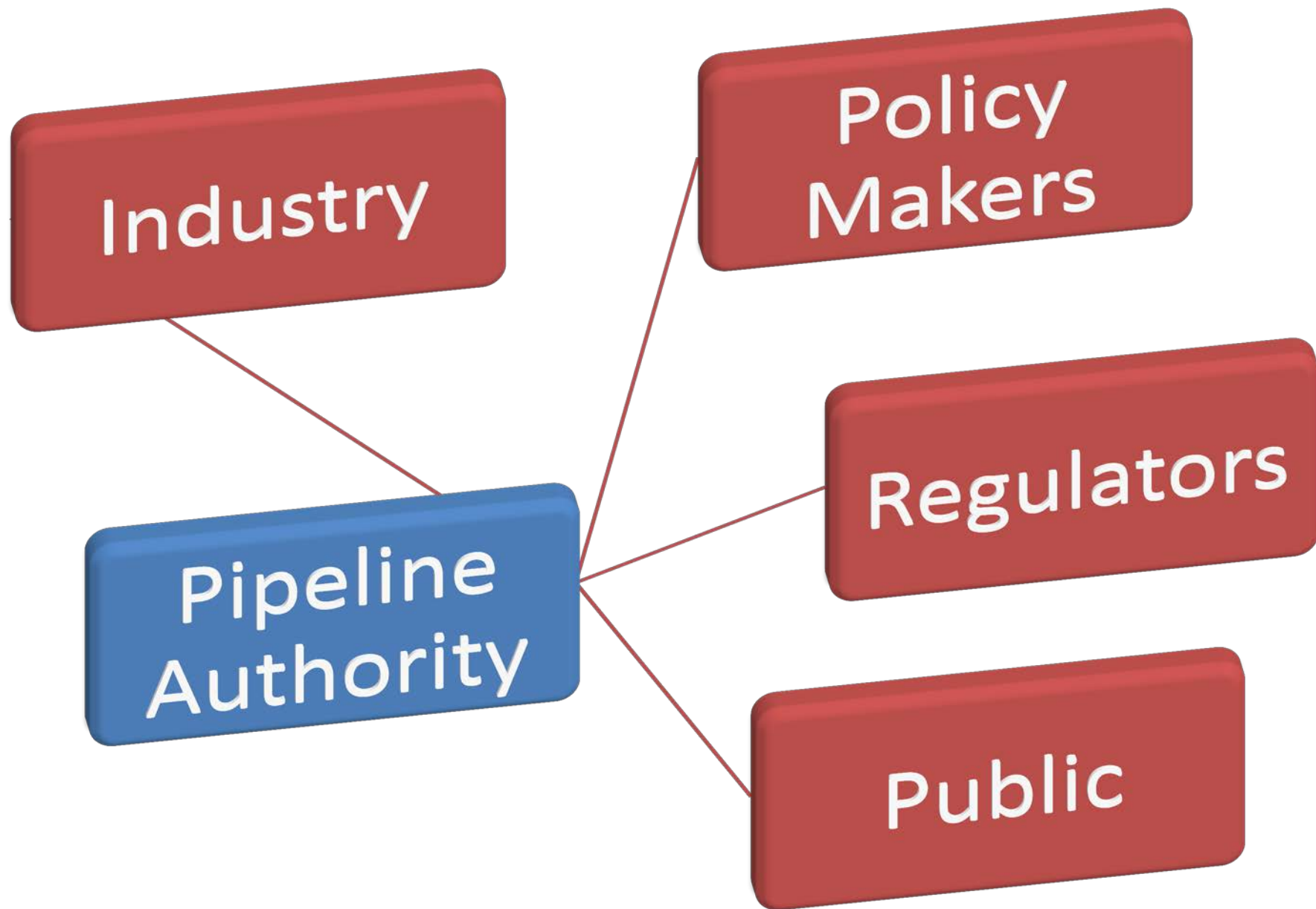
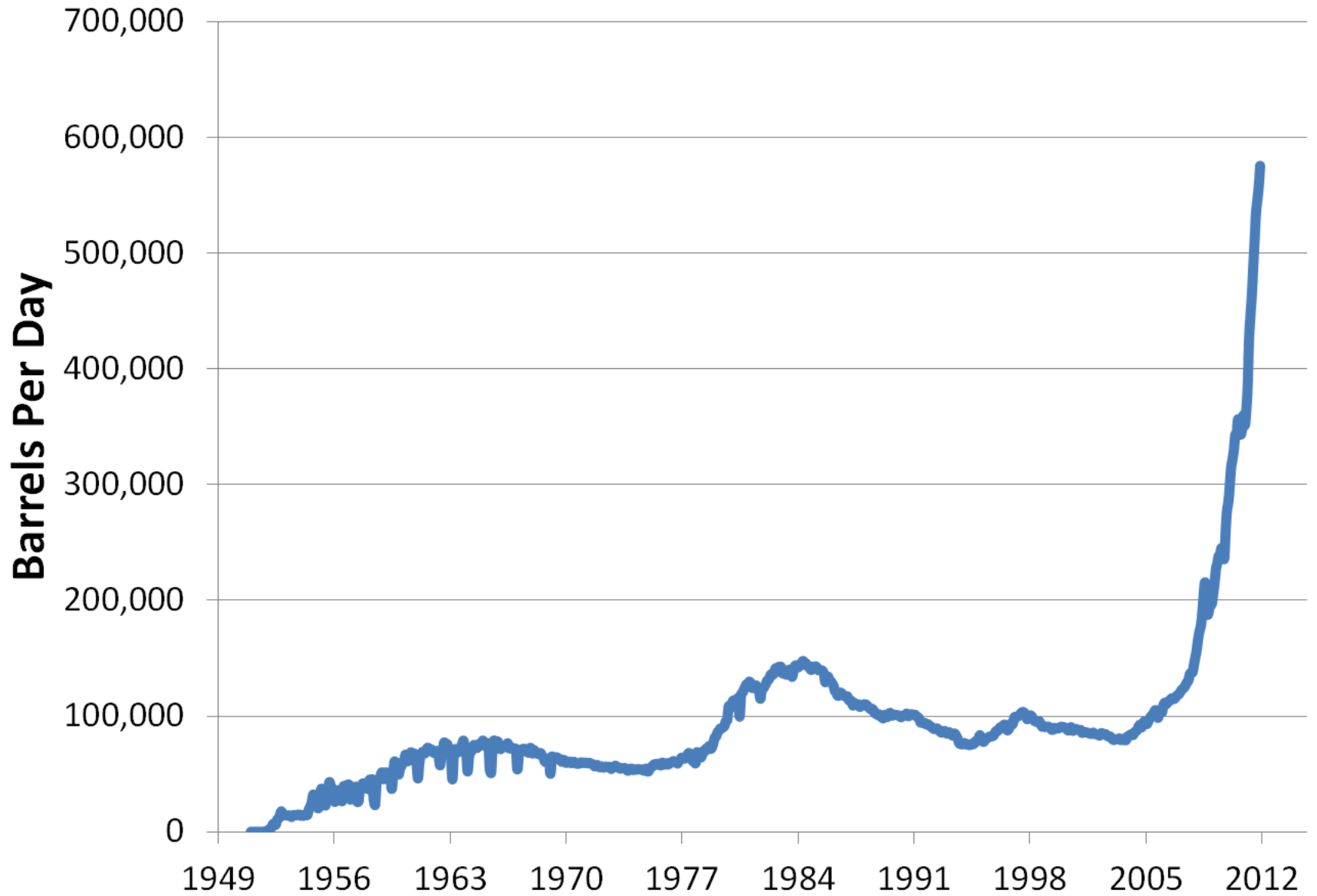




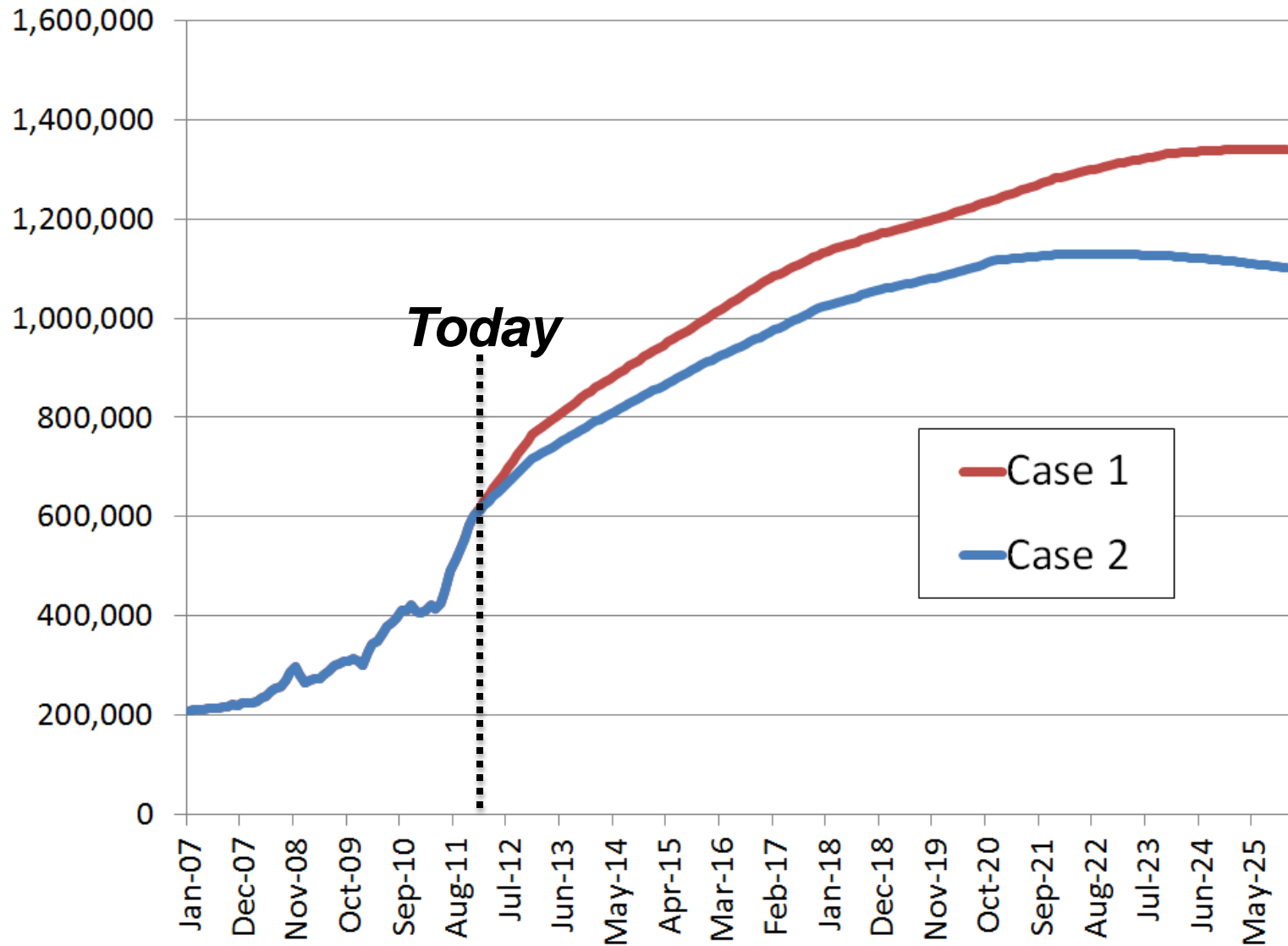
North Dakota Pipeline Authority
Williston Basin Petroleum Conference
May 23, 2012 – Bismarck, ND



North Dakota Crude Oil



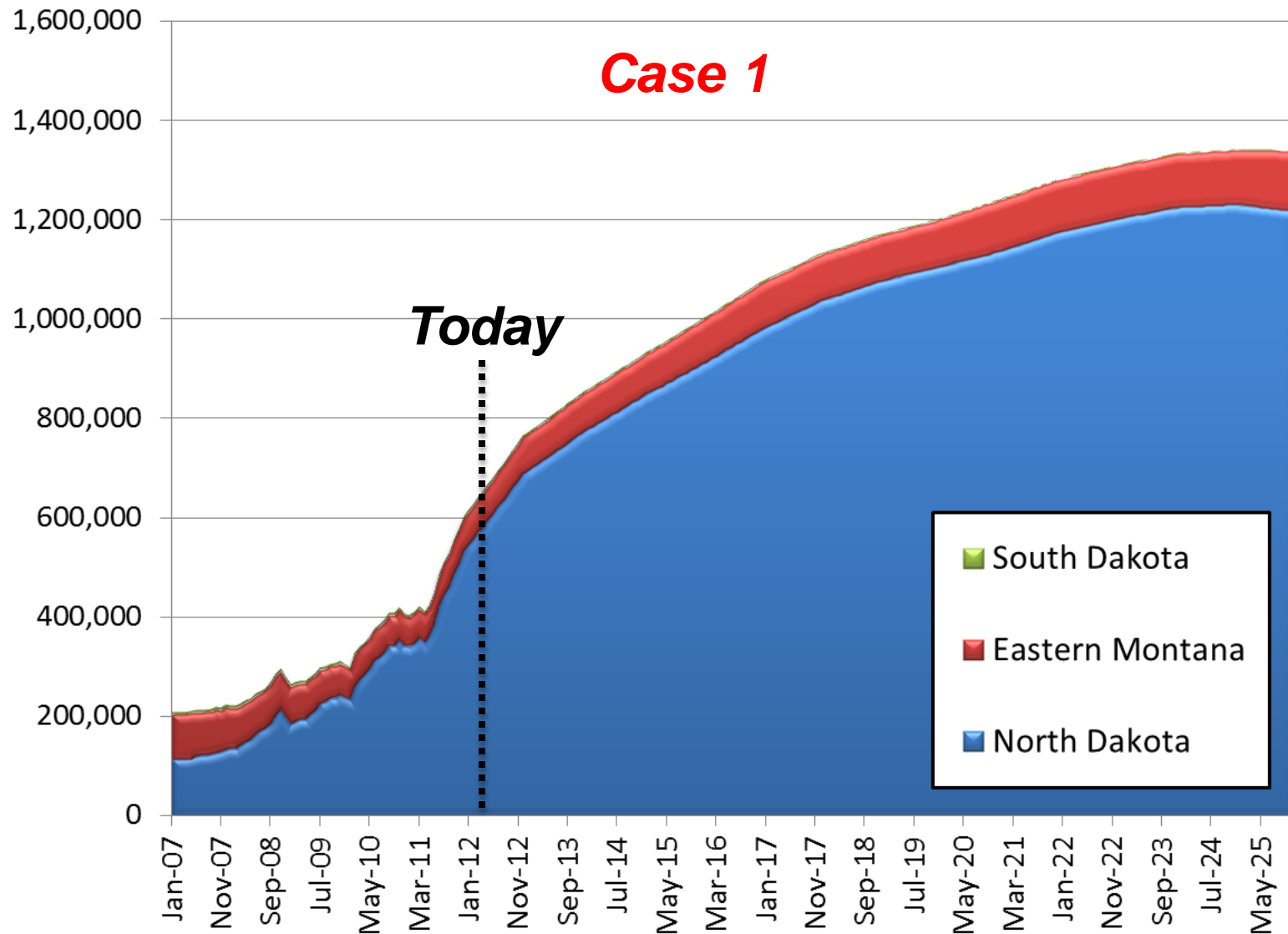
Forecasting Williston Basin Oil Production, BOPD



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



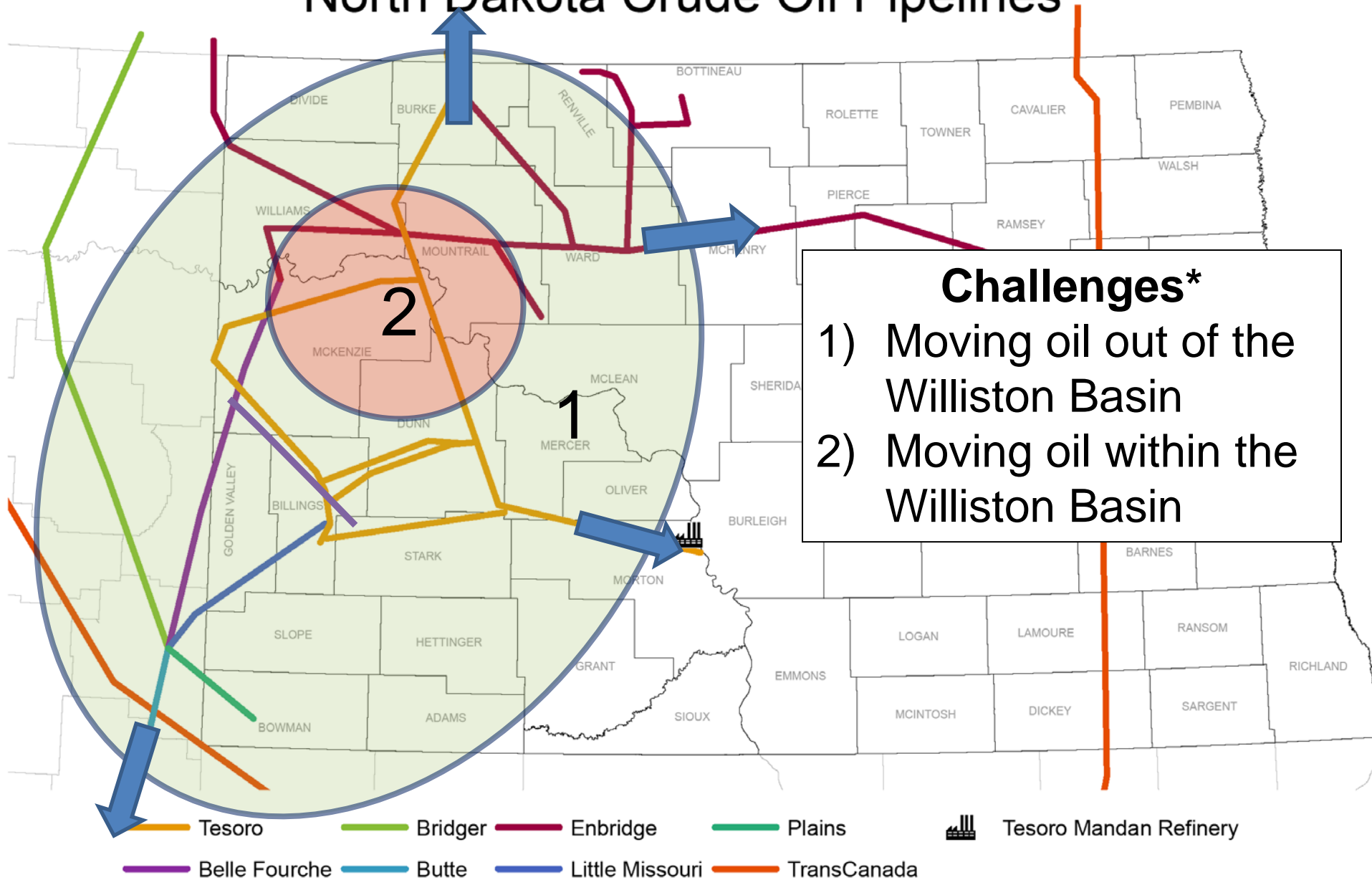
Forecasting Williston Basin Oil Production, BOPD



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



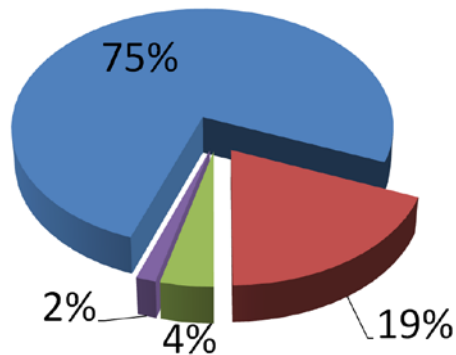
North Dakota Crude Oil Pipelines



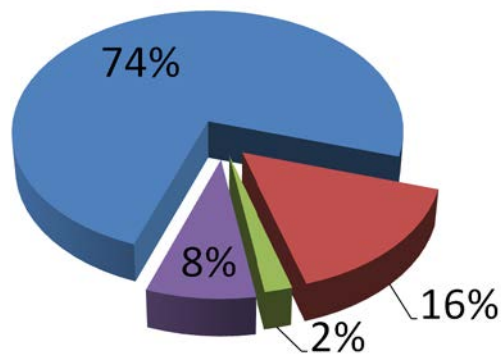
*Modified from Bridger and Belle Fourche Pipelines

Williston Basin Oil Transportation

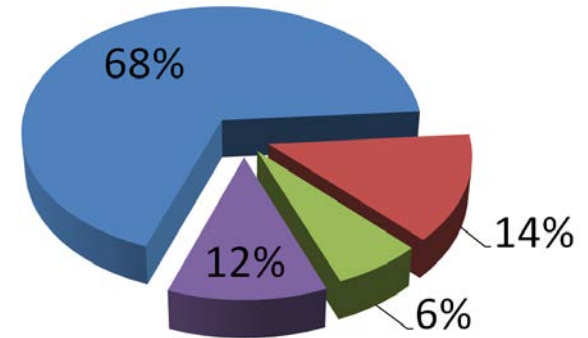
March 2009



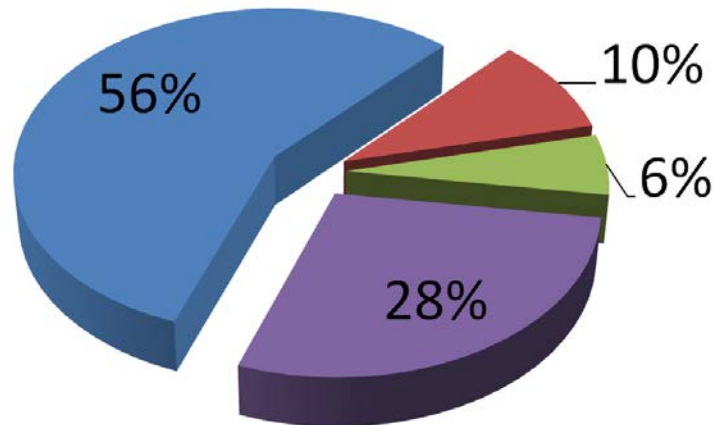
March 2010



March 2011



March 2012



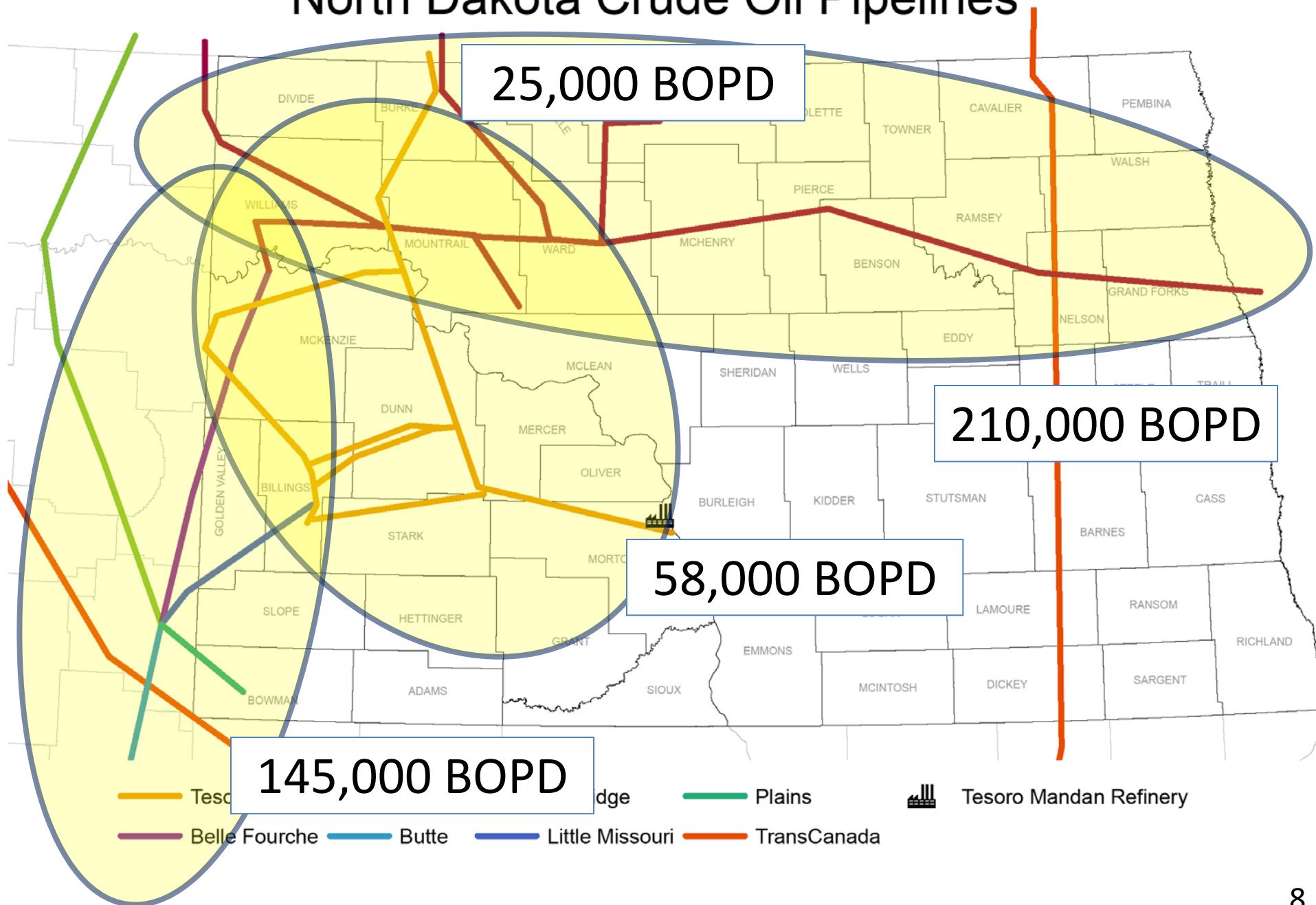
■ Pipeline Export

■ Tesoro Refinery

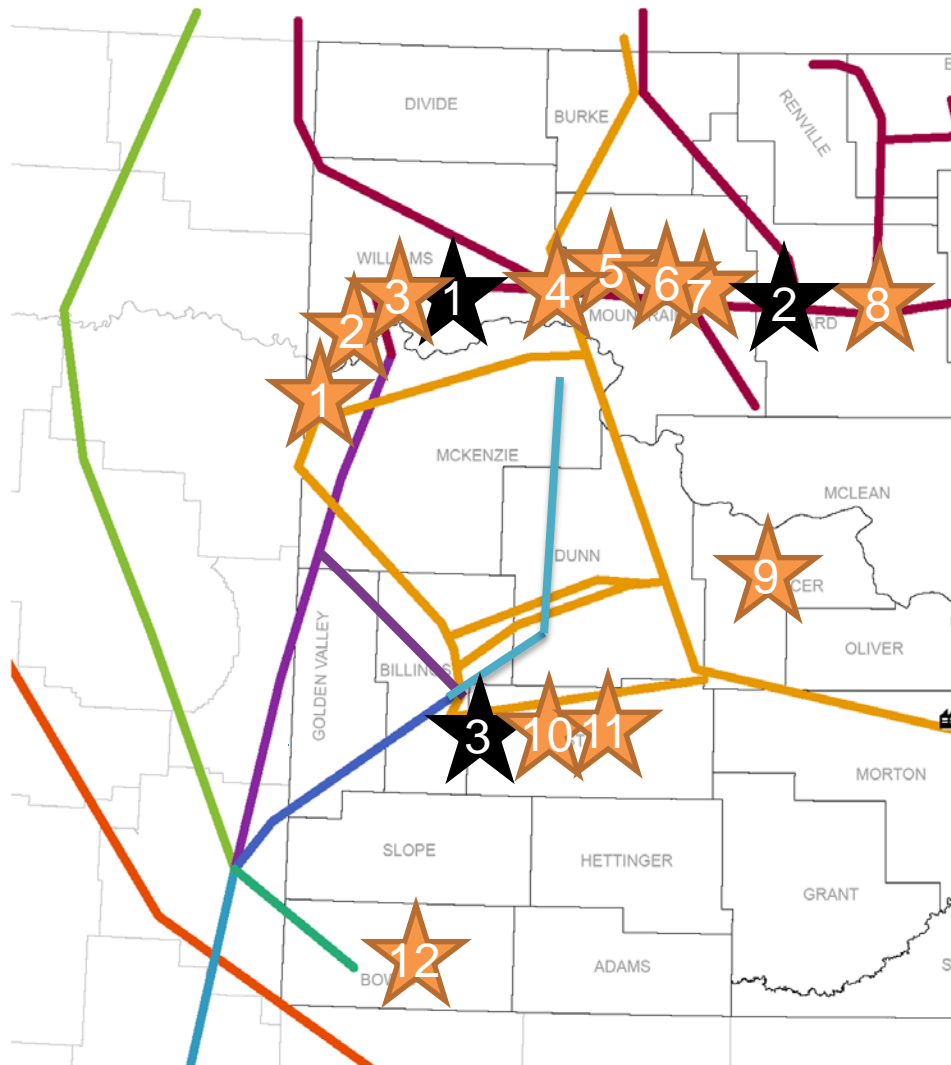
■ Truck to Canadian Pipelines

■ Estimated Rail

North Dakota Crude Oil Pipelines



BNSF Crude Rail Locations



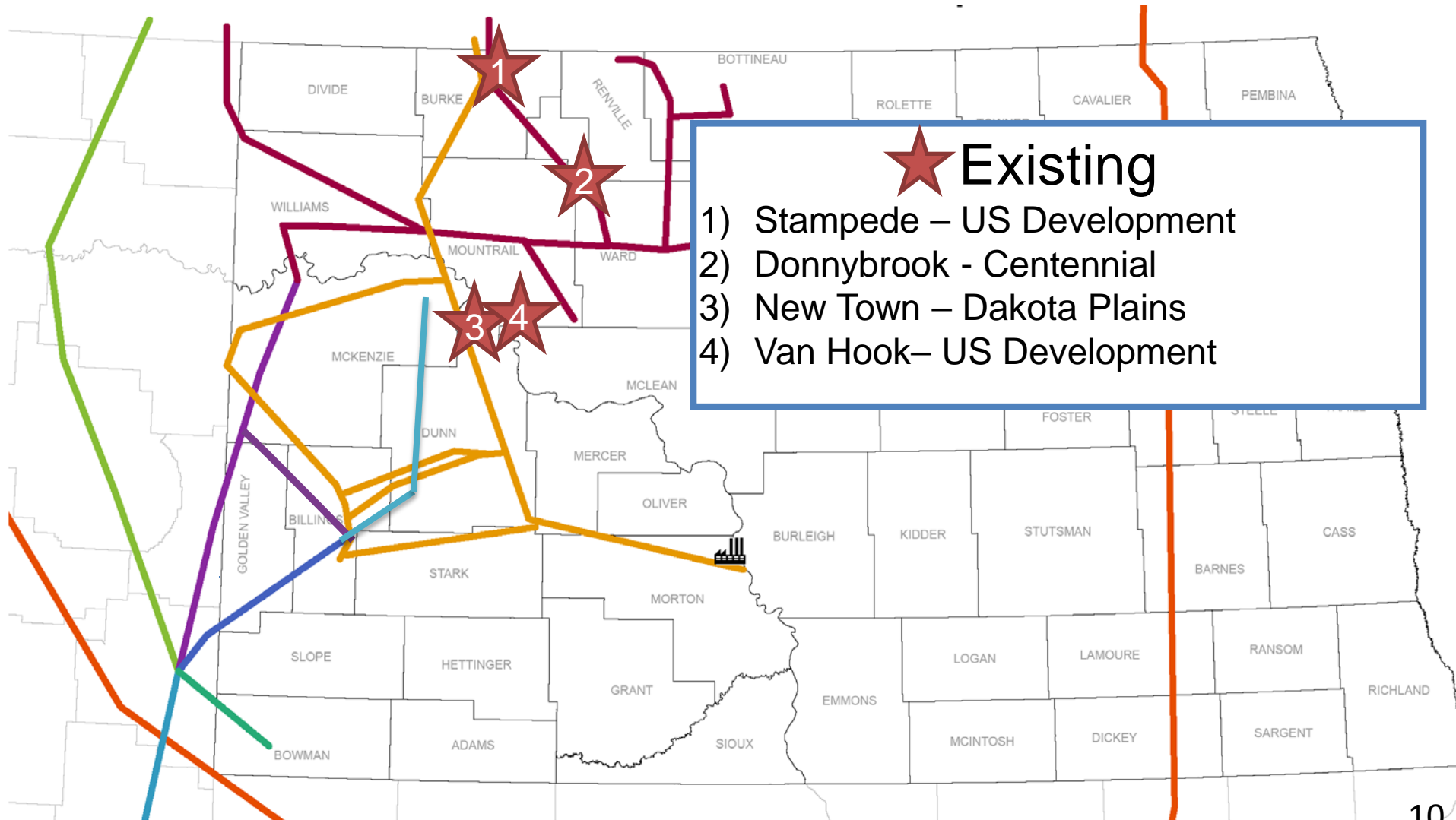
★ Existing

- 1) Dore – Musket - Unit
- 2) Trenton – Savage – Manifest/Unit
- 3) Williston – Red River Supply - Manifest
- 4) Tioga – Hess - Unit
- 5) Manitou – Plains - Unit
- 6) Ross – Bakken Transload - Manifest
- 7) Stanley – EOG - Unit
- 8) Minot – ND Port Services- Manifest
- 9) Zap/Republic – Basin Transload - Unit
- 10) Eland – BOE - Unit
- 11) Dickinson – Centennial - Manifest
- 12) Gascoyne – Enserco – Manifest/Unit

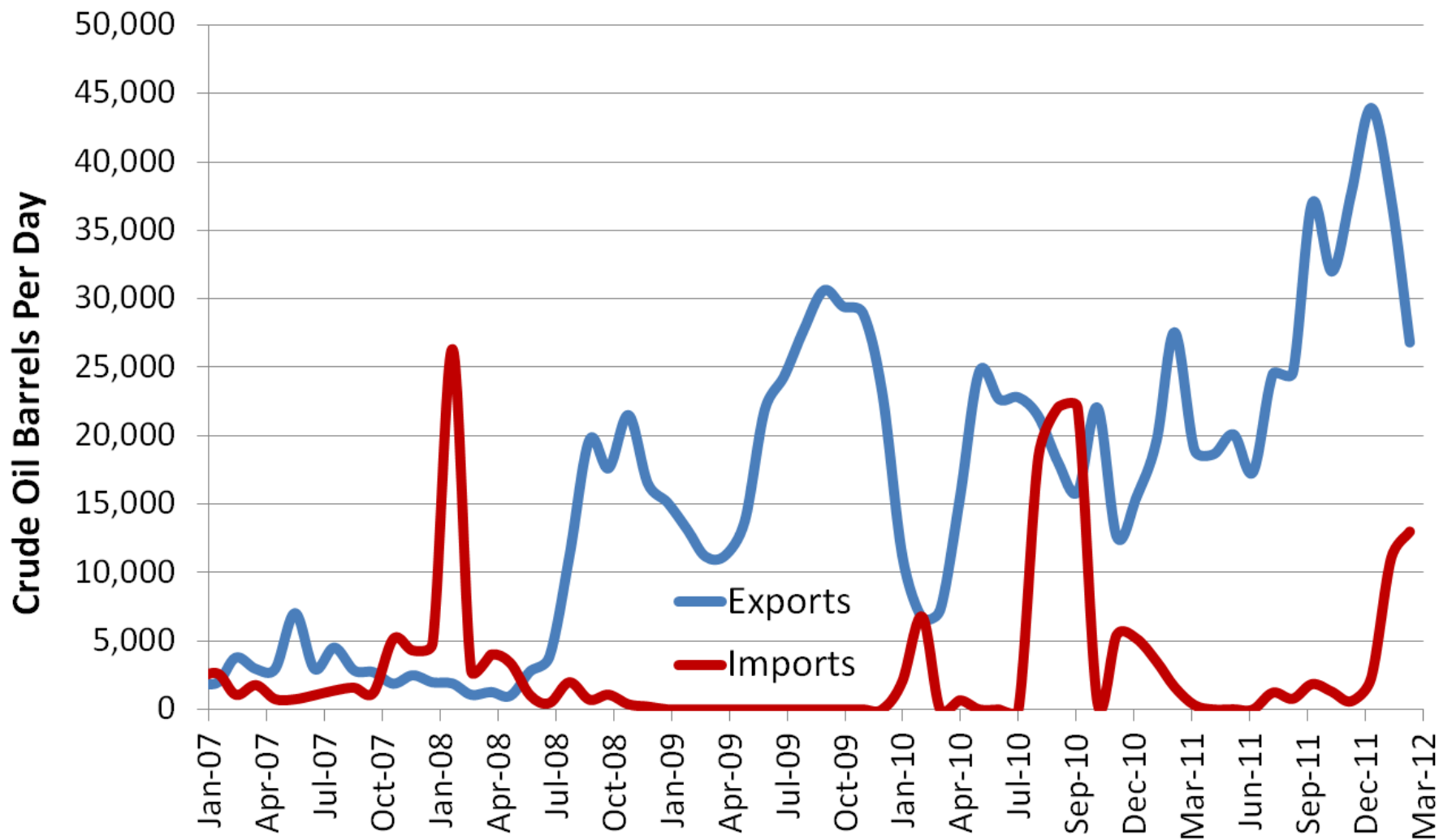
★ Planned

- 1) Epping – Rangeland – Unit (June 2012)
- 2) Berthold – Enbridge - Unit
- 3) Fryburg – Great Northern - Unit

CP Crude Rail Locations

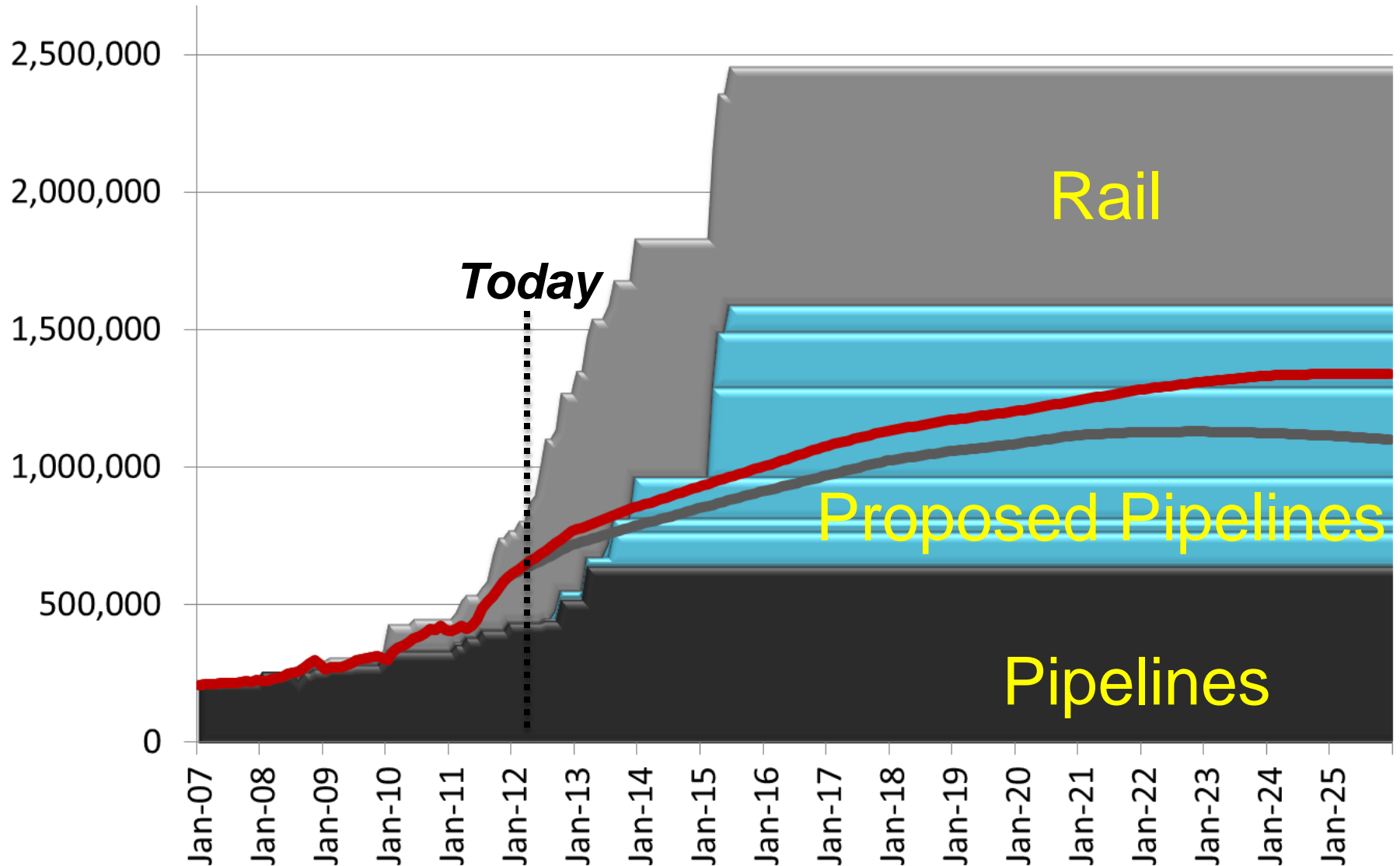


Williston Basin Truck Imports/Exports



Information collected through the United States International Trade
Commission's *Interactive Tariff and Trade DataWeb*

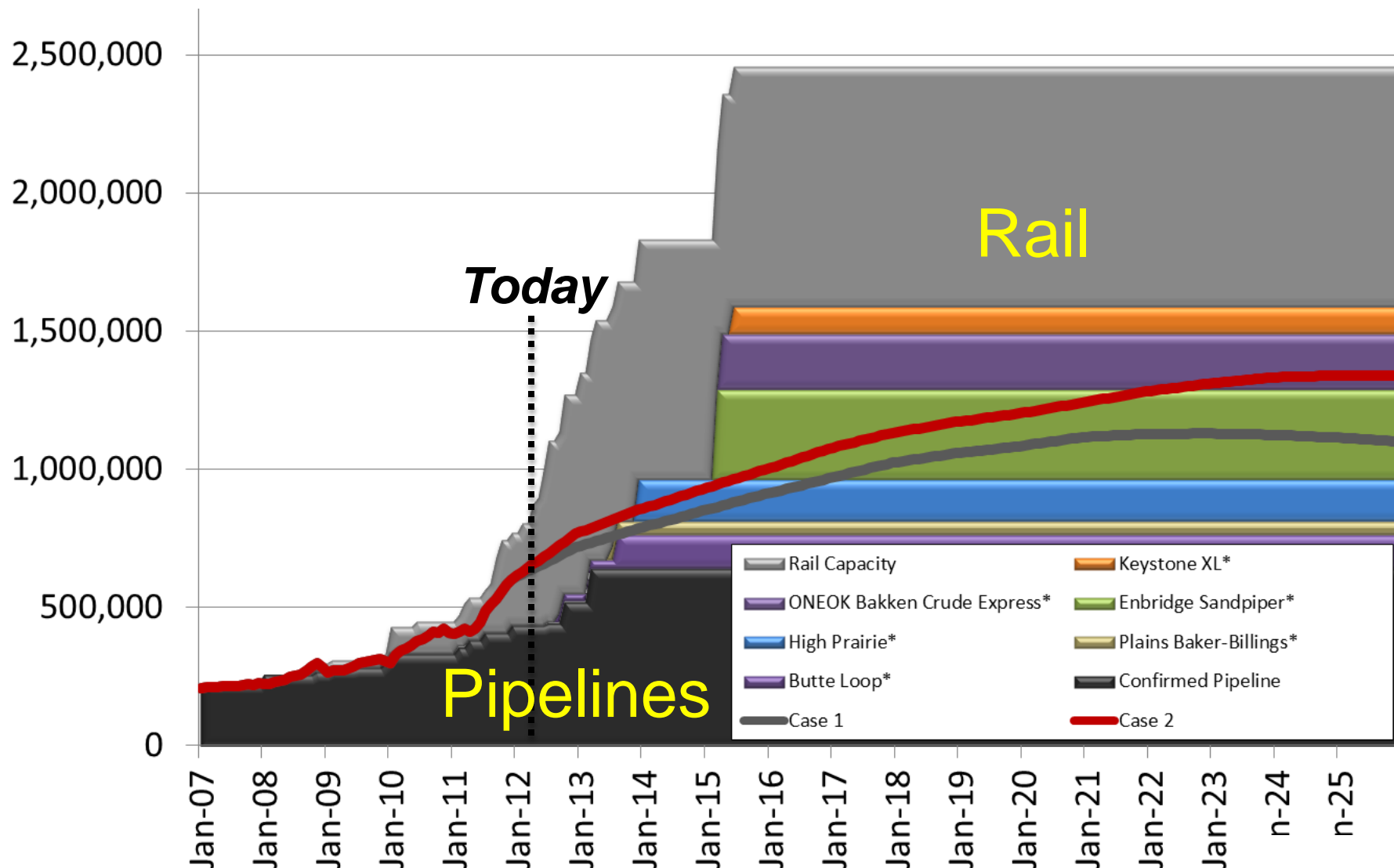
Williston Basin Oil Production & Export Capacity, BOPD



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

*Projects still in the proposed or internal review process

Williston Basin Oil Production & Export Capacity, BOPD

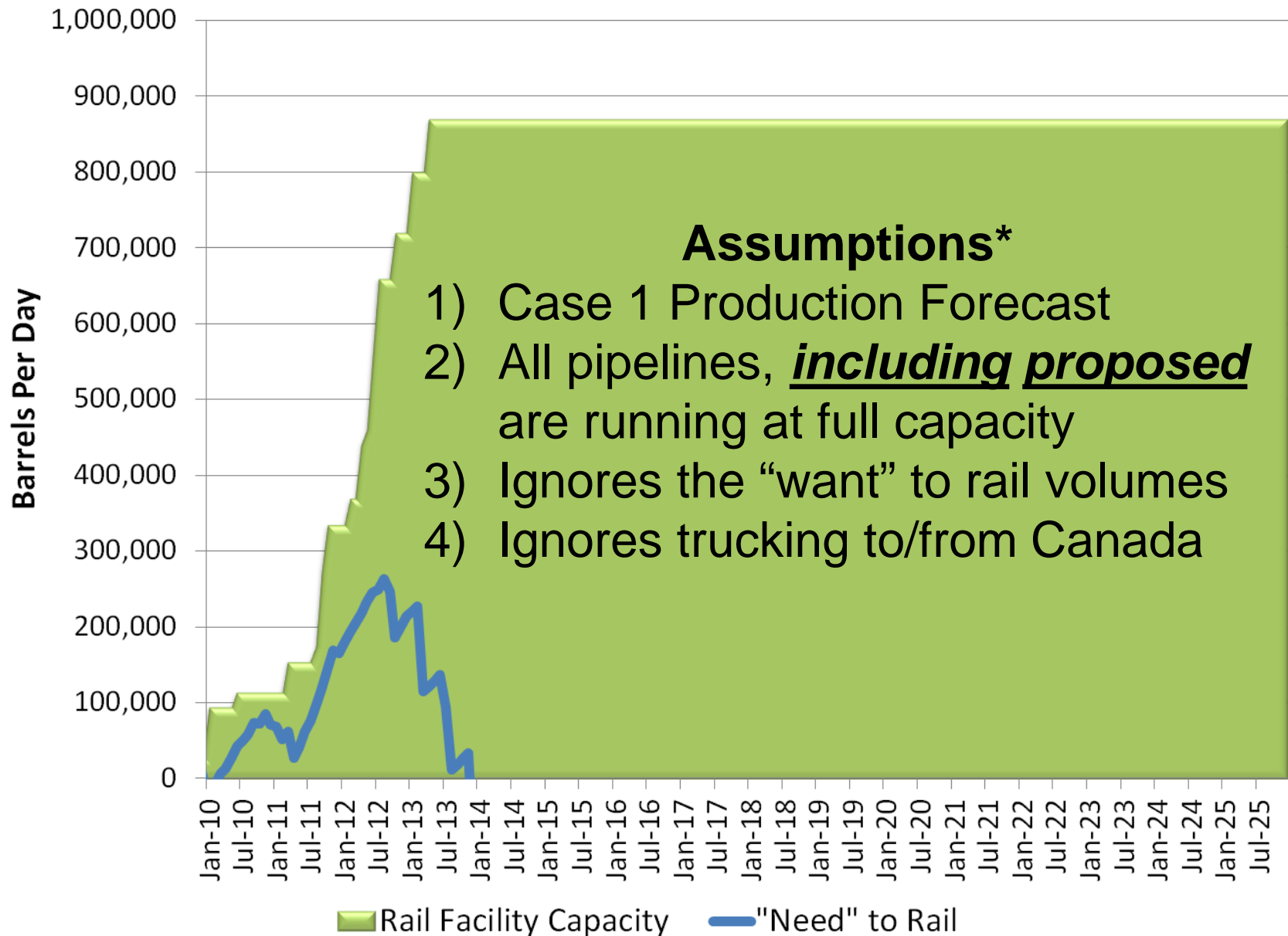


Production forecast is for visual demonstration purposes only and should not be considered accurate for any near or long term planning.

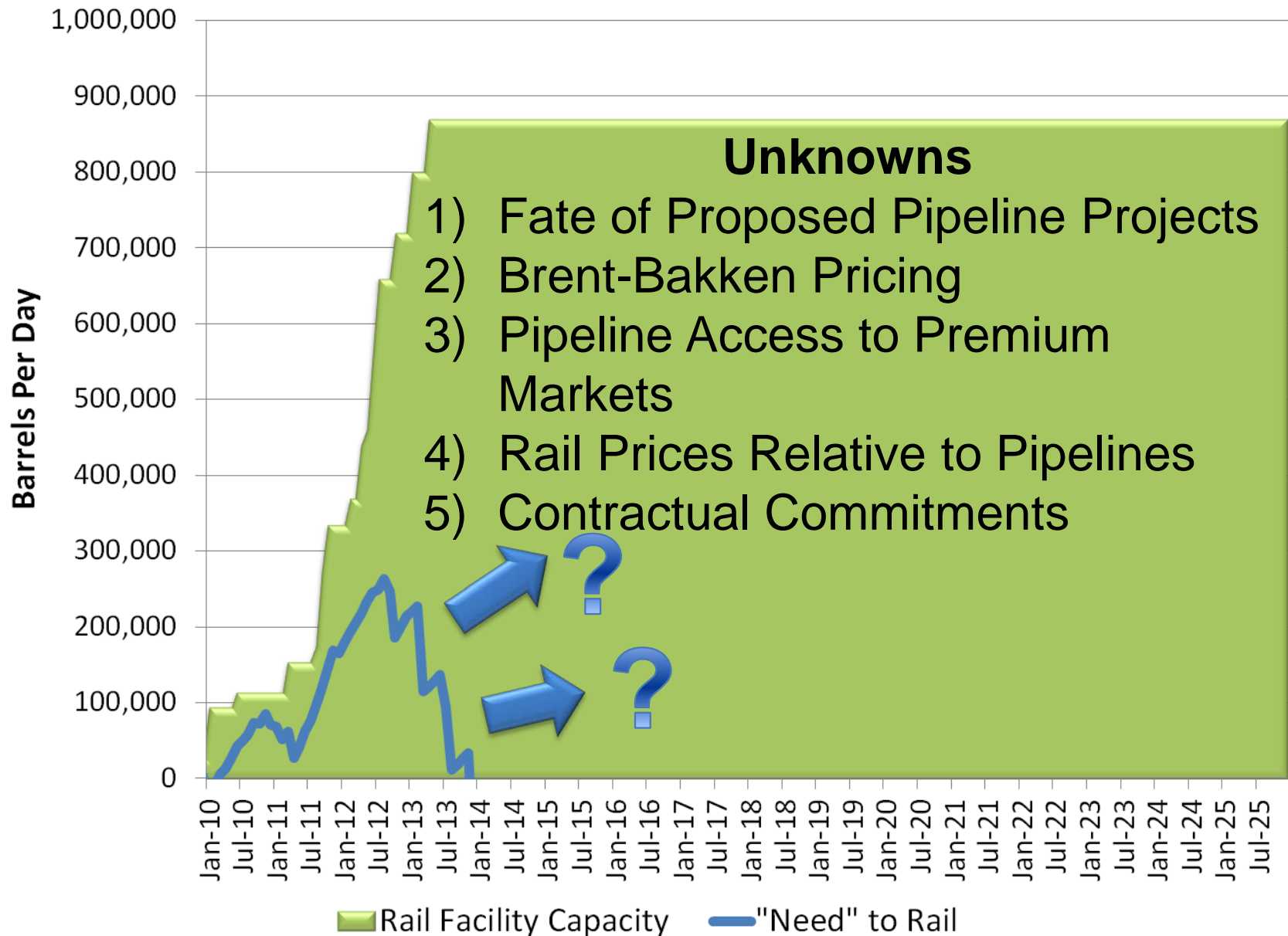
*Projects still in the proposed or internal review process



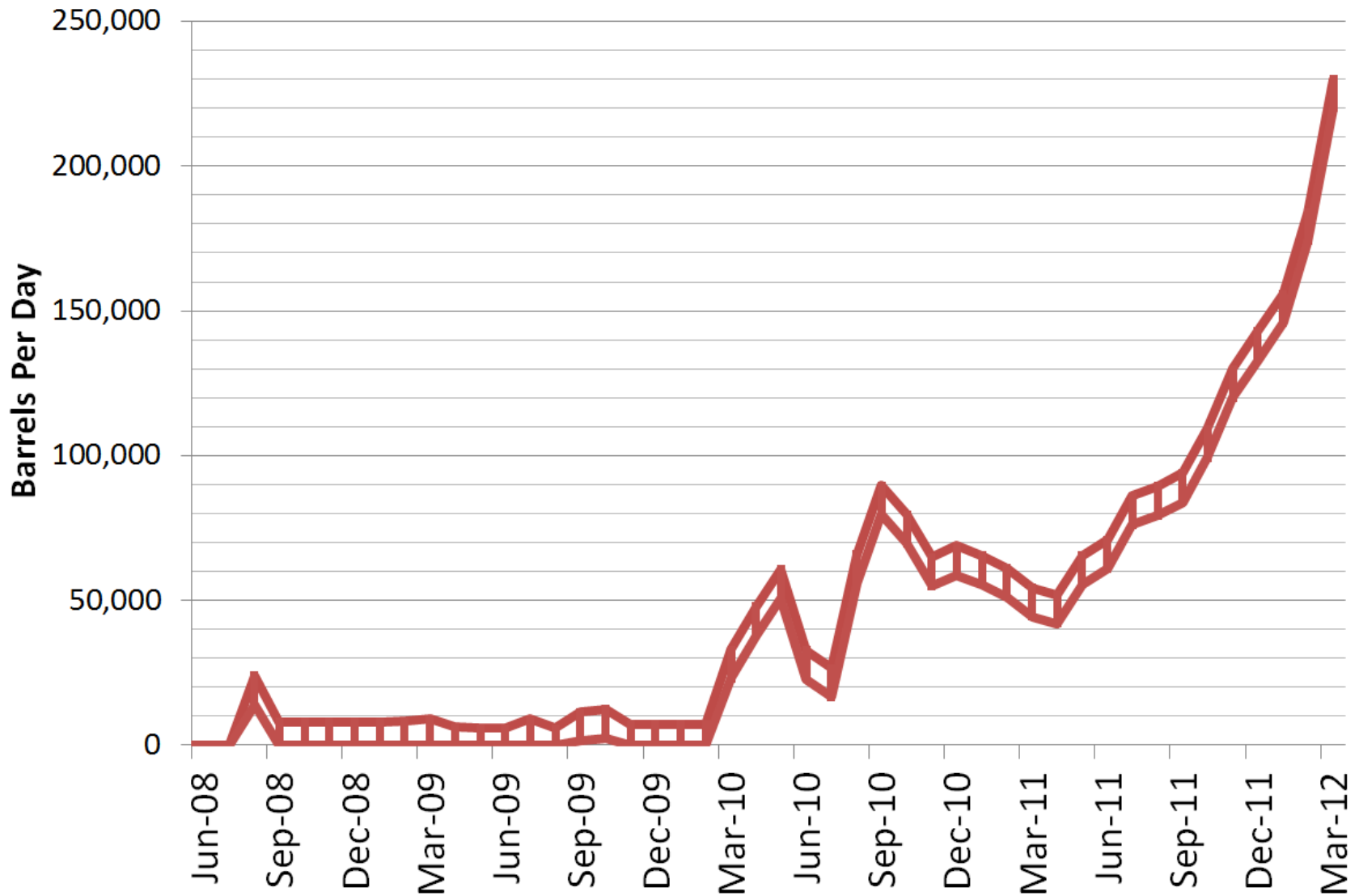
The “Need” for Rail*



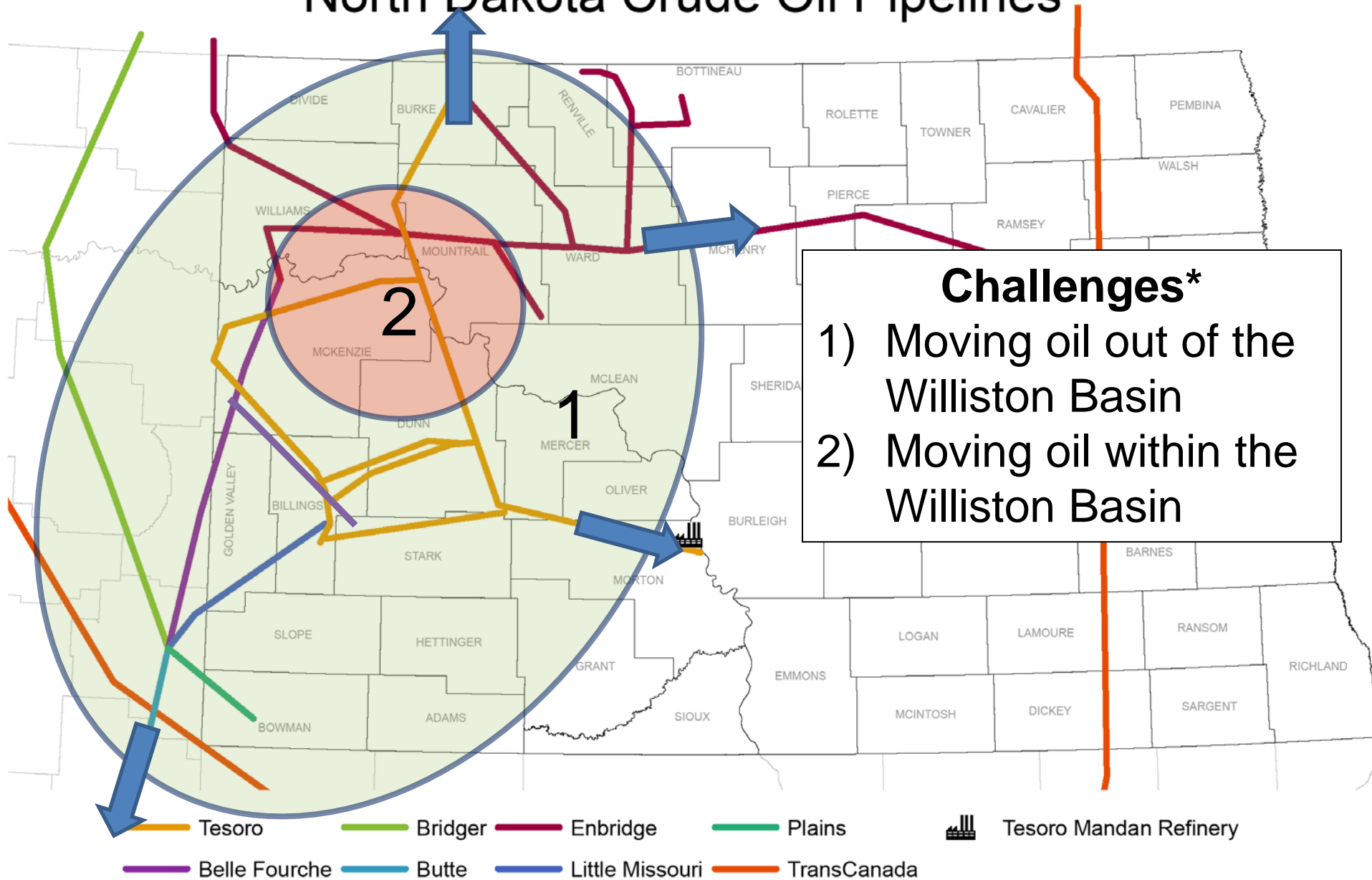
Utilizing Rail Long Term



High-Low Rail Estimate, BOPD



North Dakota Crude Oil Pipelines

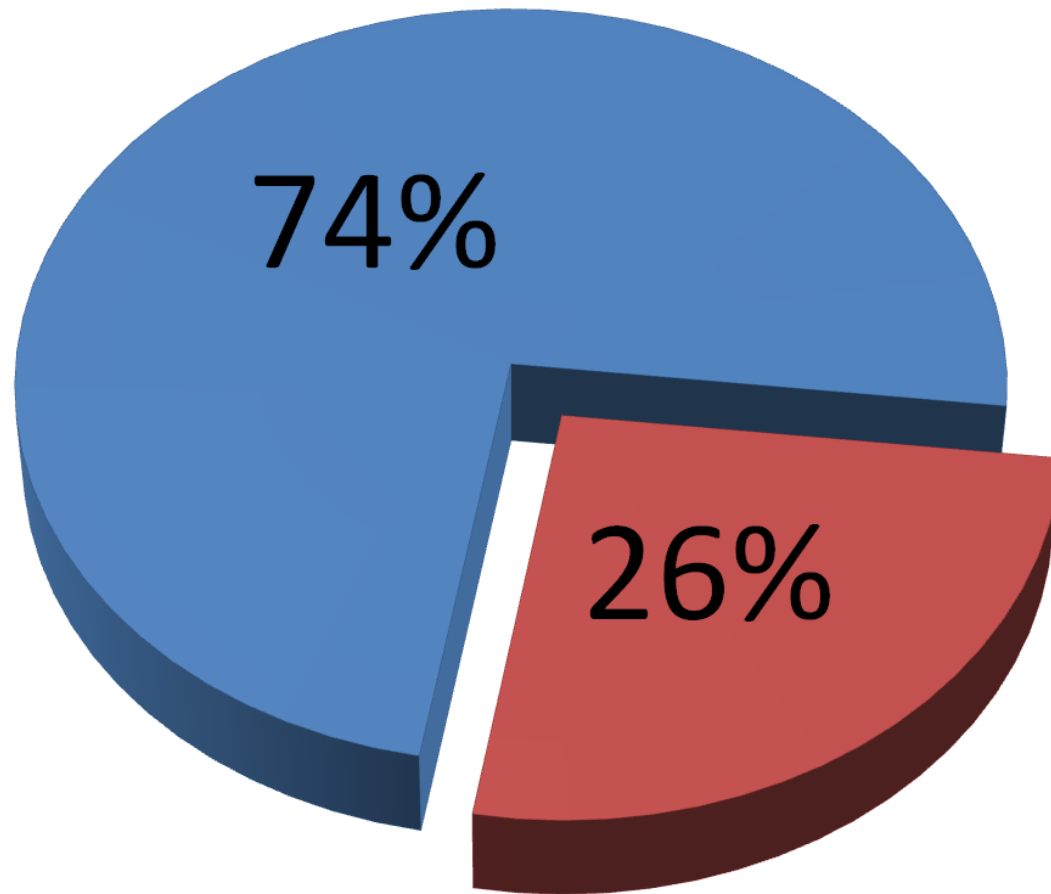


*Modified from Bridger and Belle Fourche Pipelines

Crude Oil Gathering

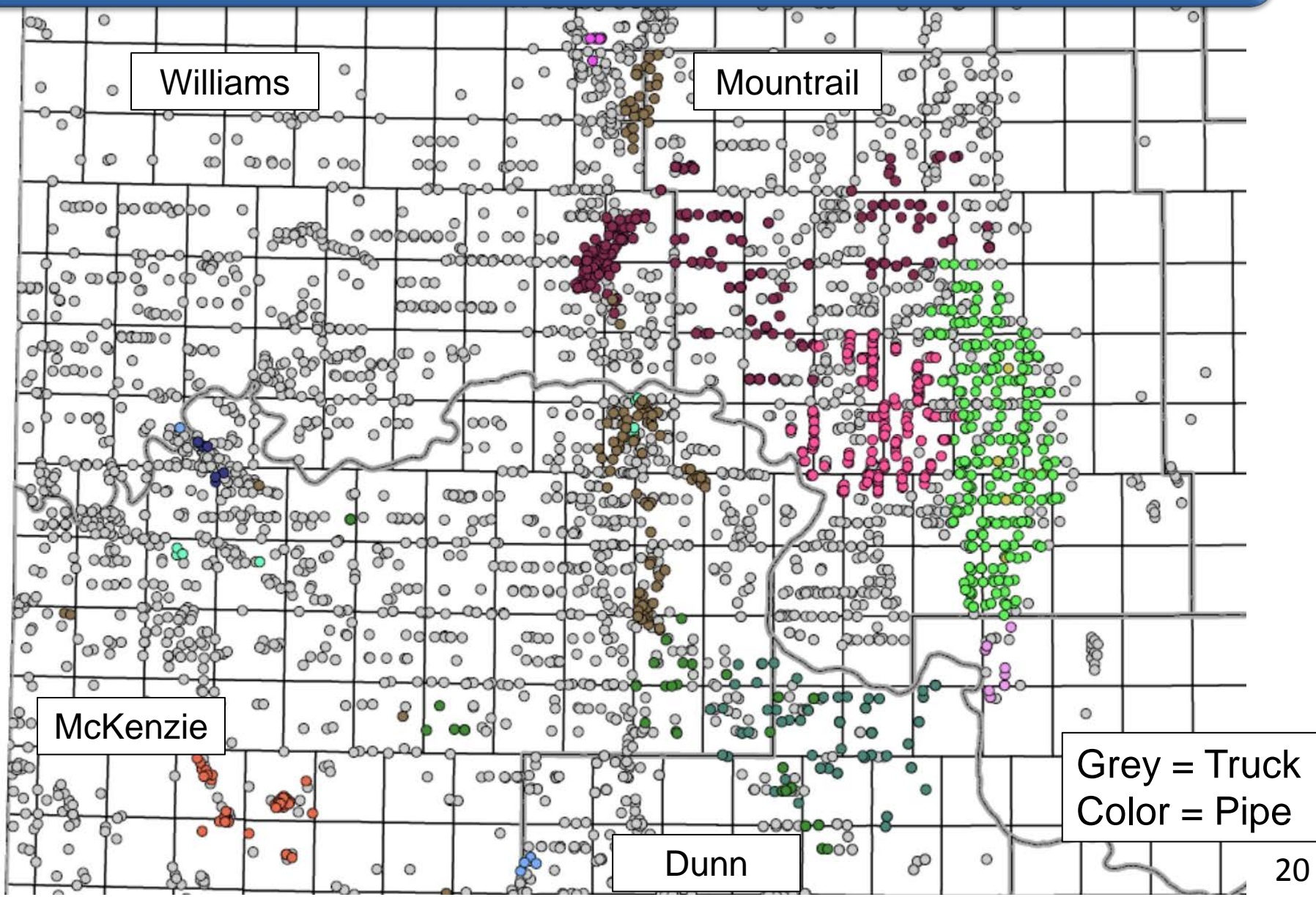


North Dakota Crude Gathering

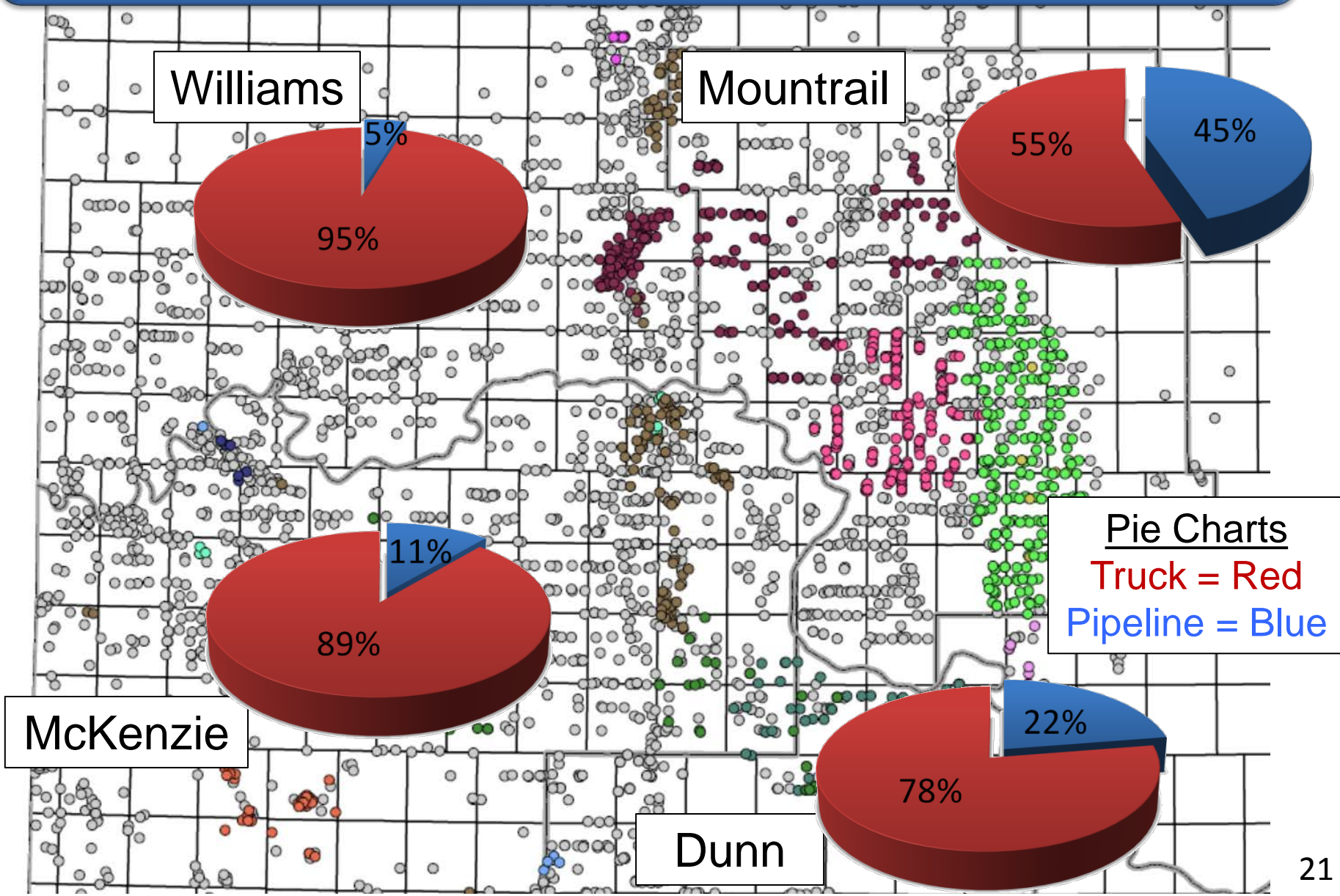


■ Truck ■ Pipeline

North Dakota Crude Gathering



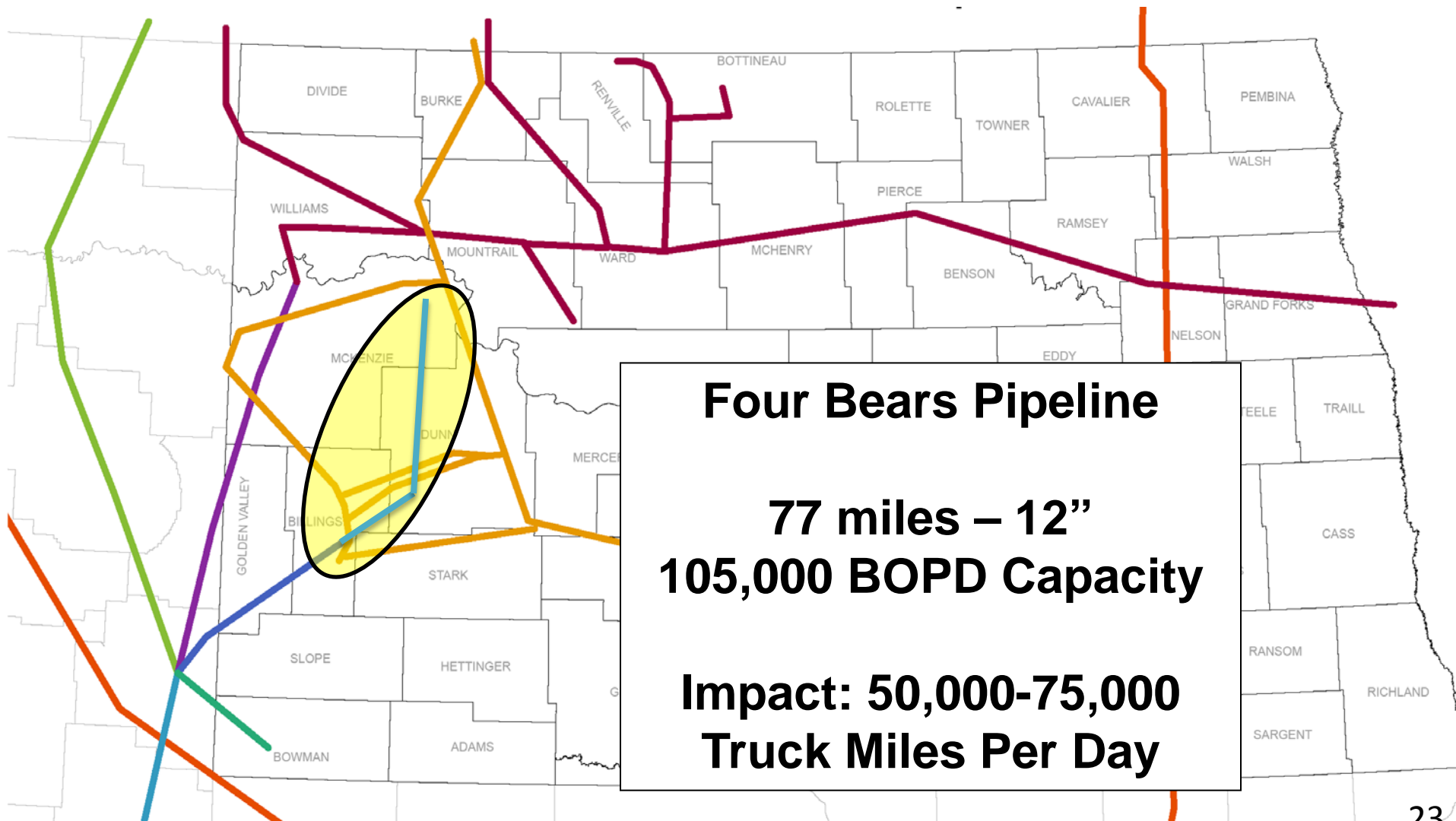
North Dakota Crude Gathering



Strengthening Landowner Relations



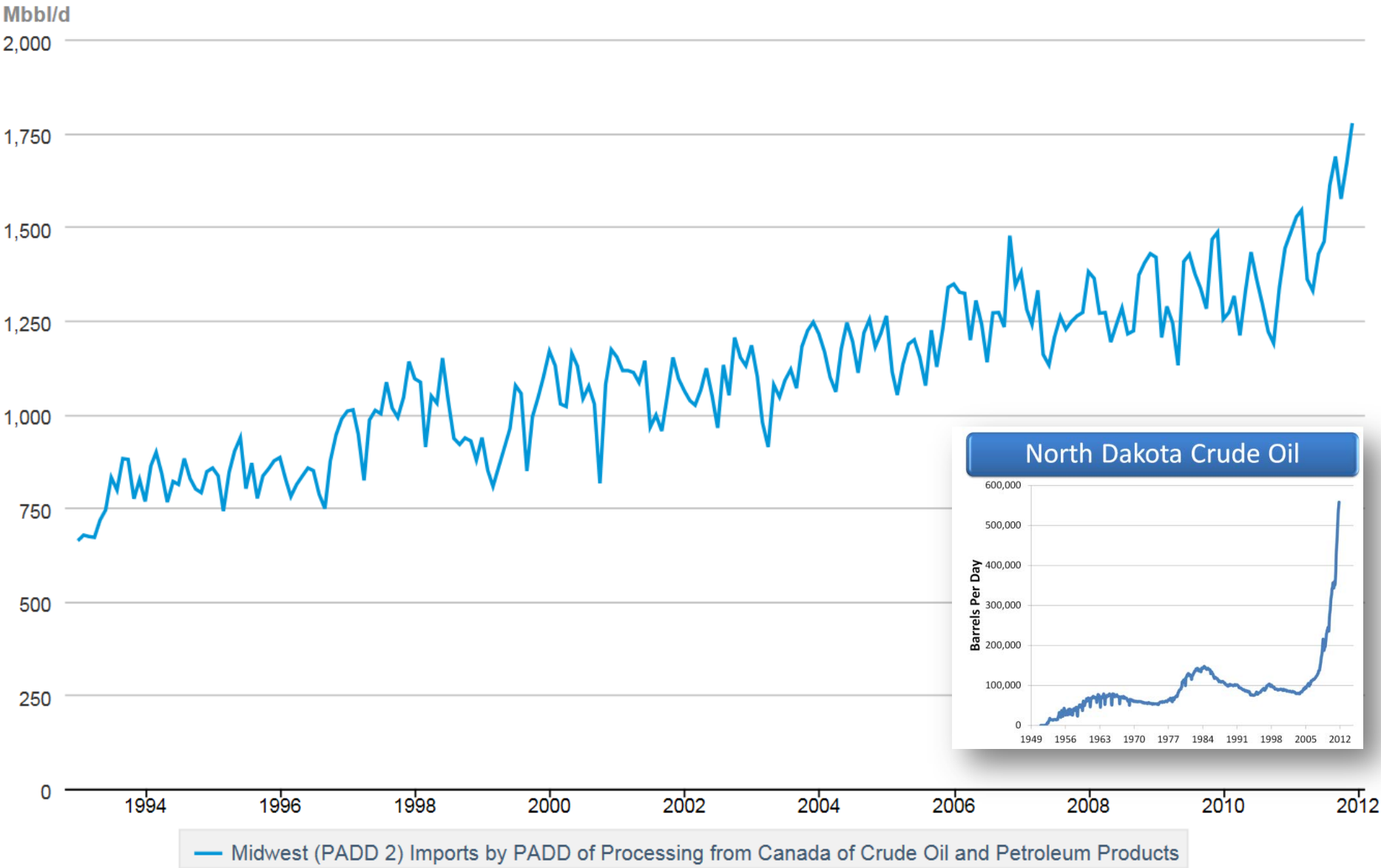
Reducing Truck Traffic



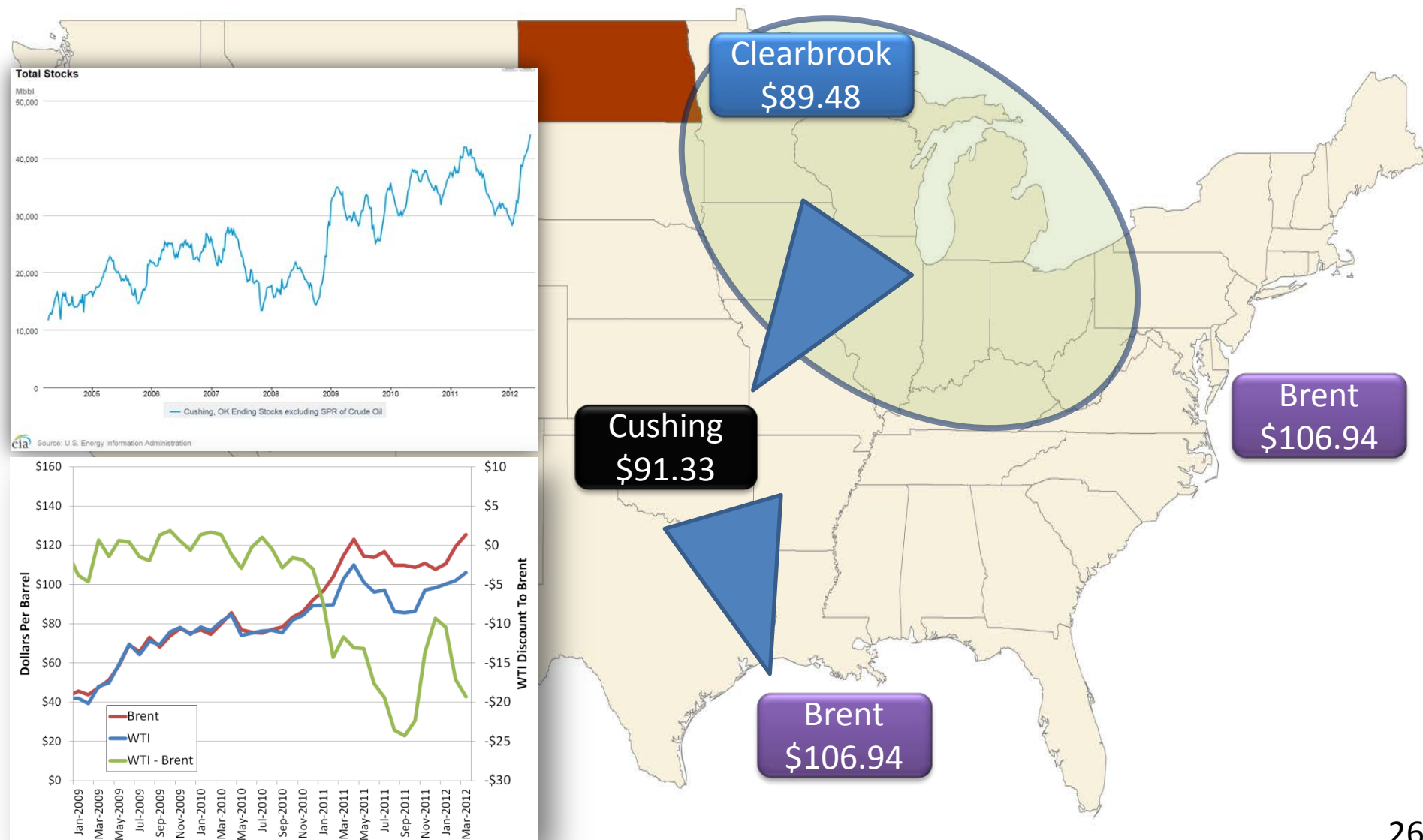
Pipeline Challenge #3



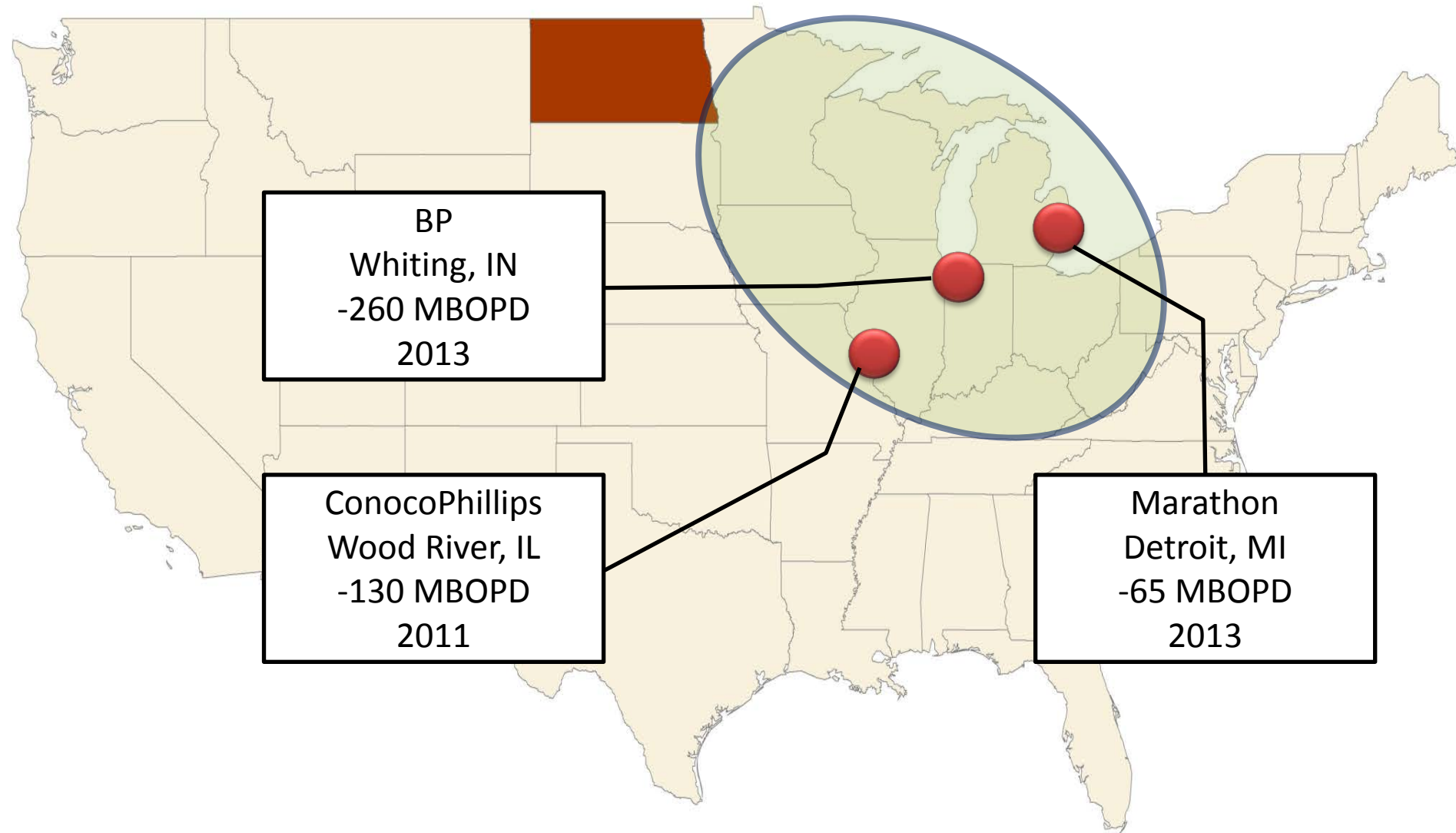
PAD District Imports by Country of Origin



Crude Pricing – May 18, 2012



PADD II Decrease In Light Demand



Domestic Crude Oil First Purchase Prices by API Gravity

(Dollars per Barrel)

Period:



[Download Series History](#)



[Definitions, Sources & Notes](#)

API Gravity	2006	2007	2008	2009	2010	2011	View History
20.0° or Less	54.96	62.00	87.10	54.05	72.40	101.30	1993-2011
20.1° to 25.0°	57.89	64.94	91.01	55.66	75.04	103.07	1993-2011
25.1° to 30.0°	56.18	62.83	89.55	54.30	71.78	97.12	1993-2011
30.1° to 35.0°	60.78	67.14	98.41	57.66	76.22	99.65	1993-2011
35.1° to 40.0°	61.83	69.29	96.69	56.93	76.03	94.54	1993-2011
40.0° or Greater	61.86	69.17	94.95	56.66	74.47	91.87	1993-2011

Interactive Chart for Bloomberg Bakken (Clearbrook MN) Crude Oil Differential (USCSUHC1)

OVERLAY ▼

INDICATORS ▼

ANNOTATIONS ▼

SETTINGS ▼

1D

1W

1M

3M

6M

1Y

3Y

5Y

YTD

[?] Add a Comparison

Add

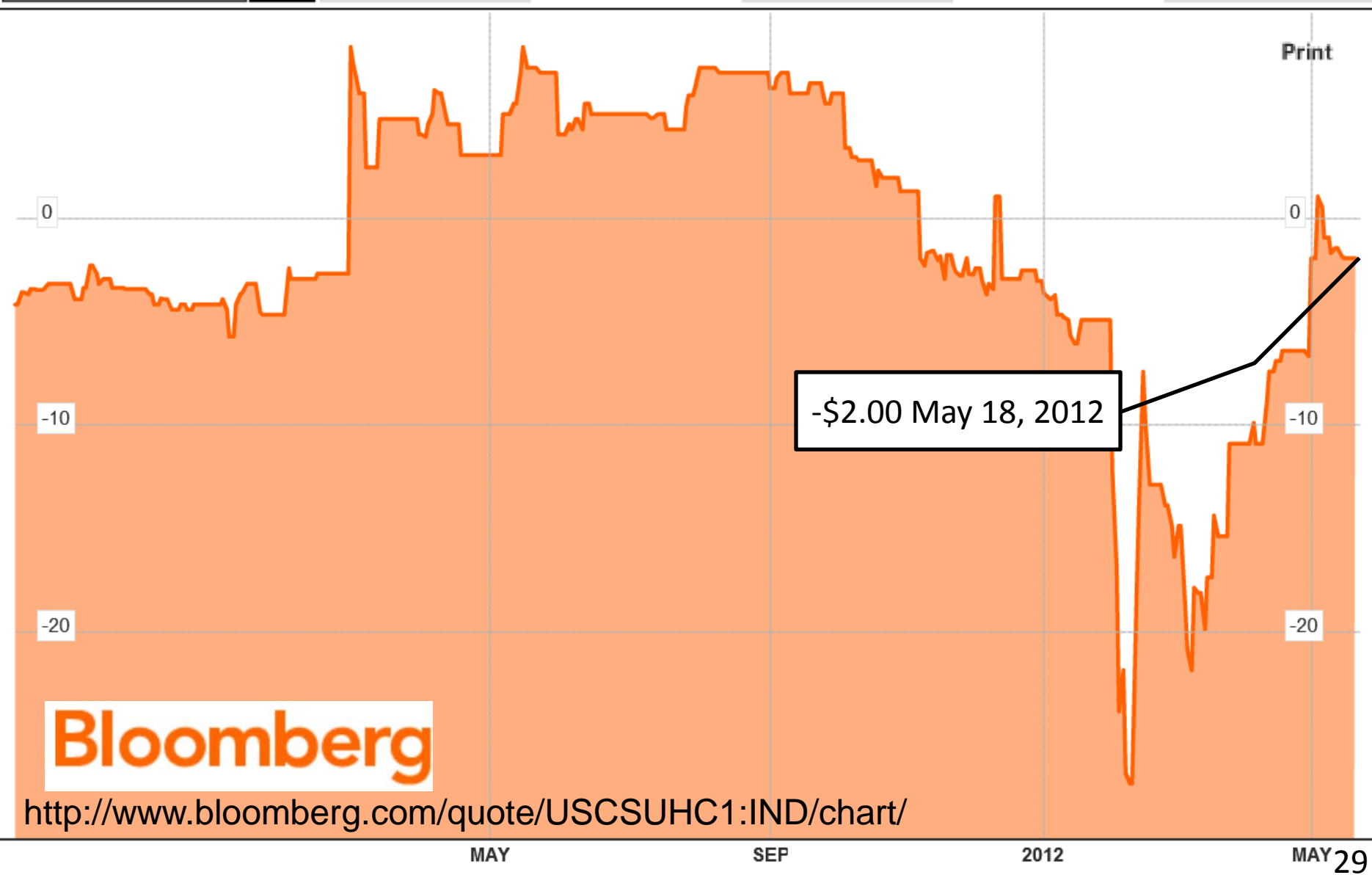
USCSUHC1:IN

Open -2.75

High -2.75

Low -3.25

Close -3.25



Challenge #4???



Natural Gas Projects



ND Natural Gas Pipelines

Williston Basin
Interstate Pipeline

Alliance Pipeline

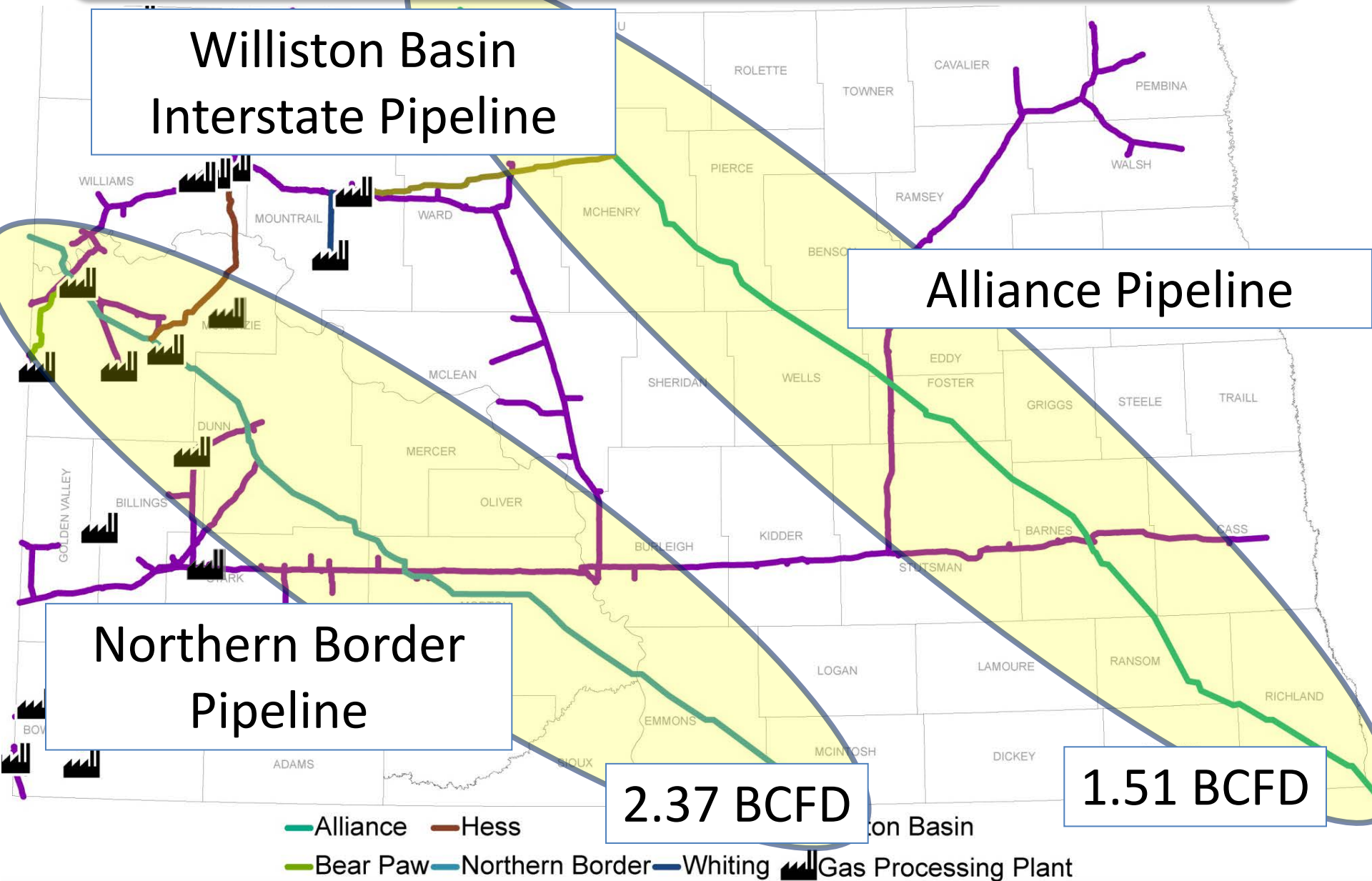
Northern Border
Pipeline

2.37 BCFD

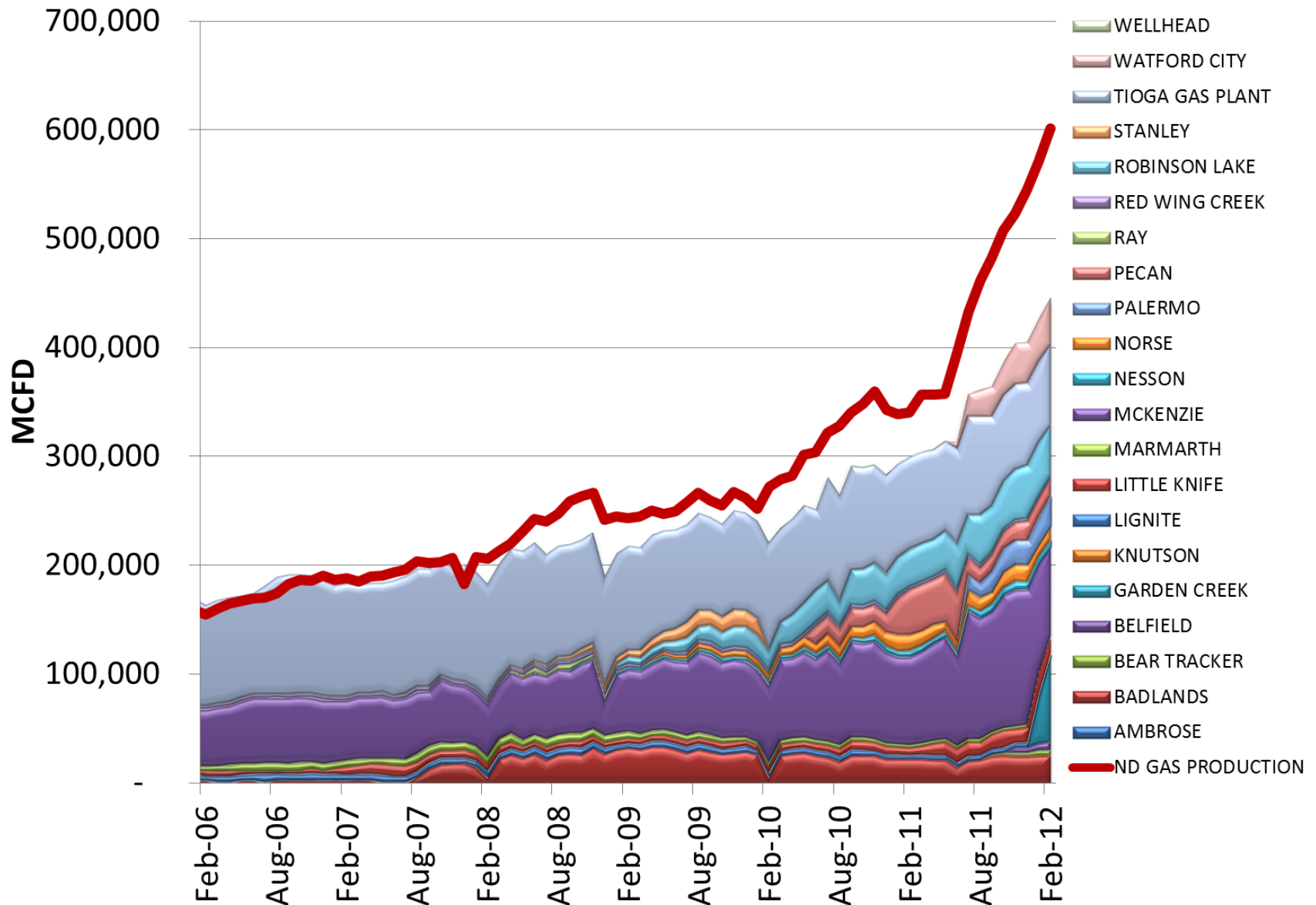
1.51 BCFD

— Alliance — Hess

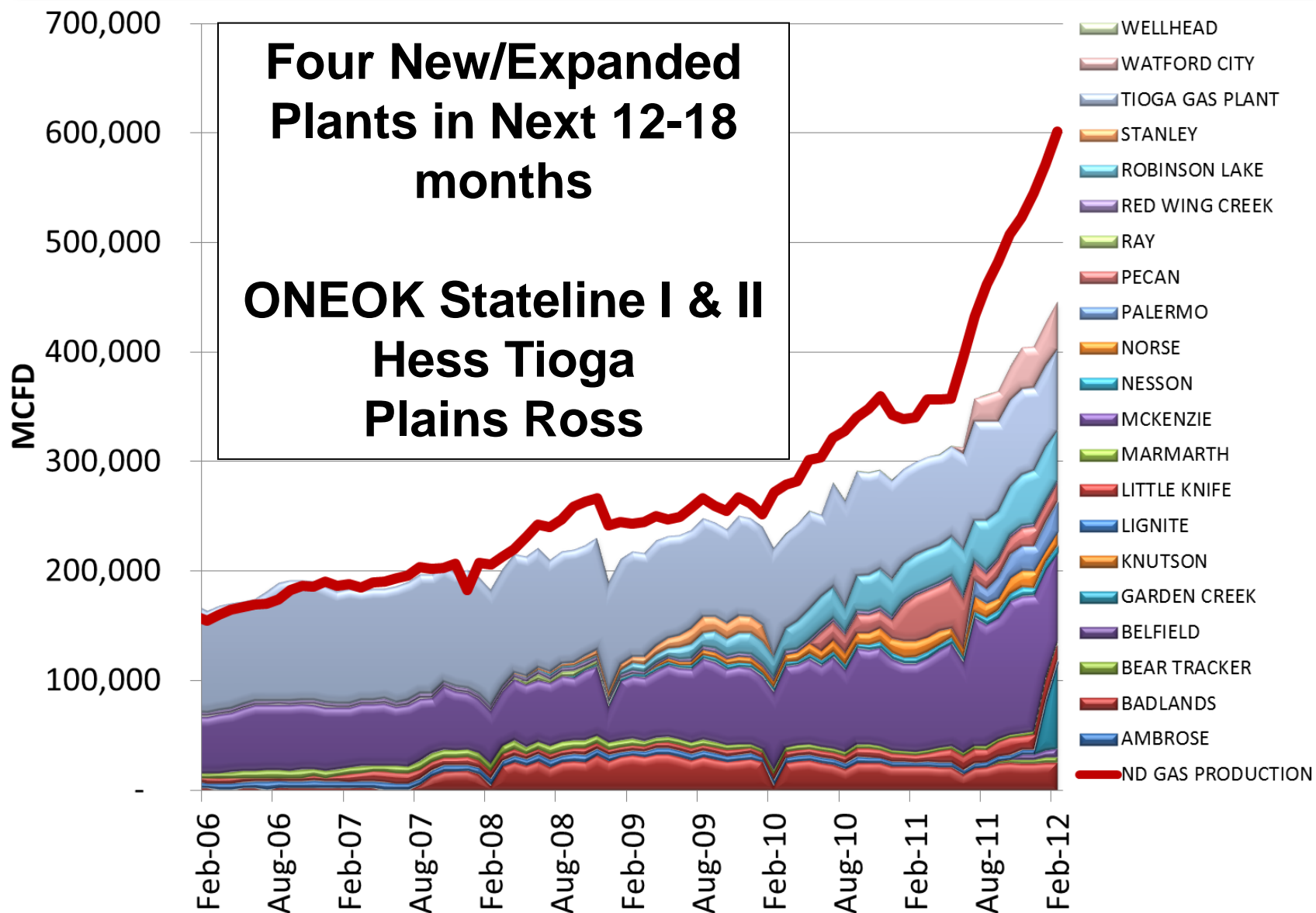
— Bear Paw — Northern Border — Whiting — Gas Processing Plant



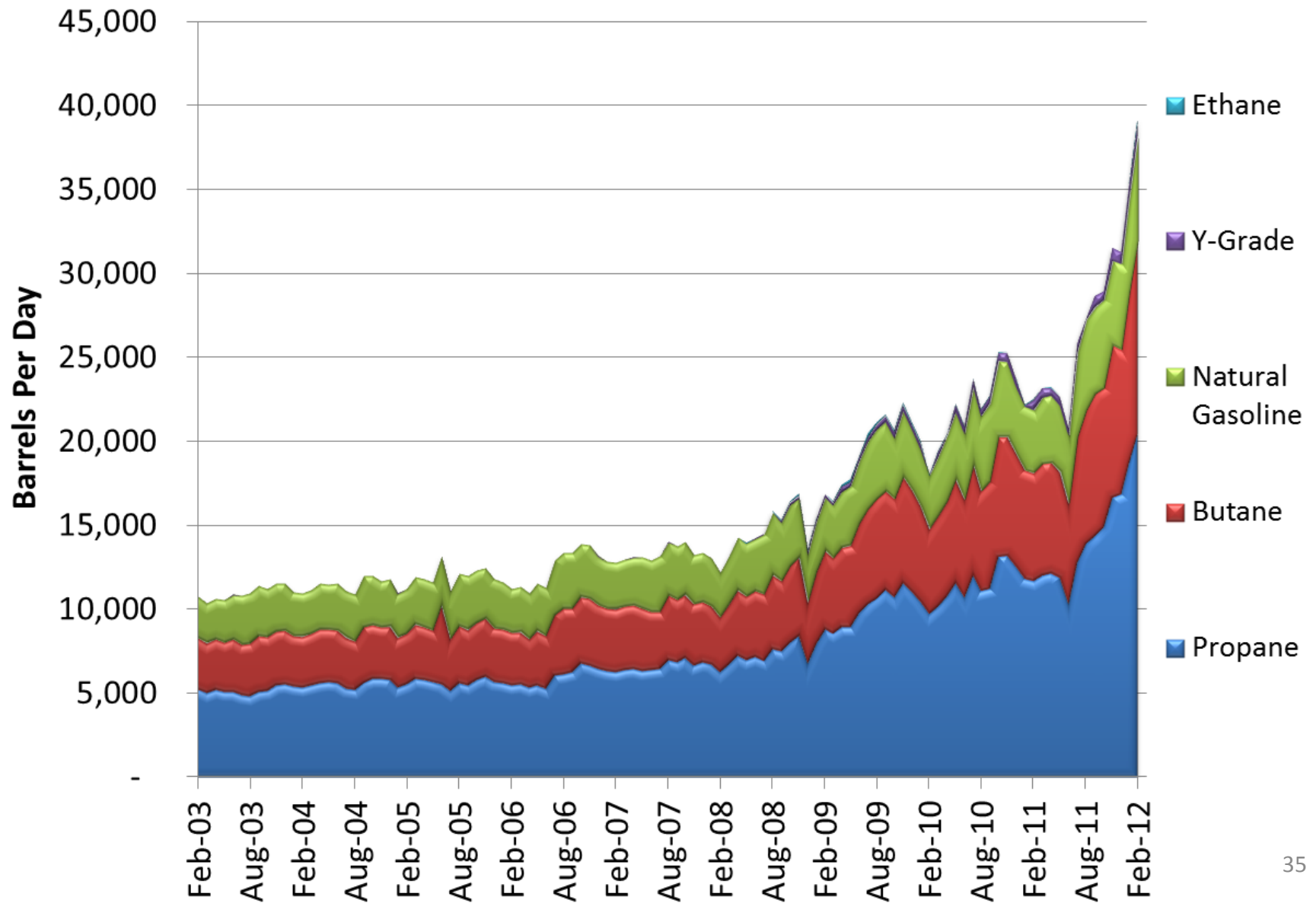
ND Gas Facility/System Intake



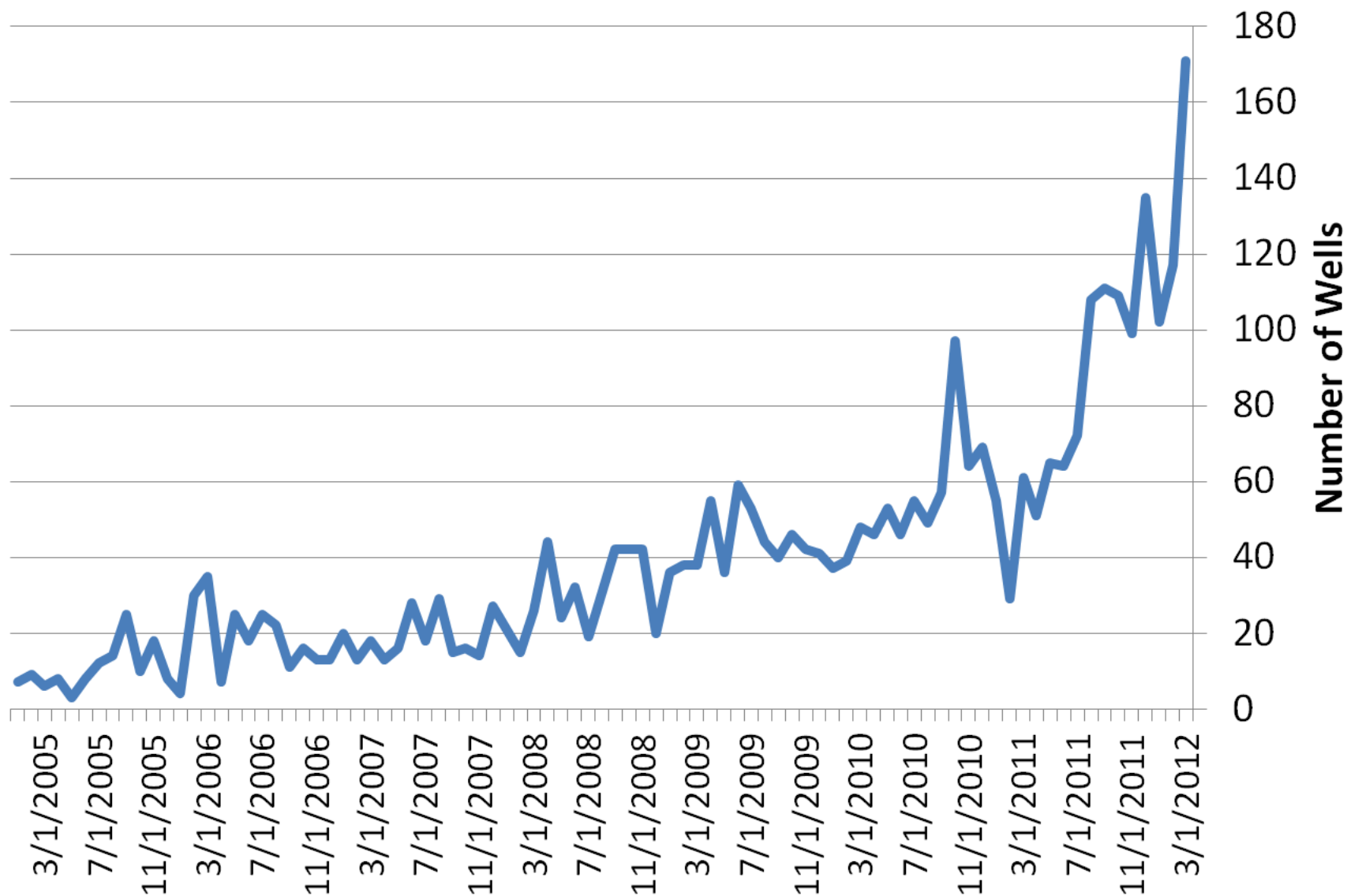
ND Gas Facility/System Intake



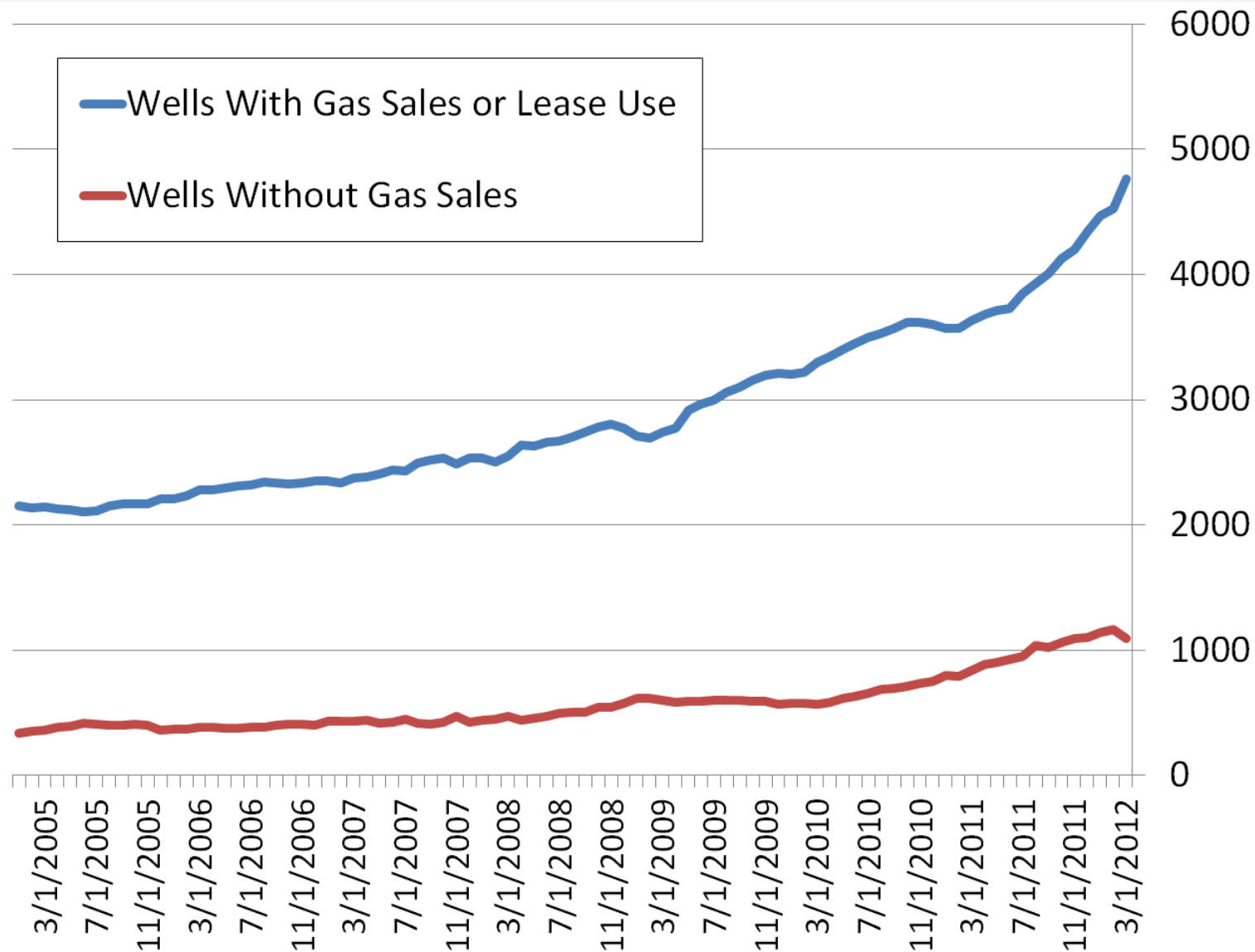
ND NGL Production



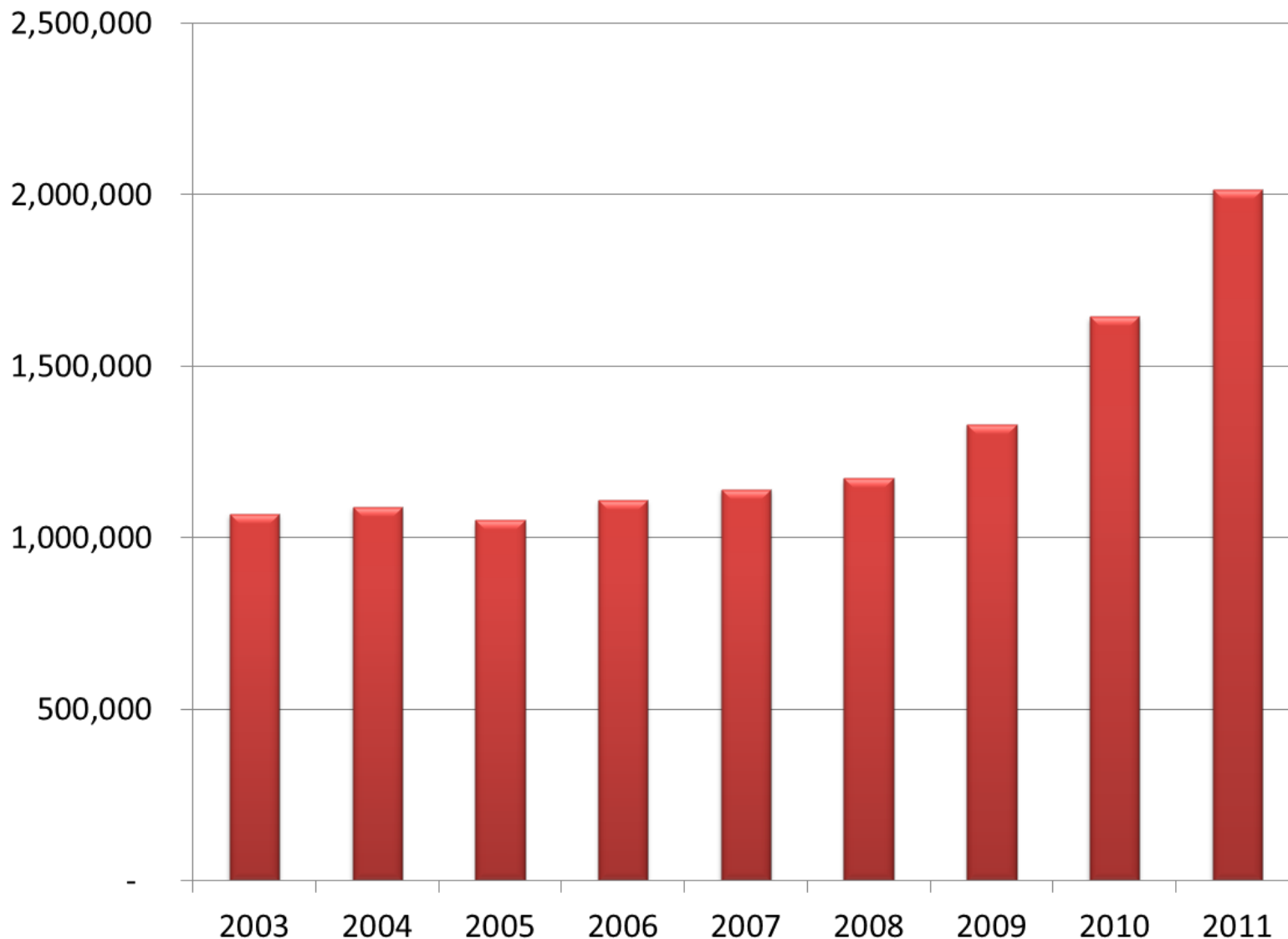
First Time Gas Sales Per Month



ND Gas Gathering Statistics

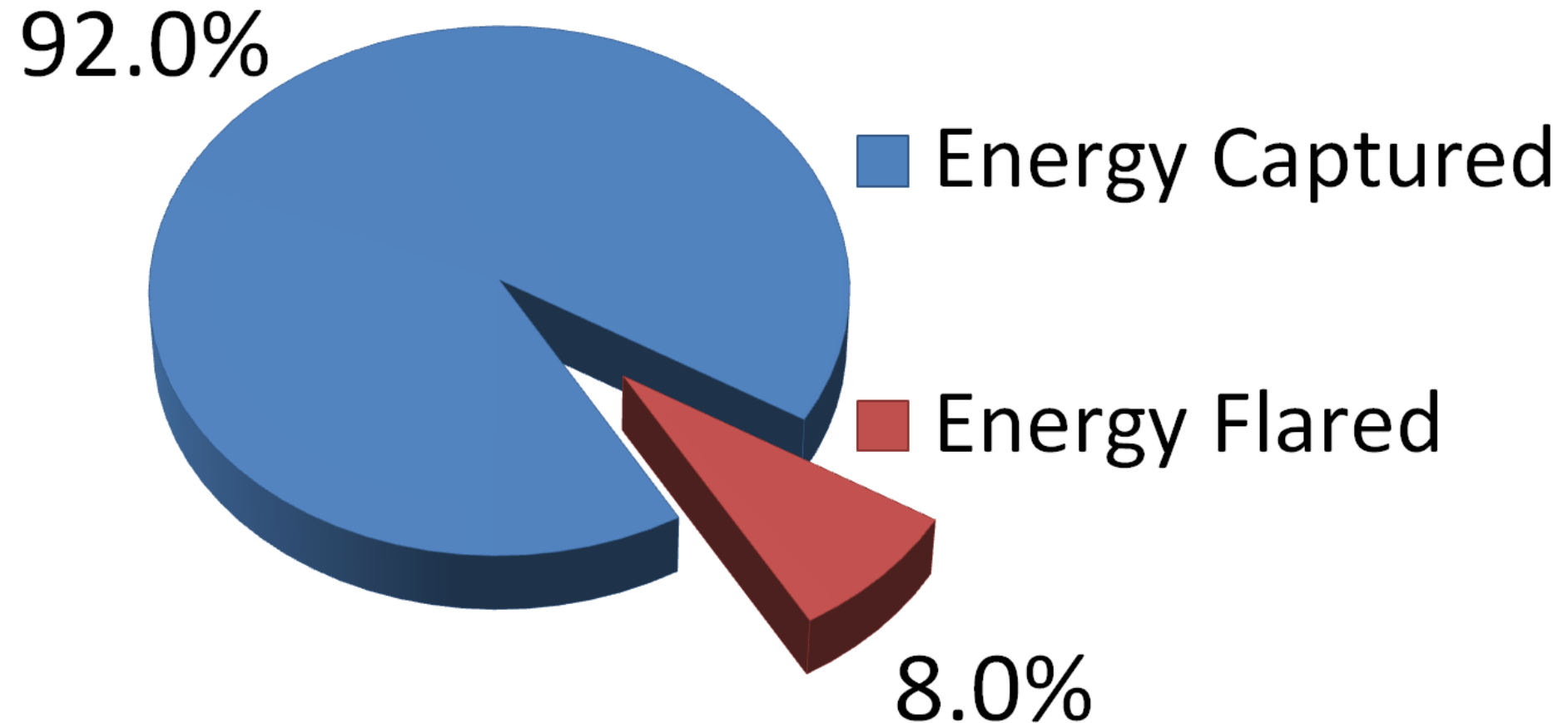


Homes Heated By ND Natural Gas



Based on Average US Home Natural Gas Consumption

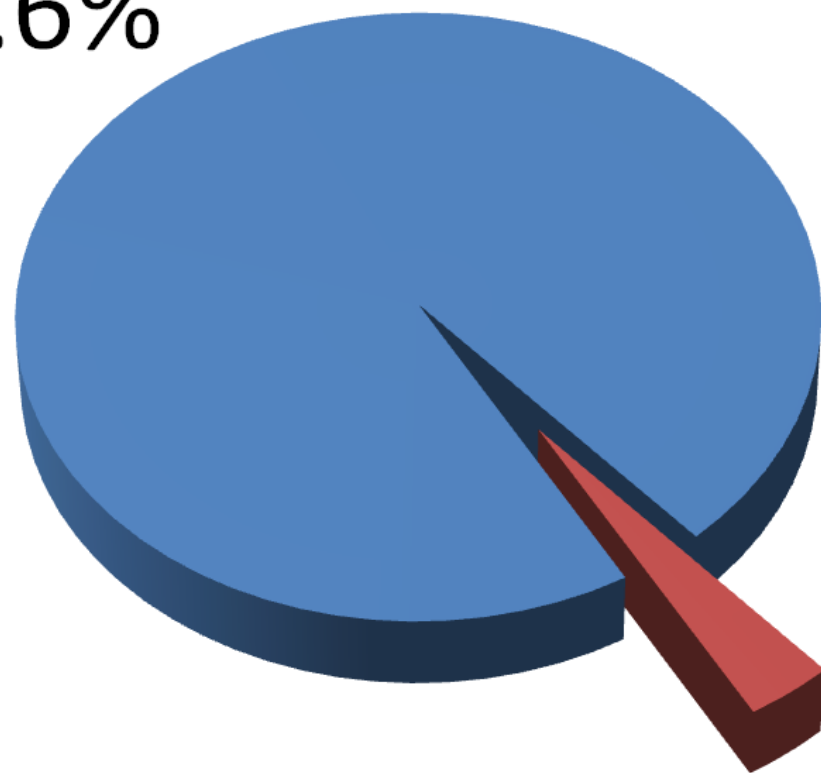
ND Oil & Gas Development Efficiency



March 2012 Data

ND Oil & Gas Development Efficiency

96.6%



■ Economic Value Captured

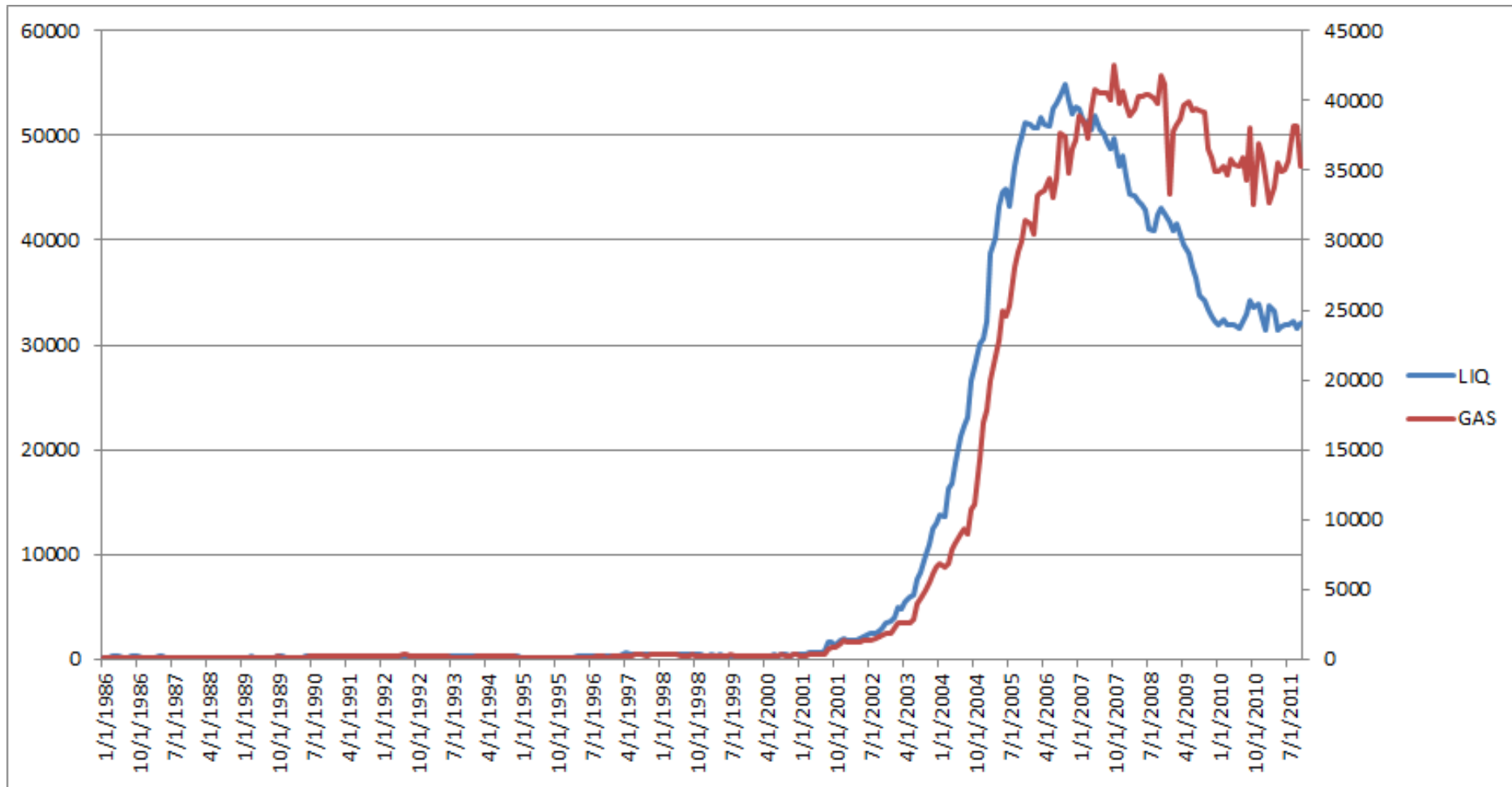
■ Economic Value Flared

3.4%

March 2012 Production Data, Oil Price of \$84.73/bbl,
Natural Gas/NGL Wellhead Price of \$8.00/MCF

Natural Gas Study

Montana Bakken Production



Source: EPRINC – Left Axis Oil, BOPD – Right Axis Gas, MCFD

Elm Coulee Montana

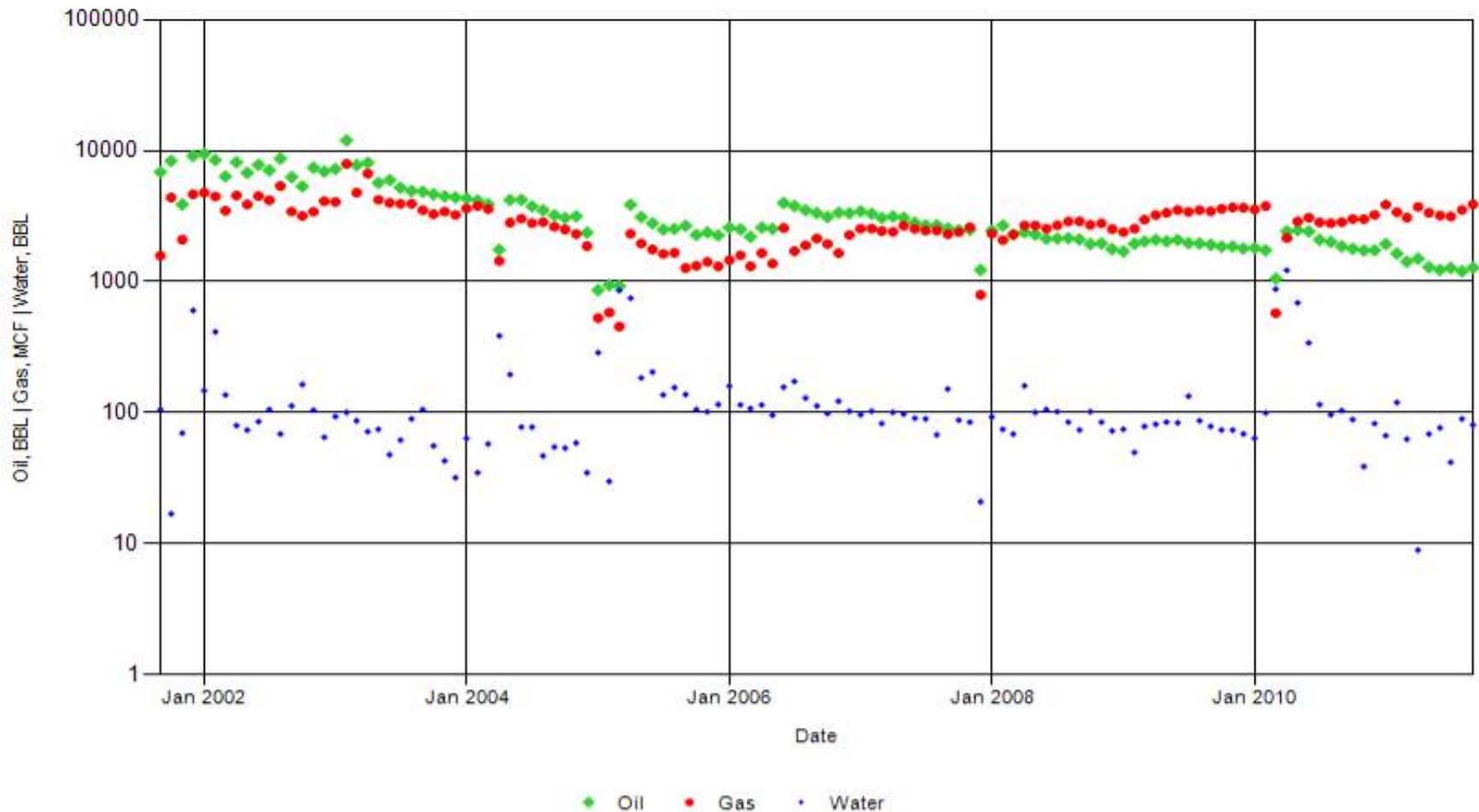
API Number:

25083218940000

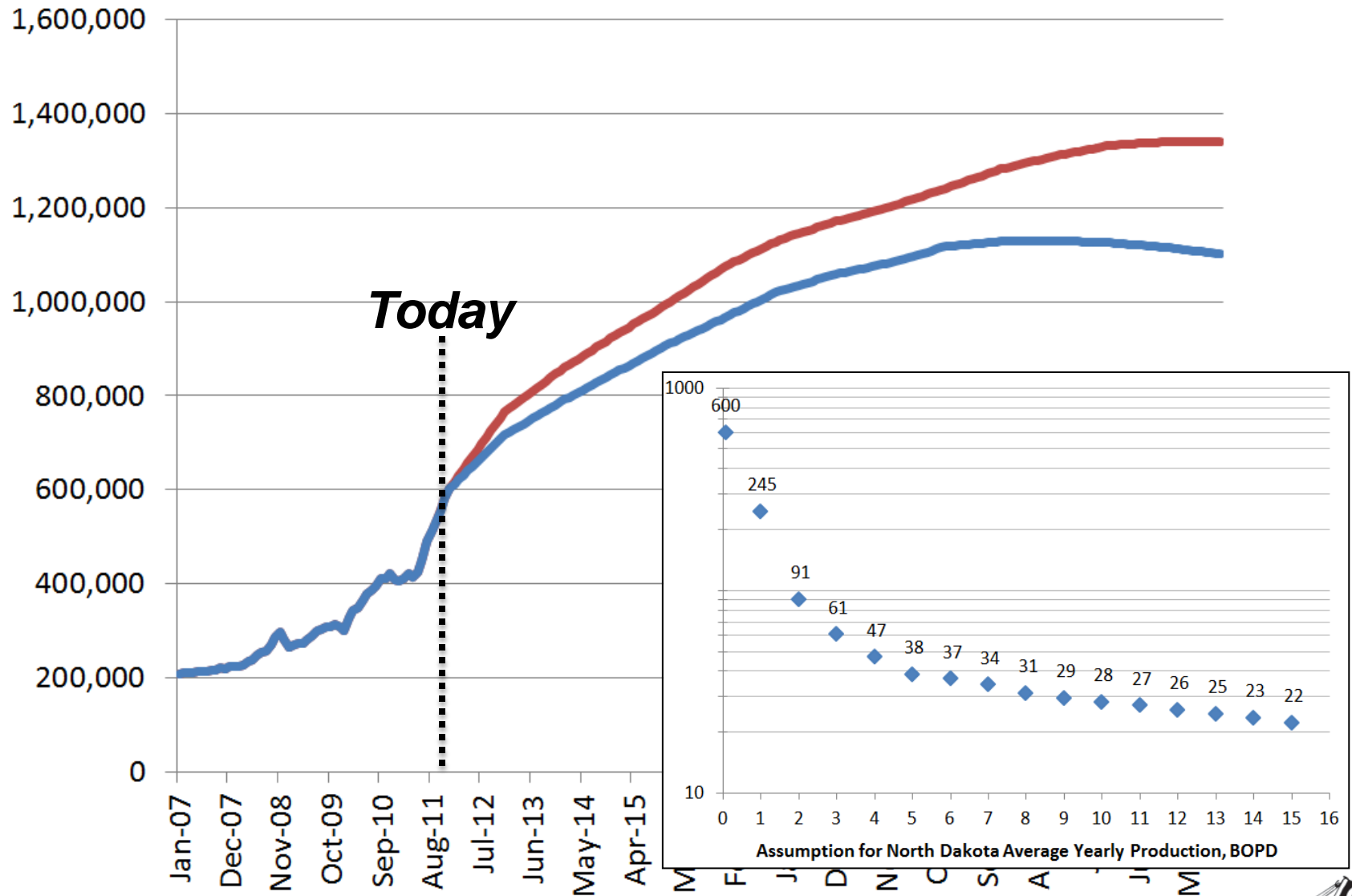
Well Name:

Burning Tree Vaira 5-2H

Well Production



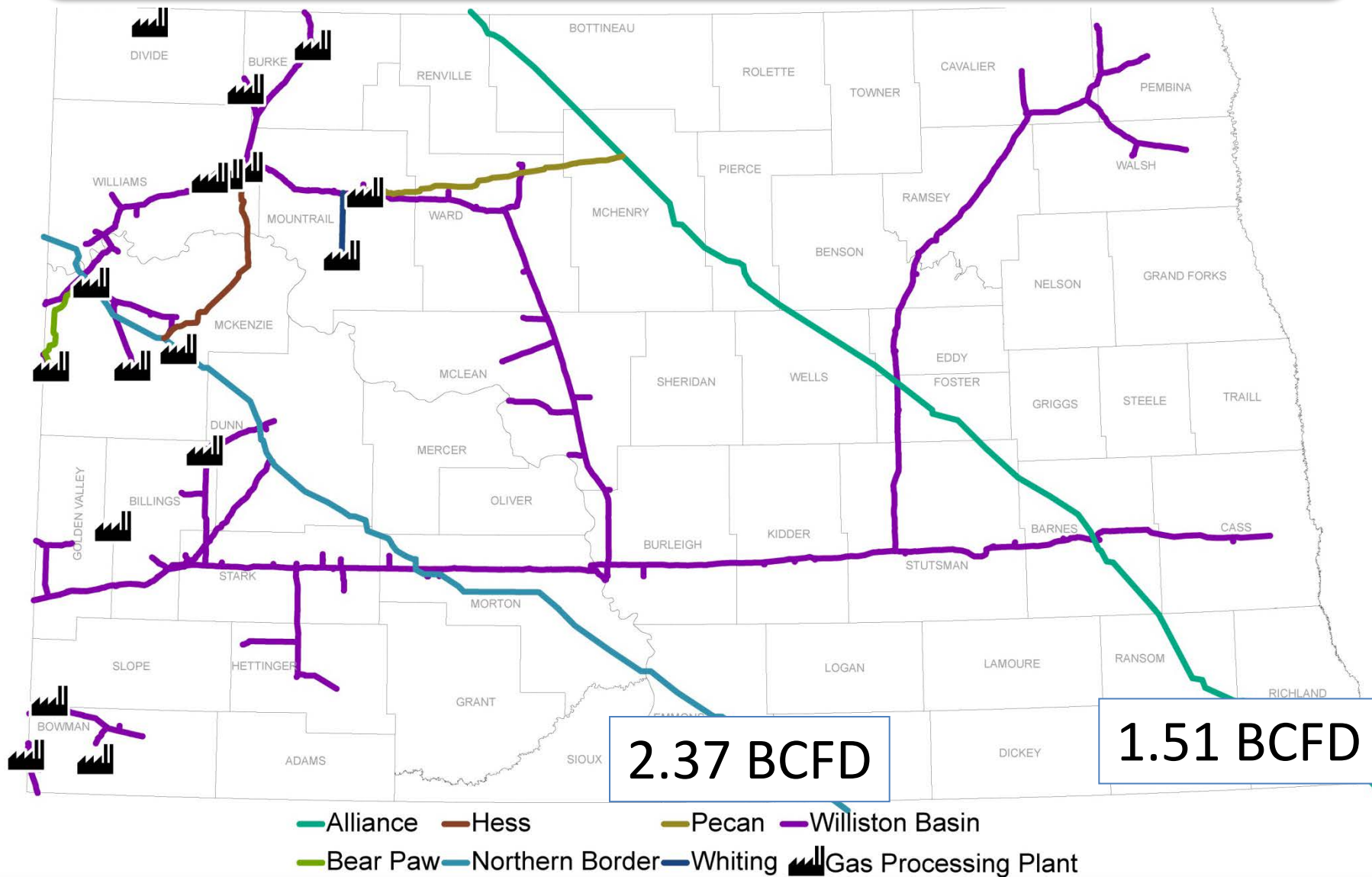
Forecasting Williston Basin Oil Production, BOPD



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Gas Transmission Pipelines



Governor's Pipeline Summit

June 14, 2012

9:00am-11:30am

Bismarck State College's
National Energy Center of Excellence

More details to come...

Contact Information

North Dakota Pipeline Authority

600 E. Boulevard Ave. Dept. 405
Bismarck, ND 58505-0840

Phone: (701)220-6227

Fax: (701)328-2820

E-mail: jjkringstad@ndpipelines.com

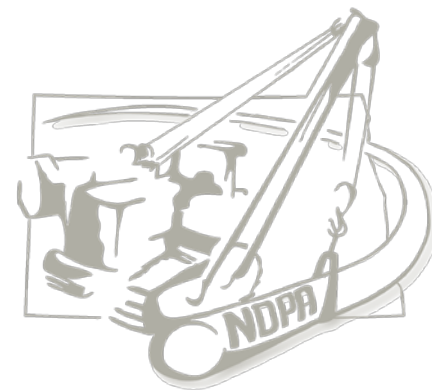
Websites:

www.pipeline.nd.gov

www.ndpipelines.wordpress.com

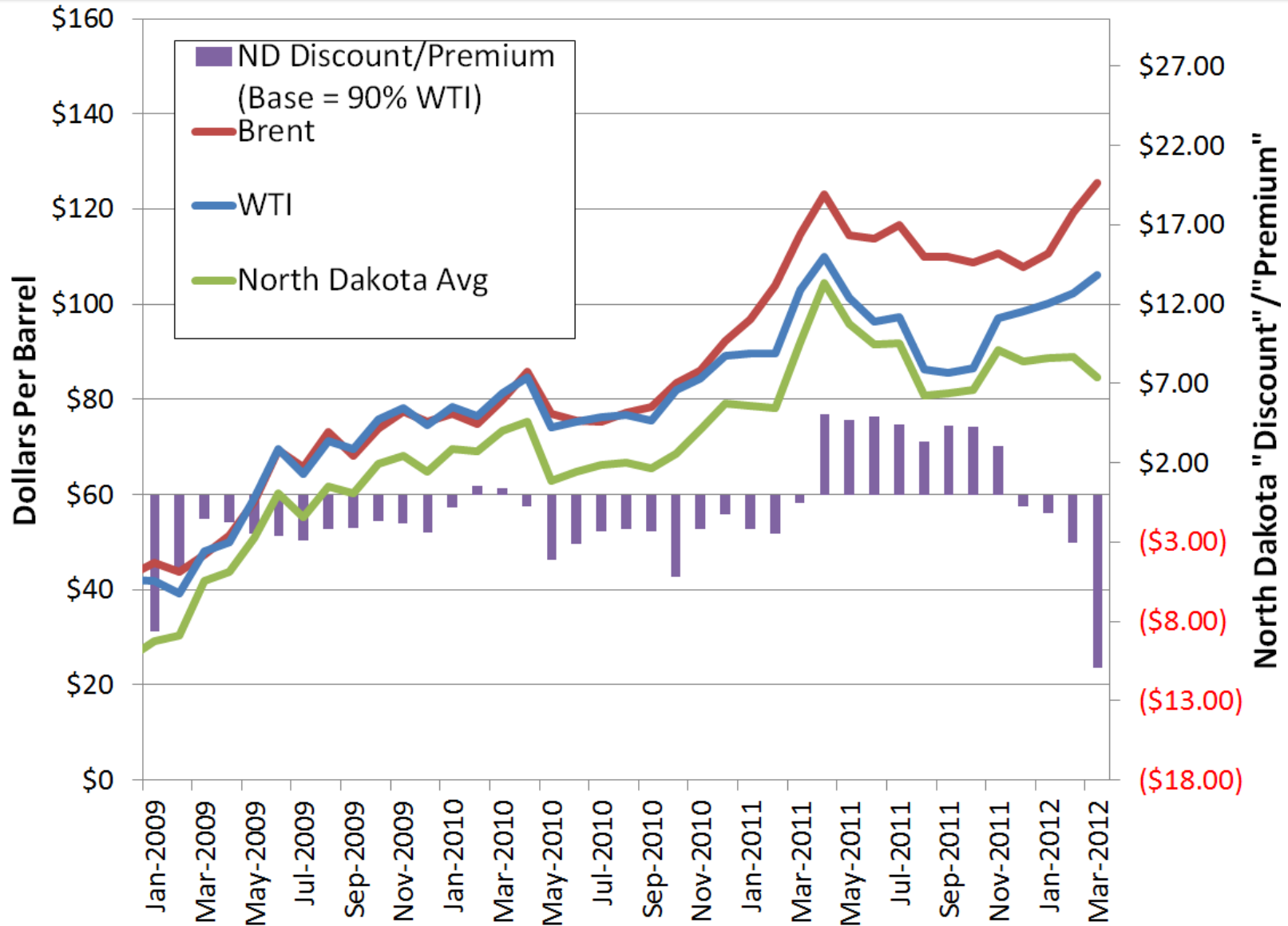


**Know what's below.
Call before you dig.**



Supporting Material

Brent-WTI-ND Crude Pricing



US Williston Basin Crude Oil Export Options - April 2012

Year End System Capacity, Barrels Per Day

	2007	2008	2009	2010	2011	2012	2013	2014	2015*
Butte Pipeline	92,000	104,000	118,000	118,000	118,000	118,000	118,000	118,000	118,000
Butte Expansion	-	-	-	-	27,000	27,000	27,000	27,000	27,000
Butte Loop*	-	-	-	-	-	30,000	120,000	120,000	120,000
Tesoro Mandan Refinery (June/July 2012)	58,000	58,000	58,000	58,000	58,000	68,000	68,000	68,000	68,000
Enbridge Mainline North Dakota	80,000	110,000	110,000	161,500	185,000	210,000	210,000	210,000	210,000
Enbridge Bakken Expansion Program (Q1-11/Q1-13)	-	-	-	-	25,000	25,000	145,000	145,000	145,000
Plains Bakken North (Q4 -12, Up to 75,000 BOPD)	-	-	-	-	-	75,000	75,000	75,000	75,000
Plains Baker to Billings* (Mid-13)							50,000	50,000	50,000
High Prairie Pipeline* (Late 2013)	-	-	-	-	-	-	-	150,000	150,000
Enbridge Sandpiper* (Q1 2015, Up to 325,000 BOPD)	-	-	-	-	-	-	-	-	325,000
TransCanada Keystone XL* (2015, Up to 100,000 BOPD)	-	-	-	-	-	-	-	-	100,000
ONEOK Bakken Crude Express Pipeline* (2015, Up to 200,000 BOPD)									200,000
Pipeline Only Total	230,000	272,000	286,000	337,500	413,000	553,000	813,000	963,000	1,588,000
EOG Rail, Stanley, ND (Up to 90,000 BOPD)	-	-	65,000	65,000	65,000	65,000	65,000	65,000	65,000
Dakota Transport Solutions, New Town, ND	-	-	-	20,000	40,000	40,000	40,000	40,000	40,000
Various Sites in Minot, Dore, Donnybrook, Gascoyne, and Stampede (est)	-	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000
Rangeland COLT Hub, Epping, ND (Q2 2012)	-	-	-	-	-	100,000	100,000	100,000	100,000
Hess Rail, Tioga, ND (Up to 120,000 BOPD)	-	-	-	-	-	60,000	60,000	60,000	60,000
Bakken Oil Express, Dickinson, ND	-	-	-	-	100,000	100,000	100,000	100,000	100,000
Savage Services, Trenton, ND (Q2 2012 Unit Trains)	-	-	-	-	-	90,000	90,000	90,000	90,000
Enbridge, Berthold, ND (Q4 2012)	-	-	-	-	-	10,000	80,000	80,000	80,000
Great Northern Midstream, Fryburg, ND (Q4 2012)	-	-	-	-	-	60,000	60,000	60,000	60,000
Musket, Dore, ND (Q2 2012)	-	-	-	-	-	70,000	70,000	70,000	70,000
Plains, Ross, ND	-	-	-	-	20,000	20,000	65,000	65,000	65,000
US Development Group - Van Hook, New Town, ND	-	-	-	-	-	35,000	70,000	70,000	70,000
Basin Transload, Zap, ND (Estimate Not Confirmed)					20,000	40,000	40,000	40,000	40,000
Rail Only Total	-	30,000	95,000	115,000	275,000	720,000	870,000	870,000	870,000
All Transportation Total	230,000	302,000	381,000	452,500	688,000	1,273,000	1,683,000	1,833,000	2,458,000

*Project Still in the Review or Proposed Phase

Natural Gas Processing Capacity, Million Cubic Feet Per Day

Owner Company	Facility	County	2006	2008	2010	2011	2012	2013
North Dakota								
Bear Paw / OneOK	Lignite	Burke	6	6	6	6	6	6
Bear Paw / OneOK	Marmath	Slope	7.5	7.5	7.5	7.5	7.5	7.5
Bear Paw / OneOK	Garden Creek	McKenzie	NA	NA	NA	100	100	100
Bear Paw / OneOK	Stateline I	Williams	NA	NA	NA	NA	100	100
Bear Paw / OneOK	Stateline II	Williams	NA	NA	NA	NA	100	100
Petro Hunt	Little Knife	Billings	32	32	32	32	32	32
True Oil	Red Wing Creek	McKenzie	4	4	4	4	4	4
Sterling Energy	Ambrose	Divide	0.5	0.5	0.5	0.5	0.5	0.5
EOG Resources	Stanley	Mountrail	NA	20	0*	0*	0*	0*
Whiting Oil & Gas	Robinson Lake	Mountrail	NA	30	45	90	90	90
Whiting Oil & Gas	Ray	Williams	NA	10	10	10	NA	NA
Whiting Oil & Gas	Belfield	Stark	NA	NA	NA	30	30	30
XTO - Nesson	Ray	Williams	NA	10	10	10	10	10
Bear Paw / OneOK	Grasslands	McKenzie	63	100	100	100	100	100
Hess	Tioga	Williams	110	120	120	120	250	250
Hiland Partners	Badlands	Bowman	4	40	40	40	40	40
Hiland Partners	Norse	Divide	NA	NA	25	25	25	25
Hiland Partners	Watford City	McKenzie	NA	NA	NA	50	50	50
Summit Resources	Knutson	Billings	NA**	NA**	NA**	NA**	NA**	NA**
Saddle Butte	Watford City	McKenzie	NA	NA	NA	45	45	45
Plains	Ross	Mountrail	NA	NA	NA	NA	NA	50-75
Aux Sable - Chicago, IL								
Aux Sable	Prairie Rose	Mountrail	NA	NA	110	110	110	110
		Total	227	380	510	780	1100	1150-1175