



# North Dakota Update

October 13, 2021

WDEA Annual





- Statistics
- 2021-2022 Administrative Rules
- Non-core Development
- EOR
- County projections





- **Statistics**
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## Oil Production

July	1,076,589 barrels/day (final)	
August	1,105,582 barrels/day (all-time high 1,519,037 BOPD Nov 2019)	NM = 1,124,333
	1,065,046 barrels/day or 96% from Bakken and Three Forks	
	40,536 barrels/day or 4% from legacy pools	

## Gas Production and Capture

July Production	2,879,310 MCF/day	
90% Capture	2,579,537 MCF/day	
August Production	2,951,756 MCF/day	(all-time high 3,145,172 MCFD Nov 2019)
92% Capture	2,709,766 MCF/day	(all-time high 2,899,998 MCFD Mar 2020)

## July Gas Capture

Statewide	92%	79,903,000 MCF
Statewide Bakken	92%	77,934,000 MCF
Non-FBIR Bakken	92%	67,752,000 MCF
FBIR Bakken	92%	15,447,000 MCF
Trust FBIR Bakken	93%	13,406,000 MCF
Fee FBIR	79%	2,600,000 MCF



# Permits

July 40 drilling and 0 seismic  
 August 79 drilling and 0 seismic  
 September 69 drilling and 0 seismic (all-time high 370 in 10/2012)

# Rig Count

August 28  
 September 27 (all-time high 218 on 5/29/12)  
 Federal surface 0  
 NM 84

## CURRENT ACTIVE DRILLING RIG LIST

10/12/2021 - 30 ACTIVE RIGS

RIG ID	WELL OPERATOR	WELL NAME & NUMBER	CURRENT LOCATION	COUNTY	FILE NO.	API	START DATE	**NEXT LOCATION
NABORS X-10	MARATHON OIL COMPANY	SEIDLER USA 31-4H	LOT 1 04 146N 94W	DUNN	38086	3302504150	10/01/2021	
H & P 454	CONTINENTAL RESOURCES, INC.	FLINT CHIPS FEDERAL 11-5H1	NW NE 08 147N 96W	DUNN	38146	3302504185	10/11/2021	
NABORS B6	CONTINENTAL RESOURCES, INC.	DOLEZAL FIU 8-5H1	SE SW 32 146N 95W	DUNN	38357	3302504273	10/07/2021	
NABORS B1	CONTINENTAL RESOURCES, INC.	JACK 9-9HSL	SE SE 08 145N 95W	DUNN	38450	3302504306	10/02/2021	
CYCLONE 38	CONTINENTAL RESOURCES, INC.	WHITMAN FIU 9-34H2	NW NE 34 147N 96W	DUNN	38496	3302504323	10/05/2021	
AES 4	CONTINENTAL RESOURCES, INC.	THORP FEDERAL 4-28H	SW NW 21 148N 97W	DUNN	38514	3302504331	10/11/2021	
H & P 640	HUNT OIL COMPANY	HALLIDAY 146-93-24-36H 2	SW SE 13 146N 93W	DUNN	38522	3302504337	10/03/2021	
H & P 259	MARATHON OIL COMPANY	PORTER 31-18TFH	NE NW 18 146N 93W	DUNN	38537	3302504344	09/29/2021	
H & P 535	MARATHON OIL COMPANY	ERMINA 31-13TFH	LOT 1 18 146N 93W	DUNN	38571	3302504353	10/10/2021	
TRUE 40	ENERPLUS RESOURCES USA CORPORATION	FB LEVIATHAN 151-94-27A-34-16B	NE NE 27 151N 94W	MCKENZIE	35492	3305308750	09/29/2021	
PATTERSON 808	ENERPLUS RESOURCES USA CORPORATION	FB LEVIATHAN 151-94-27A-34-17T	NE NE 27 151N 94W	MCKENZIE	35717	3305308818	10/10/2021	
STONEHAM 16	PETROSHALE (US) INC.	CROCKETT FEDERAL 1TFH	NW NW 30 149N 95W	MCKENZIE	36893	3305309187	09/28/2021	
PATTERSON 901	CONTINENTAL RESOURCES, INC.	CLEAR CREEK FEDERAL 10-35H2	SE SE 35 152N 97W	MCKENZIE	37860	3305309528	09/29/2021	
NABORS B27	CONTINENTAL RESOURCES, INC.	CHAROLAIS SOUTH FEDERAL 11-10H2	NE NW 15 153N 94W	MCKENZIE	37909	3305309558	10/03/2021	
NABORS X28	HESS BAKKEN INVESTMENTS II, LLC	AN-NORBY-LE- 152-94-0409H-1	LOT 1 04 152N 94W	MCKENZIE	38176	3305309654	10/07/2021	
NABORS B 13	OASIS PETROLEUM NORTH AMERICA LLC	SOTO 5097 12-3 4B	LOT 3 03 150N 97W	MCKENZIE	38335	3305309721	10/06/2021	
NABORS B26	OASIS PETROLEUM NORTH AMERICA LLC	SWENSON FEDERAL 5197 43-35 4B	SW SE 35 151N 97W	MCKENZIE	38382	3305309736	10/04/2021	
H & P 516	OVINTIV PRODUCTION INC.	BERNICE 150-99-20-17-7H	SE SE 20 150N 99W	MCKENZIE	38419	3305309740	10/03/2021	WISNESS PAD
UNIT 411	SINCLAIR OIL & GAS COMPANY	GRASSLANDS FEDERAL 14-15-1H	SW NE 13 147N 98W	MCKENZIE	38493	3305309752	10/06/2021	
IRON HAND 108	TOBACCO GARDEN SWD LLC	ENTERPRISE SWD 1	NE SE 19 152N 96W	MCKENZIE	90470	3305390470	09/17/2021	
PATTERSON 808	WHITING OIL AND GAS CORPORATION	PLATT 44-28-2H	SE SE 28 154N 91W	MOUNTRAIL	38271	3306104871	10/06/2021	
UNIT 414	SLAWSON EXPLORATION COMPANY, INC.	RAINMAKER FEDERAL 6-25-36TFH	SE SW 24 152N 93W	MOUNTRAIL	38451	3306104934	09/28/2021	
H & P 456	CONTINENTAL RESOURCES, INC.	LCU RECKITT FEDERAL 5-22H1	NE SW 22 153N 99W	WILLIAMS	37002	3310505342	10/11/2021	
H & P 492	CONTINENTAL RESOURCES, INC.	LCU RALPH 2-27H	SW SW 22 153N 99W	WILLIAMS	37015	3310505352	10/04/2021	
NABORS X27	HESS BAKKEN INVESTMENTS II, LLC	BL-OLSON- LW-155-96-0310H-1	LOT 3 03 155N 96W	WILLIAMS	37142	3310505379	09/28/2021	
PATTERSON 806	WHITING OIL AND GAS CORPORATION	ARK 21-15-2H	NE NW 15 155N 97W	WILLIAMS	37339	3310505412	09/30/2021	
NABORS X24	HESS BAKKEN INVESTMENTS II, LLC	CA-E BURDICK- 155-95-2932H-5	SE SE 20 155N 95W	WILLIAMS	38006	3310505573	09/29/2021	
NABORS B21	CRESCENT POINT ENERGY U.S. CORP.	REED 5-10-3-158N-100N-MBH	SW SE 10 158N 100W	WILLIAMS	38423	3310505640	09/14/2021	
NABORS B22	KRAKEN OPERATING, LLC	ALAMO 3-34-27 #2H	NE NE 09 158N 99W	WILLIAMS	38511	3310505656	10/05/2021	

## Wells Waiting on Completion

July 521

August 521

13 operators have 1-10

4 operators have 15-25

3 operators have 35-50

1 operator has 159

## Inactive Wells

July 2,082

July 1,672

## Completions

July 53

August 47

September 34

## Producing Wells

July 16,889

July 16,937 (preliminary)(NEW all-time high 16,937 August 2021)

14,707 wells or 87% are now unconventional Bakken – Three Forks wells

2,230 wells or 13% produce from legacy conventional pools



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## **Timetable for adopting NDIC Rules**

August 24, 2021 – NDIC approved proceeding with rulemaking

September 9, 2021 – notice of rulemaking published

October 11, 2021 – rulemaking hearings Bismarck and Dickinson

October 12, 2021 – rulemaking hearings Williston and Minot

October 22, 2021 – deadline for rulemaking comments

November 30 – NDIC approval of rule amendments

January 27, 2022 – file rule amendments with Legislative Counsel

March 2, 2022 – Administrative Rules Committee hearing

April 1, 2022 – rule amendments become final



# NDIC Rules

Microsoft Word - Rule Changes.2022.2021-08-31.Final.Filed with LC (nd.gov)

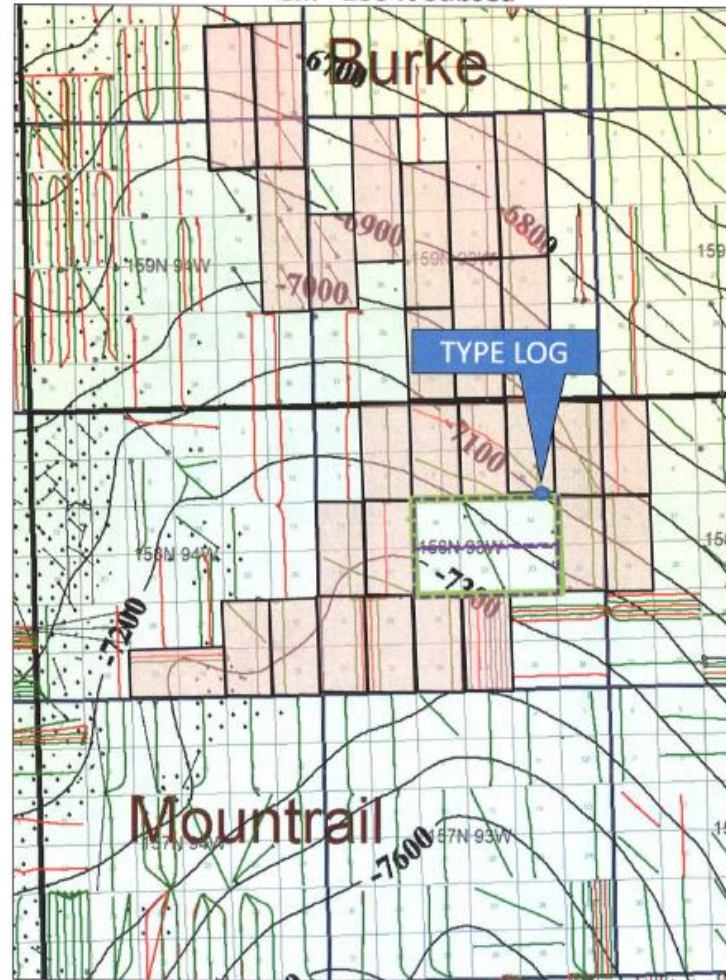
43-02-03-07	United States Government Leases	
43-02-03-09	Forms Upon Request	
43-02-03-14.2	Oil and Gas Metering Systems	
43-02-03-15	Bond and Transfer of Wells	
43-02-03-16	Application for Permit to Drill & Recomplete	
43-02-03-16.1	Designation and Responsibilities of Operator	
43-02-03-21	Casing, Tubing, and Cementing Requirements	
43-02-03-27.1	Hydraulic Fracture Stimulation	
43-02-03-29	Well & Lease Equip & Gas Gathering Pipelines	
43-02-03-29.1	Oil & Prod Water Underground Gathering Pipelines	
43-02-03-30	Notification of Fires, Leaks, Spills, or Blowouts	
43-02-03-34.1	Reclamation of Surface	
43-02-03-38.1	Preservation of Cores and Samples	
43-02-03-55	AB of Wells, TP, Pipeline, SWHF	
43-02-03-88.1	Special Procedures for Wells, CTB, Flaring	
43-02-03-90.2	Official Record	
43-02-03-90.4	Notice of Order by Mail	HB1055
43-02-14	GEOLOGIC STORAGE FACILITIES	SB2065
43-05-01-17	GEOLOCIC STORAGE OF CARBON DIOXIDE Storage Facility Fees	SB2014



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Geologic Structure Map  
Top Upper Bakken Shale  
C.I.= 100 ft Subsea



- - Existing Middle Bakken Horizontal
- - Existing Three Forks Horizontal
- Existing Liberty Spacing unit
- Existing 1920-acre Spacing Unit
- Proposed 3840-acre Spacing Unit

INDUSTRIAL COMMISSION

Case No. 28831

Liberty

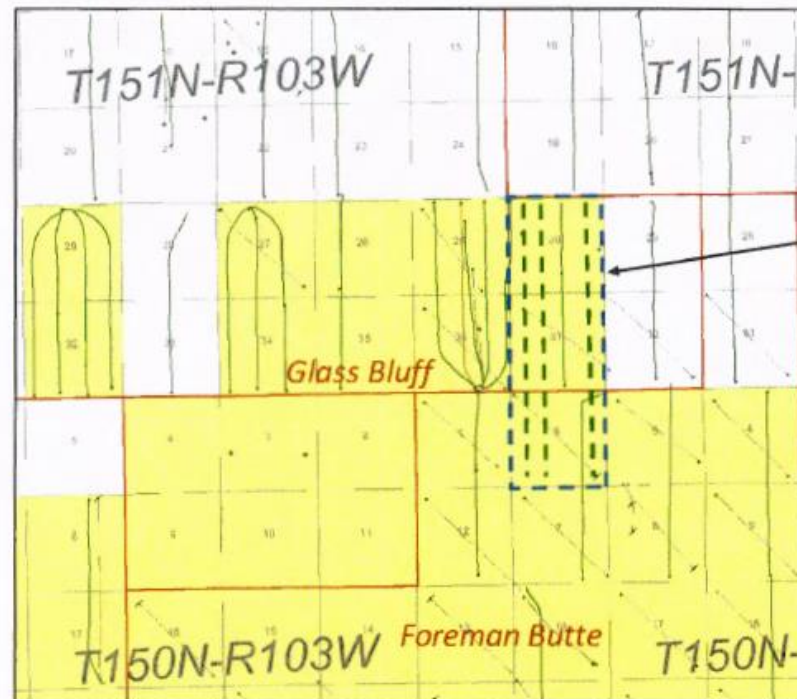
G-1

McChesney









1920-acre Spacing Unit  
Sections 30 & 31 T151N-R102W  
and Section 6 T150N-R102W

Whiting's working interest =  
56.43%

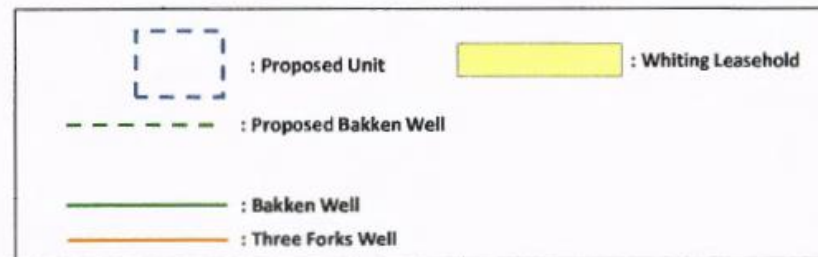
INDUSTRIAL COMMISSION  
STATE OF NORTH DAKOTA


DATE 7/28/21 CASE NO. 28861

Introduced By Whiting

Exhibit L2

Identified By Mansfield



 <b>Whiting Oil and Gas Corporation</b>	
Land Plat	
Case #28861	Exhibit L2 Page 1
D. Mansfield	July 28, 2021



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## Oil and Gas : ArcIMS Viewer

Legend / Layers

Overview Map

View Entire State

Previous View

Clear Selection

Search

Create PDF

Zoom In

Zoom Out

Pan

Rect Identify

Select Object

Buffer

Distance

Find Well

Find Field / Unit

Find Section

Browser Settings  
Suggestion

Download Shape Files

## ND OIL &amp; GAS LAYERS

- ☒ Oil and Gas
- ☒ Wells
- ☒ Permit Status Before Spud
- ☒ Rig Location
- ☒ Directional Surveys
- ☒ Directional Legs
- ☒ Horizontal Surveys
- ☒ Horizontal Legs
- ☒ Cases Docketed
- ☒ Oil Fields
- ☒ Unit Boundaries
- ☒ Inspector Areas
- ☒ Drilling / Spacing
- ☒ Seismic
- ☒ Gas Plants
- ☒ Other

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.



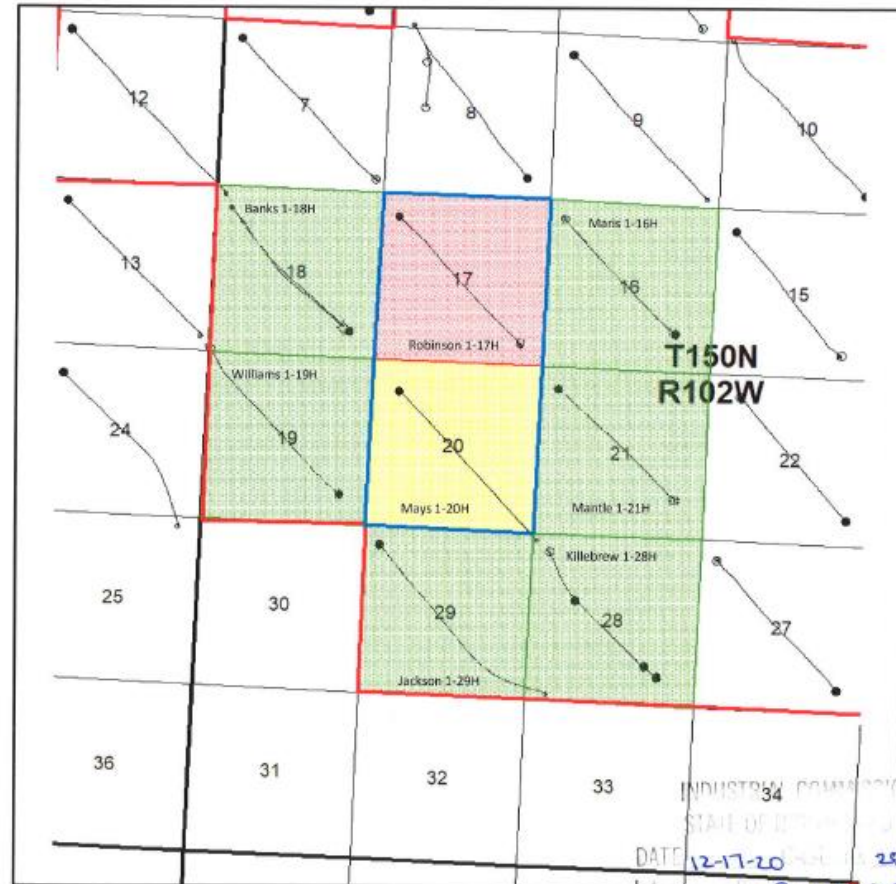
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<input type="radio"/>	<a href="#">CHARLIE BOB</a>	oilGas	<a href="#">Print</a>





Find

Map Data Last Updated : 7/19/2021

# Mays Waterflood Test Plat

Foreman Butte Field: Madison Pool



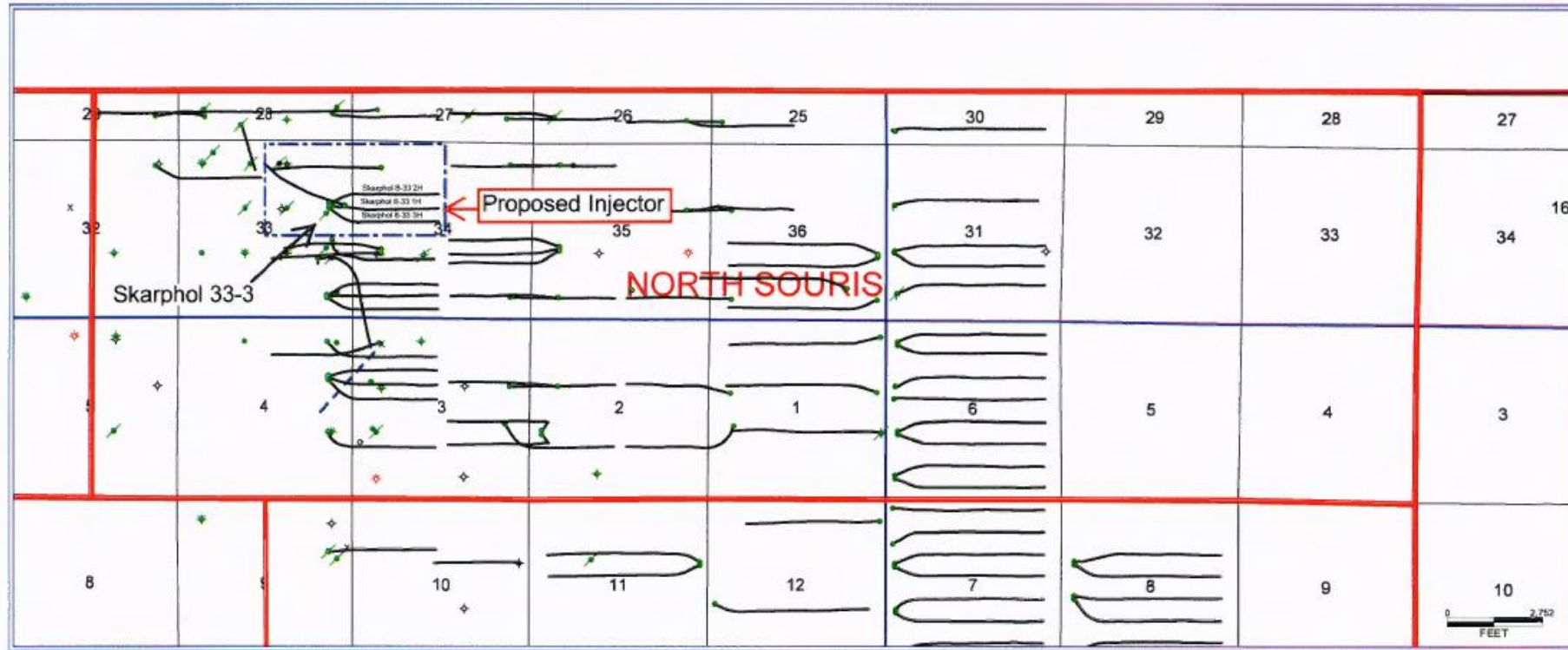
Mays 1-20H – Injector		Mays/Robinson Unit	
Robinson 1-17H – Producer			
6 Monitoring Wells			

INDUSTRIAL COMMISSION  
STATE OF OREGON  
DATE 12-17-20 FILE 28572  
Index Samson  
Exhibit 4  
Identified by Hatcher

Exhibit: 4  
Docket Case No. 28572



# Proposed horizontal water injection well location and offset vertical type well



Spacing Unit - Case 21763, Ballantyne Oil, LLC leasehold



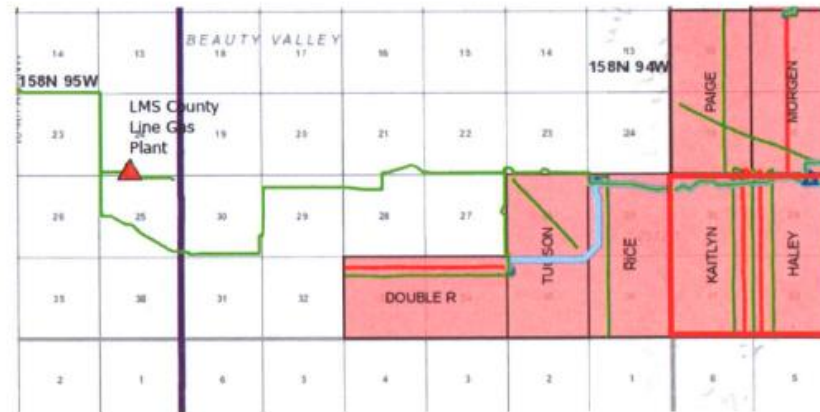
North Souris Field Boundary

INDUSTRIAL COMMISSION  
STATE OF NORTH DAKOTA

DATE 8/26/21 CASE NO. 28924  
Introduced By Ballantyne  
Exhibit 2  
Identified By Jennings

Ballantyne Oil, LLC  
Case No. 27266  
Exhibit 2

## Features of Project Location



- 2560-acre Spacing Unit of Interest
- Existing Middle Bakken Horizontal
- Existing Three Forks Horizontal
- Existing Gas Pipeline (LMS)
- Existing Water Pipeline (LMS)

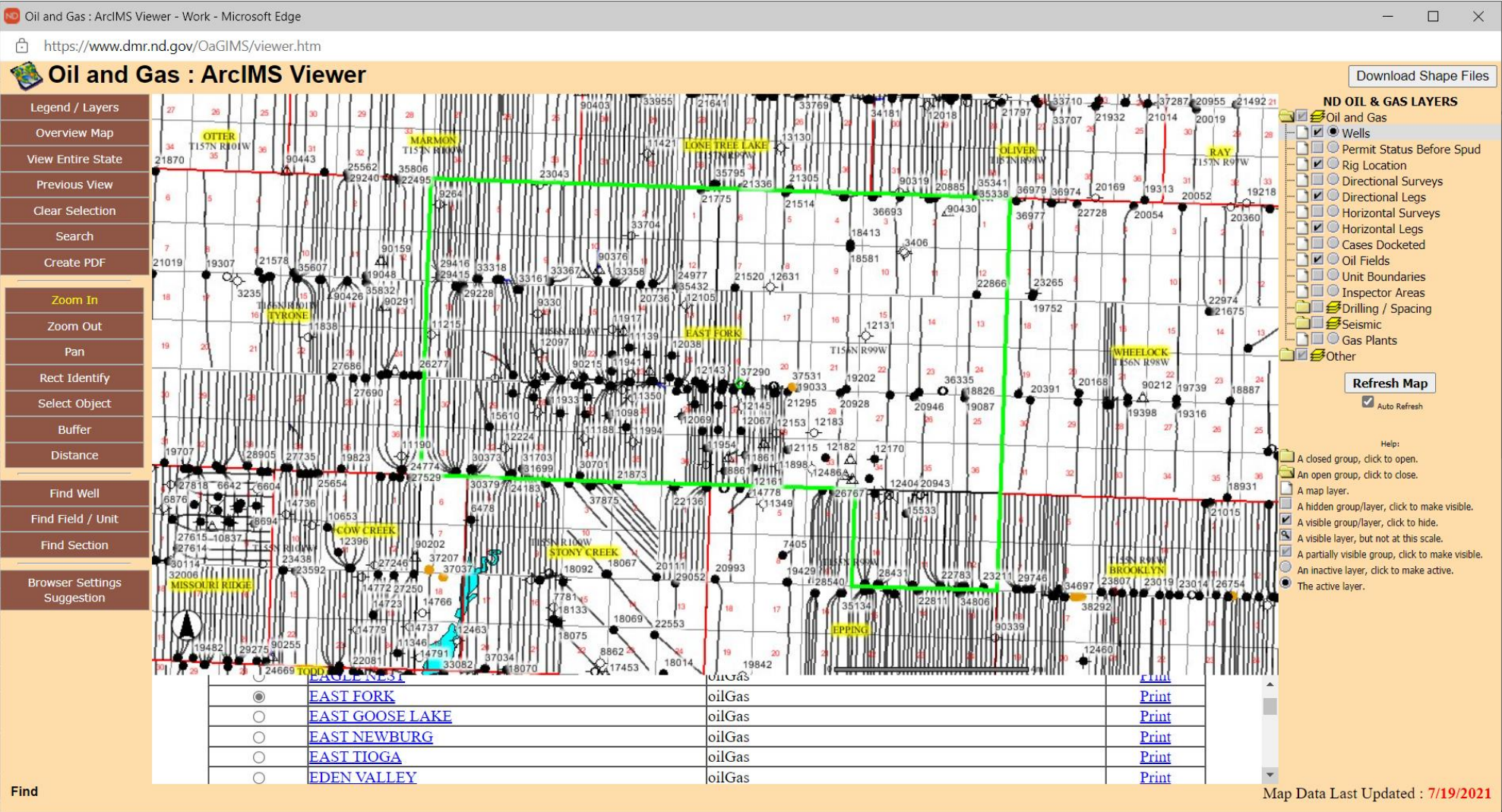
- Location selected based on results and learnings from prior Bakken EOR pilots, specifically the “Stomping Horse” pilot documented in NDIC Case No. 27926.
- Utilizes more recently completed infill wells (August ‘19); limited depletion.
- Accesses rich gas via connection to the gas plant gathering line.
- Liberty operates most of the offsetting DSUs.
- Well & completion design provides for favorable conformance along the horizontal interval using cemented liners with “Plug & Perf” completions.
- Jet pump operations ease well conversion to injection.
- Offset well configuration allows for surveillance and boundaries.

INDUSTRIAL COMMISSION  
STATE OF NORTH DAKOTA  
DATE 6-17-21 CASE NO. 28830  
WITNESSED BY Liberty  
JULIAN E-2  
Identified By Rospigil





Case No. 28963: Application of Continental Resources, Inc. for an order authorizing the rework of the Buddy 1-27H well (File No. 23180), located in a spacing unit comprised of Sections 27 and 34, T.156N., R.99W., and the Domindgo 1-22H well (File No. 23181) located in a spacing unit comprised of Sections 15 and 22, T.156N., R.99W., Williams County, ND, for the temporary injection of natural gas and possibly other fluids in the East Fork-Bakken Pool pursuant to NDAC Chapter 43 02 05, and Section 43-02-03-88.1, and such other relief as is appropriate.

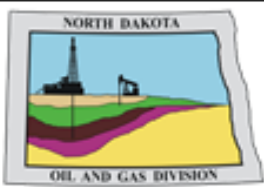






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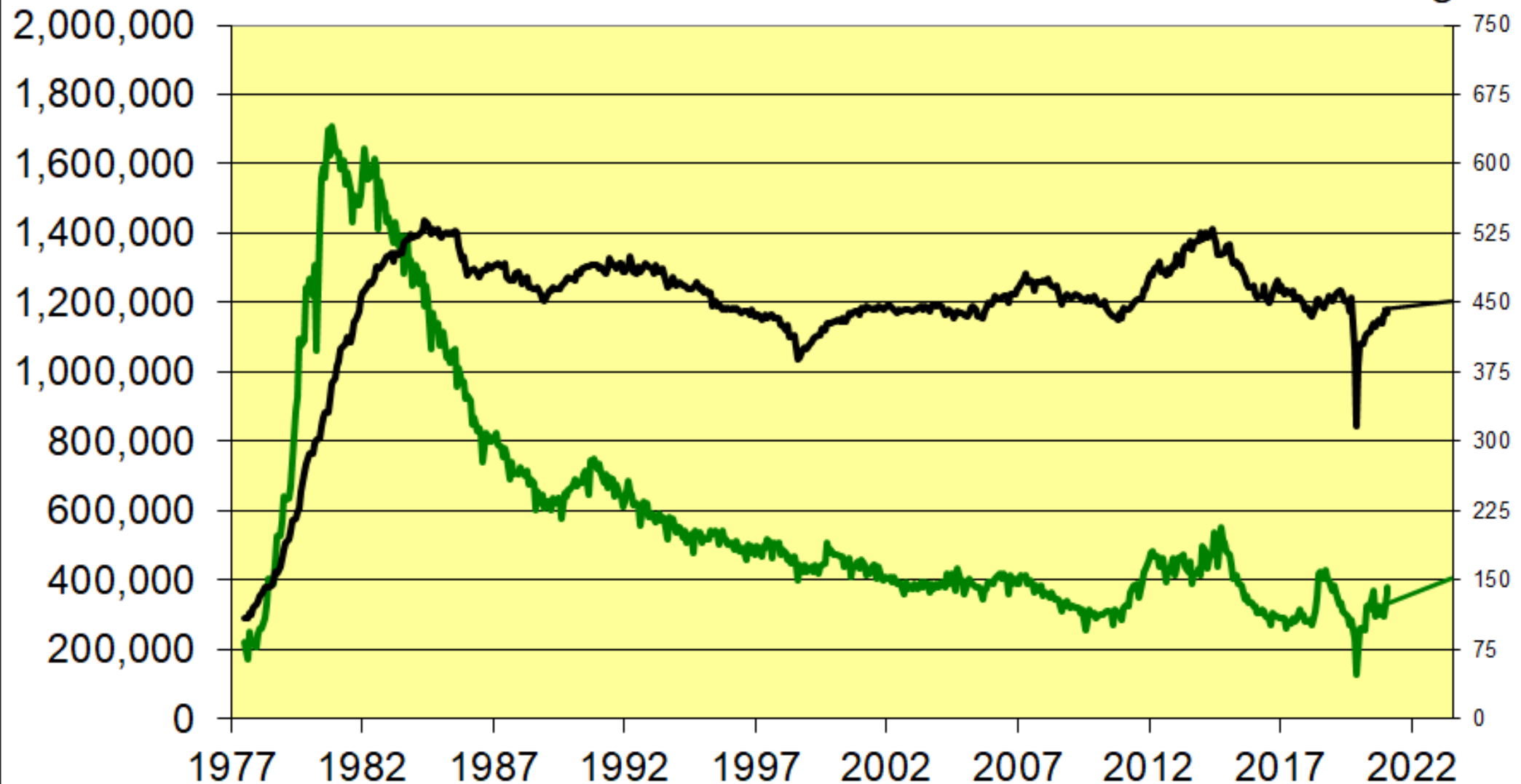




# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

Asset sales

0-1 rigs



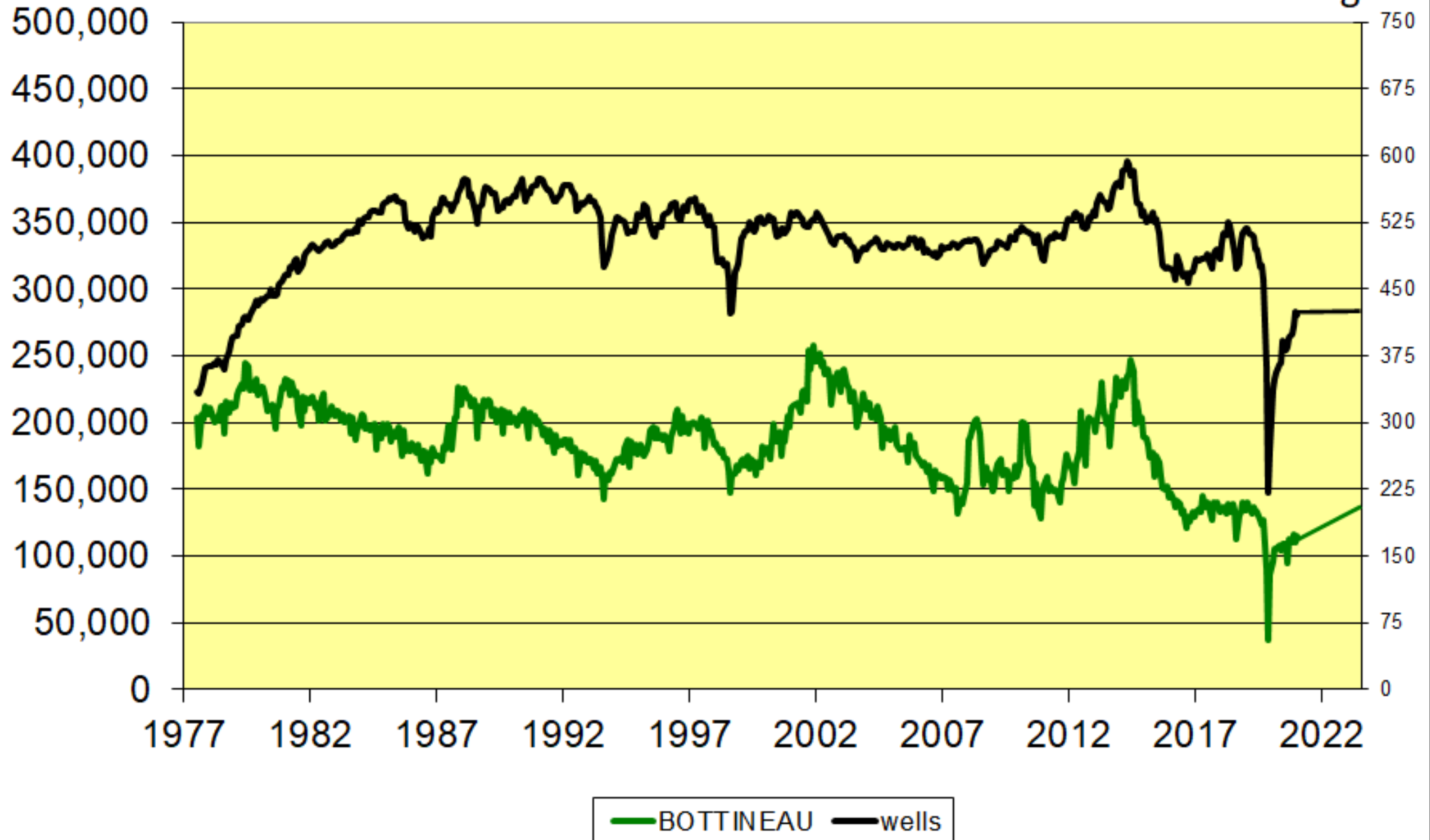
— BILLINGS — wells



# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

AB wells PA & transfer < federal funds

0-1 rigs



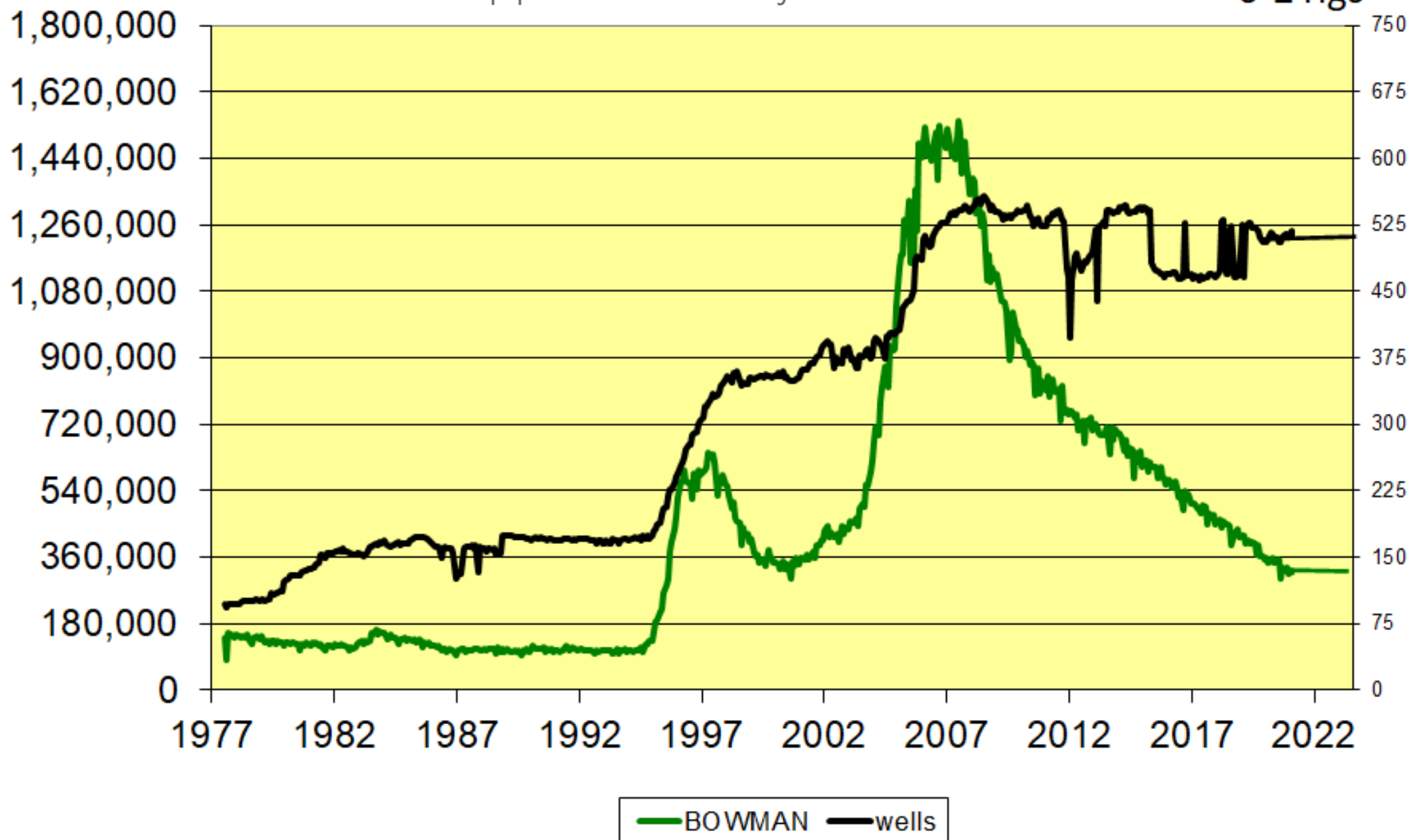




# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

CO2 pipeline 2021 first injection March 2022

0-2 rigs

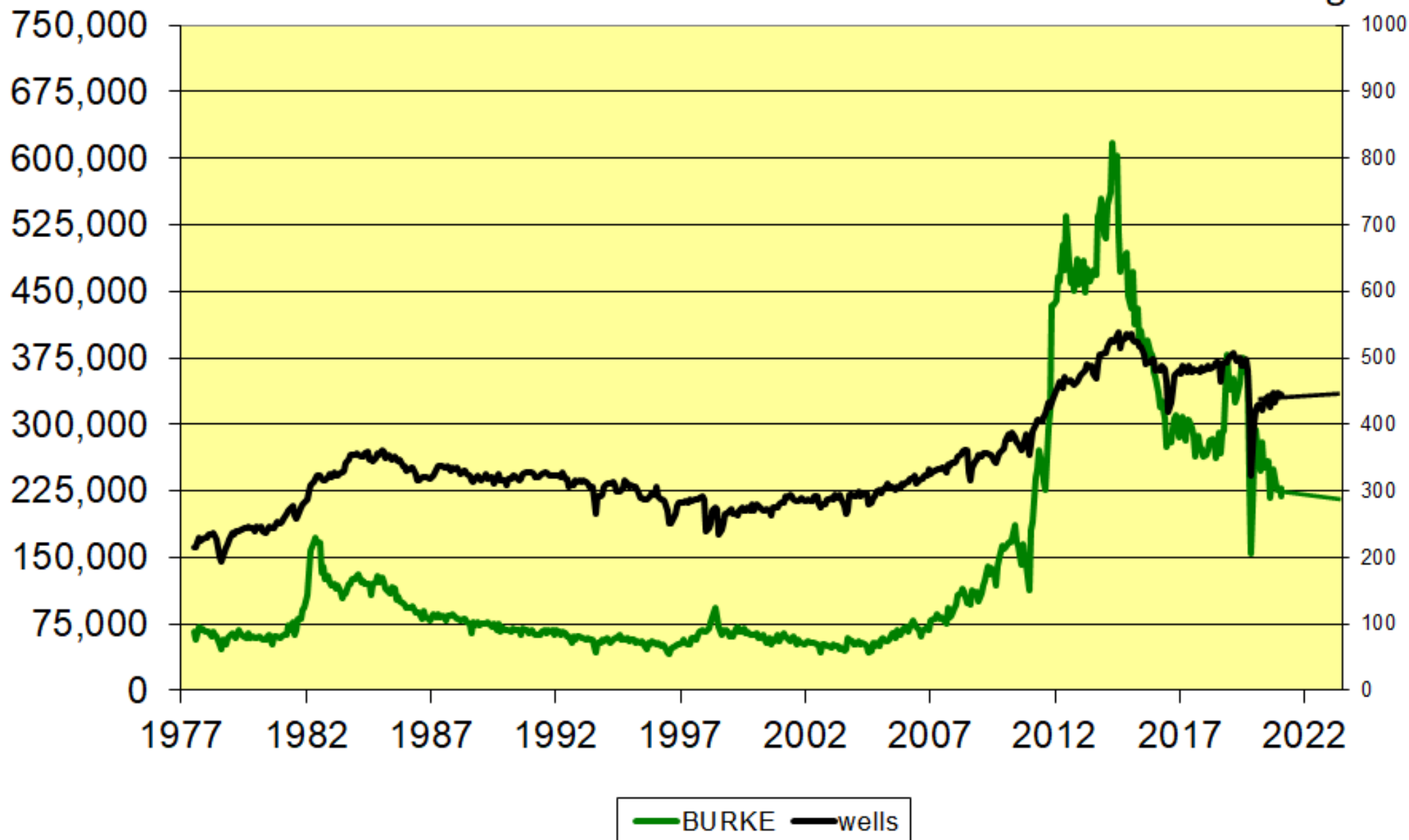




# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

AB wells PA & transfer < federal funds

0-1 rigs



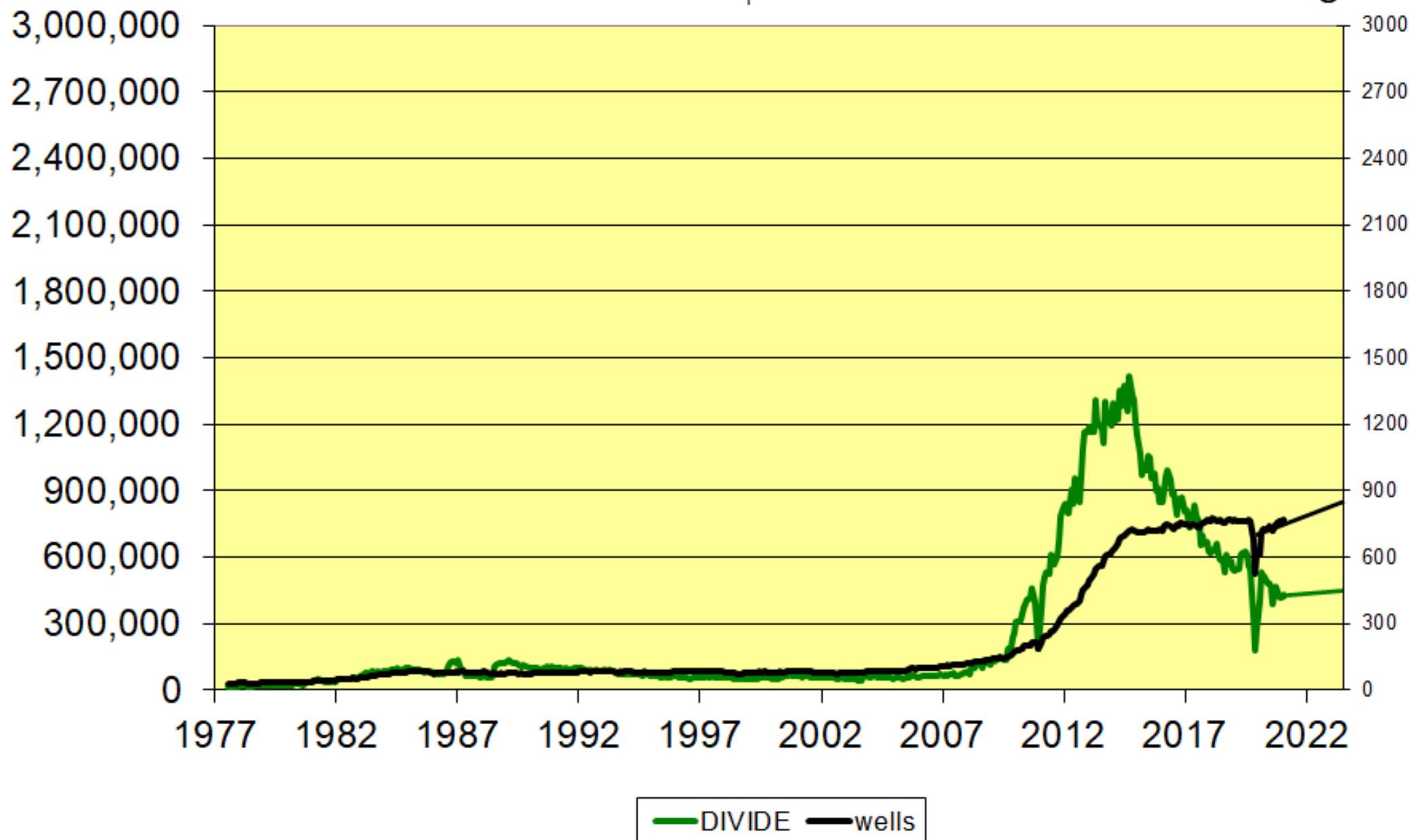




# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

Non-core development

0-1 rigs

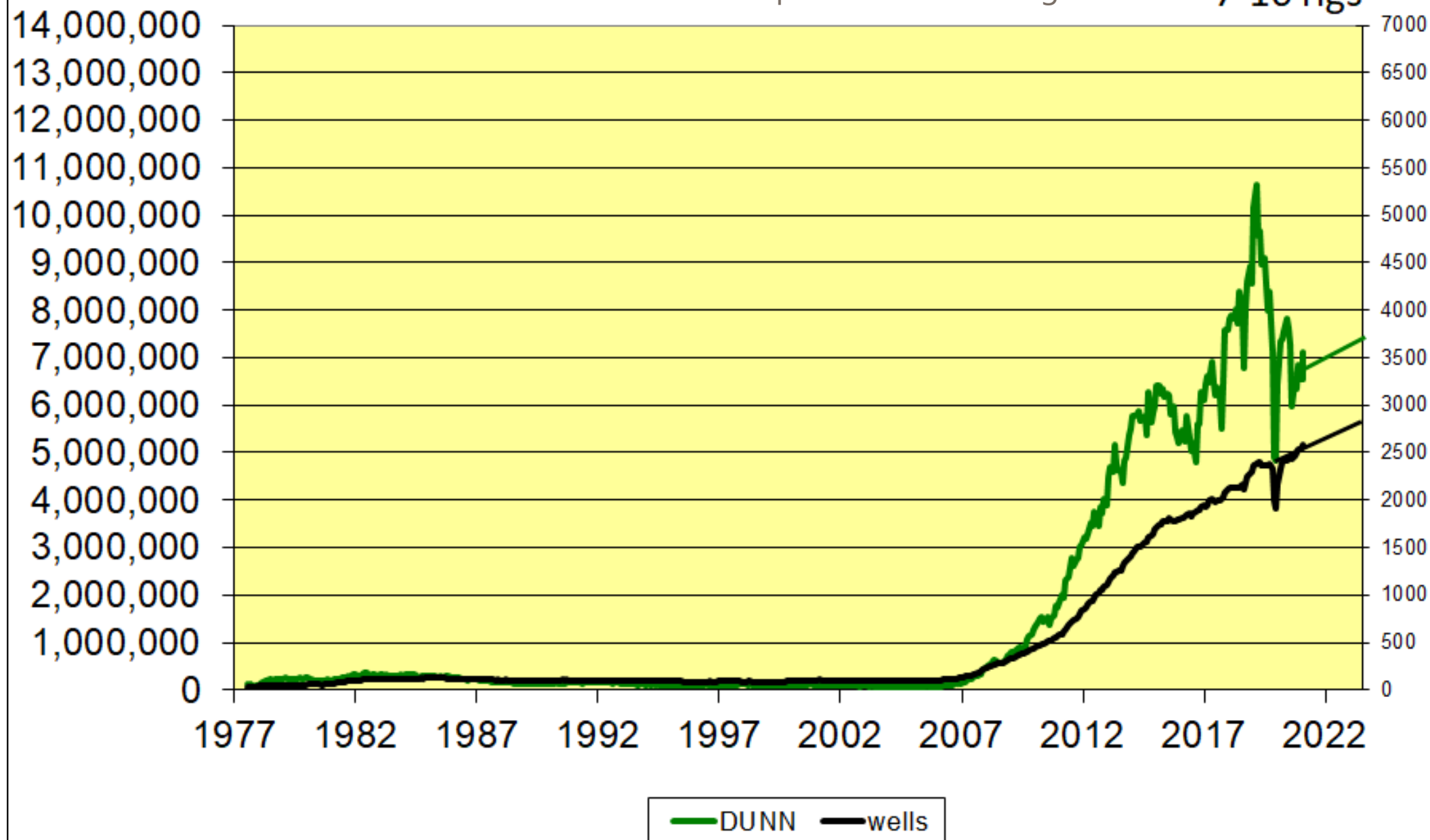




# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

Core and Non-core development + Flare mitigation

7-10 rigs



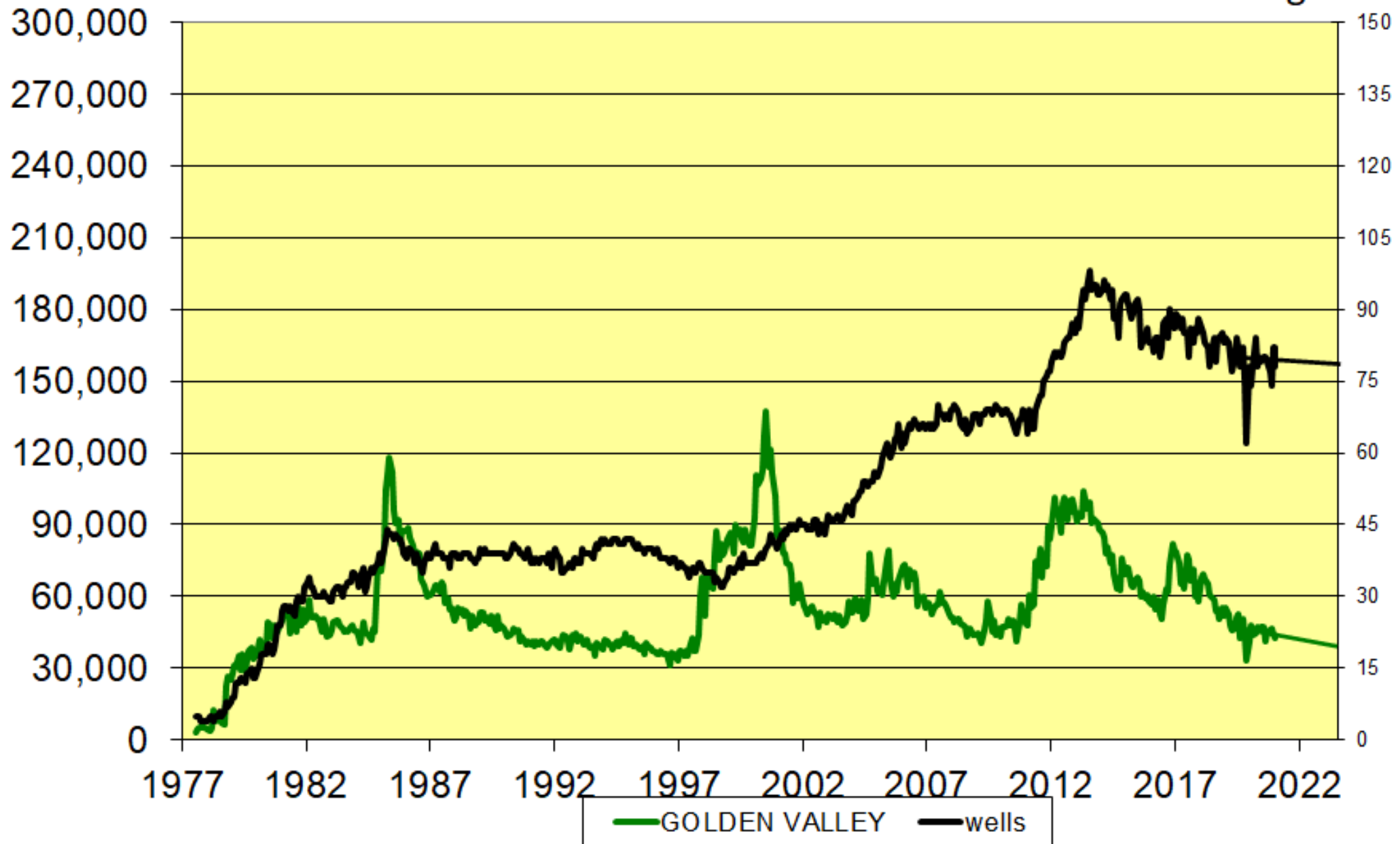




# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

AB wells PA & transfer < federal funds

0 rigs

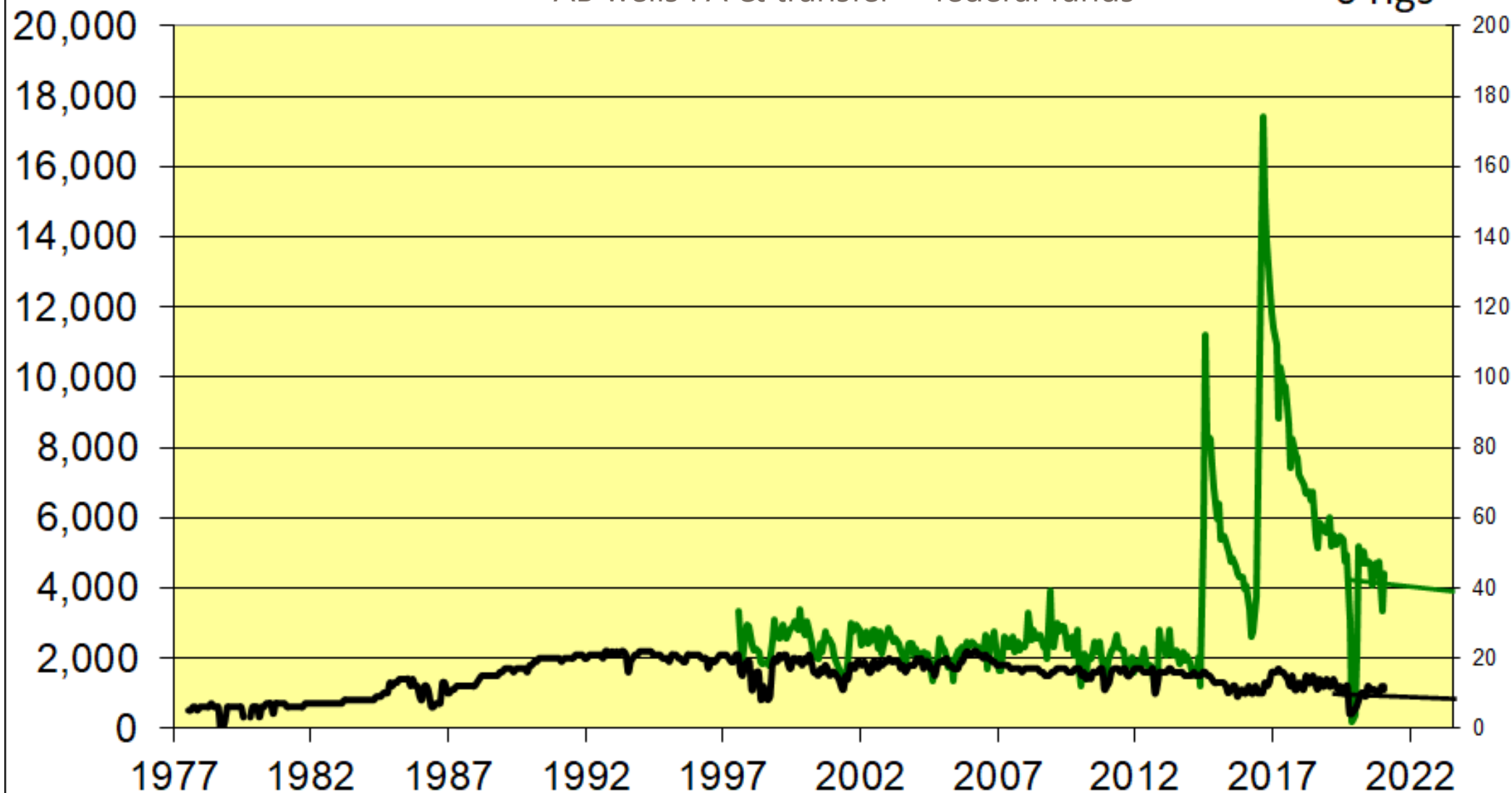




# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

AB wells PA & transfer < federal funds

0 rigs



— McHENRY — wells

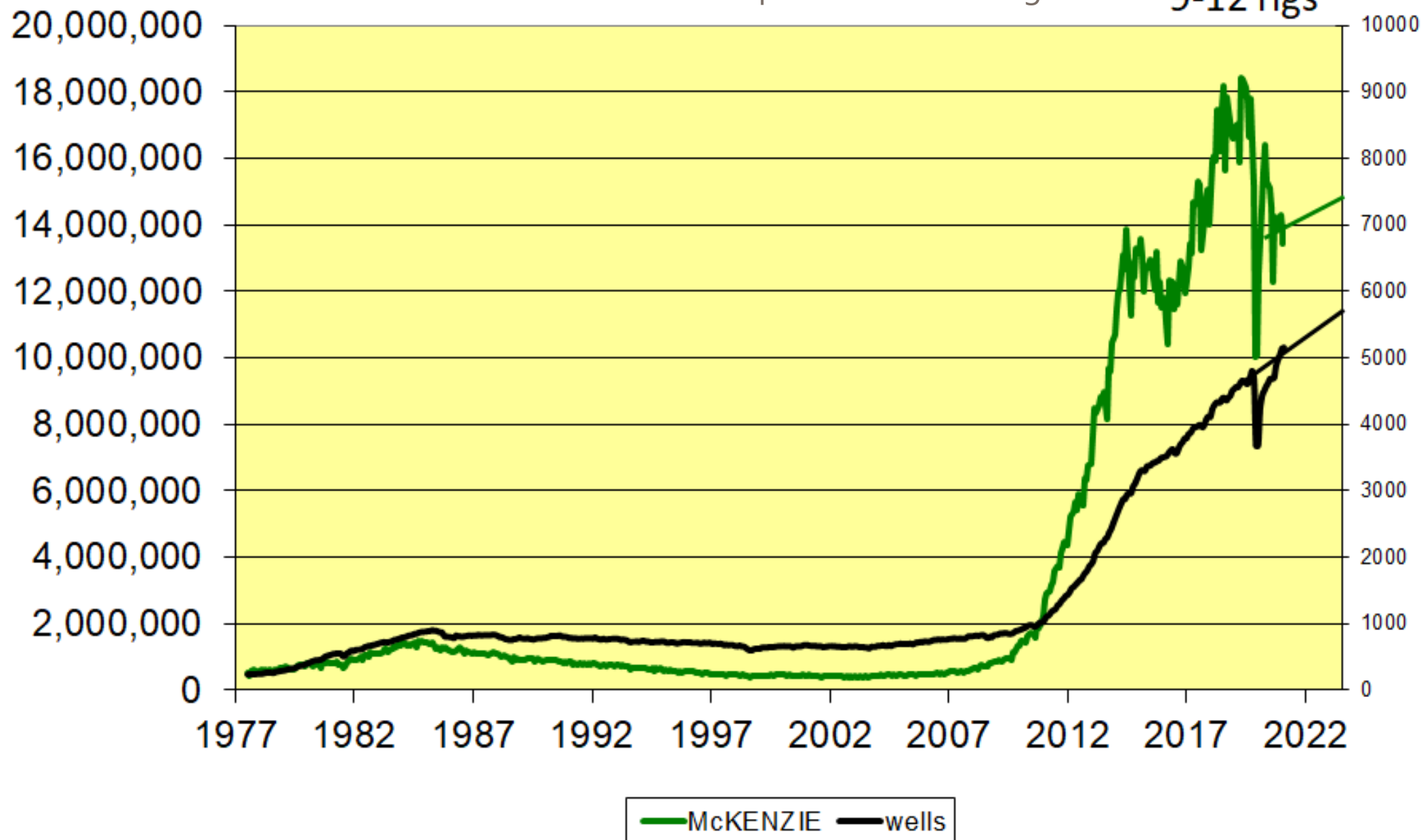




# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

Core and Non-core development + Flare mitigation

9-12 rigs

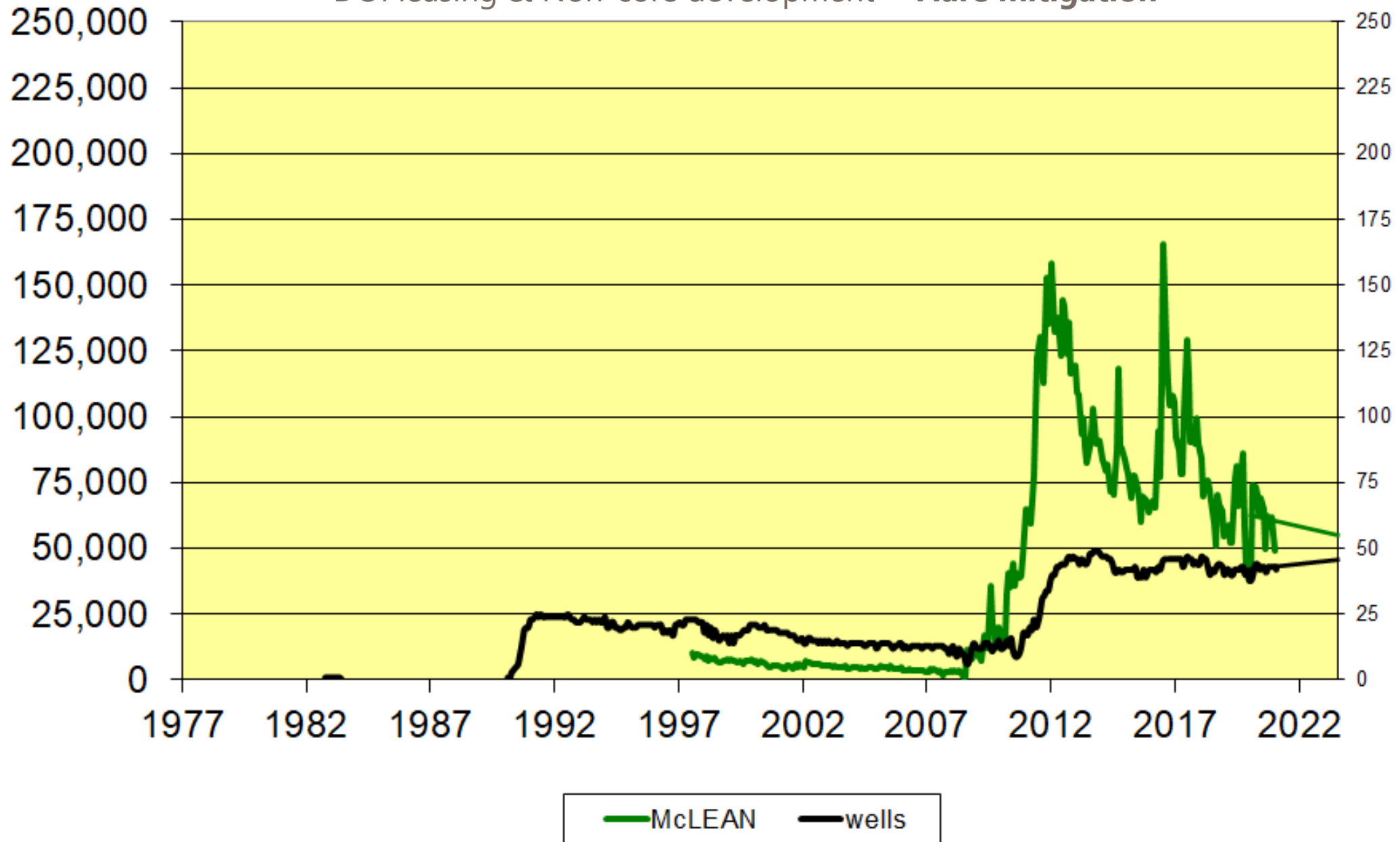




# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

DOI leasing & Non-core development + **Flare mitigation**

0 rigs



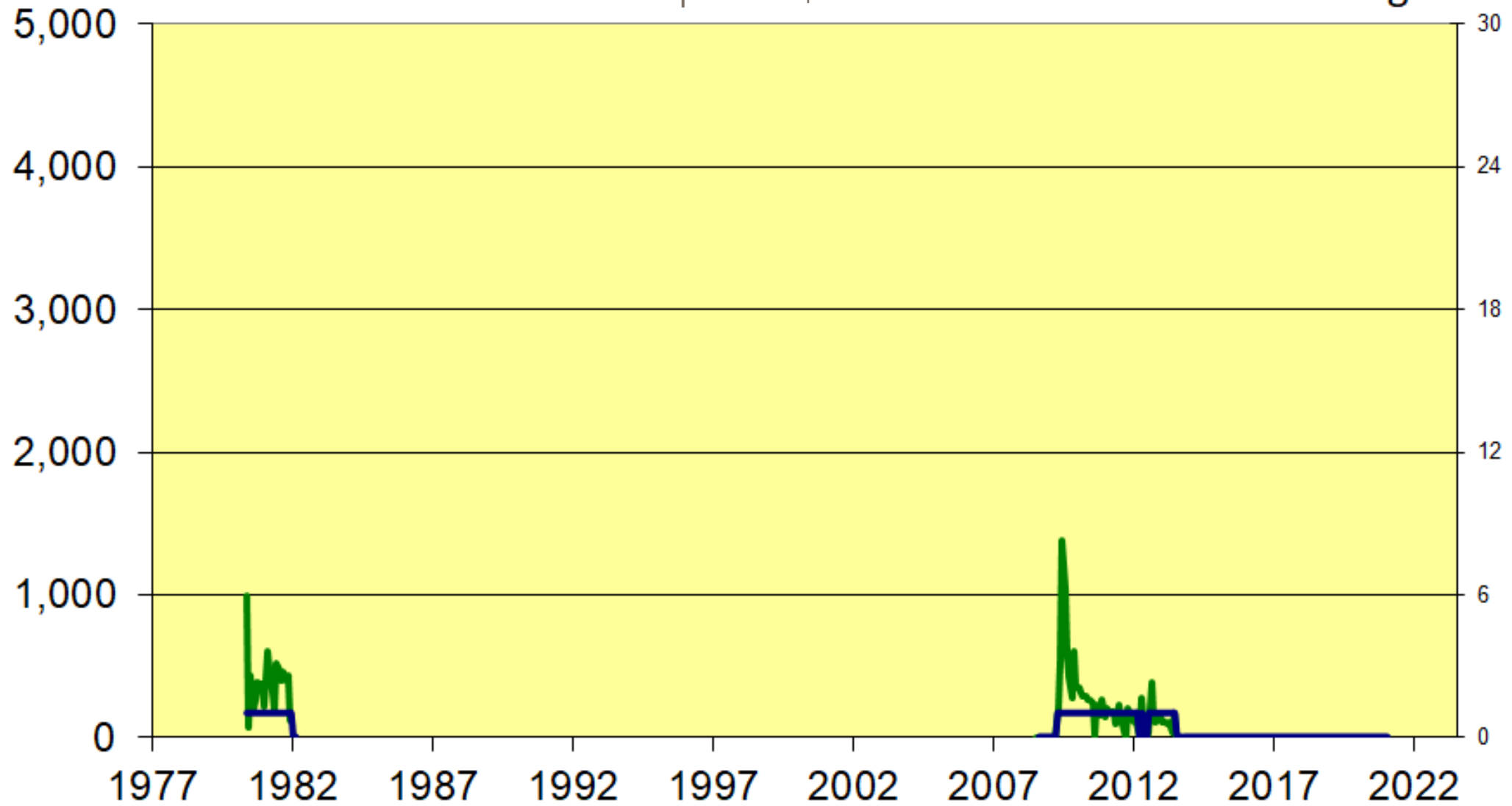




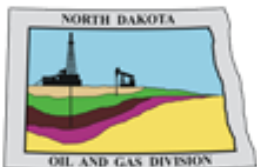
# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

Need oil price > \$100

0 rigs



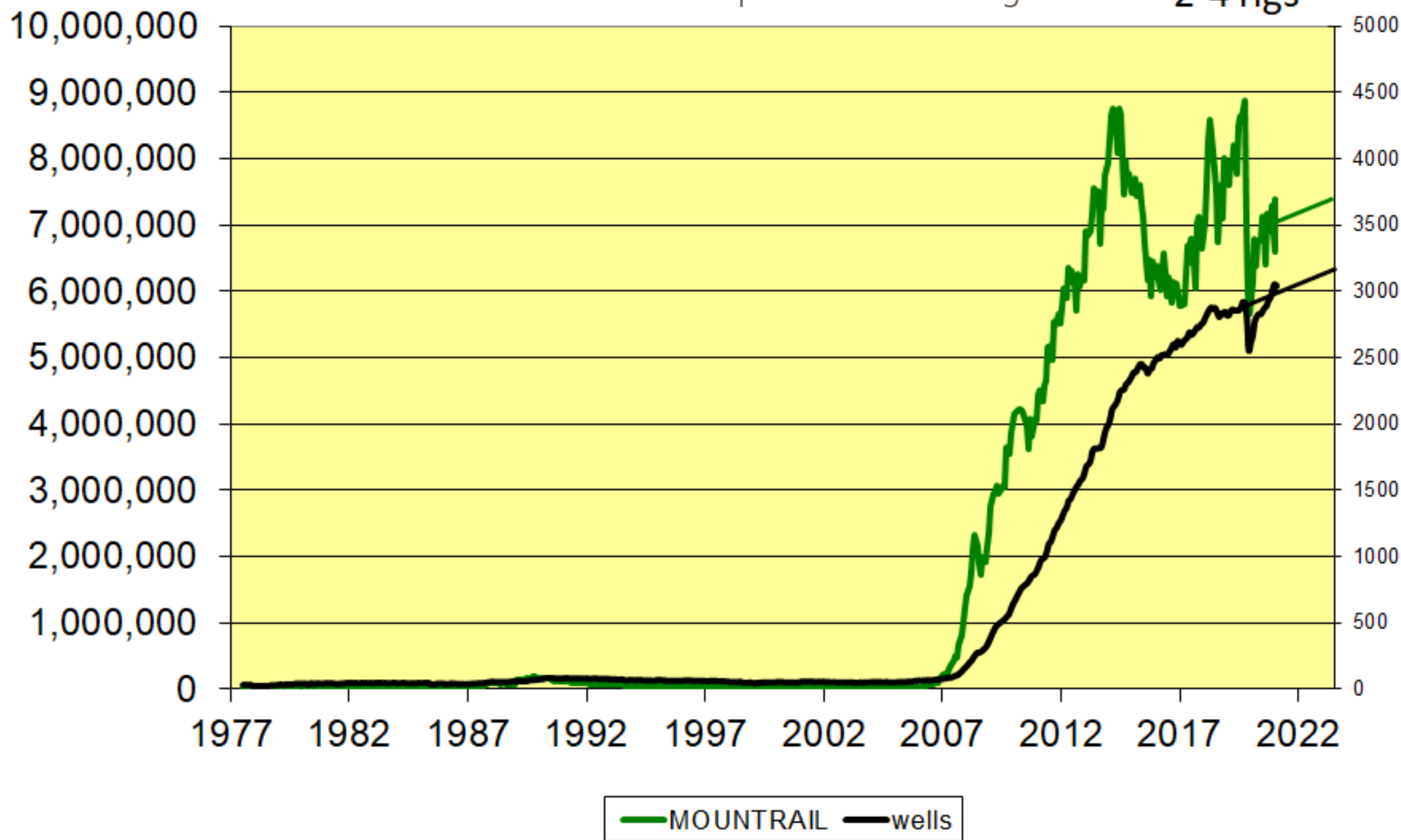
Mercer wells



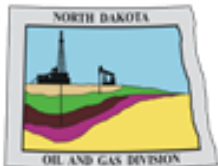
# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

Non-core development + Flare mitigation

2-4 rigs



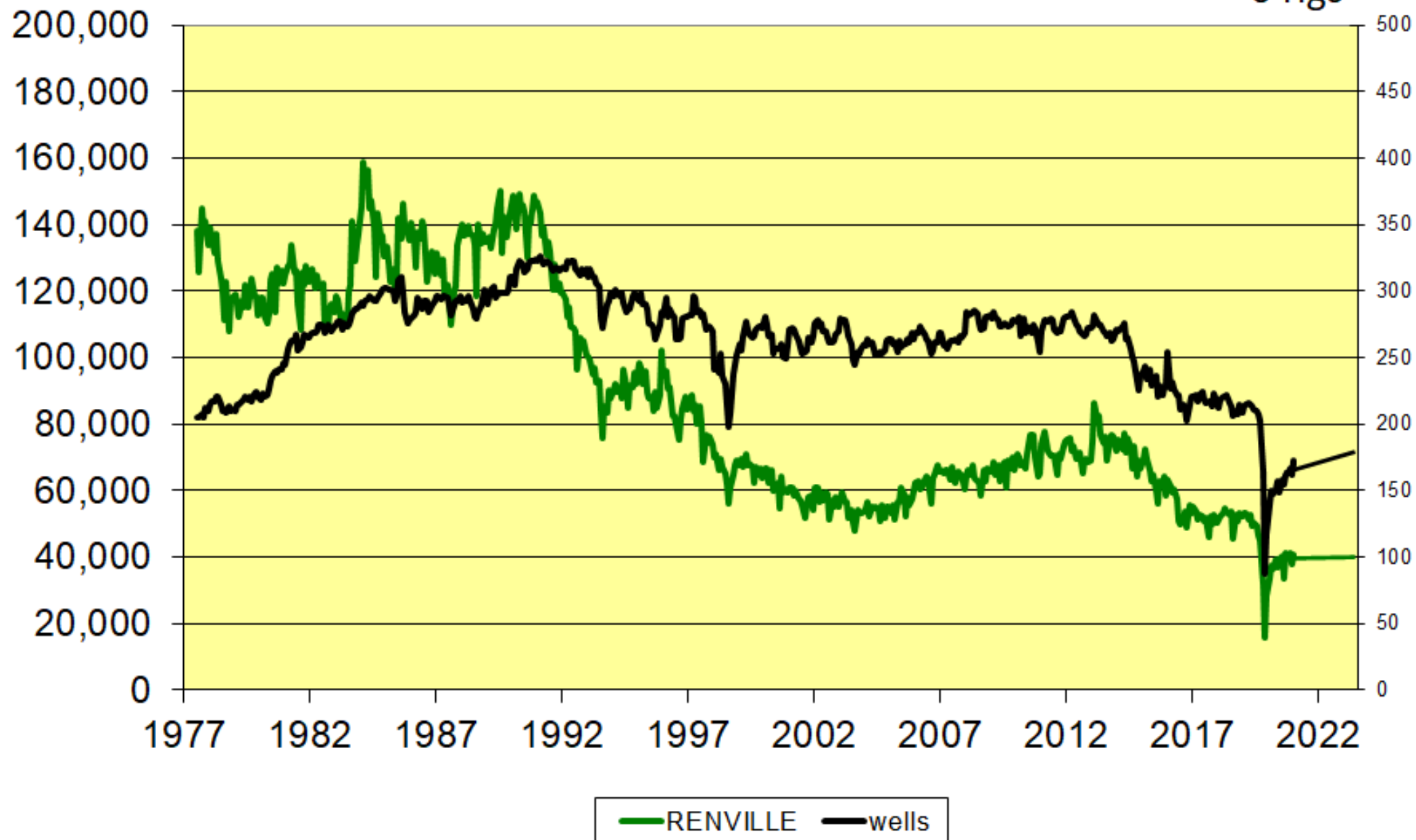


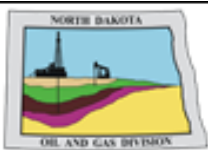


# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

AB wells PA & transfer < federal funds

0 rigs

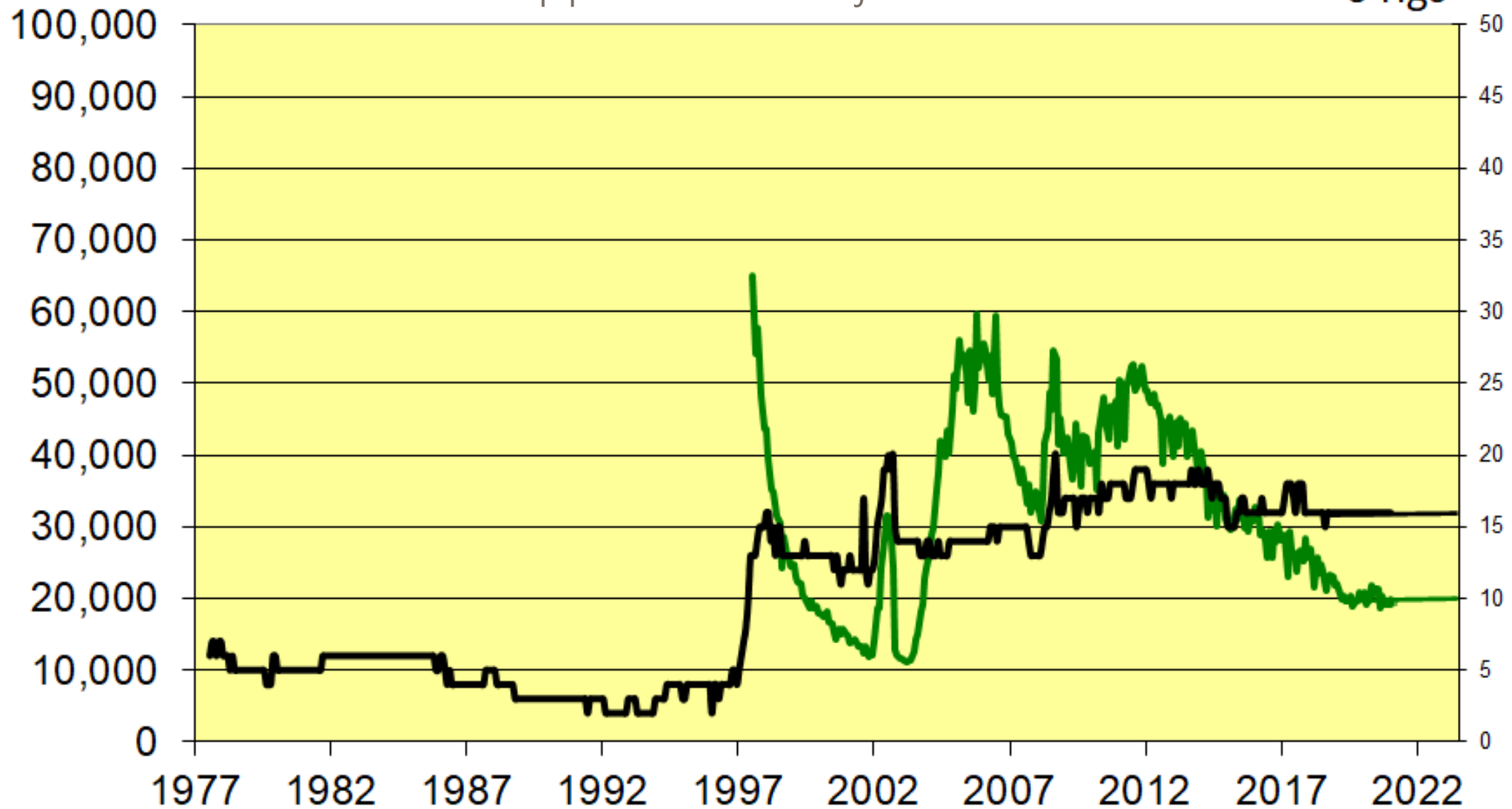




# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

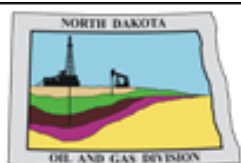
CO2 pipeline 2021 first injection March 2022

0 rigs



— SLOPE — wells

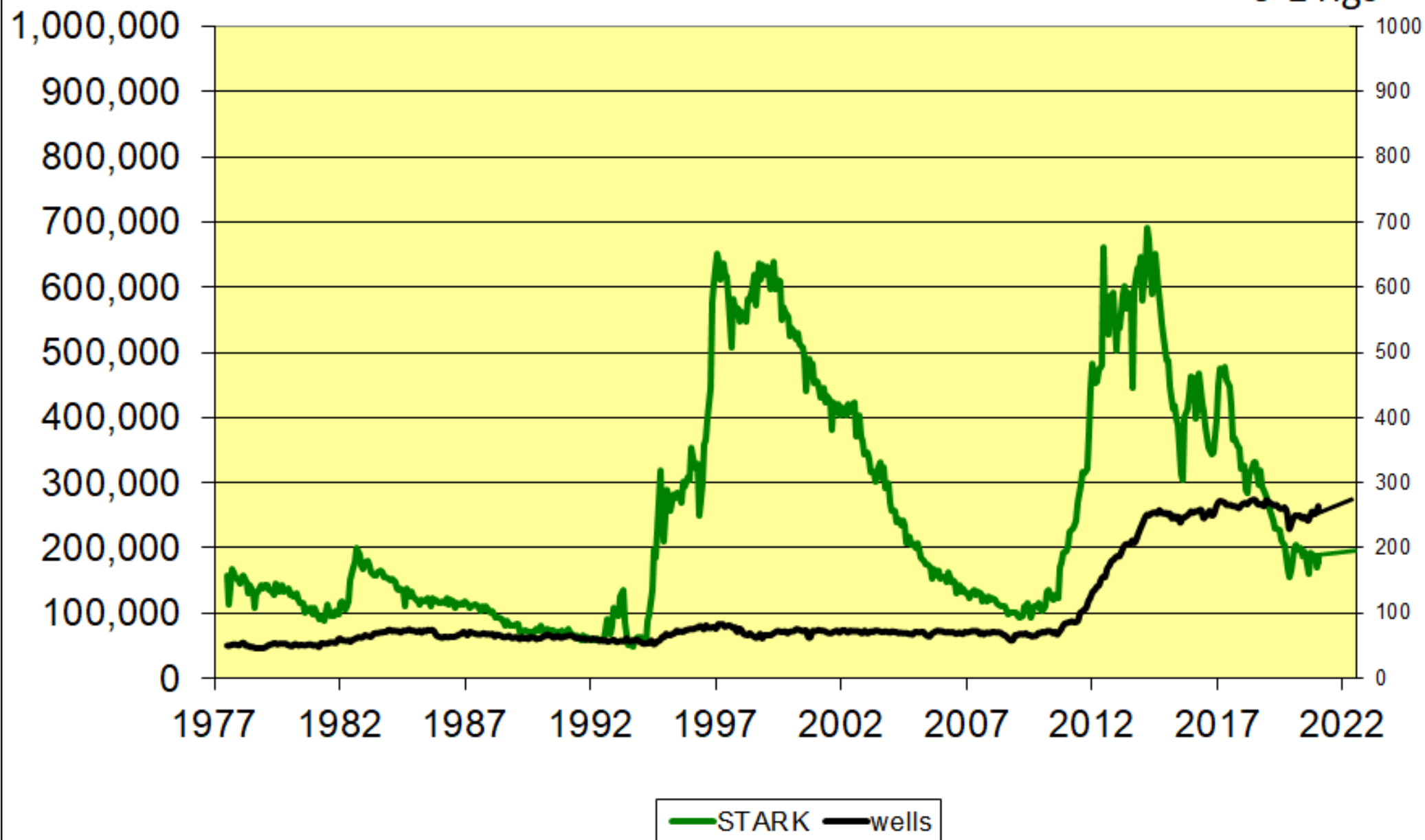


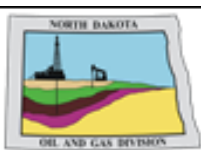


# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

Non-core development

0-1 rigs

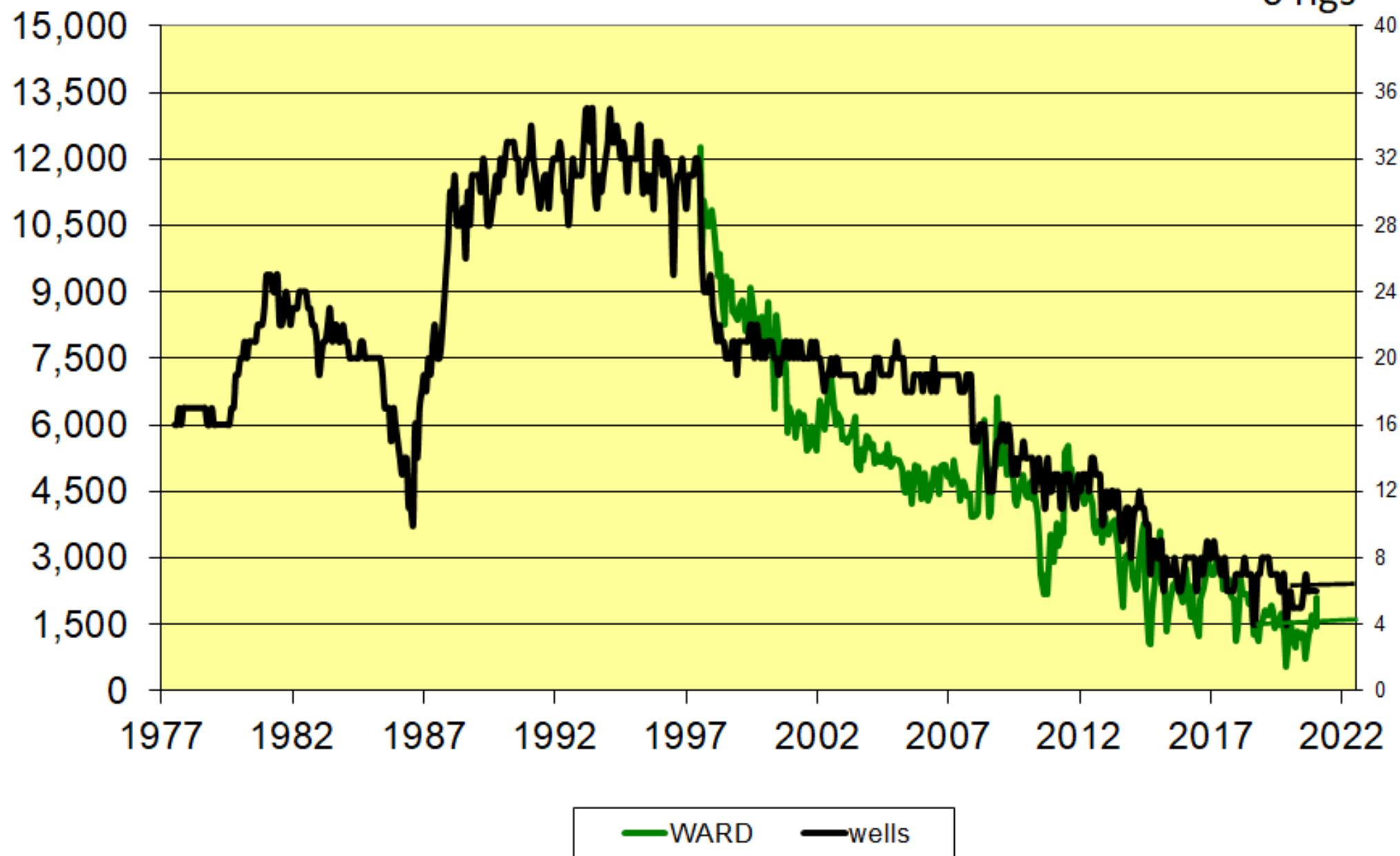




# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

AB wells PA & transfer < federal funds

0 rigs



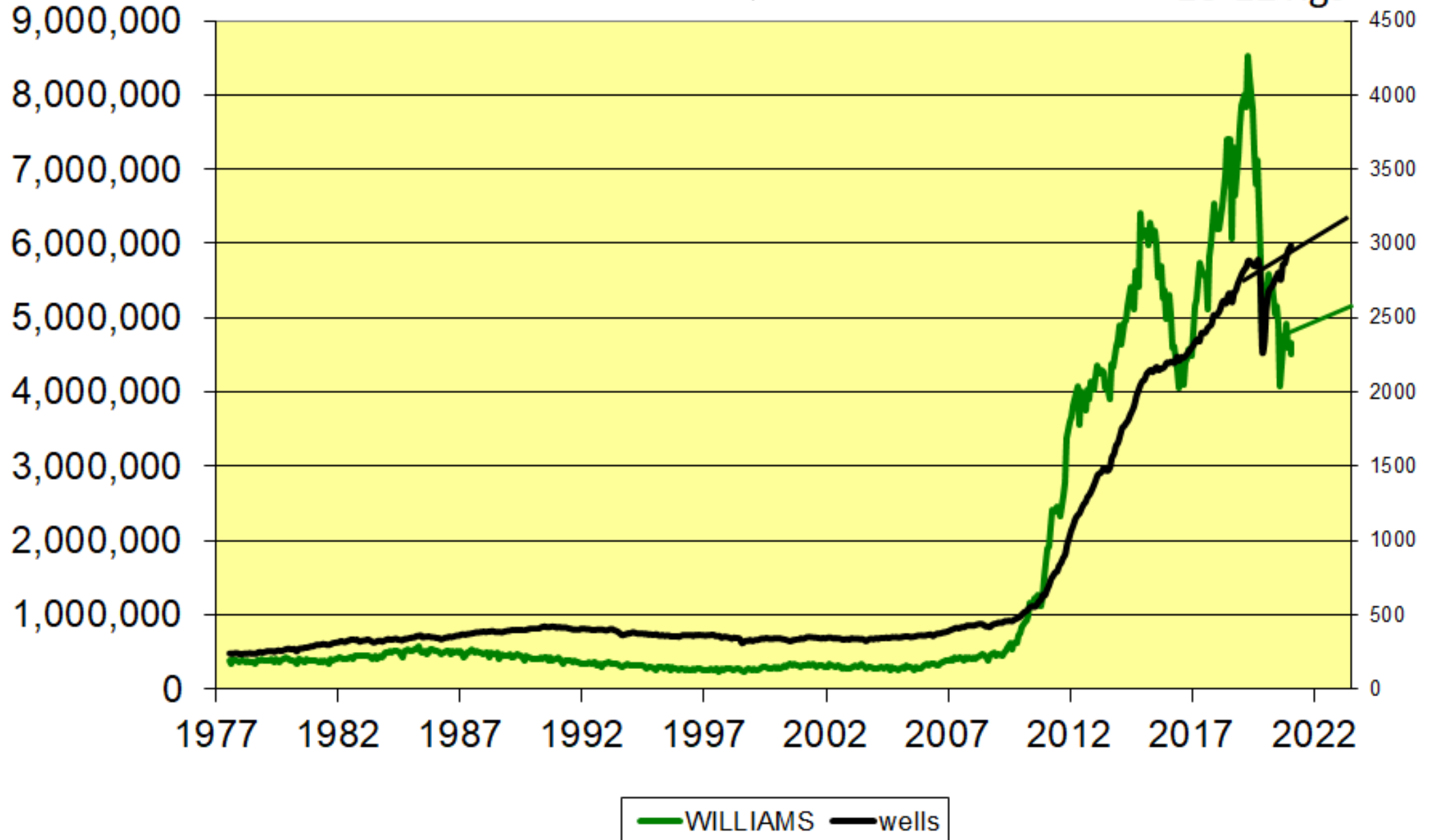




# MONTHLY OIL PRODUCTION FOR LOCAL COUNTIES

Non-core development

10-12 rigs





**North Dakota**  
**Department of Mineral Resources**  
**[www.dmr.nd.gov](http://www.dmr.nd.gov)**

**Phone: 701.328.8020**

**Email: [oilandgasinfo@nd.gov](mailto:oilandgasinfo@nd.gov)**

**Mailing Address: 600 East Boulevard Ave. Dept 405; Bismarck, ND 58505**