North Dakota Pipeline Authority

Annual Report

July 1, 2013 – June 30, 2014

<u>Industrial Commission of North Dakota</u>
Governor Jack Dalrymple, Chairman
Attorney General Wayne Stenehjem
Agriculture Commissioner Doug Goehring

North Dakota Pipeline Authority
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Overview

At the request of the North Dakota Industrial Commission, the Sixtieth Legislature passed House Bill 1128 authorizing the North Dakota Pipeline Authority. It was signed into law on April 11, 2007. The statutory mission of the Pipeline Authority is "to diversify and expand the North Dakota economy by facilitating development of pipeline facilities to support the production, transportation, and utilization of North Dakota energy-related commodities, thereby increasing employment, stimulating economic activity, augmenting sources of tax revenue, fostering economic stability and improving the State's economy". As established by the Legislature the Pipeline Authority is a builder of last resort, meaning private business would have the first opportunity to invest in and/or build additional needed pipeline infrastructure.

By law the Pipeline Authority membership is comprised of the members of the North Dakota Industrial Commission. Upon the recommendation of the Oil and Gas Research Council, the Industrial Commission authorized the expenditure of up to $300,000 during the 2013-2015 biennium for the Pipeline Authority with funding being made available from the Oil and Gas Research Fund. On August 1, 2008 the Industrial Commission named Justin J. Kringstad, a consultant, to serve as Director of the North Dakota Pipeline Authority and contracted with him for his services. The North Dakota Pipeline Authority Director works closely with Lynn Helms, Department of Mineral Resources Director, Ron Ness, North Dakota Petroleum Council President and Karlene Fine, Industrial Commission Executive Director. The Pipeline Authority has no other staff and receives no direct General Fund appropriation. The Pipeline Authority Director reports to the Industrial Commission and the Oil and Gas Research Council on a regular basis.

Statutory Authority

Statutory authority for the Pipeline Authority is found in Chapter 54-17.7 of the North Dakota Century Code. Section 54-17.7-04 N.D.C.C. delineates the powers of the Authority including: 1) making grants or loans or to borrow money; 2) to issue up to $800 million in revenue bonds; 3) enter into lease-sale contracts; 4) own, purchase, lease, rent and dispose of pipeline facilities or the right to capacity in any pipeline system or systems within or without the State of North Dakota; 5) enter into contracts to construct, maintain and operate pipeline facilities; 6) investigate, plan, prioritize and propose transportation corridors; and 7) participate in regional pipeline organizations.

Before the Pipeline Authority may exercise its power to construct pipeline facilities, it must follow a process defined by statute to ensure public participation and comment. In particular, the Pipeline Authority must publish a notice describing the need for the pipeline project. Entities interested in constructing the facilities or furnishing services to satisfy the identified needs have 180 days to respond by filing a notice of intent. If the Pipeline Authority receives a notice of intent from an interested entity, it may not exercise its powers to construct unless the Authority makes a finding that doing so would be in the public interest. In making such a finding, the Pipeline Authority shall consider the economic impact to the state, economic feasibility, technical performance, reliability, past performance, and the likelihood of successful completion and ongoing operation.

Summary of Activities

As has been the case since the Pipeline Authority's inception, the 2013-2014 timeframe was filled with many new developments for the producing and midstream industries operating in North Dakota. More efficient drilling rigs and advances in drilling and completion techniques have taken North Dakota oil production to new record highs. During the past year, the Pipeline Authority has been fully engaged in continuing efforts to convert production and development information into oil and natural gas transportation solutions. One of the most effective methods used during the year was to work alongside industry to produce crude oil and natural gas production forecasts to quantify future pipeline needs and timeframes. Pipeline companies are conservative by nature and these forecasting exercises proved to be very beneficial in adding the confidence needed to move forward with expansion project planning.

During the year the Pipeline Authority contacted, met with, and shared information with numerous interested parties including the following:

Enbridge Pipeline
TransCanada
MDU/WBI Energy
True Companies
Vantage Pipeline
ONEOK
Alliance Pipeline
Northern Border Pipeline
BNSF Railway
Basin Electric
Gtuit
NW Landowners Association
Continental Resources
Expansion Energy
Hess Corporation
Legion Energy
BakkenLink Pipeline
RBN Energy
Tesoro
Aux Sable Liquid Products
Vortex FLOW
Dakota Prairie Refining
GE
Corval Group
American Mobile Pipeline
KLJ Engineering
Plains All American
Houston Engineering

Sequent Energy
Caliber Midstream
Stanford University
Power Engineering
WPX
Enterprise Product Partners

In addition, the Pipeline Authority worked with a number of state and federal agencies to gather information and provide expertise on pipeline issues. Those agencies and entities included:

North Dakota Public Service Commission
North Dakota Transmission Authority
North Dakota Oil and Gas Division
North Dakota Governor's Office
Canadian Consulate
North Dakota State University
Bank of North Dakota
US Energy Information Administration
Pipeline and Hazardous Materials Safety Administration
Upper Great Plains Transportation Institute
North Dakota Department of Commerce
Energy and Environmental Research Center
North Dakota Department of Transportation
Federal Railroad Administration
North Dakota Tax Department
Wyoming Pipeline Authority
EmPower North Dakota Commission
US Government Accountability Office

The Director of the Pipeline Authority also worked with the following trade associations/groups:

North Dakota Petroleum Council
Energy Policy Research Foundation
National Association of Regulatory Utility Commissioners
Upper Great Plains Transportation Institute

As noted above, the Pipeline Authority has been facilitating discussions between governmental agencies and companies interested in expanding North Dakota's pipeline infrastructure.

In addition, the Director of the Pipeline Authority provided information to citizens and news media on issues related to pipelines.

Pipeline Technology Working Group

On December 27, 2013, Governor Dalrymple announced the formation of a "Pipeline Technology Working Group" to explore advances in technology that may have a positive impact on more quickly identifying leaks on a pipeline system. Along with the several state agencies and industry participants, the Pipeline Authority is a member of the working group and has participated in facilitating meetings and drafting a final report.

Natural Gas Flaring

While not a regulatory agency, the Pipeline Authority does play a very active role in helping the state reduce the amount of flared natural gas. The Pipeline Authority continually monitors and reports flaring statistics and provides analysis on current and future developments to industry participants, regulators, policy makers, and the public. More information on a comprehensive report published by the Pipeline Authority can be found in the "Industry and Public Communications Activities" portion of this Annual Report.

Two significant actions were taken by the ND Industrial Commission during the 2013-2014 timeframe that will have a positive impact on reducing natural gas flaring. The first was the requirement for operating companies to submit a natural gas capture plan to the Oil & Gas Division to outline how produced natural gas would be sold or utilized on location. The second action was an Industrial Commission order on July 1, 2014 that provides flaring reduction targets out to the year 2020 and provided a means of enforcement at the Oil & Gas Division through the use of production and permitting restrictions.

The Industrial Commission natural gas capture targets for Bakken and Three Forks production are as follows:

- 74% Capture – Q4 2014
- 77% Capture – Q1 2015
- 85% Capture – Q1 2016
- 90-95% Capture – Q4 2020

Industry and Public Communications Activities

Pipeline Publication

The Pipeline Authority continues the practice of issuing its quarterly newsletter, *Pipeline Publication*. The newsletter is designed to keep North Dakota policy makers and involved parties informed on current issues in the pipeline industry. Three newsletters (Appendix A) were published during the 2013-2014 fiscal year.

Pipeline Authority Websites

In an effort to provide industry and public users with the most timely and complete set of information, the Pipeline Authority continues to update the agency websites as new information becomes available. The websites allow the Authority to provide users with current Williston Basin oil production data, maps, news, publications, basic pipeline information, pipeline safety information, and links to pipeline mapping systems.

Monthly Updates

During the 2013-2014 fiscal year, the Pipeline Authority produced monthly transportation and production reports to allow interested parties a quick view of how much crude oil and natural gas was produced each month and how each commodity was shipped and/or processed. Information contained in the reports is presented during monthly media events in conjunction with the ND Oil & Gas Division. Monthly reports are placed on the Pipeline Authority website and an email distribution list has been created to circulate the update to interested parties.

New Natural Gas Report Published

On October 22, 2013, the Pipeline Authority published a new report titled, *North Dakota Natural Gas: A Detailed Look at Natural Gas Gathering*. The report was designed to take a factual look at the progress being made to connect wells to gas sales options. The report reflects the shifting momentum in western North Dakota in favor of further expansion of natural gas gathering and processing. Bakken wells are being connected to gas infrastructure at the fastest rate in the state's history and the trend is not showing any sign of slowing down. The full report is available for download on the Pipeline Authority website.

Pipeline Presentations

Over the past year, the Pipeline Authority has had the opportunity to make presentations at a variety of industry and public events. A few of those events included:

NDPC Flaring Task Force
Legislative Interim Committees
NDPC CookFest Events
Central North American Trade Corridor
Bismarck-Mandan Chamber of Commerce
Governor's Pipeline Summit
Rotary Club
NDPC Teachers Education Seminar
Leadership Bismarck-Mandan
Platts Rockies Oil & Gas
GRE/BSC Power Generation Conference

Slides from major presentations can be found on www.northdakotapipelines.com

Williston Basin Pipeline Infrastructure

For reference, a series of North Dakota pipeline maps can be found in Appendix B

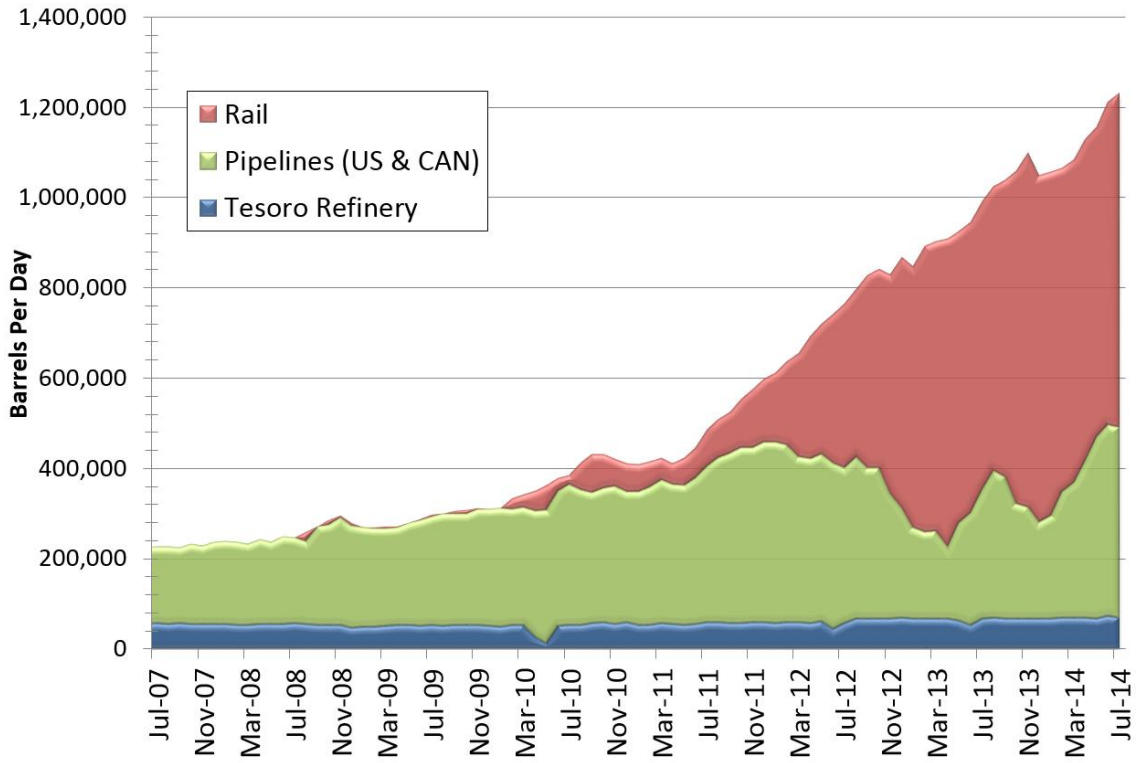


Figure 1. Estimated Oil Transportation by Mode

Crude Oil Pipelines, Refining, and Rail Transportation

Enbridge Pipelines North Dakota: Having completed several expansion projects over the past number of years, Enbridge now has the capacity to move 355,000 BOPD on its pipeline system to Clearbrook, MN. Enbridge completed their work to expand their north bound capacity of 145,000 BOPD in early 2013 for the larger scale "Bakken Expansion Project". Oil using the northbound route navigates the Enbridge Saskatchewan system to an interconnect with the Enbridge Mainline at Cromer, MB. Once on the Mainline system, the Williston Basin oil quickly reenters the United States and meets east bound Enbridge oil at Clearbrook, MN.

Enbridge is currently working on further expansion of their Williston Basin system with the "Sandpiper" project. When finished, the Sandpiper pipeline will have the capacity to move 225,000 BOPD to markets around the US.

Bridger, Belle Fourche, and Butte Pipelines: Bridger and Belle Fourche Pipelines operate as intra-basin pipeline systems moving oil to several pipeline interconnects or rail facilities in the Williston Basin. One such pipeline interconnect is with the Butte Pipeline near Baker, MT. The Butte Pipeline currently has the capacity to move 160,000 BOPD to Guernsey, WY. In Guernsey, WY, the oil is transported to Wood River, IL on the Spectra Platte Pipeline.

A 100,000 BOPD expansion of the pipeline system south of Baker, MT is being developed through a joint venture with Tallgrass Pony Express Pipeline. The current timeline of the project targets Q3/Q4 2014 for startup.

Pending regulatory approval, the Bridger, Belle Fourche, and Butte Pipelines will also deliver up to 100,000 BOPD to the Keystone XL pipeline near Baker, MT. (See TransCanada BakkenLink below)

Quintana BakkenLink: After announcing plans in 2010 to offer a pipeline system from the Williston Basin connecting to the Keystone XL Pipeline in Eastern Montana, BakkenLink has altered their current project scope. Now in service, the BakkenLink system collects crude oil from various locations south of Lake Sakakawea along its route and delivers the oil to a new rail facility located near Fryburg, ND. BakkenLink will continue to monitor shipper interest to expand the pipeline to an interconnect with the Keystone XL Pipeline near Baker, MT.

Energy Transfer Partners: In early 2014, Energy Transfer Partners (ETP) held an open season to solicit interest in a new 30" pipeline from North Dakota to Patoka, IL. In June 2014, ETP announced that they did have sufficient shipper support to move forward with the project. The "Dakota Access" pipeline will collect oil north and south of Lake Sakakawea and have the ability to transport 320,000 BOPD initially. If additional interest exists, the pipeline could be expanded to carry up to 570,000 BOPD. The project is proposed to be complete in late 2016, pending regulatory approval.

Enterprise Products Partners: In June 2014, Enterprise Products Partners proposed the construction of a new 30" pipeline from North Dakota to Cushing, OK. The "Bakken to Cushing" pipeline would originate near Stanley, ND and collect oil from both north and south of Lake Sakakawea. The pipeline would then travel through additional oil producing regions on its route to Cushing, OK. The pipeline is proposed to initially carry 340,000 BOPD combined from the various oil producing regions. It has been estimated to North Dakota may account for 200-250,000 BOPD of the total capacity. An open season is planned for Q3/Q4 2014 to determine if there is industry support to proceed with permitting and construction. If support exists, the pipeline has set an in-service target of Q3 2017.

Plains All American Pipeline: In November 2010, Plains All American Pipeline (Plains) announced plans to construct a new 103 mile, 12 inch, pipeline from Trenton, ND to an interconnect with the existing Wascana Pipeline at the United States-Canada border in northeast Montana. The "Bakken North" pipeline went into service in May 2014, with an initial capacity of 40,000 BOPD, expandable to 75,000 BOPD.

TransCanada BakkenLink: On September 13, 2010, TransCanada launched a successful open season for Bakken producers interested in accessing TransCanada's proposed Keystone XL pipeline project in eastern Montana. The proposed 100,000 BOPD interconnect would be located near Baker, MT and would require new pumps and tanks to accommodate the Bakken oil. Third party shippers, such as True Companies or Quintana's BakkenLink, would be necessary to move the crude to the Baker facility. After regulatory approval, an updated project timeline will be provided.

Tesoro Mandan Refinery: During the summer of 2012, Tesoro Corporation added 10,000 BOPD of refining capacity to its 58,000 BOPD Mandan refinery. The Mandan refinery, built in 1954 by Standard Oil, is currently North Dakota's only operational refinery. The refinery receives its light sweet feedstock though a network of pipelines in the Williston Basin operated by Tesoro High Plains Co. The Tesoro High Plains Pipeline gathering network continues to evolve and expand, with the most recent announcement being the "Connolly Gathering System" which will collect oil from various points in Dunn County for delivery at the existing Connolly pipeline station in central Dunn County. The project is expected to begin in July 2014, with a completion target of late 2015.

Products generated at the refinery are distributed directly from a truck rack at the facility or through the NuStar North Pipeline to Eastern North Dakota and Minnesota.

Dakota Prairie Refinery

A joint venture of MDU Resources Group and Calumet Specialty Products Partners, the Dakota Prairie Refinery will have the capability to process 20,000 BOPD at its facility just west of Dickinson, ND. The "diesel topping" refinery will produce around 7,000 BPD of diesel fuel for consumption, while the remaining product will need to be transported for further processing. The refinery is nearing the end of construction, with an anticipated startup in late 2014.

A map of North Dakota crude oil gathering can be found in Appendix C

Rail Loading Facilities: The transportation of crude oil by rail car has played a key role in moving growing volumes of crude oil from the Williston Basin to markets around the United States and Canada. Figure 2 shows the estimated volume of oil moved by rail out of North Dakota. Maps, capacities, and additional information on the various facilities can be found on the Pipeline Authority websites.

A map of North Dakota oil rail loading facilities can be found in Appendix D

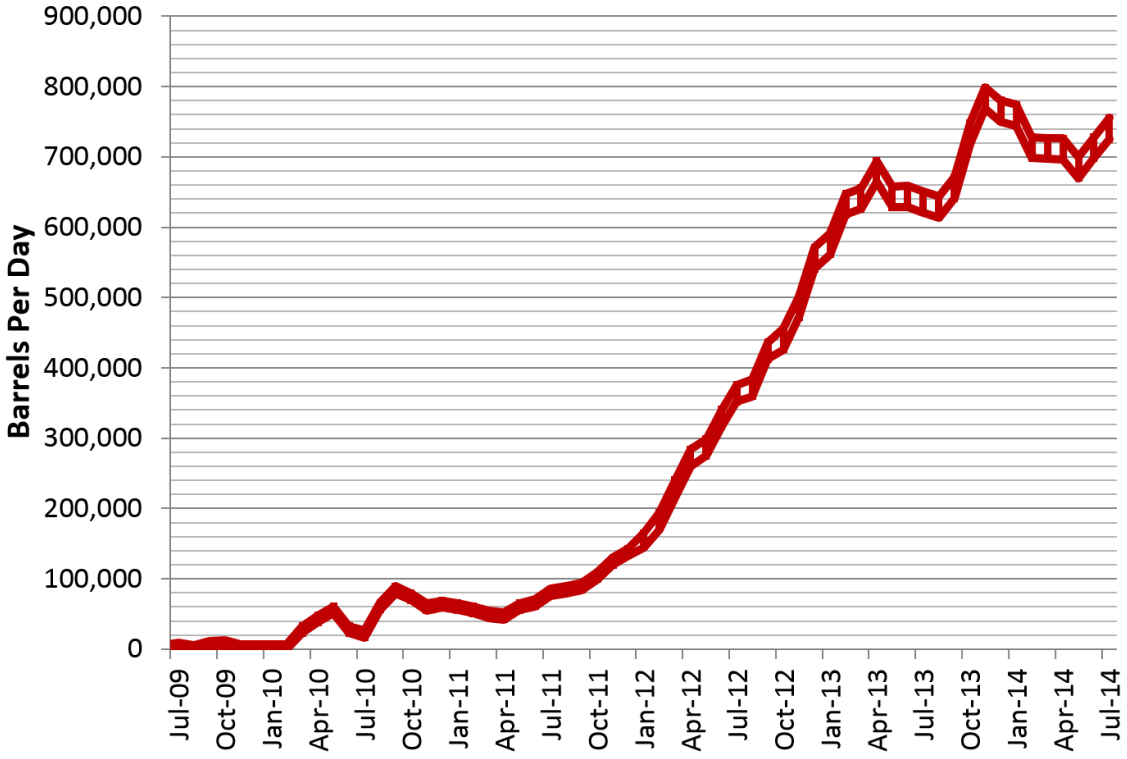


Figure 2. Estimated outbound crude oil rail shipments.

Natural Gas Pipelines

Alliance Pipeline: The Alliance Pipeline is a high pressure, large diameter natural gas pipeline that originates in British Colombia, Canada and terminates at the Aux Sable gas processing plant near Chicago, IL. The Alliance Pipeline transports "dense gas" or gas that still contains high BTU natural gas liquids, such as propane and butane. In February 2010, the Alliance Pipeline began transporting rich natural gas from North Dakota via a new interconnect with the Prairie Rose Pipeline near Bantry, ND (See Aux Sable below). The 36 inch diameter United States portion of the pipeline has a certified capacity of 1.513 billion cubic feet per day (BCFD). The Alliance Pipeline has one North Dakota delivery point in Hankinson.

In response to growing natural gas production, Alliance Pipeline announced plans on June 22, 2011, to construct a new, 80 mile, natural gas pipeline from the Hess Gas Plant in Tioga, ND to an interconnection point near Sherwood, ND. Now operational, the "Tioga Lateral Pipeline" has the ability to deliver liquids rich, high BTU, natural gas to Chicago, IL for further processing and transportation. The Tioga Lateral has the capacity to transport up to 126 MMCFD.

Northern Border: The Northern Border Pipeline, owned by TC Pipelines and ONEOK Partners, is a 1,249 mile pipeline originating at the Port of Morgan in Montana and terminating near North Hayden, Indiana. The pipeline has a system receipt capacity of 2.37 BCFD, a large portion of which is supplied with Canadian natural gas through a receipt point with the Foothills Pipeline at the Port of Morgan. The 42

inch diameter Northern Border Pipeline receives gas deliveries at a total of 12 receipt points in the Williston Basin with eleven of those points for North Dakota gas supply.

WBI Energy Transmission: Formerly known as Williston Basin Interstate Pipeline Co., WBI Energy Transmission operates more than 3,700 miles of natural gas transmission pipelines throughout North Dakota, Montana, Wyoming, and South Dakota. This network of pipelines plays a vital role in North Dakota's natural gas industry. It contains twelve interconnecting points with other regional pipelines and can also deliver natural gas to local distribution companies or natural gas storage fields. Well positioned throughout western North Dakota, the Williston Basin Interstate Pipeline has been able to expand its operating capabilities to meet growing production volumes.

Aux Sable: In June 2011, Aux Sable announced the acquisition of the Prairie Rose Pipeline and condensate recovery facility near Stanley, ND. Originally constructed by Pecan Pipeline, the 75 mile, 12 inch system went into service February 2010 and has the capability to transport over 100 MMCFD of unprocessed natural gas from Mountrail County to an interconnect with the Alliance Pipeline near Bantry, ND.

Bison Pipeline: TransCanada placed the 302 mile, 30 inch Bison Pipeline into service in early 2011. The pipeline was built to connect natural gas production in the Powder River Basin of Wyoming to the Northern Border Pipeline in Morton County North Dakota. The pipeline has an initial capacity of 407 MMCFD and could be expanded to 1 BCFD.

Natural Gas Liquids Pipelines

ONEOK Bakken NGL Pipeline: On July 26, 2010, ONEOK Partners announced plans to construct a new 12 inch natural gas liquids pipeline capable of moving 60,000 BPD from existing and planned facilities in the Williston Basin to an interconnect with the Overland Pass Pipeline near Cheyenne, WY. The new "Bakken NGL Pipeline" was built to address the high volumes of natural gas liquids that are extracted from the rich Bakken gas during processing. The pipeline operates as a Y-grade system, with product fractionation taking place in Bushton, KS. ONEOK announced completion of the pipeline in April 2013 and plans to expand capacity to 135,000 BOPD in 2014.

Vantage Pipeline: On July 15, 2010, Mistral Energy announced a new 430 mile liquid ethane pipeline from Tioga, ND to Empress, AB. With an initial capacity of 40,000-65,000 BPD, the new "Vantage Pipeline" was built to address the high concentration of ethane found in North Dakota's natural gas. Placed into service Q2 2014 in conjunction with the Hess Tioga Gas Plant Expansion, the pipeline was constructed of 10 inch pipe. Other than this particular project, the majority of North Dakota's ethane is being left in the natural gas stream after it leaves the gas processing plant.

Carbon Dioxide Pipelines

North Dakota continues to have only one carbon dioxide pipeline in service. The Dakota Gasification Company's, 12-14 inch, 205 mile pipeline went into service in 2000 and transports roughly 150 MMCFD of carbon dioxide to oilfields near Weyburn, SK.

The Pipeline Authority continues to work with interested parties on the development of new carbon dioxide pipelines for capture and sequestration, as well as enhanced oil recovery operations. The Pipeline Authority is an active member of the Plains CO_2 Reduction Partnership through the Energy and Environmental Research Center in Grand Forks, ND.

Liquefied Natural Gas (LNG)

North Dakota LNG: On May 7, 2014, officials from North Dakota LNG announced plans to construct North Dakota's first LNG processing facility in Tioga, ND. Construction of the 10,000 gallons per day facility is expected to be complete in Q2/Q3 2014. Further expansion of the facility will allow production to reach 76,000 gallons per day by early 2015.

Initial plans are for the LNG to be consumed by oilfield drilling and pressure pumping services. Longer term options for LNG in North Dakota include agricultural demand and communities currently not connected to natural gas.

Natural Gas Processing

For reference, a North Dakota Gas Processing and Transportation map can be found in Appendix E

New or Expanding Natural Gas Plants

Due to the vast footprint of the Bakken resource, natural gas gathering and processing operators in North Dakota have faced difficult challenges in the past to keep pace with faster, more efficient drilling and completion techniques. Despite the daunting task, industry is rising up to reap the great economic reward contained in the rich Bakken gas.

North Dakota currently has twenty-two natural gas processing/conditioning plants operating, with the capability to process roughly 1,320 MMCFD. Six new or expanded plants are expected in the next several years and will add up to almost 700 MMCFD of processing capacity (Figure 3). A detailed breakdown of the existing and proposed facilities can be found on the Pipeline Authority website.

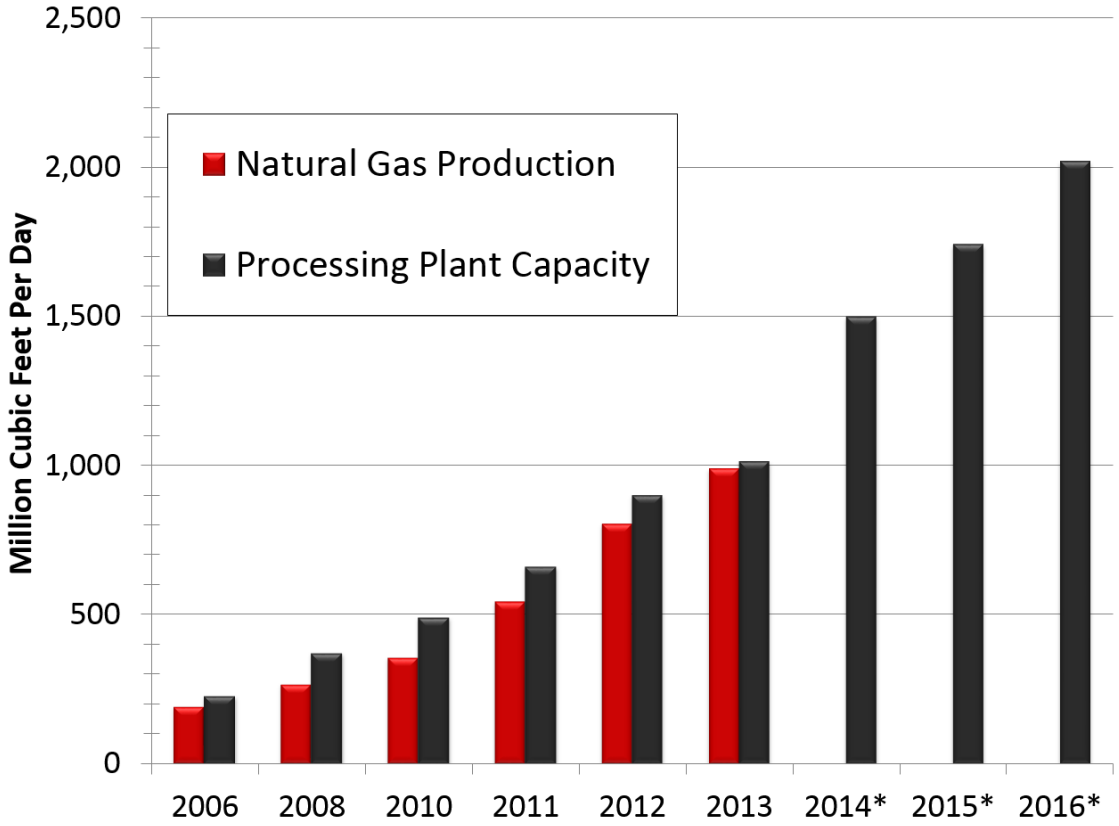


Figure 3. North Dakota natural gas processing plant intake capacity and wellhead natural gas production.
*Proposed Timeline and Pending Regulatory Approval

Planned Activities

Over the past year, the Pipeline Authority has continued to experience great success by working with industry to quantify future crude oil and natural gas production in order to provide the assurance needed to move forward with various expansion projects. The forecasted oil production levels have continued to rise and will require continuous updating and review over the next year as technology advances and market prices fluctuate. The Pipeline Authority will continue to utilize new and existing development information to gain a deeper understanding of the crude oil, natural gas, and carbon dioxide pipeline needs in Williston Basin.

Industry and public information distribution will continue with the use of a quarterly newsletter, presentations, monthly updates, and agency websites. The Pipeline Authority will continue to conduct information presentations to public audiences, legislative groups, and industry representatives at various events throughout the coming year.

APPENDIX A

North Dakota Pipeline Authority's *Pipeline Publication* Newsletter

the PIPELINE publication

Volume 6 ❖ November 2013

New Natural Gas Report Released

On October 22, 2013, the Pipeline Authority published a new report titled, *North Dakota Natural Gas: A Detailed Look at Natural Gas Gathering*. The challenges associated with natural gas flaring in North Dakota continue to linger and this report was designed to take a factual look at the progress being made to connect wells to gas sales options.

The report reflects the shifting momentum in Western North Dakota in favor of further expansion of natural gas gathering and processing. Bakken wells are being connected to gas infrastructure at the fastest rate in the state's history and the trend is not showing any sign of slowing down. Natural gas production from each well declines very rapidly and capturing the high initial production is paramount in the effort to reduce statewide flaring. The data in the report is clear that the industry has been very deliberate in their efforts to quickly connect high production new wells to gathering systems while temporarily allowing older, low volume wells to continue to flare. This strategic action will have the fastest impact in reducing the volume and percent of natural gas being flared.

One challenge ahead is the continued expansion of natural gas infrastructure that has been built in previous years. Our understanding of the Bakken/Three Forks continues to evolve and pipelines that were previously considered to be sufficient are quickly filling to capacity.

The road ahead for the gas gathering industry in North Dakota is long and will take a great deal of cooperation and patience between all stakeholders. Despite the inevitable challenges, North Dakota is positioned to have one of the most advanced oilfields in the world and a petroleum producing region that can be used as a model for other shale development around the United States.

The full report is available for free download at: http://northdakotapipelines.com/natural-gas-study/

NORTH DAKOTA — Production Numbers

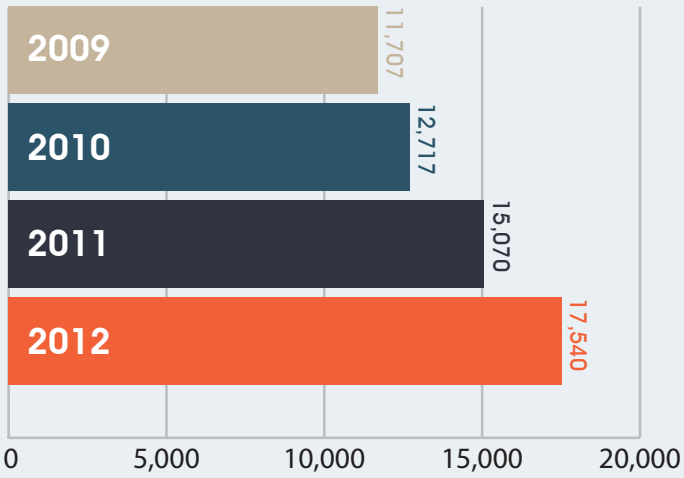
:: www.pipeline.nd.gov

Average Daily Oil Production, BOPD			Average Daily Gas Production, MMCFD			Average Rig Count		
June 2012	July 2013	Aug. 2013	June 2012	July 2013	Aug. 2013	June 2012	July 2013	Aug. 2013
822,109	875,962	911,496	933.6	972.1	1,000.3	187	186	182

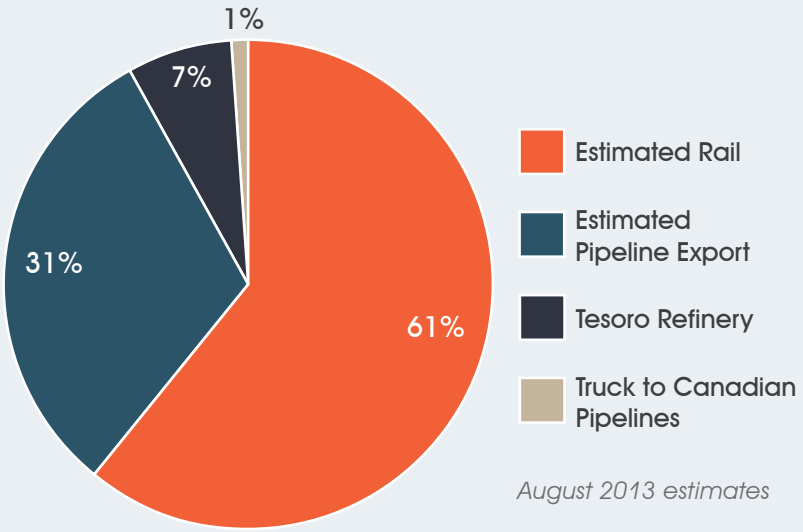
As of October 25, 2013, there are 182 active rigs in North Dakota.

Header image courtesy of the North Dakota Department of Commerce.

Year-End Miles of Gathering and Transmission Pipeline in North Dakota



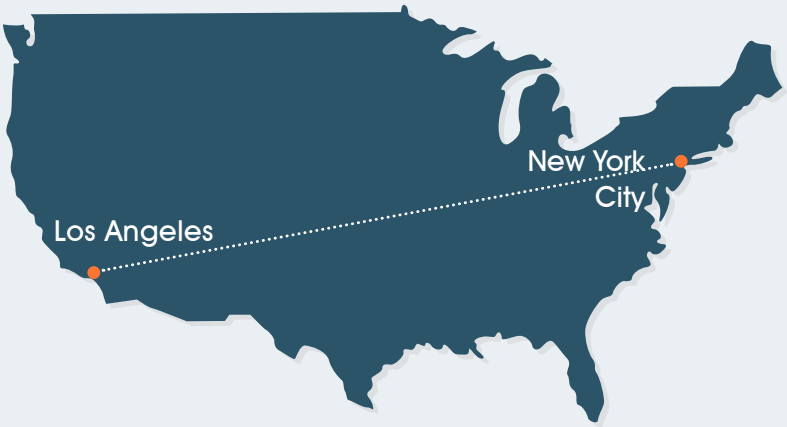
Estimated Williston Basin Oil Transportation



North Dakota Pipeline Authority
State Capitol, 14th Floor
600 E. Boulevard Ave. Dept. 405
Bismarck, ND 58505-0840

PIPELINE FACTOID

In 2012 alone, **over 2,400 miles** of pipeline was placed into service in North Dakota. This is enough pipe to reach from Los Angeles to New York City.



Know what's **below.**
Call before you dig.

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the PIPELINE publication

Volume 6 ❖ February 2014

Increased Flaring Explained

The December 2013 production report highlighted a monthly increase in flaring from 30% to 36%. This increase can be attributed to two major factors. First, the Hess Tioga gas processing plant shutdown in late November for expansion work. The second factor contributing to the increase was the extreme cold that hit the state in December. This cold snap reduced the ability of gathering companies to get new wells connected to pipeline infrastructure and proved to be an operational challenge in keeping natural gas liquids cleared from pipelines and preventing surface facility freeze-up.

Successful Open Season for Sandpiper Pipeline

In a February 12, 2014 filing with the Federal Energy Regulatory Commission (FERC), North Dakota Pipeline Company (NDPC), a subsidiary of Enbridge Energy Partners, outlined the details of their recent successful open season. The open season, which closed on January 24, 2014, received 155,000 BOPD of firm shipper commitments. These firm commitments provide the financial backstop necessary to proceed with the project. The remaining space on the 225,000 BOPD pipeline will be available to "spot" or uncommitted shippers.

With the open season hurdle cleared, several regulatory approvals will be necessary before construction on the 24 inch, $2.6 billion project begins. NDPC will work with the North Dakota Public Service Commission and the Minnesota Public Utilities Commission for route determination in both states. NDPC has asked FERC to rule on their recent filing no later than May 15, 2014. The current timeline has the pipeline being placed into service in 2016.

North Dakota Impact

Recognizing that oil production from North Dakota is expected to continue to grow, expanding the pipeline network out of the region is vital to the long term development in the state. The Sandpiper project is the largest crude oil pipeline project in development for North Dakota and would provide pipeline service to key markets in the Midwest, Gulf Coast, and Eastern Canada.

NORTH DAKOTA — Production Numbers

:: www.pipeline.nd.gov

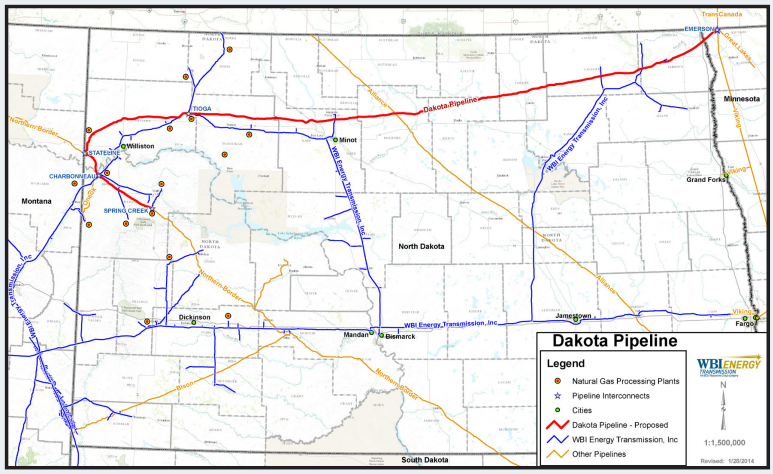
Average Daily Oil Production, BOPD			Average Daily Gas Production, MMCFD			Average Rig Count		
Oct. 2013	Nov. 2013	Dec. 2013	Oct. 2013	Nov. 2013	Dec. 2013	Oct. 2013	Nov. 2013	Dec. 2013
945,458	976,453	923,227	1,068.6	1,085.3	991.3	183	184	190

As of February 25, 2014, there are 190 active rigs in North Dakota.

Header image courtesy of the North Dakota Department of Commerce.

WBI Energy Open Season

On January 30, 2014, WBI Energy announced they were holding an open season for a 24 inch, 375 mile natural gas pipeline from western North Dakota to a hub near Emerson, MN. With an initial design of 400 million cubic feet per day (expandable to 500 million cubic feet per day), the proposed "Dakota Pipeline" could interconnect with other regional pipelines operated by Great Lakes Gas Transmission, Viking Gas Transmission, and TransCanada Pipelines.



North Dakota Impact

In order to reduce the volume of natural gas flaring in North Dakota, three major infrastructure components must be in place and include gathering, processing, and transmission. The Dakota Pipeline addresses the transmission component and would allow processed natural gas increased access out of North Dakota to major Midwest markets.

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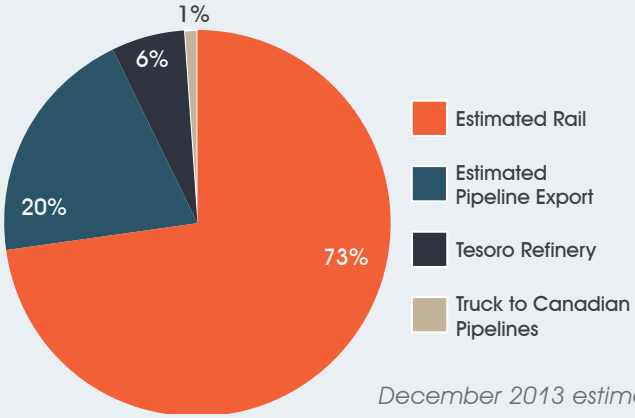
PIPELINE FACTOID

Of the 2,470 miles of North Dakota pipeline placed into service in 2012, an estimated 2,200 miles of that are used for the gathering of natural gas and other produced fluids. The 2013 statistics will not be available until Q3 2014.

Estimated Williston Basin Oil Transportation



December 2013 estimates

811 Know what's below. Call before you dig.

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the PIPELINE publication

Volume 6 ❖ June 2014

LNG Plant Being Constructed

On May 7, 2014, officials from North Dakota LNG announced plans to construct North Dakota's first liquefied natural gas (LNG) processing facility in Tioga, ND. Construction is underway with operations expected to begin this summer at a capacity of 10,000 gallons per day. Further expansion of the facility will allow production to reach 76,000 gallons per day by early 2015.

Initial plans are for the LNG to be consumed by oilfield drilling and pressure pumping services. Longer term options for LNG in North Dakota include agricultural demand and communities currently not connected to natural gas.

Tesoro Gathering Pipeline

On May 12, 2014, Tesoro Logistics announced its subsidiary, Tesoro High Plains Pipeline Company, had received sufficient shipper support to construct a 60,000 BOPD gathering system in Dunn County. The "Connolly Gathering System" will collect oil from various points in Dunn County for delivery at the existing Connolly pipeline station in central Dunn County. Construction on the $150 million dollar project is expected to begin in July 2014, with a completion target of late 2015.

Hess Gas Plant Online

After being shut down throughout the winter, the newly expanded Hess Tioga natural gas processing plant was placed back into service on March 23, 2014. The expansion increased the facility's daily capacity to 250 million cubic feet per day, making it North Dakota's largest gas processing plant.

NORTH DAKOTA — Production Numbers

:: www.pipeline.nd.gov

Average Daily Oil Production, BOPD			Average Daily Gas Production, MMCFD			Average Rig Count		
Jan. 2014	Feb. 2014	Mar. 2014	Jan. 2014	Feb. 2014	Mar. 2014	Jan. 2014	Feb. 2014	Mar. 2014
935,422	952,010	977,061	1,015.8	1,064.1	1,086.2	188	189	193

As of May 14, 2014, there are 189 active rigs in North Dakota.

Header image courtesy of the North Dakota Department of Commerce.

ND Gas Capture Plans

As part of the Industrial Commission's newly-adopted policy on reducing natural gas flaring, all drilling permit applications to the NDIC Oil & Gas Division must be accompanied by a gas capture plan.

Further information regarding gas capture plans should be directed to the ND Oil & Gas Division.

A summary of the items to be contained in the gas capture plan include:

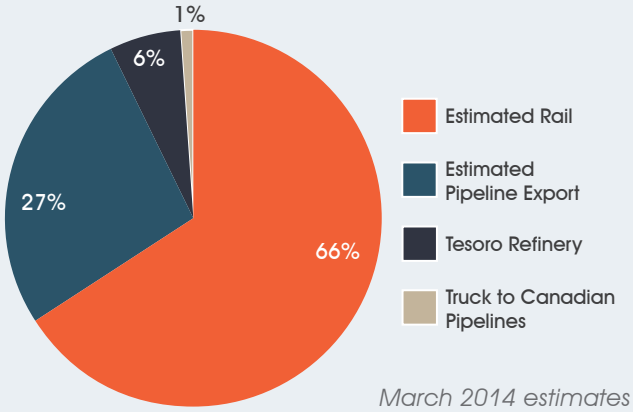
1. **An affidavit signed by a company representative indicating who the gas gathering company will be and that they have provided the gathering company with drilling and production plans**
2. **A detailed gas gathering pipeline map**
3. **Capacity and throughput information for the pipeline to which the operator proposes to connect**
4. **A detailed flowback strategy including dates and expected production levels**
5. **Amount of gas applicant is currently flaring**
6. **Alternatives to flaring**

North Dakota Pipeline Authority
State Capitol, 14th Floor
600 E. Boulevard Ave. Dept. 405
Bismarck, ND 58505-0840

PIPELINE FACTOID

In September 2013, the most recent data available, it is estimated that 44% of ND's crude oil was gathered at the wellhead by pipeline. This is up from 36% just a year earlier. Mountrail County saw the largest increase in crude oil pipeline gathering, followed by Dunn and McKenzie.

Estimated Williston Basin Oil Transportation



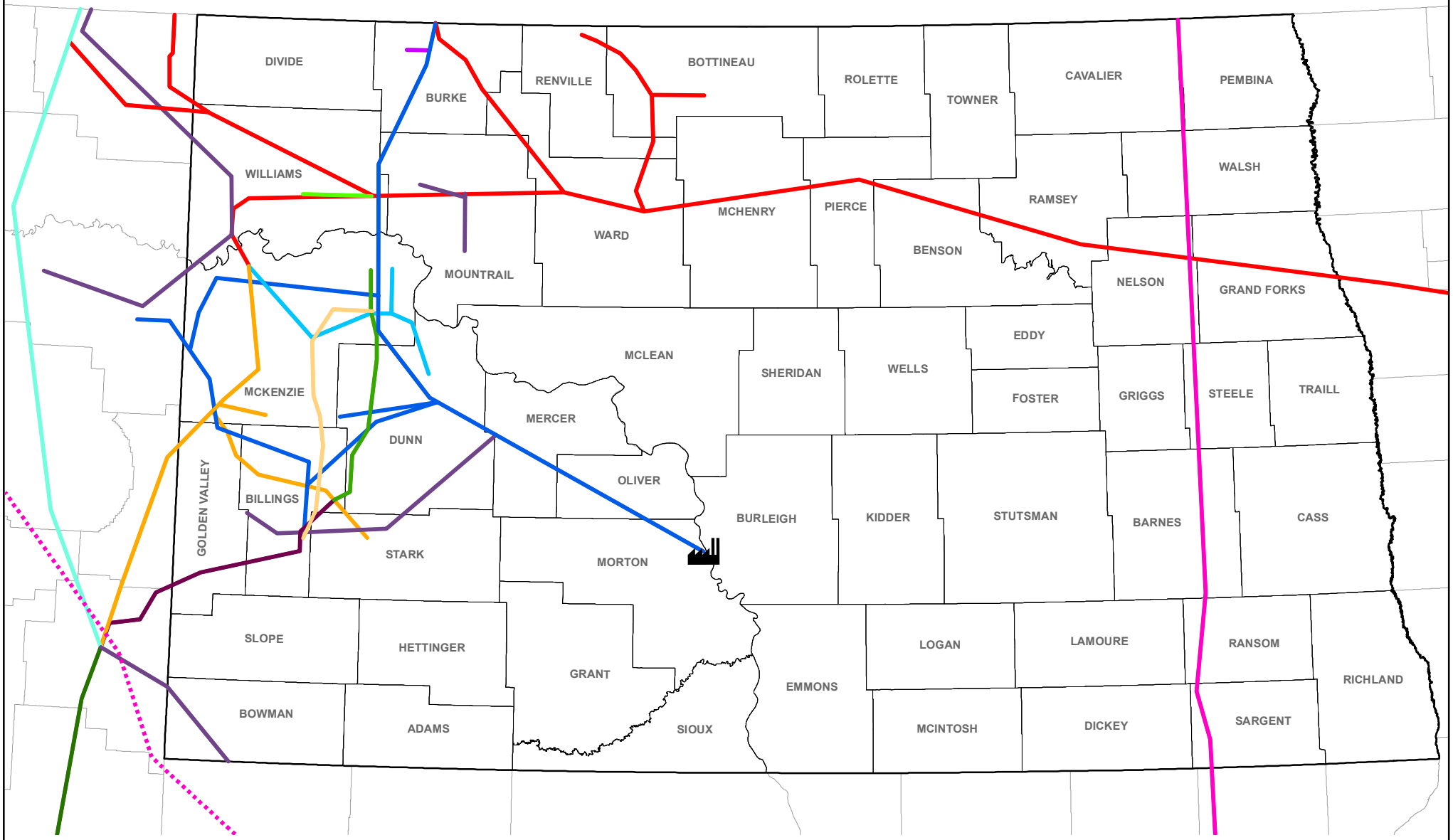
March 2014 estimates

811
Know what's **below.**
Call before you dig.

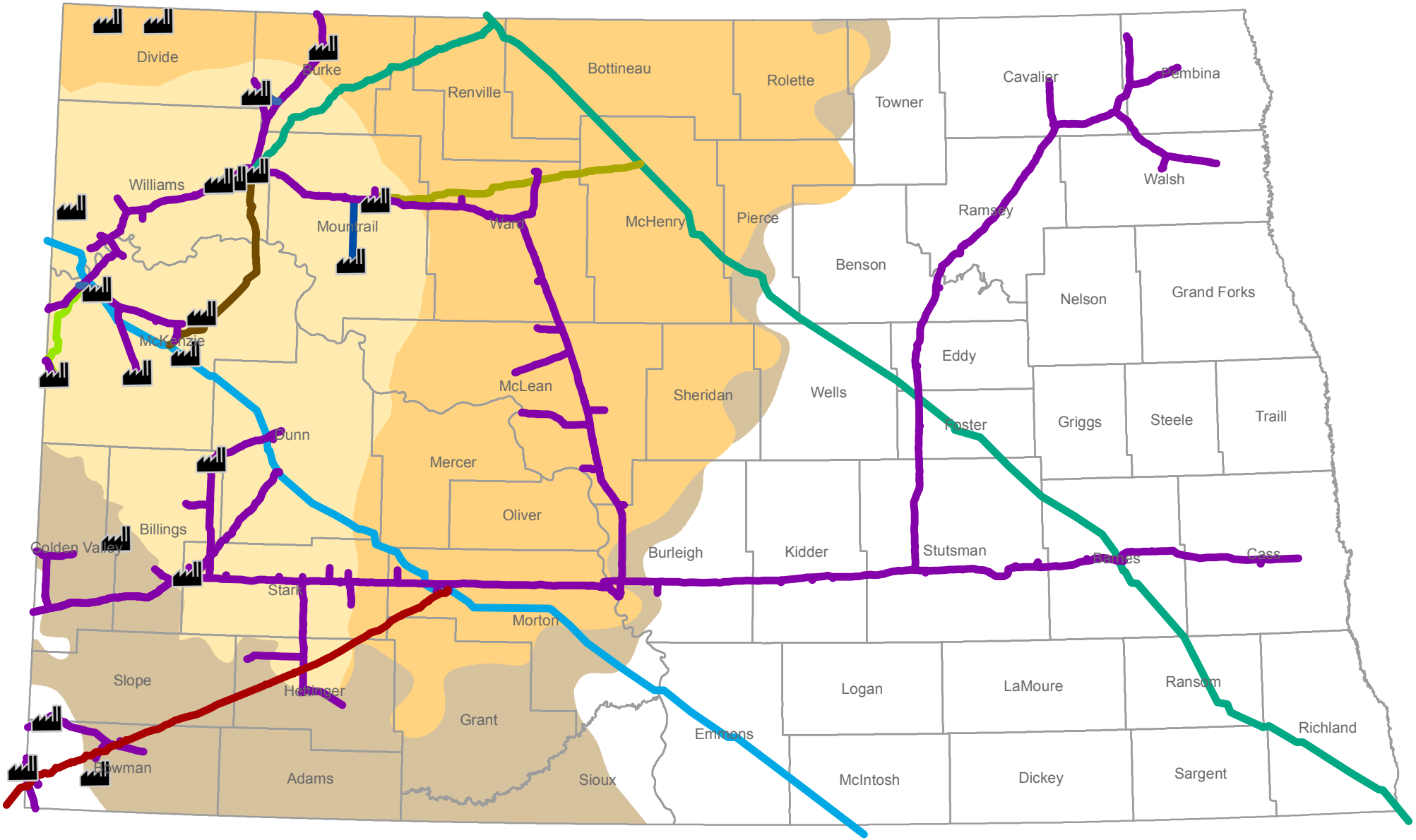
APPENDIX B

North Dakota Pipeline Maps

North Dakota Crude Oil Pipelines

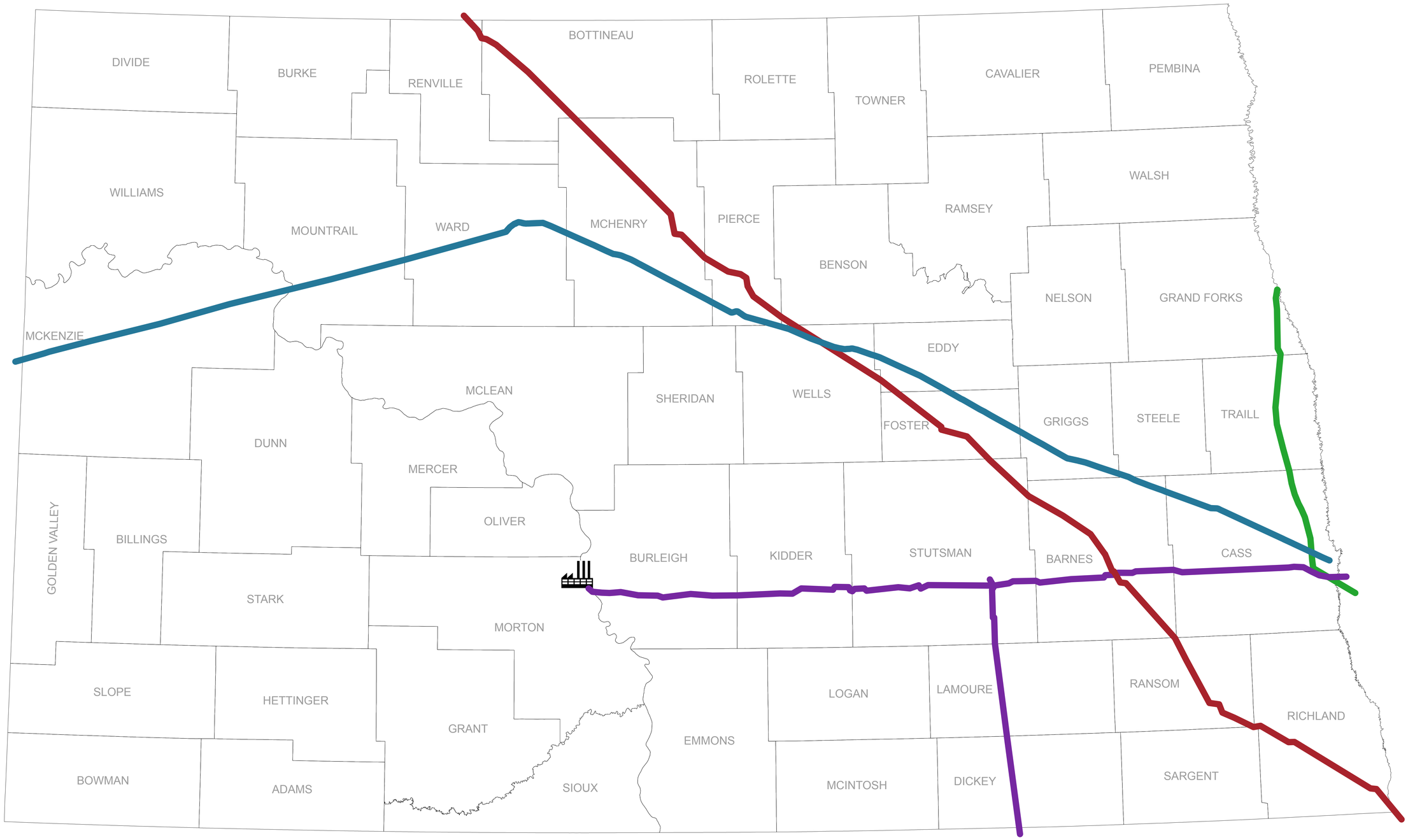


North Dakota Natural Gas Pipelines

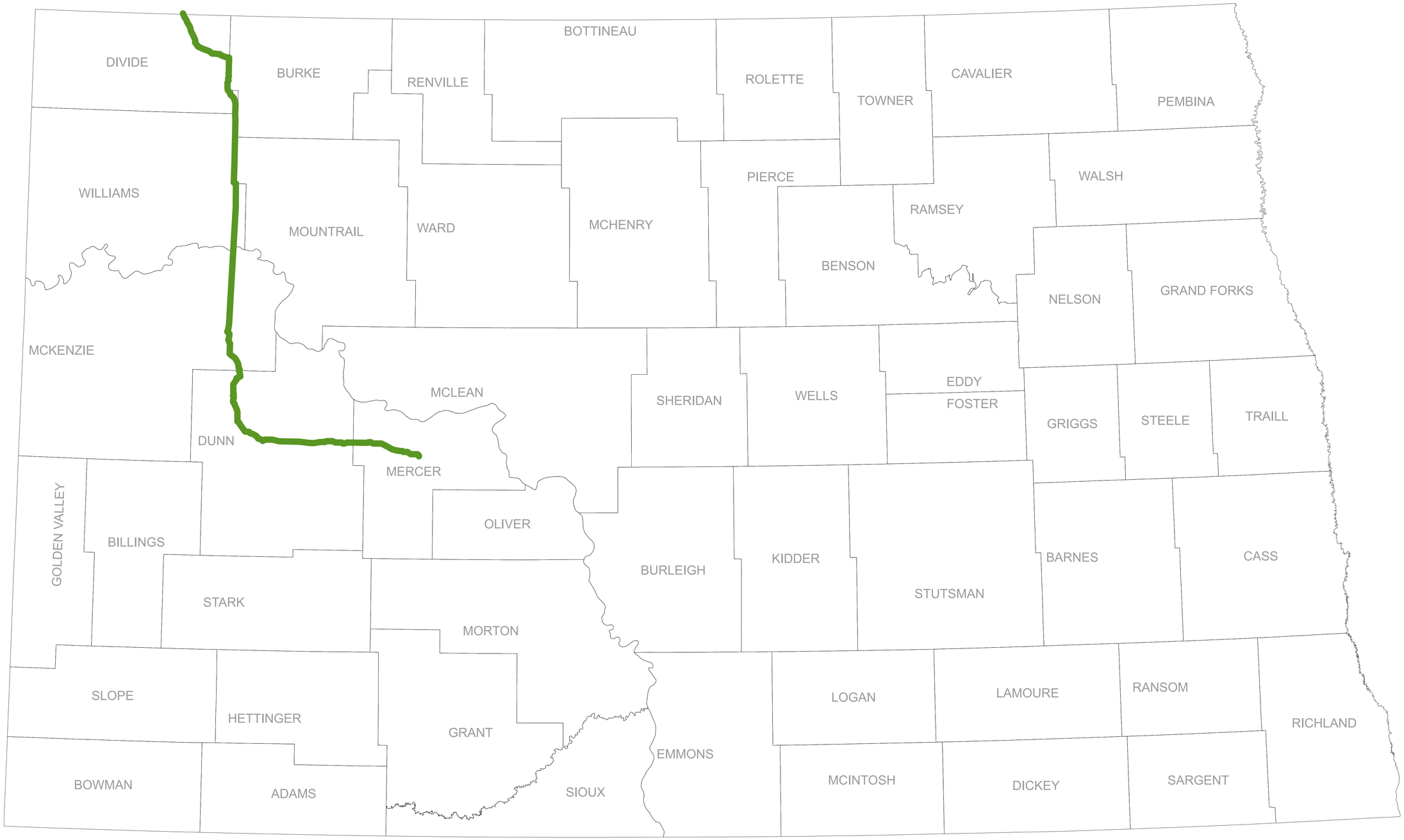


Date: 2/7/2014

North Dakota Products Pipelines



North Dakota CO_2 Pipeline

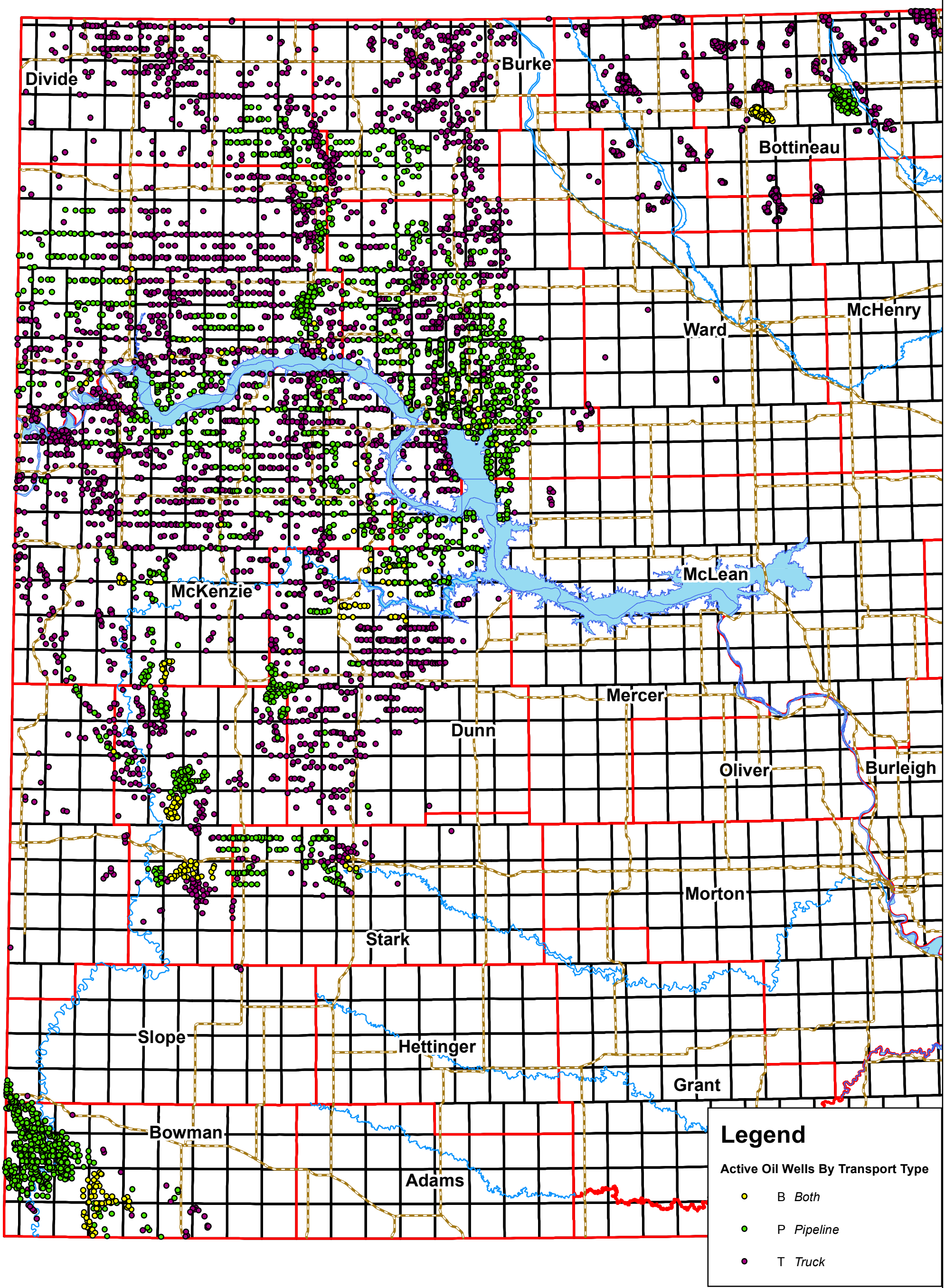


Dakota Gas

APPENDIX C

North Dakota Crude Oil Gathering Map

Active Oil Wells By Transport Type

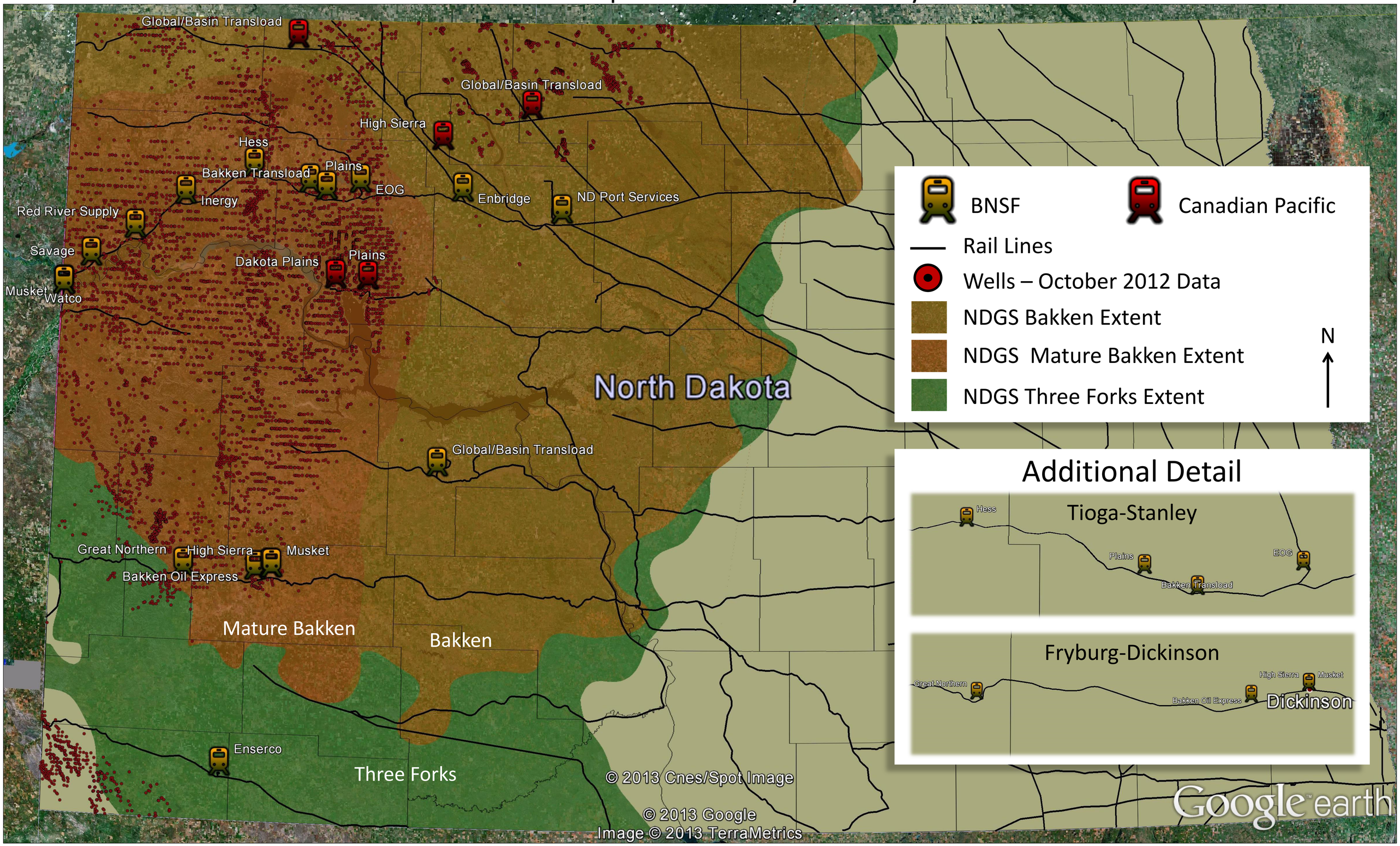


APPENDIX D

North Dakota Crude Oil Rail Loading Map

North Dakota Crude Oil Rail Loading Facilities

North Dakota Pipeline Authority – January 2013



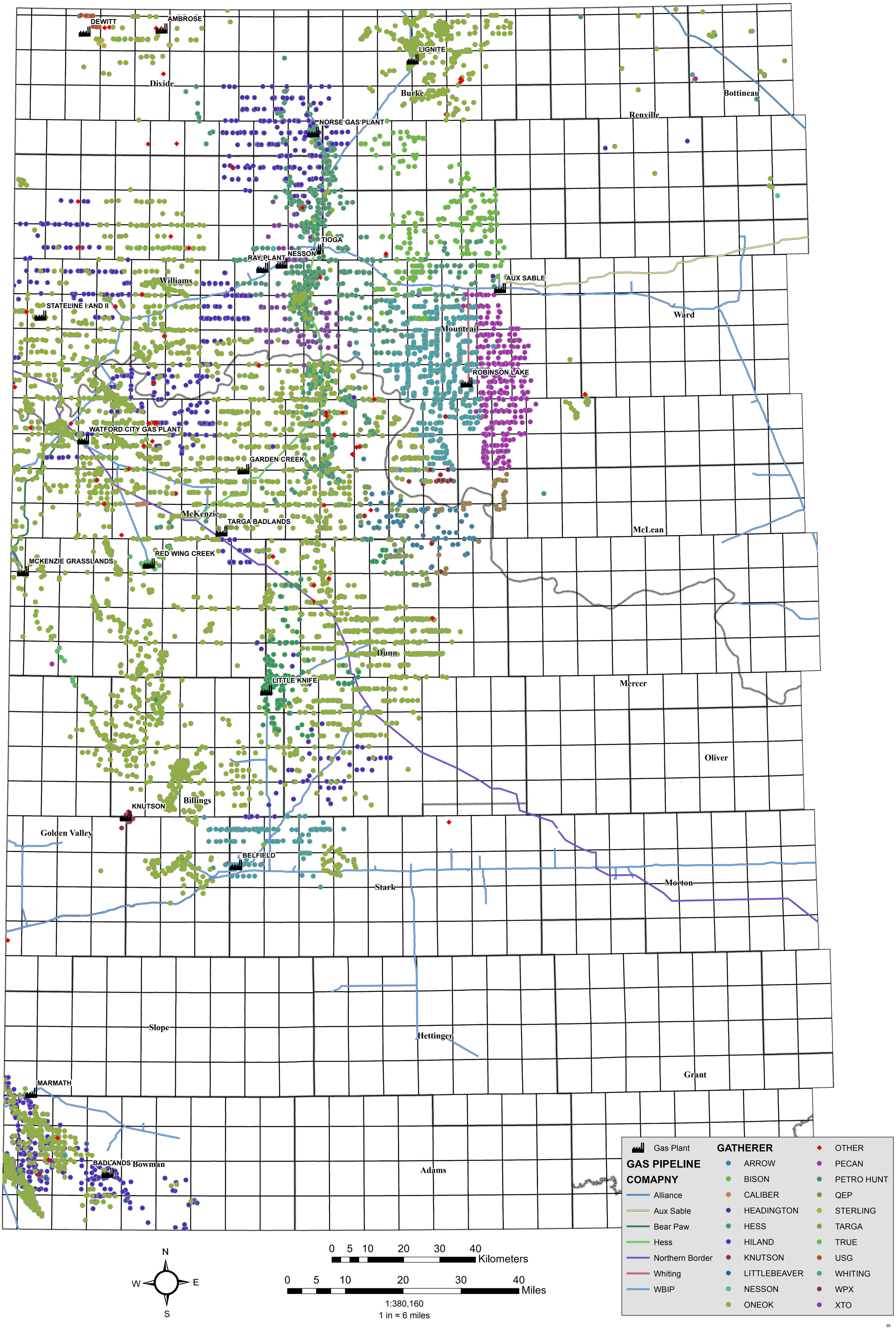
APPENDIX E

North Dakota Gas Processing and Transportation Map

DRAFT - North Dakota Gas - DRAFT

Processing and Transportation

November 2013



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