



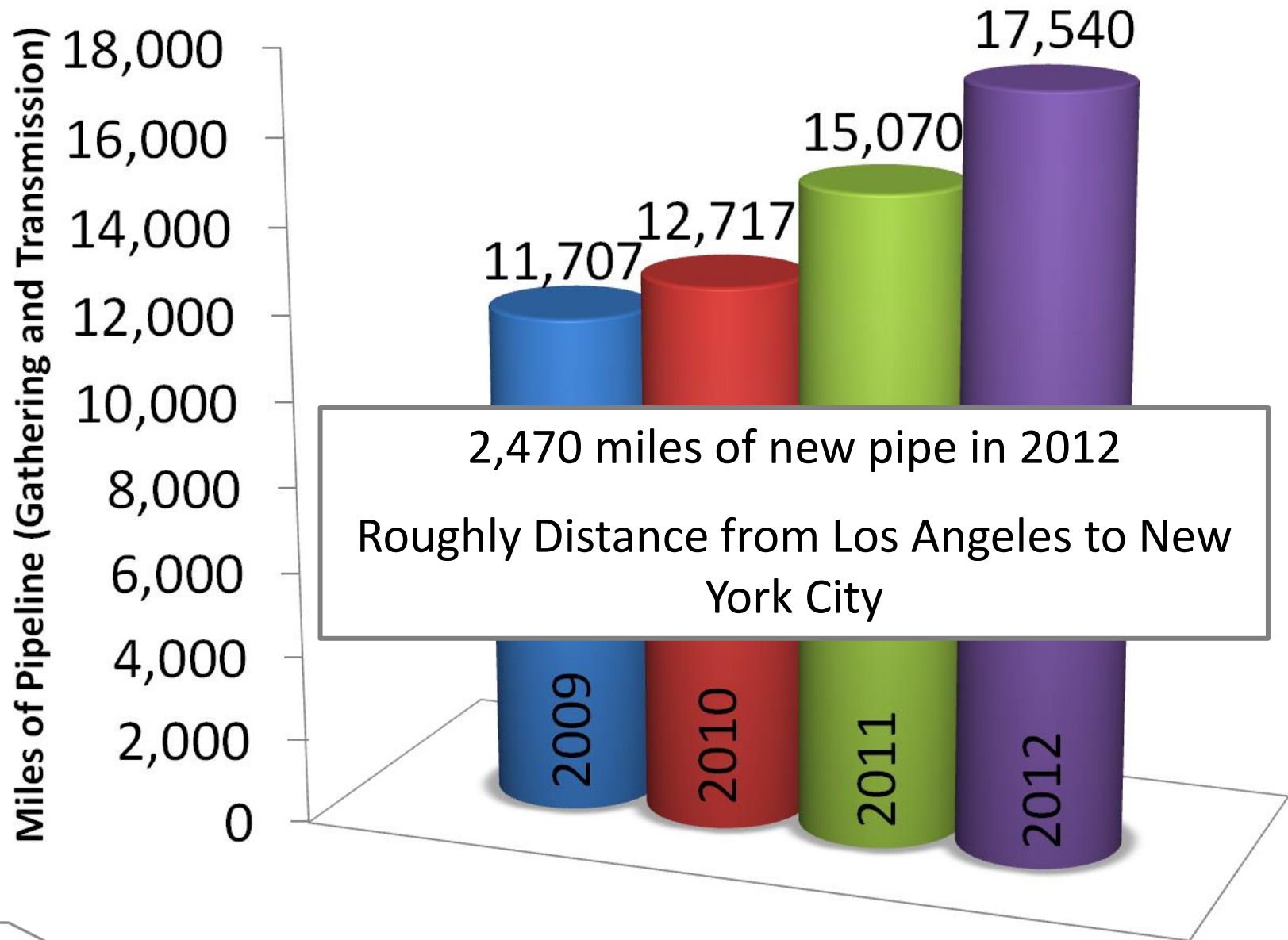
Governor's Pipeline Summit

North Dakota Pipeline Authority

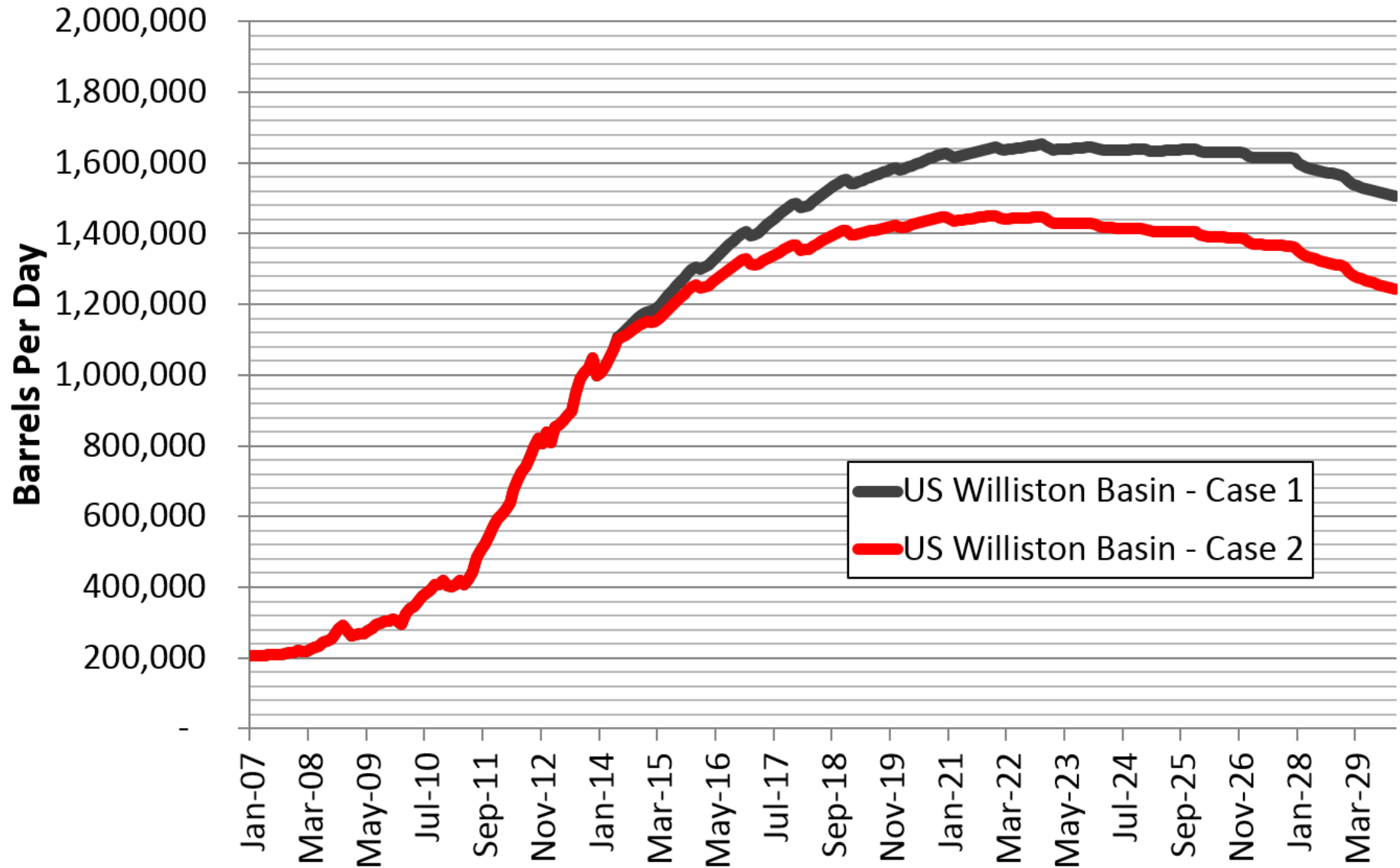
Justin J. Kringstad

June 24, 2014 – Bismarck, ND

North Dakota Pipeline Miles



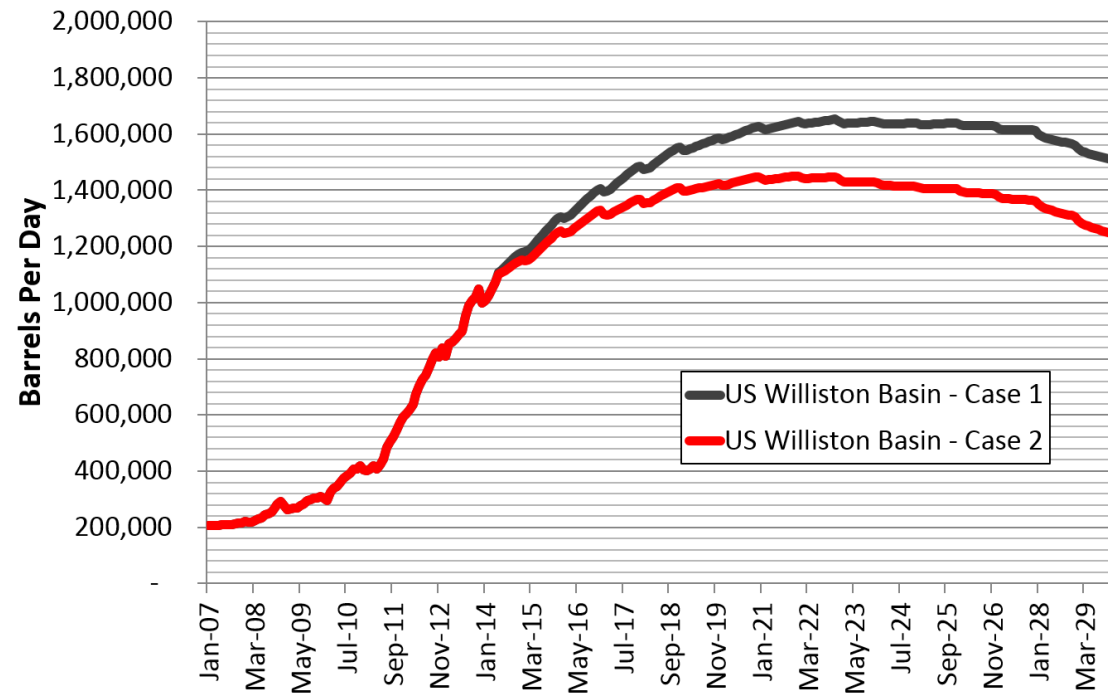
Forecasting Williston Basin Oil Production, BOPD



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



Forecasting Challenges



Current Model

- Approx. 30,000 New Wells Out to Dec 2029
- Average EUR Roughly 400,000 BBLS
- Average First Month Production of 347 BOPD

Ongoing Considerations

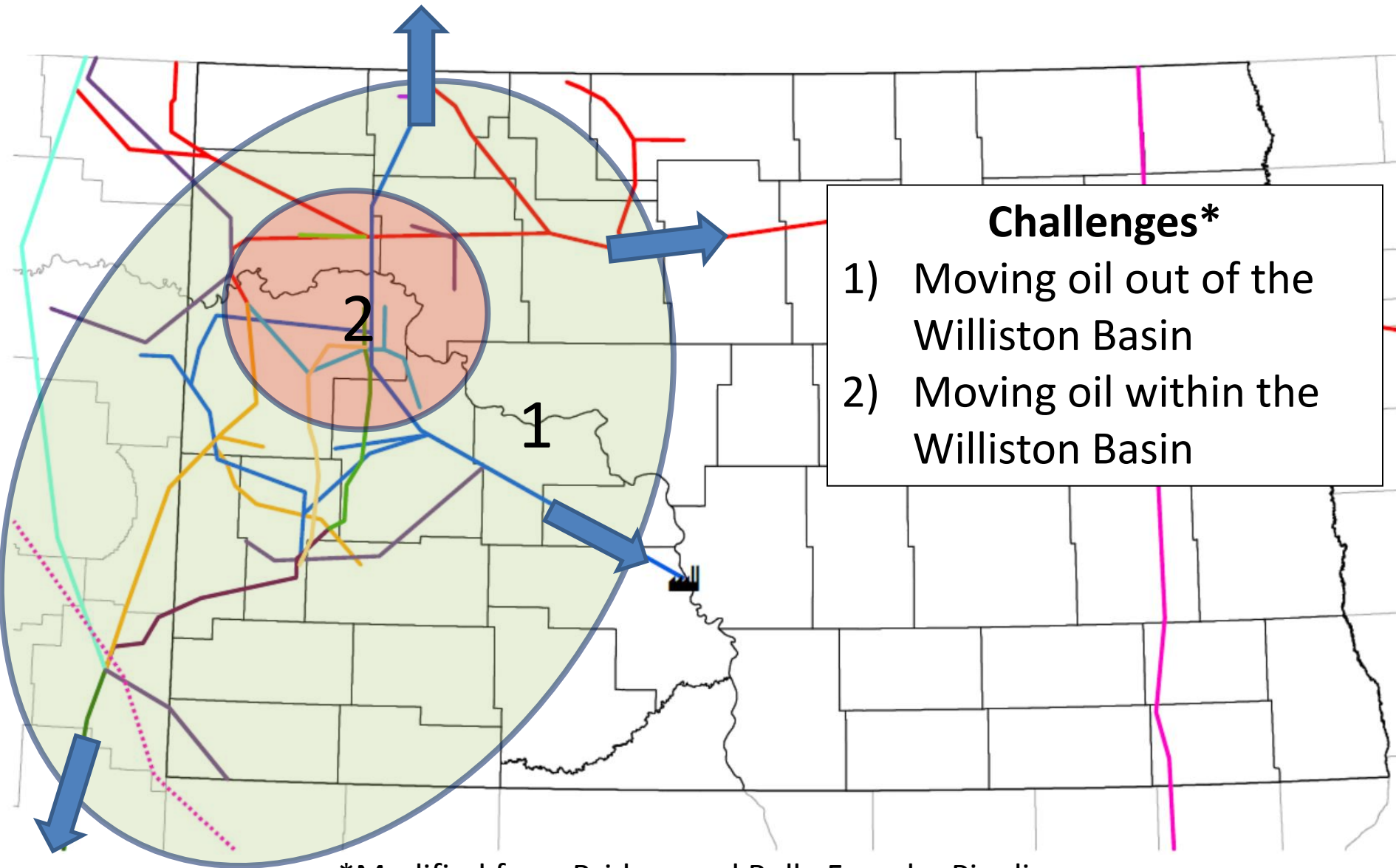
- Increased Density Drilling
- Drilling Efficiencies
- Improving Completion Techniques
- Productivity of the Lower Three Forks
- Eastern Montana Success

Long Term Considerations

- EOR Opportunities
- Pricing
- Competition
- Additional Williston Basin Plays



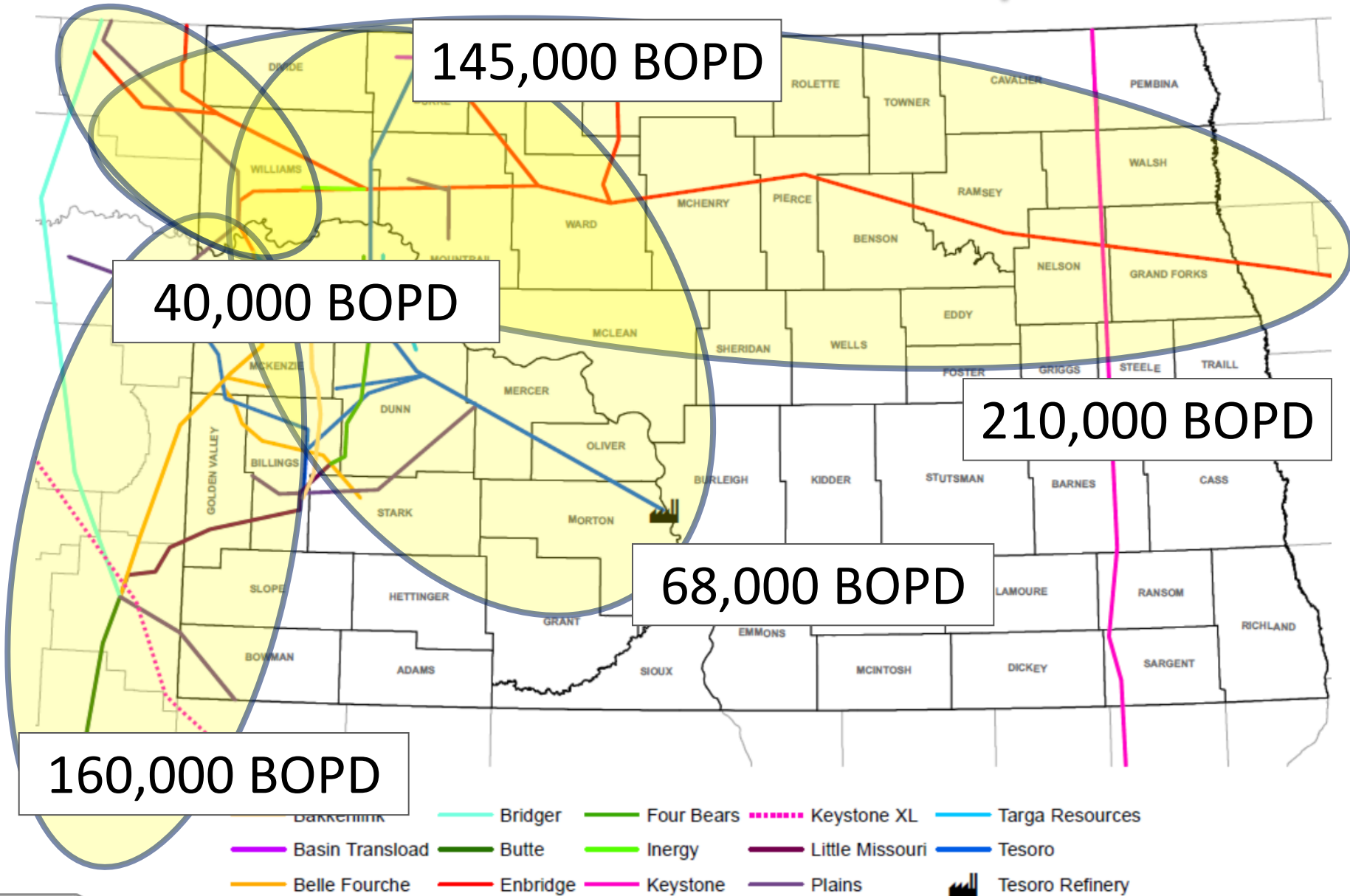
North Dakota Crude Oil Pipelines



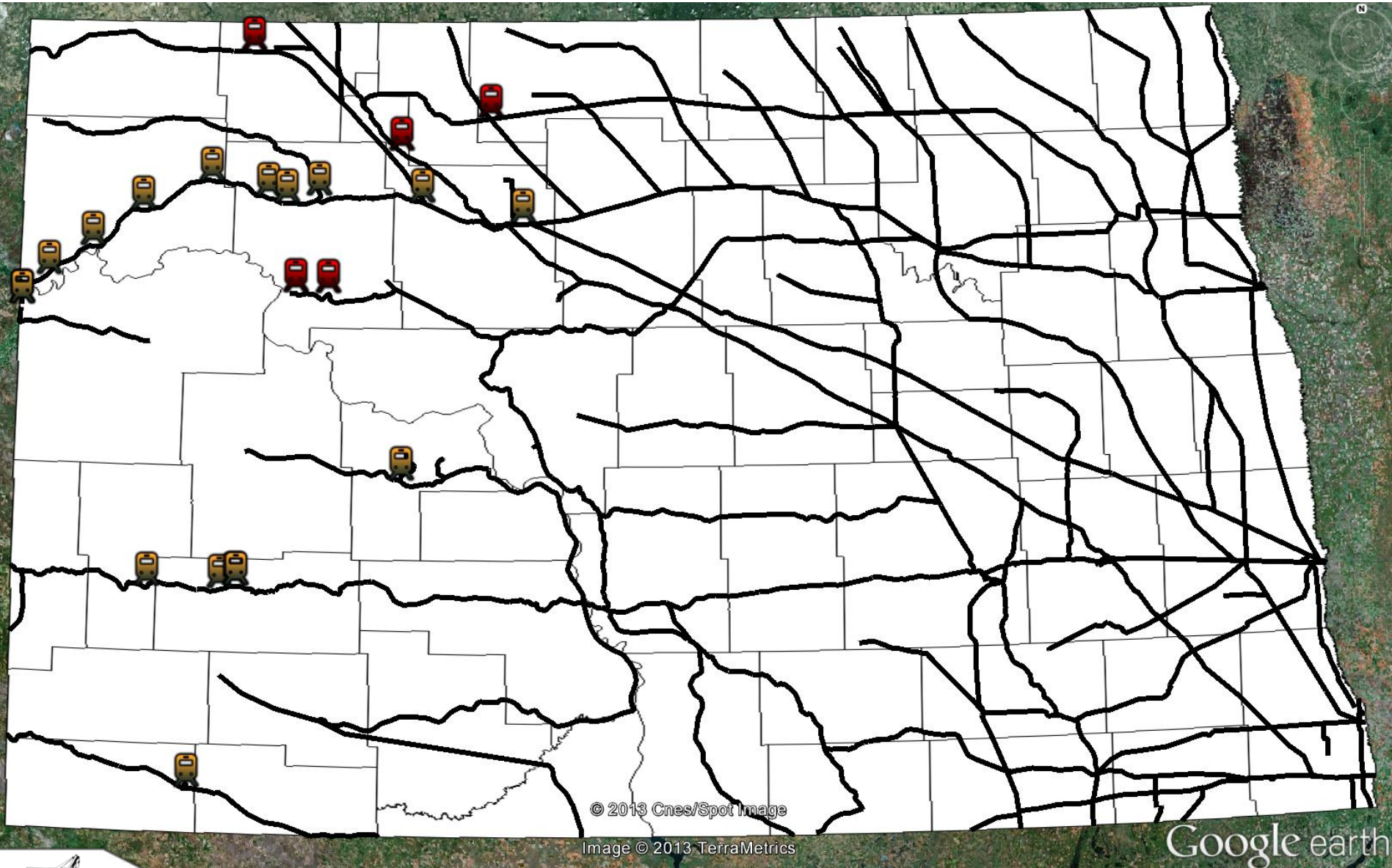
*Modified from Bridger and Belle Fourche Pipelines



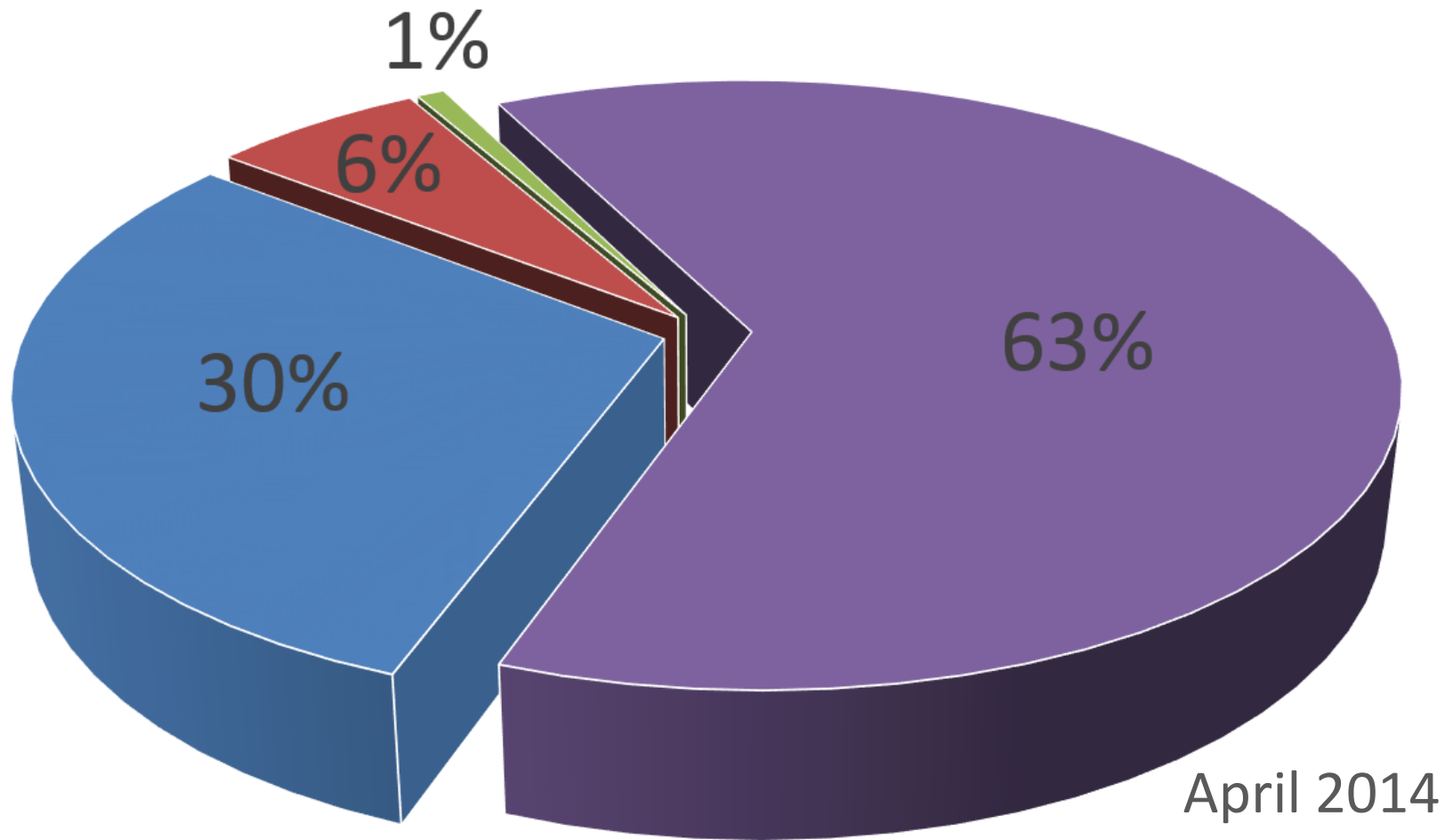
North Dakota Crude Oil Pipelines



Oil Loading Rail Facilities



Estimated Williston Basin Oil Transportation



■ Estimated Pipeline Export

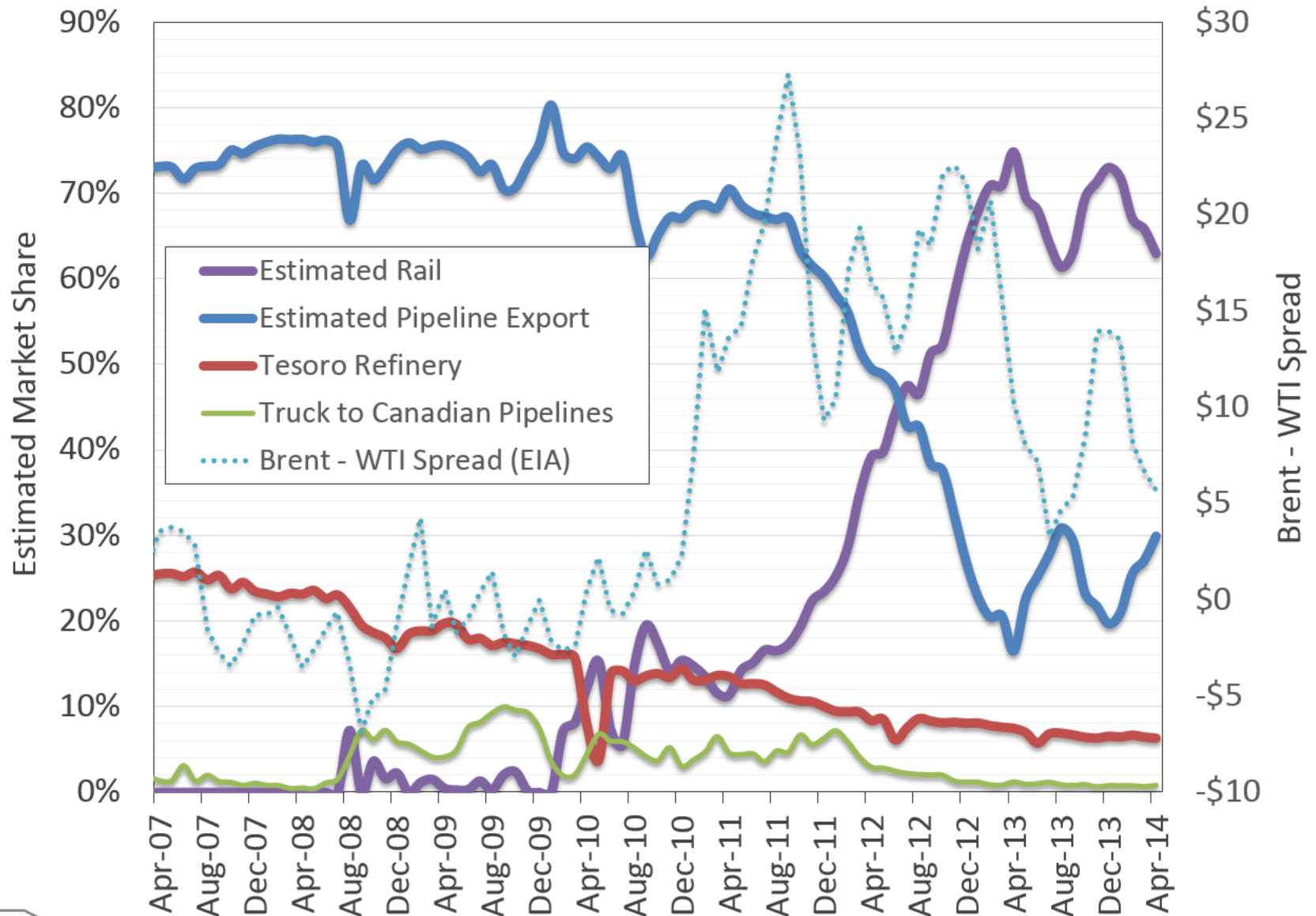
■ Tesoro Refinery

■ Truck to Canadian Pipelines

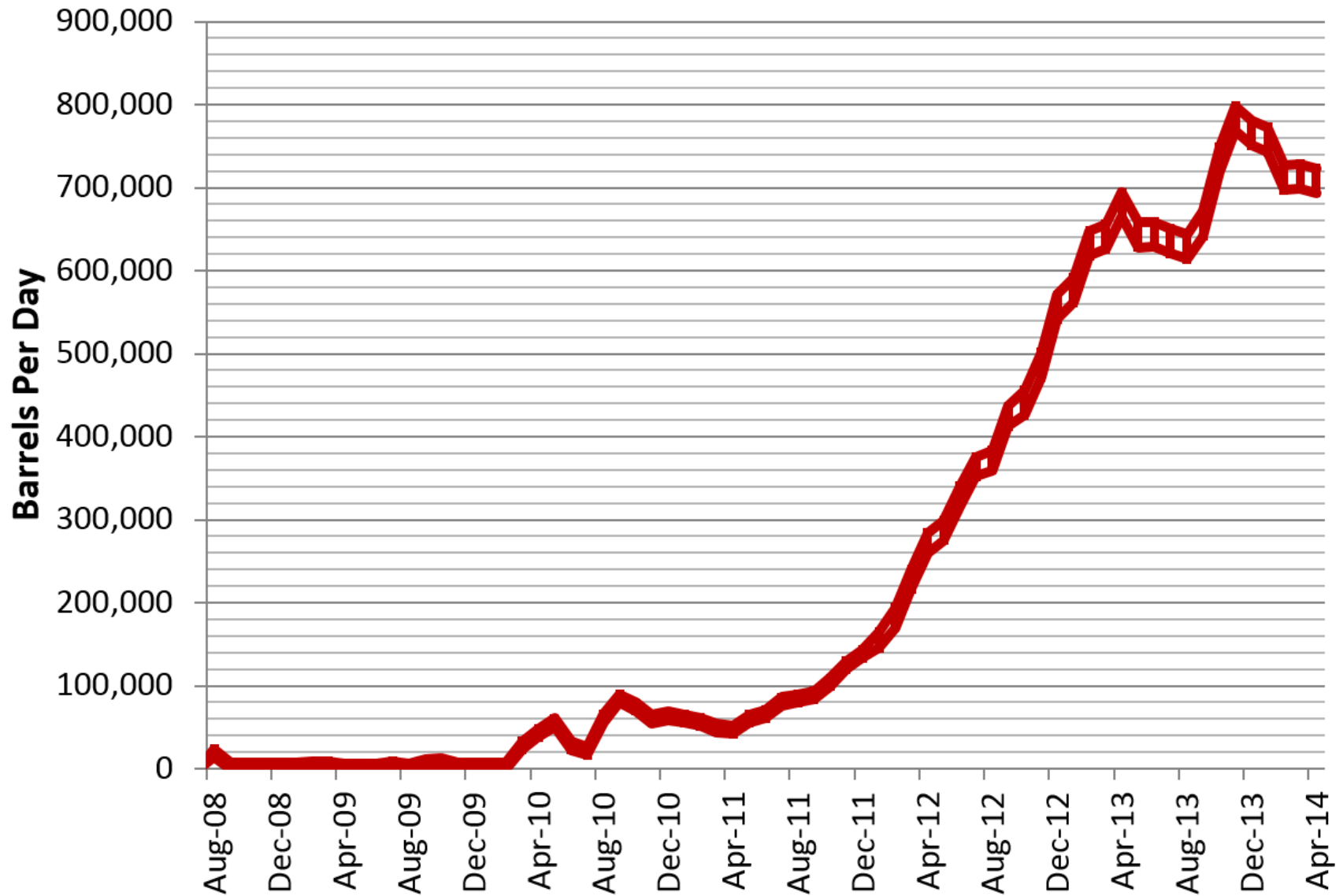
■ Estimated Rail



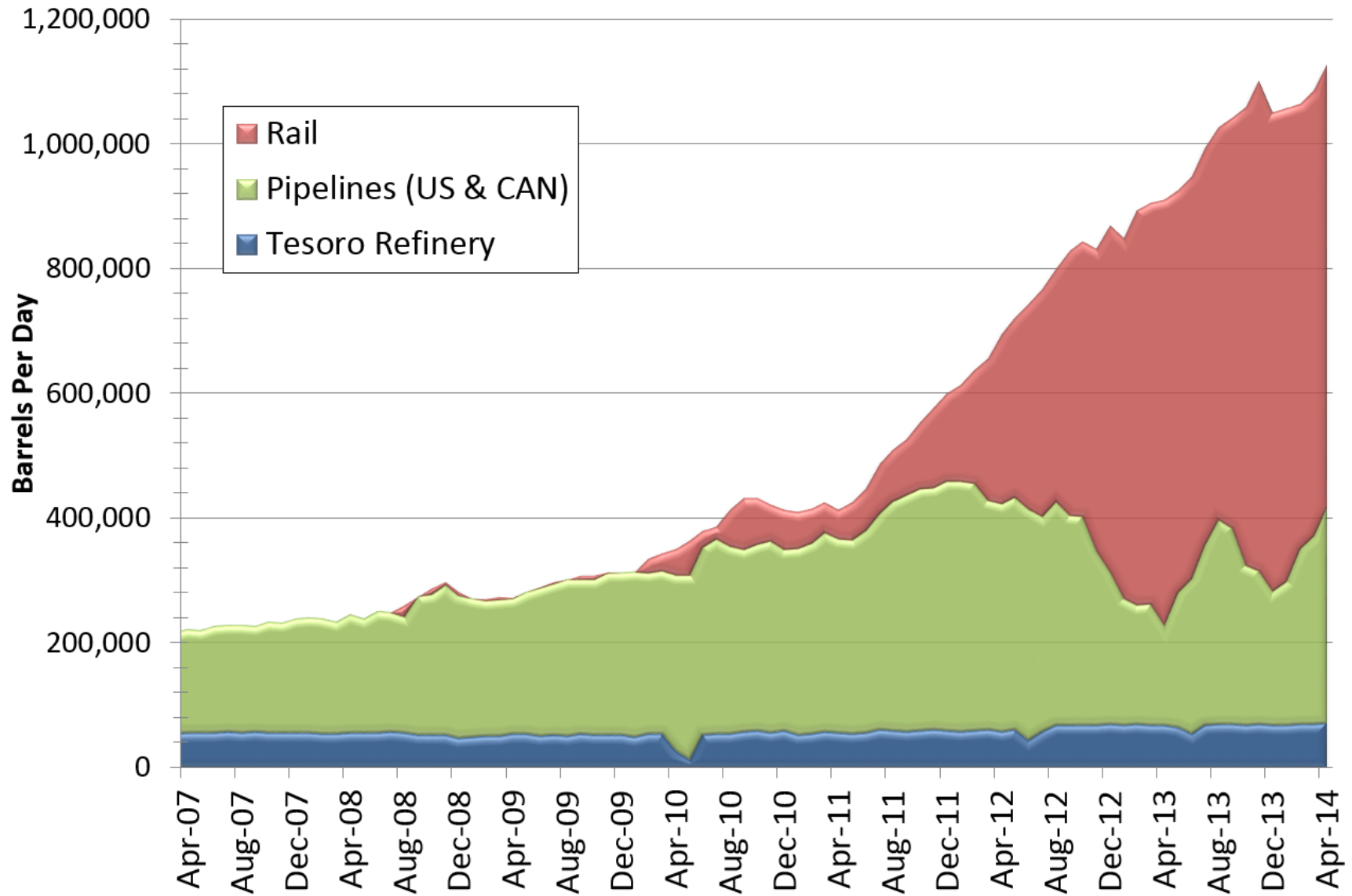
Estimated Williston Basin Oil Transportation



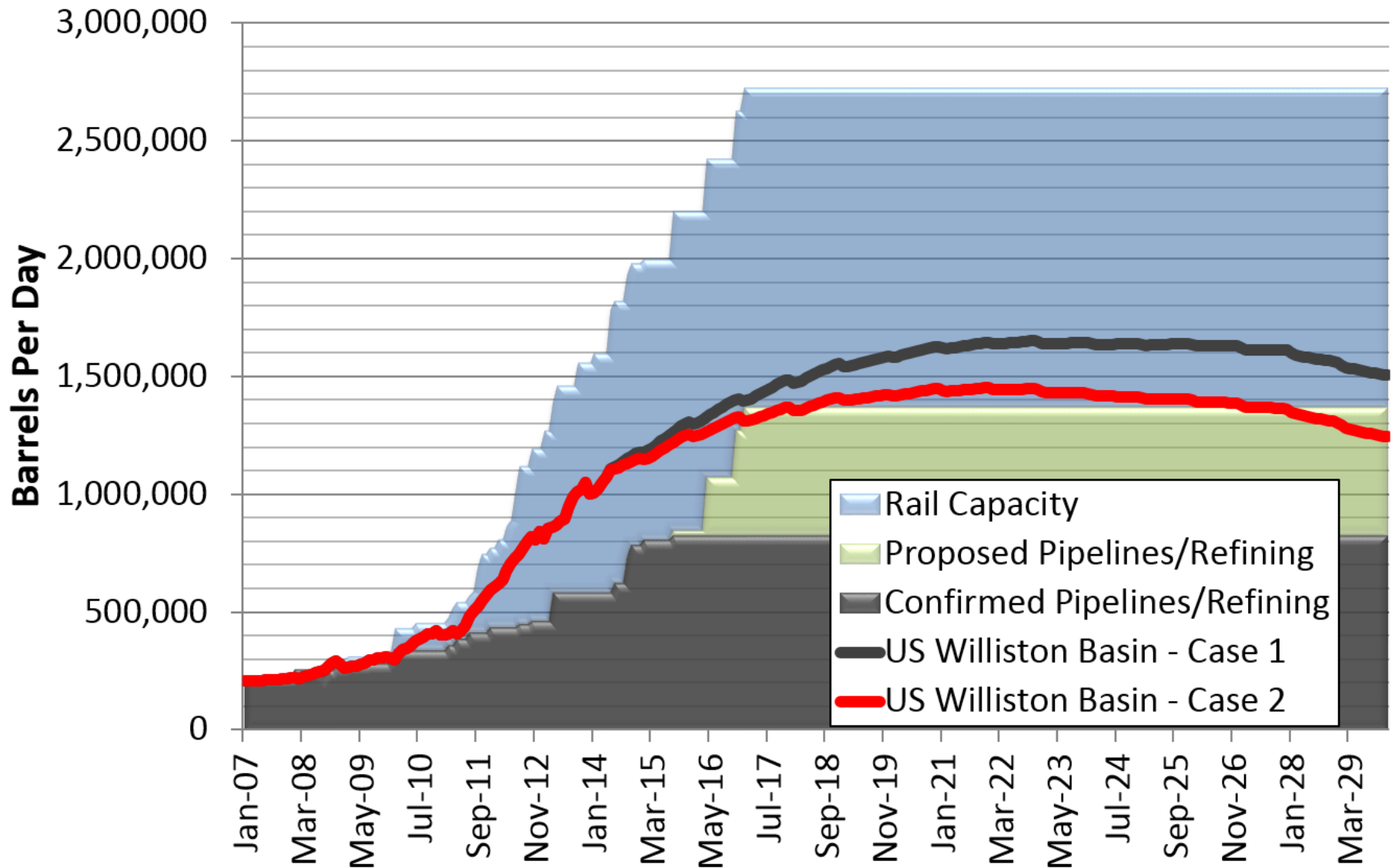
Estimated ND Rail Export Volumes



Estimated Williston Basin Oil Transportation



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.



Confirmed Pipeline Projects

Butte Loop

- In-service Date: Q3 2014
- 110,000 BOPD
- Service to Guernsey, WY

Hiland Double H

- In-service Date: Q4 2014
- 50,000 BOPD (Expandable up to 100,000 BOPD)
- Extended Open Season to April 16, 2014
- Service to Guernsey, WY

Plains Bakken North

- In-service Date: May 2014
- 40,000 BOPD (Expandable up to 70,000 BOPD)
- Movement North to Canadian Interconnect



Pipeline Projects In Business Development or Regulatory

North Dakota Pipeline Company Sandpiper

- Open Season Successful: 155,000 BOPD Committed
- 225,000 BOPD ND Capacity to Clearbrook, MN (24")
- 375,000 BOPD Clearbrook, MN to Superior, WI (30")
- In-service Date: Q1 2016

Enterprise Pipeline

- 200,000-250,000 BOPD
- Route: Stanley, ND to Cushing, OK 1,200 miles, 30"
- In-service Date: Q4 2016

TransCanada Keystone XL

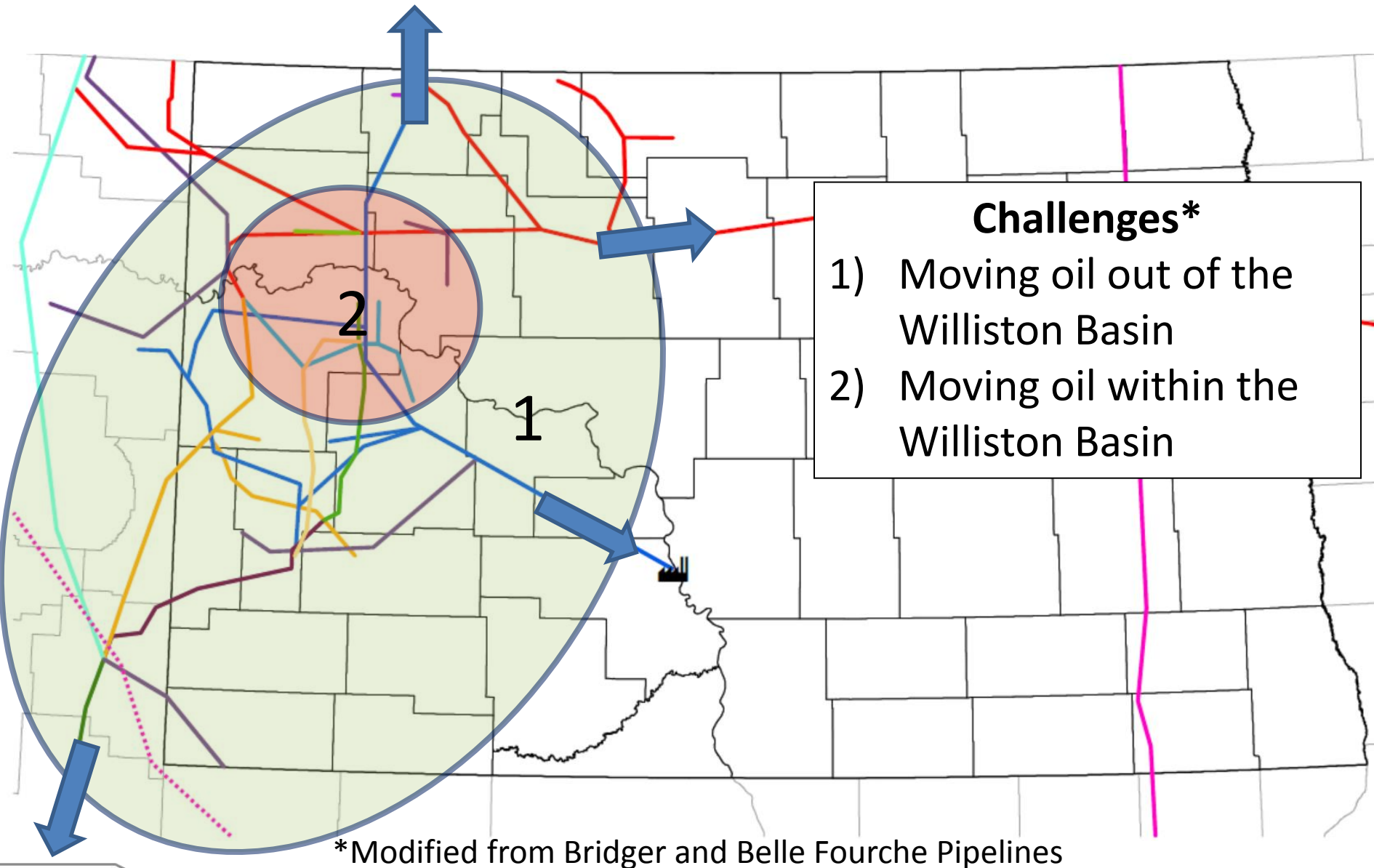
- Up to 100,000 BOPD
- Timeline Uncertain

Energy Transfer Partners

- Binding Open Season Launched March 12, 2014
- Additional Project Details Unavailable

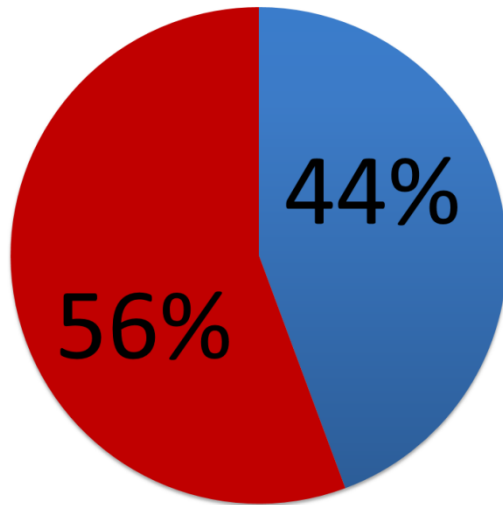


North Dakota Crude Oil Pipelines



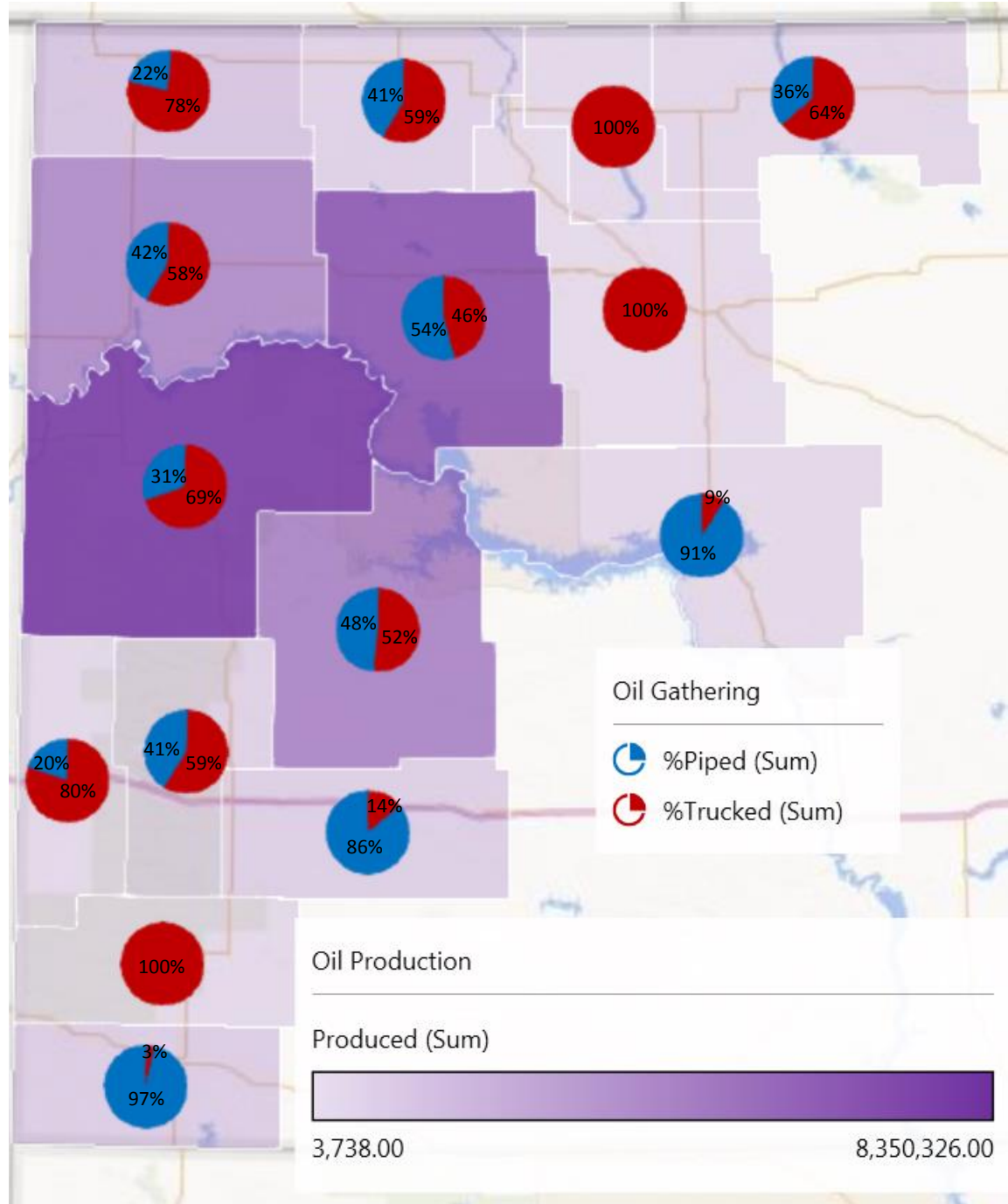
ND Oil Gathering

Red – Trucked
Blue – Pipeline

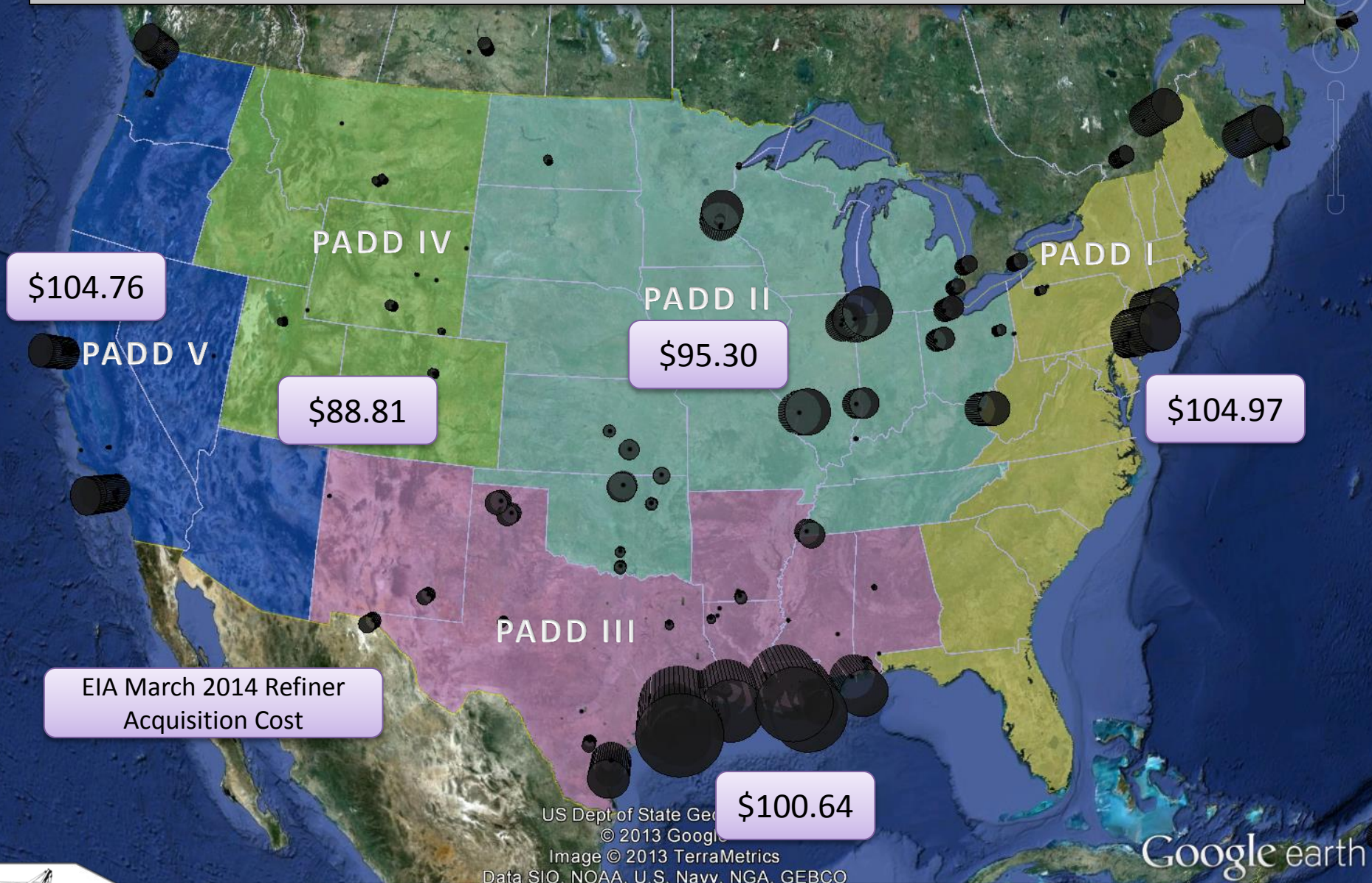


All ND Production

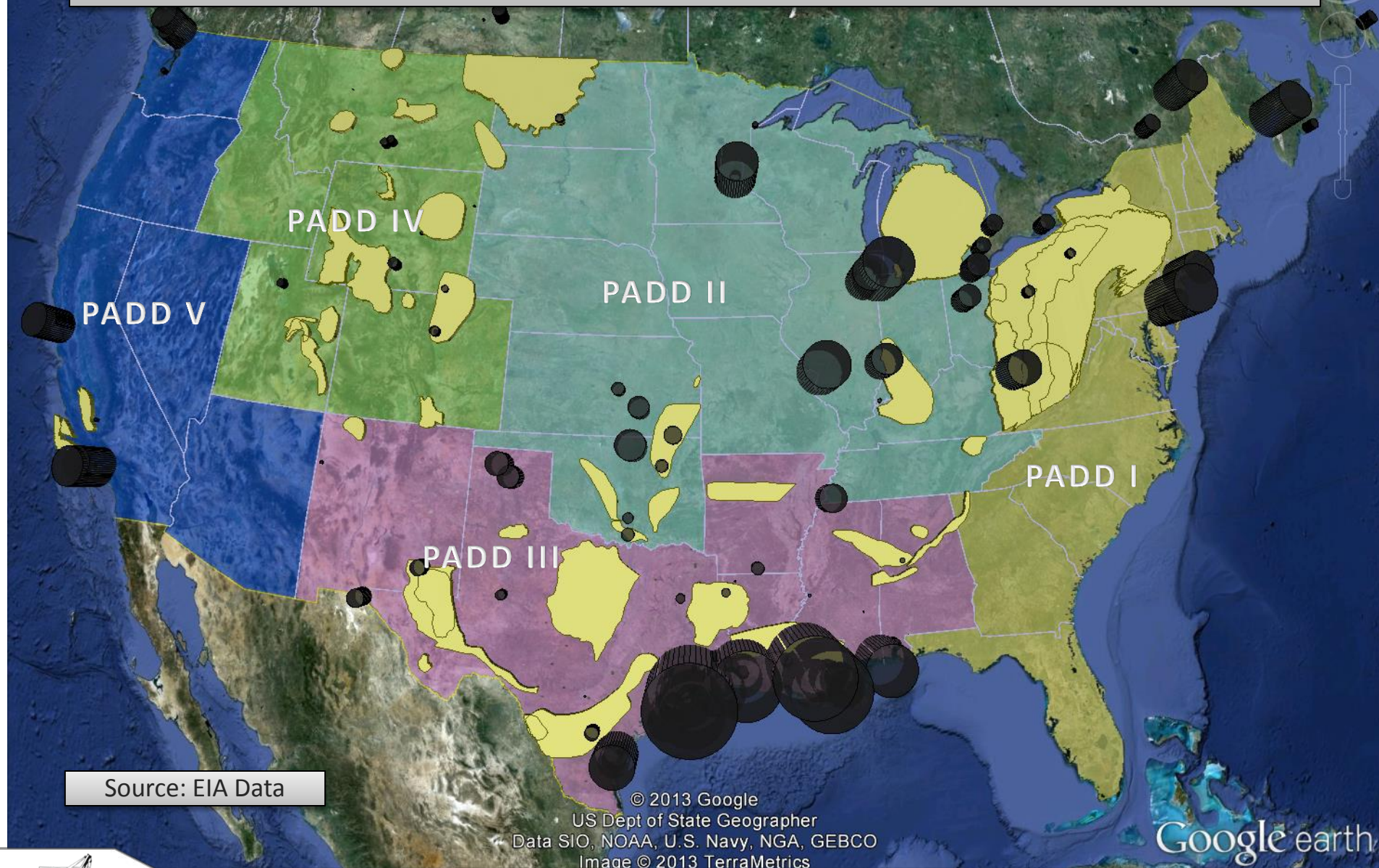
Sep 2013 Estimates
Some data incomplete or unavailable



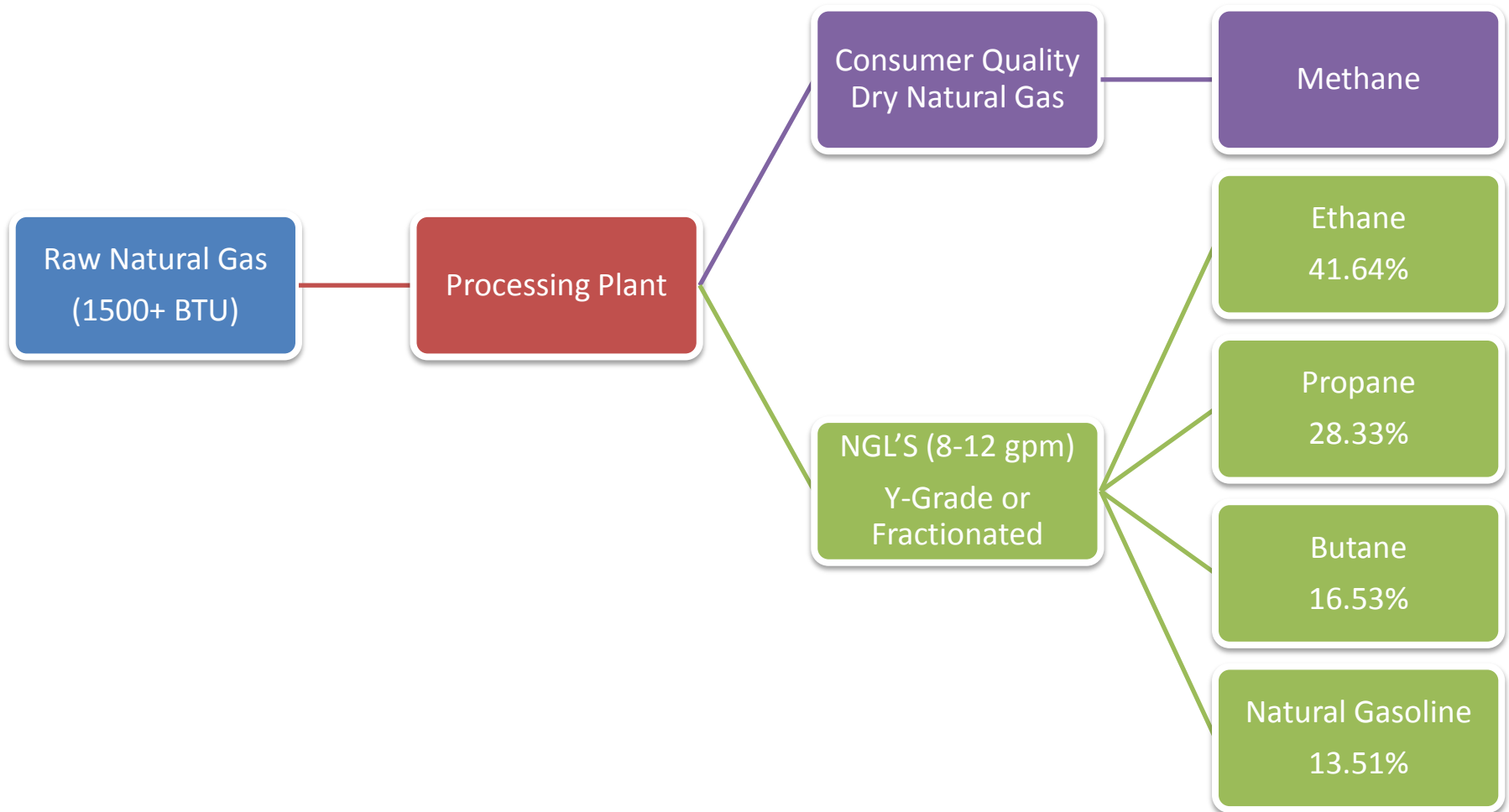
US Refining Markets



US Shale Plays and Refineries



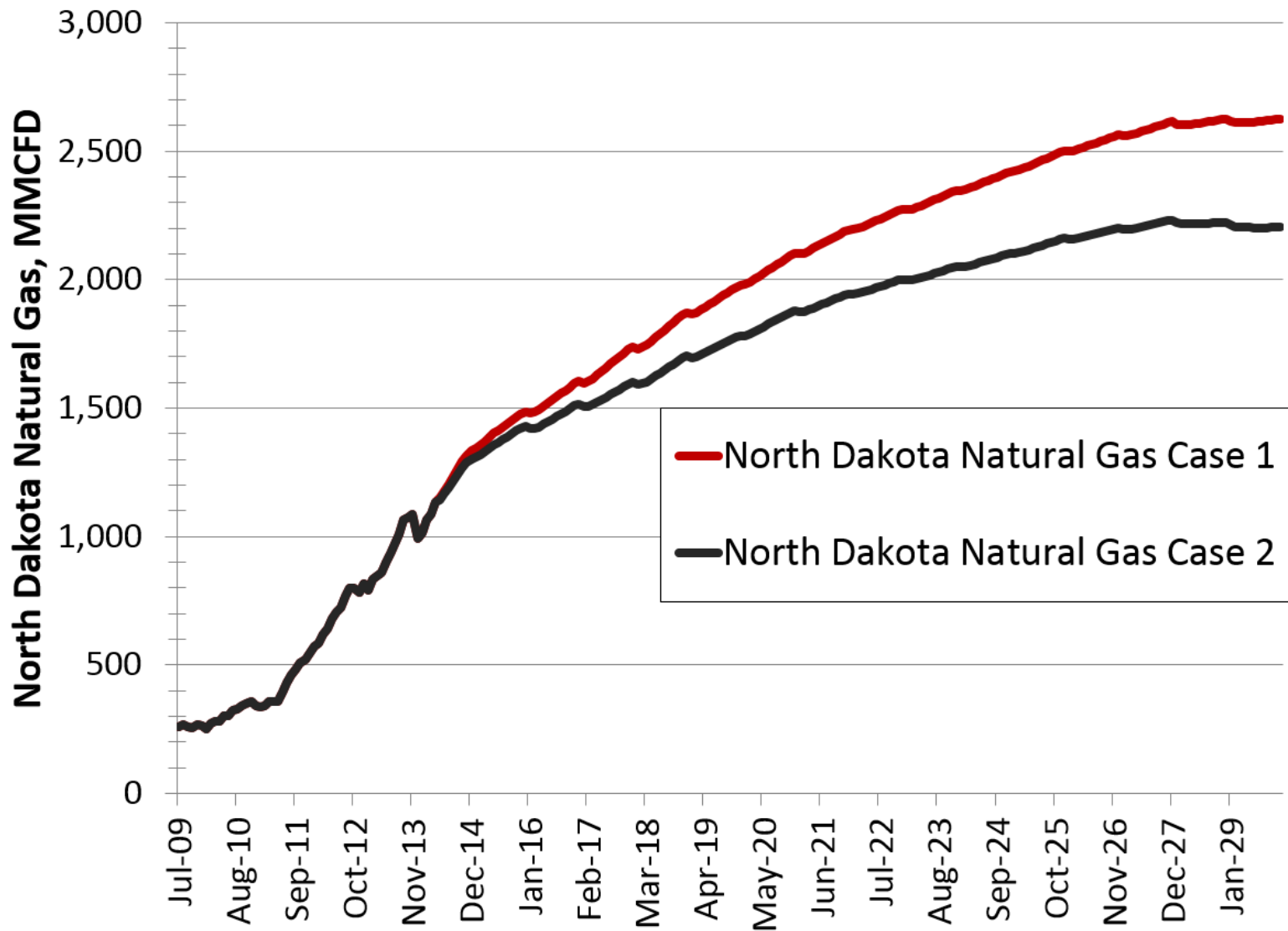
Rich Natural Gas



**Using NGL breakdown from the July 2012 BENTEK Natural Gas Study*



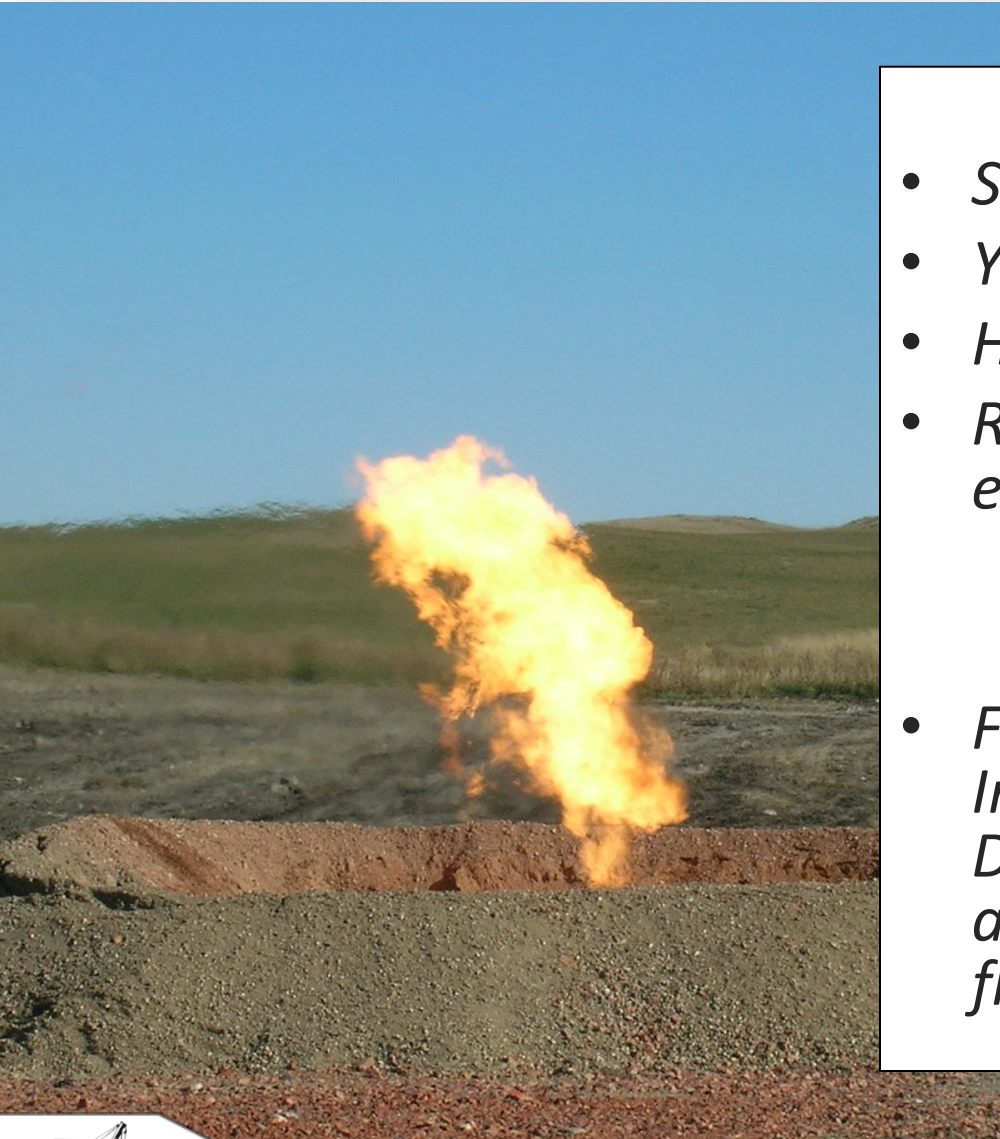
North Dakota Natural Gas Production



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



Natural Gas Flaring Facts/Challenges



Primary Challenges

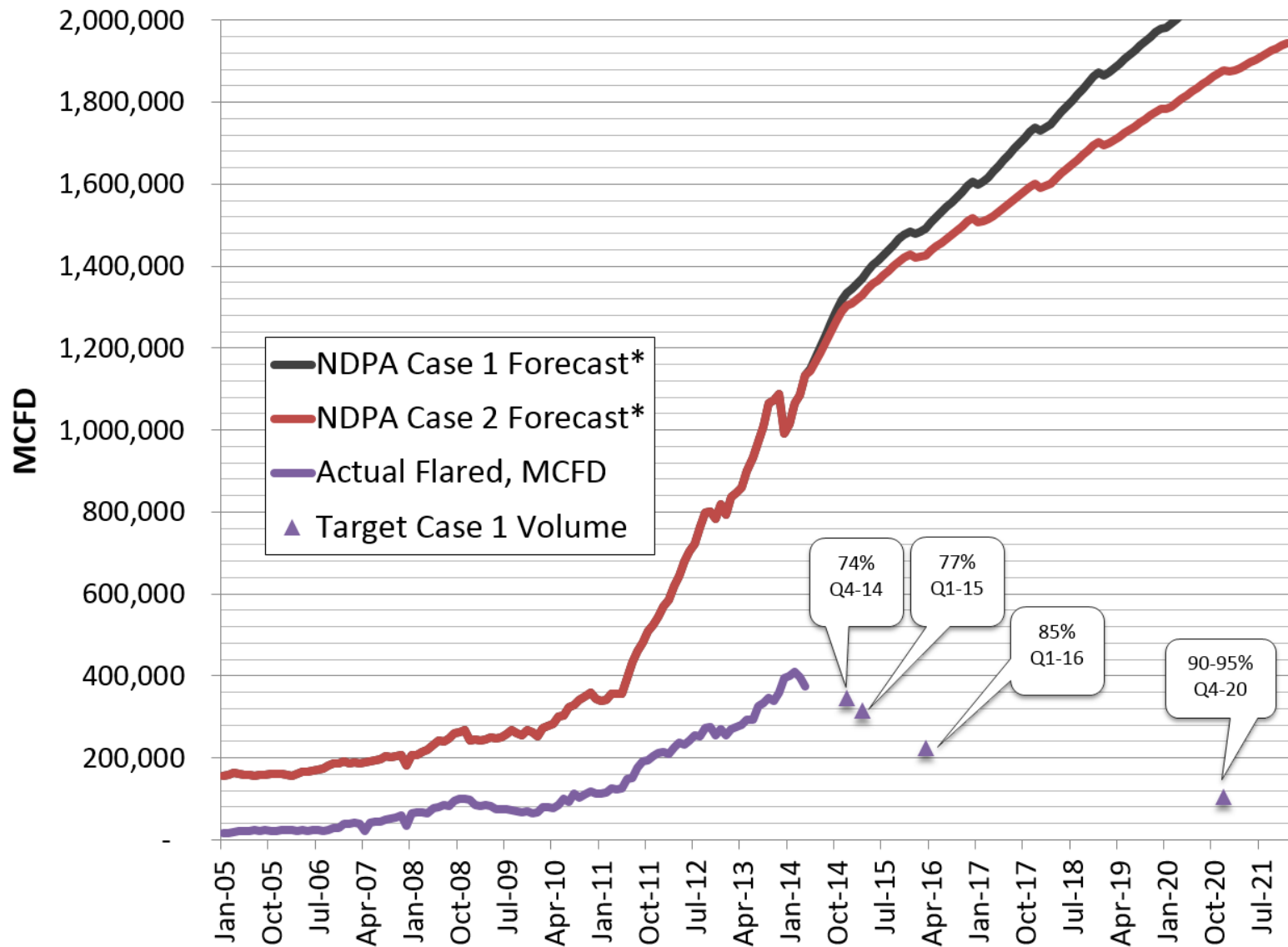
- *Size of resource*
- *Young age of development*
- *Harsh winter conditions*
- *Resource potential still being explored*

Regulations

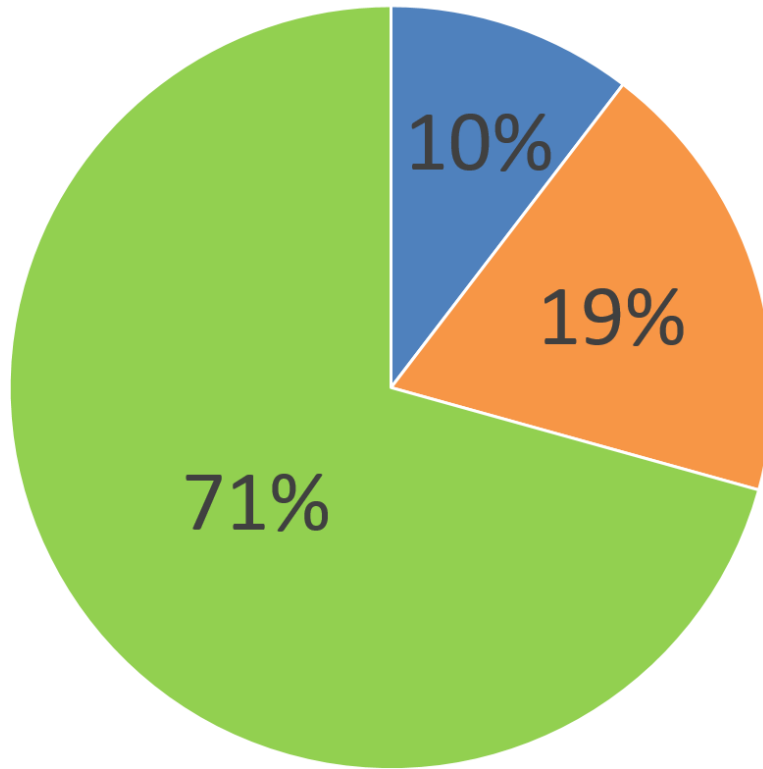
- *Flaring regulated by the ND Industrial Commission/Oil & Gas Division with existing penalties and incentives in place to reduce flaring*



Solving the Flaring Challenge



Solving the Flaring Challenge



Statewide

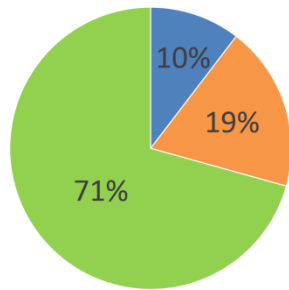
GREEN – % of gas captured and sold
Blue – % flared from zero sales wells
Orange – % flared from wells with at least one mcf sold.

Simple Terms

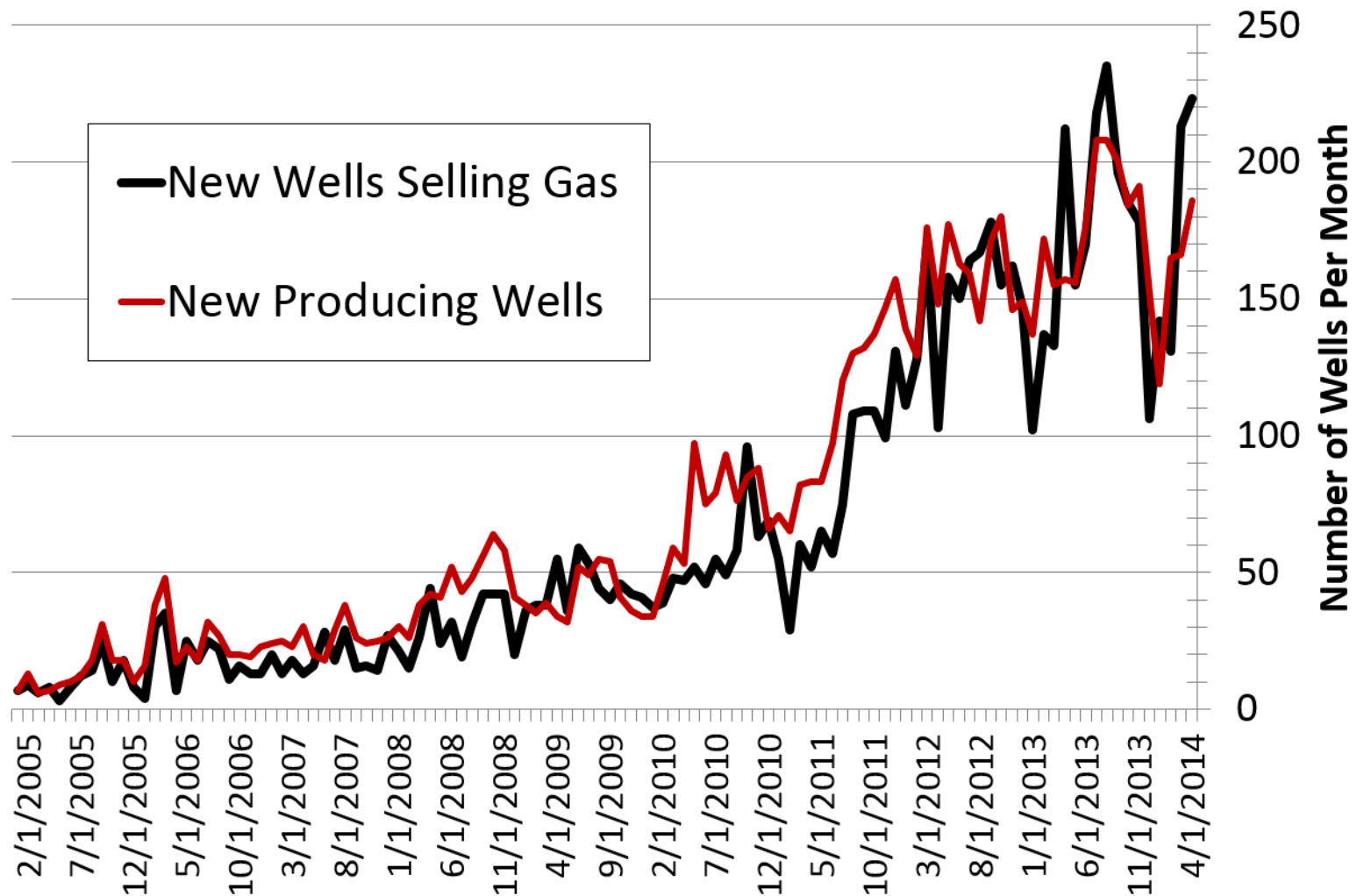
Blue – Lack of pipelines
Orange – Challenges on existing infrastructure

April 2014 Data – Non-Confidential Wells



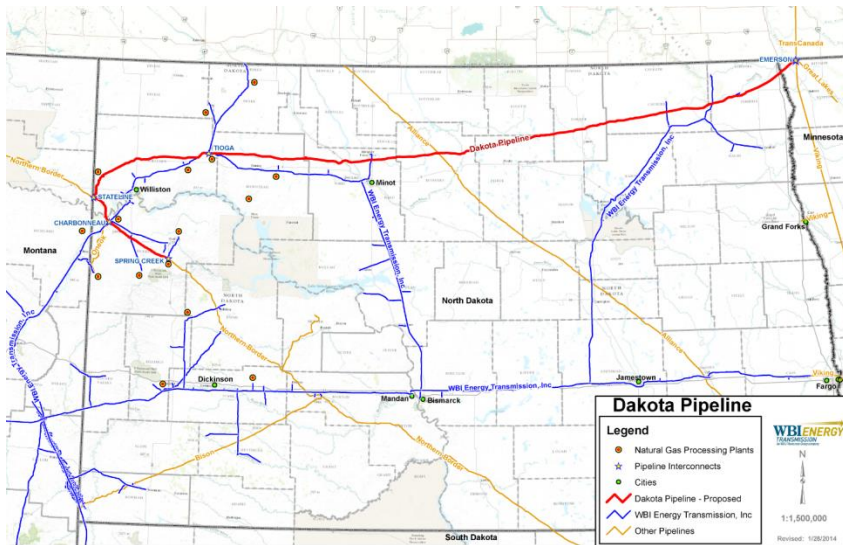


Capturing the 10% Faster Well Connections



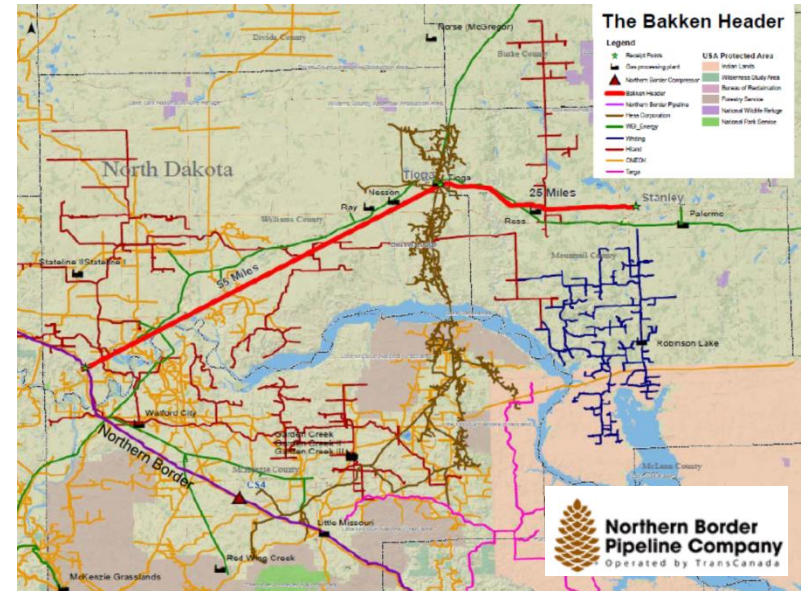
Major Gas Projects in Development

WBI Energy – Dakota Pipeline



- 400-500 MMCFD
- 375 Miles, 24"
- Proposed In-service: 2017

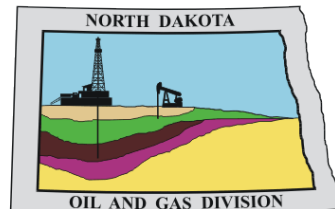
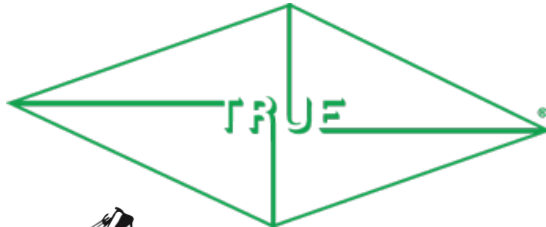
Northern Border – Bakken Header



- 400 MMCFD
- 55 Miles, 20"
- Proposed In-service: Late 2016



Governor's Pipeline Technology Working Group



Contact Information

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www.northdakotapipelines.com



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