



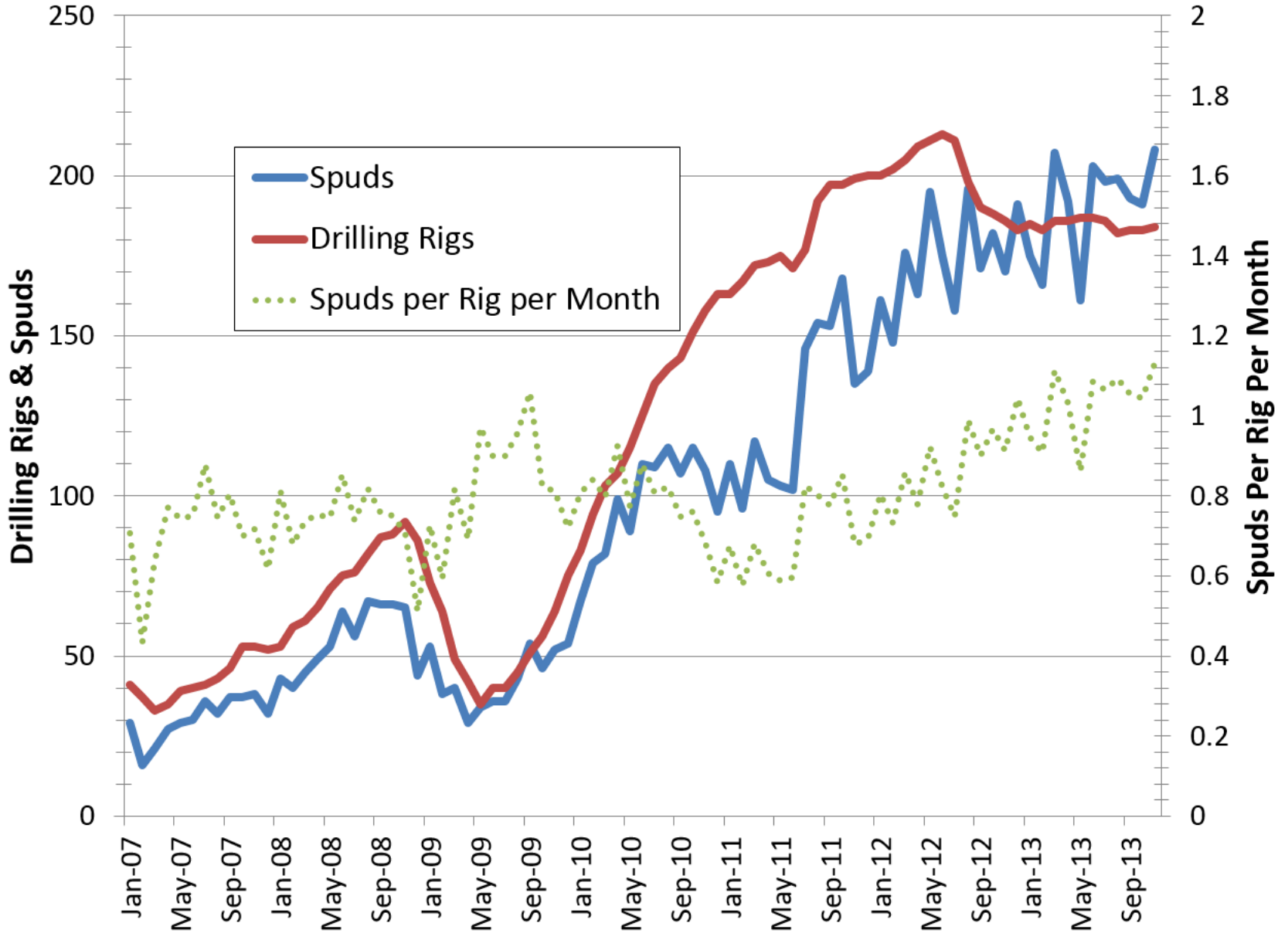
ND Oil & Gas Research Program

North Dakota Pipeline Authority

Justin J. Kringstad

January 23, 2014 - Bismarck, ND

ND Drilling Stats

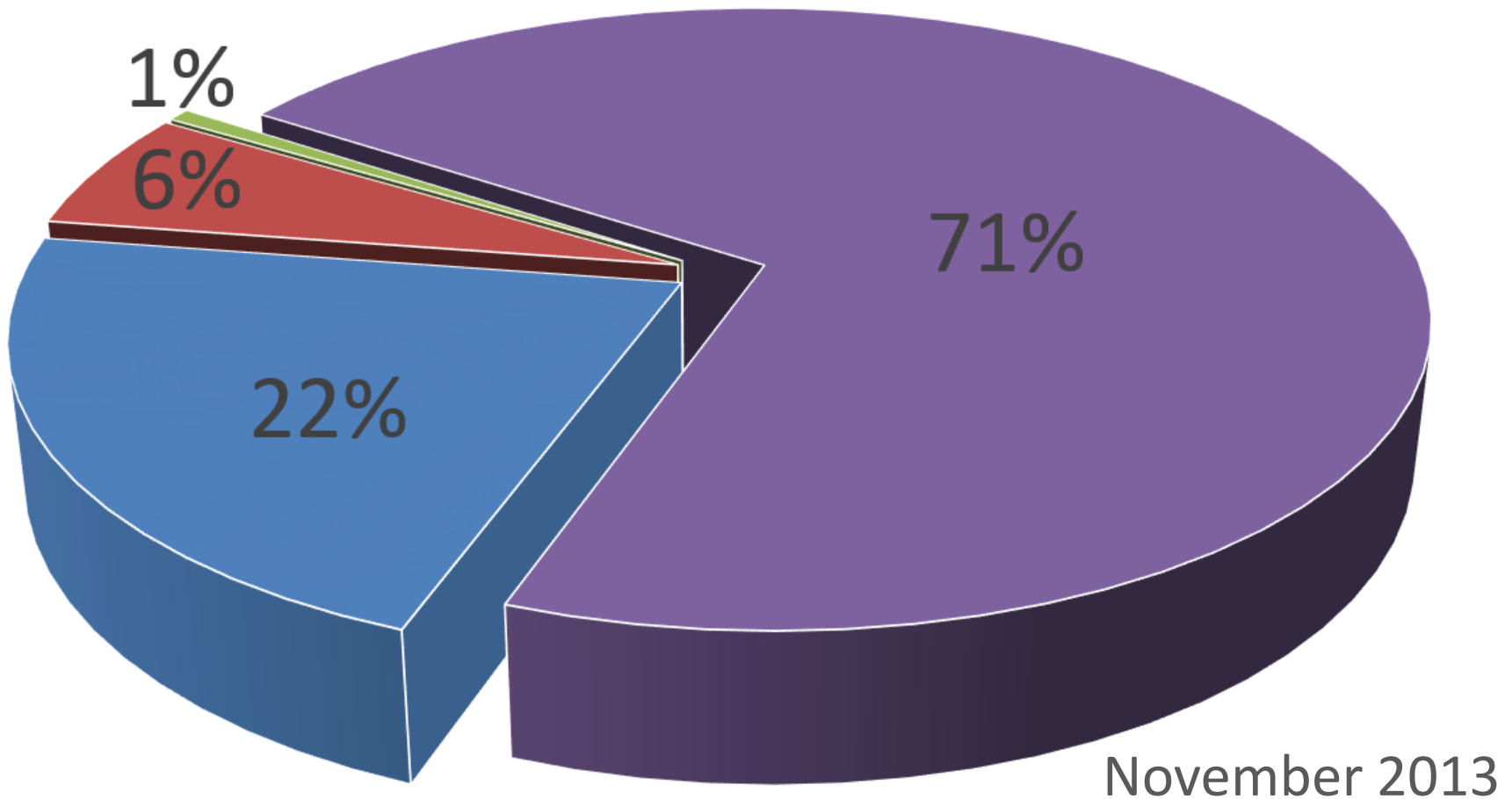


US Williston Basin Oil Production - 2013

MONTH	ND	Eastern MT*	SD	TOTAL
January	739,072	70,598	4,617	814,287
February	781,327	71,861	4,891	858,079
March	786,360	73,406	5,111	864,877
April	793,753	76,027	5,131	874,911
May	811,798	75,058	4,800	891,656
June	823,721	73,547	4,781	902,049
July	874,202	75,881	4,678	954,761
August	912,528	75,817	4,877	993,222
September	933,191	72,982	5,017	1,011,190
October	945,182		4,643	--
November	973,045		5,026	--
December				--



Estimated Williston Basin Oil Transportation

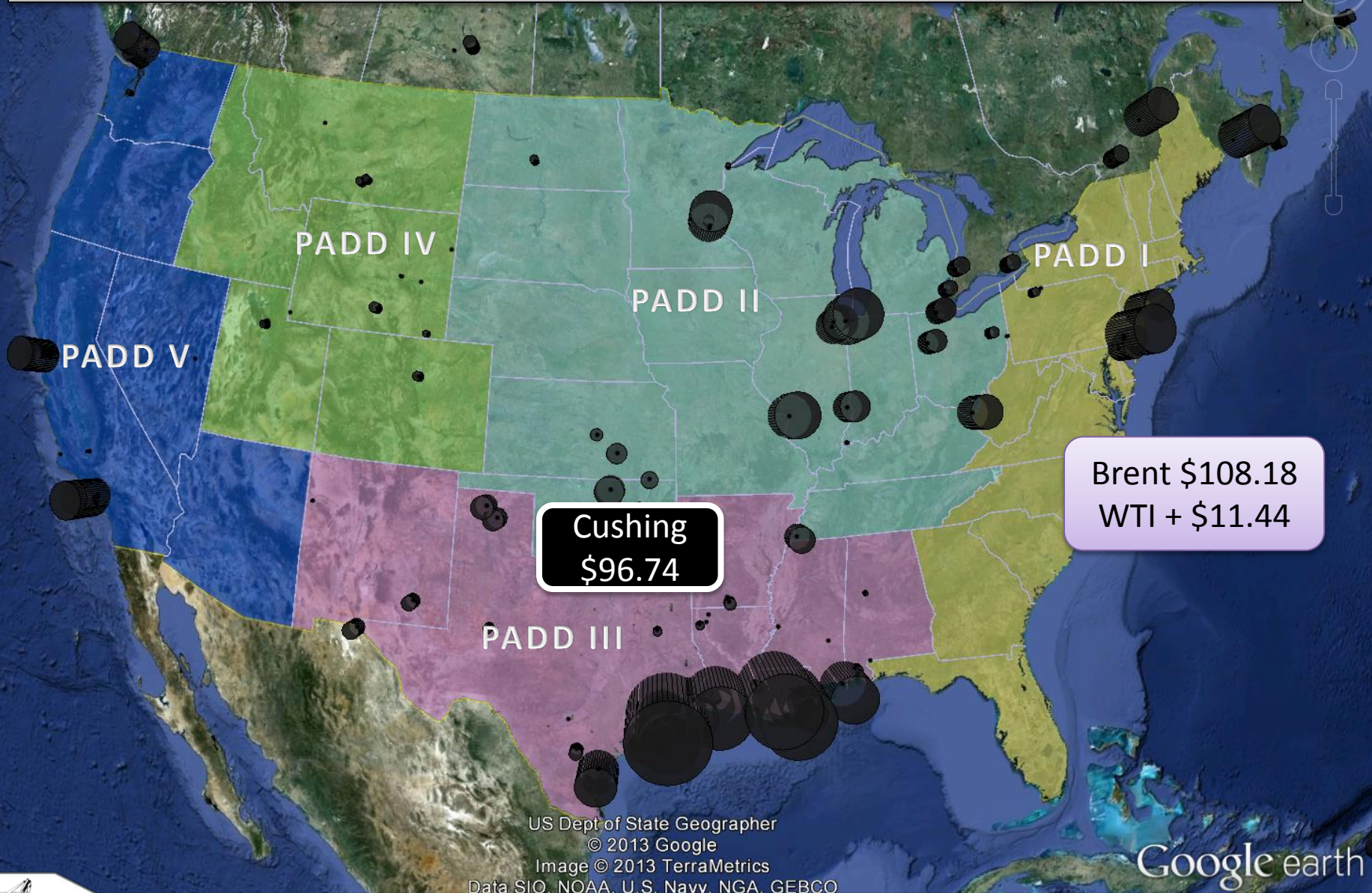


November 2013

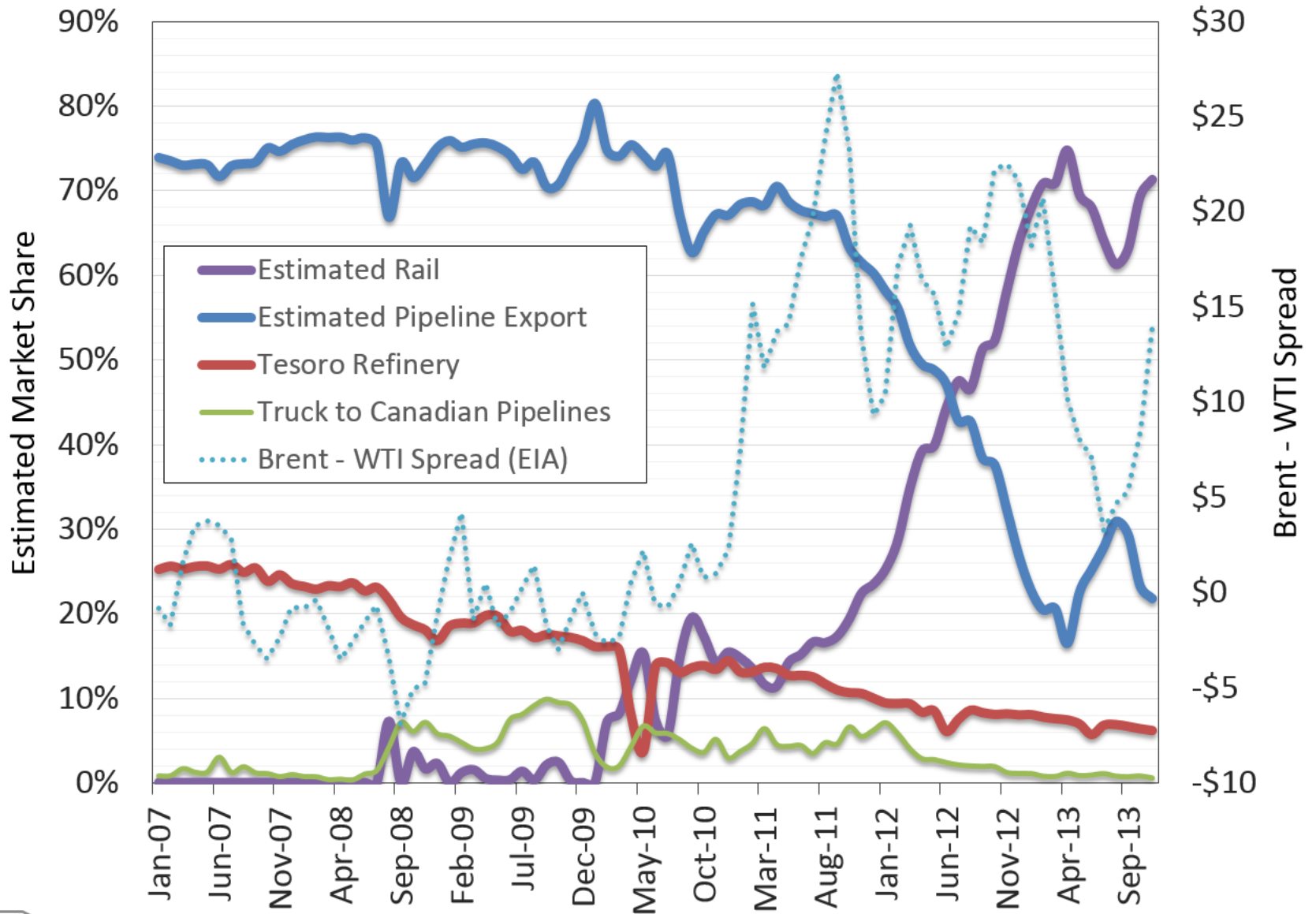
- Estimated Pipeline Export
- Tesoro Refinery
- Truck to Canadian Pipelines
- Estimated Rail



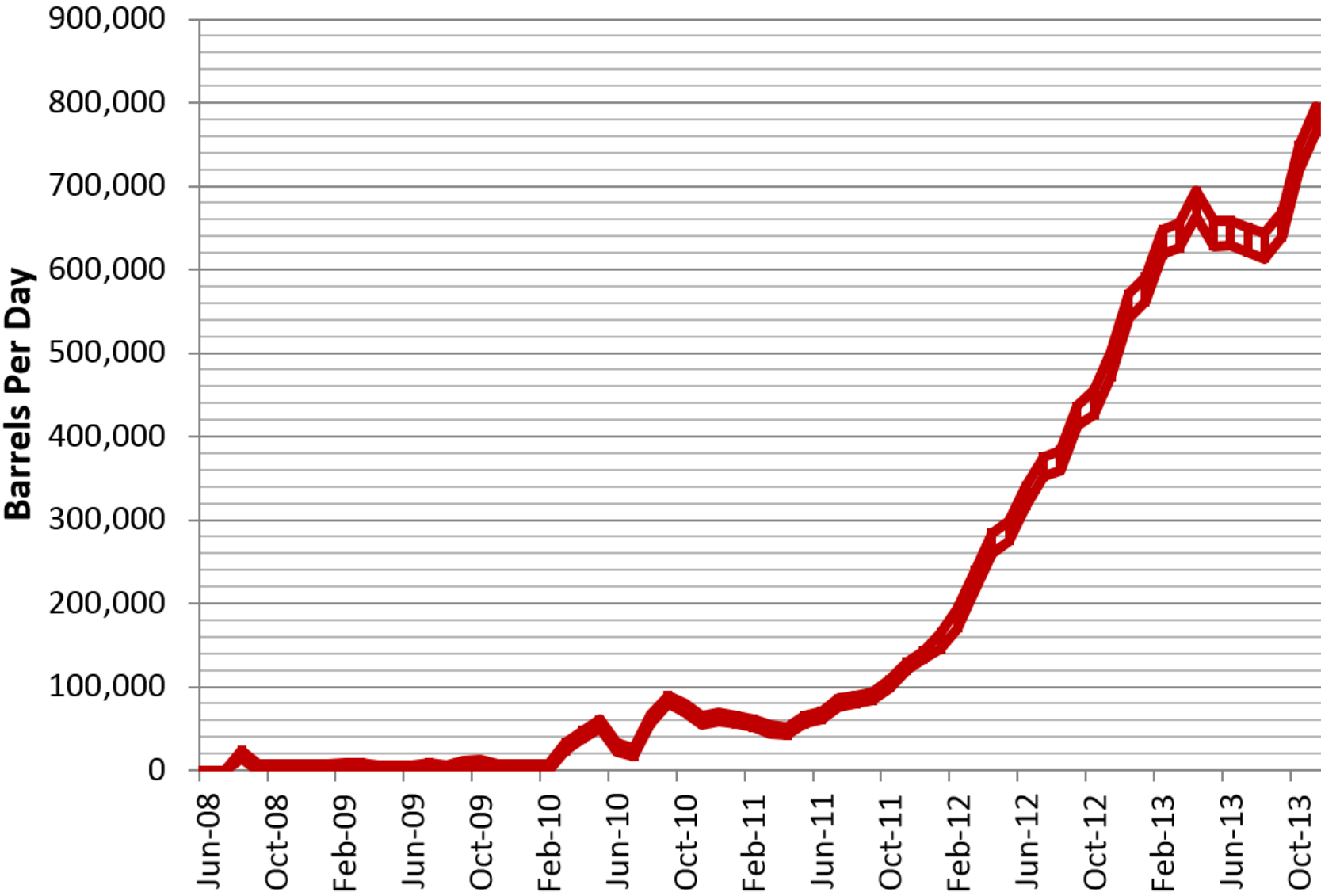
Crude Oil Prices – Jan. 22, 2014



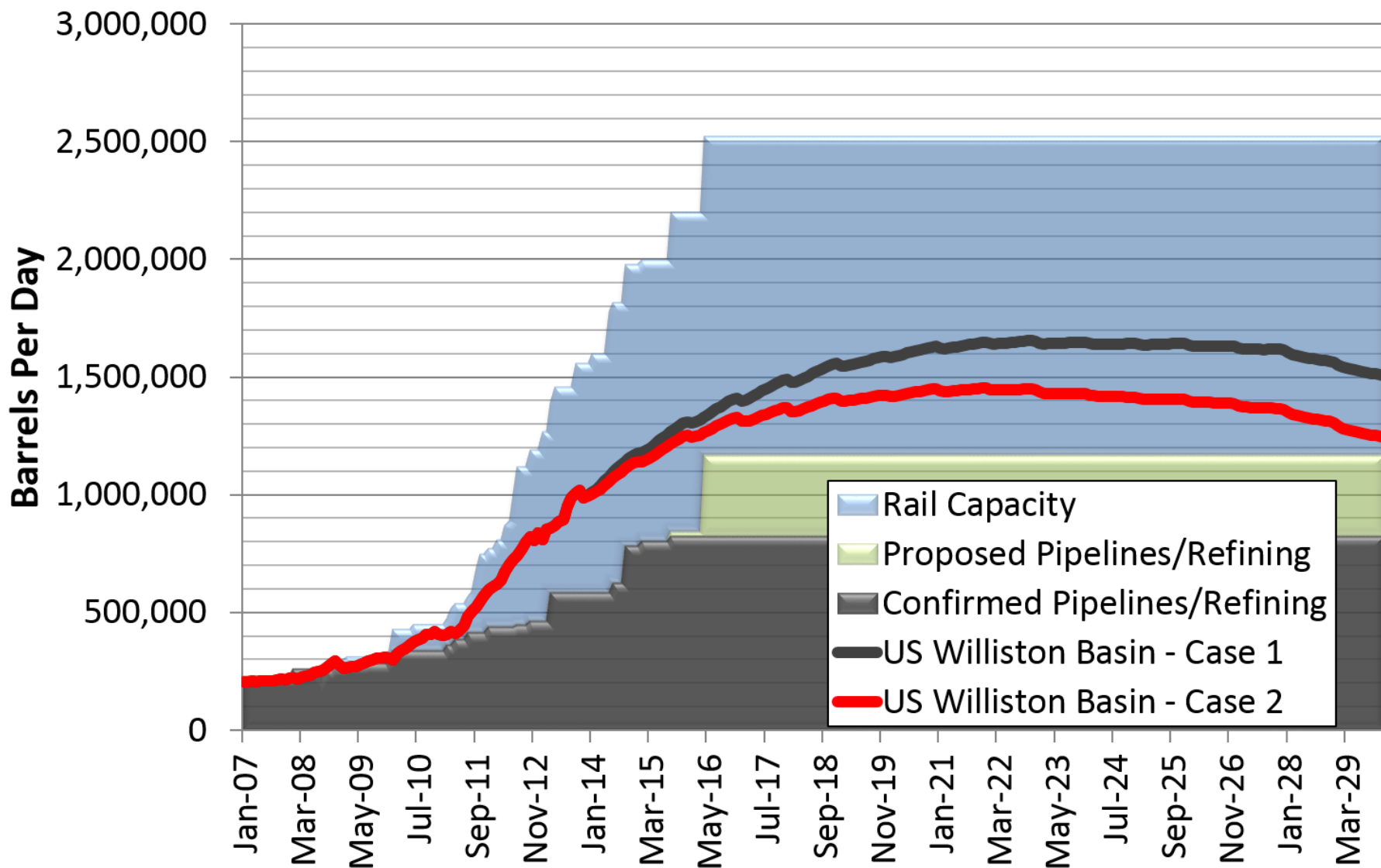
Estimated Williston Basin Oil Transportation



Estimated ND Rail Export Volumes



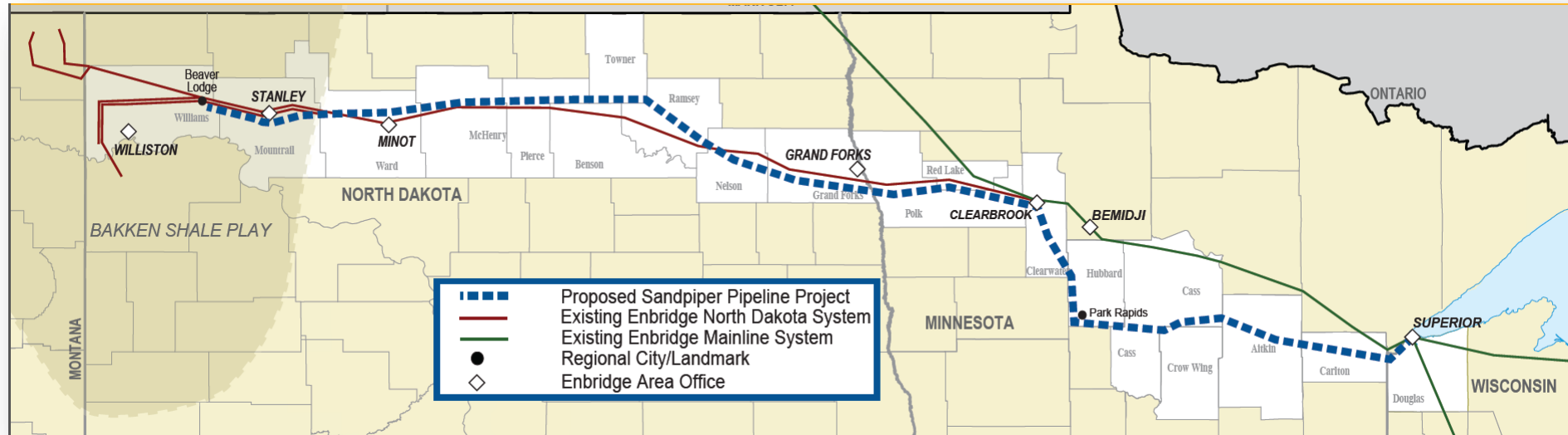
Williston Basin Oil Production & Export Capacity, BOPD



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



Sandpiper Pipeline Open Season

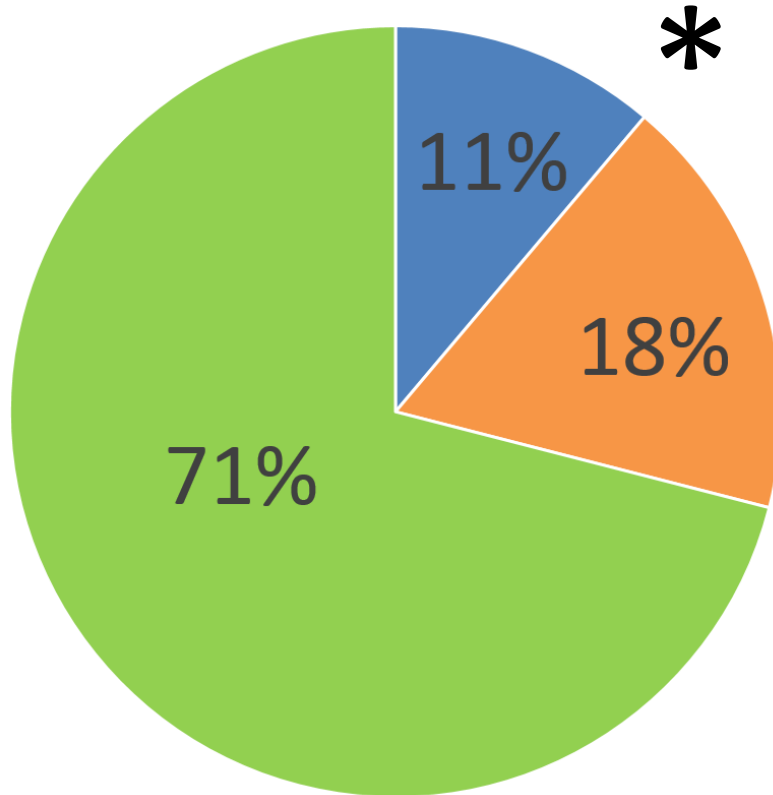


North Dakota Pipeline Company LLC - formerly known as Enbridge Pipelines (North Dakota) LLC

- Open Season Dates: November 26, 2013 – January 24, 2014
- 225,000 BOPD ND Capacity to Clearbrook, MN (24")
- 375,000 BOPD Clearbrook, MN to Superior, WI (30")
- In-service Date: Q1 2016
- Project cost: \$2.6 Billion



Solving the Flaring Challenge



Statewide

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

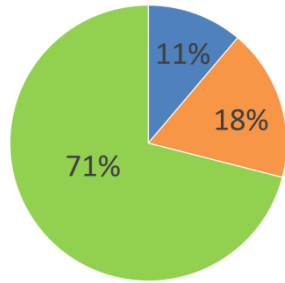
Simple Terms

Orange – Challenges on existing infrastructure
Blue – Lack of pipelines

November 2013 Data – Non-Confidential Wells

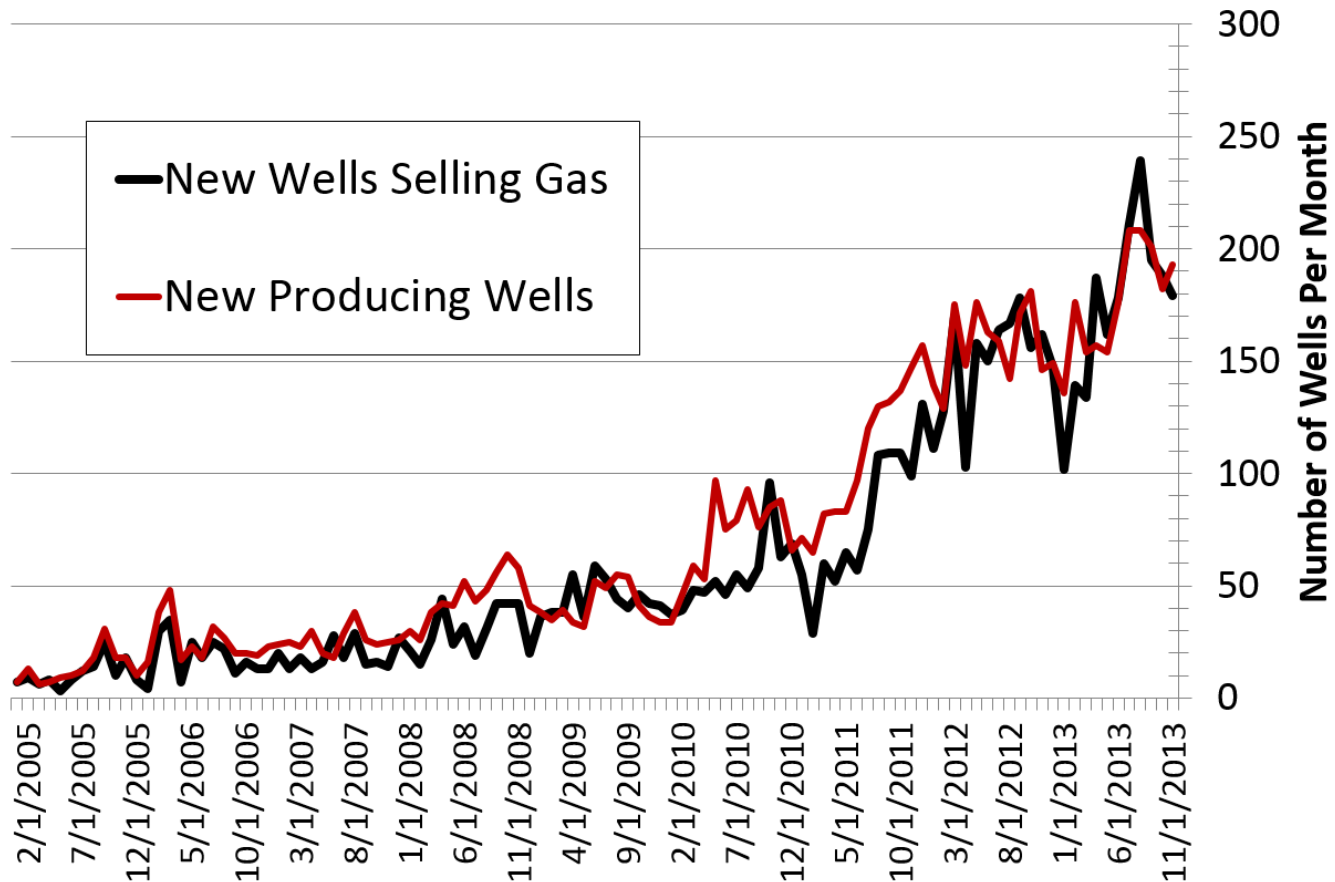
**Hess Tioga Gas Plant shut-in for 140 MMCFD expansion starting in November*



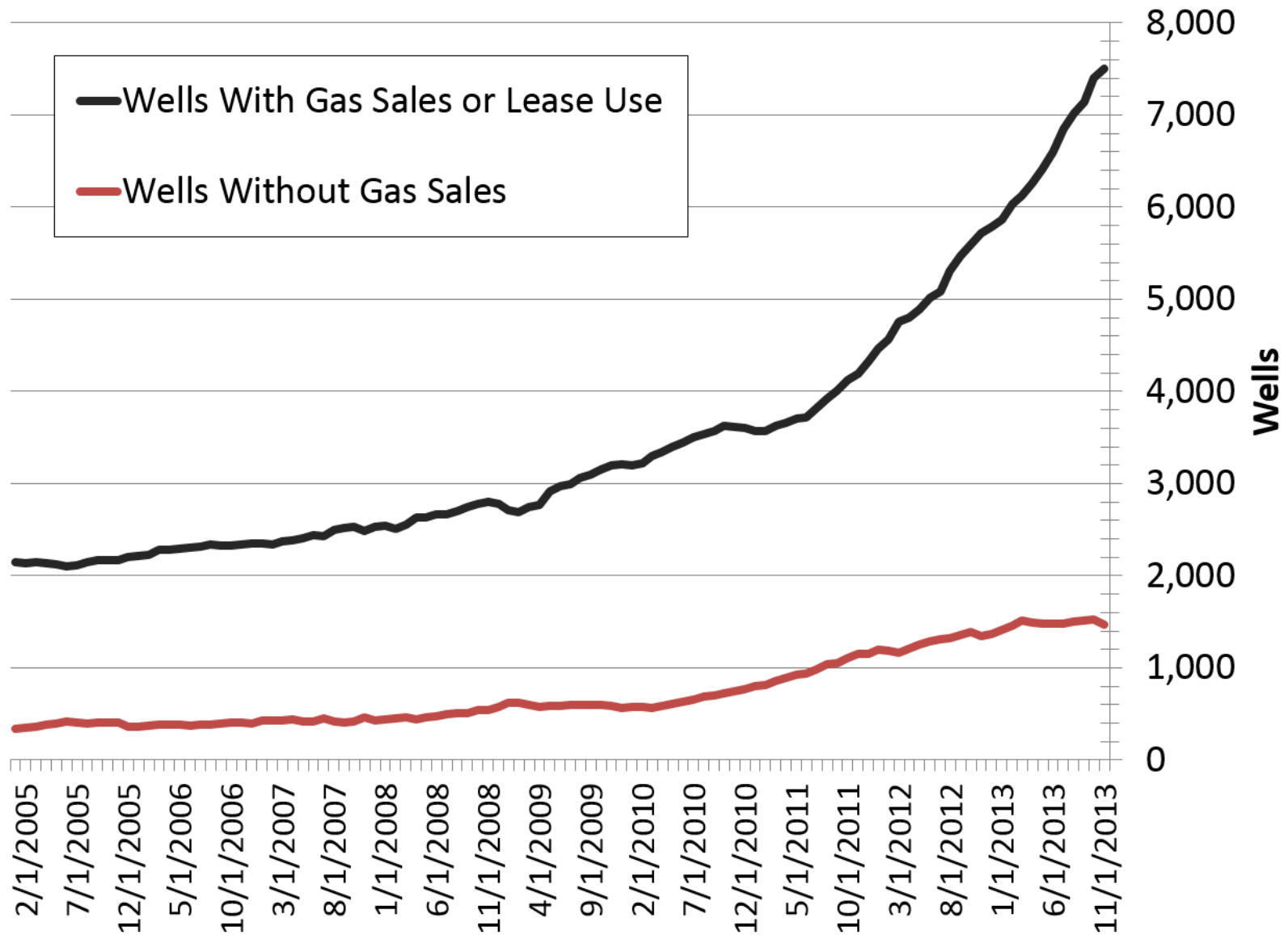


Capturing the 11% Faster Well Connections

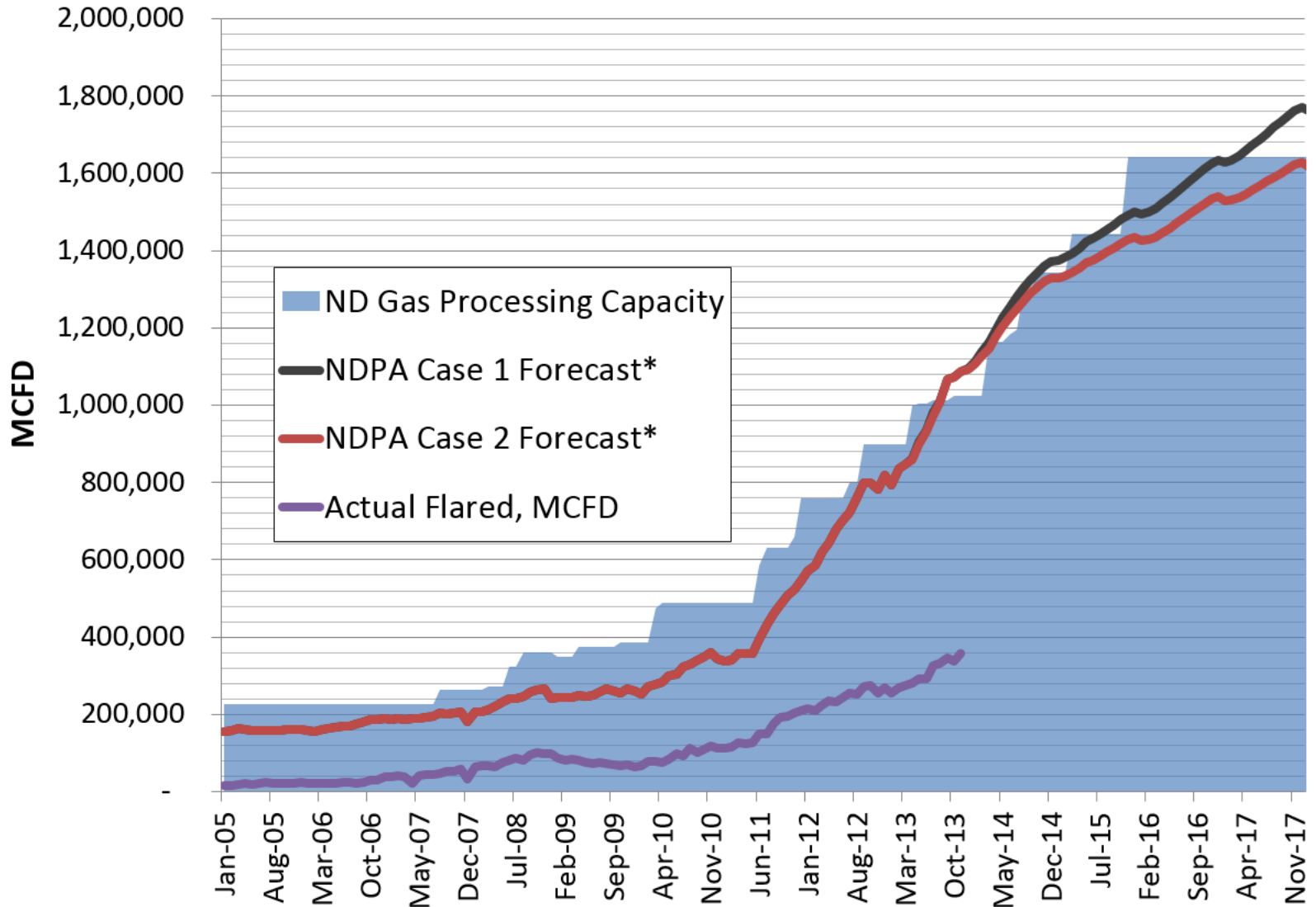
New Gas Sales Wells Per Month



ND Gas Gathering Statistics



ND Gas Plant Capacity



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



New NDPA Natural Gas Report



NORTH DAKOTA NATURAL GAS

A DETAILED LOOK AT NATURAL GAS GATHERING

Published: October 22, 2013
Justin J. Kringstad, Director
North Dakota Pipeline Authority
Office: 701.220.6227
www.northdakotapipelines.com

NORTH DAKOTA NATURAL GAS

A DETAILED LOOK AT NATURAL GAS GATHERING

This report is designed to be a factual look at natural gas gathering, processing, and flaring in North Dakota.

The Bakken – Three Forks Formations

The Bakken/Three Forks (Bakken) is the largest oil field (in square miles) in North America. It underlies approximately 15,000+ square miles of North Dakota. The formation has been known about by geologists for decades, but it wasn't until 2006 when the use of horizontal drilling combined with hydraulic fracturing that the Bakken was considered to be an economic play.

The Bakken formation produces both crude oil and associated natural gas. Oil is the primary energy resource contained in Bakken wells and is the principal economic driver for energy producing companies.

Natural Gas Flaring

Flaring occurs when natural gas is burned on location due to a lack of gathering pipeline infrastructure or economic alternatives. Flaring of natural gas is a much safer and more environmentally friendly method of handling the natural gas than simply venting into the atmosphere. By flaring the gas, it converts the methane to carbon dioxide (CO₂) which has 20-25 times less impact on greenhouse gas emissions.

A gas gathering pipeline and processing plant are the conventional means to condition the natural gas for retail use. An economic analysis must be done to determine if it is even feasible to connect a well to an

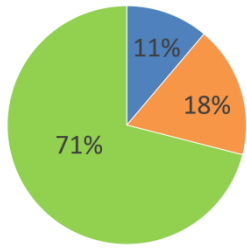
FLARING REGULATION

In an effort to conserve this resource and protect against waste, the Industrial Commission Oil and Gas Division, under the authority granted in section 38-08-04 of the North Dakota Century Code, implements and enforces rules and regulations to limit the production of oil produced from wells that are not yet connected to a gas-gathering system.

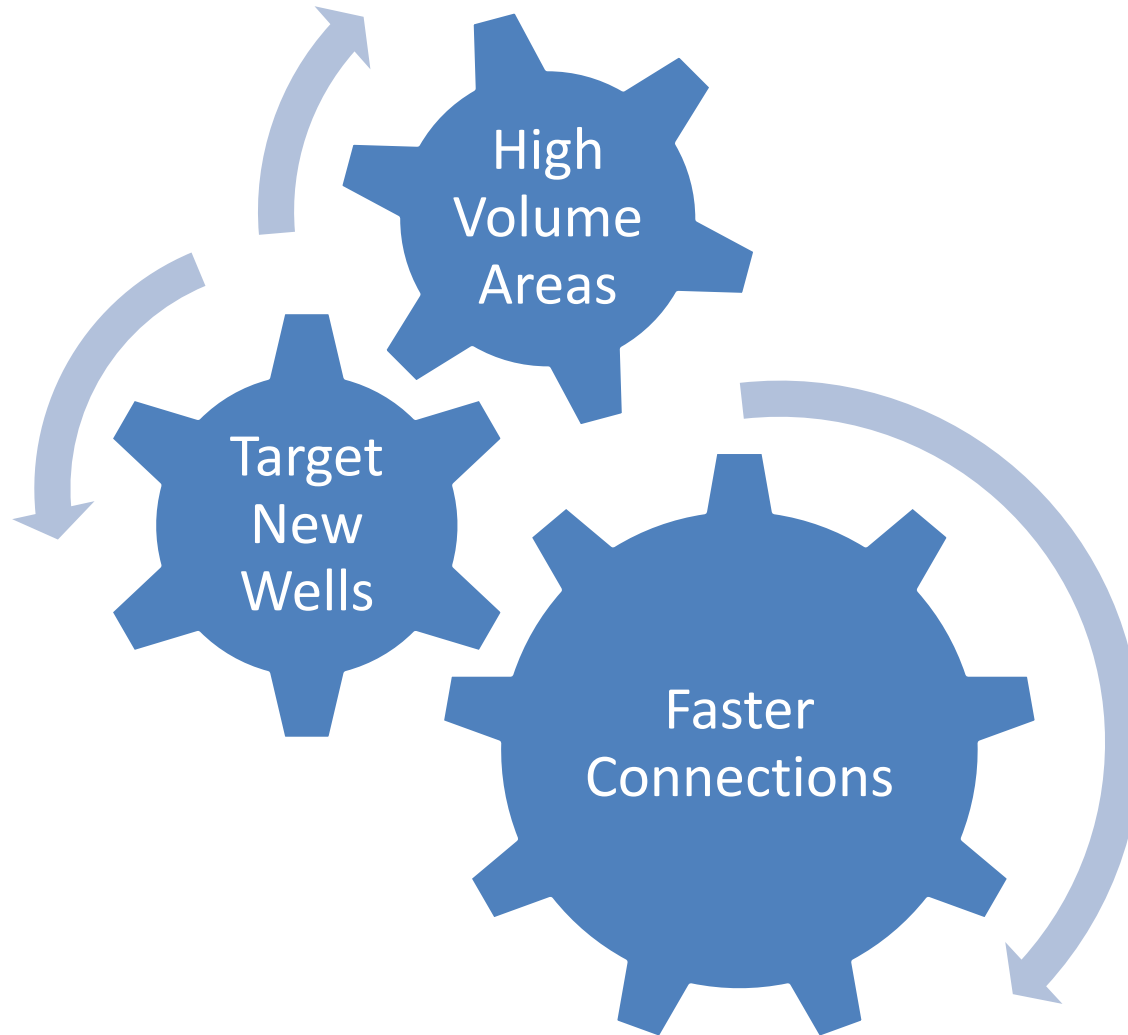
PRIMARY CHALLENGES

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

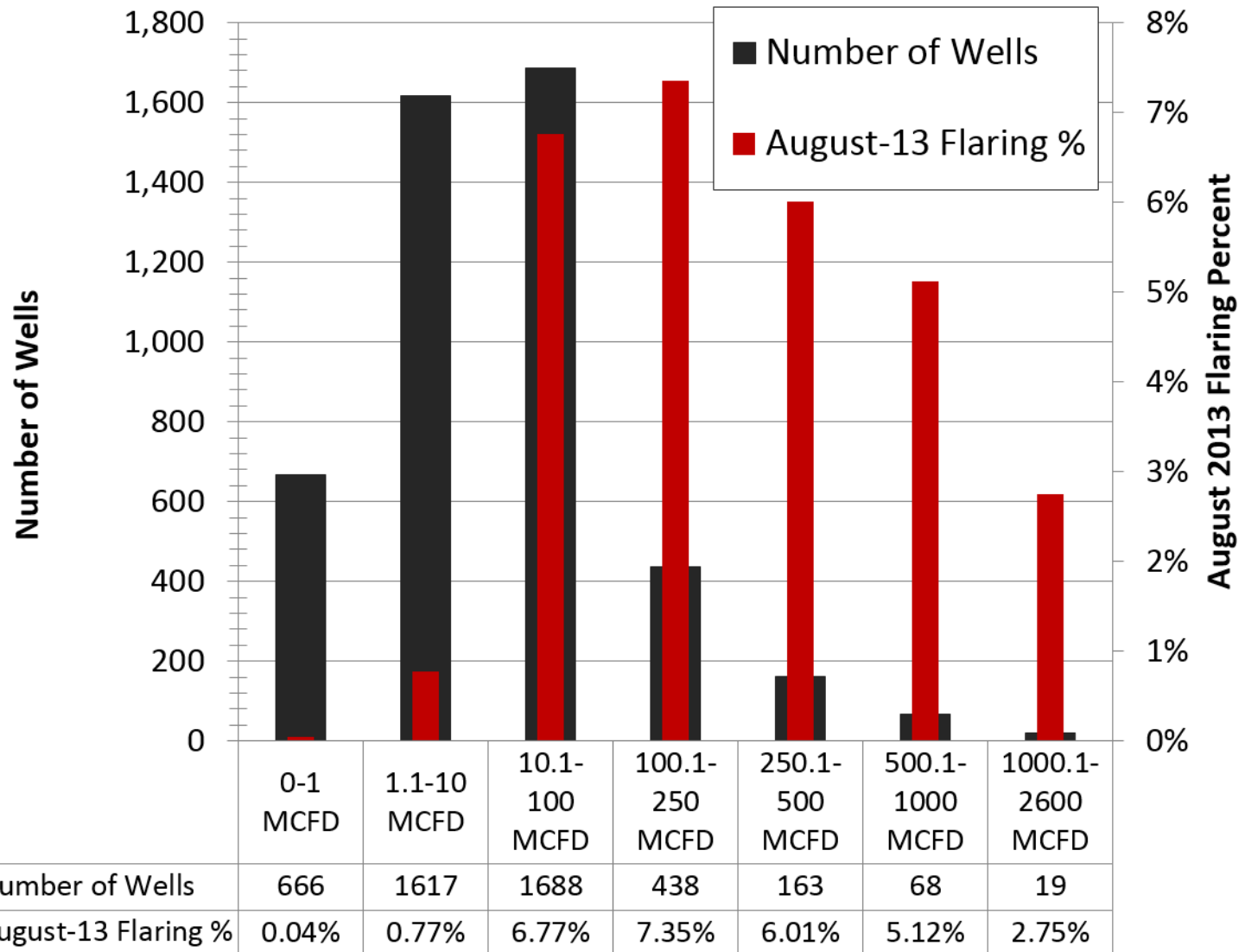


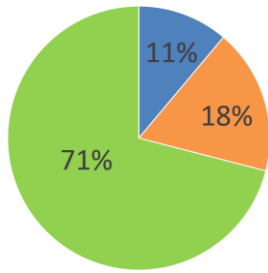


Conclusion 1: Getting the right wells connected quickly is moving in the right direction

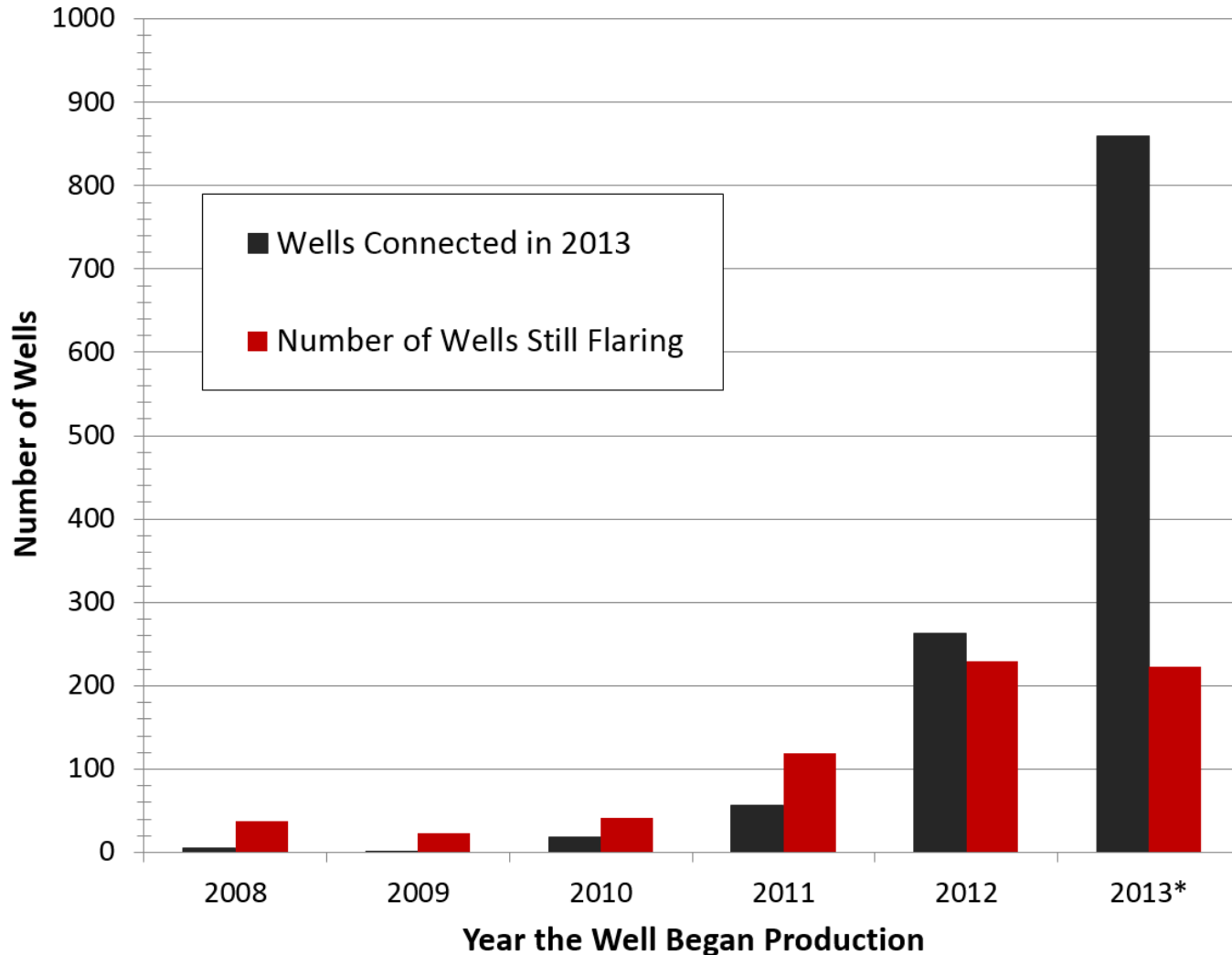


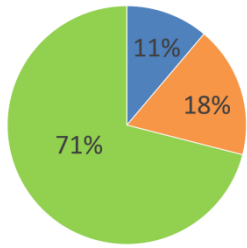
Understanding Which Wells Are Flaring



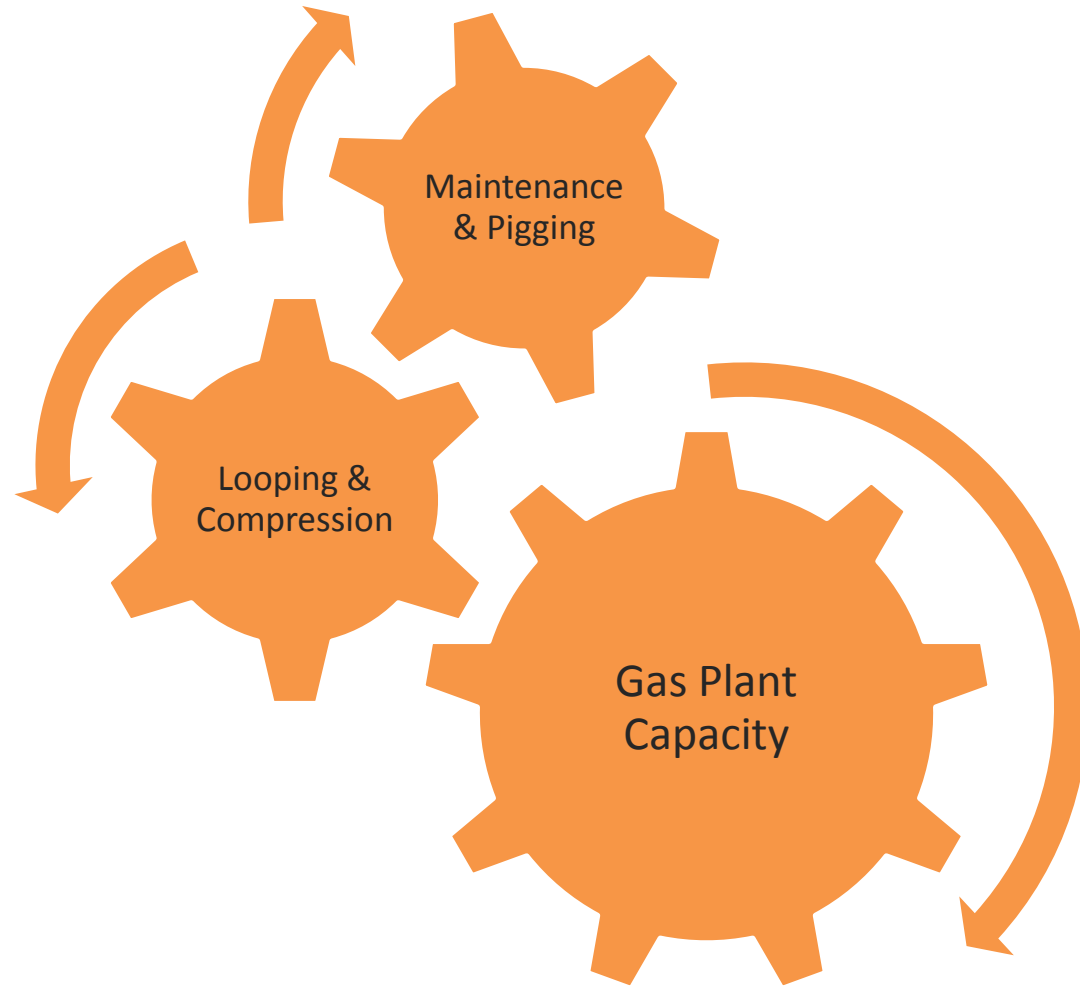


Capturing the 11% Catching Early Production





Conclusion 2: Finding a way to quantify system enhancements would greatly assist in understanding the timeline



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