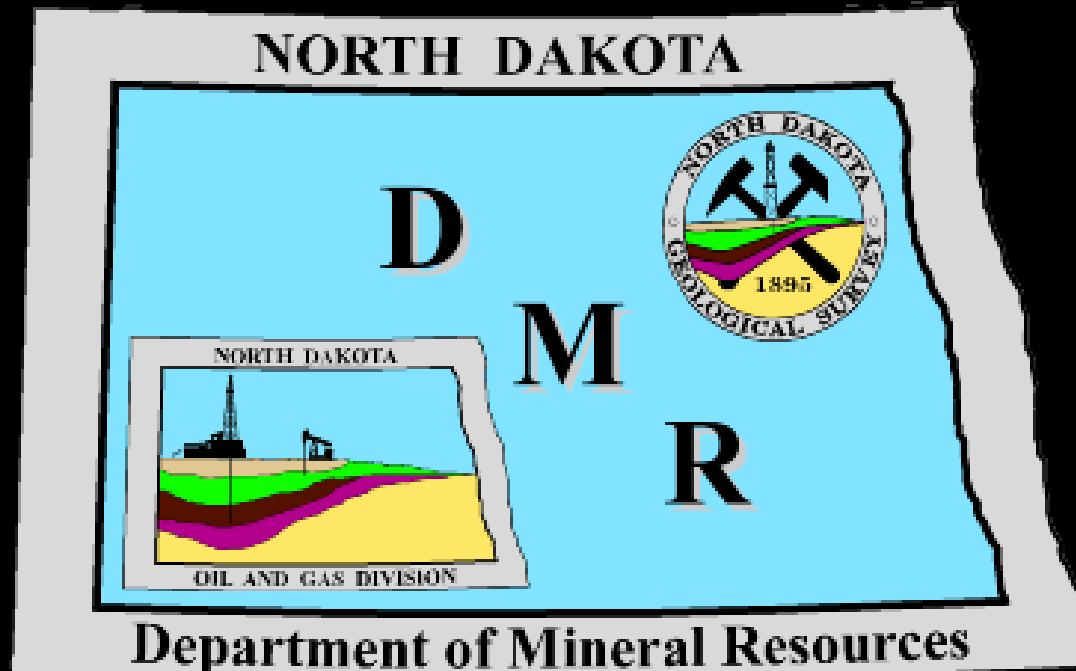


North Dakota Department of Mineral Resources



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

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

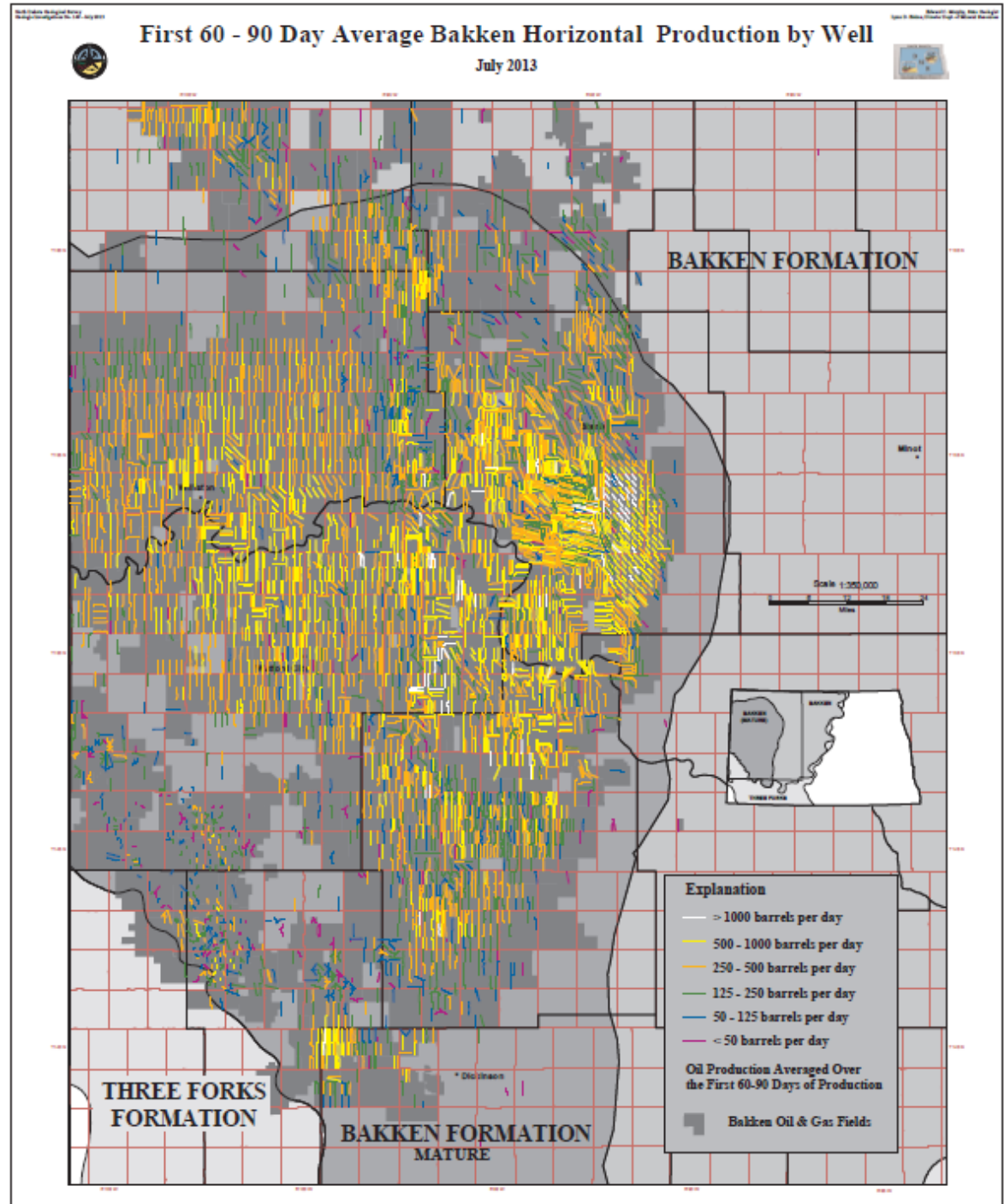
600 East Boulevard Ave. - Dept 405

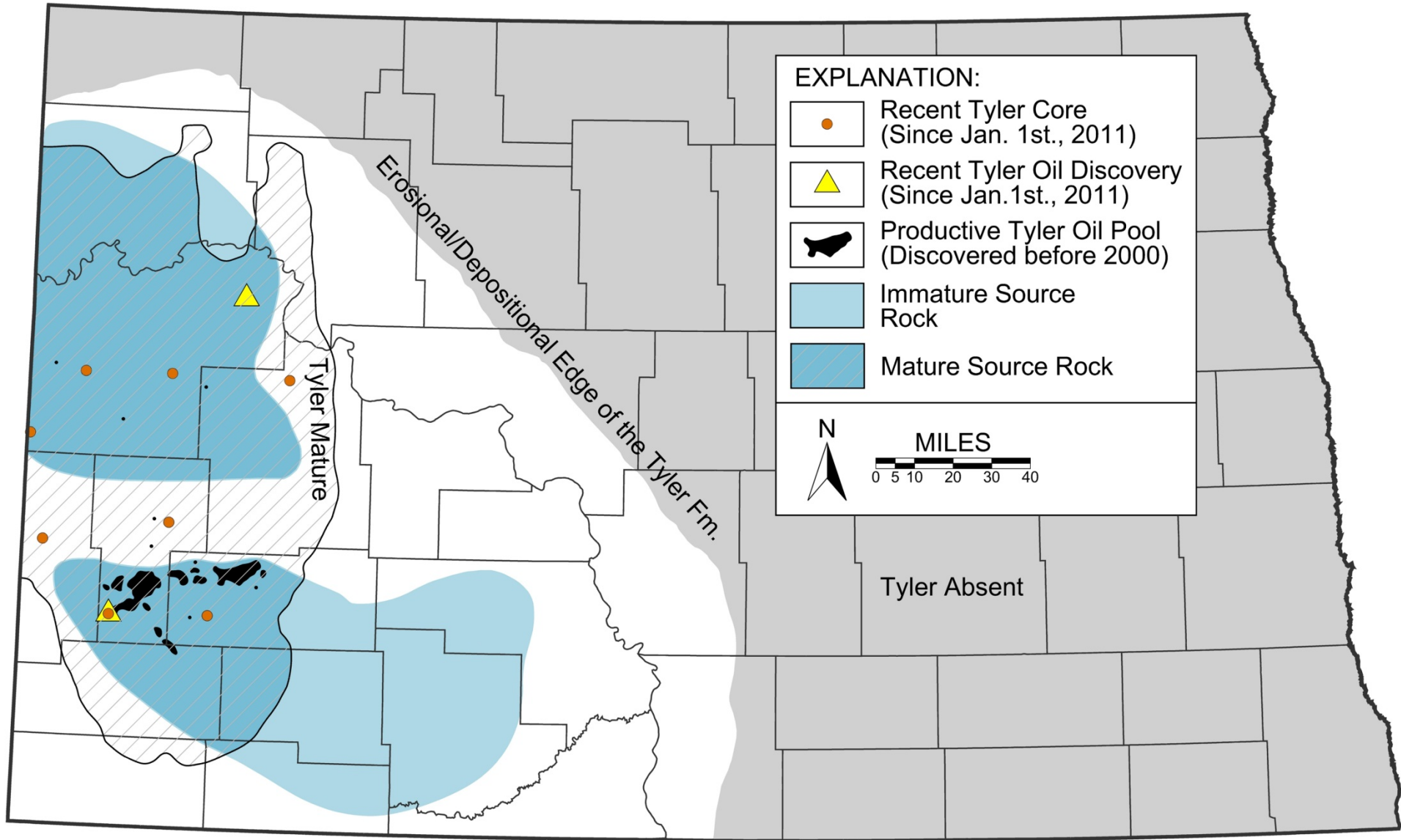
Bismarck, ND 58505-0840

(701) 328-8020

(701) 328-8000

Development
area
> 15,000 sq mi
Size of West
Virginia





EXPLANATION:

- Recent Tyler Core (Since Jan. 1st., 2011)
- Recent Tyler Oil Discovery (Since Jan.1st., 2011)
- Productive Tyler Oil Pool (Discovered before 2000)
- Immature Source Rock
- Mature Source Rock

N

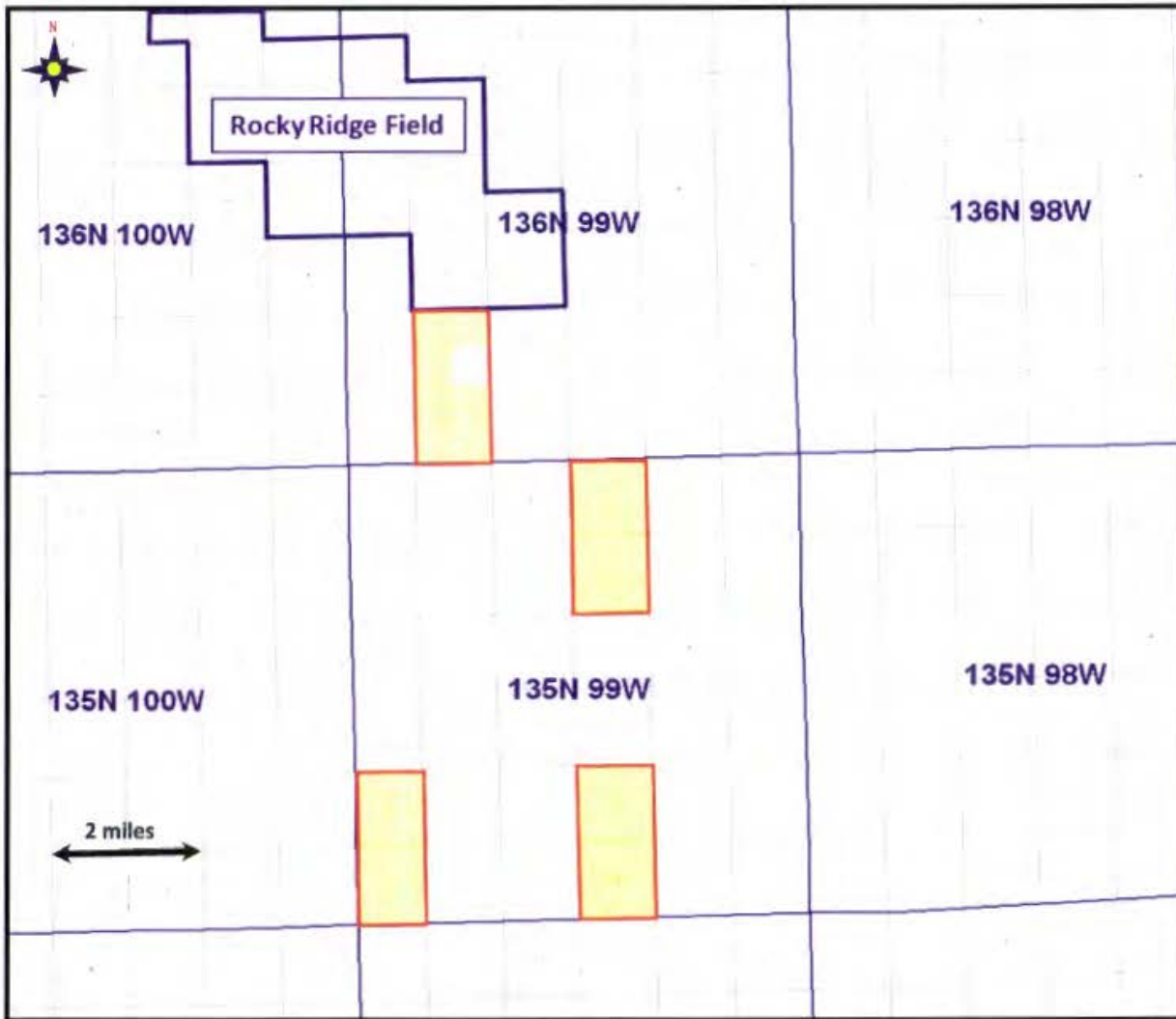
MILES

0 5 10 20 30 40

Tyler Mature

Erosional/Depositional Edge of the Tyler Fm.

Tyler Absent



Proposed 1280 Acre DSU



Marathon Oil Company Interest

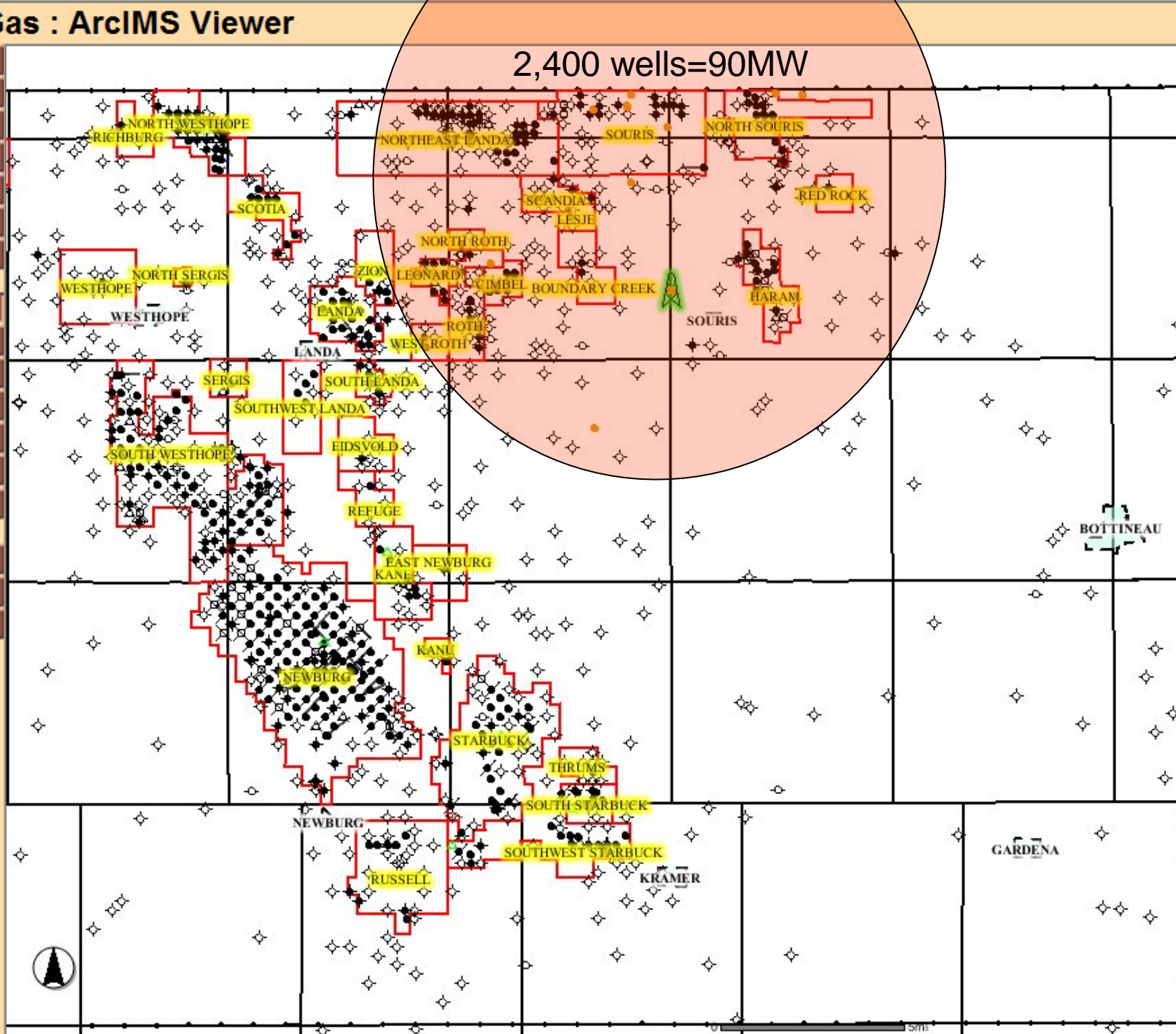


INDUSTRIAL COMMISSION
 STATE OF NORTH DAKOTA
 DATE L-1 CASE NO. 20428
 Introduced By Marathon
 Exhibit L-1
 Identified By Sims

Case No. 20428
 Exhibit L-1
 Area Map
 Application to Create Four 1280 Acre Drilling Units
 Slope County, North Dakota
 June 26, 2013

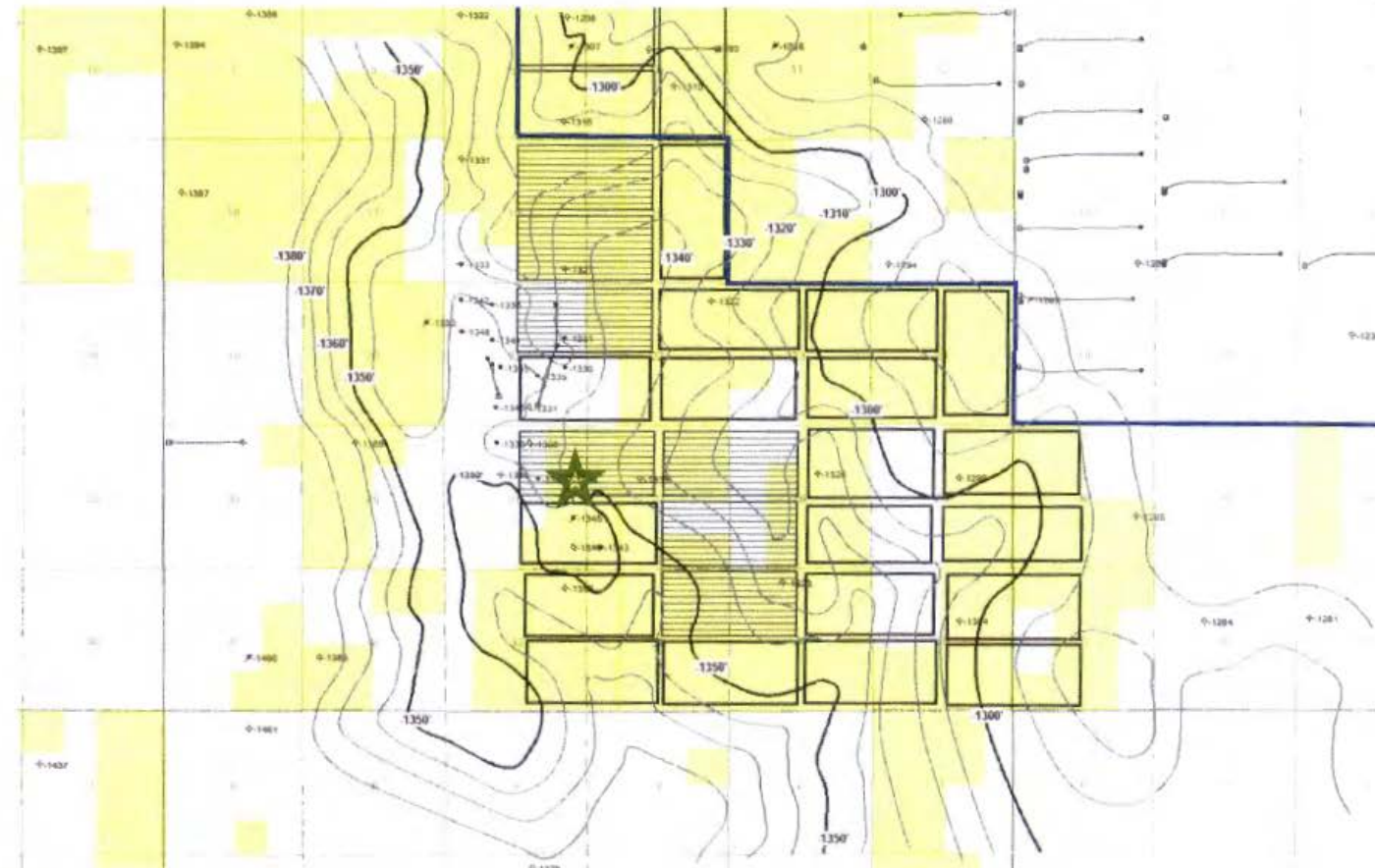
Oil and Gas : ArcIMS Viewer


- 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




Geologic Structure Map Subsea Structure on Top Spearfish (10' contour interval)

Case #20785
Exhibit 5
Aug 29, 2013



 Corinthian Leasehold within requested 320 Acre Drilling Units

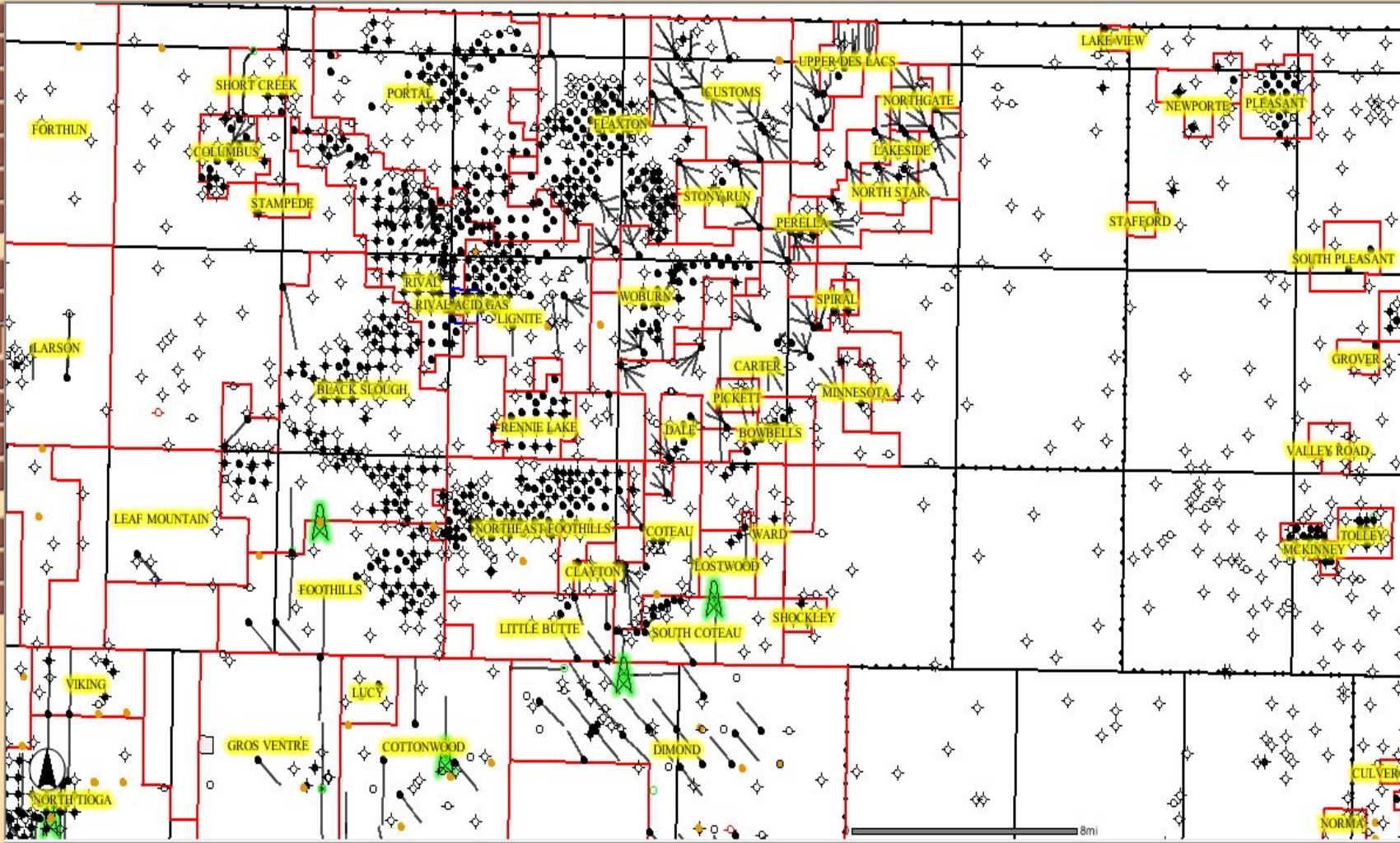
 Requested 320 Acre Drilling Units
- Up to 12 horizontals in the Spearfish zone per Drilling Unit

 Reference Well Log
Trend Moen Trust Permit #11548

350-375 wells 2013-2020

Oil and Gas Subscription: ArcIMS Viewer

- 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



County Boundaries
Selection cleared.

County: Burke State: ND Field: Carter APlR: 33-013-01347

Surf Location: 650 FSL, 2472 FEL, SWSE Sec 23 T162N R90W GL Elev: 1959 RKS: 14'

BH Location: N Lat - 391.43 FNL, 1377.82 FEL, NESE Sec 23 T162N R90W TVD: 5,890 PBTD: 6 1/8" OH MD 10,860

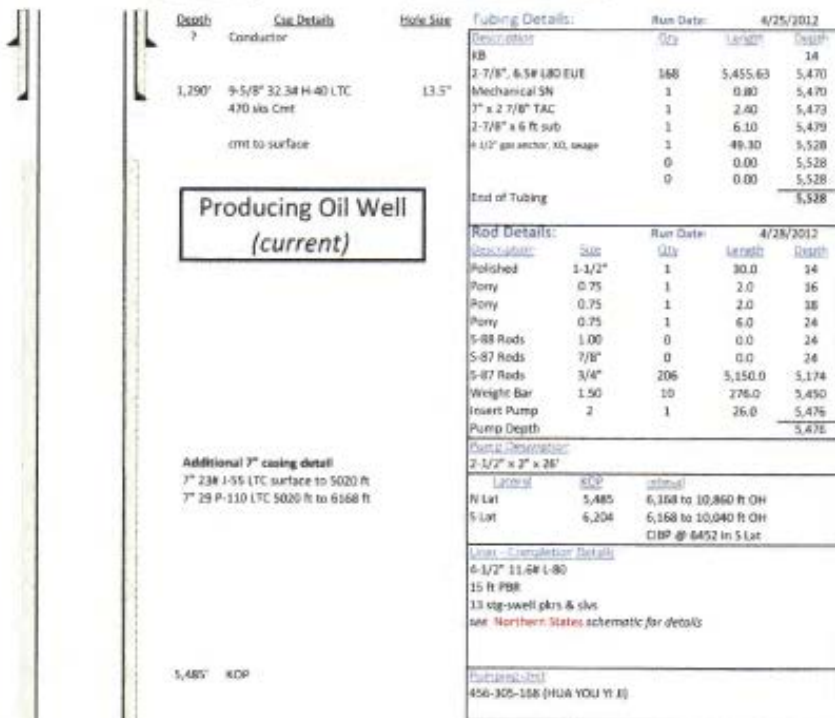
BH Location: S Lat - 2388.07 FNL, 304.83 FEL, NESE Sec 26 T162N R90W TVD: 6,035 PBTD: 6 1/8" OH MD 10,040

E/2 Sec's 23 & 26
T162N R90W

BURKE COUNTY, ND

By: MILLER June 2012

Original Spud Date: 1/18/2006 Completed Pool: Nesson/Midale



**Producing Oil Well
(current)**

Multi-Stage Frac Completion

5 Lateral Isolation Sleeve

OH Plug in S lateral @ 6452 ft

S Lat

INDUSTRIAL COMMISSION
STATE OF NORTH DAKOTA
DATE 6/27/12 CASE NO. 18033
Introduced By: Cornerstone
Exhibit E2
Identified By: Miller

Western North Dakota

- 1,100 to 2,700 wells/year = 2,000 expected
 - 185 rigs = 22,000 temporary drilling jobs
 - Another 13,000 temporary jobs building infrastructure
 - 2,000-3,000 permanent jobs added each year

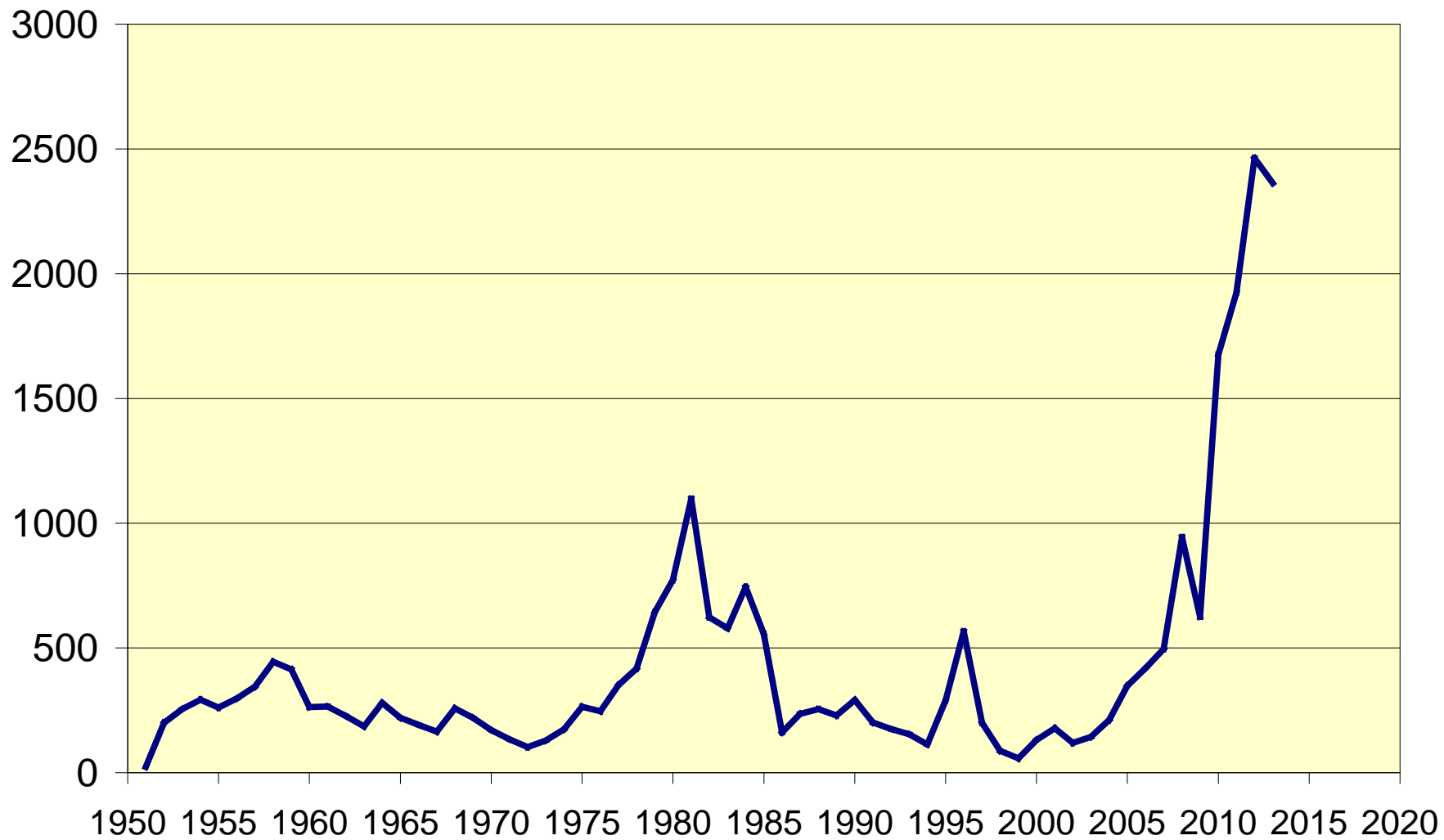
 - 185 rigs will complete the first phase of drilling in 6-12 months
 - 185 rigs will require about 20 years to complete phase 2 drilling

 - 2,000 new wells per year requires 11-22 million gallons of frac water per day

 - 40,000-45,000 new wells = 40,000-70,000 long term jobs
17-28 million gallons per day maintenance water

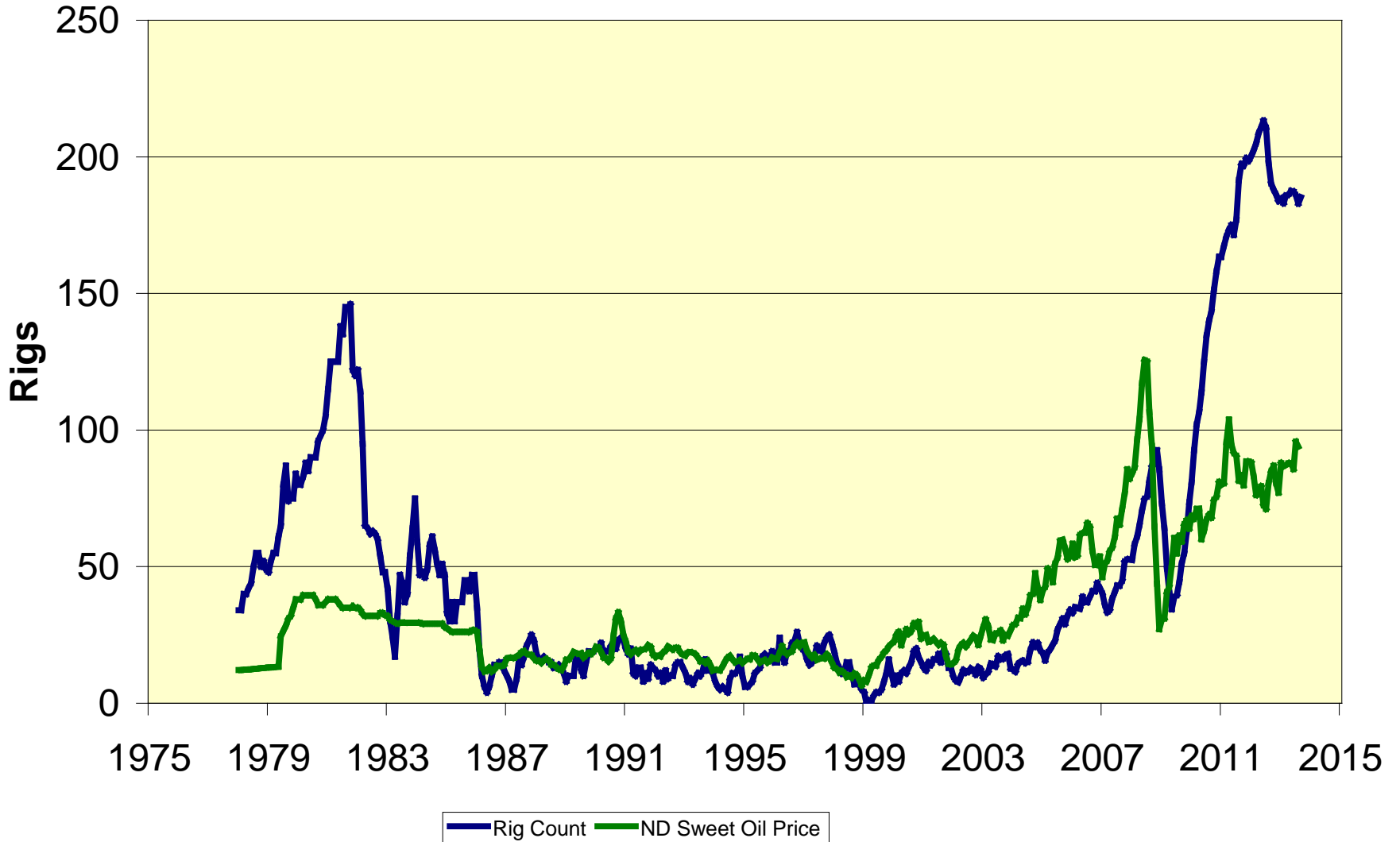


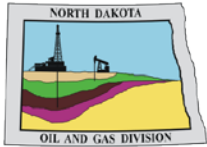
North Dakota New Well Permits Issued



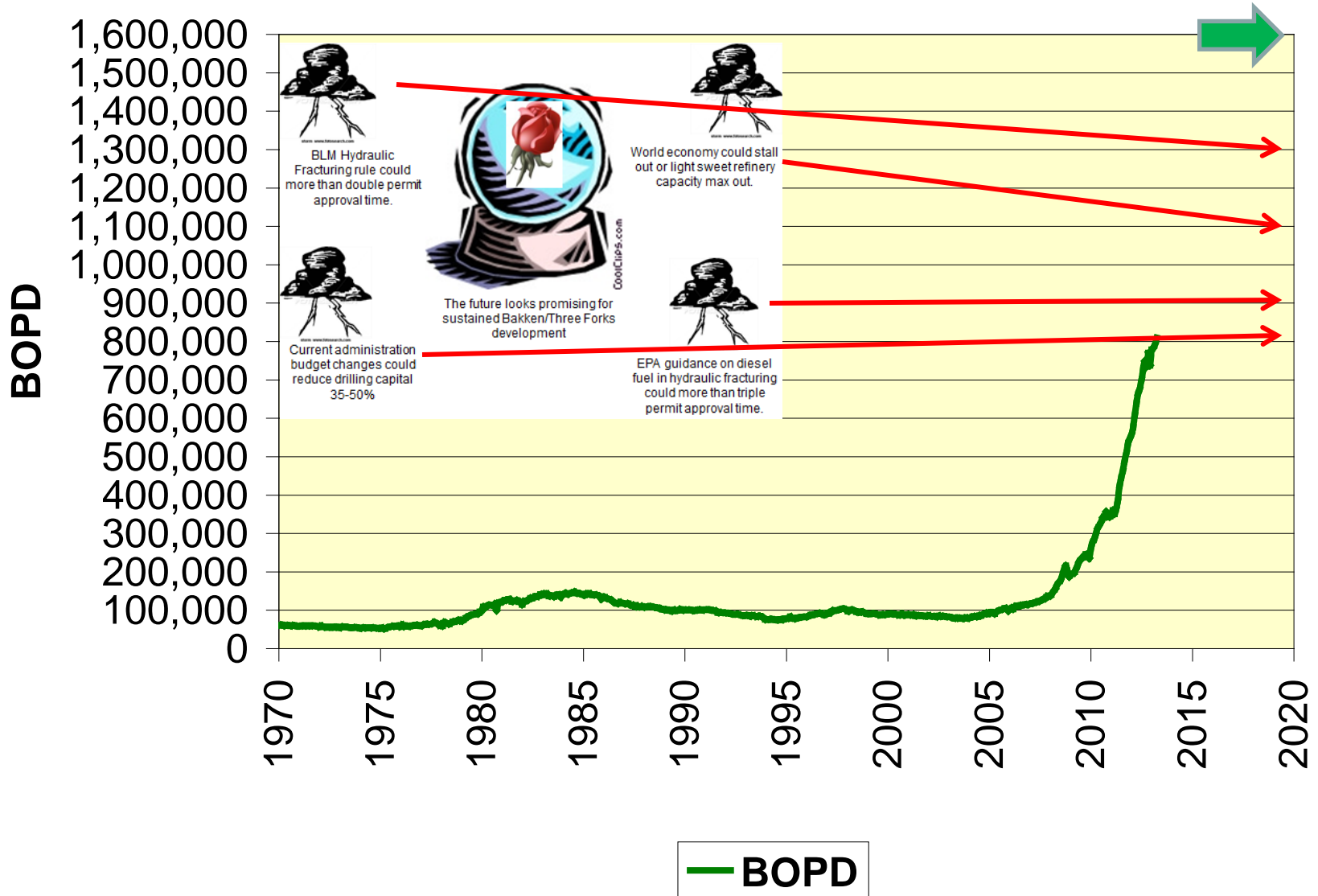


North Dakota Average Monthly Rig Count



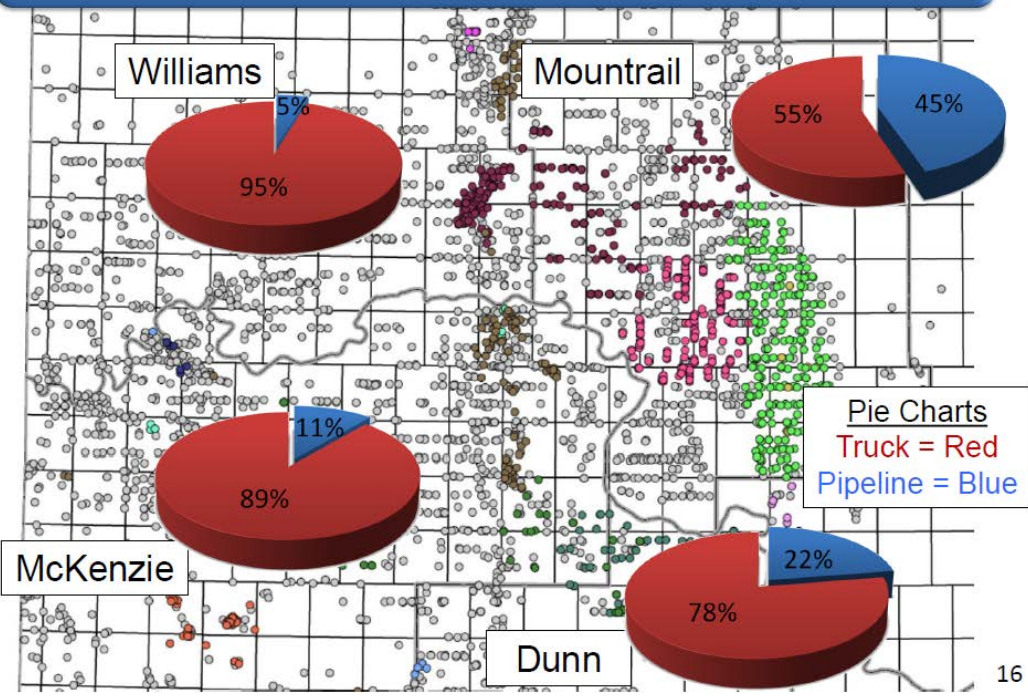


North Dakota Daily Oil Produced and Price



The North Dakota Challenges

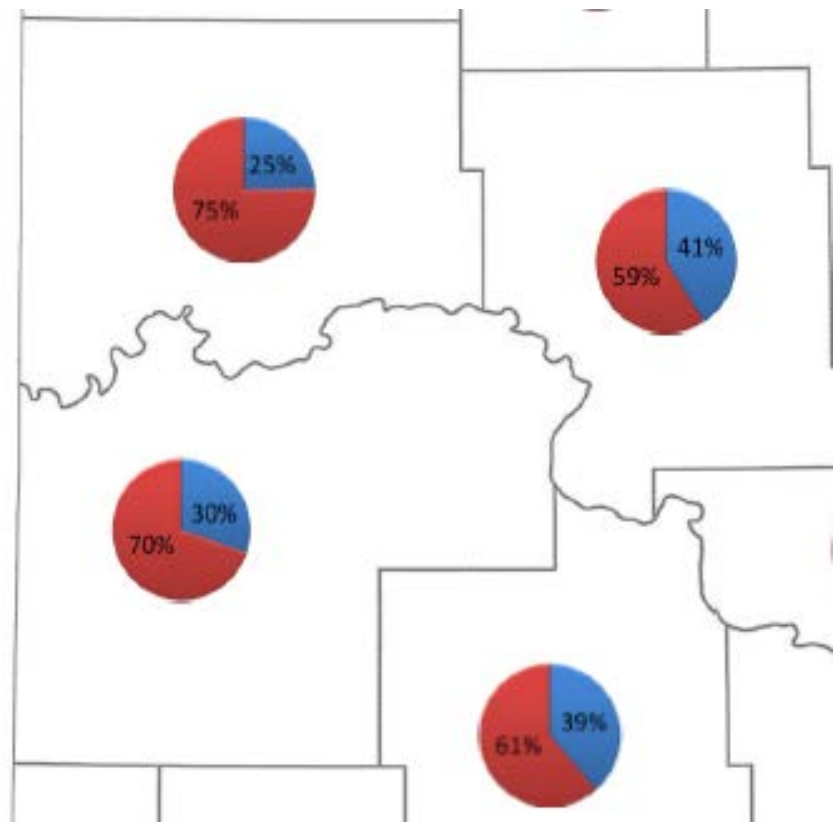
North Dakota Crude Gathering



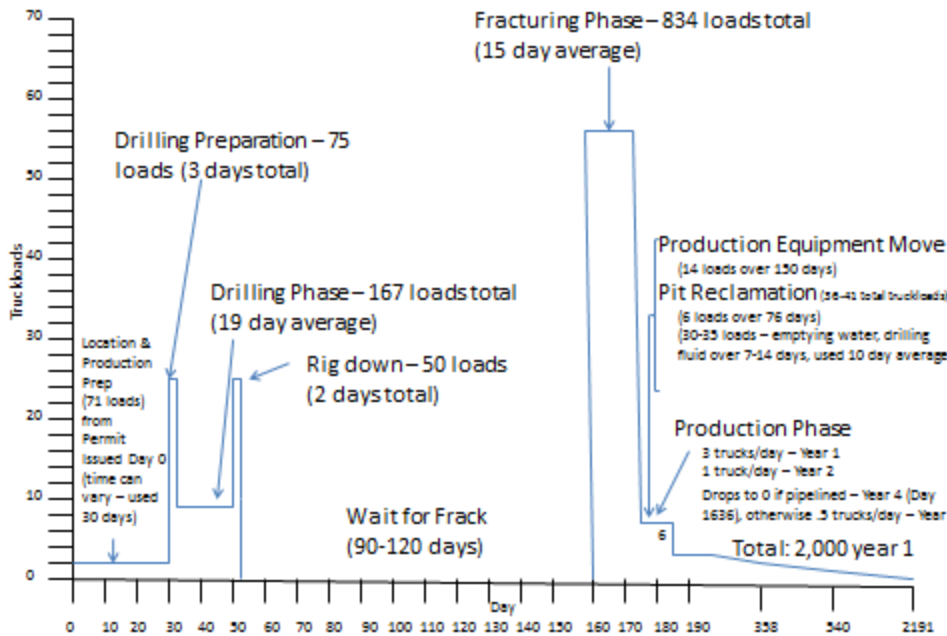
May 2012

16

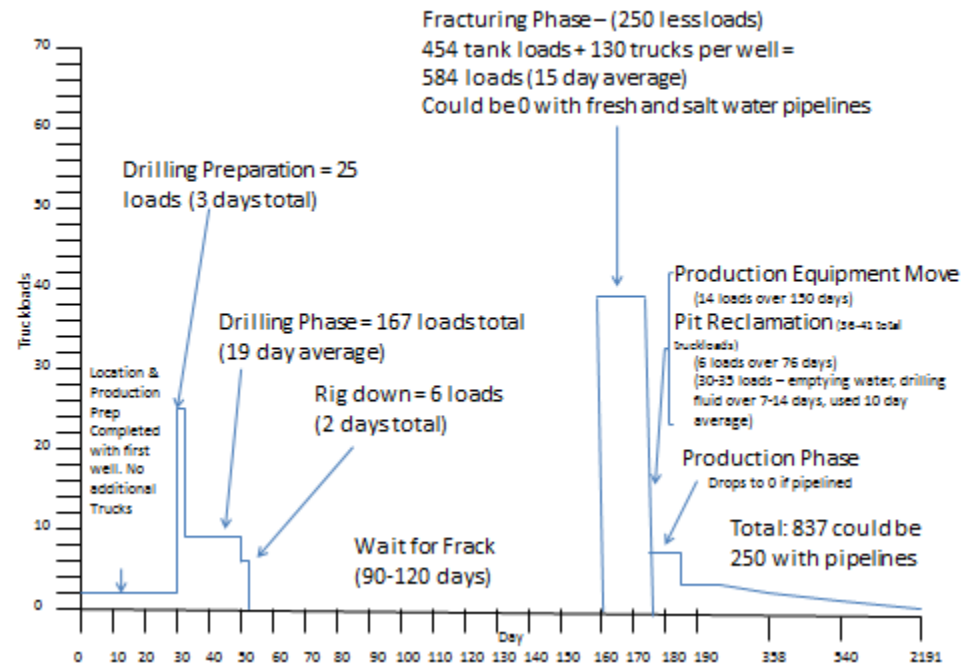
May 2013



New Bakken Well – Truckload Timeline



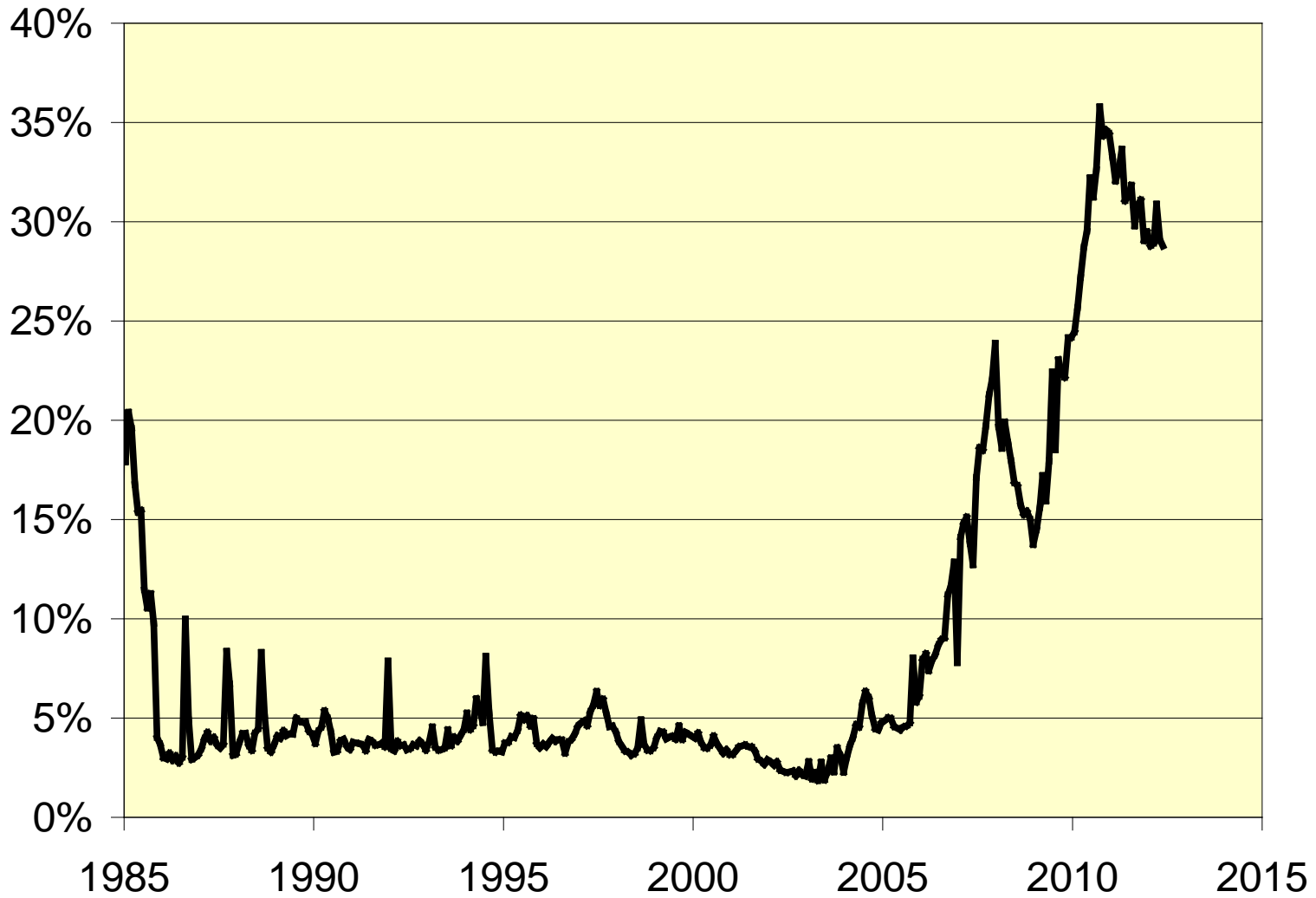
Bakken Wells 2-4 – Truckload Timeline

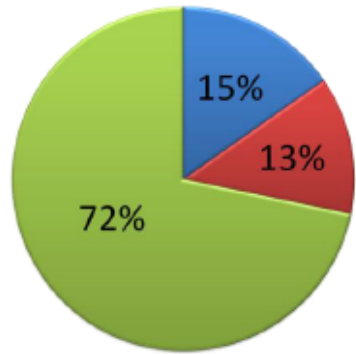




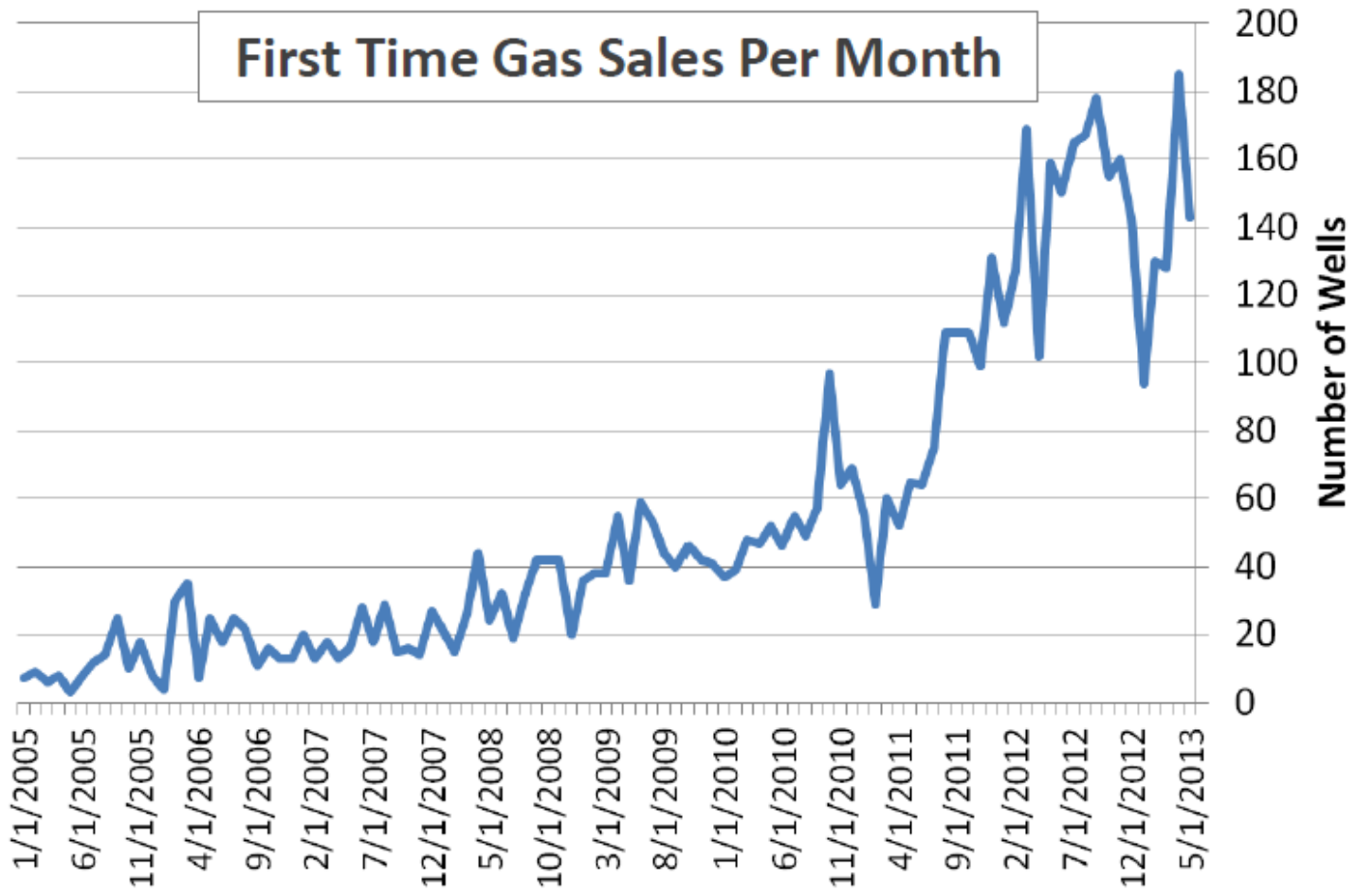


North Dakota Monthly Gas Flared



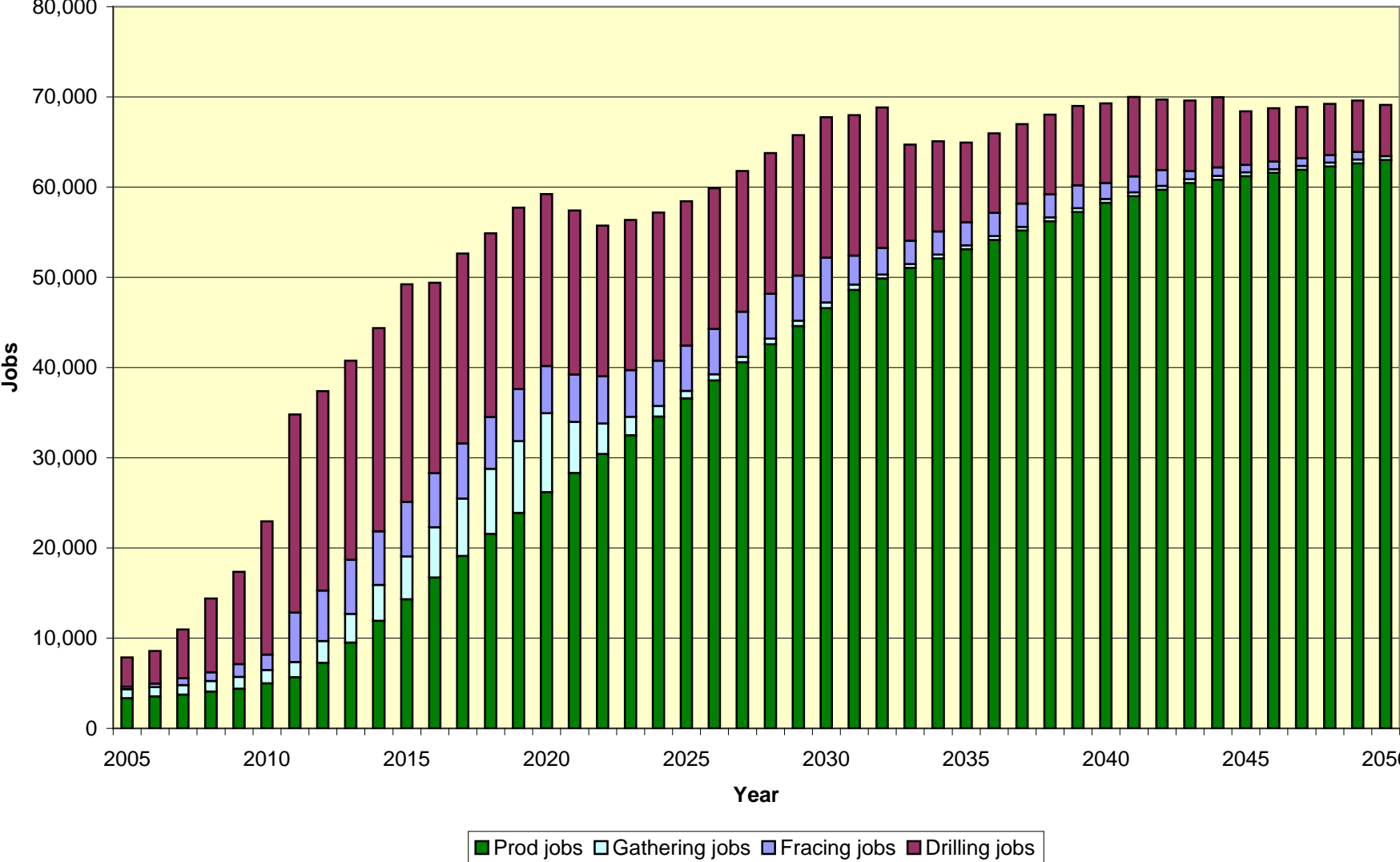


Capturing the 15% Faster Well Connections



Expected Case

North Dakota Oil Industry Jobs



Western North Dakota Jobs

- 1,100 to 2,700 wells/year = 2,000 expected
 - 185 rigs = 22,000 temporary drilling jobs
 - Another 13,000 temporary jobs building infrastructure
 - 2,000-3,000 permanent jobs added each year
- Year end 2012 jobs = 38,500
 - 7,300 permanent production
 - 22,000 temporary drilling
 - 6,800 temporary completion
 - 2,400 temporary construction

Western North Dakota Housing

District Field Office Housing Survey

1-Mar-13

Dickinson

	2006	2012	current
Housing Cost	\$75,000.00	\$150,000.00	\$150,000.00
New Construction	\$170,000.00	\$177,000.00	\$222,000.00
Apt Rental	\$600/mo	\$3000/mo	\$2400/mo
Hotel rates	\$69/night	\$189/night	\$165/night Govt rate rarely available

Williston

	2006	2012	current
Housing Cost	\$78,000.00	\$155,000.00	\$170,000.00
New Construction	\$150,000.00	\$256,000.00	\$290,000.00
Apt Rental (old existing)	\$450.00	\$1,100.00	\$1,500.00
Apt Rental (new)	\$600.00	\$2,450.00	\$3,000.00
Hotel rates	\$65.00	\$165.00	\$132.00 Govt rate rarely available

Minot

	2006	2012	current
Housing Cost	\$127,000.00	\$176,000.00	\$185,000.00
New Construction	\$149,860.00	\$207,680.00	\$218,300.00
Apt Rental	\$670.00	\$965.00	\$1,250.00
Hotel Rates	\$70.00	\$118.00	\$107.00 Govt rate rarely available

If recent trends in housing construction continue, the state's overall housing stock will expand by only 16 percent (51,292 units) from 2010 to 2025.

Housing supply forecasts for the same time period based on population change show an increase in the state's overall housing stock of 29 percent (90,469 units); this number is higher than the projected increase in demand for housing (83,429 units) because supply modeling incorporates vacancies.

Hotels 2013-2015, Apartments 2017-2019, Single family 2019-2021



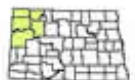
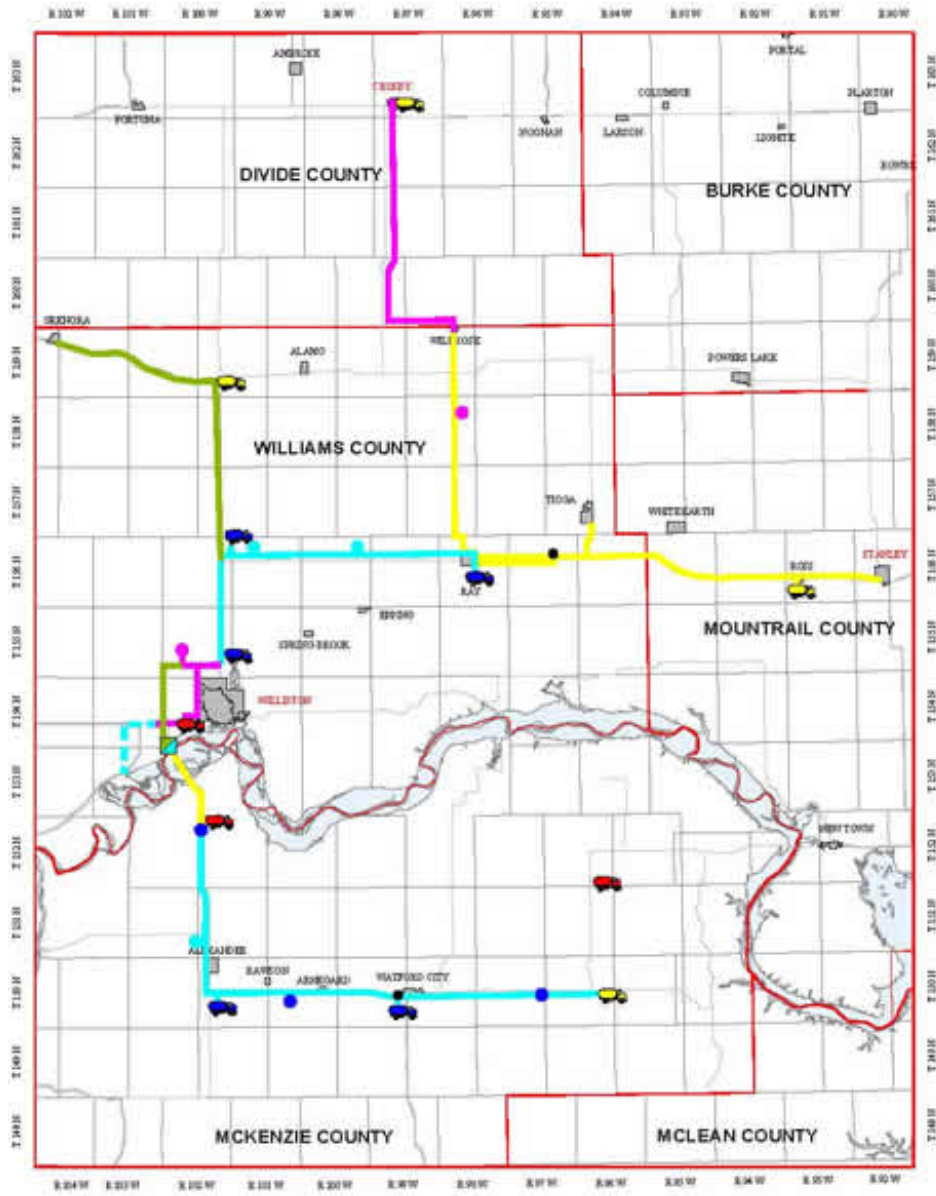
Successful Affordable Townhomes Project Will Be Repeated

A three-person household that earns \$35,000 or less would be income qualified to rent one of the townhomes with two-bedroom units renting for \$650 per month and three-bedroom units for \$795.

MINOT – The successful completion of the first phase of Washington Townhomes was celebrated today in conjunction with the groundbreaking for another 32 affordable housing units. “The dedication and groundbreaking of Washington Townhomes is a significant milestone in Minot’s efforts to recover and grow in the aftermath of the historic 2011 flood event,” said Gov. Jack Dalrymple, who attended today’s ceremony. “A strong partnership between the public and private sectors helped make this project a reality for the community. More than \$3.4 million in state funding, including \$750,000 from the governor’s discretionary fund, was provided for this project to help bring additional affordable housing opportunities to Minot and the region.”

Western North Dakota Water

- 1,100 to 2,700 wells/year = 2,000 expected
 - 185 rigs will complete the first phase of drilling in 6-12 months
 - 185 rigs will require about 20 years to complete phase 2 drilling
 - 2,000 new wells per year requires 11-22 million gallons of frac water per day
 - 40,000-45,000 new wells = 17-28 million gallons per day maintenance water



- EXISTING/PROPOSED TRANSMISSION LINES
- 10-11 IMPROVEMENTS
- 14-16 IMPROVEMENTS
- 17-20-21 IMPROVEMENTS
- WATERWAY & FLEXICORR IMPROVEMENTS
- PROPOSED FIBER/OPT
- PROPOSED DUX/FILL



Western North Dakota Power

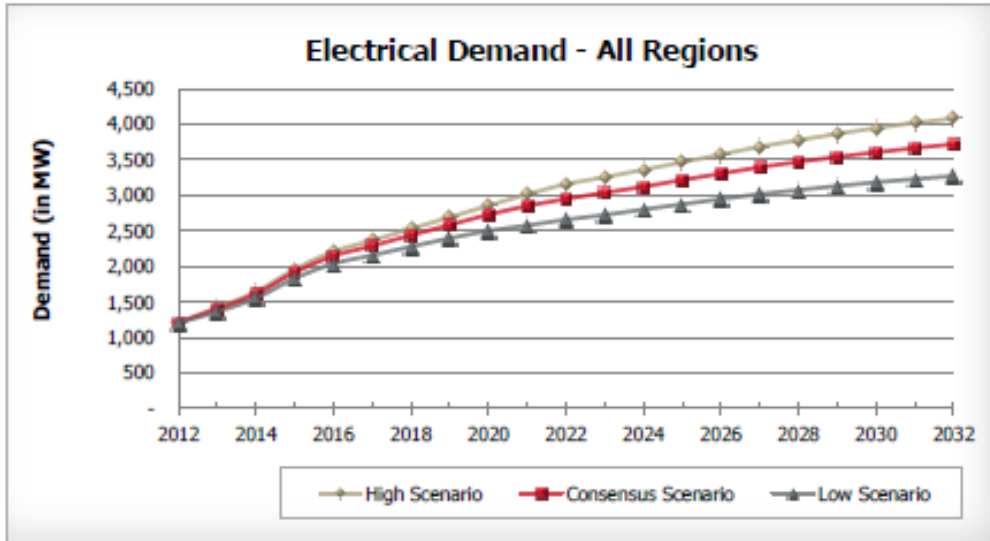


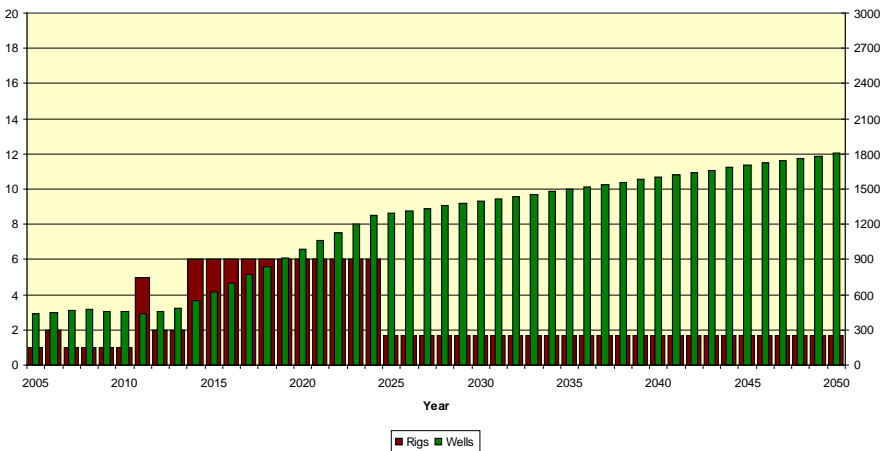
Figure 10: Electrical Demand - All Regions
Source: KLJ

Forecasted Electrical Loads - All Regions					
Demand (MW)					
	2012	2017	2022	2027	2032
Region 1	701	1,256	1,599	1,828	1,998
Region 2	404	838	1,139	1,348	1,495
Region 3	104	195	210	218	228
Total Demand	1,209	2,288	2,948	3,395	3,721
Energy (MWh)					
Region 1	3,977,246	7,945,361	10,387,903	12,058,128	13,217,653
Region 2	2,476,678	5,677,350	7,887,167	9,445,752	10,489,326
Region 3	600,749	1,272,543	1,356,960	1,404,199	1,449,922
Total Energy	7,054,673	14,895,254	19,632,031	22,908,079	25,156,901

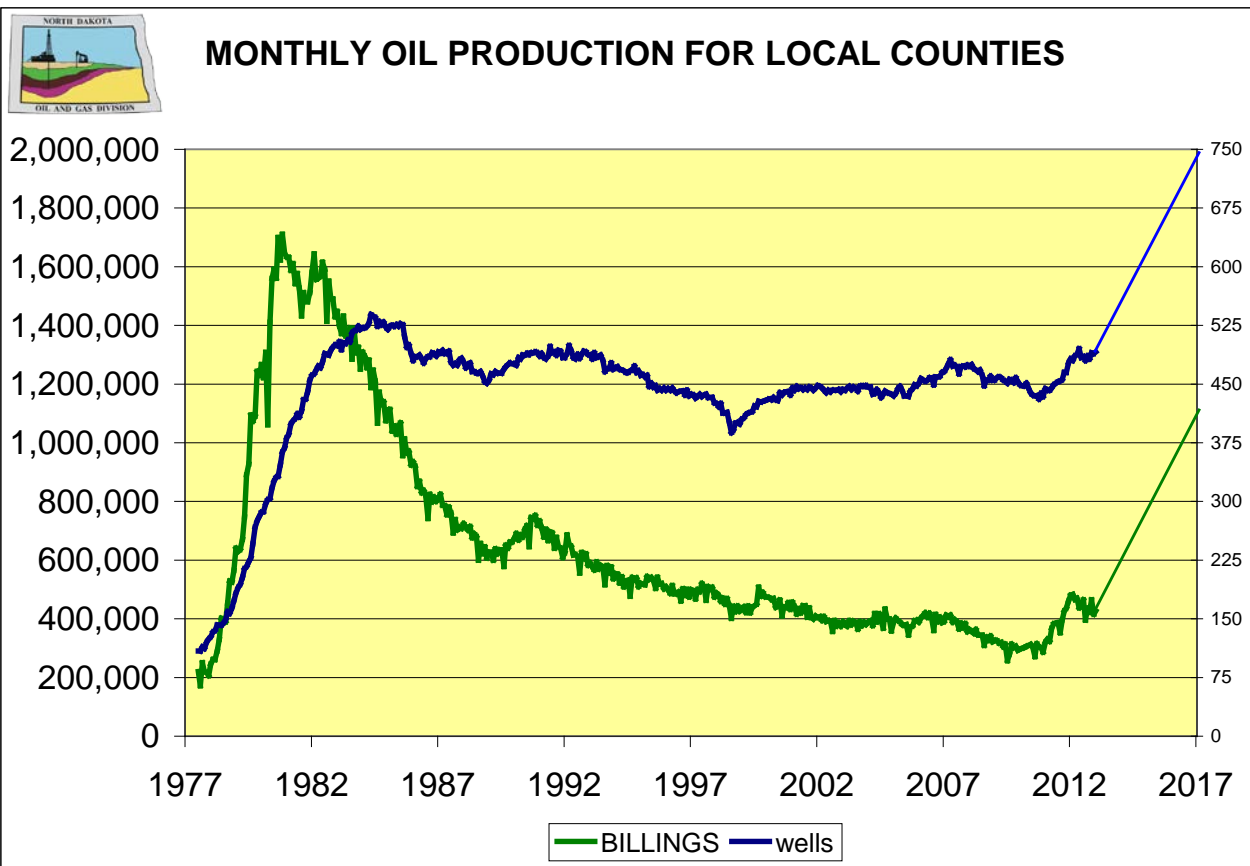
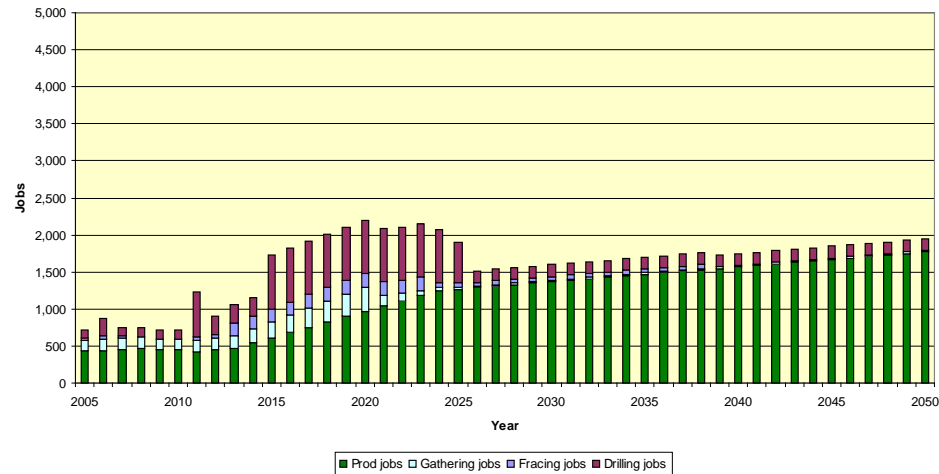
Table 3: Forecasted Electrical Loads - All Regions
Source: KLJ

County by County Outlook

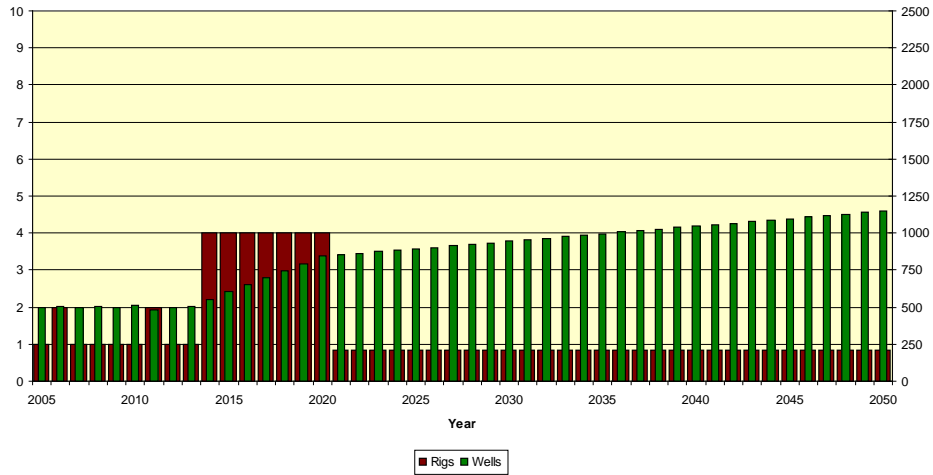
Billings Rigs and Wells



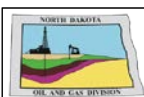
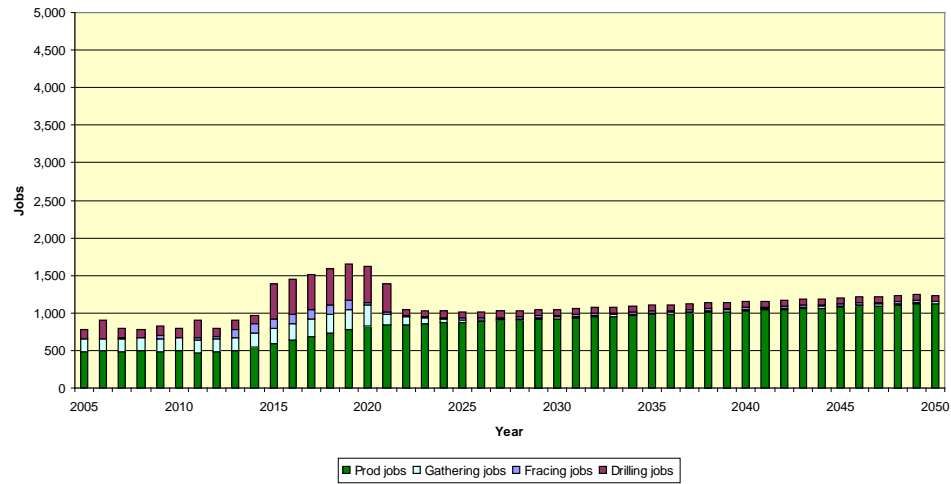
Billings Oil Industry Jobs



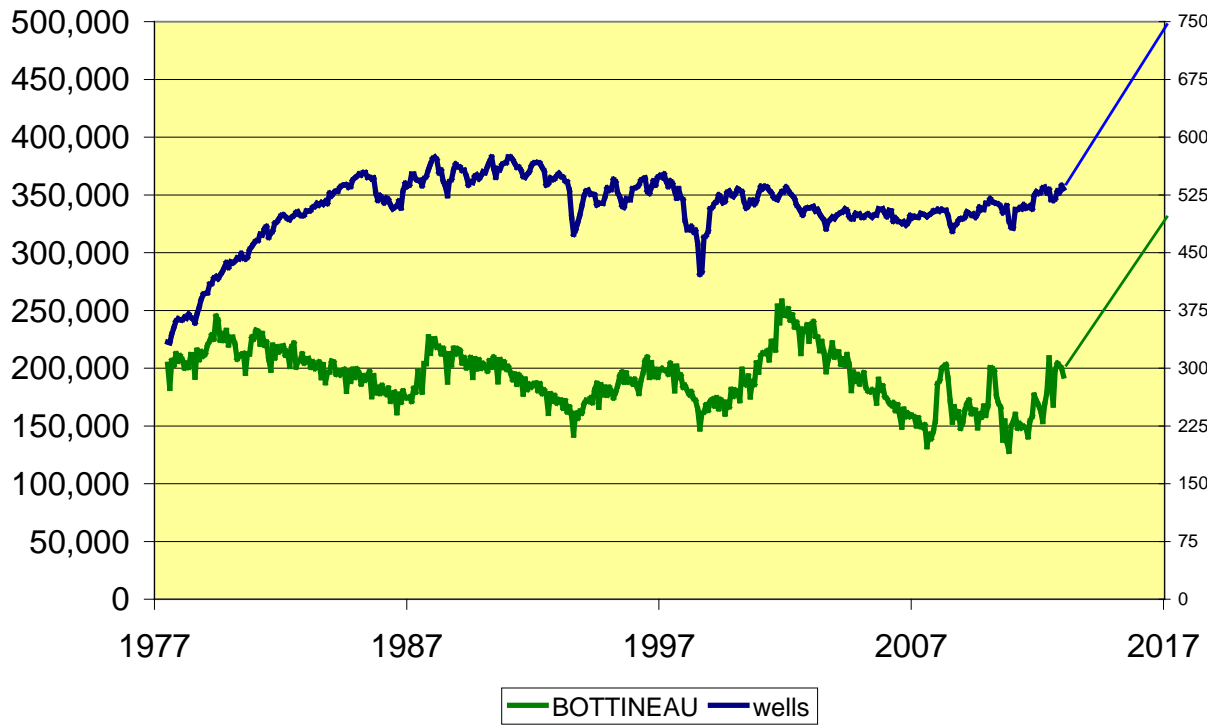
Bottineau Rigs and Wells



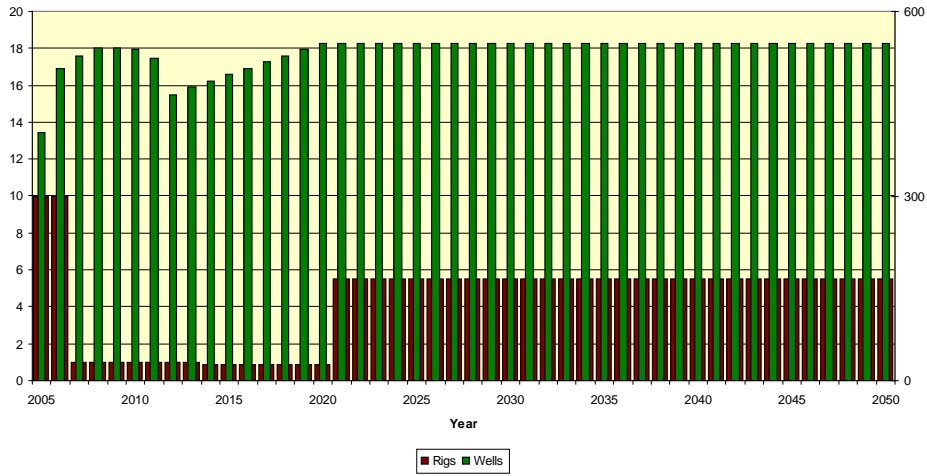
Bottineau Oil Industry Jobs



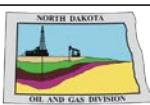
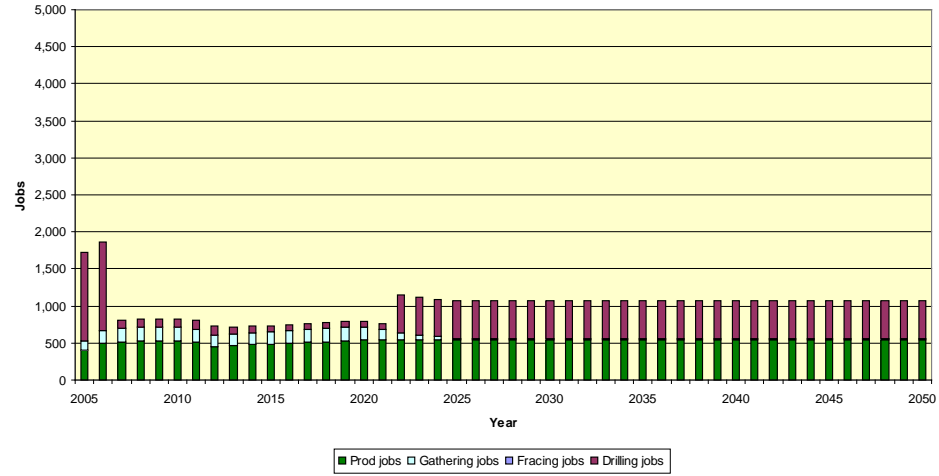
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



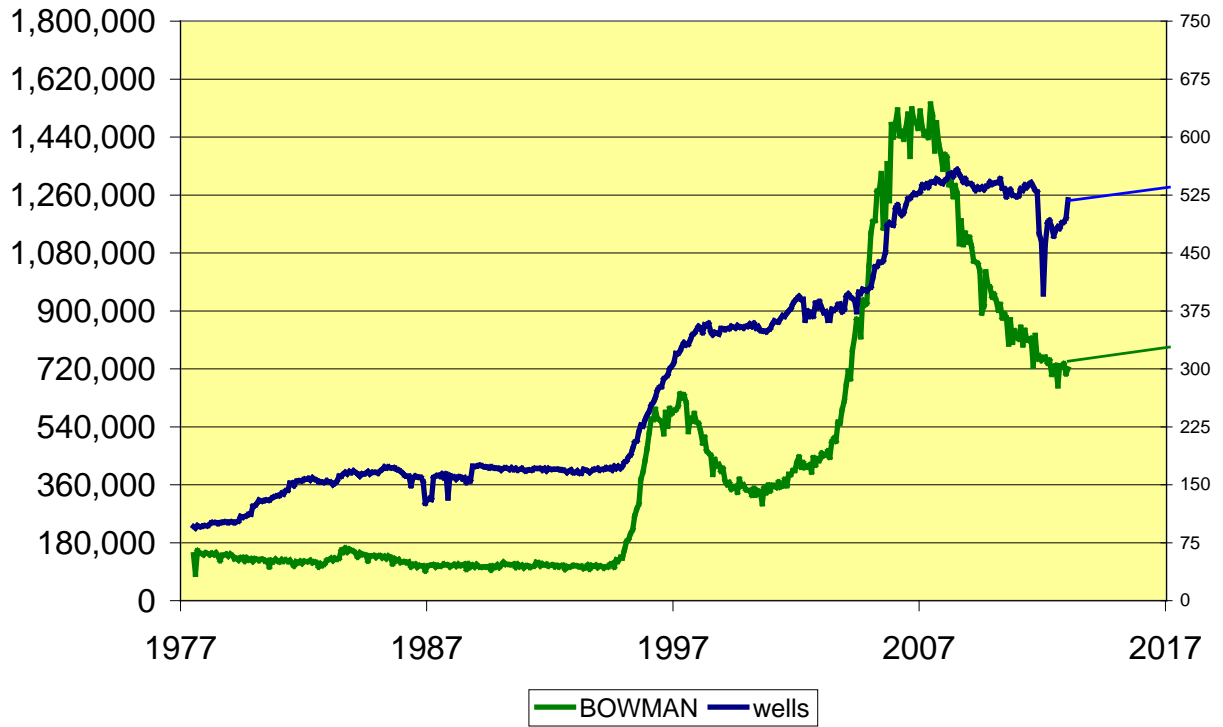
Bowman Rigs and Wells



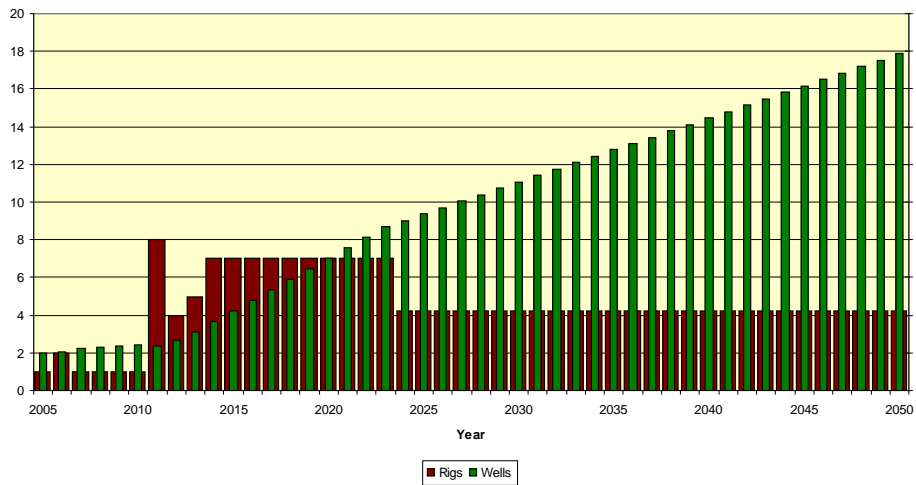
Bowman Oil Industry Jobs



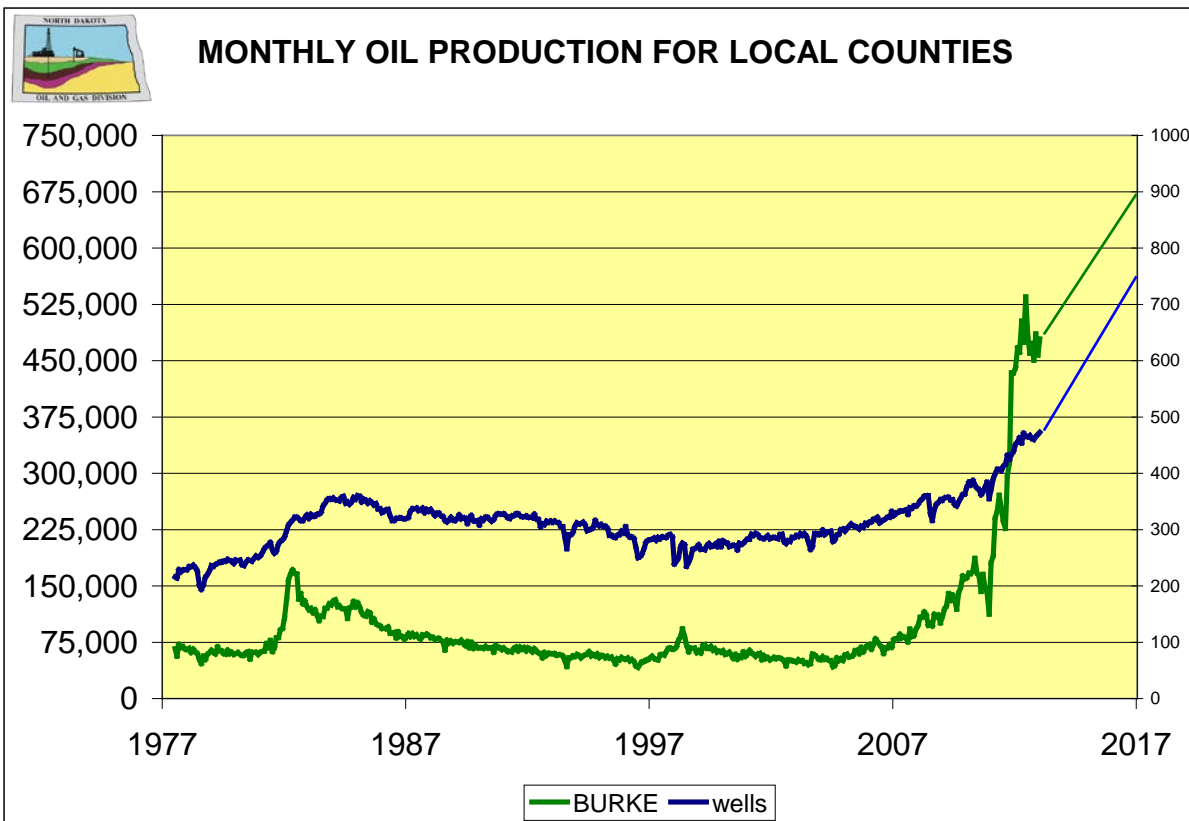
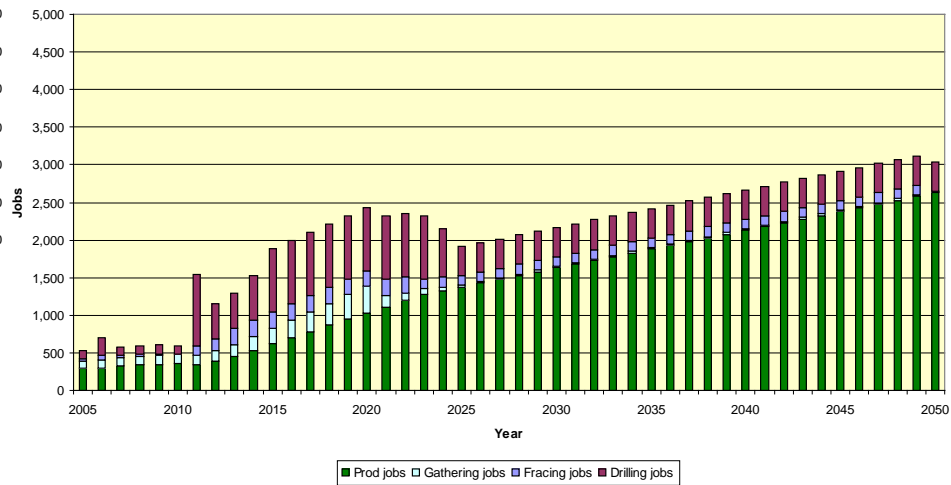
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



Burke Rigs and Wells

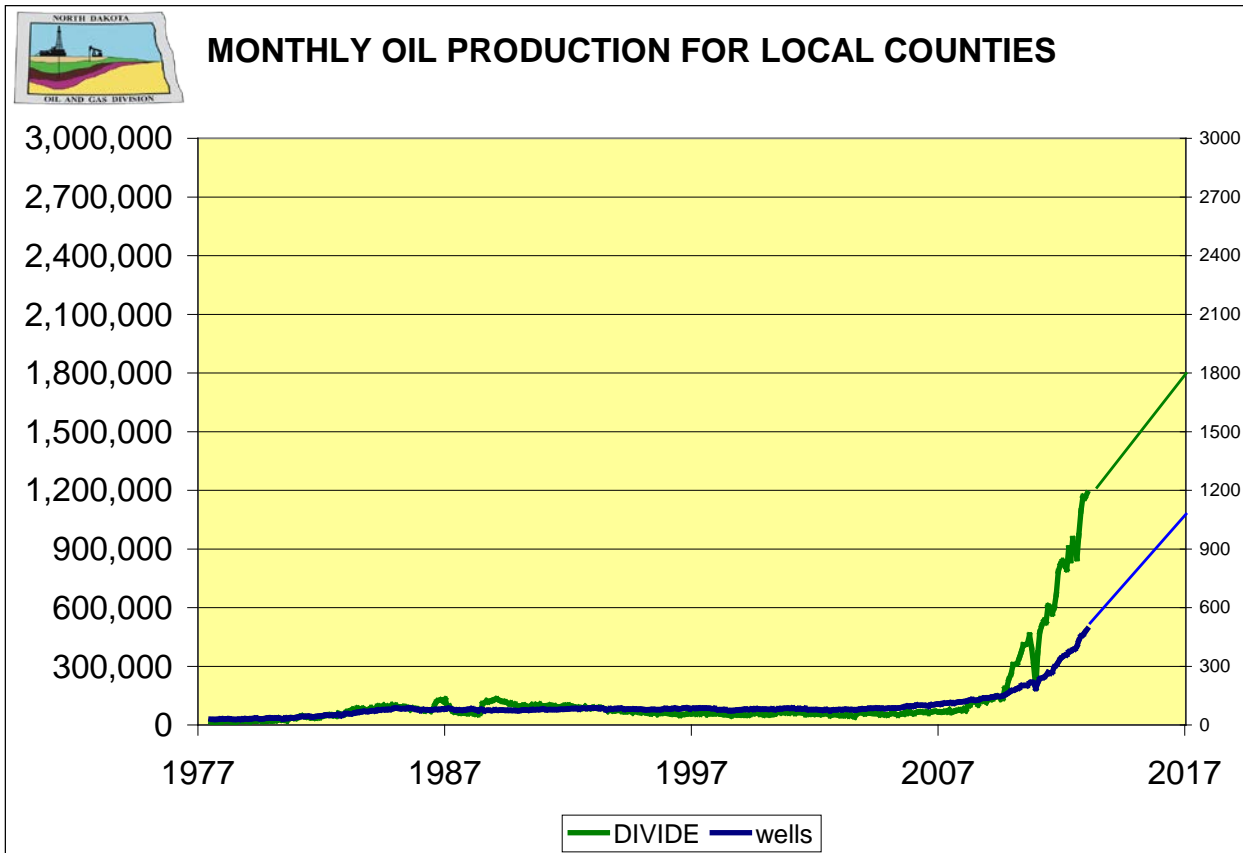
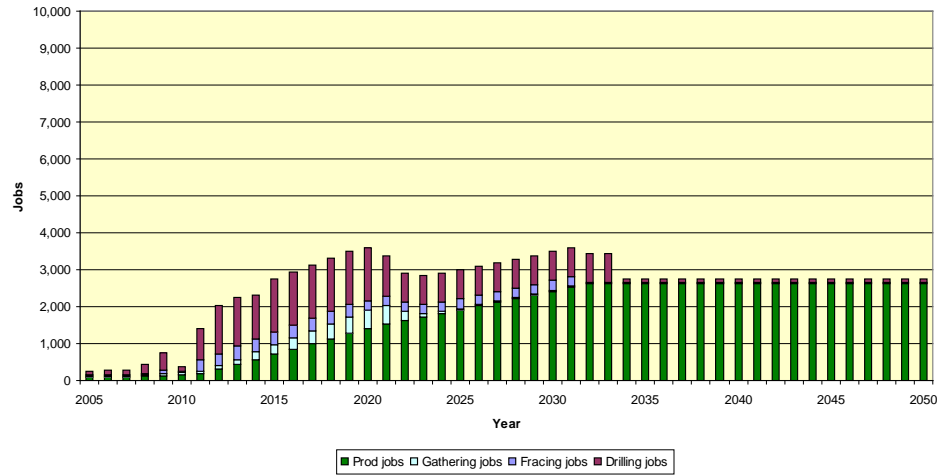
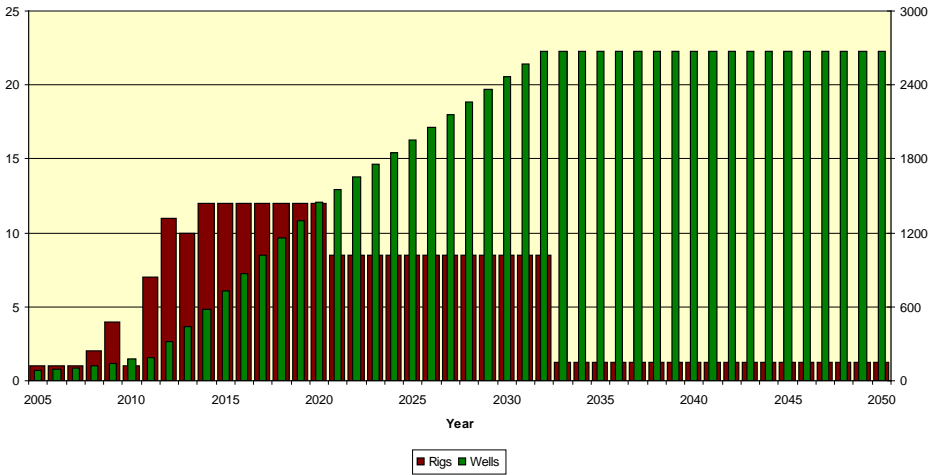


Burke Oil Industry Jobs

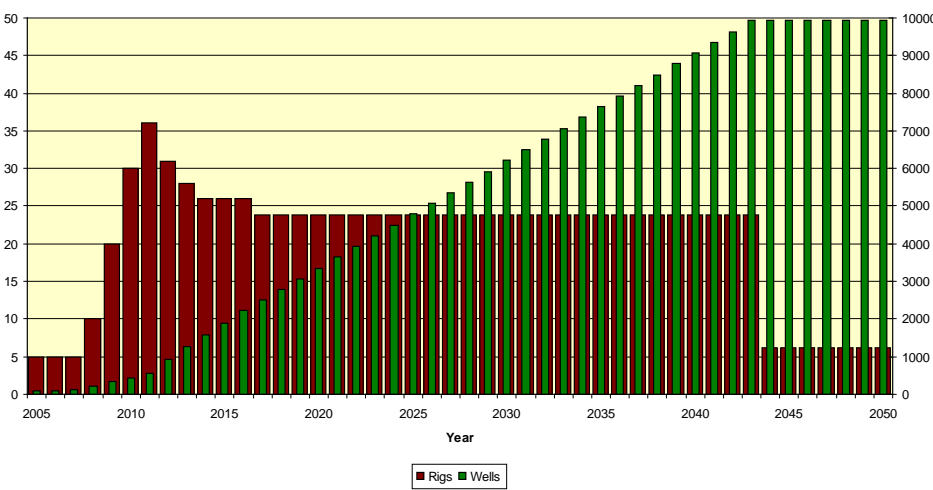


Divide Rigs and Wells

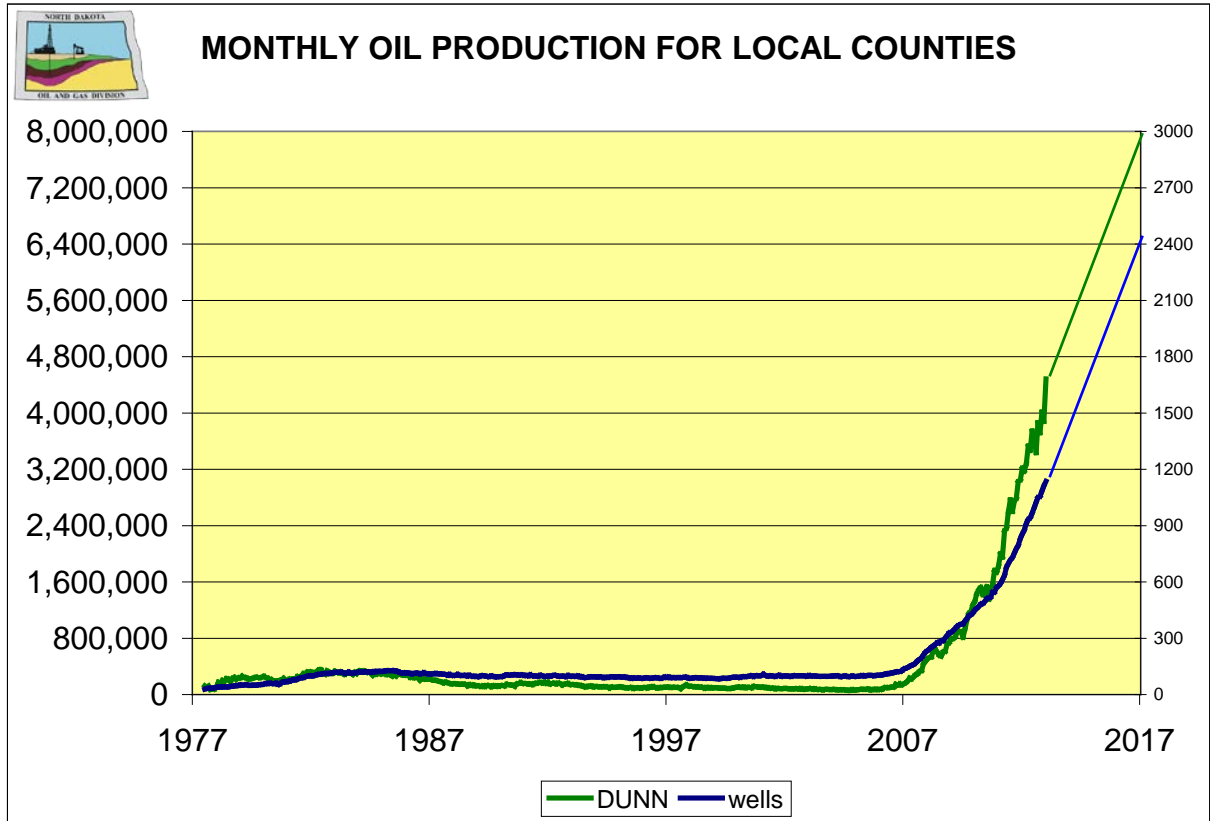
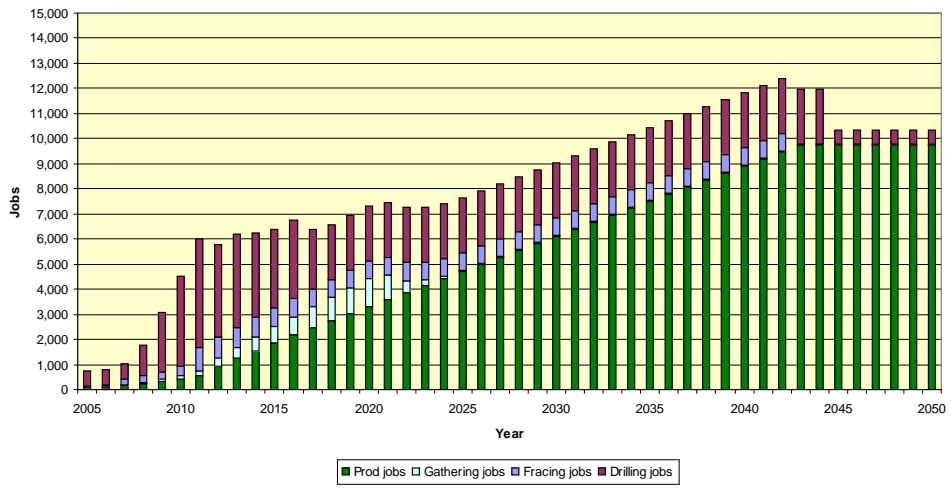
Divide Oil Industry Jobs



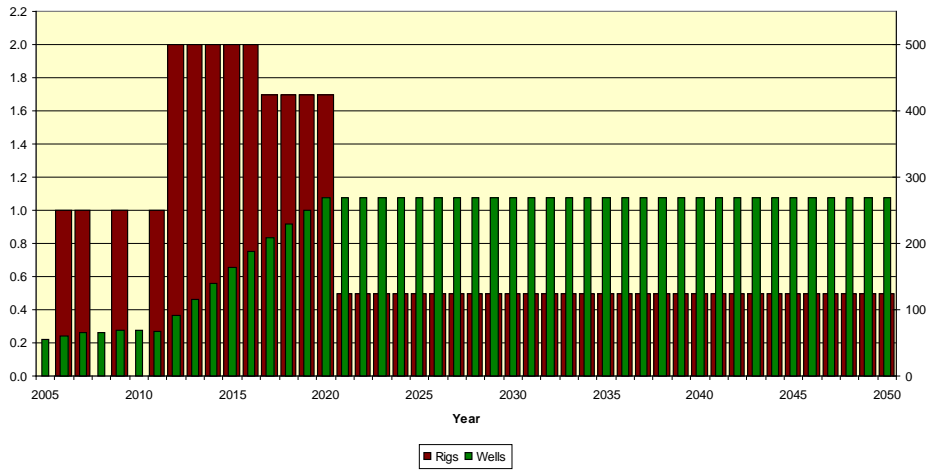
Dunn Rigs and Wells



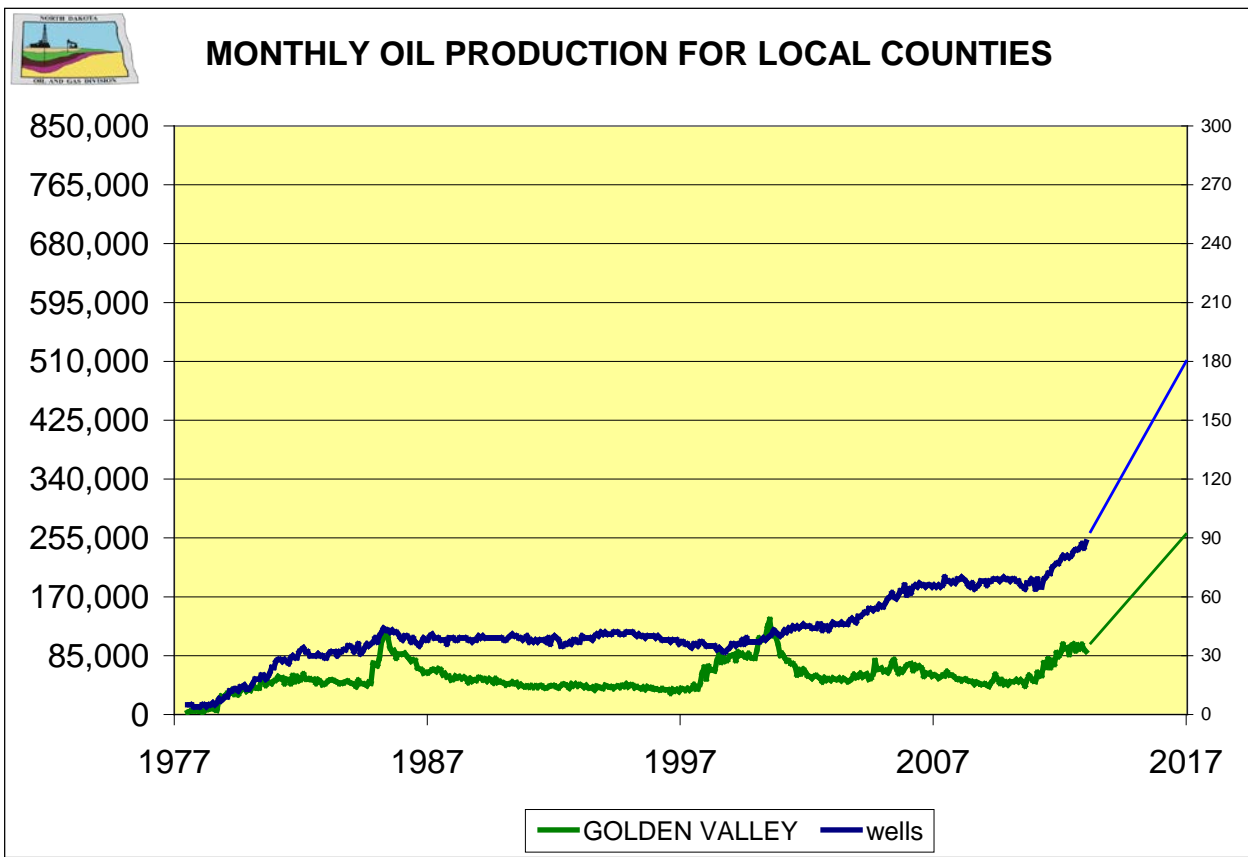
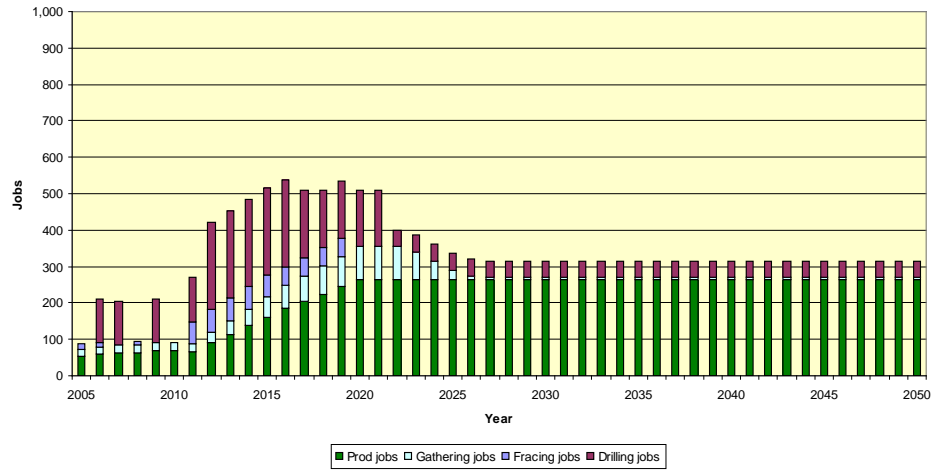
Dunn Oil Industry Jobs



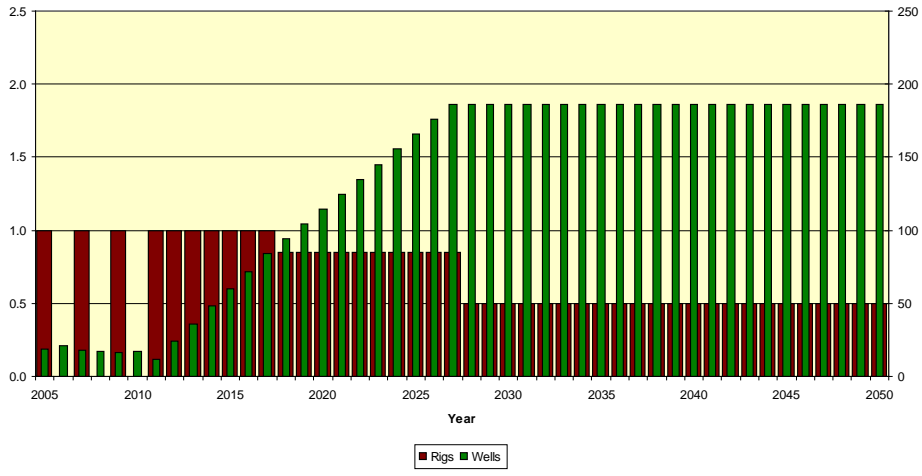
Golden Valley Rigs and Wells (includes Red River)



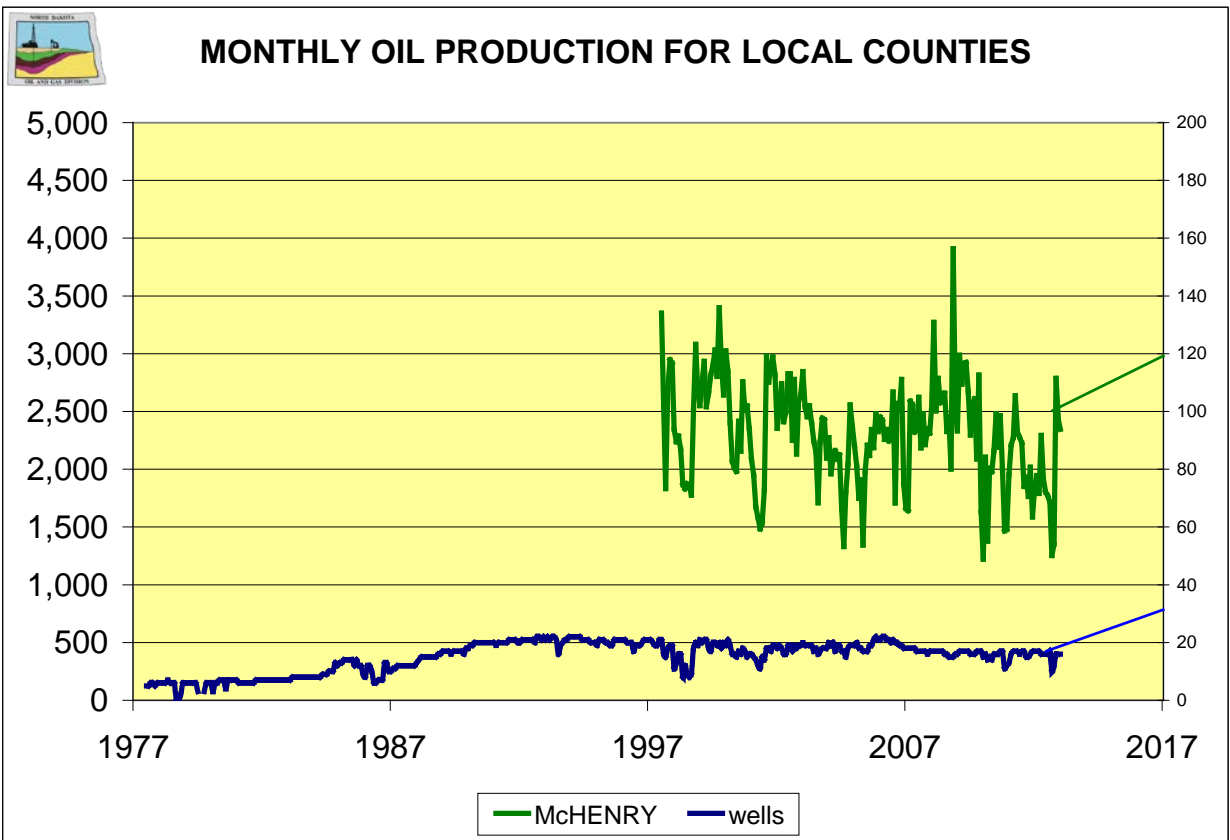
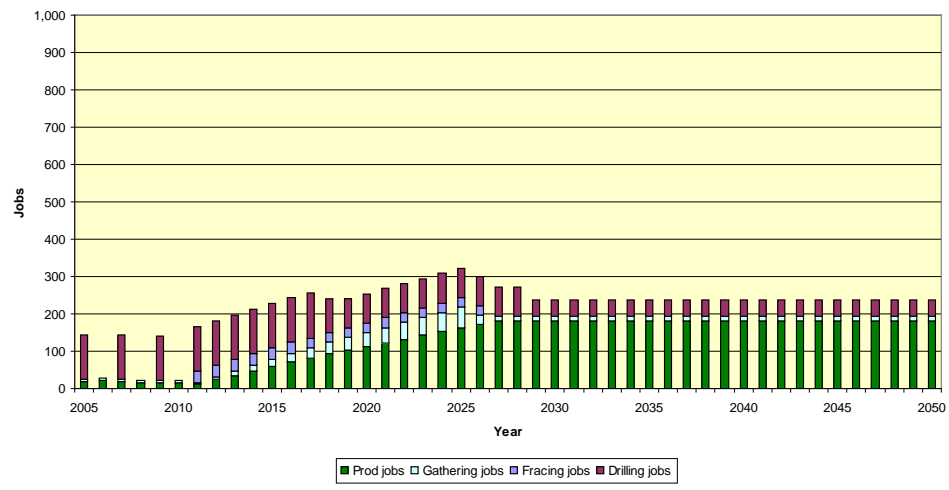
Golden Valley Oil Industry Jobs



McHenry Rigs and Wells

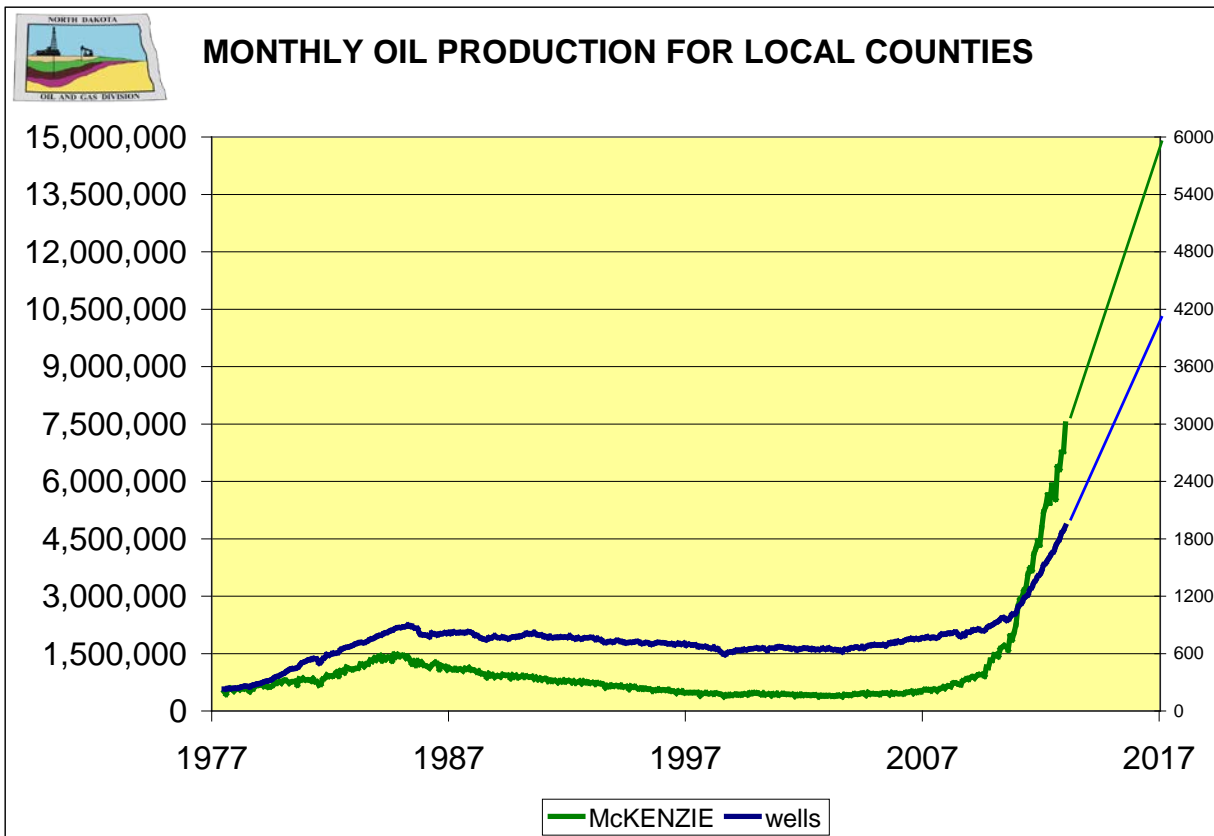
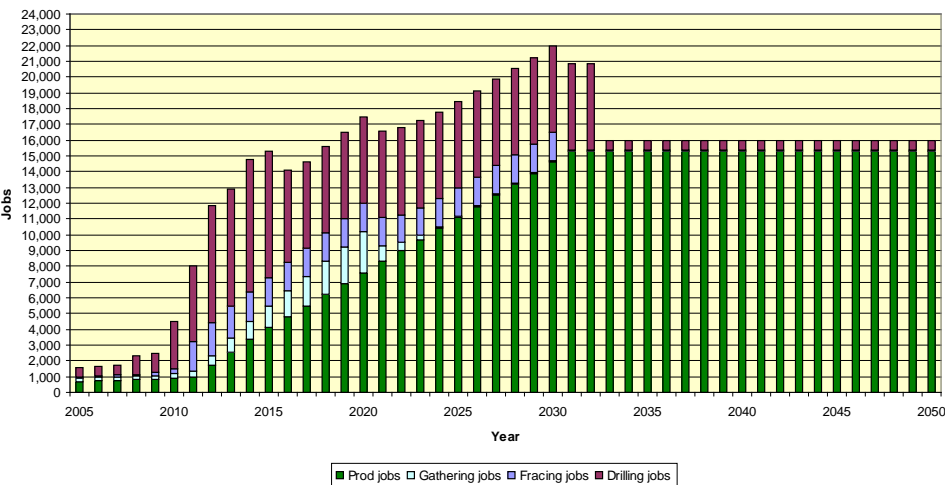
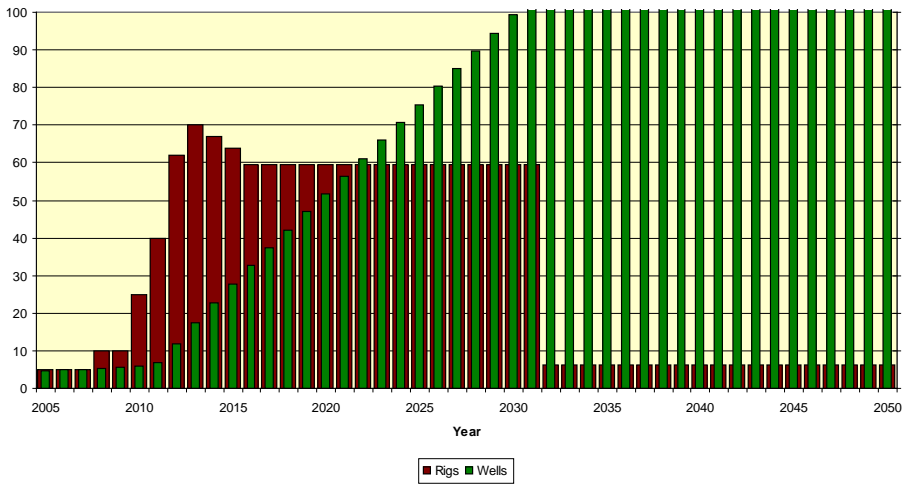


McHenry Oil Industry Jobs

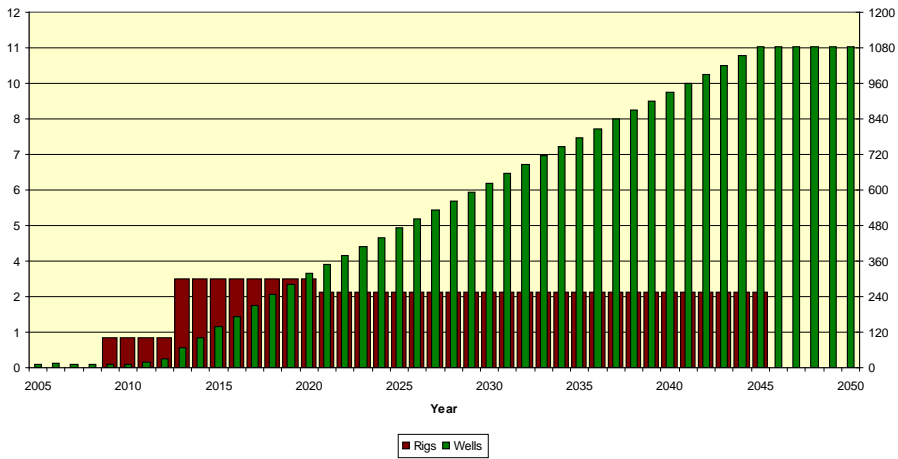


McKenzie Rigs and Wells

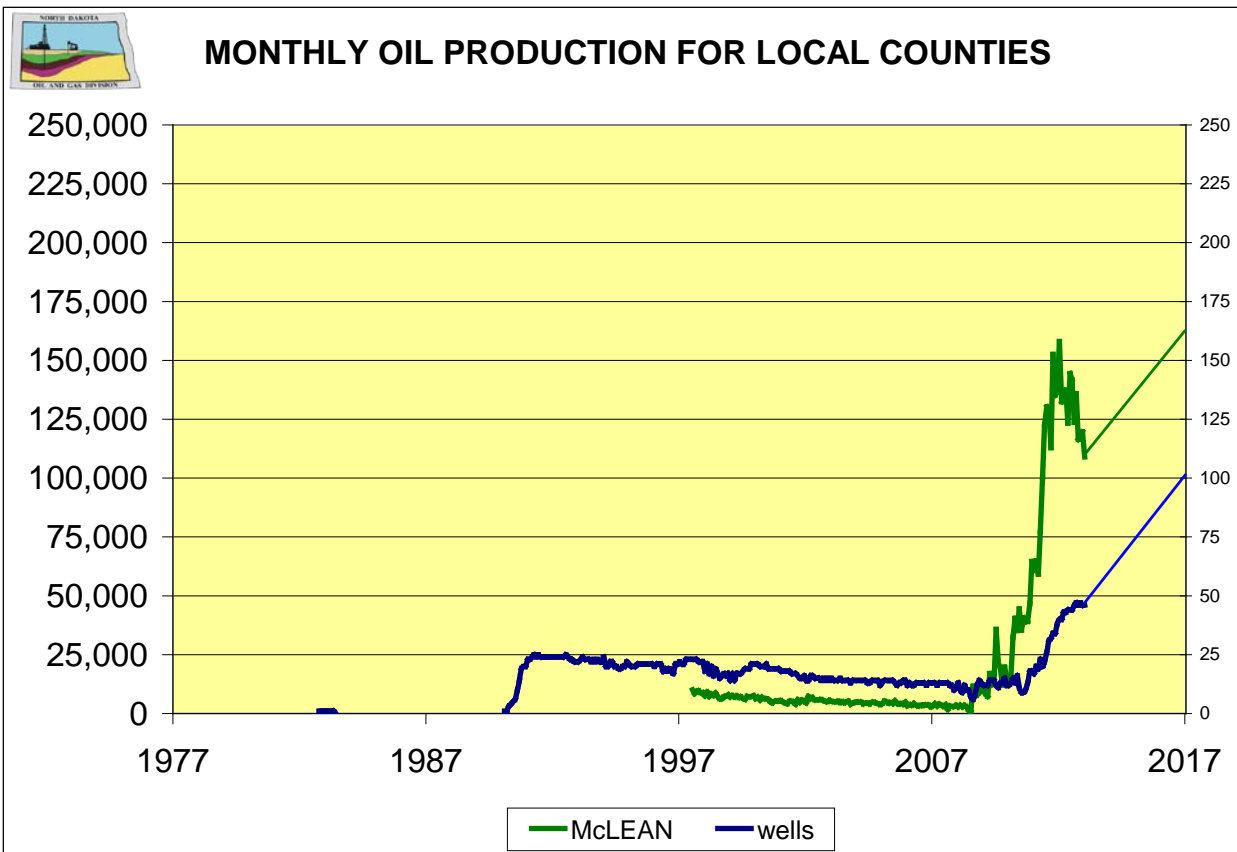
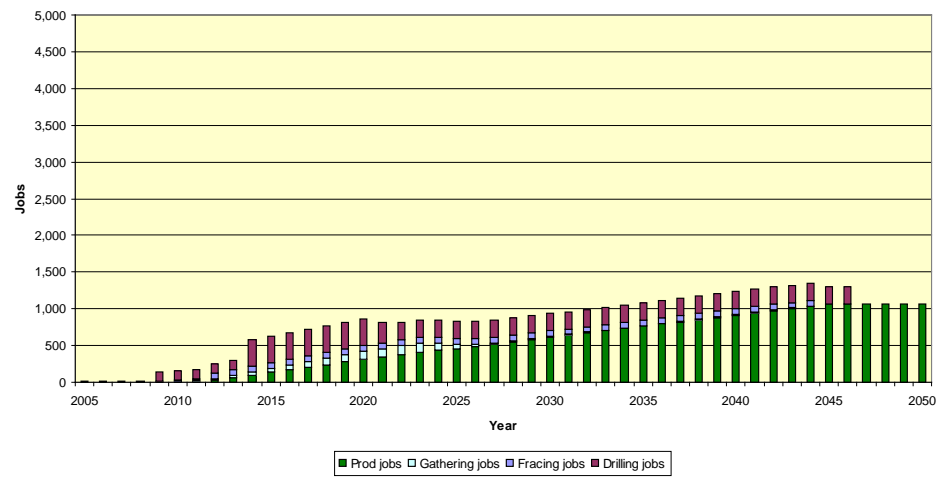
McKenzie Oil Industry Jobs



McLean Rigs and Wells

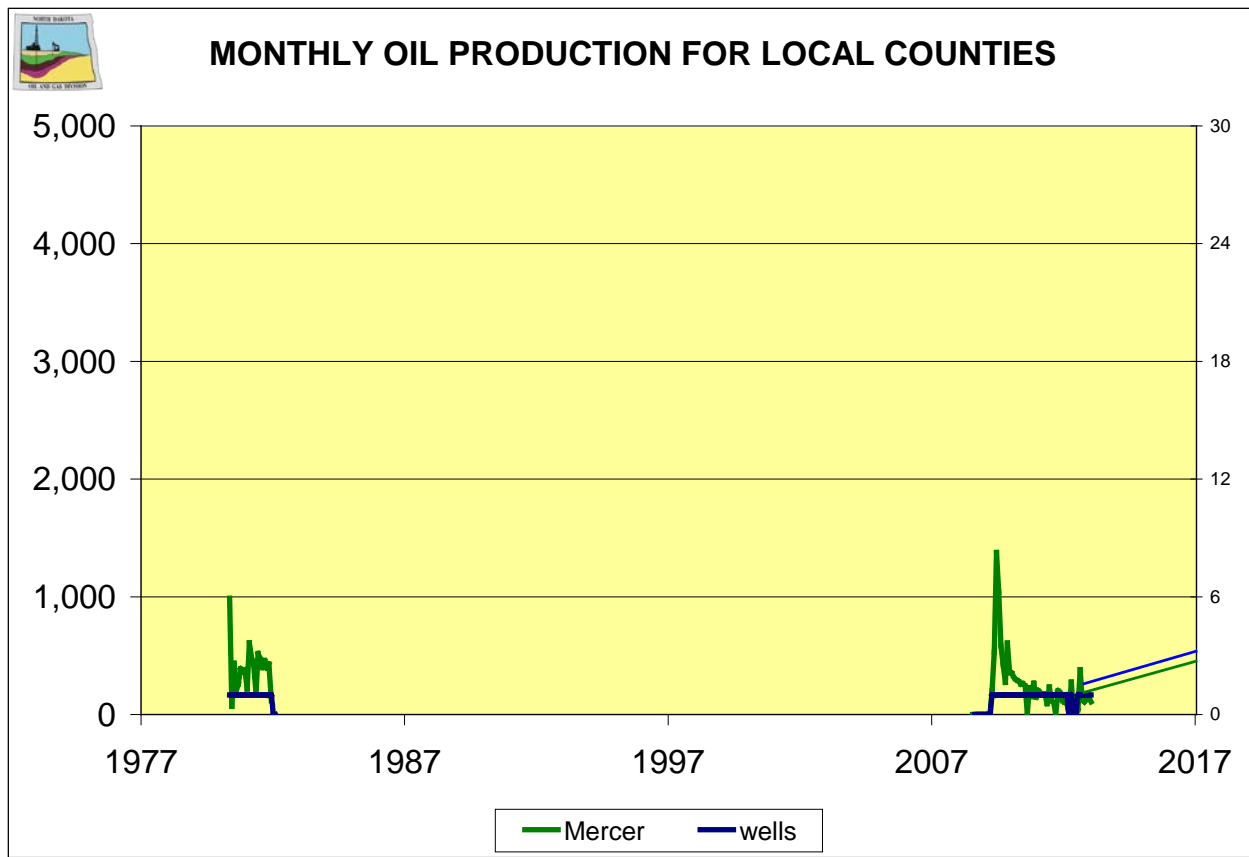
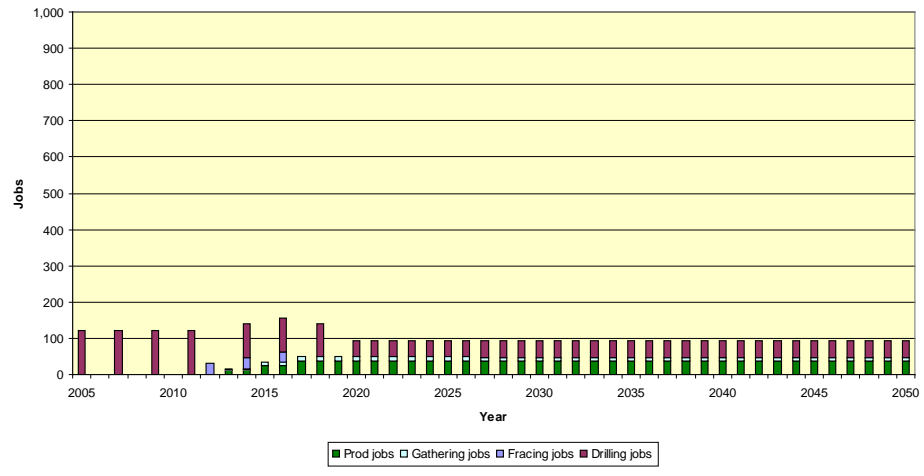
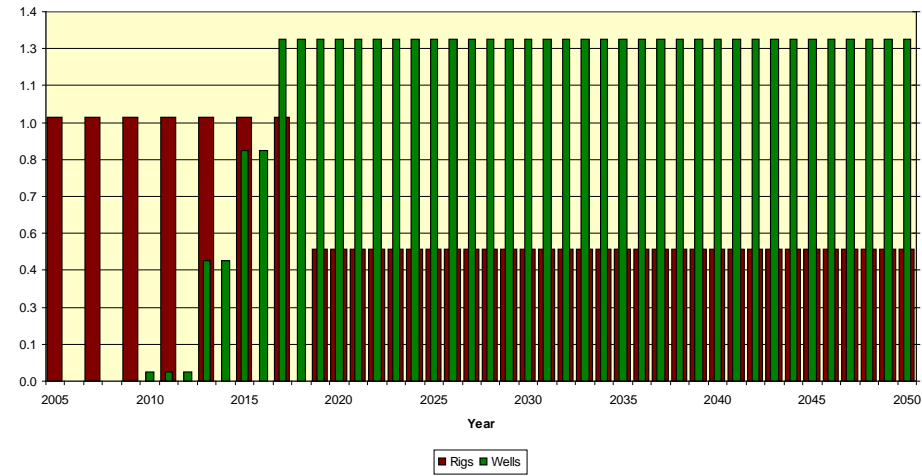


McLean Oil Industry Jobs

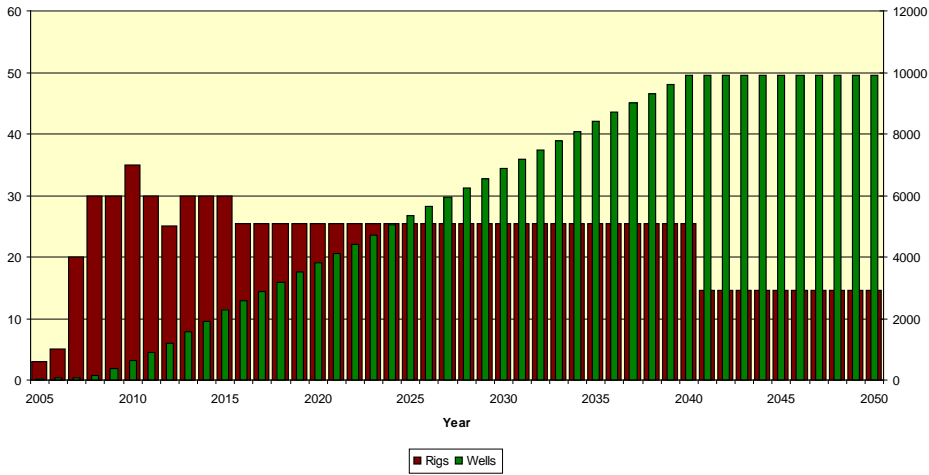


Mercer Rigs and Wells

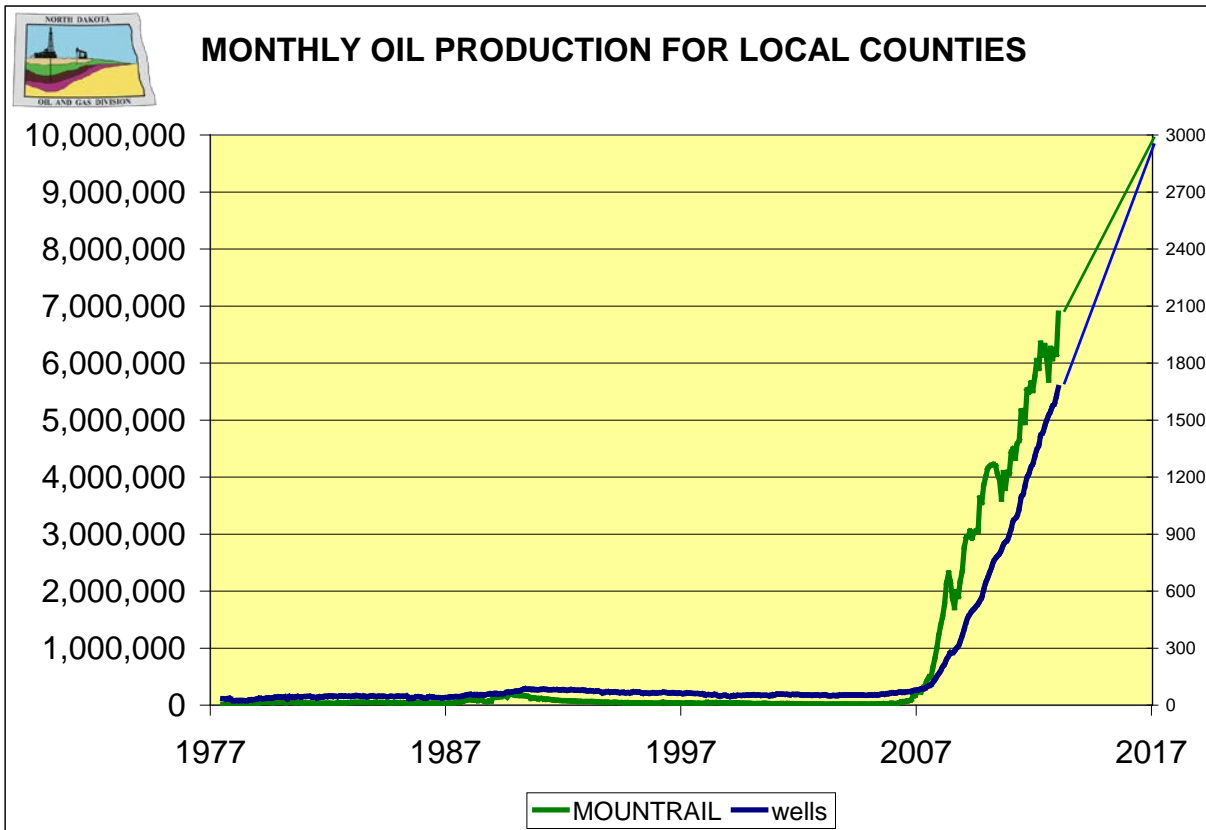
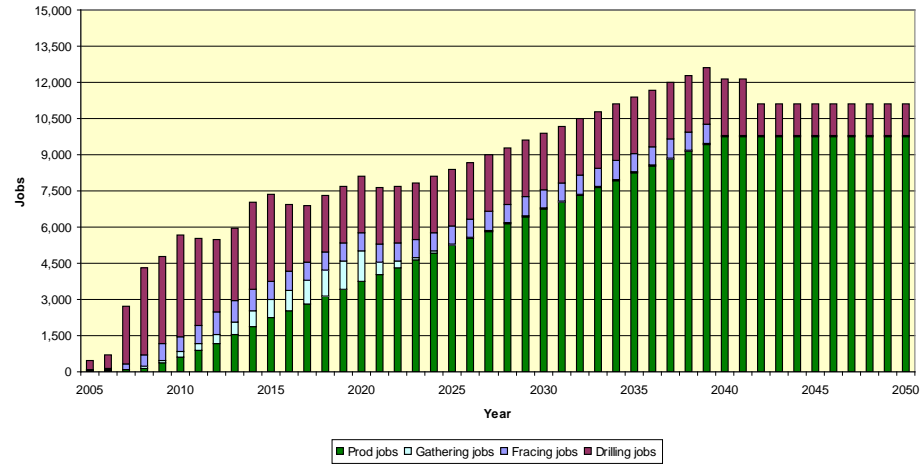
Mercer Oil Industry Jobs



Mountrail Rigs and Wells

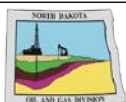
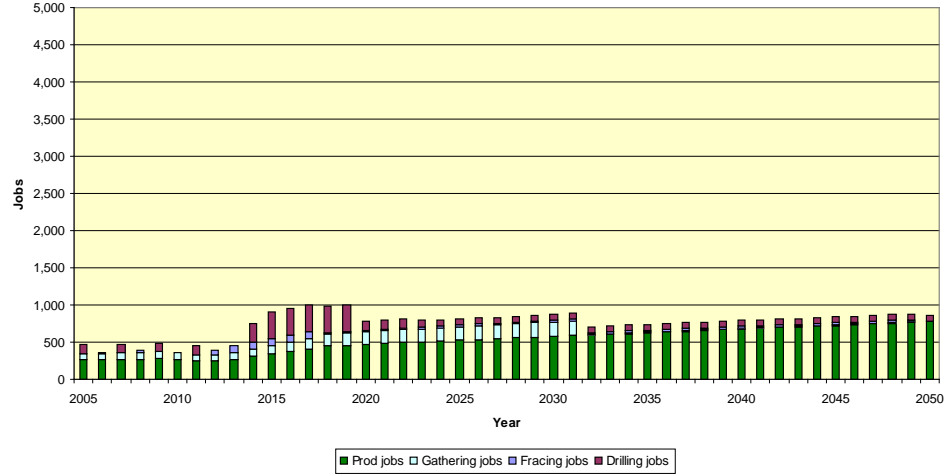
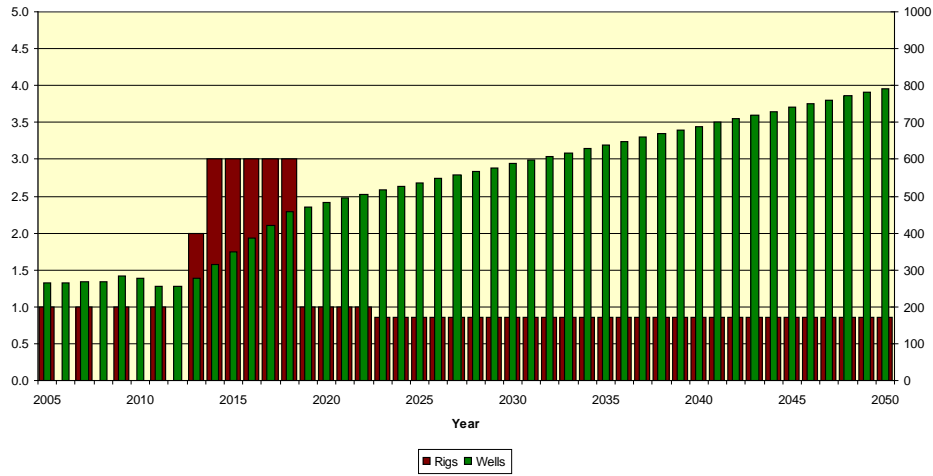


Mountrail Oil Industry Jobs

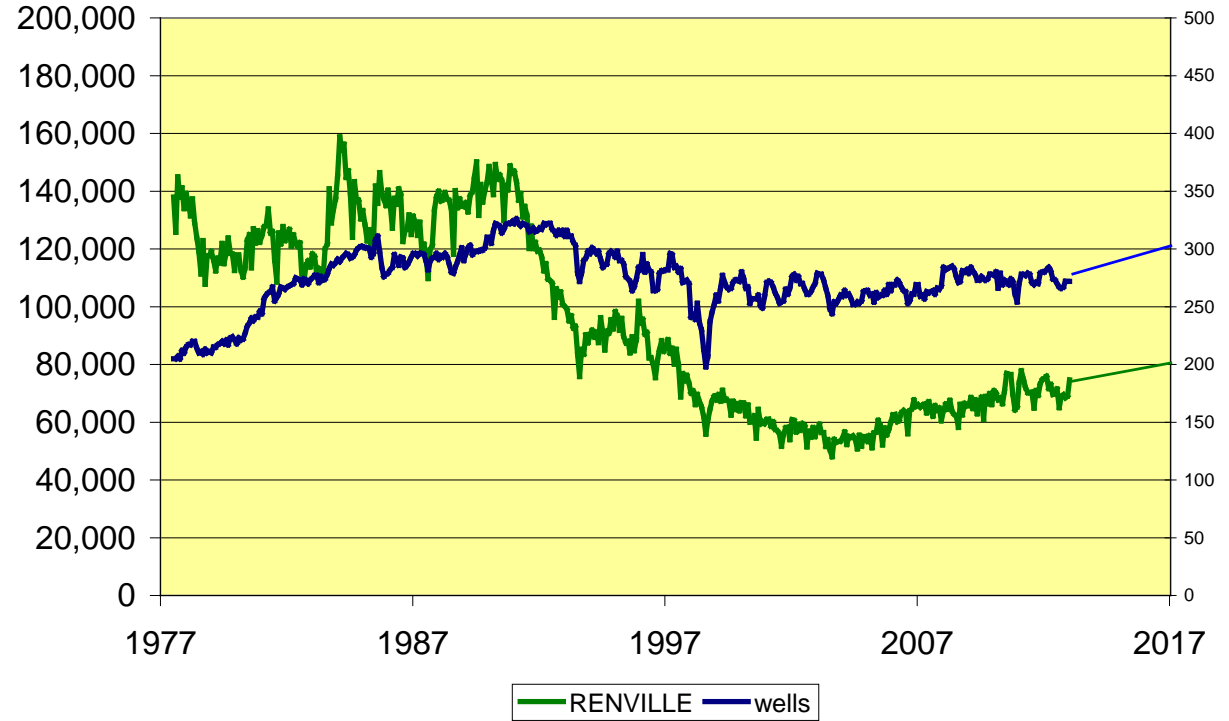


Renville Rigs and Wells

Renville Oil Industry Jobs

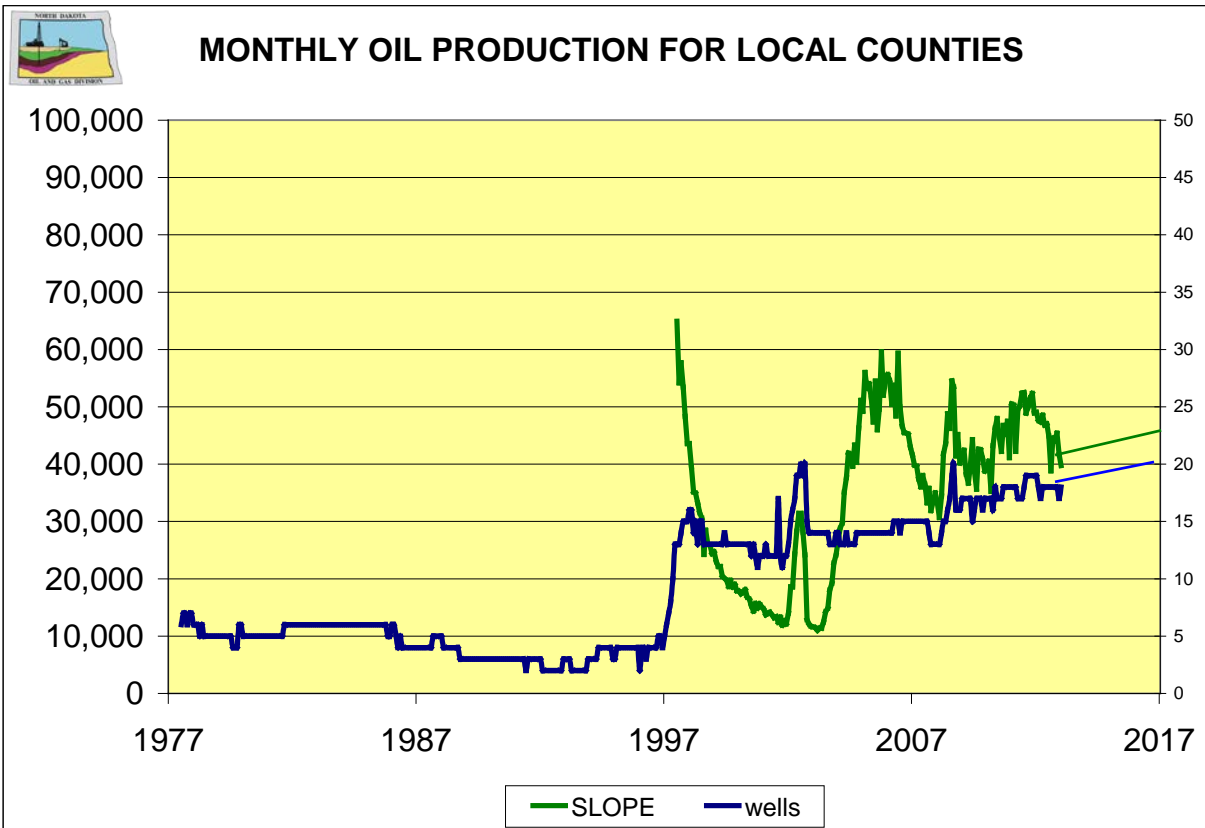
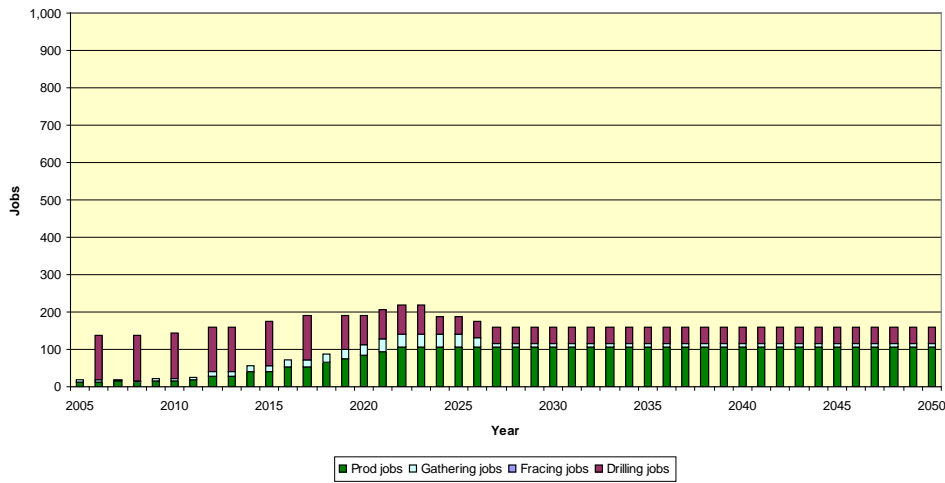
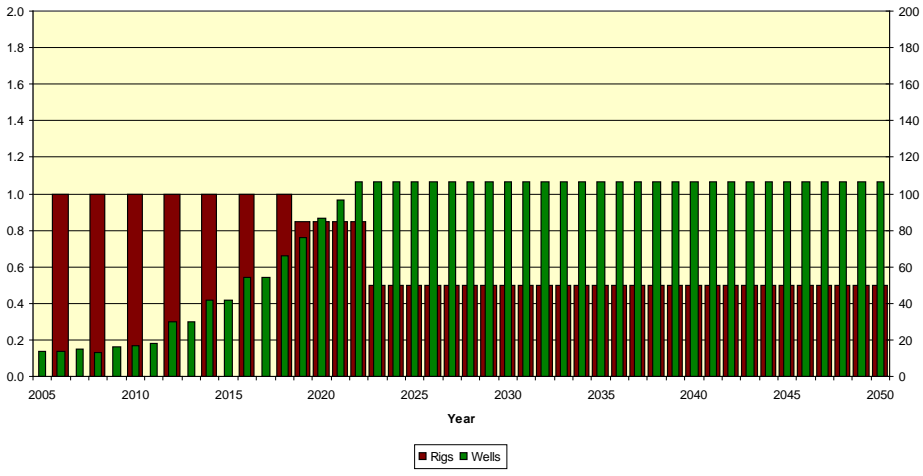


MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

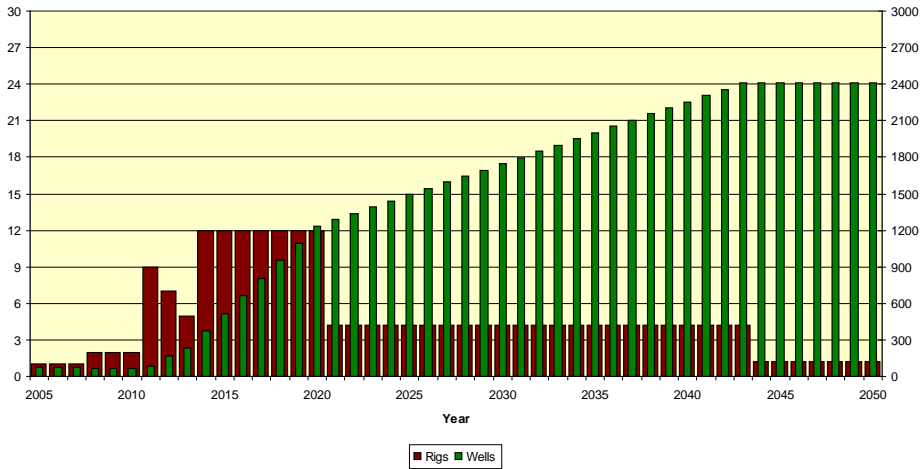


Slope non-Tyler Rigs and Wells

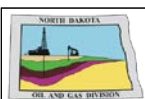
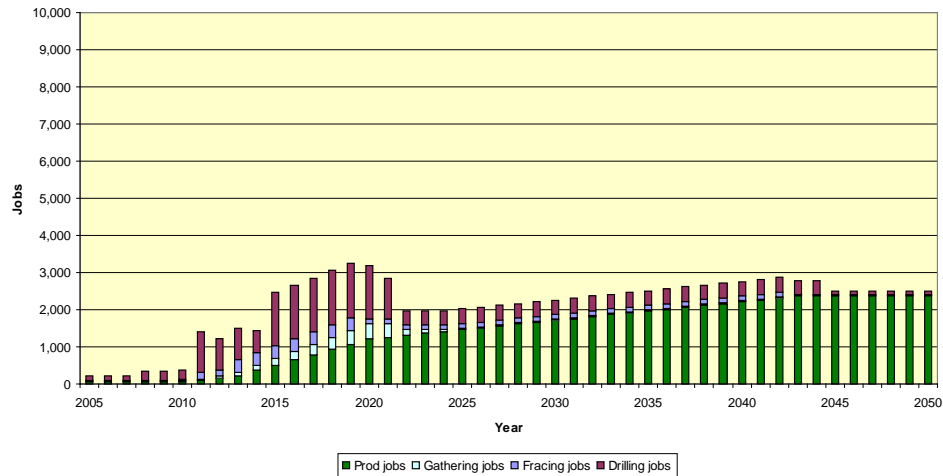
Slope non-Tyler Oil Industry Jobs



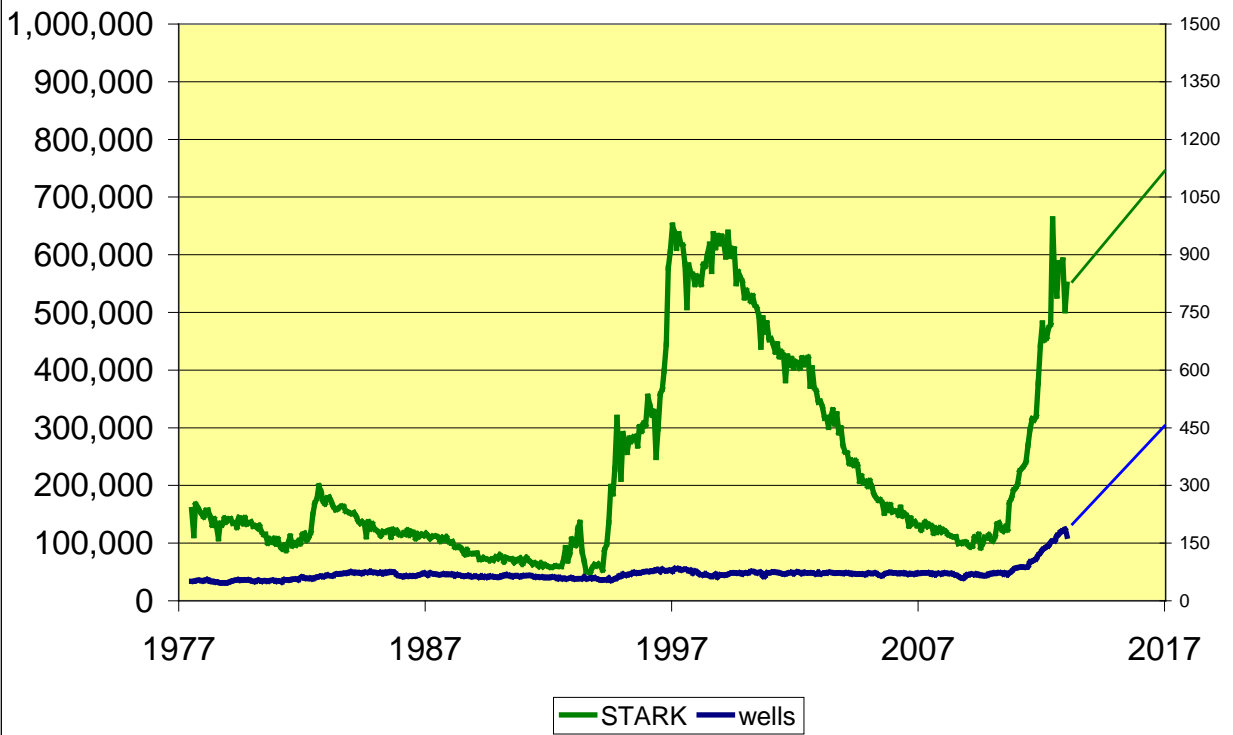
Stark Rigs and Wells



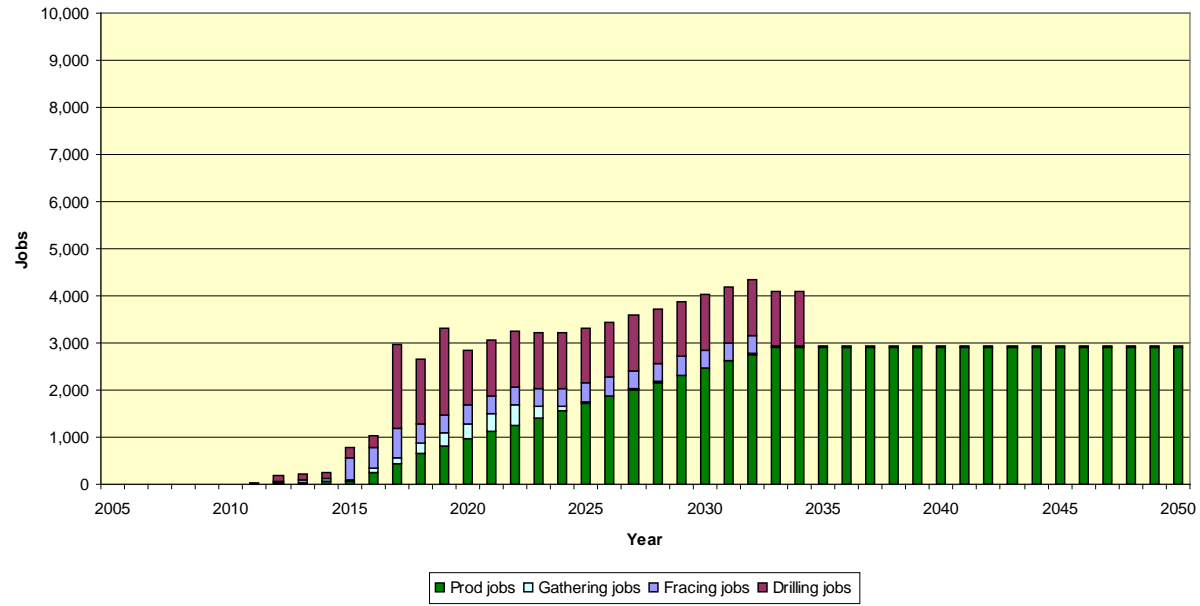
Stark Oil Industry Jobs



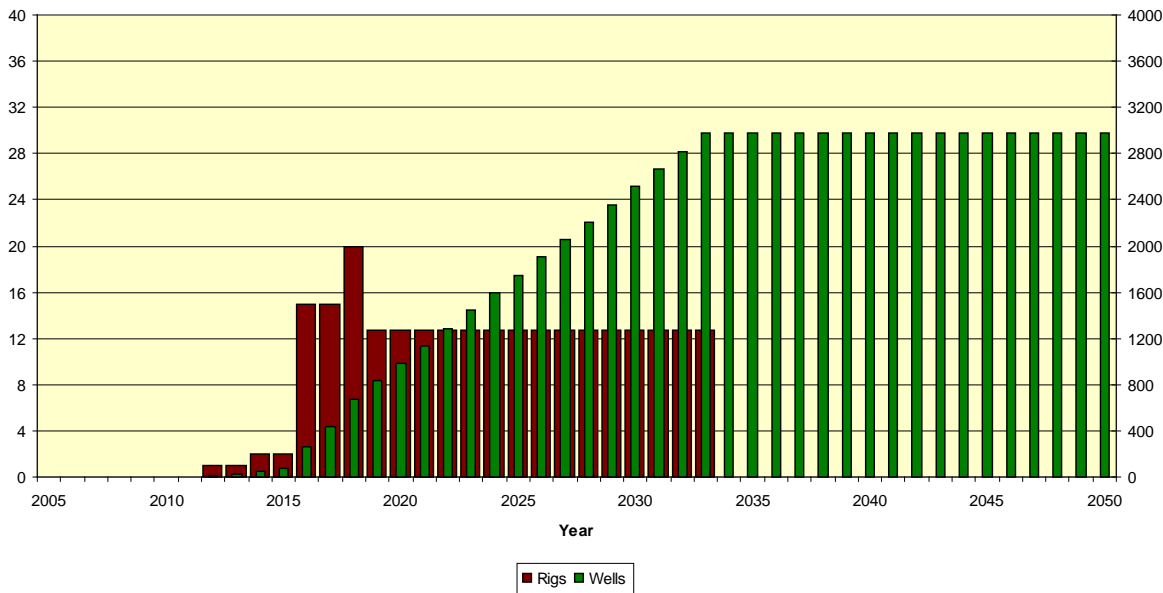
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



Tyler Oil Industry Jobs

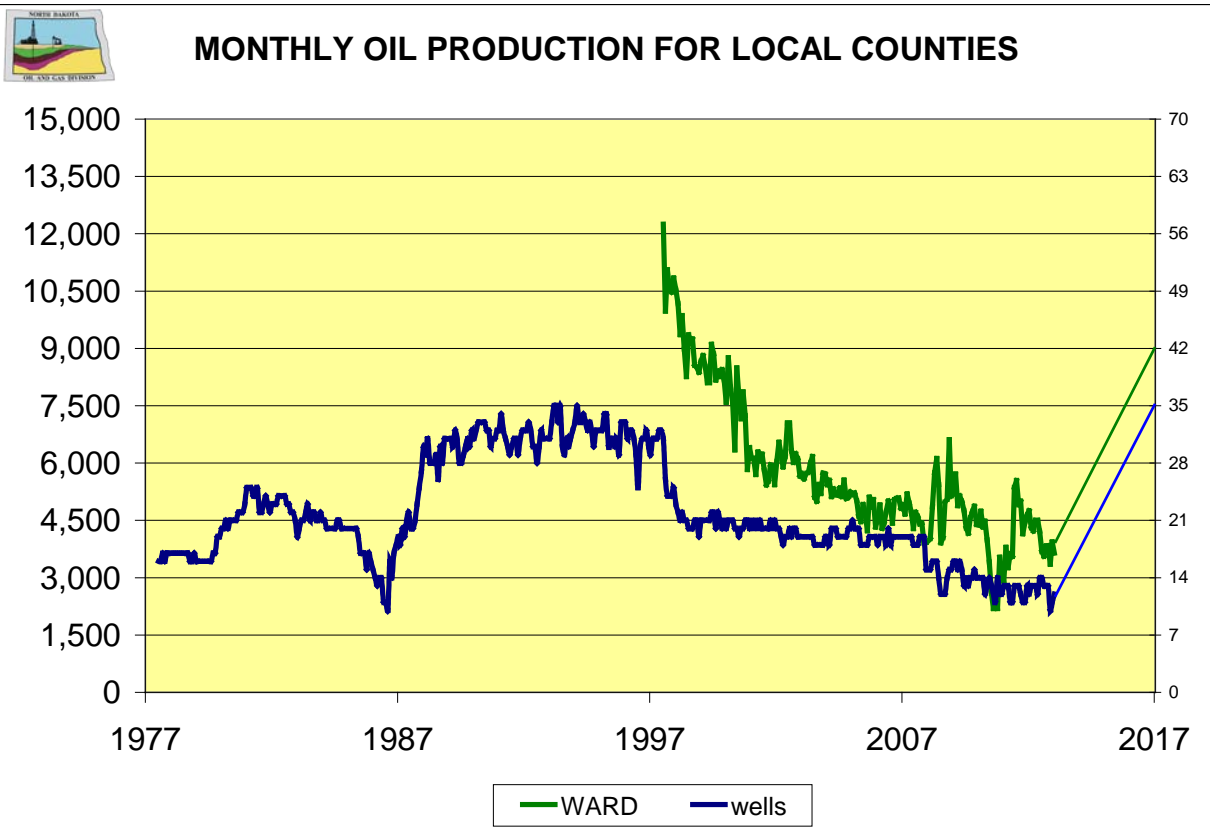
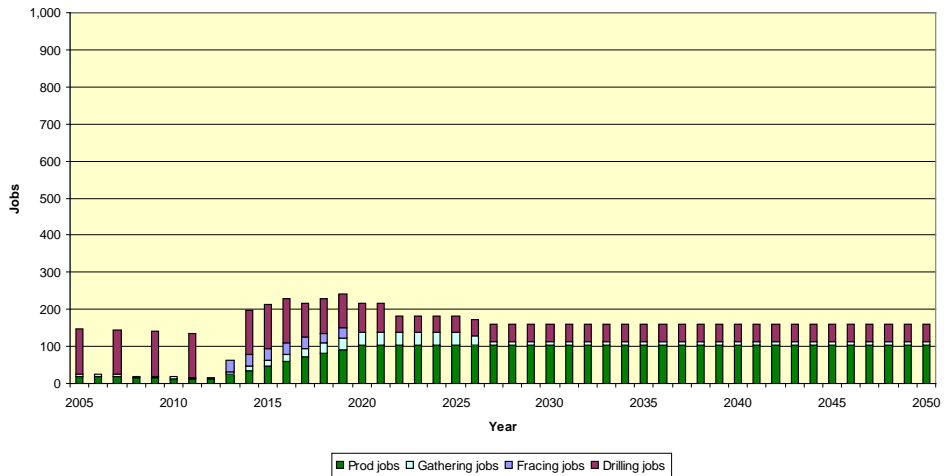
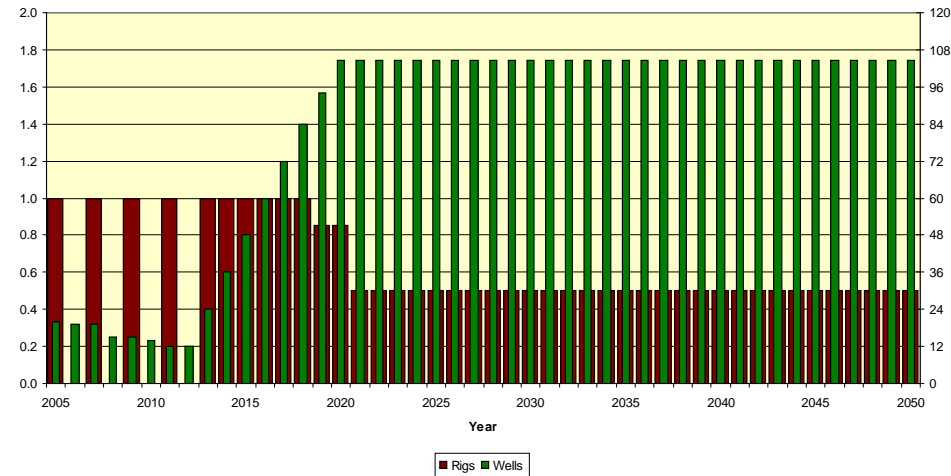


Tyler Rigs and Wells

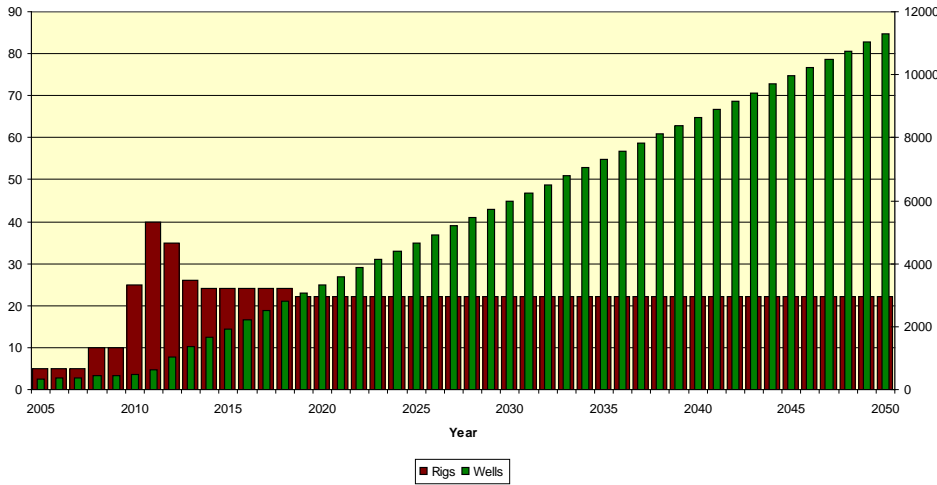


Ward Rigs and Jobs

Ward Oil Industry Jobs



Williams Rigs and Wells



Williams Oil Industry Jobs

