

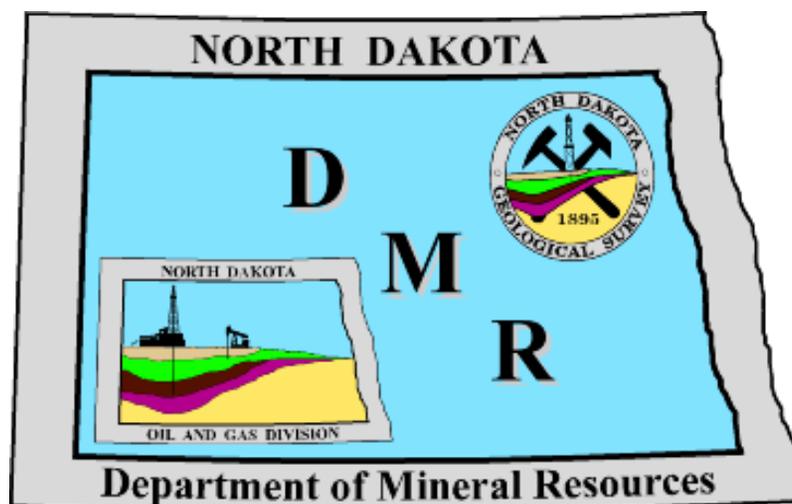
North Dakota Department of Mineral Resources

Government Finance Interim Committee 12/12/2013

10:10 a.m.

Presentation by a representative of the Department of Mineral Resources of an update on the status of oil and gas development in the state.

11:10 a.m.



<http://www.oilgas.nd.gov>

<http://www.state.nd.us/ndgs>

600 East Boulevard Ave. - Dept 405

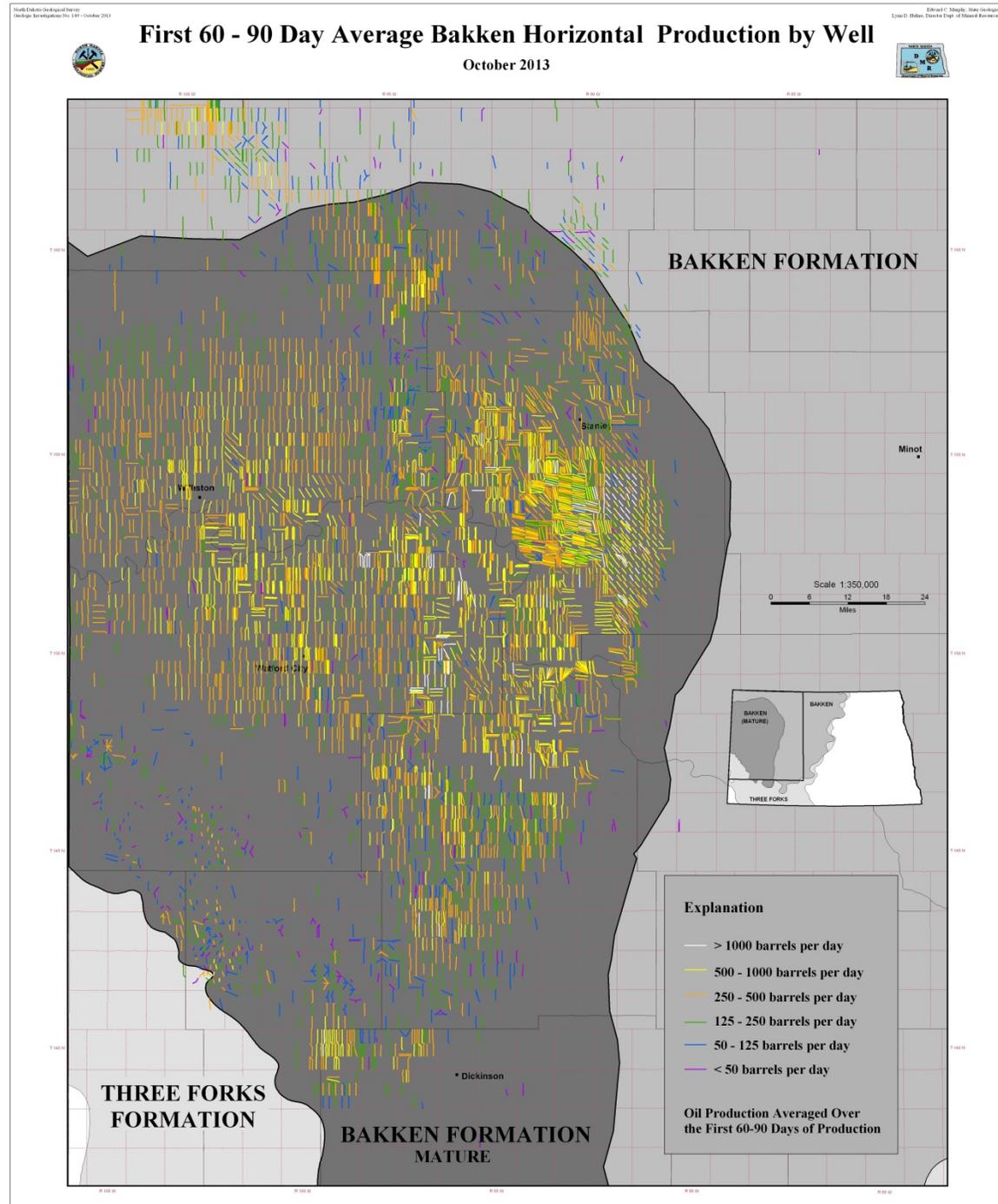
Bismarck, ND 58505-0840

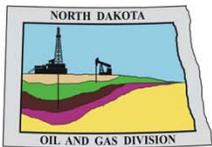
(701) 328-8020 (701) 328-8000

5,939 unconventional wells

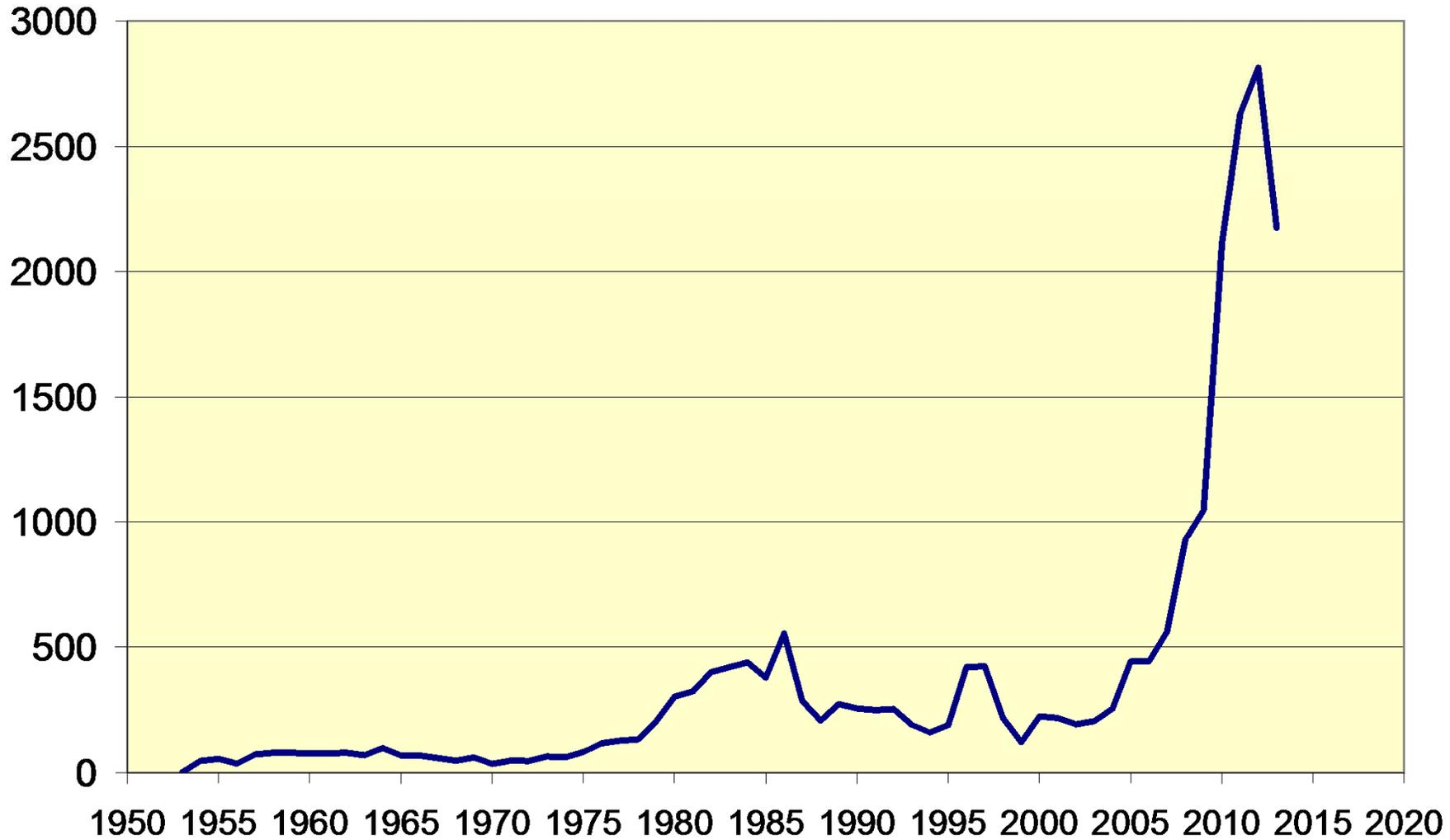
6,447 total Bakken/Three forks wells

10,874 total wells



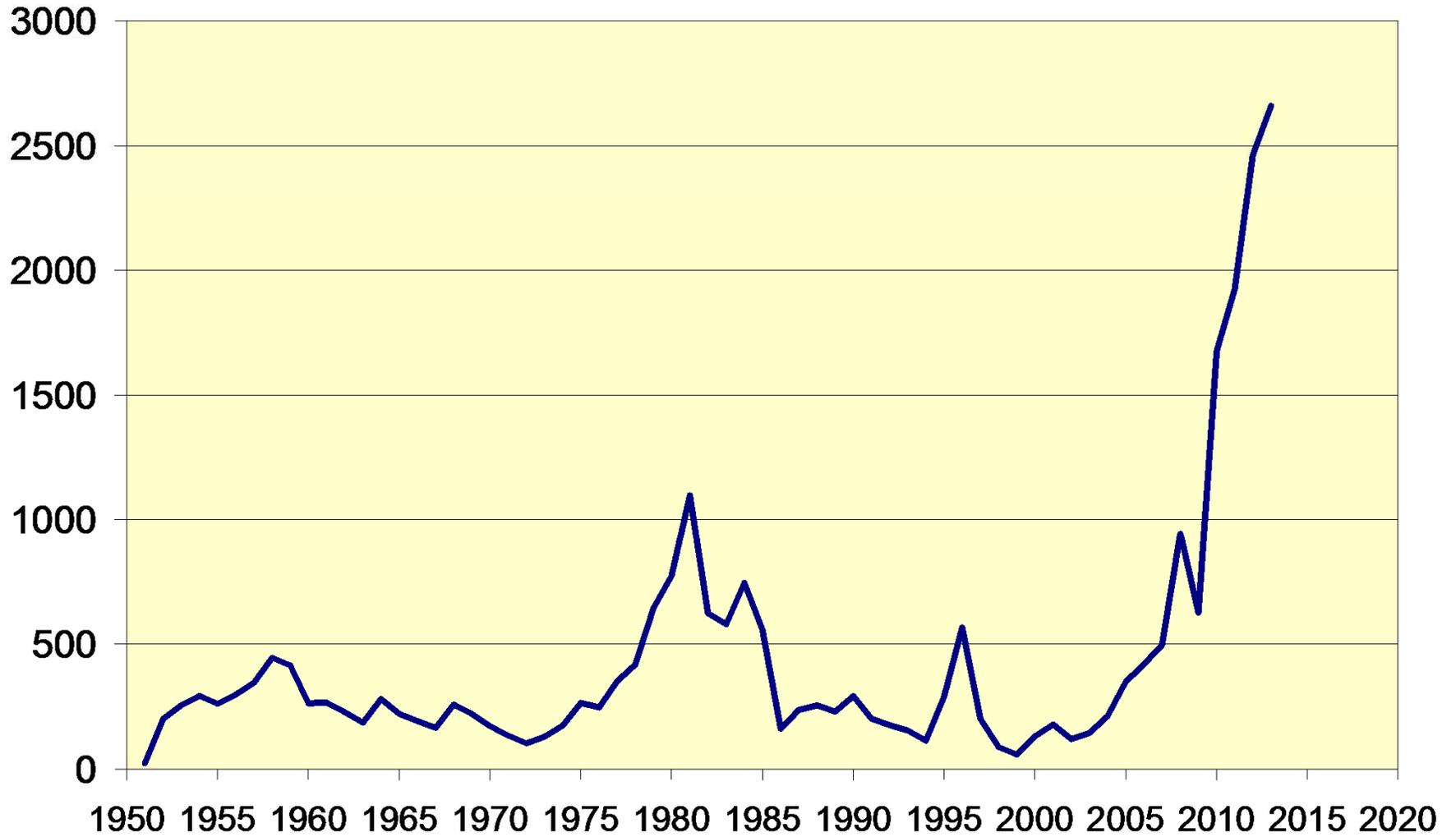


North Dakota Industrial Commission Cases Heard



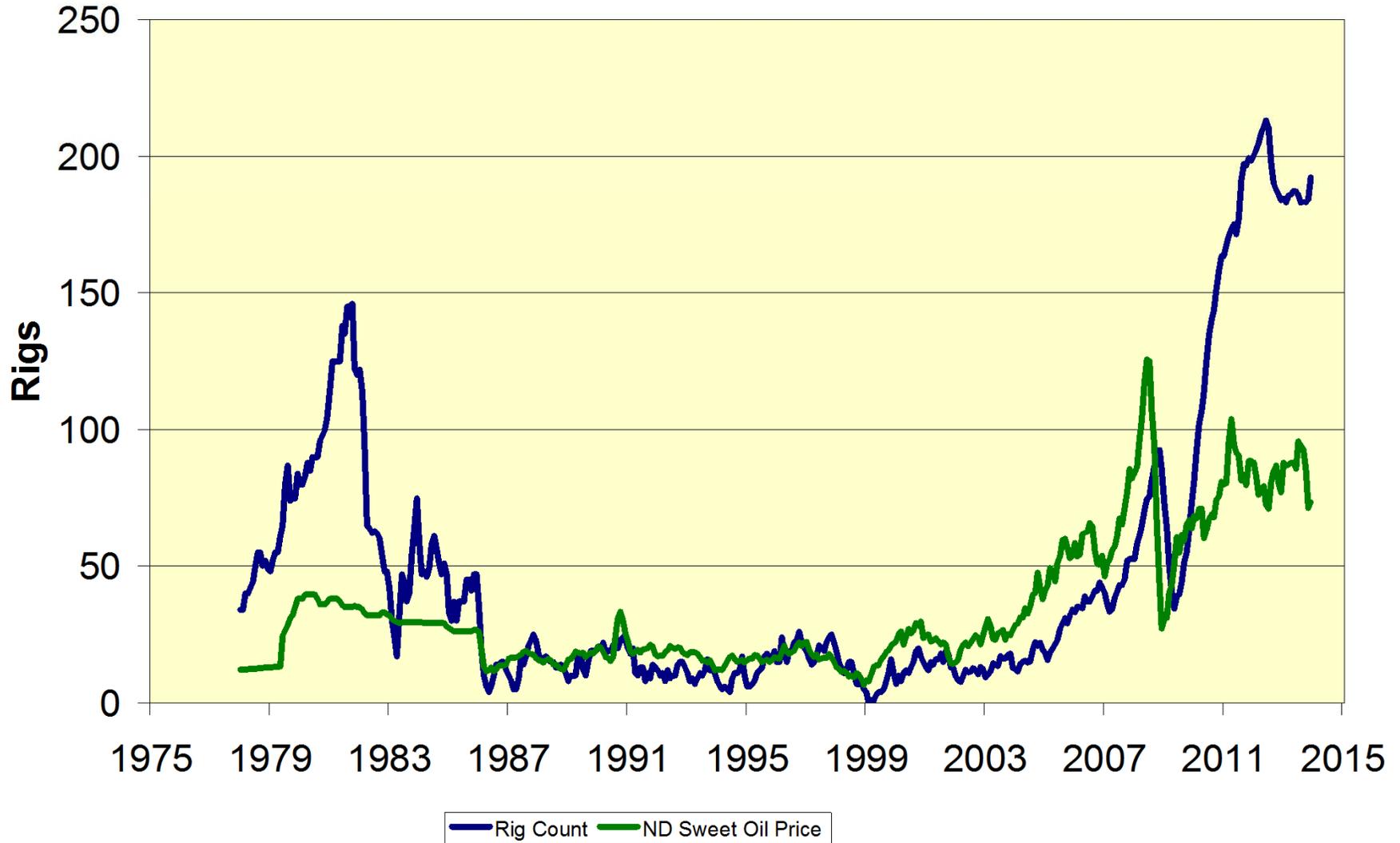


North Dakota New Well Permits Issued





North Dakota Average Monthly Rig Count

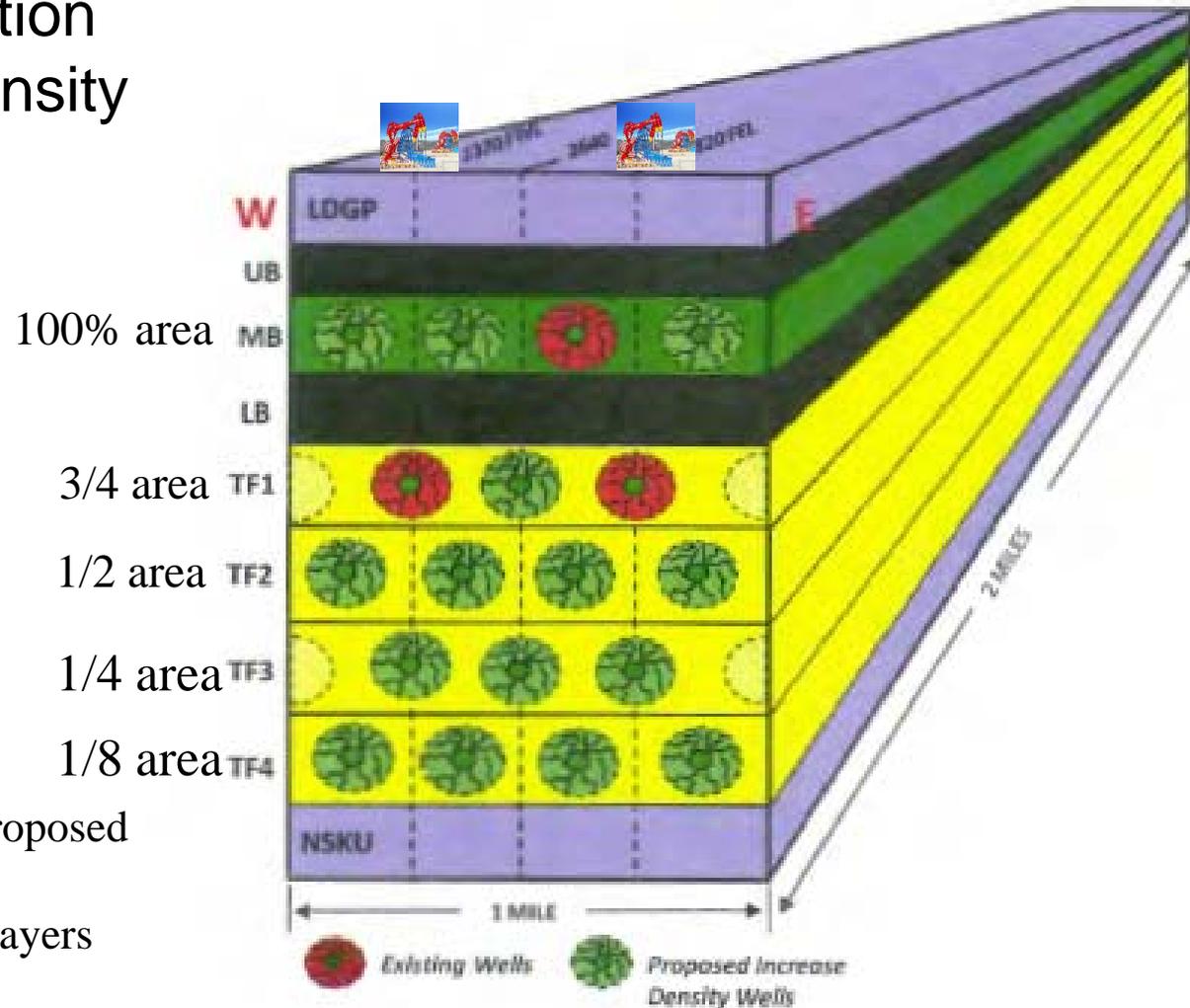


- 1,100 to 2,700 wells/year = 2,000 expected
 - 2014 drilling = 1,552 permits to drill approved & 736 pending approval
 - 185-195 rigs for 9-12 months or
 - 2015-2019 drilling = 1,012 orders approved for 5,247 more wells
 - 3 orders for 18 wells / 1280
 - 1 order for 17 wells / 640
 - 2 orders for 16 wells / 1280
 - 1 order for 15 wells / 1280
 - 40 orders for 14 wells / 1280
 - 1 order for 13 wells / 1280
 - 10 orders for 12 wells / 1280
 - 3 orders for 11 wells / 1280
 - 21 orders for 10 wells / 1280
 - 4 orders for 9 wells / 1280
 - 147 orders for 8 wells / 1280
 - 202 orders for 7 wells / 1280
 - 97 orders for 6 wells / 1280
 - 77 orders for 5 wells / 1280
 - 403 orders for 4 wells / 1280
 - 267 orders for approximately 2,000 increased density wells pending approval

North Dakota Spacing Units and well pads are designed for multiple wells

Phase 3 - Production
Increased well density

Phase 4 EOR?



8–20 wells per 1,280 acres proposed

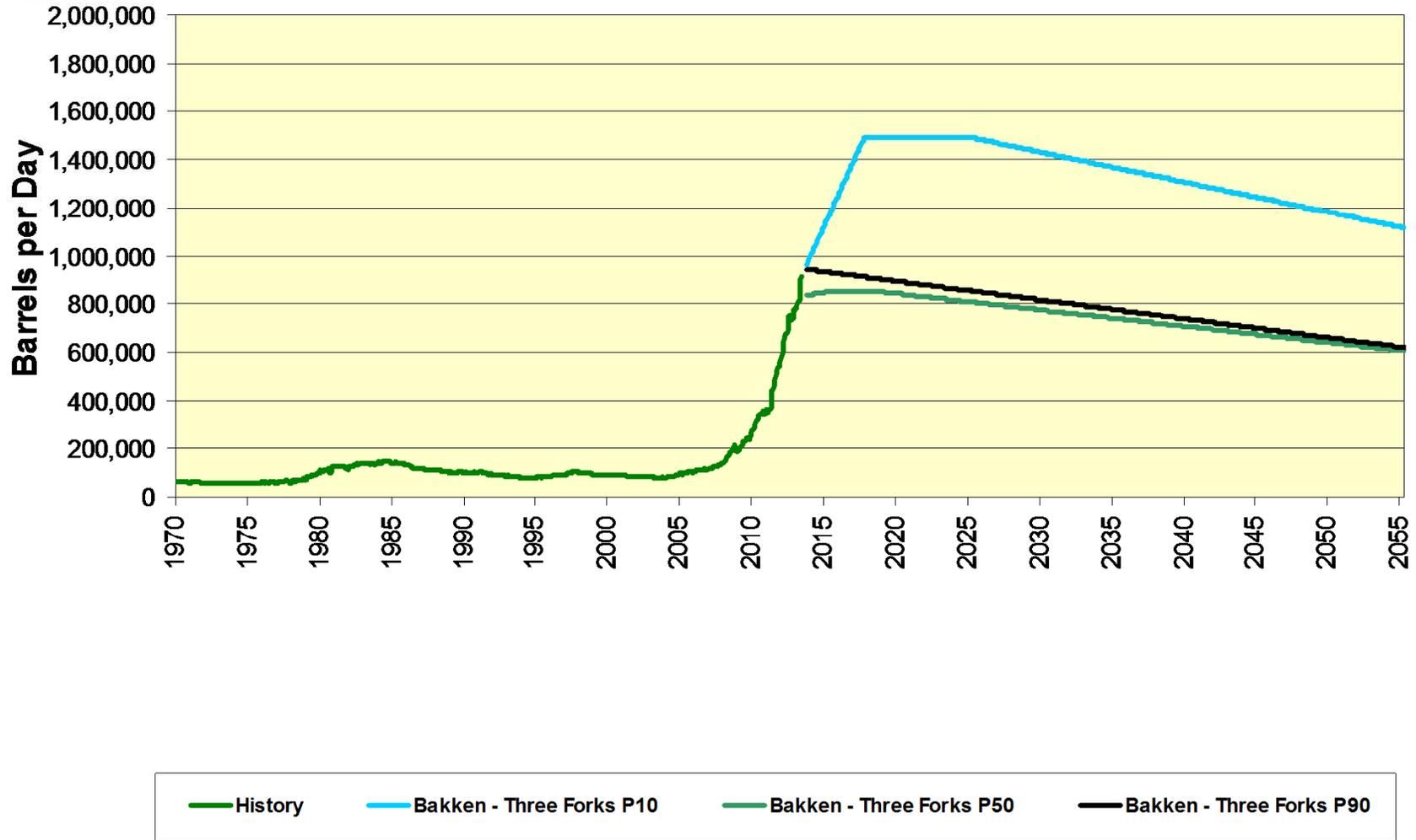
= 4 wells per layer X 2–5 layers

Western North Dakota

- 1,100 to 2,700 wells/year = 2,000 expected
 - 185 rigs = 2,000 wells per year
 - 218 rigs in May 2012 completed first phase of drilling by mid 2012
 - 195 rigs will complete the second phase of drilling in 6-12 months
 - 195 rigs will require about 20 years to complete phase 3 drilling
 - 40,000 / 60,000 / 70,000 new wells



North Dakota Oil Production





North Dakota Oil Price



—●— \$/Barrel History & DOE-EIA Projected

◆ \$/Barrel P50



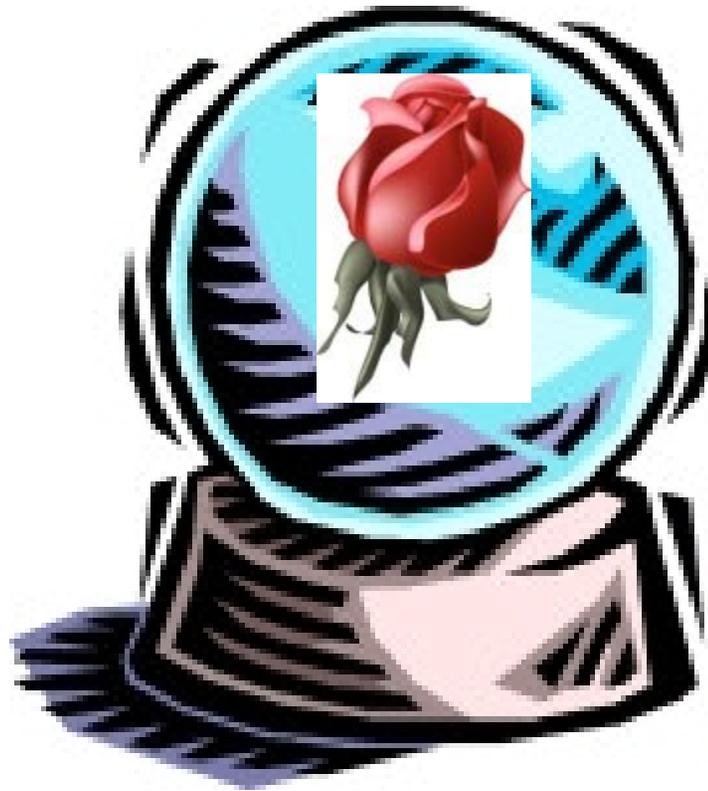
storm www.fotosearch.com

BLM Hydraulic Fracturing rule could more than double permit approval time.



storm www.fotosearch.com

Current administration budget changes could reduce drilling capital 35-50%



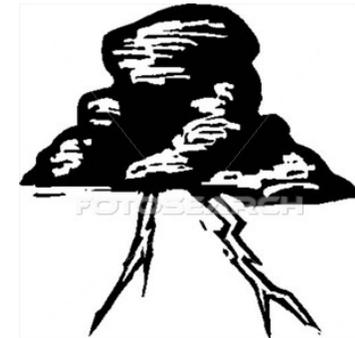
CoolClips.com

The future looks promising for sustained Bakken/Three Forks development



storm www.fotosearch.com

World economy stall out, restrictions on shipping by rail, or light sweet refinery capacity max-out.



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EPA guidance on diesel fuel in hydraulic fracturing could more than triple permit approval time.

North American shale plays (as of May 2011)



Source: U.S. Energy Information Administration based on data from various published studies. Canada and Mexico plays from ARI.
 Updated: May 9, 2011