

# North Dakota Pipeline Authority



## Annual Report July 1, 2010 – June 30, 2011

Industrial Commission of North Dakota

Governor Jack Dalrymple, Chairman

Attorney General Wayne Stenehjem

Agriculture Commissioner Doug Goehring

# **North Dakota Pipeline Authority**

## **Annual Report**

### **July 1, 2010 – June 30, 2011**

#### **Overview**

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At the request of the North Dakota Industrial Commission, the Sixtieth Legislature passed House Bill 1128 authorizing the North Dakota Pipeline Authority. Governor John Hoeven signed it 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 2009-2011 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**

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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

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As has been the case for the last several years, the 2010-2011 timeframe was filled with many exciting developments for producers in the oilfields of North Dakota. The addition of new drilling rigs and advances in drilling and completion techniques have taken North Dakota oil production to 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 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	Saddle Butte Pipeline
Hess Corporation	TransCanada
Williston Basin Interstate Pipeline	Quintana Capital Group
EOG Resources, Inc.	US Development Group
True Oil, LLC	Rangeland Energy
Vantage Pipeline	NuStar Energy
Tesoro	Murex Petroleum Corporation
Bear Paw/ONEOK	Aux Sable Liquid Products
Northern Border Pipeline	Louis Dreyfus Highbridge Energy
Kinder Morgan	Canadian Pacific Railway
BNSF Railway	URS Corp.
Legion Energy Services	KLJ Engineering
GasTechno	Savage Services
Tenaska	BenTek Energy
Plains All American	EDOG Logistics
Bakken Express	Harms Group
Raymond James	Holloman Corporation

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

North Dakota Public Service Commission	North Dakota Department of Commerce
North Dakota Tax Department	Energy and Environmental Research Center
North Dakota Oil and Gas Division	North Dakota Water Commission
North Dakota Governor's Office	Wyoming Pipeline Authority

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

North Dakota Petroleum Council  
Western CO<sub>2</sub> Infrastructure Initiative

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.

## **Industry and Public Communications Activities**

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### ***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. Four newsletters (Appendix A) were published during the 2010-2011 fiscal year.

### ***North Dakota's Oil Transportation Infrastructure***

In December 2010, the Pipeline Authority released a new crude oil transportation report titled, "North Dakota's Oil Transportation Infrastructure". The report was designed to explain the pipeline and processing investments North Dakota has seen in the past several years, as well as highlight future projects that are in the development phase. The full report is available for download on the "Publications & Maps" page of the Pipeline Authority website.

### ***Pipeline Authority Webinar Series***

Over the past year, the Pipeline Authority has hosted periodic webinars on various topics of interest to area pipeline operators and producers. A total of eight webinars were held, with very positive feedback from both the audience and presenters. Slides and video from the events are posted on our website for post-event viewing.

### **Pipeline Authority Website**

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 website as new information becomes available. The website allows 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.

### **Pipeline Presentations**

Over the past year, the Pipeline Authority has had the opportunity to present at a variety of industry and public events. Those events included:

American Petroleum Institute Chapter	Plains CO <sub>2</sub> Reduction Partnership
2011 Legislative Committees	Legislative Interim Committee Hearings
NDPC Teachers Education Seminar	NDPC CookFest Events
NDPC Town Hall Meetings	Interstate Oil and Gas Compact Commission
NDPC Annual Meeting	

### **Williston Basin Pipeline Infrastructure**

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

#### **Crude Oil Pipeline and Rail Transportation**

**Enbridge Pipelines North Dakota:** Having completed the Phase VI Expansion in early 2010, Enbridge began this fiscal year with a system capacity of 161,500 barrels of oil per day (BOPD). In February 2011, Enbridge implemented a 23,500 BOPD expansion plan on its mainline system to Clearbrook, MN. This expansion now allows Enbridge to move an average of 185,000 BOPD on its mainline and was executed by discontinuing transportation service for crude oil with high sulfur content.

June 2011 marked the first month of service for the much anticipated Enbridge “Portal Link Project”. Enbridge’s 12 inch line segment from Berthold, ND to Steelman, SK was reactivated with a capacity of 25,000 BOPD. Enbridge continues their work towards an expanded north bound capacity of 145,000 BOPD by early 2013 for the larger scale “Bakken Expansion Project”. Oil using the Portal Pipeline 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 markets. The North Dakota portion of the Bakken Expansion Project is estimated to cost \$370 million.

**True Companies:** In late 2010, Bridger, Belle Fourche, and Butte Pipelines launched a successful open season for a new expansion project called the “Baker 300”. The proposed project would increase takeaway capacity at the Baker, MT hub from 118,000 BOPD to 300,000 BOPD by 2013. The project would require incremental expansions on the Butte Pipeline and an interconnect with the Keystone XL pipeline in Eastern Montana.

The Butte Pipeline, originating in Baker, MT, increased its July 2011 capacity to Guernsey, WY from 118,000 BOPD to 140,000 BOPD. This is the first phase of the “Baker 300” project, and will ultimately increase Butte’s capacity to 150,000 BOPD in the coming months. In Guernsey, WY, the oil is transported to Wood River, IL on the Kinder Morgan Platte Pipeline. The additional 50,000 BOPD expansion on the Butte Pipeline is anticipated to be in service in early 2012.

**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 recently altered their project description. BakkenLink now intends to collect crude oil from various locations along its 144 mile system and deliver oil to either the north at Beaver Lodge, or south 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.

**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 new pipeline is anticipated to be in service in late 2012 with a system capacity of 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.

**Tesoro Mandan Refinery:** On March 21, 2011, Tesoro Corporation outlined plans to add an additional 10,000 BOPD of refining capacity to its 58,000 BOPD Mandan refinery. The expansion is estimated to cost \$35 million and is anticipated to be complete by April 2012. The Mandan refinery, built in 1954 by Standard Oil, is North Dakota’s only refinery. The refinery receives its light sweet feedstock through a network of pipelines in the Williston Basin. 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.

**Rail Loading Facilities:** As North Dakota oil production is expected to continue its upward growth trend in the coming years, rail transportation, as a percentage of overall takeaway capacity, continues to climb. The capacity on the chart (Figure 1) includes eight existing rail facilities and six that will be placed in service in the coming years. Additional information can be found on the Pipeline Authority website. Several of the major rail projects were covered during the February and July 2011 webinar events.

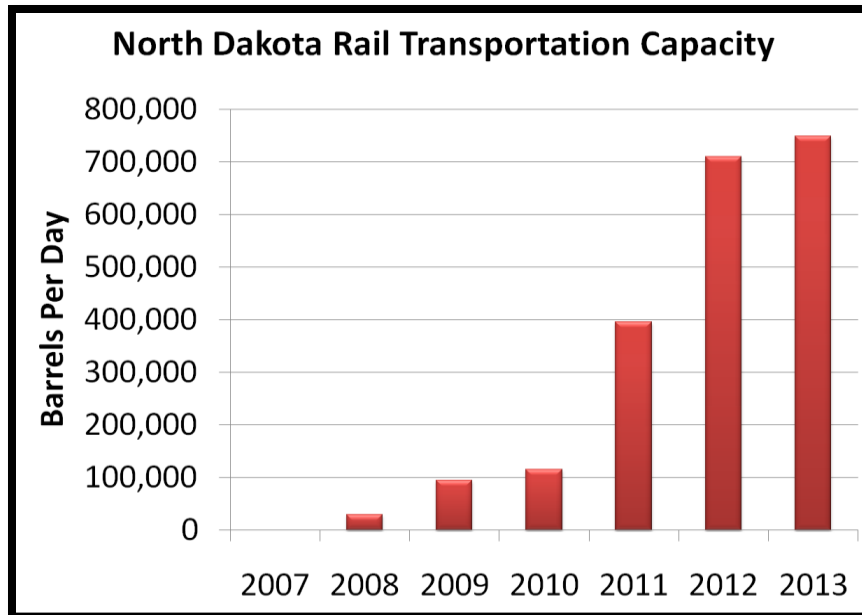


Figure 1. Outbound crude oil rail transportation capacity for current and proposed facilities in North Dakota

### **Natural Gas Pipelines**

**Alliance Pipeline:** The Alliance Pipeline is a high pressure, large diameter natural gas pipeline that originates in British Columbia, 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. The 36 inch diameter United States portion of the pipeline has a certified capacity of 1.513 billion cubic feet per day (BCFD) and had 188 million cubic feet per day (MMCFD) of capacity available prior to the Prairie Rose Pipeline startup (Alliance, 2009). 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. Once operational, the new “Tioga Lateral Pipeline” will have the ability to deliver liquids rich, high BTU, natural gas to Chicago, IL for further processing and transportation. The pipeline is scheduled to be placed in service July 2013, with construction starting in the second half of 2012.

An open season will be held during the summer of 2011 to determine whether the initial 120 MMCFD, 12 inch, Tioga Lateral Pipeline could be expanded. Alliance intends to operate the new segment as a FERC regulated pipeline, as opposed to the gathering pipeline status granted to the Prairie Rose Pipeline in 2008.

**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 Williston Basin Interstate Pipeline interconnects with the Northern Border Pipeline in North Dakota in three locations, Charbonneau, Manning, and Glen Ullin. The 42 inch diameter Northern Border Pipeline also receives gas deliveries in North Dakota from Bear Paw Energy at Ft. Buford, Hess at Watford City, and Dakota Gasification Co. at Hebron (Northern Border, 2010).

**Williston Basin Interstate Pipeline:** The Williston Basin Interstate Pipeline Co. operates 3,367 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 eleven 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 without needing to place new pipe in the ground. In December of 2008, Williston Basin Interstate Pipeline completed its first phase of the "Bakken Expansion" which added an additional 32 MMCFD of capacity to their North Dakota system by interconnecting to the Northern Border Pipeline at Charbonneau. The second Phase of the Bakken Expansion will add 27 MMCFD of gas injection capabilities in September 2011. Lastly, in February 2010, a successful open season was held to increase firm deliverability from its Baker gas storage field in eastern Montana. Along with the gas storage field upgrades, Williston Basin proposed a pipeline expansion to transport the increased firm storage volumes to the Manning interconnect with the Northern Border Pipeline. The project has an in-service date of April 2012.

**Prairie Rose Pipeline:** In June 2011, an affiliate of Aux Sable called Sable NGL 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 on January 14, 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 477 MMCFD and could be expanded to 1 BCFD. A July 2011 system incident has temporarily shutdown the system as repairs are made and an investigation takes place.

### **Natural Gas Liquids Pipelines**

**ONEOK Bakken Pipeline:** On July 26, 2010, ONEOK Partners announced plans to construct a new 12 inch natural gas liquids pipeline capable of moving 60,000-110,000 BPD from existing and planned facilities in the Williston Basin to an interconnect with the Overland Pass Pipeline near Cheyenne, WY. The new, 525-615 mile, "Bakken Pipeline" will be built to address the high volumes of natural gas liquids that are



extracted from the rich Bakken gas during processing. The pipeline will operate as a Y-grade system, with product fractionation taking place in Bushton, KS. ONEOK is targeting the first half of 2013 for system startup.

**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” will be built to address the high concentration of ethane found in North Dakota’s natural gas. Projected to be in service during the third quarter of 2013, the pipeline will be constructed of either 10 or 12 inch pipe. Currently, 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 152 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 CO2 Reduction Partnership through the Energy and Environmental Research Center in Grand Forks, ND.

## Natural Gas Processing

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

### Natural Gas Processing Capacity, Million Cubic Feet Per Day

Owner Company	Facility	County	2006	2008	2010	2011	2012
<b>North Dakota</b>							
Bear Paw / OneOK	Lignite	Burke	6	6	6	6	6
Bear Paw / OneOK	Marmath	Slope	7.5	7.5	7.5	7.5	7.5
Bear Paw / OneOK	Garden Creek	McKenzie	NA	NA	NA	100	100
Bear Paw / OneOK	Stateline I	Williams	NA	NA	NA	NA	100
Bear Paw / OneOK	Stateline II	Williams	NA	NA	NA	NA	100
Petro Hunt	Little Knife	Billings	32	32	32	32	32
True Oil	Red Wing Creek	McKenzie	4	4	4	4	4
Sterling Energy	Ambrose	Divide	0.5	0.5	0.5	0.5	0.5
EOG Resources	Stanley	Mountrail	NA	20	0*	0*	0*
Whiting Oil & Gas	Robinson Lake	Mountrail	NA	30	45	90	90
Whiting Oil & Gas	Ray	Williams	NA	10	10	10	10
Whiting Oil & Gas	Pronghorn	Stark	NA	NA	NA	30	30
XTO - Nesson	Ray	Williams	NA	10	10	10	10
Bear Paw / OneOK	Grasslands	McKenzie	63	100	100	100	100
Hess	Tioga	Williams	110	120	120	120	250
Hiland Partners	Badlands	Bowman	4	40	40	40	40
Hiland Partners	Norse	Divide	NA	NA	25	25	25
Hiland Partners	Watford City	McKenzie	NA	NA	NA	50	50
Summit Resources	Knutson	Billings	NA**	NA**	NA**	NA**	NA**
Saddle Butte	Watford City	McKenzie	NA	NA	NA	45	45
<b>Aux Sable - Chicago, IL</b>							
Aux Sable	Prairie Rose	Mountrail	NA	NA	100	100	100
<b>Total</b>			<b>227</b>	<b>380</b>	<b>500</b>	<b>770</b>	<b>1,100</b>

\*Stanley plant converted to a condensate removal facility on the Prairie Rose Pipeline

\*\*Knutson facility operates a gas separation unit. All separated gas is returned to well site for fuel.

### **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 an ever growing fleet of drilling rigs. Despite the daunting task, industry is rising up to reap the great economic reward contained in the rich Bakken gas.

In 2011, there will be five new or expanded natural gas processing plants with the capacity to process an additional 270 MMCFD. Investments in 2012 will be even greater with three new or expanded plants

adding 330 MMCFD of processing capability to the state. Figure 2 illustrates North Dakota's natural gas processing plants ability to keep pace with rising production levels. The primary natural gas challenge looking forward is not related to the processing plant capabilities, but rather the ability of gathering pipeline crews to keep pace with new well connections as more drilling rigs move into the state.

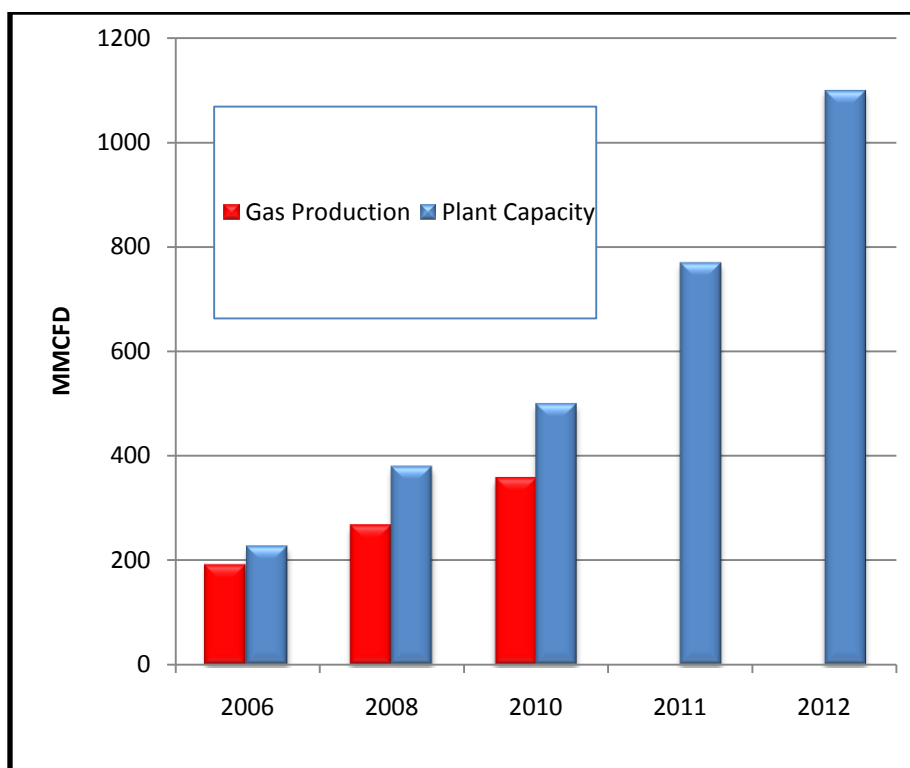


Figure 2. North Dakota natural gas processing plant intake capacity and wellhead natural gas production

## Planned Activities

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Over the past year, the Pipeline Authority has experienced 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, webinar events, and an agency website. 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



INDUSTRIAL COMMISSION OF NORTH DAKOTA

NORTH DAKOTA PIPELINE AUTHORITY

Governor **John Hoeven**

Attorney General **Wayne Stenehjem**

Agriculture Commissioner **Doug Goehring**

Director **Justin J. Kringstad**

## The Pipeline Publication

*Keeping North Dakota Connected*

Volume III Issue III - September 2010

### NDPA Starts Hosting Monthly Webinars

The Pipeline Authority is excited to have started hosting monthly webinars on various topics of interest to area pipeline operators and producers. The first event was held on September 2, and was titled, "Williston Basin NGL Production and Transportation". Slides and video from the events are posted on our website. The October event, featuring the North Dakota Public Service Commission and the Federal Energy Regulatory Commission, will cover pipeline and processing regulations in North Dakota.

### TransCanada Holding Open Season for "Bakken Marketlink Project"

On September 13, 2010, TransCanada announced that it is launching an Open Season for Bakken producers interested in accessing TransCanada's proposed Keystone XL pipeline project in eastern Montana. The proposed 100,000 barrel per day (BOPD) interconnect would be located near Baker, MT and would require new pumps and tanks to accommodate the Bakken oil. Third party shippers would be necessary to move the crude to the Baker facility.

### "Baker 300" Project Seeking Support

On August 23, 2010, Bridger, Belle Fourche, and Butte Pipelines launched a non-binding expression of interest period for a new expansion project called the "Baker 300". The proposed project would increase takeaway capacity at the Baker, MT hub from 118,000 BOPD to 300,000 BOPD by 2013. The project would require incremental expansions on the Butte Pipeline and an interconnect with the Keystone XL pipeline in Eastern Montana.

### Enbridge Announces "Bakken Expansion Program"

In August 2010, Enbridge announced a 145,000 BOPD expansion project called the "Bakken Expansion Program." The first stage of the \$370 million program will come online during the first quarter of 2011 and increase crude oil flows out of North Dakota by an additional 25,000 BOPD. The second stage of the expansion will come online during the first quarter of 2013 and add an additional 120,000 BOPD or more to the Enbridge takeaway capacity. Enbridge has also proposed removing sour crude oil service from the North Dakota system, which could result in a 25,000-30,000 BOPD expansion before the end of 2010.

### North Dakota Production Numbers

	May-10	June-10	July-10
Average Daily Oil Production, BOPD	298,060	314,477	321,042
Average Daily Gas Production, MMCFD	301.207	303.244	320.371
Average Rig Count	115	125	135
New Gas Gathering Connections	52	44	54

As of September 22, 2010, there are 144 active rigs in North Dakota.

[www.pipeline.nd.gov](http://www.pipeline.nd.gov)

## New Ethane Pipeline Planned From Tioga to Alberta

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" will be built to address the high concentration of ethane found in North Dakota's natural gas. Projected to be in service during the third quarter of 2013, the pipeline will be constructed of either 10 or 12 inch pipe. Currently, the majority of North Dakota's ethane is being left in the natural gas stream after it leaves the gas processing plant.

## Quintana Holding BakkenLink Open Season

A binding open season for Quintana's BakkenLink Pipeline commenced on September 27, 2010. On the heels of TransCanada's Keystone XL open season announcement, the BakkenLink Pipeline will allow shippers to secure transportation to an interconnect with the Keystone XL Pipeline near Baker, MT. If sufficient support is secured, the BakkenLink system would be ready for service in early 2013.

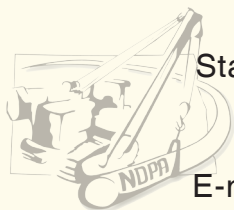
## Hiland Gas Plant

Hiland Partners has begun constructing a new 50 million cubic feet per day gas processing plant four miles north and eight miles east of Cartwright, ND in McKenzie County. The new "Watford City Plant" is anticipated to begin operations in March 2011. The processing plant's fractionated natural gas liquids will be transported 10 miles by pipeline to a proposed Hiland rail facility west of Trenton, ND. The processed natural gas will be transported by a new 5 mile, 8-inch, pipeline to interconnections with Williston Basin Interstate Pipeline and Northern Border Pipeline.

## ONEOK Outlines New NGL Pipeline

On July 26, 2010, ONEOK Partners announced plans to construct a new 12 inch natural gas liquids pipeline capable of moving 60,000-110,000 BPD from existing and planned facilities in the Williston Basin to an interconnect with the Overland Pass Pipeline near Cheyenne, WY. The new, 525-615 mile, "Bakken Pipeline" will be built to address the high volumes of natural gas liquids that are extracted from the rich Bakken gas during processing. The pipeline will operate as a Y-grade system, with product fractionation taking place in Bushton, KS. ONEOK is targeting the first half of 2013 for system startup.

## ND Pipeline Authority



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INDUSTRIAL COMMISSION OF NORTH DAKOTA

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# The Pipeline Publication

*Keeping North Dakota Connected*

Volume III Issue IV - December 2010

## Looking Back at 2010

Beginning with the Enbridge Phase VI Expansion and the startup of EOG's Stanley, ND rail facility, 2010 was a year filled with numerous exciting developments aimed at further developing North Dakota's oil and natural gas transportation infrastructure. 2010 was the year that TransCanada looked to the Williston Basin for additional crude volumes on the Keystone XL Pipeline. 2010 also saw Enbridge announce it had sufficient support to implement the much anticipated Bakken Expansion Program.

In 2010 alone, North Dakota's natural gas gathering and processing industry committed over \$2 billion to new projects designed to minimize flaring and maximize profits over the next three years. This incredible investment of capital includes five new or expanded natural gas processing plants, two new natural gas liquids pipelines, new gathering pipelines, and additional compression on existing pipeline assets.

2011 is expected to be an even larger exploration and development year for North Dakota's oil producers, with 200 drilling rigs expected to be working in the state by next summer. We can expect the momentum gained by North Dakota's transportation industry in 2010 to spill over into 2011 with even more exciting developments for our state's petroleum industry.

2010 also kept the Pipeline Authority busy with many industry and community outreach events. The Pipeline Authority was fortunate to be able to present and participate at events such as the "Oil Can!" Cookfests, community town hall tours, Teacher Education Seminar, and the Williston Basin Petroleum Conference, to name a few.

Most importantly, the memories of 2010 will be highlighted by the wonderful community members, industry representatives, and policy makers that the Pipeline Authority was able to work with throughout the past year.

## New Transportation Hub Planned Near Epping, ND

On November 30, Rangeland Energy announced plans to construct a new crude oil loading terminal and pipeline in Williams County, North Dakota. The new "COLT Hub" is anticipated to be in service by December 2011. A 20-mile, 8 inch, pipeline called the "COLT Connector" will unite the facility to both the Enbridge North Dakota and the Tesoro pipelines at an interconnect eight miles south of Tioga. Serviced by BNSF, a new railcar loading facility will be constructed at the terminal, with an initial rail capacity of 27,000 barrels of oil per day.

## ONEOK Announces Stateline I Gas Plant

On October 4, ONEOK Partners announced that it will be investing an additional \$300-\$355 million in the Williston Basin by 2012. The October announcement included a new 100 million cubic feet per day natural gas processing plant in western Williams County. The new "Stateline I" plant is expected to be complete during the third quarter of 2012 and cost \$180-\$205 million. An additional \$120-\$150 million will be invested during 2011 and 2012 for new well connections, as well as expansions and upgrades to its existing natural gas gathering system infrastructure in the Williston Basin.

North Dakota  
Production Numbers

	Aug-10	Sept-10	Oct-10
Average Daily Oil Production, BOPD	328,883	342,094	342,247
Average Daily Gas Production, MMCFD	324.131	340.187	331.335
Average Rig Count	140	143	151

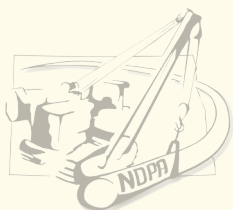
As of December 26, 2010, there are 162 active rigs in North Dakota.

[www.pipeline.nd.gov](http://www.pipeline.nd.gov)

## Overview of North Dakota, Eastern Montana, and South Dakota Crude Oil Transportation

Below you will find a table that shows the current and future crude oil transportation options out of the Williston Basin. Additional information about these projects can be found on the Pipeline Authority website or by contacting the Pipeline Authority directly by email or phone.

Transportation System Capacity, Barrels Per Day	2007	2008	2009	2010	2011	2012	2013
<b>Pipeline Transportation</b>							
Butte Pipeline	92,000	104,000	118,000	118,000	118,000	118,000	118,000
Enbridge North Dakota	80,000	110,000	110,000	161,500	161,500	161,500	161,500
Tesoro Mandan Refinery	58,000	58,000	58,000	58,000	58,000	58,000	58,000
Enbridge Sweet Expansion	-	-	-	-	23,500	23,500	23,500
Enbridge Bakken Expansion	-	-	-	-	25,000	25,000	145,000
Butte Pipeline Expansion*	-	-	-	-	32,000	32,000	32,000
Butte Loop*	-	-	-	-	-	50,000	50,000
Plains Bakken North*	-	-	-	-	-	50,000	50,000
Keystone XL Interconnect*	-	-	-	-	-	-	100,000
<b>Pipeline Only Total</b>	<b>230,000</b>	<b>272,000</b>	<b>286,000</b>	<b>337,500</b>	<b>418,000</b>	<b>518,000</b>	<b>738,000</b>
<b>Rail Transportation</b>							
Various Smaller Sites	-	30,000	30,000	30,000	30,000	30,000	30,000
EOG Rail	-	-	65,000	65,000	65,000	65,000	65,000
Dakota Transport Solutions	-	-	-	20,000	40,000	40,000	40,000
Hess Rail	-	-	-	-	-	60,000	60,000
Rangeland COLT Hub	-	-	-	-	-	27,000	27,000
<b>Rail Only Total</b>	<b>-</b>	<b>30,000</b>	<b>95,000</b>	<b>115,000</b>	<b>135,000</b>	<b>222,000</b>	<b>222,000</b>
<b>Total Pipeline and Rail</b>	<b>230,000</b>	<b>302,000</b>	<b>381,000</b>	<b>452,500</b>	<b>553,000</b>	<b>740,000</b>	<b>960,000</b>
<i>*Project still in the proposed or internal review phase</i>							



### ND Pipeline Authority

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INDUSTRIAL COMMISSION OF NORTH DAKOTA

NORTH DAKOTA PIPELINE AUTHORITY

Governor **Jack Dalrymple**

Attorney General **Wayne Stenehjem**

Agriculture Commissioner **Doug Goehring**

Director **Justin J. Kringstad**

# The Pipeline Publication

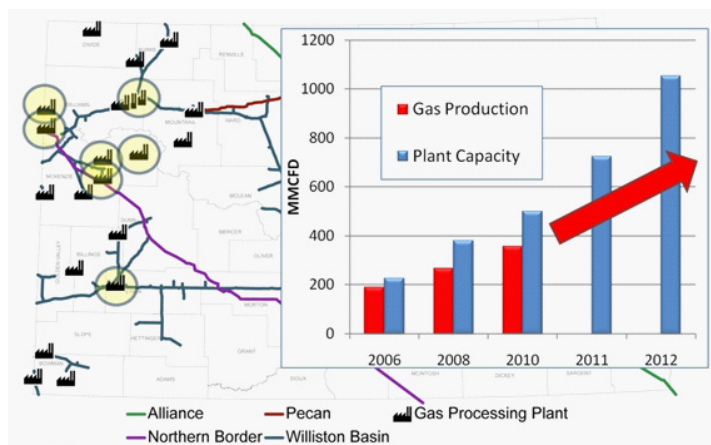
*Keeping North Dakota Connected*

Volume IV Issue I - March 2011

## Natural Gas Investments Ramping Up

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 an ever growing fleet of drilling rigs. Despite the daunting task, industry is rising up to reap the great economic reward contained in the rich Bakken gas. 2011 will see four new natural gas processing plants with the capacity to process an additional 220 million cubic feet of natural gas per day (MMCFD). Investments in 2012 will be even greater with three new or expanded plants adding 330 MMCFD of processing capability to the state. North Dakota will also see the state's first two natural gas liquids export pipelines with the Vantage Ethane Pipeline and ONEOK's Bakken Pipeline in 2012 and 2013, respectively. Lastly, North Dakota will soon see natural gas moving by compressed gas trucks in Stark County, as the company Bakken Express looks to unconventional solutions to monetize the otherwise flared gas until a pipeline can be connected to the wells.

*During the next three years, North Dakota's petroleum industry will see close to \$3 billion invested in capturing and processing its valuable natural gas resources.*



*New or expanding natural gas plants highlighted in yellow.*

## Tesoro Announces Plans to Expand Mandan Refinery

On March 21, Tesoro Corporation outlined plans to add an additional 10,000 barrels per day (BOPD) of refining capacity to its 58,000 BOPD Mandan refinery. The expansion is estimated to cost \$35 million and is anticipated to be complete by April 2012. The Mandan refinery, built in 1954 by Standard Oil, is North Dakota's only refinery. The refinery receives its light sweet feedstock through a network of pipelines in the Williston Basin. 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.

North Dakota  
Production Numbers

	Nov-10	Dec-10	Jan-11
Average Daily Oil Production, BOPD	356,505	344,064	342,088
Average Daily Gas Production, MMCFD	356.446	340.782	339.023
Average Rig Count	158	163	163

*As of March 23, 2011, there are 170 active rigs in North Dakota.*

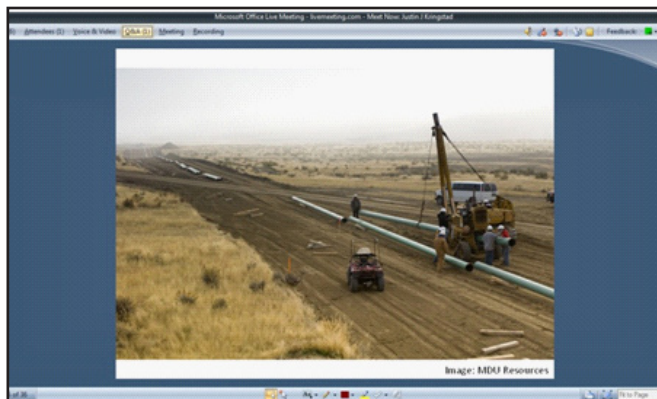
[www.pipeline.nd.gov](http://www.pipeline.nd.gov)

## Enbridge North Dakota Discontinues Sour Service

In February, Enbridge North Dakota implemented a 23,500 BOPD expansion plan on its mainline system to Clearbrook, MN. This expansion now allows Enbridge to move an average of 185,000 BOPD on its mainline and was executed by discontinuing transportation service for crude oil with high sulfur content.

## Webinar Video and Slides Available Online

The Pipeline Authority is continuing its practice of hosting monthly webinars on various topics of interest to area pipeline operators, producers, and citizens. One valuable feature of the webinar format is the ability to record the event for future viewing. Below you will find a listing of past webinar events that are available for viewing on the Pipeline Authority website.



- **September 02, 2010:** Williston Basin NGL Production and Transportation
- **October 14, 2010:** Navigating North Dakota Regulatory Requirements
- **November 30, 2010:** Northern Rockies Oil and Gas Roundup
- **December 30, 2010:** The Basics of Williston Basin Oil and Natural Gas Transportation
- **February 28, 2011:** North Dakota's Crude Oil Rail Transportation Infrastructure
- **March 30, 2011:** Williston Basin Oil Pipeline Update



### North Dakota Factoid

North Dakota set an all time record high of 174 drilling rigs on March 14, 2011. The record is not expected to last long as North Dakota is anticipating 200+ drilling rigs later this year.



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# The Pipeline Publication

*Keeping North Dakota Connected*

Volume IV Issue II - June 2011

## Flood Update

As Director of the Pipeline Authority, I would like to start by expressing my deepest sympathy and concern for all those in the region affected by this year's widespread flooding. It has been a difficult time for thousands of citizens, with much hard work ahead as flooding continues in some areas and cleanup begins in others.

I am pleased to say that the oil and natural gas transportation systems operating in the state have thus far experienced relatively little disruption due to rising flood waters. The most difficult challenges have been related to wet working conditions for new pipeline projects and the rerouting and delays of trains hauling oil to markets outside North Dakota. The duration and extent of delays experienced by rail movements has yet to be determined and will depend primarily on track conditions in the Minot area. Pipeline operators with lines under the Missouri River have been monitoring changing river conditions to ensure continued safe operation.

## Alliance Announces Tioga Lateral

In response to growing natural gas production, Alliance Pipeline announced plans on June 22 to construct a new, 80 mile, natural gas pipeline from the Hess Gas Plant in Tioga, ND to an interconnection point near Sherwood, ND. Once operational, the new "Tioga Lateral Pipeline" will have the ability to deliver liquids rich, high BTU, natural gas to Chicago, IL for further processing and transportation. The pipeline is scheduled to be placed in service July 2013, with construction starting in the second half of 2012.

An open season will be held this summer to determine whether the initial 120 MMCFD, 12 inch, Tioga Lateral Pipeline could be expanded. Alliance intends to operate the new segment as a FERC regulated pipeline, as opposed to the gathering pipeline status granted to the Prairie Rose Pipeline in 2008.



North Dakota  
Production Numbers

	Feb-11	Mar-11	Apr-11
Average Daily Oil Production, BOPD	349,063	360,279	351,183
Average Daily Gas Production, MMCFD	340,383	356,892	358,611
Average Rig Count	167	172	173

As of June 23, 2011, there are 172 active rigs in North Dakota.

[www.pipeline.nd.gov](http://www.pipeline.nd.gov)

## Enbridge Activates Portal Pipeline

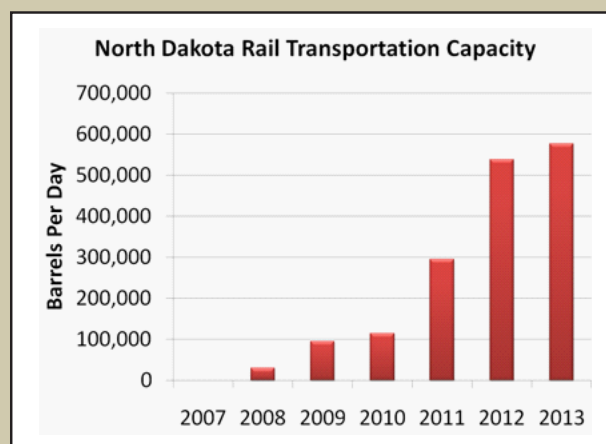
June marked the first month of service for the much anticipated Enbridge "Portal Link Project". Enbridge's 12 inch line segment from Berthold, ND to Steelman, SK was reactivated with an initial capacity of 18,000 BOPD, which is expected to increase to 25,000 BOPD in the coming months. Enbridge continues their work towards an expanded north bound capacity of 145,000 BOPD by early 2013 for the larger scale "Bakken Expansion Project". Oil using the Portal Pipeline navigates the Enbridge Saskatchewan system to an interconnect with the Enbridge Mainline at Cromer, MB. Once on the Mainline system, the oil quickly reenters the United States markets.

## Butte Pipeline Expands Capacity for July

The Butte Pipeline, originating in Baker, MT, is planning to increase its July capacity to Guernsey, WY from the current 118,000 BOPD to 140,000 BOPD. This is the first phase of the "Baker 300" project, and will ultimately increase Butte's capacity to 150,000 BOPD in the coming months. In Guernsey, WY, the oil is transported to Wood River, IL on the Kinder Morgan Platte Pipeline. An additional 50,000 BOPD expansion on the Butte Pipeline is anticipated to be in service in early 2012.

## Rail Transportation Update

As North Dakota oil production is expected to continue its upward growth trend in the coming years, rail transportation, as a percentage of overall takeaway capacity, continues to climb. The capacity on the graph includes eight existing rail facilities and five that will be placed in service in the coming years. Additional information can be found on the Pipeline Authority website, with several of the major projects being covered during the February 2011 webinar event.



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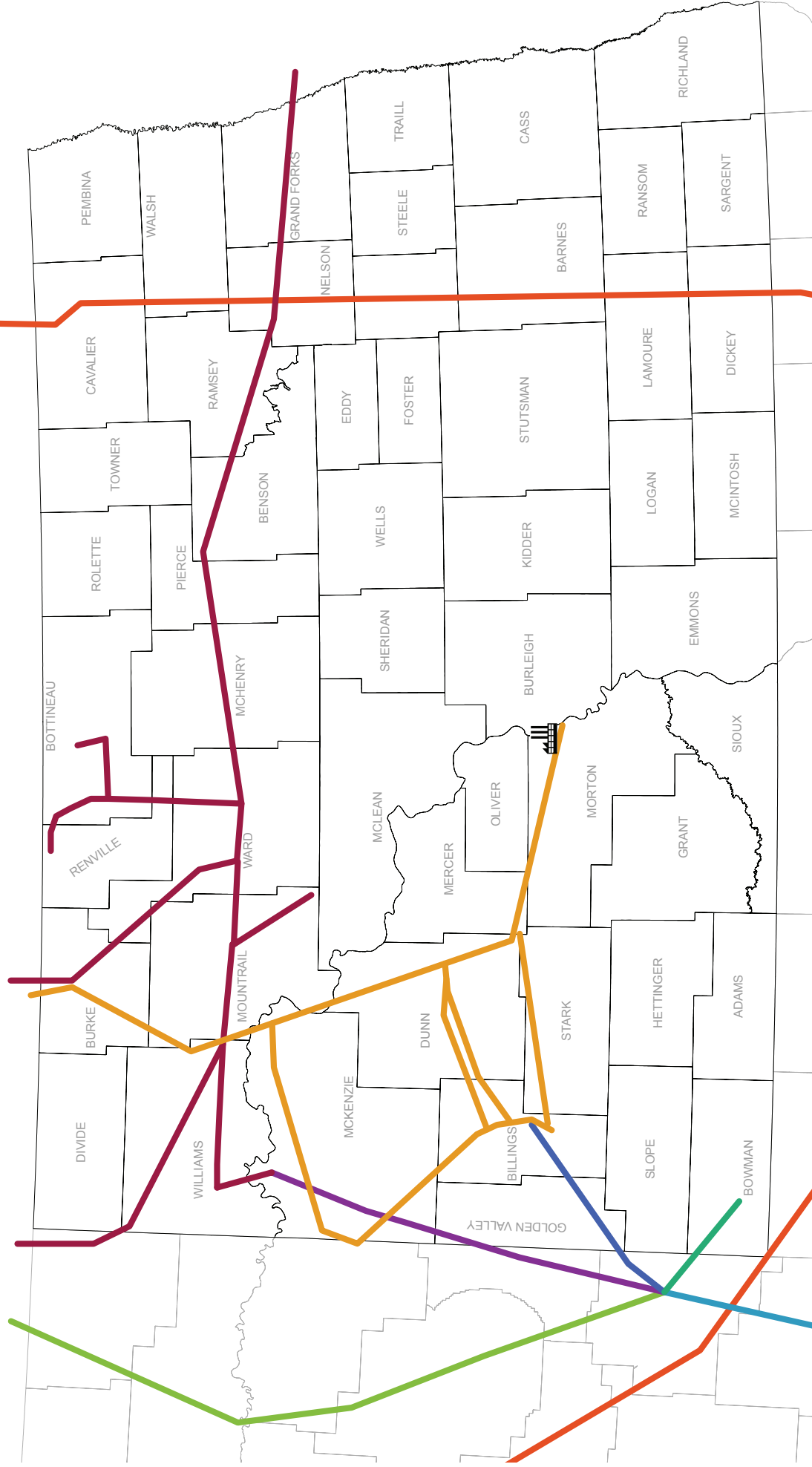
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## APPENDIX B

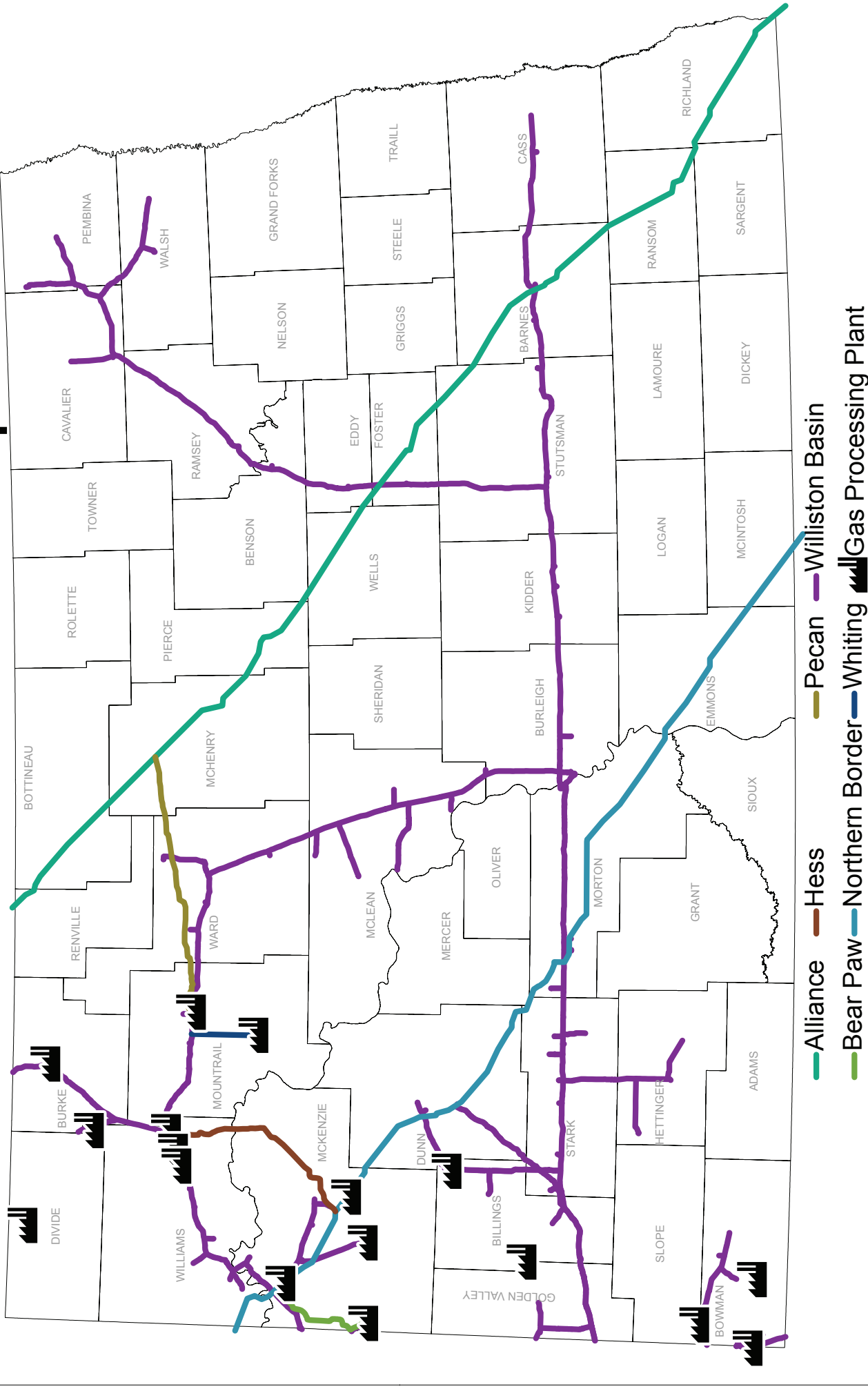
### North Dakota Pipeline Maps

# North Dakota Crude Oil Pipelines

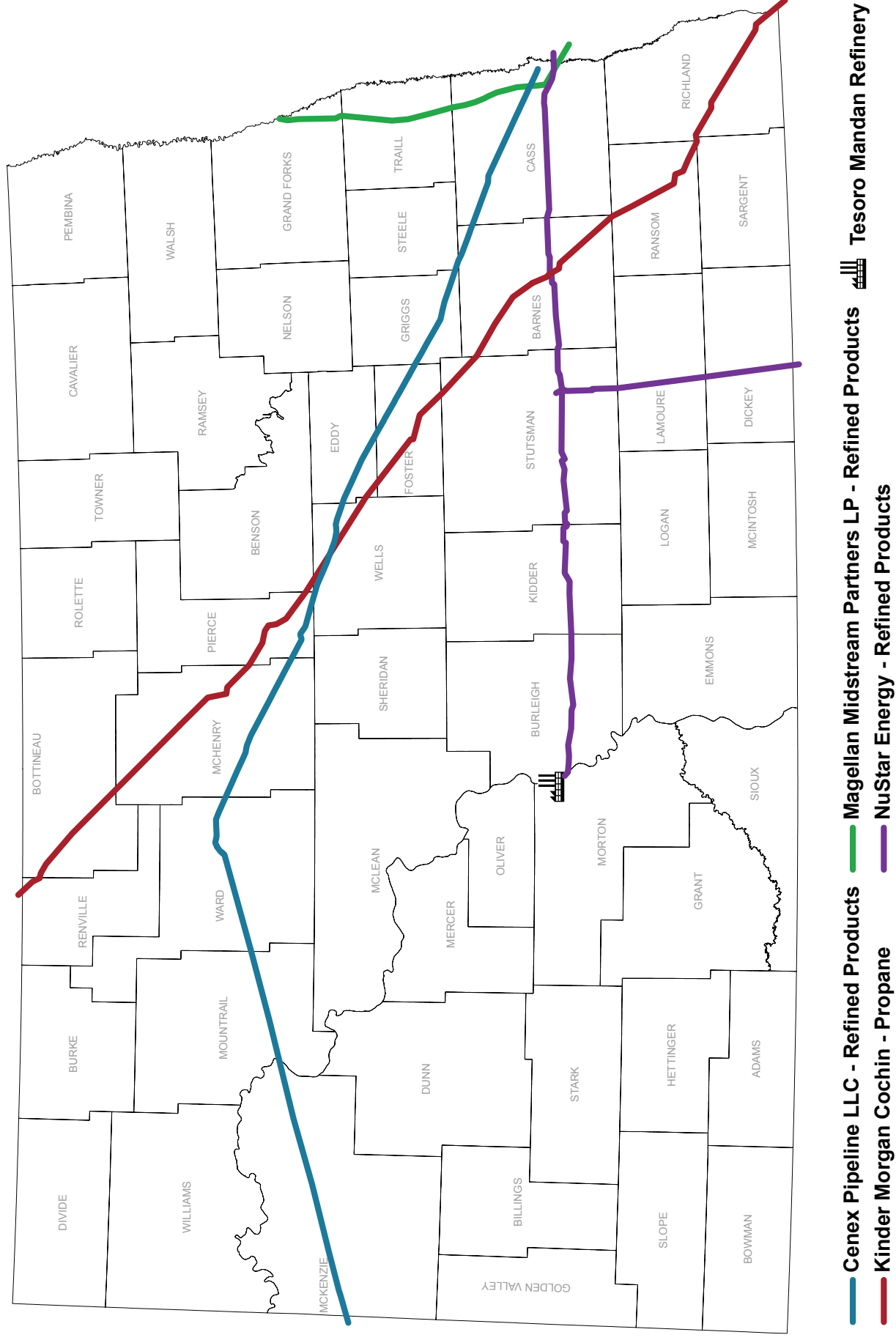




# North Dakota Natural Gas Pipelines

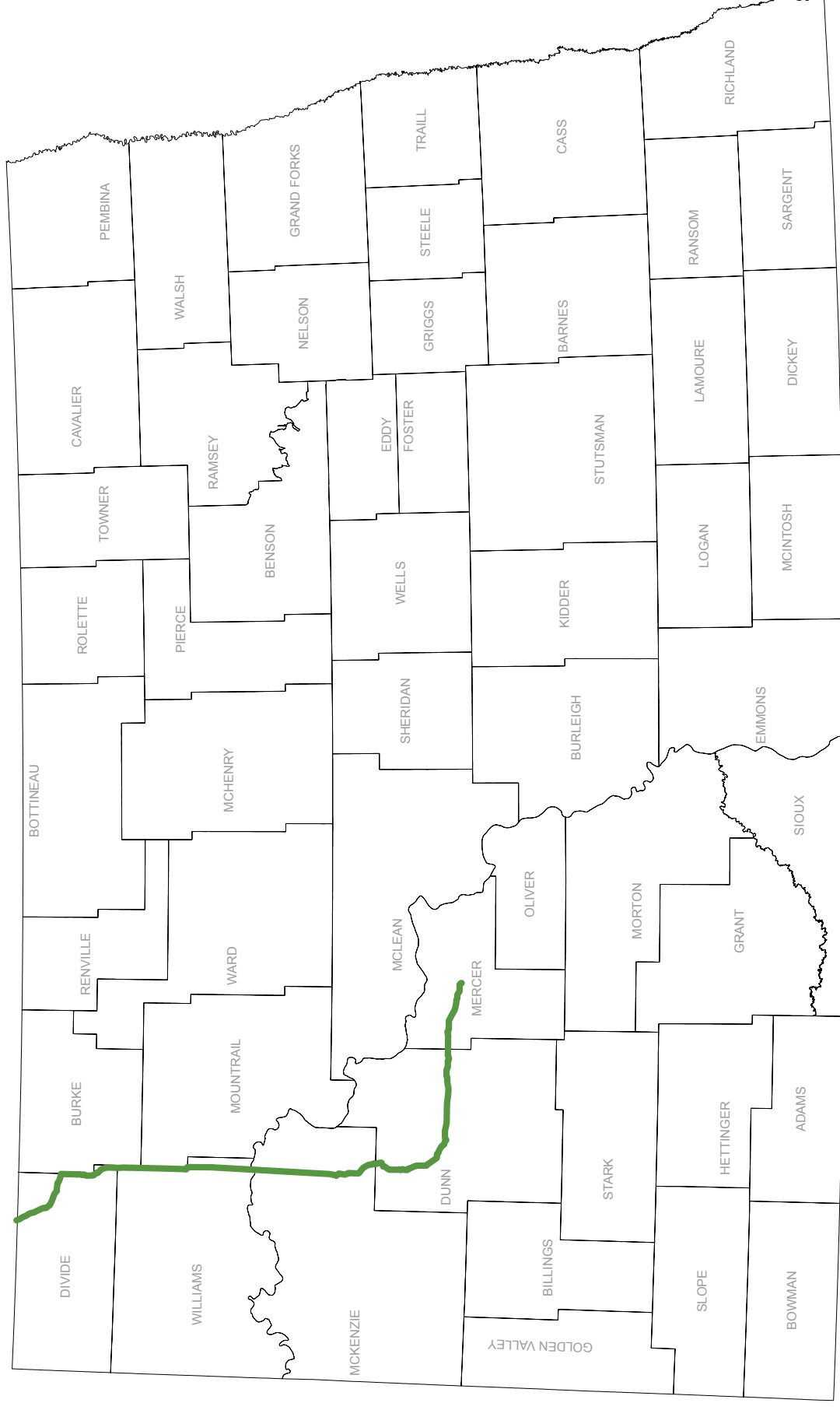


# North Dakota Products Pipelines





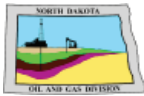
# North Dakota CO<sub>2</sub> Pipeline



— Dakota Gas

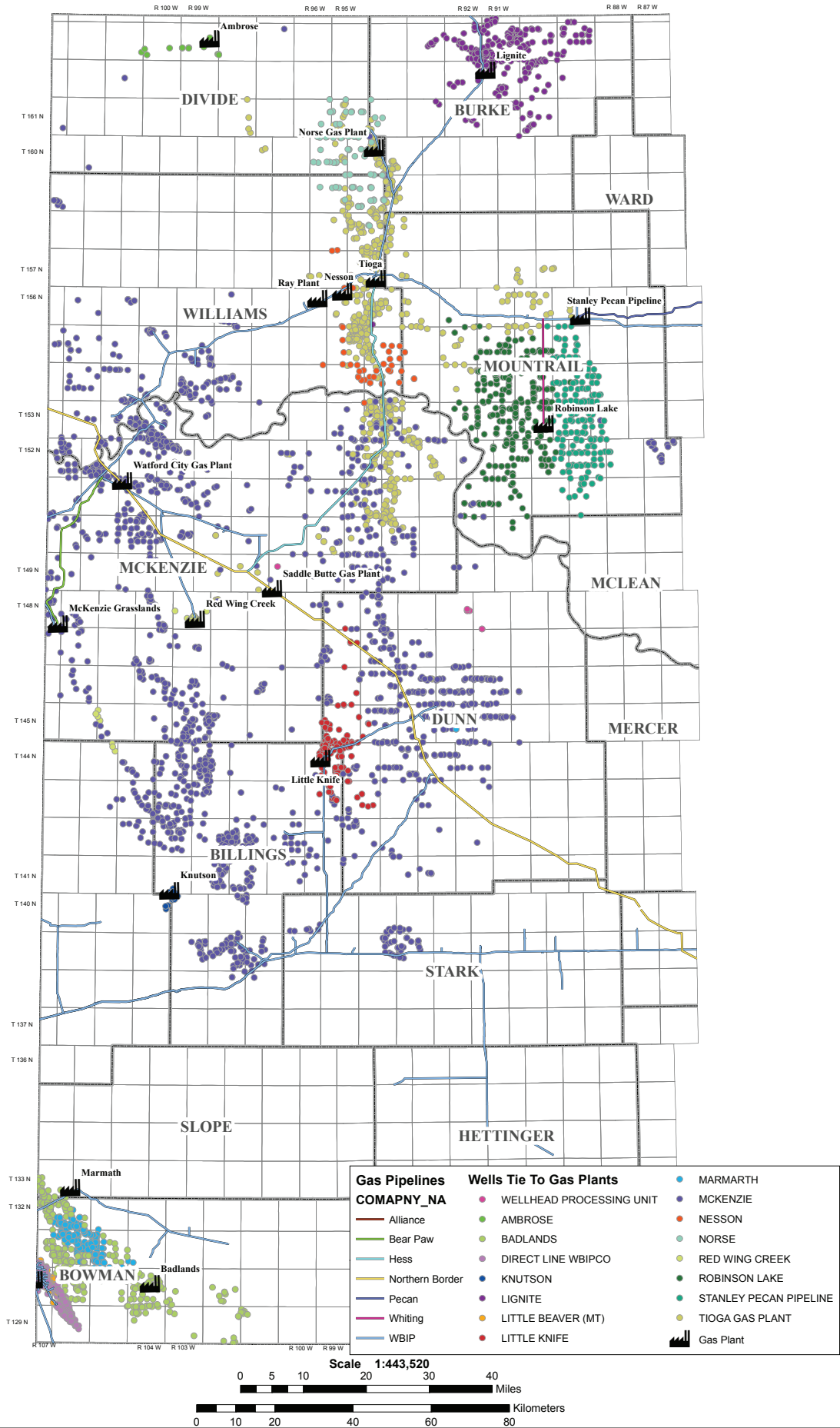
## APPENDIX C

### North Dakota Gas Processing and Transportation Map



# North Dakota Gas Processing and Transportation

July, 2011





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