North Dakota Pipeline Authority

Annual Report

July 1, 2008 – June 30, 2009

Industrial Commission of North Dakota

Governor John Hoeven, Chairman

Attorney General Wayne Stenehjem

Agriculture Commissioner Doug Goehring

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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. 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 2007-2009 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 for a one-year term. 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

During the 2008-2009 timeframe, many new and exciting developments occurred for the Pipeline Authority. While previous Pipeline Authority activities were oriented towards understanding and outlining North Dakota's pipeline challenges, the past year has been full of efforts to convert existing information into solutions. One of the most effective methods implemented during the year was to work with 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 companies including the following:

- Enbridge Pipeline
- Hess Corporation
- Alliance Pipeline, Inc.
- Williston Basin Interstate Pipeline
- EOG Resources, Inc.
- Pecan Pipeline
- Marathon Oil Company
- True Oil, LLC
- Pecan Pipeline
- Petro-Hunt LLC
- Tesoro
- Bear Paw/OneOK
- Northern Border Pipeline
- Kinder Morgan
- Saddle Butte Pipeline
- TransCanada
- Kinetic Group
- Blue Flint Ethanol
- Great River Energy
- Blaise Energy
- Somerset Refining
- AquaEnviro / EnGlobal / Northwest Refining
- Dakota Gasification Company
- JP Morgan
- Murex Petroleum Corporation
- Foothills Energy
- Louis Dreyfus Highbridge Energy
- Canadian Pacific Railway

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 Tax Department
- Wyoming Pipeline Authority
- North Dakota Department of Commerce
- Energy and Environmental Research Center
- North Dakota GIS Coordinator

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

Northern Alliance of Independent Producers
North Dakota Petroleum Council
North Dakota Petroleum Marketers Association

As noted above, the Pipeline Authority has been facilitating discussions between governmental agencies and companies interested in expanding North Dakota's pipeline infrastructure. Where it has been appropriate, the Pipeline Authority has presented testimony and submitted letters of support.

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

Industry and Public Communication Activities

Pipeline Publication

In August 2008, the Pipeline Authority created the first issue of its quarterly newsletter, *Pipeline Publication*. The newsletter was 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 2008-2009 fiscal year.

Pipeline Authority Website

In an effort to provide industry and public users with the most timely and complete set of information, a new Pipeline Authority website was created (Appendix B). The new site 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 Chapters
Kiwanis International
Legislative Briefings
Senate Caucus Meeting
Wyoming Pipeline Authority Meeting
2009 Petroleum Council's "Oil Day"
ND Society of Professional Engineers
Press Conferences
Legislative Interim Committee Hearings
Town Hall Meetings
Legislative Committee Hearings
Williston Basin Petroleum Conference
Mon-Dak Energy Alliance
Plains CO_2 Reduction Partnership

Keystone Pipeline Feasibility Study

In January 2009, the Pipeline Authority commissioned a feasibility study to assess whether the construction of a pipeline connecting to TransCanada's Keystones pipelines is a feasible and economic solution for North Dakota's oil industry.

The results of the feasibility study suggest that if a company was interested in moving North Dakota crude oil in either of the Keystone pipelines, a twelve inch pipeline running north to an interconnect in Canada would be the most feasible option. The suggested 169 mile north route was estimated to cost a total of $199 million and take approximately two years to complete. An executive summary and map of the study results can be found in Appendix C and the full report is available on the Pipeline Authority website.

Williston Basin Pipeline Expansions

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

Crude Oil

Enbridge Pipeline: Enbridge's Phase VI Expansion is scheduled to be complete during the first quarter of 2010 and increase flow from the current 110,000 barrels per day (BOPD) to 161,600 BOPD. In addition to Phase VI, Enbridge recently released information regarding a further expansion project called the "Portal Reversal Expansion Project" or PREP. PREP could come online the first quarter of 2011 and increase crude oil flows out of North Dakota by an additional 30,000-100,000 BOPD.

Butte Pipeline: By using specialized drag reducing chemicals, Butte Pipeline has been able to increase flow from 92,000 BOPD to 120,000 BOPD during late 2008 and early 2009.

Kinder Morgan: On May 29, 2009, Kinder Morgan Energy Partners announced an open season for their "Bakken Crude Project". The proposed crude oil project would utilize their existing Cochin Pipeline traveling through North Dakota to transport up to 30,000 barrels per day to markets in St. Paul, Toledo, and Detroit starting February 1, 2011. Currently, the Cochin Pipeline is transporting only propane, but with minor modifications the pipeline could also ship batches of Bakken crude oil. Ending July 17, 2009, the open season procedure allowed interested shippers to commit to three or five year terms.

Rail Loading Facilities: While North Dakota has had several crude oil rail loading facilities constructed since the fall of 2008, the largest and most significant is currently under construction by a company called EOG Resources. The EOG facility, near Stanley, is expected to begin service in late 2009 and could potentially move up to 60,000 BOPD of North Dakota crude oil.

Natural Gas Pipelines

Pecan Pipeline: Pecan Pipeline will soon begin construction of a 12" pipeline to connect the heart of the Bakken oil play in Mountrail County with Alliance Pipeline near Towner, ND. This pipeline is expected to be in service in the fall and is originally designed to carry 80 million cubic feet of gas per day (MMcfd) to Chicago via its connection to Alliance.

Williston Basin "Bakken Expansion": Williston Basin Interstate Pipeline completed its "Bakken Expansion" in December 2008. This project added an additional 32 MMCFD of capacity to their North Dakota system by interconnecting to the Northern Border Pipeline at Ft. Buford, ND.

Williston Basin "Sheyenne Expansion": Williston Basin Interstate Pipeline completed its "Sheyenne Expansion" in December 2008. This project added an additional 10 MMCFD of capacity to their North Dakota system by increasing compression and deliveries in eastern North Dakota.

Natural Gas Processing

Norse Gas Plant: Hiland Partners commissioned a newly constructed gas processing plant in the second quarter of 2009. The newly constructed "Norse Gas Plant" is located near McGregor in Divide County and is designed to process 10 MMcfd of natural gas.

North Dakota Natural Gas Processing, Million Cubic Feet Per Day

Owner Company	Location	County	2006 Plant Capacity	2008 Plant Capacity	2009 Plant Capacity
North Dakota					
Bear Paw / OneOK	Lignite	Burke	6	6	6
Bear Paw / OneOK	Marmath	Slope	7.5	7.5	7.5
Petro Hunt	Little Knife	Billings	32	32	32
True Oil	Red Wing Creek	McKenzie	4	4	4
Sterling Energy	Ambrose	Divide	0.5	0.5	0.5
EOG Resources	Stanley	Mountrail	NA	20	0*
Whiting Oil & Gas	Robinson Lake	Mountrail	NA	30	30
Whiting Oil & Gas	Ray	Williams	NA	10	10
XTO - Nesson	Ray	Williams	NA	10	10
Bear Paw / OneOK	Grasslands	McKenzie	63	100	100
Hess	Tioga	Williams	110	120	120
Hiland Partners	Badlands	Bowman	4	40	40
Hiland Partners	Norse/McGregor	Divide	NA	NA	10
Aux Sable - Chicago, IL					
Pecan Pipeline/Aux Sable	Stanley	Mountrail	NA	NA	80
		Total	**227**	**380**	**450**

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

61st Legislative Session

During North Dakota's 61st Legislative Session the Pipeline Authority presented numerous briefings and testimony on several pipeline related bills and topics. The major pipeline related bills that were signed into law are as follows:

HB-1032: Exempts pipeline projects from the Public Service Commission siting process if all work is contained within a previously permitted footprint. It also exempts petroleum pipelines that are four inches in diameter or less or less than one mile from the Public Service Commission siting process.

Passed House 94-0
Passed Senate 46-0

HB-1383: Clarifies the ability for the Pipeline Authority to provide funding to interconnecting pipelines.

Passed House 94-0
Passed Senate 46-0

SB-2037: Clarifies that the sales tax exemption for gas gathering pipelines and gas processing facilities, passed in 2007, applies to both oil and gas producing wells.

Passed Senate 42-0
Passed House 88-0

Planned Activities

Over the past year, the Pipeline Authority has experienced great success by working with industry to quantify the future crude oil production in order to provide the assurance needed to move forward with expansion projects. The forecasted oil production levels will require continuous updating and review over the next year as technology advances and market prices fluctuate. The Pipeline Authority plans to utilize a similar forecasting approach with natural gas and carbon dioxide in the coming year.

Industry and public information distribution will continue with the use of a quarterly newsletter and 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 **Roger Johnson**
Director **Justin J. Kringstad**

The Pipeline Publication

Keeping North Dakota Connected

Volume I Issue I

Inaugural Issue

Greetings from the North Dakota Pipeline Authority! This newsletter is the first in a series of quarterly publications designed to keep North Dakota policy makers and involved parties informed on current issues in the pipeline industry. Some of the topics to be covered in the upcoming quarterly newsletters will include crude oil pipeline capacity challenges, natural gas pipelines and processing, refining, refined product pipelines, carbon dioxide pipelines, and various other industry topics. White papers published during the last year on some of these topics are currently available on the Pipeline Authority website at www.nd.gov/ndic/pipeline.htm.

On August 1, 2008, Justin J. Kringstad was named the new director of the North Dakota Pipeline Authority. Kringstad is a geological engineering graduate from the University of North Dakota and has worked for Terra Utilities Co., the ND Oil & Gas Division, the Energy & Environmental Research Center, and the North Dakota Geological Survey. He and his wife Katie live in Bismarck and are expecting their first child in February.

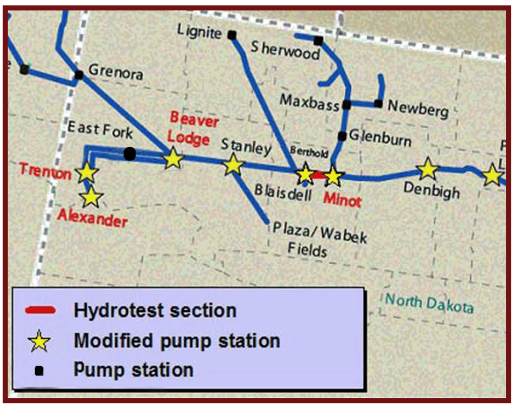
About the Pipeline Authority

North Dakota's Pipeline Authority was established by the Legislature in 2007. The North Dakota Industrial Commission is the North Dakota Pipeline Authority. The Authority was created for the purpose of diversifying and expanding the North Dakota economy by facilitating development of pipeline facilities to support the production, transportation, and utilization of North Dakota energy-related commodities.

Enbridge Hydrotesting a Success

In preparation for Enbridge's Phase VI expansion, hydrotesting of a 16" crude oil pipeline between Berthold, ND and Minot, ND took place from August 19-22. Enbridge conducted the hydrotest by filling the pipeline segment with water and pressurizing the system to determine if there are leaks or weakness. Enbridge experienced no problems during the test and the pipeline resumed shipments on August 23. Enbridge conducted the hydrotest to ensure safe operation at the higher pressures necessary for increased volumes after completion of the Phase VI expansion.

The Enbridge North Dakota Phase VI expansion, scheduled for early 2010, will increase the pipeline capacity from 110,000 barrels per day to approximately 161,600 barrels per day. The expansion will be made possible by modifying existing pump stations along the main pipeline to Enbridge's Clearbrook, MN terminal.



Western portion of the Enbridge ND Phase VI expansion. Source: Enbridge Pipelines LLC - www.enbridge-expansion.com

ND Crude Hits the Rails

Due to the success ND producers have had in the Bakken Formation, existing pipelines are at or near capacity forcing shippers to look to alternative methods of transport to move their product. While not as efficient as pipelines, railroad tank cars are the next best option for moving large amounts of oil over long distances. The Pipeline Authority is currently aware of tank cars being loaded in North Dakota at Stampede (near Columbus), Ryder, and Dore (on Highway 58 north of Fairview). Once loaded, the tank cars have been moving south to markets in Oklahoma and Texas. It is estimated that 11,000 to 17,000 barrels per day were being loaded into tank cars in August. An average tank car holds approximately 660 barrels, which is equivalent to 17 to 26 tank cars being loaded every day.

Major Crude Oil Pipelines

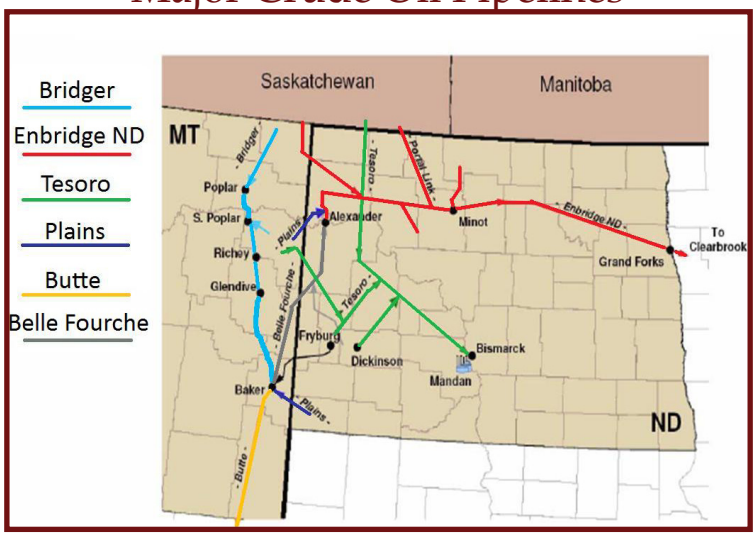


Image modified from ND Oil & Gas Division

Major Natural Gas Pipelines

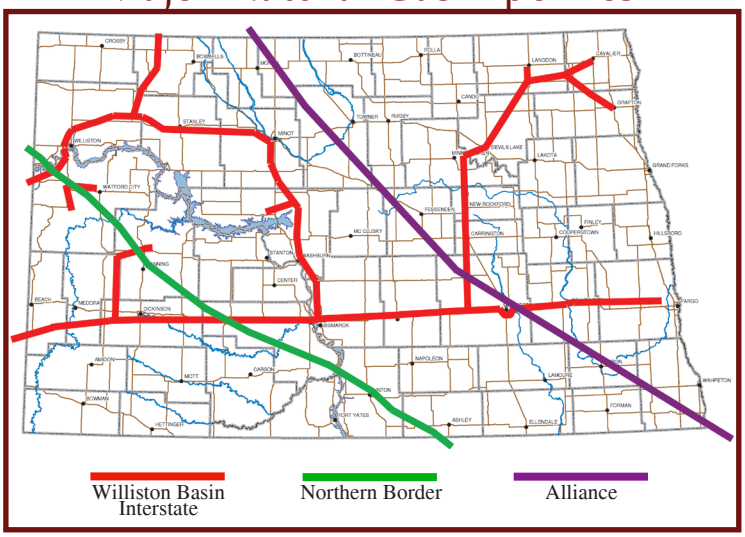


Image modified from ND Oil & Gas Division

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The Pipeline Publication

Keeping North Dakota Connected

Volume I Issue 2

Greetings

Greetings from the North Dakota Pipeline Authority! This newsletter is the second in a series of quarterly publications designed to keep North Dakota policy makers and involved parties informed on current issues in the pipeline industry.

Pipeline Authority Recommends Keystone Study

The NDPA is currently receiving proposals for a study that will investigate the feasibility of a third party pipeline company interconnecting with either TransCanada's Keystone or Keystone XL pipelines. The goals of the study are to determine whether the pipeline system can be economically constructed and operated, the timeline of such a project, and a proposed route. The study is scheduled to be completed by the end of March 2009.

Pipeline Authority Participates in Town Hall Meetings

The NDPA recently spoke to approximately 450 people in a series of town hall meetings throughout Western North Dakota. The meetings were part of the North Dakota Petroleum Council's "Oil Can!" initiative and were designed to allow for open communication between industry representatives and interested parties, such as landowners, policy makers, media, and the general public. Meeting presentations can be found on the ND Petroleum Council website www.ndoil.org.

Pecan Pipeline Plans to Carry Bakken Gas to Alliance Pipeline

For the first time, Alliance Pipeline will move North Dakota's Bakken gas to markets in the Chicago, IL area. Pecan Pipeline has proposed the Prairie Rose Pipeline, a 12 inch, 75 mile pipeline that will run from Mountrail County to a connection point with Alliance near Towner, ND. What makes this project unique is that the Bakken gas will not have to undergo the traditional gas processing before being injected into the Alliance system. The natural gas liquids (NGL), such as propane and butane, will be removed from the gas stream at a processing facility near Chicago, IL and then sold to area markets.

In order for Alliance to accept the Bakken gas with its NGL, the Federal Energy Regulatory Commission (FERC) had to approve a revision to Alliance's gas specifications that would waive previous restrictions to such shipments. The NDPA intervened by submitting a letter of support to FERC for Alliance's gas specifications waiver. President of Pecan North Dakota, Ray L. Ingle said the following in an Alliance news release, "We appreciate the support of the FERC, the State of North Dakota and other entities in helping to advance this important project."

Additionally, Pecan Pipeline has filed with FERC and the North Dakota Public Service Commission to be considered a gas gathering system and not a transmission pipeline. The NDPA has also intervened in this matter by submitting a letter of support to FERC, and at the time of publication, no rulings have been made by either FERC or the Public Service Commission.

The Prairie Rose Pipeline is scheduled to be completed during the summer of 2009. Plans are to transport 20-40 million cubic feet per day (MMCFD) in 2009 and increase to 80 MMCFD in 2010.

Williston Basin Plans Two Expansions for December

Williston Basin Interstate Pipeline Co. has two pipeline expansion projects scheduled to be completed this month. The first project to be completed is the "Sheyenne Expansion," which will increase natural gas deliveries by 10 million cubic feet per day (MMCFD) to Eastern ND. The second expansion, scheduled to be completed this month, is the "Bakken Expansion." The "Bakken Expansion" will occur by making a connection to the Northern Border Pipeline at Ft. Buford, ND. The expansion has an initial design capacity of 32 MMCFD and could be expanded further to 60 MMCFD. Additionally, Williston Basin is actively marketing to obtain shipper support for their "Bakken Pipeline." The proposed pipeline would deliver Bakken gas containing natural gas liquids to Alliance Pipeline with an initial capacity of 100 MMCFD and could be expanded to 200 MMCFD.

New Website Under Construction

The NDPA is currently constructing a new and improved website in order to better provide for industry and public needs. The new site will include current news, projects, maps, publications, production and capacity information, as well as a new GIS based information map service.

The new site, www.pipeline.nd.gov, is scheduled to be launched early 2009.

Crude Oil Expansion to the South

In September, True Co.'s Butte Pipeline system added an estimated 12,000 barrels per day (BOPD) of capacity to its existing 92,000 BOPD system. The Butte Pipeline carries crude oil from Eastern Montana and Western North Dakota to Guernsey, WY for further transportation to regional refiners. The system expansion was obtained by implementing drag reducing chemicals into the pipelines in order to reduce friction and increase product flow.

North Dakota Statistics

September Average Daily Oil Production	188,246 BOPD
September Average Daily Gas Production	257.8 MMCFD
September Wells Producing	4,193
September Wells Spudded	73
Active ND Rig Count – Dec. 5, 2008	91

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The Pipeline Publication

Keeping North Dakota Connected

Volume II Issue I - March 2009

Greetings

Greetings from the North Dakota Pipeline Authority! This newsletter is the third in a series of quarterly publications designed to keep North Dakota policy makers and involved parties informed on current issues in the pipeline industry. Archives of past newsletters, maps, reports, news, and more are available on the new Pipeline Authority website, **www.pipeline.nd.gov**.

Industrial Commission Approves Funding for Pipeline Interconnect Study

On January 21, 2009, the North Dakota Industrial Commission awarded a contract to two companies – Kadrmas, Lee, & Jackson and Rooney Engineering, Inc. - for a feasibility study on constructing a pipeline to connect with one of TransCanada's Keystone pipelines. Scheduled to be complete in mid-April, the goals of the study are to determine whether an interconnecting pipeline can be economically built by a third party company, address quality concerns of transporting Bakken crude in the same pipeline as oil sands crude, propose route options, and establish a project timeline. The results of the study will be posted on the NDPA website and a presentation by Kadrmas, Lee, & Jackson and Rooney Engineering will be given to the ND Oil and Gas Research Council.

Tesoro Refinery Defers Outage

The Tesoro Mandan Refinery had a full refinery shutdown scheduled for the spring of 2009, however, Tesoro made the decision in late 2008 to defer the outage until the spring of 2010. During the 2010 outage, Tesoro will complete necessary maintenance, inspection and cleaning of equipment, as well as a number of reliability projects. One of the reliability projects will increase the capacity of their Diesel Desulfurization Unit. This will ensure that off-road diesel fuel for agricultural and industrial use can meet the June 2010 EPA mandated reduction in sulfur content from 500 to 15 parts per million. An upgrade to the refinery power station, including the replacement of two boilers, is still scheduled to occur in 2009. In all, Tesoro is expected to invest in excess of $125 million in the plant for the outage and capital projects completed between 2008 and 2010. The last full refinery shutdown for the 60,000 barrel per day plant was in the fall of 2003 and lasted approximately 32 days.

FERC Rejects Bridger Pipeline's Displacement Service

In January, Bridger Pipeline filed Tariffs 16 & 17 for a new displacement service with the Federal Energy Regulatory Commission (FERC). The proposed displacement service was intended to reduce truck traffic and reduce shipping costs by exchanging barrels of oil in Stanley, ND with barrels at either Fryburg Station in North Dakota or Poplar, South Poplar, Richey, and Glendive Stations in Montana. The Pipeline Authority filed comments to FERC supporting these services, on the basis that they would help improve highway safety, reduce heavy truck traffic, and lower transportation costs. However, FERC rejected Bridger's proposed services because no physical pipeline movement was taking place, thus there was no need for FERC regulatory oversight.

Pecan Pipeline Ruled Non-Jurisdictional

On December 31, 2008, the North Dakota Public Service Commission (PSC) ruled that Pecan Pipeline's Prairie Rose Pipeline would be considered a gathering pipeline system and thus not subject to PSC siting jurisdiction. The Federal Energy Regulatory Commission (FERC) issued an order in January 2009 stating that the Prairie Rose system would be outside FERC jurisdiction as well. The Prairie Rose Pipeline, scheduled to begin operation in September 2009, will transport gas gathered in Mountrail County to the Alliance Pipeline near Towner, ND. The pipeline is anticipated to move 40 million cubic feet of gas per day (mmcfd) in 2009 and increase to 80 mmcfd in 2010.

North Dakota Statistics

January-09 Average Daily Oil Production	186,820 BOPD
January-09 Average Daily Gas Production	243.92 MMCFD
January-09 Wells Producing	4,151
January-09 Wells Spudded	57
Active ND Rig Count – March 20, 2009	47

Butte Pipeline's Capacity Expands Further

Butte Pipeline transports Williston Basin crude oil south into Wyoming and is one of the primary export pipelines for regional producers. In the last *Pipeline Publication*, it was reported that Butte Pipeline had expanded its capacity from 92,000 barrels of oil per day (BOPD) to 104,000 BOPD. Since that time, Butte Pipeline has been able to expand their system even further to a capacity of 115,000 BOPD. This new capacity marks a 25% increase from Butte's summer 2008 capacity.

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The Pipeline Publication

Keeping North Dakota Connected

Volume II Issue II - June 2009

Greetings

Greetings from the North Dakota Pipeline Authority! There have been some exciting pipeline developments since the last issue of the Pipeline Publication. This issue will be devoted to highlighting the new projects/ proposals that seek to further increase crude oil pipeline capacity out of the Williston Basin. Additional project information, past newsletters, maps, reports, and more are available on the Pipeline Authority website, www.pipeline.nd.gov.

Kinder Morgan Announces Open Season

On May 29, 2009, Kinder Morgan Energy Partners announced an open season for their "Bakken Crude Project". The proposed crude oil project would utilize their existing Cochin Pipeline traveling through ND to transport up to 30,000 barrels per day to markets in St. Paul, Toledo, and Detroit. Currently, the Cochin Pipeline is transporting only propane, but with minor modifications the pipeline would also be able to ship batches of Bakken crude oil.

Running through July 17, 2009, the open season procedure allows interested shippers to commit to three or five year terms. If sufficient support is received during the open season, the projected in-service date is February 1, 2011. Project Information can be found in the "News" section of the Pipeline Authority Website.

Enbridge Proposes Further Expansion

In addition to the previously announced Phase 6 expansion of the Enbridge North Dakota System, Enbridge is proceeding with design and engineering to reverse the existing cross-border Portal Pipeline. This reversal would provide an additional 30,000 barrels of oil per day (BOPD) of capacity out of North Dakota by the summer of 2011. The "Portal Reversal Expansion Project" or PREP, would connect the North Dakota system to the Enbridge Saskatchewan System and ultimately to Enbridge's crude oil mainline system near Cromer, MB. Once in Enbridge's mainline system, the North Dakota crude oil would re-enter the United States and move to Clearbrook, MN for further transportation. Subsequent expansions on this system could provide up to 115,000 BOPD deliveries into Cromer, MB as early as 2013.

The Phase 6 expansion of the Enbridge North Dakota System will boost capacity from 110,000 to 161,000 BOPD by early 2010. Ultimately, the Enbridge Phase 6 and PREP expansions could provide up to 276,000 BOPD of pipeline capacity from North Dakota into Clearbrook, MN. Enbridge has also recently completed expansions of their Southern Access and Spearhead pipelines to ensure pipeline bottlenecks in the midcontinent region will not hinder crude transportation for Williston Basin producers. Project information can be found in the "Current Projects" portion of the Pipeline Authority Website.

Results of Feasibility Study Released

In April, the Pipeline Authority received the results of a feasibility study that suggested new pipeline route options and addressed the technical challenges of Bakken crude oil being transported in the TransCanada Keystone pipelines. The study results suggest that if access to the Keystone pipelines is desirable, a twelve inch pipeline running from Mountrail County to an interconnect in Saskatchewan is the most feasible route option. The results of the Kadrmas, Lee, & Jackson and Rooney Engineering study were presented to industry in Regina, SK and are available in the "Publications" portion of the Pipeline Authority website.

North Dakota Statistics

	Feb-09	Mar-09	Apr-09
Average Daily Oil Production, BOPD	192,272	195,798	196,383
Average Daily Gas Production, MMCFD	218.12	243.51	248.13
Wells Producing	4,148	4,202	4,252
Wells Spudded	45	49	40

As of June 26, 2009, there are 41 active rigs in North Dakota.

Trade Organizations Supporting Expansion Options

In an effort to support the timely implementation of additional pipeline capacity in the Williston Basin, local trade organizations are working hard to gather support for the various transportation solutions. The Northern Alliance of Independent Producers, a trade association representing oil and gas producers in the Dakotas and Montana, has formed a Pipeline Committee among its members. With several expansion proposals now available, the twelve member committee is reaching out to the pipeline companies to support and build the necessary momentum to carry the proposals forward.

The North Dakota Petroleum Council has been informing its members of the regional expansion proposals and the opportunities available to North Dakota producers to participate in these projects. The Pipeline Authority will be giving a comprehensive presentation of all the expansion options at the Petroleum Council's Annual Meeting in September.

EOG Begins Construction of Rail Facility

EOG Resources has started construction on a new crude oil rail loading facility near Stanley, ND. Scheduled to begin operation in December 2009, the facility could ultimately ship up to 60,000 BOPD to Cushing, OK and other major crude hubs. Along with new track being installed, two 60,000 barrel tanks are being constructed to handle the increasing volume of oil from nearby oil fields.

ND Pipeline Authority
State Capitol 14th Floor • 600 E. Boulevard Ave. Dept. 405 • Bismarck, ND 58505-0840
Phone: (701) 220-6227 • Fax: (701) 328-2820
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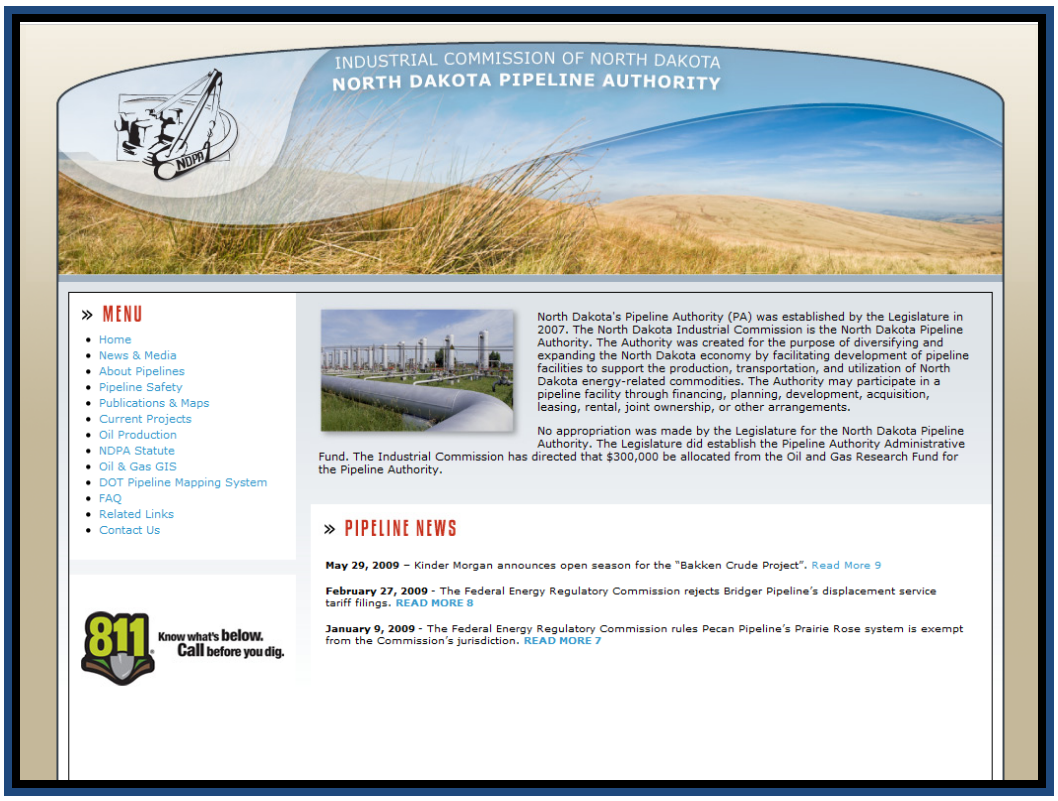
APPENDIX B

New North Dakota Pipeline Authority Website


INDUSTRIAL COMMISSION OF NORTH DAKOTA
NORTH DAKOTA PIPELINE AUTHORITY
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Pipeline Safety
Publications & Maps
Current Projects
Oil Production
NDPA Statute
Oil & Gas GIS
DOT Pipeline Mapping System
FAQ
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811 Know what's below. Call before you dig.
North Dakota's Pipeline Authority (PA) was established by the Legislature in 2007. The North Dakota Industrial Commission is the North Dakota Pipeline Authority. The Authority was created for the purpose of diversifying and expanding the North Dakota economy by facilitating development of pipeline facilities to support the production, transportation, and utilization of North Dakota energy-related commodities. The Authority may participate in a pipeline facility through financing, planning, development, acquisition, leasing, rental, joint ownership, or other arrangements.
No appropriation was made by the Legislature for the North Dakota Pipeline Authority. The Legislature did establish the Pipeline Authority Administrative Fund. The Industrial Commission has directed that $300,000 be allocated from the Oil and Gas Research Fund for the Pipeline Authority.
» PIPELINE NEWS
May 29, 2009 – Kinder Morgan announces open season for the "Bakken Crude Project". Read More 9
February 27, 2009 - The Federal Energy Regulatory Commission rejects Bridger Pipeline's displacement service tariff filings. READ MORE 8
January 9, 2009 - The Federal Energy Regulatory Commission rules Pecan Pipeline's Prairie Rose system is exempt from the Commission's jurisdiction. READ MORE 7

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» ABOUT PIPELINES
"Pipelines are really the energy lifelines of almost every daily activity. Pipelines play a role in everyone's lives and are essential to the nation's industries. Yet few people are aware of the work done by the country's 200,000-mile petroleum pipeline network that delivers the products that are integral parts of America's economy. It is a network that delivers the nation's crude oil and petroleum products (such as gasoline, jet fuel, home heating oil) reliably, safely, efficiently, and economically." ~ Pipeline 101
To learn more about pipeline operations, safety, construction, and more, please visit:
pipeline 101
Supply Line Video
• Video provided by AOPL » www.aopl.org
AOPL

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Related Links
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» OIL PRODUCTION
United States Williston Basin Oil Production
2009 BOPD
MONTH ND E. MT* SD TOTAL
January 187,821 73,309 4,978 266,108
February 192,272 73,902 4,805 270,979
March 195,798 -- 4,664 --
April 196,701 -- 4,611 --
May 206,246 -- -- --
June -- -- -- --
July -- -- -- --
August -- -- -- --
September -- -- -- --
October -- -- -- --
November -- -- -- --
December -- -- -- --
2008 BOPD
MONTH ND E. MT* SD TOTAL

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811 Know what's below. Call before you dig.
» PUBLICATIONS & MAPS
Publications
Pipeline Authority Newsletter Volume II Issue II – June 2009
Pipeline Authority Feasibility Study Full Report – April 21, 2009
Pipeline Authority Feasibility Study Executive Summary – April 21, 2009
Pipeline Authority Newsletter Volume I Issue 3 – March 2009
Bridger Pipeline Support Letter to FERC – February 27, 2009
IC Comments to PSC on Case No. PU-08-871 – December 12, 2008
Pipeline Authority Newsletter Volume I Issue 2
Pecan Pipeline Support Letter to FERC - November 4, 2008
Prairie Rose Pipeline Extension Support Letter - October 24, 2008
Pipeline Authority Annual Report 2008 - June 30, 2008
Pipeline Authority Newsletter Volume I Issue I
Enbridge Support Letter to the Illinois Commerce Commission - April 22, 2008
Pipelines and Refined Products Executive Summary - April 22, 2008
Additional Background Information on Refined Products Report - April 22, 2008
Pipelines and Refined Products Report - April 22, 2008
Enbridge Phase 6 Support Letter to FERC- January 28, 2008
North Dakota's Natural Gas Production Jumps But Infrastructure Lags - December 20, 2007
Williston Basin Crude Oil Transportation Dynamics - September 12, 2007

APPENDIX C

Feasibility Study Executive Summary

EXECUTIVE SUMMARY

GOAL

The team of **Kadrmas Lee & Jackson (KLJ)** and **Rooney Engineering, Inc. (REI)** was commissioned by the State of North Dakota to develop a feasibility study for three (3) alternative routes to transport crude oil volumes from west-central North Dakota to one of three TransCanada/Keystone transcontinental distribution pipelines. These North Dakota Pipeline route alternatives are West to Keystone XL Pipeline in southeastern Montana, East to Keystone Pipeline in eastern North Dakota, and North to TransCanada Pipeline in southern Saskatchewan, Canada. The three alternative routes are shown on the next page. The following is a summary of the report findings.

METHODOLOGY

Two (2) sized pipeline systems were evaluated, a 10-inch and a 12-inch nominal diameter, for the each of the three (3) route alternatives to transport crude oil (light, sweet) to market from central North Dakota. The following were prepared for each of the alternatives:

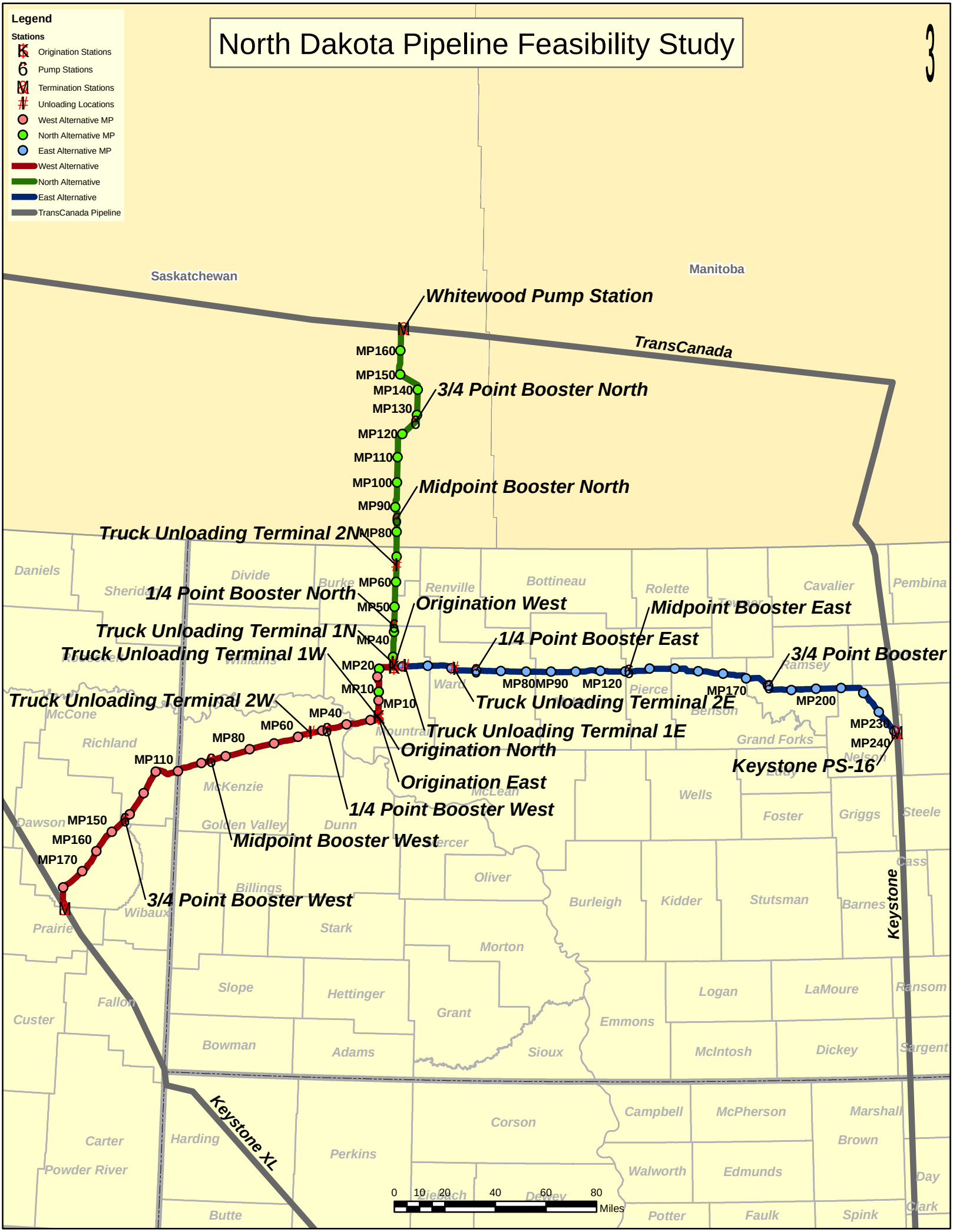
- Route Selection based upon North Dakota production data.
- Hydraulic Modeling based upon North Dakota crude parameters
- Capital Cost Estimates.
- Economic Analysis (tariff required to generate a 15% Internal Rate of Return (IRR) shipping 55,000 BPD over a 20 year period)
- Interface Volume (the volume of mixing that occurs between the light Bakken crude and the heavier more viscous Canadian crude)

OUTCOME

The following table summarizes the system length, capital cost and tariff and interface for each of the alternatives.

Route	**North**		**East**		**West**	
Pipeline Length	169 miles		240 miles		188 miles	
System	**10”**	**12”**	**10”**	**12”**	**10”**	**12”**
System Capital Cost	$195MM	$199MM	$242MM	$252MM	$210MM	$215MM
Pipeline Cost/Mi	$602M/Mi	$698M/Mi	$621M/Mi	$715M/Mi	$615M/Mi	$707M/Mi
Ops Cost ($/BBL)	$0.26/BBL	$0.19/BBL	$0.31/BBL	$0.21/BBL	$0.26/BBL	$0.21/BBL
Tariff @ 15% IRR	$4.24/BBL	$4.22/BBL	$5.25/BBL	$5.32/BBL	$4.59/BBL	$4.57/BBL
Interface Volume	18.5MBBL		10.9MBBL		20.8MBBL	
	Interface volume per batch shipped on Keystone/TransCanada pipelines					

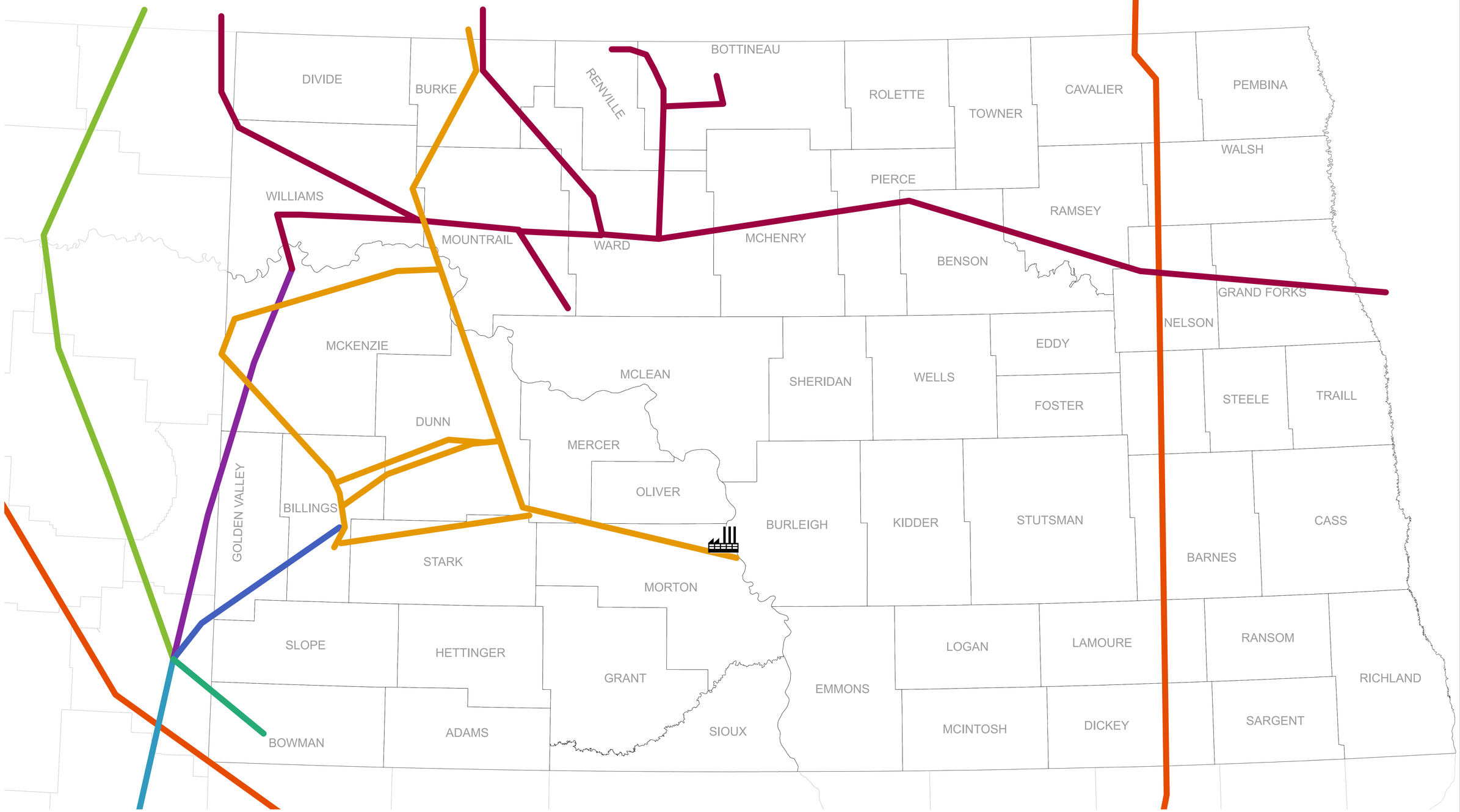
Based upon the study findings the 12-inch Northern alignment appears to be the preferred alternative. The 12-inch North alternative is the most economic alternative with the most potential for future throughput increases. In addition, the North alignment is routed through the more prolific crude production areas both South and North of the border. Lastly, the North alignment has potential to interconnect with the Enbridge Mainline and the Enbridge Alberta Clipper through southern Saskatchewan in addition to the TransCanada System.


North Dakota Pipeline Feasibility Study
3
Legend
Stations
Origination Stations
Pump Stations
Termination Stations
Unloading Locations
West Alternative MP
North Alternative MP
East Alternative MP
West Alternative
North Alternative
East Alternative
TransCanada Pipeline
Saskatchewan
Manitoba
TransCanada
Whitewood Pump Station
MP160
MP150
MP140
MP130
MP120
MP110
MP100
MP90
MP80
MP60
MP50
MP40
MP20
MP10
MP10
MP40
MP60
MP80
MP110
MP150
MP160
MP170
3/4 Point Booster North
Midpoint Booster North
Truck Unloading Terminal 2N
1/4 Point Booster North
Origination West
Midpoint Booster East
Truck Unloading Terminal 1N
1/4 Point Booster East
Truck Unloading Terminal 1W
3/4 Point Booster
MP80
MP90
MP120
MP170
MP200
MP230
MP240
Truck Unloading Terminal 2W
Truck Unloading Terminal 2E
Truck Unloading Terminal 1E
Origination North
Origination East
Keystone PS-16
1/4 Point Booster West
Midpoint Booster West
3/4 Point Booster West
Keystone
Keystone XL
Daniels
Sheridan
Divide
Burke
Renville
Bottineau
Rolette
Cavalier
Pembina
Ramsey
Pierce
Benson
Grand Forks
Nelson
Ward
Mountrail
McCone
Richland
McKenzie
McLean
Wells
Foster
Griggs
Steele
Dawson
Golden Valley
Dunn
Mercer
Oliver
Billings
Wibaux
Prairie
Stark
Burleigh
Kidder
Stutsman
Barnes
Cass
Morton
Slope
Hettinger
Grant
Logan
LaMoure
Ransom
Custer
Fallon
Emmons
Bowman
Adams
Sioux
McIntosh
Dickey
Sargent
Campbell
McPherson
Marshall
Corson
Carter
Harding
Perkins
Brown
Powder River
Walworth
Edmunds
Day
Butte
Potter
Faulk
Spink
Clark
0
10
20
40
60
80
Miles

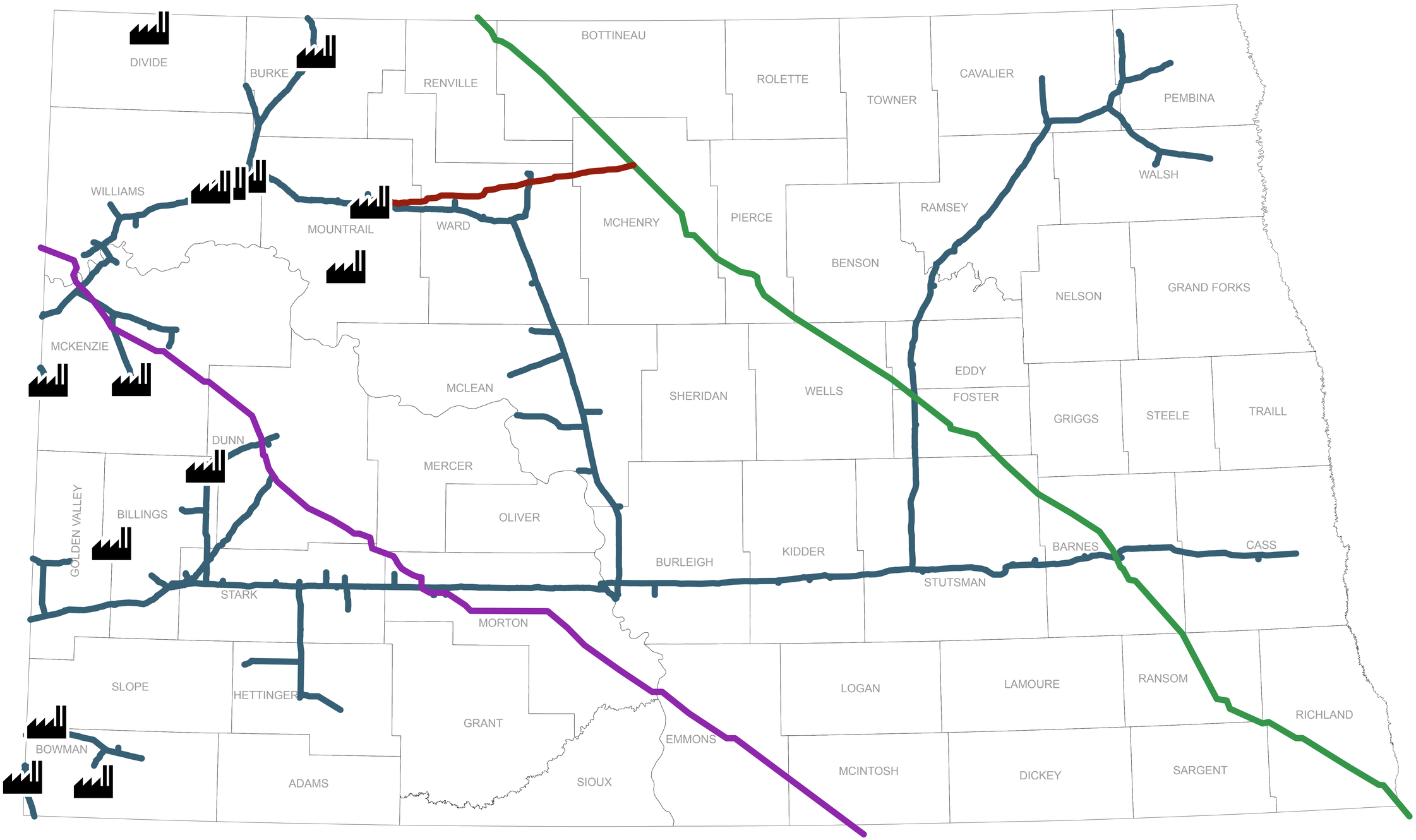
APPENDIX D

North Dakota Pipeline Maps

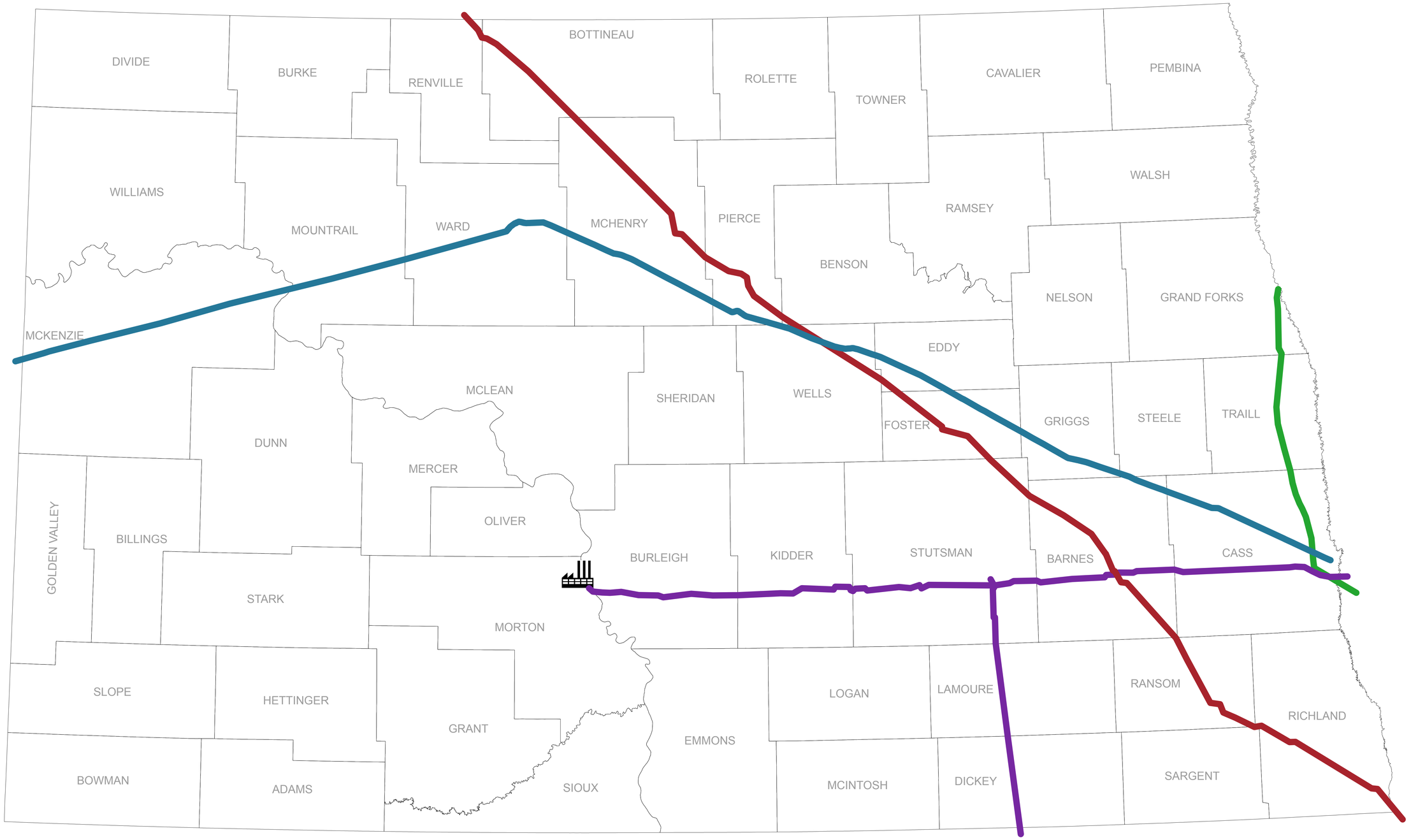
North Dakota Crude Oil Pipelines



North Dakota Natural Gas Pipelines



North Dakota Products Pipelines



Cenex Pipeline LLC - Refined Products

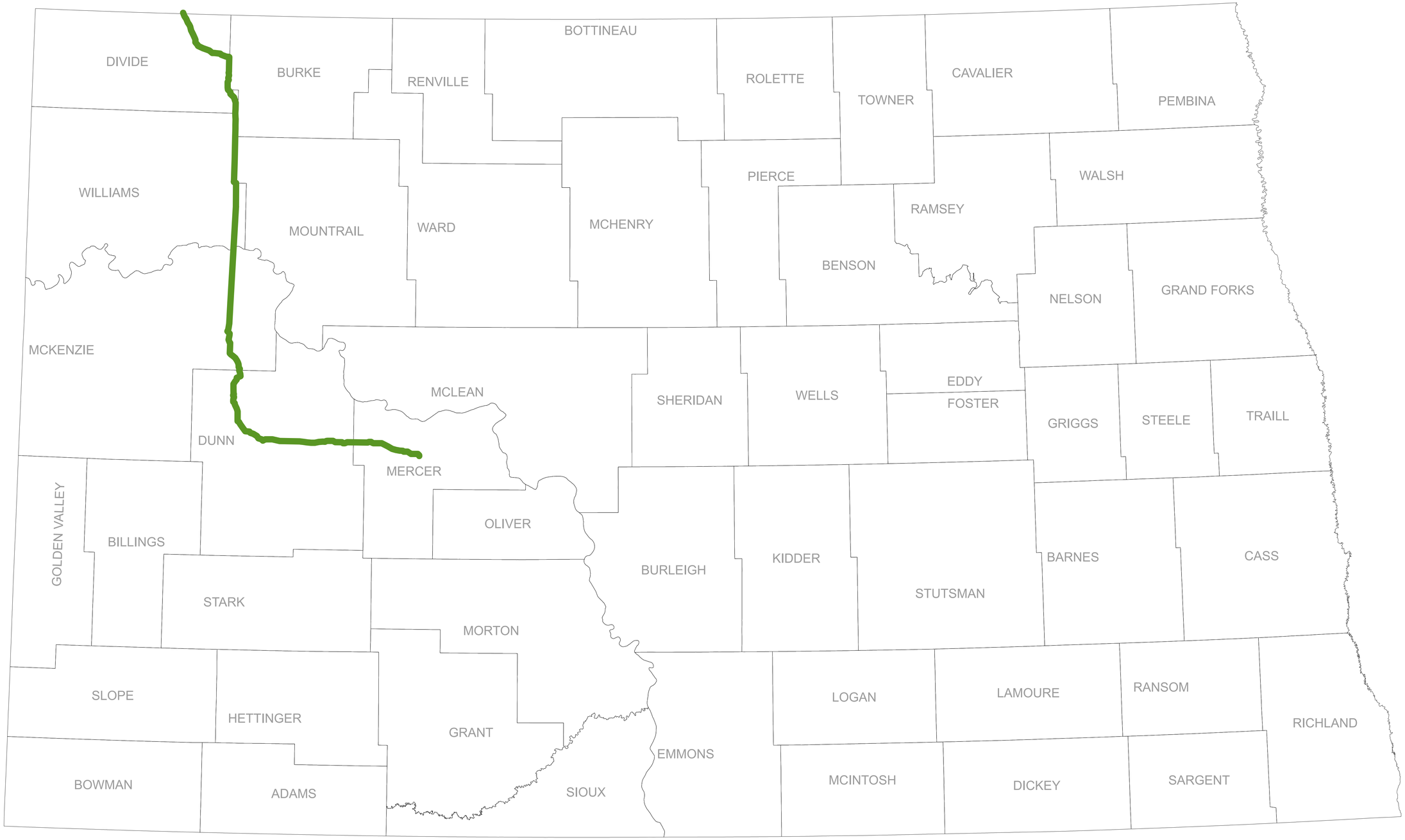
Magellan Midstream Partners LP - Refined Products

Tesoro Mandan Refinery

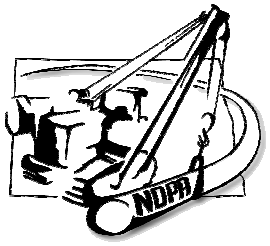
Kinder Morgan Cochin - Propane

NuStar Energy - Refined Products

North Dakota CO_2 Pipeline



Dakota Gas



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