Petroleum News
Bakken

page 3 NDDOT grapples with freight tie-ups amid infrastructure deficiencies

Vol. 3, No. 9 • www.PetroleumNewsBakken.com *Publication of record for the Bakken oil and gas industry* Week of June 15, 2014 • $2.50

Backyard production

MAXINE HERR

A Bakken petroleum system well producing just beyond a farmstead near South Heart in western Stark County, North Dakota in late May.

Summit earmarks $300 million for Bakken midstream projects

Summit Midstream Partners announced on June 10 plans to spend $300 million on four new midstream development projects in Divide and Williams counties, North Dakota. Combined, the four projects will enhance crude, natural gas and water gathering capacity as well as provide additional truck unloading capability and new access to rail exports.

Among the four projects is Summit subsidiary Tioga Midstream's construction of 240 miles of new pipeline to provide 20,000 barrels per day of crude gathering capacity, 25,000 bpd of water capacity and 14 million cubic feet of natural gas capacity to an unnamed "subsidiary of a leading independent Bakken producer" in Williams County under a 10-year, fee-based gathering agreement. Summit said the area is remote from existing infrastructure and the gas gathering system will move associated gas to the operator's

see **SUMMIT PROJECTS** *page 14*

Super Nova selling portion of Alberta Bakken Fairway acreage

Vancouver-based Super Nova Petroleum Corp. announced on June 10 that it had reached an agreement with BNV Energy LLC of Houston in which Super Nova will sell approximately 2,964 acres adjacent to its Milford Colony project in the Alberta Bakken Fairway on the Rocky Mountain Front in Lewis and Clark County in western Montana.

In the agreement, BNV Energy is committing to drill two natural gas wells and install a gas gathering system on 5,000 acres in the lower portion of Super Nova's Milford Colony acreage. Super Nova said the first well is to be spudded no later than Sept. 30. The anticipated depth of the gas wells is between 3,000 and 4,000 feet.

The Milford Colony project is a farm-in project for Super Nova per an agreement it entered into with Norstra Energy in January. Throughout 2013, Norstra had been pursuing development of its Alberta Bakken Fairway project, which it calls its South Sun River project, and in September it spudded its first well in the project and installed surface casing to 880

see **SUPER NOVA** *page 15*

NEW PLAYER

A second Slawson

Craig Slawson breaks from the family business to form new E&P venture

By MIKE ELLERD
Petroleum News Bakken

"With years of experience in some of the toughest plays in the U.S. and often with contrarian foresight, we find opportunity in less than obvious locales or less appreciated assets." That is how Craig Slawson describes Slawson Energy, the new exploration and production company he formed earlier in the year.

CRAIG SLAWSON

Those years of experience he brings to his new venture came from his tenure in his family's owned and operated Slawson Exploration Company Inc., SECI, which developed a reputation as an innovative and aggressive exploration company, due in no small part to Slawson's contribution and accomplishments from the geology side of the business.

Among his accomplishments while at SECI, Slawson developed the Big Sky project, optioning some 80,000 acres in 1991 in what is now the Elm Coulee field in Montana, some 12 years before that area was, as he puts it, "discovered." But he had a hard time finding investors. Few people at the time "believed the middle Bakken would produce," he told Petroleum News Bakken, adding that it was then

see **SECOND SLAWSON** *page 15*

MOVING HYDROCARBONS

Confidentiality rub

Views differ on keeping US crude-by-rail shipment information from public

By MAXINE HERR
For Petroleum News Bakken

A new order by the federal government requiring rail companies to report Bakken crude shipment details to state emergency agencies has set off requests to ensure those records are kept confidential.

CECILY FONG

The U.S. Department of Transportation, DOT, issued an executive order on May 7 that each railroad hauling 1 million gallons or more of Bakken crude must provide State Emergency Response Commissions, SERC, with estimates of how much of the oil it moves through each county weekly, and give updates whenever those volumes change by more than 25 percent. The information was to be provided within 30 days of the order.

On June 9, North Dakota's Department of Emergency Services, the state SERC office, had received reports from Canadian Pacific, CP, and BNSF Railway. BNSF had requested the state to sign a confidentiality agreement to protect proprietary information from getting into the hands of the general public, but due to state open records laws, that may be asking too much.

see **RAIL DETAILS** *page 16*

LAND & LEASING

NDTL negotiates leases

Oasis and Trust Lands agree on lease price and royalties for riverbed tracts

By MIKE ELLERD
Petroleum News Bakken

In what North Dakota Department of Trust Lands Minerals Management Division Director Drew Combs calls "a little unprecedented," Trust Lands and Oasis Petroleum have agreed on a negotiated lease price of $8,000 per acre at a 20 percent royalty rate on 721 sovereign state mineral acres in seven tracts in McKenzie and Williams Counties.

DREW COMBS

The acreages in the seven tracts were never nominated for lease because they involved Missouri River riverbed tracts that were not part of Trust Lands' inventory until the ordinary high watermark delineation study that began in 2009 revealed the tracts. Oasis had private mineral leases in the area and in 2010 approached Trust Lands expressing the company's interest in leasing the seven tracts. However, at that time the tracts were on "pending" status because the riverbed survey was not complete. Because of expirations and obligations Oasis had on other leases in the area, Oasis developed the "pending" tracts without having the ability to nominate the unleased riverbed acreages.

The riverbed survey was finished in 2012, and while many of the riverbed tracts have since been leased through Trust Lands' quarterly auctions, the seven in question have not. Rather than nominate the tracts for auction, Oasis approached

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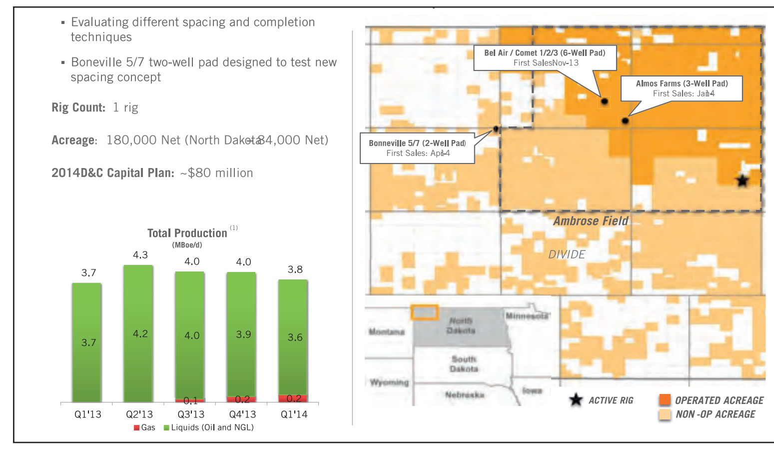

DRILLING & COMPLETION

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● INFRASTRUCTURE

Streamlining freight in a growing state

North Dakota DOT seeks comments by June 30 on state freight plan to relieve shipper delays and improve transportation efficiency

By MAXINE HERR

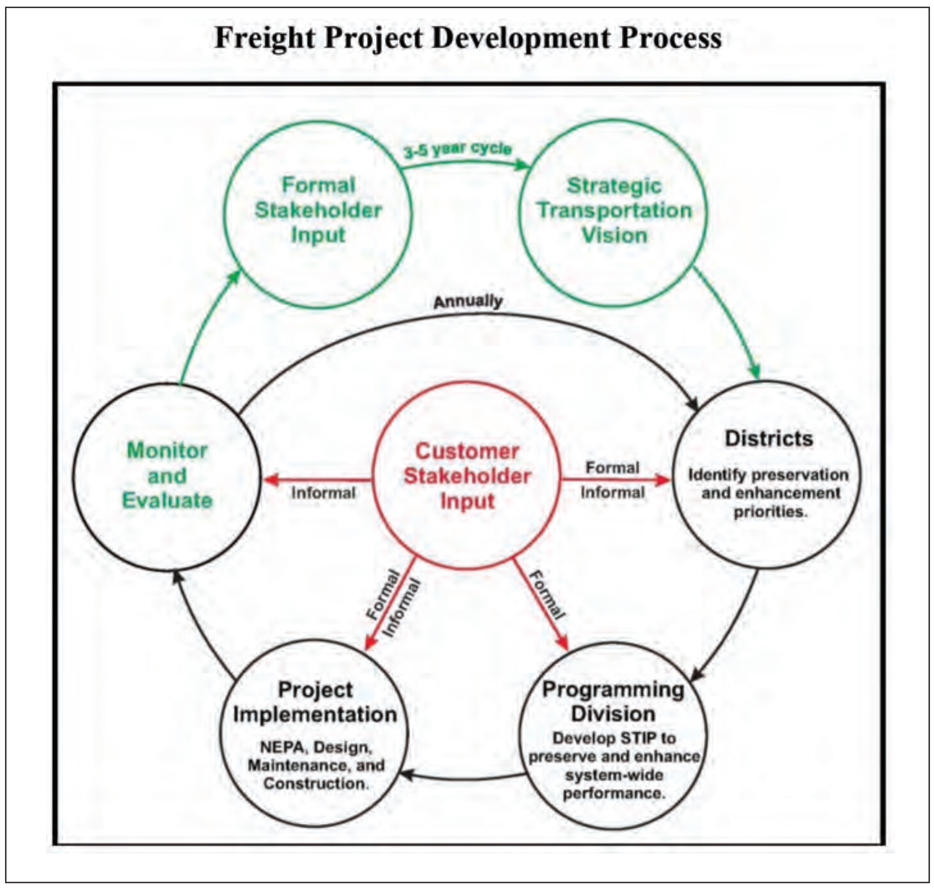
For Petroleum News Bakken

The development of oil and related industries in North Dakota brings its share of growing pains.

One challenge to overcome is moving freight in and out of the state in the midst of congestion and lack of proper infrastructure. The North Dakota Department of Transportation, NDDOT, is prepared to implement a new plan to address freight bottlenecks and delays, planning and operations, and innovative technologies to improve the safe and efficient transport of freight within the state.

SCOTT ZAINHOFSKY

NDDOT regularly develops plans that provide a broad philosophy of how to handle the overall transportation system in the state. From that, more functional plans are born, such as the state freight plan.



Strong economy leads to more traffic

In 2012, North Dakota's highways, roads, and city streets carried a total of 10.1 billion vehicle miles traveled, VMT. Of those, more than 66 percent were on state highways where truck traffic accounted for 1.5 billion VMT. The state saw a 130 percent increase from 2000 to 2012 in daily truck traffic on its highways.

Much of this increase is largely due to the rapidly expanding oil industry, but in other sectors, such as agricultural and manufacturing, traffic is on the rise as well. Though oil production climbed from approximately 122,000 barrels per day in January 2007 to more than 900,000 seven years later, agricultural production also rose from approximately 30 billion tons in 1980 to more than 89 billion tons in 2010. North Dakota was also only one of three states to experience an uptick in manufacturing between 2000 and 2012.

Improving every mode of transportation

But it isn't just road traffic that NDDOT is reviewing. Rail freight originating in North Dakota doubled between 2000 and 2011. In 2013, the state was home to 15 rail oil transload facilities on BNSF Railway lines and five on CP Railway lines. Continued additions bring an upswing in rail crossing incidents and a need for crossing improvements.

While rail facilities are popping up throughout western North Dakota to aid in transporting oil, North Dakota does not have any facilities that offer dedicated intermodal rail container service, which means overseas markets cannot rely on set timeframes for delivery. Minot and Bismarck both provide shippers access to non-dedicated intermodal service, but if, for instance, a manufacturer in North Dakota was delivering product to China, without the efficient and secure service provided by dedicated intermodal facilities, its customers would likely either find a new source for the product or pay less for it.

"The reason we don't have any in North Dakota is that it is a private sector issue," Scott Zainhofsky with NDDOT's planning/asset management division told Petroleum News Bakken. "Private companies need to provide that service, and to make it economical, there has to be enough demand for it at the location."

Meanwhile, pipelines are expanding and being added to keep pace with oil and natural gas demands in an effort to reduce the need for the more expensive rail delivery. And air freight tends to be gaining in value as an important segment to the state's economy, too. Analysis of each type of freight carrier began with NDDOT soliciting input from more than 350 stakeholders to gain insight into trends, issues and needs affecting the future of moving freight. NDDOT also surveyed neighboring states and provinces to better evaluate jurisdictional issues.

Identifying trends

Zainhofsky said stakeholders want the state's oversize or overweight freight permitting system expanded to local roads. Since most loads originate on a local road and then move to a state road, the standards can vary.

"If a state road is built to a condition that allows you to carry a load, but a half-mile off of that state system, a local road is only built to carry half that standard, they can't do it," Zainhofsky said. "So they're asking us to look at addressing those connections."

Some loads are too large to travel certain roads in the state due to load restrictions or physical obstructions, so shippers are forced to divert their trucks around those impediments which can be many miles. A related issue is the inconsistent truck size and weight restriction rules between North Dakota and neighboring states and provinces. The plethora of access points to state highways is also causing freight delays. Adjoining driveways and intersections cause less efficient traffic movement because drivers don't feel comfortable with vehicles entering from unexpected locations.

"Just as a normal operation, you start to slow down when you feel less comfortable," Zainhofsky said. "You can't travel as quickly. Also, the crash rate goes up as you increase access points." He said a unified system across all roadway levels would operate more efficiently.

Tapping into technology

One key to finding solutions to the transportation challenges is the use of innovative technology. Zainhofsky said a new routing and permitting system is being considered which would allow companies to log into an Internet system and generate their own permits instead of needing to call the highway patrol to obtain them. More intelligent transporta-

see **FREIGHT PLAN** page 4

PEOPLE TALK

Caliber taps midstream veteran for CEO

Caliber Midstream Partners L.P. has appointed R. Poe Reed as president and chief executive officer, effective June 9.

With more than 23 years of midstream experience, Reed will be responsible for the overall leadership of the business as well as the execution of what Caliber describes as the company's "unique" vision. He will be based at Caliber's headquarters in Denver.

With more than 23 years of midstream experience, Reed will be responsible for the overall leadership of the business as well as the execution of what Caliber describes as the company's "unique" vision. He will be based at Caliber's headquarters in Denver.

Reed, 58, previously was in senior management at Enable Midstream, a joint venture between CenterPoint Energy and OGE Energy. Most recently, he served as executive vice president and chief commercial officer and before that as division senior vice president and chief commercial officer for CenterPoint Energy's Interstate Pipelines for about three years.

The industry veteran joined CenterPoint Energy in January 2011, following more than 20 years with DCP Midstream and its predecessor companies where he held various leadership roles, including president of Duke Energy Field Services Canada.

Reed earned a bachelor's degree in business administration and a master's degree in industrial safety management from West Virginia University.

Caliber was formed in October 2012 as a 50-50 joint venture between First Reserve's Energy Infrastructure Fund and Triangle Petroleum Corp. as a midstream provider offering a full-service pipeline solution to producers for oil, natural gas, flowback and produced water and fresh water in the Bakken shale. Since inception, Caliber has constructed more than 140 miles of pipeline and has signed contracts with several third-party producers, significantly expanding its footprint and service offerings.

Triangle reported results for its first quarter fiscal year 2015 results on June 10, and Caliber made a significant contribution to Triangle's bottom line (see story on page 12).

—ROSE RAGSDALE

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OWNER: Petroleum Newspapers of Alaska LLC (PNA)
Petroleum News Bakken • Vol. 3, No. 9 • Week of June 15, 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

Marathon Oil sells off Norway assets for $2.7B

By MIKE ELLERD
Petroleum News Bakken

Marathon Oil Corp. announced on June 2 that it had entered into an agreement to sell its wholly owned subsidiary Marathon Oil Norge AS to Norwegian exploration and production company Det Norske Oljeselkap ASA, DETNOR. Marathon put the total value of the transaction at $2.7 billion, and after adjustments for interest, working capital and debt, Marathon expects net proceeds of $2.1 billion. The deal is expected to close in the fourth quarter.

"The sale of our Norway assets advances one of our key 2014 priorities and further demonstrates our commitment to rigorous portfolio management to simplify and concentrate our business," Lee Tillman, Marathon's president and chief executive officer, said in the June 2 press release.

Marathon's first priority for reallocating the proceeds from the sale is growth in its three key U.S. resource plays. "With respect to our plans for the re-deployment of proceeds, we remain resolute in our commitment to capital discipline," Tillman said. "Marathon Oil has a deep inventory across three high-quality U.S. resource plays with expanding opportunities to further accelerate activity. Such organic growth will be our first priority for additional capital allocation, with the balance available for share repurchases under our remaining $1.5 billion board authorization and general corporate purposes." Marathon's three key U.S. resource plays are the Bakken, Eagle Ford and Oklahoma Woodford.

Marathon also put its U.K. North Sea assets up for sale, but did not receive any acceptable offers and has opted to keep those assets. "From the beginning of this marketing process, we stated we would only sell our U.K. North Sea business if we received an offer that appropriately valued these assets," Tillman said. "Accordingly, we will continue to operate this business as we always have — with a focus on our company's long-held values and commitment to safe and responsible operations, and in a manner that maximizes shareholder value."

In the Williston Basin, Marathon estimates its total resource at approximately 800 million barrels of oil equivalent, boe. As of late May, Marathon was running six drill rigs in the basin with plans for 75 to 85 net wells drilled in 2014.

In its Oklahoma resource basins, Marathon estimates total resources at 1.2 million boe. Its Eagle Ford total resources are estimated at 1.7 million boe. As of late May, the company was running four rigs in Oklahoma with plans to drill from 14 to 20 net wells in the year. In the Eagle Ford, Marathon was running 18 rigs with plans to drill from 250 to 260 net wells in 2014. ●

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FREIGHT PLAN

tion systems that use variable message signs to alert drivers are also being requested.

"The long range plan calls for border wait time instruments to be installed at the Pembina/Emerson point of entry (to Canada) so that variable message signs (in cities or online), can tell people how much of a wait to expect at the border … in order to plan your route," Zainhofsky explained.

Determining priorities

The freight plan is currently accepting comments through June 30 at which time the report will be adjusted and finalized before NDDOT moves to implement its ideas. The freight plan will move through the development process where districts will determine priorities based on guidance from executive staff and then submit those to the programming division which will review the priorities in light of the budget and strategic goals. That group will create a list of projects that will undergo environmental and design work before being bid and constructed (see chart).

"From a typical stakeholder's perspective, they may not see the change immediately," Zainhofsky said. "But this fall we'll start adjusting how we select projects that will ultimately get built, and over time the user will see the things they identified as characteristics start to improve and change." ●

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COMPANY UPDATE

Data to drive sizeable production

With years of solid research and proven technology under its belt, XTO Energy helps ExxonMobil become prominent in the Bakken

By MAXINE HERR
For Petroleum News Bakken

Though the Bakken represents only a small part of ExxonMobil's total oil resources, the global energy giant saw enough merit in the performance of its subsidiary XTO Energy in the Williston Basin to single out that performance in the company's 2013 annual report as XTO charges ahead with full development.

In the annual report, which was discussed at an annual shareholders meeting on May 28, ExxonMobil noted that XTO's Bakken gross-operated production increased 81 percent in 2013 to more than 59,000 barrels of oil equivalent, boe, per day. This was driven by a record of 110 wells brought on production, as well as improved well performance, and the purchase of 190,000 acres in late 2012 — what ExxonMobil described as "an opportunistic acquisition."

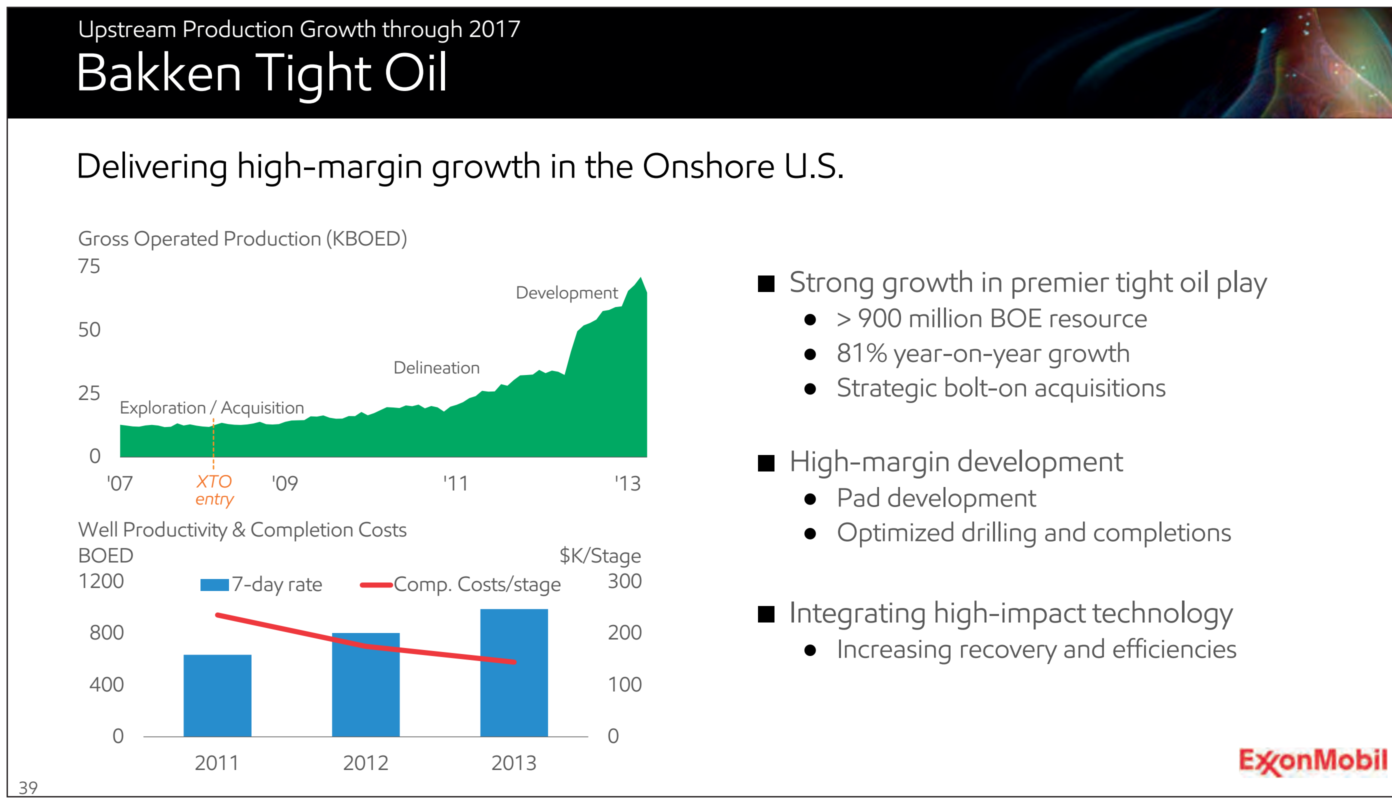
"In addition to increasing our production and acreage by roughly 50 percent, the quality of the acreage and location close to our core operations enabled us to highgrade the drilling inventory and seamlessly integrate the acquired properties," the report states. "Moreover, we were able to add the properties at an attractive price since part of the transaction involved trading non-core legacy ExxonMobil properties to the seller. This provides a prime example of how the integration of XTO and ExxonMobil enhances shareholder value, and of our disciplined investment approach."

A powerful duo

XTO Energy entered the Bakken in 2008 and was acquired by ExxonMobil shortly thereafter. Since then, operated production is up fivefold, the company said, and the Bakken resource now exceeds more than 900 million net boe (see slide).

"By applying our unconventional expertise to leasehold covering nearly 570,000 acres and leveraging our world-class research organization, we are expanding the resource base and delivering strong, high-margin production growth," the report said.

ExxonMobil has been deploying XTO's fracturing expertise to speed development in the Bakken. The two entities have spent several years analyzing geology and technology to optimize drilling and completions. Production rates indicate that XTO is forging ahead and poised to be a major player.



"We are now completing multiple pad-based wells in geological sweet spots and have significantly increased the number of stimulation stages in the horizontal laterals," ExxonMobil said in the report. "In order to optimize productivity, the Bakken completion 'recipe' is being continuously adjusted based on several factors, including the number of stages, varying stage length, the sand volume used in each stimulation, the liquid volume and rate, and the proppant type."

The numbers continue to improve

Peak 30-day production rates on new Bakken wells increased 22 percent last year, and ExxonMobil cut drilling time by 28 percent per well since 2011. It also achieved a 25 percent drop in the total costs to drill and complete a well over the past two years. The company also touted its progression of infrastructure development. In 2013, ExxonMobil completed a major upgrade to its gas gathering facilities in the Nesson area to increase value from liquids-rich gas, in addition to reducing flaring. The company said more transportation and gathering initiatives are also under way in the Little Missouri and Fort Berthold areas.

Teaming up to capitalize on the data

XTO's strong acreage position and operational expertise coupled with ExxonMobil's research capabilities are opening doors for testing new technology in the Bakken and enhancing efficiencies.

"This partnership forms an important part of the future development strategy of the Middle Bakken and Three Forks reservoirs in the Williston Basin," said ExxonMobil's report. It goes on to say that ultimately, its geoscience and engineering teams will analyze massive amounts of data to allow the operator to apply the best techniques that will make the biggest impact.

In fact, initial field tests are being performed on pilot wells to evaluate the optimal lateral spacing and the potential recovery that lies within the lower benches of the Three Forks. ExxonMobil is also trying out a new completion technology. In traditional hydraulic fracturing, the process requires

see EXXON PRESENCE page 7

● DRILLING & COMPLETION

Montana considers permanent UBS DSUs

Slawson Exploration also looking at Dawson Bay formation; other operators continue Elm Coulee, Elm Coulee Northeast development

By **MIKE ELLERD**

Petroleum News Bakken

Among the operators filing oil and gas activity applications that the Montana Board of Oil and Gas Conservation will consider in hearings scheduled for June 19 in Sidney is Slawson Exploration Company Inc., SECI, which is seeking permanent status for six 640-acre and one 1,280-acre Richland County drill spacing units, DSUs, in the Elm Coulee field. Under Montana rules, spacing units are initially created with temporary status for initial drilling, but for ongoing production the status of units must be changed to permanent. On each of those DSUs, SECI has one or more wells producing from the upper Bakken shale.

On six of the 640s, SECI has one upper Bakken shale well each and two on the seventh. Six of those seven wells are single laterals and one is a dual lateral. The first of those seven wells went on production in April 2012, and the last, the dual-lateral well, went on production in May 2013. Through April those wells have produced between 262 and 489 days with average daily production ranging from 14 to 87 barrels per day. Collectively, those six wells have produced 143,302 barrels over a total of 2,820 days on production for an average of 51 bpd as of April 30.

In addition, SECI's seven upper Bakken shale wells had average daily natural gas production ranging from approximately 6 thousand to 7 thousand cubic feet, mcf, of natural gas per day and had overall water cuts ranging from 48 percent for a well that went online in December 2012 to 71 percent for the dual-lateral well.

Data on the board's website are limited for the well on the 1,280 that SECI wants made permanent. However, it is known to be a Bakken formation well that went on production in December 2013 and through April produced for 122 days averaging 12 bpd of oil, approximately 5 mcf of gas per day and a water cut of 54 percent.

SECI also filed applications asking the board to create three temporary 640-acre DSUs in north-central Dawson County and authorize the drilling of one horizontal Dawson Bay formation well on each. The Dawson Bay is a Devonian formation which lies below the Three Forks, Nisku, Duperow and Souris River formations in that area of Dawson County.

XTO in Elm Coulee

ExxonMobil subsidiary XTO Energy filed applications asking for the creation of four overlapping 2,560-acre spacing units along with applications to amend spacing unit orders to allow XTO to drill one Bakken/Three Forks well on each of three existing permanent 1,280-acre units and one temporary overlapping 2,560-acre unit, all in the Elm Coulee field in Richland County.

In addition, XTO wants permanent status for a temporary 1,280 on which it has two producing wells, also in the Elm Coulee field. Those two wells began producing in February, and through April had produced for 49 and 64 days with an average oil output of 484 and 276 bpd and average gas output of 562 mcf and 335 mcf per day, respectively, according to data on the board's website. Those two wells have water cuts of 51 and 57 percent.

XTO is also seeking authorization to drill up to two additional Bakken/Three Forks wells on a permanent DSU, also in the Elm Coulee field. XTO has two existing wells on that spacing unit. Both are dual-lateral, middle Bakken wells originally drilled by Westport Oil and Gas that went on production in March and July 2005. Through April, the first well averaged 63 bpd of oil and 48 mcf of gas per day with a 7 percent water cut. The second well averaged 89 bpd of oil 57 mcf of gas per day with a water cut of 8 percent.

Elm Coulee Northeast

Oasis Petroleum is seeking permanent status for three 1,280-acre units in Elm Coulee Northeast field in Roosevelt County. Production data for one of the wells is not yet available, but the other two are Bakken formation wells that went on production in January and February and have averaged 338 and 301 bpd of oil and 231 mcf and 210 mcf of gas per day after 83 and 77 days on production respectively. The two wells have overall water cuts of 62 and 61 percent, respectively. In addition, Oasis is seeking authorization to drill up to six additional horizontal Bakken/Three Forks wells on each of those three 1,280-acre spacing units.

Statoil Oil and Gas is seeking permanent status for a 1,280-acre DSU in the Elm Coulee Northeast field in Roosevelt County where it has one producing middle Bakken well. That well went on production in October 2013 and through February was on production for 71 days averaging 316 bpd of oil and 333 mcf of gas per day with a water cut of 83 percent. Statoil is also seeking authorization to drill up four more Bakken/Three Forks wells on that spacing unit.

EOG Resources filed applications asking for permanent status for a temporary Elm Coulee Northeast 1,280-acre spacing unit in Roosevelt County where the company has one producing well. That well went on production in July 2013 and through April had been on production for 269 days averaging 232 bpd of oil and 143 mcf of gas per day with a 71 percent water cut. EOG also filed an application seeking authorization to drill an additional Bakken/Three Forks well on the spacing unit.

Other Richland County activity

Emerald Oil is beginning to develop its Montana assets and is asking the board to create two 1,280-acre spacing units and partially vacate existing spacing unit orders and create four temporary 1,920-acre units and to drill one horizontal Bakken/Three Forks well on each, all in Richland County. Emerald is also seeking authorization to drill a Bakken/Three Forks well on an existing temporary 1,280-unit, also in Richland County.

Whiting Oil and Gas is asking that the board amend current orders to authorize the drilling of up to four horizontal Bakken/Three Forks wells on each of two 1,280-acre spacing units in Richland County.

True Oil is also asking that the board amend a current order to allow the drilling of one horizontal Bakken/Three Forks well on an a temporary spacing unit in Richland County. True is also seeking authorization from the board to drill up to three horizontal wells in a neighboring 1,280-acre DSU.

Sheridan County EOR Pilot

In Sheridan County in the northeast corner of Montana, TAQA North USA is seeking approval from the board to conduct an 18-month enhanced oil recovery pilot project in the Bakken formation. TAQA filed two applications, one for approval of the pilot project and a second seeking authorization to convert an existing horizontal Bakken well that runs under the spacing unit into an EOR well.

TAQA has six registered wells on the spacing unit designated for the pilot test: one producing and two shut-in Ratcliffe formation wells, one abandoned Ratcliffe EOR well, one shut-in Nisku formation well, and one producing Bakken formation well. The Bakken well went on production in November 2012 and through March had been on production for 652 days averaging 57 bpd of oil and 26 mcf of gas per day with an 87 percent overall water cut. ●

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● COMPANY UPDATE

Focusing on high quality drill inventory

Abraxas to add Bakken drill locations if 660-ft spacing pans out; looking for bolt-ons to bolster 'predictable growth profile'

By STEVE SUTHERLIN
For Petroleum News Bakken

In 2014 and going forward Abraxas will focus on high quality drilling inventory, adding individual units on the Bakken and Eagle Ford in specific geological areas, it said. By doing so, it will achieve a "better match of cash flow to capex and subsequent returns;" its goal is to present a "visible and predictable growth profile."

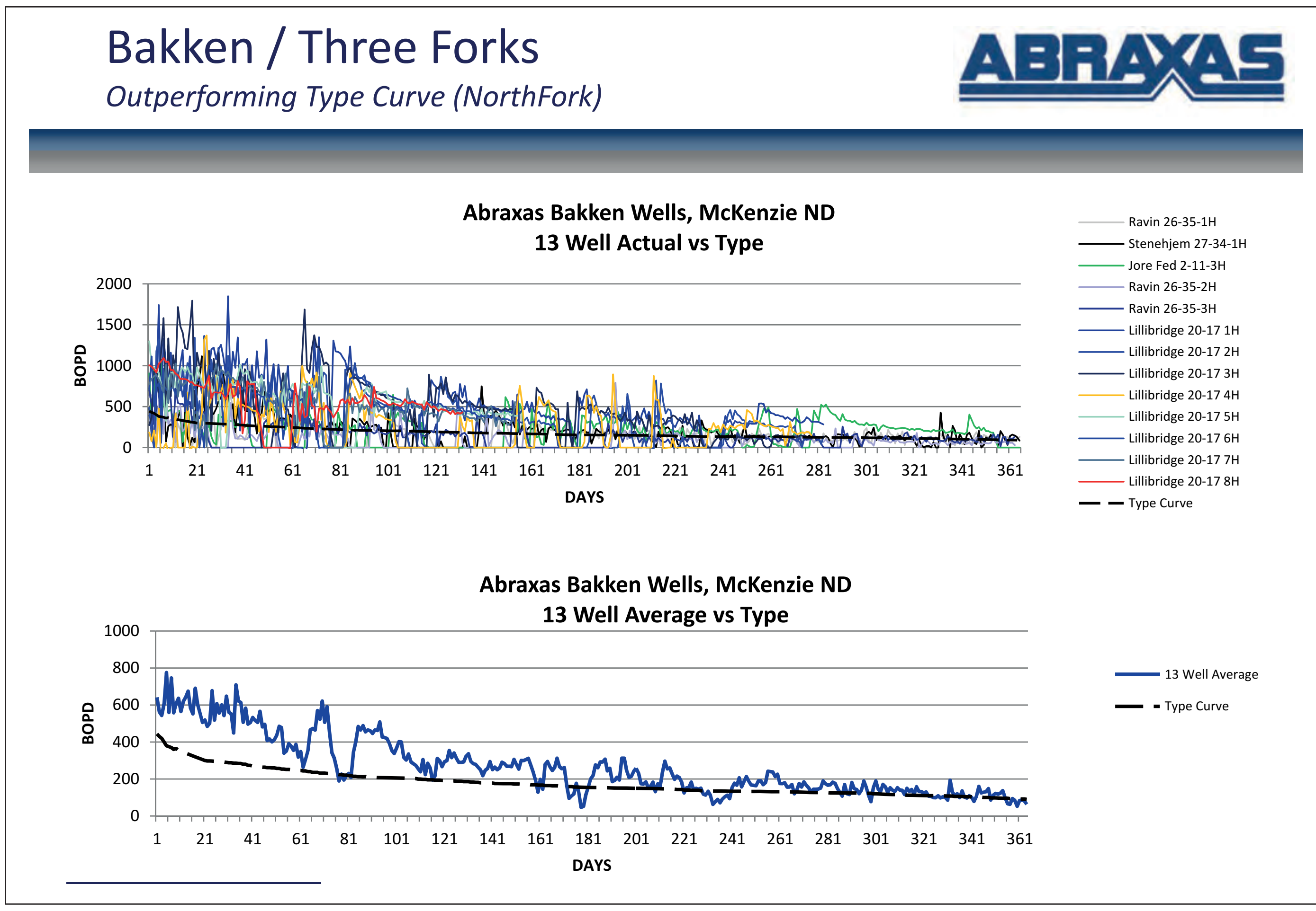
In the Bakken, Abraxas holds a very small but targeted acreage position that is all held by production, Bob Watson, Abraxas president and CEO, said June 5 at the IPAA OGIS Toronto.

At its North Fork area in McKenzie County, North Dakota, Abraxas has eight completed wells, four wells drilling, and 17 wells yet to drill on current spacing. There is a potential to drill 23 additional locations if downspacing proves successful. North Fork produced 268 barrels of oil equivalent per day average production net to Abraxas for the month of March.

At the Pershing Field in the Lillibridge area, also in McKenzie County, there were eight new completions and one well yet to drill on current spacing. Abraxas will spud a potential eight new locations if downspacing is successful.

If downspacing is successful, Watson said, "This gives us about five more years' inventory."

The East pad and the West pad are on production, and produced 1,061 boepd net to Abraxas in March.



"On the Ravin West pad, Abraxas cased the laterals of the Ravin 4H and Ravin 5H," the company said. "Abraxas recently reached TD on the lateral of the Ravin 6H at 20,793 feet."

Following casing of the lateral of the Ravin 6H, the company will drill the lateral of the Ravin 7H.

The Jore 1H, 2H and 4H were successfully completed with a combined 99 stages, the company said.

"In the Bakken, the early performance of the Jore wells has been quite encouraging," Watson said.

"We just fracked three wells in the southeastern corner of this block; those wells are flowing back as we speak," he said. "We are experiencing a very wonderful amount of flush production out of them; they just went on production in

see **DRILL INVENTORY** page 13

continued from page 5

EXXON PRESENCE

setting dozens of plugs in the well to enhance production. The company's new proprietary technology is designed to eliminate the need for these plugs, reducing well cost and the time it takes to recover oil from the formation. Due to these efficiencies, ExxonMobil continues to lead its peer group with earnings of $32.6 billion in 2013.

ExxonMobil's 2040 outlook

The company also highlighted some key components of its energy outlook for its shareholders. ExxonMobil noted that global energy demand is expected to grow about 35 percent by 2040. Among the numerous energy sources, the company indicated the rapidly emerging source of tight oil is projected to rise by more than 1,000 percent from 2010 to 2040, when it will account for 5 percent of global liquids production. This production will be led by plays in North America, to include the Bakken, followed by Russia, the company said.

"To put this in perspective with OPEC producers, North American tight oil supply in 2015 will likely surpass any other OPEC nation's current oil production — with the exception of Saudi Arabia," the report said.

While oil will remain the top energy source and transportation fuel, ExxonMobil predicts that natural gas will contribute the biggest growth in energy supplies. With abundant resources unlocked by greater technology advancements, the report said natural gas will become an essential aspect of global energy with demand rising by about 65 percent.

ExxonMobil Vice President Ken Cohen told attendees of an outlook conference in February that meeting the world's energy needs will require a broad and flexible mix of sources, including oil, natural gas, coal and other renewable resources.

"The significant growth in affordable, cleaner-burning natural gas will help reduce emissions," Cohen said. "And international energy trade backed by sound public policy will help to secure and sustain energy production and supply around the world." ●

Contact Maxine Herr at maxine606@msn.com

● COMPANY UPDATE

Samson Resources testing new spacing

Two well spacing concept pad at Bonneville area reports first sales in April; looking for bolt-on acquisitions; divesting non-core assets

By STEVE SUTHERLIN
For Petroleum News Bakken

Tulsa-based independent Samson Resources is evaluating new spacing and completion techniques in its Williston Basin acreage in 2014, the company said in a presentation to the Bank of America Merrill Lynch Leveraged Finance Conference in early June.

The company's Bonneville 5/7 two-well pad in Divide County was designed to test a new spacing concept, Samson Resources said. Bonneville is in production, with first sales reported in April.

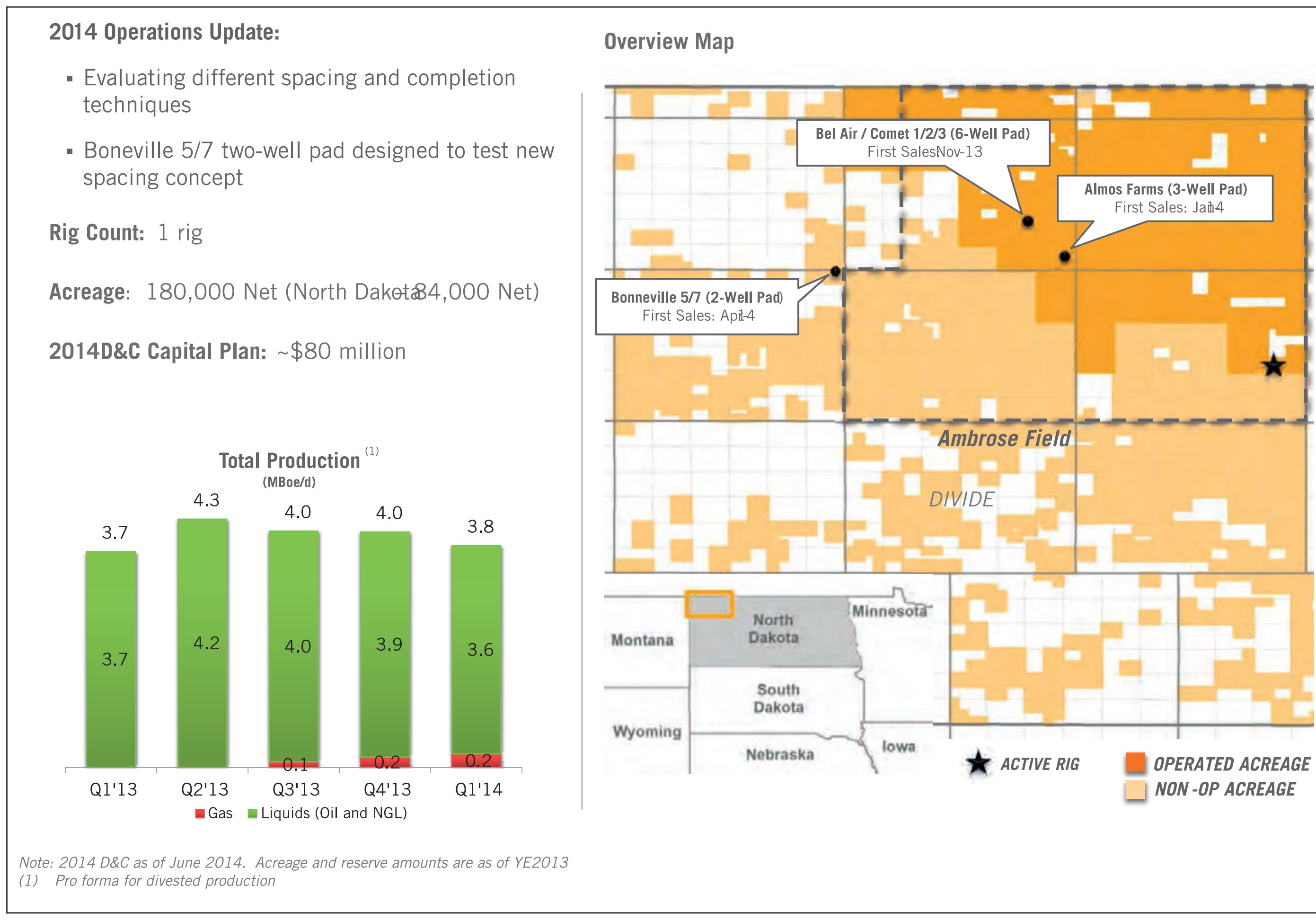
Samson Resources said it is on the alert for bolt-on acquisitions in all seven of its business units in the Rockies and Midcontinent, but it will divest non-core assets with a goal to raise $200 million from asset sales in 2014.

The company currently holds approximately 2 million acres, of which 180,000 acres are in the Williston Basin.

Samson Resources trimmed its drilling and completion budget for the Williston Basin from $85 million to approximately $80 million out of a total D&C capital plan of $310 million for 2014.

The company is getting more bang for the buck in its Williston operations, however.

In a February investor presentation, the company indicated the average number of days from spud to total depth for its Bakken wells decreased from 20 to 12, and the average spud-to-depth cost for Bakken wells went from $190 per foot in 2012 to $124 per foot in 2013. The decreases mark efficiency gains of 40 and 35 percent.



Q1 production falls

Samson Resources said in first quarter 2014 it produced 3,800 barrels of oil equivalent per day in the Williston Basin, down from 4,000 boe per day in third quarter 2013, but up from its Q1 2013 production of 3,700 boe per day.

Company-wide, first quarter 2014 production was 529 million cubic feet equivalent per day, down 2.5 percent quarter over quarter, while total liquids production rose 200 barrels per day to 26,500 bpd for a 30 percent liquids mix. Of that, Williston Basin operations contributed 23 million cubic feet equivalent per day.

see **SAMSON SPACING** page 13

Petroleum News Bakken **BAKKEN Stats**

● BAKKEN COMMENTARY

Dunn County wells dominate week's Top 10 IP list

MIKE ELLERD

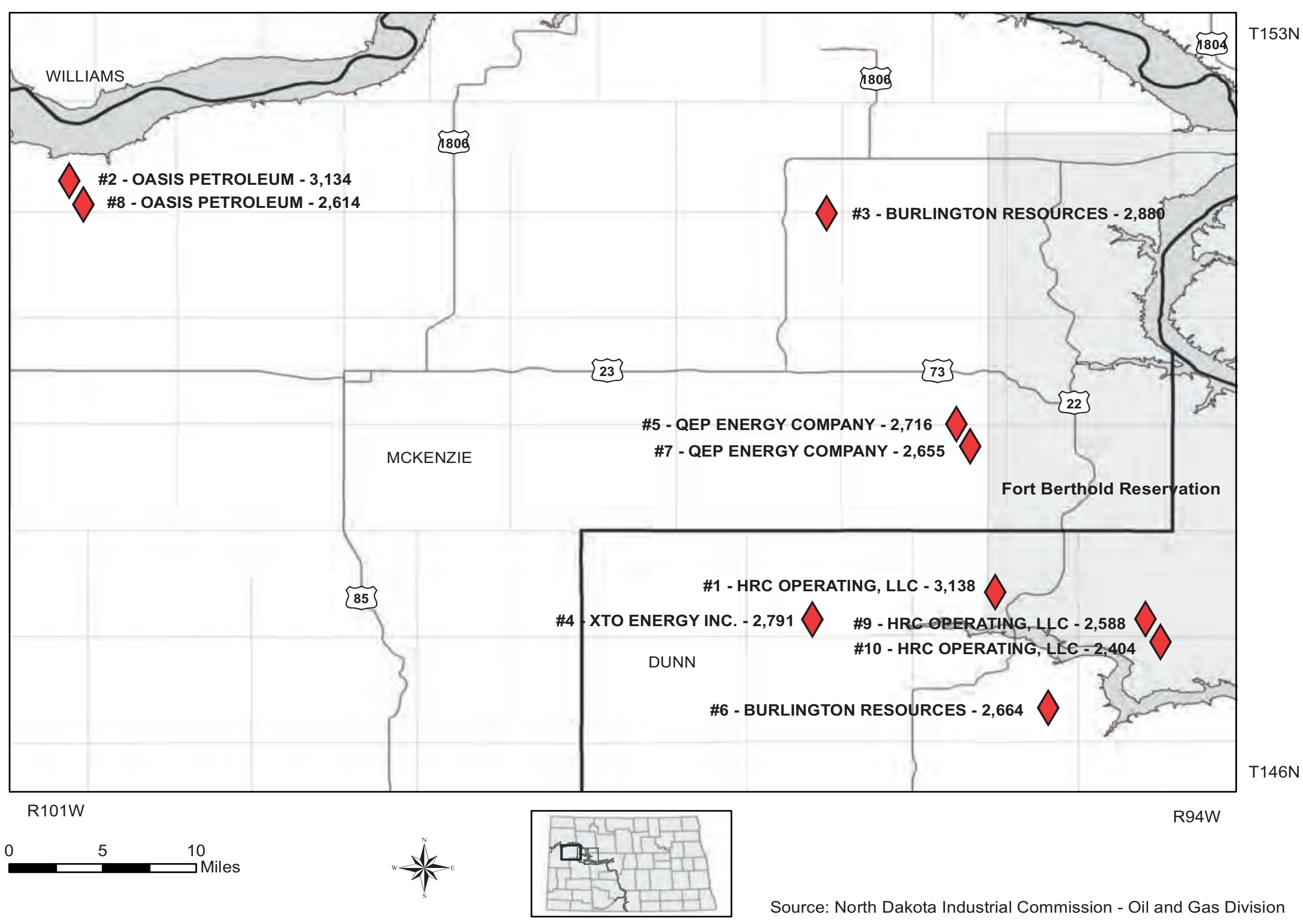
Petroleum News Bakken

A Halcon (HRC) well in the Eagle Nest field in Dunn County topped the week's Top 10 IP list with an initial 24-hour production of 3,138 barrels (32 percent water cut based oil and water). Halcon had two other Dunn County wells on the list in the 9 and 10 spots with IPs of 2,588 and 2,404 barrels (water cuts of 39 percent each), both in the McGregory Buttes field. Additionally, two other Dunn County wells made the IP list for the week: an XTO Cedar Coulee well in fourth place at 2,791 barrels (22 percent water cut); and a Burlington Corral Creek field well in sixth place at 2,644 barrels (9 percent water cut).

In the second spot for the week was an Oasis well in the Camp field in McKenzie County with an IP of 3,134 barrels (38 percent water cut), just four barrels behind Halcon's top well. Another Oasis Camp field well was eighth at 2,614 barrels (28 percent water cut). Burlington also had the No. 3 IP with a McKenzie County well in the Clear Creek field at 2,880 barrels (23 percent water cut). QEP held the Nos. 5 and 7 spots with two Grail field wells in McKenzie County at 2,716 and 2,655 barrels (water cuts of 37 and 40 percent).

Initial 24-hour production data were available for a total of 80 North Dakota wells between June 3 and 9. Those IPs ranged from the high of 3,138 barrels to a low of 30 barrels with an overall average of 1,410 barrels and an average water cut of 46 percent.

Top 10 ND Bakken Wells by IP, June 3 - 9



Source: North Dakota Industrial Commission - Oil and Gas Division

North Dakota permitting

A total of 55 North Dakota oil well permits were issued between June 3 and 9, most of which, 24, were in McKenzie County and were issued to Continental (8), Hess (8), Oasis (5) Newfield (1), XTO (1) and Zavanna (1). In Dunn County, 11 permits were issued to XTO (7), Hess (2), North Plains Energy (1) and Petro-Hunt (1). Nine permits were issued in Mountrail County to EOG Resources (3), Hess (3), Petrogulf (1) and Whiting (1). Seven permits were issued in Williams County going to Kodiak (4), XTO (3), Continental (2) and Gadeco (2). Three permits were issued in Divide County with one each going to American Eagle, Hunt Oil and North Plains. And in Renville County a permit was issued to Roff Operating. ●

Petroleum News Bakken

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

Petroleum News Bakken

Bakken producers' stock prices

Closing prices as of June 11 along with those from previous Wednesday

Company	Exchange	Symbol	June 11	June 4	May 28
Abraxas Petroleum Corporation	NASDAQ	AXAS	$5.14	$4.65	$5.10
American Eagle Energy Corporation	NYSE	AMZG	$6.58	$6.20	$6.02
Arsenal Energy USA, Inc.	TSE	AEI	$8.25	$8.10	$7.76
Baytex Energy USA Ltd	NYSE	BTE	$43.74	$41.84	$41.68
Burlington Resources Co., LP (ConocoPhillips)	NYSE	COP	$81.95	$79.80	$79.57
Continental Resources, Inc.	NYSE	CLR	$148.00	$142.87	$139.02
Crescent Point Energy US Corporation	TSE	CPG	$44.76	$44.42	$44.11
Denbury Onshore, LLC	NYSE	DNR	$17.33	$16.80	$16.78
Emerald Oil, Inc.	NYSEMKT	EOX	$6.42	$6.14	$6.61
Enerplus Resources USA Corporation	NYSE	ERF	$23.26	$23.44	$22.28
EOG Resources, Inc.	N YSE	EOG	$110.70	$106.37	$105.19
Fidelity Exploration & Production (MDU)	NYSE	MDU	$32.84	$33.64	$33.99
Halcon Resources	NYSE	HK	$6.41	$6.05	$6.04
Hess Corporation	NYSE	HES	$95.31	$92.31	$89.97
Kodiak Oil and Gas (USA), Inc.	NYSE	KOG	$13.41	$12.87	$12.47
Legacy Reserves Operating LP	NASDAQ	LGCY	$29.42	$29.28	$28.95
Marathon Oil Company	NYSE	MRO	$38.48	$36.66	$36.55
Mountain Divide, LLC (Mountainview Energy)	CVE	MVW.V	$0.47	$0.43	$0.45
Newfield Production Company	NYSE	NFX	$38.93	$36.65	$35.95
Northern Oil and Gas	NYSE	NOG	$15.36	$15.08	$15.34
Oasis Petroleum North America	NYSE	OAS	$51.06	$50.35	$49.33
Oxy USA, Inc. (Occidental Petroleum)	NYSE	OXY	$99.89	$100.16	$99.05
PetroShale Inc.	CVE	PSH	$1.30	$1.30	$1.32
QEP Energy Company	NYSE	QEP	$31.66	$31.47	$31.50
Resolute Natural Resources Company, LLC	NYSE	REN	$8.47	$8.24	$8.23
Samson Resources Company (KKR & Co)	NYSE	KKR	$24.17	$23.64	$22.91
SM Energy Company	NYSE	SM	$76.22	$74.99	$76.66
Statoil Oil and Gas LP	NYSE	STO	$30.53	$30.24	$30.65
Triangle USA Petroleum Corporation	NYSE	TPLM	$10.72	$9.78	$10.36
Whiting Oil and Gas Corporation	NYSE	WLL	$76.96	$73.92	$71.52
WPX Energy Williston, LLC	NYSE	WPX	$21.81	$21.15	$21.42
XTO Energy, Inc. (ExxonMobil)	NYSE	XOM	$101.95	$100.04	$101.06

**Note – Our apologies. The stock price chart did not make the June 1 issue of Petroleum News Bakken. To make up for it we have included both the current chart and the missed week.*

Petroleum News Bakken

IPs for ND Bakken wells

June 3—9, 2014

This chart contains initial production rates, or IPs, for active wells that were filed as completed with the state of North Dakota from June 3-9, 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, June 3-9. 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 stands for initial production, in this chart it's the first 24 hours); IP oil flow rate (barrels); IP natural gas (thousands of cubic feet, mcf); IP water (barrels)

IPs for completed North Dakota wells

American Eagle Energy
26080; Braelynne 2-2N-163-101; Colgan; LOT2 2-163-101; 2SEC; Divide; Bakken; horizontal; 14,290; 4/26/14; 77 bbl; 14 mcf; 323 bbl

Burlington Resources Oil and Gas (ConocoPhillips)
25828; Rising Sun 21-1MBH-5NH; Clear Creek; LOT3 1-151-96; 4SEC; McKenzie; Bakken; horizontal; 20,675; 5/22/14; 2,880 bbl; 4,305 mcf; 840 bbl

Continental Resources
26404; Annapolis 3-29H; Dollar Joe; NESW 20-155-97; 4SEC; Williams; Bakken; horizontal; 22,970; 4/28/14; 1,602 bbl; 1,895 mcf; 990 bbl
24804; Wahpeton 14-16H2; Banks; NWNE 16-152-99; 2SEC; McKenzie; Bakken; horizontal; 21,050; 5/19/14; 1,031 bbl; 528 mcf; 372 bbl

Cornerstone Natural Resources
25995; Anderson B-2413-6191; Clayton; SESW 24-161-91; 2SEC; Burke; Bakken; horizontal; 17,620; 5/6/14; 642 bbl; 789 mcf; 1,896 bbl
26033; Hinds C-0631-6190; N.E. Foothills; SWSE 6-161-90; 2SEC; Burke; Bakken; horizontal; 17,306; 4/26/14; 626 bbl; 708 mcf; 2,075 bbl

Hess Bakken Investments II
25701; AN-Evenson 152-95-0310H-2; Antelope; LOT3 3-152-95; 2SEC; McKenzie; Sanish; horizontal; N/A; N/A; N/A; N/A; N/A
26074; BL-Iverson 155-95-1819H-2; Beaver Lodge; NWNE 18-155-95; 2SEC; Williams; Bakken; horizontal; 19,863; 5/19/14; 879 bbl; 1,119 mcf; 192 bbl
26073; BL-Iverson 155-95-1819H-3; Beaver Lodge; NWNE 18-155-95; 2SEC; Williams; Bakken; horizontal; 19,664; 4/25/14; 948 bbl; 1,517 mcf; 464 bbl
26072; BL-Iverson 155-95-1819H-4; Beaver Lodge; NWNE 18-155-95; 2SEC; Williams; Bakken; horizontal; 19,125; 4/18/14; 928 bbl; 1,424 mcf; 328 bbl
26572; BW-Sharon- 150-100-2536H-4; Timber Creek; NWNE 25-150-100; 2SEC; McKenzie; Bakken; horizontal; 20,427; 4/28/14; 881 bbl; 1,376 mcf; 361 bbl
26672; BW-Sharon- 2560-150-100-2536-3031H-1; S. Tobacco Garden; NWNE 25-150-100; 4SEC; McKenzie; Bakken; horizontal; 21,266; 4/11/14; 907 bbl; 1,386 mcf; 434 bbl
26113; EN-Chamley 156-93-0508H-3; Baskin; NENW 5-156-93 ; 2SEC; Mountrail; Bakken; horizontal; 21,575; 4/24/14; 598 bbl; 454; 191 bbl
26114; EN-Chamley 156-93-0508H-4; Baskin; NENW 5-156-93 ; 2SEC; Mountrail; Bakken; horizontal; 21,025; 5/6/14; 836 bbl; 658; 185 bbl
25787; EN-Cvancara A-155-93-3231H-5; Robinson Lake; SENE 32-155-93; 4SEC; Mountrail; Bakken; horizontal; 19,745; 4/23/14; 758 bbl; 587; 354 bbl
25985; EN-Frandson- 154-93-2116H-4; Robinson Lake; SWSE 21-154-93; 2SEC; Mountrail; Bakken; horizontal; 19,975; 5/5/14; 572 bbl; 490; 320 bbl
25987; EN-Frandson- 154-93-2116H-6; Robinson Lake; SWSE 21-154-93; 2SEC; Mountrail; Bakken; horizontal; 19,950; 4/30/14; 1,350 bbl; 1,369; 546 bbl
22687; EN-Jeffrey-155-94- 2215H-1; Alkali Creek; SWSE 22-155-94; 4SEC; Mountrail; Bakken; horizontal; 19,592; 4/29/14; 1,107 bbl; 864 mcf; 2 bbl
26718; EN-State C- 156-93-1615H-4; Alger; NWSW 16-156-93; 4SEC; Mountrail; Bakken; horizontal; 20,796; 5/16/14; 648 bbl; 520 mcf; 0 bbl
26013; HA-Chapin 152-95-3229H-3; Hawkeye; SWSE 32-152-95; 2SEC; McKenzie; Bakken; horizontal; 20,250; 4/27/14; 997 bbl; 1,690 mcf; 209 bbl
26012; HA-Chapin 152-95-3229H-4; Hawkeye; SWSE 32-152-95; 2SEC; McKenzie; Bakken; horizontal; 20,496; 5/3/14; 1,320 bbl; 2,273 mcf; 118 bbl
26011; HA-Chapin 152-95-3229H-5; Hawkeye; SWSE 32-152-95; 2SEC; McKenzie; Bakken; horizontal; 20,874; 5/15/14; 1,165 bbl; 1,307 mcf; 188 bbl
26171; SC-4WX- 153-98-3130H-1; Banks; LOT2 3-152-99; 2SEC; McKenzie; Bakken; horizontal; 21,223; 5/13/14; 1,299 bbl; 1,879 mcf; 332 bbl

HRC Operating (Halcon Resources)
24272; Fort Berthold 147-94-3B-10-3H; McGregory Buttes; NENW 3-147-94; 2SEC; Dunn; Bakken; horizontal; 20,421; 4/28/14; 2,588 bbl; 2,464 mcf; 1,652 bbl
24271; Fort Berthold 147-94-3B-10-4H; McGregory Buttes; NENW 3-147-94; 2SEC; Dunn; Bakken; horizontal; 20,471; 4/25/14; 2,376 bbl; 2,200 mcf; 1,813 bbl
25801; Fort Berthold 147-94-3B-10-7H; McGregory Buttes; NENW 3-147-94; 2SEC; Dunn; Bakken; horizontal; 20,715; 4/26/14; 2,404 bbl; 2,263 mcf; 1,547 bbl
26323; Fort Berthold 148-95-22C-15-9H; Eagle Nest; NENW 27-148-95; 2SEC; Dunn; Bakken; horizontal; 21,334; 4/20/14; 3,138 bbl; 3,102 mcf; 1,470 bbl

Kodiak Oil and Gas
25535; P Thomas 154-98-14-33-4H; Truax; SESW 33-154-98; 2SEC; Williams; Bakken; horizontal; 20,915; 5/5/2014; 2,083 bbl; 3,576 mcf; 3,263 bbl

Marathon Oil
26660; JWC 44-34H; Reunion Bay; SESE 34-151-93; 4SEC; Mountrail; Bakken; horizontal; 20,140; 5/9/14; 2,240 bbl; 1,923 mcf; 1,649 bbl
26018; Young 24-23TFH; Chimney Butte; SWSE 23-146-95; 2SEC; Dunn; Bakken; horizontal; 20,782; 4/25/14; 30 bbl; 3 mcf; 0 bbl

Mountain Divide (Mountainview Energy)
26401; Jack Cvancara 19-18 6H; Alger; SESW 19-155-92; 2SEC; Mountrail; Bakken; horizontal; 20,027; 4/16/14; 2,154 bbl; 1,550 mcf; 4,676 bbl
27071; Jack Cvancara 19-18 7TFH; Alger; SESW 19-155-92; 2SEC; Mountrail; Bakken; horizontal; 20,245; 4/20/14; 1,831 bbl; 1,120 mcf; 3,497 bbl

Oxy USA (Occidental Petroleum)
25604; Delvin Dukart 2-31-30H-143-95; Manning; SESW 31-143-95; 2SEC; Dunn; Bakken; horizontal; 20,327; 4/10/14; 883 bbl; 435 mcf; 2,851 bbl

Petro-Hunt
26675; Burian 144-98-14A-23-1H; Little Knife; NWNE 14-144-98; 2SEC; Billings; Bakken; horizontal; 21,098; 5/13/14; 1,684 bbl; 1,439 mcf; 441 bbl
25964; Syverson 156-99-30A-31-2H; East Fork; NENE 30-156-99; 2SEC; Williams; Bakken; horizontal; 20,690; 5/25/14; 349 bbl; 1,431 mcf; 1,920 bbl
26098; Syverson 156-99-30A-31-4H; East Fork; NWNW 30-156-99; 2SEC; Williams; Bakken; horizontal; 20,656; 5/6/14; 1,612 bbl; 880 mcf; 2,406 bbl

Statoil Oil and Gas
26655; Ross-Alger 6-7 6H; Alger; LOT4 31-156-92; 2SEC; Mountrail; Bakken; horizontal; 20,555; 5/7/14; 1,652 bbl; 1,189 mcf; 4,571 bbl
26971; Ross-Alger 6-7 7TFH-R; Alger; LOT4 31-156-92; 2SEC; Mountrail; Bakken; horizontal; 20,484; 5/9/14; 1,016 bbl; 652 mcf; 4,236 bbl

Triangle USA Petroleum
26694; Gustafson 148-100-5-8-2H; Buffalo Wallow; LOT1 5-148-100; 2SEC; McKenzie; Bakken; horizontal; 20,358; 5/10/14; 552 bbl; 821 mcf; 1,011 bbl
26695; Gustafson 148-100-5-8-3H; Buffalo Wallow; LOT1 5-148-100; 2SEC; McKenzie; Bakken; horizontal; 20,517; 5/10/14; 550 bbl; 405 mcf; 987 bbl
26075; Sanders 150-100-9-10-1H; Sandrocks; NWSW 9-150-100; 2SEC; McKenzie; Bakken; horizontal; 20,804; 5/10/14; 476 bbl; 1,238 mcf; 238 bbl
26321; Sanders 150-100-9-10-2H; Sandrocks; NWSW 9-150-100; 2SEC; McKenzie; Bakken; horizontal; 20,893; 5/10/14; 580 bbl; 1,169 mcf; 266 bbl

XTO Energy (ExxonMobil)
26314; Kanyer 11X-15A; Grinnell; NWNW 15-154-97; 2SEC; Williams; Bakken; horizontal; 20,454; 4/28/14; 1,423; 4,253; 1,872
26315; Kanyer 11X-15E; Grinnell; NWNW 15-154-97; 2SEC; Williams; Bakken; horizontal; 20,215; 5/5/14; 1,107; 2,629; 1,405
26312; Kanyer Federal 11X-15B; Grinnell; NWNW 15-154-97; 2SEC; Williams; Bakken; horizontal; 20,732; 5/12/14; 1,350; 2,595; 1,628
26313; Kanyer Federal 11X-15F; Grinnell; NWNW 15-154-97; 2SEC; Williams; Bakken; horizontal; 20,866; 5/10/14; 681; 1,061; 1,502
25333; Martin Federal 21X-33A; Cedar Coulee; NENW 33-148-96; 2SEC; Dunn; Bakken; horizontal; 21,203; 4/21/14; 2,791; 2,373; 820
25334; Martin Federal 21X-33F; Cedar Coulee; NENW 33-148-96; 2SEC; Dunn; Bakken; horizontal; 20,660; 4/10/14; 2,212; 2,195; 668

Top 10 Bakken wells by IP rate

HRC Operating (Halcon Resources)
26323; Fort Berthold 148-95-22C-15-9H; Eagle Nest; Dunn; 3,138 bbl

Oasis Petroleum North America
25577; Ida 5200 21-28B; Camp; McKenzie; 3,134 bbl

Burlington Resources Oil and Gas (ConocoPhillips)
25828; Rising Sun 21-1MBH-5NH; Clear Creek; McKenzie; 2,880 bbl

XTO Energy (ExxonMobil)
25333; Martin Federal 21X-33A; Cedar Coulee; Dunn; 2,791 bbl

QEP Energy
25860; Zorro 4-35-26BH; Grail; McKenzie; 2,716 bbl

Burlington Resources Oil and Gas (ConocoPhillips)
26680; CCU Burner 41-26MBH; Corral Creek; Dunn; 2,664 bbl

QEP Energy
25861; Zorro 3-35-26BH; Grail; McKenzie; 2,655 bbl

Oasis Petroleum North America
25393; Augusta 5200 11-28B; Camp; McKenzie; 2,614 bbl

HRC Operating (Halcon Resources)
24272; Fort Berthold 147-94-3B-10-3H; McGregory Buttes; Dunn; 2,588 bbl
25801; Fort Berthold 147-94-3B-10-7H; McGregory Buttes; Dunn; 2,404 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 June 3-9, 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.

IPs for ND wells released from confidential status

Burlington Resources Oil and Gas (ConocoPhillips)
26680; CCU Burner 41-26MBH; Corral Creek; NENE 26-147-95; U; Dunn; Bakken; horizontal; 21,790; 4/2/14; 2,664; 2,689; 254
26679; CCU Burner 41-26TFH; Corral Creek; NENE 26-147-95; U; Dunn; Bakken; horizontal; 21,886; 3/26/14; 1,776; 1,472; 264
26681; CCU North Coast 11-25TFH; Corral Creek; NENE 26-147-95; U; Dunn; Bakken; horizontal; 21,897; 5/8/14; 1,844; 2,084; 248

Continental Resources
26880; Lawrence 6-24H1; North Tioga; NENW 25-159-95; N/A; Williams; Bakken; horizontal; N/A; N/A; N/A; N/A; N/A
26629; Mack 12-2H2; Antelope; LOT3 2-152-94 ; N/A; McKenzie; Bakken; horizontal; N/A; N/A; N/A; N/A; N/A
23013; Sacramento Federal 4-10H; Brooklyn; SESE 10-155-98; 2SEC; Williams; Bakken; horizontal; 21,110; 4/11/14; 876; 1,189; 1,060

Emerald Oil
26271; Pirate 6-2-11H; Foreman Butte; LOT1 2-149-102; 2SEC; McKenzie; Bakken; horizontal; 20,829; 12/6/13; 1,346; 1,254; 4,317

EOG Resources
25757; Wayzetta 35-1920H; Parshall; NENW 19-153-90; 2SEC; Mountrail; Bakken; horizontal; 16,490; 1/17/14; 989; 561; 514
25785; Wayzetta 36-1920H; Parshall; NENW 19-153-90; 2SEC; Mountrail; Bakken; horizontal; 18,093; 1/12/14; 1,682; 820; 1,259

Hess Bakken Investments II
25692; BW-Erler 149-99-1522H-3; Cherry Creek; SWSW 10-149-99; N/A; McKenzie; Bakken; horizontal; N/A; N/A; N/A; N/A; N/A
25693; BW-Johnson 149-99-1003H-2; Cherry Creek; SESW 10-149-99; N/A; McKenzie; Bakken; horizontal; N/A; N/A; N/A; N/A; N/A
25691; BW-Johnson 149-99-1003H-3; Cherry Creek; SESW 10-149-99; N/A; McKenzie; Bakken; horizontal; N/A; N/A; N/A; N/A; N/A
26738; TI-Wao- 157-95-14H-1; Tioga; NWNW 14-157-95; N/A; Williams; Lodgepole; horizontal; N/A; N/A; N/A; N/A; N/A

Hunt Oil
25893; Writing Rock 161-101-30-31H-1; Writing Rock; NWNE 30-161-101; 2SEC; Divide; Bakken; horizontal; 18,541; 2/16/14; 203 bbl; 22 mcf; 966 bbl

Kodiak Oil and Gas
20258; Skunk Creek 3-24-25-13H; Manadree; NENW 24-149-93; 2SEC; Dunn; Bakken; horizontal; 20,500; 4/20/14; 2,399 bbl; 2,097 mcf; 4,058 bbl

Marathon Oil
26728; Walter 11-2TFH; Killdeer; SWSW 35-146-95; 2SEC; Dunn; Bakken; horizontal; 21,135; 4/18/14; 1,276 bbl; 931 mcf; 1,795 bbl

Newfield Production
26472; Rolfsrud State 152-96-21-16-12H; Westberg; SESW 21-152-96; 2SEC; McKenzie; Bakken; horizontal; 20,020; 2/28/14; 1,667 bbl; 3,574 mcf; 440 bbl

Oasis Petroleum North America
25221; Aspen Federal 5300 24-15B; Willow Creek; SENE 15-153-100; 2SEC; Williams; Bakken; horizontal; 20,675; 2/10/14; 2,074 bbl; 1,559 mcf; 3,808 bbl
25393; Augusta 5200 11-28B; Camp; NWNW 28-152-100; 2SEC; McKenzie; Bakken; horizontal; 20,833; 1/14/14; 2,614 bbl; 2,626 mcf; 1,026 bbl
26179; Clementine 5693 44-35T; Alger; SESE 35-156-93; N/A; Mountrail; Bakken; horizontal; N/A; N/A; N/A; N/A; N/A
25689; Crawford 5493 44-7T; Robinson Lake; SESE 7-154-93; 2SEC; Mountrail; Bakken; horizontal; 20,665; 12/31/13; 1,992 bbl; 2,223 mcf; 4,794 bbl
25740; Fairfax 6093 12-26B; Gros Ventre; NENW 26-160-93; 2SEC; Burke; Bakken; horizontal; 19,325; 12/28/13; 810 bbl; 855 mcf; 2,168 bbl
25577; Ida 5200 21-28B; Camp; SWNW 28-152-100; 2SEC; McKenzie; Bakken; horizontal; 20,650; 1/15/14; 3,134 bbl; 3,074 mcf; 1,923 bbl
25725; Jase 5892 21-30T; Enget Lake; LOT2 30-158-92; 2SEC; Mountrail; Bakken; horizontal; 20,040; 2/9/14; 1,468 bbl; 1,687 mcf; 2,888 bbl
26124; Lefty 2500 14-30 #2T; Camp; NENE 30-152-100; 2SEC; McKenzie; Bakken; horizontal; 20,770; 4/3/14; 1,041 bbl; 326 mcf; 1,819 bbl
25726; Mahaila 5892 21-30H; Enget Lake; LOT2 30-158-92; 2SEC; Mountrail; Bakken; horizontal; 20,060; 2/11/14; 1,450 bbl; 1,551 mcf; 5,126 bbl
26057; Montague 5601 42-34 #5B; Cow Creek; SESW 34-156-101; 2SEC; Williams; Bakken; horizontal; 20,863; 3/4/14; 1,593 bbl; 986 mcf; 5,017 bbl
26182; Morgan 6093 12-6 #1H; Gros Ventre; LOT 3 6-160-93; 2SEC; Burke; Bakken; horizontal; 19,039; 1/6/14; 140 bbl; 187 mcf; 1,490 bbl
26178; Satsuma 5693 44-35B; Alger; SESE 35-156-93; 2SEC; Mountrail; Bakken; horizontal; 20,276; 4/3/14; 1,391 bbl; 1,288 mcf; 4,152 bbl
24927; Wayne Zumhoff Federal 5300 44-15T; Willow Creek; SESE 15-153-100; 2SEC; Williams; Bakken; horizontal; 20,814; 1/7/14; 1,760 bbl; 2,236 mcf; 4,835 bbl

Oxy USA (Occidental Petroleum)
25075; Charles Rand 1-6-7H-143-97; Crooked Creek; LOT3 6-143-97; 2SEC; Dunn; Bakken; horizontal; 19,951; 12/2/13; 523 bbl; 273 mcf; 1,913 bbl

see ND IP page 11

Petroleum News Bakken

North Dakota oil permit activity

June 3—9, 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

Divide Co.

Permits issued

American Eagle Energy
Massive State 3-1N-163-102; LOT3 1-163-102; 300'FNL and 2,050'FWL; Skjermo; N/A*; on confidential status; 2,229' ground; 28572; 33-023-01226; 6/9/2014

Hunt Oil
Anderson 148-100-7-6-1H; SESE 7-148-100; 370'FSL and 1,120'FEL; Buffalo Wallow; Bakken; horizontal; 2,230' ground; 25889; 33-0053-05103; 6/5/2014

North Plains Energy
Stevens 160-100-14-23-11-14A-1H; SESW 11-160-100; 250'FSL and 2,265'FWL; Smoky Butte; Bakken; horizontal; 2,172' ground; 28519; 33-023-01223; 6/3/2014

Dunn Co.

Permits issued

Hess Bakken Investments II
LK-Trotter- 146-97-3625H-2; LOT2 1-145-97; 355'FNL and 1,728'FEL; Little Knife; N/A*; on confidential status; 2,690' ground; 28530; 33-025-02561; 6/4/2014
LK-Trotter- 146-97-3625H-6; LOT2 1-145-97; 355'FNL and 1,761'FEL; Little Knife; N/A*; on confidential status; 2,689' ground; 28531; 33-025-02562; 6/4/2014
Sunline 21-1MBH-5SH; LOT3 1-151-96; 250'FSL and 2,425'FWL; Clear Creek; Bakken; horizontal; 2,423' ground; 25829; 33-053-05069; 6/4/2014

North Plains Energy
Stevens 160-100-11-2-14B-1H; SESW 11-160-100; 250'FSL and 2,235'FWL; Smoky Butte; Bakken; horizontal; 2,171' ground; 28520; 33-023-01224; 6/3/2014

Petro-Hunt
Dolezal 145-97-7D-6-3H; NWNE 18-145-97; 285'FNL and 1,535'FEL; Little Knife; N/A*; on confidential status; 2,569' ground; 28573; 33-025-02570; 6/9/2014

XTO Energy (ExxonMobil)
Schettler 14X-9A; SWSW 9-147-96; 273'FSL and 336'FWL; Cedar Coulee; N/A*; on confidential status; 2,484' ground; 28544; 33-025-02563; 6/5/2014
Schettler 14X-9B; SWSW 9-147-96; 273'FSL and 396'FWL; Cedar Coulee; N/A*; on confidential status; 2,486' ground; 28546; 33-025-02565; 6/5/2014
Schettler 14X-9C; SWSW 9-147-96; 272'FSL and 456'FWL; Cedar Coulee; N/A*; on confidential status; 2,489' ground; 28548; 33-025-02567; 6/5/2014
Schettler 14X-9D; SWSW 9-147-96; 272'FSL and 516'FWL; Cedar Coulee; N/A*; on confidential status; 2,490' ground; 28550; 33-025-02569; 6/5/2014
Schettler 14X-9E; SWSW 9-147-96; 273'FSL and 366'FWL; Cedar Coulee; N/A*; on confidential status; 2,485' ground; 28545; 33-025-02564; 6/5/2014
Schettler 14X-9F; SWSW 9-147-96; 273'FSL and 426'FWL; Cedar Coulee; N/A*; on confidential status; 2,487' ground; 28547; 33-025-02566; 6/5/2014
Schettler 14X-9G; SWSW 9-147-96; 272'FSL and 486'FWL; Cedar Coulee; N/A*; on confidential status; 2,489' ground; 28549; 33-025-02568; 6/5/2014

Location resurveyed

Petro-Hunt
Klatt 145-97-18A-19-1H; NWNE 18-145-97; 285'FNL and 1,335'FEL; Little Knife; N/A*; on confidential status; 2,569' ground; 24683; 33-025-02025; 6/9/2014
Klatt 145-97-18A-19-2H; NWNE 18-145-97; 285'FNL and 1,435'FEL; Little Knife; N/A*; on confidential status; 2,569' ground; 27275; 33-025-02394; 6/9/2014

McKenzie Co.

Permits issued

Continental Resources
Bailey 4-24H2; NWNE 25-150-97; 575'FNL and 1,685'FEL; Pershing; N/A*; on confidential status; 2,250' ground; 28561; 33-053-06001; 6/6/2014
Bailey 5-24H1; NWNE 25-150-97; 575'FNL and 1,640'FEL; Pershing; N/A*; on confidential status; 2,254' ground; 28562; 33-053-06002; 6/6/2014
Bailey 6-24H3; NWNE 25-150-97; 575'FNL and 1,595'FEL; Pershing; N/A*; on confidential status; 2,257' ground; 28563; 33-053-06003; 6/6/2014
Bailey 7-24H; NWNE 25-150-97; 575'FNL and 1,550'FEL; Pershing; N/A*; on confidential status; 2,259' ground; 28564; 33-053-06004; 6/6/2014
Wiley 4-25H2; NWNE 25-150-97; 775'FNL and 1,685'FEL; Pershing; N/A*; on confidential status; 2,239' ground; 28565; 33-053-06005; 6/6/2014
Wiley 5-25H1; NWNE 25-150-97; 775'FNL and 1,640'FEL; Pershing; N/A*; on confidential status; 2,240' ground; 28566; 33-053-06006; 6/6/2014
Wiley 6-25H3; NWNE 25-150-97; 775'FNL and 1,595'FEL; Pershing; N/A*; on confidential status; 2,241' ground; 28567; 033-053-06007; 6/6/2014
Wiley 7-25H; NWNE 25-150-97; 775'FNL and 1,550'FEL; Pershing; N/A*; on confidential status; 2,240' ground; 28568; 33-053-06008; 6/6/2014

Hanna SWD
Hanna SWD 2; SWNE 33-149-95; 2,075'FNL and 2,050'FEL; Grail; N/A*; on confidential status; 2,463' ground; 90313; 33-053-90313; 6/3/2014

Hess Bakken Investments II
BW-Norgard- 149-100-1102H-2; SESW 11-149-100; 493'FSL and 2,156'FWL; Ellsworth; N/A*; on confidential status; 2,271' ground; 28537; 33-053-05992; 6/4/2014
BW-Norgard- 149-100-1102H-3; SESW 11-149-100; 460'FSL and 2,156'FWL; Ellsworth; N/A*; on confidential status; 2,271' ground; 28538; 33-053-05993; 6/4/2014
BW-Arnegard State- 151-100-3625H-6; SWSW 36-151-100; 290'FSL and 270'FWL; Sandrocks; N/A*; on confidential status; 2,320' ground; 28543; 33-053-05994; 6/5/2014
HA-Sanford- 152-96-1819H-2; NWNW 17-152-96; 335'FNL and 305'FWL; Westberg; N/A*; on confidential status; 2,453' ground; 28532; 33-053-05987; 6/4/2014
HA-Sanford- 152-96-1819H-3; NWNW 17-152-96; 368'FNL and 305'FWL; Westberg; N/A*; on confidential status; 2,453' ground; 28533; 33-053-05988; 6/4/2014
HA-Sanford- 152-96-1819H-4; NWNW 17-152-96; 401'FNL and 305'FWL; Westberg; N/A*; on confidential status; 2,454' ground; 28534; 33-053-05989; 6/4/2014
HA-Sanford- 152-96-1819H-5; NWNW 17-152-96; 434'FNL and 305'FWL; Westberg; N/A*; on confidential status; 2,450' ground; 28535; 33-053-05990; 6/4/2014
HA-Sanford- LE-152-96-1819H-1; NWNW 17-152-96; 467'FNL and 306'FWL; Westberg; N/A*; on confidential status; 2,445' ground; 28536; 33-053-05991; 6/4/2014

Oasis Petroleum North America
Wade Federal 5300 31-30 2B; LOT3 30-153-100; 1,329'FSL and 240'FWL; Baker; Bakken; horizontal; 2,046' ground; 28554; 33-053-05995; 6/5/2014
Wade Federal 5300 41-30 3T2; LOT4 30-153-100; 1,296'FSL and 240'FWL; Baker; Bakken; horizontal; 2,050' ground; 28555; 33-053-05996; 6/5/2014
Wade Federal 5300 41-30 5T2; LOT4 30-153-100; 1,230'FSL and 240'FWL; Baker; Bakken; horizontal; 2,056' ground; 28556; 33-053-05997; 6/5/2014
Wade Federal 5300 41-30 7T; LOT4 30-153-100; 877'FSL and 280'FWL; Baker; Bakken; horizontal; 2,069' ground; 28557; 33-053-05998; 6/5/2014
Wade Federal 5300 41-30 8T2; LOT4 30-153-100; 844'FSL and 280'FWL; Baker; Bakken; horizontal; 2,064' ground; 28558; 33-053-05999; 6/5/2014

Newfield Production
Johnson 150-99-34-27-4H; SESE 34-150-99; 290'FSL and 495'FEL; S. Tobacco Garden; N/A*; on confidential status; 2,093' ground; 28560; 33-053-06000; 6/6/2014

XTO Energy (ExxonMobil)
Rieckhoff 21X-3E; LOT3 3-151-99; 325'FNL and 1,670'FWL; N. Tobacco Garden; N/A*; on confidential status; 2,345' ground; 28577; 33-053-06009; 6/9/2014

Zavanna
Helton 1 SWD; NENW 12-149-102; 250'FNL and 2,300'FWL; Foreman Butte; N/A*; on confidential status; 2,271' ground; 90314; 33-053-90314; 6/4/2014

Permits cancelled

EOG Resources
Mandaree 29-05M; NWSE 5-149-94; 1,460'FSL and 1,885'FEL; Squaw Creek; Duperow; directional; 2,221' ground; 28209; 33-053-05862; 6/3/2014

Mountrail Co.

Permits issued

EOG Resources
Parshall 58-1608H; SESW 16-152-90; 420'FSL and 1,600'FWL; Parshall; Bakken; horizontal; 1,957' ground; 28525; 33-061-03135; 6/3/2014
Parshall 59-1608H; SESW 16-152-90; 520'FSL and 1,600'FWL; Parshall; Bakken; horizontal; 1,958' ground; 28521; 33-061-03131; 6/3/2014
Parshall 151-1608H; SESW 16-152-90; 470'FSL and 1,600'FWL; Parshall; Bakken; horizontal; 1,959' ground; 28524; 33-061-03134; 6/3/2014

Hess Bakken Investments II
EN-Fretheim A- 155-93-3334H-4; SENE 32-155-93; 2,589'FNL and 802'FEL; Robinson Lake; N/A*; on confidential status; 2,346' ground; 28576; 33-061-03139; 6/9/2014
EN-Fretheim A- 155-93-3334H-5; SENE 32-155-93; 2,622'FNL and 802'FEL; Robinson Lake; N/A*; on confidential status; 2,346' ground; 28575; 33-061-03138; 6/9/2014
EN-Fretheim A- 155-93-3334H-6; SENE 32-155-93; 2,636'FSL and 802'FEL; Robinson Lake; N/A*; on confidential status; 2,346' ground; 28574; 33-061-03137; 6/9/2014

Petrogulf
Sandstrom 151-94-3H; SESW 31-151-93; 630'FSL and 1,766'FWL; Antelope; N/A**; on confidential status; 2,183' ground; 28522; 33-061-03132; 6/3/2014
Sandstrom 151-94-4HTF; SESW 31-151-93; 610'FSL and 1,812'FWL; Antelope; N/A**; on confidential status; 2,183' ground; 28523; 33-061-03133; 6/3/2014

Whiting Oil and Gas
Peterson 41-33XH; NENE 33-153-92; 275'FNL and 350'FEL; Sanish; Bakken; horizontal; 2,161' ground; 28528; 33-061-03136; 6/4/2014

Renville Co.

Permits issued

Roff Operating
Osterberg #2-16 H1; SESE 2-161-85; 255'FSL and 1,220'FEL; Wildcat; N/A; on confidential status; 1,700' ground; 28571; 33-075-01467; 6/6/2014

Williams Co.

Permits issued

Continental Resources
Anderson 2-4H1; LOT4 4-152-100; 235'FSL and 1,012'FWL; Willow Creek; N/A*; on confidential status; 1,879' ground; 28526; 33-105-03550; 6/3/2014
Anderson 3-4H; LOT4 4-152-100; 235'FNL and 967'FWL; Willow Creek; N/A*; on confidential status; 1,879' ground; 28527; 33-105-03551; 6/3/2014

Gadeco
Alexander 26-35 5TFH; NWNE 26-155-99; 262'FNL and 2,282'FEL; Epping; N/A*; on confidential status; 2,312' ground; 28569; 33-105-03559; 6/6/2014
Alexander 26-35 6H; NWNE 26-155-99; 262'FNL and 2,252FEL; Epping; N/A*; on confidential status; 2,312' ground; 28570; 33-105-03560; 6/6/2014

Kodiak Oil and Gas
P Dam state 155-99-4-16-21-13H; NWNW 16-155-99; 860'FNL and 1,315'FWL; Epping; Bakken; horizontal; 2,173' ground; 28540; 33-105-03553; 6/4/2014
P Dam State 155-99-4-16-21-13H3; NWNW 16-155-99; 860'FNL and 1,285'FWL; Epping; Bakken; horizontal; 2,172' ground; 28539; 33-105-03552; 6/4/2014
P Dam State 155-99-4-16-21-14H3; NENW 16-155-99; 860'FNL and 1,345'FWL; Epping; Bakken; horizontal; 2,173' ground; 28541; 33-105-03554; 6/4/2014
P Dam State 155-99-4-16-21-14H; NENW 16-155-99; 860'FNL and 1,375'FWL; Epping; Bakken; horizontal; 2,174' ground; 28542; 33-105-03555; 6/4/2014

XTO Energy (ExxonMobil)
HM Hove 34X-33C; SWSE 33-155-96; 321'FSL and 2,205'FEL; West Capa; N/A*; on confidential status; 1,902' ground; 28551; 33-105-03556; 6/5/2014
HM Hove 34X-33G; SWSE 33-155-96; 321'FSL and 2,175'FEL; West Capa; N/A*; on confidential status; 1,902' ground; 28552; 33-105-03557; 6/5/2014
HM Hove 34X-33D; SWSE 33-155-96; 321'FSL and 2,145'FEL; West Capa; N/A*; on confidential status; 1,902' ground; 28553; 33-105-03558; 6/5/2014

**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; Cedar Coulee, Ellsworth, Epping, Foreman Butte, Grail, Little Knife, North Tobacco Garden, Pershing, Robinson Lake, Sandrocks, Skjermo, South Tobacco Garden, West Capa, Westberg, and Willow Creek.*

***Note - The geologic target for these wells was not listed in their well file because they are a tight (confidential) hole, but the Antelope field prodoces from the Sanish pool.*

—Compiled by Ashley Lindly

continued from page 10

ND IP

QEP Energy
25861; Zorro 3-35-26BH; Grail; SWSW 35-150-95; 2SEC; McKenzie; Bakken; horizontal; 21,034; 1/12/14; 2,655 bbl; 3,873 mcf; 1,798 bbl
25860; Zorro 4-35-26BH; Grail; SWSW 35-150-95; 2SEC; McKenzie; Bakken; horizontal; 21,157; 1/10/14; 2,716 bbl; 5,151 mcf; 1,600 bbl
26060; Zorro 27-34-26-35LL; Grail; SWSW 35-150-95; ICO; McKenzie; Bakken; horizontal; 21,164; 1/8/14; 2,323 bbl; 3,670 mcf; 1,198 bbl

Sinclair Oil and Gas
26537; Martens 5-5XH; Sanish; LOT2 2-154-92; 2SEC; Mountrail; Bakken; horizontal; 15,600; N/A; N/A; N/A; N/A

SM Energy
26745; Tomlinson 3-1HN; West Ambrose; LOT3 1-161-100; N/A; Divide; Bakken; horizontal; N/A; N/A; N/A; N/A; N/A

Statoil Oil and Gas
25677; Lucy Hanson 15-22 6H; Catwalk; NENW 15-154-100; N/A; Williams; Bakken; horizontal; N/A; N/A; N/A; N/A; N/A
24757; Melissa 31-30 #5TFH; East Fork; SESE 31-156-100; N/A; Williams; Bakken; horizontal; N/A; N/A; N/A; N/A; N/A
24758; Melissa 31-30 #6H; East Fork; SESE 31-156-100; N/A; Williams; Bakken; horizontal; N/A; N/A; N/A; N/A; N/A

Whiting Oil and Gas
25391; Kessel 11-26PH; Zenith; NENW 26-140-99; 2SEC; Stark; Bakken; horizontal; 20,367; 12/5/13; 1,263 bbl; 1,128 mcf; 1,330 bbl
25390; Kessel 21-26PH; Zenith; NENW 26-140-99; 2SEC; Stark; Bakken; horizontal; 20,598; 12/5/13; 1,117 bbl; 1,277 mcf; 1,242 bbl
25389; Keseel 41-26PH; Zenith; NENW 26-140-99; 2SEC; Stark; Bakken; horizontal; 21,907; 12/6/13; 887 bbl; 932 mcf; 1,507 bbl
25357; Mork Trust 21-17-2H; Pleasant Hill; NENW 17-149-99; 2SEC; McKenzie; Bakken; horizontal; 20,556; 11/23/13; 2,069 bbl; 3,470 mcf; 3,653 bbl
25356; Mork Trust 21-17-3H; Pleasant Hill; NWNE 17-149-99; 2SEC; McKenzie; Bakken; horizontal; 20,616; 11/30/13; 2,065 bbl; 3,897 bbl; 3,445 bbl
25355; Mork Trust 21-17-4H; Pleasant Hill; NWNE 17-149-99; 2SEC; McKenzie; Bakken; horizontal; 20,825; 11/30/13; 2,061 bbl; 1,874 bbl; 2,607 bbl
25354; Mork Trust 21-17-5H; Pleasant Hill; NWNE 17-149-99; 2SEC; McKenzie; Bakken; horizontal; 21,536; 12/1/13; 1,179 bbl; 1,287 bbl; 1,321 bbl

XTO Energy (ExxonMobil)
26871; Cindy Blikre 41X-2C; Lindahl; LOT1 2-158-95; N/A; Williams; Bakken; horizontal; N/A; N/A; N/A; N/A; N/A
26872; Cindy Blikre 41X-2G; Lindahl; LOT1 2-158-95; N/A; Williams; Bakken; horizontal; N/A; N/A; N/A; N/A; N/A

—Compiled by Ashley Lindly

Contact Ashley Lindly at alindly@petroleumnewsbakken.com

● COMPANY UPDATE

Triangle's vertical integration pays off

Bakken-focused independent's output rising as fracking subsidiary completes wells and midstream subsidiary brings gas plant online

By MAXINE HERR

For Petroleum News Bakken

While significant overhead costs skewed Triangle Petroleum's profits in its fourth quarter of 2014, it has ended its fiscal year 2015 first quarter finally seeing the benefits of that spending.

"We were bearing the cost of the spread the entire (fourth) quarter, with no revenue," Triangle Petroleum President and CEO Jonathan Samuels told analysts in the company's June 10 conference call discussing results of the first quarter of its fiscal year 2015 that ended April 30. "We put 70 people on payroll and didn't generate revenue; that's tough for margins. Then you have the same thing for half of the first quarter. But for quarter two, it should be really good because we have everything working for the first time ever and we're going to see it get better."

Triangle is reaping the benefits of its vertically integrated model as it begins to execute on simultaneous operations with its subsidiaries Caliber Midstream, which provides oil and gas gathering as well as water delivery and removal, and RockPile, a pressure pumping service. An example Samuels touted was Triangle's Hagen wells in the Ellsworth field of McKenzie County which utilized Caliber's freshwater services and RockPile's fracking crew, capping it off by selling the gas into Caliber's new gas plant.

"This is one of the first times in the last three years in building this that we're there — literally the (Caliber gas plant) system is just being turned on today," Samuels said. "It's a pretty big milestone for us."

Big jumps from a year ago

In the first quarter 2015 which ended April 30, 2014, Triangle increased its quarterly production volumes to 724,000 barrels of oil equivalent, boe, which is a 200 percent increase year over year. It equates to 8,129 boe per day, whereas a year ago the company only produced 2,714 boepd. Samuels said Triangle is ahead of its midpoint guidance by a cumulative 20,000 barrels of oil. On the natural gas side, he said 89 percent of Triangle's wells are connected to gas sales. First quarter operations exceeded expectations despite difficult weather that created "a miserable operating environment."

"There was a lot of precipitation, water, road closures," Samuels said. "It makes moving commodities around difficult, so we're pretty happy with our results."

Samuels said Triangle is producing more than 10,000 bpd as the company is in full swing in its second quarter. Though it has a large backlog due to weather setbacks in recent months, Triangle's drilling times are coming down and "activity levels are robust." With RockPile generating $31 million in revenue in the month of May alone, and the Caliber gas plant fully online, Samuels expects the current quarter to be the best in company history.

"This is the time of year where we have a good runway of weather," Samuels said. "Quarter one for us, you hold your breath … trying to get to the good months of quarter two."

Triangle increased its consolidated revenues to $99.8 million, a 191 percent increase over the same period last year, and consolidated net income was 179 percent better over the first quarter 2014. The numbers reflect RockPile's $61 million of revenue and Caliber's $1.2 million, attributable to Triangle's 30 percent interest.

Leaving new acreage for next year

In May, Triangle announced the acquisition of an additional 41,600 net acres in Williams County, North Dakota, and Sheridan County, Montana. Samuels said the $120 million acquisition gave them proved developing producing reserve value of $80-$90 million.

"It's producing 1,400 barrels a day … to a certain extent, it can only get better than what we're paying for it," Samuels said. "We have a lot of acres now; this is becoming a sizable company. We're going to be operating 100 wells by the end of this year. That's a lot of physical locations to manage. Two years ago we had zero. I think this team has done a fantastic job, but there are constraints on what an organization can do."

Samuels said Triangle will close on the acquisition on June 30 but won't drill any wells until 2015 simply because of financial constraints, but he is excited for what the acreage will hold for the future.

see TRIANGLE MODEL page 13

continued from page 7

DRILL INVENTORY

June."

Abraxas owns a working interest of approximately 76 percent and 51 percent in the Jore and Ravin West pads, respectively.

Downspacing

At North Fork and at Lillibridge, Abraxas hopes to downspace to 660 feet between wells in the same reservoir.

Abraxas plans nine multi-well pads at North Fork. At its first four-well downspace test it is drilling the Ravin 4H through the Ravin 7H wells. The proposal for a total of 48 wells is pending with the North Dakota Industrial Commission.

At Lillibridge Abraxas has filed with the commission for a go-ahead on two more multi-well pads for a total of 16 wells.

Individually and as a group, the company's wells have been good producers.

Over a 361 day period, the company's wells have consistently outperformed the type curve based on a 13-well average of wells in North Fork and Lillibridge, Abraxas said.

Abraxas holds 4,935 net acres in the Bakken formation, encompassing North Fork and Lillibridge in McKenzie County, North Dakota, and the South Elm Coulee area along the southern edge of the formation in Richland County, Montana.

In the west, Abraxas has its sights and its capital budget set firmly on the Bakken; the company has no capital budgeted in 2014 for the Powder River Basin, the Permian Basin, or Canada.

Likewise there is no capital budgeted for the company's 100 percent owned subsidiary, Raven Drilling, which has one 2,000 horsepower SCR walking rig currently drilling in the Bakken, a man camp, and related drilling equipment.

Rig ownership has been good to Abraxas, Watson said.

"We'll put that rig up against any operating rig in the Williston Basin right now from an efficiency standpoint," he said. "We're very, very happy to have it; it's a great, great asset for Abraxas to have."

Watson said the company's results are improving over time, adding that the last three Bakken wells were completed for $8 million each, versus a projected $8.5 million per well.

'Hidden' portfolio

Abraxas has, in its holdings, what it calls a "hidden" gas portfolio made up mostly of plays in West Texas and South Texas, but including the Red River area in the Williston Basin, where the company estimates it has a net 2.1 billion cubic feet equivalent of recoverable reserves.

Likewise, Abraxas has not booked the production it expects to add if downspacing proves successful, Watson said.

Abraxas has increased its 2014 capital budget to $160 million.

"The company intends to use the increased amount ($35 million) to drill three incremental Eagle Ford wells: the Ribeye 1H, the Dutch 3H and the Dutch 4H," Abraxas said. "We believe that the increased capital program will be funded by increased cash flows from operations and borrowings under the company's credit facility."

The credit facility is undergoing its annual review and the company said it was confident that its lenders will provide the added capital needed for the program.

Based on the increased capex spending the company has revised its original 2014 production guidance. It adjusted its low guidance from 5,200 boepd to 5,500 boepd, and its high guidance from 5,500 boepd to 5,700 boepd.

Under the revised scenario the company expects to produce 70 percent oil versus the previous guidance of 64 percent oil, 7 percent natural gas liquids versus 9 percent NGLs, and 23 percent natural gas versus 27 percent gas. ●

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SAMSON SPACING

The company reported capex spending of $137 million in the first quarter, down 32 percent year-over-year.

Samson Resources delivered 26 wells to first sales in Q1 2014, up from 17 wells in Q4 2013. In the Williston Basin, it brought its Almos Farms three well pad to first sales in January, and it brought its Bel Air/Comet 1/2/3 six well pad to first sales in November 2013.

Williston operations

The company will continue to operate one rig in the Williston Basin out of its eight operated rigs, focusing on horizontal pad infill development of the middle Bakken and Three Forks formations in its Divide County focus area. In 2013 it spudded 35 operated wells in the Williston Basin, and it plans to spud an additional 23 gross (11 net) operated wells in 2014.

In May, Samson Resources asked the North Dakota Industrial Commission for authorization to drill up to seven Bakken pool wells on each of two existing 1,280-acre drilling spacing units in the Blooming Prairie field in north-central Divide County.

Samson Resources also requested four overlapping 2,560s and one 1,280 in the Blooming Prairie field. It wants to drill one horizontal Bakken pool well on or near the section lines between the existing 640s and 1,280s in the new 2,560s. On the new 1,280, the company wants to drill up to seven Bakken pool wells.

Elsewhere

Samson Resources has seven key plays in the U.S. and divides its operations into two divisions: Rockies and Midcontinent. The Rockies division consists of the company's operations in North Dakota, Wyoming, Colorado and northern New Mexico where it has a combined net acreage of 824,000 acres.

In addition to the rig it has running in North Dakota, Samson is currently running one drill rig in the Powder River Basin in Wyoming and one rig in the San Juan Basin at the Four Corners region of Colorado, Utah, Arizona and New Mexico.

In the Power River Basin, the company is undertaking "exploration and development of multiple prospective oil horizons."

San Juan is a "legacy dry gas position" and the site of the largest ever acquisition in company history, the company said.

"Samson seeks to maximize value in this region by reducing operating costs and actively managing the field," it said.

First quarter 2014 production in the company's Rocky Mountain division averaged 185 mmcf of natural gas equivalent per day, with proved reserves of 652 billion cubic feet equivalent.

The company's 933,000-acre Midcontinent division saw Q1 2014 production of 342 mmcf equivalent per day, with proved reserves of 1,198 bcfe.

The company said it will continue to "maintain a solid hedge position to protect (its) capital program by reducing price risk," adding that it is "over 80 percent hedged on a total hydrocarbons basis for calendar year 2014." ●

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TRIANGLE MODEL

"We like the prospectivity of the Three Forks — I almost want to say more than we like the prospectivity of the Bakken which is not to say the Bakken is not economic, but we like the potential of the Three Forks," Samuels said.

Triangle reduced its average spud to total depth drill times from 23 days in the final quarter of 2014 to approximately 20 days in the first quarter 2015, marking a 13 percent improvement. Multiwell pad drilling efficiencies helped the company see a price reduction on its third and fourth wells on a pad to about $10 million. Triangle completed nine gross operated wells and 10 gross non-operated wells in the first quarter, and added a fourth rig to its drilling program which the company plans to maintain for the remainder of the fiscal year 2015. Using a cemented liner approach with a hybrid fracturing design, Triangle has seen 30 to 40 percent improvements in production. ●

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SUMMIT PROJECTS

owned and operated gas processing plant.

Also in Williams County, Meadowlark's Polar crude and water gathering system, which first went into service in May 2013, is being expanded in an agreement with Kodiak Oil and Gas to provide service to more than 60 possible Kodiak pad sites that the Denver-based Bakken operator is expecting to develop over the next few years in its Polar project. That expansion will more than double the number of Polar system pad receipt point connections. The Polar system delivers crude oil to Crestwood's COLT terminal at Epping northeast of Williston in Williams County which is served by Burlington Northern Santa Fe.

In Divide County, Summit subsidiary Meadowlark Midstream has entered into a long-term agreement with Samson Resources to provide the Tulsa-based independent with crude oil transportation services for Samson's operations in the Ambrose field in Divide County. For more on Samson Resources, see story on page 8. Samson said Meadowlark is currently expanding its Divide system with new pipe connecting Samson wells that are being serviced by trucks. Summit expects to begin providing service to Samson in the third quarter.

In addition, as part of the services to be provided to Samson Resources, Meadowlark Midstream will construct a new truck offloading facility on its Divide system that will include 55,000 barrels of crude oil storage capacity.

Finally, the fourth project is construction of 47 miles of new pipeline connecting Meadowlark's Divide gathering system at the new truck offloading facility with Global Partners subsidiary Basin Transload's Stampede rail terminal at Columbus in northern Burke County, which is served by Canadian Pacific. Crude oil delivered to the Stampede facility has single line rail access to Global's terminal in Albany, New York.

CEO comments

"Today we announced a variety of new organic development projects that we expect will further enhance Summit's position as a leading, independent midstream provider in the Bakken Shale," Summit President and Chief Executive Officer Steve Newby said in a June 10 press release. While Kodiak is one of Summit's customers, the other three projects represent new customers for Summit. "I am pleased to welcome three new customers and to announce a significant expansion of our strong existing relationship with Kodiak. I am particularly excited about the new Tioga Midstream development project which involves a coordinated effort by Summit Investments to concurrently develop an integrated crude oil, natural gas, and water gathering system for a large, independent Bakken producer."

—MIKE ELLERD

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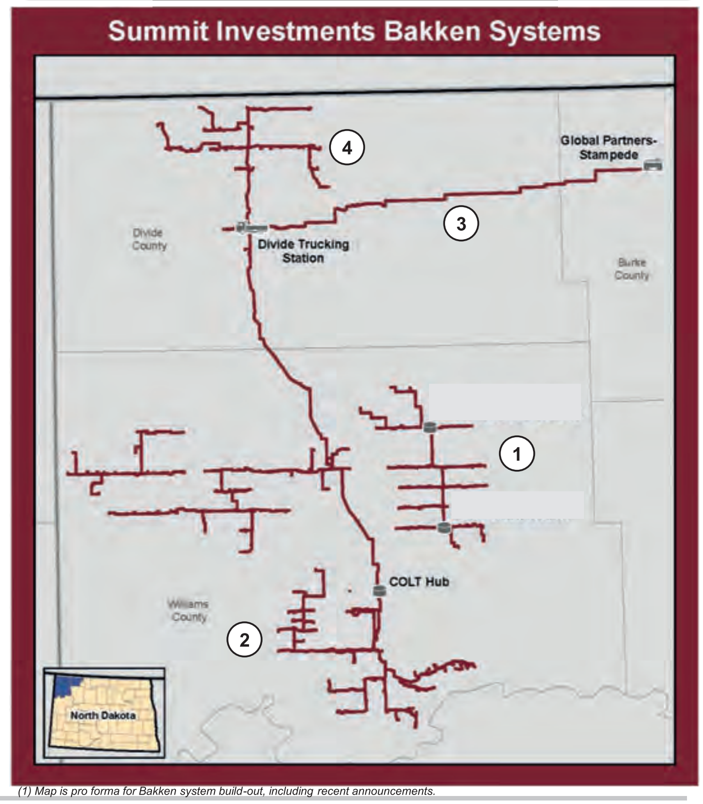
Summit Investments Adds to its Growing Inventory of Assets

Summit Investments now estimates its inventory of midstream assets to be ~ $2.0 billion

New Bakken Project Announcements

- On June 10th, Summit Investments announced approximately $300 million of new growth capex to construct and develop four new Bakken projects:
  1. ~ 240 mile crude oil, water and associated gas gathering project for a large Bakken producer. Expected total gathering capacity of 20,000 bbl/d of crude oil, 25,000 bbl/d of water and 14 MMcf/d of associated natural gas
  2. Major crude oil and water expansion for Kodiak Oil and Gas to connect over 60 new pads sites to the Polar System
  3. ~ 47 mile project to deliver crude oil from the Divide truck unloading station to Global Partners' 270,000 barrel crude oil storage facility at Basin Transload's Stampede Rail Facility for subsequent delivery to East Coast refineries
  4. ~ 30 mile crude oil gathering project to connect numerous pad sites and construct associated tankage and truck unloading facilities for Samson Resources on the Divide System
- Majority of capex to occur in 2H 2014 and 1H 2015
- Summit Investments has added six new, major Bakken development projects in the 16 months since its acquisition of Bear Tracker Energy, LLC

Pro Forma Bakken Footprint[1]



(1) Map is pro forma for Bakken system build-out, including recent announcements.

Petroleum News Bakken

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SECOND SLAWSON

"a multi-billion dollar idea."

The idea for the Big Sky development came after SECI had drilled some 15 horizontal Bakken wells in the Ash Coulee area of Billings County, North Dakota, between 1989 and 1991. SECI was among the earliest Williston Basin operators to drill a horizontal Bakken well.

Also in North Dakota, Slawson saw significant possibilities in three early EOG Resources wells east of the Nesson Anticline back in 2007, and he began buying leases in what is now known as the Parshall region around the Van Hook Peninsula in Mountrail County. Again, however, he had difficulty finding investors. "Fortunately we did end up with the leases," he said, adding that those leases have and continue to be the "backbone" of SECI.

In Wyoming, Slawson saw promise in logs from deep in the Powder River Basin and picked up 18,000 acres in that play in 2008. But because he again had difficulty finding investors, SECI sold those assets but at a "decent return," and those assets have now become part of the "hot geopressured deep PBR play," according to Slawson.

Slawson was also the driver behind SECI's exploration and development of such challenging formations as the Minnelusa, Forbes, Niobrara, Pronghorn, middle Bakken/Three Forks and the upper Bakken shale in Montana and North Dakota where few operators have ventured (see related story on page 6).

But more recently, Slawson said SECI began shifting its focus. He said his two brothers became more interested in SECI's production from its past exploration successes rather than in pursuing new exploration. As a geologist he didn't want to go in that direction and broke from the family business and started his own exploration company, allowing him to continue pursuing the more difficult, less obvious, but often profitable plays using his "contrarian foresight."

A fresh start

Since forming his new company earlier in the year, Slawson has put together four separate projects. One is in his Northern Rockies focus area and involves approximately 23,000 "thoroughly researched" net acres "in a 35-foot thick, thermally mature, overlooked region of the Bakken kitchen" that he brought with him through a negotiated buy back from SECI.

Another project in his Northern Rockies focus area is the SPR project which involves approximately 37,500 acres on a tectonic trend of fractured limestone. That project is also prospective for the Lodgepole and Red River formations.

In Wyoming, Slawson Energy's PRB Whitetail Minnelusa waterflood project in the Powder River Basin currently involves a single injection and a single producing well. While that project has had only primary production to date, Slawson predicts the secondary waterflood output should double primary production.

And in South Texas he has a project consisting of what he refers to as a "very interesting province of overlooked combo targets" involving Buda, Eagle Ford, Austin Chalk and Pearsall formations. "Like the Bakken," he said of the South Texas play, "the source rock has expelled into surrounding formations and thus multiple targets."

Through the rest of 2014, Slawson is looking to drill between four and eight wells across those four projects. He said he has evaluated and understands the risks of the four projects and has "moderated them as much as possible," adding that "I know what I don't know" and that, he said, is "important."

Operator versus non-op

Slawson is also looking at operating some assets as well partnering with other operators, depending on circumstances. "I will do both," he said, "operate if I need to or sell to a qualified like-minded operator as needed." And both have advantages and disadvantages, he said.

"Control is nice to have, but the desire to remain lean is nice too." He has already brought in joint venture partners on several of the projects.

Building a team

Slawson has secured office space for his headquarters in the Lodo area of downtown Denver. He has already hired what he calls the "cruise director," i.e., accounting-business manager. And now he has begun the search for professional staff. "I'm hiring as I go," he said.

On the engineering side, Slawson has two long-time friends and potential partners to provide professional engineering expertise, although at some point he wants to have a staff engineer. On the geology side, Slawson said he might look for a "sharp junior geologist I can mentor." And he will also be looking for a landman.

"I hire for ideas, hustle, hard work and/or contacts," he told Petroleum News Bakken. "I am not selfish and want everyone to share in the fruits of collective labor. Thus this is the small team I want to build to exploit the tired, forgotten or overlooked, but in all cases, very lucrative plays." ●

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SUPER NOVA

feet. In addition to the oil prospects in the area, Norstra discovered that multiple natural gas wells were producing from shallower formations in the area with gathering infrastructure in place, opening the possibility for a "stacked" oil and gas play.

Then in January, both Super Nova and Norstra announced that Norstra had entered into a farm-out agreement with Super Nova in which Super Nova would earn an 80 percent working interest in the Alberta Bakken Fairway project by drilling three vertical wells on the approximately 10,000-acre project.

Super Nova later announced that it had entered into an agreement with Norstra Chief Executive Officer Glen Landry acquiring a 100 percent working interest and an 80 percent net revenue interest in oil and gas leases on 6,000 acres contiguous to the approximately 10,000 acres in the farm-out agreement.

Super Nova said the well that Norstra spudded in September 2013, the Milford Colony 13-11, can be reentered and drilled to a depth of approximately 9,000 feet into the Bakken formation.

—MIKE ELLERD

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LEASE PRICE

Trust Lands with an offer to negotiate leasing the tracts directly. Trust Lands determined that it had no legal obligation to offer the leases in a public auction and agreed to negotiate with Oasis.

Details of the deal

In those negotiations, Oasis noted leases in the area averaged approximately $4,409 per acre in 2010, but since then lease prices have increased and a nearby tract was leased in the May auction for $14,000 per acre. Oasis also noted that the royalty rate to the state in the area was 1/6 or 16.67 percent in 2010, and that the current royalty rate in the area stands at 3/16 or 18.75 percent. With that background, Oasis offered to pay $8,000 per acre and pay a higher royalty rate of 20 percent. Trust Lands felt the offer was acceptable and in the best interest of the state to accept.

State Land Commissioner Lance Gaebe then took the offer to the Board of University and School Lands, which is comprised of the governor, attorney general, secretary of state, state treasurer and the superintendent of public instruction. In its June 4 meeting the board voted to accept the offer.

Rather than nominate the tracts for auction, Oasis approached Trust Lands with an offer to negotiate leasing the tracts directly.

"It all boils down to fair is fair — do we hold Oasis over a barrel?" Combs said of the negotiated leases. "In the end we made more money," he said, adding that over the expected life of wells in the leases the state will make more per well with the higher royalty rate of 20 percent versus 18.75 percent. That, he said, far outweighs the lower lease price of $8,000 per acre versus the $14,000 paid for a nearby lease in May. ●

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RAIL DETAILS

"Our position is that we're not going to sign it because we don't feel we can guarantee the confidentiality of the information that they are submitting to us," Cecily Fong, spokeswoman for the North Dakota Department of Emergency Services, NDDES, told Petroleum News Bakken. However, Fong said the agency is also not releasing the content of those reports until after it has a chance to discuss the order at its general meeting on June 25 in Bismarck. Fong said she doesn't believe the information should pose a problem, as she doesn't anticipate it to be extremely specific.

"I think the intent of the order is to gauge how much oil and how often, not necessarily what time is a particular train going through a particular town," Fong said. "I don't think anybody wants to get that detailed." She said emergency responders need some basic information to plan for a disaster, but doesn't feel non-specific information would pose any threats if it were shared with the general public.

"From a homeland security perspective, we don't want a whole lot out there in real defined detail because then some bad character knows that at exactly 12:04 there's a crude train passing through Bismarck, North Dakota, and given this knowledge he uses it as some sort of incendiary device to commit an act of domestic terrorism," Fong said.

What rail companies think

BNSF is more concerned about releasing information due to propriety business practices. In a statement issued on June 6, BNSF said it provided all the required information to each state covered by the order, asking recipients to "comply with federal regulations which indicate this type of shipment data is considered security sensitive and confidential, intended for people who have a need-to-know for such information, such as first responders and emergency planners."

> *"Our position is that we're not going to sign it because we don't feel we can guarantee the confidentiality of the information that they are submitting to us."*
> **—Cecily Fong, North Dakota Department Emergency Services**

CP did not request the SERC offices to sign a non-disclosure agreement because it takes the position that state emergency officials, by accepting the notification, are acknowledging and agreeing to the non-disclosure of the information and providing it only to first responders at state and local levels, as well as other appropriate emergency response planners.

"It has always been important for CP to work closely with first responders in communities on our network," CP spokesman Ed Greenberg told Petroleum News Bakken. "This approach has included sharing security-sensitive information with officials for emergency preparedness and planning purposes."

Union Pacific requests confidentiality, too

Six states have already denied railroad companies' requests for confidentiality agreements. North Dakota, Wisconsin, Montana, Illinois, Idaho and Washington are not on board, citing public record laws. In Washington state, BNSF and Union Pacific Railroad sent officials agreements to sign but Mark Stewart, a spokesman for the Washington Military Department's Emergency Management Division, said his office sought legal advice and determined the agreements "require us to withhold the information in a manner that's not consistent with the state public records act."

Instead, the office presented alternative agreements to the railroads, making them aware that the information may be subject to disclosure but a state official would notify the railroad if the public asked for information. BNSF is reviewing the proposal, but Union Pacific seems less concerned as it does not transport Bakken crude at the order's reporting threshold of one million gallons.

Wyoming is an exception and signed the agreement, promising to only share the information with local emergency responders and withholding it from the public. Wyoming Director of Homeland Security Guy Cameron says he considers the reports to be sensitive security information, and therefore exempt. "Should there be a sense of concern for a terroristic act, the law gives us the appropriate and lawful ability to deny a request, based on that concern," Cameron said.

Notification of a 25 percent change

Railroads would only need to submit a new report if volumes fluctuated by 25 percent, so Fong does not foresee the new order to be onerous to her office's workload.

"At this point, we're not anticipating it being a problem," she said. "But it's in the early days, so if it changes 25 percent all the time, and they are reporting to us once or twice a week, that could be a little more problematic."

BNSF spokeswoman Roxanne Butler told Petroleum News Bakken that the company currently operates an average of eight crude oil unit trains per day across all shale plays, not just the Bakken. "The crude by rail traffic is 4 percent of all commodities that BNSF transports," she said. As far as how often the information would fluctuate by 25 percent, Butler said, "I would not anticipate it being very often." She noted that BNSF reported its volumes as a range, so submitting a new report would only be a result of significant developments in the industry.

Tough penalties for non-compliance

The DOT order states that a railroad that fails to make the notification is prohibited from hauling the crude oil, is subject to civil penalties of up to $175,000 per day and any person willfully or recklessly violating the order is also subject to criminal prosecution which could result in fines, 10 years of imprisonment, or both.

The order was put in place to assist emergency responders in the event of an accident involving Bakken crude oil trains. Besides providing expected train traffic and how much oil is transported, the rail carriers must also provide a point of contact in order for responders to quickly communicate with the railroad when necessary.

"With the rising demand for rail carriage of petroleum crude oil throughout the United States, the risk of rail incidents increases along with the increases in the volume of crude oil shipped," the order states. "There have been several significant derailments in the U.S. and Canada over the last ten months causing deaths and property and environmental damage that involved petroleum crude oil shipments. These accidents have demonstrated the need for emergency action to address unsafe conditions or practices in the shipment of petroleum crude oil by rail."

> *More oil was delivered by rail in the United States during the first four months of the year than in any other period in history, according to the Association of American Railroads.*

The 1 million gallon threshold, which equates to just under 24,000 barrels of oil, was made based on the fact that all the recent train accidents consisted of more than 70 tank cars, or well above the 1 million gallons on a single train.

"This threshold amount of Bakken crude oil ensures that DOT is not unnecessarily imposing safety-related burdens on lesser risks that have not, to date, proven to represent the same safety and environmental concerns," the order said.

Crude-by-rail continues to rise

More oil was delivered by rail in the United States during the first four months of the year than in any other period in history, according to the Association of American Railroads. More than 110,000 carloads of crude oil traveled the U.S. rail network during the first quarter of 2014, equating to approximately 870,000 barrels per day. About 700,000 of those are shipped by rail out of the Bakken each day due to a lack of pipeline infrastructure. Federal regulators are also addressing tank car design to ensure greater safety in transporting crude oil. U.S. DOT Secretary Anthony Foxx sent a proposed plan to the White House's Office of Management and Budget in early May outlining improvements to tank car standards for trains carrying highly flammable materials, but details of those improvements have not been publicized. New rules are not likely to surface until the end of the year. ●

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