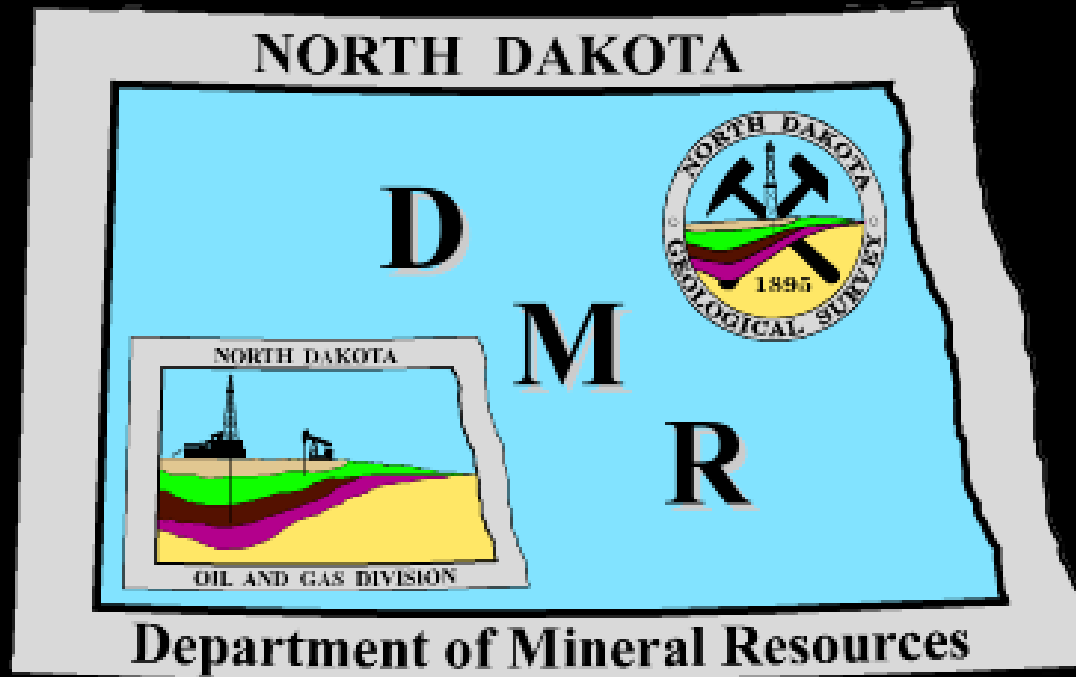


North Dakota Department of Mineral Resources



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

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

600 East Boulevard Ave. - Dept 405

Bismarck, ND 58505-0840

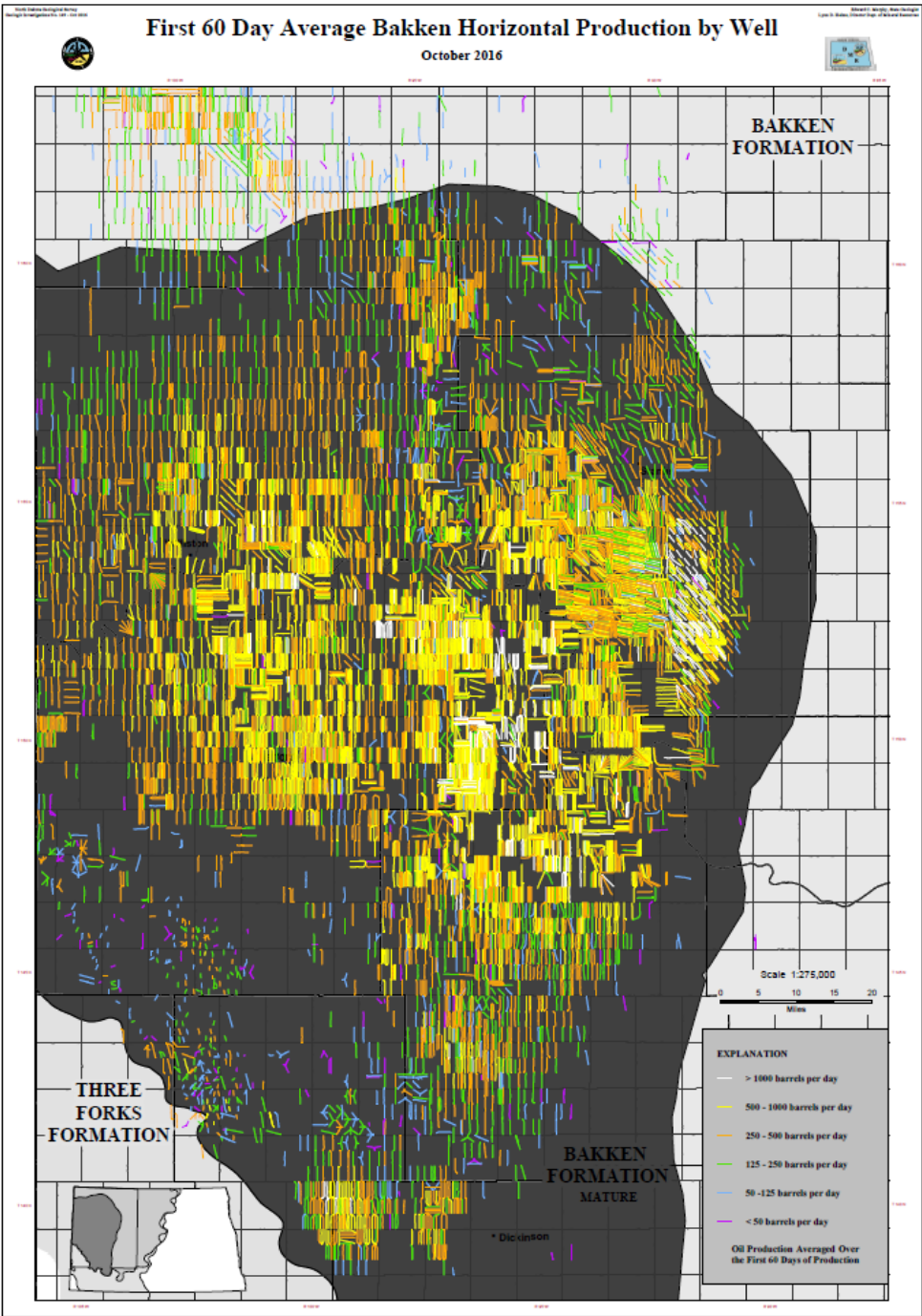
(701) 328-8020 (701) 328-8000

Wells

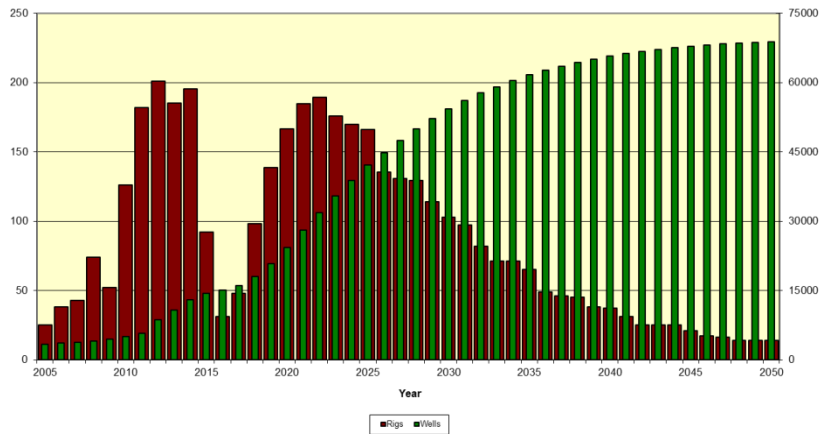
13,289 active	+349
2,063 conventional	-565
11,226 Bakken/Three Forks	+986
1,514 inactive	+213
+\$40 for 90 days	
888 waiting on completion	-26
+\$50 for 90 days	
10/07/16 – 70 days to go	
1,940 permitted	-95
+\$60 for 90 days	
NYMEX 2024+	
13,812 increased density approved	+2,857
31,443 total	+4,609

55,000-65,000 estimated final

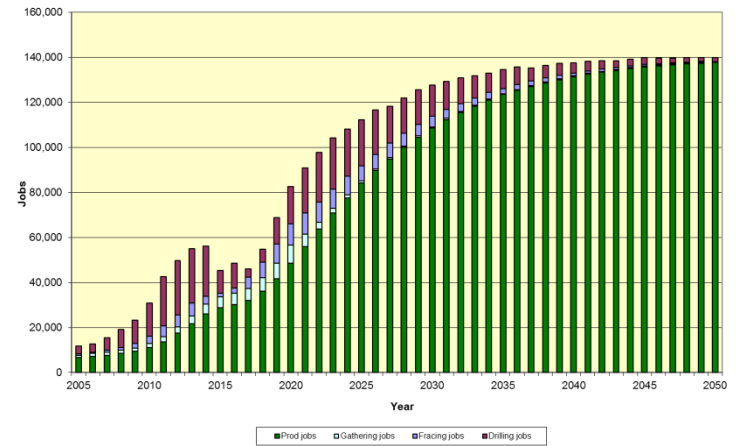
8,675 reclaimed and bond released
1,361 reclamation in progress



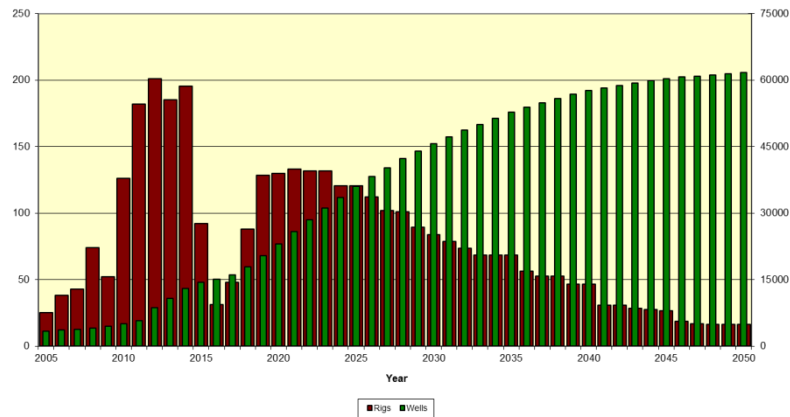
North Dakota Rigs and Wells



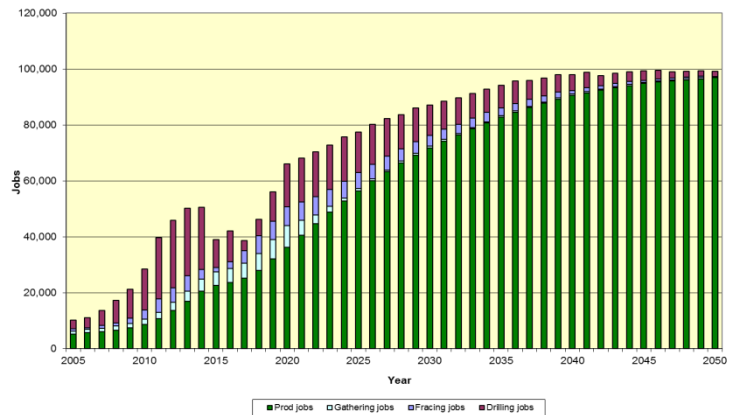
North Dakota Oil Industry Jobs



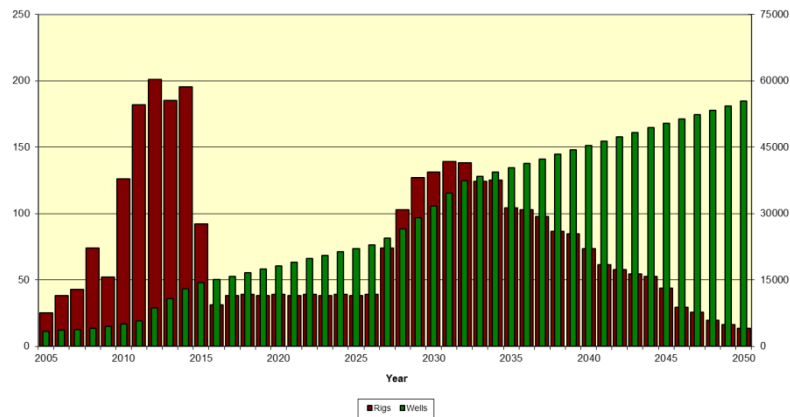
North Dakota Rigs and Wells



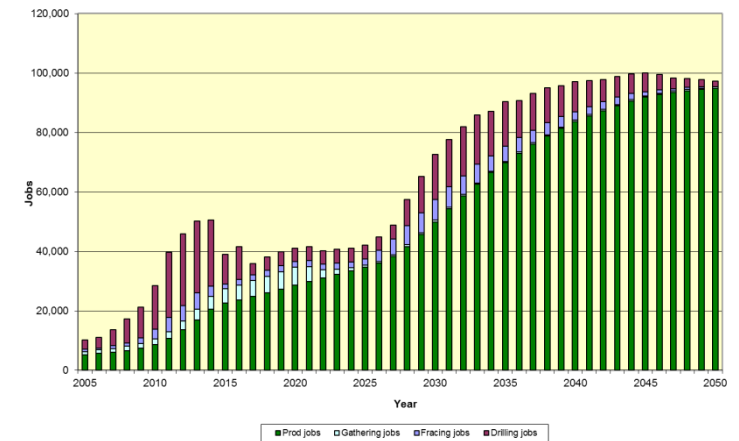
North Dakota Oil Industry Jobs

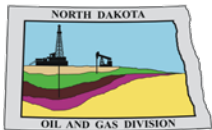


North Dakota Rigs and Wells

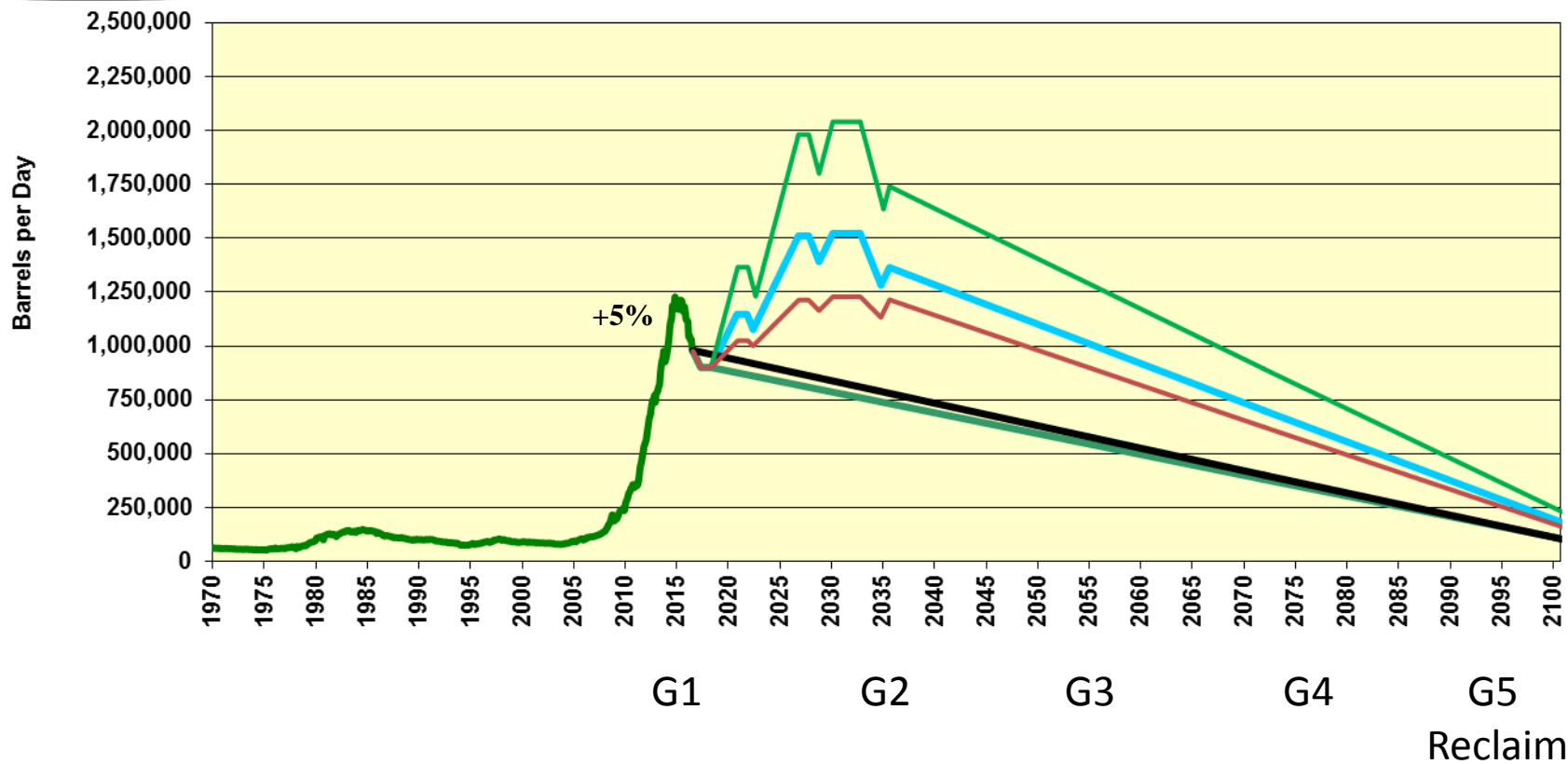


North Dakota Oil Industry Jobs





North Dakota Oil Production

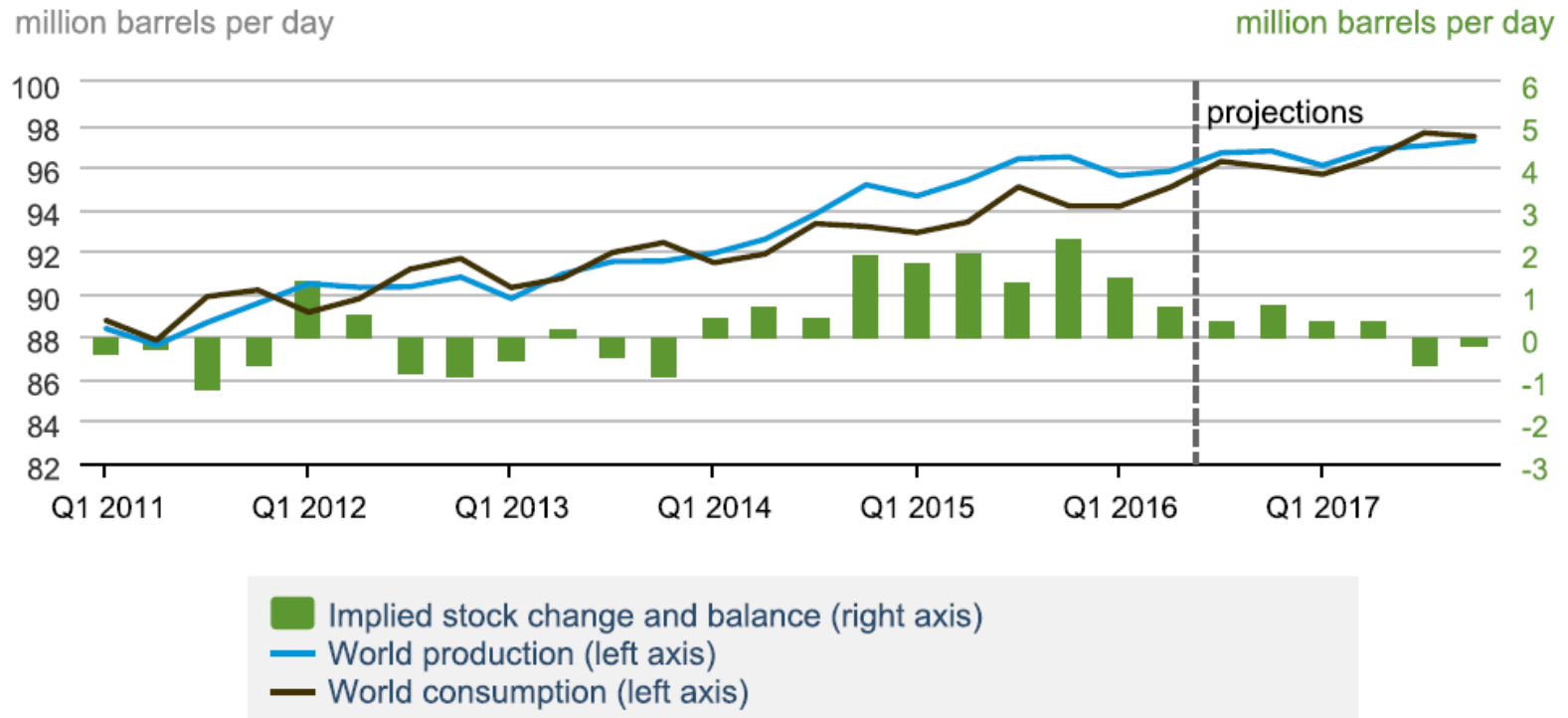


EOR? +++

- | | |
|-----------------------------|--|
| History | Peak Production Estimate |
| Current ND Revenue Estimate | Current Production Limited-No Drilling |
| Rapid Recovery | Lower-Longer-Exhaust-Core |

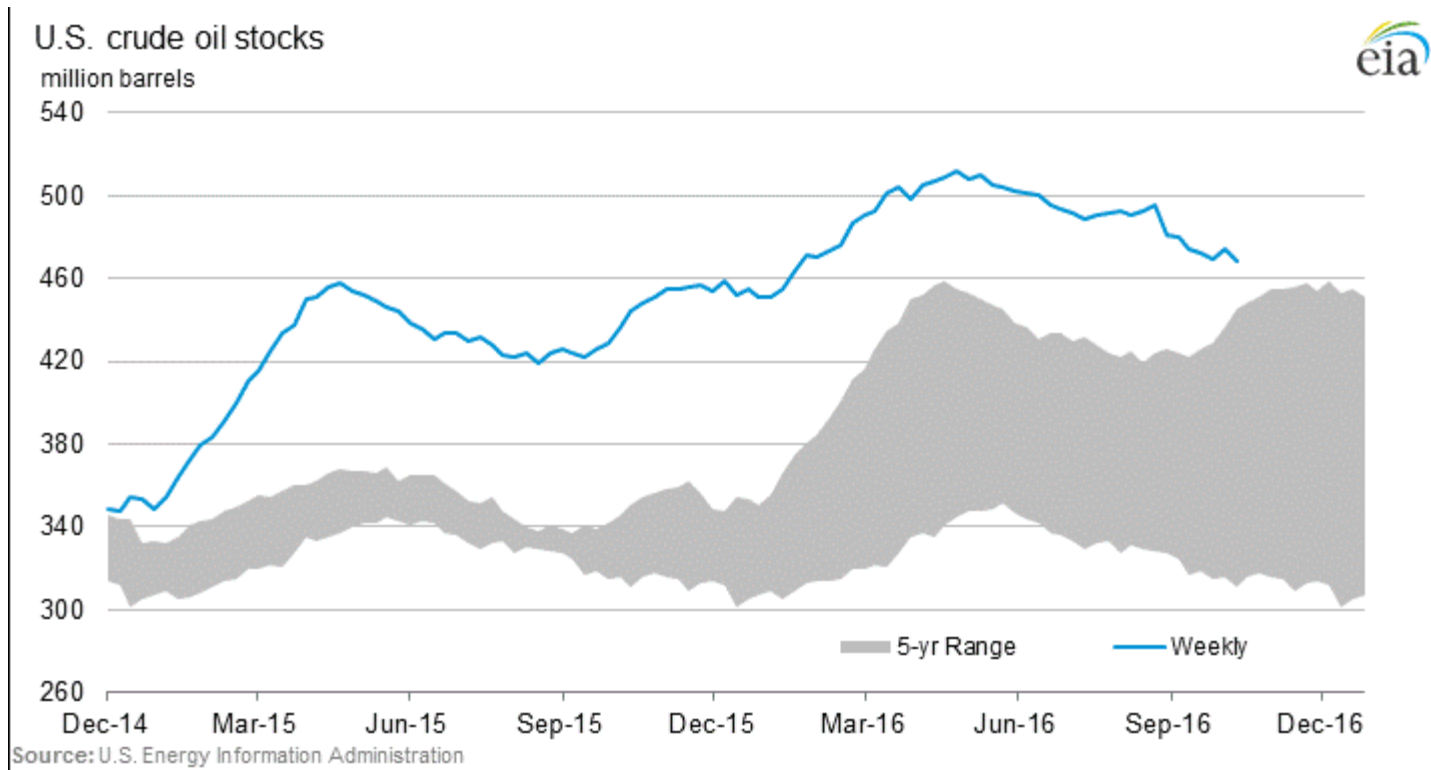
World liquid fuels production and consumption

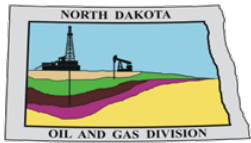
balance



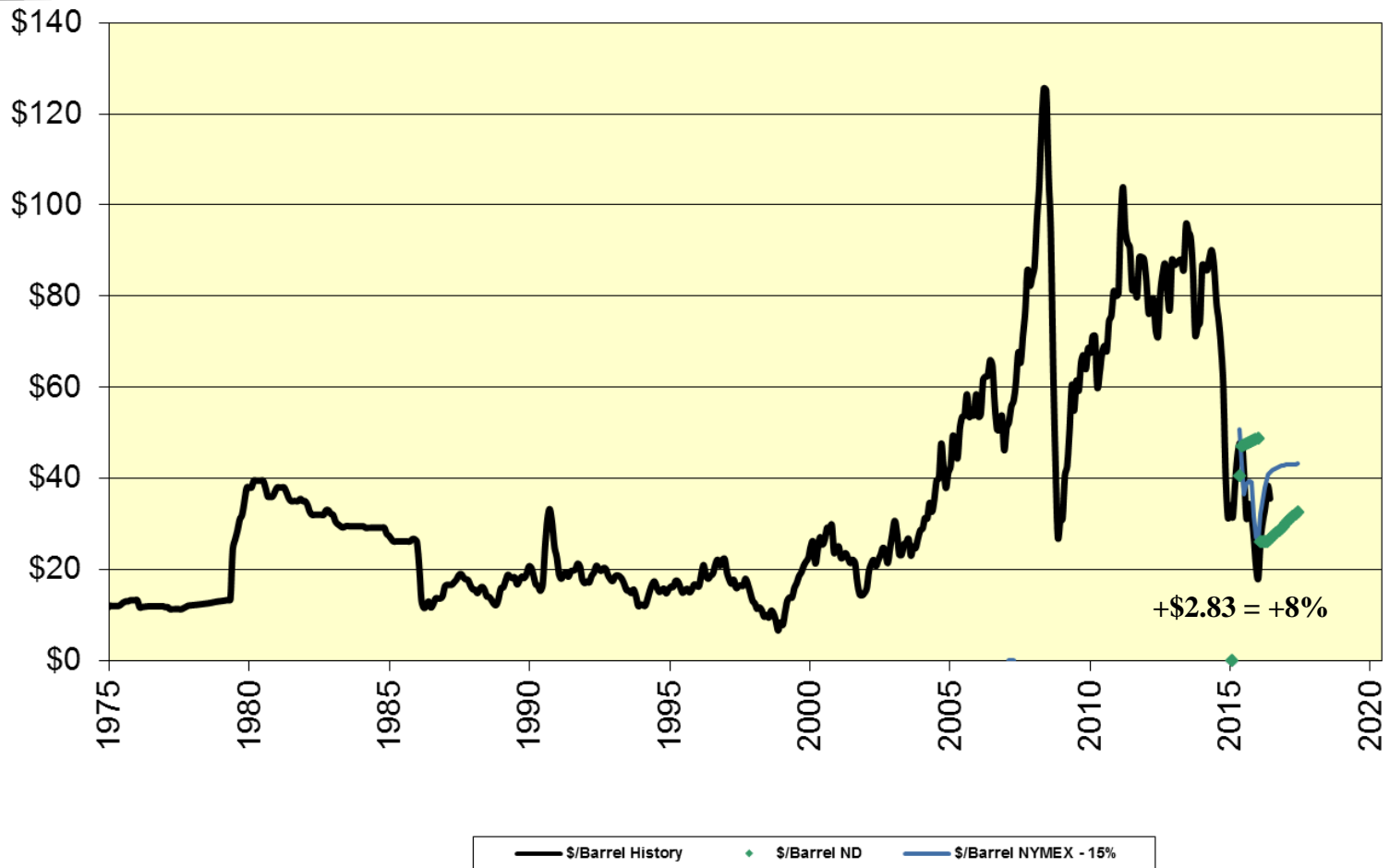
Storage East Coast 18 of 20=90%
Permian 78 of 120=65%
Rockies 22 of 40=55%
Total US 469 of 735=64%

Cushing 60 of 70=86%
Gulf Coast 241 of 395=61%
West Coast 49 of 100=49%
Normal 400 of 735=54%

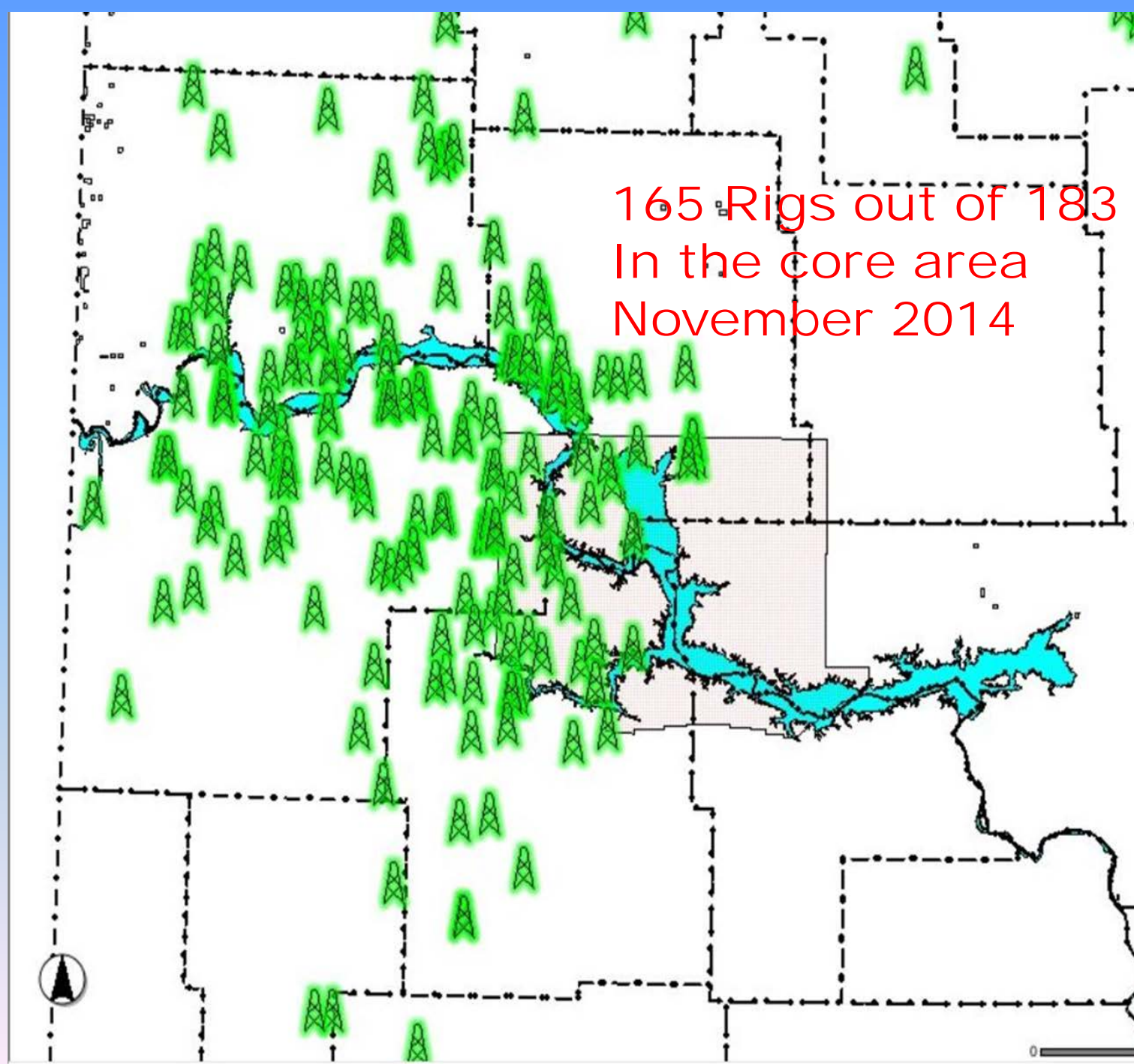


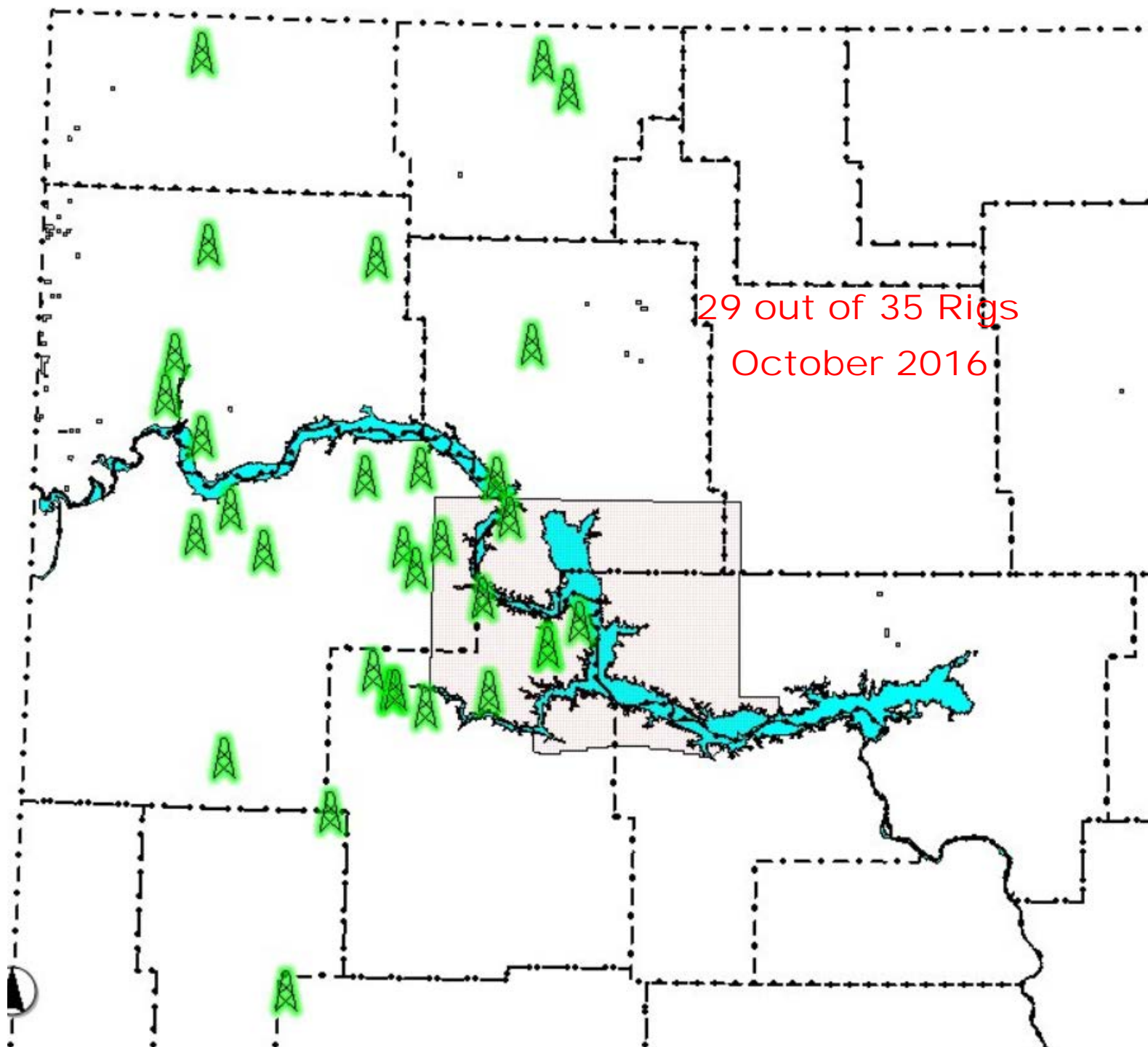


North Dakota Oil Production and Price



165 Rigs out of 183
In the core area
November 2014





33 Sections of Administrative rule changes effective October 1, 2016

43-02-03-01. DEFINITIONS
43-02-03-11. ORGANIZATION REPORTS
43-02-03-14. ACCESS TO SITES AND RECORDS
43-02-03-16. APPLICATION FOR PERMIT TO DRILL AND RECOMPLETE
43-02-03-17. SIGN ON WELL OR FACILITY
43-02-03-19. SITE CONSTRUCTION
43-02-03-19.3. EARTHEN PITS AND OPEN RECEPTACLES
43-02-03-28. SAFETY REGULATION
43-02-03-29. WELL AND LEASE EQUIPMENT
43-02-03-30. NOTIFICATION OF FIRES, LEAKS, SPILLS, OR BLOWOUTS
43-02-03-30.1. LEAK AND SPILL CLEANUP
43-02-03-31. WELL LOG, COMPLETION, AND WORKOVER REPORTS.
43-02-03-34. METHOD OF PLUGGING
43-02-03-34.1. RECLAMATION OF SURFACE
43-02-03-40. GAS-OIL RATIO TEST
43-02-03-48. MEASUREMENT OF OIL
43-02-03-51.1. TREATING PLANT PERMIT REQUIREMENTS
43-02-03-52. REPORT OF OIL PRODUCTION
43-02-03-52.1. REPORT OF GAS PRODUCED IN ASSOCIATION WITH OIL
43-02-03-53. SALTWATER HANDLING FACILITIES
43-02-03-53.1. SALTWATER HANDLING FACILITY PERMIT REQUIREMENTS
43-02-03-53.2. SALTWATER HANDLING FACILITY SITING
43-02-03-53.4. SALTWATER HANDLING FACILITY ABANDONMENT AND RECLAMATION REQUIREMENTS
43-02-03-55. ABANDONMENT OF WELLS OR, TREATING PLANTS, OR SALTWATER HANDLING FACILITIES - SUSPENSION OF DRILLING
43-02-03-80. REPORTS OF PURCHASERS AND TRANSPORTERS OF CRUDE OIL
43-02-03-81. AUTHORIZATION TO TRANSPORT OIL FROM A WELL, TREATING PLANT, OR CENTRAL PRODUCTION FACILITY, OR SALTWATER HANDLING FACILITY
43-02-03-90. HEARINGS - COMPLAINT PROCEEDINGS – EMERGENCY PROCEEDINGS - OTHER PROCEEDINGS
43-02-03-90.2. OFFICIAL RECORD
43-02-05-04. PERMIT REQUIREMENTS
43-02-05-07. MECHANICAL INTEGRITY
43-02-05-11. BONDING REQUIREMENTS
43-02-08-02.1. PROPERTY DETERMINATION
43-02-08-03. DIRECTOR SHALL DETERMINE STRIPPER WELL OR STRIPPER WELL PROPERTY STATUS

5 sections of Administrative rule changes held over to December 1, 2016 for review / revision

43-02-03-15. BOND AND TRANSFER OF WELLS
43-02-03-29.1. UNDERGROUND GATHERING PIPELINES
43-02-03-49. OIL PRODUCTION EQUIPMENT, DIKES, AND SEALS
43-02-03-51.3. TREATING PLANT CONSTRUCTION AND OPERATION REQUIREMENTS
43-02-03-53.3. SALTWATER HANDLING FACILITY CONSTRUCTION AND OPERATION REQUIREMENTS

Coming Attractions

\$50/barrel & \$60/barrel

Heel and Toe Setbacks

EOR Field Tests

Class VI Primacy

IOGCC - GWPC Produced Water Forums

November 8

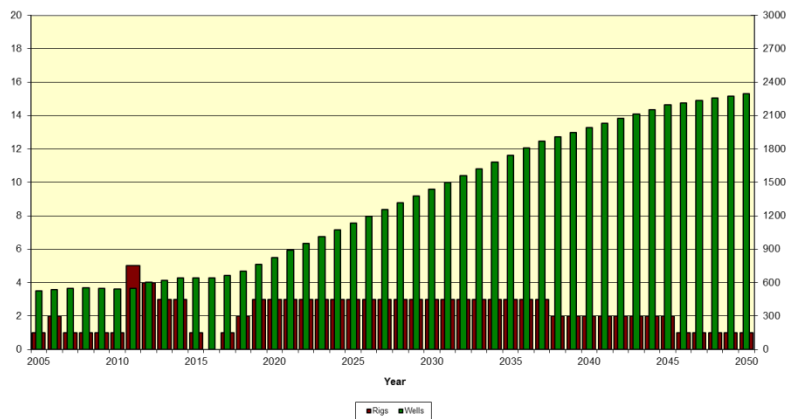
2017 Legislature

Spill Reporting Reform

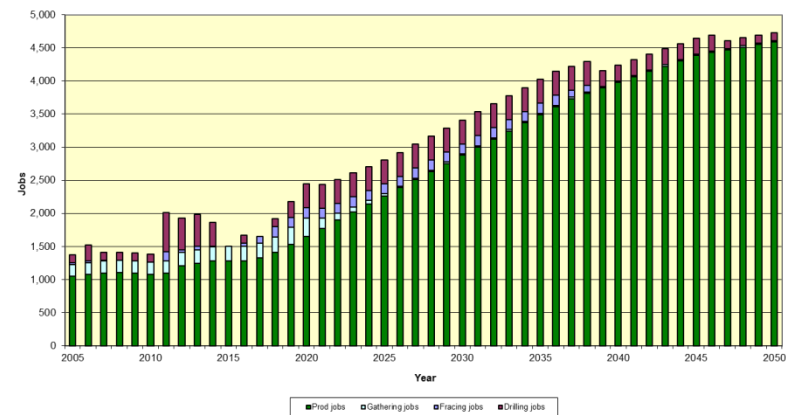
County by County Outlook

	2Q 2016					
August-16	Breakeven	August-16		Wells		
\$42	WTI \$/BO	Rigs	June-16	NC	P90	P50
Billings	\$47*	0	627	5	1,900	2,500
Bottineau-Renville	▲ +\$100	0	1,033	2	3,000	4,000
Bowman-Slope	▲ +\$100	0	540	0	900	1,200
Burke	\$83	1	628	2	1,300	3,000
Divide	\$86	1	802	48	3,000	5,000
Dunn	\$16	10	1,933	128	4,800	9,000
Golden Valley	\$78*	1	102	1	250	300
McKenzie	\$24	15	4,028	351	7,100	15,000
McLean	\$29*	0	59	7	800	1,200
Mountrail	\$38	3	2,635	190	4,800	9,000
Stark	\$29	0	277	4	2,900	3,500
Williams	\$23	3	2,427	149	5,500	10,000
Statewide	\$26	34	15,130	887	36,250	63,700
* Information from previous quarter, too little data to calculate new value						

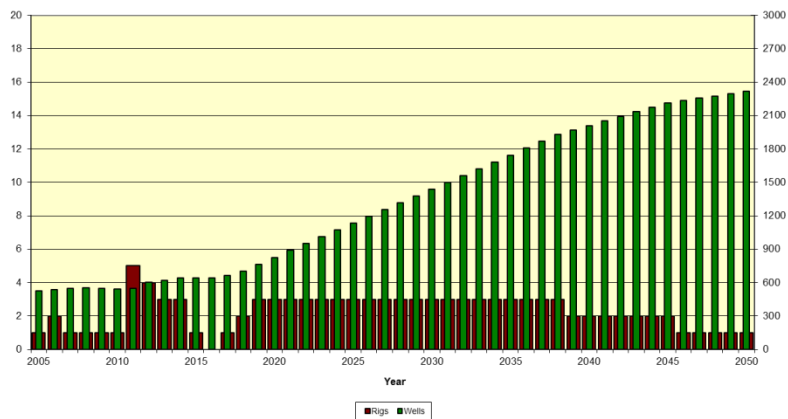
Billings Rigs and Wells



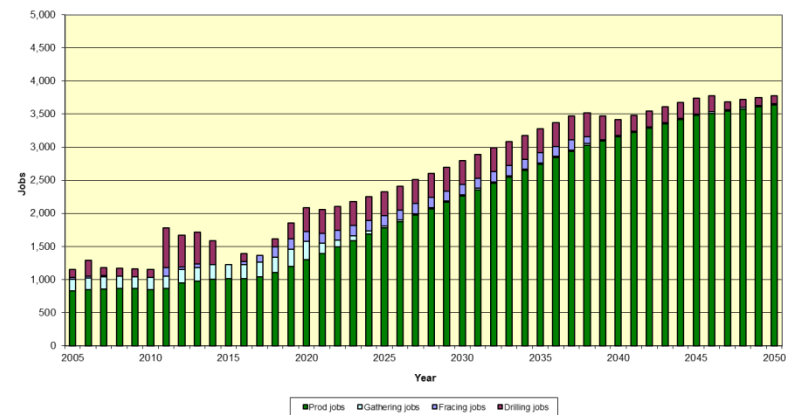
Billings Oil Industry Jobs



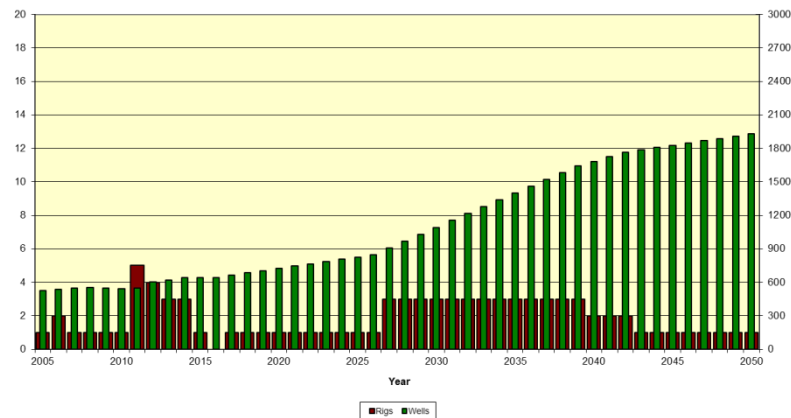
Billings Rigs and Wells



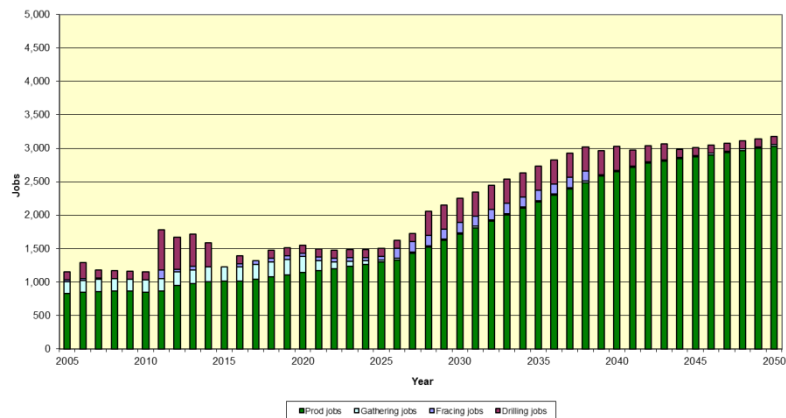
Billings Oil Industry Jobs

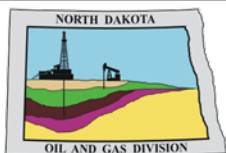


Billings Rigs and Wells

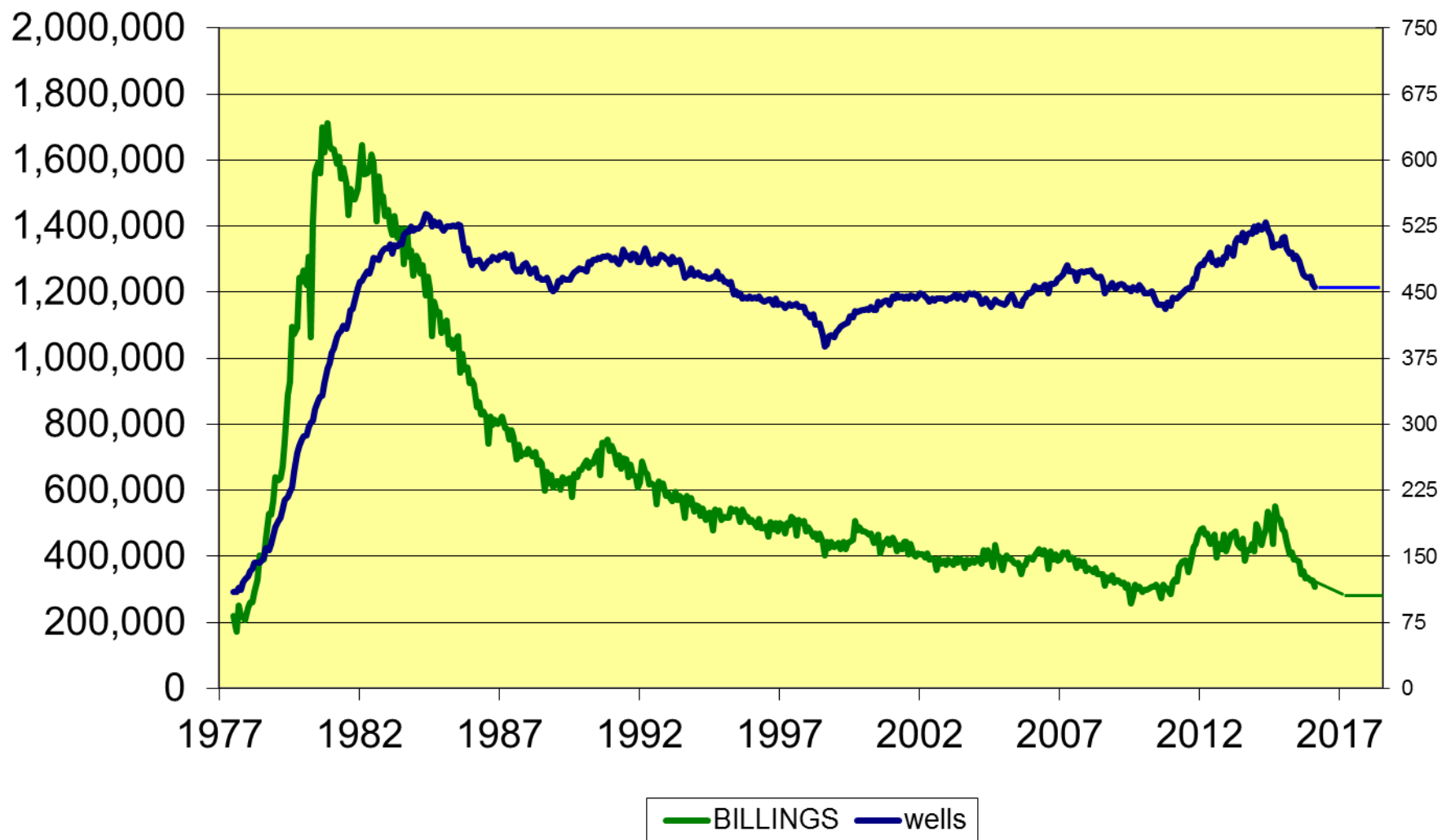


Billings Oil Industry Jobs

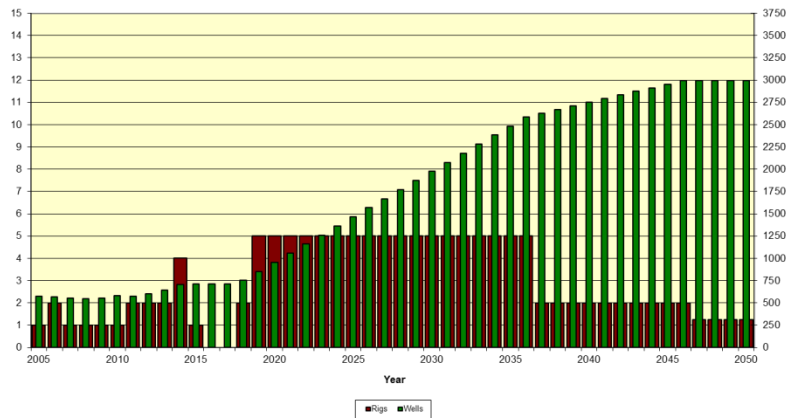




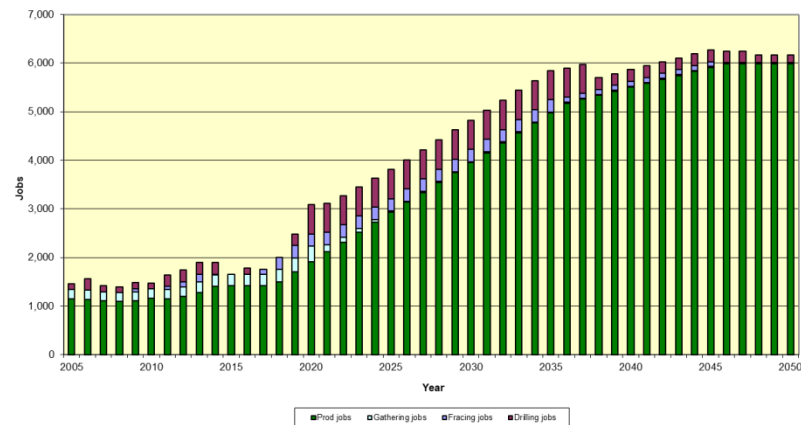
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



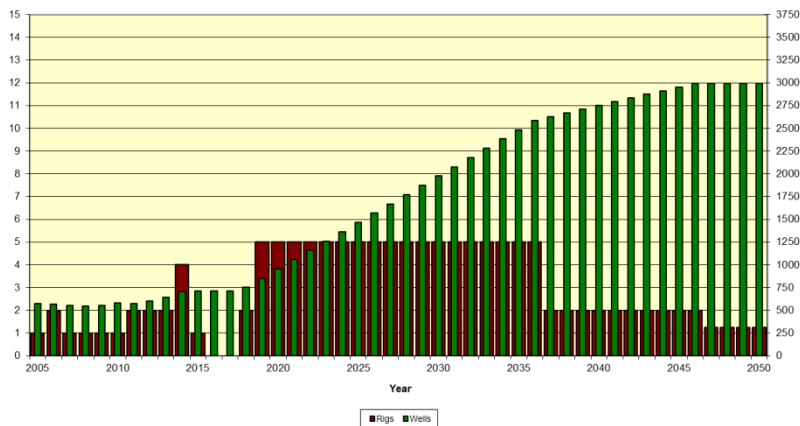
Bottineau Rigs and Wells



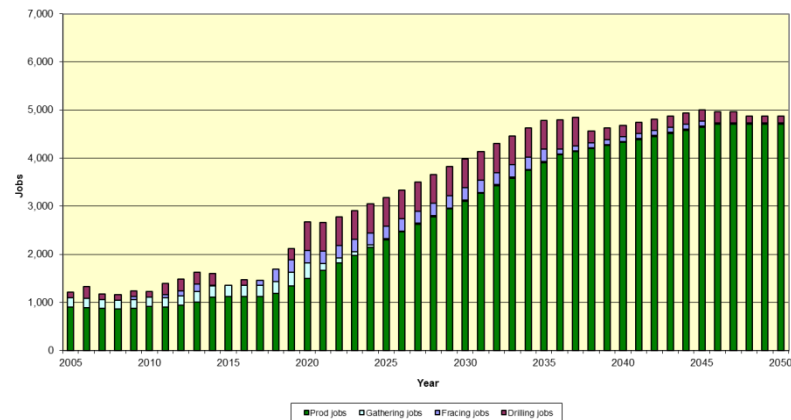
Bottineau Oil Industry Jobs



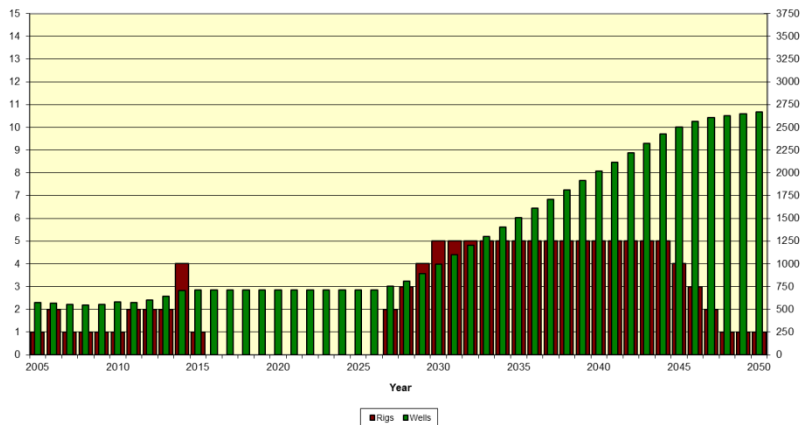
Bottineau Rigs and Wells



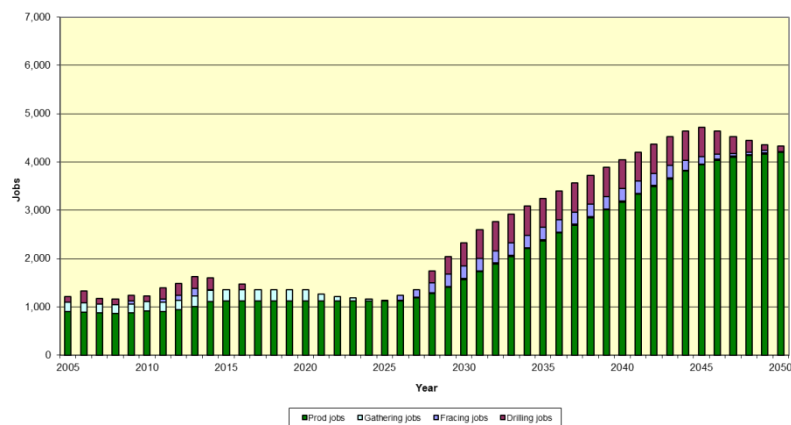
Bottineau Oil Industry Jobs



Bottineau Rigs and Wells

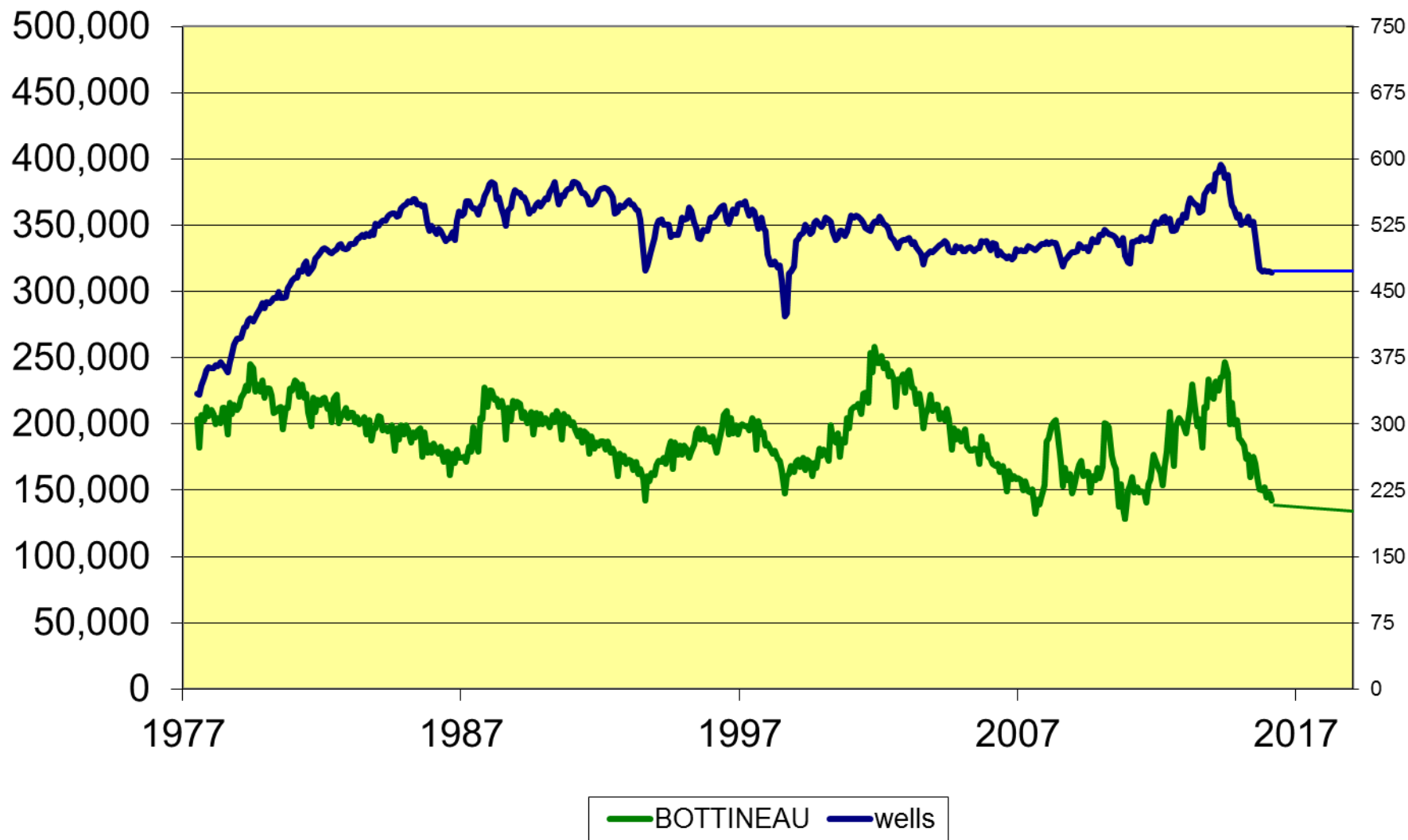


Bottineau Oil Industry Jobs

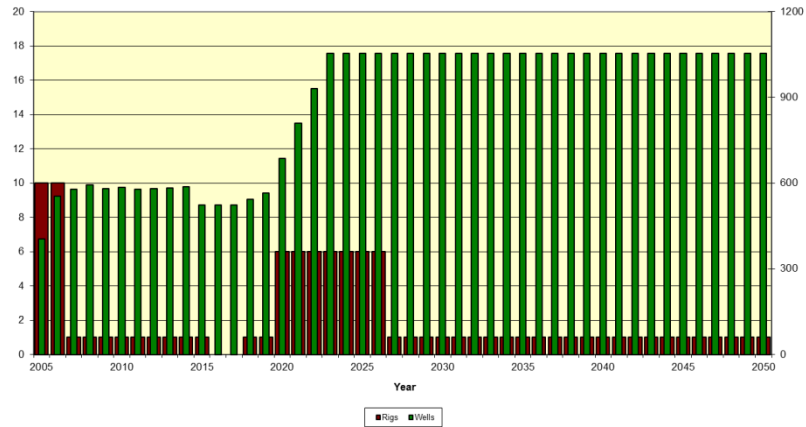




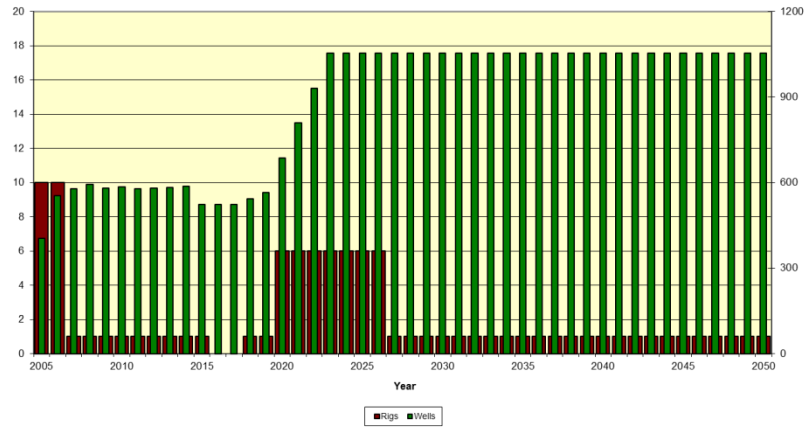
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



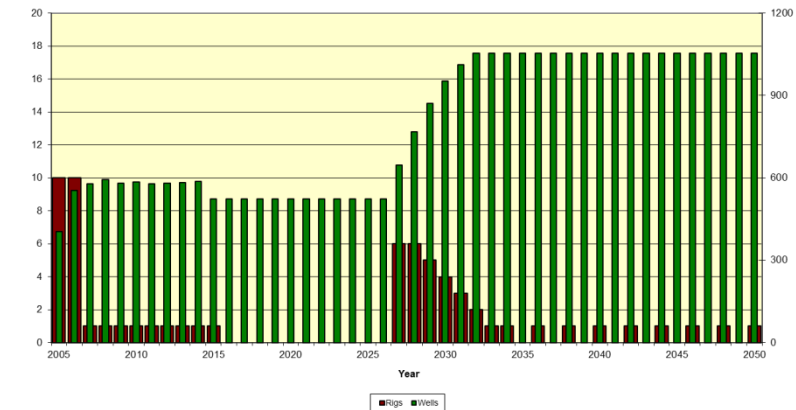
Bowman Rigs and Wells



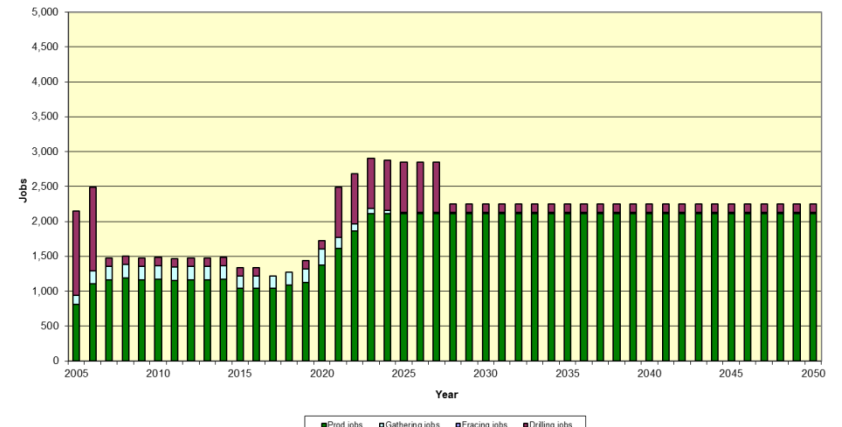
Bowman Rigs and Wells



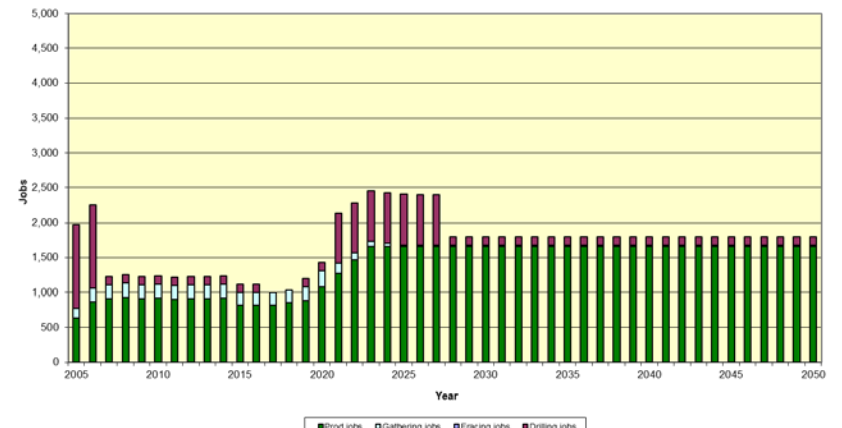
Bowman Rigs and Wells



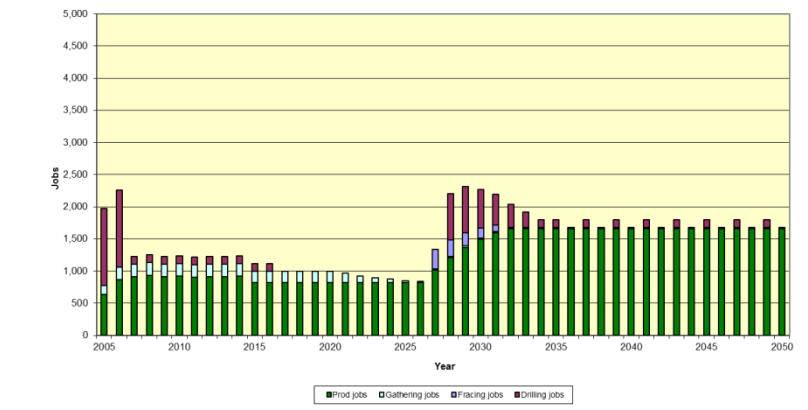
Bowman Oil Industry Jobs

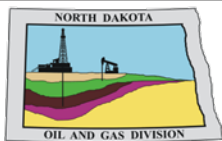


Bowman Oil Industry Jobs

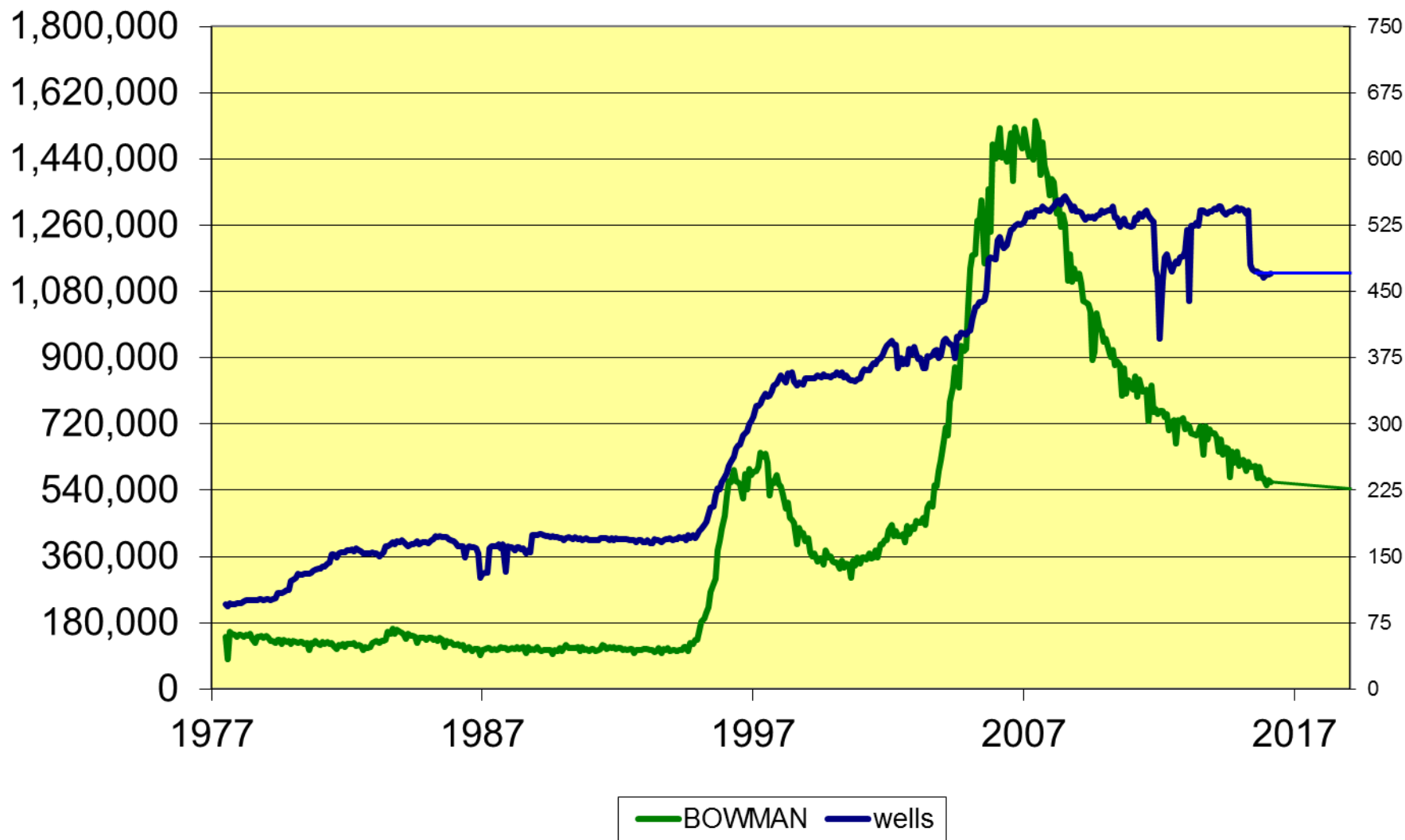


Bowman Oil Industry Jobs

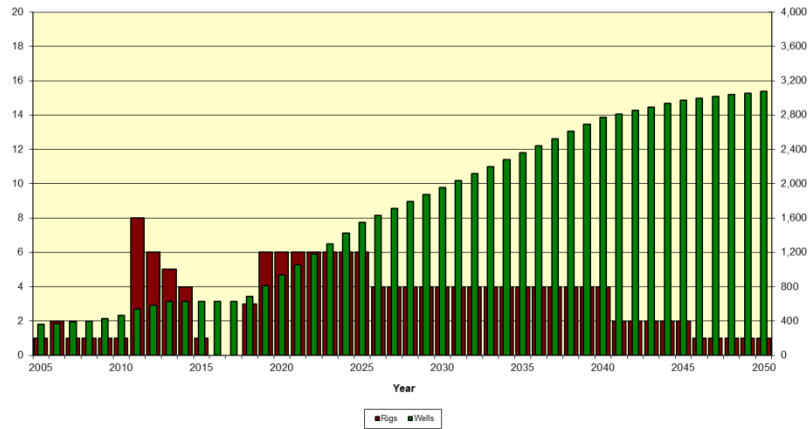




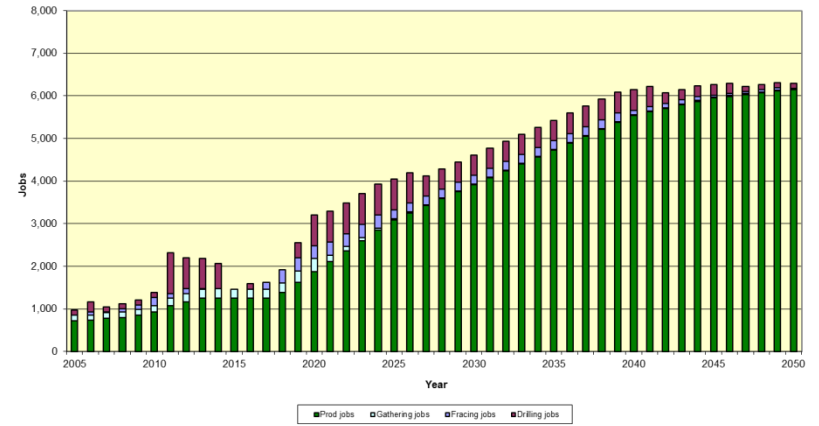
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



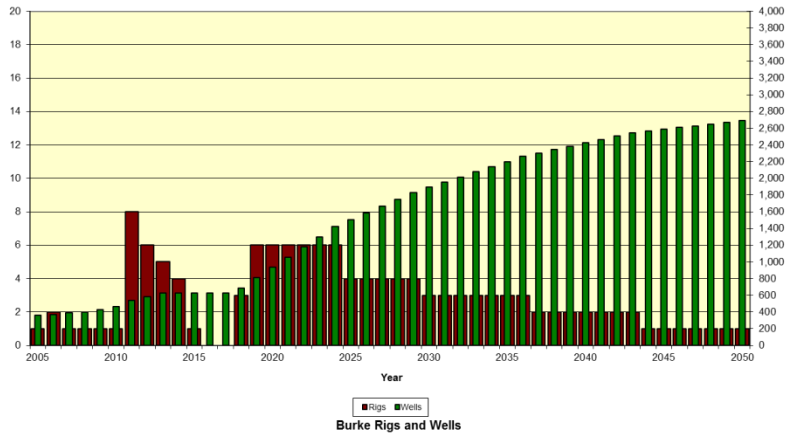
Burke Rigs and Wells



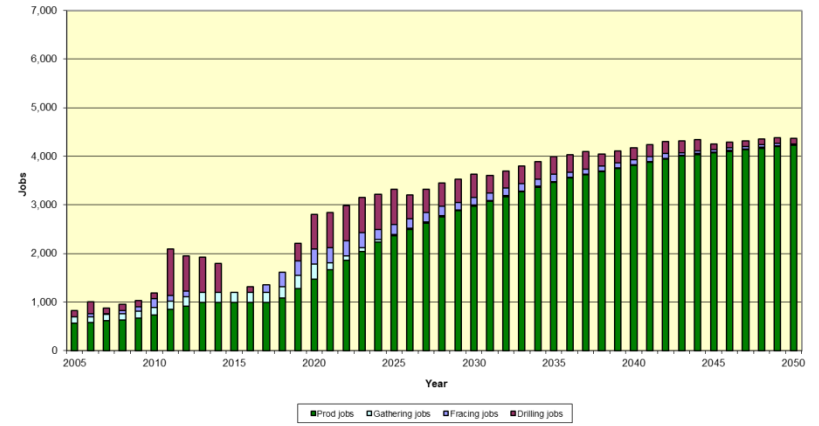
Burke Oil Industry Jobs



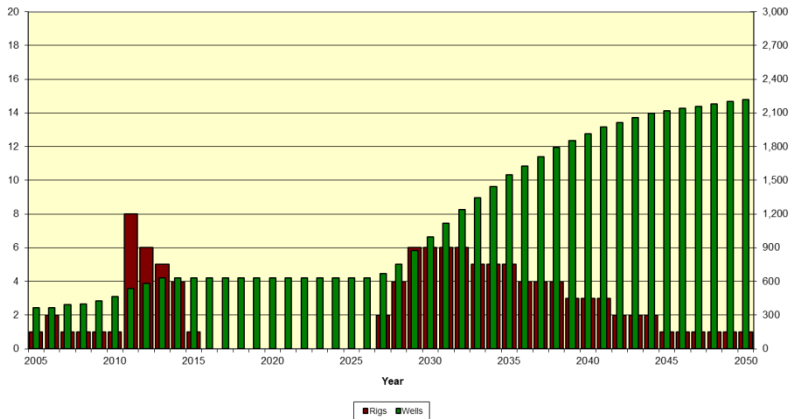
Burke Rigs and Wells



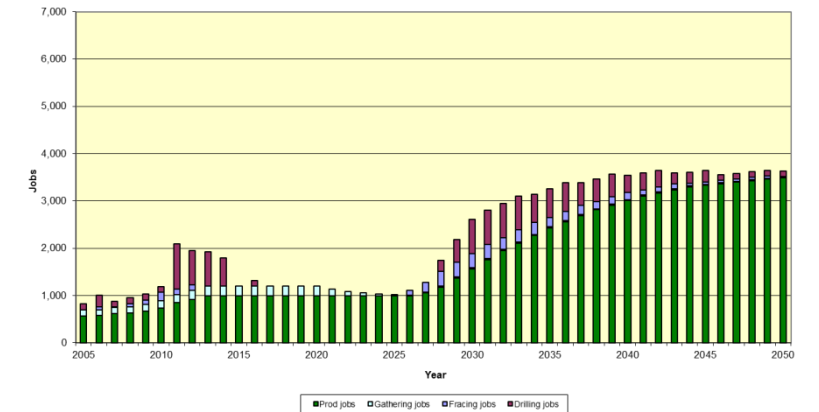
Burke Oil Industry Jobs

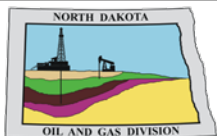


Burke Rigs and Wells

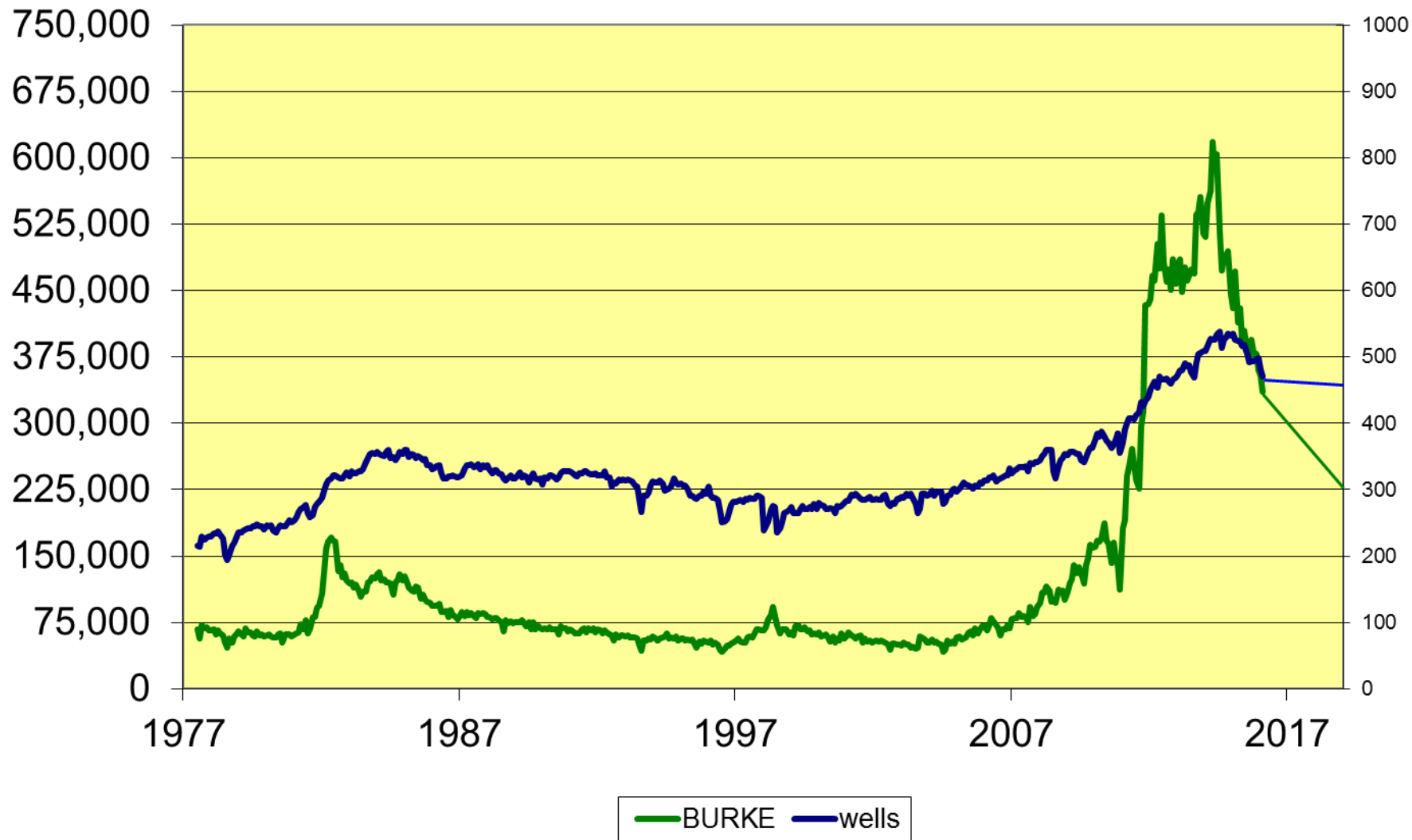


Burke Oil Industry Jobs

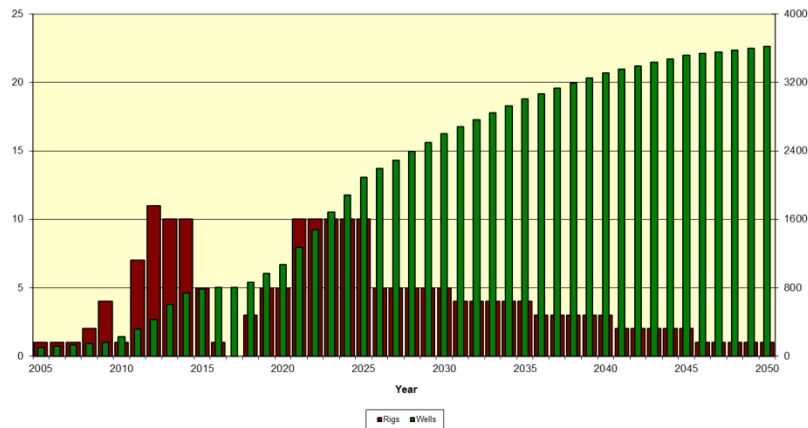




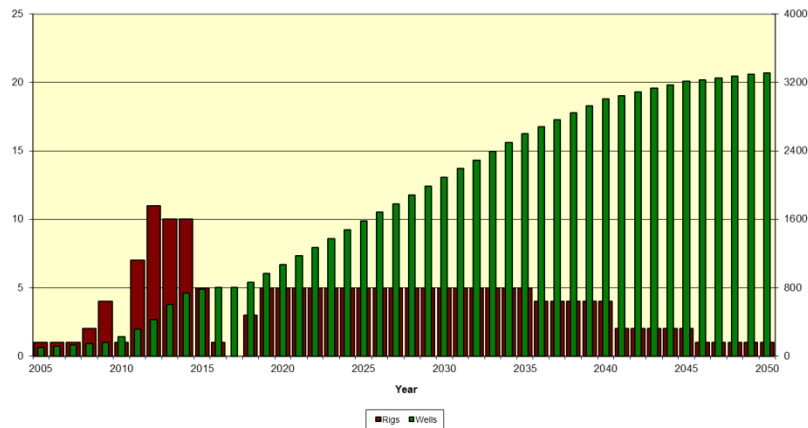
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



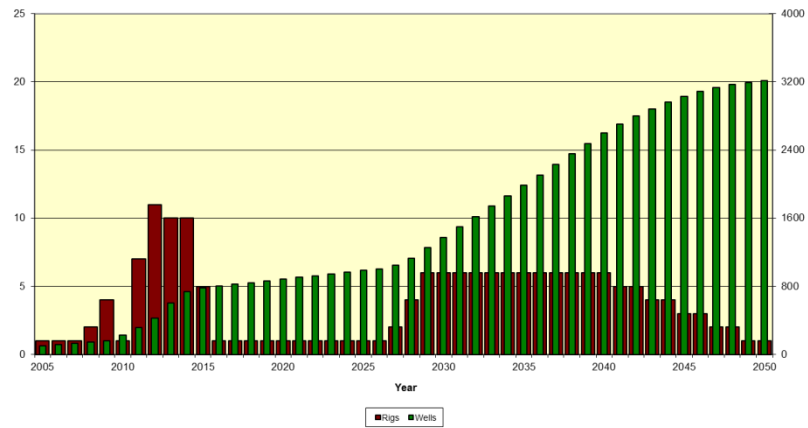
Divide Rigs and Wells



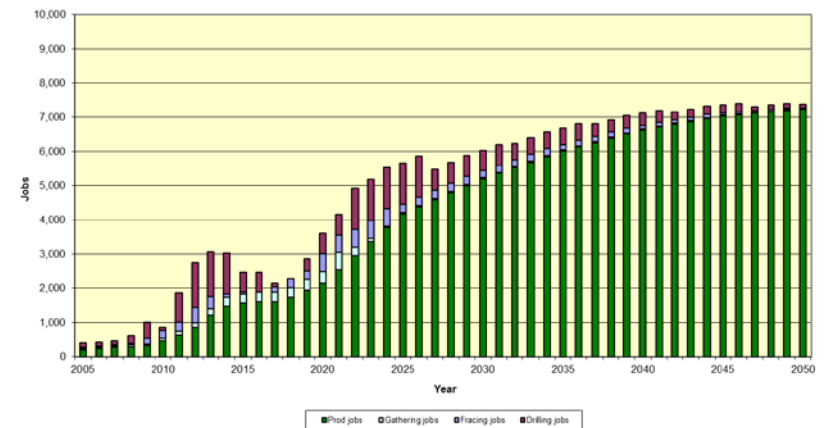
Divide Rigs and Wells



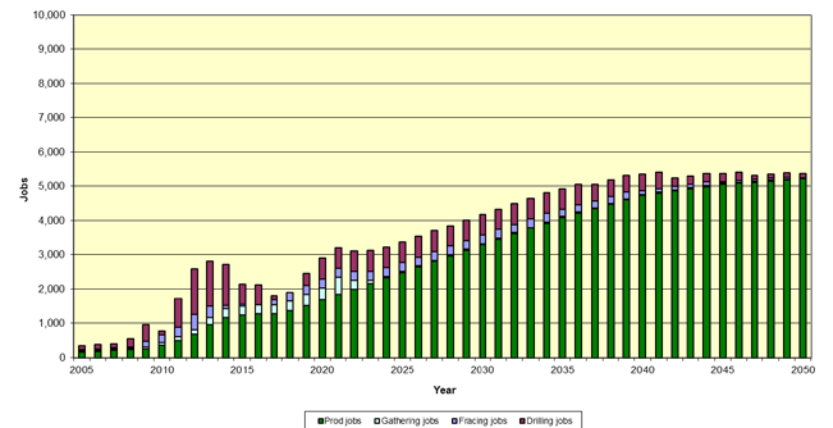
Divide Rigs and Wells



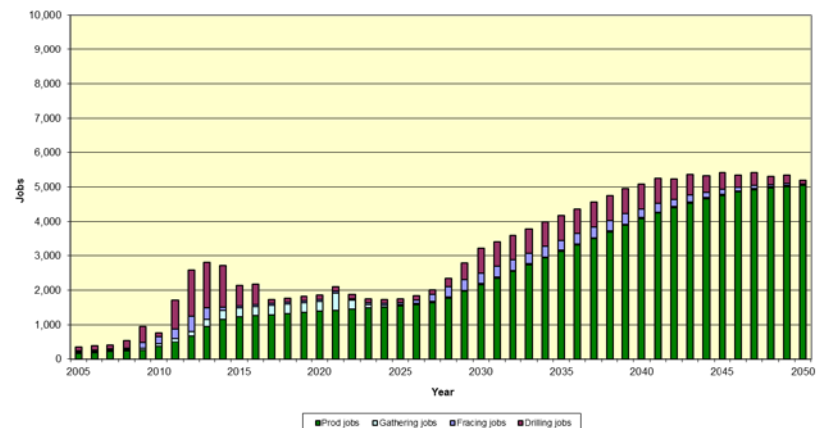
Divide Oil Industry Jobs



Divide Oil Industry Jobs

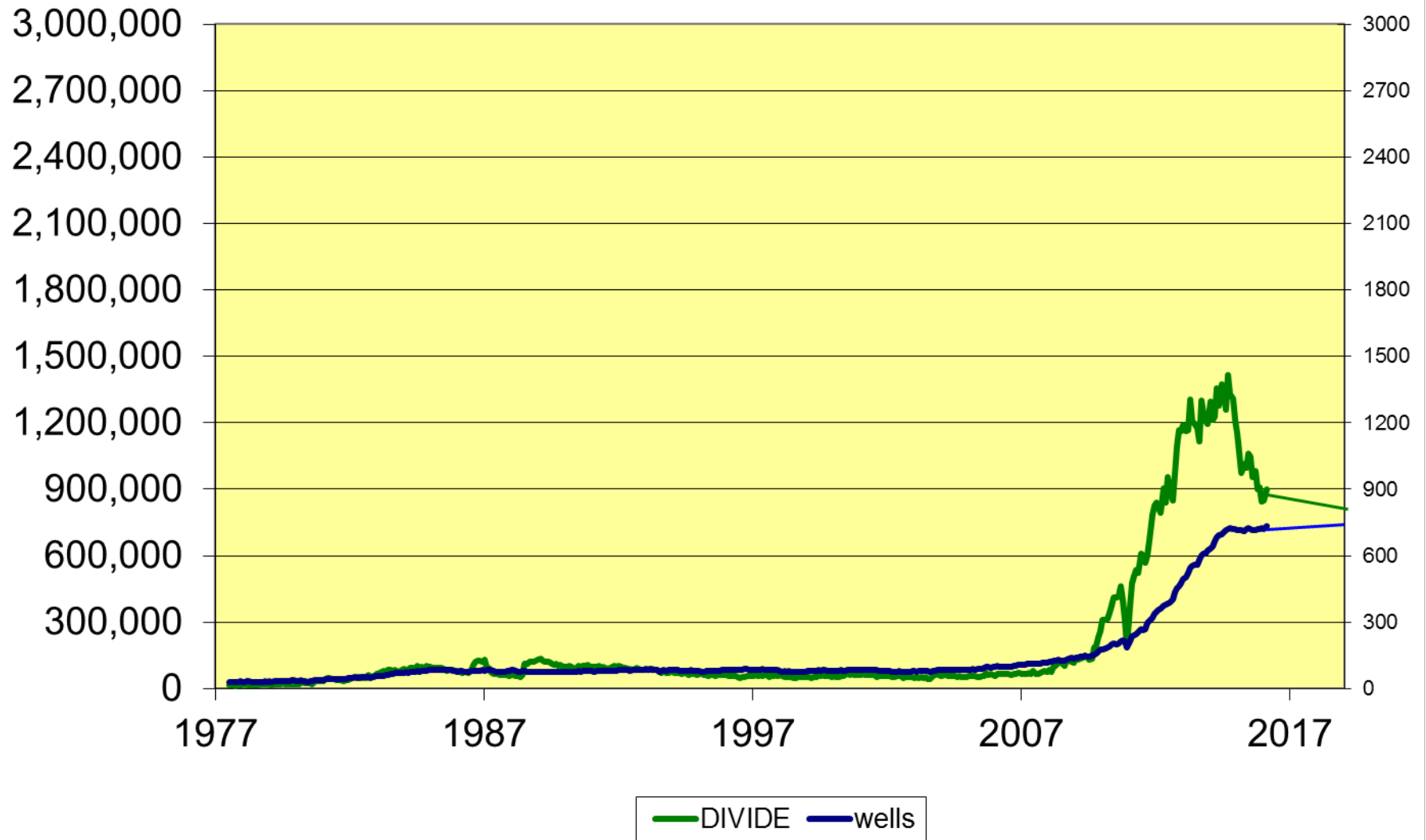


Divide Oil Industry Jobs

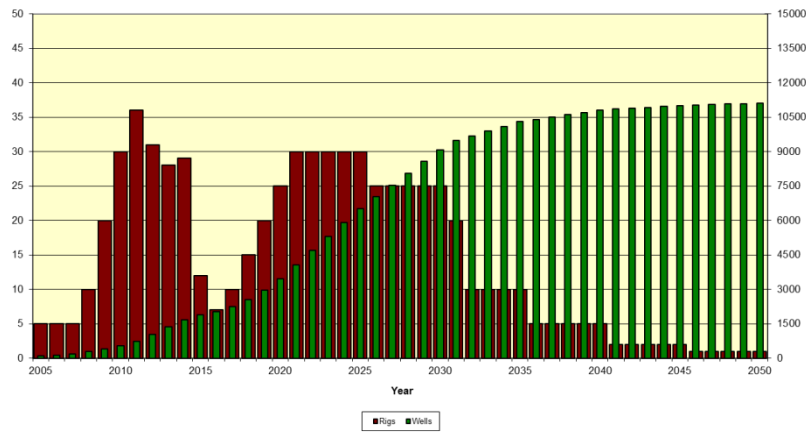




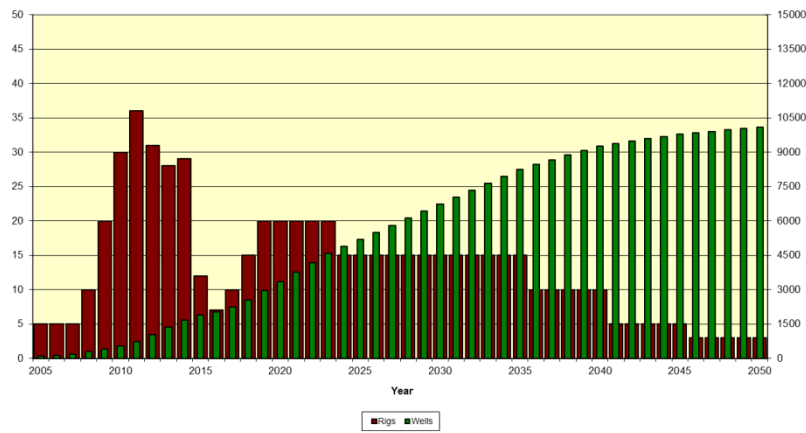
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



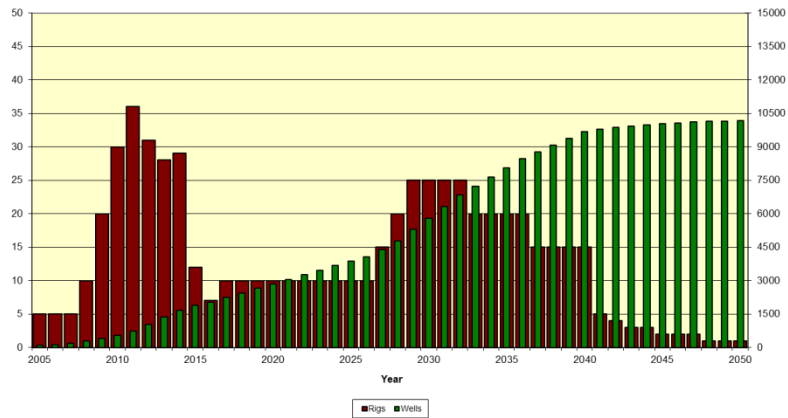
Dunn Rigs and Wells



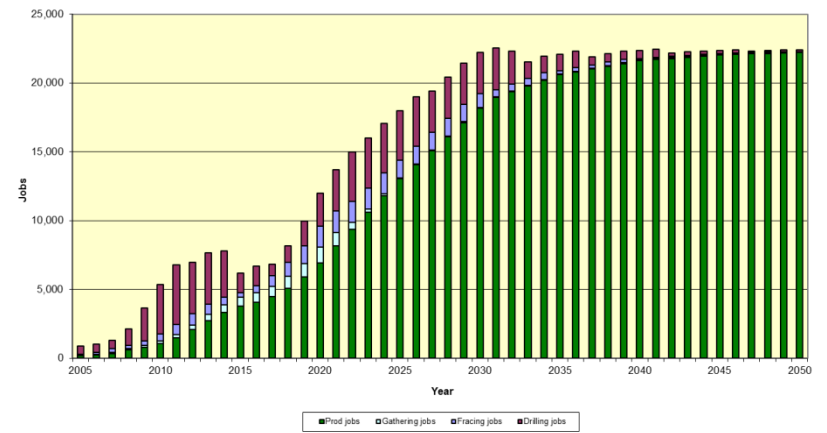
Dunn Rigs and Wells



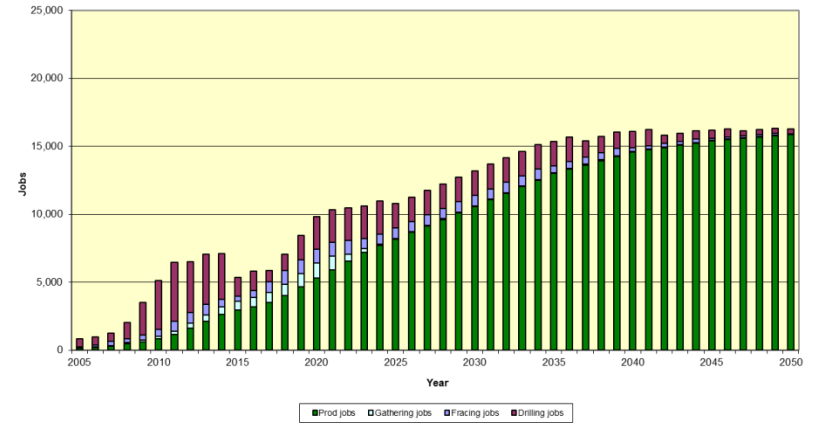
Dunn Rigs and Wells



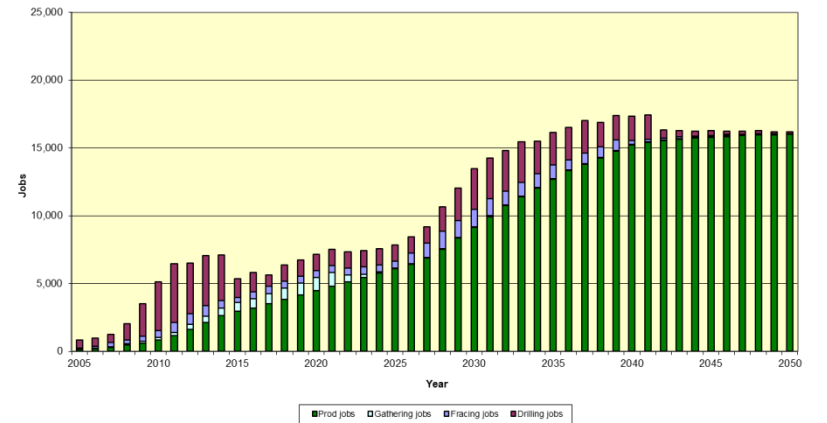
Dunn Oil Industry Jobs

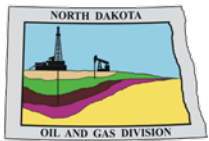


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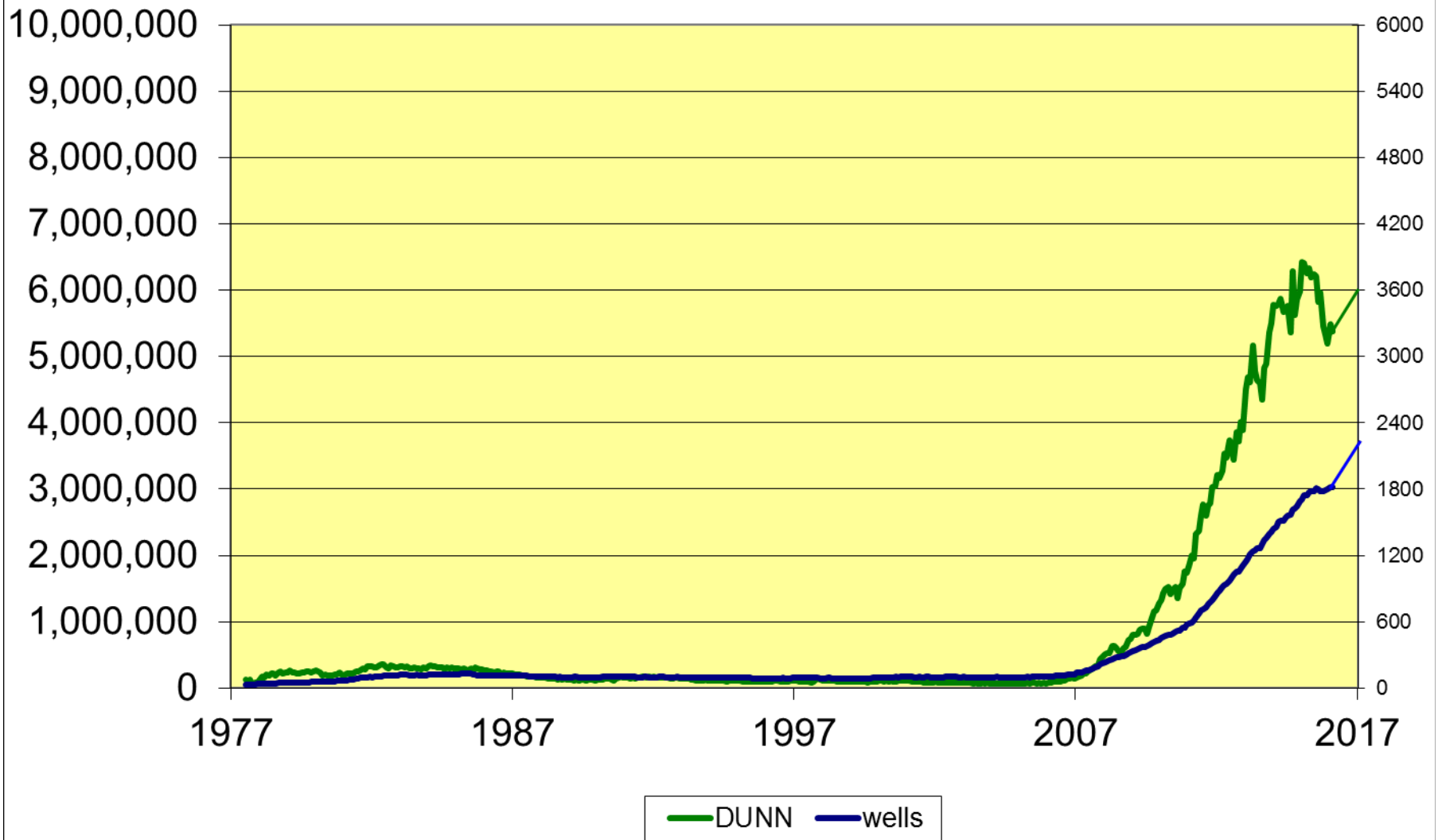


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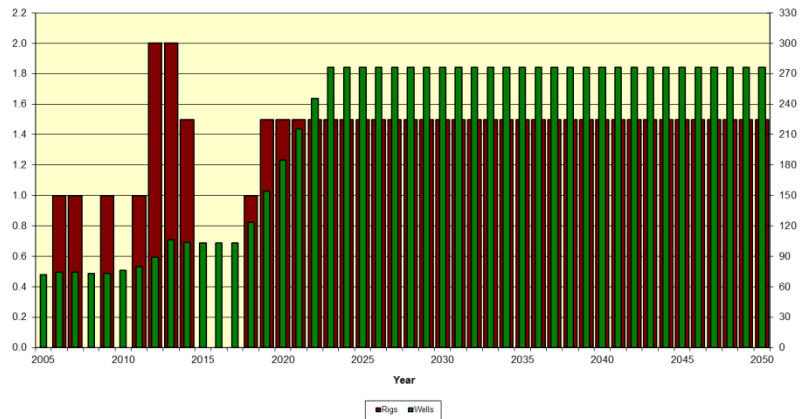




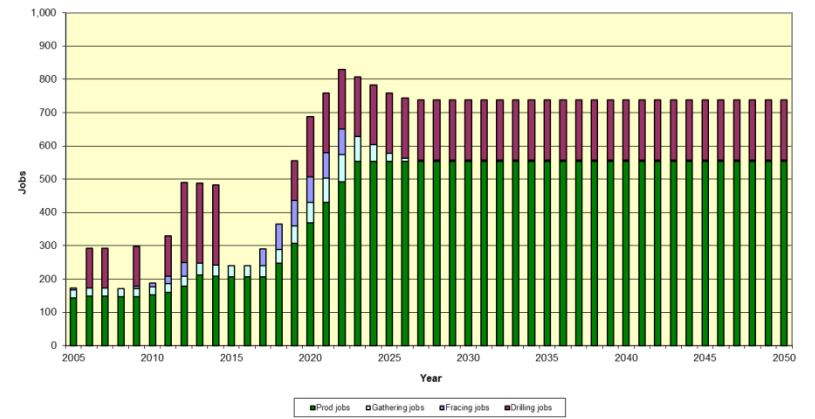
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



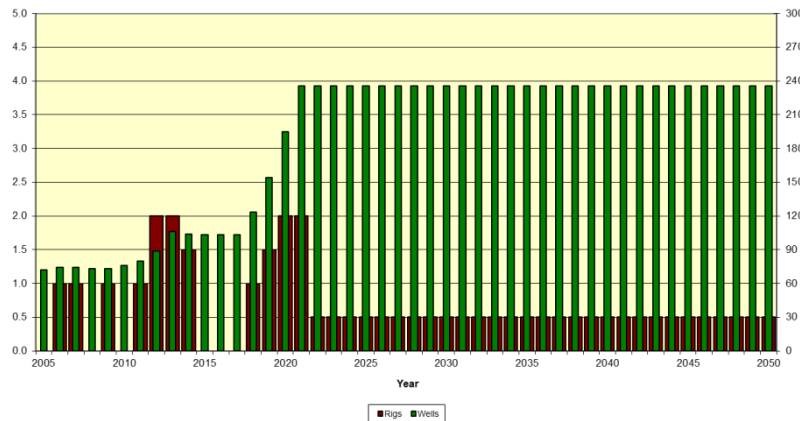
Golden Valley Rigs and Wells (includes Red River)



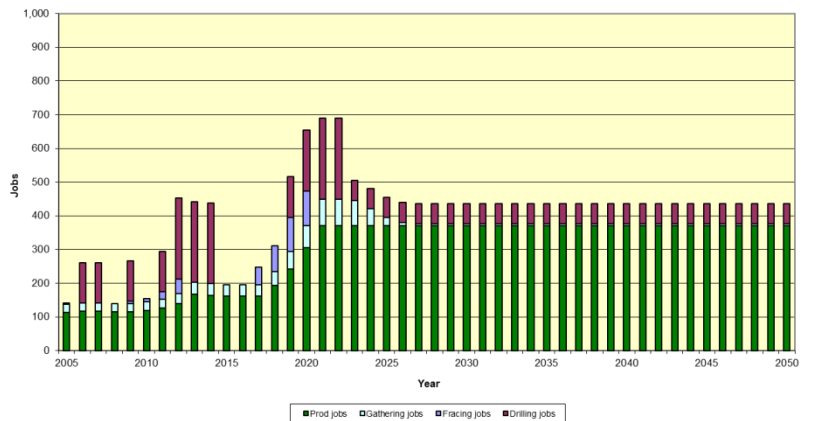
Golden Valley Oil Industry Jobs



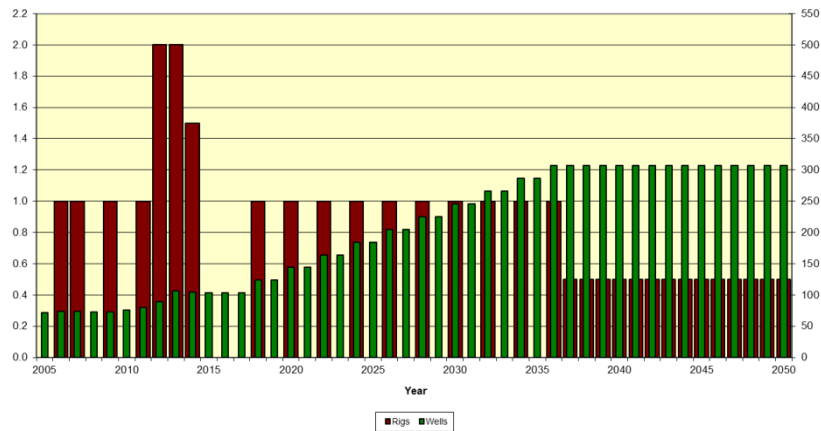
Golden Valley Rigs and Wells (includes Red River)



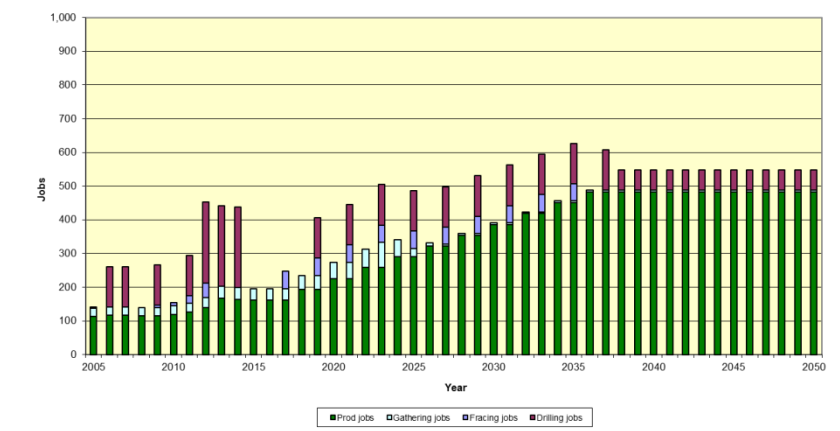
Golden Valley Oil Industry Jobs

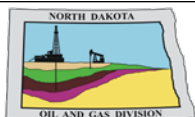


Golden Valley Rigs and Wells (includes Red River)

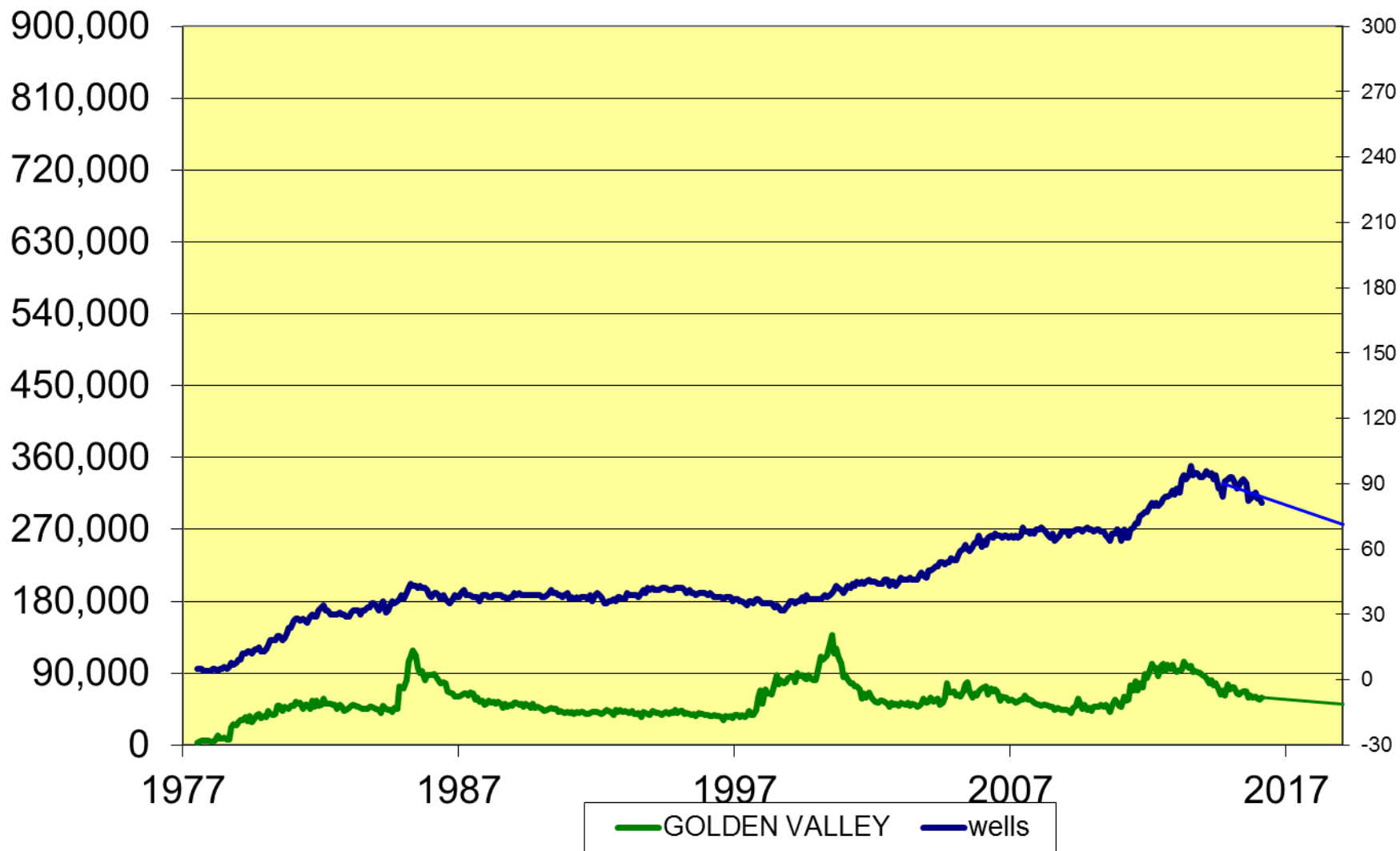


Golden Valley Oil Industry Jobs

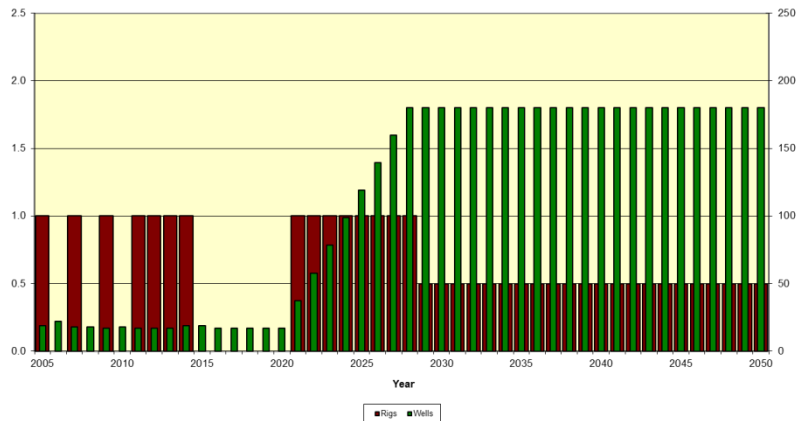




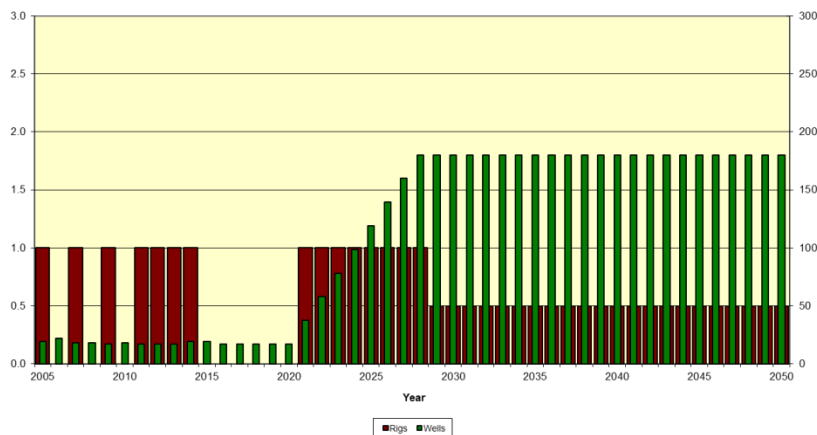
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



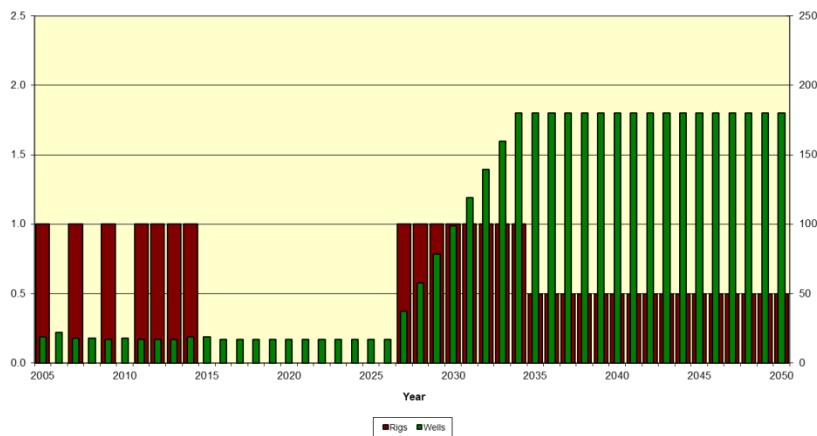
McHenry Rigs and Wells



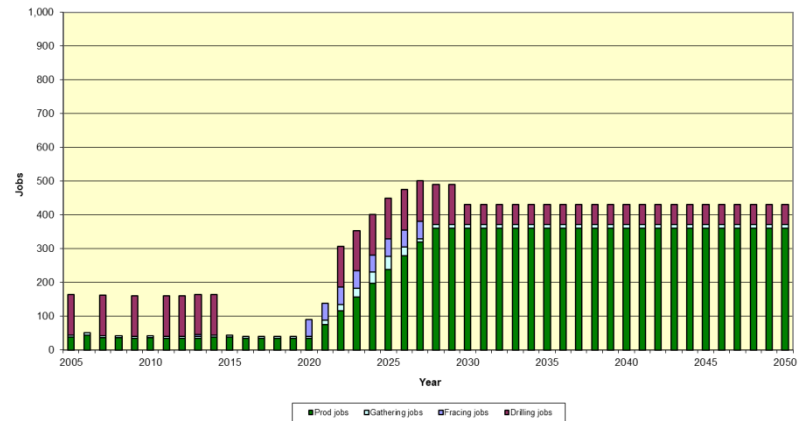
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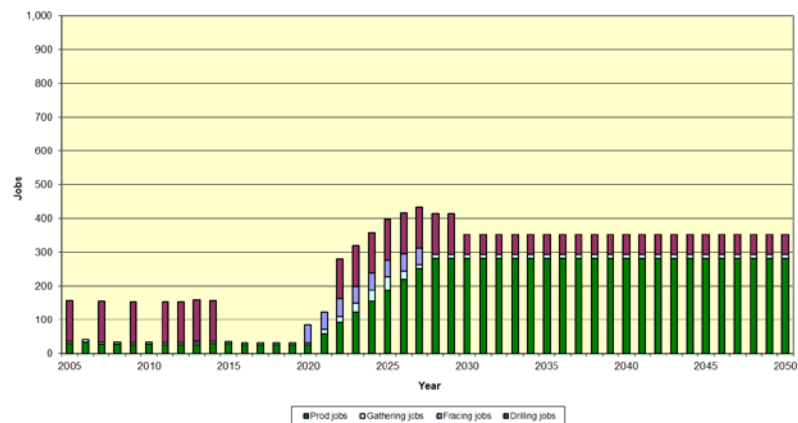
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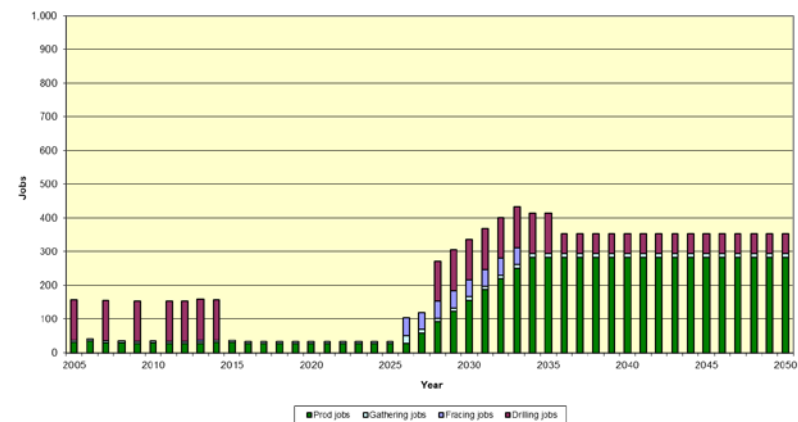
McHenry Oil Industry Jobs



McHenry Oil Industry Jobs

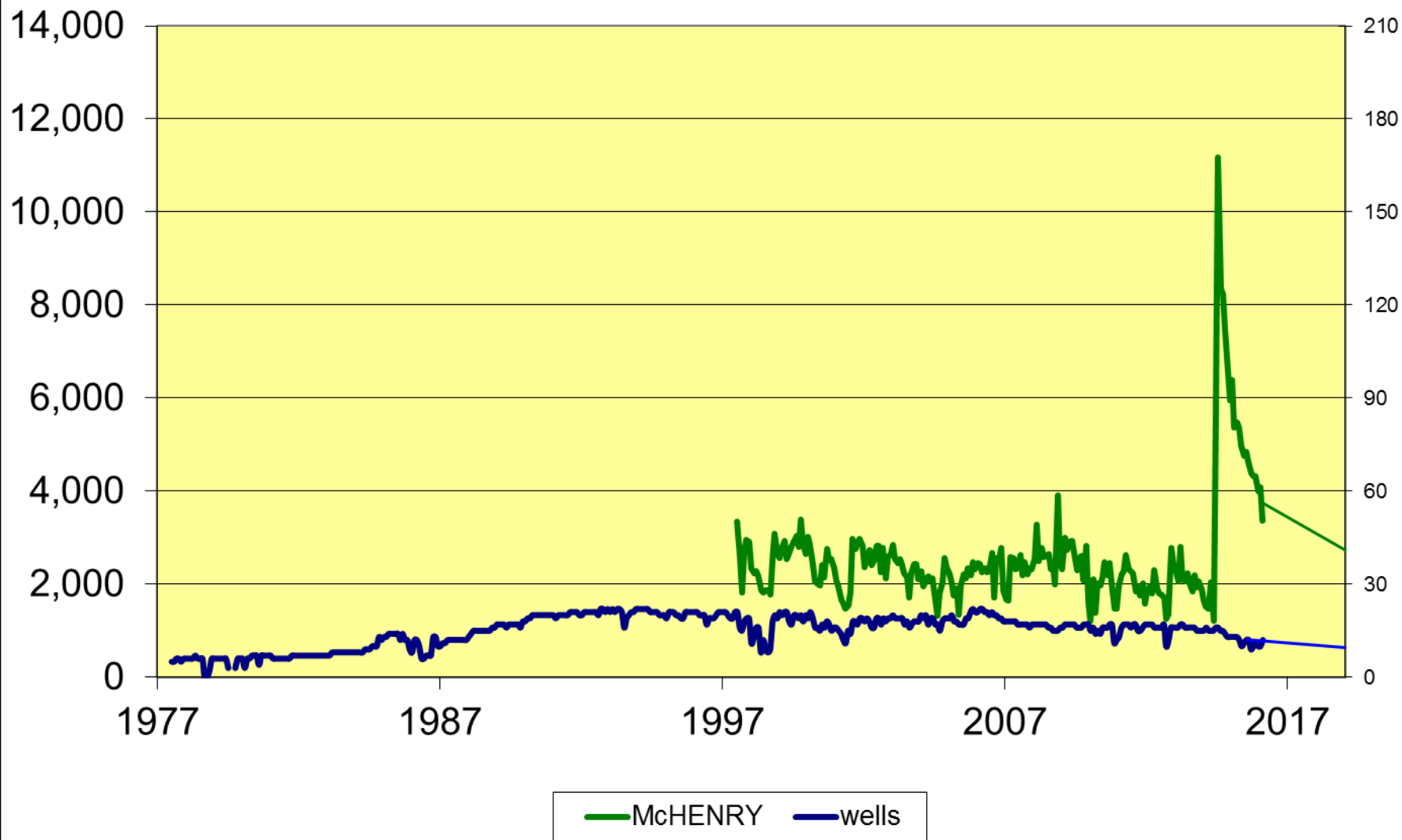


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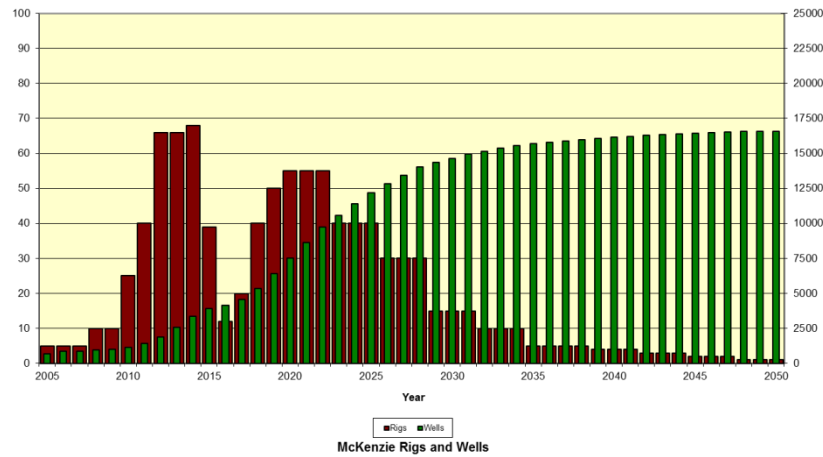




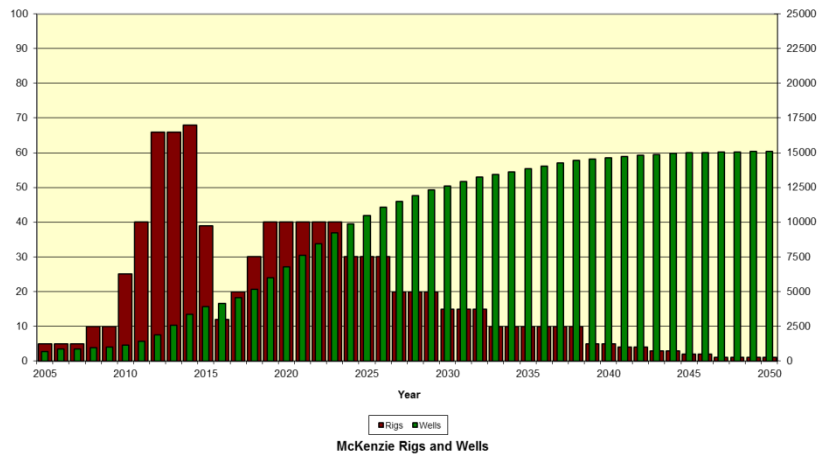
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



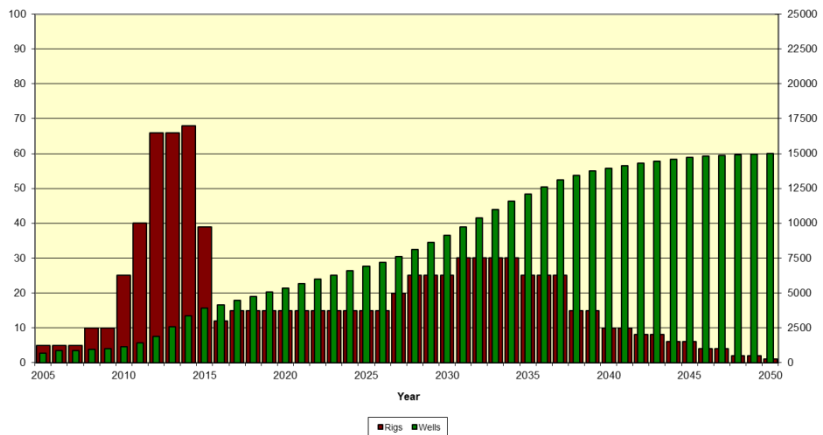
McKenzie Rigs and Wells



McKenzie Rigs and Wells

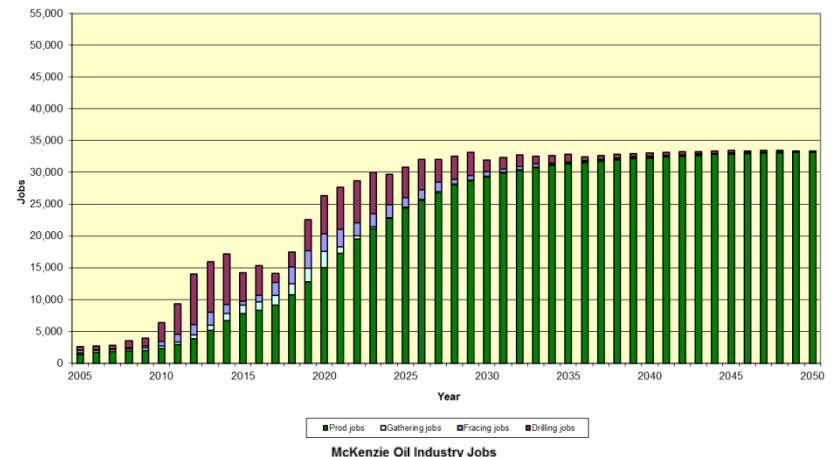


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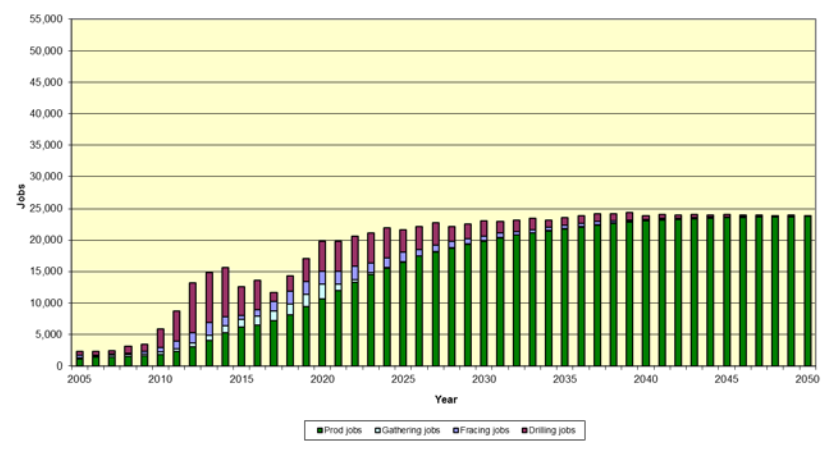


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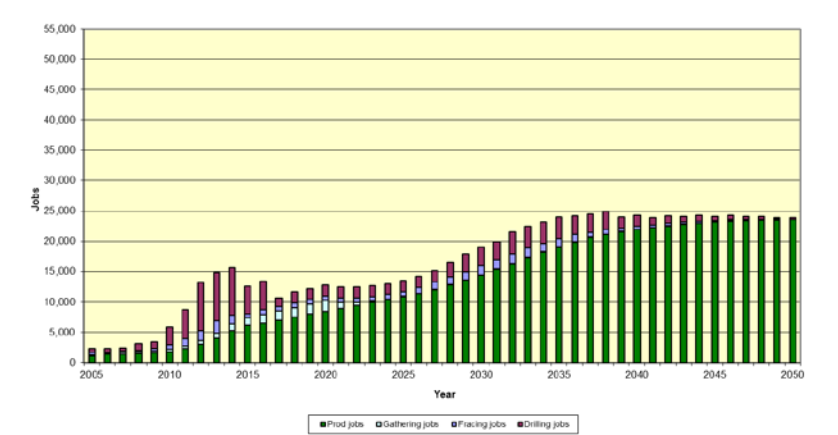
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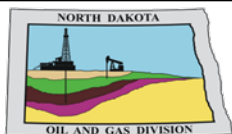
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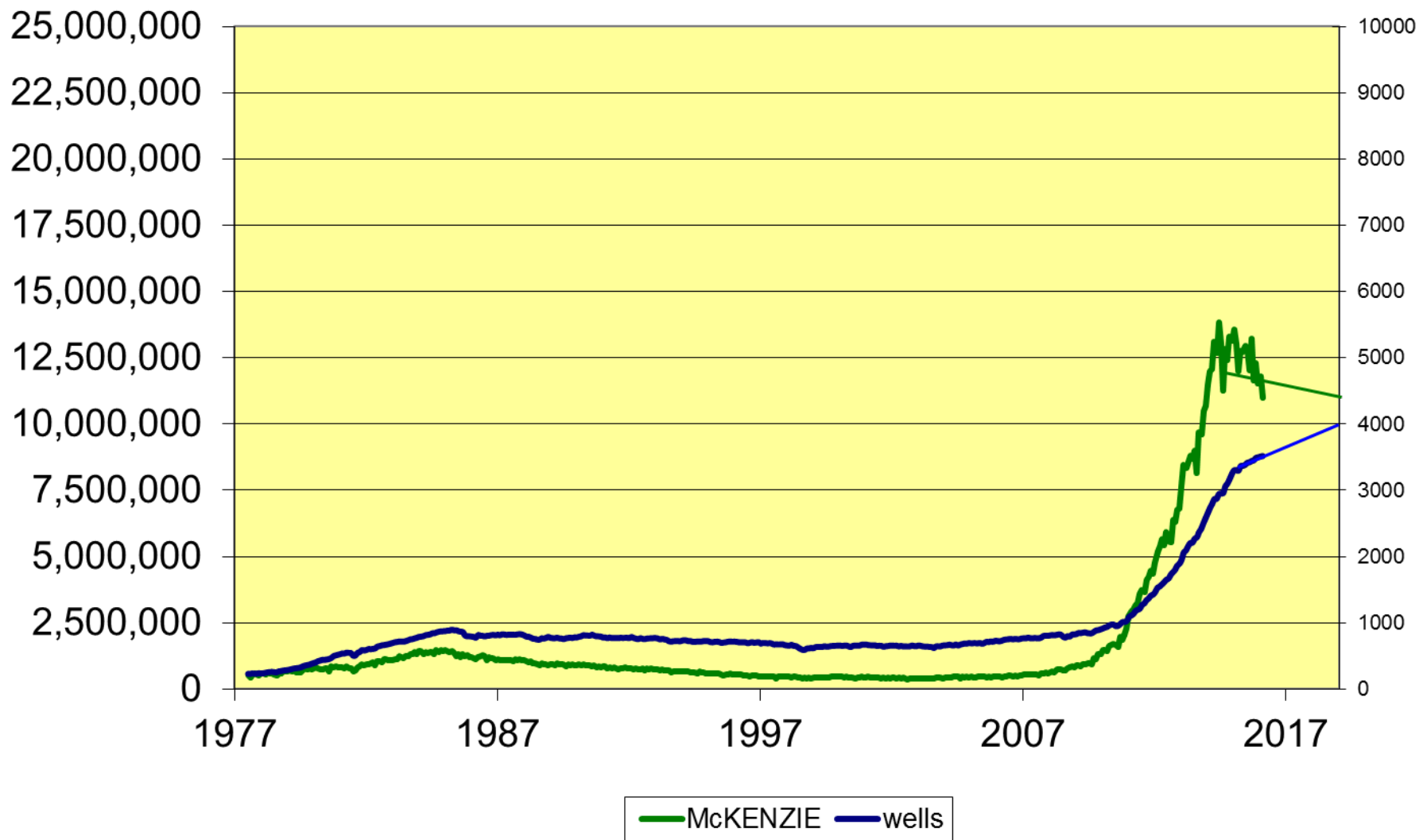
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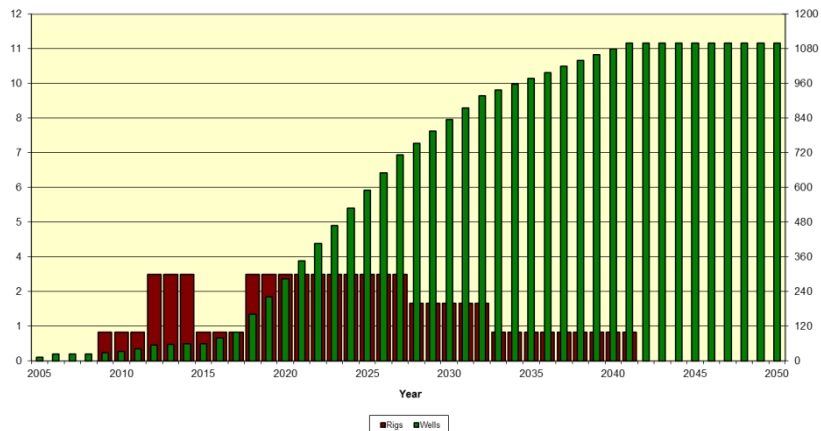
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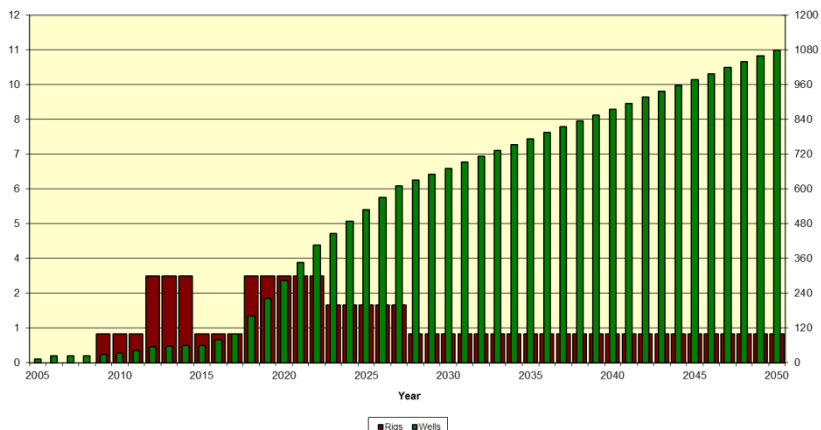
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



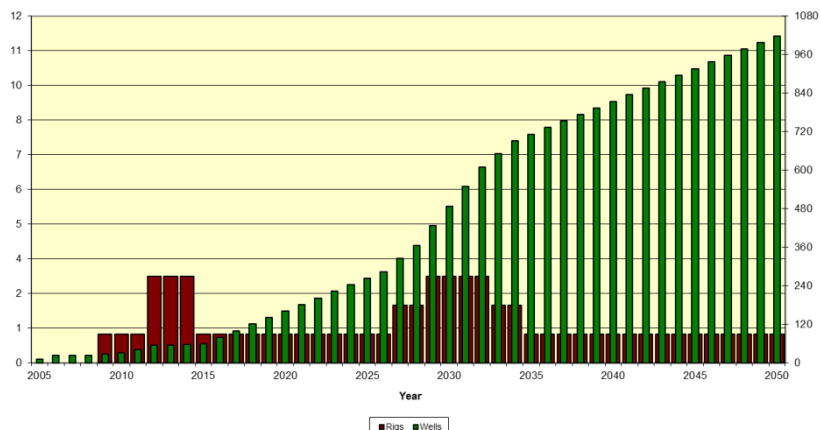
McLean Rigs and Wells



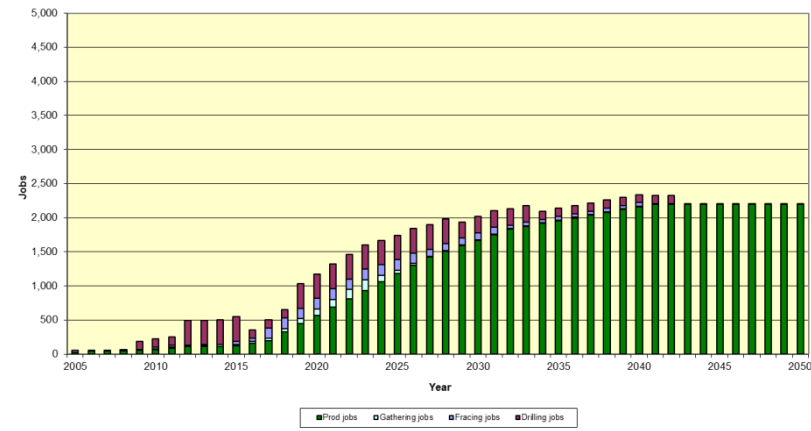
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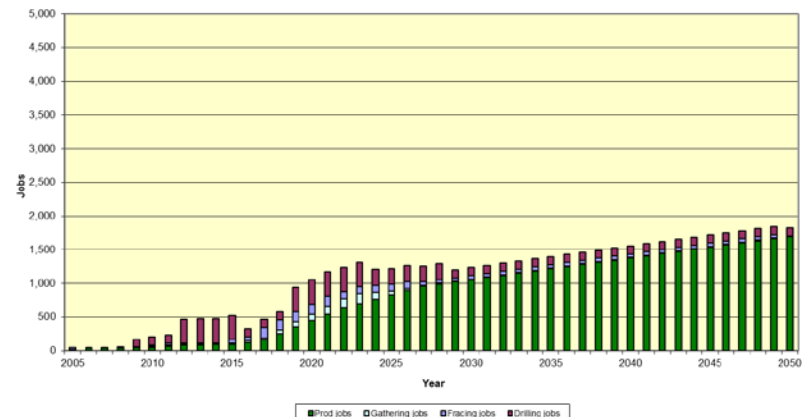
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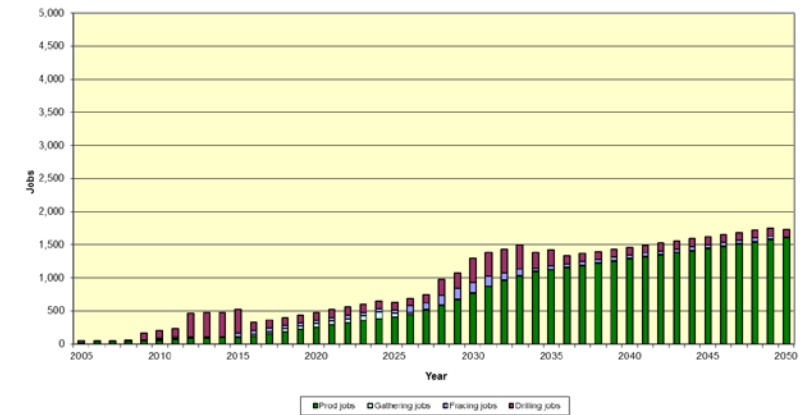
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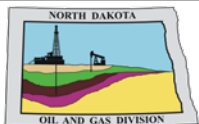


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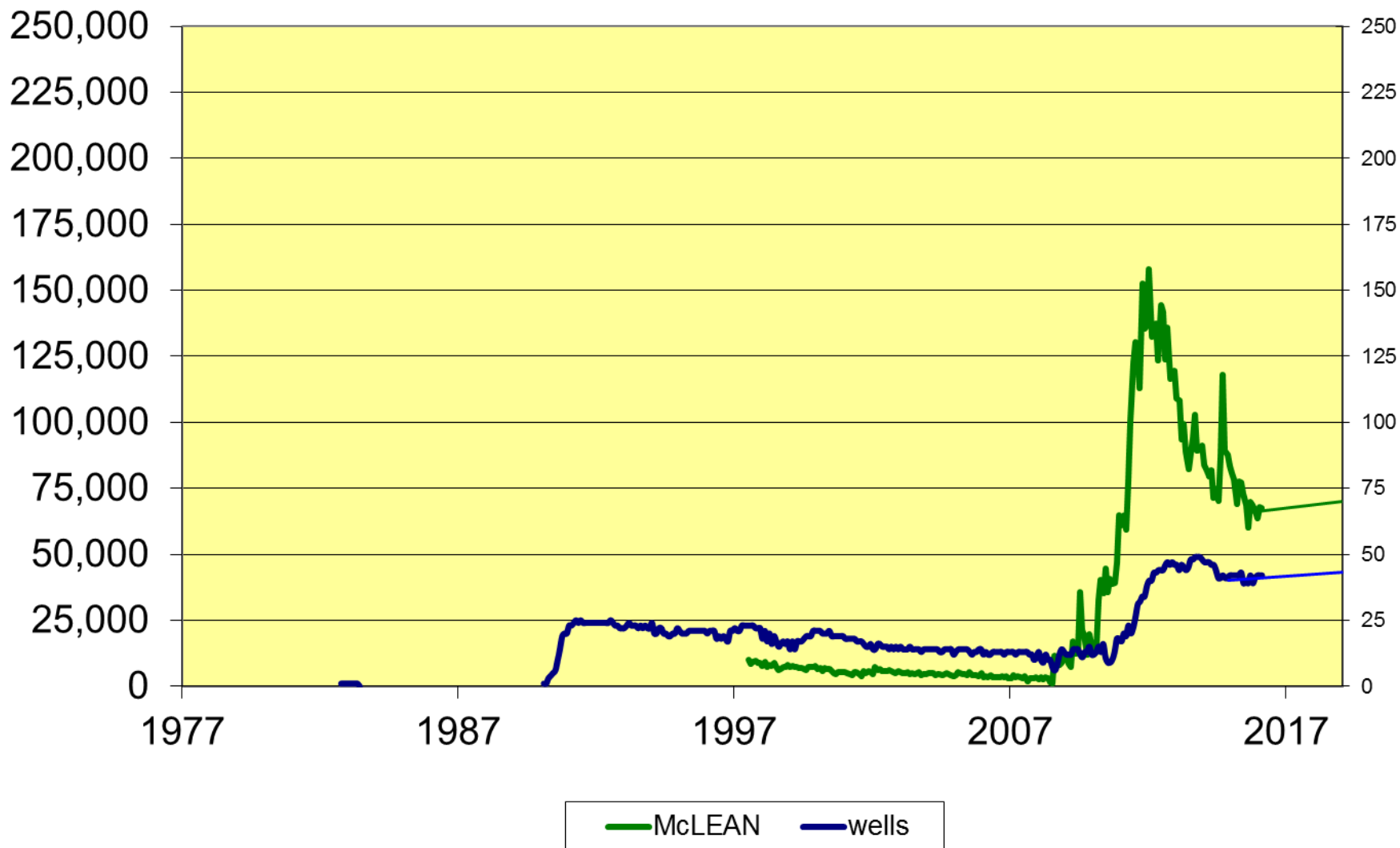


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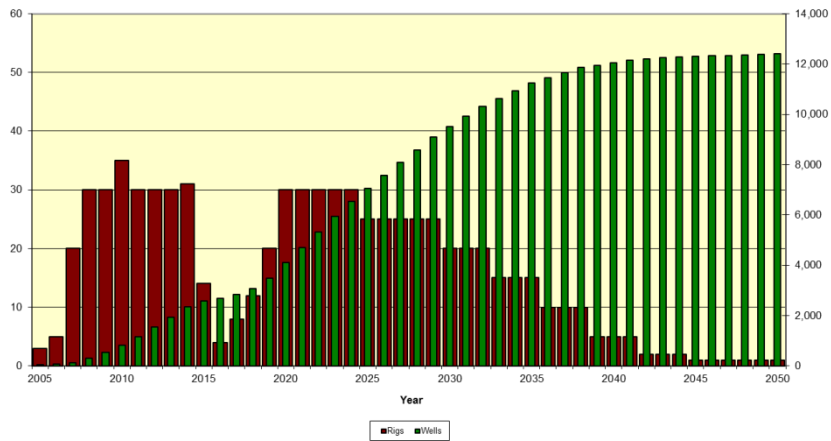




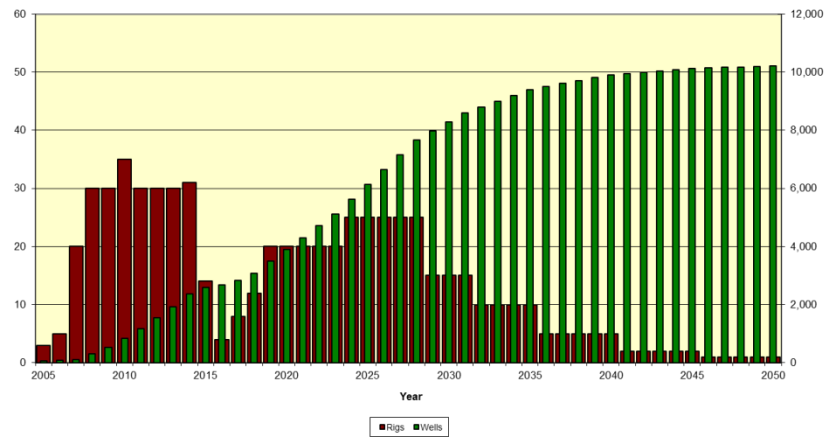
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



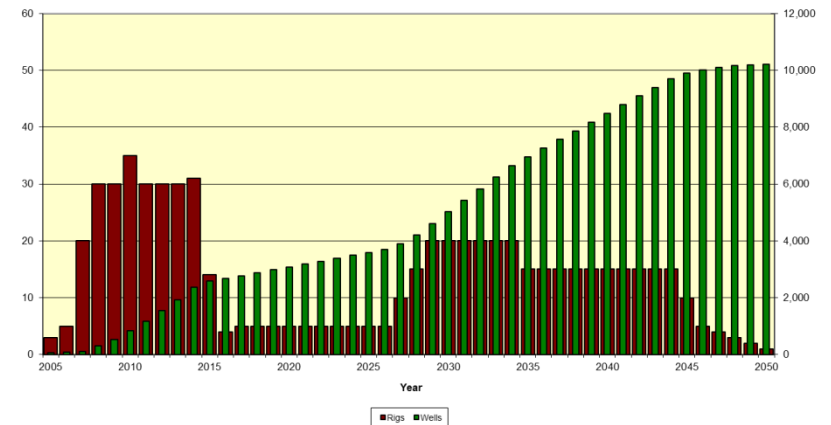
Mountrail Rigs and Wells



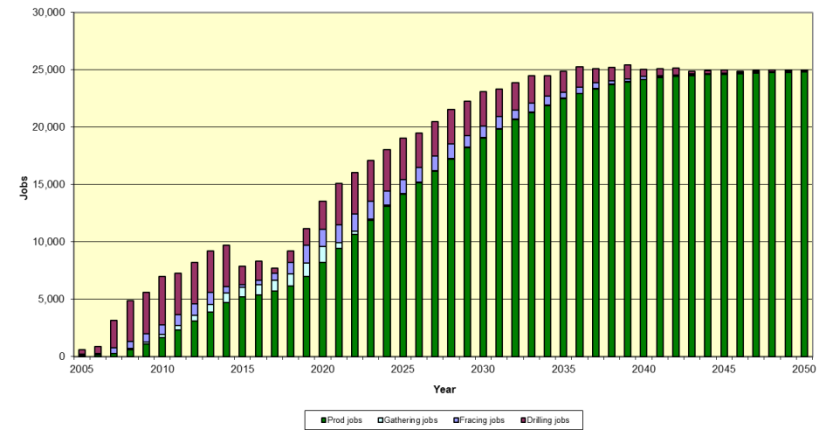
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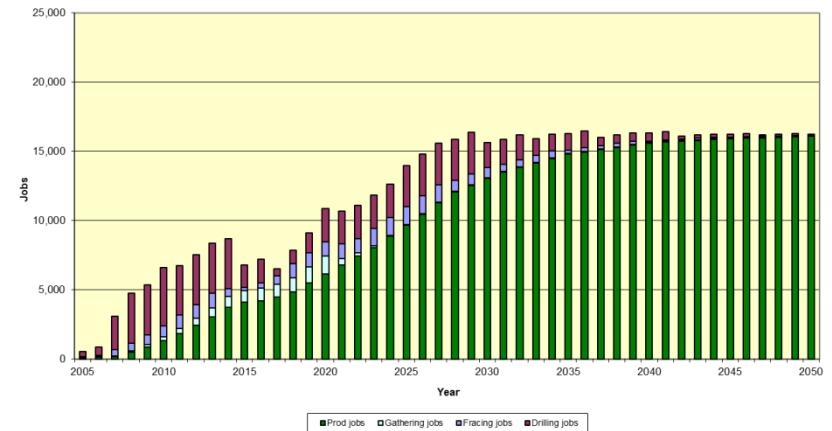
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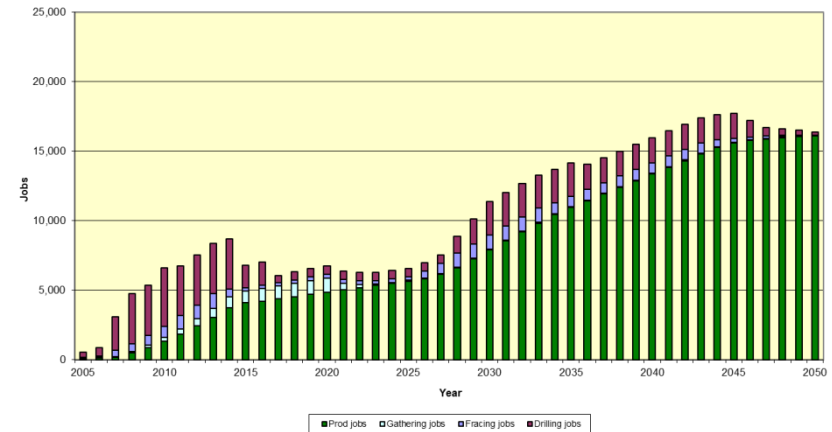
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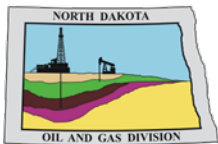


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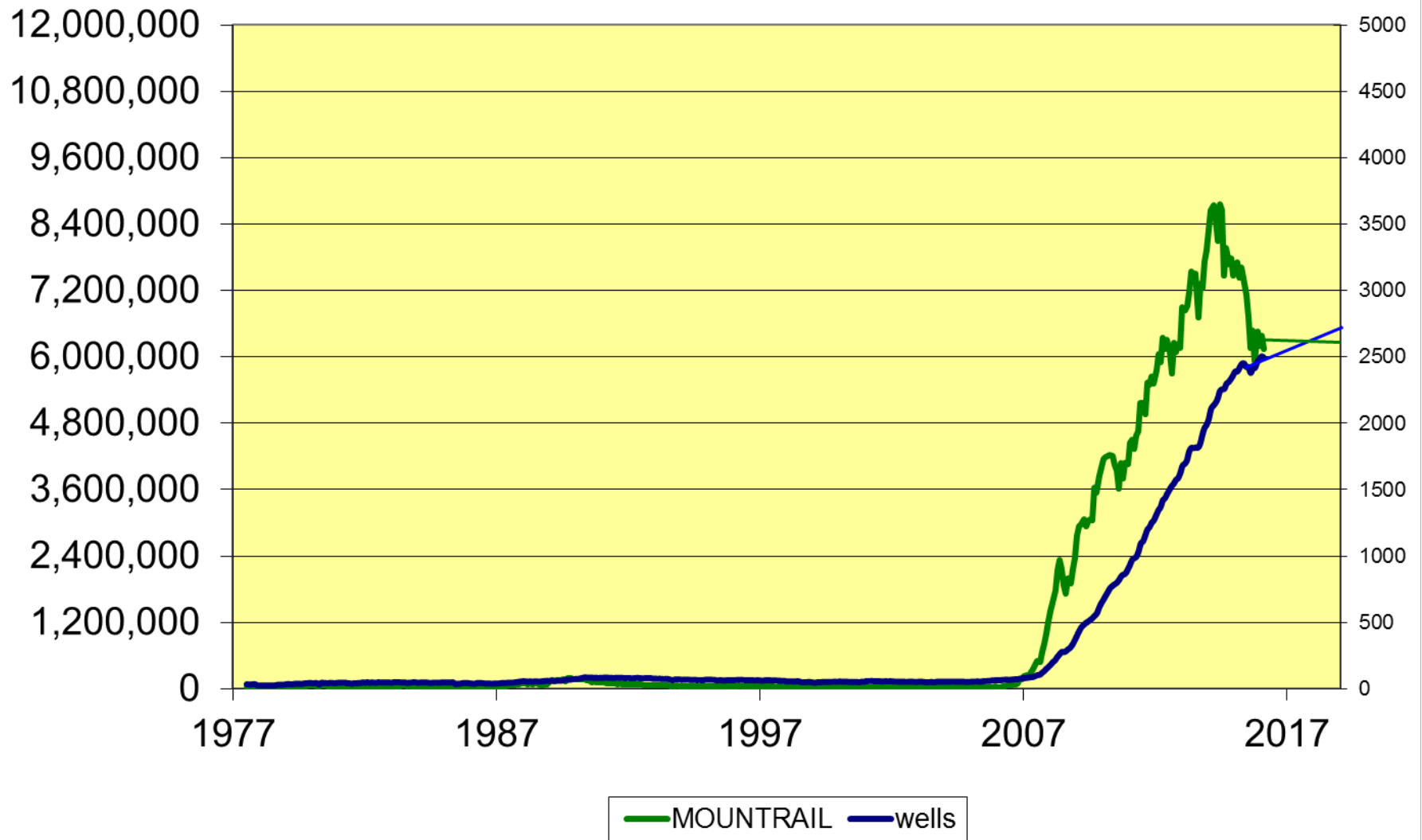


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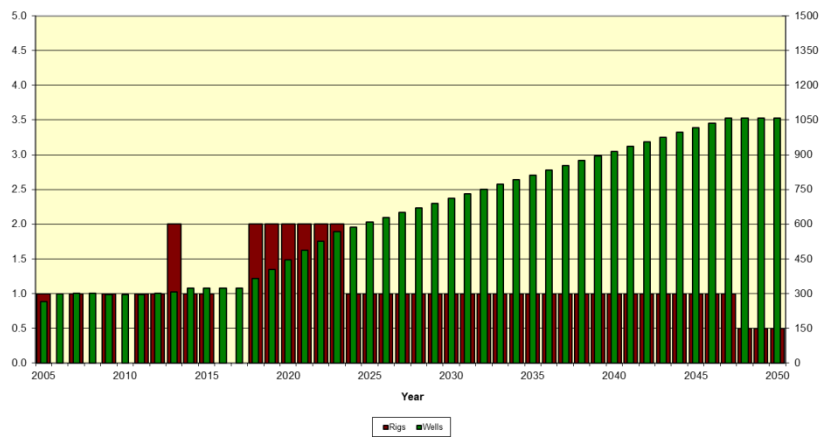




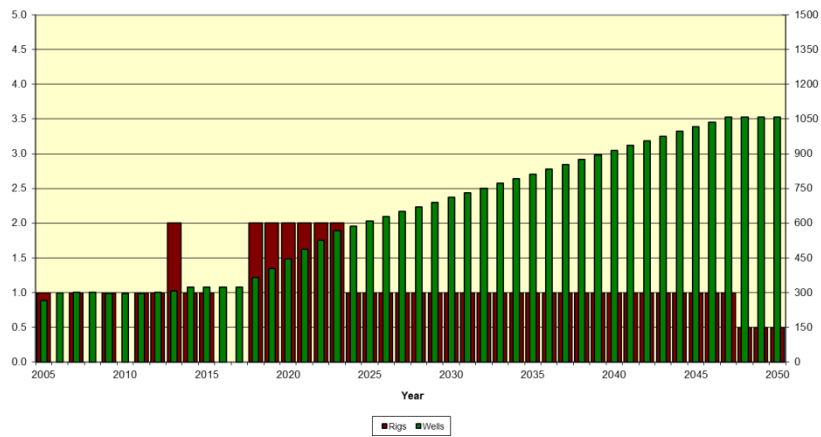
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



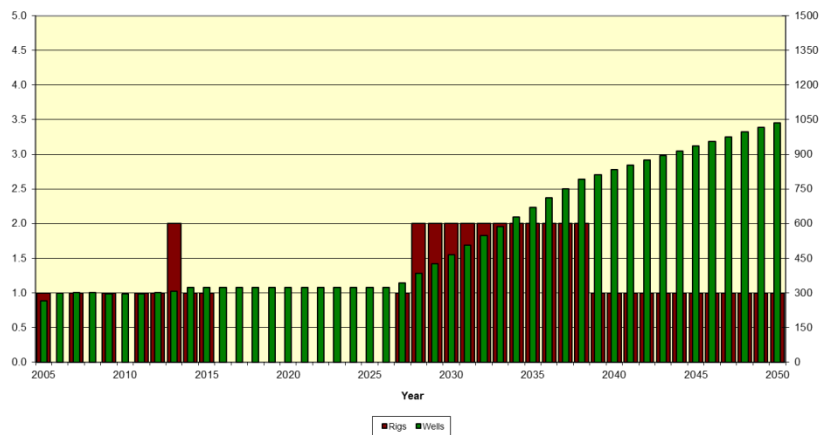
Renville Rigs and Wells



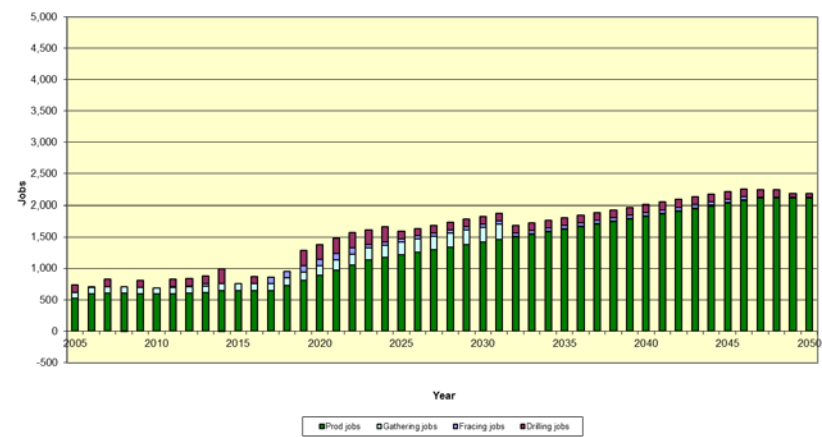
Renville Rigs and Wells



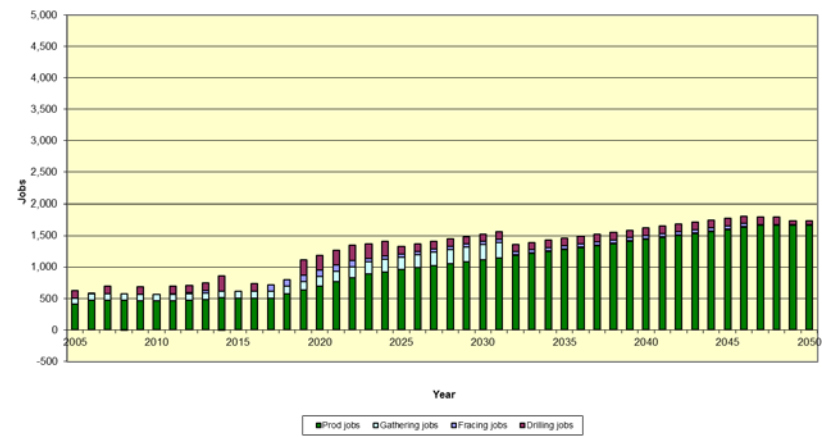
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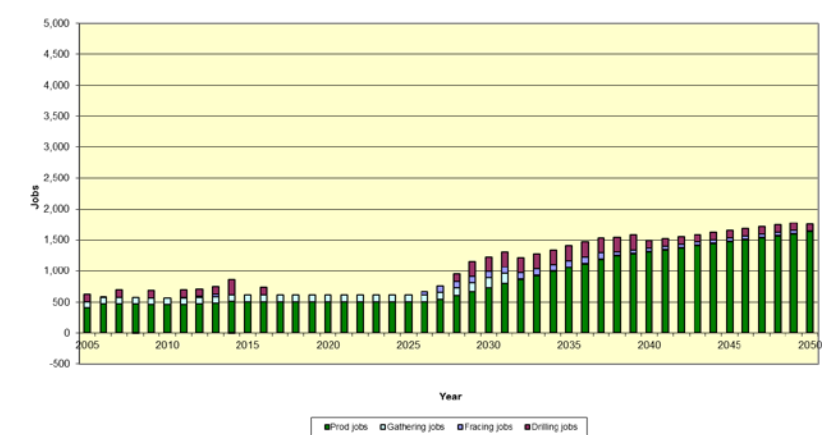
Renville Oil Industry Jobs



Renville Oil Industry Jobs

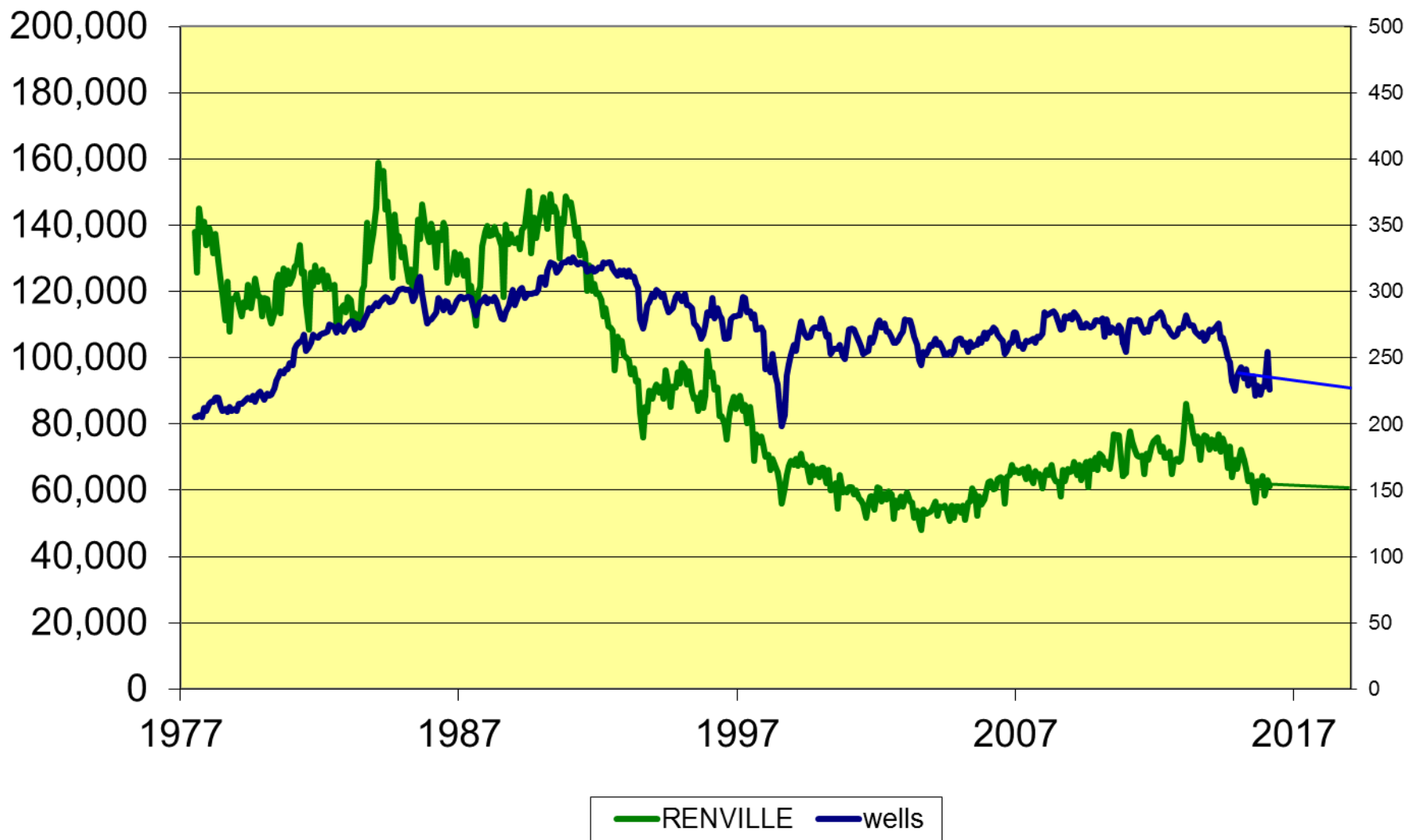


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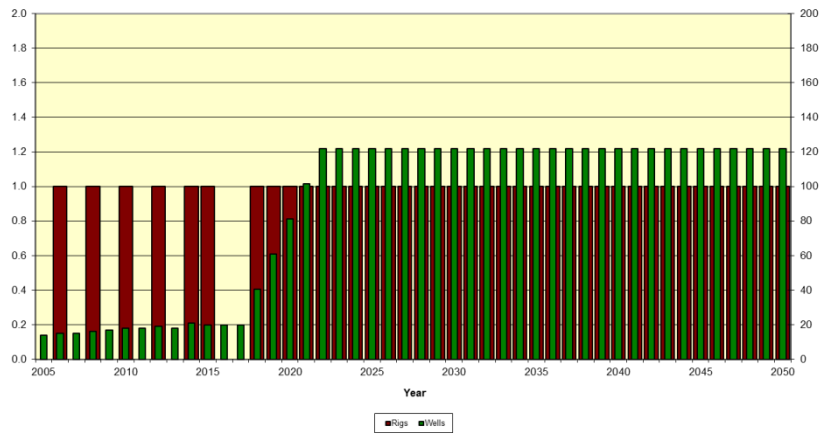




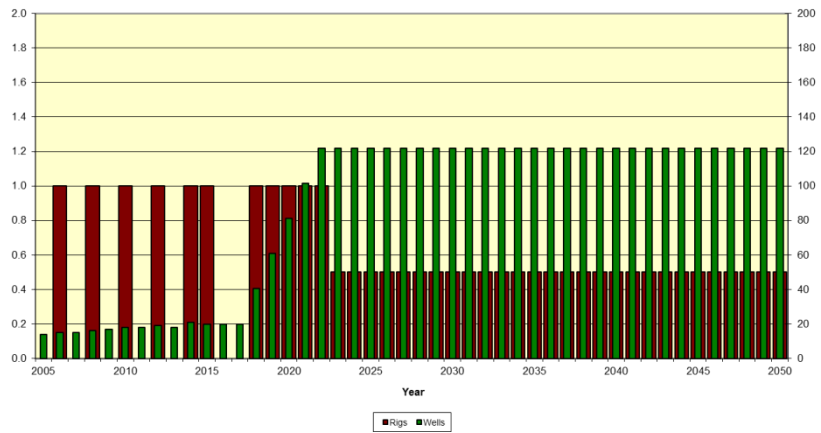
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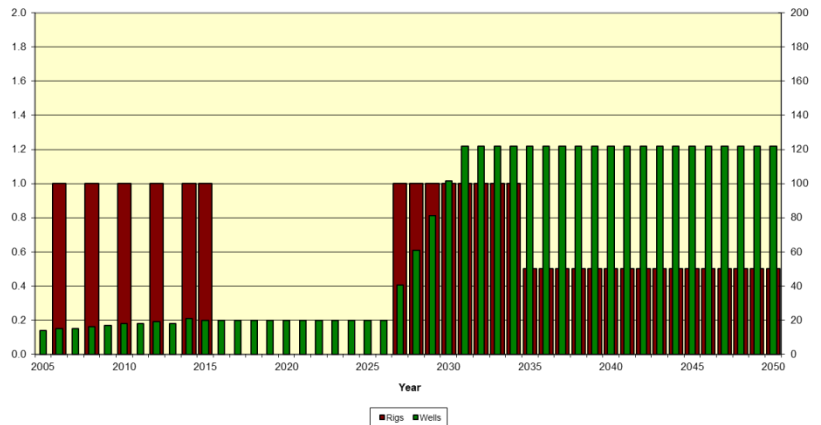
Slope non-Tyler Rigs and Wells



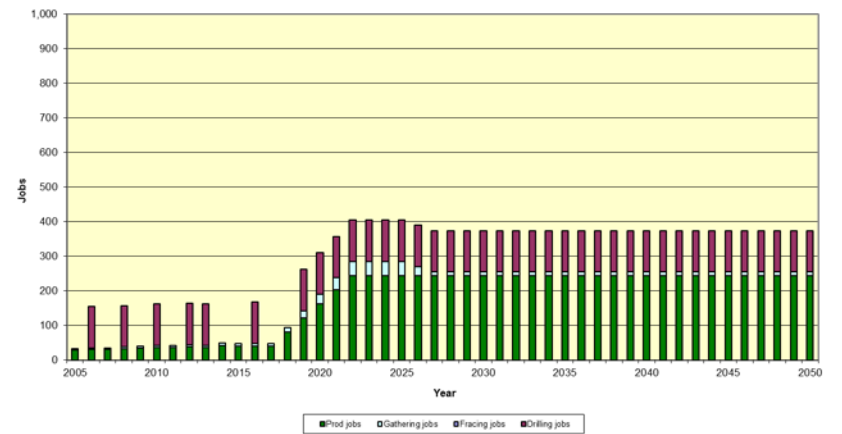
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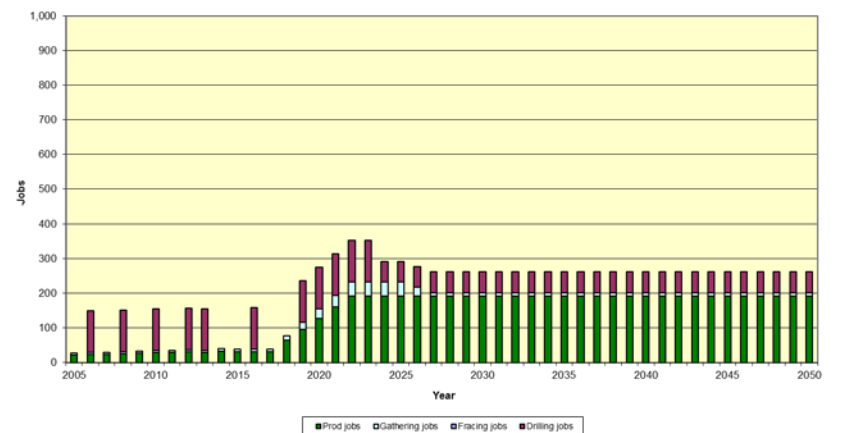
Slope non-Tyler Rigs and Wells



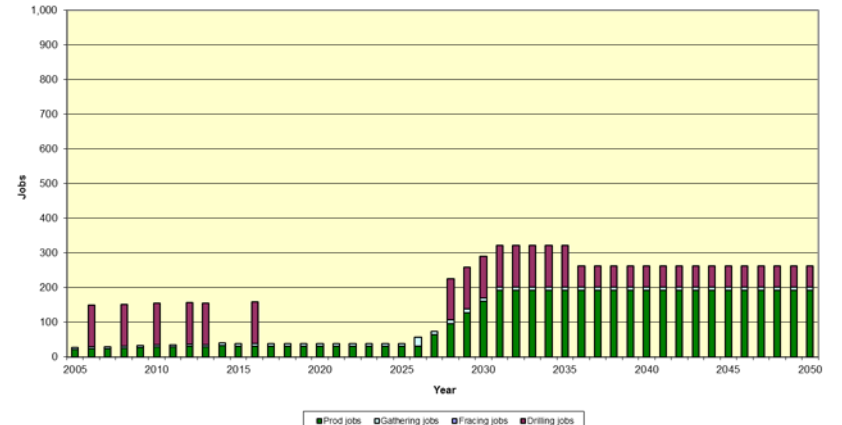
Slope non-Tyler Oil Industry Jobs



Slope non-Tyler Oil Industry Jobs

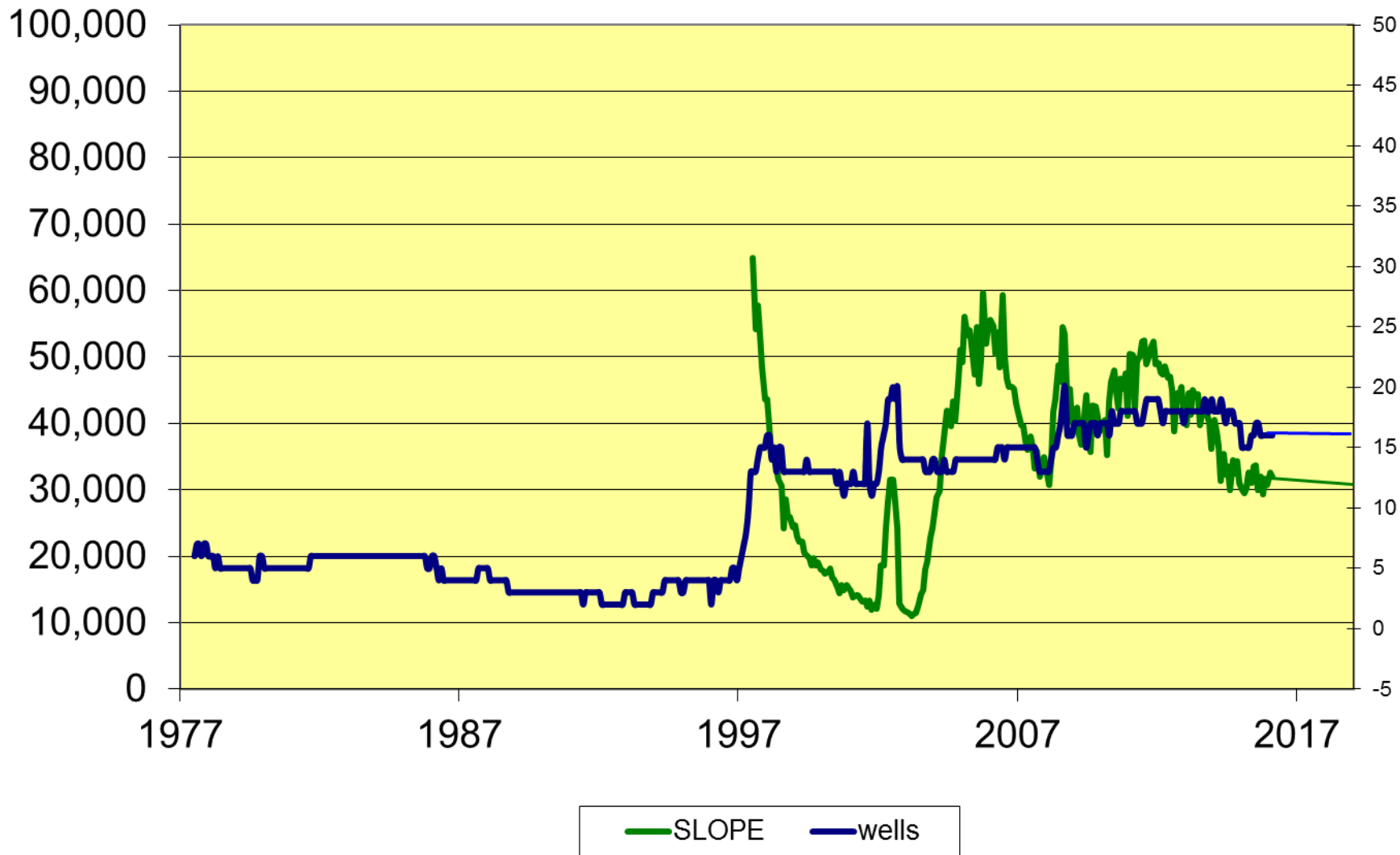


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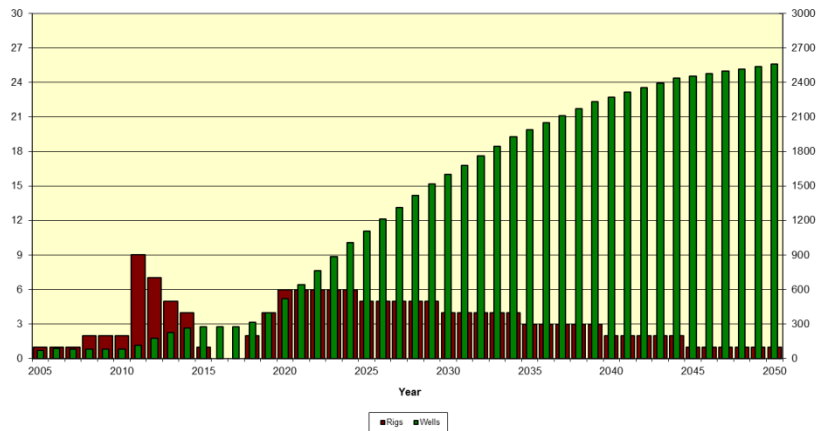




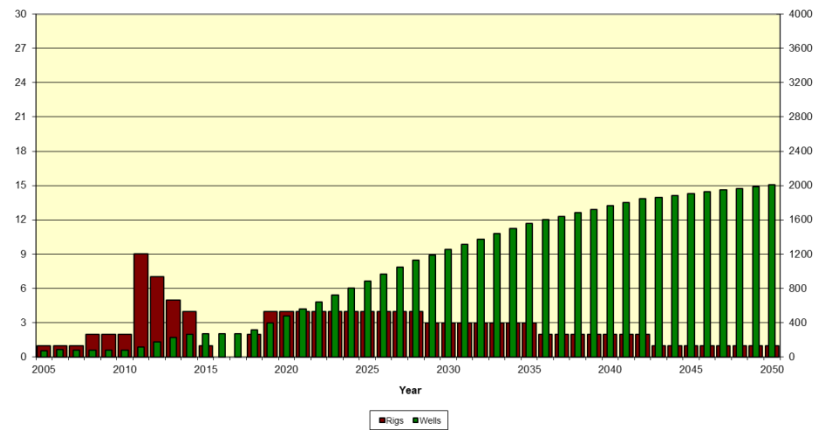
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



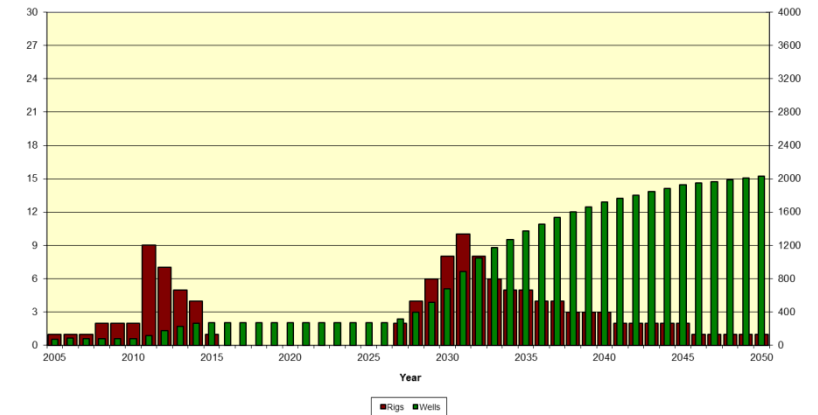
Stark Rigs and Wells



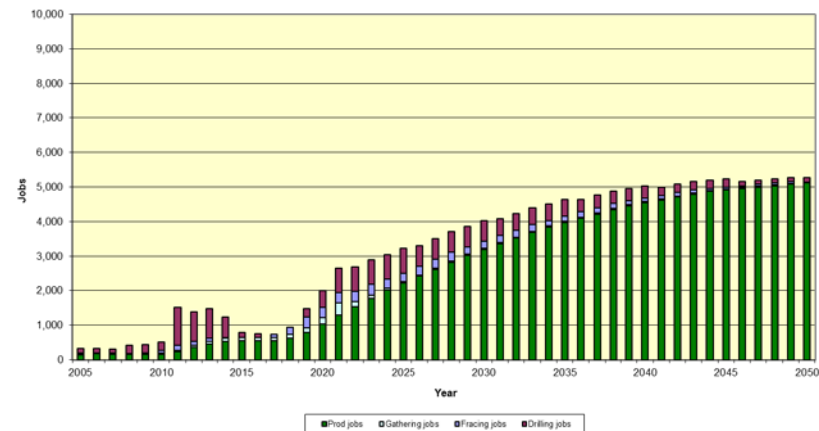
Stark Rigs and Wells



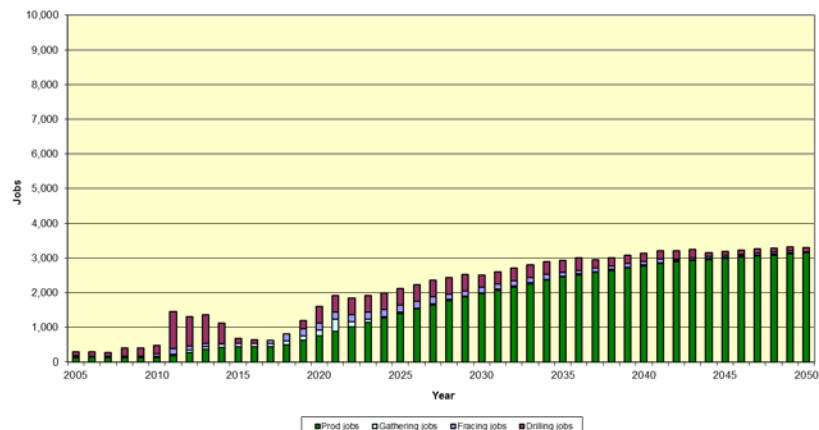
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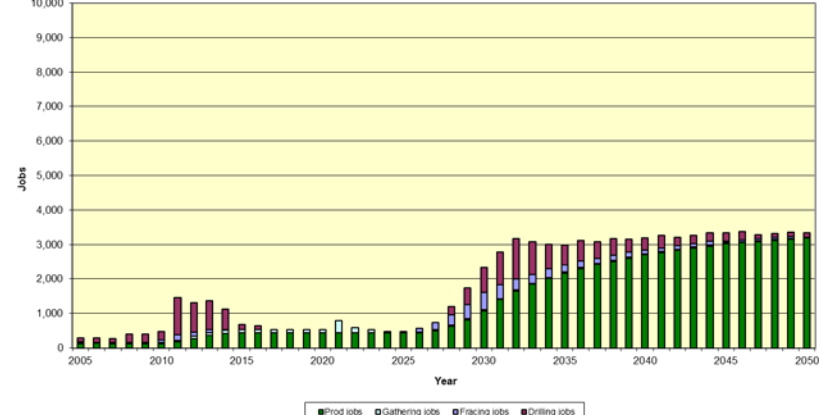
Stark Oil Industry Jobs

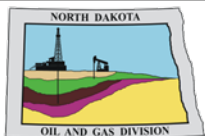


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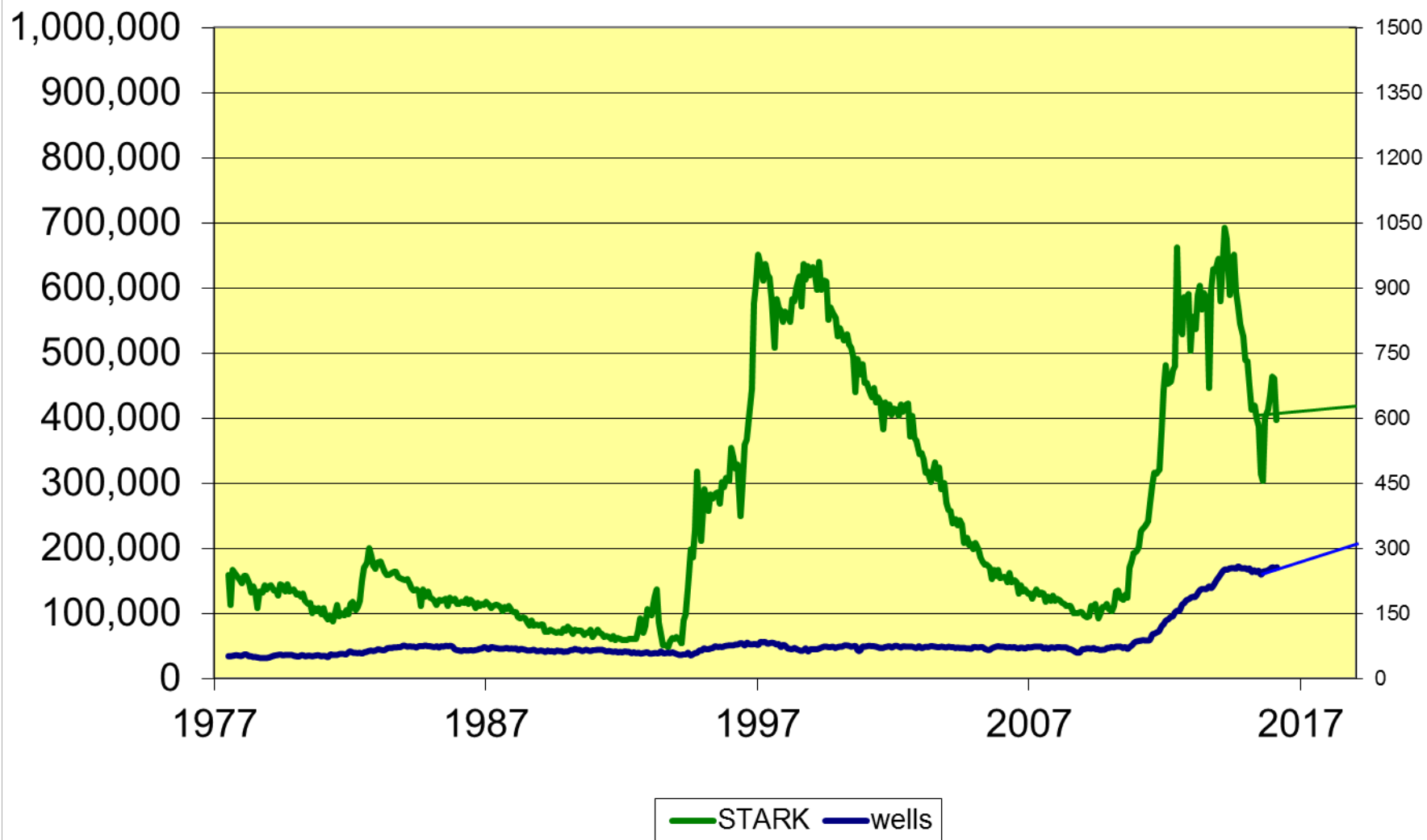


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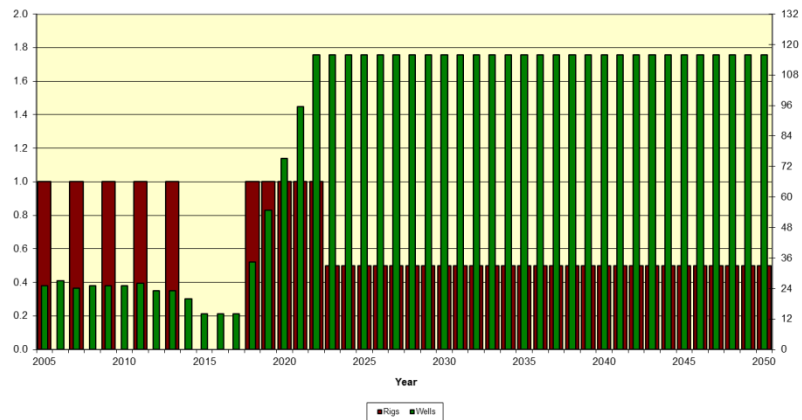




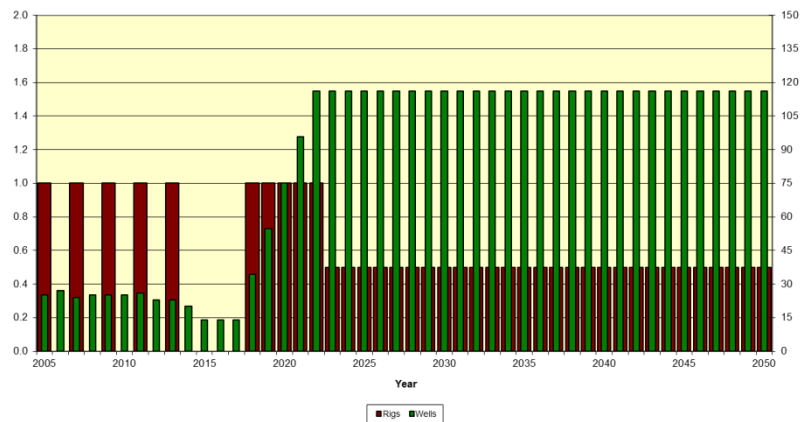
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



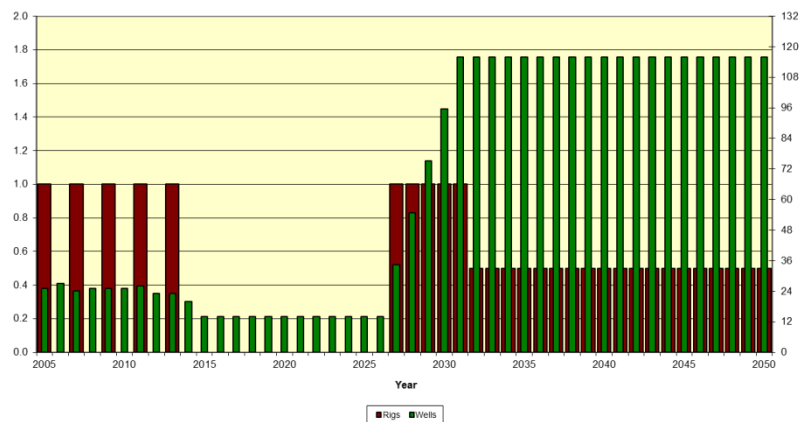
Ward Rigs and Jobs



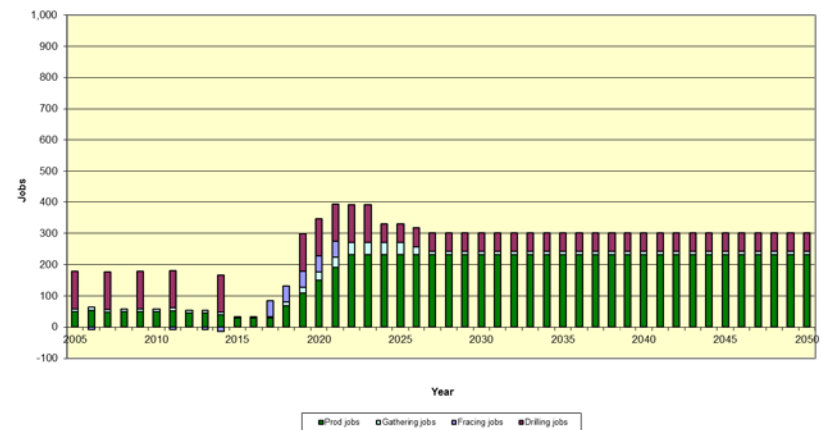
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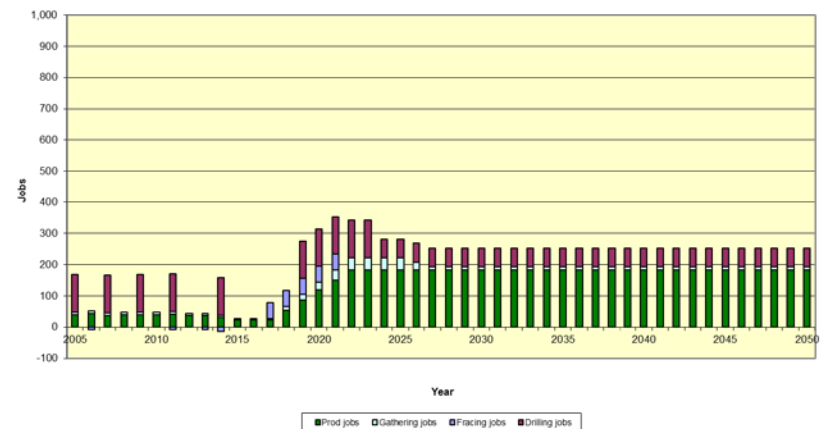
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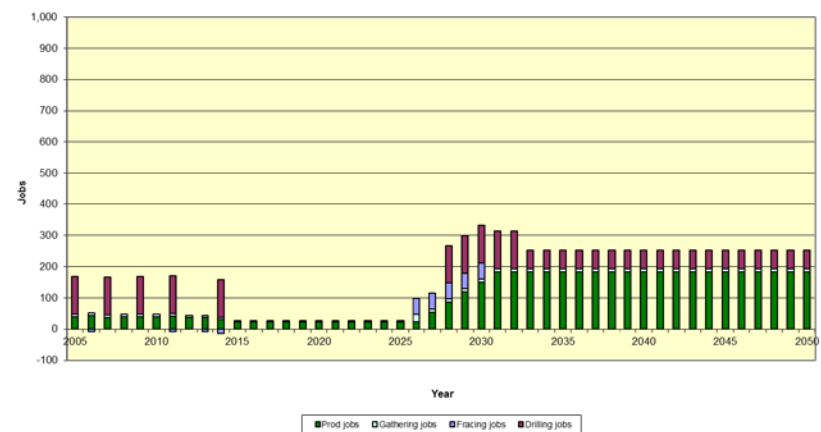
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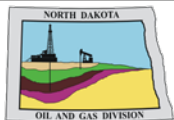


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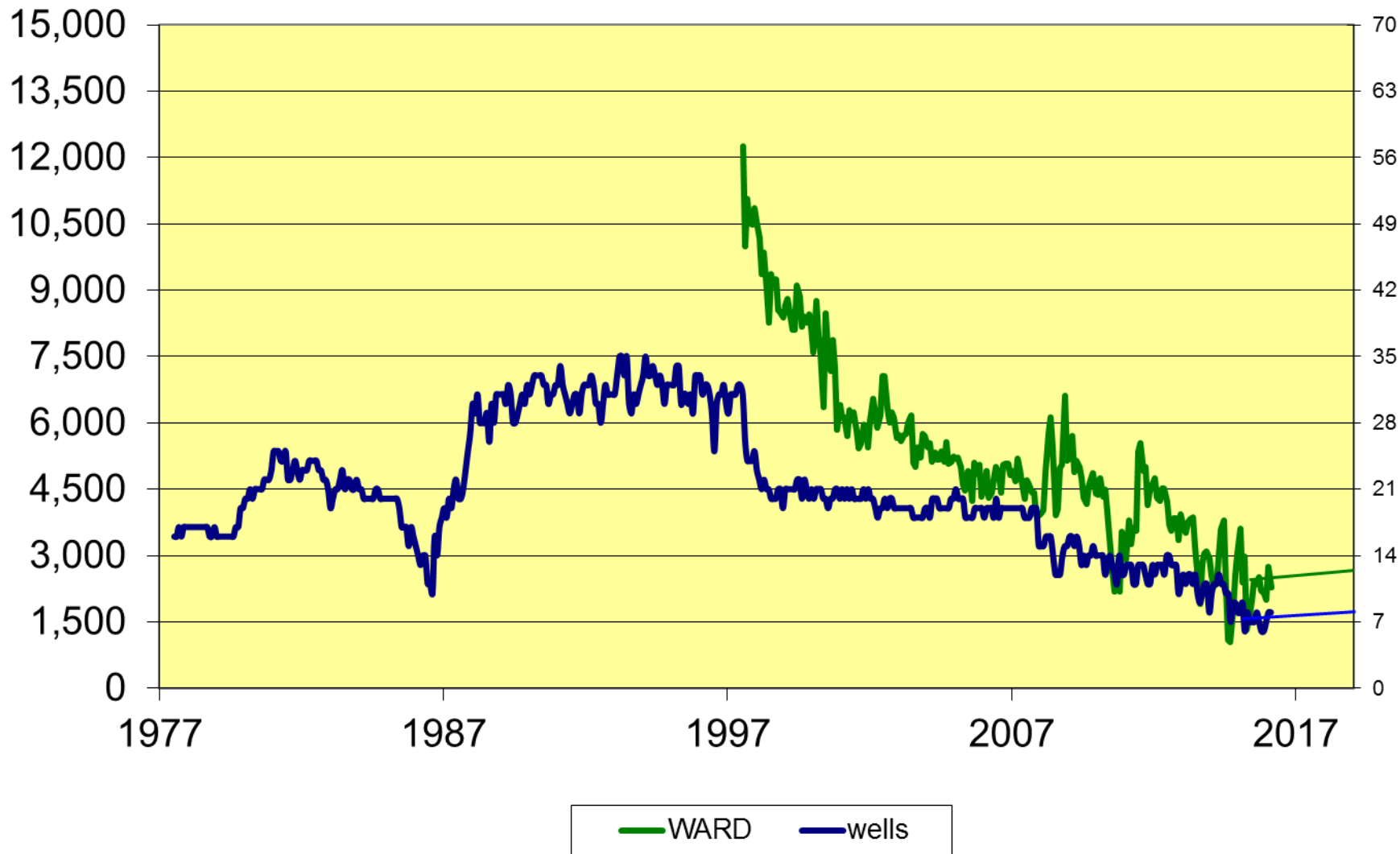


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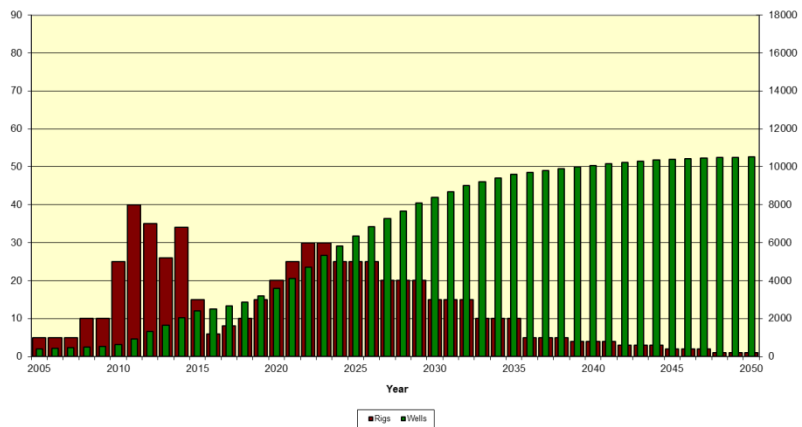




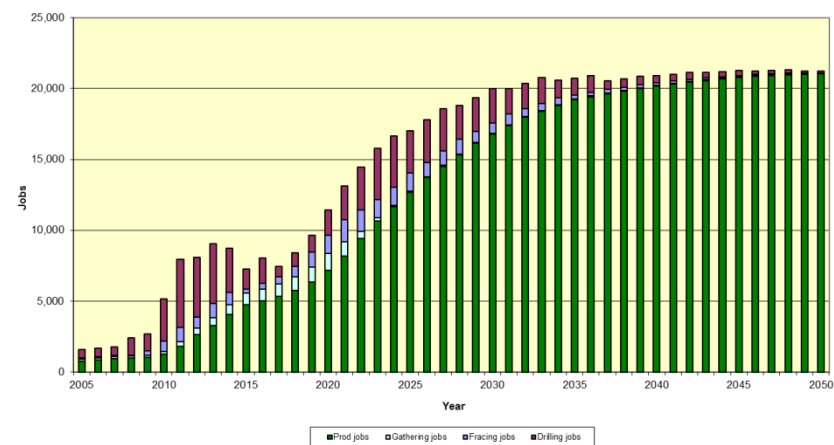
MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES



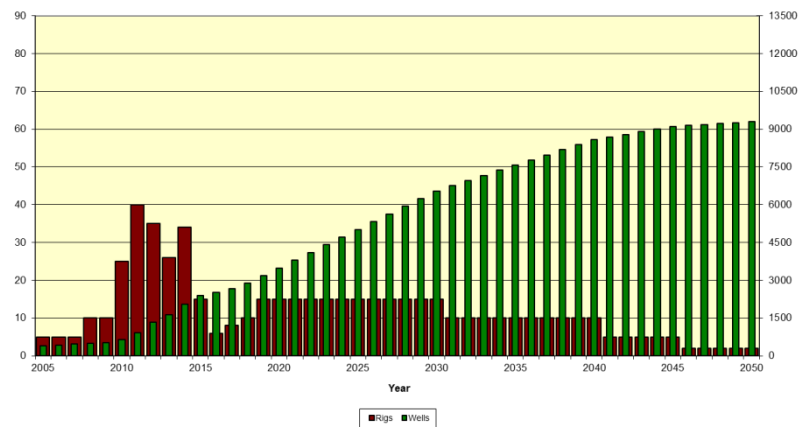
Williams Rigs and Wells



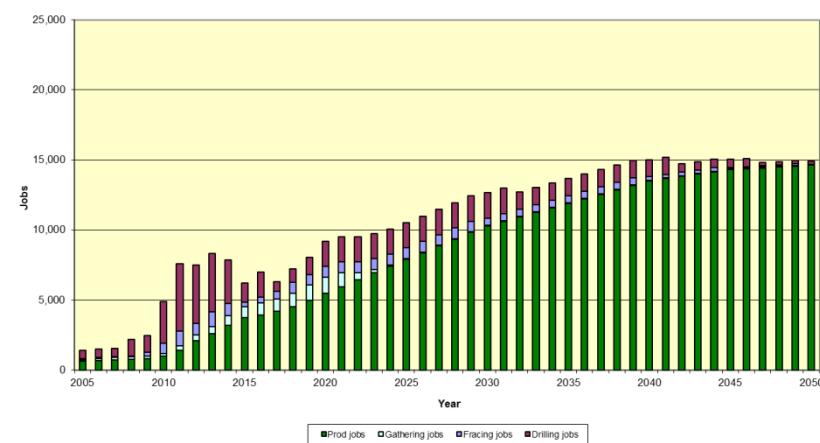
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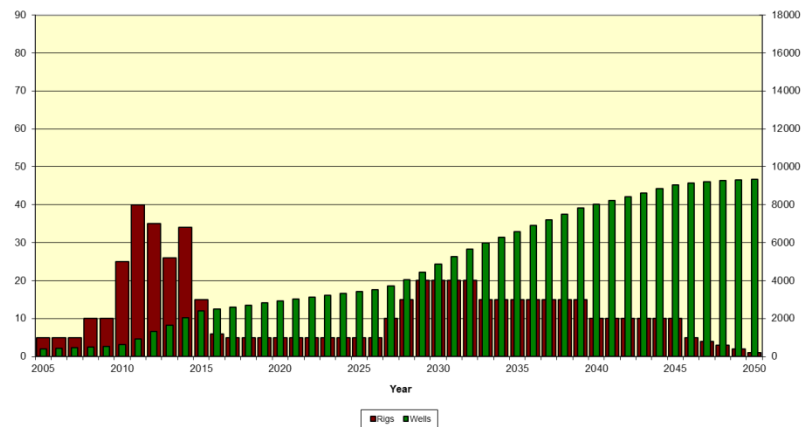
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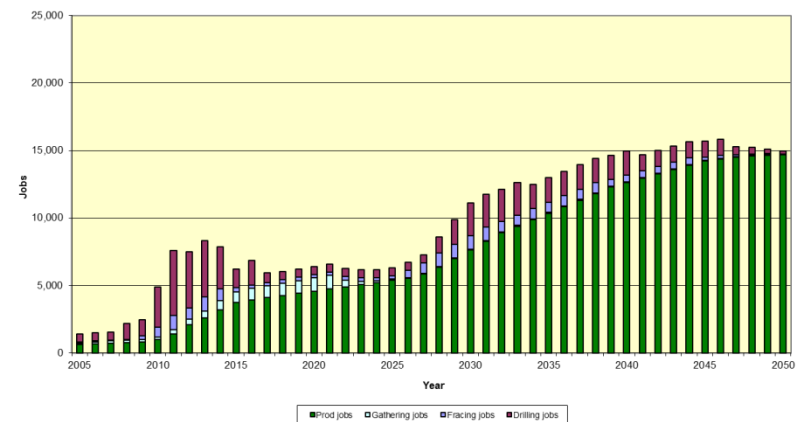
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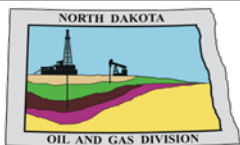


Williams Rigs and Wells



Williams Oil Industry Jobs





MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

