



North Dakota Petroleum Council

Terry Kovacevich, Vice Chairman



North Dakota Petroleum Council

Purpose

The North Dakota Petroleum Council's purpose is to provide governmental relations support to the more than 250 companies it represents who are involved in all aspects of the oil and gas industry.

Mission

- To promote and enhance the discovery, development, production, transportation, refining, conservation, and marketing of oil and gas in North Dakota, South Dakota, and the Rocky Mountain region;
- To promote opportunities for open discussion, lawful interchange of information, and education concerning the petroleum industry;
- To monitor and influence legislative and regulatory activities on the state and national level; and
- To accumulate and disseminate information concerning the petroleum industry to foster the best interests of the public and industry.



Oil Can! Program

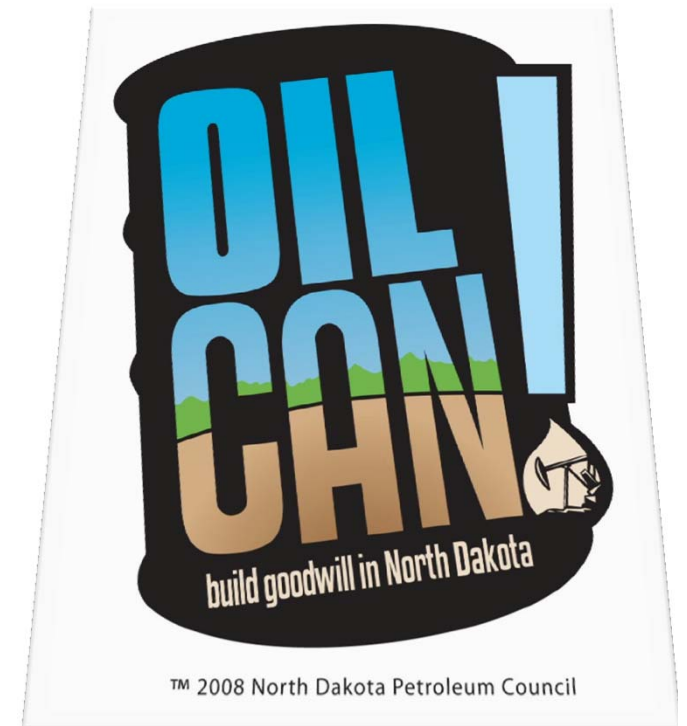
Guiding principles

- Listen first
- Develop partnerships
- Respect others



Oil Can! Program

- Townhall Meetings
- Royalty/Surface Owner Info Center
- Economic Impact Studies
- Drive Safely Campaign
- Legislative Tours
- Teacher/Student Seminars
- Bakken Cookfest

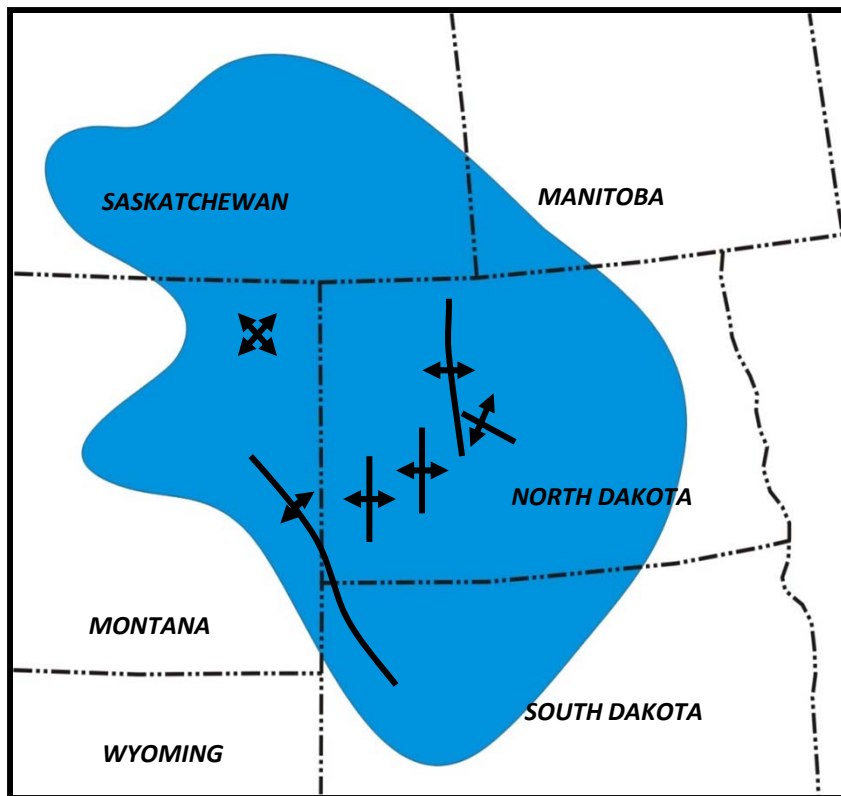


North Dakota Facts



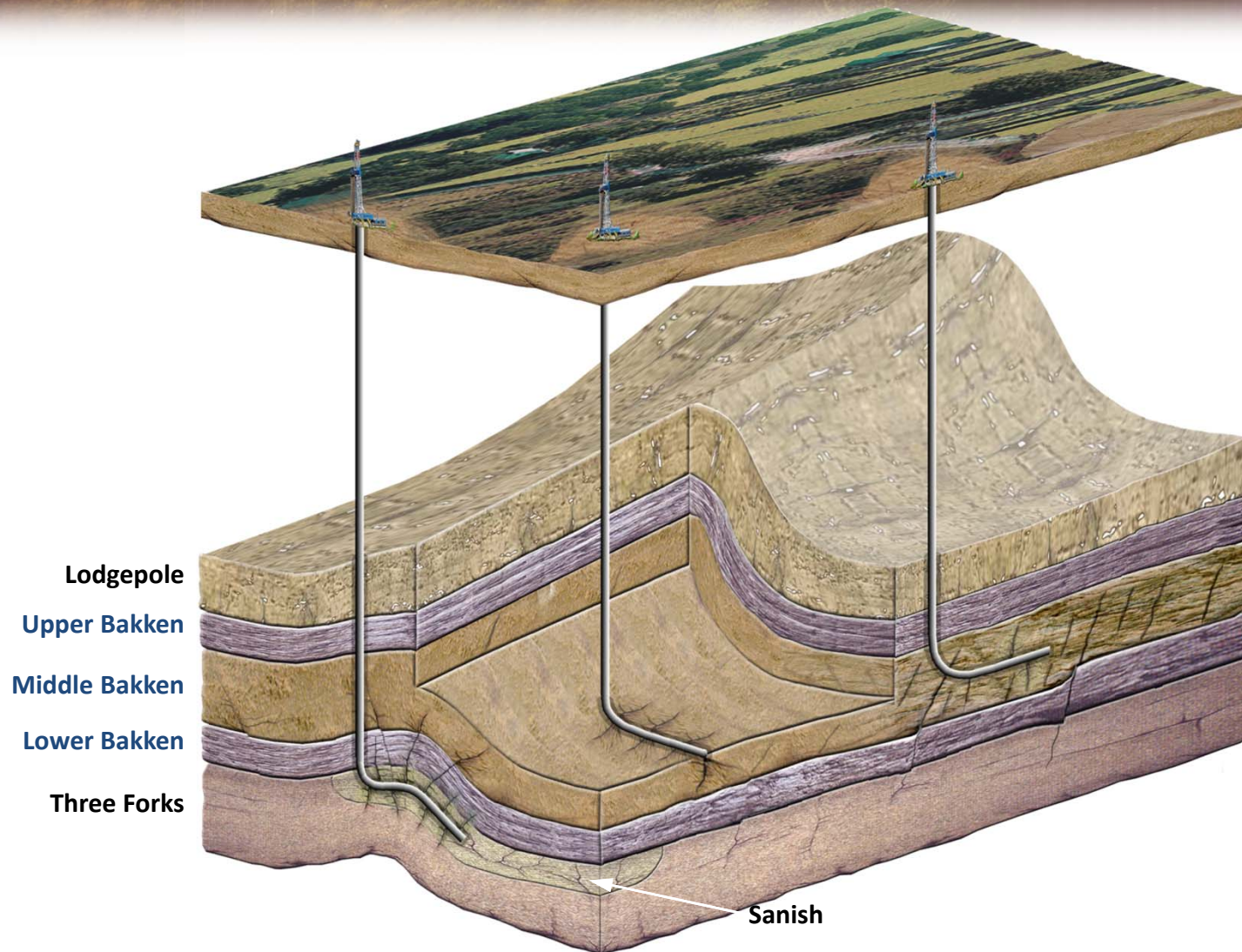
- Statehood: November 2, 1889 -39th State
- Population: 642,200- 3rd least populated state
- **Total area North Dakota: 70704 square miles-19th largest state**
- Capital: Bismarck
- **Agriculture: Sugar beets, wheat, cattle, barley, sunflowers, milk.**
- **Major Industries: Oil & Gas, Coal, Light Manufacturing**
- Largest Cities: Fargo, Bismarck, Grand Forks, Minot, Mandan, Dickinson

Williston Basin Oil and Gas History

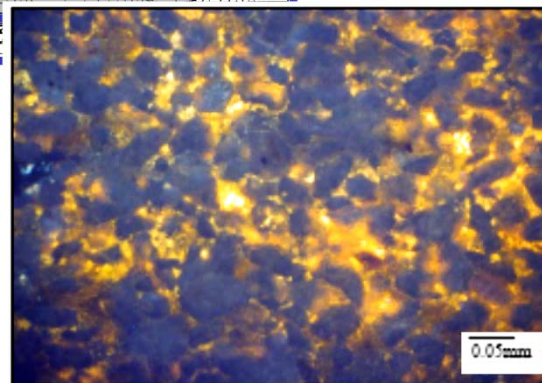
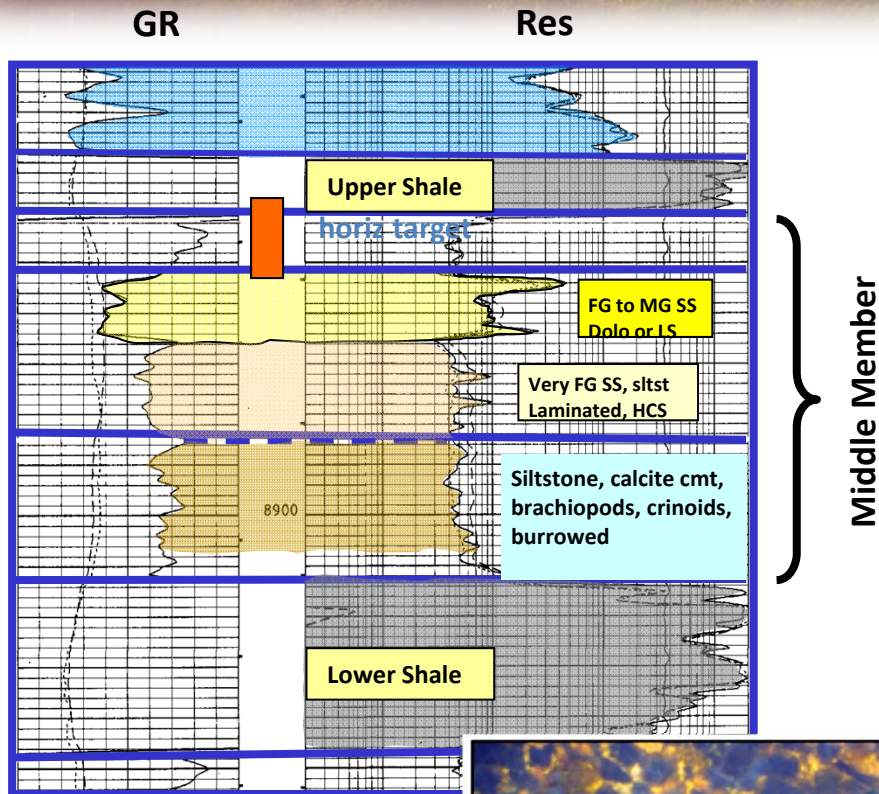


- First production established in 1951
 - Madison Group largest producer
 - Red River, Interlake, Duperow and Tyler very significant as well
 - Conventional structural and stratigraphic plays over time
- Bakken History
 - Conventional traps and “bailout completions” 1950s-60s
 - Depositional edge play 1970s-80s
 - Horizontal wells in upper Bakken shale late 1980s-90s
 - Risky and drilling/completion complications
 - Middle Bakken horizontal wells in Elm Coulee Field, Richland Co., MT 2001
 - North Dakota Middle Bakken 2004-present
 - Driven by drilling and completion technology

Subsurface Structure



Bakken Lithofacies



Tight oil resource play

- Target interval is Middle Bakken
- Consider the complete Bakken interval as a hydrocarbon system (reservoir and source)
- Mixed lithology
 - Dolomite is important
- Produces strictly oil and gas but very tight
 - Perm: 0.010 - 0.125 md
 - Porosity: 4 - 6%
 - Wells have Kh 0.5-8 md/ft over 8000+' of open hole

Bakken Formation

upper shale

middle member

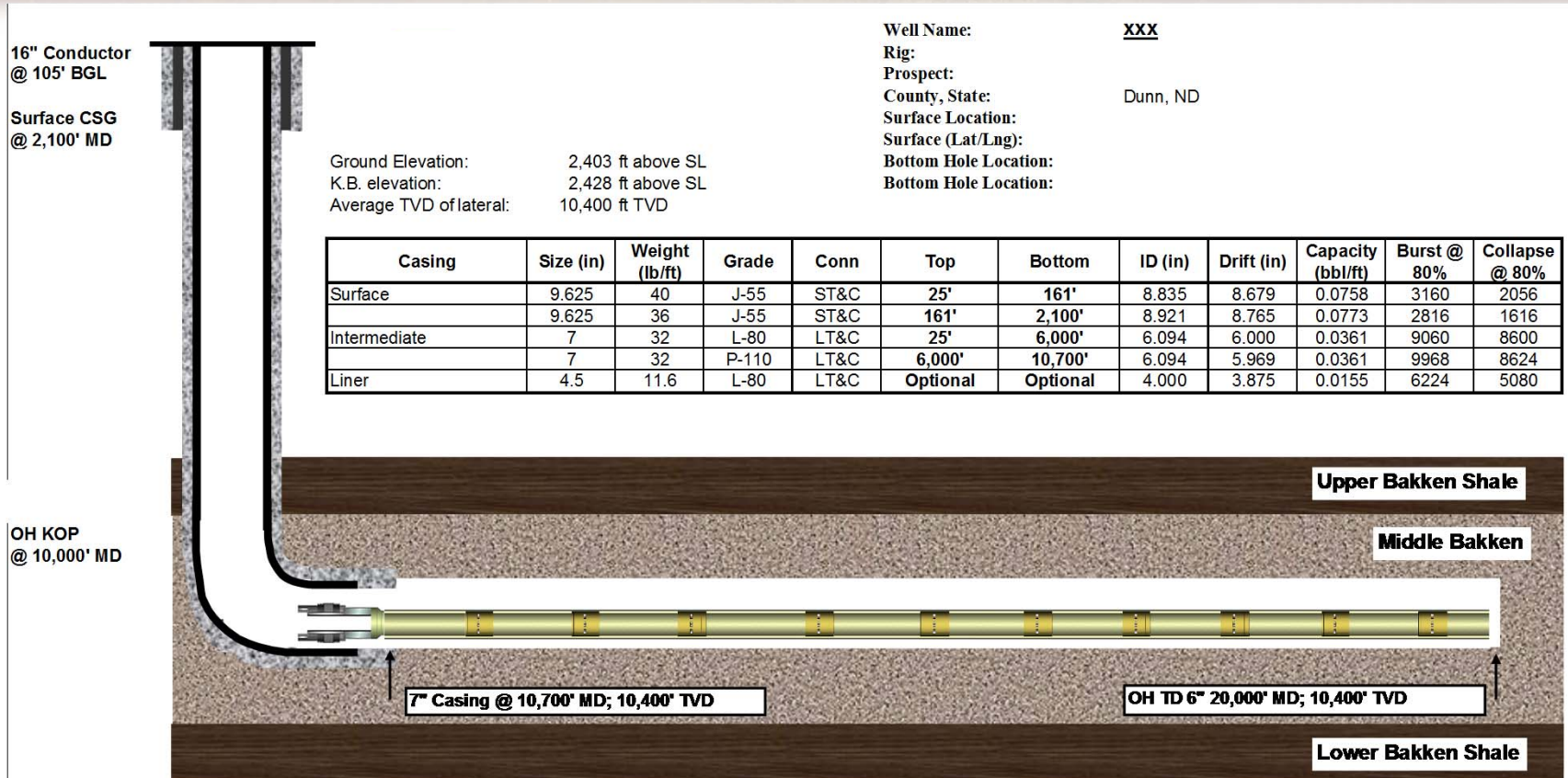
lower shale



Three Forks Formation



Well Design Bakken - Typical Well



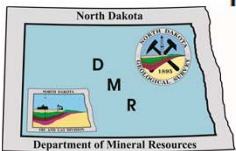
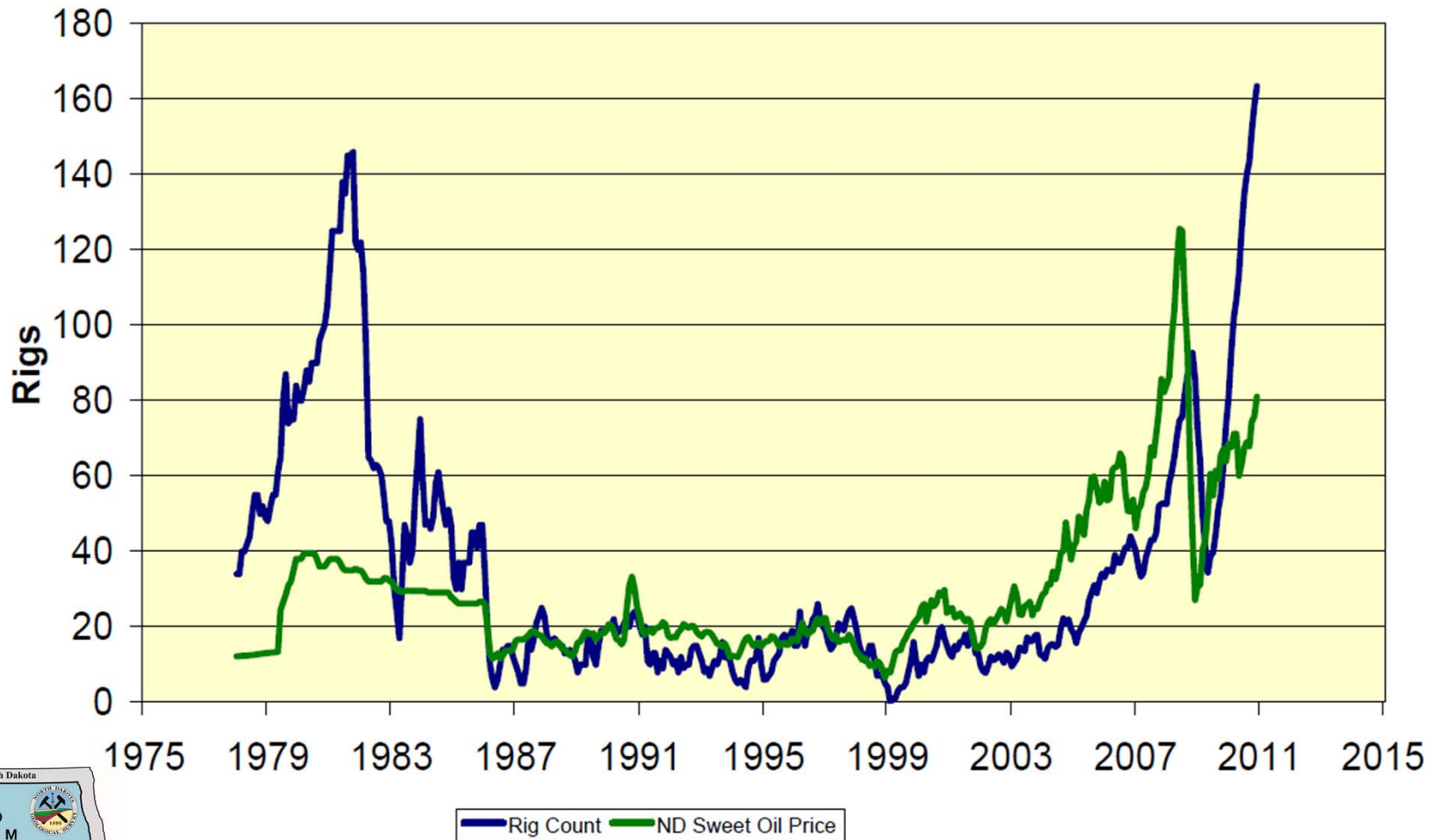
- 9 5/8" surface casing @ 2,022 ft
- 7" intermediate casing @ 10,780 ft MD, 90° inclination
- 4 1/2" liner @ 20,000 ft (optional)

Well Fracturing in the Bakken

- 1-4 million gallons of fluid
- 1-4 million lbs of sand
- Open hole, stage completions (15-40 stages), dual laterals (MB & TF)
- 50-110 BPM, 6,000-14,000 HHP

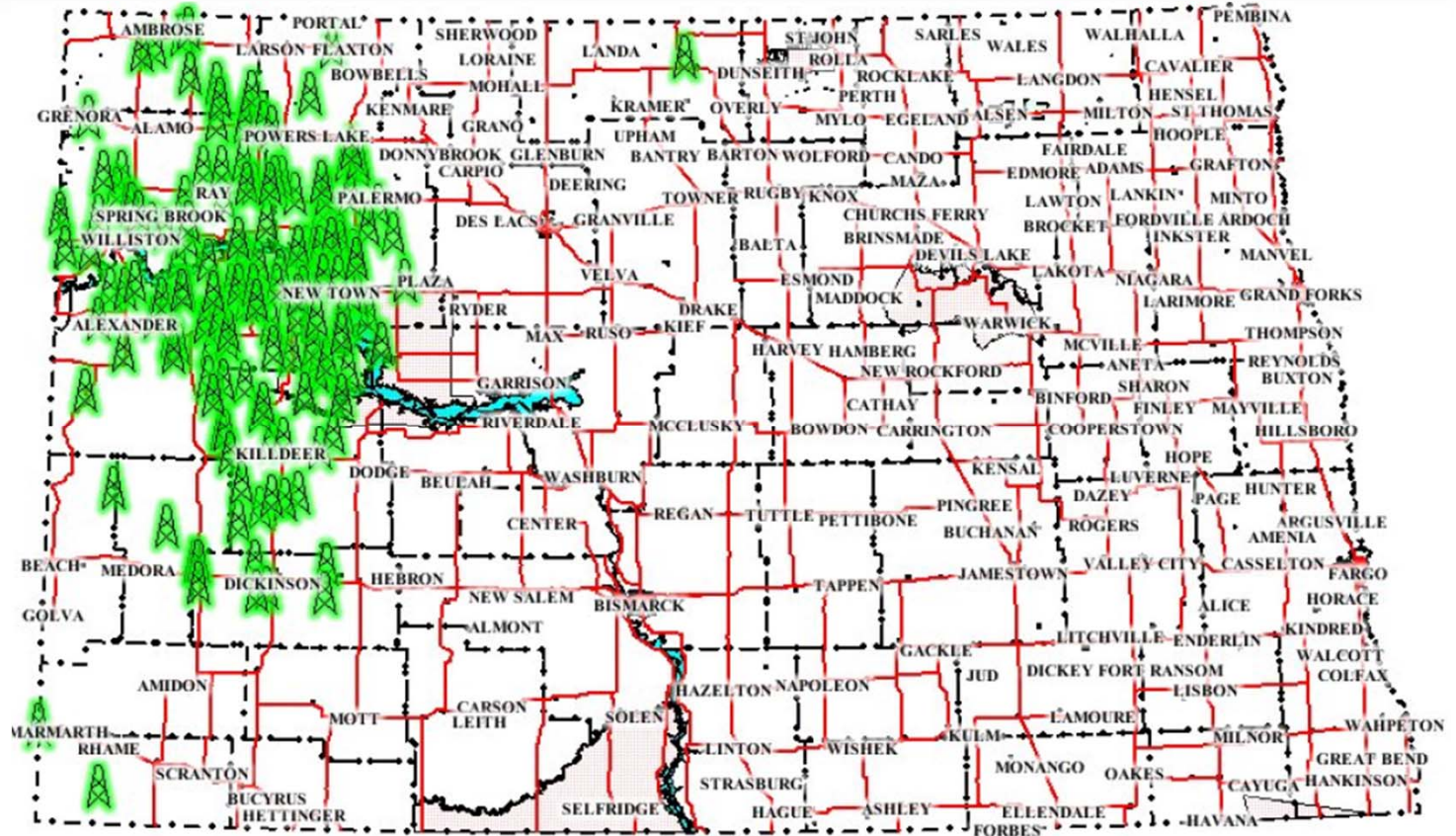


ND average monthly rig count

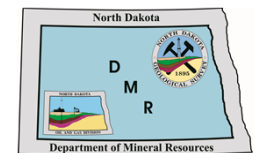


Rigs operating in ND

164 rigs
(January 7)

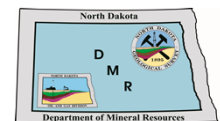
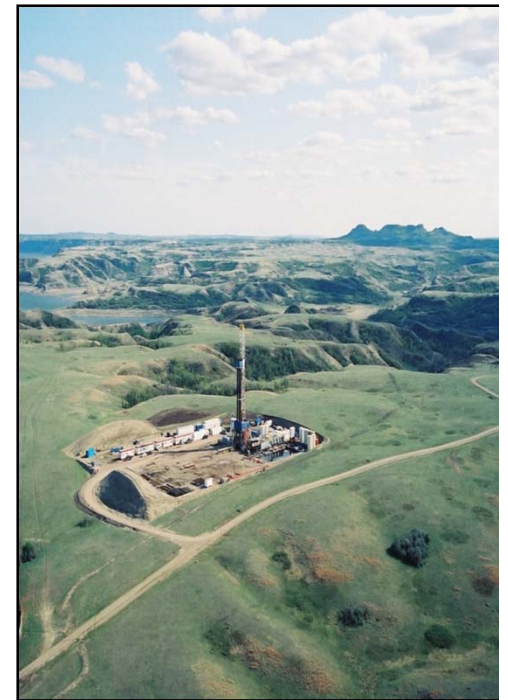


- 120 full time jobs supported by each drilling rig
- 1,050-1,250 semi-loads to drill and frac each Bakken well



What does every new oil well mean to North Dakota?

- A typical ND oil well produces for an average of 37 years.
 - If economical, additional secondary recovery efforts can be made to extend the life of the well.
- In those 37 years, an average oil well:
 - Produces 838,000+ barrels of oil (60 bopd)
 - **Generates \$57 million in gross profit**
 - **Pays \$5,775,000 in taxes**
 - Gross production tax - \$2,665,000
 - Extraction tax - \$2,813,000
 - Sales tax - \$297,000
 - **Pays royalties to mineral owners of \$9,520,000**
 - **Pays salaries of \$1,552,000**
 - Has operating expenses of \$1,666,000
- The average cost of completing a well in North Dakota in 2010 was \$6.1 million.

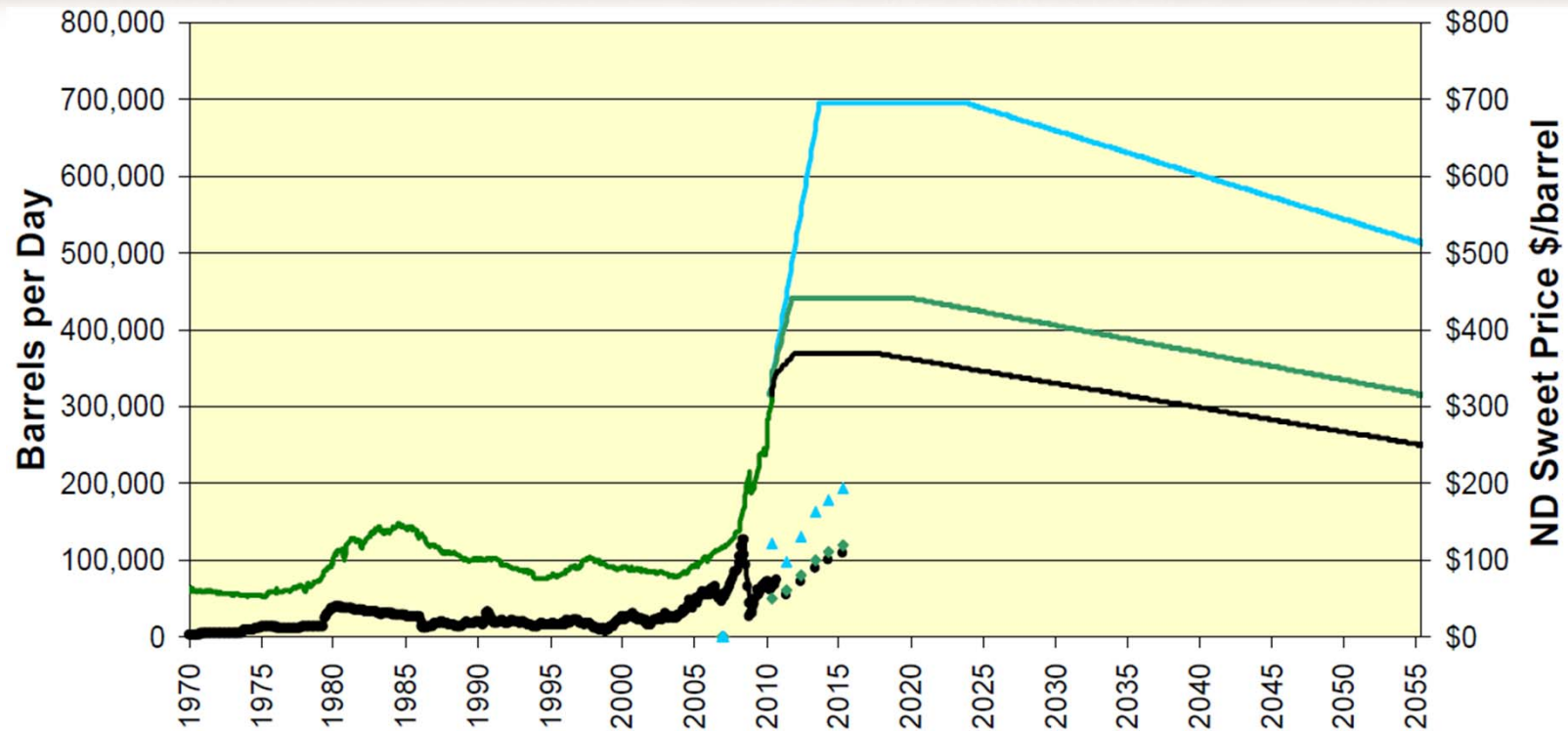


Bakken Boom How Big/How Long

- Many Challenges/Opportunities
 - Workers
 - Housing
 - Water
 - Pipeline Space
 - Road Impacts
 - Infrastructure Funding
 - Road Safety – Impatient Drivers



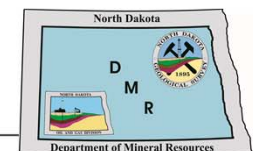
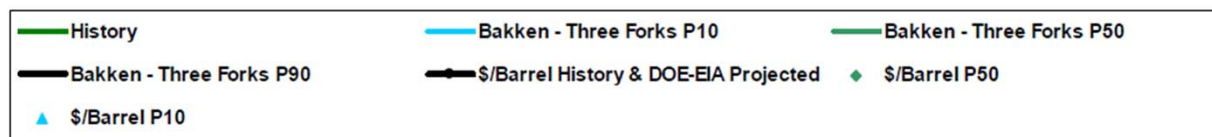
ND oil production & price



1,900 Bakken and Three Forks wells drilled and completed

19,000 – 47,000 more new wells possible in thermal mature area

P90=5 – P50=7 – P10=11 billion barrels



ND oil production forecast to surpass Alaska's

RESERVES: Production could push state past Alaska and California

By JAMES MacPHERSON
The Associated Press
(01/03/11)

BISMARCK, N.D. -- Government and industry officials believe North Dakota's oil patch contains more than twice the amount of oil previously estimated and that the **state's already record crude production will double within the decade, putting it ahead of Alaska's.**

If the forecast is correct, North Dakota could leapfrog in a few years **from the fourth-biggest oil producing state to No. 2,** trailing only Texas.

"It's a pretty rosy picture," said Lynn Helms, director of the North Dakota Department of Mineral Resources. "We have a huge amount of drilling still in front of us."

Helms said the state currently is pumping about 350,000 barrels of crude per day and was on pace to produce about 110 million barrels in 2010, up from 79.7 million last year and more than double the amount produced less than three years ago.



A landscape photograph of North Dakota featuring a pumpjack in the distance under a hazy sky, with the title 'North Dakota' overlaid in white text.

North Dakota

- Budget surplus approaching \$1B, GDP growth of 7.3%
- Unemployment < 4%, Tax cuts occurring
- **2005 Economic Impact- \$4.2B, 2011- \$12B (estimate)**
- Job growth 2005- 5,000 2011- 25,000
- **Open and receptive policy makers**
- NDIC (Governor, AG, Ag. Commissioner) provides stability
- **Pro-business attitude**
- Recently ranked #1 Business Climate in U.S.
- **Promotes incentives, not penalties or barriers**
- Solid Strategy for Job Creation
- ND Petroleum Council and it's member companies work very closely together to promote the oil & gas industry with very positive results.

State of North Dakota- Promoting North Dakota's Oil & Gas Industry

- Bakken tax incentives
- Tribal Tax Agreement
- Bakken water infrastructure planning
- More funding for oil counties
- Willingness to develop tax structures that are simple, competitive, and predictable
- Creating the Oil and Gas Research Council
- Merging the Oil and Gas Division and Geological Survey to form the Department of Mineral Resources
- Creating the Pipeline Authority
- Passing the pipeline footprint bill
- Incentives for natural gas infrastructure
- Shallow gas tax holiday
- CO2 sales tax and extraction tax exemptions
- CO2 storage rules and regulations
- Unitization of Cedar Hills oilfield
- Lowering the unitization requirement to 60%
- Forest Service Permitting Committee





North Dakota... The rush hour commute

NEWMAN

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