Oil and Gas Investor

# Summer NAPE® Special Edition

August 27-28, 2009 Hart Energy Publishing, LP

UNCONVENTIONAL GAS

## Fly like an Eagle Ford

*A fresh Cretaceous shale play in South Texas slips into the industry's future.*

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

The latest shale play to take flight is a streamlined version of the resource plays now familiar to the industry. This newest play is young and chock full of rich gas, and its economics are decidedly positive.

The Eagle Ford shale trends across a great swath of Texas, stretching from Giddings Field in Brazos and Grimes counties down into the Maverick Basin in Maverick County. The Cretaceous Eagle Ford has long been known as a majestic source rock, supplying hydrocarbons to the great Austin Chalk fields and giant East Texas Field. Now it's coming into full plumage as a formidable self-sourced reservoir.

The shale takes its name from Eagle Ford, in Dallas County. From its surface outcrop, it plunges to depths of more than 14,000 feet in South Texas. As its depth varies, so does its hydrocarbon content, ranging from dry gas to oil. These variations, along with internal facies changes, combine to make portions of the Eagle Ford trend particularly attractive to explorers.

Indeed, a couple of areas appear to have all variables aligned correctly to deliver good potential.

"The play exhibits considerable heterogeneity along strike, but specific areas already hold viable, commercial potential," says Robert Clarke, Houston-based lead analyst, Gulf Coast, for international consulting firm Wood Mackenzie.

"This is largely due to a high-Btu production stream and reasonable drilling costs. The Eagle Ford is not likely to grow to be as large as the Woodford or Fayetteville plays, but early analysis suggests it could be very profitable."

Just a handful of wells produce from the Eagle Ford, and these have all been drilled in the past year. Production histories are lacking.

"But results are intriguing, and production from the early wells seems to be holding up quite nicely."

### Hatching a play

Houston-based Petrohawk Energy disclosed the Eagle Ford's potential to the public last fall when it announced a hefty discovery in La Salle County. Since that revelation, interest in the shale has soared.

(see **Eagle Ford** on page 3)

EXPO OVERVIEW

## Summer NAPE Expo® 2009

*The premier networking event kicks off its fifth year.*

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

Whether you're looking for oil and gas drilling prospects, producing properties, to buy, sell or trade, or trolling for U.S. or international opportunities, Summer NAPE expo offers the ultimate forum.

About 7,000 attendees are expected at this year's event on Aug. 26-28, held at the George R. Brown Convention Center in Houston as in years past. Attendees will once again renew acquaintances while forming new business contacts as they peruse prospects at close to 700 booths.

Since its creation in August 2005, attendance at Summer NAPE has steadily increased, just as has the original NAPE expo held each winter. In 2005 about 4,000 attendees viewed 375 booths. Equivalent attendance did not reach this height until the fifth year of the original NAPE. In 2006, there were 525 booths and attendance jumped, to more than 5,000. In 2007 and 2008, booths and attendee numbers again posted gains.

Summer NAPE is presented by IPAA and three other limited partners in NAPE Expo LP: the American Association of Petroleum Geologists (AAPG), the American Association of Professional Landmen (AAPL) and the Society of Exploration Geophysicists (SEG). ●

## Network at the A&D event

New SEC asset reporting rules…new taxes…carbon legislation…financing strategies…emerging shale plays…divestment options…asset valuation in a brave new deal-making world.

The eighth annual **A&D Strategies and Opportunities Conference**, and third annual **A&D—The Workshop**, to be held next week on Sept. 1-2, in Dallas, will assist corporate and asset buyers and sellers in achieving best-practice deals.

More than 300 A&D specialists, business development experts and capital arrangers annually gather at this powerful networking event.

The conference is held at the Fairmont Hotel. To register, contact lcarter@hartenergy.com, call 703-891-4804, or register online at adstrategiesconference.com.

*This year's presenters include:*

- Keith Rattie, chairman, president and CEO of **Questar Corp.**, on natural gas' role in U.S. energy independence and economic security
- Dan Pickering, co-president and head of research, **Tudor, Pickering, Holt & Co. Securities LLC**, on the outlook for the capital markets and A&D
- Keith Hutton, CEO of **XTO Energy Inc.**, on how the biggest deal in the energy industry in 2008—its $4.2-billion purchase of Hunt Petroleum Corp.—got done

*Panels include:*

- The new A&D marketplace, led by Murphy Markham, managing director, **EnCap Investments**
- Private-equity availability to an acquisition-based E&P, led by Cameron O. Smith, senior managing director, **The Rodman Energy Group**
- Public capital markets and forecasts for the fall redetermination season, led by Kyle Hranicky, executive vice president and manager, **Wells Fargo Energy Group**
- Cross-border deal-making, led by Adrian Goodisman, managing director and co-head U.S., **Scotia Waterous**
- Buying distressed sellers pre-bankruptcy, led by Bob Thomas, head of the energy practice and Matt Vaughn, bankruptcy partner, **Porter & Hedges LLP**
- Carbon policy and its effect on $CO_2$ for enhanced oil recovery, led by the **$CO_2$ Group**; U.S. shale, Rockies and Gulf of Mexico take-away capacity, led by Porter Bennett, president and CEO of **Bentek Energy LLC**; and
- Analysis of the new rules on PUDs, including what public producers can show investors, led by **Netherland, Sewell & Associates Inc.**

And don't forget, on Sept. 1, **A&D—The Workshop**, co-sponsored by The Oil & Gas Asset Clearinghouse. In addition to speakers, this workshop includes a "Let's Make a Deal" virtual data-room, where participants can do a mock deal. This tutorial overview of the upstream business development space is for both newcomers and long-time professionals. ●

INSIDE THIS ISSUE

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# SCHEDULE OF EVENTS

# Summer NAPE 2009

## George R. Brown Convention Center, Downtown Houston

### THURSDAY, AUGUST 27, 2009

| | |
|---|---|
| *7:00 am - 6:00 pm* | Exhibitor and Viewer Registration and Badge Pickup |
| *8:00 am – 6:00 pm* | EXPO Open |
| *11:45 am - 1:15 pm* | Lunch Buffet for Exhibitors and Viewers (Served in Exhibit Hall A, 1st floor) |
| *11:45 pm - 1:15 pm* | Industry Luncheon, benefiting severely wounded American veterans (see below) (Grand Ballroom B, 3rd floor) Registration Required |
| *5:00 pm – 6:00 pm* | Reception for Exhibitors and Viewers (Exhibit Hall Floor) |

### FRIDAY, AUGUST 28, 2009

| | |
|---|---|
| *7:00 am - 1:00 pm* | Registration and Badge Pickup |
| *8:00 am - 4:00 pm* | Expo Open |
| *11:45 am - 1:15 pm* | Lunch Buffet for Exhibitors and Viewers (Served in Exhibit Hall A, 1st floor) |
| *4:00 pm - 7:00 pm* | Exhibit Teardown No teardown permitted during exhibit hours |

# Industry Luncheon

*Benefiting America's Heroes, Thursday, August 27, at 11:45 am*

Join hundreds of other Summer NAPE attendees for this seated luncheon, traditionally a sell-out, benefiting severely wounded American soldiers.

For a minimum contribution of $60, which can be added to your Summer NAPE registration fee, you will make a difference in the life of a soldier. This year's luncheon features Dan Naatz, a political affairs expert for the Independent Petroleum Association of America, who will present an update on legislative affairs in Washington, D.C.

Naatz is currently vice president of federal resources and political affairs for the IPAA. He coordinates all activities for the association concerning federal resource issues and also manages political activities. Prior to joining the IPAA, Naatz spent 12 years on Capitol Hill working for former Senator Craig Thomas (R-WY) in various capacities, including as chief of staff and legislative director. He holds a bachelor of arts degree in political science from Colorado College and a master of arts degree in public administration from the University of Virginia.

NAPE Expo LP underwrites all luncheon expenses so that proceeds go directly to assist severely wounded veterans of the campaigns in Afghanistan and Iraq. Contributions by NAPE participants since 2007 have now surpassed $800,000. ●

Coalition to Salute America's Heroes

### U.S. DRILLING

# Texas Alliance: Stable rig count brings hope

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

The Texas rig count rose slightly in July and may be stabilizing, indicating a "green shoot of hope" that producers are returning to the field, said petroleum economist Karr Ingham, speaking to the media at the Texas Alliance of Energy Producers lunch.

In July, the Texas oil and gas rig count rose to 342, a small but healthy gain over June's 320, according to the midyear release of PetroIndex, an energy-related composite index used to measure growth rates and track cycles and turning points in the sector.

Although the energy industry represents only 11.2% of the total Texas economy (and could fall to about 7% by the end of 2009), each dollar of revenue generated by the industry creates an economic impact with a significant multiplier.

"When rig counts are down, that means people are losing jobs and the state is losing tax revenues," said Ingham. "The July rig count indicates some stabilization, despite eight consecutive months of decline."

The midyear PetroIndex review revealed that, compared to 2008, the average monthly rig count has fallen by more than 600 (about 65% off the peak of 958), monthly drilling permits declined by more than 1,800 (a drop of about 70%), the value of Texas oil and gas production is down by 70% and some 34,000 industry jobs have been lost.

Meanwhile, although the monthly average price for crude oil has doubled over the past several months, it does not have an appreciable effect on domestic producers that target gas.

However, stable or increased drilling activity will benefit Texas communities because much of the proceeds stays in the region due to the exit of international oil companies a decade ago.

Also, the index intimates that well completions are on the rise, but the statistic is misleading, Ingham said, "because recently the Texas Railroad Commission has had time to catch up with its paperwork. We are still watching the dominos fall." ●

The company teamed with an independent geologist from Corpus Christi to generate the play concept. The initial phase was extensive subsurface analysis of the regional Eagle Ford; that was followed by geochemical and petrologic analyses of well samples in the prospective area.

Petrohawk had no previous position in this quiet corner of South Texas, but it liked the prospect's similarities to the Haynesville shale. The Eagle Ford and Haynesville have comparable thickness, gas-in-place volumes per section, and total organic carbon (TOC) values. In the prospect area, the Eagle Ford was some 250 feet thick and occurred at depths between 11,000 and 12,000 feet.

This piece of the Patch had some shallow production, and deep control was sufficient to narrow focus to a particular locality. Immense ranches dominated the land picture, which made it a prime place to quickly put together a sizeable resource play.

### Taking flight

Petrohawk began to acquire leases in early 2008, and rapidly pulled together 160,000 net acres. It drilled its first well in Syndicate Field, in La Salle County, near Fowlerton. Last October, it announced its STS-241-#1H as a discovery flowing 7.6 million cubic feet of gas and 250 barrels of condensate per day from a 3,200-foot lateral fractured in 10 stages.

The company confirmed the play with its Dora Martin #1-H, drilled some 14 miles to the west. This well tested 8.3 million cubic feet per day, with no condensate, from a 4,300-foot lateral fractured in 12 stages.

The Eagle Ford took flight. Petrohawk's third well, Donnell #1H, probed the eastern side of its acreage in McMullen County; this was 18 miles east along strike from the discovery well. It made 3.6 million cubic feet of gas and 395 barrels of condensate per day. That was followed by the Brown Trust #1H, drilled in the vicinity of the STS-241-#1H, which made 8.1 million cubic feet and 200 barrels of condensate per day.

Petrohawk had discovered a field that stretched more than 30 miles along strike, and each of its tests encountered highly prolific reservoir in the Eagle Ford. The company has dubbed its find Hawkville.

"Our field is geologically bounded," says Dick Stoneburner, executive vice president and chief operating officer. "The Eagle Ford is everywhere, but we're in a little mini-basin of high-porosity/high-resistivity facies. It's clearly a local and very mappable deposit."

An unusual feature, given remarkable homogeneity in the shale reservoir itself, is the rapid change from dry gas to rich gas and condensate across Petrohawk's leasehold.

"The variances in condensate yield and maturity are a result of different thermal maturity across our position," he says.

To the southwest, core from Petrohawk's Dora Martin well recorded thermal maturities of 1.4% Ro. At its STS well in the center of its position, Ro is 1.1%. Vertical depth to the reservoir is the same; company geoscientists surmise that the southwestern portion of its leasehold was once buried more deeply but later uplifted by the Chittim Arch, a Tertiary structural feature that trends into the area from the northwest.

Although the play was predicated on its analogy to the Haynesville, the two shales do exhibit some striking differences. The Eagle Ford, Cretaceous in age, features a pressure gradient of 0.65 psi per foot and contains lots of carbonates; the Jurassic Haynesville has gradients of up to 0.90 psi and minor carbonates.

"The Eagle Ford's carbonate content is 70% in some places, and clay content is very low," says Stoneburner. "It makes completions easier—the Eagle Ford fracs like a dream."

Certainly, the Eagle Ford is far more amenable to drilling and completion work than its pricklier cousin. Unlike the Haynesville, the Eagle Ford does not require large volumes of high-strength proppant. In its Eagle Ford laterals, which are typically 3,500 to 4,000 feet long, Petrohawk runs about 100,000 pounds of 100-mesh and 200,000 pounds of 40/70 proppant in each frac stage. The operator uses mainly white sand, but it does tail in each stage with some premium proppant.

The company believes potential estimated ultimate recoveries of Eagle Ford horizontal wells will likely fall between 4- and 7 billion cubic feet equivalent (Bcfe) apiece. Drilling costs are plummeting: Petrohawk's initial horizontal test cost $12 million and took more than 75 days to drill, while its latest well was drilled for $4.5 million in just 22 days. "We have eliminated a host of costs, such as drilling pilot holes and setting intermediate casing," says Stoneburner. "The pressure is not high, and these are not troublesome rocks to drill."

The sharply lower drilling and completion costs have immediate effects on the play's metrics: "We are drilling sub-$5 million wells for 5 Bcfe or more. The economics are off the chart."

Petrohawk's Eagle Ford leases are split by the Frio River. The company runs one rig on the southwest side of the river and one on the northeast. It is phasing in additional rigs and will raise its count to six. It planned to spend $50 million on the play this year; recently it upped that commitment by $70 million.

Stoneburner says it's likely that other areas in the trend will be found that hold the same prolific facies identified by Petrohawk. "But so far, I think that we have found the best rock."

The fledgling Eagle Ford is off to a soaring start. ●

**For more on the Eagle Ford Shale, see OilandGasInvestor.com and UGcenter.com.**

# E&P Start-Ups Debut

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

A number of new exploration and production companies have been formed since last year's summer NAPE Expo. Many of these companies were formed by experienced managers from well-known producing companies who have reconfigured as new entities. Here's a brief summary of some of the new firms entering the E&P business. For more information on these and other companies, visit OilandGasInvestor.com.

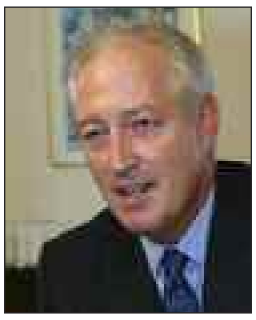
- King Tomlinson, Jim Gilstrap and John Foester have formed **Coastal Plains Exploration LLC**, Port Lavaca, Texas, to explore and exploit oil and gas reserves on the Gulf Coast of Texas and Louisiana. Tomlinson is president, Gilstrap is vice president, land and business development, and Foester is vice president, geology. The firm is funded by management and industry partners.
- Covington, La.-based **Etroa Resources LLC** has been formed by Cheryl Collarini and Kevin McVey with start-up funding from Los Angeles-based investment partnership PetroDevelopment Partners LP. Etroa will acquire and exploit oil and gas assets in the Gulf Coast region.
- The Assiniboine and Sioux tribes of the Fort Peck Indian Reservation in northeastern Montana and Salt Lake City-based Native American Resource Partners have jointly formed **Fort Peck Energy Co.** The tribes, together with Native American

*(See **Start-Ups** on page 5)*

# Rodman Energy Group: State of the energy capital markets

*"Get while the gettin's good."*

**By Cameron O. Smith, senior managing director, and Scott D. Edwards, vice president, *The Rodman Energy Group, a Division of Rodman & Renshaw Capital***



Cameron O. Smith

There are two distinct capital markets—public and private—and each has its peculiar and often diametrically opposed drivers. What's the state of the capital markets today, as they relate to energy investing?

## Private capital markets for energy

Private capital has been eerily quiet during the first half of 2009, following the bunker mentality of fourth-quarter 2008. The Rodman *Private Energy Investment Review*© *(PEIR),* published twice yearly, is based on surveys of the 24 private capital providers that have agreed to constitute our Rodman Energy Index©. At the end of 2008 the survey revealed that never before has the index presided over so large an aggregate of fresh commitments or been so bullish about investing during the unfolding crisis.

But, something appears to have happened on the way to the forum! Based on our marketing efforts over the past six months and other anecdotal information, it would appear that private capital has largely sat on the sidelines during the first half of 2009. Perhaps it is awaiting better times, distracted by the train wrecks in its own portfolios, or loath to call on its own institutional investors' commitments for fear they will not be honored.

As of this writing, our Index Surveys for the first half of 2009 have only just gone out, so we, like you, can only look forward to a more definitive snapshot of this part of the capital markets when we analyze the returns and publish our findings in the October edition of *Oil and Gas Investor* and in our next PEIR.

What we do know with confidence is that private equity is universally looking to invest in going concerns having great managements which, for reasons not of their own doing, and notwithstanding lots of PDPs, are suffering an acute lack of liquidity. Also, these companies must have significant acquisitions under contract that they are eager to consummate, but simply lack the capital.

> **"The reason for the recent opening of the capital markets is, quite simply, a sense of optimism."**
> *–Cameron O. Smith*

We also know that private equity is not looking for drill-bit-oriented investments, start-ups, natural gas, or large lease plays. It also has pulled back significantly from international opportunities, seeking primarily to invest in the U.S., onshore, in focused plays, one basin at a time.

Despite the hurdles, a few deals have been announced. Morgan Stanley's private-equity investment in Triana Energy LLC is a good example: A generalist fund with little exposure to E&P over the past couple years deciding to return to the sector and selecting a management team with

(see **Capital Markets** on page 6)

**START-UPS** *(continued from page 3)*

Resource, will co-develop the hydrocarbon-based energy resources on the reservation.

- Houston-based, privately held **Northstar Offshore Energy Partners LLC** has been formed with an initial funding of $100 million of private equity from Natural Gas Partners IX LP and the management team. The company will continue to be focused on the exploration, development and acquisition of oil and gas opportunities in the Gulf of Mexico. James P. (Jim) Ulm II is chief financial officer and partner.
- Tulsa, Okla.-based **Plymouth Exploration LLC** has been formed with a $50-million private-equity commitment from Kayne Anderson Energy Funds, and with funding from management. Plymouth is the latest venture of Plymouth Resources Inc., which has been operating since 1982. It will focus on acquisition, exploration and development primarily in Oklahoma, Texas and Kansas. PEX's founder is Ted Kronfeld, president. Alex Kronfeld is senior vice president, Joel Blake is vice president, exploration, and Jack Kueser is vice president, engineering. Kyle Hill is controller.
- G.R. (Rich) Talley, Mark Sheehan and Jack Fritts have formed privately held, Tulsa, Okla.-based **Primary Natural Resources III LLC** to acquire and exploit conventional oil and gas properties in the Midcontinent, Oklahoma/Texas Panhandle and Permian Basin with an initial equity commitment from Houston-based, private-equity provider Quantum Energy Partners, from its Quantum Energy Partners IV fund, and from management. Total commitment is more than $100 million.
- Randy Stevens has launched his third start-up E&P. Midland, Texas- and Dallas-based **Stanolind Oil and Gas LP** has been formed with private-equity backing from Natural Gas Partners to acquire and exploit properties in the Permian Basin and Midcontinent, primarily, as well as in other basins. Stevens is president and chief executive and Marshall J. Eves is executive vice president.
- Dallas private-equity firm HM Capital Partners LLC has invested in Houston-based **SunTerra Resources LLC,** a newly formed E&P company focusing on underbalanced horizontal drilling on acreage currently controlled by other HM Capital portfolio companies, including BlackBrush Oil & Gas and TriDimension Energy. The management team includes chief executive Jim Hughes; Bob Cuthbertson, vice president, engineering; Dale Cunningham, vice president, drilling services; and Rodney Bray, chief financial officer.
- Dallas-based privately held energy investment firm **Texas Energy Holdings** has launched three

# Cost vs. reward: Organic, inorganic shale-gas economics

*Shale plays will drive deal flow late in the year.*

**By Steve Toon, A&D Editor, *Oil and Gas Investor***

The combination of pent-up demand, opening of capital markets and a bullish outlook for gas prices will create an exciting deal flow in late 2009 and into 2010, driven by shale plays. This is according to Jefferies Randall & Dewey managing director Bill Marko, speaking at Hart Energy Publishing LP's Developing Unconventional Gas conference held in Fort Worth.

"You need optimistic buyers, people who believe in $6 to $7 as the prevailing price," he said. "At $6 to $7, the shales work all day long, even without cost reductions."

Paired with pessimistic sellers, deal flow could ramp up even more. "Sellers can remain bears, but as long as there are some bullish buyers, deals will get done."

At present, however, "plain vanilla A&D is not functioning." The bid/ask gap will close and sellers and buyers will capitulate at about $55 for oil and $6 for gas, he predicted. When that happens, deal flow "will take off again."

In the meantime, joint ventures will increase, more so than straight sales, as the gas-price outlook is not so good that sellers believe they can "sell at the top." Instead, most companies now want to develop their holdings more to increase value before selling. Jefferies is currently working on several such deals, he said.

> **"Sellers can remain bears, but as long as there are some bullish buyers, deals will get done."**
>
> *–Bill Marko*

"Drilling ventures are going to be what work best in the shales. They match people long on acreage and short on money with those that don't have the access and maybe don't even want to operate. And you're sharing the risk: If prices are attractive you share in the reward. If not, you share in the pain. You've just got to marry someone you can get along with."

Tom Gardner, director at Simmons & Co. International, is not as optimistic about gas prices. "Regardless of demand, 2009 is essentially a lost cause," he said.

The massive gas glut that has flooded the marketplace, due in large part to prolific resource-play production, will require drastic measures to move through.

"The E&Ps are a victim of their own success," he said, exacerbated by aggressive production growth combined with a massive decline in demand. "We were not surprised in October when the rig count began to decline after gas fell below $8."

Gardner said the rig count would have to drop from its peak of 1,600 by 700 to 1,000, "depending on the severity of the recession. We're not too hopeful for gas-on-gas competition and shut-ins for 2009." (At press time, the U.S. gas rig count had dropped by about half.)

What to do? "Stay alive until 2010—2010 is looking good."

Likewise, Bentek Energy president and chief executive Porter Bennett believes the gas glut will require more than dropped rigs and shut-in production to reverse the downward trend in gas prices.

"Performance in this industry has been absolutely remarkable. The problem is it's been too good—we've got a lot of gas and demand is shrinking because of the recession," he said. But even if demand was what it was last year, the industry still has a problem because of pipeline constraints.

"The shales are refocusing the structure of the gas markets in a lot of ways, and the pipeline system is just beginning to react to it." More than 100 pipeline projects are currently under way. "Thanks to unconventionals, the U.S. is supply long and it's going to be that way for quite a while."

Pipeline constraints around the country are exacerbating the problem of supply buildup and lack of demand, making price implications more difficult. "A lot of producers think Rex coming out of the Rockies will help, but it won't because it's already full."

More than just reduced drilling, shut-in production will be necessary to get gas below the constraint level. "Prices will start to come up pretty quickly after that happens," he said. "The problem is, once you start drilling and throw half a dozen good Haynesville wells into play, you're back to being full. Demand is the most important part of the equation. Find a friend and tell them to burn gas."

Jefferies & Co. managing director Subash Chandra, presenting in absentia, noted that over the past 12 months, shale and nonshale companies responded similarly to changing natural gas prices, where in the prior year only resource-play companies were highly sensitive to changing gas prices.

Even though both are tied to natural gas prices, shale-focused companies "tend to travel along a slightly more elevated path in the marketplace in terms of investor perceived value, but you need to be a gas-price bull to be involved in these shale names," he said. As an investor, "You should and need to have shale-gas exposure." ●



**START-UPS** *(continued from page 4)*

subsidiary companies to assist in development of oil and gas fields. Texas Energy Operations maintains and operates fiscal oil properties. Texas Energy Operating Service drills proprietary wells and wells for other companies. Texas Energy Operating Supplies will provide oilfield equipment and oilfield supplies to Texas Energy Holdings' operations and contracted operations. Chad Willis is president.

- Kayne Anderson Energy Funds and two executives from Zone Oil and Gas LLC have formed the Houston-based venture **Zone Energy LLC** to acquire and develop U.S. onshore oil and gas properties. Kathy Hogenson is president and chief executive and Bill Hogenson is vice president. ●

which it has had previous experience. The company is a dominant operator in the Appalachian Marcellus, one of the sexiest plays of recent times, which features close proximity to markets and thus commands premium wellhead prices.

Furthermore, new funds are, in fact, closing—Quantum, Kayne Anderson, First Reserve, to name but a few—and their success demonstrates that institutional investors have far from abandoned energy-focused private capital.

> **"Management teams that have taken advantage of the run must be breathing a sigh of relief."**
>
> *–Cameron O. Smith*

So, what is our outlook for private capital's investment in energy? There's simply too much pent-up capital and too much opportunity remaining in this crisis for private capital to remain paralyzed. Sooner or later, it will heal its wounds and, as it always has, fan out, discover, and back those professionals who know how to turn hard times to advantage.

### Public capital markets for energy

In contrast to the private capital markets, the public capital markets exploded in the second quarter of 2009, with more than 250 follow-on offerings completed year to date (as of June 30, 2009). Twenty such transactions were completed for upstream oil and gas producers, raising an aggregate of more than $4.5 billion. The average dilution to existing shareholders was approximately 15%, including shares issued in over-allotments.

There were also 20 private placements completed for publicly listed oil and gas producers so far this year (as of July 20, 2009), raising more than $400 million, with average dilution of 17.5%.

The precipitous fall in commodity prices during the second half of 2008, and thus, equity values, had investors and issuers alike avoiding the capital markets all together. The recent rally couldn't have come at a better time for producers: Balance sheets were hemorrhaging, cash flow was rarified, and redeterminations loomed.

We are all asking ourselves, "What's in store for the capital markets, going forward?"

To answer that question we must first understand the underlying driver of recent activity. We in the energy industry all know that equity value is inextricably tied to commodity prices (correlation R2=0.92). Oil's rebound happened to coincide with a longer and stronger than expected rally. The S&P bottomed in mid-March at 676 and has since rallied 40%, closing at 951 as of July 20, eking out a slight gain year to date.

The reason for the recent opening of the capital markets is, quite simply, a sense of optimism. Investors had cash available, and equities had been oversold. Issuer's balance sheets were exposed to liquidity risk, which provided investors with the opportunity to equitize balance sheets. This, in turn, unlocked equity value, resulting in significant returns for both investors and existing shareholders. The great divide between issuers and investors narrowed as a result of the recent rally, driving both the desperate and the savvy through capital markets' open doors.

There does not seem to be any empirical evidence of fundamental value creation by companies over the past six months. It's not as if we saw a great deal of positive economic data, such as all that job creation our globetrotting president keeps bragging about. And certainly product prices have not posted hockey-stick recoveries.

So where does the public capital for energy markets go from here?

Dare we say, "We just don't know?"

What we can say is that we've had a heck of a rally and that the capital markets for public energy stocks certainly have been open. And management teams that have taken advantage of the run must be breathing a sigh of relief. For those who have yet to do so, we say, "Get while the gettin's good!" Who knows how long it will last? Because without true recovery in underlying fundamental drivers, such as industrial demand, consumer spending, and supply/demand balance for commodities, we are likely to see a significant pull-back in the broader markets and a closing of the public capital market's doors. ●



## Bakken: Back to Business

**By Ann Priestman, Editor,**
***Unconventional Natural Gas Report***

Nymex crude oil futures are on the upswing, trading between $65 and $72 per barrel, once again driving E&P's attention to the Williston Basin's Bakken oil play, where the rig count had slowed earlier this year.

Several operators recently reported good wells. Enid, Oklahoma-based Continental Resources Inc. reported completion of its #Mathistad 2-35H in McKenzie County, North Dakota, in which it has a 41%-working interest. The well flowed at an average 995 barrels of oil per day during its initial seven-day test period, making it Continental's strongest operated Middle Bakken completion. The well proves the company's belief that the Middle Bakken and Three Forks/Sanish zones are separate reservoirs in portions of the North Dakota shale play.

EOG Resources Inc., Houston, now has six rigs operating in its 500,000 net acreage position in the Bakken, and is drilling in both the Core and Lite areas. With initial production rates of 1,700 barrels and 1,600 barrels per day, respectively, the Austin #17-20H and #20-29H are characteristic of previously completed Bakken core wells. In the Lite, EOG's Ross #7-17H and Sidonia #1-06H showed initial production at 500 barrels and 700 barrels per day, respectively. EOG plans to drill 17 gross wells in the Bakken Lite area during 2009 and an additional 58 gross wells in the Bakken core.

Kodiak Oil & Gas Corp., Denver, drilled and completed its first four wells targeting the middle member of the Bakken formation. It has one well under completion, one awaiting completion and its seventh Middle Bakken well, the Charging Eagle #1-22-10H, is drilling a horizontal lateral.

Northern Oil and Gas Inc., Wayzata, Minnesota, completed 18 wells in Bakken and Three Forks and is drilling or completing an additional 35. Thanks to its 100% drilling-success rate in the Williston, the company is producing oil and gas from 101 Bakken and Three Forks wells and three Red River wells, pumping some 967 barrels per day.

Rosetta Resources Inc., Houston, has staked and applied for permits on four vertical wells in Glacier County, Montana, targeting the Bakken shale at roughly 5,500 feet. The company plans to drill two verticals this year, the first of which will be spud in early September to assess the resource potential of the Lodgepole, Bakken and Three Forks intervals.

St. Mary Land & Exploration Co., Denver, plans to drill its first operated well targeting the Three Forks formation and will also drill several horizontal Bakken wells in the Bear Den area.

And finally, XTO Energy Inc., Fort Worth, "is excited" about its oil wells producing about 1,500 barrels daily, with one coming in at 2,400 barrels, from its Bakken shale play.

For more Williston Basin success stories, visit the Unconventional Gas Center at UGcenter.com. ●

# Haynesville shale powers on

*It tops other shales today—maybe any day.*

**By Brian Brooks**

"Happy birthday to America—and to the Haynesville shale," says Shannon Nome, Houston-based managing director and E&P analyst for Deutsche Bank Equity Research in a follow-up to her widely read and circulated year-ago report on U.S. gas shales, "Shale to Shining Shale."

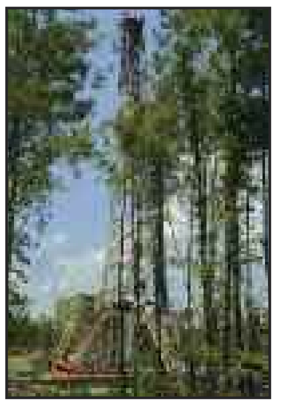
"The Haynesville continues to dominate headlines as impressive drilling results and exciting joint-venture announcements have vaulted it past the Barnett as the No. 1 U.S. shale play in terms of rig activity."

Haynesville shale results continue to impress, while activity in other shales is slowing down, Nome says.

"While a rush to hold acreage is one key driver for this increase, we believe strong drilling results have also fanned the flames of enthusiasm for Haynesville, which stands among the very few U.S. gas plays that can clear breakeven economic thresholds given the weak pricing backdrop."

Acreage values in the Haynesville play have remained steady, despite the 70% drop in natural gas prices during the past year.

"Last July, we quoted a range of valuation from $15,000 to $40,000 per acre in our shale report, with a midpoint of $25,000, while stating a belief that per-acre prices would ultimately push up into the $50,000 range."



Not all acreage transaction is slipping, though. "Today, while industry contacts suggest that the low end of acreage transaction values has slipped $5,000 per acre in the fringes of the play, land in the hottest part of the 'core' area in DeSoto Parish is indeed changing hands in the $50,000-per-acre realm," she reports.

With big production and big reserves comes big interest, she adds.

"This divergence in low-end-versus-high-end acreage values, in our estimation, reflects differences in well performance that are starting to emerge as the play enters its second year of heavy activity."

IP rates in the high range—above 20 MMcf/d—are becoming more and more frequent in the play's best areas, although differences in testing phases hinder comparability. (IP rates measured over a 24-hour period produce different results than a two-week period.)

"That said, industry per-well EUR estimates seem to be walking generally higher as production history accumulates, and even in the 'noncore' areas, we note many wells are being commercially completed."

And, what about take-away capacity? "Pipeline projects further underscore optimism for future growth from the Haynesville, as roughly 5 Bcf/d of proposals with target dates on or before 2010 currently sit on the drawing board."

With gross production of around 1 Bcf/d, Nome expects playwide production to double or triple by 2010.

"Despite the major infrastructure projects in the works, we believe occasional bottlenecks in parts of the Haynesville shale-play area are likely to occur. As well, some producers may suffer attrition in their acreage unless they are able to successfully establish production before lease terms expire."

Other risks include oil and gas exposure, weather delays, drilling/exploratory hazards, political/regulatory pressures and significant capital requirements, she adds. ●

**Haynesville, Eagle Ford, Marcellus, Barnett, Bakken, Abroad**

## The Unconventional-Resource Webinar Series

**by Nissa Darbonne, E-Editor, *Oil and Gas Investor***

Shale-gas plays across the U.S. continue to swell producers' market caps and investors' return on investment, despite lower natural gas prices, as these plays, along with the Bakken oil-shale development that is experiencing improved-oil-price-based economics, hold the greatest promise for repeatable, abundant profit-making.

The six-webinar Unconventional Resource series—presented by OilandGasInvestor.com and the new UGcenter.com unconventional-resource business-development center—is under way now and focuses on the current dynamics of each of the hottest shales: the emerging Eagle Ford, the nascent and bountiful Haynesville, the gigantic and thick Marcellus, the reliable Barnett, and the resurging Bakken. Plus it takes the promise abroad in a look at U.S. producers' opportunities to apply their expertise to shales across the world.

Seventeen experts discuss leasing trends, take-away capacity, drilling results, well economics, lease law, tax law, water-management policy, technological advancements, and always-important oil- and gas-price forecasts—plus Euro gas politics that are driving interest in importing excess U.S. shale gas production to European shores.

This series is the must-have companion for developing the most current unconventional-resource best practices, for E&P executives, financiers, investors, G&G professionals, oilfield-services partners, consultants and advisors. And, the opportunity does not end: These six webinars will be archived for attendees to revisit again, and again. Your shale is here!

- **The Haynesville Bottom Line: Leasing, Take-Away, Well Results.** (Broadcast live Aug. 20. Now available on demand.)
- **The Emerging Eagle Ford: Early Results.** (Broadcast live Aug. 25. Now available on demand.)
- Sept. 10, 10 a.m. CDT: **The Marcellus Bottom Line: Well Results, Take-Away, New Tax & Water Issues.**
- Sept. 17, 10 a.m. CDT: **The Barnett Bottom Line: Leasing, Take-Away, Well Results.**
- Sept. 24, 10 a.m. CDT: **The Renewed Bakken/Three Forks-Sanish: Economics, Well Results, Technological Advancements.**
- Oct. 1, 10 a.m. CDT: **Translating The Profit Overseas: International Unconventional Gas Opportunities, And The Macro Global Gas-Price Forecast.**

# The Big Gas Production Rollover of 2009 vs. Bigger shale wells

By Leslie Haines, Editor-In-Chief, *Oil and Gas Investor*

Everybody in the industry has been waiting for U.S. natural gas production to decline just enough that prices will recover to at least $4 per thousand cubic feet (Mcf), if not higher--and stay there.

By some accounts the Big Gas Production Rollover of 2009 began in March and started to manifest for real this past summer. On the other hand, positive gas production news continues to reverberate throughout the industry. Southwestern Energy Co. reached 1 billion cubic feet a day out of its Fayetteville operation in July, and Petrohawk Energy Corp. is approaching half a billion in the Haynesville.

> **"Production declines are accelerating and we remain comfortable in our view that U.S. production is entrenched in a steep decline through 2009 and into 2010."**
>
> *–Michael Hall*

U.S. gas production was off by about 1 billion cubic feet a day from February to May, notes Michael Hall, vice president and E&P analyst in the Denver office of Stifel, Nicolaus & Co.

"Officially confirming a trend in our eyes, daily production turned over for the third month in May 2009, to 57.5 Bcf a day, declining 0.6 Bcf a day sequentially and about 1.0 Bcf a day, or 1.7%, from February 2009's peak.

"Production declines are accelerating and we remain comfortable in our view that U.S. production is entrenched in a steep decline through 2009 and into 2010."

In a recent report, Hall says total U.S. dry gas production is higher than he anticipated "as productivity remains impressively high." He joins the chorus of others who say the rig count is losing some of its meaning, as productivity per rig has vastly increased in the past two years because of the shales, where initial production (IP) rates routinely impress.

Hall thinks 2009 U.S. gas production will average about 56 Bcf a day, with strong year-over-year declines of about 5 Bcf a day by year-end. He also says he is "increasingly convinced that 2010 production will decline year-over-year; we now estimate a decline of about 7.5%, with a much lower exit rate.

"This analysis paints a more bullish long-term scenario than our prior assumptions. The near-term, however, likely deserves even more caution."

Indeed, the signals are mixed. In its latest data, the Texas Railroad Commission reported that gas production rose in February 2009 over the prior-year number, getting to 564.5 million Mcf versus 479.2 million Mcf in February 2008. It rose again in May, to 560.3 million Mcf. In March, operators completed 1,176 gas wells in the Lone Star State, versus about 800 the year before in March. In May, they did it again, completing 1,183 gas wells, more than in the prior May.

> **"In the second quarter, XTO's production climbed 32% year-over-year, to 2.89 billion cubic feet equivalent."**

It is fair to note that these data reflect the month in which completion data is processed, which lags the month the well was actually completed. State agencies are behind in entering well data into their databases, notes Manuj Nikhanj of Ross Smith Energy Group in Calgary.

Meanwhile, although investors want to see higher gas prices, they also insist that their E&P favorites increase gas production every quarter. That shouldn't be hard to do. In a report last summer, Simmons & Co. International researchers estimated that Devon Energy Corp. has 18 years of drilling inventory in the Barnett shale alone, and Newfield Exploration Co., 22 years in the Woodford shale.

"Petrohawk is singlehandedly demonstrating the significant productive impact of the core Haynesville shale. Q2 production of 483 million cubic feet equivalent (MMcfe) a day was well above guidance and the full-year forecast has increased to 530 MMcfe a day, or about a stunning 60% annual growth rate," notes senior analyst Chris Pikul at Morgan Keegan & Co.

On its conference call, XTO Energy Inc. chairman Bob Simpson said he still looks for an economic recovery and decreasing gas supply this year, due to the slowdown in U.S. drilling—but the company provided guidance that its own gas production could grow 20% this year (10% from drilling and 10% from acquisitions.)

In the second quarter, XTO's production climbed 32% year-over-year, to 2.89 billion cubic feet equivalent.

Can we have our cake and eat it too?

XTO reports having four rigs working the Haynesville and its last two wells there IP'd at 6.5 and 6.9 million cubic feet a day during the second quarter. It has one rig running in the Marcellus and a second expected soon, with 10 to 12 horizontals planned for 2009. In the Fayetteville it has six rigs drilling, in the Barnett, 10 rigs. And finally in the Woodford, it has three rigs drilling. In this play, its last four wells IP'd between 3.7- and 6.1 million a day. ●

**NATURAL GAS PRODUCTION DECLINES, LOWER 48**

(Month-end data; assumes 675 gas rigs drilling in 2009 and 2010)

| Date | Bcf/d |
|---|---|
| 12/07 | 54.8 |
| 06/08 | 55.9 |
| 12/08 | 57.05 |
| 06/09 | 56.78 |
| 12/09E | 53.15 |
| 06/10E | 51.97 |
| 12/10E | 50.36 |

*Source: Ross Smith Energy Group*