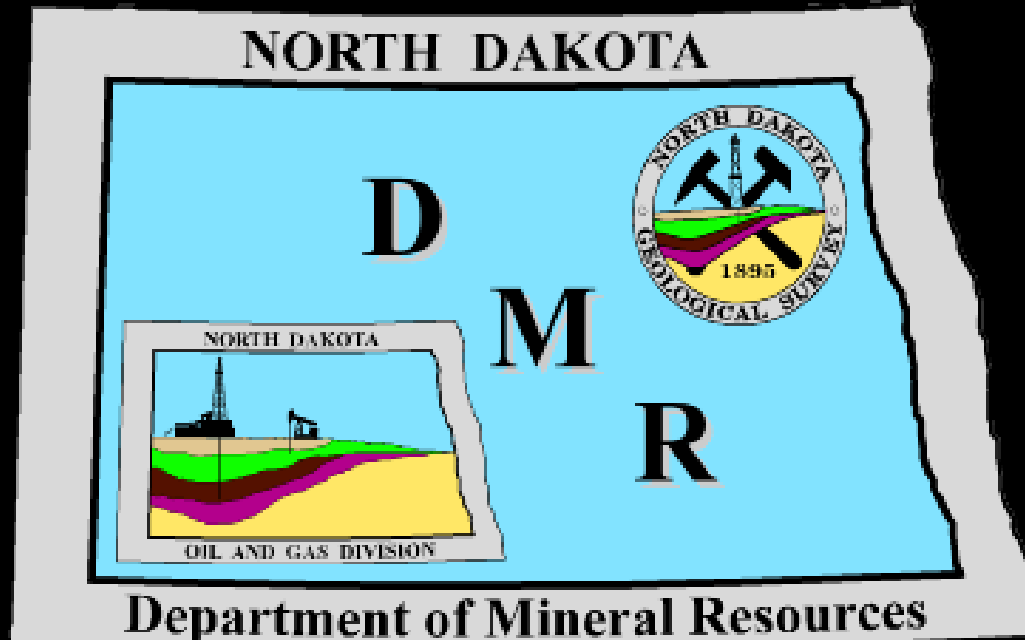


North Dakota Department of Mineral Resources



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

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

600 East Boulevard Ave. - Dept 405

Bismarck, ND 58505-0840

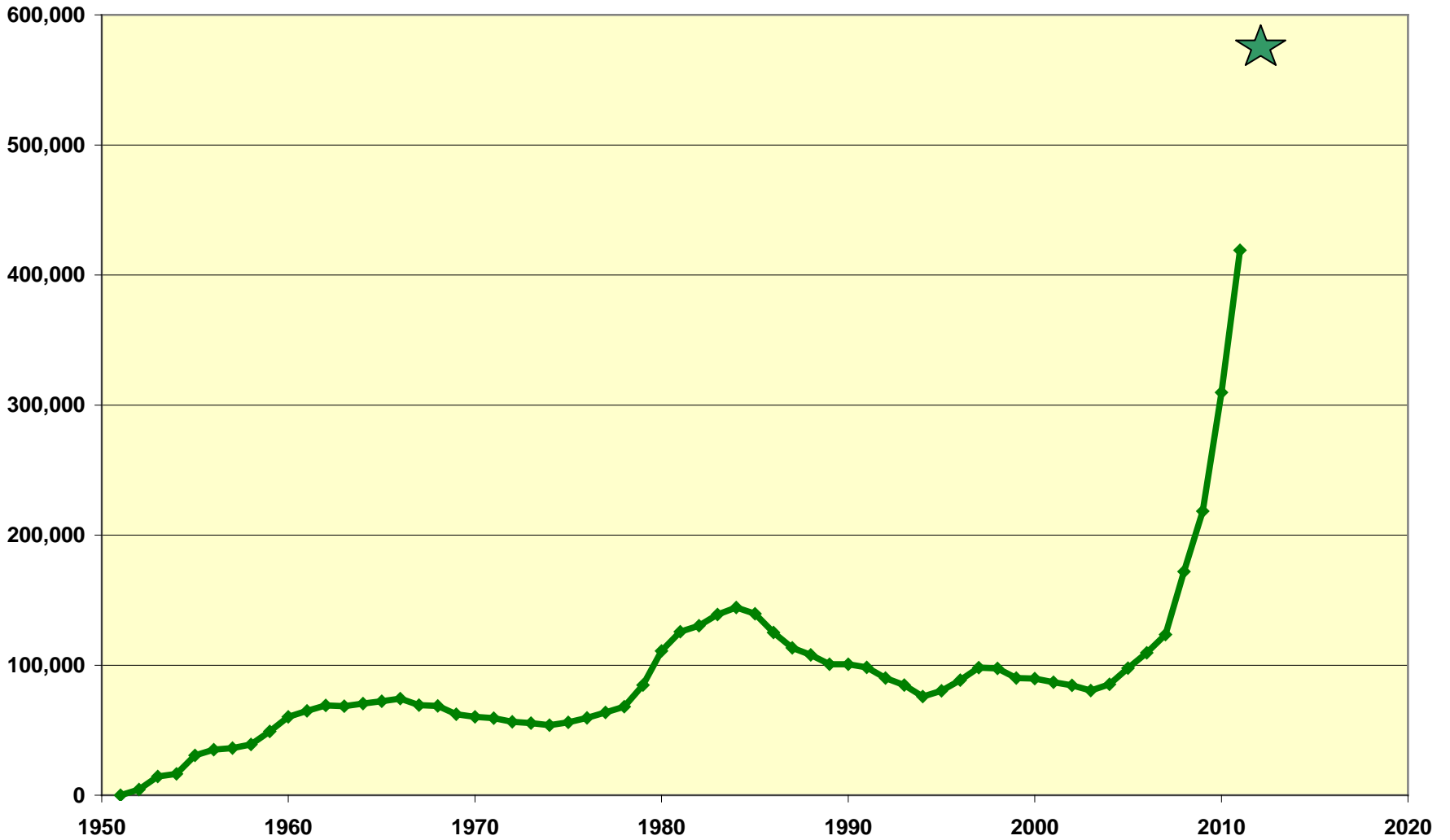
(701) 328-8020

(701) 328-8000

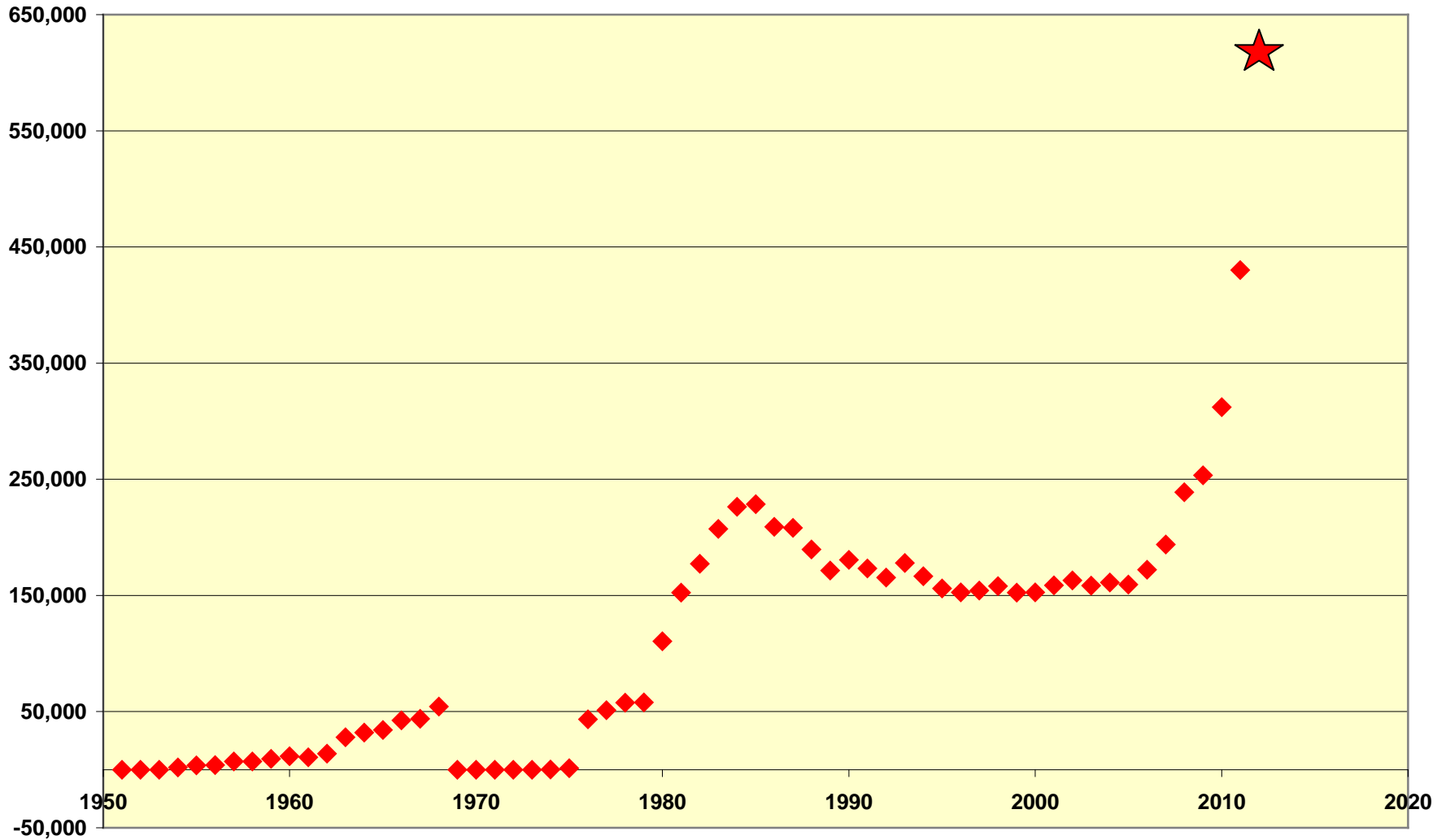
North Dakota 2011 Major Events

- Three Forks second bench was proven economic
- Eagle-Ford and Utica Shale competition
- Worst winter and spring weather in history
- Challenges
 - Infrastructure
 - Manpower
 - Housing
 - Gas gathering and processing
 - Oil transportation
 - Federal regulation
 - Global Environmental Group interest

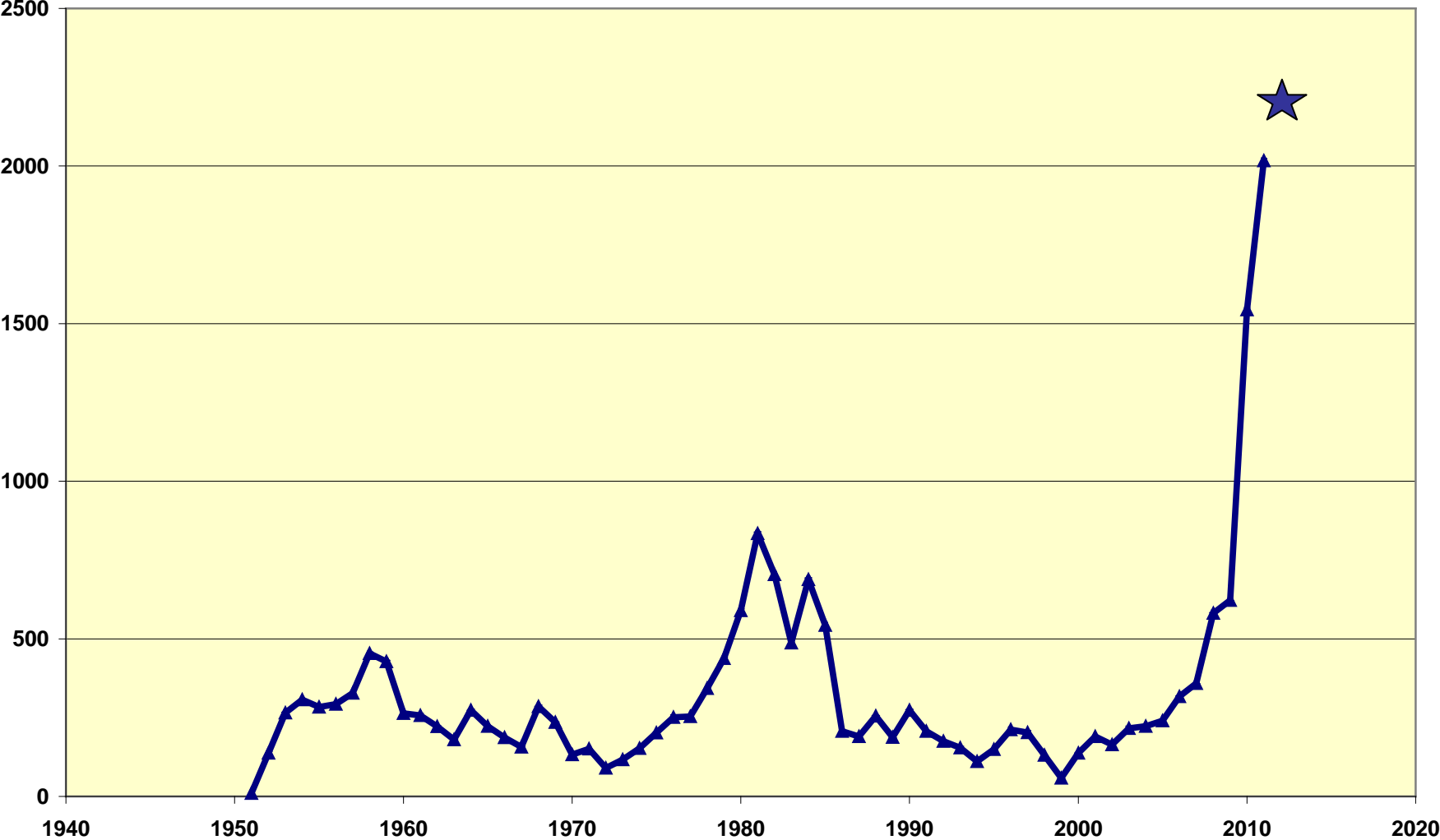
North Dakota Oil Production (Barrels / Day)



North Dakota Gas Production (MCF / Day)



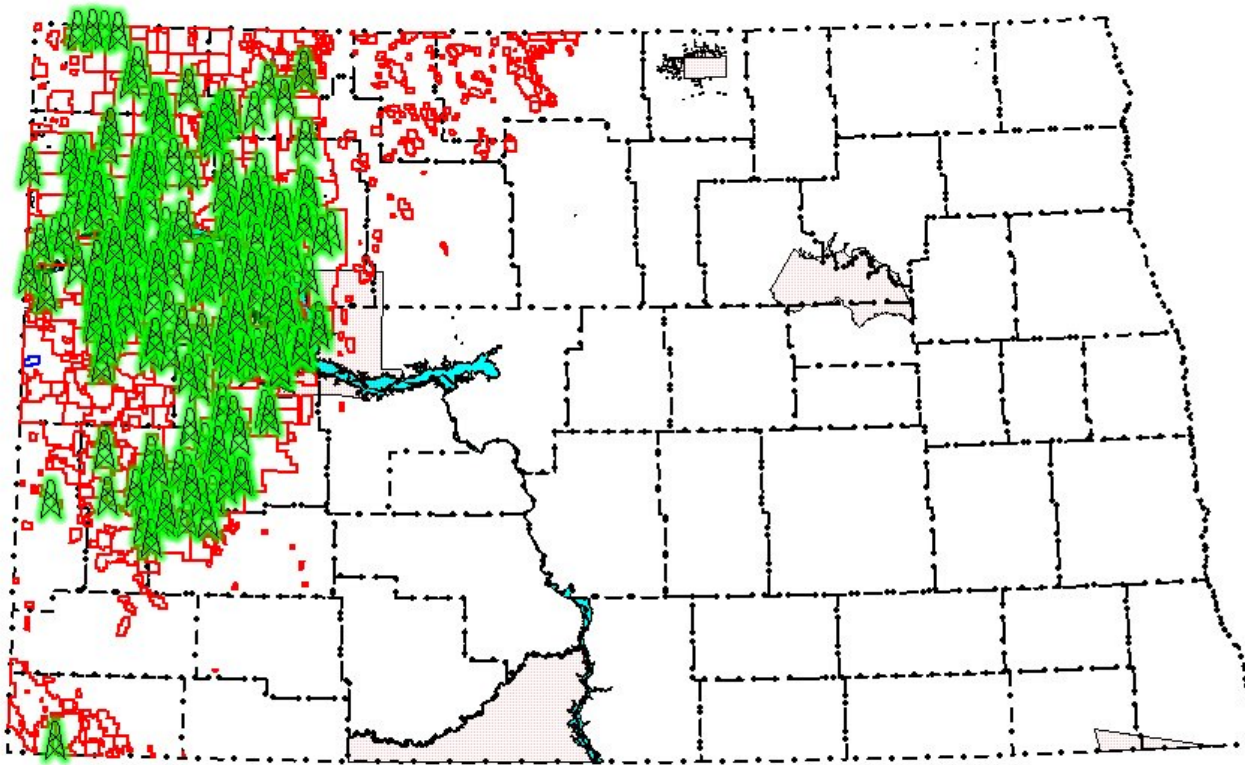
North Dakota Wells Drilled



- Legend / Layers
- Overview Map
- View Entire State
- Previous View
- Clear Selection
- Search
- Generate PDF

- Zoom In
- Zoom Out
- Pan
- Rect Identify
- Select Object
- Buffer
- Distance
- Find Well
- Find Field/Unit
- Find Section

210 rigs



0 62mi

ND OIL & GAS LAYERS

- Oil and Gas
 - Wells
 - Rig Location
 - Directional Surveys
 - Directional Legs
 - Horizontal Surveys
 - Horizontal Legs
 - Cases Docketed
 - Oil Fields
 - Unit Boundaries
 - Inspector Areas
 - Drilling / Spacing
 - Seismic
 - Gas Plants
- Other
- Imagery
 - Topo/DRG 250k
 - Topo/DRG 100k
 - NAIP 2009

Refresh Map

Auto Refresh

Help:

- A closed group, click to open.
- An open group, click to close.
- A map layer.
- A hidden group/layer, click to make visible.
- A visible group/layer, click to hide.
- A visible layer, but not at this scale.
- A partially visible group, click to make visible.
- An inactive layer, click to make active.
- The active layer.

Zoom In

Map Data Last Updated : 5/18/2012

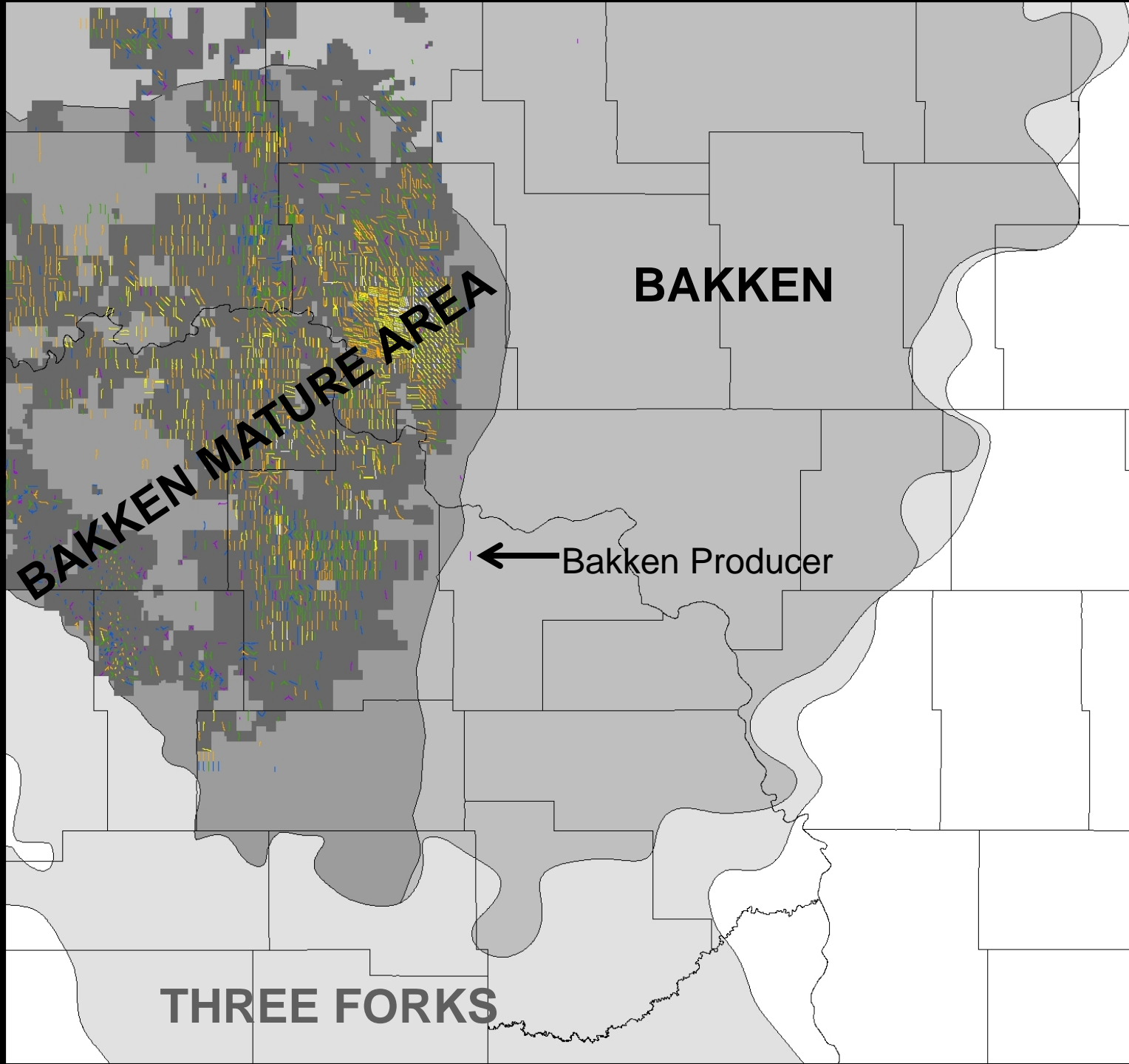
North Dakota

2011 Formations of Interest

- Three Forks
 - 3,382 Bakken Pool wells
 - 2,465 Middle Bakken
 - 625 Three Forks
 - 228 Upper Shale
 - 64 Middle Bakken & Three Forks
- Tyler
 - Same stage as North Dakota Bakken in 2003
 - Vertical wells and source rock-storage system
 - Horizontal success in Montana

North Dakota Oil & Gas Taxation

- Gross Production Tax
 - 5% on oil
 - July 1, 2011 through June 30, 2012 \$0.1112/MCF on natural gas
- Extraction Tax
 - 6.5% on oil
 - 9 exemptions or rate reductions
 - Incremental EOR, Tertiary, and Stripper Well now in effect
 - Oil Price Trigger \$50.07



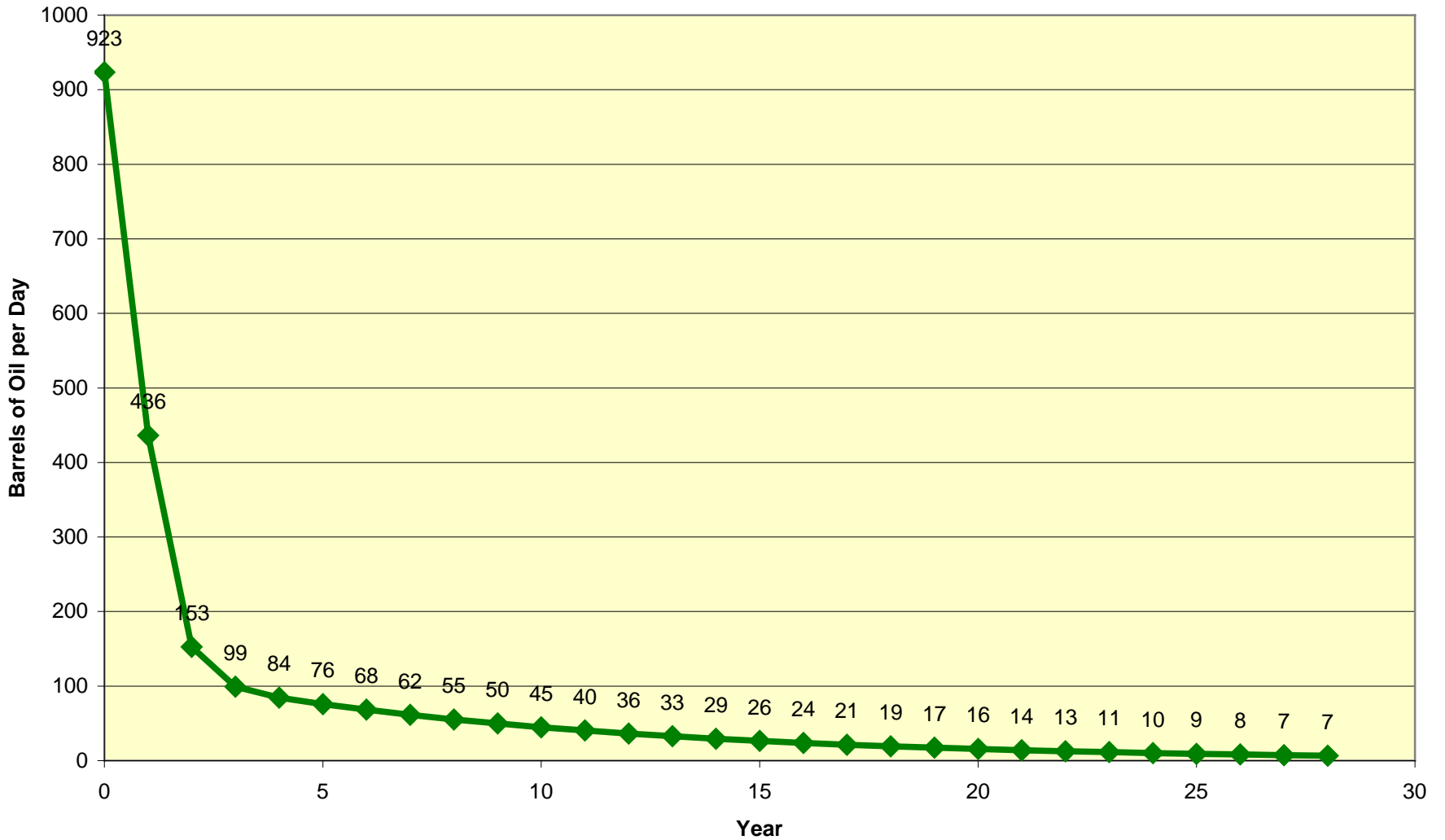
BAKKEN

BAKKEN MATURE AREA

← Bakken Producer

THREE FORKS

Typical Bakken Well Production



What Does Every New Bakken Well Mean to North Dakota

A typical 2011 North Dakota Bakken well will produce for 29 years

If economic, enhanced oil recovery efforts can extend the life of the well

In those 29 years the average 2011 Bakken well will:

Produce approximately 540,000 barrels of oil

Generate over \$20 million net profit

Pay approximately \$4,585,000 in taxes

\$2,200,000 gross production taxes

\$2,000,000 extraction tax

\$385,000 sales tax

Pay royalties of \$7,500,000 to mineral owners

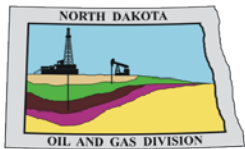
Pay salaries and wages of \$2,100,000

Pay operating expenses of \$2,300,000

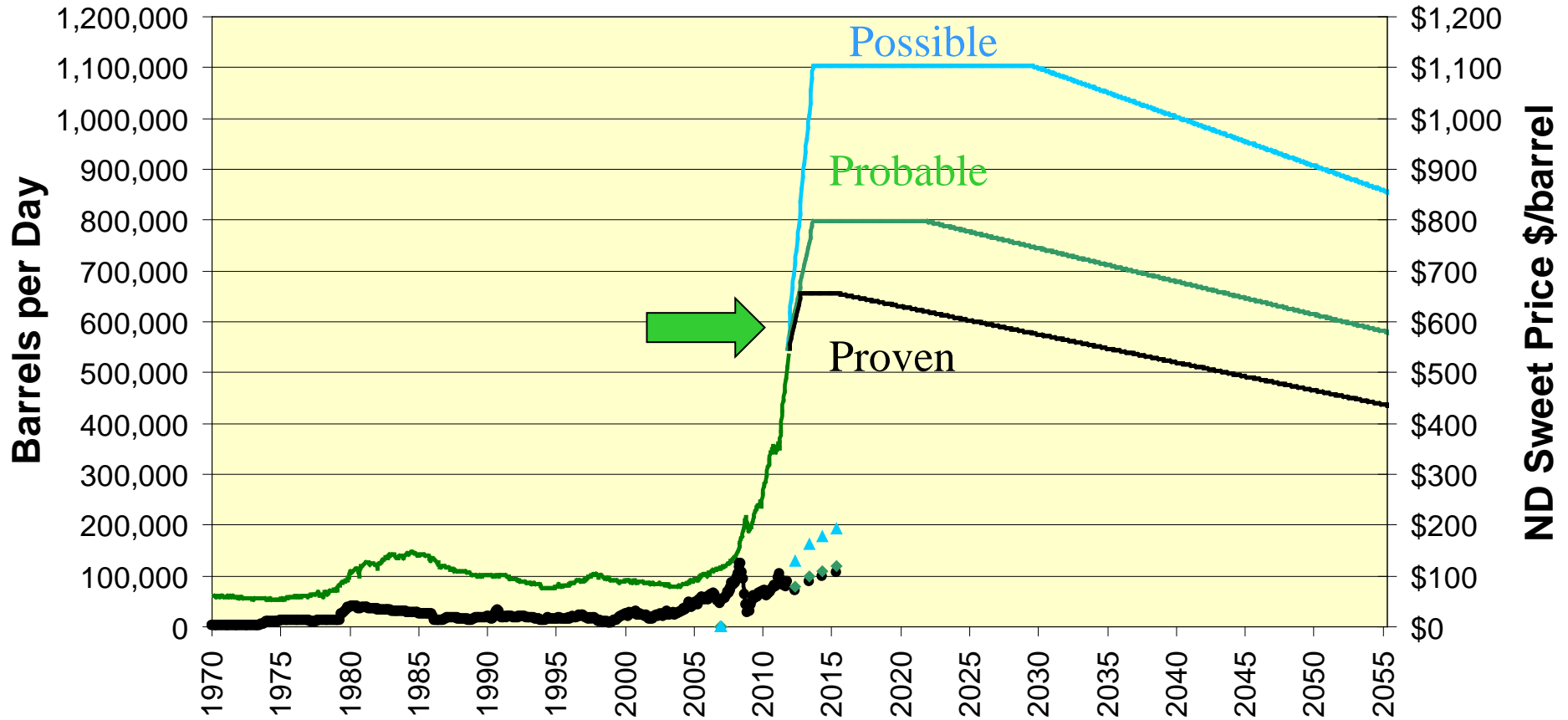
Cost \$7,925,000 to drill and complete

Western North Dakota

- 1,100 to 2,700 wells/year = 2,000 expected
 - 100-225 rigs = 12,000 – 27,000 jobs
 - Another 10,000-15,000 jobs building infrastructure
 - 225 rigs can drill the wells needed to secure leases in 2 years
 - 225 rigs can drill the wells needed to develop spacing units in 16 years
 - 35,000-40,000 new wells = 35,000-40,000 long term jobs



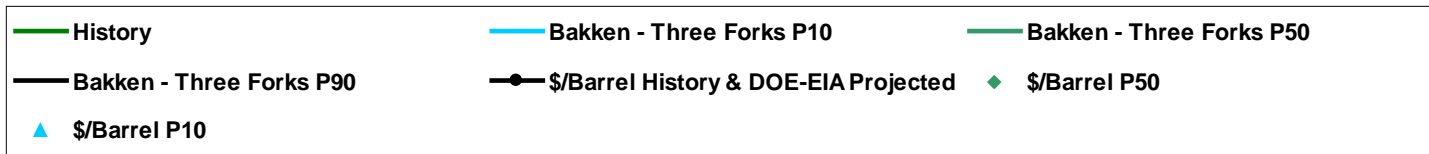
North Dakota Oil Production and Price



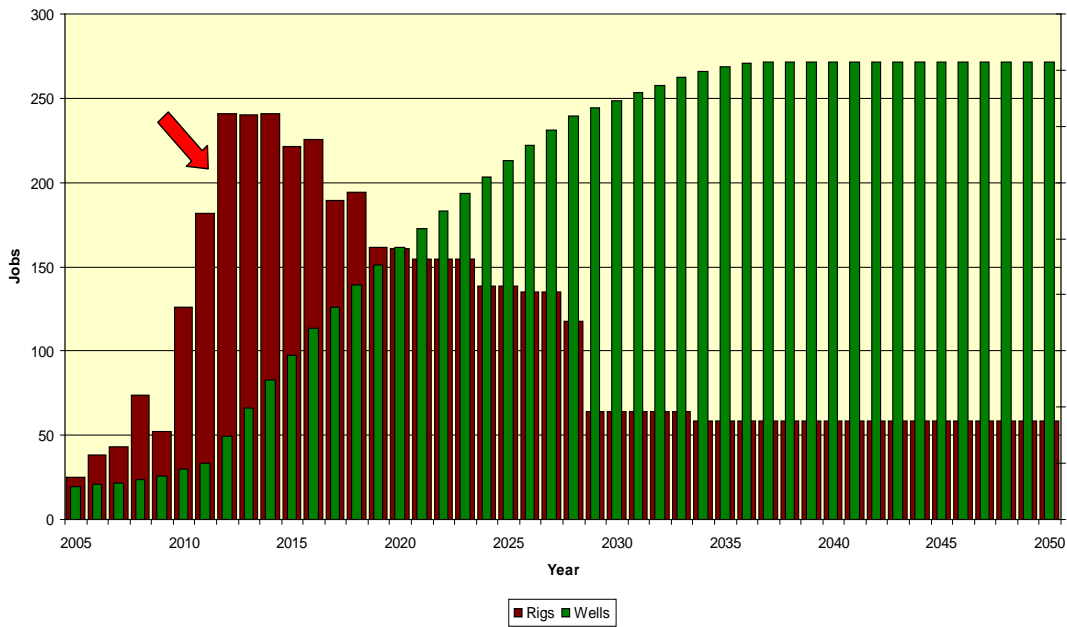
3,382 Bakken and Three Forks wells drilled and completed

35,700 more new wells possible in thermal mature area

Proven=7 BBO – Probable=10 BBO – Possible=14 BBO (billion barrels of oil)

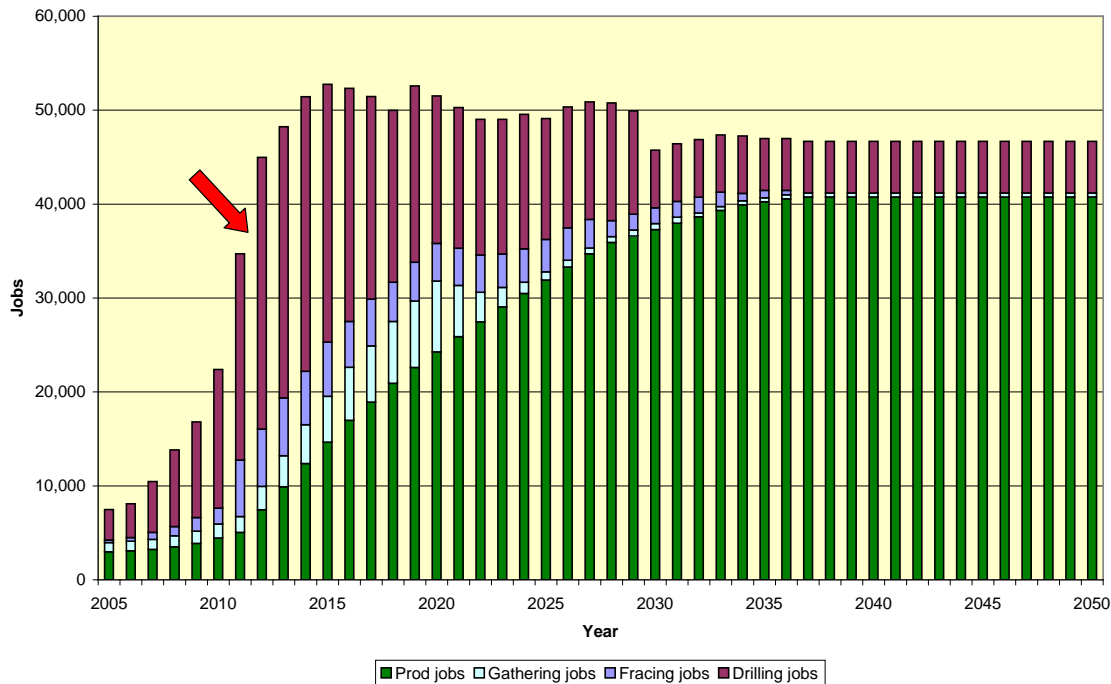


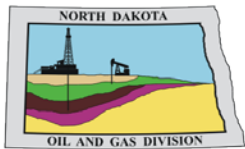
North Dakota Rigs and Wells



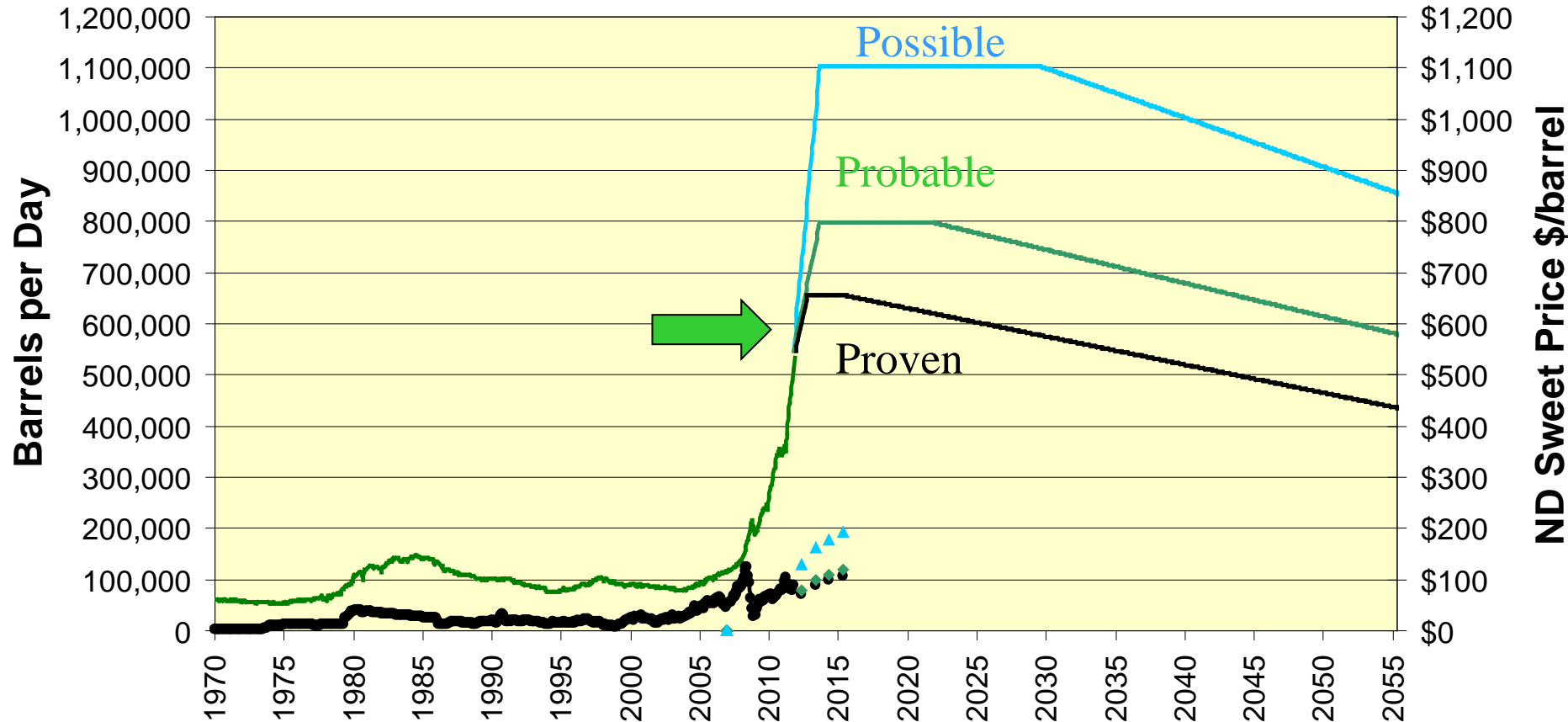
Conservative Case

North Dakota Oil Industry Jobs





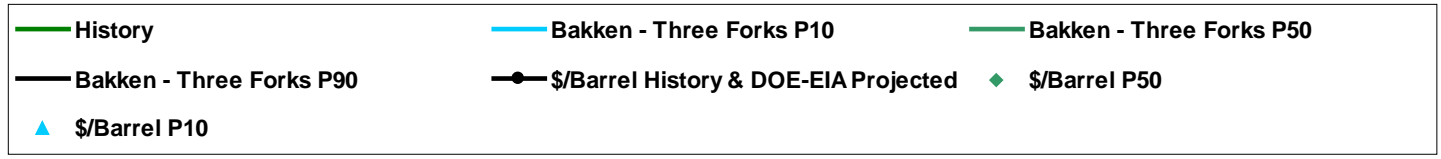
North Dakota Oil Production and Price



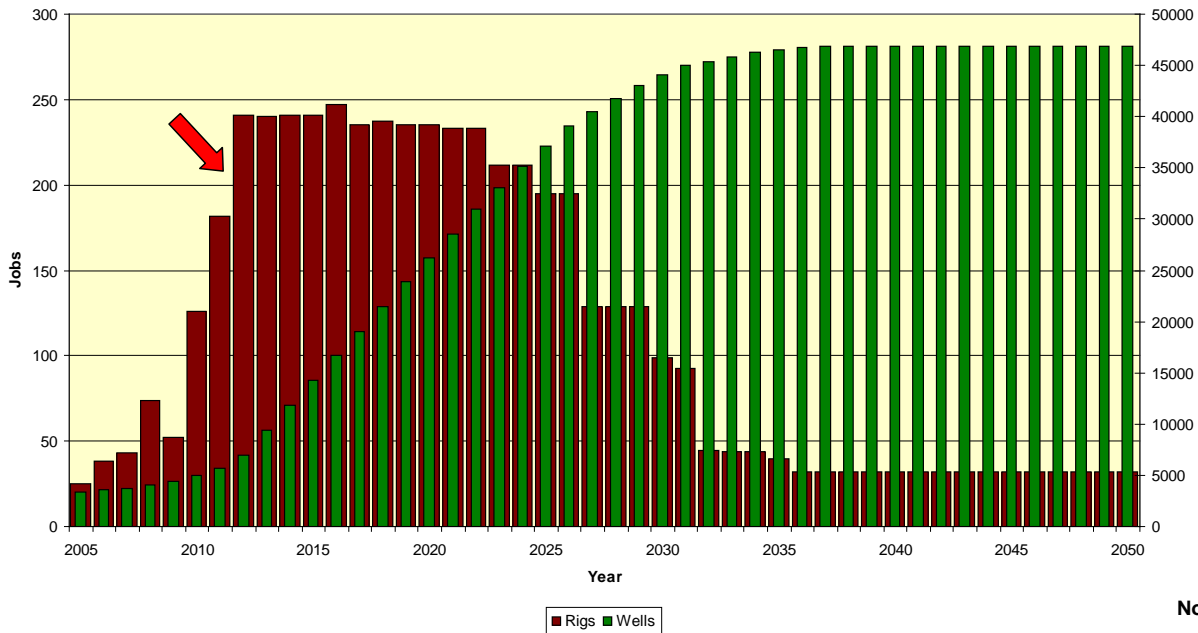
3,382 Bakken and Three Forks wells drilled and completed

41,200 more new wells possible in thermal mature area

Proven=7 BBO – Probable=10 BBO – Possible=14 BBO (billion barrels of oil)

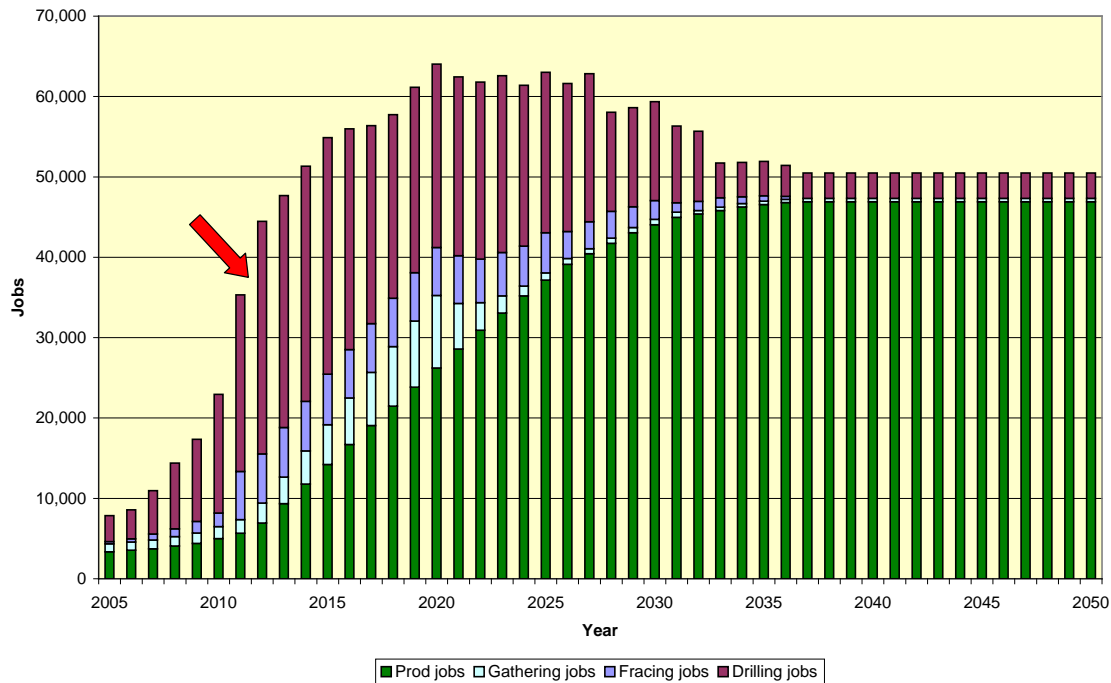


North Dakota Rigs and Wells



Expected Case

North Dakota Oil Industry Jobs





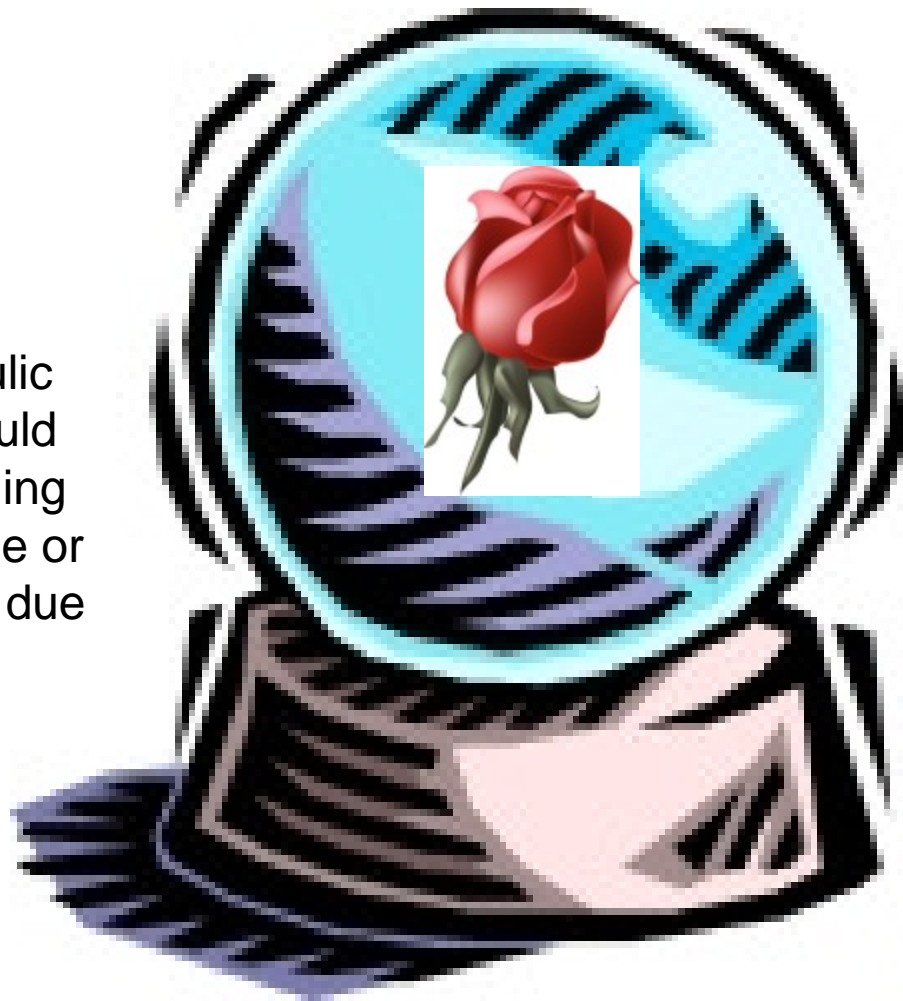
storm www.fotosearch.com

Draft BLM Hydraulic Fracturing rule could double federal drilling permit approval time or worse. Comments due 7/10/12



storm www.fotosearch.com

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



COOLCLIPS.COM

The future looks promising for sustained Bakken/Three Forks development



storm www.fotosearch.com

Draft EPA guidance on diesel fuel in hydraulic fracturing could triple drilling permit approval time or worse. Comments due 7/9/12



storm www.fotosearch.com

World and U.S. economies continue to struggle. If China joins the downward spiral oil price could fall enough to make some areas uneconomic