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## Fully operational



Hess Corp.'s Tioga natural gas processing plant looking west-southwest toward Tioga, North Dakota on June 29. The plant's capacity was increased from 115 million to 250 million cubic feet per day in an into service in March and is now fully operational.

## Energy Transfer Partners moves

 ahead on Bakken crude pipelineLarge capacity pipelines are changing the oil transportation landscape in North Dakota. Dallas-based Energy Transfer Partners, ETP, announced that it has already ordered the steel to begin construction of an approximately $1,100-$ mile, 320,000 barrel per day crude oil pipeline to transport supplies from the Bakken/Three Forks production area to Patoka, Illinois, where it will then interconnect with ETP's existing 30 -inch diameter Trunkline Pipeline, which is being converted from natural gas service to crude transportation. The pipeline is projected to be in service by the end of 2016 with the ability to expand capacity on demand. On June 24 at the Governor's Pipeline Summit, Enterprise Products Partners said it plans to build a 1,200 -mile crude oil pipeline from the Bakken oil fields to Cushing, Oklahoma, and Enbridge is in the permitting stage for its 600 -mile Sandpiper pipeline from western North Dakota to Clearbrook, Minnesota, and on to Superior, Wisconsin (see related story on page 5).
see ETP PIPELINE page 15

## Legacy hooks Spearfish assets

Calgary-based Legacy Oil + Gas is pushing ahead with building its portfolio of resource plays.

In a stock-and-debt deal valued at about C $\$ 225$ million, it has scooped up privately held Corinthian Exploration and fattened its portfolio of light oil assets in North Dakota and northern Alberta in the process.

It said the transaction is expected to close in July, subject to various approvals.
The purchase price includes 20.1 million Legacy shares with a total value of $\mathrm{C} \$ 191$ million, based on late-June trading on the Toronto Stock Exchange, and C $\$ 34$ million of Corinthian debt.

Legacy said in a statement it will acquire "high quality, high netback, light oil assets" concentrated in its North Dakota Spearfish core area and a "meaningful position" in the fastevolving Dunvegan light oil play in the Elmworth area of northwestern Alberta, incorporating "production, undeveloped land and drilling upside and owned and operated key facilities and infrastructure."

The company said that when the deal is completed it will consider alternatives for the Elmworth asset which could include disposition.

Legacy said holders of more than 91.4 percent of common shares of Corinthian have entered into agreements to endorse
see LEGACY DEAL page 15

## - GOVERNMENT

## Setting the rules

NDIC adopts production restriction regs to ensure flaring goals are met

## By MAXINE HERR

For Petroleum News Bakken

Sate regulations to curb flaring just got some teet.
The North Dakota Industrial Commission, NDIC, voted unanimously on new production restriction rules to reduce flared gas and meet a goal to capture at least 90 percent of the gas by 2020.

Lynn Helms, director of the state's Department of Mineral Resources, DMR, presented the commission with the proposed order at its monthly
see FLARING REGS page 15

## North Dakota looks at CBR oil conditioning

The North Dakota Industrial Commission plans to get involved in oil by rail regulations. At its July 1 meeting, Department of Mineral Resources Director Lynn Helms asked the commission to consider following a similar model to what it used to develop the new field rules to curb flaring and hold a hearing to determine whether to condition, or separate the more volatile components, from

OIL CONDITIONING page 16

## - NATURAL GAS <br> Meeting capture demand

Three WB gas midstreamers assess their efforts to get ahead of gas production

## By MIKE ELLERD

Petroleum News Bakken

As North Dakota continues to curb flaring of natural gas amid projections that the volume of gas in the state to be captured will more than double by 2020 (see story this page), midstream companies in the
 state are working hard to make sure the infrastructure will be there to meet the increasing supply. During the North Dakota Governor's Pipeline Summit on June 24, three of those gas midstreamers, Alliance Pipeline, Oneok see GAS CAPTURE page 12

## Quantifying ND's gas infrastructure needs

With the North Dakota Industrial Commission cracking down on how much flaring of natural gas it will tolerate, coupled with the state's ever-increasing oil and gas production, the volume of natural gas to be captured in the state continues to increase as midstream companies make efforts to keep up with that increasing capture demand (see story on page 1). That widening gap between what can be produced and what can be flared determines
see GAS DEMANDS page 13

## Another look at XL CO2

Report finds oil sands imports don't necessarily increase US carbon emissions

## By GARY PARK

For Petroleum News Bakken

0ne of the unwavering arguments used by opponents to bolster their case against Keystone XL - the project's contribution to carbon emissions - is being contested.

A report by consulting firm IHS Inc. said an increase in United States emissions as a result of increasing oil sands imports is not a given.

It found that the carbon intensity of crude oil consumed in the U.S. from 2005 to 2012 actually declined by 0.6 percent, regardless of a 75 percent rise in imports of oil sands and other Canadian heavy crudes to 2.1 million barrels per day from 1.2 million bpd.

The IHS conclusions mirror those of the U.S. State Department, which said last year that Keystone XL's impact on climate would be minimal because the production would be transported by rail or other pipelines if XL was abandoned.

Over the same period, shipments of heavy crudes from Venezuela and Mexico fell, while consumption of tight oil from the North Dakota Bakken and Texas Eagle Ford plays surged to 1.8 million bpd from virtually zero, helping to displace imports of similar crudes from Africa (with see XLCO2 page 13

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## - COMPANY UPDATE

## Doubling densities with new technologies

With the Bakken serving as a testing ground, Whiting Oil and Gas is applying lessons learned to maximize potential in other plays

By MAXINE HERR<br>For Petroleum News Bakken

The hope of finding potential in additional oil plays has led Whiting Petroleum to try the unexpected.

As the third largest oil producer in the Bakken, Whiting is a "company on the move," said Senior Vice President Pete Hagist.

Hagist presented a company update at an energy conference on June 25, saying the company has developed a greater focus on critical plays in the past two years. Production
 increased to 100,000 barrels of oil per day across all plays, with a record 73,000 barrels coming from the Williston Basin.
"We continue to innovate on our com- PETE HAGIST pletion technology, adding reserves and recovery but also additional locations," Hagist said.

The company is focused on six fields in the Bakken, and Whiting is using what it has learned in these fields to further explore the area, although Hagist said exploration makes up only 5 percent of the company's capital budget.

## Overcoming cement concerns

Whiting is expanding in the Bakken with greater well density, doubling the number and finding more potential within the Three Forks formation. The company has more than a million gross acres of leasehold in the Williston Basin with nine areas of development scattered over the core of the Bakken.
"All of these areas are working," Hagist said, "and we have enhanced them in our completion methodologies."

Hagist said there had always been a concern about putting cement on the Bakken, so standard technique involved an uncemented liner. "Then we added the swell packers to give it some sort of isolation, but then we still had 300 feet of open hole behind that pipe," Hagist explained. "We always had a suspicion that when you pump a frack in that environment, it tends to dilute the energy of that frack, so you can imagine with that much open hole, you find a weak spot in the rock, you start to initiate a frack, and then you find another weak spot in the rock, and it breaks again."

Because of the concerns associated with using cement, the company stayed with the traditional technique despite its pitfalls. However, Whiting chose to augment the technique with sliding sleeves. It allowed the operator to execute a multi-stage fracturing process in a very short period of time. It worked well for Whiting as it worked to drill and hold lease acreage. But two years ago, the company started experimenting with cemented liners, and "on an apples-to-apples basis, we think that a

## Exploiting the Bakken and Three Forks in the Williston Primary and Prospective Drilling Locations <br>  <br> PRONGHORN <br> TARPON <br> O NEW ObJECTIVES <br> LEASE LINE \& CROSS-UNIT


cemented liner gives us by far the most effective stimulation," Hagist said.

The process requires the operator to cement the liner into the ground, put one hole in the pipe, and then all the energy exits that one hole and Whiting gets the most extension on the frack.
"We tried to augment that by these perf clusters," he said. "So we put multiple stages of perf within a stage and we think that's helped also. So we're not only getting more extension of the fracture, but we're getting more fractures along the well bore."

The concept has yielded a 16 to 31 percent entry improvement, but because the company is not using cemented liners in every completion, Hagist said over time the percentage should rise.
"The challenge is time," Hagist said. "Relative to sliding sleeves, we lost time - about six to seven days - where the sliding sleeve took two. So we continue to innovate on this."

It also takes six to nine months to convert the operation to the new technique. The assembly of the completion technology involves a 10 - to 15 -foot long outer sheath of steel with an internal sliding sleeve. When the sleeve is screwed into the casing string, it requires 30 stages since Whiting can use 30 sleeves in a string. They use coil to move the sleeve back and forth, obtaining the effectiveness of a cemented liner, but the speed of a sliding sleeve.
"Where this becomes particularly important for us is when we're on pad-type operations in Colorado. For the same

DAKOTA
L A N D I N G


## COMMUNITY ISSUES

## Hess Corporation donates $\$ 5$ million to UND for new laboratory complex

To help support educational opportunities at the University of North Dakota, UND, Hess Corp. made a sizeable donation to help construct a new Collaborative Energy Complex on June 26.

The complex will provide further oil and gas educational opportunities and several laboratories including the Hess Innovation Lab, 3D Visualization and Reservoir Simulation Lab, and Drilling Simulation Lab. Hess donated $\$ 5$ million to the UND College of Engineering and Mines and the UND Alumni Association and Foundation. Gov. Jack Dalrymple announced a $\$ 2.5$ million match from the North Dakota Higher Education Challenge Fund, bringing the total impact of the Hess gift to $\$ 7.5$ million.

The complex will provide further oil and gas educational opportunities and several laboratories including the Hess Innovation Lab, 3D Visualization and Reservoir Simulation Lab, and Drilling Simulation Lab.
"This is an exciting day, not only for the
University of North Dakota, but for our entire state," Dalrymple said. "Thank you to Hess Corporation for this generous gift and for their continued investment in our communities and our educational system. This public-private partnership is a great example of how we can work together to continue to grow and strengthen our state and of how the North Dakota Higher Education Challenge Fund is helping to encourage philanthropy for our colleges and universities."

UND currently has pledges and commitments of $\$ 11.8$ million toward the $\$ 15.5$ million goal for the project. Dalrymple proposed funding for this matching grant fund in his 2013-15 executive budget, with the intent to stimulate the spirit of philanthropy for North Dakota's colleges and universities. The 2013 Legislature approved $\$ 29$ million for the fund. Every $\$ 2$ in eligible, private donations will be matched with $\$ 1$ in state funding.

The complex will be located on the southeast corner of campus and will feature more than 30,000 square feet of research/teaching labs and customized spaces for students and industry, a new home for the Petroleum Engineering and the Institute for Energy Studies programs, the Hess Innovation Lab for students to explore creative ways to solve global challenges facing the oil and energy industries, and a physical connection to the Harold Hamm School of Geology and Geological Engineering.
-MAXINE HERR

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## - LEGALCOLUMN

## ND high court ruling gives HBP direction

Pugh clause severed lands on which well was no longer producing; dissent highlights 'undeveloped' as the operative word in lease

## By Jannelle steger combs

For Petroleum News Bakken

The North Dakota Supreme Court handed down a 4-1 ruling June 24 in the Tank v. Citation Oil \& Gas Corp. matter. The opinion gave some amount of direction to industry as to the definition of "held by production" in North Dakota.

In 1982, George and Phyllis Tank executed a lease to Petro-Lewis Funds Inc. for property in McKenzie County in the south half and northwest quarter of Section 10,
Township 151 North, Range 96 West. The lease had
 a three-year primary term, which was extended by a ratification, amending the lease to continue for an additional three years.

## Production history

In May 1982, the Tank 3-10 well spud and produced until October 1996. In June 1998, the Tank 3-10R well spud and continues to produce to this day. Both wells are in the northwest quarter of Section 10. In June 1988, the Tank 13-10 well spud and produced until October 2008 and then intermittently produced until January 2012. This well was in the southwest quarter of Section 10.

In November 2008, the North Dakota Industrial Commission granted PetroHunt LLC a spacing unit which encompassed all of the lands on the original Tank lease, among others. In February 2010, the Jonsurd 151-96-3B-10-2H spud and is currently producing, as well as other wells.

In September 2011, Greggory C. Tank, who was the successor to George and Phyllis Tank, sued the operator and others seeking to cancel the lease to the extent it covered the southwest quarter due to the "Pugh clause" in the lease. Usually added to a lease as an adden-
dum, a pugh clause provides that at the end of the primary term (typically five years), the lease will terminate as to any acreage outside of a production unit.

## Pugh clause

The original lease had a pugh clause which provided, "if, at the end of the one year period from the end of the primary term hereof, this lease is maintained in full force and effect... this lease shall nevertheless expire as to all that part of the said lands not included in a producing unit unless operations for the drilling of a well have been conducted during such one-year period."
Further, the clause provided that the lease would be held "for subsequent and successive periods of one year by conducing (sic) additional drilling operations on undeveloped portions of said lands during each preceding one-year period."
The district court ruled the lease had expired under the pugh clause as to the southwest quarter. The defendants argued that the first sentence made the clause a "one-time only pugh clause." So it would only sever the non-producing lands on July 15, 1990, one year after the end of the primary term on July 15, 1989.

The district court and the Supreme Court both interpreted the clause as a whole and found that this pugh clause did sever the lease as to the non-producing lands in the southwest quarter.
Further the defendants requested that the court consider that the continuous drilling clause in the lease conflicted with the pugh clause in a way that they are irreconcilable and must be construed to hold the leases by production. The Supreme Court found that, unlike prior cases, this pugh clause clearly modified the drilling clause.

## Colorful dissent

The dissenting opinion of Justice Dale Sandstrom is of note for several reasons. First, the color of the dissent is of interest. The opinion begins with,
see LEGAL COLUMN page 5

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# Pipe projects would over double export capacity 

Enbridge and Enterprise pipelines, coupled with True/Tallgrass JV and ETP, would up WB takeaway potential to 1.63M bpd

## By MIKE ELLERD <br> Petroleum News Bakken

Calgary-based Enbridge and Houstonbased Enterprise Products Partners are working on crude oil pipeline projects that could increase takeaway capacity out of the Williston Basin by up to 570,000 barrels per day. Those two projects alone would nearly double the state's current pipeline takeaway capacity of approximately 620,000 bpd. (Although True companies' Belle Fourche joint venture project with the Tallgrass Pony Express, which is expected to go
 September, will add another 100,000 bpd takeaway capacity this year.)

Both companies provided details on their projects during the North Dakota Governor's Pipeline Summit on June 24. Enbridge is in the permitting stages for its Sandpiper project, a 600 -mile, 230,000 bpd pipeline that would run from Alexander in McKenzie County, North Dakota, to Clearbrook, Minnesota, and on to Superior, Wisconsin. Enterprise is in the planning stages for a 1,200 -mile, 340,000 bpd pipeline beginning at Stanley in Mountrail County, North Dakota, and extending south to Cushing, Oklahoma, with multiple receipt points along the way. Both companies are looking to have their pipelines in service in 2016,
 Enbridge in the first quarter and Enterprise in the fourth quarter.

In addition, Energy Transfer Partners, ETP, announced on June 25 that it is putting in motion plans to build a 340,000 bpd crude export line from North Dakota to Patoka, Illinois (see story on page 1). That pipeline is also planned to go into service in late 2016. Those three projects, coupled with True's Belle Fourche Tallgrass JV, would boost North Dakota's crude oil pipeline export capacity to 1.63 million bpd, essentially a 2.5 -fold increase in 2.5 years.

## continued from page 4

## LEGAL COLUMN

"The lynchpin of the majority opinion is the flawed premise that equates 'no longer producing' with 'undeveloped.' That's like saying a person who's had several children 'the old-fashioned way' but stops having sex is a virgin," Sandstrom opined.

The dissent focuses on the meaning of the term, "undeveloped." Because there was a producing well on the lands previously, Sandstrom concluded that the lands cannot qualify as "undeveloped." The Texas Community Bank of Raymore v. Chesapeake Exploration LLC 2013 case was used to highlight that pugh clauses operate at the expiration of the primary term or the conclusion of the continuous development program. $\bullet$

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## The Sandpiper project

Enbridge's Sandpiper project had a successful open season, has already received approval from the Federal Energy Regulatory Commission and is now in the state permitting stage. "So the Sandpiper project is actually a real project and although we haven't dug any dirt yet, we have spent over $\$ 200$ million on this project," said Paul Fisher, Enbridge's vice president for regional pipelines at the June 24 summit. The day following the summit, the North Dakota Public Service Commission gave its unanimous approval to the project.

Sandpiper will begin at Alexander in northwest McKenzie County and first run north into Williams County, then turn east to Beaver Lodge, Stanley and Berthold
 and Superior the pipe will be 30 -inch diameter and will have an initial capacity of $380,000 \mathrm{bpd}$. With additional pumping capacity, Fisher said Enbridge can increase the capacity from Clearbrook to Superior to just under $400,000 \mathrm{bpd}$ "for future expansion when those Bakken barrels keep rolling in." The Sandpiper project will also have four
pump stations and seven storage tanks.
From Clearbrook, Bakken crude has multiple options on the Enbridge system. It can go south to Cushing and on to the Gulf Coast through the EnbridgeEnterprise joint venture Seaway pipeline. It can also go south to Patoka, Illinois. And it can go northeast to Sarnia, Ontario, and on to refining markets at Montreal.

## Other Enbridge expansions

Enbridge has a number of other expansion projects in the works that ultimately increase capacity for Bakken crude. It is expanding its Line 61 from Superior to Flanagan, Illinois, by 800,000 barrels per
see PIPE PROJECTS page 6


## \section*{continued from page 5} <br> PIPE PROJECTS

day, its Flanagan South line to Cushing by $585,000 \mathrm{bpd}$, and with joint venture partner Enterprise is twinning the Seaway pipeline from Cushing to the Gulf Coast which will add 450,000 bpd capacity. The company's new Southern Access Extension pipeline will add $300,000 \mathrm{bpd}$ capacity between Flanagan and Patoka, Illinois. And going east out of Flanagan, Enbridge's Line 6B replacement and expansion will increase capacity to Sarnia by 570,000 bpd and the Line 9 re-reversal will provide 300,000 bpd capacity between Sarnia and Montreal.

In addition, Enbridge put its Eddystone rail facility south of Philadelphia in service in April, which has an offloading capacity of $80,000 \mathrm{bpd}$. The Eddystone facility provides a direct destination for Bakken crude loaded at Enbridge's Fort Berthold rail facility at west of Minot.

## The Enterprise project

The idea for Enterprise Products Partners' project began when the company was approached to build the pipeline by "a large producer," according to Brent Secrest, Enterprise vice president for crude oil. Secrest said Enterprise and the producer "quickly settled on a route that fit us and essentially fit them."

With reversal of a number of crude oil pipelines that initially ran north from the Gulf Coast to Cushing, Secrest said there is no longer the bottleneck of crude oil at Cushing. He said now there is a "sucking sound" at Cushing. "It's purely fundamentals," he said. "There's not a lot of oil in Cushing."
The route begins at Stanley and runs

## cominued from page.

## WHITING DENSITIES

ture with the extension much like a cemented fracture would produce, and now it's just a matter of mechanical execution. He explained that with a standard cemented liner, it requires four trips in and out of the hole with tubing to move the plug and the packers, perforate, and run the fracturing job.
"That's four days. It's a very, very laborious process," he said. "Every trip into a hole this deep is seven hours."
Initially, Whiting was concerned about leaving the coil in the ground while executing the frack, but so far, the company has experienced no mechanical issues. That zero failure rate carries a great deal of significance.
"Trying to do this completion times

## PROJECT OVERVIEW Connecting Producing Basins to the Market



# - Enterprise proposes the development of a new build crude oil pipeline system from the Williston Basin to Cushing, OK <br> - The pipeline system would offer producers: <br> - Pipeline access in the Williston, Powder River, DJ and Mississippian Basins <br> - Significant optionality for connectivity in Cushing including access to multiple Gulf Coast markets <br> - The proposed pipeline system would transport five common stream grades of crude oil: Bakken Crude, Powder River Crude, DJ Crude, Rockies Intermediate Crude and Rockies Condensate 

[^0]west then south along the Montana-North Dakota border where a lateral will connect from Johnsons Corner. The Enterprise line will continue south with receipt points in the Powder River, DJ and Mississippian basins, then on to Cushing (see map). Initially the pipeline would have two intermediate pump stations, but Secrest said the system's capacity is expandable up to $700,000 \mathrm{bpd}$ with additional pumps.

Enterprise is planning for storage sta-
eight, if we have any kind of problem on a well - you can imagine on a pad that has the potential of 5,000 barrels a day - it ends up getting shut in for another 40 days," Hagist said. "So cycle time execution becomes very important for us."

When asked why other wells needed to be shut in to run each completion, Hagist explained that not shutting them in could result in blowing a well head off the top of a well.
"If we're producing those offsetting wells and we initiate one of these heavy frack jobs, with that kind of horsepower all that pressure can enter those offsetting well bores and do some real damage," Hagist said. "So you have to shut in those offsetting wells, let the pressure build up everything's static - and then execute those offsetting frack jobs. So you have to go through every one of the wells, finish them ... and bring the entire pad on at

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tions at Stanley (500,000 barrels), Johnsons Corner (200,000 barrels), Powder River Basin ( 450,000 barrels), DJ Basin ( 450,000 barrels) and Cushing (1.7 million barrels). Secrest said that will provide Enterprise with three days of operational storage on both the delivery and receipts sides. "We've done this a few times in the past - we think that's going to be very important."

Secrest said Enterprise has a "fairly aggressive" schedule for the project,
allowing 28 to 30 months for construction to meet its fourth quarter 2016 in-service target. "I'll tell you that we've got boots on the ground looking at the right of way." He said "time is of the essence" to get the project completed before the winter of 2016. "But we have a strong history of execution on our side - Enterprise - in terms of getting projects built on time and on budget." •

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## once."

Whiting is doubling the number of wells in the Bakken with the belief that the play was initially "under-densified." In the Sanish, Whiting is adding well density horizontally and vertically, recognizing that the lower Bakken/Three Forks carries great potential (see diagram). The company plans to do more testing of the Three Forks benches this year and will move those wells into primary location status when Whiting is comfortable doing so.

## Tapping into hot spots

Hagist said Colorado's Niobrara has been a "great exploration story" and is a prime example of how the company has applied what it has learned from the Bakken. He said the trend in Colorado is to focus on the "mining belt" that stretches through Colorado characterized by increased heat flow.
"It can make the difference between oil flowing through the tight matrix and not," Hagist said. Whiting has identified this trend of hot spots in northeast Weld County, part of the Redtail area, where the company has accumulated more than 123 net acres and began drilling a year ago. With numerous well pads in operation, Hagist said Whiting is seeing consistent results. Its 3,300 primary locations in the Niobrara consist of 16 wells per spacing unit. Another 1,300 more locations are possible with further exploration. Whiting plans to overshoot the well density based on current proven density, but also because it wants to find the right answers sooner instead of having to go back into the areas and add wells to pads like it is doing in the Bakken. Whiting's highest interest is in the southern area of its leasehold where it is using a mix of wells and finding "the consistency of the wells is amazing."
"The curve has increased by about

20,000 barrels, so we're seeing excellent returns," Hagist said. "It's our highest return area over the Bakken. We did take some of our capital out of the Bakken for this and we'll probably even-load the two going forward."

## Established Colorado infrastructure <br> helps avoid flaring issues

Whiting's acreage is within the middle of the DJ Basin, which Hagist said is an old oil field with plenty of established infrastructure to transport oil and gas. Additionally, the company will tap into a new Tallgrass Energy Pony Express pipeline in January to send 25,000 barrels of oil a day to Cushing, Oklahoma. Sufficient gas gathering infrastructure also allows the company to capture the natural gas to avoid flaring.
"Colorado has very strict air emission regulations," Hagist said. "If you turn an oil well on and there is no place for the gas, you can't turn the well on."

He said the Environmental Protection Agency likes what they see in Colorado so he suspects that will have implications for North Dakota and Texas. Hagist noted that though the industry average for flaring in North Dakota is quite high at 30 percent or more, Whiting is only flaring 10 percent (see related flaring regulations story on page 1). It also helps that Whiting is in the gas processing business. He said about 60 percent of the company's operations in North Dakota is third party gas processing.
"It's a very profitable business but it's also a key enabler for us," he said. "If these regulations continue to clamp down, which we would expect, they really have no influence on us at all. So we're in great shape in terms of infrastructure." $\bullet$

Contact Maxine Herr
Contact Maxine Herr

## Perloleum BAKKEN Stats

# For 2nd week Statoil, Oasis top ND, MT IP lists 

By MIKE ELLERD

Petroleum News Bakken

For the second week in a row, Statoil wells came in with the week's top two reported 24 -hour initial production, IP, volumes (page 11). A Statoil well in the Alexander field in north-central McKenzie County topped the list with an IP of 3,008 barrels, and another in the Todd field in south-central Williams County was No. 2 at 2,984 barrels. Those two wells had water cuts of 63 and 66 percent, respectively, excluding natural gas liquids.

XTO wells filled the Nos. 3 and 7 IP spots with two wells in the Haystack Butte field in far northwest Dunn County with IPs of 2,412 and 1,744 barrels. Those wells had water cuts of 36 and 51 percent.

A Halcon well in the Eagle Nest field in northern Dunn County came in fourth at 2,219 barrels with a water cut of 41 percent. Kodiak wells in the Epping field in south-central Williams County filled the Nos. 6 and 10 spots at 1,878 and 1,566 barrels, and had water cuts of 53 and 51 percent. In the No. 8 spot was a Burlington well in the Camel Butte field in northwest McKenzie County

A Statoil well in the Alexander field in northcentral McKenzie County topped the list with an IP of 3,008 barrels, and another in the Todd field in south-central Williams County was No. 2 at 2,984 barrels.
at 1,643 barrels with a 28 percent water cut, and in the No. 9 spot was a Whiting well in the Sanish field in southern Mountrail County at 1,596 barrels with a 71 percent water cut.

A total of 39 IPs were reported for the week which ranged from the high of 3,008 to a low of 55 barrels and an average of 1,192 barrels (page 10). Last week 46 IPs were reported and ranged from the high of 3,106 barrels to a low of 58 barrels with an average of 1,115 barrels.

## Montana IPs

In Montana, seven completions were reported with IPs. Oasis had the top IP with a Richland County well that produced $1,019 \mathrm{bpd}$ and the second place IP with a Roosevelt County well at 703 bpd (this page). Oasis also
had another Richland County well with an IP of 565 bpd and another Roosevelt County well with an IP of 500 bpd. Whiting reported completion of a Richland County well with an IP of 554 bpd. Continental reported two completions with IPs, one in Roosevelt County at 423 bpd and one in Richland County at 333 bpd .

## Permitting activity

A total of 49 oil and gas well permits were issued in North Dakota between June 17 and 23, which is down from the 60 permits issued the previous week (page 8). Like the previous week, most of the permits were issued in McKenzie County with 15 permits, followed by Mountrail with 14 permits.

In Montana, 15 new well locations were permitted, 13 in Richland County and two in Roosevelt County (this page), all for Bakken pool wells. The other new location permit was issued for a Lodgepole formation well in Wibaux County.

## The map will be back

We apologize for not having our Top 10 North Dakota IP map this week. It will be back next week. -

## Petroleum <br> Montana well permits and completions <br> May 23-June 26, 2014

## ABBREVIATIONS \& PARAMETERS

With a few exceptions, the Montana weekly oil activity report includes horizontal well activity in the Bakken petroleum system in the eastern/northeastern part of the state within the Williston Basin. It also includes the Heath play and what is referred to as the South Alberta Bakken fairway in northwestern/westcentral Montana, which is at least 175 miles long (north-south) and 50 miles wide (east-west), extending from southern Alberta, where the formation is generally referred to as the Exshaw, southwards through Montana's Glacier, Toole, Pondera, Teton and Lewis \& Clark counties. The Southern Alberta Bakken, under
evaluation by several oil companies, is not part of the Williston Basin.
Following are the abbreviations used in the report and what they mean.
BHL: bottomhole location | BOPD: barrels of oil per day
IP: initial production | PBHL: probable bottomhole location
PD: proposed depth | SHL: surface hole location | TD: total depth
And public land survey system abbreviations:
FNL = from north line | FEL = from east line | FSL = from south line | FWL = from west line

## New locations

## Continental Resources

BR Carda 1-29HSL; Wildcat; NENE 29-25N-53E; $355^{\prime}$ 'FNL and 325'FEL; N/A; SLSE 32-25N-53E; 200'FSL and 0'FEL; 19,381'; N/A; N/A; N/A; Bakken; Richland; 6/24/2014; N/A; N/A
Tammy 2-8H; Wildcat; SWSW 8-25N-55E; 305'FSL and 960'FWL; N/A; NWNW 5-25N-55E; 200'FNL and 660'FWL; 19,698'; Bakken; Richland; 6/24/2014; N/A; N/A

## Whiting Oil and Gas

Malsam 14-18-1 H ; Wildcat; SWSW 18-24N-60E; 465'FSL and 1,200'FWL; N/A; 6-24N-60E; 240'FNL and $660^{\prime}$ FWL; 21,590'; N/A; N/A; N/A; Bakken; Richland; 6/16/2014; N/A; N/A
Malsam 14-18-2H; Wildcat; SWSW 18-24N-60E; $420^{\prime}$ FSL and $1,200^{\prime}$ 'FWL; N/A; $6-24 \mathrm{~N}-60 \mathrm{E} ; 240^{\prime} \mathrm{FNL}$ and 1,980'FWL; 21,746'; N/A; N/A; N/A; Bakken; Richland; 6/16/2014; N/A; N/A
Malsam 14-18-3H; Wildcat; SWSW 18-24N-60E; 375'FSL and 1,200'FWL; N/A; 6-24N-60E; 240'FNL and 1,980'FWL; 22,435'; N/A; N/A; N/A; Bakken; Richland;

6/16/2014; N/A; N/A
Malsam 14-18-4H; Wildcat; SWSW 18-24N-60E; 330'FSL and 1,200'FWL; N/A; 6-24N-60E; 240'FNL and 660'FWL; 23,814'; N/A; N/A; N/A; Bakken; Richland; 6/16/2014; N/A; N/A
Miller 21-20-3H; Wildcat; NWNE 20-24N-60E; 294'FNL and $2,410^{\prime}$ FWL; N/A; SESE 29-24N-60E; 240'FNL and 660'FWL; 20,284'; N/A; N/A; N/A; Bakken; Richland; 6/16/2014; N/A; N/A Young 31-1-1H; Wildcat; NE 1-24N-59E; 265'FNL and 1,999'FEL; N/A; SWSW 13-24N-59E; 240'FSL and 660'FWL; 23,259'; N/A; N/A; N/A; Bakken; Richland; 6/16/2014 N/A; N/A

## Re-issued locations

Interstate Exploration
Rieckhoff 16-1; SESE 17-14N-60E; 230'FSL and 1,000'FEL; N/A; NENE 17-14N-60E; $660^{\prime}$ FNL and 1,000'FEL; 14,069'; N/A; N/A; N/A; Lodgepole; Wibaux; 6/23/2014; N/A; N/A

XTO Energy (ExxonMobil)
Barr State 34X-21; Wildcat; SWSE 21-30N-58E;

## LEGEND

Well name; field; SHL location; SHL footages; PD; PBHL location; PBHL footages; PBHL depth; BHL location; BHL footages; BHL depth; pool; county; date approved; IP rate; BOPD
$330^{\prime}$ FSL and 2,595'FEL; N/A; NENW 16-30N-58E; $330^{\prime}$ FSL and 2,595'FEL; N/A; NENW 16-30N-58E;
$700^{\prime}$ FNL and 2,637'FWL; 19,653'; N/A; N/A; N/A; Bakken; Roosevelt; 6/23/2014; N/A; N/A Donna 31X-15; Wildcat; NWNE 15-24N-56E; 304'FNL and 2,200'FEL; N/A; SWSE 22-24N-56E; 700' ${ }^{\prime}$ FSL and 2,642'FEL; 19,897'; N/A; N/A; N/A; Bakken; Richland; 6/16/2014; N/A; N/A
Shaw 44X-13; Wildcat; SESE 13-22N-59E; 366'FSL and $341^{\prime}$ FEL); N/A; NESE 12-22N-59E; 1,948'FSL and 1,000'FEL; 17,067'; N/A; N/A; N/A; Bakken; Richland; 5/22/2014; N/A; N/A
Sonny 24X-16; Wildcat; SW 16-22N-59E; 1,141'FSL and 2,573'FWL; N/A; NWNE 9-22N-59E; 700'FNL and 2,640'FEL; 18,511'; N/A; N/A; N/A; Bakken; Richland; 5/29/2014; N/A; N/A
Vaira 31X-17; Wildcat; NWNE 17-24N-55E; 403'FNL and 2,359'FEL; N/A; SWSE 20-24N-55E; 700'FSL and 2,644'FEL; 19,300'; N/A; N/A; N/A; Bakken; Richland; 5/23/2014; N/A; N/A
Wilbur 34X-29; Wildcat; SW SE 29-24N-56E; 500'FSL and 2,373'FEL; N/A; NENW 20-24N-56E; 700'FNL and 2,649'FWL; 19,620'; N/A; N/A; N/A; Bakken; Richland; 6/16/2014; N/A; N/A

## Permit modifications/corrections

Oasis Petroleum North America
Grace Federal 2759 11-13 2B; Wildcat; NWNW 13-27N-59E; 160'FNL and 669'FWL; N/A; 1-27N-59E; 200'FNL and 660'FEL; 20,879'; N/A; N/A; N/A; Bakken; Roosevelt; 6/17/2014; N/A; N/A
Jimbo Federal 2759 11-13H; Wildcat; NWNW 13-27N-59E; 160'FNL and 636'FWL; N/A; SWSW 24-27N59E; 200'FSL and 660'FWL; 20,496'; N/A; N/A; N/A; Bakken; Roosevelt; 6/17/2014; N/A; N/A

## Completions

Continental Resources
Fisher 1-29H; Wildcat; SWSE 29-27N-53E; 265'FSL and 1,990'FEL; N/A; N/A; N/A; N/A; NWSE 20-27N-53E; 3,046'FNL and 1,968'FEL; 15,797'; NWNE 20-27N-53E; $819^{\prime} \mathrm{FNL}$ and 2,010'FEL; 18,026'; NWNE 20-27N-53E; $819^{\prime} \mathrm{FNL}$ and 2,010'FEL; 18,026'; NWNE 20-27N-53E;
230'FNL and 2,007'FEL; 18,615'; Bakken; Richland 230'FNL and 2,007'FEL; 18,615'
12/5/2013; 691 bbl; 333 BOPD
12/5/2013; 691 bbl; 333 BOPD
Jar 1-28H; Wildcat; NENW 28-28N-57E; 380'FNL and 2,125'FWL; N/A; N/A; N/A; N/A; SESW 33-28N-57E; 235'FSL and 2,003'FWL; 19,781'; Bakken; Roosevelt; 12/21/2013; $583 \mathrm{bbl} ; 423$ BOPD

Oasis Petroleum North America
Freesia Federal 2658 13-11H; Wildcat; NWNE 11-26N-58E; 460'FSL and 1,780'FEL; N/A; NWNE 35-27N58E; 254'FNL and 2,321'FEL; 20,950'; N/A; N/A; N/A; Bakken; Richland; 11/29/2013; 1,266 bbl; 1,019 BOPD Lonetree 2758 43-9H; Wildcat; SWSE 9-27N-58E; $190^{\prime} \mathrm{FSL}$ and 2,270'FEL; N/A; SWSE 21-27N-58E; $350^{\prime}$ FSL and $2,270^{\prime}$ FEL; $20,427^{\prime}$ ' N/A; N/A; N/A; 350'FSL and 2,270 FEL; 20,427; N/A; N/A
Bakken; Roosevelt; 1772013 ; NA; N/A 58E; 390'FSL and 1,960'FEL; N/A; NENE 6-26N-58E; 375'FNL and 1,073'FEL; 19,915'; N/A; N/A; N/A; Bakken; Richland; 12/25/2013; 737 bbl; 565 BOPD Susie 22758 42-10Bb; Wildcat; SESW 10-27N-58E; $230^{\prime}$ FSL and 2,200FWL; N/A; SESW 22-27N-58E; $340^{\prime}$ FSL and 2,634'FWL; 20,500'; N/A; N/A; N/A; Bakken; Roosevelt; 10/25/2013; 1,276 bbl; 703 BOPD Susie 32758 42-10B; Wildcat; SESW 10-27N-58E; 460'FSL and $1,330^{\prime}$ FWL; N/A; N/A; N/A; N/A; SWSW 22-27N-58E; 349'FSL and 600'FWL; 20,830'; Bakken; Roosevelt; 10/14/2013; 1,115 bbl; 500 BOPD

## Whiting Oil and Gas

Iversen Bros 31-1-1 H ; Wildcat; NWNE 1-25N-57E; $345^{\prime} \mathrm{FNL}$ and 2,080'FEL; N/A; SWSW 12-25N-57E; $271^{\prime}$ 'FSL and 712'FWL; 21,400'; N/A; N/A; N/A; Bakken; Richland; 12/23/2013; $597 \mathrm{bbl} ; 554$ BOPD

## Subscribe at:

## Petroleum North Dakota oil permit activity <br> $n \quad e$ $B A K K E N$ <br> June 24-30, 2014

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

| Permits issued |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Well Name | Location | Footages | Field | Geologic Target | $\begin{aligned} & \begin{array}{l} \text { Wellbore } \\ \text { Type } \end{array} \end{aligned}$ | Elev. | NDIC No. | API No. | $\begin{aligned} & \text { NoIC } \\ & \text { dete } \end{aligned}$ |
| Bottineau Co. |  |  |  |  |  |  |  |  |  |
| Enduro Operating |  |  |  |  |  |  |  |  |  |
| NSCU K-714-H1 | SWSE 8-161-79 | 1,114 ${ }^{\text {FSL }}$ and 1,563FEL | Newburg | N/A** | conf. | 1,479 | 28731 | 33-009-02395 | 6/26/14 |
| NSCU K-714-H2 | SWSE 8-161-79 | 1,024 ${ }^{\text {FSL }}$ and 1,734FEL | Newburg | N/A** | conf. | 1,478 | 28732 | 33-009-0239 | 6/26/14 |

Burke Co.

| Huff C-3526-6390 | SWSE 35-163-90 | 439'FSL and 1,420'FEL | Wildcat | Bakken | horz. | 1,916' | 28707 | \|33-013-01794 | 6/24/14 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Divide Co. |  |  |  |  |  |  |  |  |  |
| American Eagle Energy |  |  |  |  |  |  |  |  |  |
| Lilly 16-35-164-102 | SESE 35-164-102 | 250'FSL and 750'FEL | Skjermo | N/A* | conf. | 2,219' | 28706 | 33-023-01234 | 6/24/14 |
| Lincoln State 15-36-164-102 | SWSE 36-164-102 | $300^{\circ} \mathrm{FSL}$ and 1,485'FEL | Skjermo | N/A* | conf. | 2,240' | 28718 | 33-023-01235 | 6/25/14 |
| Hunt Oil |  |  |  |  |  |  |  |  |  |
| Smoky Butte 160-100-7-6H-1 | NWNE 18-160-100 | 258'FNL and 2,340'FEL | Smoky Butte | N/A* | conf. | 2,162' | 28749 | 33-023-01237 | 6/30/14 |
| Smoky Butte 160-100-18-19H-1 | NWNE 18-160-100 | $363^{\prime} \mathrm{FNL}$ and 2,340'FEL | Smoky Butte | N/A* | conf. | 2,163' | 28748 | 33-023-01236 | 6/30/14 |
| Smoky Butte 160-100-32-29H-1 | SWSE 32-160-100 | 275'FSL and 1,801'FEL | Smoky Butte | N/A* | conf. | 2,068' | 28753 | 33-023-01238 | 6/30/14 |

Dunn Co.

| Marathon Oil |  |  |  |  |  |  |  |  |  |
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| Brink 24-20TFH | NWNE 29-146-93 | 426 ${ }^{\circ} \mathrm{FNL}$ and 2,250'FEL | Bailey | N/A* | conf. | 2,316' | 28708 | 33-025-02596 | 6/24/14 |
| Oxy USA (Occidental Petroleum) |  |  |  |  |  |  |  |  |  |
| Devlin Dukart 5-30-31H-143-95 | SESW 19-143-95 | 510'FSL and 1,960'FWL | Manning | N/A* | conf. | 2,260' | 28729 | 33-025-02599 | 6/26/14 |
| Devlin Dukart 6-30-31H-143-95 | SESW 19-143-95 | $510^{\prime} \mathrm{FSL}$ and 2,000'FWL | Manning | N/A* | conf. | 2,260' | 28730 | 33-025-02600 | 6/26/14 |
| WPX Energy |  |  |  |  |  |  |  |  |  |
| Martin Fox 20-17HF | SESW 20-149-93 | 589'FSL and 2,139'FWL | Mandaree | N/A* | conf. | 2,292' | 28713 | 33-025-02598 | 6/24/14 |
| Martin Fox 20-17HW | SWSW 20-149-93 | 571'FSL and 2,185'FWL | Mandaree | N/A* | conf. | 2,291' | 28712 | 33-025-02597 | 6/24/14 |

## McKenzie Co.

Burlington Resources Oil and Gas (ConocoPhillips)

| Harley 11-2MBH-R | LOT4 2-151-95 | 296'FNL and 503'FWL | Blue Buttes | N/A* | conf. | 2,305' | 28710 | 33-053-06043 | 6/24/14 |
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| Harley 11-2TFH-R | LOT4 2-151-95 | 296'FNL and 458 ${ }^{\prime}$ FWL | Blue Buttes | N/A* | conf. | 2,306' | 28709 | 33-053-06042 | 6/24/14 |
| Harley 21-2TFH-R | LOT4 2-151-95 | 296'FNL and 548'FWL | Blue Buttes | N/A* | conf. | 2,305' | 28711 | 33-053-06044 | 6/24/14 |
| Continental Resources |  |  |  |  |  |  |  |  |  |
| Durham 6-2H1 | LOT1 2-151-99 | $330^{\prime} \mathrm{FNL}$ and 1,086'FEL | N. Tobacco Garden | N/A* | conf. | 2,345' | 28736 | 33-053-06046 | 6/27/14 |
| Durham 7-2 H | LOT1 2-151-99 | $328{ }^{\prime} \mathrm{FNL}$ and 1,041'FEL | N. Tobacco Garden | N/A* | conf. | 2,347 | 28735 | 33-053-06045 | 6/27/14 |
| Miramar 2-32H | SESE 32-152-102 | $465^{\prime} \mathrm{FSL}$ and 1,078'FEL | Elk | N/A* | conf. | 2,284' | 28750 | 33-053-06053 | 6/30/14 |
| Miramar 3-32H1 | SESE 32-152-102 | $465^{\prime}$ FSL and 1,123'FEL | Elk | N/A* | conf. | 2,284' | 28751 | 33-053-06054 | 6/30/14 |
| Uhlman 1-7H | SWSE 7-152-99 | $345^{\prime} \mathrm{FSL}$ and 1,640'FEL | Banks | N/A* | conf. | 2,089' | 28737 | 33-053-06047 | 6/30/14 |
| Oasis Petroleum |  |  |  |  |  |  |  |  |  |
| Kline Federal 5300 31-18 6B | LOT3 18-153-100 | 2,457'FSL and 238 ${ }^{\prime}$ FWL | Baker | Bakken | horz. | 2,020' | 28756 | 33-053-06057 | 6/30/14 |
| Kline Federal 5300 31-18 7T2 | LOT3 18-153-100 | 2,490'FSL and 238 ${ }^{\circ} \mathrm{FWL}$ | Baker | Bakken | horz. | 2,018' | 28755 | 33-053-06056 | 6/30/14 |
| Kline Federal 5300 31-18 8T | LOT3 18-153-100 | 2,523'FSL and 238'FWL | Baker | Bakken | horz. | 2,026 | 28754 | 33-053-06055 | 6/30/14 |
| Wade Federal 5300 41-30 9B | LOT4 30-153-100 | 811'FSL and 280'FWL | Baker | Bakken | horz. | 2,058' | 28744 | 33-053-06051 | 6/27/14 |
| XTO Energy (ExxonMobil) |  |  |  |  |  |  |  |  |  |
| Johnson 24X-31A | SESW 31-150-97 | 278'FSL and 1,893'FWL | Siverston | $\mathrm{N} / \mathrm{A}^{*}$ | conf. | 2,162' | 28741 | 33-053-06048 | 6/27/14 |
| Johnson 24X-31E | SESW 31-150-97 | 302'FSL and 1,912'FWL | Siverston | N/A* | conf. | 2,162' | 28742 | 33-053-06049 | 6/27/14 |
| Johnson 24X-31F | SESW 31-150-97 | 349'FSL and 1,949'FWL | Siverston | $\mathrm{N} / \mathrm{A}^{*}$ | conf. | 2,162' | 28743 | 33-053-06050 | 6/27/14 |

Mountrail Co.

## EOG Resources

Parshall $28-2928 \mathrm{H}$
Parshall 29-2928H
Parshall 85-2928H
Parshall 86-2928H
Parshall 87-29H
Parshall $93-2827 \mathrm{H}$
Parshall 142-2928H
Parshall 161-2928H
Hess Bakken Investments II
EN-Neset-156-94-0706H-2

|  | NW |
| :--- | :--- |
|  | NW |
|  | NW |
|  | NEN |
|  | NW |
|  | NW |
|  | NW |
|  | NEN |


| NWNE 29-152-90 | 500'FNL and 2,350'FEL | Parshall | Bakken | horz. | 1,923' | 28728 | 33-061-03178 | 6/26/14 |
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| NWNE 29-152-90 | $500^{\circ} \mathrm{FNL}$ and 2,250'FEL | Parshall | Bakken | horz. | 1,922' | 28726 | 33-061-03176 | 6/26/14 |
| NWNE 29-152-90 | $500^{\circ} \mathrm{FNL}$ and 2,300'FEL | Parshall | Bakken | horz. | 1,923' | 28727 | 33-061-03177 | 6/26/14 |
| NENW 29-152-90 | $6^{2} 5^{\prime} \mathrm{FNL}$ and 1,352'FWL | Parshall | Bakken | horz. | 1,923' | 28739 | 33-061-03181 | 6/27/14 |
| NWNW 29-152-90 | $6^{\prime 2} 5^{\prime} \mathrm{FNL}$ and 1,302'FWL | Parshall | Bakken | horz. | 1,933' | 28738 | 33-061-03180 | 6/27/14 |
| NWNW 28-152-90 | $500^{\prime} \mathrm{FNL}$ and $500^{\circ} \mathrm{FWL}$ | Parshall | Bakken | horz. | 1,930' | 28714 | 33-061-03170 | 6/27/14 |
| NWNE 29-152-90 | $500^{\prime} \mathrm{FNL}$ and 2,200'FEL | Parshall | Bakken | horz. | 1,922' | 28725 | 33-061-03175 | 6/26/14 |
| NENW 29-152-90 | $6^{62}{ }^{\prime} \mathrm{FNL}$ and 1,402'FWL | Parshall | Bakken | horz. | 1,931' | 28740 | 33-061-03182 | 6/27/14 |

EN-Neset-156-94-0706H-3
SWSE 7-156-94

673'FSL and 1,639'FEL $\quad$ Big Butte
-061-03173 $\quad 6 / 25 / 14$

ND PERMITS continued from page 8

| Well Name | Location | Footages | Field | Geologic Target | Wellbore Type | Elev. | NDIC <br> No. | API No. | NDIC date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| EN-Neset-156-94-0706H-4 | SWSE 7-156-94 | 673'FSL and 1,672'FEL | Big Butte | N/A* | conf. | 2,041' | 28720 | 33-061-03172 | 6/25/14 |
| EN-Neset-156-94-0706H-5 | SWSE 7-156-94 | 673'FSL and 1,705'FEL | Big Butte | N/A* | conf. | 2,400' | 28719 | 33-061-03171 | 6/25/14 |
| Statoil Oil and Gas |  |  |  |  |  |  |  |  |  |
| Brown 30-19 \#7TFH | SWSE 30-156-93 | 519'FSL and 1,572'FEL | Alger | N/A* | conf. | 2,324' | 28733 | 33-061-03179 | 6/26/14 |
| Uran SWD |  |  |  |  |  |  |  |  |  |
| Stubstad SWD 1 | SESW 6-152-92 | 559'FSL and 2,426'FWL | Sanish | N/A* | conf. | 2,054' | 90315 | 33-061-90315 | 6/27/14 |

Williams Co.
Hess Bakken Investments II

| TI-Arlene Stone-157-95-2423H-1 | NWSE 24-157-95 | 2181'FSL and 2,021'FEL | Tioga | N/A* | conf. | 2,278' | 28724 | 33-105-03591 | 6/26/14 |
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| TI-Arlene Stone-157-95-2423H-2 | NWSE 24-157-95 | 2181'FSL and 1,988'FEL | Tioga | N/A* | conf. | 2,277' | 28723 | 33-105-03590 | 6/26/14 |
| Hunt Oil |  |  |  |  |  |  |  |  |  |
| Blue Ridge 157-95-2423H-1 | LOT3 4-159-100 | 300 FNL and 1,980'FWL | Green Lake | N/A** | conf. | 2,046' | 28752 | 33-105-03594 | 6/30/14 |
| Kodiak Oil and Gas |  |  |  |  |  |  |  |  |  |
| P Johnson 153-98-1-6-7-16H | LOT1 6-153-98 | 429'FNL and 801'FEL | Truax | Bakken | horz. | 2,172' | 28715 | 33-105-03587 | 6/25/14 |
| P Johnson 153-98-1-6-7-16H3 | LOT1 6-153-98 | 429'FNL and 771'FEL | Truax | Bakken | horz. | 2,199' | 28716 | 33-105-03588 | 6/25/14 |
| P Johnson 153-98-1-6-7-16HA | LOT1 6-153-98 | 429'FNL and 741'FEL | Truax | Bakken | horz. | 2,202' | 28717 | 33-105-03589 | 6/25/14 |
| Liberty Resources (Kodiak Oil and Gas) |  |  |  |  |  |  |  |  |  |
| Gohrick 158-95-17-8-6MBH | SESE 17-158-95 | 263'FSL and 960'FEL | McGregor | Bakken | horz. | 2,443' | 28734 | 33-105-03592 | 6/27/14 |
| Statoil Oil and Gas |  |  |  |  |  |  |  |  |  |
| Syverson 1-12 \#8H | LOT3 1-155-100 | 320'FNL and 1,435'FWL | Stony Creek | N/A* | conf. | 2,253' | 28745 | 33-105-03593 | 6/27/14 |


| Permits cancelled |  |  |  |  |  |  |  |  |  |  |
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|  | Well Name | Location | Footages | Field | Geologic Target | Wellbore Type | Elev. | $\begin{aligned} & \hline \text { NDIC } \\ & \text { No. } \end{aligned}$ | API No. | NDIC date |

Dunn Co.

| Oxy USA (Occidental Petroleum) |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Raphael Stroh 3-24-13H-143-97 | SESW 24-143-97 | 315'FSL and 2,330'FWL | Fayette | Bakken | horz. | 2,396' | 26642 | 33-025-02302 | 6/24/14 |
| Raphael Stroh 4-24-13H-143-97 | SESW 24-143-97 | 315'FSL and 2,410'FWL | Fayette | Bakken | horz. | 2,390' | 26643 | 33-025-02303 | 6/24/14 |
| State 2-25-36H-143-97 | NENW 25-143-97 | 350'FNL and 2,300'FWL | Fayette | Bakken | horz. | 2,390' | 26648 | 33-025-02304 | 6/24/14 |
| State 3-25-36H-143-97 | NENW 25-143-97 | 350'FNL and 2,380'FWL | Fayette | Bakken | horz. | 2,394' | 26649 | 33-025-02305 | 6/24/14 |


| Location resurveyed |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Well Name | Location | Footages | Field | Geologic Target | Wellbore Type | Elev. | NDIC No. | API No. | NDIC date |

McKenzie Co.
Continental Resources

| Antelope 2-23H | SESW 23-153-94 | 220'FSL and 1,505'FWL | Elm Tree | N/A* | conf. | 2,160' | 22821 | 33-053-04102 | 6/30 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

*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; Alger, Banks, Bailey, Big Butte, Blue Buttes, Elk, Elm Tree, Mandaree, Manning, North Tobacco Garden, Sanish, Siverston, Skjermo, Stony Creek, and Tioga.
${ }^{* *}$ Note - The geologic target for these wells was not listed in their well file because they are a tight (confidential) hole, but the Green Lake field produces from the Madison pool, and the Newburg field produces from the Spearfish/Charles pool.
—Ashley Lindly | alindly@petroleumnewsbakken.com


## Petroleum 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


## Petroleum IPs for ND Bakken wells <br> June 24-30, 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 24-30, 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 24-30. 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

County (Co.) abbreviations are as follows - BRK: Burke, DIV: Divide, DUN: Dunn, MCK: McKenzie, MNT: Mountrail, STK: Stark, WIL: Williams

IPs for completed North Dakota wells

| NDIC No. | Well Name | Field | Location | Spacing | Co. | Geologic Target | Wellbore Type | Total Depth | IP Test Date | IP Rate (bbl) | IP Nat. Gas (mcf) | IP Water (bbl) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Abraxas Petroleum |  |  |  |  |  |  |  |  |  |  |  |  |
| 22995 | Jore Federal 2-11-1H | North Fork | LOT2 2-149-97 | 2SEC | MCK | Bakken | horz. | 21,070 | 6/2/14 | 1,160 | 1,252 | 609 |
| 22993 | Jore Federal 2-11-2H | North Fork | LOT2 2-149-97 | 2SEC | MCK | Bakken | horz. | 20,989' | 6/2/14 | 790 | 1,081 | 694 |
| Burlington Resources Oil and Gas (ConocoPhillips) |  |  |  |  |  |  |  |  |  |  |  |  |
| 26092 | Big Bend 21-2TFH | Camel Butte | LOT3 2-151-96 | 2SEC | MCK | Bakken | horz. | 20,622 | 6/7/14 | 1,643 | 2,923 | 641 |
| Continental Resources |  |  |  |  |  |  |  |  |  |  |  |  |
| 25108 | Bonney 5-3H1 | Jim Creek | SESW 3-145-96 | 2SEC | DUN | Bakken | horz. | 20,995' | N/A | N/A | N/A | N/A |
| 26420 | Montpelier 2-14H | Indian Hill | NWNE 14-153-101 | 2SEC | MCK | Bakken | horz. | 20,167 | N/A | N/A | N/A | N/A |
| 26191 | Montpelier 3-14H1 | Indian Hill | NWNE 14-153-101 | 2SEC | MCK | Bakken | horz. | 20,345' | N/A | N/A | N/A | N/A |
| 26445 | Vachal 4-27H | Alkali Creek | SWSE 22-154-94 | 2SEC | MNT | Bakken | horz. | 21,050 | 6/24/14 | 1,260 | 1,612 | 552 |
| 24842 | Wahpeton 5-16H2 | Banks | NENW 16-152-99 | 2SEC | MCK | Bakken | horz. | 20,880 | N/A | N/A | N/A | N/A |
| 24844 | Wahpeton 7-16H3 | Banks | NENW 16-152-99 | 2SEC | MCK | Bakken | horz. | 21,050' | N/A | N/A | N/A | N/A |
| 24808 | Wahpeton $10-16 \mathrm{H} 2$ | Banks | NWNE 16-152-99 | 2SEC | MCK | Bakken | horz. | 20,980 | 6/13/14 | 366 | 688 | 1,138 |
| Hess Bakken Investments II |  |  |  |  |  |  |  |  |  |  |  |  |
| 25698 | AN-Evenson 152-95-0310H-5 | Antelope | LOT3 3-152-95 | 2SEC | MCK | Sanish | horz. | 21,316 | 6/2/14 | 1,056 | 1,662 | 104 |
| 25924 | EN-Jeffrey A 155-94-2734H-5 | Alkali Creek | SWSE 22-155-94 | 4SEC | MNT | Bakken | horz. | 21210' | 5/28/14 | 55 | 130 | 2 |
| 26841 | EN-Leo- 154-94-2324H-2 | Alkali Creek | NWNW 26-154-94 | 2SEC | MNT | Bakken | horz. | 20,178 | 6/1/14 | 1,080 | 1,506 | 114 |
| 26174 | SC-5WX-152-99-0310H-1 | Banks | LOT2 3-152-99 | 2SEC | MCK | Bakken | horz. | 21,484' | 6/5/14 | 1,324 | 2,221 | 268 |
| HRC Operating (Halcon Resources) |  |  |  |  |  |  |  |  |  |  |  |  |
| 25207 | Fort Berthold 148-95-27B-34-4H | Eagle Nest | NENW 27-148-95 | 2SEC | DUN | Bakken | horz. | 20,475' | 5/13/14 | 2,219 | 2,408 | 1,551 |
| Kodiak Oil and Gas |  |  |  |  |  |  |  |  |  |  |  |  |
| 26564 | P Peterson 155-99-3-15-22-13H3 | Epping | NENW 15-155-99 | 2SEC | WIL | Bakken | horz. | 20,850 | 5/20/14 | 1,878 | 1,164 | 2,092 |
| 26565 | P Peterson 155-99-3-15-22-14H | Epping | NENW 15-155-99 | 2SEC | WIL | Bakken | horz. | 20,805' | 5/20/14 | 1,516 | 1,783 | 2,219 |
| 26566 | P Peterson 155-99-3-15-22-14H3 | Epping | NENW 15-155-99 | 2SEC | WIL | Bakken | horz. | 20,900 | 5/20/14 | 1,271 | 1,829 | 2,296 |
| 26567 | P Peterson 155-99-3-15-22-15H | Epping | NENW 15-155-99 | 2SEC | WIL | Bakken | horz. | 21,000 | 5/20/14 | 1,566 | 3,186 | 1,601 |
| Murex Petroleum |  |  |  |  |  |  |  |  |  |  |  |  |
| 25934 | Stephanie Catherine 18-19H | Ambrose | NWNW 26-163-99 | 4SEC | DIV | Bakken | horz. | 18,432 | 11/20/13 | 723 | 1,029 | 2,317 |
| Statoil Oil and Gas |  |  |  |  |  |  |  |  |  |  |  |  |
| 25646 | Bill 14-23 4TFH | Parshall | SWSE 32-153-90 | ICO | MNT | Bakken | horz. | 21,101' | 11/21/13 | 607 | 38 | 452 |
| 25644 | Bill 14-23 6H | Alexander | NWNE 14-151-101 | 2SEC | MCK | Bakken | horz. | 20,687 | 5/27/14 | 3,008 | 3,558 | 5,193 |
| 24183 | Folvag 5-8 4TFH | Stony Creek | SESE 32-156-100 | 2SEC | WIL | Bakken | horz. | 21,081' | 5/27/14 | 1,949 | 1,632 | 7,555 |
| 23091 | Jarold 25-36 3TFH | Todd | NENE 25-155-101 | 2SEC | WIL | Bakken | horz. | 20,325' | 5/22/14 | 2,984 | 2,227 | 5,810 |
| Whiting Oil and Gas |  |  |  |  |  |  |  |  |  |  |  |  |
| 27026 | Bartleson 44-1-2TFH | Sanish | SESE 1-152-93 | SEC | MNT | Bakken | horz. | 17,034 | 5/28/14 | 1,034 | 540 | 1,751 |
| 27684 | Uran 11-24-2H | Sanish | NWNW 24-153-92 | 2SEC | MNT | Bakken | horz. | 14,450' | 5/31/14 | 1,596 | 1,957 | 3,890 |
| XTO Energy (ExxonMobil) |  |  |  |  |  |  |  |  |  |  |  |  |
| 25541 | Clarence Federal 34X-7B | Haystack Butte | SWSE 7-148-97 | 2SEC | DUN | Bakken | horz. | 20,543' | 5/26/14 | 736 | 1,150 | 1,134 |
| 25540 | Clarence Federal 34X-7C | Haystack Butte | SWSE 7-148-97 | 2SEC | DUN | Bakken | horz. | 20,392' | 6/18/14 | 1,744 | 1,170 | 1,797 |
| 25991 | Clarence Federal 34X-7D | Haystack Butte | SWSE 7-148-97 | 2SEC | DUN | Bakken | horz. | 20,932' | 6/5/14 | 1,437 | 2,213 | 1,281 |
| 25990 | Clarence Federal 34X-7H | Haystack Butte | SWSE 7-148-97 | 2SEC | DUN | Bakken | horz. | 20,616' | 6/12/14 | 1,311 | 2,267 | 1,281 |
| 25981 | Inga Federal 41X-29C | Haystack Butte | NENE 29-148-97 | 2SEC | DUN | Bakken | horz. | 21,094 | 5/11/14 | 1,461 | 2,213 | 2,325 |
| 25979 | Inga Federal 41X-29D | Haystack Butte | NENE 29-148-97 | 2SEC | DUN | Bakken | horz. | 20,656 | 5/21/14 | 2,412 | 3,699 | 1,356 |

IPs for ND wells released from confidential status

| NDIC No. | Well Name | Field | Location | Spacing | co. | Geologic Target | Wellbore <br> Type | Total Depth | IP Test Date | $\begin{aligned} & \text { IP Rate } \\ & \text { (bbl) } \end{aligned}$ | $\begin{aligned} & \text { IP Nat. } \\ & \text { Gas } \\ & \text { (mcf) } \end{aligned}$ | IP Water (bbl) <br> (bb) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Burlington Resources Oil and Gas (ConocoPhillips) |  |  |  |  |  |  |  |  |  |  |  |  |
| 27083 | Denali 44-33TFH | Johnson Corner | SWSE 33-151-96 | N/A | MCK | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
| 26962 | Norman 11-4TFH ULW | Fancy Buttes | LOT4 4-150-96 | N/A | MCK | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
| Continental Resources |  |  |  |  |  |  |  |  |  |  |  |  |
| 26479 | Brogger 4-4H | Crazy Man Creek | LOT4 4-153-99 | N/A | WIL | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
| 26190 | Montpelier 4-14H | Indian Hill | NWNE 14-153-101 | N/A | MCK | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
| 25965 | Rehak Federal 4-25H | Alkali Creek | NWNE 25-155-94 | 2SEC | MNT | Bakken | horz. | 20,450 | 5/23/14 | 1,112 | 921 | 658 |
| 25966 | Rehak Federal 5-25H1 | Alkali Creek | NWNE 25-155-94 | 2SEC | MNT | Bakken | horz. | 20,520 | 5/28/14 | 955 | 1,113 | 1,030 |


| ND IP continued from page 10 |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NDIC No. | Well Name | Field | Location | Spacing | Co. | Geologic Target | Wellbore Type | Total Depth | IP Test Date | IP Rate (bbl) | IP Nat. Gas (mcf) | IP Water (bbl) |
| Hess Bakken Investments II |  |  |  |  |  |  |  |  |  |  |  |  |
| 26696 | EN-Schroeder-157-94-1102H-1 | White Earth | NWNE 14-157-94 | 2SEC | MNT | Bakken | horz. | 20,075' | 5/7/14 | 396 | 529 | 326 |
| 26858 | EN-State D-154-93-2635H-8 | Robinson Lake | NWNE 26-154-93 | N/A | MNT | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
| 26859 | EN-State D-154-93-2635H-9 | Robinson Lake | NWNE 26-154-93 | N/A | MNT | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
| 26497 | GN-Ring-158-98-1522H-1 | Rainbow | SESE 10-158-98 | N/A | WIL | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
| 26498 | GN-Ringabeu- 158-98-1102H-1 | Rainbow | SESE 10-158-98 | N/A | WIL | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
| 26662 | HA-Link 152-95-3526H-3 | Hawkeye | SWSE 35-152-95 | 2SEC | MCK | Bakken | horz. | 20,460' | 6/4/14 | 872 | 1,317 | 166 |
| 26663 | HA-Link 152-95-3526H-4 | Hawkeye | SWSE 35-152-95 | N/A | MCK | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
| 27021 | HA-Nelson A-152-95-3427H-6 | Hawkeye | SWSW 34-152-95 | N/A | MCK | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
| Kodiak Oil and Gas |  |  |  |  |  |  |  |  |  |  |  |  |
| 26424 | P Manning 154-99-2-2-11-14H | Stockyard Creek | LOT2 2-154-99 | N/A | WIL | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
| 26423 | P Manning 154-99-2-2-11-15H3 | Stockyard Creek | LOT2 2-154-99 | N/A | WIL | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
| Marathon Oil |  |  |  |  |  |  |  |  |  |  |  |  |
| 26729 | Jakob 14-35TFH | Killdeer | SWSW 35-146-95 | 2SEC | DUN | Bakken | horz. | 20,558 | 4/13/14 | 1,049 | 812 | 1,161 |
| Oxy USA (Occidental Petroleum) |  |  |  |  |  |  |  |  |  |  |  |  |
| 26366 | Keary Kadrmas 2-32-29H-142-96 | Russian Creek | SESW 32-142-96 | 2SEC | DUN | Bakken | horz. | 19,912' | 12/22/13 | 143 | 32 | 1,975 |
| 25365 | State Jaeger B 4-27-34H-144-97 | Cabernet | SWSW 22-144-97 | 2SEC | DUN | Bakken | horz. | 21,300' | 12/24/13 | 545 | 398 | 2,863 |
| 25366 | State Jaeger B 5-27-34H-144-97 | Cabernet | SWSW 22-144-97 | 2SEC | DUN | Bakken | horz. | 21,485' | 12/25/13 | 382 | 265 | 2,008 |
| 25367 | State Jaeger B 6-27-34H-144-97 | Cabernet | SWSW 22-144-97 | 2SEC | DUN | Bakken | horz. | 21,590' | 12/24/13 | 606 | 422 | 2,780 |
| 26096 | State Jaeger B 7-27-34H-144-97 | Cabernet | SESW 22-144-97 | 2SEC | DUN | Bakken | horz. | 21,235' | 12/15/13 | 70 | 44 | 560 |
| Petro-Hunt |  |  |  |  |  |  |  |  |  |  |  |  |
| 25963 | Syverson 156-99-30A-31-3H | East Fork | NENE 30-156-99 | 2SEC | WIL | Bakken | horz. | 20,679 | 5/27/14 | 987 | 1,310 | 2,094 |
| Slawson Exploration |  |  |  |  |  |  |  |  |  |  |  |  |
| 27312 | Nightmaker 4-8-17TFH | Big Bend | SWSW 5-152-91 | N/A | MNT | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
| SM Energy |  |  |  |  |  |  |  |  |  |  |  |  |
| 26851 | Bonner 9X-12HA | Poe | NESE 12-151-100 | N/A | MCK | Bakken | horz. | N/A | N/A | N/A | N/A | N/A |
|  |  |  |  |  |  |  |  | -Ashley Lindly \| alindly@petroleumnewsbakken.com |  |  |  |  |

## Petroleum Top 10 Bakken wells by IP rate June 24-30, 2014

| Statoil Oil and Gas |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 25644 | Bill 14-23 6H | Alexander | MCK | 3,008 |
| 23091 | Jarold 25-36 3TFH | Todd | WIL | 2,984 |
| XTO Energy (ExxonMobil) |  |  |  |  |
| 25979 | Inga Federal 41X-29D | Haystack Butte | DUN | 2,412 |
| HRC Operating (Halcon Resources) |  |  |  |  |
| 25207 | Fort Berthold 148-95-27B-34-4H | Eagle Nest | DUN | 2,219 |
| Statoil Oil and Gas |  |  |  |  |
| 24183 | Folvag 5-8 4TFH | Stony Creek | WIL | 1,949 |
| Kodiak Oil and Gas |  |  |  |  |
| 26564 | P Peterson 155-99-3-15-22-13H3 | Epping | WIL | 1,878 |
| XTO Energy (ExxonMobil) |  |  |  |  |
| 25540 | Clarence Federal 34X-7C | Haystack Butte | DUN | 1,744 |
| Burlington Resources Oil and Gas (ConocoPhillips) |  |  |  |  |
| 26092 | Big Bend 21-2TFH | Camel Butte | MCK | 1,643 |
| Whiting Oil and Gas |  |  |  |  |
| 27684 | Uran 11-24-2H | Sanish | MNT | 1,596 |
| Kodiak Oil and Gas |  |  |  |  |
| 26567 | P Peterson 155-99-3-15-22-15H | Epping | WIL | 1,566 |
| 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 24-30, 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. |  |  |  |  |

## Petroleum <br> ND weekly county permit totals June 24-30, 2014

| Co. | Issued | Ren. | Conf. | Total | Compl. | Conf. Compl. | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bottineau | 0 |  | 2 | 2 | 0 | 0 | 0 |
| Burke | 1 |  | 0 | 1 | 0 | 0 | 0 |
| Divide | 0 |  | 5 | 5 | 1 | 0 | 1 |
| Dunn | 0 |  | 5 | 5 | 8 | 0 | 8 |
| McKenzie | 4 |  | 11 | 15 | 11 | 0 | 11 |
| Mountrail | 8 |  | 6 | 14 | 6 | 0 | 6 |
| Williams | 4 |  | 4 | 8 | 6 | 0 | 6 |
| Permit totals |  |  |  | 50 | Compl. totals |  | 32 |

## Petroleum Bakken producers' stock prices <br> Closing prices as of July 1 along with those from previous Wednesday

| Company | Exchange | Symbol | Closing price | Previous Wed. |
| :--- | :---: | :---: | :---: | :---: |
| Abraxas Petroleum Corporation | NASDAQ | AXAS | $\$ 6.28$ | $\$ 5.84$ |
| American Eagle Energy Corporation | NYSE | AMZG | $\$ 6.09$ | $\$ 6.00$ |
| Arsenal Energy USA, Inc. | TSE | AEI | $\$ 7.84$ | $\$ 7.92$ |
| Baytex Energy USA Ltd | NYSE | BTE | $\$ 46.06$ | $\$ 44.97$ |
| Burlington Resources Co., LP (ConocoPhillips) | NYSE | COP | $\$ 86.11$ | $\$ 85.62$ |
| Continental Resources, Inc. | NYSE | CLR | $\$ 157.53$ | $\$ 156.02$ |
| Crescent Point Energy US Corporation | TSE | CPG | $\$ 47.29$ | $\$ 46.37$ |
| Denbury Onshore, LLC | NYSE | DNR | $\$ 18.31$ | $\$ 18.44$ |
| Emerald Oil, Inc. | NYSEMKT | EOX | $\$ 7.66$ | $\$ 7.33$ |
| Enerplus Resources USA Corporation | NYSE | ERF | $\$ 25.18$ | $\$ 24.08$ |
| EOG Resources, Inc. | NYSE | EOG | $\$ 116.55$ | $\$ 116.02$ |
| Fidelity Exploration \& Production (MDU) | NYSE | MDU | $\$ 34.92$ | $\$ 33.98$ |
| Halcon Resources | NYSE | HK | $\$ 7.42$ | $\$ 6.87$ |
| Hess Corporation | NYSE | HES | $\$ 99.61$ | $\$ 98.18$ |
| Kodiak Oil and Gas (USA), Inc. | NYSE | KOG | $\$ 14.28$ | $\$ 14.25$ |
| Legacy Reserves Operating LP | NASDAQ | LGCY | $\$ 31.34$ | $\$ 31.26$ |
| Marathon Oil Company | NYSE | MRO | $\$ 39.76$ | $\$ 39.71$ |
| Mountain Divide, LLC (Mountainview Energy) | CVE | MVW.V | $\$ 0.48$ | $\$ 0.49$ |
| Newfield Production Company | NYSE | NFX | $\$ 43.89$ | $\$ 43.70$ |
| Northern Oil and Gas | NYSE | NOG | $\$ 16.49$ | $\$ 16.29$ |
| Oasis Petroleum North America | NYSE | OAS | $\$ 55.94$ | $\$ 53.10$ |
| Oxy USA, Inc. (Occidental Petroleum) | NYSE | OXY | $\$ 102.80$ | $\$ 102.62$ |
| PetroShale Inc. | CVE | PSH | $\$ 1.40$ | $\$ 1.39$ |
| QEP Energy Company | NYSE | QEP | $\$ 34.20$ | $\$ 33.52$ |
| Resolute Natural Resources Company, LLC | NYSE | REN | $\$ 8.56$ | $\$ 8.36$ |
| Samson Resources Company (KKR \& Co) | NYSE | KKR | $\$ 24.49$ | $\$ 23.62$ |
| SM Energy Company | NYSE | SM | $\$ 84.35$ | $\$ 84.96$ |
| Statoil Oil and Gas LP | NYSE | STO | $\$ 31.01$ | $\$ 31.07$ |
| Triangle USA Petroleum Corporation | NYSE | TPLM | $\$ 11.76$ | $\$ 11.88$ |
| Whiting Oil and Gas Corporation | NYSE | WILL | $\$ 80.62$ | $\$ 79.48$ |
| WPX Energy Williston, LLC | NYSE | WPX | $\$ 23.56$ | $\$ 23.14$ |
| XTO Energy, Inc. (ExxonMobil) | NYSE | XOM | $\$ 101.36$ | $\$ 102.14$ |
|  |  |  |  |  |



## continued from page 1

## GAS CAPTURE

Partners and WBI Energy, gave assessments of how they are working to help the state deal with the growing demand on gas gathering, processing and exporting.

## Alliance

Tony Straquadine, manager of government affairs for Canadian-based Alliance Pipeline, described his company's natural gas pipeline, which extends from western Canada to Chicago, as a " 2,500 -mile long truck" that transports high density, energy-rich natural gas from eastern British Columbia, Alberta, Saskatchewan and the Bakken to the Midwest (see map). The gas transported in the Alliance system has the natural gas liquids still entrained in Hess Corporation donates $\$ 5$ million to UND for new laboratory complexthe gas stream, which Straquadine says makes the Alliance system a "pipeline within a pipeline."

Alliance's sister company, Aux Sable, has a gas processing plant in Chicago, which separates the natural gas liquids, NGLs, from the gas stream. "The Alliance pipeline is different," he said, adding that Alliance looks to more Bakken producers as a "one stop" solution for both their natural gas needs as well as natural gas liquids needs.

As an example of just how rich the gas is that the Alliance system transports, on the day before the summit, June 23, Straquadine said some 140,000 barrels of natural gas liquids were separated from the Alliance system gas stream at the Aux Sable plant, and 40,000 of those barrels came from the Bakken.

Straquadine said Alliance is entering into a re-contracting phase for the first time since the pipeline went into service in 2000 with a 15 -year contract that expires on Dec. 1, 2015. "So we have new capacity that's available for contracting on its pipeline system." In addition, he said Alliance recently completed a filing with the National Energy Board in Canada "to redefine how we work with producers going to a much more industry-friendly or a 'skin-in-the-game' approach where pipelines will take risk on term and capacity with a fixed toll overall."

The Alliance mainline has two interconnections in North Dakota. The company's Tioga Lateral is an 80 -mile pipeline running from Hess Corp.'s Tioga gas plant to Alliance's mainline in northern Renville County. That pipeline has a capacity of 126 million cubic feet, mmcf, per day and currently about half of that capacity is under contract with the balance of the capacity available.

The second interconnection is with Aux Sable's Prairie Rose pipeline at Bantry in McHenry County. Straquadine said 80 mmcf of contracted natural gas are moving per day through Aux Sable's Prairie Rose pipeline into the Alliance mainline. In addition, Aux Sable has the capacity to bring another 40 mmcf per day into the Alliance system.

Both the Tioga Lateral and the Prairie Rose systems are expandable with additional compression. "We have capacity to move about a quarter of the natural gas in North Dakota today on the existing systems. So 250 million of the 1 billion cubic feet that's produced in the state," Straquadine said. "We see production growing. We see opportunities to take more away. We can do some interesting things on our mainline pipe that's been in the ground for 14 years, adding


## OKS - Growth Continues

Lonesome Creek Investment

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- \$230-\$290 million
- Supported by acreage dedications from producers
\$550 million to $\mathbf{\$ 6 8 0}$ million

- Garden Creek plant (in service)
- Garden Creek II plant
- Garden Creek III plant
- Stateline I plant (in service)
$\triangle$ Stateline II plant (in service)
- Lonesome Creek plant
$\triangle$ Existing OKS processing plants
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## \section*{continued from page 1} <br> GAS DEMANDS

just how much gas midstreamers will have to capture as development of the Bakken petroleum system progresses. So what do those volumes look like in the future?

The North Dakota Pipeline Authority, NDPA, has estimated natural gas production in the state through 2030 based on two different assumptions for Bakken well drilling. At the same time, the Department of Mineral Resources, DMR, has set flaring targets in terms of the percent of all gas produced in the state through 2020. Combined, those allow for an estimate of the volume of natural gas that will have to be captured in the state through the end of the decade (see chart).

By the fourth quarter 2014, NDPA's estimates put natural gas production at approximately 1.31 billion cubic feet, bcf, per day. DMR's capture target for the fourth quarter is 74 percent, i.e., flaring is reduced to 26 percent. That puts the capture demand at approximately 0.97 bcf per day at the end of the current year.

Moving into 2015, DMR's capture target for the end of the first quarter is 77 percent (i.e., flaring is reduced to 23 percent). NDPA estimates gas production at between approximately 1.32 and 1.38 bcf per day for an average of approximately 1.35 bcf per day. At a 77 percent capture rate, that increases the volume of gas to be captured to approximately 1.04 bcf per day.

By the first quarter of 2016, NDPA estimates gas production at somewhere between approximately 1.44 and 1.48 bcf per day, for an average of approximately 1.46 bcf per day. DMR wants 85 percent of all gas captured by that time (i.e., flaring would be down to 15 percent). Thus, at the end of the first quarter 2016, approximately 1.26 bcf per day will have to be captured.

## continued form page 1

## XL CO2

Nigerian imports down 64 percent) and elsewhere that carried relatively higher carbon footprints.

The findings were partly based on a meeting last October in Washington, D.C., with the Alberta government's Department of Energy and major oil sands producers.

Kevin Born, a director of IHS Energy and leader of the firm's oil sands dialogue in Calgary, told the Financial Post that much has changed since 2005, with heavy crudes pushing out other heavy crudes that all operated in the same greenhouse gas intensity range.

The IHS conclusions mirror those of the U.S. State Department, which said last year that Keystone XL's impact on climate would be minimal because the production would be transported by rail or other pipelines if XL was abandoned.

IHS estimated GHG emissions from the oil sands are 1 percent to 19 percent higher than the average crude consumed in the U.S. in 2012 based on a "wells-towheels" analysis, which includes combustion of fuels in vehicles.

The report said that places the oil sands in the same range as 45 percent of all crude used as feedstock in U.S. refineries.

## Extra safety measures

Separately, a Canadian analyst said that any extra safety conditions imposed on XL would not hurt the economics of the project.

Steven Paget, with FirstEnergy Capital, said that if TransCanada is required to take a "couple of extra steps"

## Solving the Flaring Challenge <br> 

## JJ Kringstad - North Dakota Pipeline Authority

Going out to the end of the decade DMR is looking at a capture of between 90 and 95 percent (i.e., flaring would be reduced to 5 to 10 percent). NDPA's projections put gas production in 2020 at between approximately 1.88 and 2.28 bcf per day. At the low end, 1.88 bcf per day production results in a capture of 1.69 bcf per day at a capture rate of 90 percent and 1.79 bcf per day at a 95 percent capture rate.

In the high case scenario, production of
2.28 bcf per day and a 90 percent capture rate equates to a volume of approximately 2.05 bef per day. In that scenario, the high capture rate of 95 percent puts the capture volume at approximately 2.17 bcf per day.
To put all of these numbers in perspective, in April, the latest month for which North Dakota gas statistics are currently available, the state produced approximately 1.13 bcf of natural gas per day, of which approximately 30 percent was flared. The
remaining 70 percent, some 0.79 bcf per day, was captured. That is less than half the lowest estimated capture volume in 2020.

If the projections are accurate, the gas capture capacity in North Dakota will need to increase between approximately 0.90 and 1.38 bcf per day by 2020 , or in terms of percentages, between 114 and 175 percent.
—MIKE ELLERD
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in the welding process that should not make an economic difference.

Reports have been circulating that the U.S. Pipeline and Hazardous Materials Safety Administration has required TransCanada to hire a third-party contractor of PHMSA's choosing and to adopt a quality management program. Those conditions would be in addition to the 57 that TransCanada agreed to three years ago.

TransCanada Chief Executive Officer Russ Girling has already hinted that XL's costs are likely to rise by several hundred million dollars from the current estimate of US\$5.4 billion to more than US\$6 billion.
"It will be a big number," he has told reporters. "We'll let people know once we get the go-ahead. But there's no sense in me re-estimating every few months."

The company has already spent US $\$ 2.5$ billion on the pipeline, prompting FirstEnergy to suggest the final bill is likely to reach US\$6.9 billion.

Sonny Mottahed, chief executive officer and managing partner at Black Spruce Merchant Capital, doubted that even costs in that range would make XL less attractive than the rail alternative.

However, Laura Lau, senior vice president of the Toronto-based Brampton Group, said the biggest test of XL is the prospect of delay in issuing a Presidential Permit.

She said that if President Barack Obama pushes that decision beyond his term of office to January 2017, shippers may opt to go with TransCanada's proposed Energy East pipeline to Ontario, Quebec and Atlantic Canada.
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## continued from page 12

## GAS CAPTURE

compression to move more gas as the demand might be there."

## Oneok

Unlike Alliance which moves the entire natural gas stream out of the basin before separating out the NGLs, Oneok Partners has a number of gas plants in the basin that separate the NGLs before the dry gas is exported. Oneok also has an NGL pipeline that exports the NGLs to the Midcontinent. Oneok Vice President Kevin Burdick said flaring is a challenge and Oneok is stepping up to that challenge. "When you look at the growth that's occurring from a natural gas perspective, and you look at the flaring targets, that's a challenge. But we're stepping up to that challenge and we'll continue to work to achieve those targets and even beat those targets as we go forward. But it is staggering when you look at the volume of gas that has come online and we project will be coming online over the next several years. And that's going to require investment, and that's going to require continued investment both in gathering lines and in compression and in plant processing capabilities and in the takeaway also."
"We've been investing in the basin and we'll continue to do so," Burdick said, adding that over the last several years Oneok has invested more than $\$ 3$ billion on gathering infrastructure, processing infrastructure and NGL takeaway "to get products from the wellhead to the ultimate markets and create that value for the producer."

Oneok has six gas processing plants operating in the Williston Basin, three of which are in the Bakken region. Oneok has two more plants under construction, and a third in the planning stages. That brings to six the number of gas plants the Tulsabased midstreamer currently has on its Bakken roster. All of the Bakken plants have capacities of 100 mmcf per day except the one in the planning stage, which is the company's Lonesome Creek plant, and will have 200 mmcf per day capacity. When the Lonesome Creek plant goes online, Oneok will have approximately 800 mmcf per day of natural gas processing capability in the Williston Basin.

Oneok's Bakken NGL pipeline, which went into service in 2013, transports NGLs from processing plants in the Williston and Powder River basins to the Overland Pass pipeline in northern Colorado, which then sends the NGLs to the Midcontinent. Oneok is currently expanding the capacity of the Bakken NGL pipeline from 60,000 barrels per day to $135,000 \mathrm{bpd}$, and has plans for further expansion to $160,000 \mathrm{bpd}$ in 2016.

Going forward, Oneok has an investment backlog of $\$ 3$ billion to $\$ 4$ billion and a "lengthy" backlog of unannounced growth projects, and the company is already looking at possible future investments beyond 2018. "We're not done," Burdick said. "As we have in the past, as we continue to look at those volume forecasts and you look at the acreage and the commitments we have with our producers, there's more out there. We've got, again, our Lonesome Creek facility coming online


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and as we have those commitments and the forecasts line up, we'll be out with other announcements."

## WBI Energy

Rounding out the gas midstreamers presenting at the summit was Bismarck-based MDU Resources subsidiary WBI Energy, which Vice President Rob Johnson said has "been in the pipeline business in Montana and North Dakota for over 90 years."
WBI Energy has two major divisions, a midstream unit and a gas transmission unit. WBI Energy's midstream unit has operated facilities in Montana, Wyoming and Colorado and soon will have operations in Utah. The gas transmission unit has pipelines in North Dakota, Montana, Wyoming and South Dakota. In the Bakken, WBI Energy has an extensive gas transmission network with numerous producer receipt points and interstate pipeline interconnects through which it takes residue gas from a number of processing plants.

WBI Energy has been expanding its takeaway capacity. In 2010 the company was taking away approximately 100 mmcf per day, but by the end of 2014, the company expects to be taking away nearly 600 mmcf per day. And the company has plans for even more takeaway capacity with two current projects.

One of those projects is the company's Garden Creek expansion, which is a 15.5 mile, 215 mmcf per day pipeline that will move more gas away from Oneok's Garden Creek II and III plants. That project is currently under construction and is expected to be in service in the first half of July. Combined with its existing Garden Creek pipeline, WBI Energy will have more than $350,000 \mathrm{mcf}$ per day takeaway capacity from the Oneok Garden Creek plants.

WBI Energy's other current project is its Dakota Pipeline, a 400 mmcf per day bidirectional pipeline that will run approximately 375 miles from the Bakken to connecting points on the Viking and Great Lakes interstate systems in Minnesota. Those two systems have a combined capacity of approximately 2.5 bcf per day and provide access to Midcontinent markets as well as Midcontinent storage. And storage, Johnson said, is an important factor for North Dakota gas production. "This gas moves each and every day," he said. "With the seasonality of the upper Midwest, in the wintertime there is plenty of demand to use this gas up - in the summer it needs a home. Storage provides that home."

The Dakota Pipeline will also have ethane straddle capacity if necessary. Johnson said the gas going into its system from Bakken plants currently contains about 20 percent ethane. With a straddle option, ethane could be extracted near Tioga and put into the Vantage pipeline that runs north to Nova Chemicals Corp.'s petrochemical processing in Alberta.

Johnson said WBI Energy is still working on shipper commitment, and if the project gets subscribed, he said WBI Energy will begin the FERC pre-filing work along with the final design and route determination as well as right-of-way, environmental and regulatory work, and community meetings. "Getting this thing out in front of the affected stakeholders will be key to this project on a go-forward basis." If all of that is successful, Johnson said, WBI Energy expects construction on compression locations would begin in 2016 and pipeline construction would begin in 2017 with service expected to begin in late 2017.

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## ETP PIPELINE

It's very encouraging because we know crude oil production is going to continue to rise and having projects like these in development are going to be crucial for the long term development of this resource," Justin Kringstad of the North Dakota Pipeline Authority told Petroleum News Bakken.

## Access to key markets

At the pipeline summit, Kringstad stressed the importance of building pipelines that can get the crude oil to key
markets on the coasts. The mega pipelines will help do just that. With outlets at Patoka, the Bakken Pipeline will allow access to multiple pipeline markets in the Midwest and Gulf Coast, as well as by rail to the East Coast. ETP plans to develop a rail terminal facility in Illinois to access those eastern refineries.

ETP has secured long-term contracts from shippers sufficient to support the pipeline construction and the pipeline is expected to be in service by the end of 2016.
"The pipeline not only supports the continued growth and production on the Bakken area, but does so in a cost effective and environmentally responsible
manner by reducing the current utilization of rail and truck transportation as the predominant alternative to moving Bakken crude oil volumes to major U.S. markets," the company said in a statement.

## North Dakota pleased

"We are pleased that on the heels of the Governor's Pipeline Summit two companies announced their plans to build new pipelines capable of transporting substantial amounts of Bakken crude oil to outside markets," Gov. Jack Dalrymple said in an emailed statement to Petroleum News Bakken. "These projects are significant commitments to North Dakota and
demonstrate where our state is heading in regards to pipeline development."

Kringstad said pipeline companies are constantly assessing production levels in the Bakken region in order to determine what additional products on the export side of the business are necessary.
"There are a lot of companies also looking at options for intrastate movement of crude oil just within the region itself," Kringstad said. "There is a high level of activity of companies looking at opportunities."
-MAXINE HERR

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## LEGACY DEAL

the transaction, while the board of Corinthian has unanimously approved the deal.

The acquisition includes current production of 2,800 barrels of oil equivalent ( 86 percent light oil and natural gas liquids, averaging 38 degree API), 11.9 million boe of proved plus probable reserves with a reserve life index of 11.6 years, 104,000 net acres of undeveloped land, 105 square miles of 3-D seismic, 320 gross, or 258.7 net drilling locations ( 75 percent unbooked) and an operating netback of $\$ 47.50$ per boe.

Net of undeveloped land and seismic, which carry an estimated value of $\mathrm{C} \$ 15.6$

## continued from page 1

## FLARING REGS

meeting on July 1. It imposes oil production restrictions if producers fail to meet the gas capture goals determined by the North Dakota Petroleum Council, NDPC, flaring task force. The first target is to capture 74 percent of the gas by Oct. 1. This date was chosen because Oneok's Garden Creek II plant is scheduled to be operational at that time, adding 100 million cubic feet of gas processing per day.

To meet that goal, the commission ruled to allow all infill horizontal wells within the Bakken and Three Forks pools to produce at a maximum efficient rate for 90 days. The first 14 days of flowback gas can be removed from the total monthly volume calculation. That leaves another 76 days for an operator to get connected to a gathering facility or utilize remote capture processes in order to hit the gas capture target. If unsuccessful, the operator will face production restrictions. If they can capture 60 percent of the gas through remote capture, then they can
million, the transaction metrics for the long reserve life, high netback acquired production works out at a production price of C $\$ 75,000$ per boe, or $\mathrm{C} \$ 17.55$ per boe of proved plus probable reserves.

From a strategic rationale standpoint, Legacy said the deal represents an ideal fit with its Spearfish holdings, with a portion of the lands joint with Legacy and the remainder located immediately adjacent to Legacy operated assets, as a result of which Legacy will become the "dominant player" in the area.

It said the play has benefited from "improved economics and capital efficiencies as a result of reduced capital costs and higher initial production rates and the recently reduced North Dakota severance tax."
produce up to 200 barrels a day. But if they fail to employ that technology, they are restricted to 100 barrels a day until they implement a solution.

The order addresses the difference between wells in the delineation phase and those in full development. The first wells completed in the pool can produce at a maximum efficient rate indefinitely, but those flaring totals will count against the operator in its overall performance. The commission intends to review an operator's track record of getting wells connected before curtailing production on a well that may have special circumstances attached to it, such as poor topography that can impede construction. But even these areas will be subjected to finding well site solutions in order to solve their flaring problem. Allowing maximum production on the first well provides for critical evaluation to determine the accurate number of wells to drill and the needed infrastructure.
"A lot of 8-inch pipe was laid in the ground over the last few years because
see FLARING REGS page 16

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Legacy said it is now positioned to "drive additional efficiencies with significantly enhanced economies of scale," while its expanded operational footprint "will also accelerate implementation of waterflood in the play."

Once the transaction is closed, Legacy expects to raise its guidance for 2014 to an average 23,100 boe per day ( 88 percent oil and NGLs) and its exit rate to 27,350 boe per day ( 90 percent oil and NGLs), representing gains of 22 percent and 27 percent
respectively over 2013.
The anticipated hike in volumes and revenues from operations have allowed Legacy to raise its 2014 capital budget to C $\$ 390$ million, with operating and transportation costs expected to average $\mathrm{C} \$ 17.50$ per boe.
-GARY PARK

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## FLARING REGS

we didn't do this and now we found out it was too small," Helms explained, "and so we don't want to compound that error."

The only exception to the production restriction rule on infill wells are those proven to never be economic to connect to a gas facility. This applies to just over 1,000 wells and most of those produce less than 100 barrels of oil so restriction wouldn't be necessary anyway.
"I think the way this order rolls out, companies are going to have adequate time between today and Oct. 1 to secure those well site processes and increase gathering capacity," Helms said.

But NDPC President Ron Ness said the industry would have preferred a "toolbox option" that would allow operators not in compliance to be given greater opportunity to find gas capture solutions.
"This is, if you're not meeting the target, and you go into the penalty box, what's going to happen?" Ness said. "It's a big change. Typically this type of thing would take place over months and months and maybe legislative discussions, but they made a drastic change on how you're going to impose potential curtailment on production if you're not meeting those goals and that is a significant issue to operators."

## Critical features

If the commission issues a directive to restrict production, it constitutes a force majeure on any contracts with a midstream company. This will allow the operator to use a temporary solution to process the gas until adequate gas capacity arrives at the well. This was an issue


North Dakota Industrial Commission, from left to right: Attorney General Wayne Stenehjem, Gov. Jack Dalrymple and Agriculture Commissioner Doug Goehring
for many operators at an April 22 flaring hearing. Hearing testimony also caused Helms to consider air quality within the order, so now if the state Department of Health determines a well's flare violates air pollution control rules, then NDIC has the authority to restrict production to zero.

"I think that's a critical thing," Helms said. "But we do want it to be a case where the health department does an analysis and it is based on science."

Flaring on the Fort Berthold Indian Reservation is significantly higher than the rest of the state with percentages in
the 40 percent range due to topography and right-of-way delays. DMR is working with the tribe so they can develop a similar resolution.
"It will be challenging in many ways, so I don't think the lands on Fort Berthold will come along as quickly as those off, but I do think we're going to have a cooperative effort."

Helms said the commission will be flexible with operators struggling to reduce flaring on the reservation if they are proving to be hitting gas capture targets on wells elsewhere. He said operators will be evaluated on a statewide, field-wide, well pad and well basis.

With gas capture goals spread over October through January 2016, Helms said the order is a continuous rollout of "increasing and tightening" flaring

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## "I think this order and its implications spread the pain pretty evenly." -Lynn Helms, ND Department of Mineral Resources

restrictions. With October production reported in December, the earliest restrictions could come is January. By then, the next goal - capturing 77 percent takes effect.
"I suspect if you bring the average (flaring percentage) down, there's going to be a couple producers out there that will feel the pinch and they're going to be scrambling," Gov. Jack Dalrymple said. "We don't know who those are but we'll find out. What we do here today, we're serious about it."

Helms noted not only will the flaring percentage go down, but a significant drop of volume flared should follow.
The new rules come exactly one month after a new requirement took effect for operators to submit a gas capture plan with each drilling permit outlining how they plan to capture the gas. Helms said the response to those plans indicate the industry understands what the commission is trying to accomplish.
"I think this order and its implications spread the pain pretty evenly," Helms said. •

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## continued from page 1

## OIL CONDITIONING

Bakken crude oil prior to putting it on rail cars.

Helms said he's been meeting with officials from the U.S. Department of Energy as regulators are looking at a four-part solution to rail safety. Rail routing and maintenance along with rail car standards are federal issues, but emergency management planning and crude oil conditioning involve the state and local entities.
"(Oil conditioning) is in the Industrial Commission's purview ... we may want to follow up with a hearing to see whether our crude oil is conditioned properly for sale and transport," Helms told the commission. "The Department of Energy is researching this for the White House and you do have a role in this."
Currently, the NDIC does not have any standards regarding oil conditioning for transport.
"I think we do need to go there," Gov. Jack Dalrymple said. "The question has been raised about the volatility of Bakken oil. Studies that were done say that it is not, but that also assumes that crude oil is conditioned as it comes out of the ground and we don't really know, as an Industrial Commission, if it is or isn't," he continued. "I think we need to go there and be able to say we know what these producers are doing in the way of conditioning."

The commission voted unanimously to allow Helms to proceed with the hearing process to ascertain practices of conditioning crude oil in North Dakota. Helms said a study by Turner Mason on best practices should be available later in July that could be presented at the hearing.
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