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WELCOME TO

page Alberta Bakken gains impetus:

Exshaw investment totals \$500M

BAKKEN

Vol. 1, No. 2 • www.PetroleumNewsBakken.com

A semi-monthly newspaper for industry and government

Week of May 6, 2012

Reger, NOG's profitable tactics



Northern Oil and Gas President Ryan Gilbertson (bottom) and CEO Michael Reger pulled in \$2.8 in profit in 2009, their second year in business; in 2011 Northern's profits exceeded \$40 million. See story on page 11.

Gas-to-oil conversion underlies Sunoco takeover by pipeline

Pipeline operator Energy Transfer Partners' bid to takeover refiner Sunoco for \$5.3 billion signals the latest move to seize a chunk of the more lucrative action in liquid shale formations in the United States rather than wait out the depressed market for dry gas.

The deal, which is expected to close in the third or fourth quarter, lays the groundwork for Dallas-based ETP to diversify from its current portfolio of 21,500 miles of natural gas pipelines and 1,500 miles of natural gas liquids pipelines in 10 states, but no crude transportation.

see TAKEOVER page 22

Bakken oil price up on Tesoro's increase in rail loads to WA

Bakken oil prices strengthened to a premium against West Texas Intermediate crude May 3, following Tesoro Corp.'s announcement it was ahead of schedule on the construction of rail facilities for its Anacortes, Wash. refinery. Crude shipments from its North Dakota crude oil gathering system to the refinery would begin in September, instead of the end of the year, Tesoro officials said, and the amount of crude shipped might eventually be 60,000 barrels a day as opposed to 40,000 bpd under the current plan.

Following the announcement, which was made at a first quarter conference call, Bakken oil strengthened \$3 to a \$1

see BAKKEN OIL PRICES page 23

Exxon wins round for market based tariff: Seaway implications?

The Federal Energy Regulatory Commission has been ordered by the U.S. Court of Appeals to reconsider its refusal to allow ExxonMobil to charge a market-based tariff on its Pegasus pipeline from Illinois to the Texas Gulf Coast.

A three-judge panel said it was "unreasonable" of FERC to reject ExxonMobil's application because Pegasus does not have the ability to control the transportation of crude from Canada.

The judges said the "record shows that producers and shippers of Western Canadian crude oil have numerous alternatives

see COURT RULING page 22

FINANCE & ECONOM

No additional rigs

Continental hikes capex from \$1.75B to \$2.3B to fund drilling of new acreage

Bv KAY CASHMAN

Petroleum News Bakken

mid the good news from Continental Resources Inc. (NYSE: CLR) about its first quarter performance, was an increase in capital spending for 2012,

from \$1.75 billion to \$2.3 billion, per a May 2 news release,



one day before the company's first-quarter earnings conference call.

The revised budget excluded acquisition funding and 88 percent of the initial amount was for drilling, Continental said.

The spending hike was for continued development of recently acquired acreage and to fund

Initial one-day test production rates for Continental-operated wells in North Dakota averaged approximately 947 boe per day.

accelerated drilling because of faster cycle times, the company said.

So, instead of participating in drilling and completing 759 gross wells (249 net) and operating 325 gross wells (240 net) in 2012, the acquisition of 46,000 net acres in targeted areas of North Dakota's Bakken since mid-2011 resulted in a 2012 capital budget that called for completing 842 gross (300 net) wells this year, with Continental-

see CONTINENTAL page 18

DEVELOPMENT & PRODUCTION

Conoco production up 50%

Plans \$500M, 16-rig, 120-well drilling program in North Dakota this year

By ERIC LIDJI

For Petroleum News Bakken

onocoPhillips produced 24,000 barrels of oil equivalent per day from the Bakken play in the first quarter of the year, company executives said in an earnings call on April 23.

That's up 50 percent from 18,000 barrels of oil equivalent per day in the fourth **RYAN LANCE**

ConocoPhillips — now an exclusively upstream outfit — lists the Bakken among its "near-term growth opportunities on high-margin projects" in North America, alongside the Eagle Ford shale and Permian basin of Texas, and the Canadian oil



sands. Those plays contributed to 85,000 barrels of oil equivalent per day of growth, year over year.

The Bakken remains the smallest of those unconventional oil projects, cur-

The company is running some 13 rigs in the Bakken, up from about eight last year at this time, and plans to increase that to some 16 rigs over the remainder of the vear.

ConocoPhillips holds more than net 200,000 acres in the "heart" of the Bakken. The company plans to spend some \$500 million drilling 120 wells in the play this year.

see CONOCO PRODUCTION page 22

MOVING HYDROCARBONS

TC extends turf battle

Looks at converting gas line to take Bakken oil to refineries paying top prices

By GARY PARK

For Petroleum News Bakken

ransCanada has opened a new front in its turf war with Canadian rival Enbridge to ship crude from unconventional plays to North America's largest

Chief Executive Officer Russ Girling told analysts, shareholders and reporters RUSS GIRLING on April 27 that his company will submit

revised plans "very shortly" to United States regulators for its stalled Keystone XL system linking the Alberta oil sands and Bakken play to Texas Gulf Coast refineries and is "actively" exploring



the possible conversion of its natural gas Mainline from Alberta to Eastern Canada to carry crude.

Both plans put it head-to-head with Enbridge, which is moving ahead with its plans for the Flanagan South and Seaway pipeline projects to compete with TransCanada's US\$2.3 billion Gulf Coast connection from Cushing, Okla., to the Texas refineries.

Repurposed Mainline: 800,000 bpd

The surprise was Girling's announcement that TransCanada is now in the early stages of weighing

see TURF BATTLE page 23

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Petroleum News Bakken

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No additional rigs

Continental hikes capex from \$1.75B to \$2.3B to fund drilling of new acreage

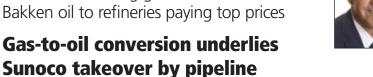
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program in North Dakota this year

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Looks at converting gas line to take Bakken oil to refineries paying top prices



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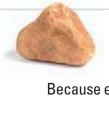
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TECHNOLOGY & ECONOMICS

Drilling technologies may erode prices

Yergin: Global impact of increasing use of horizontal drilling, hydraulic fracturing to tap shale, tight oil could hurt prices







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ENVIRONMENT & SAFETY

NDPC launches trash clean up

By KAY CASHMAN

Petroleum News Bakken

In April, a group representing 350 companies working in North Dakota's booming oil industry announced a new program to clean up the human waste, old tires and other trash littering the state's highways.

State and national media reported in March that oil patch communities were struggling to combat the growing trash problem that included urine-filled jugs tossed by truckers along roadsides.

Alexis Brinkman, government relations manager for the North Dakota Petroleum Council, said NDPC's new Oil Can! Pick up the Patch! program aims to address the growing concern over littering and trash accumulation in North Dakota by encouraging the oil industry and communities to work together to create a "no litter" culture.

NDPC was unanimous in its support for the cleanup initiative, and members are being encouraged to establish long-term programs, not just one-time pickups, Brinkman said.

"Most of the challenges — roads and houses for example — that western North Dakota is facing take time. Trash is something we feel we can take care of immediately."

The NDPC is encouraging companies involved with the oil industry to promote cleanliness and proper litter disposal by:

- including proper trash disposal in employee training;
- making a staff person responsible for cleaning work areas;
- reminding crew not to litter during daily briefings and including trash bags in company vehicles;
- taking part in statewide efforts like Adopt-A-Highway and Keep North Dakota Clean; and
 - scheduling cleanup days in their local communities.

Marathon prime example

Brinkman said Marathon Oil, headquartered in Dickinson, is a prime example of industry participation in the Pick up the Patch! program.

On April 18, approximately 100 volunteers participated in a Marathon-led cleanup day to pick up trash along North Dakota Highway 22 from the Marathon offices, three miles north of Dickinson, south into town.

Terry Kovacevich, asset manager for Bakken project for Marathon Oil, said the company adopted Highway 22 three years ago and organizes cleanup days two or three times a

"We ask all of our employees to help with these cleanup days," Kovacevich said. "We want to keep our roads and communities litter-free just like everyone else. These are our communities, too."

Some 135 people pitched in April 21 to pick up refuse along 15 miles of road in the Watford City area, organizer



Baker-Hughes Safety Trainer Justin Jones cleans up trash along Highway 22 north of Dickinson.



Alexis Brinkman, government relations manager for North Dakota Petroleum Council, and ND District 36 Sen. George Nodland, announcing the Oil Can! Pick Up the Patch campaign at Marathon Oil's Dickinson office.

Karen Holte said. Volunteers filled about 100 big garbage bags of trash per mile and three heaping truckloads of semi tires, but by April 24, evidence of their effort was beginning to fade

"We're only three days in, and there already is fresh trash in the ditches," Holte said. "It's ridiculous."

Pick up the Patch! is a permanent Oil Can! program to help combat litter in the Oil Patch communities. There are already several industry-led cleanup events scheduled as a result of the campaign, and several more will be added in the coming months, per NDPC's press release. "Our com-

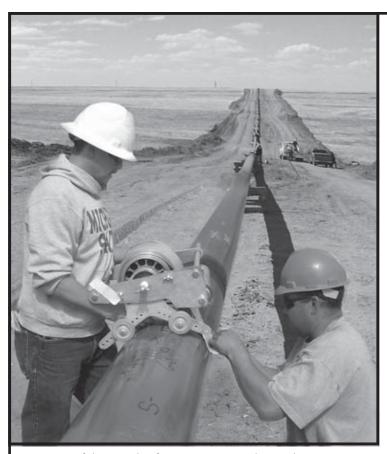
Alexis Brinkman, government relations manager for the North Dakota Petroleum Council, said NDPC's new Oil Can! Pick up the Patch! program aims to address the growing concern over littering and trash accumulation in North Dakota by encouraging the oil industry and communities to work together to create a "no litter" culture.

panies have been incredibly responsive," Brinkman said. "Both immediate cleanup efforts and long-term prevention plans are being implemented. It's exactly what we'd hoped for."

Open to all organizations involved with the petroleum industry, the Oil Can! program was created by NDPC to give the industry "the opportunity to gather information from stakeholders through town hall meetings, websites, surveys and mailings," so the industry could gain a better "understanding of issues and concerns and can respond to stakeholders in a timely manner," the April 18 press release said. •

—The Associated Press contributed to this report

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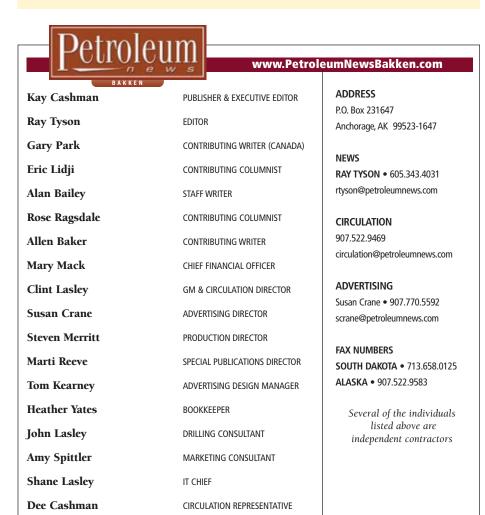
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FINANCE & ECONOMY

Whiting off to a great start

Whiting touts 1st quarter success; includes report of 1 million bpd of rail, pipeline takeaway capacity for Williston year-end

By KAY CASHMAN

Petroleum News Bakken

n April 25, Whiting Petroleum Corp. (NYSE: WLL), which has a market cap of \$6.44 billion and a price-to-earnings ratio of 11.60, posted first quarter net income available to common shareholders of \$98.2 million, or 83 cents a share, compared with \$19.1 million, or 16 cents a share, a year ago.

Excluding items, Whiting earned \$1.03 per share.

Along with an average daily production rate increase of 22 percent to 80,747 barrels of oil equivalent in the first quarter, the Denver-based oil and gas company's revenue rose 30.4 percent to \$563.7 million on a year-over-year basis.

Whiting raised its capital expenditure estimate for the year by \$200 million to \$1.8 billion, as well as increased its full-year production outlook from 77,300-81,100 boe per day to 79,235-82,515 boe a day.

Equities research analysts at Barrington Research, which started coverage of Whiting shares on May 2, reported analysts expect Whiting will earn \$1.13 per share in the second quarter.

All in all, "Whiting is off to a great start this year," company Chairman and CEO James J. Volker said per an earnings call transcript provided online by Seeking Alpha at www.SeekingAlpha.com. He noted the company's first quarter production was 14 percent higher than the fourth quarter of last year.

"We now project 17 percent to 22 percent growth over 2011 versus our prior forecast of 14 percent to 20 percent," Volker said, pointing out that Whiting "had announced several notable exploration wells at our DJ Basin Niobrara and Permian basin Wolfcamp plays and we're expanding our activity in those areas."

He also said the company's revised budget partly "reflects the high pace of activity in the Williston basin," where Whiting is currently running 19 rigs and has more than 2,500 drilling locations that Volker said represents 10 years-plus work.

The company's first-quarter financials show Whiting controls nearly 702,000 net acres in the Bakken and related Williston basin plays, an increase of more than 20,000 acres in the first quarter. (See adjacent chart.)

The Pronghorn play on the southeastern edge of the Bakken maturity limit received a lot of attention during the company's April 26 presentation. The top five operators in the lead for cumulative production in the first six months are, from first to last, Whiting, Brigham, Enerplus, Murex and Slawson.

Here is some of what Volker and other company executives had to say about Pronghorn:

- Target is Pronghorn Sand and upper Three Forks horizon, which can be tapped with one wellbore.
- The two typical production profile EURs (estimated ultimate recovery) range from 600,000 boe to 350,000 boe.
- Average well cost is about \$7 million.
- Pronghorn delivered very similar results to the Sanish Bakken in terms of productivity.
- Did have nine rigs in Lewis & Clark Pronghorn area, recently lowered to five, because going to be drilling all wells off pads there, either two or three wells per pad "depending how the pattern works out. ... We think we're going to see a benefit on the cost side. ... And we also think we're going to be able to drill more wells with fewer rigs because we're going to be eliminating all those rig move days out of there. So our goal is to get to the same endpoint with fewer rigs."
- Pronghorn acreage de-risking is up in the first quarter "about 8,000 or 9,000 acres" in the 100,000-acre prospect.

Slides from Whiting's April 26 presentation and a May 1 presentation are available on its website: http://www.whiting.com/investor-relations/presentations-and-media-events/

Slide 15 from the April 26 presentation shows a comparison between the average IP, or initial production for the first 24 hours, and for first 30, 60, and 90 day production of Whiting-operated Sanish Bakken and Pronghorn wells in 2011.

The Sanish Bakken average IP is 2,017, with the Pronghorn at 803, but after the first day production begins to level out, with the first 30 days at 803 boe per day for the Sanish Bakken and 772 for Pronghorn; in the first 60 days, Pronghorn slightly surpasses the Sanish Bakken, 659 to 650; in the 90-day period, Sanish Bakken is in the lead again with 589 boe a day to Pronghorn's 577.

Best cumulative production

The next slide shows Whiting in the lead for cumulative production by opera-

see WHITING page 10

ATTENTION READERS

Check out 'Shell on the move'

Don't miss the Petroleum News article titled "Shell on the move," on page 1 of this issue of Petroleum News Bakken.

Not only does the story address Shell's Arctic drilling fleet, but it also reports what Shell is saying about its North America strategy for shale gas and liquidsrich shale plays, and what the company is doing with the Chinese.

FINANCE & ECONOMY

Exxon moving drilling rigs to Bakken

XTO parent increases 5-year capital projects budget by 29 percent to \$185 billion; most will be spent finding more oil

By KAY CASHMAN

Petroleum News Bakken

n the midst of falling oil production and a first quarter net income decline of 11 percent, Exxon Mobil Corp. is both shifting rigs from shale gas areas to liquids-rich areas such as North Dakota's Bakken play and acquiring more properties, a top executive told investors April 26.

The move is a switch for ExxonMobil, which had continued to drill for shale gas despite low natural gas prices.

In a first quarter earnings conference call David S. Rosenthal, ExxonMobil vice president of investor relations and secretary, said the company was currently running 61 rigs in the United States, having averaged 64 in the first quarter.

In North America, he said, ExxonMobil holds "a material position in multiple unconventional plays across 8 million acres, and we continue to increase our lease holdings in emerging liquidsrich plays, like the Woodford Ardmore," where the company currently has 10 oper-

ExxonMobil's acreage position in the Woodford Ardmore play "tripled in 2011 to more than 170,000 acres, with acquisition costs on a per-acre basis roughly 50 percent below major industry acquisitions in the Eagle Ford play," Rosenthal said.

Focusing on Bakken rig count

In response to a request from Arjun N. Murti in Goldman Sachs Group's research division to provide an update on ExxonMobil's activities in the Marcellus and Utica shale plays, as well as the Bakken, "in terms of maybe how the rig counts are trending and what you're expected to do here over the rest of this year," Rosenthal replied, "Let me start with the Bakken ... because that is an area where we have been, over the last many months, increasing rigs, and we have continued to increase our rigs, with a total of eight rigs currently operated by ExxonMobil subsidiary XTO Energy."

Things are "progressing very well" in the Bakken, he said, and "we are encouraged by that."

The company is continuing to shift its rigs "to the liquids-rich plays ... really focusing on the Bakken (North Dakota),

"Let me start with the Bakken ... because that is an area where we have been, over the last many months, increasing rigs, and we have continued to increase our rigs, with a total of eight rigs currently operated by ExxonMobil subsidiary XTO Energy."

— David S. Rosenthal, ExxonMobil vice president of investor relations

Permian (west Texas), the Ardmore (southern Oklahoma). We're looking at and getting ready to ... get some wells down in the Utica (eastern Ohio), so all of that's going well and, again, continuing to acquire liquids-rich acreage at attractive prices and shift our rig fleet over to those areas while minimizing the incremental exposure to dry gas wells."

First quarterly drop since 2009

The quarterly drop was the first since late 2009. The company produced less oil and natural gas and profits dropped at its chemical plants and U.S. refineries.

On top of that, the cost of oil, which rose 14 percent in the U.S. during the quarter, kept ExxonMobil from earning bigger profits on the chemicals and gasoline it sold.

But there was some positive news for investors. ExxonMobil sold oil for higher prices around the world, and international natural gas prices rose by 16 percent. Profit rose for its international refining operations. ExxonMobil also plans to boost its quarterly dividend by 21 percent, the largest increase since 1975, making it the biggest corporate dividend payer. ExxonMobil, America's largest energy company earned \$9.45 billion, or \$2 per share, from January to March. Revenue rose 8.8 percent to \$124.1 bil-

Still, the results were short of Wall Street expectations.

"The lower production is certainly a negative," Morningstar Inc. analyst Allen Good told the Associated Press.

"When you get as big as Exxon, it's hard to keep growing," Blake Fernandez, an analyst with Howard Weil Inc., told the Associated Press. "There's only so many projects you can take on at the same

ExxonMobil isn't alone in its struggles. Its production of oil and natural gas was flat last year. Chevron Corp., BP and Royal Dutch Shell also produced less.

In the first three months of this year, ExxonMobil's output fell 5.5 percent, twice the rate expected for the year.

Must find more crude sources

A handful of trends are keeping oil companies from pumping more oil and gas. Existing fields produce less as they get older. New wells are tougher, and more expensive, to find.

And some of the world's best resources are controlled by foreign governments that want to keep their oil revenue at home. They typically offer contracts that limit the amount of oil and gas that partners, such as ExxonMobil, can sell as prices rise.

ExxonMobil must find new sources of crude to get its production back up. It will plow \$185 billion into capital projects over the next five years. That's up 29 percent from the previous five-year period, and much of the budget is devoted to finding more oil.

ExxonMobil said production will eventually grow about 2-3 percent annually over the next several years.

The company expects production soon from oil fields in Canada and wells in Angola and Nigeria. It's also boosting production in Iraq.

Rosenthal wouldn't comment about

reports that the company has been banned from bidding for more contracts in Iraq next month. Iraq's state run oil company said it will turn away future offers from ExxonMobil after the company signed deals with the self-ruled Kurds last year against the wishes of the Iraqi central government.

Rosneft, Exxon to study tight oil in Siberia

ExxonMobil also recently signed a deal with Russian oil giant Rosneft to search for oil and gas in the Arctic and the Black Sea. Drilling could begin as early as 2014. The Russian Arctic is in such a remote and frigid part of the world, however, that moving quickly will be difficult, the company said.

It "will require all of the technological and operational capabilities to explore," Rosenthal said.

As part of the deal Rosneft will "take equity in promising exploration and development projects in the United States and Canada, including the La Escalera Ranch project in the Delaware Basin in West Texas and equity in the Harmattan acreage in the Cardium play of the western Canada basin in Alberta. ... In addition, Rosneft and ExxonMobil will jointly study tight oil production technologies in western Siberia," he said.

—Associated Press contributed to this

Contact Kay Cashman at publisher@petroleumnews.com

NORTH SLOPE EXPERIENCE, NORTH DAKOTA DRIVE.



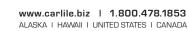
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ENVIRONMENT & SAFETY

Oil waste facility OK'd in SW North Dakota

An Oklahoma company has received approval to build an oil waste facility in southwest North Dakota.

On April 17, Stark County commissioners gave the final go-ahead to Location Service Inc. for the facility near Belfield, approving a zoning change for about 80 acres of land. The Dickinson Press reports that it will be the fourth landfill for drilling waste in western North Dakota's booming oil patch. Commissioners gave approval despite a petition signed by about 200 people who opposed the project because of worries over truck traffic and possible harm to the environment.

On April 17, Stark County commissioners gave the final go-ahead to Location *Service Inc. for the facility* near Belfield, approving a zoning change for about 80 acres of land.

Company spokesman Luke Boss says the site will not handle hazardous waste.

The state Health Department will have to approve the site plan. State Waste Management Director Scott Radig says existing oil waste disposal sites are near-

-ASSOCIATED PRESS

COLUMN

QEP adding \$50 million to capital budget

Stepping back from gas, the Denver independent says the Bakken 'still makes sense,' but sees value in Wyoming liquids plays

By ERIC LIDJI

For Petroleum News Bakken

ith chronically low natural gas prices in North America, QEP Resources Inc. (NYSE: QEP) is slashing spending in the dry-gas Haynesville Shale and now plans to direct 89 percent of its capital budget to liquids-rich plays in the Rockies and Midcontinent.

This year, QEP hopes to increase its liquids production from 14 percent to 20 percent.

IRR Chatter

The Denver-based company wants to increase that production organically. To that end, it's adding \$50 million to its \$1.3 billion to \$1.5 billion spending plan for the year.

The increase is meant to accommodate additional drilling in the Texas Panhandle and western Oklahoma, in the Uinta basin of Utah and in the Bakken of North Dakota.

The additional money for North Dakota allows QEP to run a fourth rig in the play and to manage cost increases in the Williston basin, the company said in recent financial filings.

QEP hopes those expenses can offset each other, to some degree.

Those higher costs are partially the result of drilling in a high-pressure area of the basin and partially from an expectation that completion fluids will get more expensive this year, according to CEO Charles Stanley. But they also come from drilling inefficiencies.

Asked during its recent first quarter earnings call whether a fourth rig would lower costs in the Williston basin, Stanley said, "We haven't seen enough pad drilling activity to really get a good handle on what sort of economies of scale we should see. But our experience at Pinedale and other places where we pad drill would indicate that."

With a fourth rig, QEP could keep rigs on pads longer, and could maximize completions crews and infrastructure hook-ups, according to Stanley. On paper, those efficiencies should shave about \$500,000 off the cost of each Bakken well QEP drills, Stanley

"We haven't seen enough pad drilling activity to really get a good handle on what sort of economies of scale we should see." -QEP CEO Charles Stanley

"Whether we can actually realize that ... the jury is still out on that," he added, noting that a fifth rig in the play would be the "sweet spot" for maximizing those

From 12 to 50 percent

How would those savings play into the economics of the Williston basin?

QEP estimates its Bakken wells this year will cost between \$9.7 million and \$10.4 million each, a range dependant in part on lateral lengths between 5,000 and

Those wells have an average estimated ultimate recovery, or EUR, rate of 500 million barrels of oil equivalent (or a range between 300 million and 900 million barrels of oil equivalent).

In November 2011, QEP estimated a pre-tax rate of return of 26.4 percent for its average well, assuming EUR rates of 550 million barrels of oil equivalent at an average West Texas Intermediate price of \$85 per barrel and a completed well cost of \$9.5 million.

That average is the midpoint of a much wider range: as low as 12 percent for wells with EUR rates of 450 million barrels and oil prices at \$75 per barrel, and nearly as high as 50 percent for wells with EUR rates of 650 million barrels and oil prices at \$95 per barrel.

QEP maintains 90,000 net acres of Williston basin acreage in North Dakota, primarily in a large swath along Lake Sakakawea and the Fort Berthold Indian Reservation. The company operates 32 producing wells in the Williston basin — 26 in the Bakken and six in the Three Forks — and holds an interest in 106 producing non-operated wells.

QEP averaged 5,728 net barrels of oil equivalent per day during the first quarter.

The Powder River basin

How does that compare to other plays in the QEP

QEP is currently running one rig in the Haynesville, but plans to drop it if natural gas prices don't improve by the third quarter. Stanley said QEP wouldn't kick start Haynesville investment until prices are comfortably above \$4 per thousand cubic feet.

That's more than double the current price.

When asked where the company would direct its capital currently tied up in the Haynesville, as it becomes freed up, Stanley said, "Well, the Bakken still makes sense," but added, "Obviously we'd like to put capital into the Sussex and the other plays in the Powder River basin to the extent that we can gain some traction on permits."

Although still evaluating its properties in the Powder River of Wyoming, QEP likes its economics. The company estimated a pre-tax rate of return of 42 percent for its average well in the Sussex play, assuming EUR rates of 350 million barrels of oil equivalent at an average West Texas Intermediate price of \$85 per barrel and a Nymex natural gas price of \$4.50 per million British thermal unit, and a completed well cost of \$6.1 million.

In the Shannon, another play in the Powder River basin, QEP estimated a pre-tax rate of return of 49.3 percent for a well with an EUR rate of 350 million barrels of oil equivalent at an average West Texas Intermediate price of \$85 per barrel and a Nymex natural gas price of \$4.50 per million Btu, and a completed well cost of \$6.2 million.

But in the Niobrara, also in the Powder River basin, QEP estimated a pre-tax rate of return of 19.9 percent for a well with an EUR rate of 300 million barrels of oil equivalent at an average West Texas Intermediate price of \$85 per barrel and a Nymex natural gas price of \$4.50 per million Btu, and a completed well cost of

While oil is currently above \$100 per barrel, natural gas is trading below \$2 per mcf. ●

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TECHNOLOGY & ECONOMICS

Drilling technologies may erode prices

Yergin: Global impact of increasing use of horizontal drilling, hydraulic fracturing to tap shale, tight oil could hurt prices

By ROSE RAGSDALE

For Petroleum News Bakken

n its April 24 edition, the Calgary office of the Torontobased Globe and Mail reported that Daniel Yergin, chairman of energy research firm IHS CERA, said the future strength of oil prices hangs in the balance as tight oil-production methods sweeping North America spread around the world and unlock new energy supplies.

Yergin said Russian, Chinese, European and Saudi com-

panies are rushing to adopt the horizontal drilling and fracturing technology that has opened up a wealth of new oil

What others are saying

Globe and Mail • April 24, 2012 Check it out: http://bit.ly/l02PXq

and gas reserves in Canada and the United States, according to writer Nathan Vanderklippe.

The stage is set for international price pressure, much like the way new output has weighed on oil and gas prices in Canada and the U.S. in recent years, Yergin warned, during a presentation at the University of Calgary's School of Public Policy.

"This technology is not going to migrate. It's already migrating," he said. "And I think in three or four or five years, if we want to talk about surprises that are there, it might be the global impact of these technologies."

The impact is already being felt in North America with

That's not to say that oil prices are likely to crater. For one, the entrepreneurial energy that motivates North America's energy industry —

where competition between hundreds of mpanies leads to rapid adoption of anything new and profitable — doesn't exist elsewhere.

the explosion of shale gas supplies, which has severely depressed prices of natural gas.

The development of so-called "light, tight" oil plays, such as the North Dakota Bakken, also has had an impact, said Yergin, who the Globe and Mail described as a respected voice on energy issues.

"U.S. oil production is up 20 percent since 2008. If we hadn't added 1 million barrels per day of supply in the U.S., we'd be looking at much higher oil prices," he said. "You have a spare capacity of between 1 (million) and 2-million barrels per day in the world market. You take away 1 million (barrels), you don't have much spare capacity at all."

Development of new oil and gas sources around the world stands to deliver a similar impact, but on a much larg-

At the same time, a series of factors could erode oil demand, even in the face of continued growth in much of the developing world. China's thirst for oil and new cars is rising fast. But elsewhere, cars are losing some of the allure that once drove heavy demand.

The current generation of young people "doesn't have the same intense attachment to automobiles that earlier generations had," Yergin said, per the Globe and Mail's report. "And it's not just in North America. It's in Europe, too."

Today's oil prices are high enough to effect change, he added. He said oil prices in 2011, on an inflation- DANIEL YERGIN adjusted basis, were higher than

they've ever been since the 1860s, and if that persists for a few years, it "will be a tremendous stimulus to innovation, substitution, greater efficiency."

That's not to say that oil prices are likely to crater. For one, the entrepreneurial energy that motivates North America's energy industry — where competition between hundreds of companies leads to rapid adoption of anything new and profitable — doesn't exist elsewhere. That factor is likely to moderate the global spread of technology, as are political obstacles, such as France pushing away fracturing technology.

In addition, the drilling and fracturing used to unlock new energy supplies are inherently expensive.

"Many of these new developments in tight oil, oil sands and offshore oil don't exist at \$20-a-barrel oil," the newspaper quoted Yergin as saying. •



FINANCE & ECONOMY

Halcon: New player in the Bakken

By RAY TYSON

Petroleum News Bakken Editor

hief executive Floyd Wilson shifted his latest business venture, Halcon Resources Corp., into high gear with the acquisition of GeoResources, Inc., a fellow Houston, Texas-based E&P independent that complements Halcon's liquids-rich portfolio; and perhaps more important, gives Halcon a firm start in the Bakken.

"We have always envisioned an entry into the Bakken shale," Wilson said in an April 25 conference call with analysts. "I think it is an area where we can grow that footprint."

GeoResources will merge with Halcon in a cash and stock transaction for about \$985 million, according to the compa-

GeoResources entered the Bakken in 2007 with a small non-operated position. but quickly accumulated acreage where today the company operates some 40,000 of its 55,000-net acres across four project areas, three in western North Dakota and one in eastern Montana. About a quarter of the company's total year-end reserves were located in the Bakken, primarily in northwest Williams County. About half of the company budget is dedicated to the Bakken.

"This announcement should come as no surprise to existing Halcon stockholders, as this transaction complements our strategy of concentrating our efforts at building core positions in liquidprone plays." - Floyd Wilson

Reserves boosted 10 fold

And over the past five years, GeoResources has increased its reserve base from some 3 million barrels of oil equivalent to roughly 30 million boe.

"We have a base of bullet-proof reserves and production that generates a lot of cash flow to help us develop these properties," Robert Anderson, GeoResources' chief operating officer, told the 2nd Annual Bakken Investor Conference last month in Minot, N.D.

GeoResources' operational portfolio, in addition to 55,000 net acres in the Bakken, consists of two other key plays in the Lower 48: 24,000 net acres in the Eagle Ford shale play and 200,000 net acres in the Austin Chalk. As of Jan.1, 2012, GeoResources reported 2011 fourth-quarter daily production of 6,982 boe, of which 62 percent is oil.

The deal, pending shareholder approval, increases Halcon's estimated proved reserves by a whopping 150 percent to nearly 52.8 million boe (69 percent liquids); and significantly boosts the new company's average net daily production by over 170 percent to about 11,070

"We believe size and scale are important factors to successful development of resource plays in today's oil and gas industry," Frank A. Lodzinski, chief executive officer of GeoResources, said in the conference call.

Under terms of the deal, Halcon will acquire all outstanding shares of GeoResources common stock. In return, GeoResources shareholders will receive \$20 in cash and 1.932 shares of Halcon common stock for each share of

Halcon faces Eagle Ford divestiture

Independent producer Halcon Resources likely will be required to divest one of the jewels in its nearly \$1 billion takeover of GeoResources — 24,000 net acres of liquids-rich acreage in the prolific Eagle Ford shale play in Fayette County, Texas.

That's because Halcon Chief Executive Officer Floyd Wilson, formerly CEO of Petrohawk Energy Corp., signed a "non-compete" agreement with Australia's BHP Billiton when BHP acquired Petrohawk last year in a \$15 billion deal that included Eagle Ford acreage.

"We plan to divest this property, unless I can work something else out with BHP," Wilson said in an April 25 conference call with analysts. "I suspect that we will end up divesting the property as per our agreement. They did a great job of dealing with us in a very business-like way, and we intend to respond in the same way."

"It will be an extremely easy property to sell for top dollars," Wilson said of Eagle Ford. "It is a very valuable asset, and we intend to make the most of the value of that asset in whatever way we can."

Like many other U.S. shale players, BHP is shifting its focus from natural gas to oil. Since the Petrohawk acquisition, BHP has dramatically increased its drilling activities in the Eagle Ford. Moreover, successful drilling by GeoResources has "de-risked" its acreage in the Eagle Ford, Wilson said.

BHP told analysts in February that the company was planning to moderate the number of drilling rigs in dry gas areas and increase the liquids component of production to 20 percent on a boe basis by 2015.

The company said it expects activity in the liquids-prone Eagle Ford and Permian basins to represent the significant majority of its U.S. onshore activity by

"We continue to adjust our onshore U.S. development plans in response to lower (gas) prices," the company said in its latest quarterly production report.

Eagle Ford and the Bakken, the U.S.'s premier unconventional oil plays, make up the lion's share of GeoResources' capital budget. The deal does give Halcon a significant position in Bakken, on both the North Dakota and Montana side of the

Wilson said whatever deal it works out with BHP on GeoResources' Eagle Ford acreage will have to wait until after Halcon's merger with GeoResources closes, expected sometime in this year's third quarter. Until then, he added, it's business as usual, with GeoResources and Halcon pursuing their own separate projects,

"It will be an extremely easy property to sell for top dollars," Wilson said of Eagle Ford. "It is a very valuable asset, and we intend to make the most of the value of that asset in whatever way we can."

Analysts have said GeoResources' Eagle Ford acreage could fetch around \$180 million.

—RAY TYSON

GeoResources common stock, representing a total consideration to GeoResources shareholders of \$37.97 per share. GeoResources shareholders are expected to own roughly 18 percent of the combined company's outstanding shares on a fully diluted basis.

Deal to close in Q3

The companies anticipate completing the transaction in this year's third quarter, pending shareholder approval.

GeoResources' operational portfolio, in addition to 55,000 net acres in the Bakken, consists of two other key plays in the Lower 48: 24,000 net acres in the Eagle Ford shale play and 200,000 net acres in the Austin Chalk.

The first step in Wilson's new business venture was the \$550 million recapitalization of RAM Energy Resources Inc. late in 2011 to form Halcon. The transaction addressed RAM's considerable debt and opened up investment for oil-rich plays across the mid-continent. The company targeted oil and gas projects in the Utica Shale of Ohio, Wilcox of Louisiana, Woodbine of Texas, and the Mississippi Lime of Kansas and Oklahoma.

Wilson took the same road nearly a decade ago with Beta Oil and Gas, which became Petrohawk Energy Corp. He started with a \$60 million recapitalization and built up the company into the Petrohawk giant that was sold for about \$15 billion to Australian company BHP

Step two for Halcon, after cleaning up the RAM assets, was to accelerate the company's growth by adding a strategic acquisition, namely GeoResources.

"This announcement should come as no surprise to existing Halcon stockholders, as this transaction complements our strategy of concentrating our efforts at building core positions in liquid-prone plays," Wilson said.

Halcon reported a net loss for the 2011 fourth quarter of \$12.2 million on \$25.5 million in oil and gas sales, and a net loss for the full year 2011 of \$1.4 million on \$103.5 million in oil and gas revenues.

In contrast, GeoResources' net income for the 2011 fourth quarter was \$6.7 million on \$39.4 million in oil and gas revenues, and net income for the full year 2011 of \$31.2 million on \$130.6 million in oil and gas revenues.

> Contact Ray Tyson at raymondtyson@msn.com



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DOWNSTREAM

California refiner loves North Dakota oil

By ROSE RAGSDALE

For Petroleum News Bakken

he April 8 edition of The Californian features an arti-L cle about a strategy being used by a refiner in the heart of California oil country of buying large amounts of crude from North Dakota and paying

to have it hauled by train to Bakersfield, Calif., where it's turned into mostly gasoline and diesel for the California market.

The ingenious part of this approach is that the company is turning a bigger profit using midcontinent crude than if

it were buying roughly the same grade oil strictly in Kern County, Calif., the article by John Cox reported.

More refiners will likely follow

Strange as it may seem to purchase oil from afar when so much crude is produced nearby, there's every reason to believe other refineries will soon follow 26,000-barrel-aday Kern Oil & Refining's lead, according to Cox.

"I know that there are a number of people looking at it and looking at making arrangements," oil marketer Bob Devine told the publication.

At least one large West Coast refinery is considering the move. Tesoro Corp. said it was spending \$50 million to build new rail loading and unloading facilities at its 120,000 bpd refinery in Anacortes, Wash. The upgrade would allow it to receive up to 30,000 bpd of North Dakota crude — up from 1,000 to 2,000 bpd now. (The project aimed to cut Tesoro's use of Alaska North Slope crude. In March, construction began and Tesoro ordered about 800 rail cars, which it said can accommodate another 10,000 bpd of Bakken crude.)

Depending on how widespread the trend becomes, it could push down barrel prices for Kern County oil producers, and potentially lower prices at the pump. It also

> could reduce California's growing dependence on oil imported from the Middle East and South America.

> Since 1982, California's use of foreign oil has increased from 6 percent to 50 percent, according to the state Energy Commission. Last year, most of

the imported oil refined in California came from Saudi Arabia (29 percent of the state's foreign oil), followed by Ecuador (22 percent) and Iraq (16 percent).

The commission said it does not know how much crude oil arrives from North Dakota.

A better price

What others are saying

The Californian • April 8, 2012

Check it out: http://bit.ly/IsRGfQ

Simple math is the driving force behind the shift, which appears to have begun in 2010. Math, that is, and the technology-fueled oil boom that has outpaced pipeline companies' ability to deliver oil to refining hubs.

Widespread use of hydraulic fracturing and directional drilling in the Bakken formation has opened up vast oil reserves in and around North Dakota. In just five years, the state's oil production quadrupled to about 550,000 bpd, bringing it roughly even with California's production rate.

While California's 2 million bpd refining industry thirsts for oil, North Dakota is enjoying a glut of Bakken crude, which has contributed to the historic price imbalance. At the end of March, oil from the Bakken was selling at about \$92 a barrel, while heavy crude produced in Kern County was selling for about \$112 a barrel.

Experts told The Californian that the \$20-a-barrel price difference presents opportunities for companies that have been able to re-engineer their plants to make efficient use of light North Dakota crude.

In March, railroad watchers who share their observations on trainorders.com tracked the movement of a train carrying about 60 tankers of Bakken crude into Kern Oil & Refining. That amounts to more than 40,000 barrels of oil in a single shipment.

Refinery consultant Dave Hackett recently examined the economics of shipping midcontinent crude to California on his blog at stillwaterassociates.com. He said Kern Oil & Refining has a strong financial incentive to bring in large volumes of Bakken oil.

"My guess is they're running as much as they can get," he told the publication.

Editor's note: In March Tesoro also said the \$35 million expansion at its 58,000 bpd refinery in the heart of the Bakken play in Mandan, N.D., is on track to increase capacity by 10,000 bpd by the end of the second quarter this year.

Contact Rose Ragsdale at roseragsdale@live.com

COMMUNITY ISSUES

Anderson: North Dakota not just about oil

North Dakota Oil Industry Jobs (Ph2=80% Ph1)

By ROSE RAGSDALE

For Petroleum News Bakken

orth Dakota has one of the strongest economies in the nation and while oil plays a role, it is only one piece of the puzzle, making up just 25 percent of the state's revenue collections, North Dakota Commerce Commissioner Alan Anderson

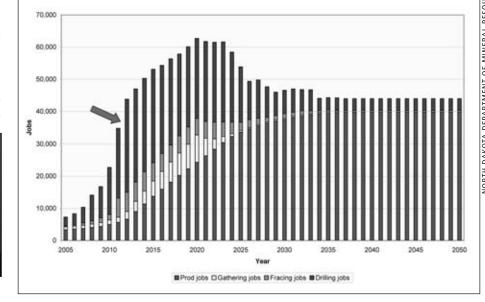
said in commentary written for Prairie Business Magazine, titled, "Growth in targeted industries led to state's strong econo-

"Steady growth in North Dakota's targeted industries is key to our state's strong ALAN ANDERSON economy and diversi-



fication. These targeted industries include advanced manufacturing, energy, valueadded agriculture, technology-based business and tourism.

Our technology sector has gained national recognition and our information technology subsector job growth has been triple that of the nation. Microsoft and Amazon have both recently expanded. Amazon added a 30,000-square-foot facility that will expand its customer service



operations in Grand Forks and create 200 full-time jobs. Microsoft's Fargo campus is one of the larger Microsoft locations worldwide, and its three buildings house over 1,500 employees, vendors and contingent

"Manufacturing also continues to grow in North Dakota. One example is the recent expansion announcement by Caterpillar in West Fargo. Construction has started on a \$50 million project that will create about 250 new jobs during the next three years, nearly doubling the plant's current workforce. Caterpillar officials told us that North Dakota's pro-business climate was a major factor in its decision to expand in West Fargo. Phoenix International, a company that manufactures electronics for John Deere, recently broke ground on a \$22 million expansion project that will include 90,000 additional square feet in Fargo for an expanded work force.

"The state's business growth also includes expansions at WCCO Belting in Wahpeton, Harris Manufacturing in Oakes, and at the Monsanto and Cargill facilities in the Fargo area. Cargill recently started a \$50-million expansion project and Monsanto has completed a \$17.5 million expansion that has created 20 new jobs.

"Tourism is another area that continues to drive North Dakota's economy as the third-largest contributor to gross state product. The tourism industry growth is visible by looking at the number of new hotels constructed across the state. In the past two years, 21 new hotels have opened, adding 1,474 sleeping rooms in 11 communities. Another 24 hotels are under development and are expected to add another 1,800

What others are saying

Prairie Business Magazine • April 6, 2012 Check it out: http://bit.ly/HkDXNm

rooms by later this year.

"North Dakota has the lowest unemployment rate in the nation; we have 16,000 plus jobs openings, with 60 percent of those outside of oil-producing counties. In fact, the counties with the greatest number of job openings right now are Cass with 3,684 and Burleigh with 2,797.

"North Dakota has added nearly 50,000 new jobs in the last decade. The American economy grew at a pace of 2.9 percent last year, while North Dakota's economy increased by 7.1 percent last year.

"Oil is just one piece of our economic success and our economy is much bigger and more diverse than ever before," Anderson concluded.

Fast-growing oil sector

But the oil industry is a rapidly growing and highly lucrative sector of the state's

In a March 20 presentation to the North Dakota Legislature's Energy Development and Transmission Committee, Lynn Helms, director of the state's Department of Mineral Resources, used the adjacent oilfield employment chart in his presentation.

"It's important to see that in 2011 we were at 35,000 oil field jobs; by the middle of this year we expect to be at 45,000 ... peaking in 2020 at 65,000. We peak and then we drop back to a long-term producing paradigm of 45,000 people," Helms told committee members.

The multiple for every oilfield job is 2.5, he said. This adds another 112,500 people in support positions to the 45,000 figure for permanent oilfield jobs.



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• E&P REGION PROFILI

Alberta Bakken gains impetus

Exshaw play straddling Montana-Alberta border comparable to core Williston Bakken; C\$500M spent so far on land, JVs, exploration

By GARY PARK

For Petroleum News Bakken

A new chirping sound emanating from either side of the Alberta-Montana border has nothing do with the birds of spring and a lot to do with fledgling E&P companies living in hopes that the "big" Bakken in Saskatchewan and North Dakota has extended its wingspan.

The juniors are already raising quite a flap as they poke and scratch around in the Alberta Bakken tight oil play which straddles the international border to background noises that the Exshaw component of the play is close to the Bakken.

For the Calgary-based companies, who are coming under pressure from their lenders to get out of dry natural gas, the prospect of crude oil and natural gas liquids development in the so-called Exshaw/Bakken is a godsend.

"We maintain the productivity potential of the Alberta Bakken is comparable to what we're seeing in the Williston basin," said Robert Mercier, president and chief executive officer of Bowood Energy, which holds a net 110,000 acres in the fairway and is in the forefront of advancing the play.

He described the Alberta Bakken as straddling the 49th parallel, extending over 110 miles north-and south and stretching across 25 miles.

Bowood is involved in a joint venture with Legacy Oil + Gas, which itself is immersed in the Spearfish play at the eastern end of the Williston basin.

"What has the industry excited is the potential and similarities between the Alberta Bakken and Williston basin," said Mike Marrandino, president of Primary Petroleum, which holds 170,000 acres of mainly freehold land in the Pondera and Teton counties of Montana.

He said the Alberta Bakken reservoir size sprawls over such a large land area the potential is huge.

Some C\$500 million spent

Primary estimates the broader oil industry has spent about C\$500 million on the Alberta Bakken, including investments in land, joint ventures, exploration and drilling.

It believes C\$230 million has been spent on land alone at an average price of C\$2,000 per hectare (C\$812 per acre).

Bowood reported earlier this year that a test well on Blood First Nation land in southern Alberta started production in December, but that it had been unable to establish a stabilized production rate due to the high-pressure, multiphase influx of oil, water and gas that was hampering pump performance during early-stage production. However, the company indicated the problems were being resolved.

Mercier told investors and analysts at a Calgary conference late last year that Bowood has light oil recovery between 35 and 40 degrees API, but cautioned that the sparse information issued by other producers has ranged from "quite encouraging to discouraging."

He said the shortage of solid news stems from the fact that most wells remain classified as confidential.

Murphy encouraged

Of the larger operators, Murphy Oil, said a year ago that it had drilled the first two Exshaw/Bakken appraisal wells of its



six-well program, and has since disclosed that it hit oil in the Three Forks zone.

"At this early stage, from what we have seen, it's encouraging but it's not an Eagle Ford," he told a conference call, estimating that about 87 wells have been drilled — 36 of them in Montana and 51 in Canada, with 27 drilled horizontally and 20 classed as producing wells.

David Wood, Murphy's chief executive officer, shed some light on the precise nature of the Exshaw play, when asked if it was similar to the Bakken.

"It's a geological equivalent," he said. "If you look at the make-up in terms of how it looks as a section, it's about 10 percent thinner overall than the sweet spots of the Bakken.

see ALBERTA BAKKEN page 10

A quick Bakken guide

Reports by brokerage firm BMO Nesbitt Burns, investment banker and brokerage firm Macquarie Capital and Haywood Securities have all identified the Alberta Bakken as a deep, over-pressured formation, causing them to believe that the economics may have an edge

over the main Canadian Bakken play in Viewfield, south-central Saskatchewan, but lower than the North Dakota Bakken.

BMO believes producers in the Alberta Bakken will recover 250,000 barrels per well at a three-month initial production average of 348 barrels per day at a break-even supply cost of \$41.25-\$42.20 per barrel, which it rates as being just below the Saskatchewan Bakken.

"Ultimately, when comparing the Alberta Bakken type well to the Saskatchewan Bakken type wells, the Alberta Bakken — due to the overall thickness of the reservoir, and the overpressured, Deep basin setting — has the poten-

see BAKKEN GUIDE page 10

WELCOME TO

ALBERTA

WILD ROSE COUNTRY



continued from page 4

WHITING

tor in the first six months from all Bakken and Three Forks wells drilled in North Dakota since January 2009

The data was compiled by IHS Energy Inc. and the North Dakota Industrial Commission, and carries an April 2012 date.

Whiting's average six-month output is 4,000 boes higher than the second ranked operator and "more than 27,000 boes better than the average of the next 25 operators."

The top five operators in the lead for cumulative production in the first six months are, from first to last, Whiting, Brigham, Enerplus, Murex and Slawson.

Jewel in the pack

Finally, in the Seeking Alpha transcript, slide 17 shows "412,000 barrels per day of planned expansion for the Williston basin for the balance of 2012," including rail and pipeline transport.

"This should bring total takeaway capacity to over 1 million barrels per day by year-end 2012, and go a long way toward relieving the high differentials we experienced in the first quarter of 2012," Whiting said on the slide.

Contact Kay Cashman at publisher@petroleumnews.com



continued from page 9

ALBERTA BAKKEN

"It does have the same carrier bed in the middle. So, given the results of the Bakken where that is a key contributor to how wells perform ... it has very similar geologic characteristics," Wood said.

"The oil that was recovered from the two wells on acreage we have is good quality oil, low-30 gravity. The section is over-pressured. So it is quite analogous.

"I don't want us to stop calling it back because we don't have enough data yet and geologically things change over these long distances, but it does have a lot of very similar characteristics," Wood said.

Murphy said it is trying to grow its position which is now close to 150,000 net acres, encouraged that two old wells on some of its acreage have recovered oil "so we have a good place to start."

Although the company's results have been mixed, initial production from one well exceed 300 bpd and flowed for 42 successive days on a small choke. Murphy's budget provides for two more wells this year.

Early-entry tight oil play

BMO Capital Markets has described the Alberta Bakken as an early-entry tight oil resources play, with the main Alberta Bakken fairway coinciding with the thermally mature Exshaw source rock fairway.

"Though approximately time equivalent, the Alberta Bakken and Williston basin Bakken developed in two very different depositional settings: a semirestricted intracractorix basin (Williston) versus a westward-facing foreland trough (Alberta Bakken)," said the report.

Geoff Ready, a research analyst at Haywood Securities, said the C\$150 million in successful Alberta land auction bids in 2010 for 280,000 acres was "an extraordinary amount considering the negligible horizontal drilling that has taken place to date."

In addition to Murphy, Shell Canada, Nexen, Crescent Point Energy and Penn West Petroleum are among the big-names that have staked claims along with a number of little-known juniors, including Bowood, Legacy and DeeThree Exploration.

DeeThree, backed by a C\$17.3 million

continued from page 9

BAKKEN GUIDE

tial for a highly economic well," BMO said.

Macquarie said to the west in southern Alberta and British Columbia, the lower Bakken members correlate with the Exshaw formation, while the upper Bakken member is similar to the black shale unit of the Banff formation.

It said the Exshaw/Bakken represents a petroleum system that can be "tracked from source to trap."

The Exshaw/Bakken is considered the most conducive to horizontal multistage fracturing given that "most of the oil remains contained within the member."

—GARY PARK

financing and a successful drilling program, hiked its 2012 capital budget to C\$82 million from C\$57 million, primarily to capitalize on Bakken success in the Lethbridge area, where 11 net wells are

scheduled

The company's current overall production is 4,000 barrels of oil equivalent per day (63 percent crude and natural gas liquids). Initial production from the Lethbridge discovery well was 415 bpd with an average water cut of 3 percent. A second well has been drilled this year to a planned total horizontal length of 4,700 feet

Emerging light-oil development

GMP Securities analyst Peter Doig said Shell, Nexen and Crescent Point operators have "let it be known that they are chasing an emerging new light-oil development."

Macquarie analyst Ray Kwan suggests the play could help rescue the Western Canada Sedimentary basin, WCSB, from its conventional oil and natural gas decline.

He said the Exshaw/Bakken formation is the largest of four that extend into northern Alberta and British Columbia and are estimated to have more than 40 billion barrels of original oil in place.

"Even at a 1 percent recovery factor, they would go a long way" towards prolonging WCSB production.

Brad Hayes, president of Petrel Robertson Consulting, said the Exshaw/Bakken is "regionally very extensive," stretching more than 800 miles north into the Horn River basin of northeastern British Columbia, the Yukon Territory and the Northwest Territories.

Primary Petroleum said the list of U.S. producers to have joined the Bakken hunt in western Montana include Rosetta Resources, Newfield Exploration, Mountainview Energy, Stone Energy, Anschutz Exploration, Quicksilver Resources, Fairways Offshore Exploration, Arkanova Energy, FX Energy and American Eagle Energy.

According to a Rosetta presentation the Alberta Bakken is found at depths of 4,500 feet to 7,500 feet and where it operates in Montana's Pondera County the Bakken is at 6,200 feet.

On the Alberta side, activity is gathering pace, with Shell licensing four new wildcat horizontal wells in the Del Bonita area, with one drilled. The terminating zone is listed as the Big Valley formation, just below the Exshaw/Bakken. ●



COLUMN

Michael Reger: Bakken native son

North Dakota, Montana landman capitalizes on family's heritage to steer course for fast-growing non-operator in dynamic oil play

By ROSE RAGSDALE

For Petroleum News Bakken

As a teenager Michael L. Reger worked as an oil and gas landman, visiting farmers on behalf of his father's company in the Williston basin of North Dakota and Montana.

Reger is still knocking on doors, but he does so now as chairman and CEO of Northern Oil and Gas Inc., a company he co-founded in 2006. The message Reger delivers these days to landowners, operators and shareholders is as compelling as it was two decades ago.

That's because Northern Oil and Gas, based in Wayzata, Minn., is an oil and gas exploration and production company building an impressive presence in the Northern Plains. As one of the largest non-operating participants in the Bakken/Three Forks play, Northern has mushroomed in size during the past three years.

Listed on the American Stock Exchange in March 2008, the company's initial public report, for the first quarter of 2008, showed a net loss of \$187,000. In the very next quarter, the company climbed out of the hole, posting a net profit of \$283,465 on revenues of \$764,528. Since then, Northern's annual profits have grown, despite quarterly dips and spurts brought on by fluctuations in oil prices and other factors. From a net income of \$2.8 million on \$14.2 million in revenue in 2009, Northern's profits soared to \$40.6 million on revenues of \$149 million in 2011. And analysts predict the stellar growth is far from over.

Leases in the "thick and juicy" part

Like most oil and gas companies
Northern holds leases, or percentages of
leases, rather than actually owning land.
In six years since official startup in 2007,
the company's portfolio of mineral rights
leases has ballooned to more than
170,000 net acres located in prime
Bakken country — Mountrail, McKenzie,
Dunn, Burke, Billings, Williams and
Divide counties in western North Dakota.

Reger has called this area the "thick and juicy" part of the Bakken.

Northern has invested in numerous wells being drilled by experienced oil and gas independents and majors throughout the Bakken/Three Forks play. Producers now working in the area include well known industry names such as Marathon, Hess, ConocoPhillips, Statoil and Oxy, as well as Bakken-grown companies, such as Continental Resources, Whiting Petroleum and Slawson Exploration.

Northern's participation in Bakken and Three Forks wells is proportionate to its leasehold interest in each drilling unit that is drilled by its operating partners. For example, if Northern controls leases on 160 acres in a 640-acre drilling unit – or 25 percent of the unit – the company would participate for its proportionate 25 percent working interest in any well drilled in that unit.

As a non-operating (minority) working interest owner in a well, Northern says it does not bear all the operating and overhead costs of its operating (majority) partners, making it a low-cost producer in the Bakken and Three Forks play

At Dec. 31, the company was participating in 664 gross producing (57.9 net) wells and 175 gross (18 net) wells being

Who's Who

drilled or completed, with aggregate daily production of about 5,275 barrels of oil equivalent (up 117 percent year-over-year) in 2011. But those figures change every day as more and more wells are drilled on the leases in which Northern holds an interest.

Proved reserves also jumped 198 percent in 2011 to 46.8 million boe (89 percent oil and 11 percent natural gas and natural gas liquids), boasting a pre-tax value of \$1.1 billion as of Dec. 31 and a 38-year average reserve life.

Added proved reserves of 31.1 million boe in 2011

"Operationally, our 2011 performance reflects another year of successfully exe-

see WHO'S WHO page 12

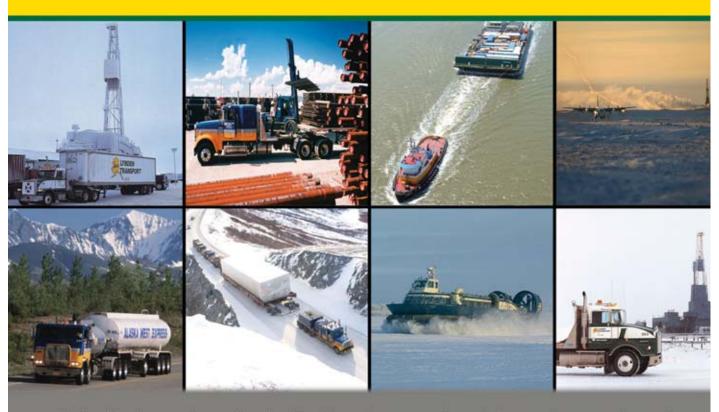


Northern Oil and Gas President Ryan Gilbertson (bottom) and CEO Michael Reger pulled in \$2.8 in profit in 2009, their second year in business; by 2011 Northern's annual profits had grown to \$40.6 million.



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continued from page 11

WHO'S WHO

cuting our strategy of developing our acreage position and building a long-life reserve base. Our success enabled us to increase proved reserves by 31.1 million boe in 2011, representing approximately a 1,700 percent replacement of our 2011 produced reserves," Reger said in a recent statement. "We are also pleased with the expansion and syndication of our credit facility. With our increased borrowing capacity, we are well-positioned to continue our growth and expansion."

Bullish on the Bakken

Reger believes that growth is assured because of the vast potential of the Bakken petroleum system, which includes the Three Forks formation.

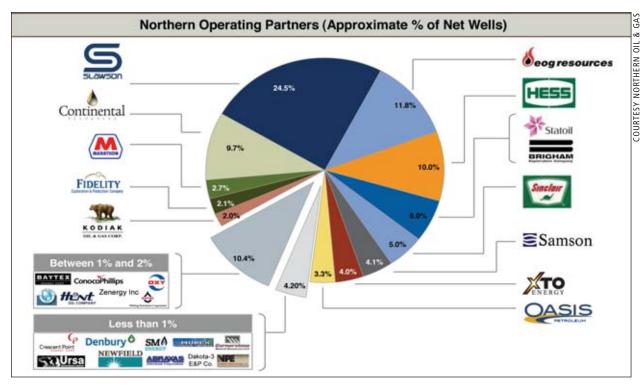
Named for Henry O. Bakken, a North Dakota farmer upon whose land drillers discovered the Bakken in the 1950s, the formation lies about 10,000 feet beneath the surface of the Williston Basin. Described by geologist as being like a rock sandwich, the formation is comprised of two shale layers — the upper and lower Bakken shale — enclosing a section called the Middle Silt, or Middle Bakken. The Middle Silt reservoir is thin, rarely more than 40 feet in thickness, and about 22 feet on average in North Dakota.

For decades, drillers noticed the Bakken as they sought deeper pools of more easily recoverable oil. They reported that Bakken crude had a low sulfur content and required little refining.

"You could take this out of the ground and put it in your car," Reger has observed.

But the Bakken formation yielded little crude to conventional drilling. The advent in the 1990s of horizontal drilling, combined with proved hydraulic fracturing technology, was the key to unlocking the Bakken's potential.

Explorers now drill 10,000 feet to reach the formation and then turn the well bore at a 90-degree angle to horizontally drill through the Middle Silt. Then they "frac" a well – injecting a sand, gel and liquid mixture that fractures and stimulates the formation, causing oil to flow more easily and in larger quantities to the surface.



In 2008, the U.S. Geological Survey estimated the U.S. portion of the Bakken formation held 3.65 billion barrels of mean undiscovered volumes of oil, 1.85 trillion cubic feet of associated natural gas and 148 million barrels of natural gas liquids.

Reger thinks USGS estimates are low.

"We continue to be impressed by the extensions of the field and the infill drilling potential that is now clearly evident," he said recently.

In addition, beneath parts of the Bakken ("definitely beneath our parts," Reger has told reporters), directly below its lower shale, lies another silt formation called the Three Forks/Sanish.

According to the most recent study by the North Dakota Geological Survey and Department of Mineral Resources, the Three Forks formation could yield an additional 2 billion barrels of oil, enhancing sustainability for the play over time. (The 2008 USGS estimate did not include an appraisal of Three Forks, but its next assessment will, the agency recently said.)

The Bakken and Sanish formations are mutually exclusive: "They don't 'communicate,' meaning that if

you drill into the Sanish, you're not draining the Bakken, and vice versa," Reger has said.

One of highest-paid Midwest CEOs

Today, Reger is celebrated as one of the youngest CEOs in corporate America and one of the highest-paid CEOs in the Midwest.

To better align his interests with those of Northern's shareholders, he agreed not to take a base salary in 2011 and 2012. Still, in 2011 Reger received more than \$7.75 million in total compensation (\$1.6 million in bonuses and about \$6.2 million in company stock).

Along with Gilbertson, a former derivatives trader and now Northern's president, Reger is credited with much of Northern's rapid rise to prominence in the North Dakota oil industry.

"The boys have done a great job," one older board member told a local business journal.

Lesson learned

Growing up in Montana, Reger spent his entire

see WHO'S WHO page 20



LAND & LEASING

Acquisition raises MHR's Williston capex

Magnum Hunter's \$311M buy of Baytex ND acreage bumps its area capital budget to \$100M; Baytex still plans 20-25 ND wells this year

By KAY CASHMAN

Petroleum News Bakken

Baytex Energy Corp. (NYSE: BTE) said April 18 that its U.S. subsidiary has agreed to sell its non-operated interests in North Dakota's Williston basin to a subsidiary of Houston-based Magnum Hunter Resources (NYSE: MHR) for \$311 million.

Samson Resources Company, the operator of the leasehold, has the option under a mutual interest provision, to participate in the acquisition, which was expected to close on or about May 22, with an effective date of March 1.

The deal, if it goes through, would increase Magnum Hunter's non-operated working interest in the acquired leasehold from 10 percent to 47.5 percent.

Upon completion of the deal and assuming Samson does not participate, Magnum Hunter would buy 50,400 net mineral acres, primarily in Divide County, that would expand Magnum Hunter's total Williston basin position to more than 125,000 net acres.

As a result of a successful acquisition, which involved proved reserves of 8.6 million barrels of oil equivalent (93 percent oil) and a production capacity of 1,295 boe per day, Magnum Hunter said it would increase its 2012 capital budget in the Williston basin from \$50 million to \$100 million, and do the same for Eagle Ford spending, which would have increased its total upstream capex to \$250 million, except for the fact the company is reducing its spending in the Appalachia region from \$50 million to \$25 million due to lower natural gas prices and the delay in completion of planned third party gas processing facilities.

Current net production capacity of the Baytex acreage includes an estimated 350 boe per day that is behind-pipe or waiting to be completed from wells recently drilled on the leasehold acreage.

Baytex will still drill 20-25 North Dakota wells

Calgary-based Baytex, which will use the money from the sale to pay down debt, said the deal would lower its companywide production in 2012 by only 500 barrels of boe per day to 53,500-54,500 boe. The sale represented about 40 per cent of its current U.S. production, the company

"The assets are not a primary focus of our U.S. business unit as they are nonoperated and generally have a lower average working interest than our remaining lands," Baytex said in a press release.

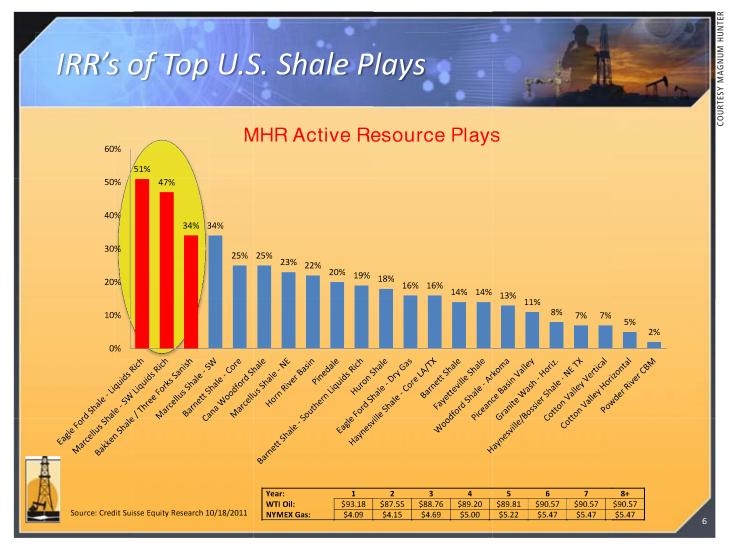
Baytex still plans to drill 20-25 wells in North Dakota this year, its exploration and development budget remaining at \$400 million.

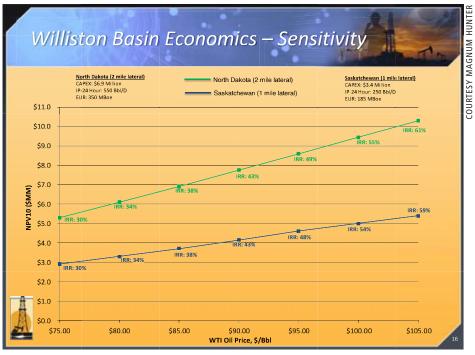
In a Reuters article about the transaction, BMO Capital Markets-Canada analyst Gordon Tait was quoted as saying Baytex got good price for the assets: "They got \$327,000 per flowing barrel of oil equivalent and Baytex is currently trading at \$144,000 per flowing boe."

A flowing barrel of oil equivalent, Reuters explained, corresponds to a production rate of one barrel of boe per day.

Significant growth platform

"This strategic 'bolt-on' acquisition in North Dakota increases our technically focused acreage position to a 125,000 net





mineral acreage blocks located in the Williston basin. We will be transitioning from a previously minor working interest position into a significant growth platform targeting the prolific Sanish-Three Forks Reservoir and emerging middle Bakken trends in this region," Glenn Dawson, president of Williston Hunter Inc., the Magnum Hunter subsidiary that operates in the Bakken, said in a prepared statement.

"Increased capital allocation combined with advancing drilling and completion technology will propel oil production growth for the remainder of 2012 any many years to come for our division. Williston Hunter's recently executed third party midstream contract to gather and process natural gas liquids will also create current hidden value through material production, reserve and cash-flow additions in 2013," he said.

Aim to become a drilling factory

According to recent presentations by Magnum Hunter executives, the company is focused exclusively on three of the most prolific unconventional resource plays in the United States:

- South Texas Eagle Ford Shale
- Appalachia Marcellus Shale / Utica / Huron / Weir
- North Dakota Williston Basin / Bakken / Three Forks Sanish / Madison

The company said its strategy is to "create substantial shareholder value through a balanced program of acquisitions of companies and properties and initiation of low-risk development and

exploitation drilling, exclusively in unconventional resources plays with an oil or liquids rich focus."

Magnum Hunter's goal is to become an efficient "drilling factory" within the three shale resource plays where significant property positions have been assembled.

As of March 31, its proved oil and gas reserves were split Williston 24 percent, Eagle Ford 16 percent and Appalachia 60 percent.

According to April presentation slides on Magnum Hunter's web page, the highest internal rates of return come from the following liquids plays, per research conducted late last year by Credit Suisse Equity Research: Eagle Ford play, 51 percent; the Marcellus 47 percent; Bakken 34 percent. (See chart adjacent to this article.)

Further, a Williston basin economics slide that included North Dakota and Saskatchewan horizontal wells, at a price of \$6.9 million and \$3.4 million, respectively, the internal rate of return at \$75 per barrel oil was 30 percent for both North Dakota and Saskatchewan, presumably because production was higher from the North Dakota wells.

At \$105 oil, the IRR for North Dakota was 61 percent, and 59 percent for Saskatchewan. (See adjacent chart.) ●

Contact Kay Cashman at publisher@petroleumnews.com



FINANCE & ECONOMY

KTVO-2 News • April 3, 2012

Check it out: http://bit.ly/lpF0ev

Energy expert calls Montana superpower

KTVQ-2 News of Billings, Mont. reported April 3 that energy and geopolitics expert Michael Economides called Montana a "superpower" when it comes to the nation's energy future.

Speaking to the Montana Energy 2012 conference in Billings April 3, he pre-

dicted a robust future for oil and natural gas production in the Bakken oil fields located in Montana and in Canada and

North Dakota to the What others are saying

north and east, Jay Kohn reported.

"The last time I looked, we were producing 150,000 barrels per day in the



MICHAEL ECONOMIDES

Bakken. Today, it's nearing 600,000 barrels," said Economides. "I don't think there's a story like this in the history of U.S. oil and gas."

Economides, who editor-in-chief Energy is of (www.energytribune.com), and a professor at the Cullen College of Engineering at the University of Houston, also talked at length about the emerging U.S. presence in the world of liquefied natural gas.

He predicted the price for liquefied natural gas in the United States will soon boom from the current \$2 per million British thermal units to \$8 per million Btu, which he believes will happen by 2014 or 2015, making the United States the most important player in the world natural gas market. As for crude oil, KTVQ-2 News reported that Economides foresees production in the Bakken exceeding 1 million bpd in the near future.

—ROSE RAGSDALE

Don Swystun, the company's

executive vice president of

refining, marketing and

transportation, told analysts

April 25 that the current rail

volumes are about 2,000 barrels

per day and could grow to 5,000

bpd by late this year.

MOVING HYDROCARBONS

Cenovus boosts rail use

Cenovus Energy — the Canadian oil producer spun off from Encana just over two years ago — plans to increase rail shipments of crude oil from Saskatchewan and Alberta over the next few months, but is hesitant about overselling that

Don Swystun, the company's executive vice president of refining, marketing and transportation, told analysts April 25 that the current rail volumes are about 2,000 barrels per day and could grow to 5,000 bpd by late this year.

He also said Cenovus is assessing the possibility of converting its railcars that carry diluents from Kitimat, British Columbia, so they can carry crude.

Beyond that Swystun gave no indication that the company has greater ambitions to use rail.

Expansion gathering pace

However, its expansion from the Alberta oil sands to unconventional plays in Western Canada is gathering pace.

In searching for tight oil, Cenovus has drilled four wells in the Viking formation in Alberta and Saskatchewan this year and will drill more over the rest of 2012, but cautions these are "early days."

John Brannan, chief operating officer, said "we have some interesting plays that we're working on in Alberta, but we are not ready to divulge those at this point."

Lower Shaunavon output in Saskatchewan averaged 4,100 bpd in the first quarter, up about 150 percent from a year earlier, and Cenovus has 87 horizontal wells and one vertical well producing from the play.

Its Bakken operation in Saskatchewan averaged 2,700 bpd from 29 wells at the end of the first quarter.

Cenovus forecast that those plays will be major contributors to its goal of 65,000-75,000 bpd of oil production outside its oil sands activities by the end of

—GARY PARK



PEOPLE

Time: Hamm makes 'Most Influential' list

By ROSE RAGSDALE

For Petroleum News Bakken

n its April 30 edition, Time magazine ranked Harold Hamm, chairman and CEO of Continental Resources Inc. among the 100 most influential people in the world on its annual list, 2012 Time 100. The issue featured the full list and related tributes and was available on newsstands April 19

and now time.com/time100.

The list, currently in its ninth year, recognizes the activism, innovation and achievement of the world's most influential individuals. Time Managing Editor Richard



HAROLD HAMM

Stengel has said of the list in the past, "The Time 100 is not a list of the most powerful people in the world (and), it's not a list of the smartest people in the world; it's a list of the most influential people in the world. They're scientists, they're thinkers, they're philosophers, they're leaders, they're icons, they're artists and they're visionaries. (They are) people using their ideas, their visions, their actions to transform the world and have an effect on a multitude of people."

Hamm was ranked 54th on the list, just below Warren Buffet at No. 52, and Alice Walton (daughter of Wal-Mart founder Sam Walton) at No. 53.

Hamm and his company have pioneered the development of America's premier oil play — the Bakken Play of North

What others are saying

Time • April 19, 2012 Check it out: http://ti.me/HQ5h1W

Dakota and Montana. With an estimated 24 billion barrels of oil, the Bakken is the nation's largest oil discovery in more than 40 years.

Continental Resources is a top 10 petroleum liquids producer in the United States, and the largest leaseholder in the Bakken Play of North Dakota and Montana. The company reported total revenues of \$1.6 billion for 2011 and is on track to triple production and proved reserves from 2009 to 2014.

"The TIME 100 recognition is a great honor not only for myself, but also for the entire Continental Resources team," Hamm said. "As we work to significantly increase our nation's energy supply, this distinction adds to the momentum of our mission to help make America energy independent within the next decade."

In addition to leading Continental Resources, Hamm is energy adviser to presidential candidate Mitt Romney and founder and chairman of the Domestic Energy Producers Alliance, a collaboration of independent energy producers and associations from across America. His leadership also extends to health initiatives. He and his wife, Sue Ann Hamm, founded the Harold Hamm Diabetes Center at the University of Oklahoma. The center is a world leader in diabetes research, education, care and prevention.

> Contact Rose Ragsdale at roseragsdale@live.com

GOVERNMENT

ND officials help SD leaders prepare for oil

North Dakota officials are telling business and government leaders in South Dakota to prepare for opportunities and challenges when the oil boom moves south.

More than 150 lawmakers and business leaders were at the Black Hills Bakken Conference in the western South Dakota city of Spearfish in early May to talk about how officials can prepare for an oil boom and take advantage of it. Experts said \$2 billion dollars a month is being spent in and around the Bakken oil patch in western

"People need to eat, people need haircuts, they need to buy supplies, need to be entertained. It's opening up a broad spectrum of opportunity," said Shane Goettle, North Dakota's former state commerce commissioner.

The oil boom also has brought challenges. Goettle said North Dakota officials were unprepared for the influx of people.

"The first well that's drilled (in South Dakota) that proves up and generates excitement, start planning immediately because those trucks are coming," he said.

Oil companies buying SD leases

Northwestern South Dakota lies within the oil-producing Williston basin, fueling speculation that it might have petroleum reserves similar to North Dakota. Energy companies have been snatching up oil and gas leases in South Dakota.

Goettle said once one energy company has success in South Dakota, "all of a sudden other companies will come in and start trying to develop those leases. That's when the faucet gets turned on."

Spearfish Economic Development Director Bryan Walker said officials plan a trip to Williston in the heart of the North Dakota oil patch in the next couple of weeks, to get a firsthand look at what that city is dealing with.

"As the footprint of the Bakken expands, we can be ready for those opportunities," Walker said.

People paid \$500 to attend this week's conference. Nick Caggiano flew in from Delaware to determine if he should invest in commercial property in the area. He told the Rapid City Journal he was encouraged by what he heard about the activity in western North Dakota.

"People are sleeping in cars and pandemonium everywhere, and it's fantastic," he

—THE ASSOCIATED PRESS

• FINANCE & ECONOMY

Hess likely to miss output target

Blames performance on permitting bottleneck and 'well mix'; share price tumbles; continues to make progress in drilling efficiency

By RAY TYSON

Petroleum News Bakken Editor

In North Dakota, where production expectations for the booming Bakken are higher than Mount Everest, never promise more than can be delivered. Hess Corp. said it "may" come up short on 2012 production and was severely reprimanded by investors, despite other notable achievements in the Bakken during this year's first quarter.

In fact, Hess' net production from the Bakken rocketed to 42,000 barrels of oil equivalent per day in the 2012 first quarter, compared to 25,000 boe per day in the year ago quarter. And for the first three weeks of April, net output was up again



JOHN B. HESS

averaging 47,000 boe per day.

Moreover, while Hess' overall crude oil and natural gas production was roughly flat with the year ago quarter, higher production from the Bakken helped to offset the impact of North Sea natural gas asset sales and natural field declines in Equatorial Guinea, the company noted. Finally, Hess has started operations at a rail loading terminal in North Dakota and will begin moving about 25,000 barrels a day of Bakken light crude oil to St. James, Louisiana.

"We should be ramping up to higher volumes" and will ship 50,000 to 54,000 barrels a day by the end of the year, John B. Hess, the company's chairman and chief executive officer, said in an April 25 conference call.

Then Hess, one of the most active players in the Bakken, dropped the bomb.

"While we expect the monthly average to continue to increase throughout the rest of the year, we now expect the average for the full year may come in somewhat lower than our original estimate of 60,000 barrels of oil equivalent per day." John B. Hess said.

On that disclosure Hess shares plummeted nearly 8 percent, even though Bakken production currently represents just 12 percent of Hess' overall daily output of 397,000 boe.

Bakken progress key

However, it appears the Bakken has come to be a measuring stick for the company's overall progress.

"Progress in the Bakken has been the key underpinning for optimism of a turnaround in Hess share price in 2012," analyst Edward Westlake of Credit Suisse said in a note to clients.

Hess shares had been underperforming compared to its peers amid production disruptions and five quarters of missing analysts' expectations.

Gregory P. Hill, Hess' president of world-wide exploration and production, attributed the probable missed production target to two issues, neither one of which seemed to satisfy analysts' concerns about Hess' performance in the Bakken.

"The first thing was (a) permitting issue, which really just reflects the huge amount of activity in North Dakota," Hill explained. "So during the first quarter, we experienced some delays in receiving permits at certain

Hill said that for the remainder of the year, Hess plans to add two drilling rigs, going from 14 in the first quarter to 16 and 17 for the

balance of the year, and then modifying the well "mix to focus our drilling activities on higher productivity and higher working interest areas."

locations, which resulted in delays in getting wells on production. So we're working with the state to resolve these issues."

He said the second issue had to do with "well mix," or as Credit Suisse's Westlake explained it, "drilling certain acreage to capture leases as opposed to focusing just on the sweet spots."

Hill said that for the remainder of the year, Hess plans to add two drilling rigs, going from 14 in the first quarter to 16 and 17 for the balance of the year, and then modifying the well "mix to focus our drilling activities on higher productivity and higher working interest areas."

Solid growth trajectory

"Now although first quarter production was a little lower than planned ... we continue to make progress in drilling efficiency and remain on this very solid growth trajectory," Hill said.

Hess reported a profit of \$545 million, or \$1.60 a share, down from \$929 million, or \$2.74 a share, a year earlier. The latest results included a \$36 million gain tied to the sale of Norwegian offshore assets, while the year-earlier period included a \$310 million gain from asset sales. Excluding the asset sale gain, earnings per share were \$1.50, relatively in line with analysts' expectations of \$1.52 per share. Revenue fell 7.3 percent to \$9.75 billion. ●

Contact Ray Tyson at raymondtyson@msn.com

DRILLING & COMPLETION

Drilling, production in Eagle Ford surges

Drilling in the Eagle Ford shale dramatically increased during the first quarter of 2012, as producers turned away from cheap natural gas to production from regions that yield higher priced oils and other liquids.

The number of new wells drilled in Texas' Eagle Ford shale more than doubled during the first three months of 2012, compared with the same period a year ago, according to Bentek Energy analysis, which the U.S. Energy Information Administration highlighted on its website.

Operators started 856 new wells in the first quarter of 2012, compared with 407 in the same period a year ago, the energy market analysis firm reported.

There was also a record high number of 217 rigs active in the Eagle Ford during April.

Daily increase in activity ratcheted up production of oil and other liquids, from 182,000 barrels per day in April 2011 to more than 500,000 bpd in April, according to Bentek's analysis. The Eagle Ford also produces about 2 billion cubic feet of natural gas per day.

According to Bentek, Eagle Ford crude oil and liquids production was approaching the levels of the booming Bakken play in North Dakota and eastern Montana during March 2012.

—RAY TYSON

GOVERNMENT

ND tax collections jump 44 percent

In the April 17 edition of Forbes, contributor Josh Barro cited an astonishing jump in North Dakota tax collections in 2011 due to the recent oil and gas boom in the northern plains state. Citing U.S. Census Bureau report on 2011 state tax collections figures, Barro said tax collections in North Dakota have soared — up 44.4 percent

over 2010, all on the strength of the oil and gas boom in the Bakken shale formation. Severance taxes (taxes on natural resource extraction) leaped 65 percent from year to year and now make up 49 percent of the state's tax collections. Other taxes were strong, too — the boom in oil-related activ-

What others are saying

Forbes • April 17, 2012 Check it out: http://onforb.es/HFoLap

ity has led to big increases in income and sales tax collections, he said.

"Put another way, the year-to-year increase in severance tax collections (\$745 million) is equal to 172 percent of the state's total 2011 individual income tax collections (\$433 million). It sure looks like North Dakota doesn't need an income tax anymore," Barro elaborated.

The windfall in public revenue bodes well for a new proposal to abolish property taxes in North Dakota.

"In the last 50 years, only one U.S. state has abolished a major tax (general sales, income, or property). It's Alaska, which abandoned its income tax after oil started flowing down from the North Slope through the Alaska pipeline. Alaska is now so flush that it has no income or sales tax and it sends an annual oil rebate payment to all of its residents," according to Barro.

North Dakota could be next, he said.

In June, North Dakota voters will vote on a constitutional amendment proposal to abolish property taxes in the state. Barro said this would be an odd move; if passed, North Dakota would become the only state without property tax. (Seven states have no personal income tax and five have no sales tax.)

"If the property tax proposal doesn't pass, look for the state to abolish its income tax — or, if the Bakken is productive enough, perhaps it can get rid of both," he added.

—ROSE RAGSDALE



ENVIRONMENT & SAFETY

Industry dodges EPA bullet

New federal rule gives producers 2-plus years to employ 'green completions' designed to rid air of well fracking emissions

By RAY TYSON

Petroleum News Bakken Editor

Bakken producers appear to have dodged what could have stopped hydraulic fracturing dead in its tracks, stalling the North Dakota-Montana oil boom.

Rather, the U.S. Environmental Protection Agency, or EPA, announced April 18 it decided to give producers until 2015 to comply with so-called "green completions" designed to rid the air of toxic substances emitted during the well fracking process.

Industry had feared that EPA would impose an immediate drilling moratorium, effectively halting well completions until companies could employ the necessary technology. In fact, an earlier version of the rule would have required companies to install pollution-reducing equipment immediately after the rule was final-

Drillers now will be given more than two years to come up with the technology to reduce emissions of smog- and sootforming pollutants during the fracking stage. EPA will require drillers to burn off gas in the meantime, an alternative that can release smog-forming nitrogen oxides, but will still slash overall emis-

Much of the air pollution from wells is vented when the well transitions from drilling to production, a three-to 10-day process referred to as "completion."



From a Colorado Oil and Gas Conservation Commission brochure, pictured above is green completion equipment in an unidentified field in Colorado

Last update 13 years ago

The limited federal standards that existed prior to the new clean air measures covered only natural gas processing plants, and were most recently updated, in part, 13 years ago, EPA said, noting that other aspects of the air standards for the oil and gas industry are more than 25

Still, industry groups had pushed hard for the delay, claiming the equipment to reduce pollution at the wellhead during completion was not readily available.

Capturing gas to sell

In addition to allowing producers to

zene, green completions will allow them to capture and profit from the sale of gas that would otherwise be lost through flaring. For example, the gas could be diverted to a pipeline and sold in the marketplace. The Bakken, though primarily an oil play, does produce a significant amount of gas.

completion technologies, along with other measures in the rule that would plug leaks throughout the system, will save billions of cubic feet of domestic natural gas each year. EPA estimates that application of these "proven, cost-effective technologies" will yield a cost savings of \$11 to \$19 million in 2015, because the value of natural gas and condensate that will be recovered and sold will offset costs.

The industry had lobbied to prevent the rule from applying to the hydraulic fracturing process, saying that shale wells generally emit far fewer volatile organic

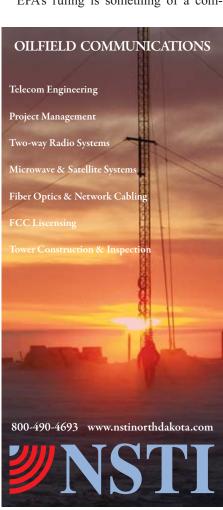
the toxic gases and methane from shale wells through flaring that is relatively effective in eliminating the pollutants but is not as clean as capturing them.

EPA's ruling is something of a com-

capture harmful emissions, such as ben-

EPA estimates that deploying green

compounds than conventional wells. Instead, the industry proposed burning



The (green completions equipment) rental cost is roughly \$1,000 per day. However, the process helps Devon generate far more daily revenue than that in additional natural gas sales.

promise, subjecting fracking to the new regulations but giving the industry more time to obtain the equipment and requiring flaring during the interim.

Rule gets broad support

Both industry and environmentalists seemed pleased with the ruling.

"These updated standards will reduce harmful air pollution through highly costeffective controls and avoid the needless waste of a valuable domestic energy source: natural gas," said Ramon Alvarez, senior scientist for the Environmental Defense Fund. "They will also standardize many common sense practices and technologies that natural gas companies already use successfully and benefit from financially."

Howard Feldman, American Petroleum Institute's director of regulatory and scientific affairs, recognized improvements in EPA's final air rules, including those covering hydraulic fracturing operations.

"The industry has led efforts to reduce emissions by developing new technologies that were adopted in the rule," he said, noting EPA's willingness to allow companies to continue reducing emissions while producing oil and natural gas to meet America's energy needs. However, he cautioned: "This is a large and complicated rulemaking ... and we need to thoroughly review the final rule to fully understand its impacts."

Already required in some states

Some states, notably Colorado and Wyoming, already require the capture of gases during the fracking process. EPA's ruling makes it a federal standard. So, the equipment is becoming more available as companies adopt the method.

For example, the Colorado Oil and Gas Conservation Commission awarded BP an "Outstanding Operations Award" in 2004 for using closed loop completion technology in the San Juan basin. And EPA invited Williams Production Co. to discuss its green completion program in the Piceance basin as part of EPA's Gas Star program in 2006

Moreover, green completions have been Devon Energy's standard practice in the Texas Barnett Shale since 2004. The company uses the same process to complete wells in New Mexico, Wyoming and Oklahoma. In the Barnett Shale alone, Devon has reduced methane emissions by more than 25 billion cubic feet.

At first, green completions were so uncommon that Devon had to look as far as Wyoming to rent the necessary filtering equipment. Now, more than 2,000 green completions later, the rental equipment is available readily and locally, the company said. The rental cost is roughly \$1,000 per day. However, the process helps Devon generate far more daily revenue than that in additional natural gas

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• LAND & LEASING

Husky in hot pursuit of resource plays

By GARY PARK

For Petroleum News Bakken

algary-based Husky Energy is sharpening its focus on oil and liquids-rich plays as the conventional sector of the Western Canada Sedimentary basin goes into decline, said chief executive officer Aim Ghosh.

He told his company's annual meeting April 26 that Husky has "built a substantial resource position and the capacity to develop" those prospects.

Of the 400 wells Husky plans to drill in the basin this year "over a third of them are focused on oil and liquidsrich gas resource plays," he said.

"That gives you a sense of how focused we are and how fast we are moving into transformation of this basin and, although it's early days, we are encouraged by the results," Ghosh said.

Husky's first-quarter results showed that 36 wells were drilled in the liquids-rich gas plays, nine at Ansell in west-central Alberta, including one vertical Cardium well, three horizontal Cardium wells, two Wilrich horizontal wells and three multi-zone vertical wells.

The company has previously hinted that Ansell could contribute 15,000 barrels per day of the 30,000 bpd targeted for Western Canada by 2015.

Two horizontal wells were drilled to evaluate the Duvernay liquids-rich gas play at Kaybob in northern Alberta, while test results from a horizontal well drilled in late 2011 have met expectations and should be on production during the current quarter.

One horizontal well was drilled to evaluate the Montney formation on acreage in Alberta's Sinclair region.

Across the portfolio, 24 horizontal oil resource plays and two vertical pilots wells were drilled in the quarter.

At Oungre Bakken four horizontals drilled

At the Oungre Bakken project in southeast Saskatchewan, four horizontal wells were drilled, while three horizontal wells were drilled in southwestern Saskatchewan's Lower Shaunavon project and eight horizontal wells were drilled in the same region's Viking formation.

In the northern Cardium oil resource trend, three hor-

izontal wells were drilled at Wapiti and five were completed, while four wells were completed at Kakwa.

One horizontal Rainbow Muskwa shale oil resource well was drilled and operations started on a two-well pad, with production testing measuring up to expectations

Chief Operating Officer Rob Peabody told analysts Husky is "on track and seeing good results" from the push to transition one-third of its oil production — which averaged 222,000 bpd in the first quarter — to the resource plays.

But neither he nor Ghosh would disclose 30-day initial production numbers, saying that information would have to wait until late 2012.

Ghosh said Husky is pleased with its land position of about 800,000 net acres and nothing has happened so far that "causes us concern about our long-term plan to reposition."

"We have some confidence that we are not chasing a pie-in-the-sky dream," he said. ●

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• COMMUNITY ISSUES

As Bakken oil booms, so does crime

By ROSE RAGSDALE

For Petroleum News Bakken

The Associated Press reported April 23 that booming oil production across a wide expanse of the Northern Plains is forcing law enforcement from the U.S. and Canada to deal with spiking crimes, ranging from drug trafficking and gun offenses to prostitution.

Drug crimes in eastern Montana have more than doubled. Assaults in Dickinson, N.D., have increased five-fold in just two years. And the once-sleepy town of Plentywood, Mont., has seen three assaults with weapons in the past few months — a prospect previously unheard of in the tiny community tucked against the Canada border, AP writer Matthew Brown reported.

The rural region is emerging as one of the top oil producing areas of North America, and the recent kidnapping and brutal murder of Montana teacher Sherry Arnold has drawn more attention to the changes brought on by the rapid pace of drilling.

Officials say up to 30,000 workers could descend on the Bakken oil fields of Montana,

North Dakota and Saskatchewan in the next few years, Others, however, are predicting that North Dakota,

alone, will add 35,000 oil jobs during the period.

In the wake of the killing in Sidney, federal prosecutors held a two-day retreat that began April 23 for dozens of police, border agents and other law enforcement to

What others are saying

Associated Press story on Minnesota Public Radio April 23, 2012 Check it out: http://bit.ly/JKDyB4 craft a common strategy to deal with rising crime. Two men are in custody in Arnold's case, which left residents shaken and led to a rise in applications to carry concealed weapons.

The suspects in Arnold's killing were not employed in the oil and gas industry.

Housing shortage hurts

Sidney is located in the heart of the booming oil fields, its once-quiet streets now jammed with oil company trucks and hotels booked full with workers.

see CRIME RATES page 18

• ENVIRONMENT & SAFETY

Groups work to avert sage grouse listing

By ROSE RAGSDALE

For Petroleum News Bakken

In its April 28 edition, the Great Falls Tribune reported that the sage grouse, an enduring symbol of the West, is experiencing significant population declines.

As a result, government land managers, with help from ranchers and conservation groups, are committing tens of millions of dollars and rewriting dozens of management plans to protect habitat where the birds still

thrive, Tribune staff writer Karl Puckett reported.

What others are saying

Sweeping initiatives are under way on both private and public

Sweeping initiatives are under way on both private and public

lands in 11 states including Montana that aim to increase grouse populations and avert the listing of the bird as a threatened or endangered species. Experts say this would bring tougher restrictions on grazing and energy development. The conservation initiatives cover 186 million acres of public and private sage grouse habitat in the West.

Spotted owl of the West?

The U.S. Fish and Wildlife Service plans to revisit a listing decision on the birds in 2015.

If the sage grouse is listed as endangered or threatened, a University of Montana expert told the newspaper that restrictions on both energy extraction and grazing likely would follow. This would create the possibility that the prairie bird will become the northern spotted owl



of the West, pitting conservation and development interests in messy legal and political fights, according to Puckett.

Montana has about 18 percent of the estimated population of 200,000 sage grouse, second only to Wyoming.

The BLM is heading efforts on land it manages, rewriting almost 100 management plans across the West to improve protections. The federal agency manages about 45 percent of the sage grouse habitat.

Meanwhile, the U.S. Department of Agriculture's Natural Resources Conservation Service or NRCS is heading the initiatives on private land, where 39 percent

of sage grouse are found.

In 2010 and 2011, \$115 million in Farm Bill money was appropriated for the NRCS' national sage grouse conservation initiative in Washington, Oregon, Idaho, Montana, the Dakotas, eastern California, Nevada, Utah, Colorado and Wyoming.

The agency launched the program because listing would threaten grazing on agricultural lands.

Another \$40 million has been set aside so far in 2012. Private groups supporting the work have chipped in another \$60 million.

Energy development a factor

Depending on the state, energy development, conversion of native sage to farm ground, livestock grazing, urbanization and disease are factors in the decline of sage grouse.

Scientists told the Great Falls newspaper that the loss of habitat to tillage and energy development are the biggest threats in Montana.

Already in Wyoming, 12 years of coalbed methane gas development in the Powder River basin coincided with a 79 percent decline in sage grouse population, with energy development prompting birds to abandon traditional habitat, according to the Fish and Wildlife Service.

Montana saw 25,351 acres of sagebrush converted to tilled agriculture between 2005 and 2009, according to the USFWS.

BLM officials told the Tribune that oil development and its impact on sage grouse will be addressed in the agency's plan revisions.

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PETROLEUM NEWS BAKKEN • WEEK OF MAY 6, 2012

duction.

continued from page 1

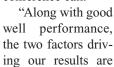
CONTINENTAL

operated wells representing 342 gross (240 net) wells in the revised plan. Nearly all of the additional company-operated wells are planned for the Bakken play, where Continental has 21 rigs operating in North Dakota and three in Montana.

Spud-to-spud cycle time cut 30%

But no new rigs will be required to meet the stepped up drilling because the company has reduced its spud-to-spud drilling cycle time for Bakken wells by approximately 30 percent in the last six

months, Continental Chairman and Chief Executive Officer Harold Hamm said in a press release in advance of a May 3 conference call.





HAROLD HAMM

faster drilling cycle times and our increased working interest ownership in Bakken wells," he said.

Those factors have prompted Continental to forecast a 47-50 percent production growth in 2012.

The company's first quarter production of 85,526 barrels of oil equivalent per day was 14 percent higher than its fourth quarter 2011 output of 75,219 boe per day, and 66 percent more than its 51,663 boe a day average in first quarter 2011.

Continental entered May 2012 with production in excess of 91,000 boe per day, benefiting from strong well results throughout the Bakken and Anadarko Woodford of Oklahoma.

Continental's prediction for its North Dakota production increase in 2012? A modest 107 percent.

The bottom line

After accounting for "an unrealized mark-to-market loss on derivatives," Continental reported net income of \$69.1 million, or 38 cents per diluted share, for first quarter 2012.

Net income included a \$129.1 million pre-tax unrealized loss on mark-to-market derivative instruments, a \$29.9 million pre-tax property impairment charge, and a \$49.6 million pre-tax gain on sales of

Excluding the combined effects of the non-cash, unrealized derivatives loss, property impairment charge and gain on asset sales, Continental said its first quarter net income would have been 76 cents per diluted share.

In the same quarter last year, Continental reported a net loss of \$137.2 million, or 80 cents per diluted share.

Excluding the combined effects of a non-cash, unrealized derivatives loss, a property impairment charge, and a gain on sale of assets, the company's net income

In communities like Sidney and

Williston, N.D., assaults, traffic offens-

es and other crimes are on the rise as

drilling accelerates to meet the nation's

housing shortage that is spurring the

construction of sprawling "man-

camps" that can accommodate hun-

dreds of out-of-state oil workers,

according to the AP report.

The situation is exacerbated by a

strong appetite for domestic fuels.

continued from page 17

CRIME RATES

"Much of the improvement was in the Buffalo units in South Dakota, where we've been increasing our injection volumes over the past year. We're seeing excellent results in this enhanced oil recovery project," Harold Hamm said about the 10 percent production in the Red River units.

would have been 53 cents per diluted share for the first quarter of 2011.

Here are other highlights from the company's information for the first quar-

- The acquisitions since mid-2011 have not only been in North Dakota's Bakken, but "in prime areas where we have significant operating history," Hamm said.
- · Continental experienced strong yearover-year production growth across its three principal operating area — the Bakken, Anadarko Woodford and the Red River units of Montana, North Dakota and South Dakota.
- · Bakken production increased 88 percent to 48,024 boe a day in the first quarter of 2012, compared with 25,523 in first quarter 2011.
- · Production in the North Dakota Bakken was 41,895 boe per day in the first quarter of 2012, versus 20,238 boe a day in first quarter 2011 (107 percent
- Montana Bakken production increased 16 percent to 6,129 boe a day in the first quarter of 2012, compared with first quarter 2011.
- The company's Anadarko Woodford production was 12,826 boe a day in first quarter 2012, nearly five times higher than production of 2,685 boe per day in first quarter 2011.
- Production in the Red River units was 15,415 boe a day for the first quarter of 2012, a 10 percent increase over production of 14,066 boe per day for first quarter 2011. "Much of the improvement was in the Buffalo units in South Dakota, where we've been increasing our injection volumes over the past year. We're seeing excellent results in this enhanced oil recovery project," Hamm said.
- Three acquisitions completed since mid-2011 had a minimal impact on first quarter 2012 production, after the effect of Continental's \$84 million sale of its Worland, Wyo., properties and associated production in early 2012. The net combined effect of the acquisitions and sale was an increase in production of approximately 800 boe per day going forward.
- Continental currently has 35 operated drilling rigs, with 24 in the Bakken, 10 in the Anadarko Woodford and one in the Red River units, as compared with a peak of 44 operated rigs in the fourth quarter of 2011. The biggest reduction has been in the Woodford, where the company has reduced its operated rigs from 16 to 10.
- Crude oil accounted for 70 percent of Continental's first quarter 2012 total pro-

Industry representatives say companies go to lengths such as drug tests

and background checks to ensure the

workers they hire won't cause trouble

either on the job or in the communi-

"We do know there are challenges.

Any opportunity has challenges that

need to be overcome, and we want to be

part of the solution in all this," said

Kari Cutting with North Dakota

Petroleum Council.

\$552.3 million for the first quarter, compared with \$326.5 million for the same period of 2011.

• Crude oil and natural gas sales were

• Continental's average realized crude oil price was \$90.58 per barrel in the first quarter of 2012, while the average realized natural gas price was \$4.48 per thousand cubic feet, yielding a blended realized price of \$71.39 per boe. In first quarter 2011, the company reported a blended

- realized price of \$71.14 per boe. • The company's crude oil price differential was \$12.27 per barrel and its natural gas price differential was a premium of \$1.76 per mcf for the first quarter of 2012, due to the high liquids content of the gas. A spike in oil price differentials at the Clearbrook, Minn., and Guernsey, Wyo., markets negatively affected realized prices for March and April 2012, but differentials at these markets have since improved. Due to increased oil differentials and volatility at Clearbrook and Guernsey, Continental expects average differentials for the year will be in a range of \$9 to \$11 per barrel.
- Production expense was \$5.18 per boe for first quarter 2012, down from \$6.38 per boe for the first quarter of 2011.
- General and administrative expense was \$3.23 per boe, compared with \$3.56 for first quarter 2011.
- Capital expenditures in first quarter 2012 were \$1.0 billion, including \$345 million invested in lease and production acquisitions, which seems to conflict with this statement in Continental's May 2 press release under the subhead Increased 2012 Capital Expenditures and Growth Rate: "Continental is increasing its 2012 capital expenditure budget to \$2.3 billion, excluding acquisitions." (Petroleum News Bakken has an email into Continental, asking for a clarification, which will appear in the next issue, May 20.)
- The company's Worland property sale added back \$84 million to the \$1.0 billion first-quarter capital expenditures.
- As of March 31, Continental's balance sheet included \$43 million in cash and cash equivalents and \$1.9 billion in total long-term debt. Total long-term debt at the end of the first quarter included \$176 million in borrowings under Continental's revolving credit facility. Commitments under the facility are \$1.25 billion, and its total borrowing base is \$2.25 billion.
- Bakken production of 48,024 boe per day accounted for 56 percent of total Continental production, compared with 49 percent of total production in the first quarter last year.
- Continental participated in completing 103 gross wells in the Bakken in the first quarter of 2012. In terms of company-operated wells, Continental completed 54 gross (36 net) operated wells during first quarter 2012, with 47 gross (30 net) in North Dakota and 7 gross (6 net) in Montana.
- Initial one-day test production rates for Continental-operated wells in North Dakota averaged approximately 947 boe
- Four of Continental's operated rigs in the Bakken are drilling multi-well ECO-Pad® projects, and that number is expected to increase throughout the remainder of the year.
- Continental completed three ECO-Pad projects in late December, and consequently did not complete a multi-well project during the first quarter ending March 31.
- The ECO-Pad design involves drilling four wells on two adjoining 1,280-acre spacing units from a single drilling pad. This approach reduces well costs, as well as reducing the surface impact of each

Candee-Kukla ECO-Pad project, which was comprised of the Candee 2-9H and 3-9H (56 percent WI) wells and the Kukla 2-16H and 3-16H (56 percent WI) wells in Dunn County, N.D. The four wells produced a total 5,913 boe per day in their initial one-day test periods, for an average of 1,478 boe a day per well. Continental expects to complete at least two more ECO-Pad projects by the end of the second quarter.

- As of March 31, 2012, Continental's acreage position in the Bakken totaled 938,940 net acres, with 684,109 net acres leased in the North Dakota portion of the play and 254,831 net acres in the Montana Bakken.
- Highlighting the company's Anadarko Woodford operations in the first quarter was the January "completion of the Tom's 1-21XH (84 percent WI) in Blaine County. The Tom's 1-21XH was the first multiple-unit spaced well drilled in Oklahoma, and its horizontal section was twice the length of previous Anadarko Woodford wells drilled in the play. Continental said the Tom's 1-21XH flowed at a rate of 1,270 boe per day (76 percent oil) in its initial one-day test peri-
- Continental expects longer laterals in the Anadarko Woodford "will have a significant, positive impact on well productivity and economics." The company is currently completing its second multipleunit well.
- Overall, Continental participated in completing 21 gross wells in the Anadarko Woodford in the first quarter. In terms of operated wells, Continental completed 12 gross (nine net) wells in the
- Initial one-day test production rates for company-operated wells in the Anadarko Woodford averaged approximately 728 boe per day.
- Continental currently has eight operated rigs in the Southeast Cana section of the Anadarko Woodford and two in the Northwest Cana, all of which are focused on crude oil and liquids-rich areas.
- In the Arkoma Woodford of Oklahoma, the company's production was 3,637 boe per day in the first quarter, compared with 4,065 boe a day in the first quarter of 2011. Continental has suspended drilling in the Arkoma Woodford due to the low price for dry gas.
- · As of March 31, Continental had 280,610 net acres leased in the Anadarko Woodford and 36,729 in the Arkoma Woodford.
- the Niobrara/DJ Basin, • In Continental completed the Buchner 1-2H (82 percent WI) in Weld County, Colo., during the first quarter. The Buchner well produced 910 boe per day (90 percent oil) in its initial one-day test period.
- · As previously announced, the company completed the Staudinger 1-31H (56 percent WI) in January, which produced 739 boe per day in its initial one-day test production period.
- "We're currently assessing results for our first nine Niobrara wells and preparing to initiate the second phase of our development program," Hamm said.
- · As of March 31, Continental had 92,842 net acres in the Niobrara/DJ basin, with approximately 25,000 net acres in the identified oil fairway of the play.

For the rest of the information included in Continental's May 2 release, including the company's EBITDAX, go to Continental's webpage www.contres.com/.

The largest leaseholder in the "nation's premier oil play, the Bakken play of North Dakota and Montana," Continental is based in Oklahoma City. •

Contact Rose Ragsdale at roseragsdale@live.com

• In April, Continental completed the

Contact Kay Cashman at publisher@petroleumnews.com FINANCE & ECONOMY

Denbury reports record Bakken output

Bumps Bakken capex from \$400 million to \$480 million; production in region up 164%; price differential starting to improve

By KAY CASHMAN

Petroleum News Bakken

enbury Resources Inc. (NYSE:DNR) announced record quarterly Bakken sales volumes of 15,114 barrels of oil equivalent per day, a 164 percent increase from last year's first quarter and a 29 percent increase from fourth quarter levels, the company said May 3 in a news release prior to a first quarter webcast and conference call.

Denbury, which focuses predominantly on CO2 enhanced oil recovery in the Gulf and Rockies with the exception of its Bakken properties, credited its rapid growth in Bakken production to its active drilling program in the region.

Company-wide first quarter production averaged 71,532 boe per day, up 12 percent from 63,604 boe per day produced in the prior year period, and up 6 percent from the 67,234 boe a day produced in the fourth quarter of last year.

In 2012, Denbury estimated Bakken production would be between 14,350 and 16,350 boe per day.

The Plano, Texas-based independent's capital expenditure budget for this year was increased by \$150 million to \$1.5 billion, bumping its spending in the Bakken from \$400 million to \$480 million, as Denbury now plans to keep a fourth operated rig running in the second half of the year.

Average oil sales price of \$102.52

Denbury said it realized an average oil sales price of \$102.52 per barrel in the first three months of the year, down from \$103.08 per barrel in fourth quarter 2011, as Denbury's average realized oil price differential — the average price at which the company sold its production compared to NYMEX price — moved to a negative 37 cents per barrel in first quarter, compared to a positive \$9.14 per barrel in the last three months of 2011.

Denbury's oil price differential improved only slightly from the prior year's first quarter (59 cents) because improvements in the Light Louisiana Sweet, or LLS, index premium were partly offset by widening Bakken differentials.

For the first quarter, the LLS index differential averaged a positive \$12.55 per barrel on a trade-month basis, compared to a positive \$9.28 in last year's first quarter

In the Bakken, differentials averaged \$16.96 per barrel below NYMEX in the first quarter, down from \$11.55 per barrel in the same quarter last year.

By March 31, "both differentials had improved, with the LLS to NYMEX premium increasing and Bakken to NYMEX discount shrinking," Denbury said.

During first quarter, the company sold approximately 40 percent of its crude oil at prices based on the LLS index price, approximately 20 percent at prices tied to a combination of the LLS index price and other indexes, and the balance at prices based on various other indexes tied to NYMEX prices, primarily in the Rocky Mountain region.

Bakken reserves up 4 million barrels

The company added estimated proved reserves of approximately 18 million boe, including about 14 million boe at Oyster Bayou field in southeast Texas, based on its response to CO2 injections, and about

Denbury, which focuses predominantly on CO2 enhanced oil recovery in the Gulf and Rockies with the exception of its Bakken properties, credited its rapid growth in Bakken production to its active drilling program in the region.

4 million boe in the Bakken in North

"We are off to a strong start in 2012 as production from our tertiary oil and Bakken operations both reached new record levels in the first quarter. We expect continued tertiary production growth in 2012, while the rate of our Bakken production growth is expected to slow as we reduce our operated rig count in the area to four by mid-year from a peak of seven in 2011," said Phil Rykhoek, Denbury's president and CEO.

"As a result of our strong start to the year, we expect that our tertiary and total production will both be in the upper half of our estimated 2012 production ranges. Our quarterly revenue reached a new record level in the first quarter, increasing approximately 5 percent from fourth quarter 2011 levels, as higher oil production and NYMEX oil prices offset the impact of lower oil price differentials."

In regard to Denbury's increased capex, he said, "The additional spending will have an impact on our Bakken production late in 2012 and early 2013, while the higher tertiary spending will benefit 2013 production."

\$161 million earned in first quarter

Denbury announced adjusted net income of \$161 million for the first quarter, or 41 cents per diluted share, on record quarterly revenues of \$640 million.

This compares to \$104 million of adjusted net income, or 26 cents per diluted share, on revenues of \$511 million for the prior year's first quarter, and \$175 million, or 45 cents per diluted share, on revenues of \$612 million for fourth quarter 2011.

Higher finding costs in Bakken

In first quarter, Denbury's depletion, depreciation and amortization of oil and gas properties was \$16.71 per boe, as compared to \$14.61 per boe in 2011's first quarter.

The increase was "primarily due to higher finding costs per barrel associated with the company's Bakken assets and upward revisions in estimated future development costs primarily in the Bakken," Denbury said. ●

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DRILLING & COMPLETION

Kodiak touts progress in Bakken drilling

PETROLEUM NEWS BAKKEN

s part of a May 3 announcement of first quarter financial results, Kodiak Oil & Gas Corp. presented information about its active drilling program in the Bakken play of North Dakota and Montana, as well as its dramatic increase in production over the last year.

The company is currently operating six drilling rigs in the Williston basin and expects delivery of a seventh rig before the end of May.

Kodiak has a full-time, 24-hour-perday completion crew that started work at the beginning of the year. A second completion crew, the company said, will be "utilized going forward in order to accelerate completion activity."

The Denver-based independent reported average sales volumes of 10,578 barrels of oil equivalent per day for the first quarter, as compared to 1,864 boe per day for first quarter 2011 and 7,195 boe in the quarter ending in December.

Crude oil accounted for 91 percent of its first quarter sales volumes.

'On track' for 51 net wells

"We are on track to meet our 73 gross and 51 net well program as contemplated under our \$585 million 2012 capex program. For the remainder of the year, we expect all of our wells to be drilled and completed through the heart of our core leasehold in southern Williams, McKenzie and Dunn counties, where we carry a high working interest in the

wells," said Kodiak's Chairman and CEO Lynn Peterson.

The company said \$151 million was invested for the drilling and completion of wells and for infrastructure in the Williston basin during the first quarter.

Kodiak has designated \$550 million of its 2012 capex for drilling and completion, \$25 million for infrastructure investments, and \$10 million for additional acreage acquisitions.

Drilling and completion costs per well are about \$10.5 million Kodiak said in a recent presentation.

The company's 2011 capex was \$261

Utilizing zipper frac technique

"We have 14 gross (12.6 net) operated wells that we anticipate completing in the second quarter. Two of the wells are already completed and are flowing back. Completion work with our dedicated frac crew is under way on our second two-well pad. Both of these wells have cemented liners, and we are utilizing the zipper frac technique for operational efficiency," Peterson said.

During the first quarter, Kodiak drilled 14 gross (12.1 net) operated wells and completed 12 gross (eight net) operated wells, and as of March 31, the company had 14 gross (12.6 net) operated wells waiting on completion. ●

Editor's note: The adjacent table summarizes Kodiak's completion activities for first quarter 2012.

Kodiak Oil & Gas Corp. Q1 2012 Bakken and Three Forks Completion Activities Production Volumes (BOE/d) WI/ IP 24 NRI Length of Hour 30 Day 60 Day Well Name (%) Formation Lateral Test Cum Cum Dunn County, ND Skunk Creek 2-8-17-Three 14H3 44/38 9,354 2,680 1,277 1,048 Forks Skunk Creek 9-2-3-2,174 99/81 Bakken 9,240 912 Charging Eagle 15-60/49 Bakken 9,209 14-11-4H Charging Eagle 15-14-24-16H 8,695 1,716 60/49 Bakken 646 Williams and McKenzie Counties, ND Grizzly 149-104-15-12-1-2H 78/64 Bakken 8,632 1,026 Grizzly 3-25-13-3H 86 / 71 Bakken 10,075 508 Grizzly 3-25-36-15H 90/74 9,407 689 401 Bakken Three Pankowski 4-6H 8,860 1,588 61/49 Forks Long 112-1H 73 / 56 1,978 1,017 908 Bakken 9,583 Lind 211-1H 70/54 9,563 1,419 704 560 Bakken Mildred 94-1H 45/35 Bakken 10,041 1,396 495 427 State 1621-1H 1,658 525 36/28 Bakken 8,926' 446 Non-Operated: Dunn County, ND FBIR Darcie 34X-10 44/36 Bakken 9,494 1,561 N/A N/A FBIR IronWoman 21X-10(1) 50/41 Bakken 9,467 2,355 N/A N/A **FBIR** WalterPacksWolf 31X-12 50/41 Bakken 9,217 1,290 N/A N/A FBIR YellowWolf 1,445 N/A 21X-10 50/41 Bakken 9,720 N/A FBIR GuyBlackHawk 24X-27 50/41 Bakken 9,221 Well on Confidential Status (1)Wells completed in Q4 2011

continued from page 12

WHO'S WHO

career engaged in the acquisition of oil and gas mineral rights in the family business, Reger Oil, before co-founding Northern. He holds a bachelor's degree in finance and an MBA in finance/management from the University of St. Thomas in St. Paul, Minn.

In 2005, he and Gilbertson plotted the launch of an oil exploration company. But a conversation with Reger's father convinced the pair to shift their focus. The senior Reger had sold the mineral rights to a 640-acre section — one square mile — in Sheridan County, Mont. that he picked up at a state sale to Kodiak Oil and Gas of Denver but kept an "override" that entitled him to roughly 3 percent of the revenue from any oil that Kodiak might produce. Kodiak drilled three productive, conventional wells on the acreage, and Reger's father

Even if the company stopped leasing acreage immediately, and even if the price of crude oil should somehow plummet, Northern almost can't avoid making a pile of money: "I could fall asleep under my desk for the next two years and wake up a hero," Reger told a reporter.

gladly collected a significant return on the override.

But the younger Reger gleaned a different meaning from the father's experience. "It became clear to me in that moment that my dad left a lot of money on the table," he told a reporter. "Because the embedded value in that lease, and leases in general, is not the broker's flip for double or triple or however many times your money. The embedded value is the production and the reserves."

Reger's father had been able to spot the value in the section in the first place because three generations of the family have worked in the region's oil patch since 1952 and currently own a large seismic database on the Williston basin.

"If you have the data, and you have the acreage, you know it's highly likely the oil is there. So why sell the lease, even at a hefty multiple of what you paid? Override or no, instead of selling the lease, like a broker, "the smart thing to do would have been (to) keep the lease and drill it," argued the younger Reger. "Drill it, yourself, bring in a partner to drill it – something. Don't sell the lease."

Following this philosophy, Northern acquired leases on 22,000 acres in Montana as well as 10,000 natural-gas acres in Yates County, New York before setting its sights on the Bakken play.

Foolproof future?

Reger says Northern' strategy is simple: Maximize its exposure as a nonoperator in the Bakken/Three Forks play; acquire "opportunistic" acreage (about 42,000 net acres in 2011 at an average cost of \$1,832 per acre); maintain financial flexibility and a strong balance sheet (\$750 million revolving credit facility with \$250 million borrowing base); and use a consistent hedging program to manage risk.

With a low-overhead business model, Northern's position is virtually foolproof, argues Reger. Even if the company stopped leasing acreage immediately, and even if the price of crude oil should somehow plummet, Northern almost can't avoid making a pile of money.

"I could fall asleep under my desk for the next two years and wake up a hero," Reger told a reporter. As the company has grown, so has its costs, including expenses associated with personnel. Northern's permanent work force more than doubled in 2011, jumping 122 percent year-over-year to a still modest-size 19 employees. The new additions joined the land, legal and finance departments, including a new general counsel and chief financial officer. The company had five permanent employees, including Reger and Gilbertson, in 2007.

Northern also moved in 2011 to add more depth and expertise to its board of directors, bringing on Richard D. Weber, chairman and CEO of PennEnergy Resources, LLC, and business consultant and land exchange expert Delos "Cy" Jamison.

2012 capex: \$325M drilling, \$80M leases

For 2012, Northern's capital expenditures budget includes \$325 million for drilling and \$80 million for lease acquisitions. The company has targeted 44 net wells spud during the year at an average estimated well cost of \$7.4 million and doubling 2012 production to about 4 million BOE.

"We are encouraged by the pace of drilling and completion activity in 2012," Reger said in March. "Approximately 39 percent of our total producing net wells were brought online during the most recent two fiscal quarters. This represents a significantly accelerating pace of development on our acreage. We continue to execute our strategy of acquiring high-quality, non-operated acreage and turning it efficiently to production and cash flow."

ENVIRONMENT & SAFETY

Some camping restricted in western ND

North Dakota's Game and Fish Department is prohibiting overnight camping on some wildlife management areas in the western part of the state and along Lake Sakakawea to deter oilfield workers who have nowhere else to stay.

The boom in the oil industry has led to a housing crunch, and wildlife chief Randy Kreil told The Bismarck Tribune some people are setting up camp in the WMAs. He says that's led to other problems such as littering.

Most WMAs are open to primitive camping for 10 consecutive days, but Game and Fish doesn't have staff to oversee the areas or a registration system to keep track of when people come and go.

Assistant wildlife chief Jeb Williams says officials want to ensure the areas are available for hunters and anglers.

—THE ASSOCIATED PRESS

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• FINANCE & ECONOMY

Marathon earnings fall, but some good news

Setting IP records in Middle Bakken, Three Forks; Bakken production continues to rise, but partly offset by price differentials

By KAY CASHMAN

Petroleum News Bakken

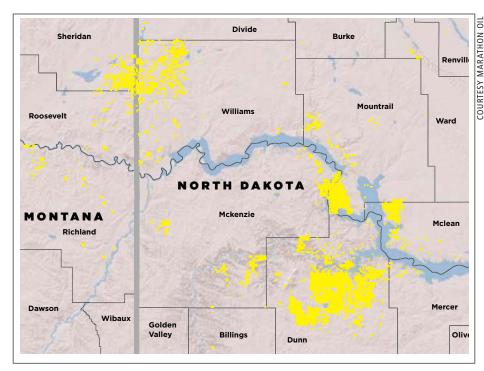
arathon Oil Corp. said May 2 that its first-quarter net income fell by 58 percent following a decline in production and natural gas prices. The company also was comparing its results with a year-ago period that included its now spun-off refining business.

The Houston oil and natural gas producer reported earnings of \$417 million, or 59 cents per share, for the first three months of the year. That compares with \$996 million, or \$1.39 per share, in the year-ago quarter that included \$541 million from Marathon's refining business that was spun off last June, so that Marathon Oil could focus its drilling efforts on tight U.S. plays, such as the Bakken field in North Dakota, Anadarko Woodford in Oklahoma and Eagle Ford in Texas. Revenue increased by 6.1 percent to \$4.04 billion.

Excluding special items such as an impairment charge related to a reduction in some of its Gulf of Mexico reserve estimates, Marathon said it earned an adjusted 67 cents per share. That still fell below Wall Street profit expectations of 88 cents per share, though Marathon beat analyst sales forecasts of \$3.37 billion, according to FactSet.

Shares of the company fell nearly 5 percent, or \$1.37, to \$28.82 in afternoon trading.

Marathon said that overall production available for sale declined 4.3 percent in the period to 383,000 barrels of oil equivalent per day. It sold oil between January and March for an average of \$106.06 per barrel, up 10.7 percent from the same period last year. Natural gas was sold for an average of \$2.96 per 1,000 cubic feet,



Marathon Oil currently holds approximately 416,000 net acres in the Bakken oil play in North Dakota and eastern Montana. The company's acreage is within the established Williston basin in Dunn, McKenzie, McLean, Mountrail and Williams counties in North Dakota, and Richland, Roosevelt and Sheridan counties in Montana, with estimated P50 net resource of approximately 350 million barrels of oil equivalent (mmboe) as of Dec. 31, 2011.

down 11.4 percent.

The company reported production — available for sale — of 371,000 oil-equivalent barrels per day, a modest decline from the 375,000 boe per day achieved in fourth quarter 2011.

Bakken, Eagle Ford partly offset production drop elsewhere

The decline is primarily due to the downtime associated with planned turnaround in Equatorial Guinea and unplanned interruption at the BP-operated Foinaven field in the U.K. North Sea; both were partly offset by improved production from the Eagle Ford and Bakken shale plays.

Average Bakken production increased from 22,500 boe per day in the fourth quarter to 25,500 boe per day by March

This was partially offset, the company said, "by lower U.S. natural gas prices and U.S. and Canadian liquid hydrocarbon price realizations that were negatively impacted by dislocations in the crude markets creating wider differentials and lower crude realizations in the Bakken, across the Rocky Mountain region and

from the Oil Sands Mining segment."

Strong results

Marathon said it "achieved strong results from the Ajax and Hector areas with average 24-hour initial production (IP) rates of 1,500 boe per day, a 30 percent increase over previous averages for those areas, and at Myrmidon, company record 24-hour IP rates of 2,100 and 2,400 boe per day for Middle Bakken and Three Forks, respectively."

The company has eight drilling rigs and three hydraulic fracturing crews working in the play, as compared to 18, soon to be 20, rigs operating in the Eagle Ford play.

Marathon's "drilling pace has exceeded expectations this year with improved 'spud-to-spud' drilling times averaging 30 days compared to the previous 38 days planned."

Marathon's Bakken production averages about 95 percent crude oil. As of the end of April, the company had 14 gross operated wells awaiting completion.

Marathon holds approximately 416,000 net acres in the Bakken play in North Dakota and Montana. Its drilling and production operations started there in 2006.

At the end of December, Marathon projected net Bakken production of approximately 38,000 boe per day by 2016. ●

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COMMUNITY ISSUES

ND oil patch getting indoor RV park

A Minnesota businessman has come up with a unique approach to helping ease the housing shortage in western North Dakota's booming oil patch — an indoor park for recreational vehicles.

Chad Lekander, of Mahtowa, Minn., and a partner have formed B&H Construction Companies to build the indoor RV park south of Watford City. It will consist of 10 buildings to accommodate 240 RVs. Fargo-based NETA Property Management will oversee it.

The goal is to provide a safer, more comfortable housing option for the oil field workers who are forced to live in campers because they have nowhere else to stay, NETA President Bill Triebwasser told The Forum newspaper (http://bit.ly/ItSWp7)

Each ventilated building will be separated into eight bays. There will be drywall partitions to prevent fire from spreading. Each camper will have water and sewer hookups. The park also will have laundry facilities and a common gathering room.

"We're trying to provide a healthy, safe environment," Triebwasser said. Kenan Bullinger, director of the food and lodging division at the state Health Department, said it is the first such project in the state.

"I think it's a great concept," Bullinger said.

RVs have been coming under increased scrutiny in the oil patch. Officials in Williston, the major city in the region, are considering banning them from areas that are not part of an RV park.

The first 48 units at the indoor RV park near Watford City will be available July 1, with another 48 opening each following month, Triebwasser said.

"It's basically care-free RV living," he said.

If the project is successful, the developers will look to build indoor RV parks in other areas, Triebwasser said. The developers have not finalized the rental price but say it will be less expensive than an apartment in western North Dakota and comparable to outdoor RV parks in the area. Tenants will have to sign 12-month leases

"We're not trying to gouge," Triebwasser said. "We're trying to offer something that's obtainable and make people a little more at ease about the living situation."

—THE ASSOCIATED PRESS



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Atigun Inc. announces building of new facility in ND

Atigun Inc. said April 30 that its new facility, headed up by General Manager Jerry Olson, based in Minot, N.D., is slated to open and be operational Oct. 1.

The 144,000-square-foot facility being built by TK Builders LLC will house office

space, a showroom, a two-bedroom apartment and large

Atigun also has a service location in Watford City, N.D., headed up by Manager Corkey Barlow, with a 20-acre storage yard, shops, five-bedroom staff house and office.

Atigun Inc. is an Alaskabased company in business for over 21 years, specializing in sales and rentals of oilfield service equipment. Atigun's fleet includes a line of flame-



less heaters built by Therm Dynamics. Atigun is the dealer for Therm Dynamics in North Dakota and Alaska. With experienced oilfield personnel and mechanics, Atigun's equipment and customer service is top notch. Atigun services Alaska and the entire Williston basin, including North Dakota, Wyoming, and Montana.

For your equipment needs in North Dakota, please contact Atigun's General Manager Jerry Olson at 701-509-5337 or Sales Representative Keith Huss at 701-509-1439; in Alaska please contact Tim Kirsch at 907-398-0305.

For more information visit www.atiguninc.com.

ASCE invites participants to 2012 symposium

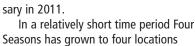
The ASCE said April 25 that it is requesting papers for the upcoming 10th International Symposium on Cold Regions Development in Anchorage, Alaska, June 2-5,

The Technical Council on Cold Regions Engineering of the American Society of Civil Engineers and the Alaska Section of ASCE will sponsor the ASCE 10th International Symposium on Cold Regions Development in Anchorage, Alaska, at the Dena'ina Civic and Convention Center.

The symposium theme is "Planning for Sustainable Cold Regions." You are invited to submit paper abstracts and session proposals online at http://content.asce.org/conferences/coldregions2013/index.html. Authors are expected to orally present their papers in a technical session or poster session. Deadline for abstracts and or papers is June 20, 2012. Papers and poster presentations are encouraged on all aspects of cold regions engineering and development, including: frozen ground and permafrost; building design; construction techniques; oil and gas; structure and foundation failures; water and wastewater systems, and much more. For information, please contact Steering Committee Co-Chairs Thomas G. Krzewinski at tkrzewinski@golder.com, or Jon E. Zufelt at jon.e.zufelt@usace.army.mil.

Four Seasons Equipment celebrates 10 years of service

Four Seasons Equipment said April 27 that it celebrated its 10th anniversary in 2011.



across Texas, Louisiana and its newest



addition in Williston, N.D. Four Seasons is a full-service heavy construction equipment distributor. Its fleet consists of new and used Hyundai Excavators and Wheel Loaders, Liebherr Scrap Handlers, Terex Articulated Dumptrucks, Sakai Rollers and Compactors, Morooka crawler carriers, LaBounty shears, grapples and hammers, Indeco breakers and Swenson spreaders.

Four Seasons' newest facility in Williston, N.D., is now open. They are proud to bring the same level of service and support to this new and exciting area. Please contact its sales department at 701-577-7014 for your heavy equipment needs in the Bakken.

Companies involved in the Bakken, Three Forks and related plays

ADVERTISER	PAGE AD APPEARS
Alaska Textiles	•
Atigun Inc	
Bakken Tight Oil Congress 2012	
Carlile Transportation	
Cruz Energy Services LLC (A CIRI Co.)	
Four Seasons Equipment	
Innovate ND	
Lister Industries	
Lynden	
North Slope Telecom (NSTI)	
Petroleum News Bakken	19,24
Polyguard Products	
SolstenXP	
Totem Equipment and Supply	

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COURT RULING

to Pegasus for transporting and selling their crude oil."

Until FERC decides whether to appeal the judgment will not become law.

The ruling coincides with an application to FERC by Enterprise Products Partners, co-owner with Enbridge of the Seaway crude oil pipeline from Cushing, Okla., to the Gulf Coast, to also be allowed to charge market rates.

The 858-mile Pegasus line carries about 60,000 barrels per day of oil, or 3 percent of the 2.2 million bpd Western Canada produces, the court was told.

Oil producers had challenged ExxonMobil's request, arguing it would give the operator too much control over transportation prices.

FERC concluded that approval of the application would give ExxonMobil the chance to manipulate rates above competitive levels for a significant period of time because of a lack of competition.

Circuit Judge Brett Kavanagh wrote for the panel that FERC "jumped the rails by treating the Pegasus pipeline as the rough equivalent of a bottleneck or essential facility for transportation of Western Canadian crude. The record thoroughly undermines FERC's conclu-

Since the Pegasus application was filed five years ago, TransCanada has launched its controversial Keystone XL plan to deliver 830,000 bpd to Gulf Coast refineries, while Enbridge plans to carry 850,000 bpd to Texas using its Canadian mainline and Seaway. Both projects are designed to deliver oil sands crude from Alberta and crude from the Bakken

TransCanada is not prepared to speculate what form its rates application might

-GARY PARK

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TAKEOVER

By bringing Sunoco into its fold, ETP will bring on 5,400 miles of crude pipelines and 2,500 miles of refined products pipelines and recalibrate its mix to about 70 percent natural gas and 30 percent liquids.

ETP Chief Executive Officer Kelcy Warren said in a statement that his company has set a goal over the past year of deriving "more of our distributable cash flow from the transportation of heavier hydrocarbons like crude oil, NGLs and refined products."

Giving an example of how the shifting priorities can work, he told analysts that Sunoco operated an unidentified Texas pipeline decades ago before switching to carry natural gas in 1980.

That pipeline "has access to all the electric infrastructure. It would be very easy to convert. It's running at very low capacity now and it would be an excellent conduit to take crude from optimal resources to Nederland (on the Texas-Louisiana border), or from Nederland north," he said.

Warren said other longer pipelines ETP has acquired from Southern Union also lend themselves to crude conversion.

"They're not needed for the demand of our customers and they're not necessary," he said. "So we are exploring converting some of those lines that would go from the Gulf Coast to the Midwest and to other parts of the country," he said.

Under the terms of the deal, Sunoco will continue with its plan to exit the refining business and continue to see a joint venture with The Carlyle Group to run its 33,000 barrels per day Philadelphia refin-

Pardy calls for EnCana to make major buy

The swing to liquids production is underscored by Calgary-based gas giant Encana, which unloaded its crude operations two years ago in spinning off Cenovus Energy, but is now scrambling to rebuild and expand its liquids sector.

Greg Pardy, an analyst with RBC Dominion Securities, has even called for Encana to make a "liquids-weighted rifle shot acquisition" to shake things up.

-GARY PARK

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CONOCO PRODUCTION

The company expects Bakken production to approach 20,000 boe per day by the end of the year and 40,000 boe per day by 2016.

Eagle Ford still shines

ConocoPhillips produced 54,000 boe per day from the Eagle Ford in the first quarter, up from 50,000 boe per day at the end of 2011.

ConocoPhillips plans to drill some 180 wells using 16 rigs this year and expects production to hit 100,000 boe per day by the end of the year. The company currently has the capacity to handle around 60,000 boe per day, but said it hopes to avoid curtailments by staying ahead of condensate takeaway and by increasing natural gas takeaway capacity through new infrastructure projects.

ConocoPhillips' Eagle Ford production is approximately 60 percent crude and condensate. By comparison, its Bakken production is about 90 percent crude and condensate.

Asked during a fourth-quarter earnings call in January whether the production disparity between the Bakken and the Eagle Ford reflected economics or infrastructure, Chief Finance Office Jeff Sheets said "both," according to a ConocoPhillips transcript.

"The economics are better for us in the Eagle Ford than they are at the Bakken," Sheets said. "So that will have priority as we think about where were allocating our capital.

Because ConocoPhillips holds its Bakken-area leases on a long-term basis, Sheets said the company doesn't need to drill wells to hold on to its acreage. "So we're taking a very measured approach there. We don't want to get ahead of infrastructure in the Bakken. So you will see us continue to ramp up our activities there," Sheets said. "They're good strong return projects but it's not as strong as what we have in the Eagle Ford."

At an investor update in April, interim CEO Ryan Lance said the company had 10 years of drilling opportunities in the Bakken. "We will be here for a long time," he said.

ConocoPhillips averaged 51,000 boe per day in the first quarter in the Permian, where it is also running 13 rigs en route toward a target of 16 rigs this year.

> Contact Eric Lidji at ericlidji@mac.com

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TURF BATTLE

an attempt to link Western Canadian crude production to Canada's major outlets in Ontario and Quebec, which currently rely on imports of 500,000 barrels per day from the Middle East and Africa.

A repurposed Mainline could, by some estimates, carry 800,000 bpd.

"We have a lot of work to do technically," he said. "We have a lot of work to do in conversations with out shippers. But ... it seems to make sense to people."

He said Eastern Canadian refiners have asked TransCanada whether it is feasible for them to access landlocked supplies of Western Canadian crude rather than paying premium prices of \$15-\$30 per barrel for international feedstock.

TC has conversion experience

Girling said it would be premature to discuss what such a plan would entail.

He said there are "integrity" issues that come from switching gas pipe to oil, but TransCanada has already had some experience in that field in building its existing Keystone system, which carries Alberta crude to refineries in Illinois and the storage hub in Cushing.

Line 1 of the mainline was converted in 2010 for the Canadian portion of the first Keystone pipeline to Steel City, Neb.

"I think it's likely technically feasible that we can make something like that work," Girling said.

Gas customers welcome switch

Chad Friess, an analyst with UBS Securities, said he expects current gas customers on the underutilized Mainline would welcome the switch.

He predicted that if the project goes ahead, light oil rather than oil sands crude would fill the line, pointing to the Bakken plays in Saskatchewan and North Dakota as the likely sources.

Friess said the conversion would "free up TransCanada's stranded capital in the gas Mainline and solve a lot of the problem they are having with producers over tolls. If a portion of that rate base was transferred to an oil pipeline, it would be very attractive for both. It is like a winwin situation."

Montreal-based research analyst Pierre Lacroix, of Desjardin Securities, said the concept is based on two top-ofmind rationales that the Mainline needs higher volumes and the Eastern Canadian refineries want lower-priced feedstock than the global barrels they import.

"It's certainly something that can be entertained at high-level discussions, but a lot of details probably need to be nailed down," he said.

Also on the table

Refineries in Ontario, Quebec and Atlantic Canada could process a combined 1.2 million bpd.

Enbridge has the edge with its longestablished mainline to the U.S. Midwest and Ontario, although the line has recently been carrying only about 1.55 million barrels per day, 1 million bpd short of its design limit.

But the company has filed an application with Canada's National Energy Board to reverse the flow of Line 9, extending shipments of Alberta and Bakken crude from Sarnia, Ontario, to Westover, in southwestern Ontario, then possibly into the Montreal area and eventually to Atlantic Canada and the U.S. Atlantic Seaboard.

Canada's largest oil sands producer Suncor Energy, which has a refinery in Montreal, has publicly endorsed moving more Western Canadian oil into that region

Also on the table is a proposal to build about 50 miles of new pipe from the end of the Mainline in Quebec to the St. Lawrence Seaway, which it could be barged to the 300,000 bpd Irving Oil refinery — Canada's largest — in Saint John, New Brunswick.

For those staring into their crystal balls that has even opened up the possibility of Alberta oil sands crude being exported to Europe — a prospect that has stirred concern among environmentalists and European lawmakers, who are trying to curb the growth of oil sands-derived production

Enbridge is also considering a 50,000 bpd addition to its Line 5 from Superior, Wis., to Sarnia for Bakken and oil sands crude to meet refining needs in Michigan, Ohio and Ontario.

New Keystone XL route skirts Sand Hills

Taking on these fresh challenges is seen as TransCanada's response to the intense heat it has faced over the past year as Keystone XL turned into an international issue and, Girling said, made life very uncomfortable for his 4,400 employees.

To counter some of the opposition from lawmakers and critics of "dirty" oil sands crude who fear the harm to the U.S. heartland from a pipeline spill, TransCanada is on the verge of filing a new application to skirt the environmentally sensitive Sand Hills region of Nebraska.

That proposal is being reviewed by Nebraska regulators and a parallel federal review by the U.S. State Department is pending.

Rather than retreating from the spotlight and the "high profile twists and turns it has experienced," Girling said TransCanada is currently evaluating C\$50 billion worth of long-term energy projects, in addition to its slate of C\$13.8 billion of projects scheduled for completion over the next three years, including C\$7.8 billion for new oil pipelines.

He said TransCanada "fully understands that the transition to a less carbon-intensive future" requires a greater effort by his company to manage its environmental impact, while it seeks to land a "fair share" of the C\$50 billion nest egg. •

Contact Gary Park through publisher@petroleumnews.com

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BAKKEN OIL PRICES

premium to WTI at 12:09 p.m. in New York, according to Bloomberg data. It was the first time since December that the grade has traded at a premium.

At the same time, Bloomberg showed Syncrude's premium to WTI weakened 30 cents to \$1.50 a barrel, and Western Canada Select's discount widened 75 cents to \$15.

Light Louisiana Sweet's premium to WTI added \$1.05 to \$15.55 a barrel. Heavy Louisiana Sweet's premium increased \$1.15 to \$15.65 a barrel.

From 30,000 bpd to 60,000

The Anacortes rail terminal was initially scheduled to deliver 30,000 bpd a day of sweet Bakken crude to the West Coast refinery, replacing the heavier and more expensive Alaska North Slope crude. The company said in mid-2011 that Bakken crude oil yielded approximately 16 percent more clean product and less fuel oil than Alaska North Slope crude, and that during the second quarter of 2011, the differential between those products was approximately \$28 per barrel.

Currently the 120,000 barrel-per-day Washington refinery receives 1,000 to 2,000 bpd of North Dakota oil.

Then in March of this year, Tesoro President and CEO Greg Goff said the amount of Bakken crude had been bumped to 40,000 bpd because the 800 rail cars Tesoro ordered could handle that much crude.

Initially, Goff said shipments would be every other day: "We need to test the delivery system and how everything fits together. ... Physically, if it works like we planned, you can go to every day. But you have to get the rail cars, and rail cars are in tight supply right now."

In the May 3 conference call, Scott Spendlove, senior vice president and CFO of Tesoro, explained that the terminal was actually designed to handle 60,000 barrels a day and that Tesoro was hoping to eventually utilize that full capacity.

"The physical design of the system is designed to take, it could physically take, a unit train every day, which would be 60,000 barrels a day. We are currently permitted for less than that, but we are working through the process to hopefully

On May 3, Goff also said the company was on schedule and nearing completion of its \$35 million Mandan, North Dakota refinery expansion, where

Tesoro is increasing the refinery's capacity from 58,000 bpd to 68,000 by the end of the second quarter this year.

increase the capability to maximize the use of the facility," Spendlove said.

Massive investment to further expand Mandan

On May 3, Goff also said the company was on schedule and nearing completion of its \$35 million Mandan, North Dakota refinery expansion, where Tesoro is increasing the refinery's capacity from 58,000 bpd to 68,000 by the end of the second quarter this year.

When asked by Goldman Sachs analyst Arjun Murti to talk about "additional running room you see to further expand that facility after this phase, given the pretty dramatic growth in Bakken production," Goff said that when the Mandan expansion was complete there would be, with one exception, no room for more expansions.

"The Mandan refinery, once we complete the expansion we've been working on, the refinery becomes basically balanced," he said. "So we effectively use all of the assets there. And there really is no room for further expansion, with one exception. And that is ... we will produce additional ultra-low sulphur diesel during 2013, by changing our yield and moving a little bit away from gasoline to diesel."

In March, Goff had said further capacity expansions of the plant would require "massive investments" and the Northern Great Plains market "is pretty well situated" as is.

Goff also said at that time Tesoro was interested in acquisitions in the areas where the company already operates, which included the Midwest, Rockies and West Coast of the U.S. Tesoro was not interested in expanding into the Gulf Coast or struggling East Coast regions,

—KAY CASHMAN

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