North Dakota Pipeline Authority
March 16, 2010
Minot, ND
March 12, 2010: 104 Active Drilling Rigs
North Dakota Crude Oil
North Dakota Oil Production and Price

Barrels per Day

ND Sweet Price $/barrel


ProdPriceTable'!$S$451

Bakken - Three Forks Maximum
Bakken - Three Forks Most Likely
$/Barrel History & DOE-EIA Projected
$/Barrel Most Likely
$/Barrel Maximum
Future Basin Production

“The Big Question”

*Production forecast is for visual demonstration purposes only and should not be considered accurate for any near or long term planning.
Challenges*

1) Moving oil out of the Williston Basin
2) Moving oil off of the well site

*Modified from Bridger and Belle Fourche Pipelines
North Dakota Crude Oil Pipelines

58,000 BOPD
Williston Basin Production* & Export Capacity

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Tesoro Refinery
North Dakota Crude Oil Pipelines

Fall 08 - 92,000 BOPD
July 09 - 120,000 BOPD
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Phase V: 110,000 BOPD
Additional 51,600 BOPD
January 1, 2010
Williston Basin Production* & Export Capacity

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EOG Rail Facility Details

- New facility at Stanley, ND
- Two 60,000 bbl tanks constructed
- First Unit Train Departed Dec 31, 2009
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Several Exciting Developments For Post 2010 Crude Oil Transport

- Enbridge BPEP
- Kinder Morgan Bakken Crude Project
- Keystone Interconnect Feasibility Study
- Unit Train Development
- Others Still Looking at Opportunities
Enbridge BPEP
(Bakken Pipeline Expansion Project)
Potential Bakken Pipeline Expansion

Enbridge Pipelines (North Dakota)

- Bakken Pipeline Expansion Project: Berthold to Cromer
- Phase 7 Beaver Lodge Looping Project: Beaver Lodge to Berthold

EPND Phase 7 Gathering Projects: SORTI, Dunn, Plaza and McGregor
Enbridge BPEP Details

• Project currently out for non-binding indications of interest from potential shippers
• Gathering pipelines could be in-service Q3 2011
• Beaver Lodge looping could provide up to 115,000+ BOPD into Cromer, MB by Q3 2012
Kinder Morgan Bakken Crude Project

Propane

Lt. Sweet Bakken Crude

Propane

Natural Gasoline
Kinder Morgan Bakken Crude Project

McHenry County, ND
Crude Receipt Truck Rack near Hwy 2

Connection to Koch Wood River PL to:
Flint Hills Resources Pine Bend Refinery, and
Marathon Oil Minnesota Refinery in St. Paul, MN

Connection to Sunoco Logistics Marysville PL
to: Sunoco Toledo Refinery, and
BP-Husky Refinery in Toledo, OH

Connection to Marathon Oil Detroit Refinery
in Detroit, MI
Keystone Interconnect Study

- Shortest Route
- Lowest Capital Investment
- Following Bakken Development Trend
- Lowest Tariff
- 55,000 BOPD Initial Design
## Study Overview

<table>
<thead>
<tr>
<th>Route</th>
<th>North</th>
<th>East</th>
<th>West</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pipeline Length</td>
<td>169 Miles</td>
<td>240 Miles</td>
<td>188 Miles</td>
</tr>
<tr>
<td>System</td>
<td>10”</td>
<td>12”</td>
<td>10”</td>
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<tr>
<td>System Capital Cost (Millions)</td>
<td>$195</td>
<td>$199</td>
<td>$242</td>
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<tr>
<td>Pipeline Cost/Mi</td>
<td>$602M</td>
<td>$698M</td>
<td>$621M</td>
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<tr>
<td>Ops Cost ($/bbl)</td>
<td>$0.26</td>
<td>$0.19</td>
<td>$0.31</td>
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<tr>
<td>Tariff @ 15% IRR ($/BBL)</td>
<td>$4.24</td>
<td>$4.22</td>
<td>$5.25</td>
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<tr>
<td>Interface Volume*</td>
<td>18.5MBBL</td>
<td>10.9MBBL</td>
<td>20.8MBBL</td>
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*Interface Volume per Batch Shipped on TransCanada/Keystone Pipelines
**Projects still in the proposed or internal review process**

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Williston Basin Production* & Export Capacity

**Projects still in the proposed or internal review process**

Enbridge BPEP 2**
Enbridge BPEP 1** & Kinder Morgan**
EOG Rail - Stanley
Enbridge Pipeline
Butte Pipeline
Tesoro Refinery

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North Dakota Truck Imports/Exports

Information collected through the United States International Trade Commission’s Interactive Tariff and Trade DataWeb
Challenges
1) Moving oil out of the Williston Basin
2) Moving oil off of the well site

*Modified from Bridger and Belle Fourche Pipelines
Stanley Station Injection

Pre-Phase VI – 15,000 BOPD

Current - 54,000 BOPD

Proposed - 70,000 BOPD
Bridger Pipeline’s Parshall Gathering Expansions

Completed & In-Service Construction:
- Line Pipe: 176 Miles
- Well Connections: 100

In-Process Construction:
- Line Pipe: 35 Miles
- Well Connections: 42
Four Bears Pipeline

Anticipated Q1 2011
Initial- 40,000 BOPD
Expandable- 60,000 BOPD
Natural Gas Projects
Natural Gas Challenges
Flaring Reduction Dec. 08- Dec. 09

-44% Bowman
-37% McKenzie
-31% Mountrail
-62% Williams
-71% State

Flaring Reduction Dec. 08 - Dec. 09
Pecan’s Prairie Rose Pipeline

100 MMCFD Initial Capacity
Hess Tioga Gas Plant Expansion

Current Capacity 120 MMCFD, Looking to double in the coming years
TransCanada’s Bison Pipeline

- 302 Miles – 30”
- Expandable up to 1 BCFD
- 477 MMCFD Initial Capacity
- Proposed Nov. 2010 Startup

Image: http://www.transcanada.com/company/bison.html
Greetings

Season’s Greetings from the North Dakota Pipeline Authority! While the temperature in North Dakota is dropping fast, the activity in North Dakota’s oilfields is heating up. With more rigs moving into the basin, improved well completion techniques, and quicker spud to spud times, North Dakota petroleum production is expected to grow for many years to come. Along with the growing crude oil production, several exciting transportation expansion projects are very near completion, with many more in the works. For additional project information, past newsletters, maps, reports, and more please visit the Pipeline Authority website, www.pipeline.nd.gov.

Enbridge Phase VI Expansion Update

The much anticipated Enbridge Phase VI Expansion is nearly complete. Scheduled to be in service on January 1, 2010, the expansion will increase Enbridge’s mainline capacity to Clearbrook, MN from 110,000 barrels per day (BOPD) to 161,600 BOPD. Once complete, Enbridge North Dakota will have more than doubled its 2007 system capacity of 80,000 BOPD.

More good news is that Enbridge has no intentions of stopping at 161,600 BOPD and is actively working to gain support from interested shippers for the proposed Portal Reversal Expansion Project or PREP. As proposed, PREP would allow Enbridge to transport an additional 30,000 BOPD by 2011 and up to an additional 115,000 BOPD by 2013.

North Dakota Statistics

<table>
<thead>
<tr>
<th></th>
<th>Aug-09</th>
<th>Sept-09</th>
<th>Oct-09</th>
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<tbody>
<tr>
<td>Average Daily Oil Production, BOPD</td>
<td>232,355</td>
<td>238,265</td>
<td>239,067</td>
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<tr>
<td>Average Daily Gas Production, MMCFD</td>
<td>266.66</td>
<td>259.76</td>
<td>253.04</td>
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<td>Wells Producing</td>
<td>4,545</td>
<td>4,579</td>
<td>4,606</td>
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<tr>
<td>Average Rig Count</td>
<td>45</td>
<td>51</td>
<td>56</td>
</tr>
</tbody>
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As of December 16, 2009, there are 77 active rigs in North Dakota.

Prairie Rose Pipeline Nears Completion

An unexpected construction specification change has delayed the startup of the Pecan Prairie Rose Pipeline until Mid-January, 2010. The new 75 mile, 12 inch pipeline is designed to transport up to 80 million cubic feet of unprocessed natural gas per day from Mountrail County to an interconnect with the Alliance Pipeline near Towner, ND.

Proposed Baker Storage Enhancement

Williston Basin Interstate Pipeline Company is developing a project to increase firm deliverability from its Baker gas storage field in eastern Montana. With current firm storage withdrawal rates of 115 million cubic feet per day (MMCFD), Williston Basin sees an opportunity to add an additional 125MMCFD of firm withdrawal capacity, which would more than double the firm withdrawal rate from Baker. Along with the gas storage field upgrades, Williston Basin is planning a pipeline expansion to transport the increased, firm storage volumes to an interconnect with the Northern Border Pipeline in North Dakota. The project has a proposed in-service date of 2012 and an open season is expected in January 2010.

Natural Gas Storage Explained

During the mid 1990’s, natural gas grew in popularity as a winter heating fuel. As a result, natural gas markets began experiencing seasonal demand swings that needed be managed using underground storage operations. Depleted natural gas fields are most often targeted for storage due to existing infrastructure and reservoir knowledge. During the summer months when demand is low, natural gas is injected into storage and when demand increases in the winter months, natural gas is withdrawn for consumer use.

ND Pipeline Authority

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"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:

Supply Line Video

- Video provided by AOPL » www.aopl.org
North Dakota Pipeline Authority

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