The lake in winter

The south shore of Lake Sakakawea as seen near New Town, N.D., in March 2013. It is the third largest man-made lake in the U.S. and extends from the Garrison Dam at Riverdale north over Mandan back some 178 miles to Trenton just east of the Montana border. Lake Sakakawea has 1,340 miles of shoreline.

Watco, Great Northern to build multi-purpose Bakken rail hub

Kansas-based Watco Terminal and Port Services along with Houston-based Great Northern Project Development recently announced that the two companies are entering into a partnership to construct and operate a “major multi-pur-
pose rail transload terminal and railcar maintenance shop” near South Heart, N.D., just east of Fryburg where Watco operates Great Northern’s crude oil rail loading facility. Watco will operate the South Heart facility.

The South Heart facility will provide rail transload and rail car maintenance services along with warehousing and materials storage. It is designed to receive and transload all

New, planned projects boost ND oil pipeline export capacity

North Dakota’s crude oil pipeline export capacity currently stands at approximately 583,000 barrels per day through a combination of existing pipelines owned and operated primarily by Enbridge and the True companies. Currently, however, there are several projects in the works that will signifi-
cantly boost the state’s pipeline export capacity between 2014 and 2016 according to the North Dakota Pipeline Authority.

While pipeline export capacity, combined with rail and

Mineral owners will have final say on QEP’s proposed Grail unit

North Dakota Gov. Jack Dalrymple doesn’t always believe he’s bigger. He cast the sole vote against QEP Energy Co.’s request for unitization of nearly 25,000 acres in McKenzie
County at the Jan. 29 Industrial Commission meeting, saying he doesn’t “see the world as 25,000-acre units in North Dakota.”

“I kind of have a problem with these deals where they have

A pathway to 5 percent

NDPC task force brings fraying solution to NDIC, but it must be a joint effort

The North Dakota Petroleum Council’s Flaring Task Force offered solutions to the state Industrial Commission to reduce flaring in the state to as low as 5 percent within the next six years.

On Jan. 29, the task force presented its report outlining gas capture plans, reiterat-
ing how unusual it is for industry to come together in this way.

“When much gnashing of teeth, and heated debate, I can’t emphasize how hard it was to come up with these solutions,” says Eric Dille of EOG Resources, task force chairman. “It was very diffi-
cult and unique for industry to do that.”

The report outlined how the industry could capture 85 percent of the natural gas within two years, 90 percent in six years and possibly even hit a 95 percent goal with cooperation from the commission, state agencies, lawmakers, tribes, landowners and industry. North Dakota is currently capturing approximately 70 per-
cent of the natural gas produced in the state and the other 30 percent is flared.

Industry takes bold step, encourages regulation

Reductions would come primarily from a combi-
nation of gathering pipelines and processing plants, but proper planning and communication would be

Tighter rail rules

US, Canada want quick action to improve safety of flammable liquids transport

In a ground-breaking effort, the United States and Canadian transportation safety watchdogs have applied extreme pressure to federal regulators in both countries to waste no time in changing rules for the rail shipment of crude and flammable liquids.

An unprecedented joint statement Jan. 23 by the two agencies — the U.S. National Transportation Safety Board, or NTSB, and the

Transportation Safety Board of Canada, or TSB — called for the phasing out of an estimated fleet of 75,000 DOT-111 tank cars, which carry the bulk of Bakken crude and volatile fuels such as ethanol in North America.

But neither agency suggest-
ed a timeframe for eliminat-
ing the cars.

They also recommended greater efforts to reroute those trains outside populated areas and better emergency planning to handle accidents.

Keystone XL gets a leg up

CEO has Plan B for moving crude to Gulf; Canada steps up pitch in Washington

TransCanada’s Keystone XL project has received a first-stage launch with the formal opening of the southern leg from the Cushing, Okla., hub to Nederland, Texas.

The 485-mile Gulf Coast Project is already operating at 300,000 barrels per day, expected to average 700,000 bpd over its first year and designed for 800,000 bpd all

helping to free up crude trapped by the U.S.

Midcontinent pipeline bottleneck. A Houston

Lateral from Liberty, Texas, is also on track for a

startup in late 2014.

NATURAL GAS

For Petroleum News Bakken

By MAXINE HERB

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see KEYSTONE LEG UP page 14

see EXPIRED CAPACITY page 15

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Hess Corp. has increased its rig count and bring 57 more wells online in 2014. Along with Hess Corp.’s 20 percent production increase came a 16 percent reduction in average well cost. In the fourth quarter 2012, the corporation’s average Bakken well cost stood at $9 million, but in the fourth quarter of 2013 that average well cost was $7.6 million.

Also contributing to the corporation’s output is the quality of its wells. “Since the start of 2012, one-third of the top 50 wells drilled in the Bakken in North Dakota in terms of 90-day initial production rate were operated by Hess,” said Chief Executive Officer John Hess in a Jan. 29 earnings conference call with analysts. “We have an outstanding team operating in the Bakken, and they are doing all the right things to capture the tremendous investment opportunity there as we continue to drive down well costs, increase production and maximize returns.”

Hess Corp. President Greg Hill told analysts during the Jan. 29 conference call that the corporation’s 30-day initial production rates have been averaging between 750 and 900 boepd, which he said is 15 to 20 percent above the industry average.

Rig count, well locations and reserves

The corporation is projecting its 2014 Bakken production to average between 80,000 and 90,000 boepd, an increase of between 19 and 34 percent over 2013. For the first quarter, however, the corporation estimates production at between 65,000 to 70,000 boepd due to wells being shut-in as the Tioga gas plant expansion is completed.

Hess Corp. has increased its rig count from 14 to 17 going into 2014. In addition, Hess Corp. increased its number of future well locations in the Bakken by 33 percent from 1,800 to 2,400. It also increased its estimate of recoverable Bakken resources by 20 percent from 1 billion boe to 1.2 billion boe. Hill said the corporation’s overall estimate ultimate recovery for its Bakken system wells remains as between 550,000 and 650,000 boe, “demonstrating further the high quality of our Bakken acreage.”

Infill testing

Hess Corp. is planning to conduct tighter spacing pilot tests in the Bakken in 2014 and 2015 and said the corporation’s configuration of five Middle Bakken and four Three Forks wells per 1,280-acre spacing unit has been a success. The corporation is now planning to construct 17 well pads to test infill spacing of seven Middle Bakken and six Three Forks wells per spacing unit, and will construct an additional two pads to test infill spacing of nine Bakken and eight Three Forks wells per unit.

“If this tighter spacing validates the results of our reservoir simulations, our longer-term guidance of 150,000 barrels per day, our number of economic drilling locations, and our recoverable resource will likely increase.” — Greg Hill, Hess Corp. president

Hess’s state-of-the-art rail cars

During a quarterly analysts’ conference call on Jan. 29, Hess Corp. President Greg Hill was asked about the quality of the corporation’s rail assets in light of the recent scrutiny crude-by-rail has come under as well as proposed new regulations (see related story on page 1).

Hill said safety is always important in all of the corporation’s activities, and said that all of the corporation’s rail cars meet the highest standards for specifications and maintenance. He said all of the tank cars in the corporation’s rail fleet are of an industry design standard known as “Petition 1577” for DOT-111 tank cars. That standard, Hill said, includes enhanced features such as thicker steel, double hull bottoms, half head shields, top fittings protection, and a reclosing pressure-relief device. “So they’re truly state-of-the-art rail cars,” Hill said. Hess Corp. has more than 900 crude oil tank cars in its rail fleet.

“We worked for over a year with railroad companies and industry experts to really design the safest car … we could to transport Bakken crude. So we feel like we are running … one of the safest fleets in the industry,” Hill said.

Ken Dorsey of the American Association of Railroads told Petroleum News Bakken that the steel used in the Petition 1577 design is known as TC 128 Grade B, which Dorsey said is the best steel available for tank cars and is the same steel used for pressurized cars. Dorsey said the Petition 1577 design is the latest industry consensus design for railroad tanks cars carrying such products as crude oil.

Along with its fleet of rail cars, Hess Corp. maintains pipeline export capacity out of the Williston Basin. CEO Hess said in the Jan. 29 conference call that the corporation has access to between 60,000 and 70,000 barrels per day of pipeline capacity, some of which he said the corporation is using and some it is not because of favorable price differentials at different markets. “So we’re actu- ally well positioned should something happen.”

—MIKE ELLERD
Trespassing claim dismissed as frivolous
North Dakota Supreme Court affirms lower court ruling against charges of trespassing, interference with oilfield operations

By JANNELLE STEGER COMBS
For Petroleum News Bakken

I n January, the North Dakota Supreme Court issued an opinion in the case of Sagebrush v. Peterson, et al. While the claim by an operator that individuals were trespassing and interfering with oil and gas operations was found frivolous, this case resulted from its unusual facts. Sagebrush Resources LLC previously operated several oil and gas wells in Bottineau County. In 2011, the company filed a trespassing civil complaint against Daryl Peterson, Larry Peterson and Galen Peterson. Sagebrush alleged that the Petersons entered Sagebrush well sites and a tank battery. In the underlying District Court case, Larry and Daryl Peterson admitted to entering the Cramer Central Tank Battery at the request of the Bottineau Emergency Services manager, and that Daryl Peterson had been at the site of the one of the wells to document spills with a state inspector and had driven on the lease road for another well with the permission of the surface owner. During the progression of the District Court case, it was revealed that Sagebrush claimed the Petersons damaged the company by filing a series of complaints with the North Dakota Industrial Commission regarding possible violations of its regulations. The damages were monetized, in Sagebrush’s opinion, by direct expenditures in participating in the investigations as well as the North Dakota Industrial Commission’s withholding of an approval of its planned sale of Sagebrush’s interests in the units, which delayed that sale to Petro Harvester Operating Company LLC.

No factual evidence

District Court Judge Michael Sturdevant found that Sagebrush’s claims had no factual evidence to support trespass or to support that the Petersons’ taking of photographs interfered with the development of the mineral estate. The District Court further found that Sagebrush had brought a frivolous lawsuit in retaliation for the efforts of the Petersons to pursue their remedies through the Industrial Commission and for the litigation, that litigation that was brought regarding a salvaging disposal case involving some of the Petersons. The Petersons then filed an affidavit requesting their attorneys’ fees, as is allowed if a case is found to be frivolous. The Petersons were awarded $23,729 in attorneys’ fees. In the appeal, Sagebrush did not contest the dismissal of its complaint by the lower court. Instead it only argued that the finding that the claim was frivolous, the award of attorneys’ fees and the amount of fees were all in error. The Supreme Court affirmed the lower court’s ruling.

Chief Justice GundeWalle agreed with the result of the majority opinion of the Supreme Court but also wrote a special concurrence. In it, he ruled that if a case is found to be frivolous, the surface owner does not lose all right to use the surface even though the mineral estate is dominant. The concurrence further noted that the oil and gas lessee has the right to keep people “off of dangerous property the lessee is using to produce the oil and gas, such as tank batteries, open pits, pumps, etc.” The facts in this case however did not lead to that type of situation.

Contact Jannelle Steger Combs at janelle@petroleumnews.com or 907.561.7517

TrioGen, a company that provides solutions for the oil and gas industry, has announced that it has added three new employees to its team. The new hires include

- Kevin Johnson, who will be responsible for sales and marketing.
- Rachel Lee, who will work on product development.
- Sarah Green, who will handle customer support.

TrioGen specializes in providing innovative solutions for the oil and gas industry, particularly in the areas of artificial lift and energy efficiency. The company has seen a surge in demand for its products, which have helped operators reduce costs and improve efficiency. The new hires will help TrioGen meet this growing demand and expand its offerings to meet the needs of its customers.

TrioGen’s focus on innovation and customer satisfaction has led to its recent success in the market, and the new hires are expected to further contribute to this growth. The company is optimistic about the future and looks forward to continued success with its innovative solutions.

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For more information, please visit www.trio-gen.com
Sandpiper moving closer to reality

Open season closes as Public Service Commission prepares for public hearings on North Dakota’s largest capacity crude oil pipeline

By MAXINE HERR
For Petroleum News Bakken

The largest pipeline project to date in the Williston Basin is gaining momentum as the open season on the Sandpiper project just closed and the North Dakota Public Service Commission is holding public hearings on the project in February.

To address the rapid oil production growth in the Bakken region, Enbridge subsidiary North Dakota Pipeline Co., formerly known as Enbridge Pipelines, is seeking to develop the Sandpiper project, a 375-mile, 24-inch diameter crude oil pipeline running from Beaver Lodge near Tioga, N.D., to Clearbrook, Minn., providing capacity to transport 225,000 barrels per day out of the region. The pipeline then would extend another 223 miles from Clearbrook with 375,000 bpd of capacity to Superior, Wis., where the crude oil transport system would connect to other transport options and make its way to refineries in the U.S. and Canada. As Petroleum News Bakken previously reported, Enbridge is seeking as the anchor shipper for the project. Marathon Petroleum Corp. has been secured as the anchor shipper for the project. Marathon is funding 37.5 percent of the project in return for a 27 percent equity interest.

“It’s the largest pipeline project we have in development today in the Williston Basin,” said Justin Kringsrud, director of the N.D. Pipeline Authority. “Going forward, as we continue to grow production and develop and mature this area, we need major pipeline projects like this.”

Enbridge conducted an open season between Nov. 26 and Jan. 24 to solicit commitments from shippers for capacity on the Sandpiper project.

Kelly Wilkins, spokesman for the Enbridge subsidiary, told Petroleum News Bakken there are many elements to a successful project, and the company is actively developing the permitting and construction plans.

“We’re very pleased with the results,” Wilkins said. “We’re going full speed ahead on this like we’ve always planned. We’re looking for support from not only customers, but communities, and regulators, and all the markets.”

Public to provide input

The state Public Service Commission will hold public hearings in February about the project. The first is Feb. 19 at the University of North Dakota School of Law in Grand Forks, then in Devils Lake on Feb. 20 at Lake Region State College, and finally at the Minot City Council chambers on Feb. 27.

PSC Commissioner Julie Fedorchak said the commission conducts a very thorough process to ensure all of the construction is done in a way that makes the least amount of environmental and cultural damage, but also provides more transport options as needs continue to grow.

“We want to decrease the demand for rail, or at least provide another outlet to get this oil to market … and we need projects like this to do it safely,” Fedorchak told Petroleum News Bakken. “Each and every project is another piece in the puzzle to having infrastructure in place to support growth and development of this valuable resource that our lifestyle relies upon.”

During open season, shippers also had the option of making a priority or non-priority service commitment. Customer contracts vary, Wilkins said, but generally, priority service customers would have first access to the pipeline.

The expected in-service date for the $2.6 billion project is the first quarter of 2016.

Contact Maxine Herr
at maxineh@pnn.com

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Moving Hydrocarbons
**Emerald Oil accelerates development**

By STEVE SUTHERLIN
For Petroleum News Bakken

Emerald Oil’s fourth quarter 2013 production increased 50 percent over the third quarter and 103 percent over the same quarter of 2012 averaging 2,430 barrels of oil equivalent per day from its operating development program. The Denver-based company also exited 2013 with an average daily production of 2,630 bpd.

Emerald currently has two rigs operating in its Low Rider project area in west-central McKenzie County, N.D., and plans to add a third operating rig beginning in April, which is estimated to reduce by approximately six years the company’s acreage development for its 435 current gross operated drilling locations.

“Emerald exceeded both our average and exit rate production forecasts for 2013,” said McAndrew Rudisill, Emerald CEO. “Our production growth will further accelerate in 2014 with the addition of the third rig.”

Since its last operational update in November, Emerald said it has drilled and completed 13.9 net wells that are now producing, adding that it currently has 6.9 net wells drilling, completing or waiting on completion early in the first quarter of 2014.

Emerald’s first well into the Three Forks formation turned in a 30-day average production of 573 bopd, an amount the company said bodes well for the formation in the company’s McKenzie County acreage.

“Emerald is very encouraged by the results of our first well into the Three Forks formation, the Excalibur 4-25-36H, the well confirms the Three Forks resource in our acreage position in McKenzie County,” Rudisill said. “We now plan on drilling more Three Forks wells in conjunction with our Middle Bakken development program for 2014.”

The company’s Middle Bakken drilling program showed solid results in Q4 2013, despite bitter cold weather that hampered operations.

**Specific wells**

All but one of Emerald’s 15 operated wells are showing average production of more than 500 bopd, the company said.

The Pirate 1-2-11H well had a 90-day average production of 621 bopd, while the Arsenal 1-17-20H had a 90-day average production of 570 bopd. The Caper 1-15-22H had a 90-day average of 678 bopd, and the Mogoose 1-8-5H had a 90-day average of 619 bopd. The Talon 1-9-4H averaged 570 bopd over 90 days, and the Slugger 1-16-21H showed a 90-day average of 508 bopd. The Hot Rod 1-27-26H had a 90-day average rate of 650 bopd.

The Hot Rod 4-27-26H had a 60-day average production of 490 bopd, while the Excalibur 5-25-36H turned in a 60-day average of 591 bopd.

The Pirate 5-2-11H had a 30-day average of 607 bopd, while the Pirate 6-2-11H had a 30-day average of 708 bopd. The Caper 5-22-15H had a 30-day average of 704 bopd, while the Caper 6-22-15H had a 30-day average of 827 bopd. The Excalibur 4-32-36H had a 30-day average of 824 bopd. The company’s sole Three Forks formation well, the Excalibur 4-25-36H, turned in an initial production rate of 1,935 bopd and a 30-day average rate of 824 bopd.

**Kodiak acquisition**

On Jan. 10, Emerald announced that it was spending $74.6 million to acquire approximately 20,000 net acres — in purchase and sale agreements with Kodiak Oil and Gas Inc. and an unidentified seller — increasing Emerald’s total Williston Basin leasehold to approximately 85,000 net acres.

Emerald said it would pay Kodiak $68.3 million for oil and gas properties and assets in Williams County and McKenzie County, N.D.

The Kodiak package includes operated working interests in approximately 19,500 net acres in the Williston Basin which “are highly contiguous to Emerald’s Low Rider operating area in McKenzie County.”

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**Canada labeled ‘soft’ on energy accidents**

By GARY PARK
For Petroleum News Bakken

The Canadian government is being accused of putting petroleum industry interests ahead of public safety after a huge natural gas pipeline blast in Manitoba and a second derailment in three weeks involving a Canadian National Railway’s train in New Brunswick.

Tom Mulcair, leader of the opposition New Democratic Party, said the events are proof that the government “doesn’t believe in enforcing legislation when it comes to the oil companies.”

He said the public should not have to depend on luck, as it did in the latest two accidents, for its protection.

“Rigorous enforcement in the public interest is essential,” he said. “We should have structures involved.”

Natural Resources Minister Joe Oliver said the government is taking measures to address safety issues, including increased pipeline inspections, a doubling of comprehensive audits and new legislation to make it easier to impose fines.

There were no injuries from the gas line explosion in the early hours of Jan. 25, although four homes were evacuated, but 4,000 gas customers in southern Manitoba were without heat in bitter weather for three days.

Spot gas prices in the U.S. Midwest and southern Canada soared as a result of the disruption, averaging $53.30 per million British thermal units on Jan. 27, an increase of $43, with some deals reaching $83.

Another safety challenge

But the event is another chance for opponents of Keystone XL to challenge TransCanada’s safety record, given that the existing Keystone line has experienced several incidents on both sides of the U.S.-Canada border since starting operations in 2010.

Warren Maebe, director of an energy and environmental policy institute at Queen’s University in Ontario, said the explosion comes at a bad time when TransCanada “is trying to sell people on how safe it is and how efficient it is.”

Karl Johannson, TransCanada’s president of natural gas pipelines, said it was too early to speculate on the cause of the Manitoba explosion pending investigations by Canada’s National Energy Board and Transportation Safety Board.

He said it is five years since TransCanada last used a pipeline inspection gauge (known as a pig) on the damaged section of line and downplayed concerns that the decades-old pipeline faces heightened corrosion risks.

Johannson said “one of the experts on stress corrosion. We’ve been working on it since the mid-1980s when this first came to our attention.

A spokesman for TransCanada said the public and governments will also measure how the company responds and deals with the event.

Maebe said that if TransCanada wants to earn public trust it needs to be open about what caused the explosion and what it is doing to prevent a repetition, suggesting that society is becoming “far less tolerant of risks and is demanding more of companies than ever before.”

**Derailment near Edmonton**

The CN freight train derailment affected five cars, one of them carrying butane for use as feedstock in winter-grade gasoline.

Although there were no leaks, fires or evacuations, CN said it was “very unusual” to have two derailments in such a short period of time in the same province and “is certainly not the way we wanted to see SAFETY ACCUSATIONS page 12
Ethane posing more transport woes

Williston Basin midstream and pipeline operators face NGL logistics issues as gas production increases and markets fluctuate

BY MAXINE HERR
For Petroleum News Bakken

Natural gas liquids, NGLs, behave differently than natural gas, and industry is keeping a watchful eye on a particular stream of those NGLs.

Ethane, a light hydrocarbon used primarily to produce plastics and petrochemical feedstock, is commonly processed into ethylene used to make plastic bags, bottles, antifreeze, or bumpers on cars. But it is difficult and often uneconomical to recover ethane from the natural gas stream so it is typically left with the natural gas and sent through interstate pipelines.

In North Dakota, much of the ethane blends with the dry natural gas and moves along the Alliance Pipeline, a 2,300-mile integrated Canadian and U.S. natural gas transmission pipeline system that delivers to the Chicago market hub. The pipeline is unique in that the natural gas is sent through the pipeline unprocessed until it reaches its destination for processing. Natural gas is processed in gas plants before it’s transmitted through North Dakota’s other gas pipelines.

The ‘hot stuff’ could be problematic

Ethane is not often sold to chemical companies but instead is added to the gas pipeline used for power and heating. A glut of it could spell trouble due to the heat value of the gas. Industry and state regulations are observing the pipelines carrying ethane, and as oil and gas production ramps up, they know the challenges.

“There are many more walls we’re going to hit in this gas processing thing, and one of them is ethane,” Lynn Helms, the state’s Department of Mineral Resources director told Petroleum News Bakken. “There’s only a limited amount of ethane that can come to your house in the natural gas before your furnace and appliances start to have real problems. It has limited use as a fuel because your appliances are not built to burn that hot stuff.”

The 36-inch Alliance Pipeline is large enough to handle the ethane at this point, but Helms said with hikes in production, the space will dwindle over time.

“We still have room for blending the ethane in before the gas gets too hot for your appliances, but we will use it up and then something will have to happen with it,” Helms said.

Industry taking steps to better utilize ethane

Justin Kringstad of the N.D. Pipeline Authority says the industry keeps close tabs on current and future NGL production and market conditions to prepare for any issues.

“The industry is very aware of the situation,” Kringstad told Petroleum News Bakken. “They are looking at what production levels will be, what the takeaway options are, and if there’s a case for additional infrastructure, they’re positioning themselves to make that move if necessary.”

Current takeaway options are few in North Dakota, but a newly expanded processing plant in the state includes the ability to strip the ethane for other uses.

The Hess plant uses cryogenic processes to extract ethane from the natural gas. While traditional absorption methods can extract almost all of the heavier NGLs, lighter hydrocarbons like ethane are often more difficult to recover from the natural gas stream. The plant’s cryogenic processes offer higher recovery rates by dropping the temperature of the gas stream to around minus 120 degrees Fahrenheit.

Oneok and Targa

Oneok Partners, the largest independent operator of natural gas gathering and processing facilities, operates four plants in the region, with two more under construction and a seventh expected to be completed in 2015. The seven plants will bring Oneok’s total processing capacity in the state to 800 million cubic feet, mmcf, per day.

Oneok’s Bakken NGL pipeline transports NGLs from the Williston Basin to an interconnection with the Overland Pass Pipeline, where they are ultimately sent to its NGL storage and separation facilities in Bushton, Kansas. From there, the NGLs ultimately are transported to the Texas Gulf Coast or to Midwest markets, including Chicago, through the company’s integrated system.

Oneok’s Garden Creek and Stateline I and II natural gas processing plants have the capability to strip out ethane from the natural gas stream and send it down the Bakken NGL pipeline, but due to pricing, the company told Petroleum News Bakken it is currently rejecting ethane and leaving it in the natural gas stream.

A processing plant owned by Targa Badlands, a subsidiary of Targa Resources which acquired Saddle Butte Pipeline LLC, also strips out the ethane as it processes approximately 45 mmcf per day of natural gas at its Little Missouri processing plant in McKenzie County. The company also owns approximately 95 miles of natural gas gathering pipelines. North Dakota currently has 20 natural gas processing plants in operation with the capacity to process roughly 1,000 mmcf per day, according to data from the N.D. Pipeline Authority, but many of the plants cannot remove ethane. Kringstad said unlike older processing plants in the state, when new plants are constructed, they are designed to strip the ethane. Projects for new or expanded plants will add 450 mmcf per day of natural gas processing capacity.

THE BAKKEN EXPLORERS

For more information on this annual magazine, which will feature those oil companies exploring vertically or laterally in the Bakken petroleum system, email Kay Cashman, publisher and executive editor, at publisher@petroleumnews.com.
Montana well permits and completions

January 17—23, 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 the northwest/south-central Montana, which is at least 175 miles long (north-south) and 50 miles wide (east-west), extending from southern Alberta, where the formation is generally referred to as the Edson, 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 | BP: barrels of oil per day | BWPD: barrels of water per day | IP: initial production | MCFPD: million cubic feet per day | PBHL: probable bottomhole location | PDP: 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
In Musselshell County, North Range Exploration LLC has been approved to drill the Bar 7-4 at NW 25-29N-57E (200 FNL/1980 FEL). The Bar will target the Heath formation at a proposed depth of 3,950 feet.

New locations — horizontal wells
In Richland County, Continental Resources Inc. has been approved for two Bakken formation wells. The Boles 2-33H has an SHL at NE 33-25N-56E (280 FNL/1137 FEL) and a PBHL of 17,211 feet at 2-24N-55E (280 FNL/1092 FEL) and a PBHL of 16,548 feet at 2-24N-55E (200 FSL/660 FEL). The Boles 3-33H has an SHL at NE 33-25N-56E (280 FNL/1137 FEL) and a PBHL of 20,202 feet at NW 15-5N-59E (250 FNL/750 FWL). In Roosevelt County, a re-issued permit was approved for the Dag 1-8-5H, operated by Slawson Exploration Company Inc. The Bakken formation well has an SHL at SW SW 8-21N-59E (200 FSL/675 FWL) and a PBHL of 20,202 feet at NW 5-5N-59E (250 FNL/750 FWL).

Re-issued locations
In Dawson County, Petro-Hunt, LLC was approved for a re-issued permit to drill the Karlan 18-55 19B-1-1, which has an SHL at NE 18-19N-55E (680 FNL/1620 FWL). The Karlan will target the red River formation at a proposed depth of 11,100 feet.

In Glacier County, Omimex Canada Ltd. was approved for a re-issued permit for the Tribul 194 5-5-37N-7W at SW NW 35-37N-7W (1650 FNL/340 FWL). At a proposed depth of 4,600 feet, the well will target the Lodgepole formation. In Richland County, a re-issued permit was approved for the Dag 1-8-5H, operated by Slawson Exploration Company Inc. Spaight 1-24H, a Bakken formation well. The Spaight has an SHL at SW SE 24-29N-57E (180 FSL/1865 FWL) and a PBHL of 20,202 feet at NW NE 13-29N-57E (200 FSL/1980 FWL).

Expired permits
In Glacier County, the permit for the Big Tex 1-21H, operated by Newfield Production Co., expired. The well was at NE 21-34N-6W (200 FNL/660 FWL) and was permitted to the Devonian undifferentiated.

Top IP wells clustered in McKenzie Co.
Nine of this week’s Top 10 IP wells are all located in near proximity in northern McKenzie and southern Williams counties. The Top 10 IPs range from 2,126 to 3,170 barrels (page 8).

Oasis Petroleum had the top IP well at 3,170 barrels from a well in the Willow Creek field in far southern Williams County. The Willow Creek field straddles the north shore of Lake Sakakawea along the county line between Williams and McKenzie counties.

Of the remaining nine wells on this week’s list, eight are clustered in nearby northern McKenzie County while the ninth lies to the south in Dunn County.

Bakken producers’ stock prices

Company | Exchange | Symbol | Closing Price | Previous Wed.
--- | --- | --- | --- | ---
Abacus Petroleum Corporation | NASDAQ | AXAS | $3.19 | $3.25
American Eagle Energy Corporation | NYSE | AME | $1.80 | $2.04
Axiar Energy USA, Inc. | TSE | AH | $4.90 | $5.40
Baytex Energy Ltd | NYSE | BTE | $35.88 | $37.64
Burlington Resources Co., LP (ConocoPhillips) | NYSE | COP | $65.82 | $68.31
Continental Resources Inc. | NYSE | CLR | $107.03 | $123.45
Crescent Point Energy Corp | TSE | CPGA | $38.50 | $39.83
Denbury Onshore, LLC | NYSE | DNS | $16.04 | $16.37
Emerald Oil, Inc. | NYSEMKT | EOX | $7.52 | $7.79
Encana Resources USA Corporation | NYSE | EFR | $18.18 | $18.48
Eidos Resources Inc. | NYSE | EDS | $144.65 | $171.72
Fidelity Exploration & Production (MDU) | NYSE | MDU | $31.45 | $31.48
GOM Resources, Inc. | NYSE | GOMR | $3.06 | $3.39
Halliburton | NYSE | HAL | $53.48 | $54.72
Hess Corporation | NYSE | HES | $77.06 | $78.12
Kodiak Oil and Gas (USA), Inc. | NYSE | KOG | $10.44 | $11.45
Legacy Resources Development Corp. | NASDAQ | LGCY | $26.83 | $27.82
Marathon Oil Company | NYSE | MRO | $33.04 | $34.40
Mountain Divide, LLC (Mountainview Energy) | CSE | MVN | $0.45 | $0.49
Newfield Production Company | NYSE | NFX | $24.25 | $25.50
Northern Oil and Gas | NYSE | NOG | $154.90 | $155.16
Oasis Petroleum North America | NYSE | OAS | $41.08 | $46.60
Ouy USA, Inc. (Occidental Petroleum) | NYSE | OXY | $87.82 | $90.06
Petroleco Inc. | CSE | PSH | $1.38 | $1.38
QEP Energy Company | NYSE | QEP | $16.09 | $16.10
Resolute Natural Resources Company, LLC | NYSE | RNO | $8.29 | $8.93
Samson Resources Company (KKR & Co) | NYSE | KKR | $23.95 | $24.10
Sid Oil and Gas Inc | NYSE | SM | $82.87 | $87.58
Sloan Oil and Gas LP | NYSE | SPD | $24.08 | $24.90
Triaxial USA Petroleum Corporation | NYSE | TPLM | $7.77 | $8.88
Whiting Oil and Gas Corporation | NYSE | WLL | $33.55 | $41.57
Wyper Energy Williston, LLC | NYSE | WYF | $19.39 | $19.95
XTO Energy, Inc. (Equinor) | NYSE | XOM | $89.11 | $97.88

Compiled by Darryl L. Flowers
For Petroleum News Bakken

Bakken Stats Commentary

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.dmnd.gov/ogis/nightlight.asp

Saskatchewan

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

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Mike Ellerd
For the legend, the chart is divided into the following categories:

1. Top 10 Bakken wells by IP rate
2. Wells for ND Bakken developments
3. Oil sales
4. Exploration

For the chart, please refer to the page for the complete data.
LEGEND
The county name is on the upper line, the type of permit issued is on the second line, and company names are not, followed by individual wells with data in this order: well name; location; state; depth; date; operator.

Permits issued
Gosch Energy
1/9-22H, NENE 27-145N-96W, 2307; 1/22/2014

Divide Co.

Permits cancelled

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Dunn Co.

Permits issued

American Eagle Energy
1/20-23H, NENE 27-145N-96W, 2306; 1/22/2014

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

American Eagle Energy
1/20-23H, NENE 27-145N-96W, 2306; 1/22/2014

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

Billings Co.

Permits issued

Guy Soap Company

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

American Eagle Energy
1/20-23H, NENE 27-145N-96W, 2306; 1/22/2014

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

Guy Soap Company

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

American Eagle Energy
1/20-23H, NENE 27-145N-96W, 2306; 1/22/2014

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

Guy Soap Company

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

American Eagle Energy
1/20-23H, NENE 27-145N-96W, 2306; 1/22/2014

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

Guy Soap Company

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

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1/20-23H, NENE 27-145N-96W, 2306; 1/22/2014

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

Guy Soap Company

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

American Eagle Energy
1/20-23H, NENE 27-145N-96W, 2306; 1/22/2014

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

Guy Soap Company

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

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Divide Co.

Permits issued

Guy Soap Company

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

American Eagle Energy
1/20-23H, NENE 27-145N-96W, 2306; 1/22/2014

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

American Eagle Energy
1/20-23H, NENE 27-145N-96W, 2306; 1/22/2014

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

Divide Co.

Permits issued

American Eagle Energy
1/20-23H, NENE 27-145N-96W, 2306; 1/22/2014

Location resurveyed

Rayonier
1/5-25H, NENE 27-149N-96W, 2297; 1/22/2014

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• Standalone photos promote your business
• Your company included in directory listings

Contact Bonnie Yonker, Phone 425-483-9765 | Raylene Combs, Phone 509-290-5903 | Renee Garbutt, Phone 907-522-9469 | Susan Crane, Phone 907-770-5592
SAFETY ACCUSATIONS

The North Dakota Industrial Commission began its Jan. 29 meeting discussing Attorney General Wayne Stenehjem’s proposal to designate areas in western North Dakota as ‘‘extraordinary places’’ in regard to oil and gas development, but postponed any action on the issue until the next commission meeting scheduled for March 3.

Legal staff had revised the policy after the commission decided to change the proposal from an administrative rule to a policy on Jan. 22. The policy no longer includes the section that required oil companies to submit a plan detailing how they would minimize any impact, as is already required by the Department of Mineral Resources, DMR. The policy gives the public 10 calendar days to offer comments about the well’s potential impacts to the area. It also allows the commission to hire someone as an ‘‘executive director designate’’ to summarize the comments for DMR Director Lynn Helms.

Governor wants more feedback

Dalrymple said over 300 messages have come into his office since people learned of the proposal, with more still coming. Because of that, he preferred not to take any official action on the proposed policy until ‘‘everyone has an opportunity to let us know what they think.’’

“I don’t think it’s finished, and I’m not totally happy with all that I see,’’ Dalrymple said. “It still leaves additional questions, and I haven’t received all the comments.’’

He added that since the proposal was changed from a proposed rule to policy, many people are reacting to outdated information. Dalrymple wants to make a draft of the policy readily available to the public so their comments are specific to the current version.

The commission also decided to develop a Frequently Asked Questions sheet to accompany the policy draft to better explain the proposal.

“We need to show how it compares with our current process that’s not as formalized, or as transparent, as possible,’’ Stenehjem said.

The commission also voted to accept written comments until Feb. 28, three days prior to its next meeting.

continued from page 6

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GOVERNMENT

Action delayed on ‘extraordinary places’

Samson O&G inks $25M credit facility

Proceeds to fund Slawson-operated North Stockyard drilling program as development of the Williams County, N.D., project continues

By STEVE SUTHERLIN

For Petroleum News Bakken

Samson Oil and Gas finalized a new credit facility with Mutual of Omaha Bank on Jan. 27 for up to $25 million, with an initial borrowing base of $8 million that the company will use to fund its current continuous drilling program in its North Stockyard project in Williams County, N.D., the company said in a statement.

The facility has a three-year term with an interest rate of LIBOR plus 3.75 percent, which Samson said would amount to approximately 3.908 percent initially.

Samson said it drew down $4 million from the facility immediately, with the remaining $4 million to be drawn down after the implementation of a hedging program expected to be in place within the next two weeks.

The loan agreement for the new facility provides for periodic re-determinations of the borrowing base based on Samson’s estimated proved reserves, the company said, adding that it expects that its proved reserves and consequently its borrowing base will grow as drilling continues on its North Stockyard infill development program, and as the initial drilling program in its Rainbow project is commenced.

“In particular, as the Three Forks bench one is developed in North Stockyard, there are eight wells currently classified as probable that would be changed to proved developing produced when these wells are completed,’’ Samson said. “Drilling of these Three Forks wells is currently expected to commence in late 2014 following the completion of the four ‘corner’ wells targeting the middle Bakken formation.”

The first two of the middle Bakken wells — Remerfeld 1 and Remerfeld 2 — are currently being batch drilled, the company said.

North Stockyard progress

At its North Stockyard project, where Slawson is the operator, flow-back operations on the Tooshi 4-15-14HGBK well are under way and in the first 38 hours of operation 1,589 barrels of oil and 3,778 barrels of water were recovered, repre-...
east-central McKenzie County with QEP as the sole operator of the unit. Under unitization, the entire area within the unit boundaries would be developed as a single spacing unit, and one of the advantages is being able to drill within setback areas. But some mineral owners fought back at a November commission hearing, saying the unit does not protect their correlative rights because current development in that area has some spacing units containing numerous wells while others only have one.

**A two-phase approach**

Department of Mineral Resources Director Lynn Helms said QEP came with a single phase formula for developing the unit, but his office created a two-phase formula which he presented to the commission.

Provided that QEP can obtain 60 percent approval from mineral and working interest owners, the first phase would begin on Aug. 1, 2014, and end once the unit produced nearly 22 million barrels of oil — what production would likely be in absence of a unit. Of that total, owners would enjoy the benefits of production rates from their spacing units prior to unitization. In phase two, all owners would share in cumulative production at the same rate.

"In phase two, everyone shares," Helms says. "With increased recovery, there is a strong support of the correlative rights. The biggest issue here is the recovery of an additional 2.7 million barrels of oil."

But Dalrymple questioned whether it was the only way to provide equity. "You can't ever have perfect equity on that since we don't know where production is strongest," he said. "I think 1280s are a pretty good size unless you see some really great benefit to mitigating surface impact."

The commission briefly discussed a prior large unit proposal from Burlington Resources that they approved, but noted it was due to topography. Helms said topography is not an issue at the Grail field, and even the footprint on the land is a "pretty small change."

He explained that unitization is mainly economical in that it allows operators to fully develop the reservoir with the ability to drill within setback areas, but it also reduces flaring, truck traffic and the need for additional pipeline.

**Mineral owners get the final say**

With the majority vote, the application was approved, but mineral owners will have the final say. QEP has six months to obtain approval from 60 percent of the mineral and working interest owners to proceed. Goering said that fact puts him at a greater comfort level with his vote and Helms agreed.

"That's the great thing," Helms said. "Those mineral owners have the last call. They get to vote as to whether it gets unitized."

Helms told Petroleum News Bakken after the meeting that the commission set a good precedent. "They had the opportunity to either send a strong signal to the industry that they don't want to utilize, or to show that if you're going to bring us a unit proposal, it needs to be formulated in a manner like the Grail unit in order to get approved." Helms said. "So don't bring us a unit proposal that has uneven development in a single phase formula."

---MAXINE HERR

**FLARING SOLUTION**

Operators would be required to create a gas capture plan prior to filing for a drilling permit instead of waiting until a year into production. Each plan would include the location of the well and its gas volumes, as well as locations of the nearest pipeline and processing plant with each system's capacity, and a time period for connection.

The task force also included penalties for failure to comply. If a gas capture plan is not submitted, new drilling permits could be suspended or denied, while production on existing wells could be restricted until the operator complies.

"But this is a very mechanically finicky thing," Dille said. "If you shut in a well or choke it back, it may never come back as well (as before). If you shut it in, it may never start again. So we would ask if you're going to curtail production, may it not be to the detriment of that well."

Extensions would be available for extenuating circumstances such as plant construction, power outages or inclement weather. Though companies may currently apply for extensions, there are no requirements to develop capture plans. The task force recommended the commission revise its current gas production and sales reports to provide more detail about whether flaring is due to those extenuating circumstances. They also requested reservation and non-reservation flaring be tracked separately due to tribal policy challenges and permit scrutiny.

**Task force recommends swift action**

The task force recommended a tentative date of June 1 for the Industrial Commission to require the capture plans on new wells. Operators would have until Sept. 1 to submit plans for existing wells that flare the largest volumes of gas, and until March 1, 2015, for all other wells flaring longer than 90 days.

**Finding a place for new technology**

Chad Wocken of the University of North Dakota Energy and Environmental Research Center showed the commission a database that was created to assemble information about remote capture technology vendors in order to match them with operators seeking on-site flaring solutions.

The task force recommended the state increase funding for this type of technology as well as provide tax credits and incentives for value-added ventures using natural gas, such as petrochemicals and fertilizers.

The commission praised the task force for its clear plan, and Attorney Wayne Stenehjem encouraged their fellow commission members to "be prepared to act as swiftly as possible."

Gov. Jack Dalrymple said he was intrigued by the gas capture plan and said it offered a lot of practical applications. "It could make a big difference," Dalrymple told the task force. "It depends on your voluntary commitment. I appreciate your willingness to work on this with us."

After the meeting, Dille reiterated the importance of a synchronized approach. "We believe there are projects that will get us there," Dille said. "Ninety-five will be really tough, but we can get there if everybody is willing to put a shoulder to the wheel."

---MAXINE HERR

**CREDIT FACILITY**

Operation is continued on the Blackdog well. The Rennerfeldt 2-13-HBK well was spud on Jan. 10 and drilled to 2,450 feet, where the surface casing string was set and cemented, Samson said.

The Frontier 24 rig was shackled back to the well and it is currently drilling ahead the 8.75-inch hole at a depth of 3,458 feet, Samson said. The hole will be drilled to a depth of approximately 11,500 feet, where the 7-inch casing will be set and cemented.

On the Rennerfeldt 2-13-HBK well, surface casing was set and cemented at 2,470 feet and a 8.75-inch vertical hole was drilled to a depth of 9,013 feet, Samson said. The well was drilled to 11,571 feet and a 1-inch casing has been set and cemented in the middle Bakken.

The forward operation will be to drill a 4,300 foot lateral in the Middle Bakken, Samson said. Samson holds a 25.03 percent working interest in the wells. Contact Dan Sather at dsather@clearspan.com.

---MAXINE HERR
continued from page 1

KEYSTONE LEG UP

cost of $2.3 billion, is a “win-win-win” for Gulf Cerifins, who will pass to less access to a “more secure source of crude” than their traditional offshore imports, while North American crude producers will obtain a better price for their landlocked volumes.

The project also includes 2.25 million barrels of new storage capacity at Cushing.

"We’re seeing an enormous change in North American energy markets and how energy gets delivered," he said, adding there is "not a chance" in his lifetime — regardless of speculation by some critics — that the crude will exported from North America.

Shift to northern leg

Now attention shifts to the northern leg of Keystone XL from Alberta to Nebraska, which Girling concedes has already grown of $100 million from the budgeted

Girling said that the Gulf Coast still

4.5 billion, blaming the rise to the ongo-

the field and “shyer cost escalat-

He also, in a separate presentation to investors at Whistler, British Columbia, disclosed that if President Barack Obama refuses to issue a presidential permit for Keystone XL Transcanada has other options for moving the crude that shippers have contracted to fill 100 percent of XL.

Girling said his company would work on other ways to get crude — including the contracts it has in place for XL, some crude from Eagle Ford and some spot vol-

On progress towards a final decision within the Obama administration, he reported that the environmental review by the State Department is “pretty close to being done ... so that’s positive. We would hope to see it completed shortly.”

Months to go

Girling expects the department’s Final Impact Statement will up use an allocated 90 days for public response, followed by three to four months before Obama ren-

However, he cautioned that the 90-day period comes from an executive order in the White House and there is nothing to stop another executive order being issued.

Both the Canadian government and the industry are gradually shifting from diplo-

macy to blunt language in making their case for XL, with the government posting its message in two of the busiest metro sta-

tions in Washington, D.C., both within three blocks of the White House.

Two large banners tell critics that the Great White North is “America’s best energy partner.”

“America faces a choice: It can import oil from Canada — a secure and environment-

ally responsible neighbour that is committed to North American energy independence — or it can choose less sta-

ble offshore sources with much weaker environmental standards,” says one ad.

Another banner shows that Canada sends 2.4 million bpd of crude to the U.S., more than “Saudi Arabia and Venezuela combined.”

A Canadian government website also notes that Canada is the “first major coal user to ban construction of traditional coal-fired electricity generation units,” while pointing out that the Nature Conservancy of Canada, a private not-for-

profit organization, has preserved “835,637 acres of natural habitat — an area larger than the individual landmass of 80 countries in the world.”

Congressional push

Another political push is being crafted by Republican leaders in Congress who are considering attaching an XL decision to a new law to raise the U.S. debt ceiling, which may be needed before the end of February to avert another financial crisis.

Eric Cantor, the House Majority Leader, told reporters at the World Economic Forum in Davos, Switzerland, that the U.S. “needs Keystone (and) we’re looking at whatever we need to do to see that the pipeline gets built.”

The Democrats are also under pressure to retain Senate seats in pro-XL states, including Montana, South Dakota, Arkansas and Louisiana.

With relations between Obama and Canadian Prime Minister Stephen Harper at the lowest point in the recent history of dealings between leaders of the two coun-

tries, the mood will be put to the test in February when they and Mexican President Enrique Pena Nieto hold one of their periodic summits.

They will commemorate 20 years of the North American Free Trade Agreement amid a number of irritants, none more public than XL, which many Canadians believe has been put through five years of manufactured delays that some warn could now be extended beyond this year’s mid-

term Congressional elections.

Girling said that the Gulf Coast still imports 7.5 million bpd of freighted stock, and, despite projected production growth in the Lower 48 states, will still need 4 million-6 million bpd estimating that introducing XL would allow the U.S. to reduce its dependence on crude from Venezuela and the Middle East by up to 40 percent.

Oil Patch Bits

The conference and expo will be held in Bismarck, N.D., May 20-22. Registration for the WBPC opened Jan. 29. Exhibit space for the conference sold out in 17 minutes when North Dakota last hosted the conference in 2012, and more than 4,000 people registered, making it the largest event ever to be held in Bismarck-Mandan. The Bismarck Civic Center is under-

going an expansion, allowing for 500 booths in the exhibit hall, which is more than 150 additional spaces for this year.

The conference alternates between North Dakota and Saskatchewan, Canada, every other year and is sponsored by the North Dakota Petroleum Council, North Dakota Department of Mineral Resources and Government of Saskatchewan Ministry of the Economy. For a full agenda of speakers and events, visit www.wbpcnd.org.
refining capacity, is not projected to exceed North Dakota’s peak oil production, the Williston Basin is projected to have more than sufficient export/refining capacity to meet the needs of Williston Basin oil producers as the Bakken play continues to develop in years to come.

“Having a safe, reliable, and efficient means of moving North Dakota oil to key refining centers around the United States is critical for this oil field as it continues to mature,” North Dakota Pipeline Authority Director Justin Kringstad told Petroleum News Bakken in a written statement.

Ongoing pipeline expansions
Wyoming-based True companies is expanding by 110,000 bpd the capacity of its Butte pipeline that exports oil out of western North Dakota to and through trunk lines in southeast Montana to the transportation hub at Guernsey in eastern Wyoming. That expansion will bring the Butte pipeline export capacity to 270,000 bpd and the state’s capacity to 693,000 bpd.

Plains All American’s Bakken North pipeline, a pipeline that will export up to 40,000 bpd of North Dakota oil northwest into Canada, is under construction and is scheduled to go into service this year. That pipeline has an expansion capacity of up to 70,000 bpd, but the initial 40,000 bpd will bring the state’s crude export capacity to 733,000 bpd. Kringstad said the Bakken North pipeline is expected to be the first pipeline project completed in 2014.

Construction is also under way on Hiland Partners’ 462-mile Double H crude pipeline that will run from Dore in far western McKenzie County to Guernsey in eastern Wyoming. That pipeline is expected to go into service in the second half of 2014 with an initial capacity of 50,000 bpd and an expansion capacity of up to 100,000 bpd. With a 62-mile expansion, Double D, North Dakota’s crude export capacity should reach 783,000 bpd by the end of 2014.

Both the Butte and the Hiland pipelines will connect to the Tallgrass Pony Express pipeline at Guernsey, and both pipelines should be completed by late 2014. The Pony Express is a former gas pipeline that is being converted to oil and will run from Guernsey to Cushing, Okla. The Pony Express also involves construction of some new pipe. The entire system is expected to be in service in the third quarter 2014 and will have a transport capacity of between 230,000 and 320,000 bpd.

Pipes in the planning stages
Exbridge’s Sandpiper project, a proposed 225,000 bpd pipeline to run from Beaver Lodge near Tioga in Williams County some 610 miles east to Superior, Wis., would boost North Dakota’s pipeline export capacity to 940,000 bpd if approved. The Sandpiper is currently in the permitting stage (see story on page 5), and if approved is projected to go into service in 2016. And should TransCanada’s Keystone XL pipeline begin construction (see story on page 1), it would add another 100,000 bpd to North Dakota’s export capacity and would boost North Dakota’s crude oil export capacity to more than a million barrels at 1,040,000 bpd.

Refining capacity
In addition to pipeline exports, North Dakota has one existing refinery, two refineries under construction, and another in the business development stage, which combined would give the state the capacity to process 128,000 bpd. With those refineries, North Dakota’s combined pipeline export and refining capacity would increase to 1,188,000 bpd.

Teso's Mandan refinery has the capacity to process 68,000 bpd. Additionally, the Dakota Prairie refinery, a diesel refinery currently under construction just west of Dickinson, will have a processing capacity of 20,000 bpd. That project is a joint venture between MDU Resources Group and Calumet Specialty Products.

On the Fort Berthold Indian Reservation, construction began on the Thunder Bay refinery in late 2013, when finished it will have a capacity of 20,000 bpd. That refinery, which is estimated to be completed in 2015, is a Three Affiliated Tribes project.

Dakota Oil Processing LLC is planning to build a diesel topping refinery near Trenton southwest of Williston which would also have a processing capacity of 20,000 bpd.

And as Petroleum News Bakken reported in January, Michigan-based American Energy Holdings is exploring the possibility of building a 20,000 bpd diesel and jet fuel refinery near Devils Lake. If that project proceeds, it would raise North Dakota’s crude oil processing capacity to 148,000 bpd and the combined pipeline export and refining capacity to 1,188,000 bpd.

Rail capacity
What must also be included in any export/refining equation is rail export capacity. With 22 rail terminals, North Dakota had a rail export capacity at the end of 2013 of approximately 965,000 bpd. That capacity combined with the 515,000 bpd pipeline capacity and the 68,000 bpd Tesoro refinery capacity, put the state’s export/refining capacity at approximately 1,548,000 bpd.

Two additional rail facilities under construction will further increase Williston Basin export capacity.

Pipeline expansion update
Capacity versus production
As Petroleum News Bakken reported in January, North Dakota produced approximately 973,000 bpd in November, the last month for which production data are available, and total Williston Basin crude production was estimated at 1,651,000 bpd.

The latest projection of North Dakota crude oil production estimates the state’s oil output will reach a peak of approximately 1,500,000 bpd at some point between 2015 and 2016. With a total export/refining capacity of 2,543,000 bpd by the end of 2016. And finally, if the Keystone XL is approved, the Williston Basin could have a total export/refining capacity of 2,543,000 bpd at the end 2014.

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NEW RAIL HUB

types of oilfield materials including fracturing sand, energetic proppants, cement, pipe, equipment, building materials, aggre- gates, asphalt and road materials. The rail car maintenance services that will be provided at the facility include tank car inspections, testing, qualifica- tions, preventative maintenance, ret rofits, painting, and cleaning.

Sitting just south of Interstate 90 and 12 miles west of Dickinson, the two companies say the facility’s location is strat- egic for supplying oilfield materials to the Bakken play.

“We are thrilled about the South Heart Rail Terminal and its ability to serve the region. Todd Jonker, General Manager of Great Northern Project Development president and chief executive officer said in a Jan. 17 press release. "The long term prospects for the South Heart Rail Terminal are very bright as we consider the longevity of the energy industry in the region. The addition of Watco will ensure success for many years to come."

Watco Terminal and Port Services President Dan Smith said his company is excited about partnering with Great Northern on the project. “We believe this facility will be a great compliment to our existing Bakken Region Customers, and will help build new relationships both in and out of the energy sector,” Smith said. “The service offerings we will provide to our customers at this facility are a great complement to our existing operations in this region.”

Mike Yanish, regional business development manager for Watco, told Petroleum News Bakken that the relationship between Great Northern and Watco "is such a good fit," that it was a "natural progression" for Watco to partner with Great Northern on the South Heart facil- ity.

Construction on the facility is sched- uled to begin sometime in the first half of 2014, and operations are expected to commence in the first quarter of 2015. As with the Fryburg crude oil rail facility, Watco will operate the South Heart facil- ity.

About Watco and Great Northern
Watco operates 25 terminal facilities in 21 states in the U.S. and provides services in the transportation, mechanical and termi- nal/port services throughout the U.S., Canada and Australia. In addition, Watco is the largest privately held shortline rail company in the U.S. with more than 4,500 miles of track, and also operates 15 rail car repair and eight locomotive shops.

Great Northern Project Development is a subsidiary of Quintana Minerals Corp., which is a family-owned Houston-based energy sector operating company. The company is engaged in the acquisition and management of energy and natu- ral resources businesses and energy-related assets.

Contact Mike Ellerd
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Williston Basin Petroleum Conference May 20-22, 2014 Bismarck Civic Center | Bismarck, ND

• Featuring guest speakers:
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- Tommy Nusz, CEO, Oasis Petroleum
- Lee Tillman, CEO, Marathon Oil
- Jim Volker, CEO, Whiting
- And many other industry experts!

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Although Bakken crude has been blamed for the explosions and fires on July 6 that killed 47 people and destroyed 40 buildings in Lac-Megantic, Quebec, TSB chair Wendy Tadros said investigations by the two boards was broadened to cover all flammable liquids.

**DOT stressing safety**

The department said in a statement that “safety is our top priority and we agree that a wide-ranging approach is necessary to ensure the safe transportation of crude oil.

“We have already taken action on the (NTSB) recommendations and many others, from investigating proper classification through the Bakken Blitz to holding a meeting with the rail and petroleum industries asking them to consider their routes and ways to improve first responder training.”

The Bakken Blitz is at the forefront of efforts to test the chemical composition of lighter crude produced from the Bakken formation, which the PHMSA believes are more likely than conventional crudes to combust in an accident.

**Canadian railroads endorse call**

Canada’s two largest railroads endorsed the call for swift action.

Canadian National spokesman Mark Hallman said CN believes the design of the older DOT-111 cars is one of the “most important systemic issues arising from the Lac-Megantic accident.”

Canadian Pacific spokesman Ed Greenberg said his company favors an “immediate and meaningful increase in federal tank car safety standards as the single most important step to improving the safety of rail transport of dangerous goods.”

Canadian Pacific chief executive officer of GATX, a railcar leasing company, supported “any tank car design that would meaningfully improve the safe transportation of flammable liquids by rail. But we also believe that these regulations need to be comprehensive.”

“They should address railroad operating procedures, they should be based on scientific data and they need to be comprehensive enough to avoid unintended consequences such as shifting of this traffic to less-safe modes of transportation, like highways.”

The TSB is also urging that key train routes for dangerous goods be confined to maximum speeds of 50 miles an hour and that the routes have sensors to detect defective rail-car bearings.

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**RAIL RULES**

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**PETROLEUM NEWS BAKKEN**

RBN Energy, said in a report that if regulators implemented tougher safety standards, and ordered a retrofitting of the older cars, the measures would be “very disruptive.”

Michael Wittern, with Societe Generale, said it is more likely that regulators would stagger the introduction of safety improvements, otherwise transportation costs would rise and crude would start “piling up in North Dakota.”

Robert McNally, president of the consulting firm of Rapidan Group, doubts that new regulations would be introduced so fast that they would cripple the economics of Bakken crude.

A report by the consulting firm of Turner, Mason & Co. has calculated the cost of retrofits would range from $30,000 to $60,000 per car, adding 20 cents to 40 cents per barrel for rail shipments.

**Bakken production could drop**

If producers are restricted the using the constrained pipeline system, the North Dakota Pipeline Authority has forecast that Bakken production could drop to about 600,000 barrels per day.

But North Dakota Gov. Jack Dalrymple joined other lawmakers in calling for new tank car safety rules to be implemented immediately.

Canadian’s Transport Minister Lisa Raitt instructed her department to “review the (safety board’s) recommendations on an urgent basis,” while noting that the Canadian government has already implemented every TSB recommendation stemming from Lac-Megantic.

The U.S. Pipeline and Hazardous Materials Safety Administration is considering new rules based partly on earlier NTSB recommendations.

The PHMSA and the Federal Railroad Administration — both arms of the Department of Transportation — asked railroads and shippers to respond by mid-February steps that can be taken to increase rail safety, while the PPHMSA expects to complete a new set of rules sometime in 2015.

**Action up to transportation departments**

The boards exist to investigate accidents and make recommendations, but action is up to the transportation departments in both countries.

Joint measures by the two governments are essential because the tank cars are continually crossing the international border.

The language in the agency reports was the strongest yet in criticizing the state of outdated DOT-111 cars, which have been the workhorses supporting a 400 percent increase in crude-by-rail shipments since 2005.

“We can verify that the longer the (DOT-111 cars) are left out there the greater the risk,” Tadros told reporters in Ottawa. “A long phase-out of older cars simply isn’t enough.”

NTSB chairman Deborah Hersman said in a statement that while the “energy boom (created by rail) is good for business, the people and the environment along rail corridors must be protected from harm.”

Tadros said the “sooner (action is taken) the better,” adding that the vulnerability of the cars to rupturing, leading to fires and explosions, is “irrefutable.”

“If North American railways are to carry more and more of these flammable liquids through our communities, it must be done safely. Change must come and it must come now,” she said.

**Production could be curtailed**

The spate of rail accidents in the U.S. and Canada since the Lac-Megantic has crude traders and energy analysts warning that the vulnerability of the cars to rupturing, leading to fires and explosions, is “irrefutable.”

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