

ND Pipeline Authority

North Dakota Oil & Gas Research Council



Justin J Kringstad

Geological Engineer

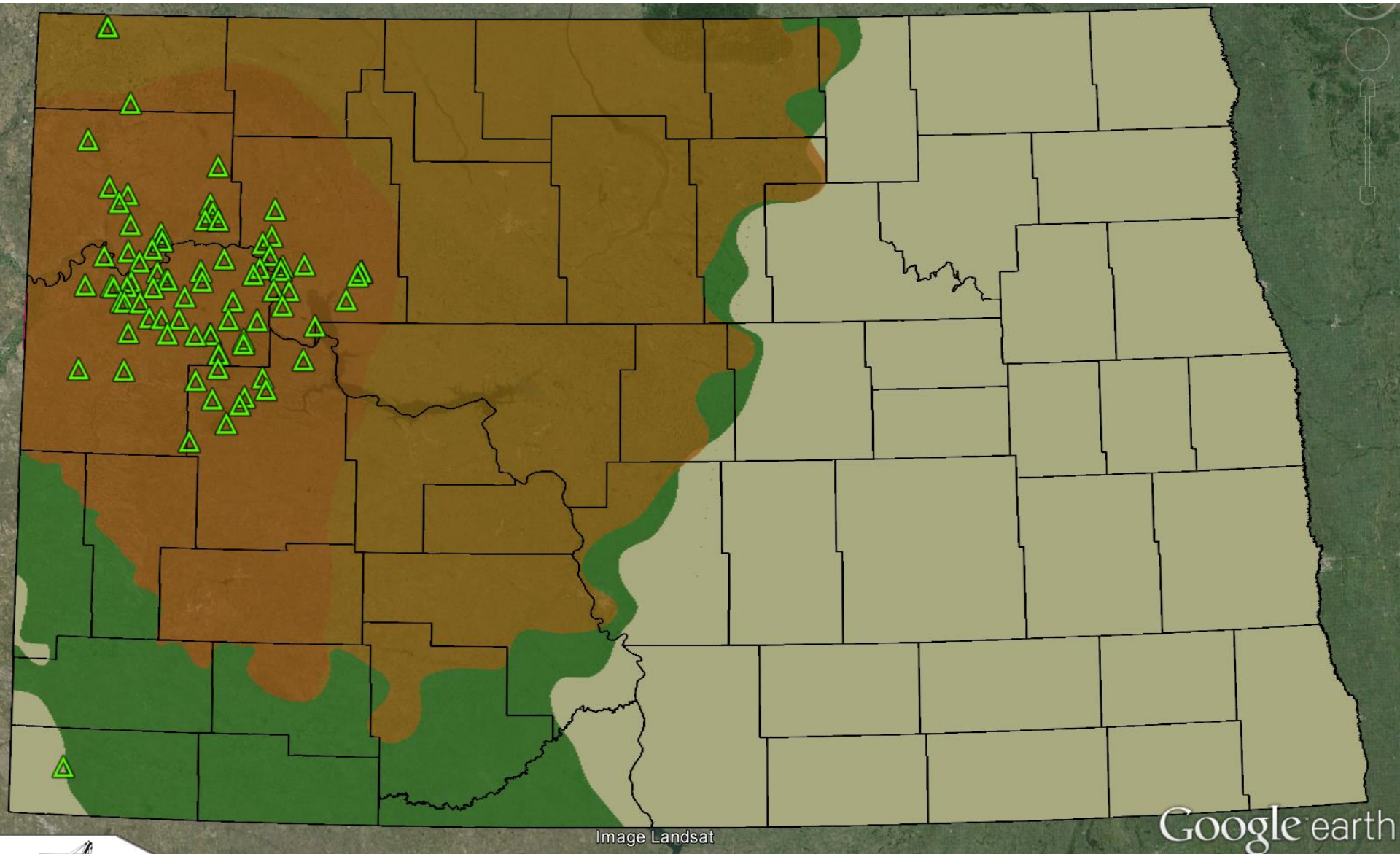
Director

North Dakota Pipeline Authority

May 26, 2015

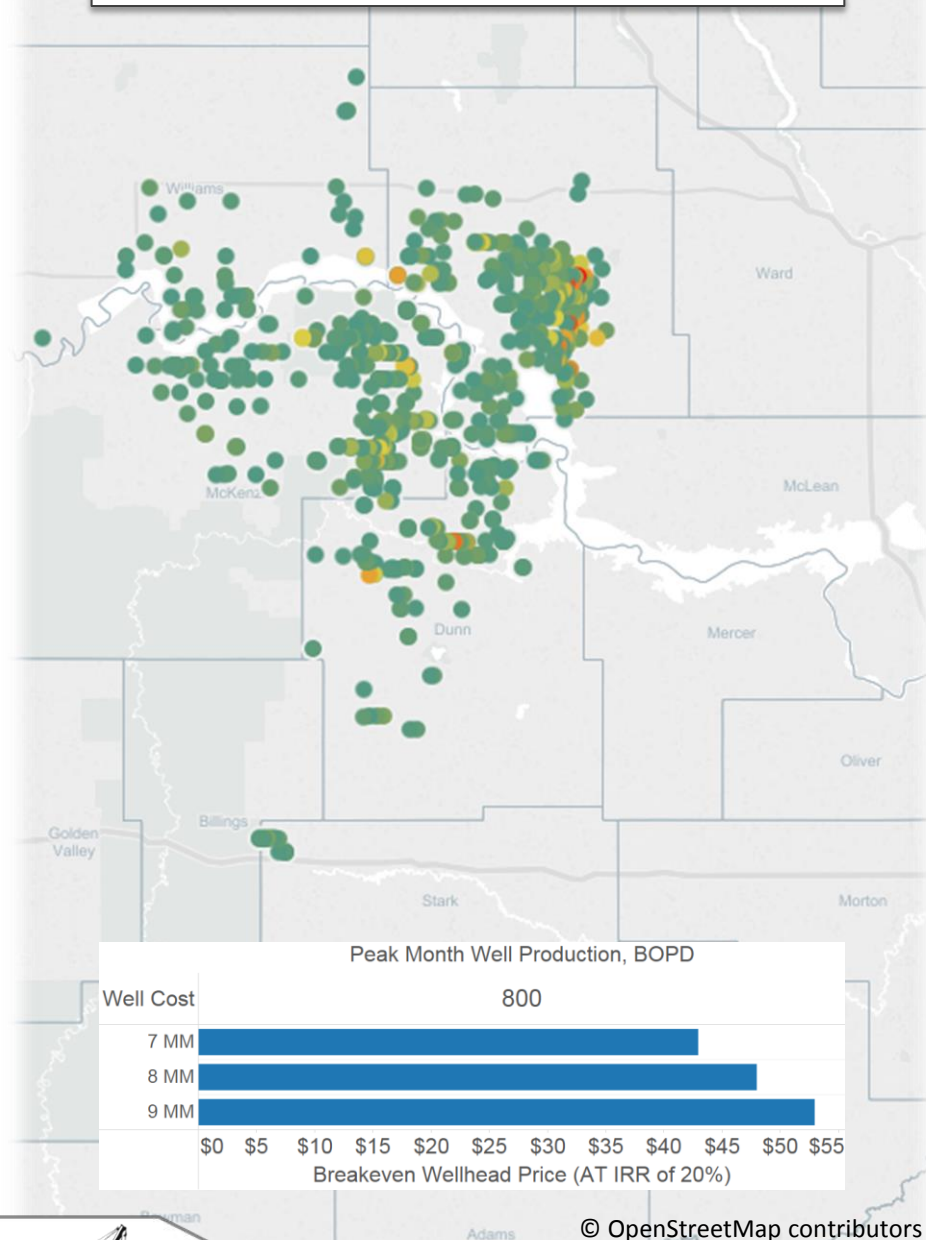


Current Drilling Activity

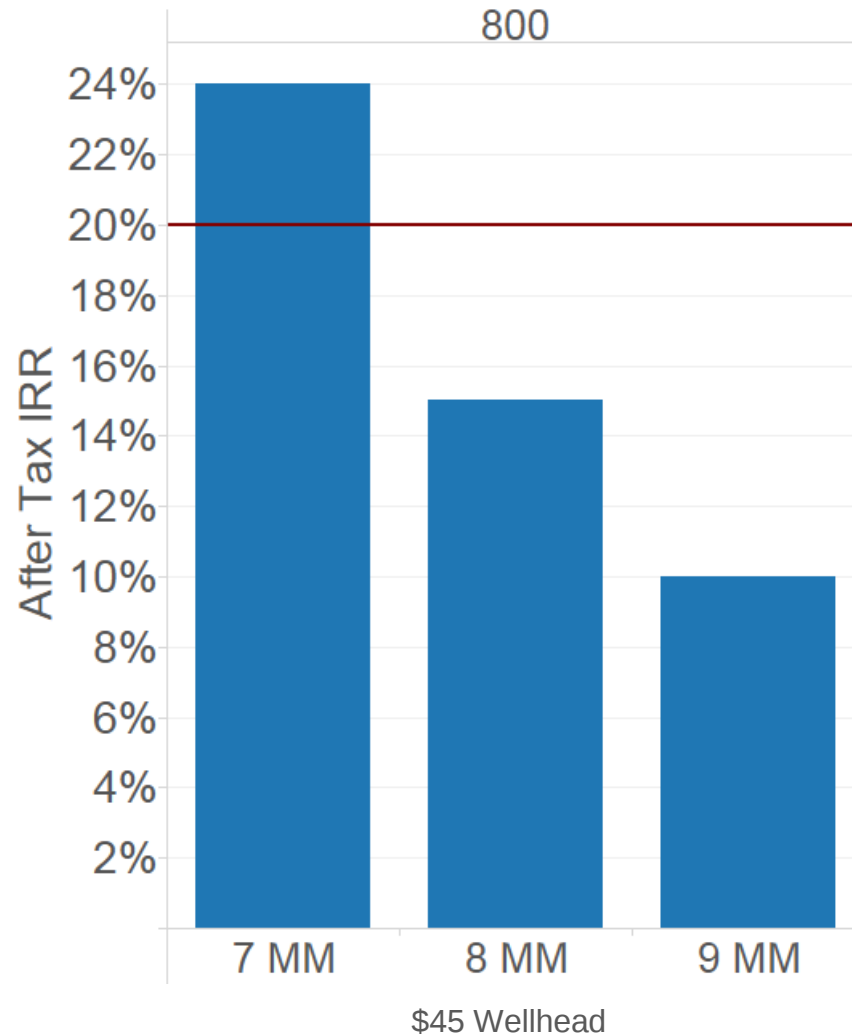


From Jan-15 PPT

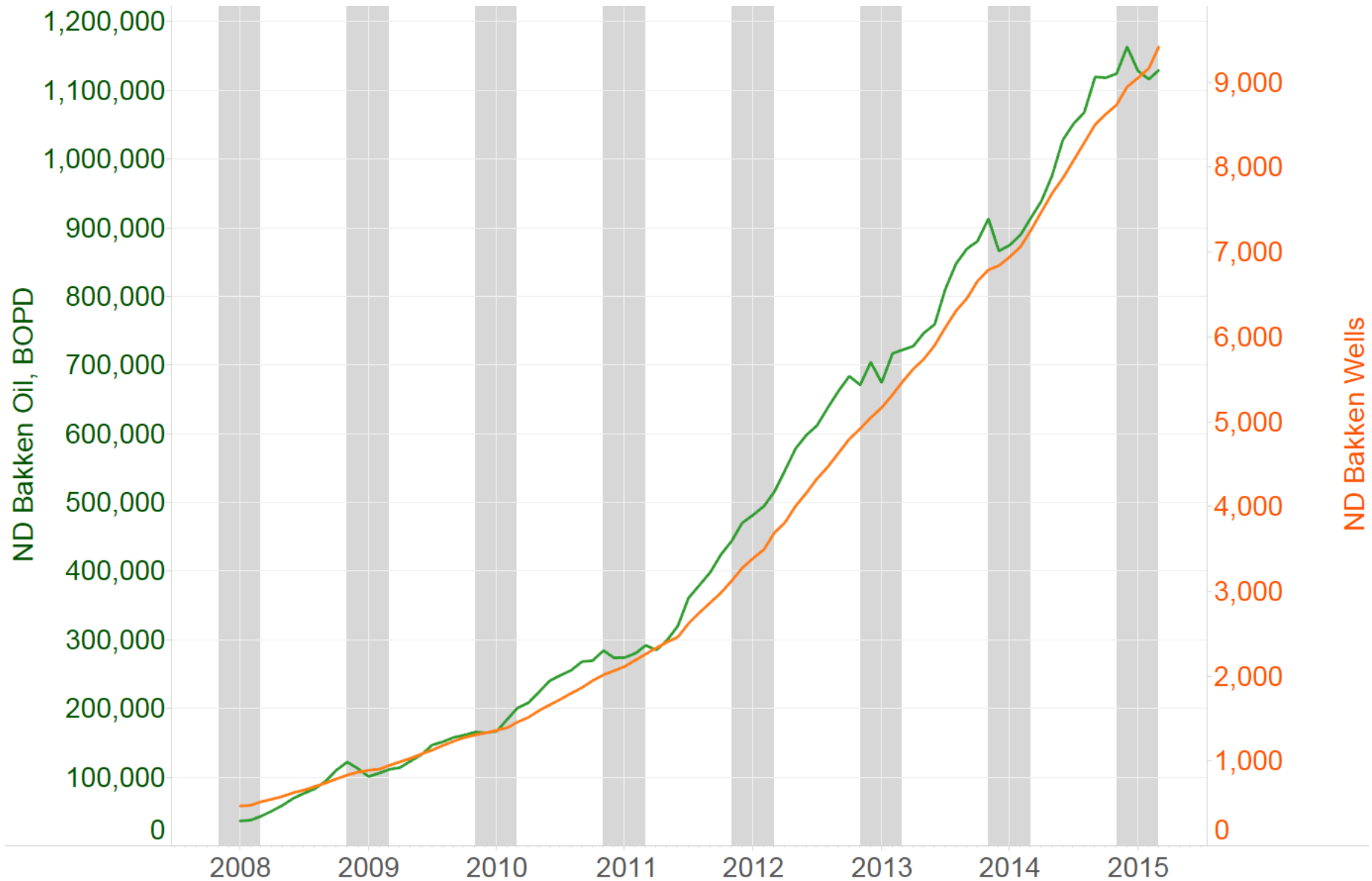
Peak Month Minimum 800 BOPD



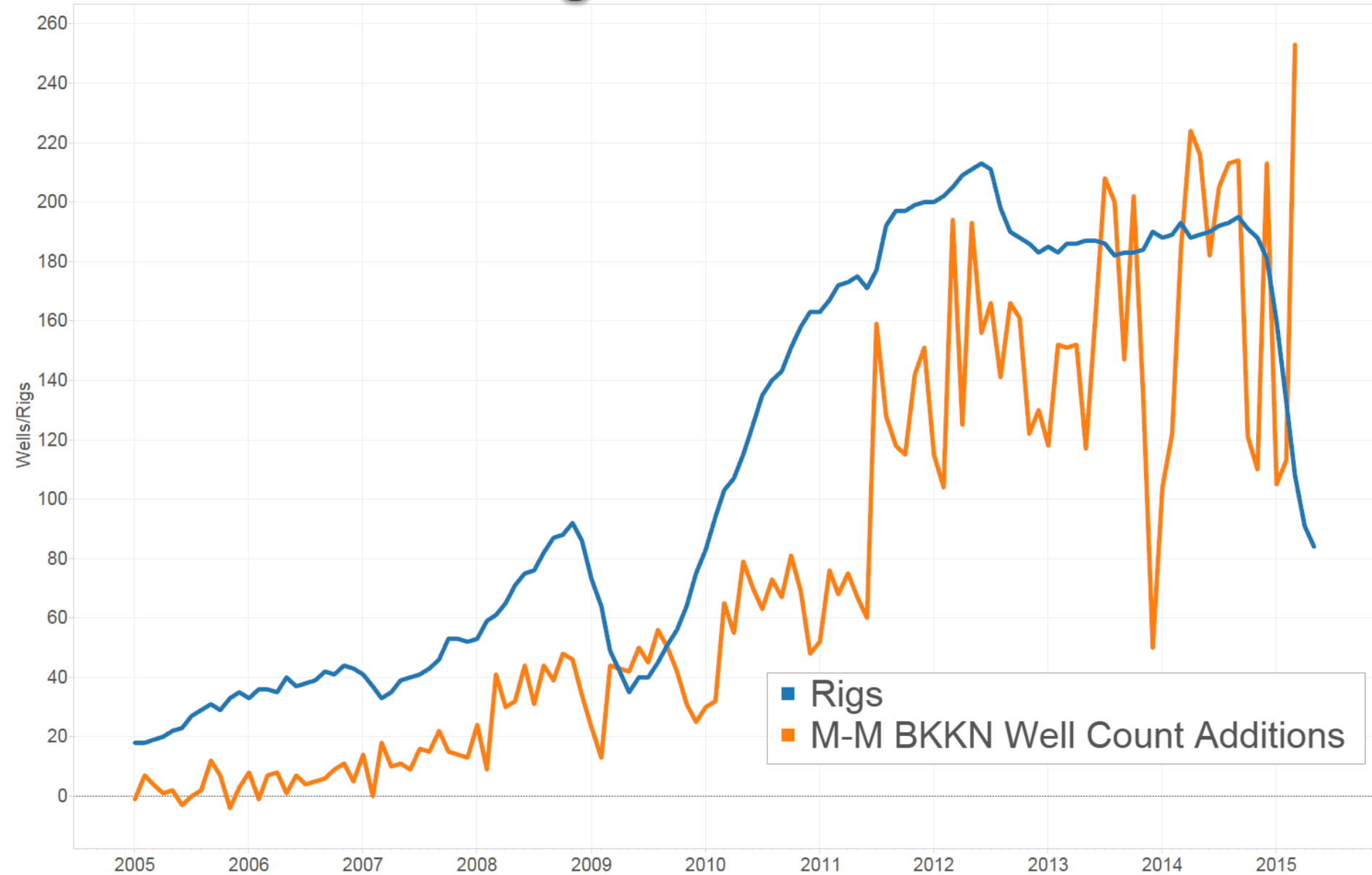
Peak Month BOPD / Well Cost
800



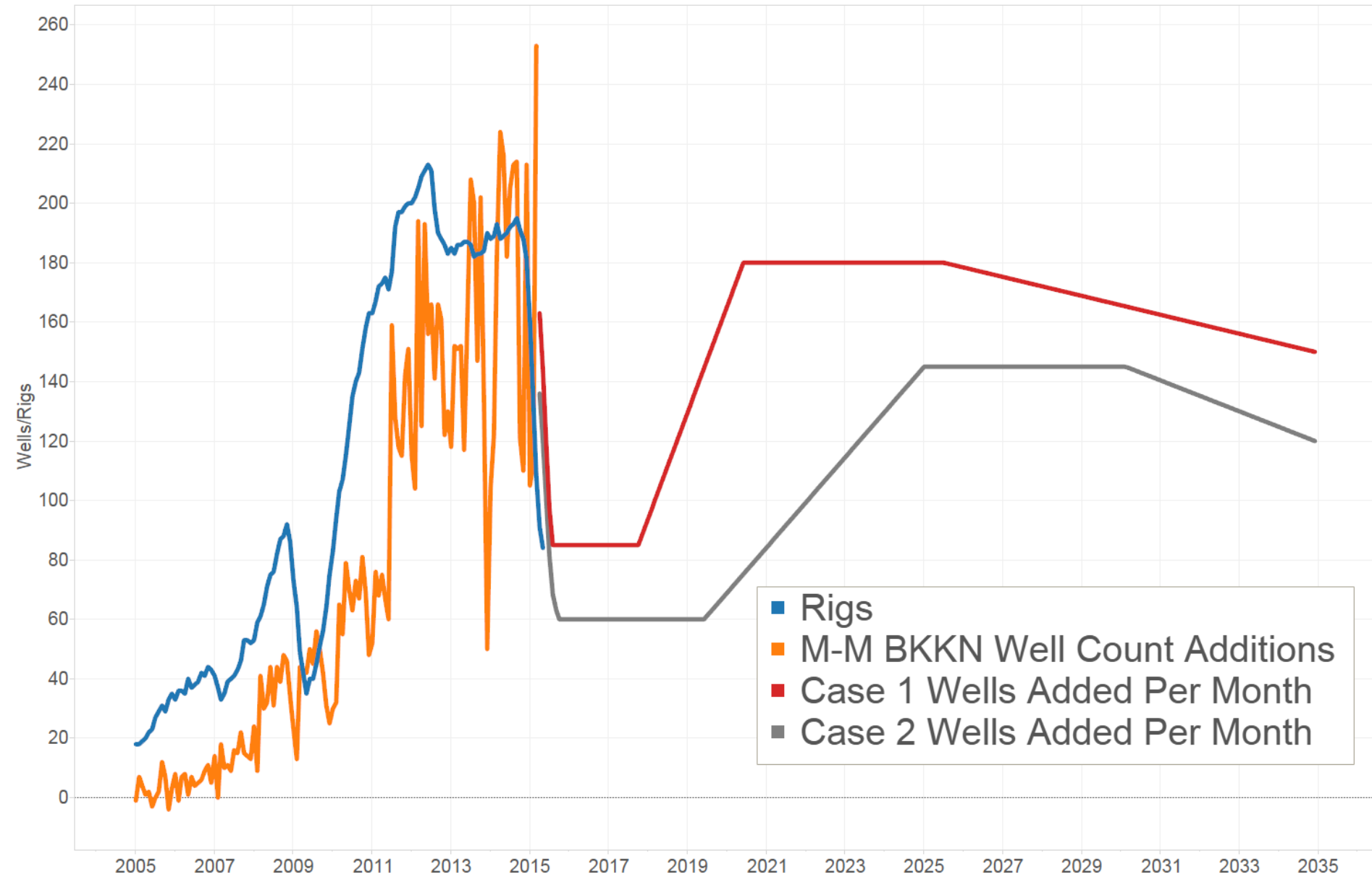
Understanding the Winter of 2014-15



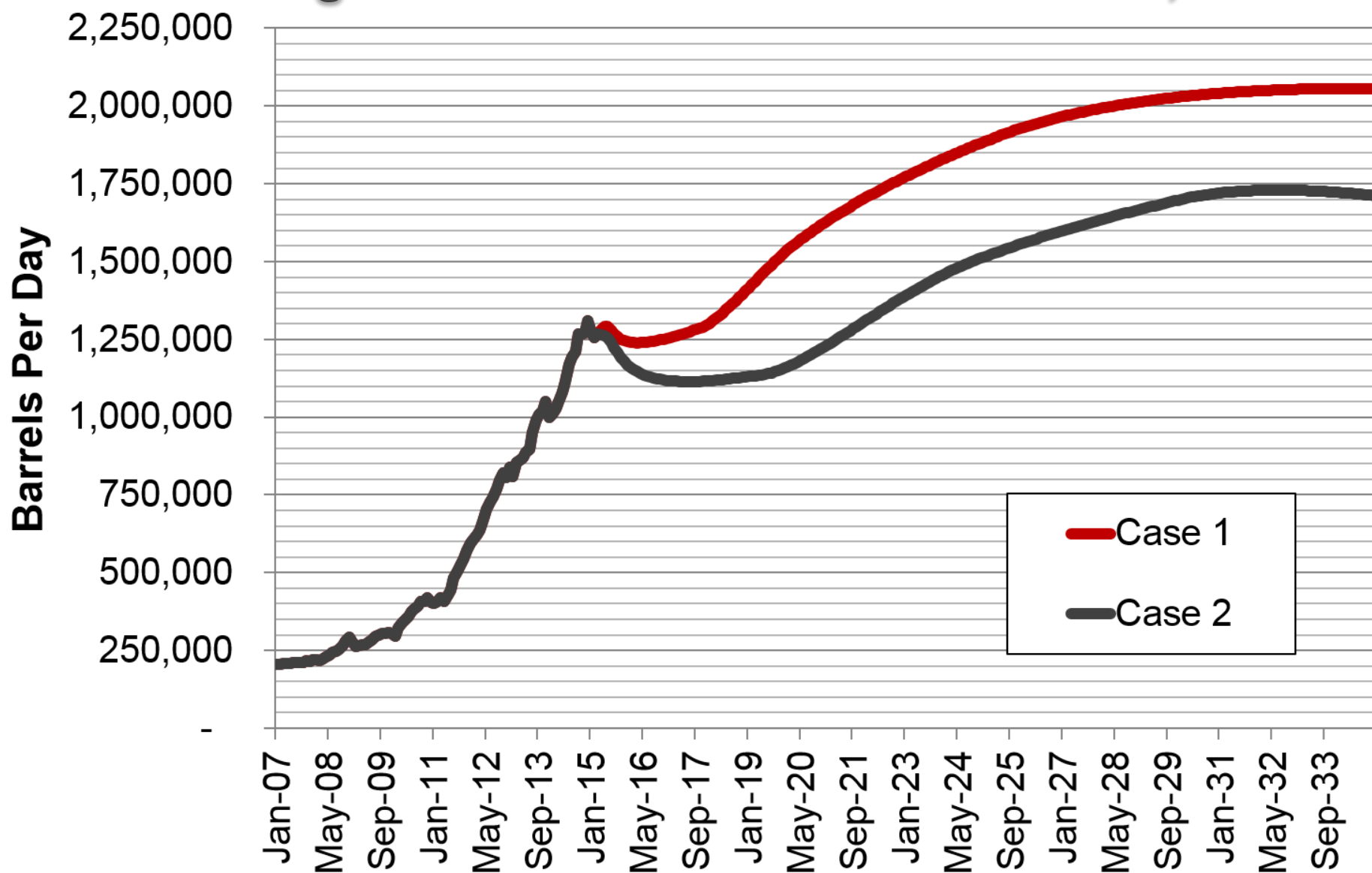
Understanding the Winter of 2014-15



Revised Forecast Assumptions



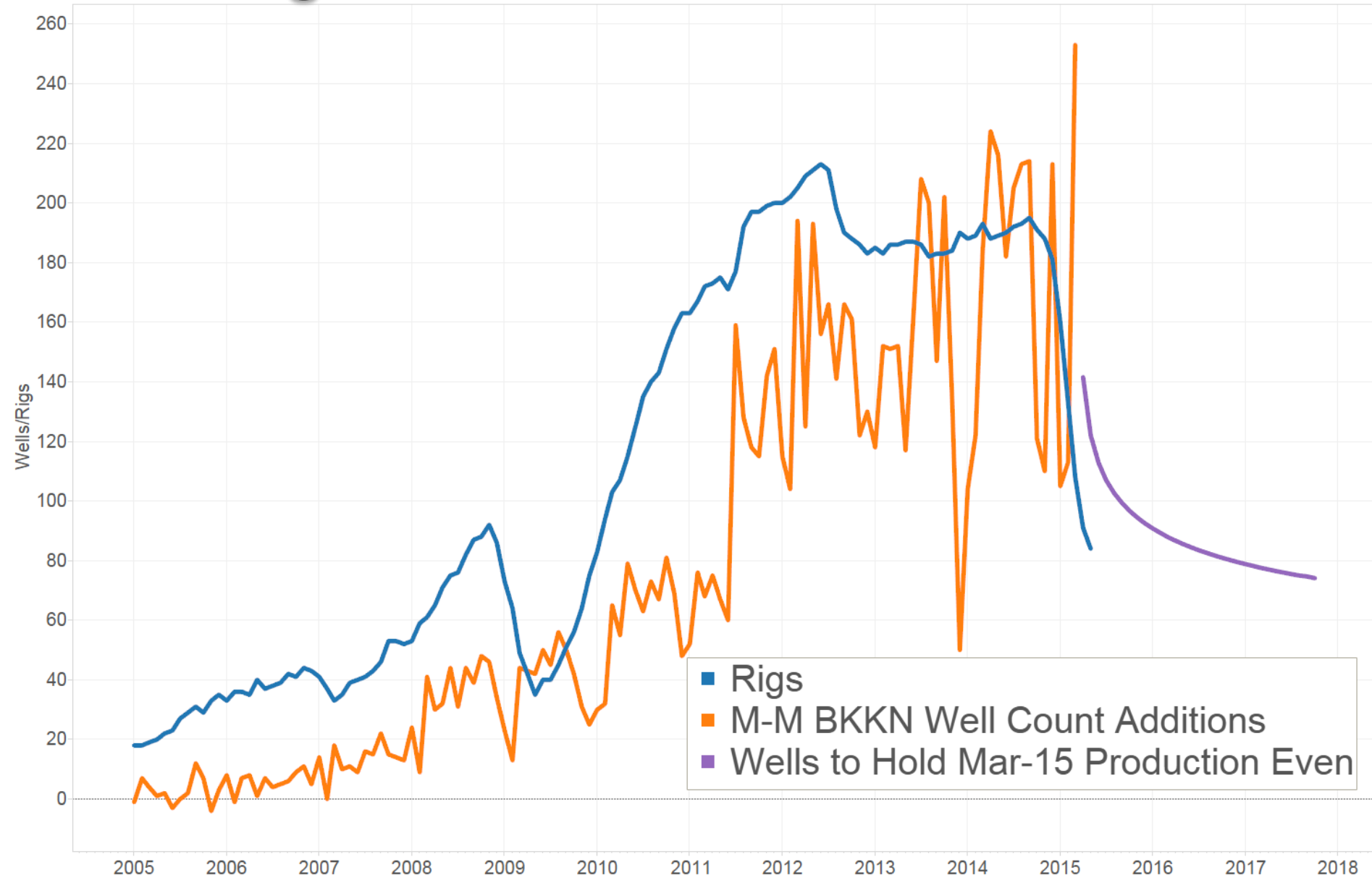
Forecasting Williston Basin Oil Production, BOPD



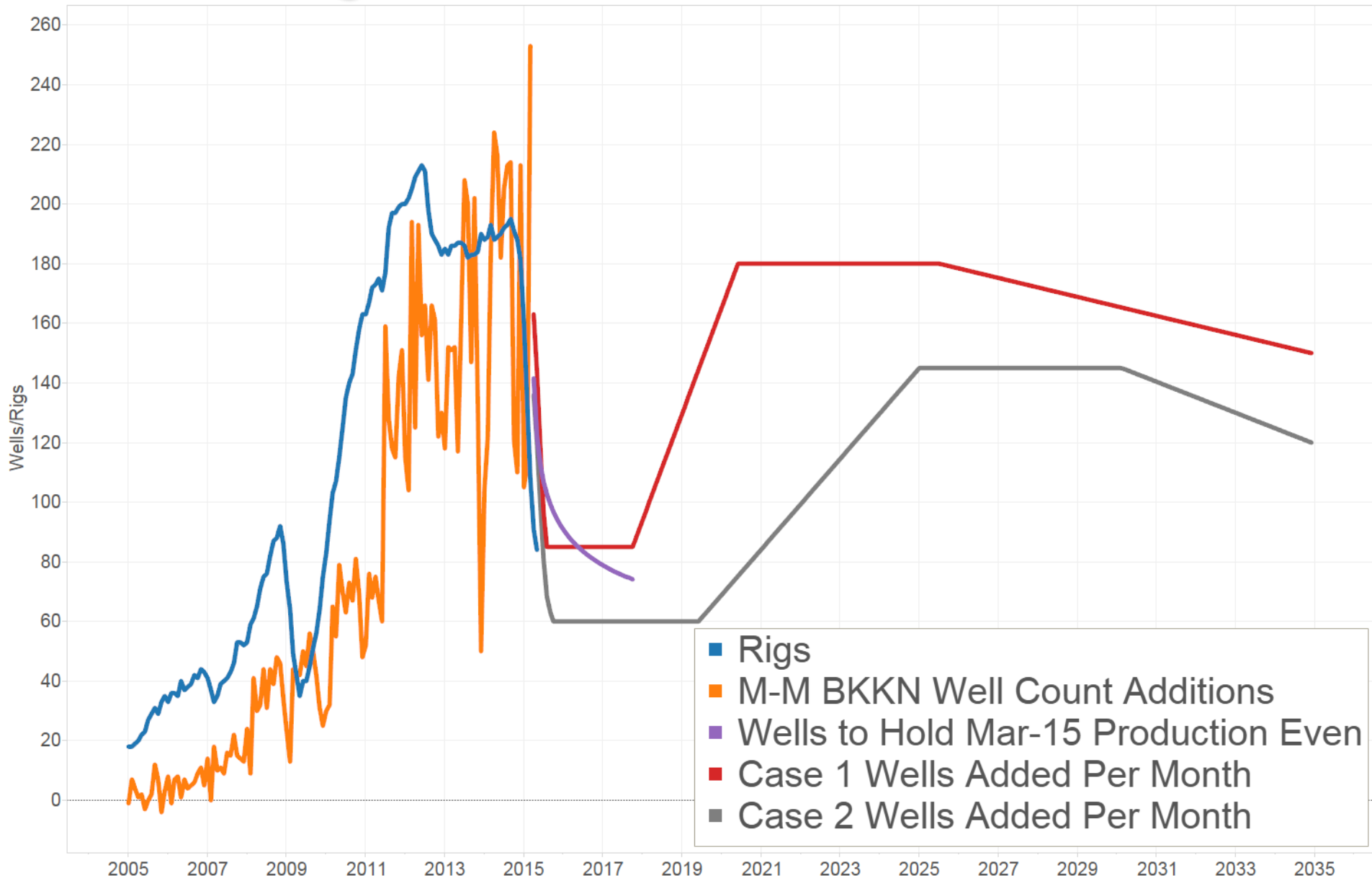
Production forecast is for visual demonstration purposes only and should not be considered accurate for any near or long term planning.



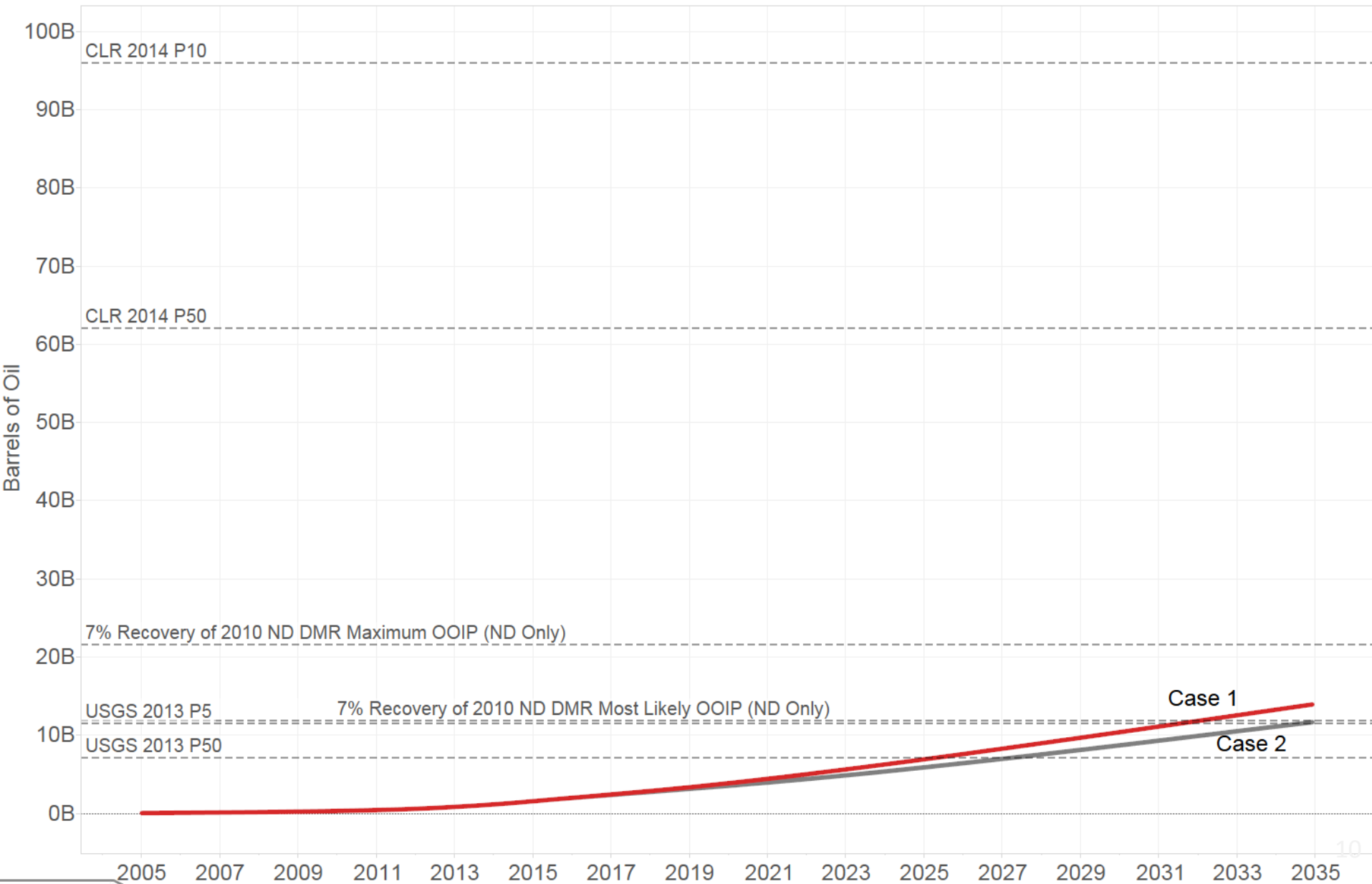
Holding March 2015 Production Scenario



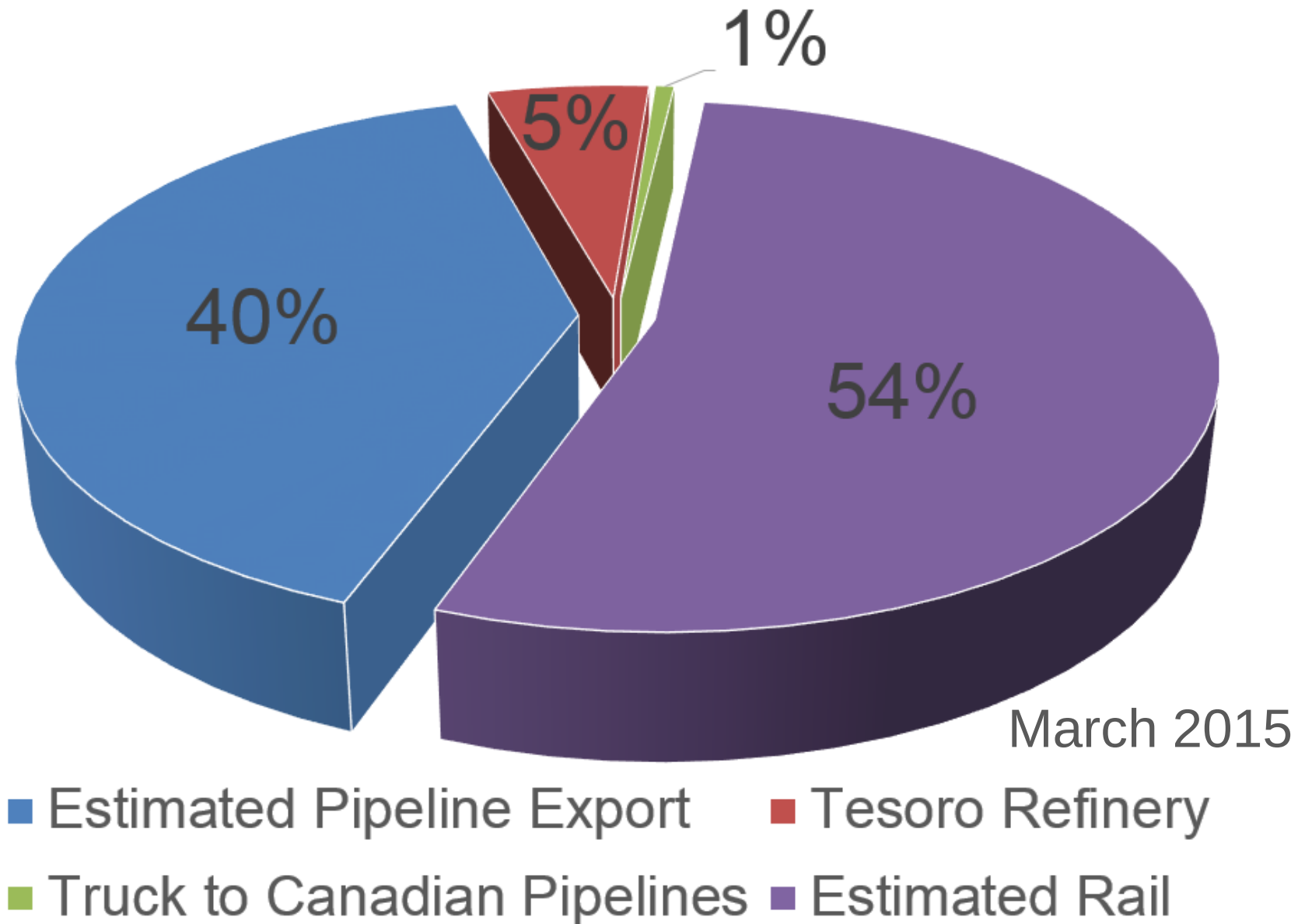
Holding March 2015 Production Scenario



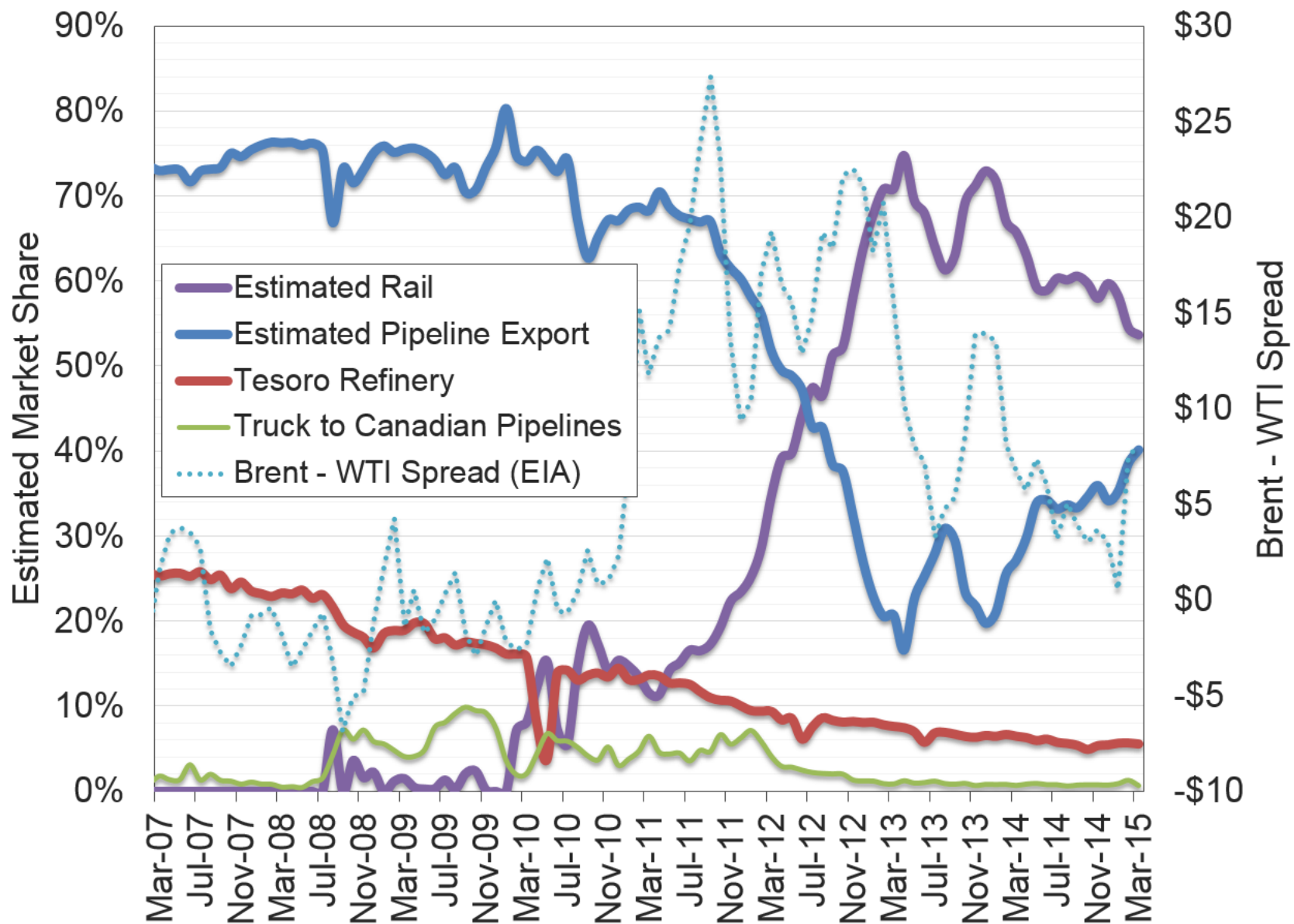
Forecast Cum. Prod. & EUR Estimates



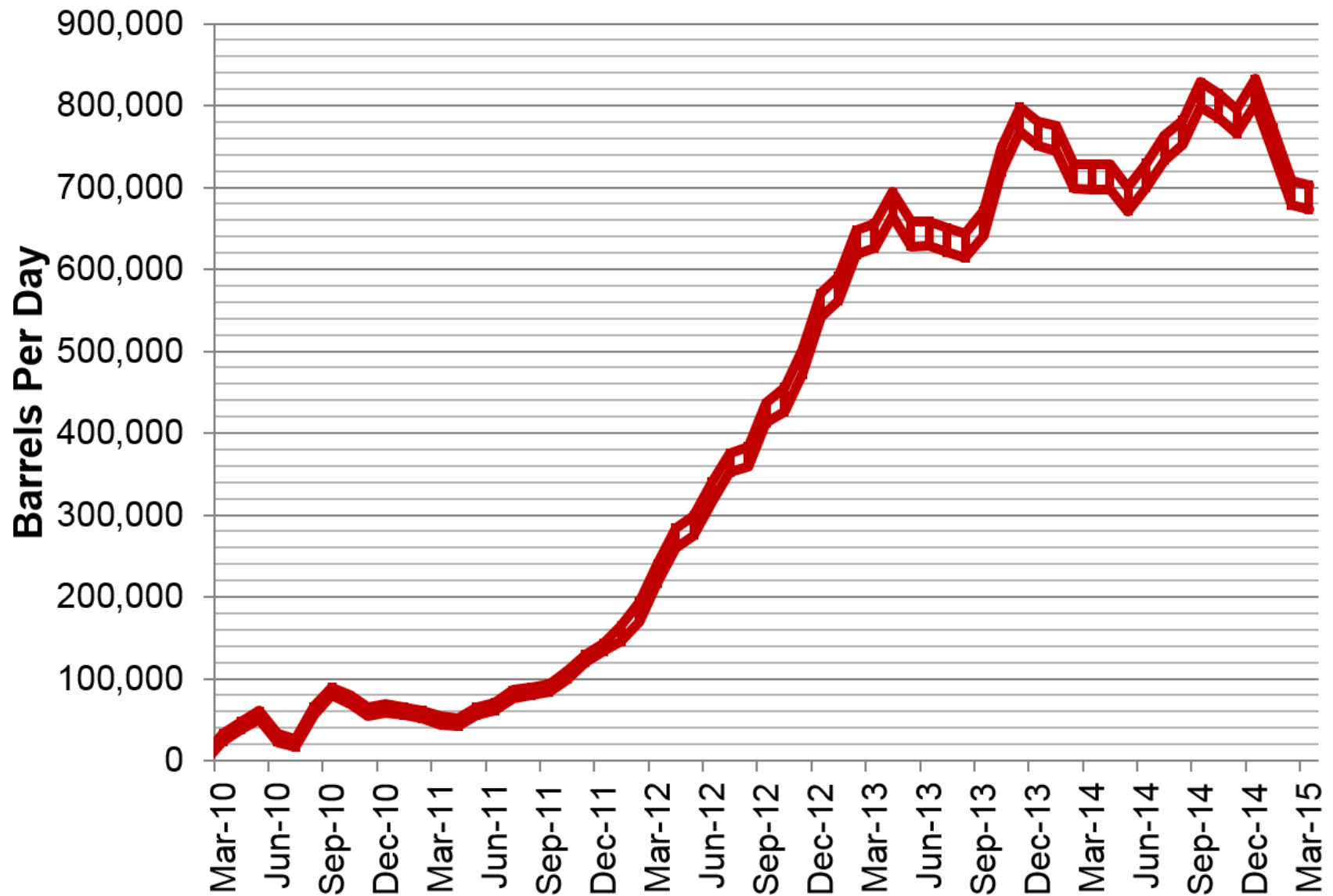
Estimated Williston Basin Oil Transportation



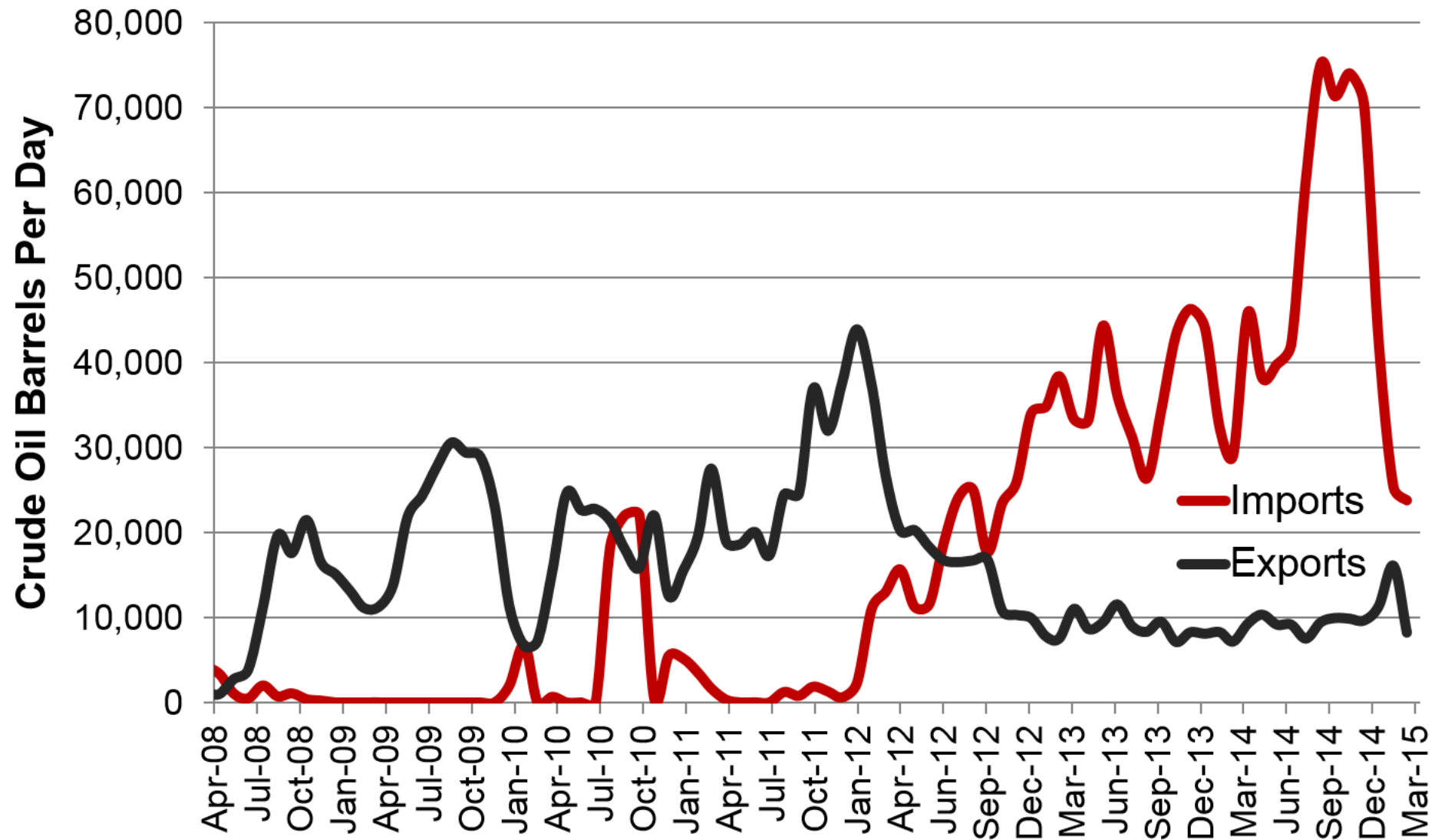
Estimated Williston Basin Oil Transportation



Estimated ND Rail Export Volumes



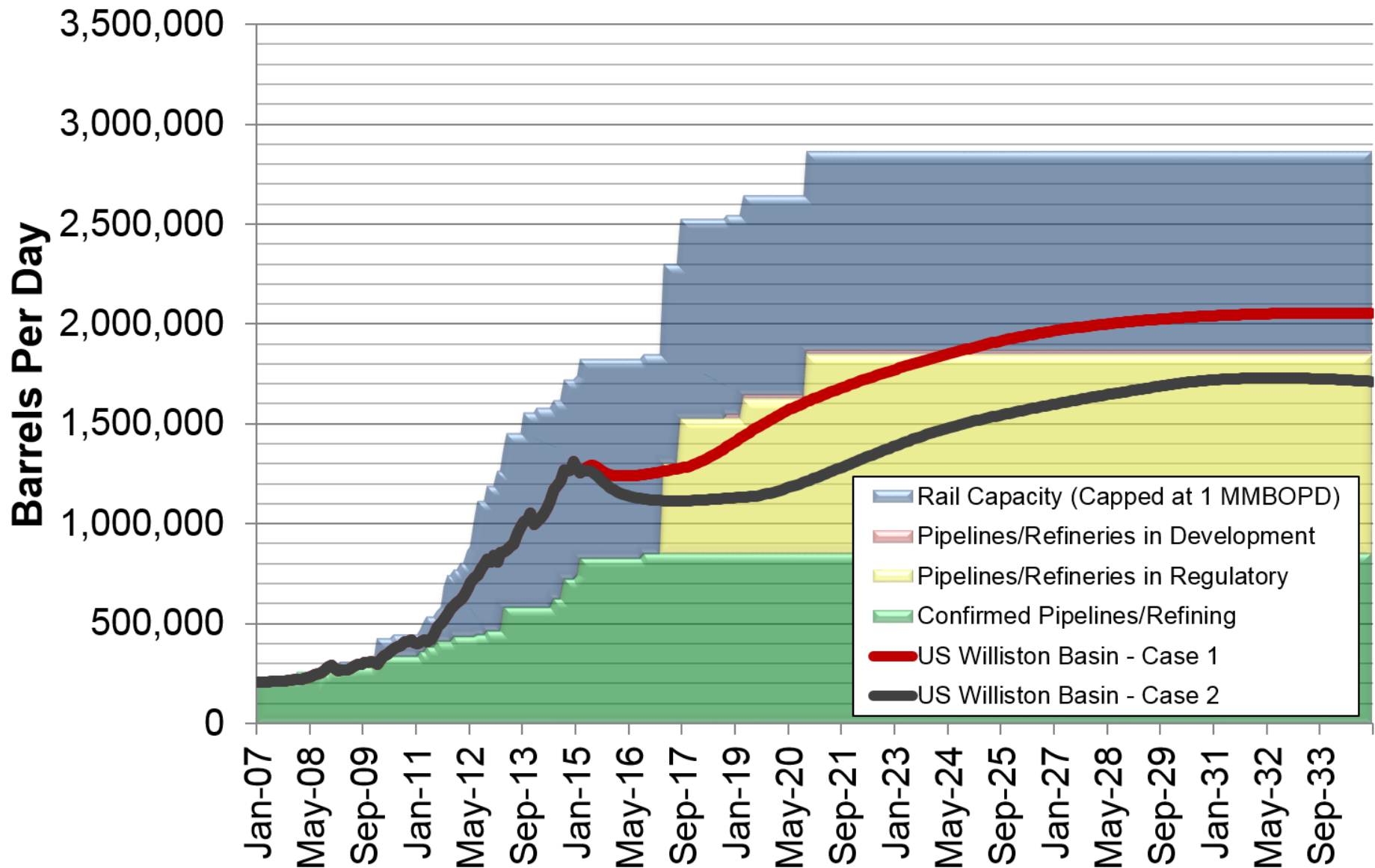
Williston Basin Truck Imports and Exports with Canada



Data for truck imports/exports chart is provided by the US International Trade Commission



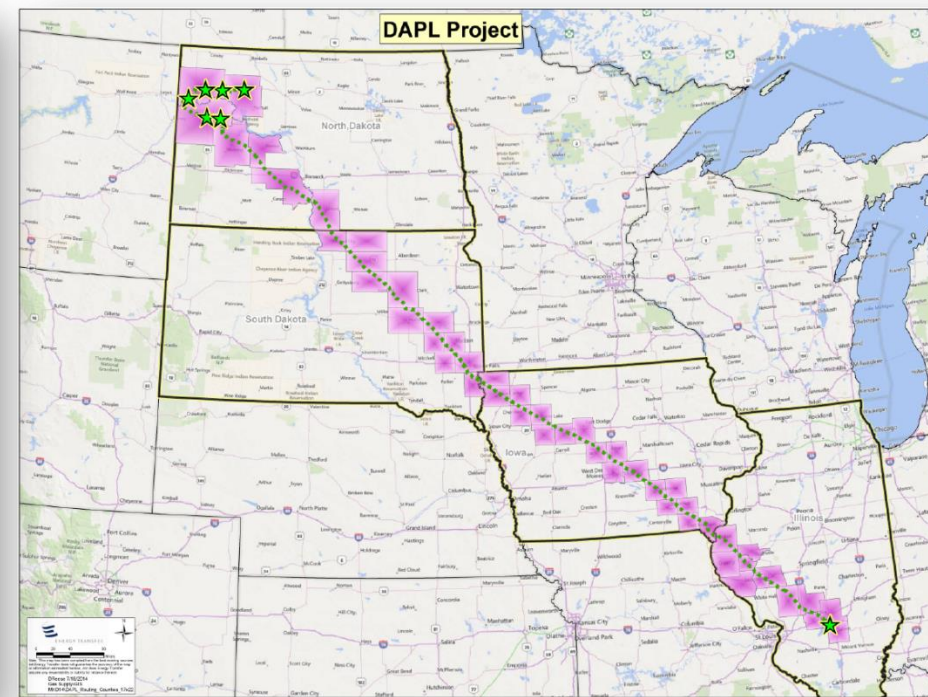
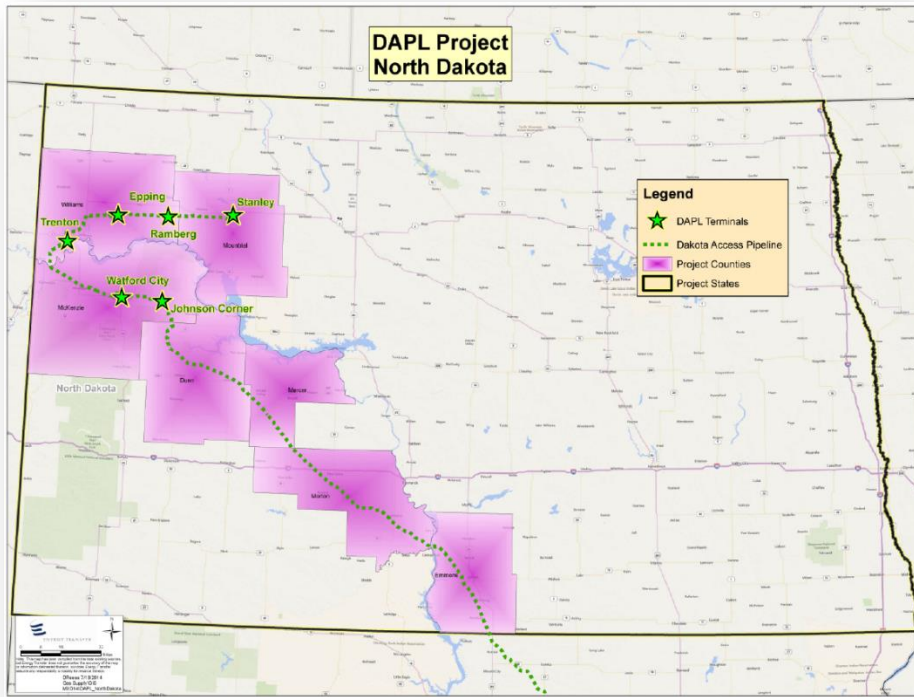
Williston Basin Oil Production & Export Capacity, BOPD



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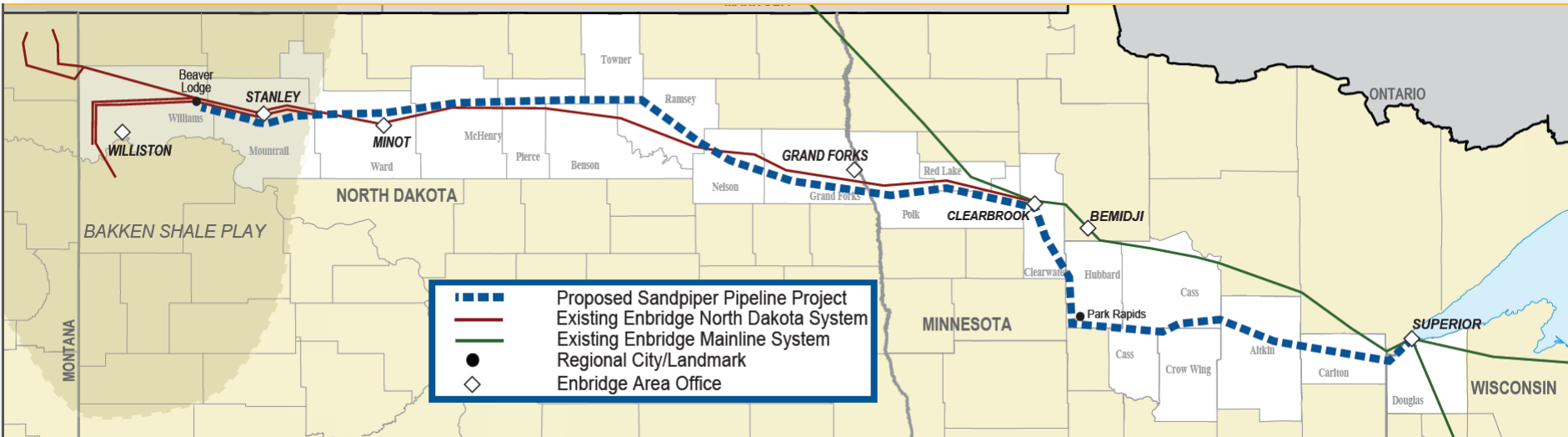
Energy Transfer Partners: Dakota Access



- Successful Open Season During the First Half of 2014
- 450,000 BOPD Capacity to Patoka, IL (30")
- Expandable Up To 570,000 BOPD if Shipper Demand Exists
- Target In-service Date: Late 2016



Sandpiper Pipeline



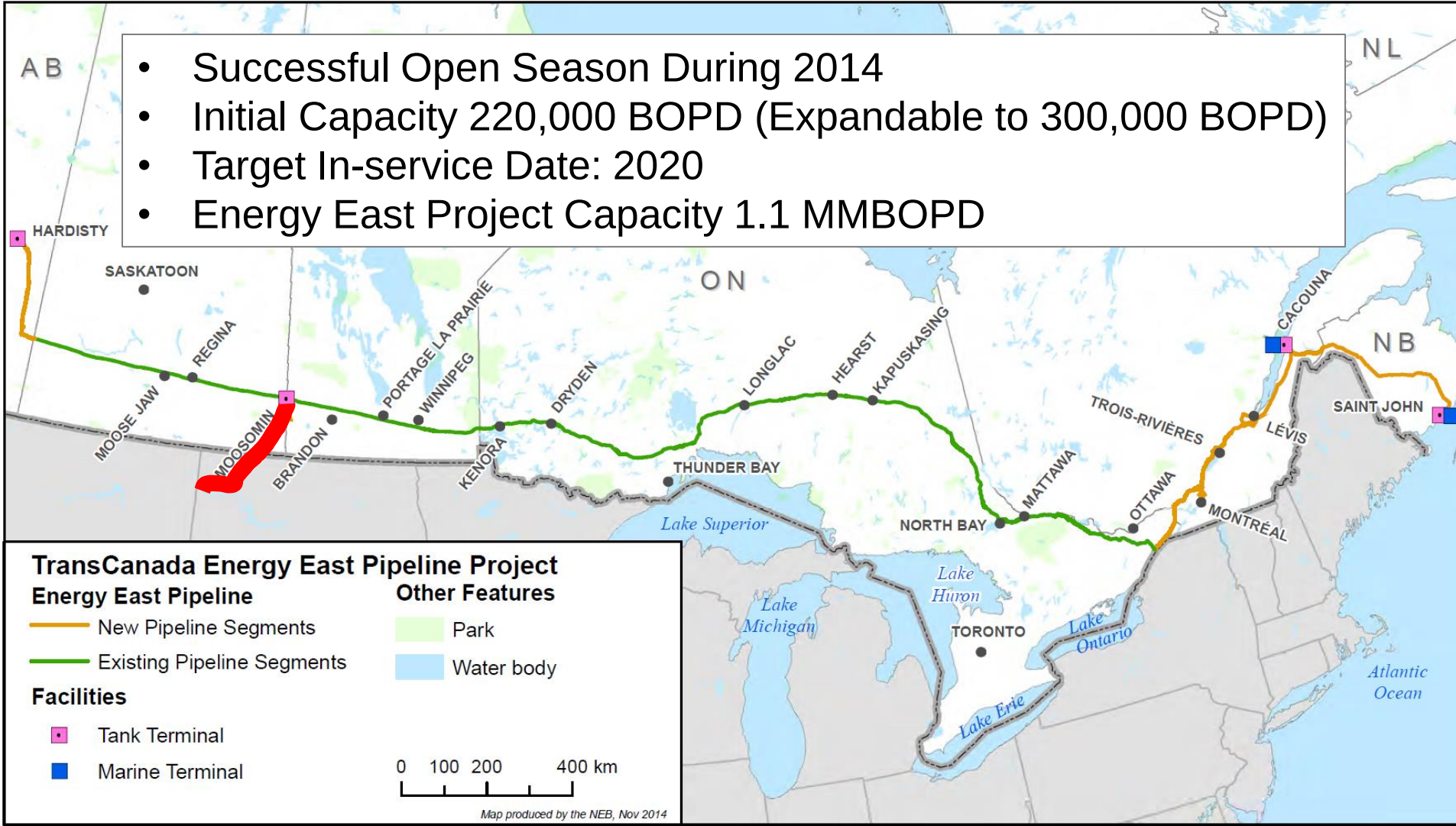
North Dakota Pipeline Company LLC - formerly known as Enbridge Pipelines (North Dakota) LLC

- 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")
- Target In-service Date: 2017



TransCanada: Upland Pipeline

- Successful Open Season During 2014
- Initial Capacity 220,000 BOPD (Expandable to 300,000 BOPD)
- Target In-service Date: 2020
- Energy East Project Capacity 1.1 MMBOPD



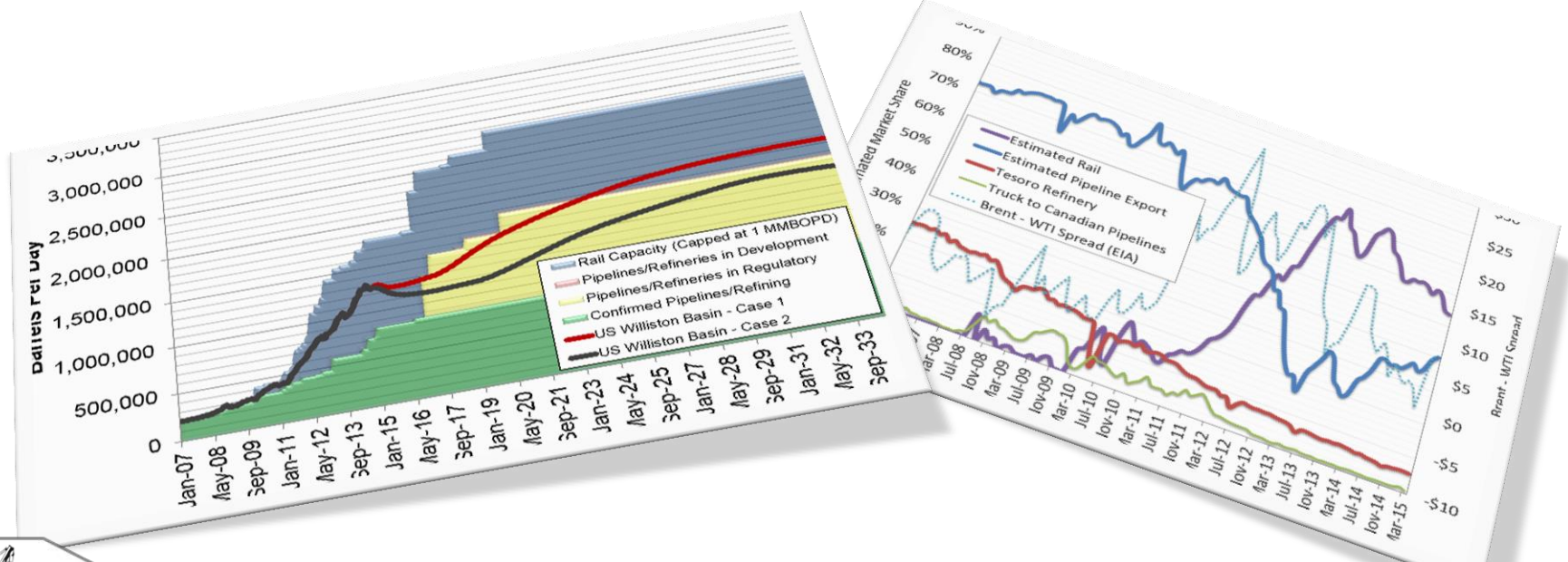
Map: NEB – NDPA Upland Addition



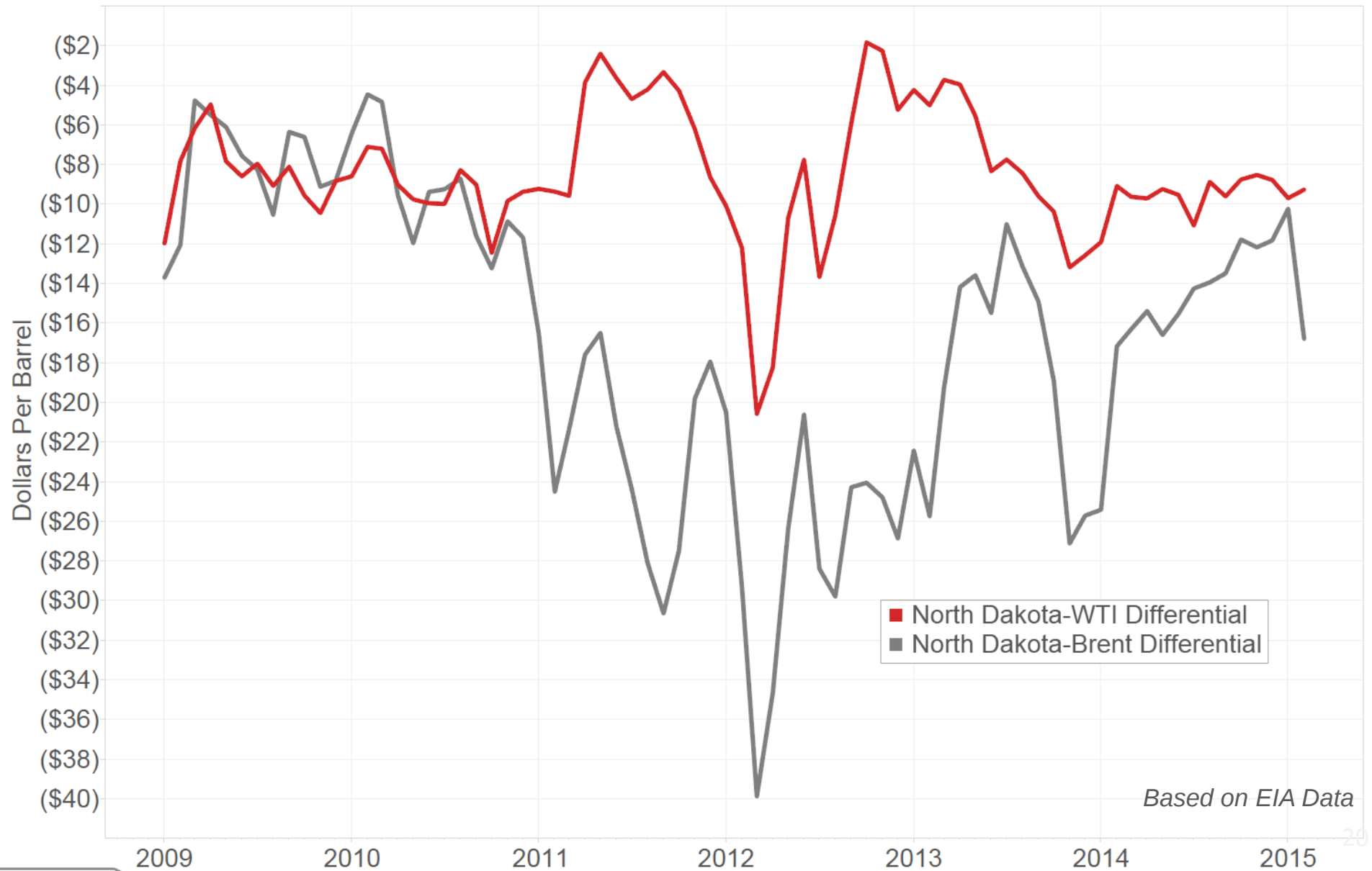
Forecasting Future Market Share is Difficult

Predicting how future oil production will move with any degree of confidence is difficult/impossible due to:

- Future oil production uncertainty
- Shifting market conditions
- Project commitments are unknown (pipe & rail)
- Regulatory uncertainty (pipe, rail, exports, etc)



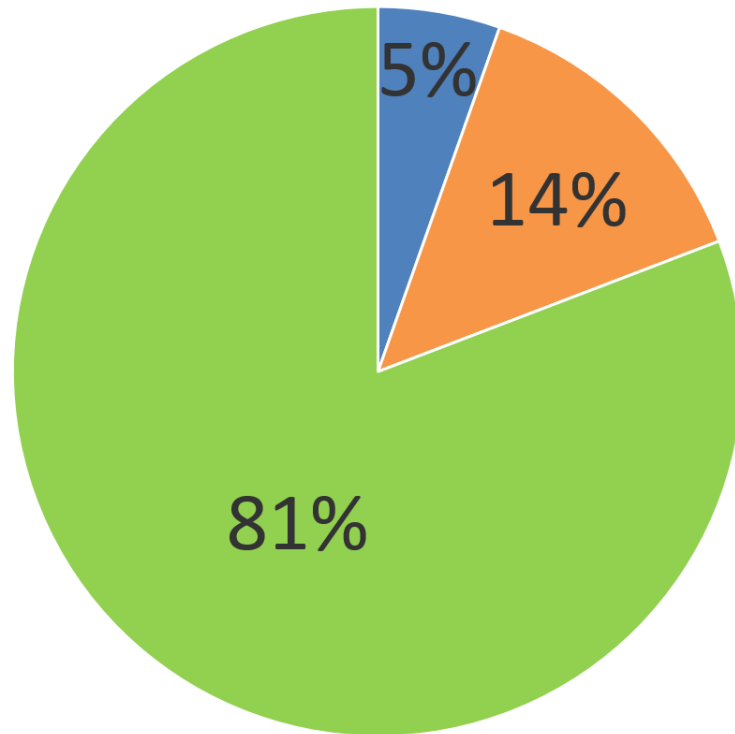
North Dakota Oil Differential



Based on EIA Data



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.

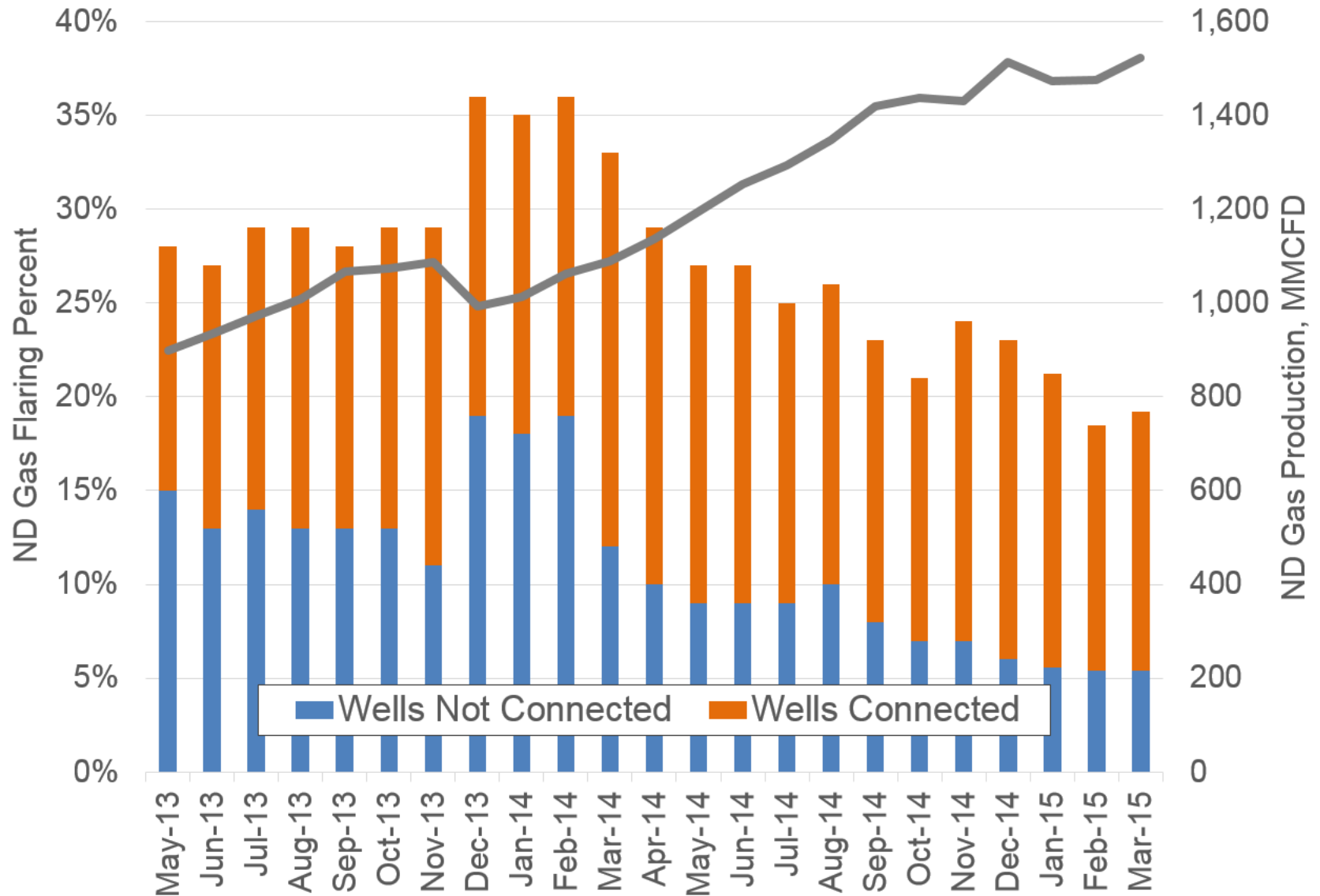
Simple Terms

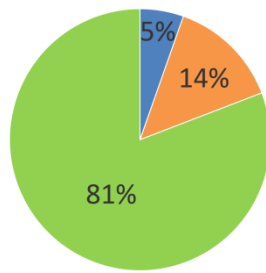
Blue – Lack of pipelines
Orange – Challenges on existing infrastructure

March 2015 Data – Non-Confidential Wells

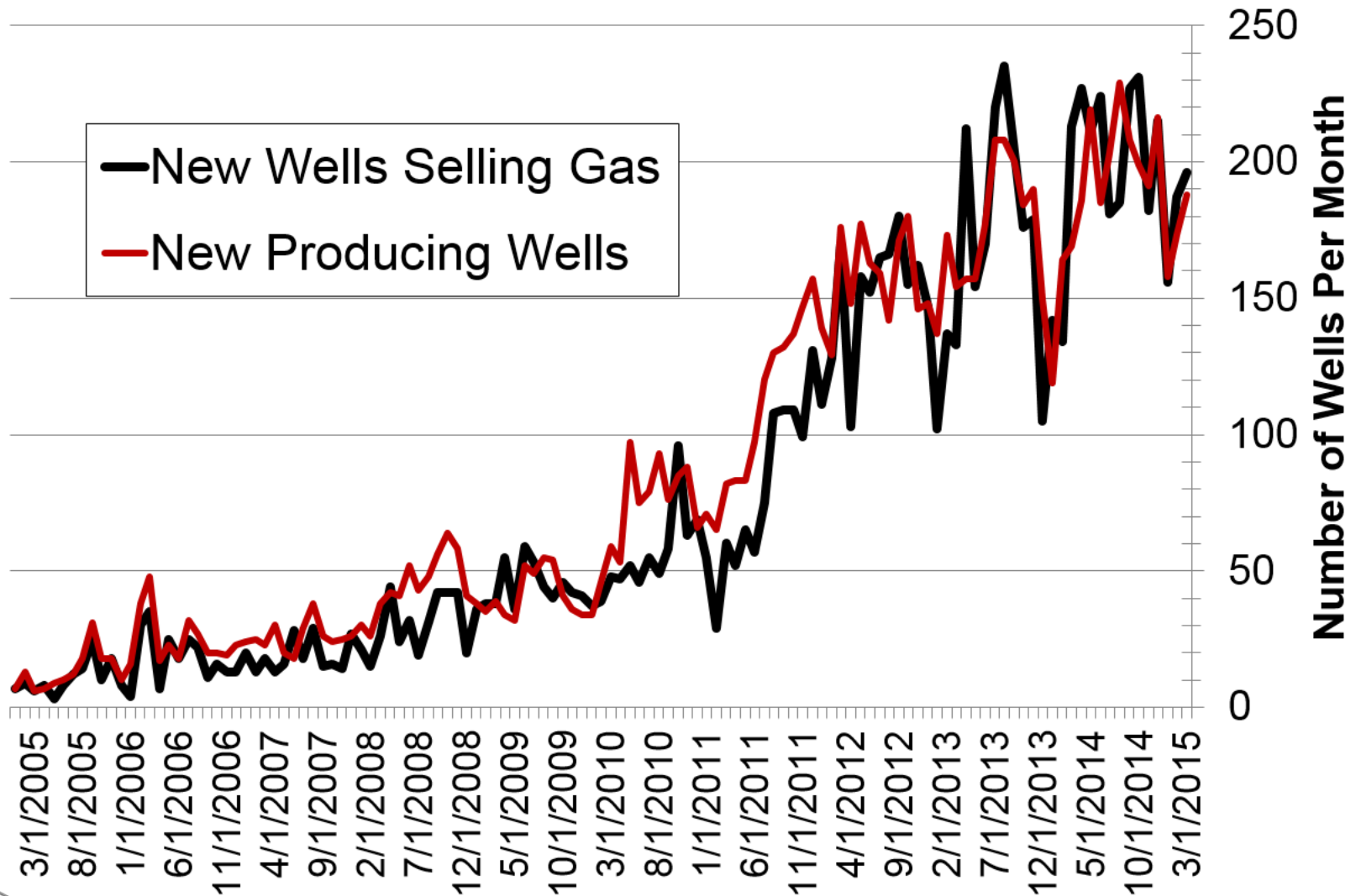


Solving the Flaring Challenge

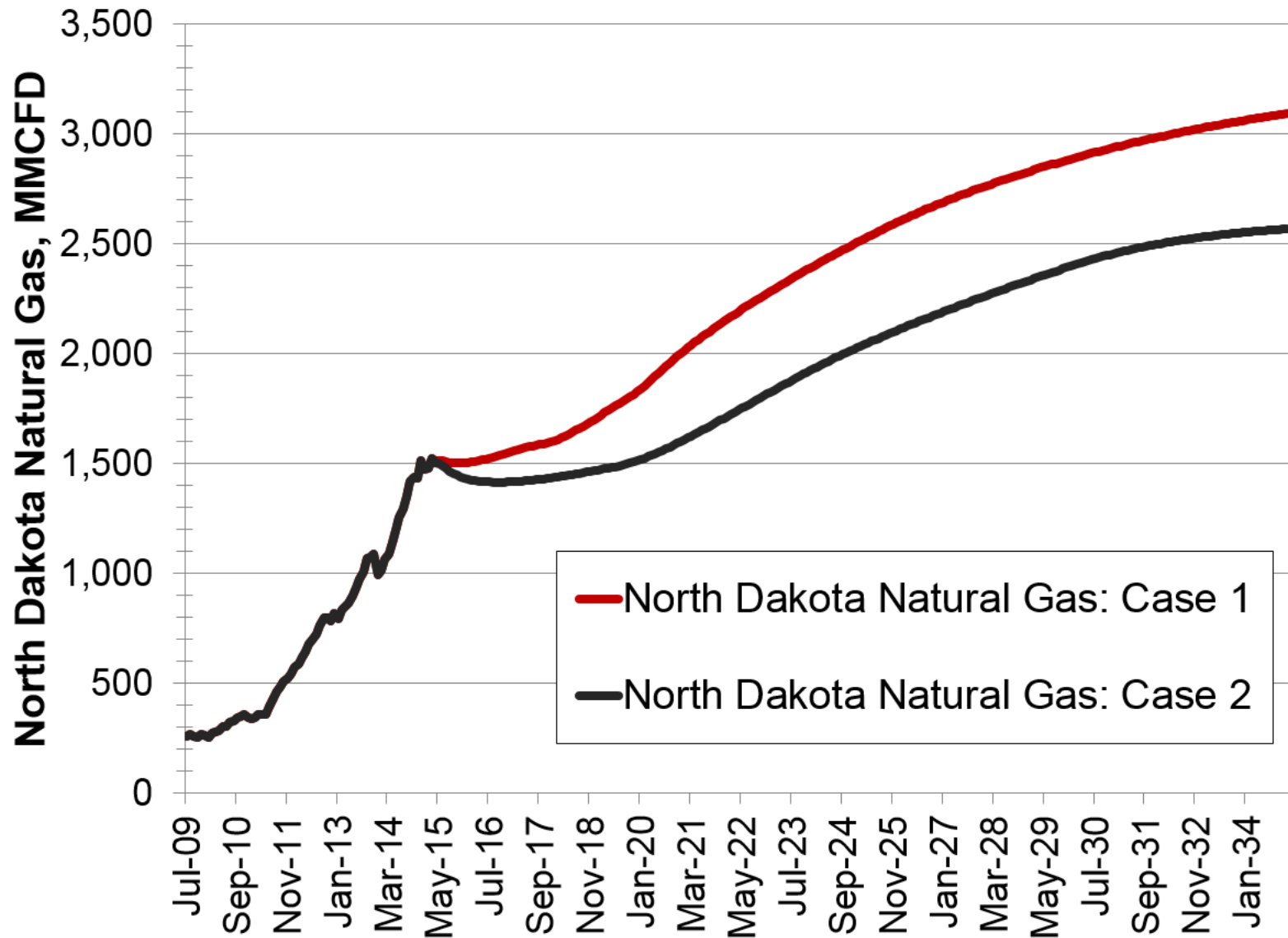




Capturing the 5% Faster Well Connections



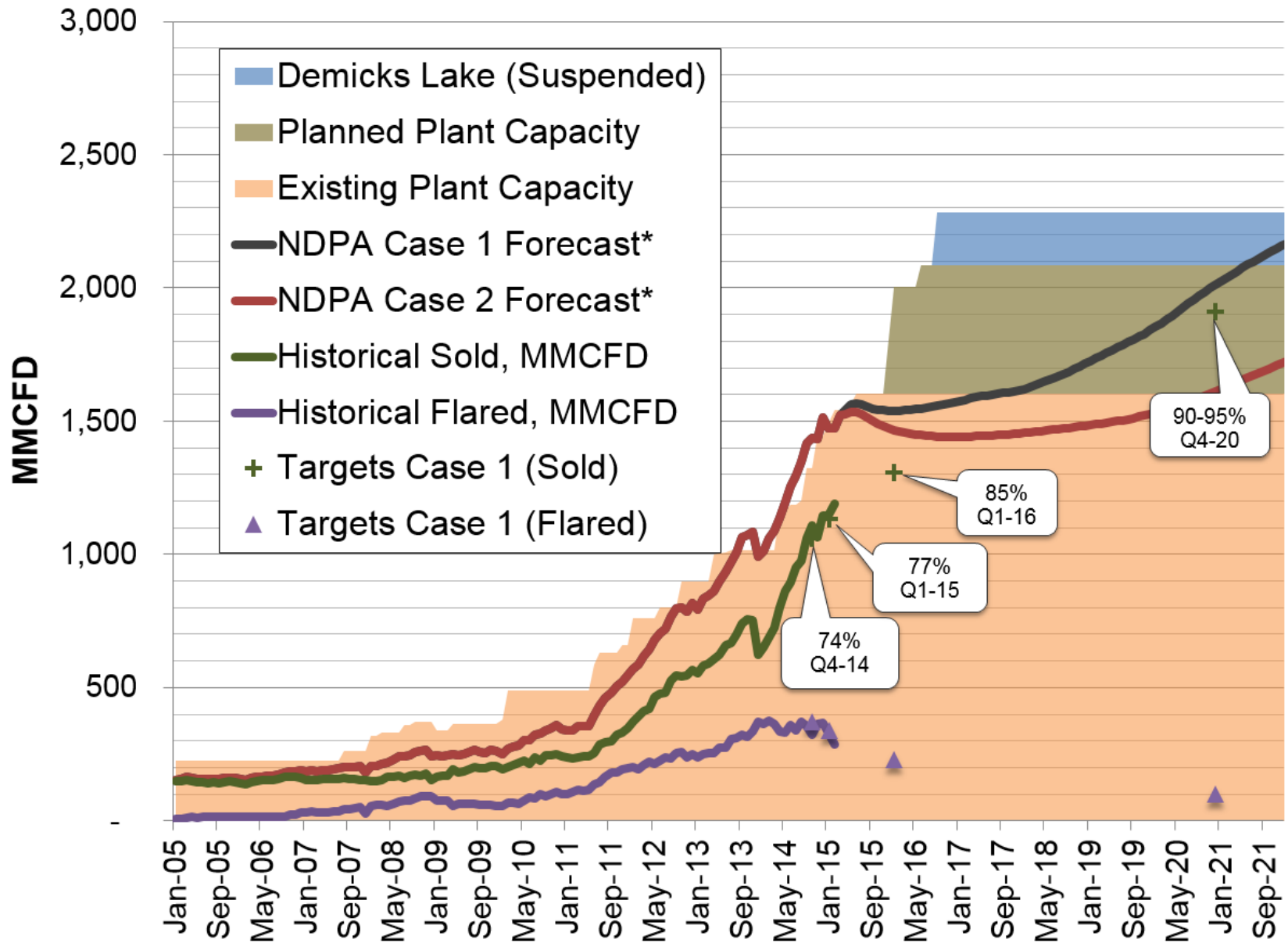
North Dakota Natural Gas Forecast, MMCFD



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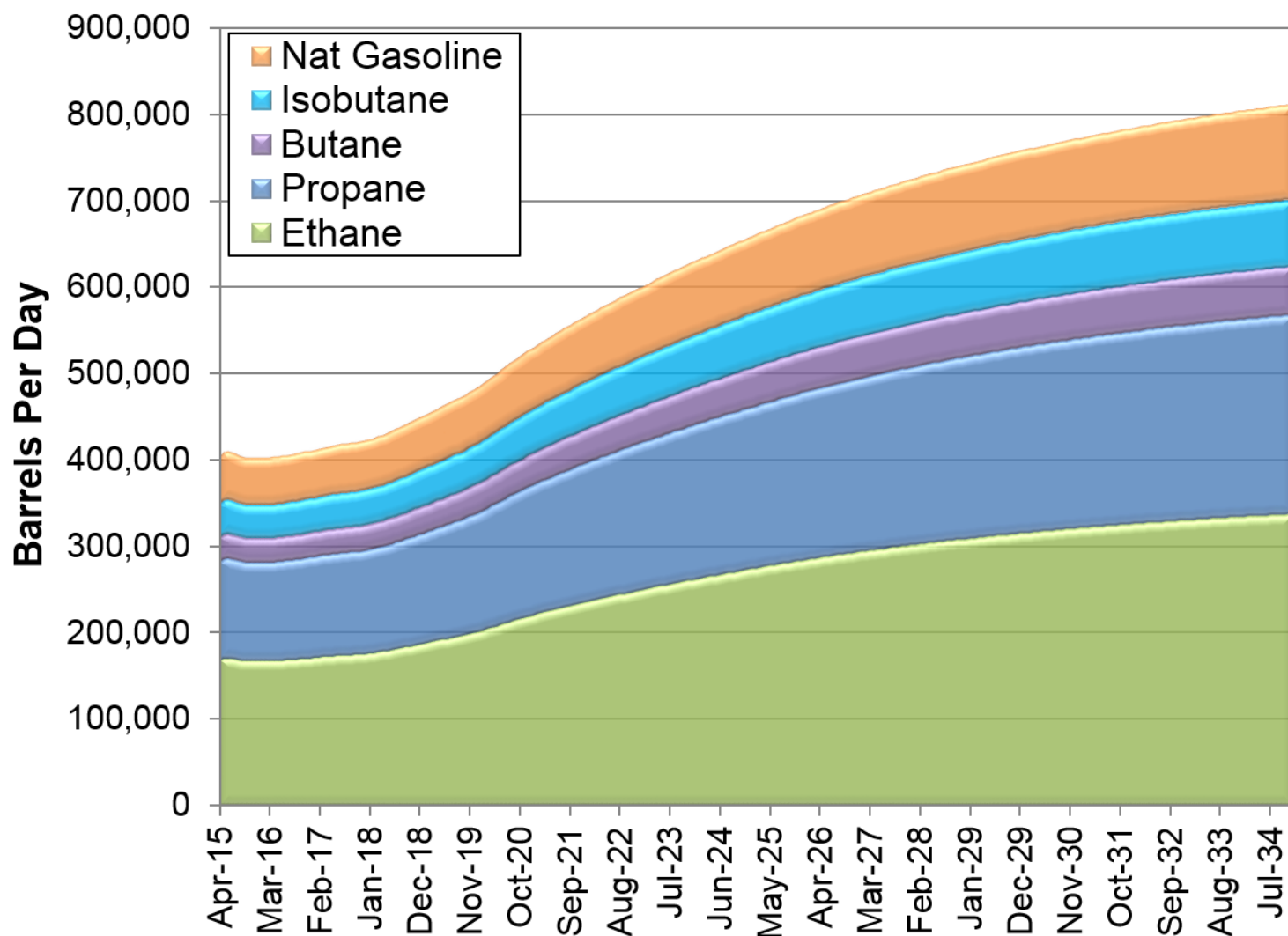


Solving the Flaring Challenge



North Dakota NGL Production Forecast, BPD

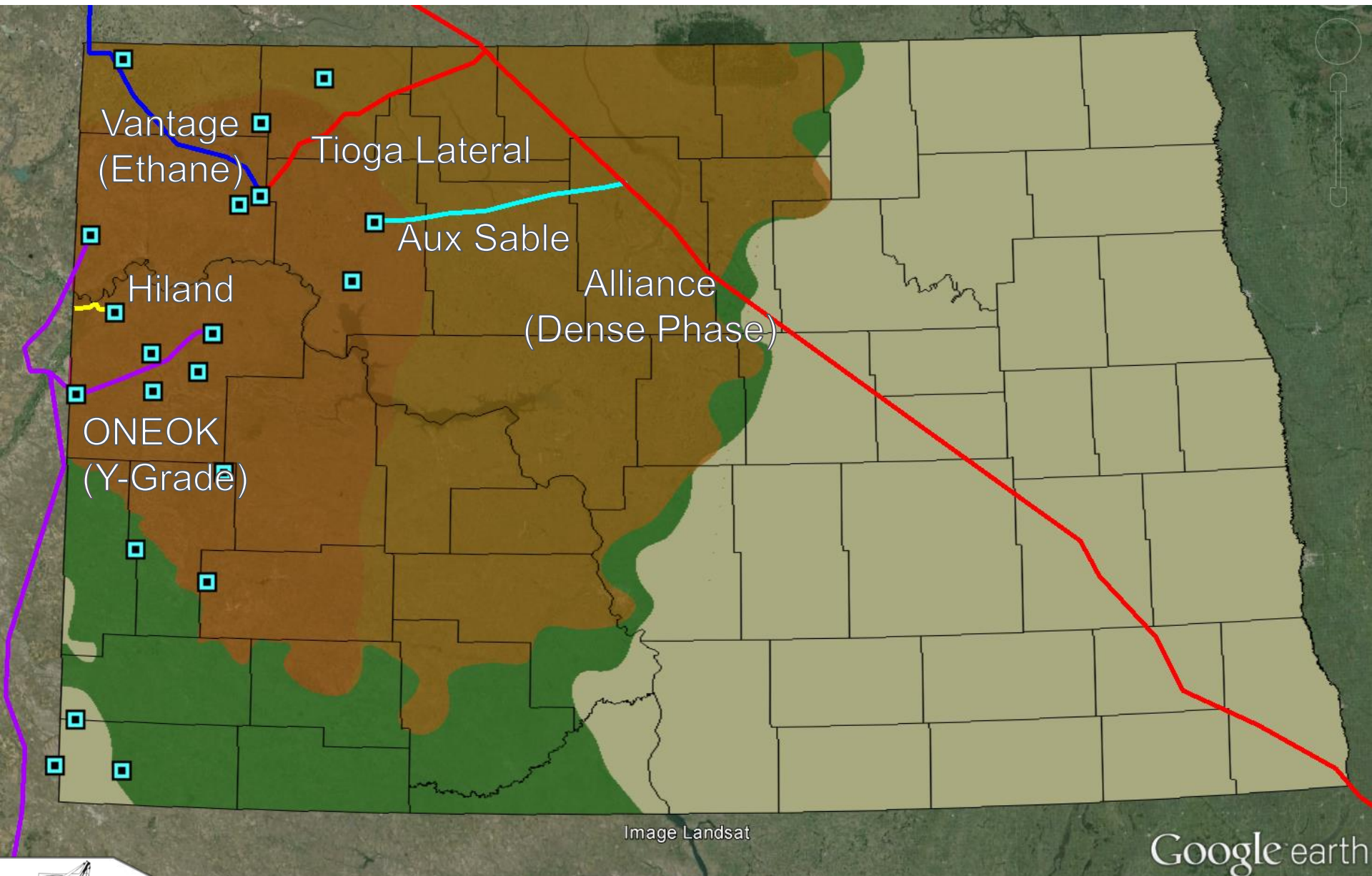
Assumes 11 gpm and Case 1 Natural Gas Production



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NGL Pipeline Transportation



Contact Information

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