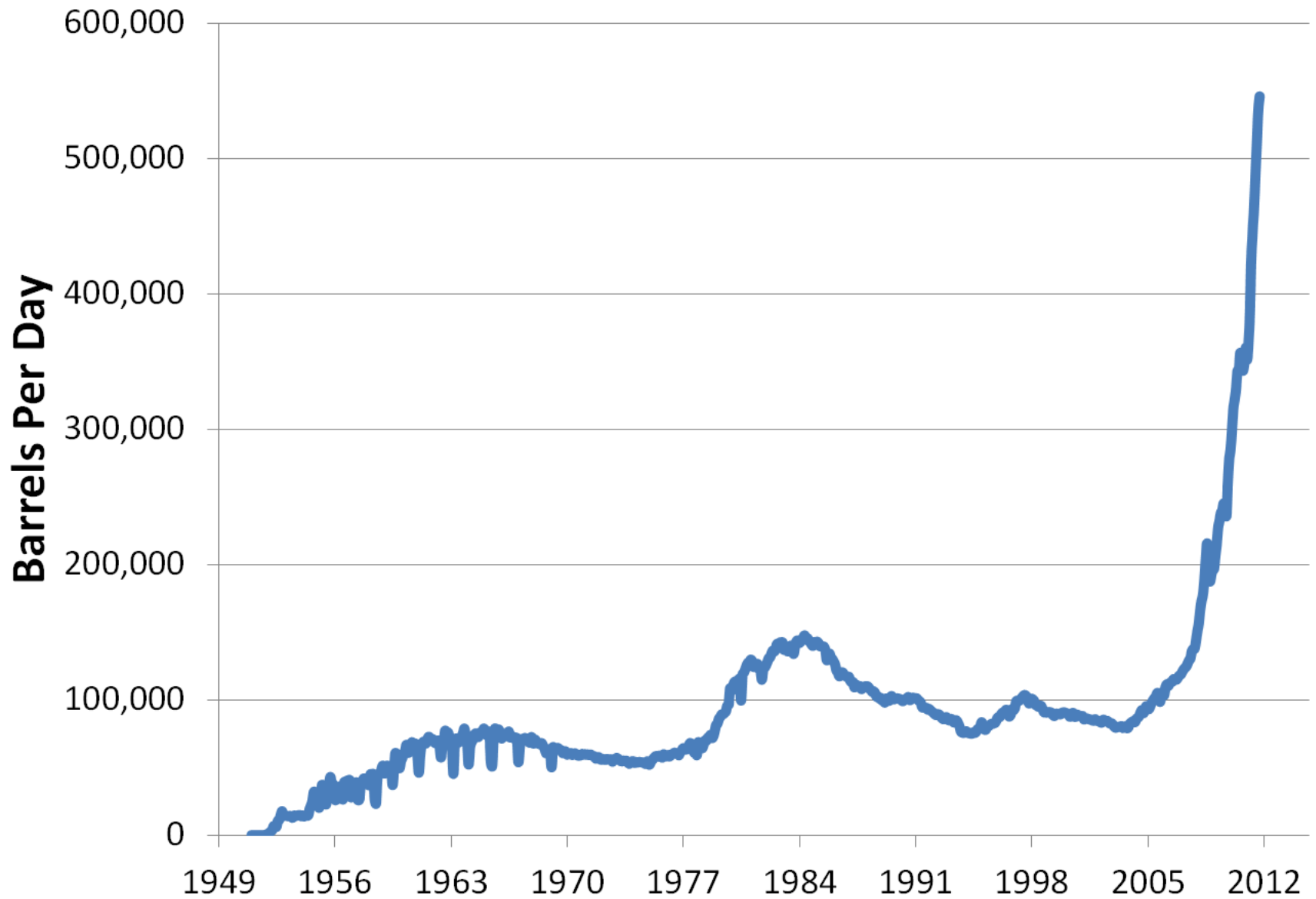


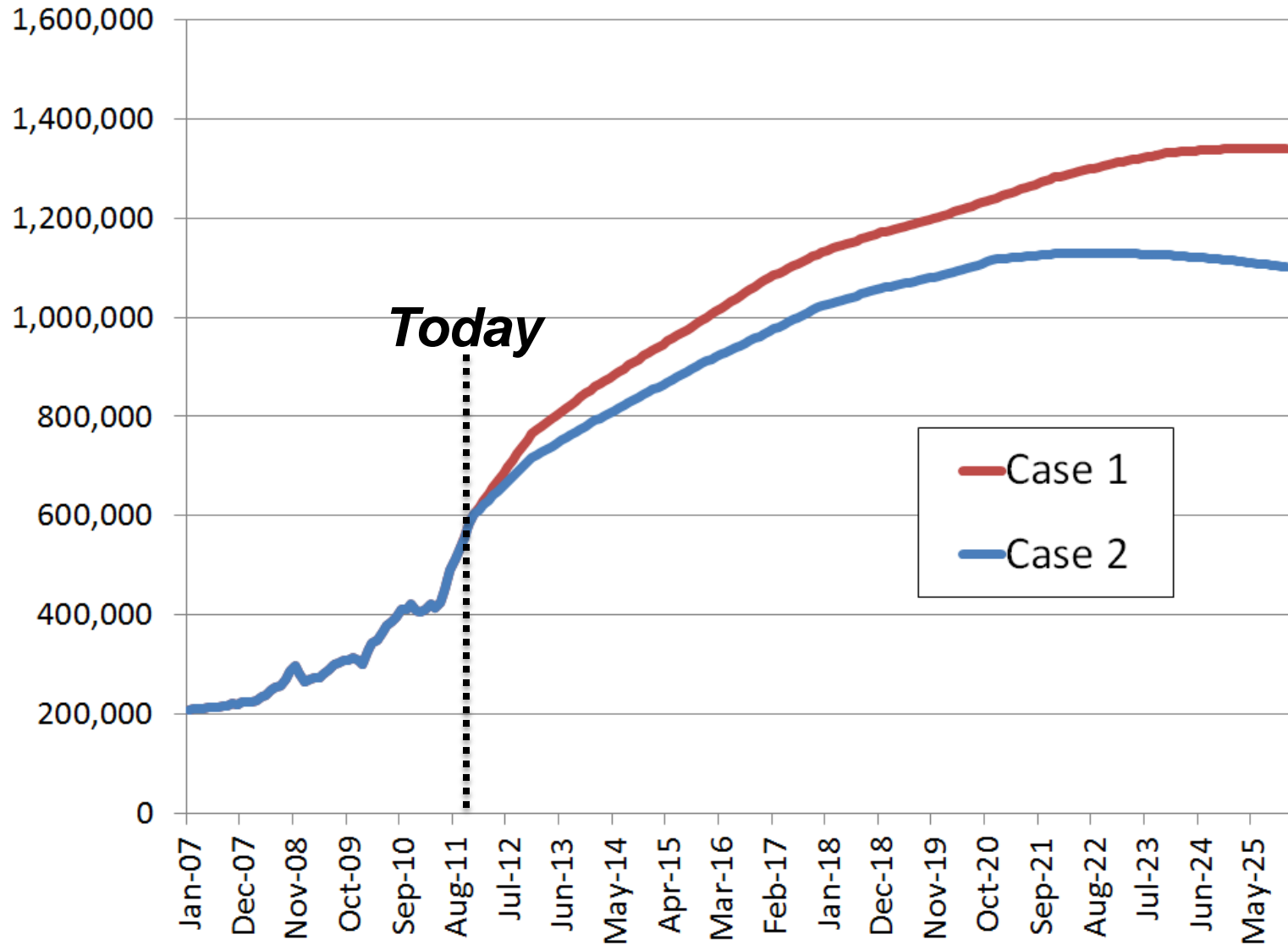


North Dakota Pipeline Authority
Energy Development and Transmission Committee
Justin J. Kringstad
March 20, 2012

North Dakota Crude Oil



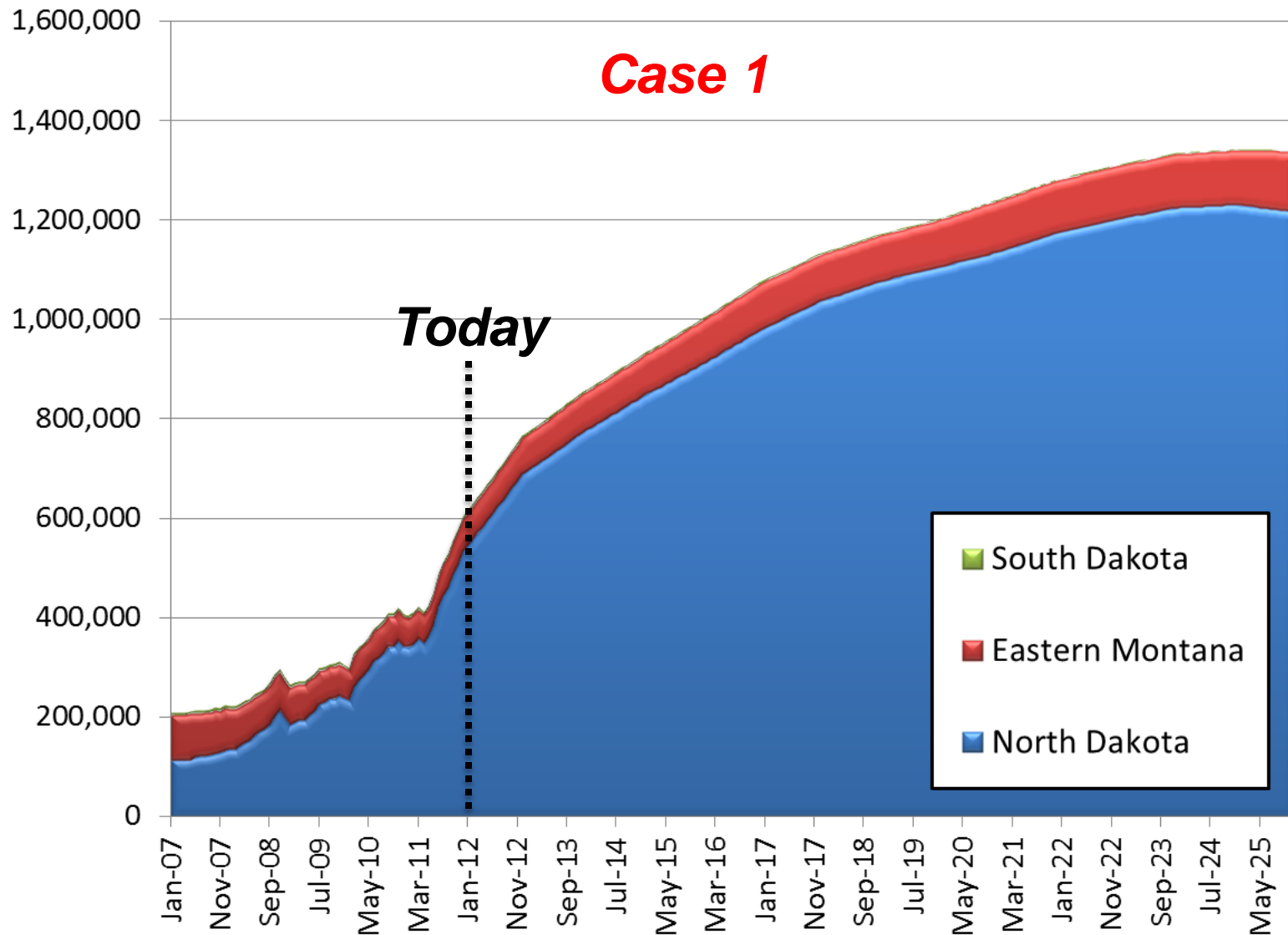
Forecasting Williston Basin Oil Production, BOPD



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



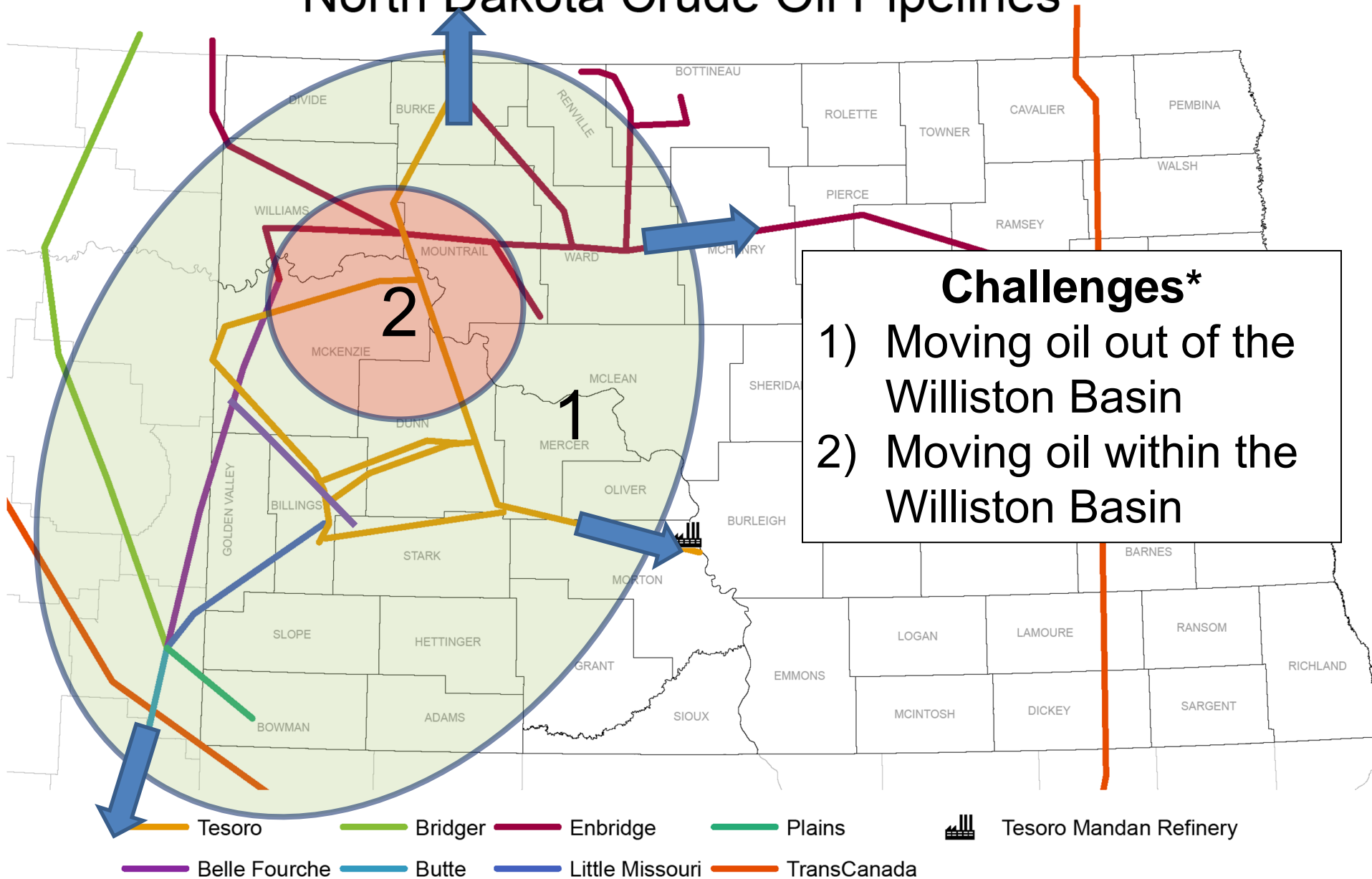
Forecasting Williston Basin Oil Production, BOPD



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

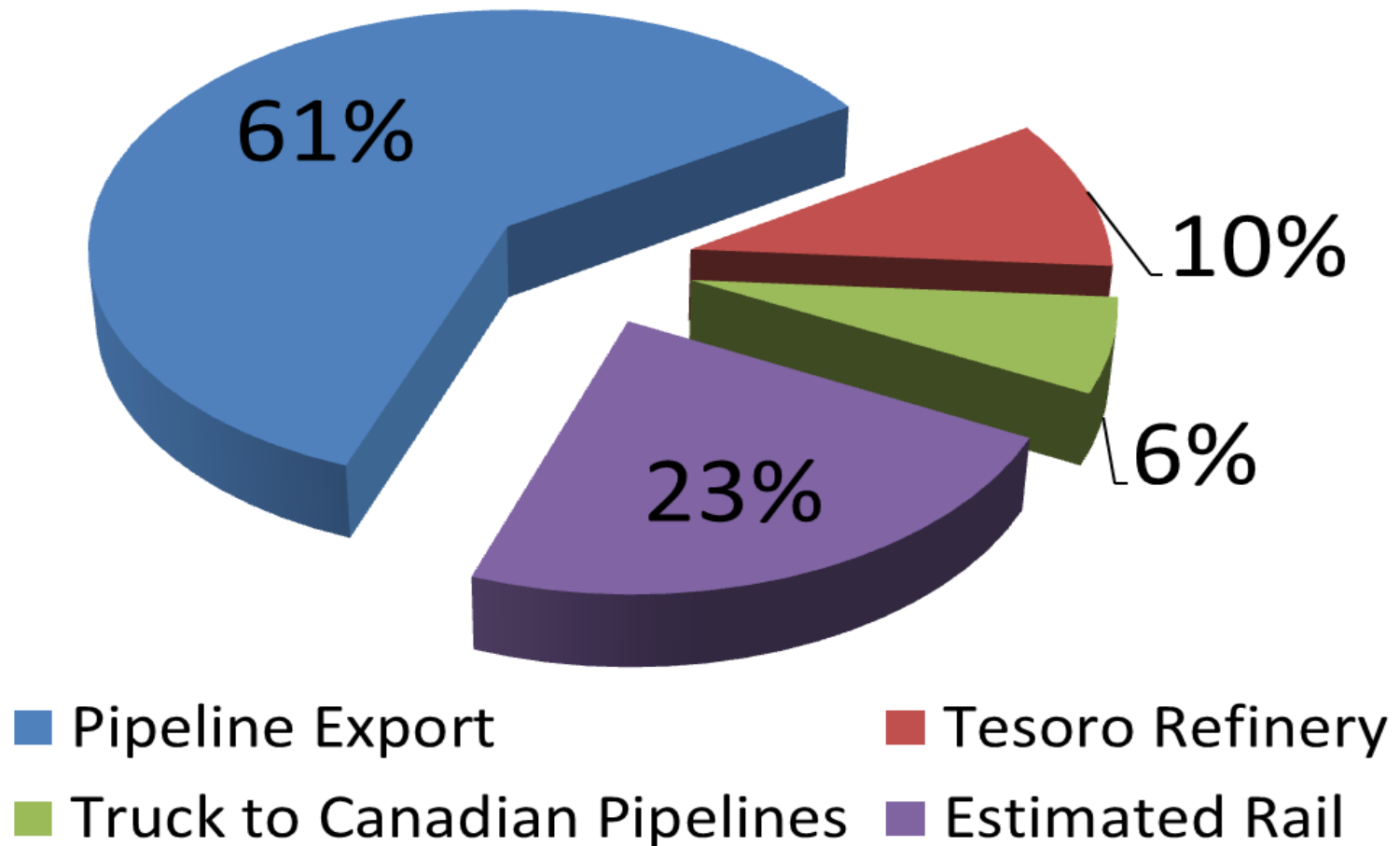


North Dakota Crude Oil Pipelines



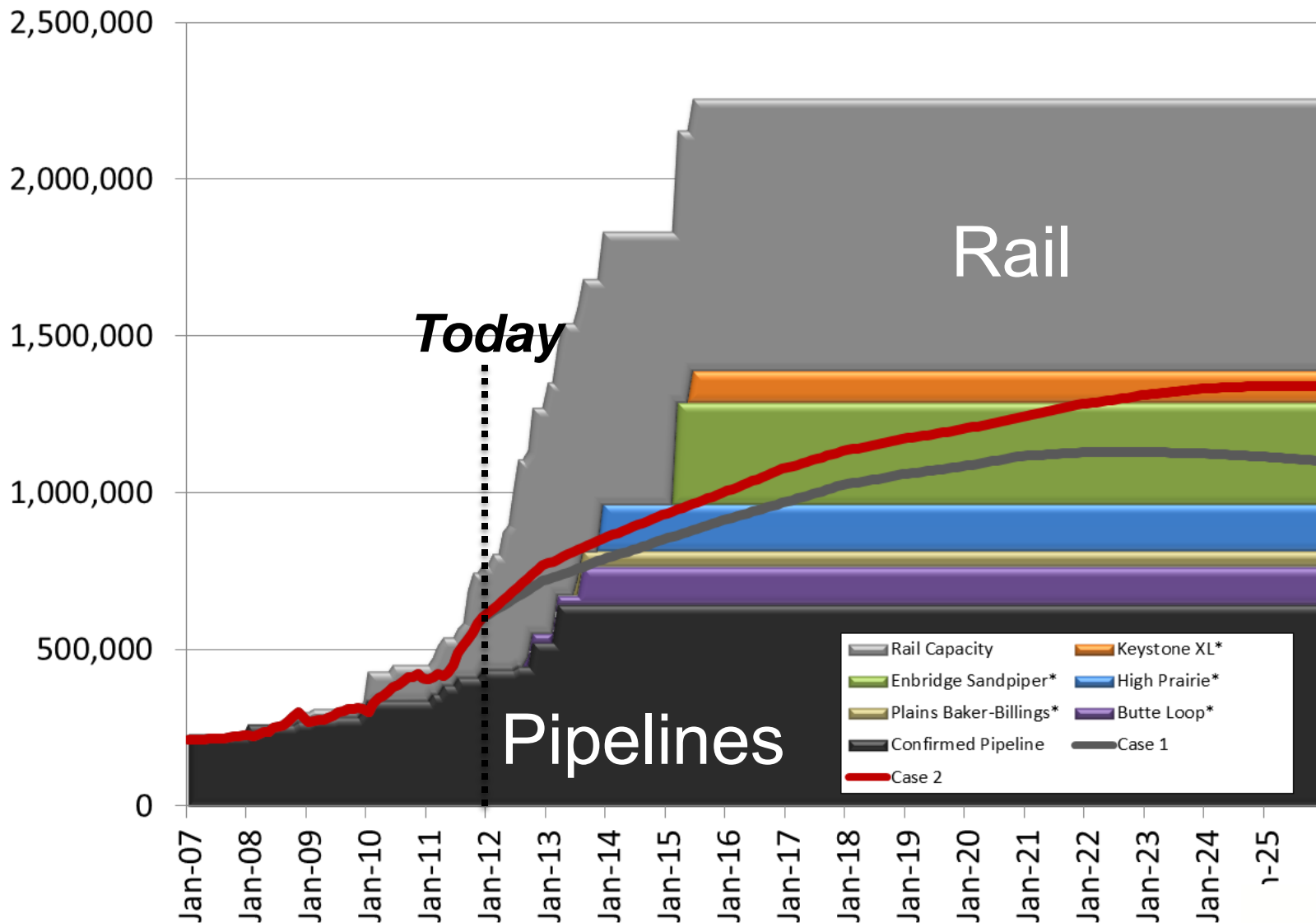
*Modified from Bridger and Belle Fourche Pipelines

Williston Basin Oil Transportation



December 2011 Estimates

Williston Basin Oil Production & Export Capacity, BOPD

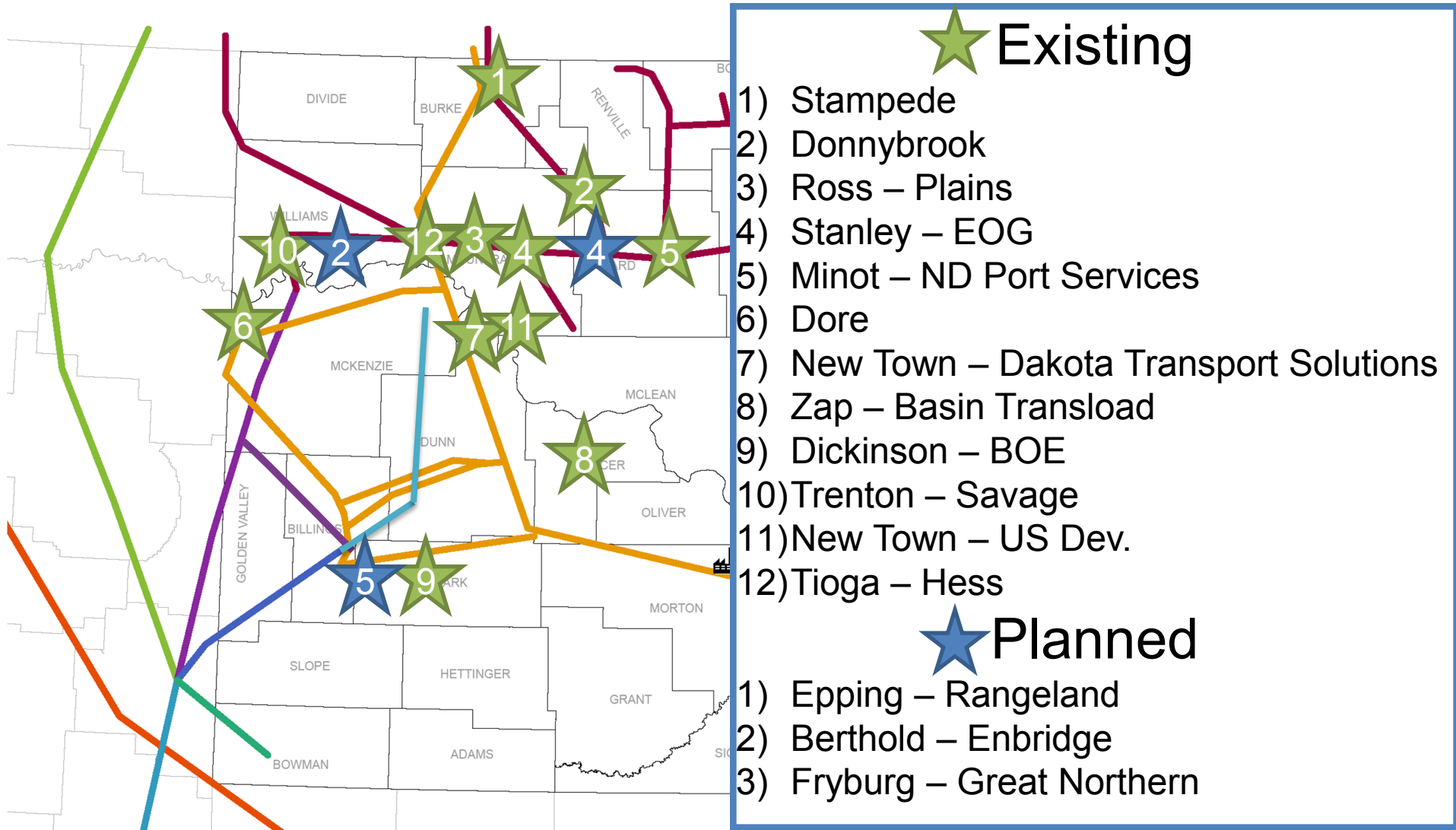


Production forecast is for visual demonstration purposes only and should not be considered accurate for any near or long term planning.

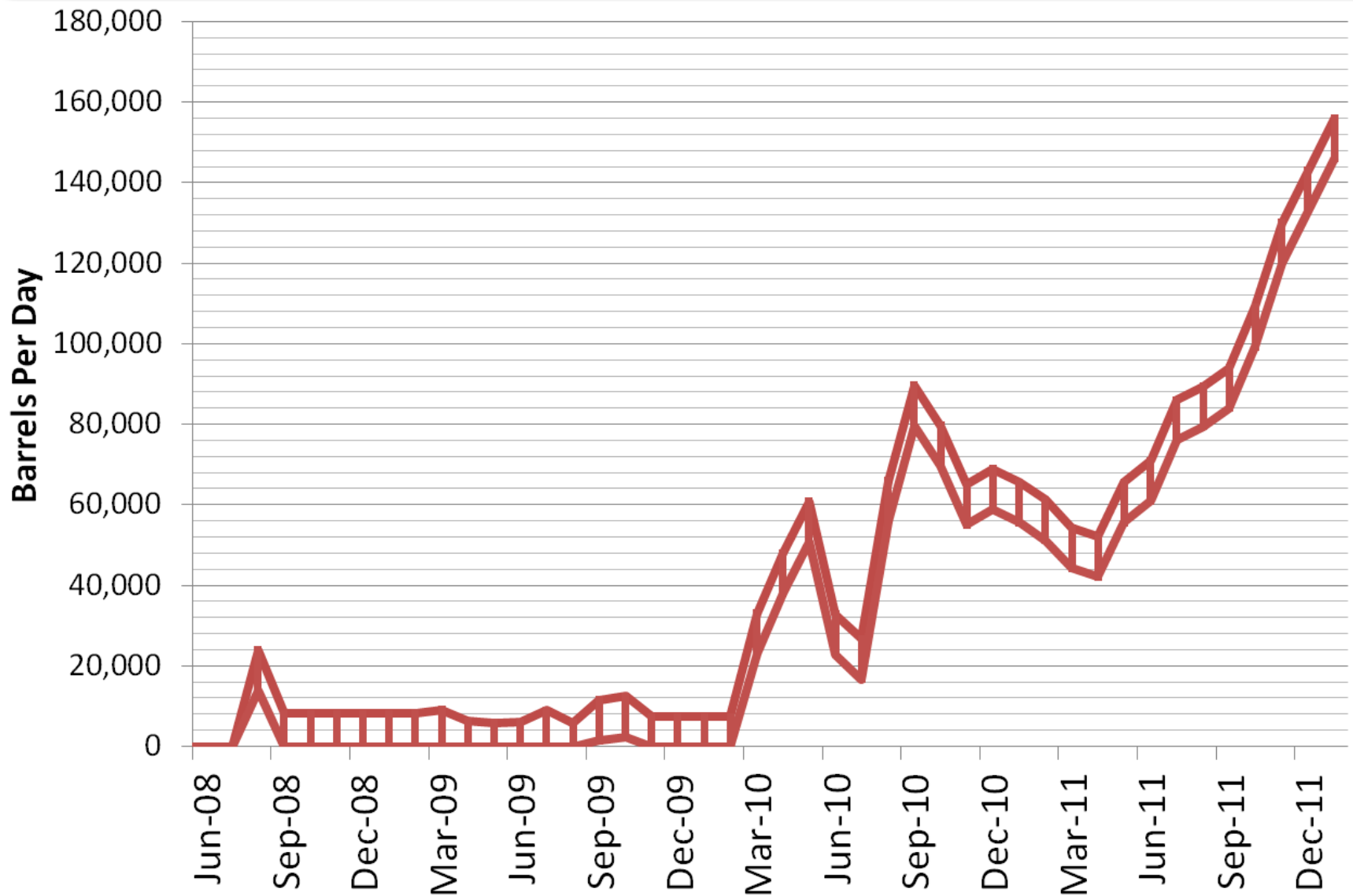
*Projects still in the proposed or internal review process



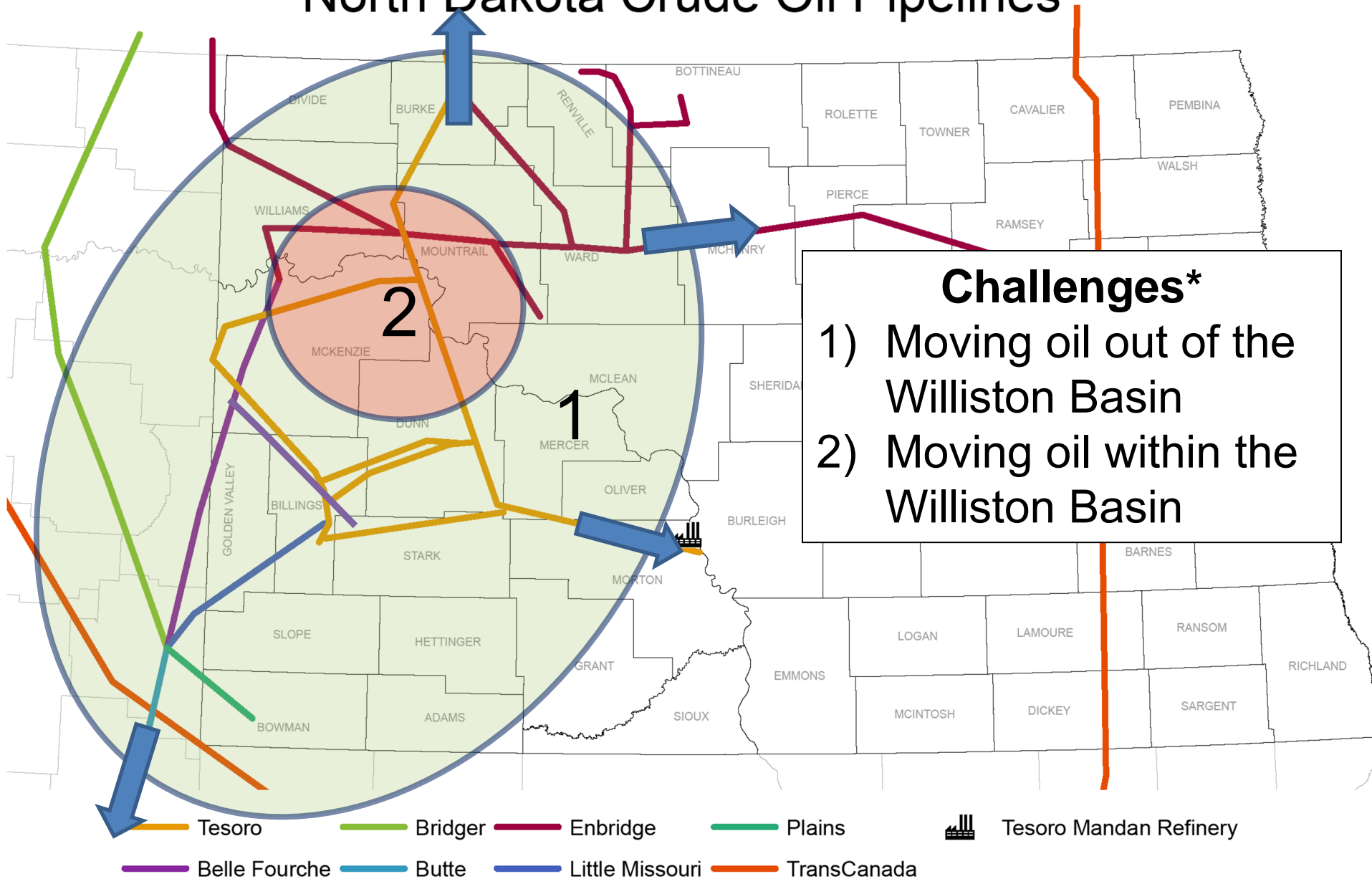
Existing & Planned Rail Locations



High-Low Rail Estimate, BOPD



North Dakota Crude Oil Pipelines

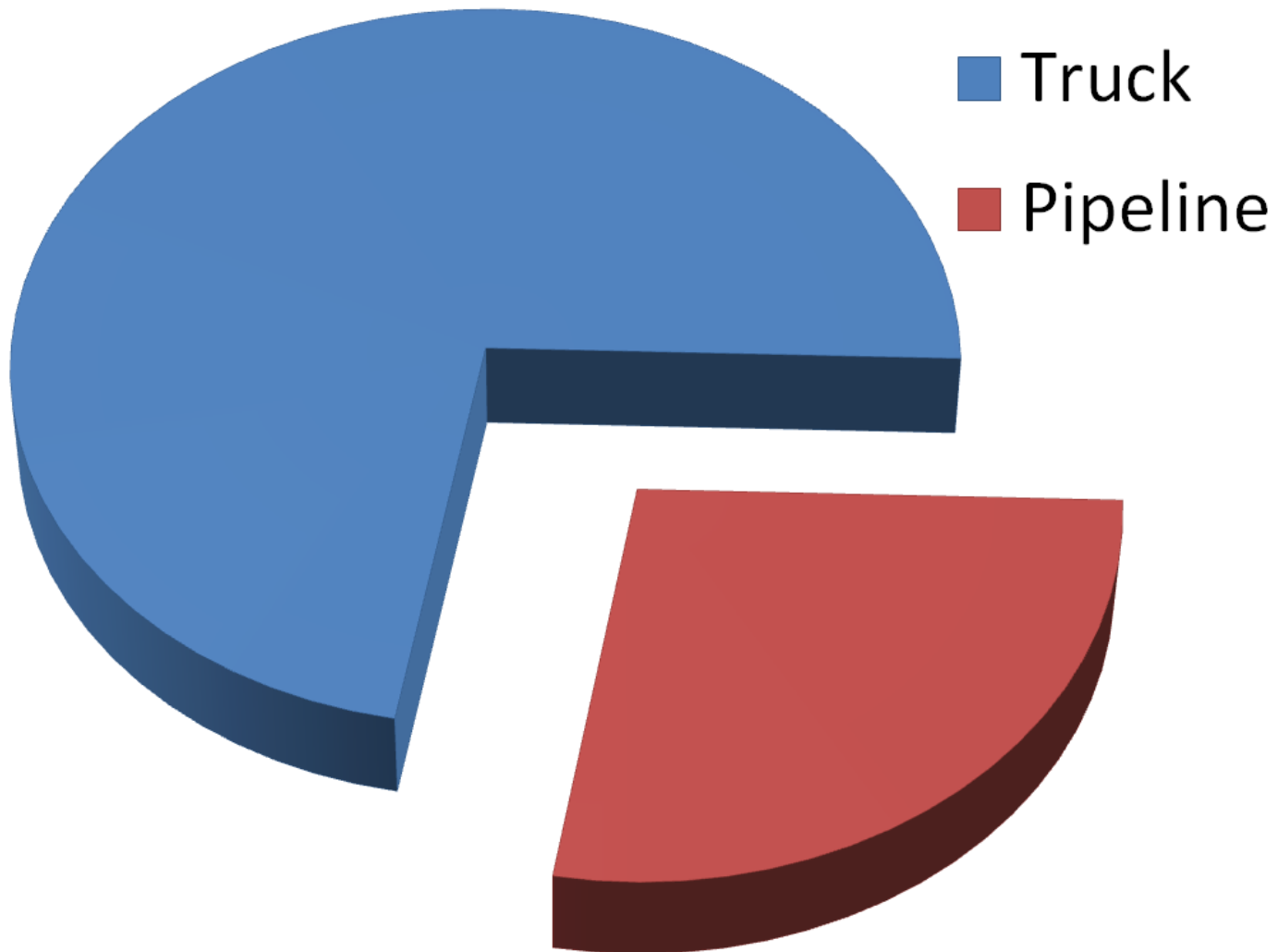


*Modified from Bridger and Belle Fourche Pipelines

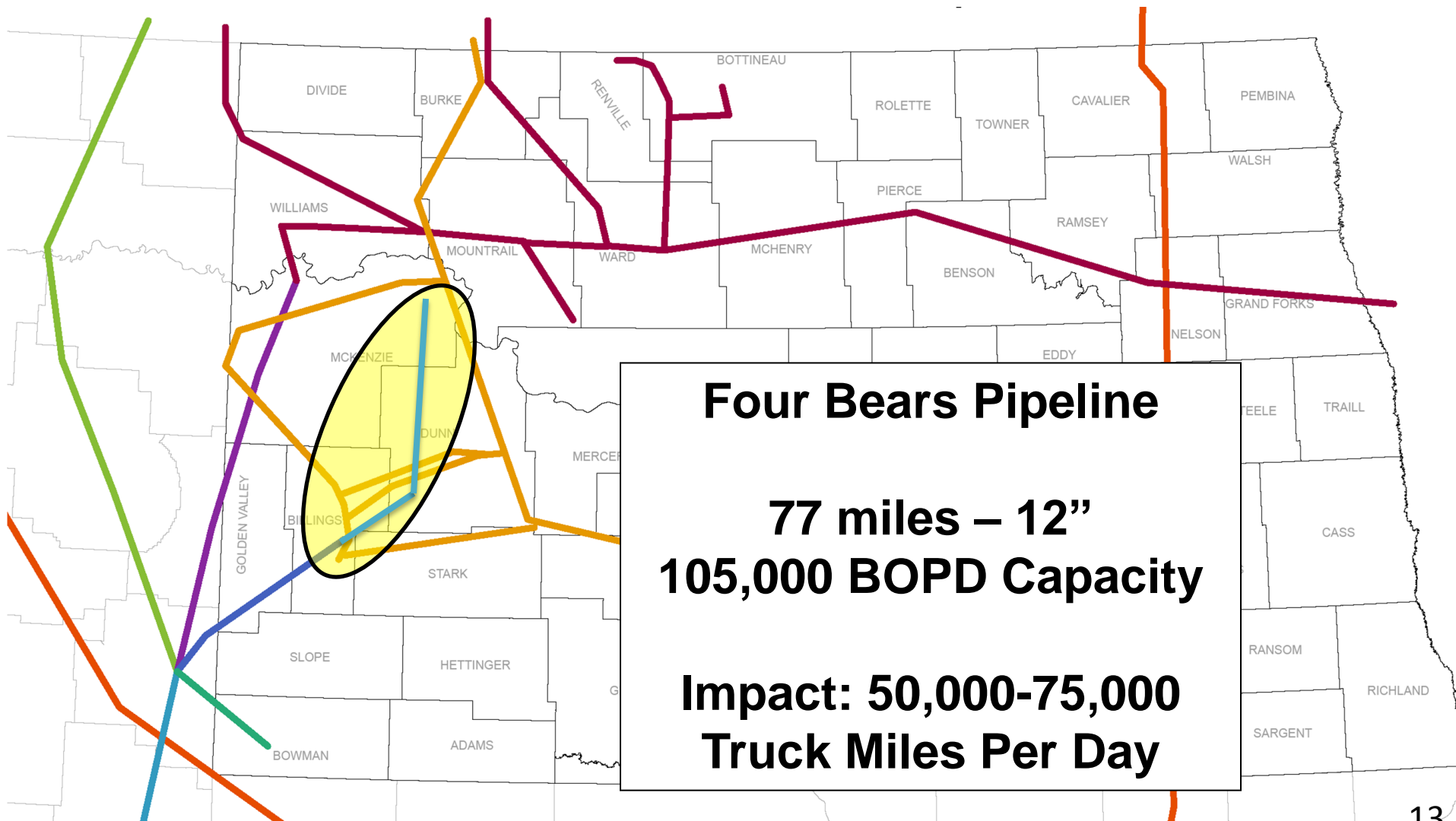
North Dakota Crude Gathering



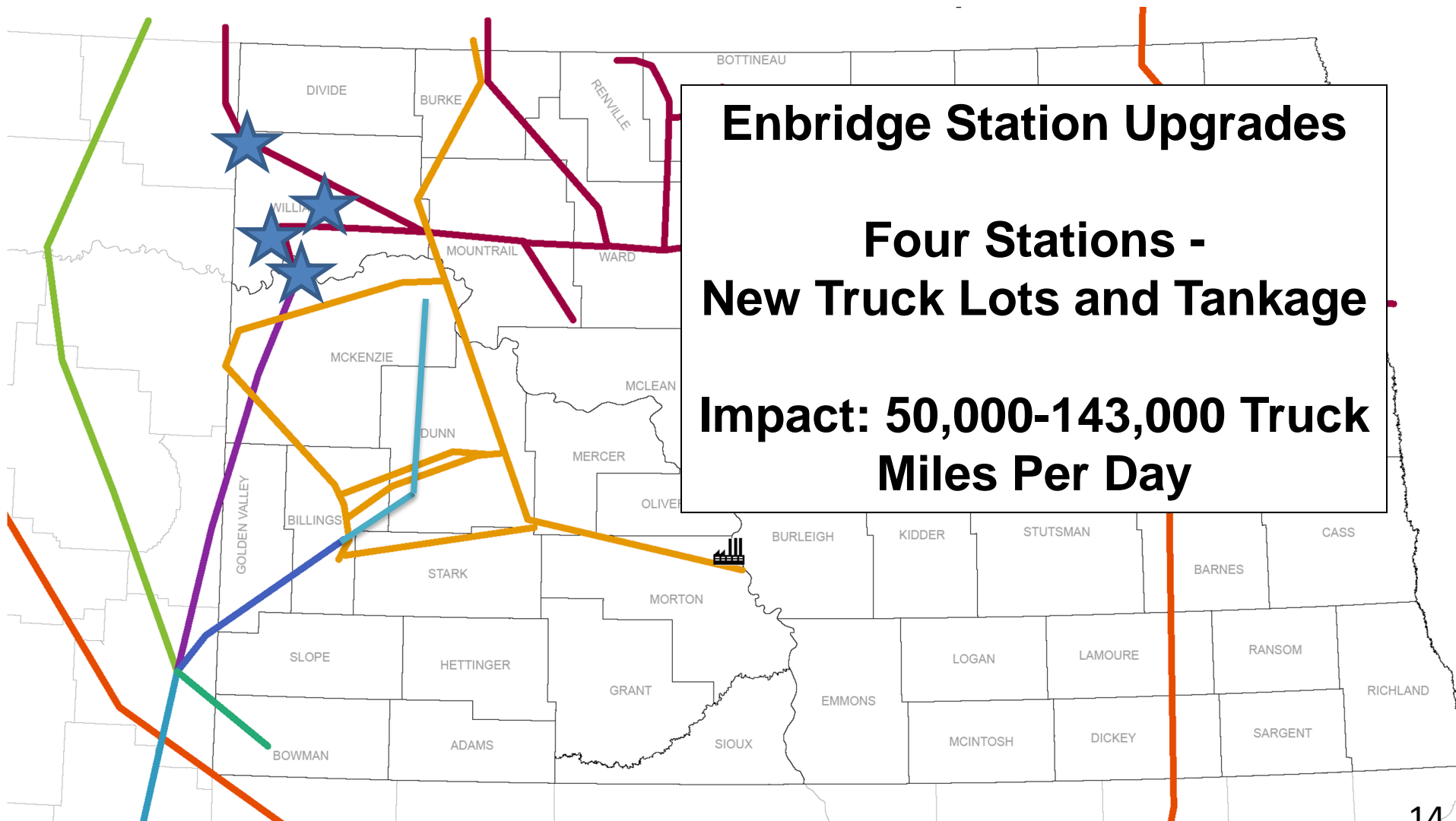
North Dakota Crude Gathering



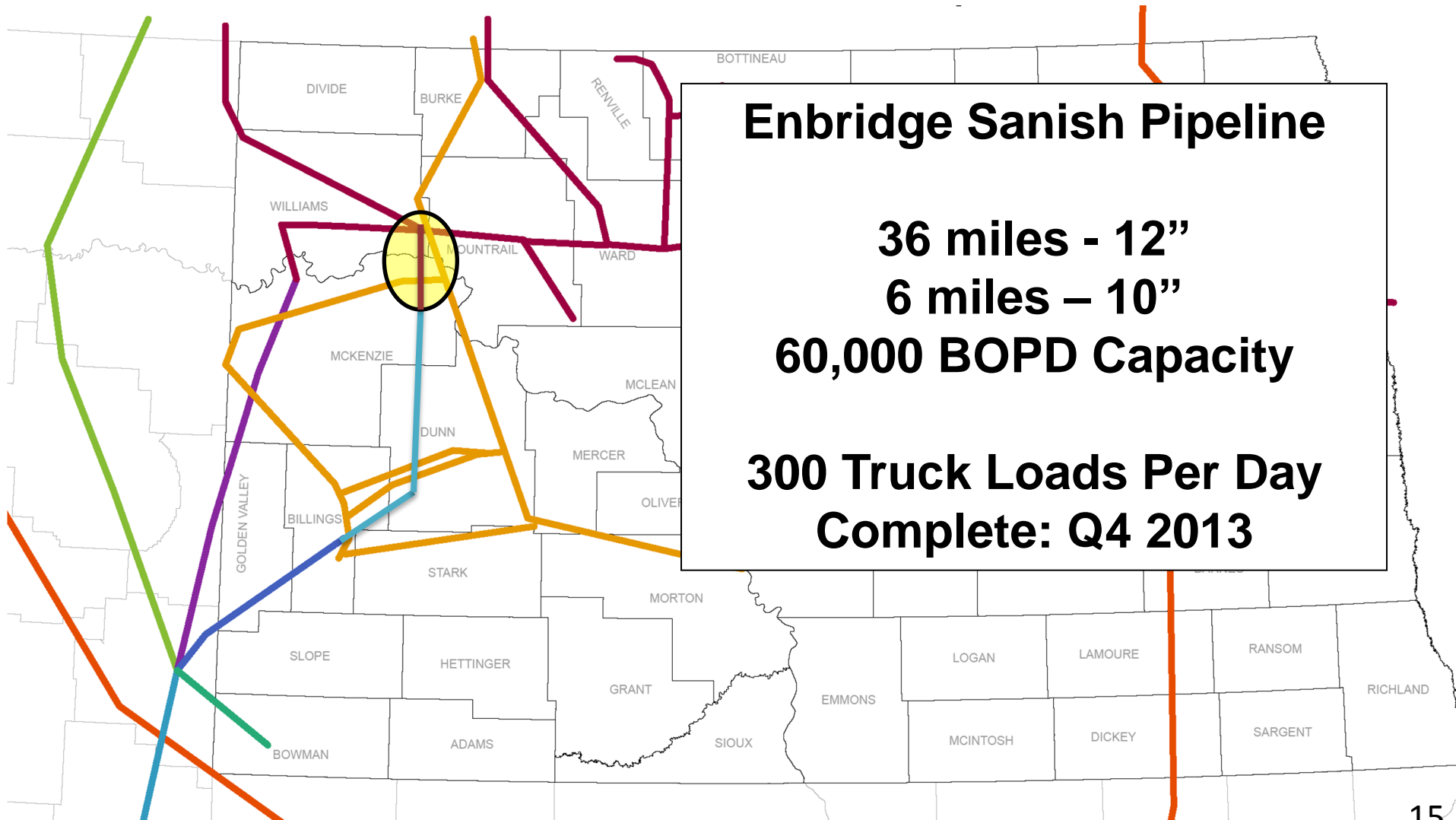
Reducing Truck Traffic



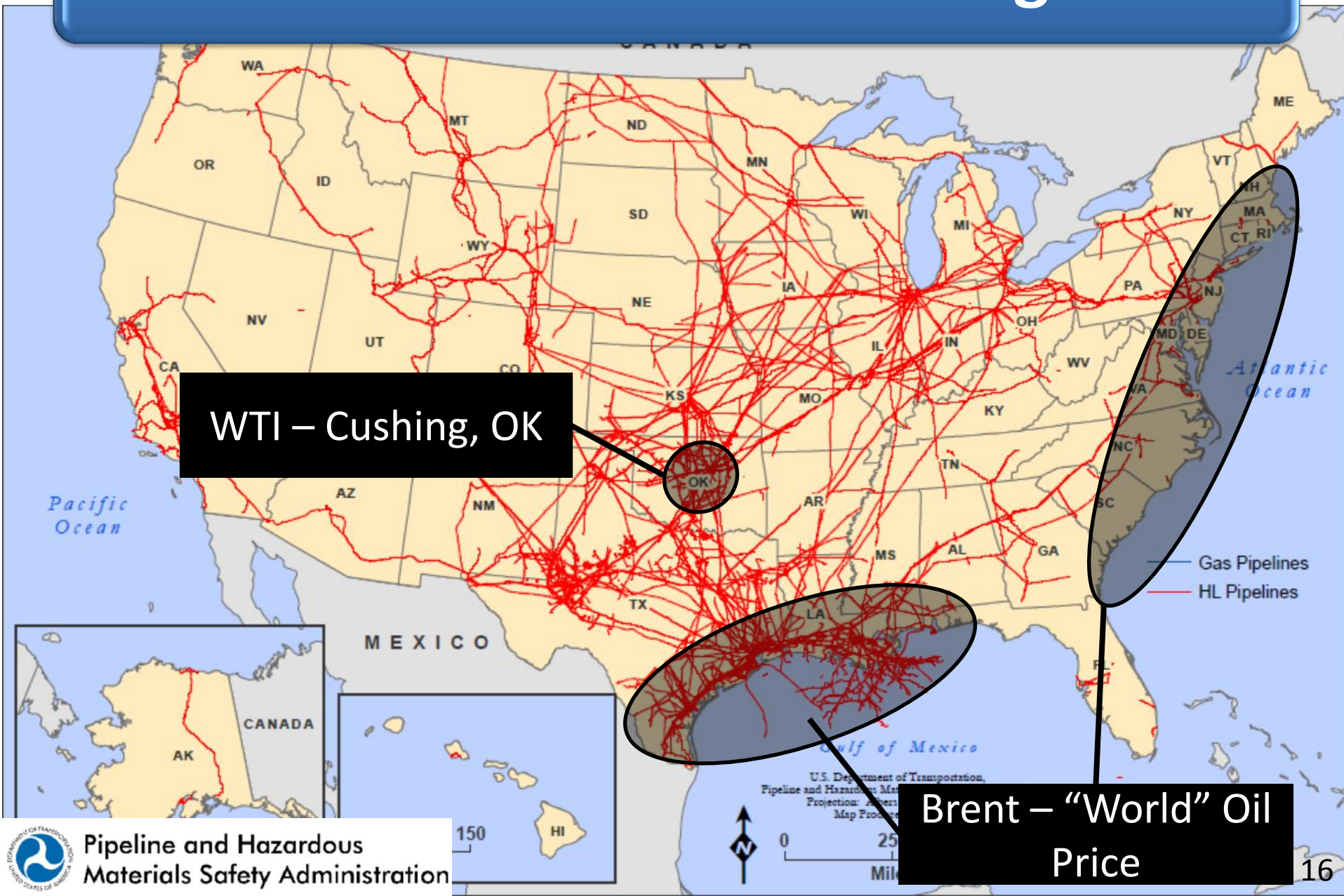
Reducing Truck Traffic



Reducing Truck Traffic



Brent-WTI Crude Pricing



Vancouver Inc.
Japan - 4,300 miles
Taiwan - 5,600 miles
S. Korea - 4,600 miles
China - 5,100 miles

San Francisco - 800 miles
Los Angeles - 1,100 miles

Puget Sound

BP	234
ConocoPhillips	100
Shell	110
Tecoco	120
USOC	30

San Francisco

Cheniere	210
ConocoPhillips	120
Shell	160
Tecoco	160
Valero	130

Los Angeles

BP	260
Cheniere	260
ConocoPhillips	190
ExxonMobil	190
Tecoco	37
Valero	130

Upgrades

Sensuade (Fort McMurray)	147
Suncor (Fort McMurray)	128
Shell (Gordale)	130
CNR (Hortale)	130
CP (New Long Lake)	73

Sales and

Imperial	140
Suncor	130
Shell	100
Liendendier	38
Hunk	38
Hunk Upgrader	40

Regina

Co-op Refinery	100
Upgrader	100
Moore Inc.	10
Moore Inc. Asphalt	15

2010 Canadian Crude Oil Production

	000 m/bbl	000 b/d
British Columbia	5	31
Alberta	326	2,052
Saskatchewan	67	421
Manitoba	5	32
Northwest Territories	2	15
Western Canada	405	2,552
Atlantic Canada	44	276
Total Canada	449	2,828

Great Falls

Montana Refining	10
------------------	----

Billings

CVS	30
ConocoPhillips	38
ExxonMobil	40

Winnipeg

Feather (Cheniere)	32
USDA America (Cargill)	25
Seaboard (Cargill)	38
Winnipeg (Newcastle)	14

South Lake City

Big West	20
Cheniere	70
Holly	20
Tecoco	38

Oklahoma

ConocoPhillips (Ponca City)	140
Holly	120
Valero (Anders)	30
Wyness	70

Bonny/McKee

WFO	110
Valero	170

El Paso

Western Refining	120
------------------	-----

Artis

Holly	130
-------	-----

Three Rivers

BP	130
ConocoPhillips	130
CTCO	130
CTCO	130
Valero	130

Newport/Texas City

BP	110
ConocoPhillips	110
ExxonMobil	110
Houston Refining	110
Wyness	110
Valero (C)	110

McPherson

NCTA	80
El Dorado	130
Frontier	130
Calfield Refining	110

St. Paul

El Dorado	130
Northern Tier	70

Chicago

BP	100
ExxonMobil	130
PDV	140

Superior

Murphy	30
--------	----

Samia

Imperial	121
Nova	80
Shell	70
Suncor	80
Norfolk	112

Montreal/Quebec

Suncor	130
Ultramar	260

Warren

United	70
--------	----

Detroit

Murphy	100
Valero	180
BP (Lucky)	180
PS	170
Lima	180
Holly	180
Carton	78
Murphy	210

Wood River

WFO	130
Robinson	130
Murphy	130

Memphis

Valero	190
El Dorado	80
Lima	80

Port Arthur/Texas

ExxonMobil	360
Valero	360
Total	114

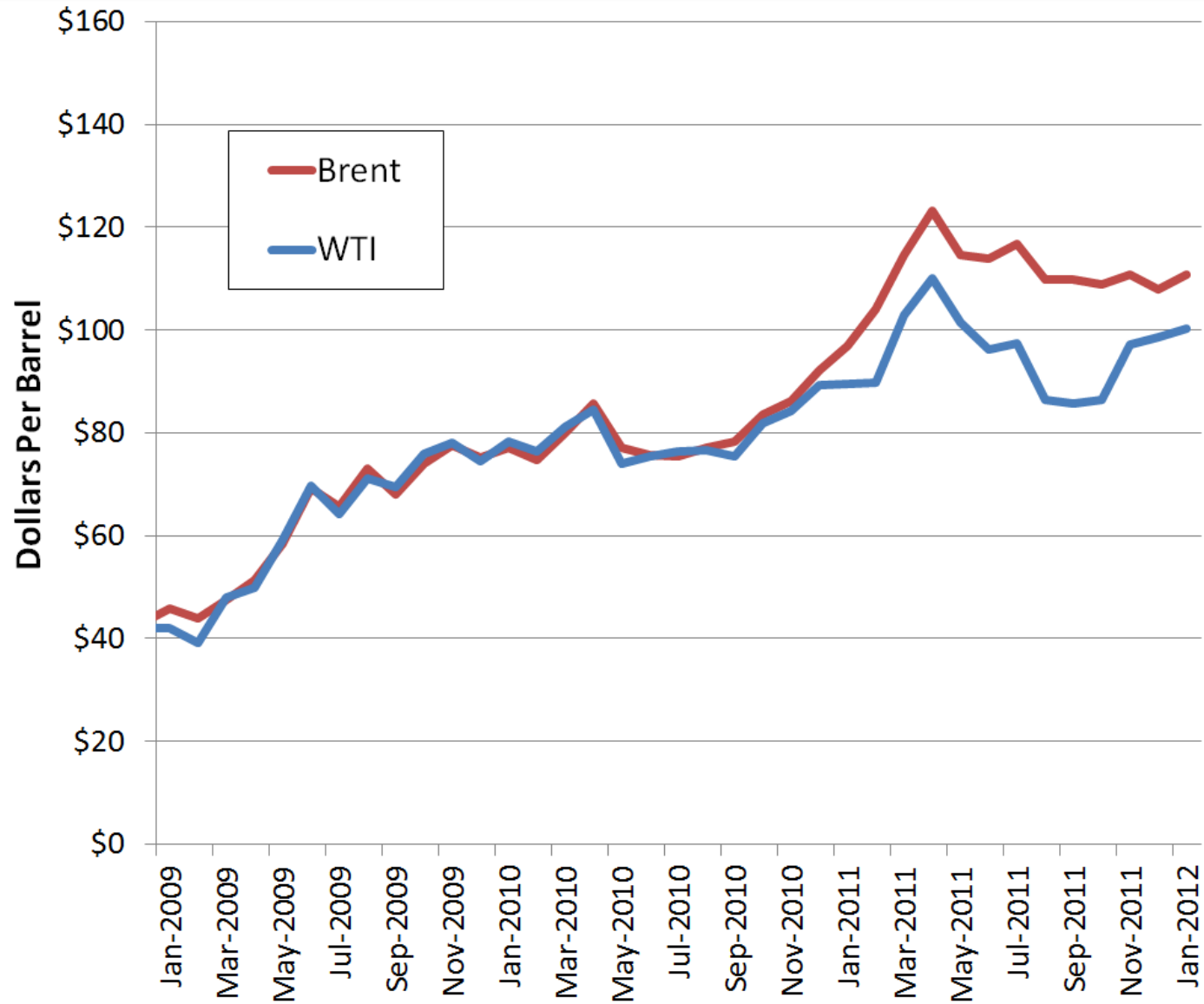
Lake Charles/Cameron

ConocoPhillips	230
CTCO	110
Murphy	110
Valero	110

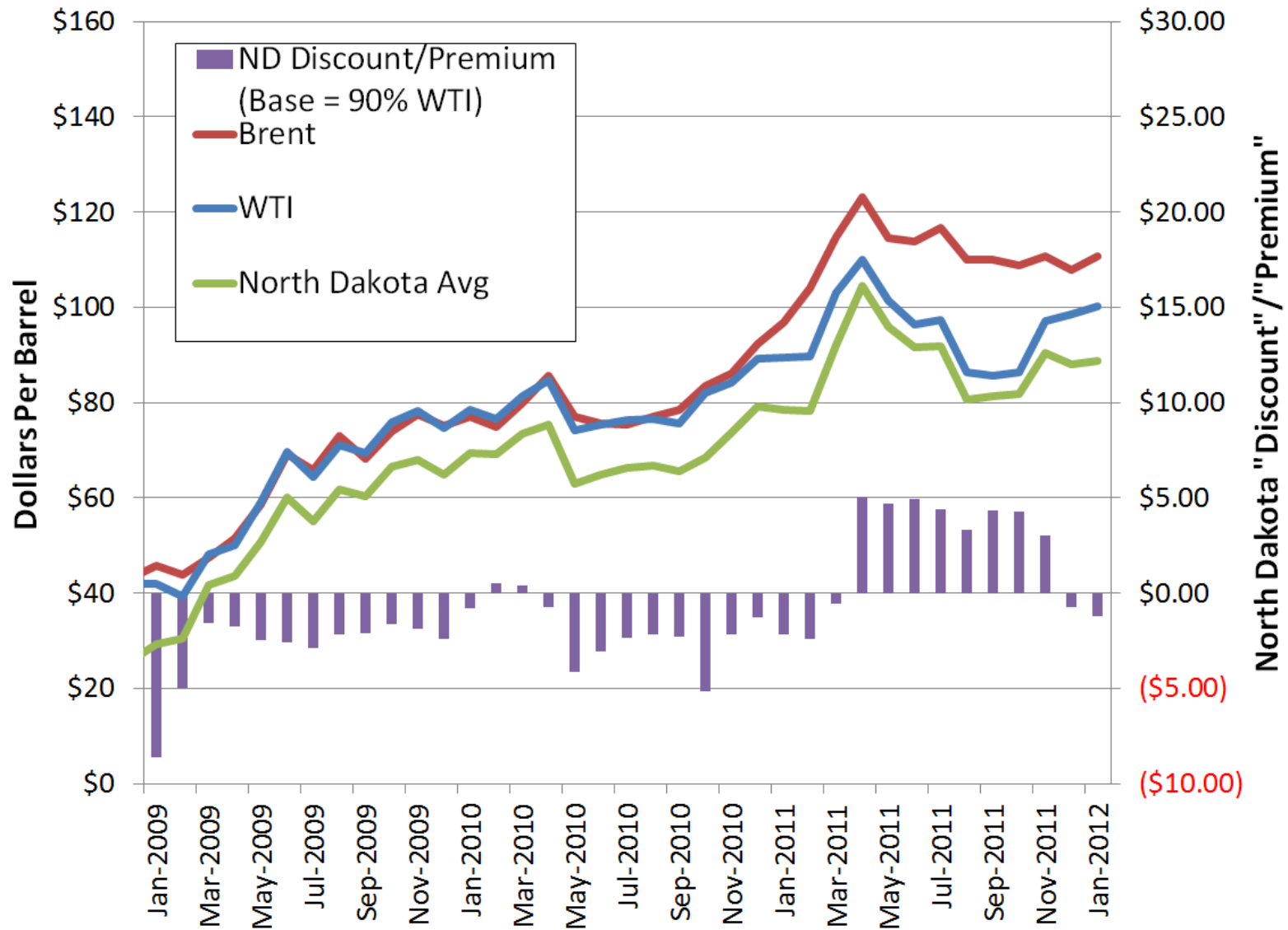


CANADIAN ASSOCIATION
OF PETROLEUM PRODUCERS

Brent-WTI Crude Pricing



Brent-WTI-ND Crude Pricing



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

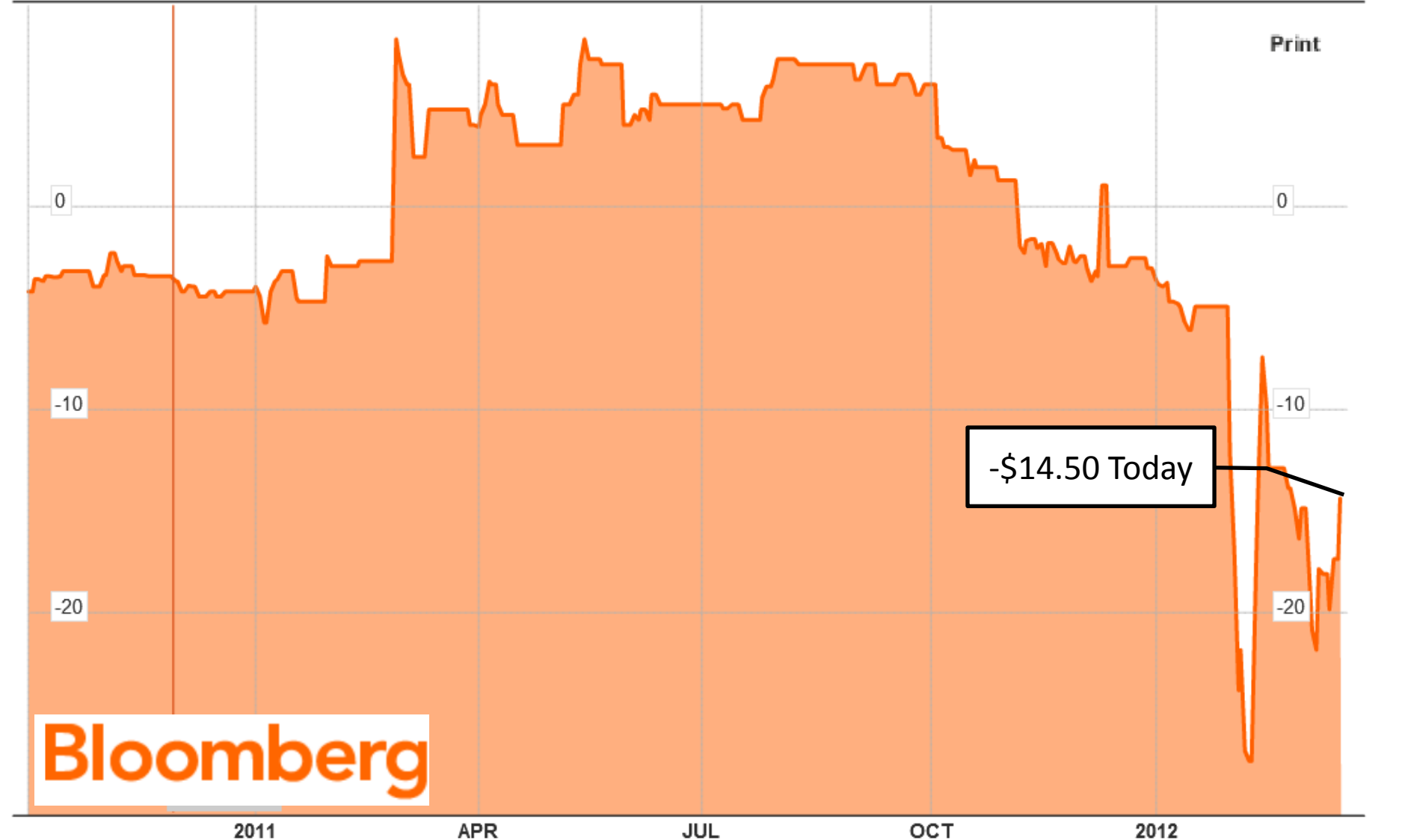
USCSUHC1:INI

Open -3.50

High -3.50

Low -3.50

Close -3.50





Domestic Crude Oil First Purchase Prices by API Gravity

(Dollars per Barrel)

Period:



[Download Series History](#)



[Definitions, Sources & Notes](#)

API Gravity	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	View History
20.0° or Less	101.82	93.51	104.07	105.47	111.13	101.87	1993-2011
20.1° to 25.0°	103.92	95.26	103.51	105.14	111.19	103.21	1993-2011
25.1° to 30.0°	98.06	92.89	94.47	96.18	101.42	97.34	1993-2011
30.1° to 35.0°	102.56	95.73	95.53	99.01	104.30	104.58	1993-2011
35.1° to 40.0°	96.70	86.50	87.02	89.38	99.60	99.01	1993-2011
40.0° or Greater	94.66	83.90	84.22	85.10	95.02	94.68	1993-2011

Domestic Crude Oil First Purchase Prices by API Gravity

(Dollars per Barrel)

Period:



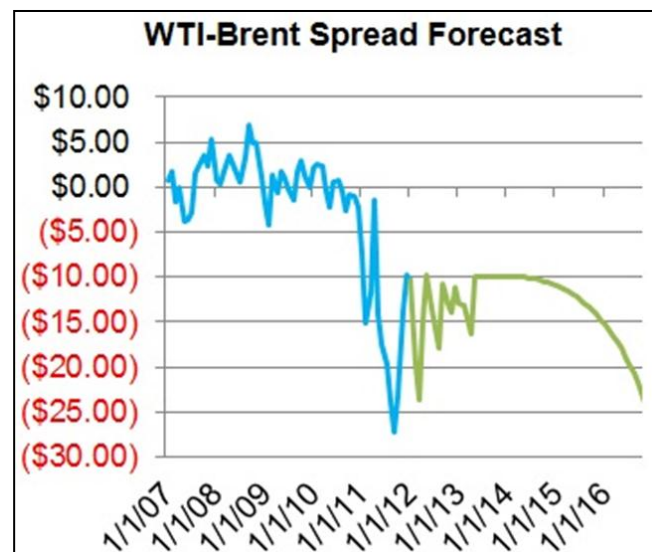
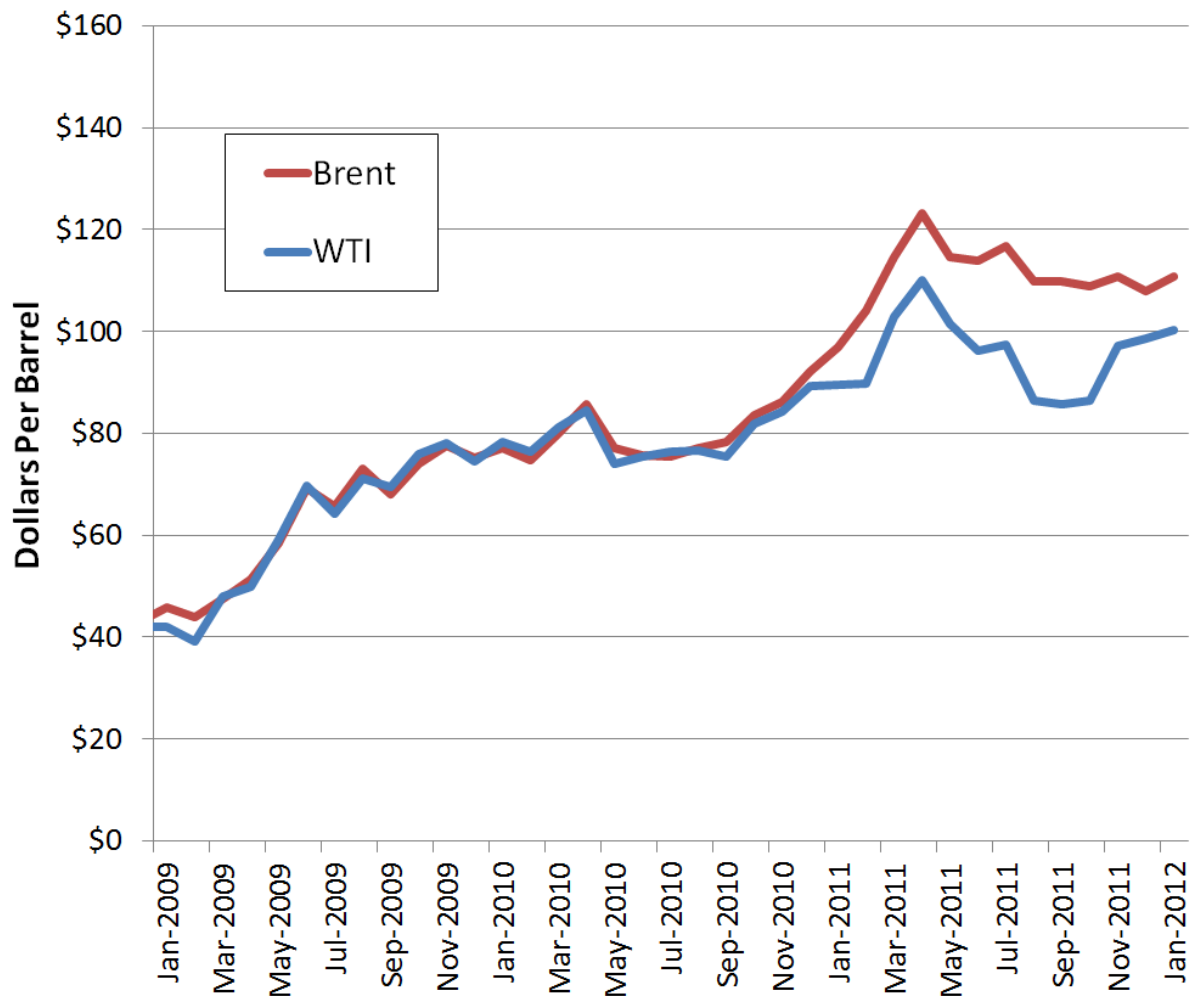
[Download Series History](#)



[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

Brent-WTI Crude Pricing



East Coast Getting a Taste



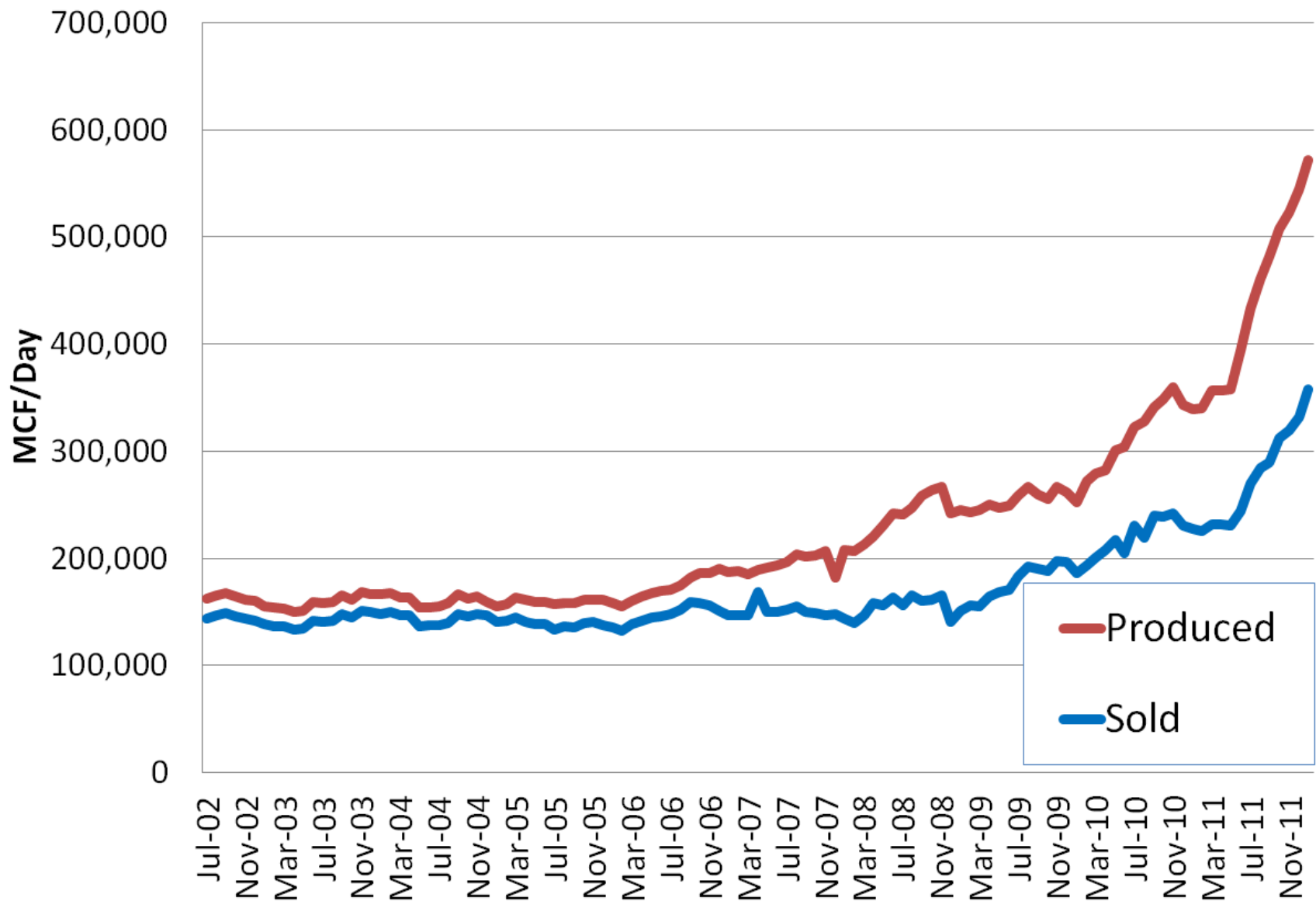
© 2012 Google
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© 2012 Europa Technologies
Image © 2012 TerraMetrics

Google earth

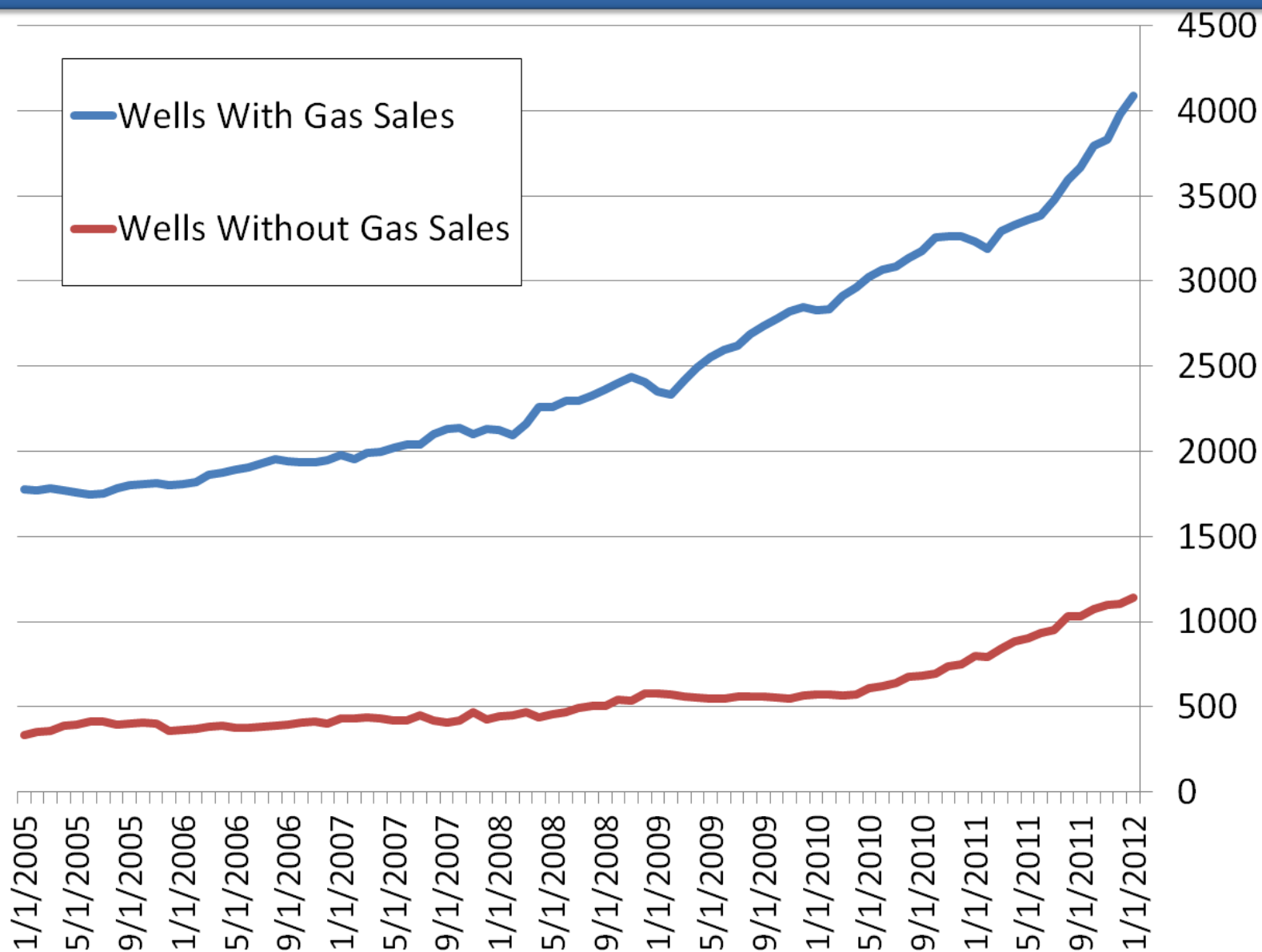
Natural Gas Projects



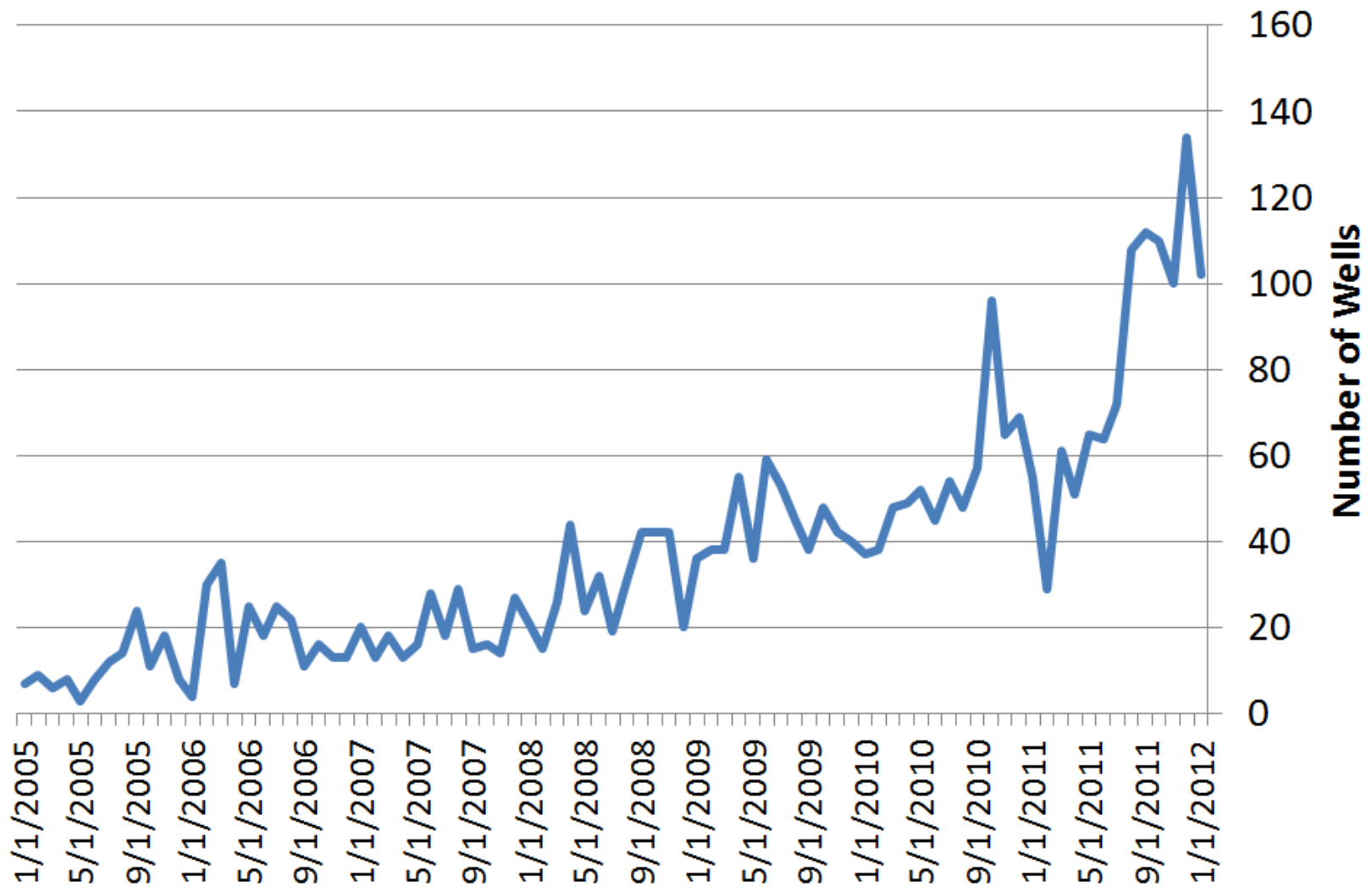
ND Gas Production



ND Gas Gathering Statistics



First Time Gas Sales Per Month



Natural Gas Study

Elm Coulee Montana

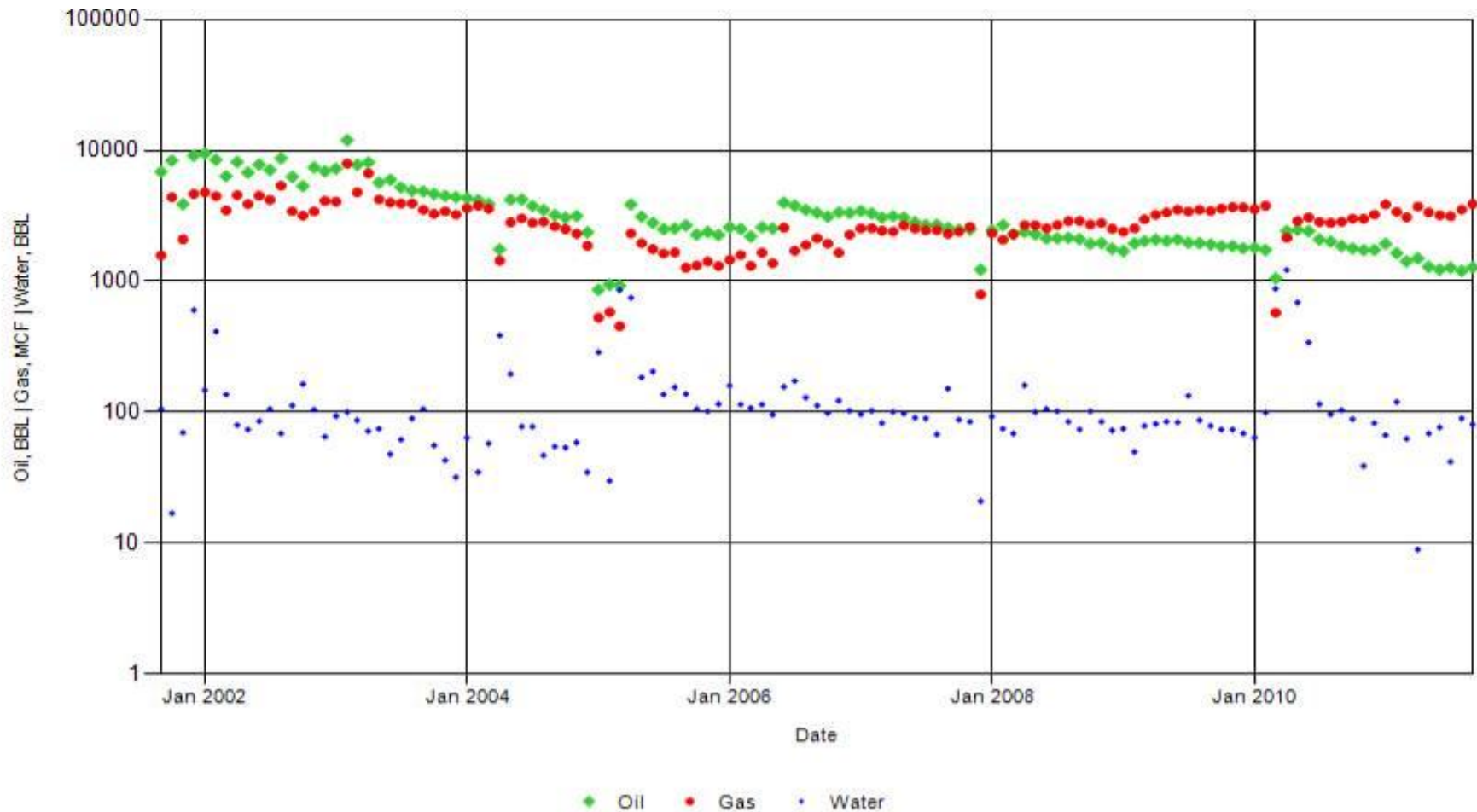
API Number:

25083218940000

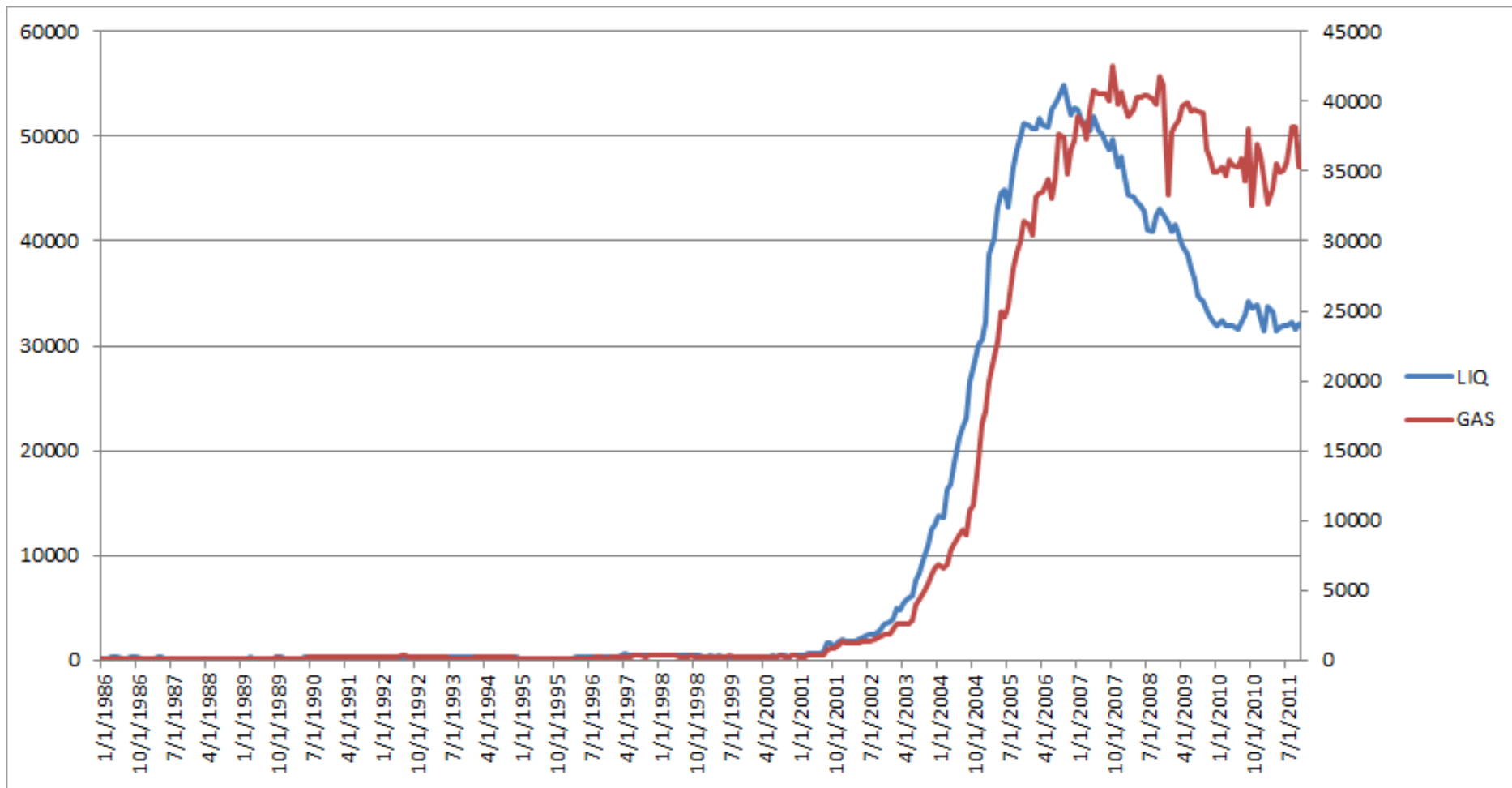
Well Name:

Burning Tree Vaira 5-2H

Well Production

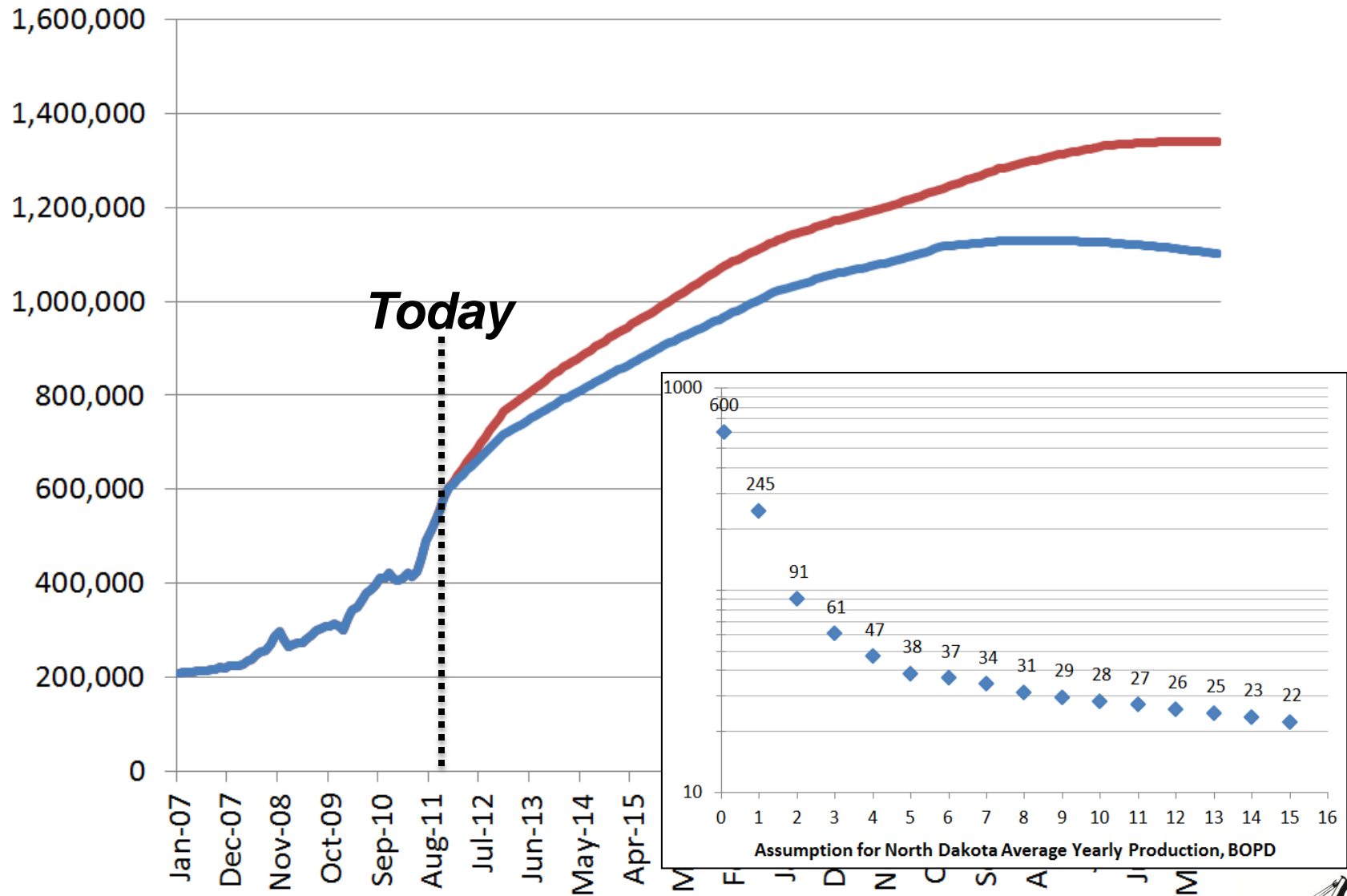


Montana Bakken Production



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

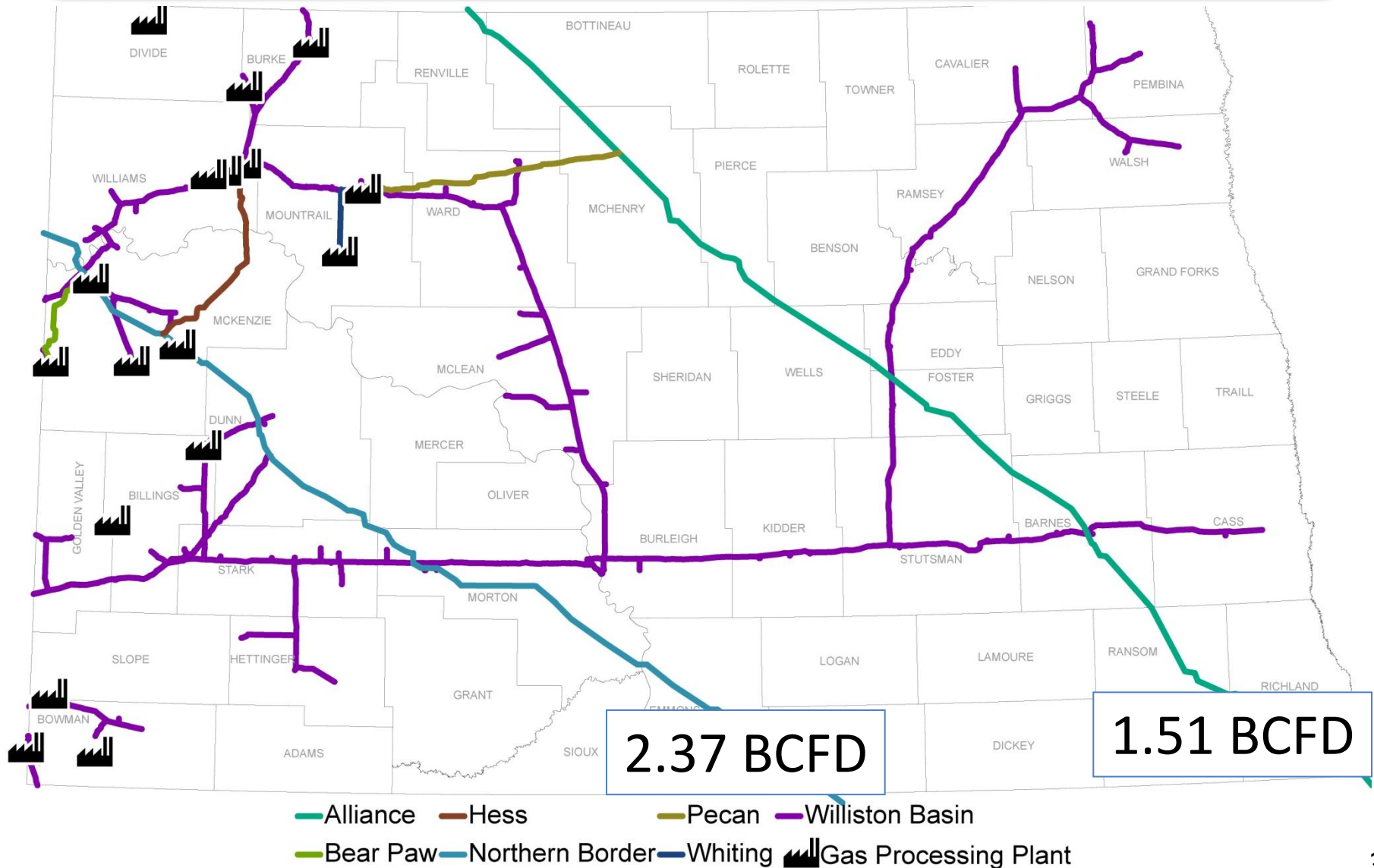
Forecasting Williston Basin Oil Production, BOPD



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Gas Transmission Pipelines



Contact Information

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E-mail: jjkringstad@ndpipelines.com

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www.pipeline.nd.gov



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