a Denver-based firm that marries computing technology and exploration and production pursuits.

"I wanted to apply new ideas from robotics and computer science to find and develop low-cost, low-risk assets in the Rocky Mountain region," he says. Initially, Eser Corp. focused on finding acreage that

could deliver the highest risk-adjusted return on investment (ROI).

Chamoglu quickly realized that there was a seemingly infinite amount of publicly available oil and gas data. Unfortunately, there was no 'Google for oil and gas.'

"This was a complete shock to me—I had spent the prior seven years living 20 minutes from the headquarters of both Yahoo and Google; I now realized that it was easier to find news articles on the internet than it was to find correlated formation tops for oil and gas wells."

Chalk play pops to top

Chamoglu attacked the problem by manually assembling a database of oil and gas information for Kansas,



Eser Chamoglu, HydrocarbonSearch

Nebraska and Oklahoma, three business-friendly Midcontinent states. In addition to data on oil and gas wells, he included locations of seismic surveys, oil and gas plants, pipelines, power plants, storage facilities and metering stations. Information on upcoming lease auctions and historical data on gravity and magnetic surveys went in the database as well.

Next, he applied his particular expertise. "Rather than manually sifting through data to identify high ROI acreage, I crafted a software algorithm to do it for me."

His product, ESER 3D GIS, relies on genetic algorithms and support vector machines, two computer science techniques. Essentially, the software calculates an ROI score for each quarter-section of land and then ranks the quarter-sections. Results are displayed on a color-coded map, and locations of pipelines, infrastructure and offsetting wells are overlaid.

Chamoglu's work pinpointed the Niobrara shallow chalk play in Nebraska's Chase County. The Upper Cretaceous Niobrara is a vast, biogenic gas play that centers in the Kansas-Nebraska-Colorado tri-state area.

The Niobrara is attractive to an E&P startup because it is low-cost, low-risk, low-decline-rate, and long-lived. Shallow wells, less than 2,000 feet deep, can be drilled in as little as five hours using coiled-tubing rigs, which deliver cost savings of up to 30% over conventional rigs. Niobrara wells typically come on line at 80,000 cubic feet per day and decline over 24 months to a rate of some 50,000 a day, and they produce for 30 years.

The company jumped into the selected play, and is currently assembling acreage. It is temporarily taking a pass on drilling, however, awaiting improving gas prices in the Rockies.

Website launch

Meanwhile, Eser Corp.'s work in data gathering and analyses for the Niobrara play led directly into its development of HydrocarbonSearch.com.

The idea is to give a birds-eye view of all oil and gas assets in the United States—everything from existing wells to lease auction lots to daily pipeline flows at pricing points. HydrocarbonSearch.com collects this information in one place, updates it automatically, and makes it easily mappable and searchable.

"It is as easy to use as your favorite website—there is no installation or download. Just Google 'hydrocarbonsearch'," he says.

Chamoglu is personally developing the initial version of HydrocarbonSearch.com, and he's constantly testing ideas and features. His goal is to deliver intelligence that meets the needs of an E&P independent. For now, Eser Corp.'s exploration software remains proprietary, although it may eventually be folded into HydrocarbonSearch.

Significantly, HydrocarbonSearch is free to use. It has features that improve as more people use them, so charging for use of the website is counterproductive. Instead, fees will be assessed for listings of third-party prospects and properties.

"I think that there is a huge future in using cutting-edge ideas from computer science to increase productivity in the oil and gas business," says Chamoglu. "I believe that computing technology can increase efficiencies across all aspects of the industry, from exploration, development, production, marketing and transportation to acquisitions and divestitures."

Given the scale of the industry, the application of the right ideas from computing to the right problems could have huge, net positive impacts on both oil and gas productivity and its environmental impact, he says.

But, don't take his word for it. Visit HydrocarbonSearch.com and test it yourself! ●

Your BD Team has Better Things to Do Than Search Multiple Sites for Assets for Sale.

With the new **A-Dcenter.com** you can get your BD team back to buying and selling assets, rather than surfing the web for leads. Save time, save money, take advantage of the current buyer's market and stay ahead of the competition with the **A-Dcenter.com's** On The Market Database.

With more than 3,300 asset listings, it's the single source of all significant current offerings in a searchable, sortable, and real-time format – from auction to negotiated, from asset to corporate, and from ORRI to operated. The On the Market Database will instantly tell you what's available for purchase right now in the U.S. and abroad. Just type in "Texas" or "Wyoming" ... or by play – "Bakken," "Haynesville," "Wilcox" and more. All from a trusted, unbiased and respected source –

the editors of *A&D Watch* and *Oil and Gas Investor*.

Also, the website's "Most Hit, Most E-Mailed and Most Searched" results feature reveals up-to-the-minute hot topics among your peers and competitors.

A-D CENTER.COM ALSO PROVIDES:

- A&D Deals Database
- Who's Who in E&P A&D Database
- Networking Events Calendar
- Online Exclusives
- Breaking News E-Alerts
- Print & Web Archives
- Survey Results
- A&D Conference Archives
- Blogs
- Video Interviews
- And More!

A-Dcenter.com
Take a Tour
For a site tour or to learn more about what **A-Dcenter.com** can do for your next deal, please contact:
ATTRICE HUNT
(713) 260-6437
ahunt@hartenergy.com

Get Back to Buying and Selling!



A-Dcenter.com

The Rodman Energy Group Foresees Opportunity in 2009

Private equity is in place to seize the day as financial strategies adapt.

By Leslie Haines, Editor-in-chief, *Oil and Gas Investor*

For financial institutions with expertise and flexibility, today is a good time to be in the energy-finance arena.

According to Cameron Smith, senior managing director and head of The Rodman Energy Group, based in New York, "We have never been more busy than we are right now, assisting our private energy clients to access capital. Half-way through January, we had already closed one significant financing, received term sheets on two others, and were engaged by several large industry companies, as well as capital sources, in the U.S., Canada, and Australia, to assist them to arrange financing or to facilitate and focus their investment strategies."

Undaunted by currently low and volatile commodity prices and the overall economic slowdown, Smith says, "The most challenging aspect of our business, right now, and perhaps for the next year or two, may well be whom to choose to assist in attracting capital, as the opportunities are so broad and the cost of inertia so large.

"It's a great time to be in our business. Whatever you do, don't squander this crisis!"

Certainly, it's private equity's time to shine in 2009, as the public markets are totally closed, cash flows are down drastically, and even commercial bank debt remains a challenge for many energy companies.

Rodman Energy is the recently formed arm of Rodman & Renshaw LLC, the full-service, independent New York investment banking firm, whose parent, Rodman and Renshaw Capital Group Inc., went public in fall 2007. The IPO enabled Rodman to expand significantly by acquiring entire companies, such as its June 2008 purchase of COSCO Capital Management LLC, the well-known financial intermediary firm that Smith founded in 1992.

Rodman retained all COSCO's former employees and immediately formed Rodman Energy, consolidating their respective offices in New York, and, in fact, adding personnel to COSCO's former bases in Houston and Calgary.

Smith and this seasoned team are convinced that today, the private equity community has an "extraordinary opportunity to invest unusually well," using the record capital it raised in 2007 and early 2008.

For instance, for the first time in many years, E&P and service companies are short on liquidity and long on capital opportunity. "Companies, particularly the fast-trackers of the last public cycle, have to triage capital to what they deem to be their most attractive plays. This leaves vast spreads of acreage, some even with production and reserves, available for purchase or farm-in, which is perfect for private capital," Smith points out.

"Prices for proved reserves are down and falling lower, and companies which last year would never have considered raising equity or debt are now in the market, seeking to gain momentum, while their peers drift aimlessly, at the mercy of their creditors."

Smith acknowledges the rumors that some institutions that made large commitments to energy funds are reneging, or asking them to "go slow" on capital calls. But in each case where he has asked a fund's manager for specifics, "I've been told not to worry—that they have sufficient spread and strength within their portfolios of investors to overcome whatever liquidity issues might arise."

Additionally, the market has responded to these rumors by attracting a number of secondary funds that are raising, or have raised, capital, to take advantage of any duress among existing fund owners.

"Our challenge," Smith says, "is to assist the very best energy-focused funds to find the very best companies—and more accurately their managements—who recognize that periods of com-



Cameron Smith,
The Rodman Energy
Group

modity distress have always provided the greatest opportunity for quantum-changing initiatives. Short-term dilution is always trumped by long-term value creation.

"We are trying to remain patient, to ensure our selections for clients are both best in class, as well as consistent with our principles and animating mandate: 'To promote sound, sustainable and profitable relationships between the financial and operational segments of the energy business.'"

On the public side, Rodman is using these market doldrums to build up its team of public analysts, bankers and dedicated sales force. The firm continues to search for the best individual talent available, many having been cast adrift by the implosion of

the investment banking world, Smith says.

"For five of the past six years, and we think again in 2008, Rodman has been the leader in the number of private placements of highly liquid public equities ("PIPES").

Going forward, Smith says the firm wants its strengths to be as strong in the public domain for energy as it has been for almost two decades in the private arena.

Services include arranging placements of illiquid public stock, warrants, debentures, convertible notes, or secured notes.

As part of this initiative, in October 2008, Rodman & Renshaw hired Jeff Hayden, CFA, as senior analyst, and Chad Mabry, as associate analyst, basing both in the firm's Houston office. They have launched energy research and now cover nine E&P equities. In summary, they view the dramatic correction in the group as being overdone, given industry fundamentals, creating an attractive entry point for long-term investors. ●

DI Plus⁺ is a Top Floor to Rig Floor Solution

Maximize the benefit of Drillinginfo with DI Plus. DI Plus is dynamic and interactive. It gives your entire team total access, anytime...anywhere. Make better decisions, get quicker answers, and be more productive with a DI Plus subscription for your company.

Strategic Decision Makers
Decision Support Tools and Services

- Interactive Research Platforms
- Strategic Play Analysis
- Custom Data Mining

Operations Management
Knowledge, Project, and Document Management

- Incorporate and Manage Your Company's Knowledge with DNA™
- View Opportunities with DI's Landtrac™ Unified Land and Exploration Suite

Professional and Technical Staff
Dynamic and Up-to Date Information Resources and Tools

- Integrated Land, Well, and Production Information Resources

Field Operations
Drillinginfo Energy Services

- Business Opportunities for Service Companies
- Access and Exposure to Key Service Providers

www.drillinginfo.com

Explore DI Plus⁺ at NAPE!

Visit Booth 2301

Stop by today to see how Drillinginfo can be an asset to your company.
Demos available during the show.

Open To Explore™

www.drillinginfo.com

sales@drillinginfo.com

888.477.7667

Drillinginfo is a registered trademark of Drillinginfo, Inc.
©2008 Drillinginfo, Inc.

P.O. Box 5545,
Austin, TX 78763

0109PFRM03224

Weatherford Applies Its Credo of Technology And Efficiency To The Shale Plays

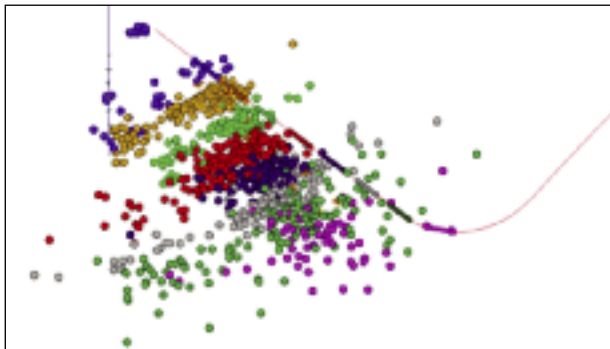
A focus on making all oil and gas development viable investments.

By Susan Klann, Managing Editor, *Oil and Gas Investor*

Weatherford International Ltd. is one of the largest global providers of advanced products and services spanning the drilling, evaluation, completion, production and intervention cycles of oil and natural gas wells. It is bringing its focus on efficiency and productivity to bear in the shale resource plays, one of the highest-potential arenas for operators both in the U.S. and internationally. The company is helping operators to achieve success in these plays by meeting technology and geological challenges.

The IEA estimates that global reserves of shale gas are some 450 trillion cubic meters. This represents more than the total remaining ultimately recoverable reserves of conventional natural gas as estimated by the U.S. Geological Society.

“Reciting these big numbers is easy, but for those investing in shale plays and working to develop shale gas fields, there are significant development chal-



This example of a horizontal well shows a multi-stage stimulation in shale indicating interaction and overlap between stimulation stages. (Courtesy Weatherford International)

lenges,” notes Rob Fulks, U.S. projects manager.

“We don’t dwell on when the downturn will end, but rather on what we can do to ease its impact by

making shale plays, other unconventional gas plays, and indeed, all oil and gas development, viable investments. We see hard times as a time to apply technology to maximize production and recovery, in concert with operational efficiency-building measures that reduce costs and risks.”

The questions operators must answer are many, and run the gamut from cost pressures to production and drilling issues to environmental concerns. How can operators cut costs to make these wells economic? How can they obtain high-quality openhole logs in long horizontal well bores? How can they achieve effective multi-zone fracture stimulation? Can produced frac fluids be made environmentally safe?

Weatherford addresses these challenges and more at all stages of a shale play’s life-cycle, from drilling and evaluation through completion to production and intervention, and ultimately, well abandonment. “Our

focus is two-fold: technology and efficiency,” says Fulks. “The application of our technology in shale plays is directed at increasing production rates and maximizing recovery. While we recognize overlap, the efficiency component is directed more at operational execution in the field to reduce well costs and minimize risk.”

For an investor in shale plays, Weatherford’s technology is about maximizing return, and its efficiency is about minimizing cost and risk. For example, the ZoneSelect™ completion system enables multiple fracture stimulations to be performed in a single trip without thru-tubing intervention. By providing interventionless diversion of the fracture treatment, coupled with life-of-well zonal isolation capability, ZoneSelect minimizes the time and cost to complete long horizontal shale wells.

“Tightly coupled to ZoneSelect are our fracture stimulation services,” says Barry Ekstrand, vice president of reservoir stimulation and pressure pumping. “We help build efficiency by operating one of the most modern fleets of equipment available. This, combined with good training and competency assurance, helps minimize unnecessary downtime. Efficiency is further improved in the wellbore with fracture conductivity enhancements using ZetaFlow™, which alters the zeta potential of sand or ceramic proppants. This results in a reorientation of the proppant pack to create additional porosity and conductivity, and ultimately help optimize well performance and maximize recovery.”

Reducing uncertainties

One of the investment uncertainties in the shale plays is tied to reservoir uncertainty. “This is the hardest variable in the profitability equation to assess and control, with the arguable exception of oil and gas commodity price,” notes Fulks. “For many years, there have been a multitude of data sources to characterize a reservoir. When properly understood and interpreted, this data can inform decision-making and reduce uncertainty.”

Key to this understanding is the efficient integration of the various disparate data sources:

- Geo-chemistry, to understand reservoir continuity, basin modeling and for pay-zone identification;
- Geo-mechanics, to ascertain tectonic influences, fracture orientation and pore pressure;
- Core analysis, to derive the “ground truth”, calibrate logs and reservoir models;
- Formation evaluation from LWD, wireline logging for imaging and geo-steering;
- Micro-seismic measurements to confirm fracture length and orientation and optimize stimulation treatments; and

Private Placements and Transaction Advice:

\$1.825 billion since January 2000, alone!

- Equity: \$875 million
- Debt: \$450 million
- A&D Advisory: \$500 million

In June 2008, Rodman & Renshaw, LLC (member FINRA/SIPC) acquired COSCO Capital Management LLC and formed **The Rodman Energy Group**, retaining all of COSCO’s former personnel and offices in Houston and Calgary.

An Affiliate of
Dewbre Petroleum Corporation
CORPORATION

and

HARBOR HILL INTERESTS, L.P.

\$35,500,000

Senior Secured Notes

Rodman & Renshaw, LLC
acted as Placement Agent
for Dewbre Petroleum Corporation

October 2008

Zodiac Exploration Corporation

zodiac
exploration corp

C\$18,110,000

Common Equity

Rodman & Renshaw, LLC
acted as Placement Agent
for Zodiac Exploration Corporation

September 2008

Mt. Dora Energy Corporation

\$35,500,000

Line of Equity

COSCO Capital Management LLC
acted as Placement Agent
for Mt. Dora Energy Corporation

May 2008

Lake Ronel Energy Partners, LLC

LAKE RONEL
ENERGY PARTNERS, LLC

\$40,500,000

Common Equity

COSCO Capital Management LLC
acted as Placement Agent
for Lake Ronel Energy Partners, LLC

January 2008

Action Energy Inc.

\$17,500,000

Common Stock

COSCO Capital Management LLC
acted as Placement Agent
for Action Energy Inc.

December 2007

Red Arrow Energy, LLC

\$85,600,000

Line of Equity

COSCO Capital Management LLC
acted as Placement Agent
for Red Arrow Energy, LLC

July 2007

Ausam Energy Corporation

\$25,000,000

Line of Debentures and Warrants
To The Huff Energy Fund, L.P.

COSCO Capital Management LLC
acted as Placement Agent
for Ausam Energy Corporation

July 2007

KGL Investment Company

\$30,000,000

Units of Convertible Notes and Warrants

COSCO Capital Management LLC
acted as Exclusive Advisor
for KGL Investment Company

June 2007

The Rodman Energy Group

For further detail on The Rodman Energy Group, its Services and Track Record, please visit www.rodman.com

Cameron O. Smith	New York NY	212-430-1792	cos@rodman.com
William E. Weidner	Simsbury CT	860-658-6700	wew@rodman.com
Lane W. McKay	Calgary AB	403-237-9462	lwm@rodman.com
T.P.(Scott) Kessey	Houston TX	713-654-8080	tpk@rodman.com

16

February 5-6, 2009 • NAPE EXPO 2009—A SPECIAL REPORT

- Mud logging for geo-steering, fluid identification and stratigraphic picks.

A truly integrated data set that comprises the above sources will reduce geological uncertainty. "When this intellectual understanding is practiced through real-time operations centers, a host of efficiency-building measures are realized," says David Tonner, director, global sales, surface logging systems. "From a personnel safety standpoint, the headcount at the well site can be reduced as key experts can be remotely located in real-time centers. In areas of expertise such as geo-steering, a limited number of individuals with expertise can attend to multiple well sites, bringing their knowledge to a number of simultaneous operations. Related to this, one is better able to manage knowledge and best-practice transfer, all of which reduces cost and risk."

Adoption of a well-life-cycle perspective is key. Applying a strong geo-sciences capability in concert with the two core shale-service capabilities of horizontal drilling and fracture stimulation assists operators in the planning stages of shale wells.

"One example would be the map and core analysis data package we have for the Haynesville," says Henderson Watkins, director of technical market development, Weatherford Laboratories. "We can follow through the entire well life-cycles with an integrated range of specific products and services."

Among the technologies being applied in the shales are ZetaFlow, and multi-zone completion systems, which have been installed across all the major shale plays, whether in the form of ZoneSelect or FracGuard composite bridge plugs. In terms of chemistry, Weatherford's micro-emulsion flowback surfactant is at work in both the Marcellus and Barnett shales. "We are also seeing significant interest in our microseismic hydraulic fracture mapping to optimize fracture stimulation design and execution," says Fulks. The advantage to this mapping is the ability to monitor microseismicity in the same well that is being fraced; this can even be applied in the hot shale plays where the frac fluid cools the monitoring tools during the well stimulation, assuring reliable operations, even when bottom-hole temperatures are high.

Formation evaluation and reservoir characterization are enhanced by Weatherford's GC-Tracer (gas chromatograph tool for real-time analysis characterization and evaluation of reservoirs). The tool improves on traditional methods of formation gas analysis by leveraging a patented membrane-based extraction technology. The result is more precise, timely results.

In another formation evaluation innovation, Weatherford recently drilled a 60-degree deviated well in the Haynesville using its point-the-bit Revolution® Rotary Steerable System. Bottomhole temperature in the 3,500-foot horizontal reservoir section of the well averaged 320°F (160°C) and the BHA operated for over one hundred hours at these conditions. The need to drill long horizontal wells is common to all shale plays, and this job underscores the ability to do this, even at extreme Haynesville bottom-hole conditions. This technology has also been used in horizontal drilling from pads near Dallas-Fort Worth airport.

Drill pipe-based formation evaluation techniques are extended with a wide range of other logging tool conveyance options, including coiled tubing, through drill-pipe, and the Compact™ suite—reliable, smaller and slimmer systems that allow efficient acquisition of high-quality data from both conventional and deviated well paths.

Weatherford's efficiency focus yields tangible results, such as with its frac-flowback work in the Bakken shale play. There, 15,000 psi-rated equipment up to 14% H₂S offers "inline" services allowing oil sales as the well is unloaded. Building on this efficiency, the CoMag™ system has recently been successfully trialed in the Powder River Basin to yield clean produced water effluent at the well site, with a significant environmental benefit. ●

EXPO OVERVIEW *Continued from page 1*

exhibiting companies.

NAPE's resilience and growth despite the economic climate underscores the quality setting it provides for vendors to meet with clients, prospectors to sell their deals and properties to get sold. Advanced technology and energy capital formation exhibitors complete the marketplace offerings. Participants place a high value on the opportunity to conduct marketing in an efficient, two-day time frame rather than having to host road shows throughout the year. Likewise, the networking opportunities inherent in NAPE's venue are invaluable.

Now in its third year, the International Pavilion (IP) is also growing. It has taken more space at the winter NAPE and expects to have 125 booths housing national oil companies, ministries of energy and other international government entities and E&Ps operating globally compared with the 87 booths in 2008. National oil companies and independents operating exclusively internationally will all be located within the IP space.

The annual Industry Luncheon on Thursday will feature special entertainment. Proceeds from this event benefit The Coalition to Salute America's Heroes, which helps severely wounded and disabled veterans rebuild their lives.

Forté expects interest in the shale plays to continue



Exhibitors are estimated to number some 900.

(Photo courtesy of NAPE)

strong at the event. "They appear to be holding strong while some conventional plays are taking a bit of a hit," says Forté. "Fortunately some shale plays such as the Barnett are still very economic."

"NAPE is the place to market deals industry-wide, domestically and internationally," says Forté.

The NAPE, formerly known as the North American Prospect Expo, was founded in 1993 to provide a marketplace for the buying, selling and trading of oil and gas prospects. Producing properties and international companies were added in 1998. ●

TRACK RECORD

New Century Exploration, Inc.

HAS WHAT IT TAKES
TO WIN THE RACE FOR ENERGY:

EXPLORATION • DEVELOPMENT • PRODUCTION

- LOW COST, EFFICIENT OPERATOR
- EXPERT TEAM WITH LONG HISTORY OF SUCCESS
- STRATEGIC POSITIONS: GULF COAST & ARK-LA-TEX
- SUSTAINABLE PROJECTS WITH UPSIDE POTENTIAL

New Century  Exploration, Inc.

17350 State Highway 249, Suite 300 ~ Houston, Texas 77064
281-664-7000 or visit www.NewCenturyExp.com

The Mighty Marcellus

Despite a tough economy and industry caution, this super-giant gas field remains highly promising.

By Stuart Smoller, Contributing Editor

Ever since geoscientists at Penn State and State University of New York (SUNY) said a black shale in northern Appalachia, the Marcellus, could boost proven U.S. natural gas reserves by many trillions of cubic feet, industry excitement has mounted. To realize the vast potential depends on how well E&P companies use horizontal drilling and fracturing techniques to maximize production. But the prize could be enormous: the Marcellus shale stretches from southern New York through western Pennsylvania into eastern Ohio and across West Virginia.

Penn State professor Terry Engelder and SUNY professor Gary Lash say the Marcellus shale conservatively holds 168 trillion cubic feet equivalent (Tcfe) of gas in place, but this figure might be as high as 516 Tcfe.

Engelder says the technology exists to recover 50 Tcfe of gas from the Marcellus, making it a super-giant gas field.

"While existing technologies from the Barnett shale and other similar plays in North America are being employed in the Marcellus shale play, these technologies will need to be tailored to specific geological conditions present within the various regions of this play," says John Pinkerton, Range Resources Corp. president and CEO.

Range Resources has drilled more than 100 wells in the Marcellus shale in Pennsylvania and West Virginia. In late 2008, it had three rigs drilling with plans to increase that to six for 2009. Its last 10 horizontal wells had an average peak initial rate of 7.3 million cubic feet (MMcf) per day.

Over the past 30 years, Range has quietly accumulated a lease position in the Appalachian Basin of 2.3 million net acres. Of this, approximately 900,000 net acres are in the fairway of the Marcellus. Based on current recovery rates.

"We have drilled more than 100 vertical and horizontal wells to the Marcellus over the past four years, but a number of these wells had been shut-in awaiting processing and pipeline infrastructure. With the opening of the Houston, Pennsylvania, gas processing plant by MarkWest Energy LLP in October 2008, our Marcellus production currently exceeds 35 MMcfe per day."

"We do not foresee any delays in hooking up wells drilled in 2009, and therefore expect to exit 2009 with Marcellus production in the 80- to 100-MMcfe range, coming from both dry gas and wet gas areas."

At press time, the 2009 budget was expected to stay within cash flow. "We anticipate entering the development mode in the Marcellus during 2009, drilling approximately 50 horizontals and another 25-plus verticals."

As of mid-January, Atlas Energy Resources LLC had completed more than 100 wells to the Marcellus shale, of which 90 (some of which have been online for two years) have normalized

production approaching 25 MMcf per day into a pipeline, according to Atlas president and chief operating officer Richard D. Weber. The remaining eight wells were to be turned into the sales line by the end of 2008.

Atlas has developed a robust geologic database from its Marcellus shale wells in southwestern Pennsylvania and has significantly enhanced its vertical completion and production techniques.

The company's last 13 vertical Marcellus wells averaged initial rates of 1.3 MMcf per day, which is 30% higher than Atlas's prior average vertical Marcellus well.

A typical vertical well costs between \$1.3- and \$1.8 million, whereas horizontal well costs will run between \$4.5- and \$5.5 million, says Weber.

Atlas has posted much higher IP (initial potential) rates on vertical Marcellus wells using a two-stage frac design, and has averaged 24-hour IP rates of 2.5 MMcfe per day on the first seven wells, more than double the company's historical average from its previous 90 wells. The two-stage frac also exhibits a shallower decline rate than a well with a single-stage frac.

In November 2008, Atlas reported successfully casing its second horizontal well to the Marcellus, with a lateral leg of approximately 3,000 feet. The company planned to complete this well, in Washington County, with an eight-stage frac. Atlas has spudded its third and fourth horizontal wells and plans to have completed 12 wells by early second-quarter 2009. ●

No Matter Where You Sit at the Table

OilandGasInvestor.com

For both **E&P players** and **financial insiders**, **OilandGasInvestor.com** delivers the real-time market intelligence, searchable databases, research archives and up-to-the-minute news you need before sitting down to negotiate your next deal. Give yourself an advantage over your competitors, by logging onto the ultimate online resource for anyone who is serious about making money in oil and gas. And, try to hide your smile as you walk into the next meeting knowing you're more prepared than the other side.

Take the Online Tour at oilandgasinvestor.com/onlinetour, and in four minutes, we'll show you how the site can help enhance your deal flow.

and huge potential in the Deep Bossier, one of the hottest plays in the country. Proved horizons include Woodbine, Sub-Clarksville, Rodessa, and Pettit, with significant upside in Cotton Valley and the Deep Bossier. Because of the drop in drilling costs, this project is sustainable even at a lower price deck. Informal plans are to drill six shallower wells to Rodessa in 2009, and proceed at a rate based on the success of early drilling. The decision how to fund the drilling of the Deep Bossier also depends on those results. The property includes portions of five fields and the potential for up to 150 locations, with 40 in the PUD category.

New Century began acquiring Haynesville shale leases in the second quarter of 2008. While not as extensive as the company's holdings in the Deep Bossier, they could have a sizable impact on reserves. The company plans to launch a Cotton Valley drilling program in the second half of 2009, learning from the results of other operators' Haynesville wells before



New Century drilling a gas discovery in the Wilcox trend of Colorado County, Texas.

(Photo courtesy New Century Exploration.)

embarking on horizontal drilling. "This is a play that rewards smart operators and the metrics are improving at what seems like the speed of light," says Martin.

While tumbling commodity prices challenge the economics of any play, Martin expects the company's Haynesville shale properties to be sustainable even at \$2 per Mcf. (Martin presented on the Haynesville at a recent SIPES continuing education seminar at the Marathon Oil Conference Center.) Helping to offset commodity-price drops are falling service costs. "We have seen drilling costs drop 50% from last fall," notes Martin. "On two of our wells in Texas and Louisiana, service costs have fallen by \$200,000 in the last month and I expect them to drop even further." Costs have not bottomed out yet, he notes, because of the year-end bulge in drilling activity and the significant number of contracts still in place. As those expire, costs will decrease further, and continue to help offset the fall in oil and gas prices.

New Century's activities span the E&P spectrum, from prospect generation through pipeline transportation. Its compact but skilled team is made up of geologists, geophysicists, landmen, engineers, and experienced support staff. Communication is a valued commodity in the company's culture, and the staff includes long-time business associates, friends, and others sharing connections through the years. Key personnel include Narda Martin, vice president and CFO; Duncan DuBroff, exploration and land manager; Ken Dunlap, chief geophysicist; C.B. Caire, engineering manager; Lindsay Holley, head of contracts and regulation; Jeff Grimes, land manager; Alison Van Arsdol, landman; Lisa Miller, controller; and Candyce Ter Haar, public relations.

Martin is optimistic about the opportunities currently available, despite leaner times. "We are tightening our belts just like everyone else," he says. "We are reviewing all of our business processes carefully." A sharpened focus on elimination of any redundancies and reexamination of reserve reports on all producing properties, for example, have been integral in identifying areas that should be revisited to apply alternative strategies or technologies.

"It's been a healthy process," says Martin, "as we look at how we manage wells and all of our operations and increase efficiencies." Its land department employs iLandman, an online database management system, its back-office systems use Wolfe Pak accounting software, and revenues and expenses are communicated through direct deposit and e-mail, a particular advantage for its international participants.

Challenging times present opportunities, and New Century is in discussions with a variety of capital providers to fund its anticipated drilling program and growth. It has conserved its cash so that it has sufficient dry powder to take advantage of opportunities that will arise through 2009 and beyond. "We expect to see a large number of properties on the market and we'll be looking at those that are sustainable at these price decks and where we can add value," says Martin. "We'll be looking at buying in to benefit from the coming upcycle." ●

will Prepare You for the Meeting.

What **Oil and Gas Investor.com** Brings to the Table:

For Oil & Gas Producers

- Find out where your competitors are successfully drilling before you make your next move.
- Know who is arranging, lending and investing capital in your competitors' companies—and the deal terms.
- See which of your peers are taking chips off the table—how many and at what price.
- Find the key A&D contacts for the assets you want to buy.
- Hear upstream insiders' thoughts on their companies and investments and on the marketplace—uncut!
- Search for talent as you staff up to execute your business plan.
- Instantly gain access to 215 articles in *Oil and Gas Investor* that reference the Bakken shale.
- Find sources of the many types of capital—from private equity to drilling partners to commercial lenders.
- Peek into the hot topics among your competitors and among investors.

EXPLORATION HIGHLIGHTS DATABASE

RECENT FINANCINGS DATABASE

EXECUTIVE STOCK TRANSACTIONS DATABASE

WHO'S WHO IN E&P A&D DATABASE

EXCLUSIVE VIDEO & AUDIOCASTS

PEOPLE ON THE MOVE

EIGHT YEARS OF EDITORIAL & WEB ARCHIVES

OIL AND GAS FINANCE SOURCEBOOK

MOST READ, MOST SEARCHED, MOST E-MAILED

For Financial Partners

- Discover the details of new E&P plays before play-makers' stock prices reflect the added potential.
- Keep abreast of which financiers and investors are providing capital to your potential upstream energy financial clients.
- See what upstream executives think of the value of their own company's stock before you buy in.
- Sort A&D go-to leaders by sport and asset, and arrange a business-development outing.
- Watch E&P leaders describe the strategies that are behind their financial decisions—uncut!
- Verify that E&P start-ups are pulling together experienced management teams before extending credit.
- Review 130 articles on Rockies M&A in *Oil and Gas Investor* before deciding to expand your portfolio in the region.
- List your firm and stand out from the crowd while also letting us pre-screen for you—producers can read up on your financing criteria before they call.
- See if your investments are getting the market recognition they need, or might want to change their playbook.

SUBSCRIBE TODAY AT
OILANDGASINVESTOR.COM/SUBSCRIBE

For a personalized tour of OilandGasInvestor.com — tailored to whether you sit on the E&P or financial side of the table — and to subscribe, contact **Attrice Hunt** at 713-260-6437 or ahunt@hartenergy.com.

Oil prices rise and fall



Visit us in
Booth 2607

Our software levels the field

Now is the time to streamline your business and make it more flexible for an uncertain future.

P2 Energy Solutions has the knowledge and software to save you time and money. Our 650 functional experts have many years of oil and gas experience and our products are developed specifically for and used by more than 450 E&P companies. We provide insight and solutions to upstream business like no other company.

P2 Energy Solutions is the most comprehensive source of exploration, development, management and production software, data, hosting and outsourcing services.

- Accounting
- Financial
- Production
- Land Management
- Well Life-cycle
- Reserves Management
- Map Data
- GIS tools



Find out how to save time and money with our systems at

WWW.P2ES.COM

or call us at 800-662-9144