Petroleum News
Bakken

page 3 Marathon planning to aggressively develop Three Forks in 2014

Vol. 2, No. 44 • www.PetroleumNewsBakken.com — *Publication of record for the Bakken oil and gas industry* — Week of February 16, 2014 • $2.50

A Continental completion

VERN WHITTEN PHOTOGRAPHY

A Schlumberger hydraulic fracturing operation on one of Continental Resources' Atlanta wells in the Baker field southwest of Williston, N.D. Continental's Atlanta pad is on the north side of Lake Sakakawea in Williams County but the multiple wells fan out south to east under the lake into McKenzie County.

North Dakota looks to take regulation reins from fed's hands

As North Dakota state legislators look back at a 20,000-barrel oil pipeline release and a derailment that caused crude oil to explode in the state in 2013, they wonder if federal regulators are doing their job, or if it's time to step in.

At a Feb. 11 Energy Development and Transmission Committee meeting, legislators heard from spill reporting agencies including the Department of Health, the Oil and Gas Division and the Department of Emergency Services with updates on the reclamation process of the Tesoro pipeline spill and the Casselton train accident. Committee chairman Sen. Rich Wardner and Sen. Connie Triplett voiced

see **REGULATION REINS** *page 16*

EPA issues permitting guidance for fracks using diesel additive

The EPA released an interpretive memorandum Feb. 11 to clarify its underground injection control program, UIC, requirements under the Safe Drinking Water Act, for underground injection of diesel fuels in hydraulic fracturing for oil and gas extraction.

The EPA said that any owner or operator who injects diesel fuels in hydraulic fracturing for oil or gas extraction must obtain a UIC Class II permit before injection.

The guidelines affect only a tiny fraction of fracking operations in the United States; diesel is not widely used.

In issuing the guidelines, the EPA has elevated its involve-

see **PERMITTING MEMO** *page 9*

TransCanada comes out swinging on Energy East pipeline project

TransCanada apparently now subscribes to the once-bitten-twice-shy school of thought.

Having seen its assumption of a smooth regulatory passage for the Keystone XL project dashed and mindful of the parallel upheaval for Enbridge's Northern Gateway project and the opposition building to Kinder Morgan's proposed Trans Mountain expansion, it has decided that offence is better than defense.

Now fully aware that pipelines companies can no longer count on low-key, esoteric hearings of its applications by

see **ENERGY EAST** *page 16*

COMPANY UPDATE

Climbing the ladder

Continental Resources saw double-digit output and reserve growth in 2013

By RAY TYSON
For Petroleum News Bakken

HAROLD HAMM

RICK BOTT

Continental Resources overcame weather delays to establish both reserve and production records in 2013, while staying firmly on course to fulfill a longer-term goal of tripling output over five years.

It was a year highlighted by technical, far-reaching achievements, including delineation of the lower Three Forks benches of the Bakken petroleum system and southern portions of another prolific shale play, the so-called South Central Oklahoma Oil Province, or SCOOP.

Continental said it also took a big step in improving efficiencies, while managing to reduce drilling and completion costs.

"In spite of abnormal winter weather … that delayed some completions and deliveries, we achieved our 2013 targets," Harold Hamm, Continental's chairman and chief executive officer, said in a statement.

see **CONTINENTAL RECORDS** *page 14*

COMPANY UPDATE

Costs 'simply too high'

Statoil trims $5B from 3-year capex while maintaining strong growth prospects

By MIKE ELLERD
Petroleum News Bakken

TROND ISAKSEN – STATOIL ASA

HELGE LUND

The oil and gas industry is facing some demanding challenges according to Statoil Oil and Gas, and the global giant is facing those challenges by making important changes to its strategy for growth and creating value.

In launching what Chief Executive Officer and President Helge Lund calls "a comprehensive program to deal with efficiency," the Norwegian-based integrated multinational energy company is looking at a 3 percent compound annual growth rate, CAGR, over the next three years while at the same time revising downward its estimated 2014-2016 global capital expenditure, capex, by $5 billion or approximately 8 percent. Statoil is also backing four years away from its previously announced production guidance of reaching a total global daily production of 2.5 million barrels of oil equivalent per day by 2020. In the fourth quarter, Statoil's total global production averaged 1.940 million boepd, which was 56 percent liquids.

"We expect around 3 percent CAGR in the

see **STATOIL MOVES** *page 15*

MOVING HYDROCARBONS

XL pipe versus rail a wash

State Department finds little difference in heavy Canadian crude transport costs

By GARY PARK
For Petroleum News Bakken

RUSS GIRLING

Of all the nuggets buried in the U.S. State Department's massive final environmental impact report on Keystone XL one of the most telling was that the cost of moving heavy crude from Alberta to the Gulf Coast would be similar, whether the mode of transportation was pipeline or rail.

The analysis also concluded that the prevailing economics make it likely that the use of rail would allow Canadian crude to displace Mexican Maya crude in the Gulf if XL was rejected by the Obama administration.

The State Department's bottom line is that even if XL and other cross-border pipelines are turned down, the development of Alberta's oil sands would not be significantly impacted and the output would find a way to market.

That reinforces the disclosure two months ago by TransCanada Chief Executive Officer Russ Girling that his company is holding discussions with railroads and oil producers to use rail links from Alberta, to the Cushing, Okla., hub, where the crude would be fed into the new Gulf Coast pipeline to Texas refineries.

"There is a point in time (with XL) at which we would consider a rail option," he said. "If we need a bridge with rail, we will bridge."

see **PIPE VS. RAIL** *page 15*

contents

Petroleum News Bakken

● COMPANY UPDATE

Marathon plans aggressive TF development

Bakken production rises as drilling time and drilling costs fall, even as proppant and stimulation fluid volumes are boosted

By STEVE SUTHERLIN

For Petroleum News Bakken

Marathon Oil Corp. is planning an aggressive drilling program in its Williston Basin acreage in 2014, to exploit what it considers to be excellent prospects in the Three Forks formation, Lee Tillman, Marathon president and CEO said in a Feb. 6 earnings conference.

"We have got a considerable amount of our production today that's in the Three Forks first bench; about 20 percent of our production today is there," Tillman said. "We have a very aggressive Three Forks development program in 2014 that includes not only first bench, but also second bench piloting."

LEE TILLMAN

Tillman said low production volumes the company saw in some Three Forks wells reflect the variability of the oil bearing structures, not the promise of the play.

"In our particular acreage areas which we believe to be very high quality, we're seeing excellent performance and tight curves from the Three Forks first bench and we look forward to testing what the second bench can deliver as well," Tillman said. "There is a natural variability across the plays which whether you are talking about the middle Bakken or the Three Forks first bench depending upon where your acreage is located, there is going to be a natural variability in the quality and based on the type curves that we have seen thus far particularly in the Three Forks first bench we have no concerns there."

Bakken production up

Marathon averaged approximately 40,000 net barrels of oil equivalent per day in the Bakken during the fourth quarter of 2013, up from 38,000 net boepd in the prior quarter, he said.

Tillman said Marathon reached total depth on 15 gross company operated wells and brought 22 gross wells to sales during the fourth quarter, while in the third quarter it reached total depth on 21 wells and it brought 21 wells to sales.

During the fourth quarter the company's average time to drill a Bakken well improved approximately 16 percent compared to the year-ago quarter, averaging 15 days spud-to-total depth, Tillman said.

Marathon's drilling and completion costs fell by approximately 10 percent compared to the year-ago quarter, even as the company has increased the volumes of stimulation fluid and proppant it is using, he said.

Tillman said the company is progressing with its program to drill high-density pilot wells, combining middle Bakken wells and Three Forks wells in single-pad drilling.

Tillman said the company is progressing with its program to drill high-density pilot wells, combining middle Bakken wells and Three Forks wells in single-pad drilling.

"Those pilots are still moving forward but we are aggressively pursuing down spacing particularly in our high quality acreage," he said, adding that the company is "keenly interested" in the downspacing program, which is contributing to an increase in resource potential that the company shared in an earlier presentation to stock analysts.

He said Marathon doesn't have new data to share yet, having not had "enough run time yet to come out and state definitively the impact ultimately of the down spacing."

Tillman said Marathon's Bakken production averages approximately 90 percent crude oil, 4 percent natural gas liquids, and 6 percent natural gas.

North America strong

Marathon's full-year 2013 net income was $1.753 billion, or $2.47 per diluted share, compared to $1.582 billion, or $2.23 per diluted share, in 2012, Tillman said.

"During 2013, we continued to maintain a sharp focus on our core values, operating reliability and execution excellence, marked by our 11 percent overall production growth (excluding Alaska and Libya), exceeding 2013 growth guidance, Tillman said. "In particular, our strong year-over-year net production growth in the top U.S. liquids resource plays — 136 percent in the Eagle Ford, 34 percent in the Bakken and 68 percent in the Oklahoma resource basins — demonstrated our ability to drive superior operating results."

Tillman said Marathon expects its resource play production to grow more than 30 percent in 2014 compared to 2013, with a total company production growth rate of approximately 4 percent (excluding Alaska, Angola and Libya).

"We've allocated more than 60 percent of our $5.9 billion 2014 capital, investment and exploration budget to our three outstanding resource plays, where we've accelerated activity and already ramped up to our committed 28-rig program, he said. "In 2014, we again expect greater than 100 percent reserve replacement, excluding acquisitions and divestitures.

Marathon's total net proved reserves were approximately 2.2 billion boe at the end of 2013, an increase of 8 percent from the prior year, Tillman said. The company's reserve replacement ratio, excluding dispositions of 13 million boe, was 194 percent, with 344 million boe of net proved reserves added, while producing 177 million boe. The company's finding and development cost was approximately $16 per boe.

"Net additions, including acquisitions, were driven primarily by U.S. resource play activity in the Eagle Ford, Oklahoma resource basins and Bakken as well as additions in oil sands mining and Norway," he said.

Tillman said crude exports may be the key to an improved pricing environment for U.S. producers.

Pricing issues

Softer pricing tempered Marathon's financial results in the third quarter.

"Our strong fourth quarter operating results were offset by decreased price realizations, particularly in the U.S. and Canada. Fourth quarter U.S. liquid hydrocarbon realizations fell almost 12 percent and synthetic crude oil realizations declined 23 percent compared to the third quarter of 2013."

Tillman said crude exports may be the key to an improved pricing environment for U.S. producers.

"Clearly it's encouraging to us as a company to see the crude export issue being out there and discussed openly now," he said. "I mean if you rewind back not so long ago that was not the case — we were hard pressed to get any traction around that, but now I think there is some traction in the political circle.

"Certainly with the growth and the economic growth that is being generated in the North America resource plays we need to continue to enable that and to me it's a natural next step for us to move into a commodity situation where we're in the world open market; that benefits the producers and benefits the consumers," he said. "It doesn't in any way damage our energy security but rather I think creates opportunities for further growth here in the U.S." ●

Contact Steve Sutherlin at stevepna@hotmail.com

MOVING HYDROCARBONS

Kansas City Southern looks at Canada to help offset Bakken shipping losses

Kansas City Southern is turning to Canadian heavy crude to offset the decline in Bakken crude available for shipment by rail to the U.S. Gulf Coast.

Pat Ottensmeyer, the railroad's executive vice president of sales and marketing, told a fourth-quarter analysts' call that with more Bakken crude moving to East and West coasts, KCS has decided its "longer-term opportunity is going to be driven more by heavy crude coming from Canada."

Although those volumes did increase strongly in the final quarter of 2013 they were not enough to fully counter the loss of volumes from the Bakken and West Texas.

Ottensmeyer said increased pipeline capacity and the shrinkage in established benchmark price spreads have seen Bakken crude diverted from the Gulf faster than KCS had anticipated.

During the final three months of 2013, KCS relied on Canadian crude for the bulk of its shipments and "very little Bakken and West Texas" crudes, he said.

Other KCS managers said some Gulf crude-by-rail investors are expected to bolster that trend this year by installing the heating equipment needed to deliver Canadian heavy crude in a rail tanker with adding the usual diluents.

KCS said it expects crude-by-rail options to expand in Port Arthur, Texas; Baton Rouge, La.; and New Orleans.

However, Chief Executive Officer Dave Sterling noted that regulatory approvals for new facilities are taking longer because of the series of derailments in North America.

"People are a lot more nervous and the permitting process seems to be taking longer," he said. "But we certainly don't see the desire to move crude by rail stopping."

Ottensmeyer noted that even if Keystone XL is approved, the pipeline would deliver only about half of the crude required in the Port Arthur area.

KCS and Savage Cos. announced almost three years ago that they had established a joint venture to build a large multiuse rail terminal in Port Arthur and indicated they hoped to have the facility available by mid-2012.

KCS managers said they continue to work on permitting for the facility, but offered no details on timing.

The railroad posted an overall decline in its crude operations during the latest quarter from a year earlier, with revenues dropping to $5.1 million from $7.3 million, tanker loads dropped to 3,200 from 3,500 and revenues per tanker load dropped to $1,594 from $2,028.

—GARY PARK

Petroleum News Bakken

www.PetroleumNewsBakken.com

Kay Cashman	PUBLISHER & EXECUTIVE EDITOR
Mike Ellerd	EDITOR-IN-CHIEF
Ray Tyson	CONTRIBUTING WRITER
Gary Park	CONTRIBUTING WRITER (CANADA)
Eric Lidji	CONTRIBUTING WRITER
Rose Ragsdale	CONTRIBUTING WRITER
Steve Sutherlin	CONTRIBUTING WRITER
Darryl Flowers	CONTRIBUTING WRITER
Maxine Herr	CONTRIBUTING WRITER
Jannelle Steger Combs	LEGAL COLUMNIST
Mary Mack	CEO & GENERAL MANAGER
Raylene Combs	BAKKEN ADVERTISING EXECUTIVE
Ashley Lindly	RESEARCH ASSOCIATE
Mark Cashman	RESEARCH ASSOCIATE
Susan Crane	ADVERTISING DIRECTOR
Bonnie Yonker	AK / NATL ADVERTISING SPECIALIST
Steven Merritt	PRODUCTION DIRECTOR
Marti Reeve	SPECIAL PUBLICATIONS DIRECTOR
Tom Kearney	ADVERTISING DESIGN MANAGER
Heather Yates	BOOKKEEPER & CIRCULATION MANAGER
Renee Garbutt	CIRCULATION SALES
Shane Lasley	IT CHIEF
Dee Cashman	RESEARCH ASSOCIATE

ADDRESS
P.O. Box 231647
Anchorage, AK 99523-1647

NEWS
MIKE ELLERD
406.551.0815
mellerd@bresnan.net

CIRCULATION
907.522.9469
circulation@petroleumnews.com

ADVERTISING
907.522.9469
mreeve@petroleumnews.com

FAX NUMBER
907.522.9583

Several of the individuals listed above are independent contractors

OWNER: Petroleum Newspapers of Alaska LLC (PNA)
Petroleum News Bakken • Vol. 2, No. 44 • Week of February 16, 2014

Published weekly. Address: 5441 Old Seward, #3, Anchorage, AK 99518
(Please mail ALL correspondence to: P.O. Box 231647 Anchorage, AK 99523-1647)
Subscription prices in U.S. — $98.00 1 year, $176.00 2 years • Canada — $185.95 1 year, $334.95 2 years
Overseas (sent air mail) — $220.00 1 year, $396.00 2 years
POSTMASTER: Send address changes to Petroleum News, P.O. Box 231647 Anchorage, AK 99523-1647.

● MERGERS & ACQUISITIONS

Baytex Energy takes dive into Texas

Canadian heavy oil producer, Bakken operator buying premium Eagle Ford acreage, most of which operated by Marathon subsidiary

By GARY PARK
For Petroleum News Bakken

Baytex Energy, a Canadian heavy oil producer with a stake in the North Dakota Bakken, is expanding its horizons and changing its makeup by agreeing to buy Australia's Aurora Oil & Gas for C$2.6 billion to gain premier acreage in the Eagle Ford, Texas, shale oil play.

The deal, which includes C$1.8 billion for Aurora shares and assumed long-term debt of C$744 million, is the largest in Baytex's 20-year history, adding 22,200 acres of exploration land and 166.6 million barrels of reserves in the Sugarkane field in south Texas, to the Baytex portfolio.


JAMES BOWZER

Aurora's production of about 24,700 barrels of oil equivalent per day, raising Baytex volumes to about 85,000 boe per day — 53 percent heavy oil, 34 percent light oil and liquids and 13 percent natural gas (previously 75 percent heavy oil, 14 percent light oil and 11 percent gas) — if the transaction closes as scheduled in the second half of May.

Most of the Eagle Ford acreage is operated by a subsidiary of Marathon Oil, where Baytex Chief Executive Officer James Bowzer spent 30 years, including a stint as vice president for North America, including exposure to the Eagle Ford.

He said the Marathon subsidiary has improved its drilling and completion techniques, increasing 30-day initial production rates by 45 percent since the final quarter of 2011.

RBC Capital Markets analyst Andrew Williams said a deal was expected because Aurora's share value has fallen 13 percent since the start of 2014 despite its strong growth outlook, including a targeted 29,000-32,000 boe per day this year.

"It does not surprise us that a bid has been tabled as we have been highlighting the disconnect between the company's operational performance and share prices and the potential for that to lead to increased M&A activity," he wrote.

Tudor Pickering Holt said the deal carries an implied price of $50,000 per acre, compared with $30,000 precedents for Eagle Ford acreage which "likely reflects acreage quality and stage of development."

Rival bid not expected

Williams said the Baytex bid represents an attractive 9 percent premium, but does not overvalue the shares. Although a rival bid is not expected, if the Baytex offer is trumped it will be paid an A$18.8 million break fee.

Tudor Pickering Holt said the deal carries an implied price of $50,000 per acre, compared with $30,000 precedents for Eagle Ford acreage which "likely reflects acreage quality and stage of development."

Lance Robertson, Marathon's vice president of North American production, said in December that the company has begun to test the idea of co-developing the Lower Austin Chalk formation and Upper Eagle Ford Zone together with its primary Lower Eagle Ford.

He said that as Marathon drills longer horizontal laterals and improves the stimulation design for the Upper Eagle Ford Austin Chalk combination it anticipates further improvements in production.

Bowzer said the Sugarkane field has been "largely delineated" and, as well as having infrastructure in place, has shown "attractive reserve upside."

He said that once the deal closes the company's three key oil resource plays — Eagle Ford and Alberta's Peace River and Lloydminster will represent some of North America's highest rate return projects.

Baytex's 123,000 acres in the Bakken/Three Forks yield about 3,400 barrels per day and have been earmarked by analysts as a likely sales candidate, although Baytex has indicated that until the assets are held by production, likely in 2015, it has no interest in looking for a buyer. ●

Contact Gary Park through publisher@petroleumnews.com

MOVING HYDROCARBONS

Tioga pipeline explosion under investigation

Hiland Partners had released no additional information as of Feb. 12 about the explosion of one of its natural gas pipelines near Tioga beyond what the company stated in a Feb. 11 press release. In that press release, the company said a gas pipeline had ruptured approximately six miles south of Tioga on the night of Feb. 10 causing a fire but no injuries and that the fire was extinguished, no third-party damage occurred, and Highland officials were on the scene.

The rupture occurred in an above-ground segment of one of Hiland's natural gas pipelines and on property owned by Hiland. The North Dakota Department of Health and the North Dakota Public Service Commission responded to the incident, which is currently under investigation Hiland owns and operates four Williston Basin natural gas gathering systems in Montana and North Dakota, and is also building its 462-mile Double H crude oil pipeline to run from western McKenzie County, N.D., to the Guernsey hub in eastern Wyoming. Hiland Partners is owned by Continental Resources Chairman and Chief Executive Officer Harold Hamm and his family, but operates separately from Continental.

—PETROLEUM NEWS BAKKEN

● COMPANY UPDATE

Tesoro finishes year of accomplishments

Reversal of the High Plains pipeline and breaking ground on the Vancouver rail offloading facility among the tasks slated for 2014

By MIKE ELLERD

Petroleum News Bakken

Refinery acquisitions and expansions, new pipeline operations and a new marine terminal on the drawing board define 2013 as a year of accomplishments for Tesoro Corp. and its spin-off master limited partner Tesoro Logistics. And 2014 looks to bring ongoing growth and cost structure improvement for the Texas-based independent petroleum refining and marketing partners.

The 2013 accomplishments include the $2.4 billion acquisition of BP's Southern California refining, marketing and logistics business; the first stage of a conversion project at the Salt Lake City, Utah, refinery; completion of expansion at the Mandan, N.D., refinery; and the beginning of a joint venture with the energy supply chain management firm Savage Cos. to build a 30,000 barrel per day rail offloading terminal at Vancouver, Wash. On the retail side, Tesoro added Exxon and Mobil brands to its portfolio.

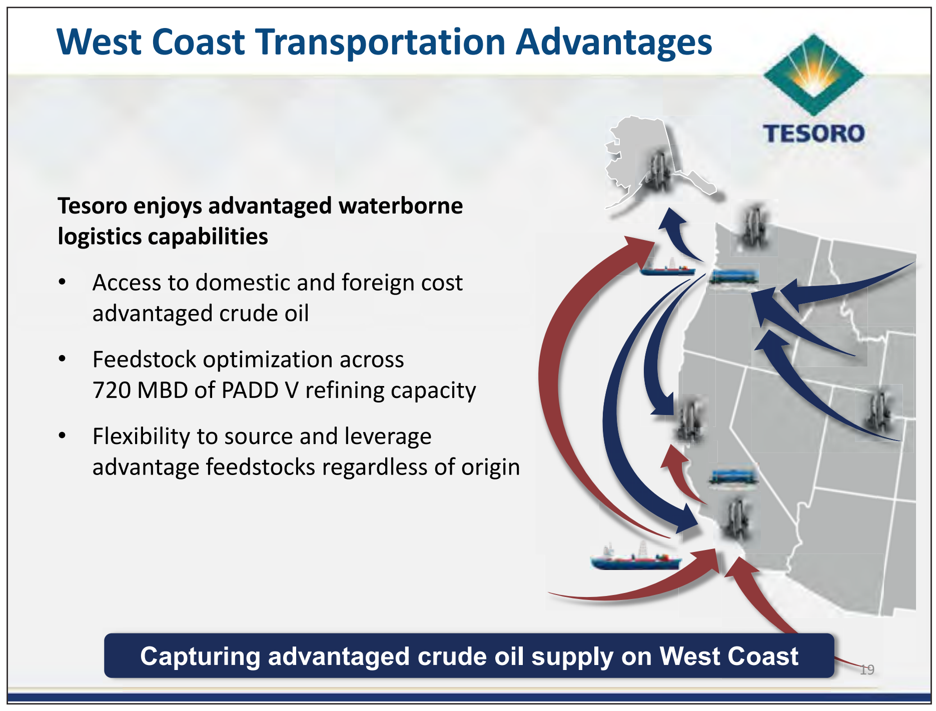
"As I look back over 2013, it was a year of important strategic accomplishments for the company," Tesoro Corp. President and Chief Executive Officer Gregory Goff said during a Feb. 6 conference call with industry analysts. "We have created a strong foundation by focusing on our strategic priority and the company is well positioned to create significant value."

For 2014, the Tesoro partners are planning to start construction on the Vancouver terminal following completion of the permitting process. Tesoro also plans to reverse a portion of the High Plains pipeline in North Dakota, complete the conversion at the Salt Lake refinery, and grow the Los Angeles refining business.

Williston Basin achievements

In the second quarter, Tesoro completed expansion of the diesel desulfurization unit at the Mandan Refinery. That expansion brought the throughput capacity of the refinery to 71,000 barrels per day. Goff said the DDU expansion was in response to a shortage of diesel fuel in the state due to high demand from drilling activity. "Our estimates are that it's short somewhere between 40,000 to 60,000 barrels a day of diesel fuel."

Tesoro announced plans in May to reverse a key section of its High Plains pipeline in order to move crude oil from northeast McKenzie County north to access rail and pipeline export hubs in Burke and Williams County. On Feb. 4, Tesoro Logistics launched an open season through 12 p.m. on March 14 to evaluate shipper interest in the pipeline.



Tesoro ensuring safety in crude-by-rail fleet

Amid the ongoing attention given to rail tank car safety, Tesoro Corp. is proactively replacing the small percentage of older cars in its fleet that don't meet the newest design standards.

In a Feb. 6 press release, Tesoro said it is committing that its entire rail tank car fleet will be compliant with the Casualty Prevention Circular or CPC1232, which specifies the American Association of Railroad's P-1577 design standard for DOT-111 tank cars.

The P-1577 standard applies to non-pressurized DOT-111 rail tank cars carrying what is known as Class 3 Packing Group, PG, I and II crude oil and denatured ethanol. While DOT-111 cars are not pressurized, the steel used in the P-1577 design, TC 128 Grade B, is the same used for pressurized tank cars. P-1577 cars also have additional safety features such as double hull bottoms, head shields and pressure relief valves.

In a Feb. 7 conference call with analysts, Gregory Goff, Tesoro Corp. president and chief executive officer, said 90 percent of Tesoro's fleet of tank cars currently meet "the highest standards that are out there today," and the company will replace the other 10 percent by mid-year. "So our cars will meet the requirements that are out there today for the safety standards."

But Goff said building to the safest tank car design standards is not enough, and Tesoro has its own emergency response standards in place in the event of derailment. Even though, as Goff said, it is not Tesoro's responsibility to respond to emergencies when crude is in transit, the company has developed the ability to respond within two hours to any incident involving the delivery of Bakken crude to Washington state, a response ability that have been in place for a year or more.

As Petroleum News Bakken reported on Feb. 2, Hess Corp. has also voluntarily adopted the higher tank car standard. All of the cars in the Hess fleet meet the P-1577 standard.

—MIKE ELLERD

In addition, Tesoro Logistics also announced on Feb. 4 a proposed expansion of its Bakken Area Storage Hub currently under construction near Ramberg Station in Williams County. The current, initial construction phase will provide 360,000 barrels of storage capacity, with additional plans to increase that capacity to 1 million barrels. However, between land that Tesoro Logistics currently owns and the rights it has to acquire additional land, the capacity of the Bakken Area Storage Hub eventually could more than double to at least 2.5 million barrels.

Other 2013 achievements

The largest of Tesoro's 2013 accomplishments was the acquisition of BP's integrated Southern California assets. That deal, which closed in June, included BP's Carson refinery, marine terminals, pipelines and 2 million barrels of crude and refined products storage, all of which are now part of Tesoro Logistics' Los Angeles refining complex.

In addition, Tesoro started running up to three unit trains per day in September from the Bakken to the Tesoro Golden Eagle refinery at Martinez in northern California. Those unit trains along with manifest tank cars in mixed-freight trains brought Tesoro's capacity to deliver Bakken crude to the Martinez refinery to 350,000 bpd. Tesoro also delivered up to 50,000 barrels of Bakken crude per day to its refinery in Anacortes, Wash.

Tesoro also shipped a barge load of Bakken crude from the West Coast to its refinery in Kenai, Alaska, in 2013 during turnaround at the Anacortes refinery in March, with positive economic results.

At the Salt Lake City refinery, Tesoro completed the first of two stages of a conversion project to increase that refinery's capacity to process "waxy" Uinta Basin crude oil. Tesoro expects the second stage to be completed by the second quarter, bringing the crude processing capacity to 22,000 bpd.

Vancouver terminal

In April, 2012, Tesoro announced its joint venture with Savage to build the rail offloading facility at Vancouver on the Columbia River along the Oregon border in southwest Washington state. That $110 million facility will have the capacity to accept up to 380,000 barrels of crude per day and transfer that oil to tankers for delivery to West Coast refineries, including Tesoro's Kenai refinery.

The project initially received approval by the Port of Vancouver in July, but under pressure from project opponents, the Port commission reopened a hearing on the terminal in October, although on reconsideration it again voted to approve the project.

A lawsuit was then filed by three environmental organizations claiming that approval of the project was a violation of Washington's Environmental Policy Act; however, a judge ruled the project could proceed.

More recently, as reported by Vancouver's The Columbian, the project has come under fire from an Oregon real estate developer claiming the terminal

see **TESORO'S YEAR** *page 6*

MERGERS & ACQUISITIONS

Bakken non-op sells 767 acres for $7.9M

An undisclosed buyer has shelled out $10,250 per acre to Bakken non-operator Bakken Resources for approximately 767 net mineral acres in north-central McKenzie County, N.D. In a Feb. 6 press release, Bakken Resources said the deal was valued at $7,871,240. Bakken Resources is retaining a 2 percent royalty interest in the assets.

In the Feb. 6 press release, the Helena, Mont.-based non-op said it acquired the assets in November 2010 for an aggregate amount of $1.535 million. At a sale price of $7.871 million, those 767 acres appreciated over 400 percent over three years.

"We are very pleased about this win-win transaction," Chief Executive Officer Val Holms said in the Feb. 6 press release. "Proceeds from this transaction will allow us to seriously explore several other opportunities we are currently evaluating."

—MIKE ELLERD

MOVING HYDROCARBONS

PHMSA expanding Operation Classification

As part of what it calls "Operation Classification," also known as the "Bakken Blitz," the U.S. Department of Transportation, DOT, has found that cargo tanks carrying Bakken crude oil to rail terminals were not properly labeled. DOT's Pipeline and Hazardous Materials Safety Administration, PHMSA, is levying $93,000 in fines against three Bakken operations for those violations.

The DOT requires labels identifying specific hazardous material classes when in transport to ensure that the container or pipeline is of the proper design for the material and to aid emergency responders in the event of release.

The DOT requires labels identifying specific hazardous material classes when in transport to ensure that the container or pipeline is of the proper design for the material and to aid emergency responders in the event of release. Crude oil is considered hazardous and must be properly labeled.

The three general hazardous materials classifications are Packing Group I, PG I, materials, which pose "great danger," PG II materials, which pose "medium danger" and PG III materials, which pose "minor danger." Criteria for the classifications include vapor pressure, flash point and boiling point. Light, sweet crude typically has flash points below 73 degrees Fahrenheit and boiling points below 95 degrees F, resulting in a PG I or PG II classification.

As part of Operation Classification, PHMSA began unannounced inspections of crude oil samples collected from various points throughout the Bakken region's crude transport chain, including gathering system tanks, tanker trucks, pipelines and storage tanks. Eighteen samples were collected from August to November last year and submitted for laboratory analysis to determine packing group classification.

In early February, the DOT announced that of those 18 samples, 11 were found to be in containers labeled with the incorrect packing group classification, i.e., samples were labeled as either PG II or PG III when laboratory analysis indicated samples were PG I or PG II materials.

PHMSA is now expanding Operation Classification and is adding new laboratory tests for the crude samples its inspectors collect, including vapor pressure, composition and/or concentration of entrained gases, corrosivity and hydrogen sulfide content.

—MIKE ELLERD

CORRECTION

Sections, not acres

In the Feb. 9 print edition of Petroleum News Bakken, the caption under the photograph on the upper left of page 1 indicated that the Siverston field in McKenzie County, N.D., encompasses more than 100 acres. That area was incorrect and off by a factor of 640 — the Siverston field encompasses more than 100 sections. The error did not appear in the PDF or online editions.

—MIKE ELLERD

continued from page 5

TESORO'S YEAR

threatens a 32-acre waterfront development two miles farther down the Columbia River

The project is now in the environmental review and permitting process, and Goff said Tesoro anticipates the terminal will be operational in late 2014 or early 2015. He said Tesoro "is very confident that continuing through the process that the State of Washington has to permit the facility, that we will be able to work our way through that and receive a permit for the facility."

Goff said Bakken crude oil prices favorably for West Coast refining markets. "If you look at Bakken relative to Brent, Bakken so far has been about $16 under Brent for the first quarter, which is a little bit weaker than what it was in the fourth quarter of last year," Goff said. "But other than that, Bakken prices are holding up and continue to be very attractive."

"Our focus … is to really bring Midcontinent crudes into the Port of Vancouver to be able to supply our entire West Coast system wherever we get the greatest value for those," Goff said in response to an analyst's question. ●

Contact Mike Ellerd at mellerd@bresnan.net

● COMPANY UPDATE

Plains reaching or exceeding its goals

Major hydrocarbon transporter stabilizes by targeting capital expansion as it moves forward amid potential market volatility

By MAXINE HERR
For Petroleum News Bakken

Houston-based Plains All American Pipeline ended 2013 on a strong note, reaching or exceeding its goals for the year. Plains offers transportation options to the oil industry, often servicing areas overlooked by midstream companies.

In the Bakken, Plains operates two pipelines and two rail loading terminals in northwest North Dakota and northeast Montana.

Plains Chairman and CEO Greg Armstrong says the Bakken, as well as the Permian and Eagle Ford, make up a significant amount of the projected volume of lease gathering growth, and the company expects to gain its own fair share of that growth as it moves forward.

Focus on expanding capital, not acquisitions

The company delivered earnings in 2013 that exceeded the midpoint of its fourth quarter guidance by $50 million and the midpoint of its start-of-the-year guidance by over $265 million.

"Somewhat similar to prior years, the pace and volume of activity throughout 2013 was very high," Armstrong said. "Unlike years past, these elevated activity levels were not driven by efforts to negotiate, close, finance, and integrate multiple and/or large complex acquisitions. Instead we invested significant efforts to execute our 2013 expansion capital program."

The company invested approximately $1.62 billion in organic growth projects in 2013, but initially projected a $1.2 billion price tag. Armstrong said as projects matured, the tally went up, and therefore the company is comfortable setting the 2014 budget for expansion capital expenditures at $1.7 billion. He added this flexibility is typical with Plains' capital program primarily composed of many smaller to medium sized projects spread across most of the liquid rich resource plays.

Of those dollars, the company expects to invest $185 million to expand rail loading and unloading capacity, which includes expansion of its existing Van Hook facilities in New Town, N.D., and a new loading facility in Saskatchewan, Canada. Plains will also construct a facility in Bakersfield, Calif. and expand facilities in Carr, Colo.

"The cost to build the rail loading facilities is not huge … so that's not going to be hugely fatal, but the other side of it is the unloading facilities which is where we're short right now and provides the flexibility to get to different markets," Armstrong said.

Strategies to avoid bumps in the road

Plains President Harry Pefanis said the company is also evaluating other rail loading opportunities in Alberta, Canada, and plans to invest approximately $180 million into its Fort Saskatchewan facility.

"Our capital program at Fort Saskatchewan includes a development of two high delivery 350,000 barrel propane caverns," Pefanis said. "We expect a small portion of these projects to be in service in the third quarter of 2014 with the balance of the investments coming into service throughout 2015 and into the second quarter of 2016."

Plains' management believes these activities position them for any potential disruptions in forecasted crude oil production. If oil prices fall or capital costs rise, the company sees these investments as a way to provide solutions despite any imbalances in the market.

GREG ARMSTRONG

"We're having discussions with customers currently about moving those things forward, because we have such a large footprint in the crude oil space and we know who needs the service to move it from the production areas, we know who needs to acquire it on the refinery areas, and we really don't need to go through massive open seasons to determine where the interest is," Armstrong said.

He expects the next two to three years to be "fairly eventful" for Plains, and said crude production growth should sustain an attractive level of utilization of existing midstream assets as well as drive demand for construction of additional infrastructure.

"We expect petroleum demand for the U.S. and Canada will remain relatively unchanged with increase in crude oil production being balanced by reducing the level of waterborne crude oil imports," Armstrong said. "As a result, a very important issue will be how much worldwide crude demand increases."

He added that the current outlook suggests the growth of worldwide demand will hit some 1.2 million to 1.3 million barrels of crude per day, which is roughly equivalent to projected crude oil and natural gas liquids production growth in the U.S. and Canada.

Better prepared for new rail regulations

Though new regulations for railcar standards are on the horizon, Plains' railcars currently meet the post-2011 standards, and Armstrong said any new testing requirements would not add to Plains' costs since the company already goes above and beyond with its tests.

He said the greater question is whether the regulations will grandfather in the current cars, or if double tanker cars will be required, and how quickly they would need to be phased in.

"I don't think the retrofit works with the existing cars that are already built to the wide scale, so you really can't add another layer on to it," Armstrong said. "And this is going to be hard to retrofit railcars in a shorter timeframe just because we have limited capacity at the facilities that can retrofit railcars."

Despite the possible delays, Plains is confident it will move 1.7 million barrels of crude by rail per day at its peak over the

see **PLAINS' GOALS** *page 8*

● GOVERNMENT

Legislators briefed on industry issues

Interim ND committee updated on new pipeline rules, illegal dumping, anti-flaring incentives, local propane use, and spill cleanup status

By MAXINE HERR
For Petroleum News Bakken

The North Dakota Industrial Commission approved new underground pipeline rules in December, but implementation is still a work in progress.

Department of Mineral Resources, DMR, Director Lynn Helms shared the new rules with the legislative Energy Development and Transmission Committee on Feb. 11, and legislators suggested a central point of contact so companies know to whom to report in the process.

"We're working on that, but it's far from centrally located," Helms said. "We have had numerous conversations with (other agencies) and we're trying to work that out. That's an area we really need to work on some policy to make sure we don't confuse people."

"I think we have something North Dakota should be proud of, that we aren't constricting the process in getting pipes in the ground, but that they recognize the inherent danger of not doing it right."
—Rep. Todd Porter, Energy Development and Transmission Committee

The new rules apply to all oil field-related underground pipelines, and start with self-certification, which means companies must follow construction standards, bury the lines with location-tracking wires and backfill trenches.

Rep. Todd Porter told Petroleum News Bakken that he likes the accountability the rules provide.

"We wanted to make sure they were being constructed properly, but we don't have the manpower to inspect all the gathering lines, so we put a lot of the onerous back on to the companies that own those lines so they know they are legally responsible," Porter said. "I think we have something North Dakota should be proud of, that we aren't constricting the process in getting pipes in the ground, but that they recognize the inherent danger of not doing it right."

State seeks contractors to assist with cleanup

The state is also cracking down on illegal dumping. Helms said 11 cases were reported since July 1, 2013, so his office plans to obtain a contractor who would oversee the cleanup process.

"We want to make an immediate trip to the site and then contact a contractor to make the site assessment and plan," Helms said.

DMR is also close to signing an agreement with the Sakakawea Area Spill Response, SASR, team to use its equipment for spill cleanup. SASR operates spill response trailers and boats, but since the state does not have staff trained to operate the equipment, another contractor would be hired to do so.

Proposing incentives

The committee also heard from the oil industry flaring task force and its plans to capture more natural gas. Task force chairman Eric Dille explained that drilling schedules often change, so an operator's long-term plans are not an accurate guide for midstream companies.

"When we drill one well, that may influence the next five wells," Dille said. "We may go a completely different way, so it's a misperception that we know where we're going because there are a lot of factors."

Instead, Dille proposed that the state offer incentives for midstream companies to overbuild pipelines in anticipation of potential capacity. Porter told Petroleum News Bakken the legislature has proven to be open-minded about incentives.

"We have tax incentives that date back to 2003," Porter said. "We took sales tax off the compression build outs. We put incentives on onsite innovations last session. But I think the long-term solution is still to get the plants and gathering lines to move to absolute refining."

MAXINE HERR

From left, Energy, Development and Transmission Committee member Rep. Mike Schatz, Legal Counsel Tim Dawson, Chairman Sen. Rich Wardner, and member Rep. Todd Porter.

A solution to propane woes?

Sen. John Andrist asked Dille to address the option of pulling propane from the natural gas stream to use locally. Citing high propane costs, the legislator wondered if the solution to the problem may be closer to home.

Though not part of the task force report, Dille did note that the potential for capturing propane exists.

"It is an exciting opportunity for entrepreneurs in North Dakota, and a great opportunity for using the gas," Dille said.

Natural gas is typically sold as a bulk liquid mixture and not separated until it reaches fractionation facilities.

"It'd be nice to see manufacturing companies move here that can use those products … so they are split here and can help with propane needs," said Porter. "Until now, there was not really a demand to do that kind of process."

Cleanup continues at large spill sites

Dave Glatt of the Department of Health updated the committee on cleanup efforts from the Sept. 29 Tesoro pipeline spill in Williams County, and said results show contamination as far down as 30 feet, and that cleanup could take two years.

"Groundwater is at 150 feet so there's a lot of cushion there, but we need more data to see how far it went," Glatt told the committee. "We have a backhoe that can go another 20 feet. At the end of the day, I think we'll get a vast majority of the contamination."

The spill is contained, and Tesoro will conduct a thermal treatment to reclaim the soil.

At the Casselton train derailment site, crews excavated 9,000 yards of contaminated soil since the incident on Dec. 30. Reclamation will be completed this summer. ●

Contact Maxine Herr at maxine606@msn.com

PEOPLE TALK

Magnum Hunter promotes two managers

Magnum Hunter Resources Corp. Jan. 21 said it has promoted Chris Benton to vice president of finance and capital markets and Cham King to assistant vice president of investor relations. Benton previously served the company as assistant vice president of finance and capital markets and managed the investor relations function and capital market activities. He will continue to manage existing institutional relationships with an increased focus on corporate finance, corporate modeling, budgeting, and capital markets activities. He joined Magnum Hunter in January 2013 after more than six years of prior banking and corporate finance experience in the energy industry with extensive capital market experience in the upstream and midstream sectors. He previously worked at RBC Capital Markets as a vice president in the energy corporate banking group and before that, at Bank of Scotland.

Benton holds a bachelor's degree in economics and Spanish from the University of Texas at Austin.

King, who joined Magnum Hunter in July 2012, has worked as a financial analyst in the finance department. Prior to joining Magnum Hunter, he completed an internship with the company in the finance department during a period covering two summers. King has earned a bachelor's degree in finance and management at Baylor University. King has become the new primary contact for investor relations matters at the company.

Magnum Hunter is a Bakken non-operator but is the parent company of Bakken operator Bakken Hunter.

—ROSE RAGSDALE

MISCELLANEOUS

Al Golden scholarship apps being accepted

Applications for the 2014 Al Golden post-secondary scholarships are now being accepted by the North Dakota Petroleum Council. The council, which sponsors the program, will accept applications through April 1.

This year the Petroleum Council is awarding nine scholarships of $2,000 each to North Dakota students pursuing post-secondary degrees in the oil and gas industry-related fields of geology, engineering, processing plant technology, science, technical skills or any other discipline leading to careers in the industry.

"As North Dakota continues to see significant growth in the oil and gas industry, we will need more and more qualified students to pursue a great, high-paying career right here in North Dakota," said scholarship committee member Kate Black of Inland Oil and Gas in a Feb. 11 press release. "This is a win-win for students and for the industry, especially as baby-boomers near retirement within the next five to ten years, and the opportunities for career advancement grow. The time for young people in North Dakota is now," Black said.

The number of scholarships and the amount of money available has increased considerably in recent years. The $18,000 being awarded in 2014 is more than all of the money awarded in the previous six years combined and more than three times the amount awarded in 2013 when five $1,000 scholarships were awarded. In the past, scholarships were awarded in a single installment at the beginning of the academic year, but this year's awards will be issued in two installments of $1,000 per semester.

Funds for the scholarships come from industry companies as well as individuals. The annual Williston Basin Petroleum Conference, which is scheduled for May 20-22 in Bismarck, also contributes to the fund.

The late Al Golden was a pioneer in North Dakota's oil and gas industry and was the first person inducted into the Petroleum Council's Hall of Fame in 2000. Golden died in 2012 at the age of 84. According to the Petroleum Council, the scholarship program honoring Golden was established by the council "to encourage and support students interested in careers related to North Dakota's oil and gas industry."

More information on the scholarships is available on the Petroleum Council's website at ndoil.com/resources/scholarship.

—MIKE ELLERD

continued from page 7

PLAINS' GOALS

next four years.

"Because all of our current cars qualify, we should be as well, if not better positioned, than most anybody else in the crude oil side of that equation," Armstrong said. "Because of the scale and scope that we have and the fact we already had cars on pre-order that gives us kind of the early preference, if you will, on priority and any retrofit that would happen."

But even if regulations make it uneconomic to move oil by rail, Plains is prepared to offer an alternative.

"Remember, we've got 18,000 miles of pipeline that we're more than happy to move and expand on," Armstrong said. "We just want to get it right, and we want to make sure we come up with the safest way." ●

Contact Maxine Herr at maxine606@msn.com

COMPANY UPDATE

Bakken to get 40% of WPX '14 capex

WPX Energy Inc. will spend 40 percent of its $1.4 billion company-wide 2014 planned capital spending to develop its Bakken properties in North Dakota, the company said in Feb. 10 and Feb 11 releases.

In 2014, of the $1.4 billion WPX plans to spend in the United States, an estimated $580 million to $600 million of spending will occur in North Dakota.

Through its planned investments, WPX hopes to grow its oil production in the state by as much as 35 percent in 2014.

The company said it developed about 50 new oil wells last year on the Fort Berthold Indian Reservation where it holds approximately 80,000 net acres. This year the company is planning 62 new (gross) oil wells in the Williston Basin.

WPX said it expects to drill 376 gross operated wells across all of its plays in 2014, by deploying an average of 15 to 16 rigs.

In 2014 the company will deploy two new rigs in the Piceance for a total of nine rigs, one new rig in the Williston for a total of five and one new rig in the San Juan Gallup for a total of two.

WPX said its company-wide 2014 plan represents a 20 percent capital increase over 2013, driven by larger investments in domestic oil drilling.

"Increased oil volumes, efficient development of our resource base and enhanced balance sheet flexibility will help drive increased cash flows and better overall results," Jim Bender, WPX president and CEO said. "We have increased our hedge positions as commodity prices improved and continue to evaluate all aspects of our operations to drive cost reductions."

Early in 2013, WPX completed its first "triple zipper frack," completing three wells at once.

The company said its multiple zipper frack results were positive, and that it intended to use dual and triple-zipper fracks going forward.

WPX also uses ceramic proppant in the Bakken rather than just sand and said costs for ceramic proppants are higher by design and judged well worth the cost.

"We're currently using about a two-thirds to one-third ratio of ceramic to sand," the company's operations department said. "Although that adds about $1 million to our costs, ceramic completions are more predictable than sand, leading to better results."

More than half of WPX's planned 2014 investments are in domestic oil properties, it said.

The company said its spending is providing benefits to the local economy in North Dakota.

WPX said it has an $8.5 million payroll in North Dakota via its offices in New Town and Minot.

The company said it paid approximately $109 million in royalties to the Three Affiliated Tribes for oil production on the Fort Berthold Indian Reservation — up from $86 million in 2012.

WPX oil production also generated $47.5 million in tax revenue for the state of North Dakota in 2013, the company said, up from $29 million in 2012.

—STEVE SUTHERLIN

continued from page 1

PERMITTING MEMO

ment in hydraulic fracturing.

In September a bipartisan group of five U.S. senators said the EPA was overstepping its authority by imposing new conditions on programs whose authority has been expressly delegated to states under the Safe Drinking Water Act.

The senators, John Hoeven, R-N.D., James Inhofe, R-Okla., Mary Landrieu, D-La., Joe Manchin, D-W.Va., and Lisa Murkowski, R-Alaska, said in letters that the guidance could expose states to citizen lawsuits, and further expressed concern over the broad definition of diesel fuel in the draft guidance.

Explanations

The EPA said its guidance explains the agency's interpretation of the term "diesel fuels" for permitting purposes, and that the guidance also describes existing UIC Class II program requirements for permitting underground injection of diesel fuels in hydraulic fracturing.

The EPA said the guidelines also "provide recommendations for the EPA's permit writers to consider in implementing the agency's requirements to ensure protection of underground sources of drinking water."

"A key component of our nation's energy future is the safe, responsible development of oil and gas resources. If produced responsibly, natural gas has the potential to improve air quality, stabilize energy prices, and provide greater certainty about future energy reserves." the agency said. "The EPA is committed to working with co-regulators and other stakeholders to ensure that shale gas development occurs safely and responsibly and to encourage use of best practices."

The EPA said its technical recommendations in the guidance are for EPA regional offices to consider when permitting diesel fuels hydraulic fracturing wells, and that EPA permit writers have "the discretion to consider alternative approaches that are consistent with statutory and regulatory requirements."

The EPA said states and tribes responsible for issuing UIC and oil and gas well permits and/or updating regulations will "find the recommendations useful in improving the protection of underground sources of drinking water and public health wherever hydraulic fracturing is practiced."

The agency's guidance also put the industry on notice that the EPA may look into fracturing fluids and additives other than diesel.

"The EPA recognizes that in addition to diesel fuels, other substances included in some hydraulic fracturing fluids contain of chemicals of concern," the agency said. "The EPA will work with states and industry to explore approaches to promote voluntary use of safer alternatives in hydraulic fracturing fluids."

The EPA said its technical recommendations are consistent with best practices listed in state regulations, model guidelines and voluntary standards developed by industry and stakeholders.

—STEVE SUTHERLIN

Contact Steve Sutherlin at stevepna@hotmail.com

Need to stretch your dollar?

Advertise 12x in Petroleum News Bakken, competitive rates with lots of complimentary extras, including:

Benefits of becoming a contracted advertiser

To become a Petroleum News Bakken 'contracted advertiser' and gain the marketing benefits, you simply have to run 12 ads of any size over a 12-month period. In return, you will receive this bonus exposure:

Presence in every issue of Petroleum News Bakken

- Your organization makes the List
- Your people featured in Spotlights
- Your news appears in Oil Patch Bits

OIL PATCH BITS

PEOPLE SPOTLIGHT

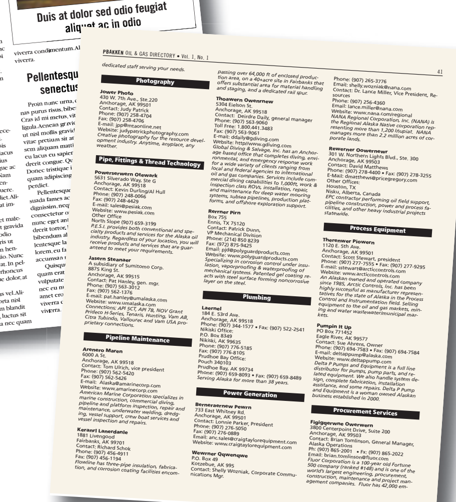
COMPANY LIST

Exposure in our semi-annual Bakken Oil & Gas Directory

- Your news appears
- Standalone photos promote your business
- Your company included in directory listings

STANDALONE PHOTOS

NEWS ITEMS



LISTINGS SECTION

Contact Bonnie Yonker, Phone 425-483-9705 | Raylene Combs, Phone 509-290-5903 | Renee Garbutt, Phone 907-522-9469 | Susan Crane, Phone 907-770-5592

BAKKEN Stats

Montana well permits and completions

January 31—February 6, 2014

Abbreviations & parameters

With a few exceptions, the Montana weekly oil activity report includes horizontal well activity in the Bakken petroleum system in the eastern/northeastern part of the state within the Williston Basin. It also includes the Heath play and what is referred to as the South Alberta Bakken fairway in northwest-ern/west-central Montana, which is at least 175 miles long (north-south) and 50 miles wide (east-west), extending from southern Alberta, where the formation is generally referred to as the Exshaw, southwards through Montana's Glacier, Toole, Pondera, Teton and Lewis & Clark counties. The Southern Alberta Bakken, under evaluation by several oil companies, is not part of the Williston Basin.

Following are the abbreviations used in the report and what they mean.

BHL: bottomhole location | **BOPD:** barrels of oil per day | **BWPD:** barrels of water per day
IP: initial production | **MCFPD:** thousand cubic feet per day | **PBHL:** probable bottomhole location
PD: proposed depth | **SHL:** surface hole location | **TD:** total depth

And public land survey system abbreviations:
FNL = from north line | **FEL** = from east line | **FSL** = from south line | **FWL** = from west line

COMPILED BY DARRYL L. FLOWERS
For Petroleum News Bakken

Completions

Completion reports for two Bakken formation wells in Richland County were filed during the reporting period.

Continental Resources Inc. reported the completion of the Prevost-Mondalin HSU, which has an SHL at SW SW 15-23N-56E (230 FSL/397 FWL) and a BHL of 20,300 feet at NE NE 9-23N-56E (240 FNL/36 FEL). The well recorded an IP of 426 BOPD, 115 MCFPD of natural gas and 72 BWPD.

Whiting Oil and Gas Corp. filed a completion report for the Sundheim 21-3-1H, which has an SHL at N2 3-24N-59E (200 FNL/1980 FWL) and two laterals with BHLs of 13,704 feet and 17,005 feet at SW SW 10-24N-59E (272 FSL/719 FWL).

In Roosevelt County, a completion report was filed by Oasis Petroleum North America LLC for the Crocket 2958 42-21 1H. The Bakken formation well has an SHL at SE SW 21-29N-58E (180 FSL/2365 FWL) and a BHL of 20,694 feet at SW SE 33-29N-58E (301 FSL/2707 FWL). The Crocket reported an IP of 554 BOPD, 265 MCFPD of natural gas and 5,401 BWPD. ●

Editor's note: Darryl L. Flowers, a contributor to Petroleum News Bakken, is the publisher of the Fairfield Sun Times in Fairfield, Mont., www.fairfieldsun-times.com, and can be reached at publisher@fairfieldsuntimes.com. The information is derived from the online records of the Montana Board of Oil & Gas Conservation Commission.

BAKKEN STATS COMMENTARY

Pad wells dominate week's Top 10 IP list

Of the 10 North Dakota wells with the highest 24-hour initial production, IP, rates for the week (page 12), four were on one pad in Williams County and three were on another pad in McKenzie County.

The top three IP wells for the week belong to Burlington Resources and all are Three Forks wells on the company's Blue Ridge pad in the Keene field in north-east McKenzie County with IPs of 2,824, 2,887 and 2,970 barrels. Four of Kodiak's P Wood Bakken wells in the Traux field in south-central Williams County filled the 7 through 10 spots on the list with IPs ranging from 1,770 to 2,044 barrels.

In the 4, 5 and 6 spots were Statoil, Continental Resources and Marathon Oil wells in north-central and far northeast McKenzie County and northern Dunn County.

For the week (Feb. 4-10), IPs were reported for 17 non-confidential wells, and another 35 wells were released from confidential status, although IPs were not available for all of the wells coming off confidential status. IPs for the non-confidential wells ranged from 103 to 2,044 barrels. The IPs for the wells released from tight-hole status ranged from 163 barrels to the week's high IP of 2,970 barrels.

Kodiak has the most non-confidential wells reporting IPs for the week with its four Traux field wells, and at six wells, Burlington Resources had the most wells coming off confidential status reporting IPs.

New ND well permits

North Dakota issued 40 new well permits during the week of Feb. 4-10 for wells in Bottineau (1), Bowman (1), Burke (1), Divide (2), Dunn (7), McKenzie (11), Mountrail (7), Renville (1), Stark (1) and Williams (8) counties (page 13).

Four permits were renewed in McKenzie County. One permit was cancelled in Mountrail County and another in Williams County.

Montana Completions

Three completion reports were filed for wells in eastern Montana between Jan. 31 and Feb. 6. Continental completed a Richland County well with an IP of 426 barrels, and Whiting completed a well in Richland County, although an IP was not available. In Roosevelt County, Oasis completed a well with an IP of 554 barrels.

—MIKE ELLERD

Looking for a rig report?

North Dakota
The best list for North Dakota is updated daily by the North Dakota Oil and Gas Division at **www.dmr.nd.gov/oilgas/riglist.asp**

Saskatchewan
Weekly drilling activity report from the government of Saskatchewan:
www.economy.gov.sk.ca/Daily-Well-Bulletin-Weekly-Drilling-Reports

Manitoba
Weekly drilling activity report from the government of Manitoba:
www.manitoba.ca/iem/petroleum/wwar/index.html


PHOTO COURTESY CONTINENTAL RESOURCES

Bakken producers' stock prices

Closing prices as of Feb.12 along with those from previous Wednesday

Company	Exchange	Symbol	Closing price	Previous Wed.
Abraxas Petroleum Corporation	NASDAQ	AXAS	$3.41	$3.11
American Eagle Energy Corporation	OTC	AMZG	$1.82	$1.82
Arsenal Energy USA, Inc.	TSE	AEI	$5.07	$4.90
Baytex Energy USA Ltd	NYSE	BTE	$37.17	$37.16
Burlington Resources Co., LP (ConocoPhillips)	NYSE	COP	$65.22	$63.46
Continental Resources, Inc.	NYSE	CLR	$110.83	$106.09
Crescent Point Energy US Corporation	TSE	CPG	$38.66	$37.66
Denbury Onshore, LLC	NYSE	DNR	$16.34	$15.70
Emerald Oil, Inc.	NYSEMKT	EOX	$7.09	$7.12
Enerplus Resources USA Corporation	NYSE	ERF	$19.55	$19.01
EOG Resources, Inc.	NYSE	EOG	$174.99	$167.49
Fidelity Exploration & Production (MDU)	NYSE	MDU	$33.13	$31.88
Halcon Resources	NYSE	HK	$3.70	$3.39
Hess Corporation	NYSE	HES	$78.03	$74.66
Kodiak Oil and Gas (USA), Inc.	NYSE	KOG	$11.62	$10.26
Legacy Reserves Operating LP	NASDAQ	LGCY	$27.02	$26.81
Marathon Oil Company	NYSE	MRO	$33.27	$32.10
Mountain Divide, LLC (Mountainview Energy)	CVE	MVW.V	$0.48	$0.47
Newfield Production Company	NYSE	NFX	$24.25	$23.69
Northern Oil and Gas	NYSE	NOG	$15.15	$14.43
Oasis Petroleum North America	NYSE	OAS	$42.20	$39.51
Oxy USA, Inc. (Occidental Petroleum)	NYSE	OXY	$92.19	$87.29
PetroShale Inc.	CVE	PSH	$1.35	$1.37
QEP Energy Company	NYSE	QEP	$31.61	$29.87
Resolute Natural Resources Company, LLC	NYSE	REN	$8.61	$7.67
Samson Resources Company (KKR & Co)	NYSE	KKR	$24.36	$23.21
SM Energy Company	NYSE	SM	$85.59	$81.95
Statoil Oil and Gas LP	NYSE	STO	$25.99	$23.62
Triangle USA Petroleum Corporation	NYSE	TPLM	$8.01	$7.27
Whiting Oil and Gas Corporation	NYSE	WLL	$59.04	$56.03
WPX Energy Williston, LLC	NYSE	WPX	$17.11	$19.03
XTO Energy, Inc. (ExxonMobil)	NYSE	XOM	$91.01	$89.58

IPs for ND Bakken wells

February 4—10, 2014

This chart contains initial production rates, or IPs, for active wells that were filed as completed with the state of North Dakota from Feb. 4-10, 2014 in the Bakken petroleum system, which includes formations such as the Bakken and Three Forks. The completed wells that did not have an available IP rate (N/A) likely haven't been tested or were awarded confidential (tight-hole) status by the North Dakota Industrial Commission's Department of Minerals. This chart also contains a section with active wells that were released from confidential status during the same period, Feb 4-10. Again, some IP rates were not available (N/A). The information was assembled by Petroleum News Bakken from NDIC daily activity reports and other sources. The name of the well operator is as it appears in state records, with the loss of an occasional Inc., LLC or Corporation because of space limitations. Some of the companies, or their Bakken petroleum system assets, have been acquired by others. In some of those cases, the current owner's name is in parenthesis behind the owner of record, such as ExxonMobil in parenthesis behind XTO Energy. If the chart is missing current owner's names, please contact Ashley Lindly at alindly@petroleumnewsbakken.com.

LEGEND

The well operator's name is on the upper line, followed by individual wells with data in this order: NDIC file number; well name; field; location; spacing; county; geologic target; wellbore type; total depth; IP test date; IP oil flow rate. (IP stands for initial production; in this chart it's the first 24 hours of oil production.)

IPs for completed North Dakota wells

Bakken Hunter
25901; Tundra 3130 3H; Ambrose; SESW 31-164N-98W; 2SEC; Divide; Bakken; horizontal; 13,566; 10/15/2013; 103 bbl

Continental Resources
25905; Jefferson 3-17H1; Crazy Man Creek; NWNE 17-153N-99W; 2SEC; Williams; Bakken; horizontal; 21,063; 1/26/2014; 1,073 bbl
25768; Pierre 4-21H1; Dollar Joe; SWNE 28-155N-97W; 4SEC; Williams; Bakken; horizontal; 22,947; 12/24/2013; 479 bbl

Hess
25420; CA-Halverson 154-95-0409H-6; Hofflund; NENW 4-154N-95W; 2SEC; Williams; Bakken; horizontal; 18,840; 1/9/2014; 846 bbl
25069; EN-Hermanson A 155-93-3601H-3; Robinson Lake; NWNW 36-155N-93W; 2SEC; Mountrail; Bakken; horizontal; 18,905; 1/15/2014; 467 bbl
25034; LK-Thomas-145-97- 3625H-4; Little Knife; SWSW 36-145N-97W; 2SEC; Dunn; Bakken; horizontal; 20,714; 1/12/2014; 651 bbl

Kodiak Oil and Gas
25177; P Wood 154-98-4-26-35-13H; Truax; NWNW 26-154N-98W; 2SEC; Williams; Bakken; horizontal; 20,235; 12/31/2013; 2,044 bbl
25178; P Wood 154-98-4-26-35-13H3; Truax; NWNW 26-154N-98W; 2SEC; Williams; Bakken; horizontal; 20,385; 12/31/2013; 1,880 bbl
25179; P Wood 154-98-4-26-35-14H; Truax; NWNW 26-154N-98W; 2SEC; Williams; Bakken; horizontal; 20,300; 12/31/2013; 1,894 bbl
26488; P Wood 154-98-4-26-35-14H3; Truax; NWNW 26-154N-98W; 2SEC; Williams; Bakken; horizontal; 20,146; 12/31/2013; 1,770 bbl

Statoil Oil and Gas
24633; Blanche 27-22 #2TFH; Painted Woods; NENE 34-154N-102W; 2SEC; Williams; Bakken; horizontal; 20,123; 1/22/2014; 1,171 bbl
24547; Greenstein 30-31 4H; Camp; LOT1 30-152N-101W; 2SEC; McKenzie; Bakken; horizontal; 21,050; 1/16/2014; 2,607 bbl

Triangle USA Petroleum
23813; Steen 149-101-13-24-2H; Antelope Creek; NWNW 13-149N-101W; 2SEC; McKenzie; Bakken; horizontal; 21,039; 1/30/2014; 510 bbl

Whiting Oil and Gas
26051; Bartleson 34-30TFH; Sanish; SWSE 30-153N-92W; 2SEC; Mountrail; Bakken; horizontal; 19,024; 1/27/2014; 1,390 bbl
25931; Oja 13-27-2XH; Sanish; NWSW 27-154N-91W; ICO; Mountrail; Bakken; horizontal; 20,325; N/A; N/A
25797; Uran 43-17-2H; Sanish; NESE 17-153N-92W; 2SEC; Mountrail; Bakken; horizontal; 19,944; 1/19/2014; 1,068 bbl

XTO Energy (ExxonMobil)
25474; Kerbaugh 31X-4C; Beaver Lodge; LOT2 4-155N-96W; 2SEC; Williams; Bakken; horizontal; 19,728; 12/22/2013; 1,658 bbl

Top 10 Bakken wells by IP rate

Burlington Resources Oil and Gas (ConocoPhillips)
25888; Blue Ridge 24-31TFH; Keene; McKenzie; 2,970 bbl
25890; Blue Ridge 44-31TFH; Keene; McKenzie; 2,887 bbl
25887; Blue Ridge 24-31MBH; Keene; McKenzie; 2,834 bbl

Statoil Oil and Gas
24547; Greenstein 30-31 4H; Camp; McKenzie; 2,607 bbl

Continental Resources
24339; Dolezal 3-5H; McGregory Buttes; Dunn; 2,302 bbl

Marathon Oil
26086; Chuck Quale USA 21-29H; Reunion Bay; McKenzie; 2,169 bbl

Kodiak Oil and Gas
25177; P Wood 154-98-4-26-35-13H; Truax; Williams; 2,044 bbl
25179; P Wood 154-98-4-26-35-14H; Truax; Williams; 1,894 bbl
25178; P Wood 154-98-4-26-35-13H3; Truax; Williams; 1,880 bbl
26488; P Wood 154-98-4-26-35-14H3; Truax; Williams; 1,770 bbl

Note: This chart contains initial production rates, or IPs, from the adjacent IP chart for active wells that were filed as completed with the state of North Dakota from Feb 4-10, 2014 in the Bakken petroleum system, as well as active wells that were released from tight- hole (confidential) status during the same period. The well operator's name is on the upper line, followed by individual wells; the NDIC file number; well name; field; county; IP oil flow rate in barrels of oil.

Burlington Resources Oil and Gas (ConocoPhillips)
25961; Archer 44-25MBH; Charlson; SESE 25-153N-95W; N/A; McKenzie; Bakken; horizontal; N/A; N/A; N/A
25887; Blue Ridge 24-31MBH; Keene; SESW 31-153N-95W; 2SEC; McKenzie; Bakken/Three Forks; horizontal; 20,065; 1/16/2014; 2,834 bbl
25888; Blue Ridge 24-31TFH; Keene; SESW 31-153N-95W; 2SEC; McKenzie; Bakken/Three Forks; horizontal; 18,642; 1/19/2014; 2,970 bbl
25890; Blue Ridge 44-31TFH; Keene; SESE 31-153N-95W; 2SEC; McKenzie; Bakken/Three Forks; horizontal; 20,133; 1/20/2014; 2,887 bbl
25910; CCU Columbian 33-1MBH; Corral Creek; NWSE 1-146N-94W; N/A; Dunn; Bakken; horizontal; N/A; N/A; N/A
25909; CCU Columbian 33-1TFH; Corral Creek; NWSE 1-146N-94W; N/A; Dunn; Bakken; horizontal; N/A; N/A; N/A

Continental Resources
24835; Bice Federal 3-32H; Chimney Butte; SESW 32-146N-95W; 4SEC; Dunn; Bakken; horizontal; 20,753; 12/22/2013; 1,473 bbl
24339; Dolezal 3-5H; McGregory Buttes; SESW 32-146N-95W; 2SEC; Dunn; Bakken; horizontal; 20,593; 8/13/2013; 2,302 bbl
25627; Kidd 1-19H1; Bluffton; SESW 19-162N-97W; 2SEC; Divide; Bakken; horizontal; 18,175; 10/15/2013; 274 bbl
24320; Raymo 5-31H; Dolphin; SESW 31-161N-95W; N/A; Divide; Bakken; horizontal; N/A; N/A; N/A

EOG Resources
25374; Austin 39-3204H; Parshall; NWNW 32-154N-90W; ICO; Mountrail; Bakken; horizontal; 22,349; 9/23/2013; 1,414 bbl
23061; Bear Den 23-2019H; Spotted Horn; SESE 20-150N-94W; 4SEC; McKenzie; Bakken; horizontal; 20,382; 8/27/2013; 1,206 bbl

Fidelity Exploration and Production (MDU)
25376; Kubas 12-1H; New Hradec; SESE 12-140N-98W; 2SEC; Stark; Bakken; horizontal; 21,305; 8/12/2013; 523 bbl

Hess
23454; BB-Budahn 150-95-0506H-3; Blue Buttes; SENE 5-150N-95W; N/A; McKenzie; Bakken; horizontal; N/A; N/A; N/A
24407; BB-Budahn 150-95-0506H-5; Blue Buttes; SENE 5-150N-95W; N/A; McKenzie; Bakken; horizontal; N/A; N/A; N/A

HRC Operating (Halcon Resources)
24536; Poeckes 1-15-22H; Climax; SWSE 10-158N-102W; 2SEC; Williams; Bakken; horizontal; 20,073; 9/28/2013; 711 bbl
24254; Fort Berthold 152-93-7D-6-3H; Four Bears; NWNE 18-152N-93W; N/A; McKenzie; Bakken; horizontal; N/A; N/A; N/A

Marathon Oil
25106; Darcy Dirkach 34-12H; Murphy Creek; SWSE 12-144N-95W; 2SEC; Dunn; Bakken; horizontal; 20,420; 11/24/2013; 1,446 bbl
26086; Chuck Quale USA 21-29H; Reunion Bay; SWSW 20-152N-93W; 4SEC; McKenzie; Bakken; horizontal; 21,615; 12/14/2013; 2,169 bbl

Murex Petroleum
25933; Lexie Kay 31-30H; Wildcat; SWSE 31-162N-101W; 2SEC; Divide; Bakken; horizontal; 18,480; 9/29/2013; 163 bbl

Oasis Petroleum
26000; Kelter 7-1H2; Eightmile; NWSE 7-152N-102W; N/A; McKenzie; Bakken; horizontal; N/A; N/A; N/A

Oxy USA (Occidental Petroleum)
22893; Leiss 2-23-26H-143-96; Fayette; SWSW 14-143N-96W; 2SEC; Dunn; Bakken; horizontal; 20,550; 8/7/2013; 813 bbl
22894; Leiss 3-23-26H-143-96; Fayette; SWSW 14-143N-96W; 2SEC; Dunn; Bakken; horizontal; 21,235; 8/9/2013; 589 bbl

Petro-Hunt
24772; Tande 159-94-29D-20-4H; North Tioga; SESE 29-159N-94W; 2SEC; Burke; Bakken; horizontal; 19,088; 12/23/2013
24053; Wisness 152-96-33C-28-4H; Clear Creek; SWSW 33-152N-96W; 2SEC; McKenzie; Bakken; horizontal; 20,529; 1/4/2014; 892 bbl

Whiting Oil and Gas
24863; Gregory Wright Federal 41-5H; Bully; LOT1 5-148N-99W; 2SEC; McKenzie; Bakken; horizontal; 20,955; 8/5/2013; 1,305 bbl
24862; Gregory Wright Federal 41-5-2H; Bully; LOT1 5-148N-99W; 2SEC; McKenzie; Bakken; horizontal; 20,846; 8/6/2013; 1,374 bbl

XTO Energy (ExxonMobil)
25838; Duke 34X-31A; Siverston; SWSE 31-150N-98W; N/A; McKenzie; Bakken; horizontal; N/A; N/A; N/A

IPs for ND wells released from confidential status

Baytex Energy
25451; Twin Butte 17-20-162-99H 1BP; Ambrose; NWNE 17-162N-99W; 2SEC; Divide; Bakken; horizontal; 18,404; 8/21/2013; 381 bbl

—Compiled by Ashley Lindly

Contact Ashley Lindly at alindly@petroleumnewsbakken.com

North Dakota oil permit activity

February 4—10, 2014

LEGEND

The county name is on the upper line, the type of permit issued is on the second line, and company names are next, followed by individual wells with data in this order: well name; location; footages; field; geological target; well bore type; elevation; NDIC file number; API number; date permit shows on NDIC website.

Abbreviations

Following are the abbreviations used in the report and what they mean:
FNL = From North Line | FEL = From East Line
FSL = From South Line | FWL = From West Line

Billings Co.

Permits renewed
Continental Resources
J Lazy H 1-26H; NWNE 26-144N-99W; 320'FNL and 2,255'FEL; Wildcat; N/A; on confidential status; 2,634' ground; 22370; 33-007-01725; 2/7/2014

Bottineau Co.

Permits issued
Enduro Operating
NSCU I-706H; SWSW 20-161N-79W; 1,176'FSL and 1,222'FWL; Newburg; N/A**; on confidential status; 1,482' ground; 27625; 33-009-02361; 2/4/2014

Bowman Co.

Permits issued
Denbury Onshore
27631; CHSU 41-35SHR 15; NENE 35-131N-105W; 730'FNL and 360'FEL; Cedar Hills; N/A**; on confidential status; 3,059' ground; 27631; 33-011-01521; 2/5/2014

Burke Co.

Permits renewed
Petro Harvester
Swenson 5H; SESW 23-163N-93W; 150'FSL and 2,420'FWL; Columbus; N/A**; on confidential status; 1,924' ground; 24959; 33-013-01703; 2/7/2014

Divide Co.

Permits issued
Baytex Energy
Bernie A-20-17-162-98H 2XC; NWNE 29-162N-98W; 310'FNL and 2,247'FEL; Blooming Prairie; Bakken; horizontal; 2,149' ground; 27620; 33-023-01162; 2/4/2014
Bernie B-20-17-162-98H 3XB; NWNE 29-162N-98W; 310'FNL and 2,201'FEL; Blooming Prairie; Bakken; horizontal; 2,150' ground; 27621; 33-023-01163; 2/4/2014

Dunn Co.

Permits issued
Hess
LK-Alwin-LK-147-97-1324H-1; SWSW 12-147N-97W; 470'FNL and 688'FWL; Little Knife; N/A*; on confidential status; 2,561' ground; 27637; 33-025-02463; 2/6/2014

HRC Operating (Halcon Resources)
Fort Berthold 148-94-26A-35-14H; SESE 23-148N-95W; 396'FSL and 1,109'FEL; Eagle Nest; Bakken; horizontal; 2,284' ground; 27646; 33-025-02464; 2/7/2014

Oxy USA (Occidental Petroleum)
Kary 3-24-13H-144-97; SESW 24-144N-97W; 350'FSL and 2,235'FWL; Cabernet; Bakken; horizontal; 2,361' ground; 27632; 33-025-02461; 2/5/2014
Kary 4-24-13H-144-97; SESW 24-144N-97W; 350'FSL and 2,275'FWL; Cabernet; Bakken; horizontal; 2,362' ground; 27633; 33-025-02462; 2/5/2014

Petro-Hunt
Klatt 145-97-19C-18-3H; SESW 19-145N-97W; 250'FSL and 1,620'FWL; Little Knife; N/A*; on confidential status; 2,653' ground; 27650; 33-025-02465; 2/10/2014
Klatt 145-97-19C-18-4H; SESW 19-145N-97W; 250'FSL and 1,520'FWL; Little Knife; N/A*; on confidential status; 2,655' ground; 27651; 33-025-02466; 2/10/2014
Klatt 145-97-19C-18-5H; SESW 19-145N-97W; 250'FSL and 1,420'FWL; Little Knife; N/A*; on confidential status; 2,655' ground; 27652; 33-025-02467; 2/10/2014

McKenzie Co.

Permits issued
Emerald Oil
Billy Ray Valentine 3-8-5H; SESW 8-148N-102W;

see **ND PERMIT** page 13

continued from page 12

ND PERMIT

325'FSL and 1,550'FWL; Boxcar Butte; Bakken; horizontal; 2,477' ground; 27640; 33-053-05675; 2/6/2014

QEP Energy
Johnson 3-9-4BH; NWNW 16-149N-95W; 777'FSL and 779'FWL; Grail; Bakken; horizontal; 2,395' ground; 27647; 33-053-05682; 2/10/2014
Moberg 2-17-16TH; NWSW 17-149N-95W; 1,335'FSL and 246'FWL; Grail; Bakken; horizontal; 2,399' ground; 27649; 33-053-05678; 2/7/2014
Moberg 3-17-16BH; SWSW 17-149N-95W; 1,285'FSL and 246'FWL; Grail; Bakken; horizontal; 2,399' ground; 27648; 33-053-05677; 2/7/2014
Moberg 4-17-16BH; SWSW 17-149N-95W; 1,260'FSL and 246'FWL; Grail; Bakken; horizontal; 2,399' ground; 27647; 33-053-05676; 2/7/2014

Petro-Hunt
Johnsrud 151-96-4A-10-1HS; LOT1 4-151N-96W; 580'FNL and 300'FEL; Clear Creek; N/A*; on confidential status; 2,315' ground; 27654; 33-053-05680; 2/10/2014
Johnsrud 152-96-33D-28-1HS; LOT1 4-151N-96W; 580'FNL and 350'FEL; Clear Creek; N/A*; on confidential status; 2,313' ground; 27653; 33-053-05679; 2/10/2014
Johnsrud 152-96-34D-27-2HS; LOT1 4-151N-96W; 580'FNL and 250'FEL; Clear Creek; N/A*; on confidential status; 2,317' ground; 27655; 33-053-05681; 2/10/2014

SM Energy
Carol 12-35H; NWSW 35-152N-100W; 2,366'FSL and 330'FWL; Camp; N/A*; on confidential status; 2,258' ground; 27623; 33-053-05673; 2/4/2014
Dixie 12X-35H; NWSW 35-152N-100W; 2,461'FSL and 330'FWL; Camp; N/A*; on confidential status; 2,260' ground; 27624; 33-053-05674; 2/4/2014
Donna 12X-35H; NWSW 35-152N-100W; 2,271'FSL and 330'FWL; Camp; N/A*; on confidential status; 2,257' ground; 27622; 33-053-05672; 2/4/2014

Permits renewed

Enerplus Resources
Banjo 149-94-02B-01H TF; LOT4 2-149N-94W; 742'FNL and 453'FWL; Mandaree; Bakken; horizontal; 2,186' ground; 24963; 33-053-04787; 2/7/2014
Grassy Knoll 2-11H; LOT4 2-149N-94W; 730'FNL and 405'FWL; Mandaree; Bakken; horizontal; 2,188' ground; 24962; 33-053-04786; 2/7/2014

Newfield Production
Federal 16-30-1H; SESE 30-153N-96W; 663'FSL and 546'FEL; Sand Creek; N/A*; on confidential status; 2,251' ground; 20522; 33-053-03508; 2/7/2014
Federal 16-30-2H; SESE 30-153N-96W; 657'FSL and 496'FEL; Sand Creek; N/A*; on confidential status; 2,251' ground; 20523; 33-053-03509; 2/7/2014

Mountrail Co.

Permits issued

Hess
EN-Farhart-156-93-0409H-1; LOT1 4-156N-93W; 296'FNL and 793'FEL; Baskin; N/A*; on confidential status; 2,361' ground; 27628; 33-061-02960; 2/4/2014
EN-Farhart-156-93-0409H-2; LOT1 4-156N-93W; 296'FNL and 826'FEL; Baskin; N/A*; on confidential status; 2,361' ground; 27627; 33-061-02959; 2/4/2014
EN-Farhart-156-93-0409H-3; LOT1 4-156N-93W; 296'FNL and 859'FEL; Baskin; N/A*; on confidential status; 2,361' ground; 27626; 33-061-02958; 2/4/2014

Oasis Petroleum
Banks 5892 24-34 5B; SENE 34-158N-92W; 2,350'FNL and 250'FEL; Cottonwood; Bakken; horizontal; 2,424' ground; 27645; 33-061-02963; 2/7/2014
Banks 5892 24-34 6T2; SENE 34-158N-92W; 2,563'FNL and 250'FEL; Cottonwood; Bakken; horizontal; 2,424' ground; 27644; 33-061-02962; 2/7/2014
Banks 5892 24-34 7T; SENE 34-158N-92W; 2,596'FNL and 250'FEL; Cottonwood; Bakken; horizontal; 2,423' ground; 27643; 33-061-02961; 2/7/2014

Whiting Oil and Gas
Littlefield 11-30H; LOT1 30-153N-91W; 840'FNL and 275'FWL; Sanish; Bakken; horizontal; 2,376' ground; 27656; 33-061-02964; 2/10/2014

Permits cancelled

Hess
EN-Anderson B-156-94- 19; SWSE 19-156N-94W; 740'FSL and 2,030'FEL; Manitou; N/A*; on confidential status; 2,371' ground; 90198; 33-061-90198; 2/6/2014

Renville Co.

Permits issued

Enduro Operating
MRPSU 30-42-H1; SENE 30-162N-85W; 2,282'FNL and 195'FEL; Mouse River Park; N/A**; on confidential status; 1,764' ground; 27634; 33-075-01457; 2/5/2014

Stark Co.

Permits issued

Fidelity Exploration and Production (MDU)
Isa Dore 6-7H; LOT2 6-139N-97W; 548'FNL and 2,392'FEL; Heart River; Bakken; horizontal; 2,529' ground; 27638; 33-089-00828; 2/6/2014

Williams Co.

Permits issued

Continental Resources
Brogger 6-4H1; LOT1 4-153N-99W; 380'FNL and 1,293'FEL; Crazy Man Creek; N/A*; on confidential status; 2,386' ground; 27630; 33-105-03403; 2/5/2014
Brogger 7-4H; LOT1 4-153N-99W; 380'FNL and 1,248'FEL; Crazy Man Creek; N/A*; on confidential status; 2,388' ground; 27629; 33-105-03402; 2/5/2014
Stark 1-26H1; NWNE 26-159N-96W; 230'FNL and 2,365'FEL; Temple; N/A*; on confidential status; 2,297' ground; 27639; 33-105-03406; 2/6/2014

Oasis Petroleum
Holmes 5501 11-5 #3B; NWNW 5-155N-101W; 255'FNL and 797'FWL; Tyrone; Bakken; horizontal; 2,249' ground; 27641; 33-105-03407; 2/6/2014
Holmes 5501 11-5 #2T; LOT4 5-155N-101W; 255'FNL and 830'FWL; Tyrone; Bakken; horizontal; 2,251' ground; 27642; 33-105-03408; 2/6/2014

Slawson Exploration
Matilda Bay 1-15H; SWSW 15-154N-99W; 275'FSL and 505'FWL; Stockyard Creek; N/A*; on confidential status; 2,245' ground; 27635; 33-105-03404; 2/6/2014
Matilda Bay 2-15H; SWSW 15-154N-99W; 275'FSL and 480'FWL; Stockyard Creek; N/A*; on confidential status; 2,245' ground; 27636; 33-105-03405; 2/6/2014

Statoil Oil and Gas
Buford 10-3 1H; SWSW 10-152N-104W; 225'FSL and 1,060'FWL; Buford; N/A*; on confidential status; 1,925' ground; 27658; 33-105-03409; 2/10/2014

Permits cancelled

Hess
GO-Overdorf 158-96-03; SWSE 3-158N-96W; 1,100'FSL and 2,410'FEL; Big Meadow; N/A*; on confidential status; 2,336' ground; 90205; 33-105-90205; 2/6/2014

**Note - The geologic target for these wells was not listed in its well file because they are tight (confidential) holes, but the following fields produce from the Bakken pool; Baskin, Big Meadow, Buford, Camp, Clear Creek, Crazy Man Creek, Little Knife, Manitou, Sand Creek, Stockyard Creek, Temple.*

***Note - The geologic target for these wells was not listed in its well file because they are tight (confidential) holes, but the Columbus and Mouse River Park fields produce from the Madison pool, the Cedar Hills field produces from the North Red River B pool, and the Newburg field produces from the Spearfish/Charles pool.*

—Compiled by Ashley Lindly

continued from page 1

CONTINENTAL RECORDS

Moreover, the company's annual guidance remains intact for strong growth in 2014, with production expected to increase in a range of 26-to 32 percent, he said.

Output tops 49 million boe in 2013

Estimated total production was 49.6 million barrels of oil equivalent, or 135,890 boe per day, for full-year 2013, a whopping 39 percent increase compared to 2012, the company reported. Crude oil accounted for 71 percent of total production, or 35 million barrels, in 2013. Estimated natural gas production for the year was 87.7 billion cubic feet.

Production totaled 13.3 million boe in the fourth quarter of 2013, for an average of 144,250 boe per day, representing just a 2 percent increase over the previous quarter due to delays, but a hefty 35 percent increase over the same period in 2012.

However, Continental had reached a new production milestone of 150,000 boe per day during November, prior to experiencing the winter weather delays. But the company said it recently regained the 150,000 boe per day level.

"Weather affected the fourth quarter, but the timing of production gains also reflects our continued shift to large, multi-well drilling pads," said W.F. "Rick" Bott, Continental's president and chief operating officer. This is a key driver of future efficiency gains and production growth."

"Such strong execution continues to underpin our confidence in achieving Continental's five-year plan to triple production and proved reserves," he added.

Proved reserves jump 38 percent

Continental also had huge gains in proved reserves during 2013, reflecting the significant production growth in the Bakken play of North Dakota and Montana. The company reported proved reserves of 1.08 billion boe at Dec. 31, an increase of 299 million boe or 38 percent compared with year-end 2012. Year-end 2013 proved reserves were 87 percent operated by the company, 37 percent proved developed producing, PDP, and 68 percent crude oil. The company noted that it has grown its proved reserves at a compound annual growth rate of 47 percent since year-end 2008.

In 2013, Continental's PDP reserves for the first time exceeded 400 million boe, increasing 31 percent from year-end 2012 to 405 million at Dec. 31. The company had 2,330 gross (1,302 net) proved undeveloped, PUD, locations at the end of 2013. The Bakken accounted for 84 percent of PUD locations at year-end, the company said.

Continental's year-end 2013 proved reserves had a net present value discounted at 10 percent (PV-10) of $20.2 billion, a 52 percent increase over the PV-10 of $13.3 billion for year-end 2012 proved reserves.

Bakken contributes 741 million boe

The Bakken petroleum system, which includes the Three Forks formation, accounted for 741 million boe or about 70 percent of 2013 proved reserves, with a PV-10 value of $14.5 billion. Continental pioneered development of the upper Three Forks in 2008, and during the past year played a leading role with down-space testing of wells across the Williston Basin. Last October the company successfully completed the first of four pilot density projects it had under way. The Hawkinson project became industry's first such program in the Williston Basin to include all of the lower benches of the Three Forks. Results from the Tangsrud, Rollefstad and Wahpeton density projects are expected during the first half of 2014.

Continental's 2013 proved reserves were also augmented by accelerated production in the SCOOP, an unconventional oil- and liquids-rich play in Oklahoma. SCOOP accounted for 215 million boe of 2013 proved reserves, a 241 percent increase over proved reserves of 63 million boe at year-end 2012. The PV-10 value of the company's SCOOP proved reserves was $3.3 billion as of Dec. 31.

"We ramped up our SCOOP rig count early in 2013 and delivered strong results in a capital-efficient manner within our budget for the year," Bott said.

Continental holds the dominant leasehold positions in the Bakken and SCOOP, with 1.2 million net acres in the Bakken and 403,000 net acres in SCOOP at year-end. The company also said it has the industry's most active drilling program in each play.

Capex just under $3.6 billion

Capital expenditures excluding acquisitions for 2013 were just under the budget of $3.6 billion, which included $3.1 billion for drilling and completion operations. Acquisitions last year amounted to $270 million.

Continental said it began 2014 with an inventory of more than 100 gross wells that have been drilled, but are not yet producing, almost all of which are associated with multi-well pads. In November, the company expected to complete about 282

see **CONTINENTAL RECORDS** *page 16*

Petroleum News Bakken

Oil Patch Bits

Fortis selected as finalist for the Oil & Gas Awards

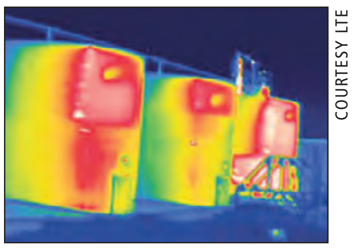
Fortis Energy Services announced that it has been selected as a finalist for the Award for Excellence in Well Completion in the Rocky Mountain Region for 2013 by the Oil & Gas Award's judges.

The Oil & Gas Award organizers stated that, "This year an unprecedented number of entries were received for the Oil & Gas Awards, and we are pleased to announce that Fortis Energy Services was selected by the judges as best in class."

"We are honored to have been selected as a finalist for the Award for Excellence in Well Completions," stated Fortis CEO Nathan Conway. "This award serves as an example of our deep commitment to safety, efficiency and customer satisfaction. It helps solidify our reputation as a leader in oil and gas well services and serves as a platform to further increase our strong customer relationships."

Fortis Energy Services Inc. is a leading oil and gas service company in the USA, providing oil and gas well services throughout the production life cycle. A well-maintained fleet combined with highly experienced professionals has enabled Fortis to establish strong customer relationships and an excellent safety record.

LT Environmental now offers gas leak detection service



COURTESY LTE

LTE utilizes optical gas imaging technology

LT Environmental Inc. has extensive experience since 1992 in compliance and remediation and is proud to announce its new hydrocarbon gas leak detection services for the oil and gas industry. LTE utilizes optical gas imaging technology to efficiently detect low-concentration hydrocarbon gas leaks in large areas as well as hard-to-reach or inaccessible areas, which other leak detecting methods cannot access.

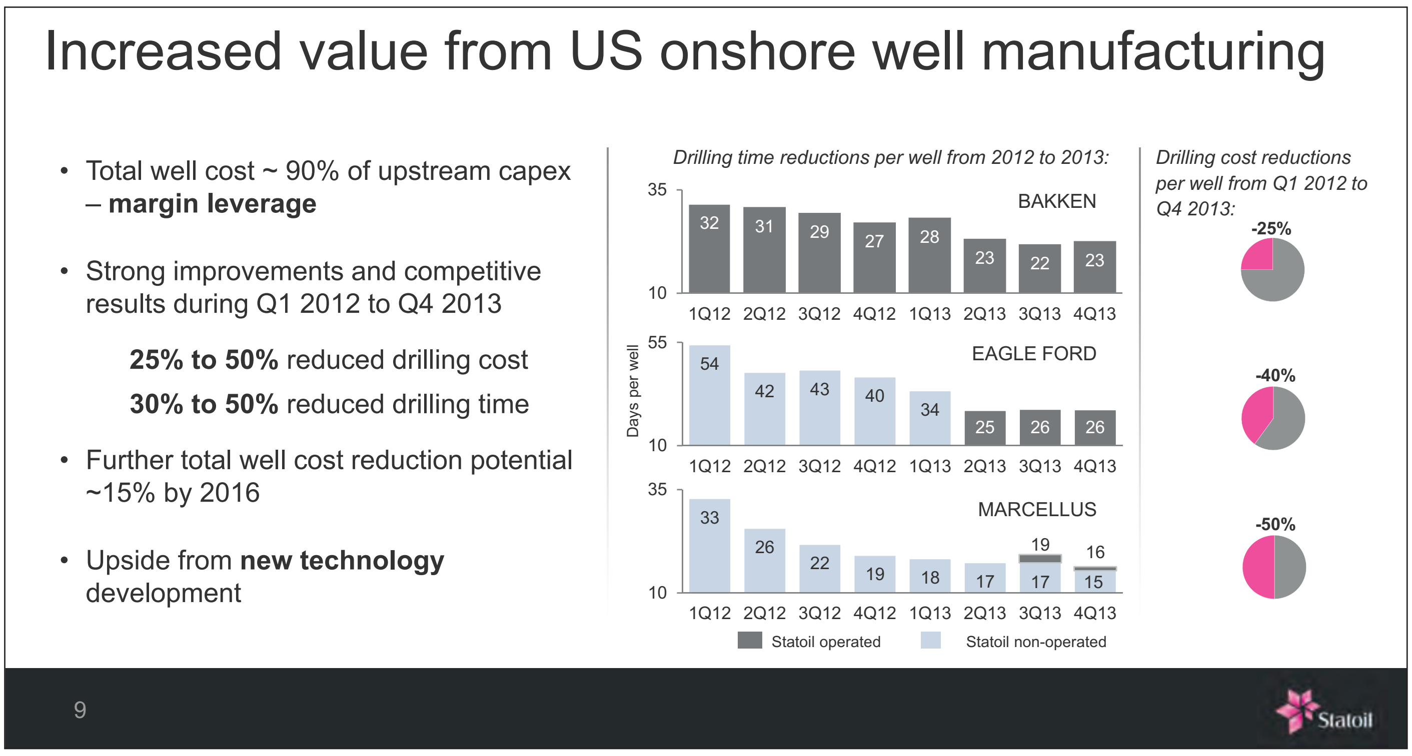
State and federal agencies have legislated a reduction in volatile organic compound emissions through leak detection and repair compliance requirements. The OGI camera enables oil and gas clients to maintain regulatory compliance by identifying and confirming repairs of hydrocarbon gas leaks. LTE's hydrocarbon gas leak inspection services include comprehensive site evaluations using the FLIR GF320 OGI camera by certified, experienced field inspectors, optional regulatory compliance audits, and reporting of facility

see **OIL PATCH BITS** *page 15*

Bakken Players

continued from page 1

STATOIL MOVES



period between 2013 and 2016, and we have good growth prospects towards 2020 and beyond, backed by a very strong resource position," Lund said in a Feb. 7 earnings press conference with analysts in London. "But we will grow with less spend."

Lund said Statoil has "scrutinized" every part of its portfolio in an effort to improve project profitability, and he definitely sees room for improvement. "On the project side, despite delivering major projects on time and on budget, I'm not happy. I'm not satisfied because the cost in the industry is simply too high," Lund told analysts. "We therefore need to redouble our effort in this important area. And attacking this basic industrial challenge gives the opportunity to set new standards, both when it comes to profitability and return."


TROND ISAKSEN — STATOIL ASA

MARGARETH OVRUM

With the $5 billion capex cut, Statoil is now planning to spend approximately $20 billion per year over the next three years for a total 2014-2016 capex of $60 billion. However, Lund said approximately 40 percent of that total capex will be going into projects that won't begin production until after 2016, which he said underlines the importance of building long-term growth for Statoil.

Fourth quarter production

Torgrim Reitan, Statoil's chief financial officer, said the company's fourth quarter output was a decrease of 4 percent over the fourth quarter 2012, which was expected. In the quarter, Retain said, Statoil continued to start up new fields and ramp up production in others, but those production increases were more than offset by divestitures, redeterminations, lower gas offtake from the company's Norwegian Continental Shelf operations, and expected natural decline.

However, Statoil's "international" production, i.e., outside of Norway, was increased in the fourth quarter to 740,000 boepd, up from the 728,000 boepd output in the third quarter. The fourth quarter output was 70 percent liquids.

In addition, Reitan said the company is ramping up production in the U.S. onshore as well as in Angola and Brazil, although earnings from those business segments was down in the quarter due primarily to higher gas share in the output, lower realized prices and high depreciation in the North American business segment. However, for the full year, Statoil's "international" earnings were up by 1 percent.

"Around one-third of our production now comes from outside Norway," Reitan said. "And the cash flow per barrel for our international production is on par with our Norwegian production. So we are growing internationally and it is a profitable growth."

North America and the Bakken

In North America, Statoil is active in both the U.S. and Canada, although most of the company's North American production comes from three U.S. plays, including the Bakken. In the fourth quarter, Statoil's North American output averaged 237,800 boepd, of which 83 percent or 197,900 boepd came from the Marcellus, Bakken and Eagle Ford plays. In the Marcellus, Statoil's fourth quarter output was 116,300 boepd, although that output was 95 percent gas. In the Bakken, Statoil averaged 49,900 boepd in the quarter, with 87 percent being liquids. Statoil's Eagle Ford production averaged 31,700 boepd in the quarter, which was 66 percent liquids.

At 87 percent liquids, the Bakken has the highest liquids content of Statoil's North American plays, followed by the Eagle Ford at 66 percent liquids. Of the total fourth quarter North American production of 237,800 boepd, 46 percent was liquids, and of that 46 percent liquids, the Bakken accounted for 40 percent.

Statoil's fourth quarter North American production was a 23 percent increase over the 193,500 boepd output in the same quarter of 2012. The company's Bakken production was up nearly 7 percent over the 46,700 boepd production in fourth quarter 2012.

At the same time that Statoil's U.S. production is up, the company's U.S. well costs are down. Margareth Ovrum, Statoil's executive vice president of technology, projects and drilling, told analysts in the London press conference that the company has seen significant improvements in well efficiencies in the three primary U.S. assets with average drilling time reductions of 30 to 50 percent per well and average well cost reductions ranging from 25 to 50 percent. In addition, Ovrum said there is potential for an additional 15 percent reduction in average well cost by 2016, and that with new technology development, there could be even further upside.

"The main reason for these savings is what we refer to as our perfect well approach, which is a systematic deconstruction of best practices within all segments of the well construction and subsequent drive towards improvement and simplification on each segment," Ovrum said. "We expect to continue these improvements, and we aim for another 15 percent reduction on the total well cost by 2016. And there may be some further upside from new technology development." ●

Contact Mike Ellerd at mellerd@bresnan.net

continued from page 1

PIPE VS. RAIL

Less diluent by rail

The State Department report delved at some detail into the comparative pipeline vs. rail costs.

In order to achieve breakeven costs, it said the costs of production, transport and the blend of 70 percent oil sands bitumen and 30 percent diluents that is needed to ship the Alberta heavy crude by pipeline would require the benchmark Maya heavy crude price to average $76.78-$79.40 per barrel under long-term committed contracts and $83.76-$86.38 without a contract.

But the report noted that rail tankers can move the oil sands production with a blend of 85 percent bitumen and 15 percent diluents at a lower cost than by pipeline.

It said that to achieve a breakeven point, "railbit" would require a Maya price of $83.03-$90.89, while raw bitumen would require a Maya price of $77.77-$85.82.

The statement said that the "transport penalty for shipping oil sands crude to the Gulf Coast resulting from pipeline constraints" could range from nothing to $8 per barrel.

Although raw bitumen must be mixed with diluents, such as naphtha or condensate, to facilitate shipment by pipeline, rail, despite its higher basic transportation costs, can carry bitumen in its undiluted form or with a lower diluent content.

Seven rail crossings

The State Department determined that 90,000-100,000 barrels per day of heavy Canadian crude was carried by rail into the U.S. during the second quarter of 2013, using seven rail crossings along the Washington and Montana borders, with an average 32 trains per day entering the U.S.

The report said unit trains carrying crude alone cost $3-$4 per barrel less than crude being moved on manifest trains which include a mix of cargoes.

It said four unit train facilities were operational in Western Canada by the end of 2013 and another three are scheduled for completion this year, prompting the department to forecast that rail will likely be able to handle incremental oil sands production in the absence of XL and other pipelines.

"Crude by rail would have to increase by an average 210,000 bpd per year beginning in 2016," the report said.

"From a logistics standpoint, the ability to construct the necessary crude-by-rail loading and offloading facilities at a rate that could support (Alberta oil sands) production growth in the long term does not appear to be a substantial impediment."

The State Department's supplemental environmental impact statement can be downloaded at http://1.usa.gov/1nszGrh. ●

Contact Gary Park through publisher@petroleumnews.com

continued from page 14

OIL PATCH BITS

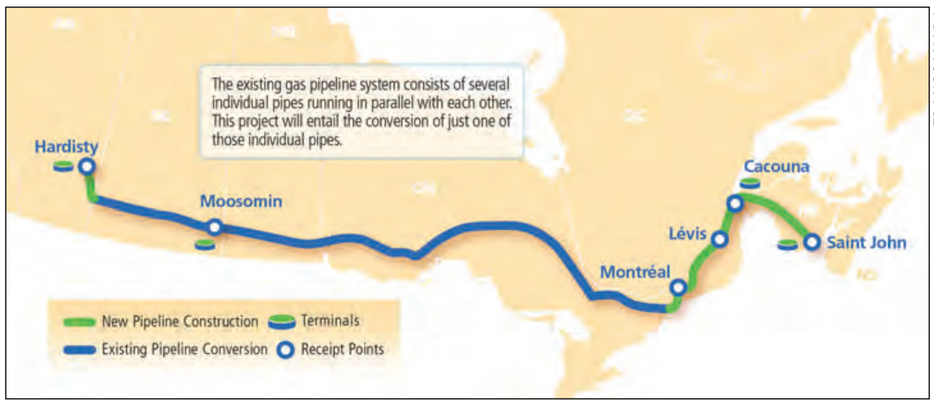
leaks, post-repair leak inspections, and access to LTE proprietary, secure client-specific leak inspection databases.

Contact Jennifer McQueen, LTE air quality specialist, at 303-433-9788 or jmcqueen@ltenv.com for further OGI inspection information and specifications.

LTE, headquartered in Arvada, Colo., is a full-service environmental engineering company specializing in compliance, engineering, remediation, and safety services for private and public entities throughout the United States.

continued from page 1

ENERGY EAST



TRANSCANADA

agencies in the United States and Canada, TransCanada is wasting no time getting embroiled in the public wrangle over its Energy East project.

Conversion of six gas lines

The C$12 billion, 2,700-mile venture is designed to ship 1.1 million barrels per day of crude from Western Canada, including the Bakken formation in Saskatchewan and Manitoba, to refineries in Ontario and Quebec, by converting one of its six natural gas pipelines to a crude carrier.

The plan, strongly backed by producers, refiners and most provincial governments along the route, also includes a new line from Quebec to Irving Oil's refinery at Saint John, New Brunswick, plus terminals in Quebec and New Brunswick to export Canadian crude to Europe and Asia.

But TransCanada has shown it will not sit back and allow its opponents to seize the media spotlight.

It has called on Canada's federal and provincial governments and other supporters of Energy East to "drown out" opposition and stifle those who have added years to its planned Keystone XL route.

Pembina moves against line

The Alberta-based Pembina Institute made the first concerted move Feb. 6 against Energy East by claiming the project would generate more greenhouse gas emissions from related oil sands production than Keystone XL.

"We want regulators to look not only at the infrastructure, but to look at whatever goes through the pipeline itself," said Claire Demerse, federal policy director for the independent environmental think tank. "We want them to look at the full picture."

The Pembina report estimated Energy East would require 650,000-750,000 bpd of incremental oil sands production, resulting in 30 million-32 million metric tons per year of GHGs, compared with 22 million metric tons a year by Keystone XL, and raise emissions from the oil sands by 34 percent-39 percent from 2012 levels.

First oil could be in 2018

If Canada's National Energy Board and the federal government approve the proposal by late 2015, construction could start in 2016 and first crude would be delivered by late 2018, Energy East project manager Steve Pohlod told the Maritime Energy Association in Halifax, Nova Scotia, Feb. 5.

The 830,000 bpd Keystone XL system is intended to carry the bulk of its volumes from the oil sands to the U.S. Gulf Coast, picking up about 100,000 bpd from the North Dakota Bakken.

Demerse said the Canadian government has a responsibility to expand its assessment of pipelines beyond the traditional safety and economic issues to "what goes inside the pipe. The environmental impacts of the crude that will be carried are, we think, quite significant and should be part of that conversation."

The Pembina Institute said the NEB's most recent review of a major pipeline, involving Northern Gateway, "did not consider the environmental impacts of producing the crude that would flow through that pipeline."

Alberta says markets would be opened

Alberta Energy Minister Diana McQueen said in a statement that Energy East would open up important markets for oil sands production without significant negative impacts.

She said her government works hard to develop the resource in a "very positive way (by finding) a balance between responsible, sustainable development and protecting the environment."

Detailed application not yet filed

Although TransCanada has yet to file a detailed regulatory application, a study commissioned by the company estimated the project would add C$35 billion to Canada's Gross Domestic Product over 40 years and contribute C$10.2 billion in tax revenues.

Demerse said her organization decided to play an early role in the Energy East process "to open a conversation about what we consider to be a project with significant environmental impact."

TransCanada said it needed more time to study the Pembina report before commenting, but Pohlod said the company is ready to counter the "noise" expected from environmental groups and "other interest groups (many of which are) out there to effectively oppose all energy infrastructure projects."

"We can't just let opponents of these types of projects be the ones that get the press and get noticed," he said.

Pohlod said TransCanada has so far held 62 Energy East open houses for about 600 communities across Canada, with 50 more scheduled for 2014, and held discussions with 185 First Nations and 6,000 landowners on pipeline easements and land access. ●

Contact Gary Park through publisher@petroleumnews.com

continued from page 1

REGULATION REINS

their concerns about gaps in the regulatory process.

Triplett urged the agencies to do what they can to prevent future incidents, and questioned Department of Health Chief Dave Glatt about the quality of pipelines that run under Lake Sakakawea, presenting a scenario that could be catastrophic in the event of pipeline failure.

"From my perspective, I think (the Tesoro spill) has opened some eyes to take a harder look at these pipelines to make sure they're taken care of," Glatt said. "We always prepare, and prepare some more. Hopefully we never lose that paranoia of never being prepared enough. As far as the integrity of the pipelines and response times, could more be done? I'm in a business where, yeah, you can always do more."

Taking charge of inspections

Triplett noted that for each case, whether pipeline or rail, there may be slightly different solutions to enhance regulation.

"The Casselton incident concerns me more than any other," Triplett said. "We can't just keep saying this is up to the federal government, because we know they don't have the money to send inspectors, and as we promote this industry and encourage it, we have to have some responsibility to make sure our public is safe. We need to ask all our agencies how it could be done better."

The subject also stirred an impassioned response from Wardner.

"I agree with (Sen.) Triplett about the federal resources. The state agencies are being blamed for the spills, rails, and the feds aren't going to do more than they have," Wardner said. "I think the state of North Dakota needs to do more. We need to make sure we take care of these things. I'm not sure of an answer when it comes to the rails, but we do need to take charge of them, have enforcement people and inspectors there."

Inviting the PSC to the table

The committee discussed giving the Public Service Commission, PSC, authority over pipeline inspections and plans to invite PSC members to its March meeting to consider its feasibility. Triplett told Petroleum News Bakken there is a process by which states can certify a local


MAXINE HERR

Sen. Connie Triplett

agency to do pipeline inspections, avoiding a need for legislation, but the legislature would need to appropriate additional dollars for PSC or any other agency to implement the regulation. Triplett said agencies need to focus more on prevention and cited media reports that revealed shipping documents for the train that crashed near Casselton were falsified.

"The notion of people lying on their shipping manifests is truly concerning to me. That's completely unacceptable behavior," Triplett told Petroleum News Bakken following the meeting. "I understand the Federal Railroad Administration prefers to handle issues with education and cajoling and the threat of civil penalties, but if push comes to shove, there are criminal penalties at the federal level that could be imposed — whatever it takes to get people doing things right."

She said the state needs to be "clear-eyed" to the problems and help balance company rights with public safety and the general welfare of the state.

"Someone has to take responsibility at a level that is getting the job done," Triplett said. "Now we find out the feds don't really do anything because they don't have inspectors that come here very often. Not that I want to arm wrestle them for control, I would just want there to be some assurance for the citizens of North Dakota that at one level or another it is being handled in a responsible way."

—MAXINE HERR

Contact Maxine Herr at maxine606@msn.com

continued from page 14

CONTINENTAL RECORDS

(761 gross) wells in the Bakken in 2013, including both operated and non-operated wells. Continental also estimated its operated rig activity would average 20 rigs through the balance of 2013, down from 22 rigs as earlier expected due to "realized efficiencies."

More details are expected when Continental releases its fourth quarter and full-year 2013 earnings report on Feb. 26.

Fourth-quarter 2013 oil price differential (discount to WTI crude and inclusive of all transportation) is expected to be about $13 per barrel, about twice as high as the average for the first nine months of the year. Full-year 2013 differential is expected to be roughly $8.25 per barrel, compared with annual guidance range of $6 o $8 per barrel.

Lower volumes due to winter weather delays and the company's mix of wells in the fourth quarter also affected production expense per boe and depreciation, depletion and amortization per boe, the company said. ●

Contact Ray Tyson at rtyson@petroleumnews.com