



# North Dakota DMR Update

June 15, 2023

NARO





- Statistics
- Oil Prices
- The Next 10 Years of (Bakken Development & EOR) (Legacy EOR)
- IIJA
- 2023 Legislation & Rule Changes
- 2030 Vision vs NIMBY





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## Oil Production

April	1,135,763 barrels/day (final)	NM 1,406,036
may	1,133,530 barrels/day (all-time high 1,519,037 BOPD Nov 2019)	
	1,091,811 barrels/day or 96% from Bakken and Three Forks	
	41,719 barrels/day or 4% from legacy pools	

## Gas Production and Capture

April Production	3,119,451 MCF/day
95% Capture	2,975,142 MCF/day
May Production	3,156,374 MCF/day (all-time high 3,179,517 MCFD Sep 2022)
95% Capture	3,003,098 MCF/day (all-time high 3,021,655 MCFD Sep 2022)

## May Gas Capture

Statewide	95%
Statewide Bakken	96%
Non-FBIR Bakken	95%
FBIR Bakken	97%
Trust FBIR Bakken	97%
Fee FBIR	96%



## Rig Count

April	45
May	43
June	37
Today	37 (all-time high was 218 on 5/29/2012)
Federal surface	0
New Mexico	111

## Wells

### Permitted

April	89
May	63
June	85 (all-time high was 370 in 10/2012)

### Completed

April	51 (preliminary)
May	138 (preliminary)

### Waiting on Completion

April	458
May	459



## Producing

April 17,768

May 17,913 (preliminary) (NEW all-time high 17,913 May 2023)

15,622 wells or 87% are now unconventional Bakken - Three Forks wells

2,291 wells or 13% produce from legacy conventional pools

## Inactive

April 1,899

May 1,779

## IIJA Initial Grant

January

1

## Wells PA Sites Reclaimed

0

February

4

0

March

1

0

April

8

0

May

18

0

June

9

0



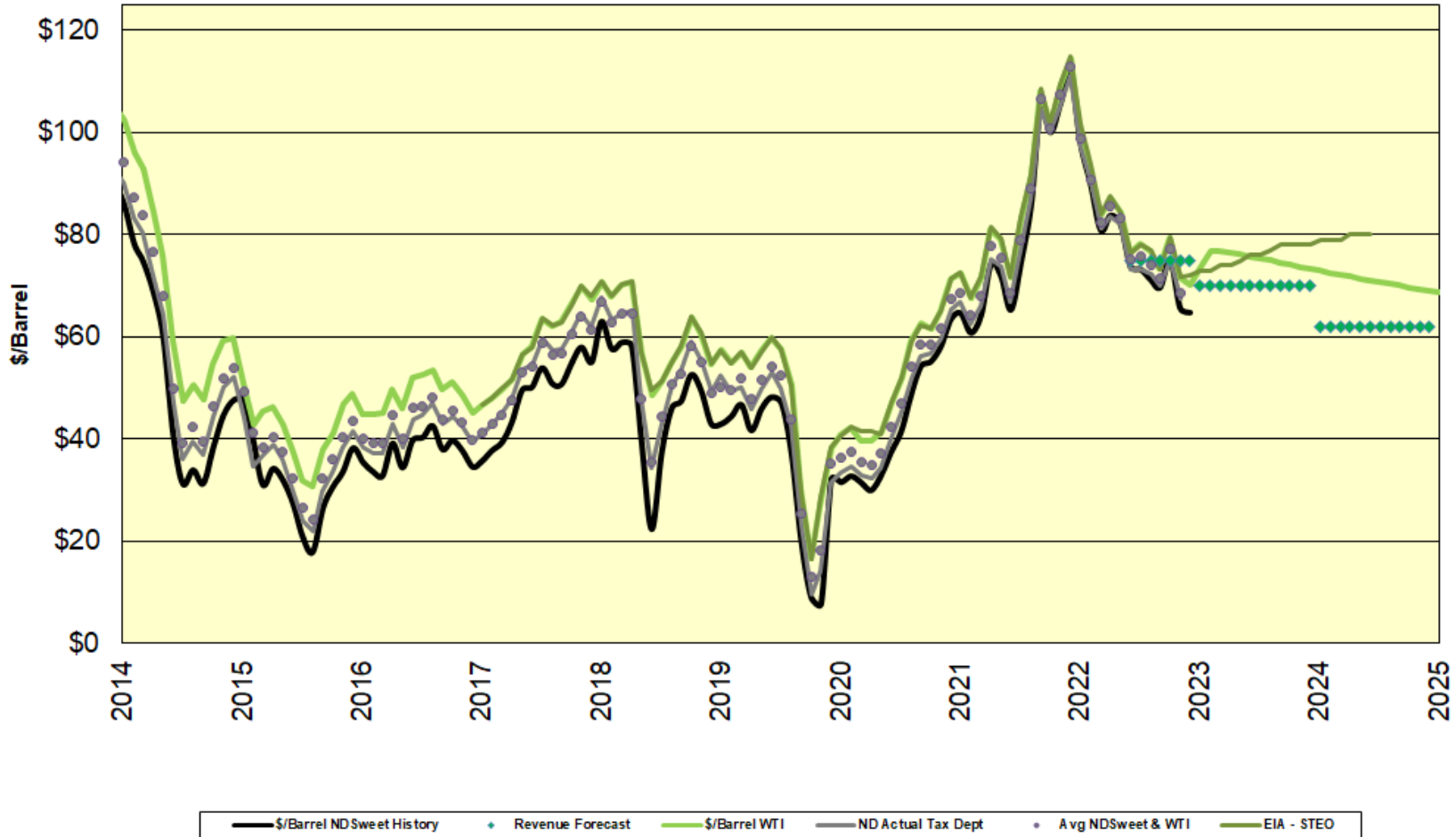


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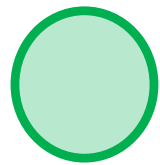
### North Dakota Oil Price Projections



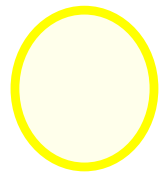


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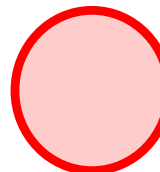




Core=Tier 1 > EOR  
 80-85% developed  
 +8,000 wells  
 1-2% growth = 35 rigs = 8 years

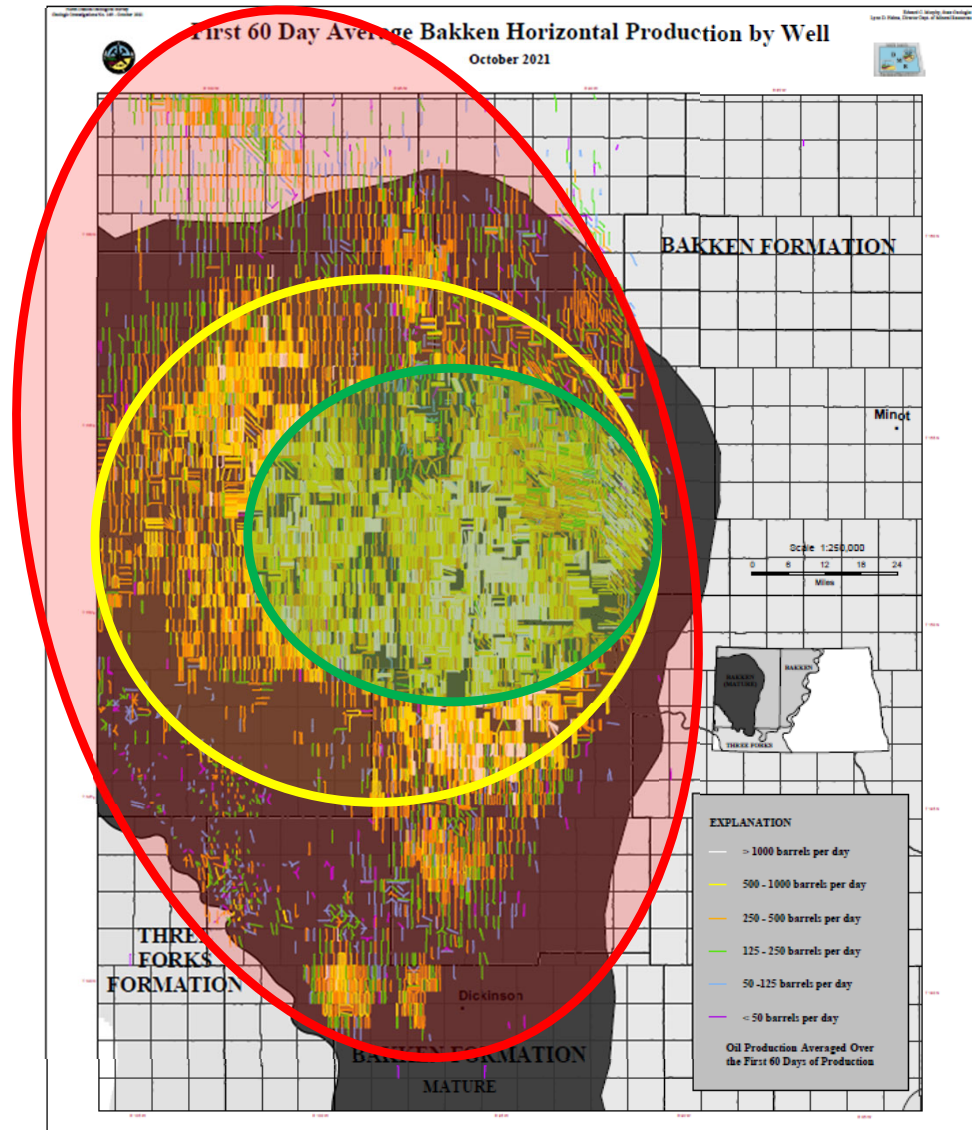


Tier 2 > 3 mi laterals  
 50% developed  
 +8,000 wells  
 1-2% growth = 50 rigs = 6 years

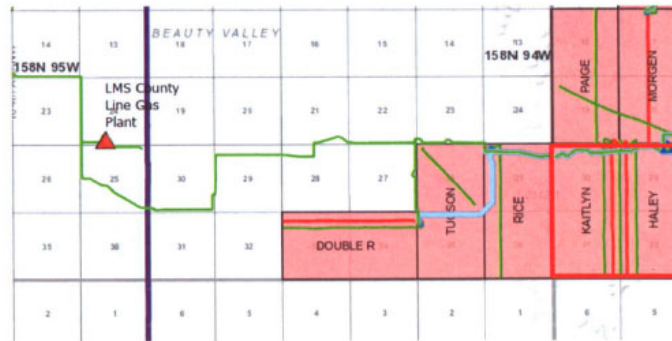


Tier 3 > 3-4 mi laterals  
 25% developed  
 +7,000 wells  
 1-2% growth = 75 rigs = 4 years

Total = 23,000 wells & 18 years  
 Current 17,000 wells & 16 years



## 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)

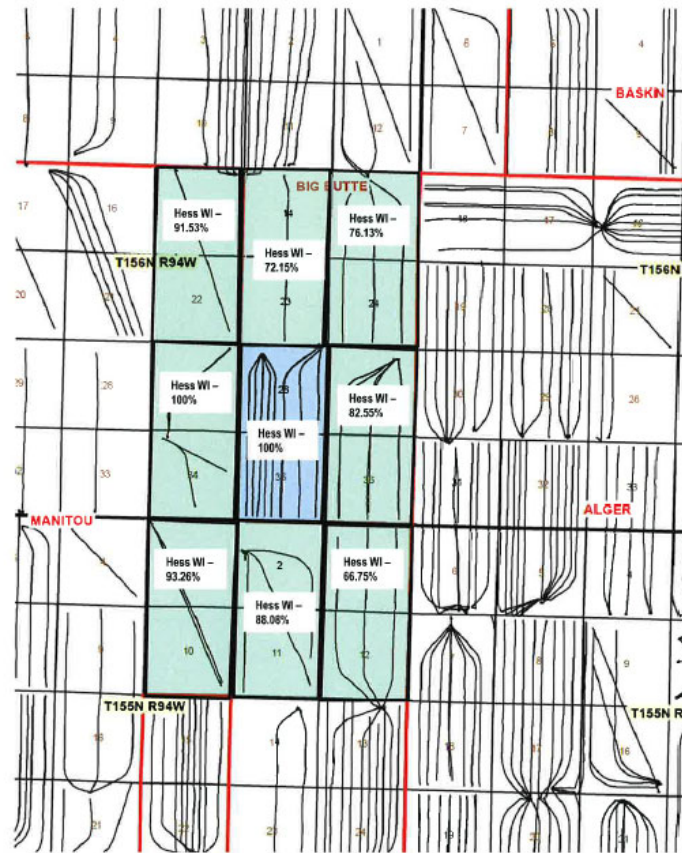
- Location selected based on results and learnings from prior Bakken EOR pilots, specifically the “Stomping Horse” pilot documented in NDIC Case No. 27926.
- Utilizes more recently completed infill wells (August ‘19); limited depletion.
- Accesses rich gas via connection to the gas plant gathering line.
- 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  
RPT 6-17-21 CASE NO. 28830  
INTRODUCED BY Liberty  
COURT E-2  
IDENTIFIED BY Pospisil

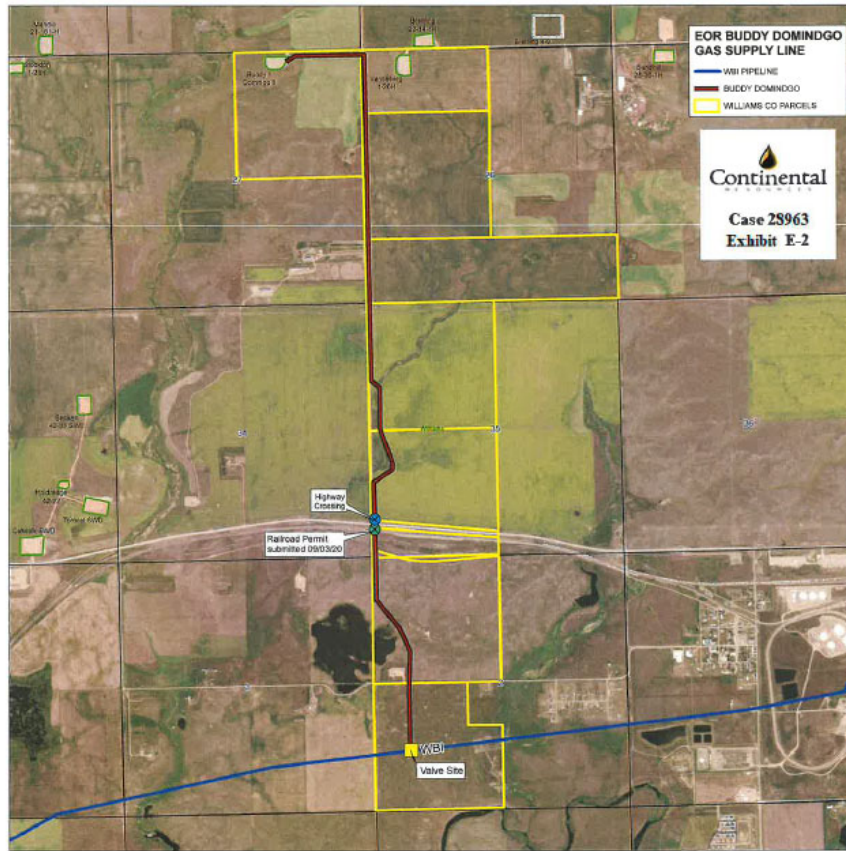




### Location Map – Hess WI

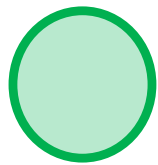


Case # 27836  
10/23/19  
Exhibit 3

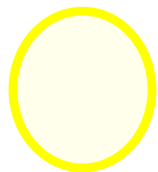


INDUSTRIAL COMPANY  
 STATE OF OREGON  
 DATE 9-30-21 Filed No 28963  
 APPROVED BY Continental  
 EXHIBIT E-2  
 WITNESSED BY Bennett

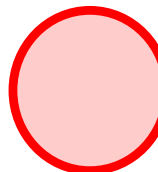




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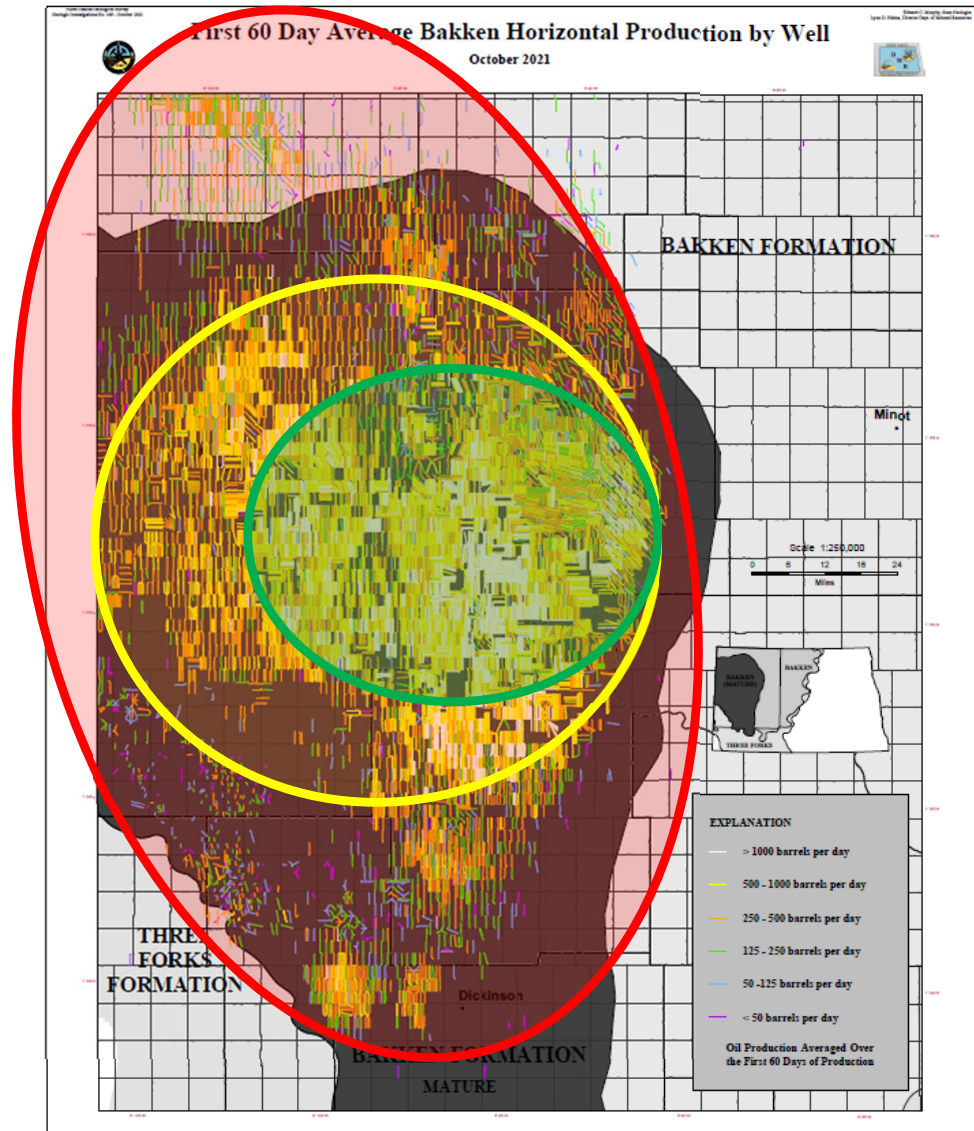


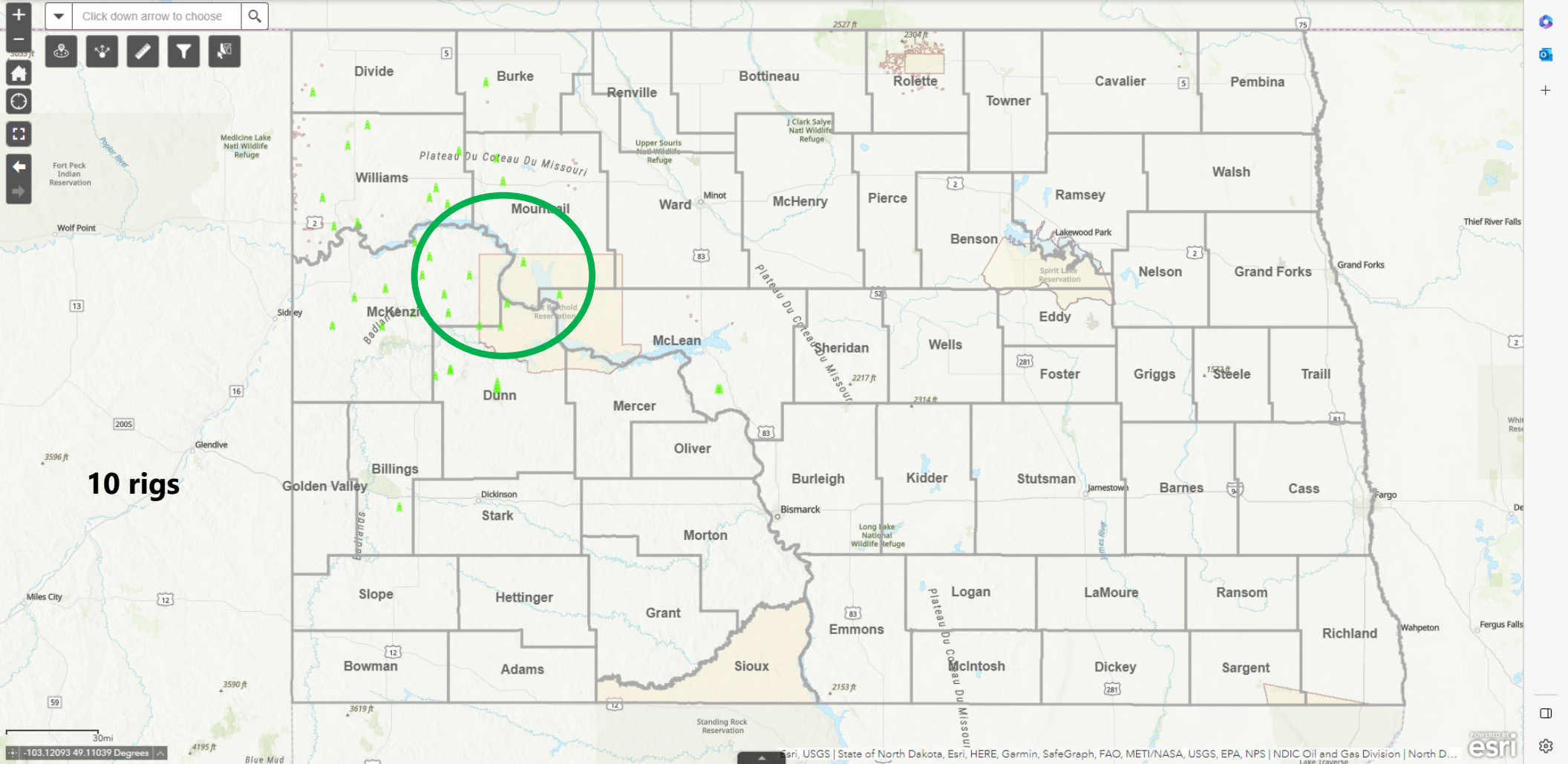
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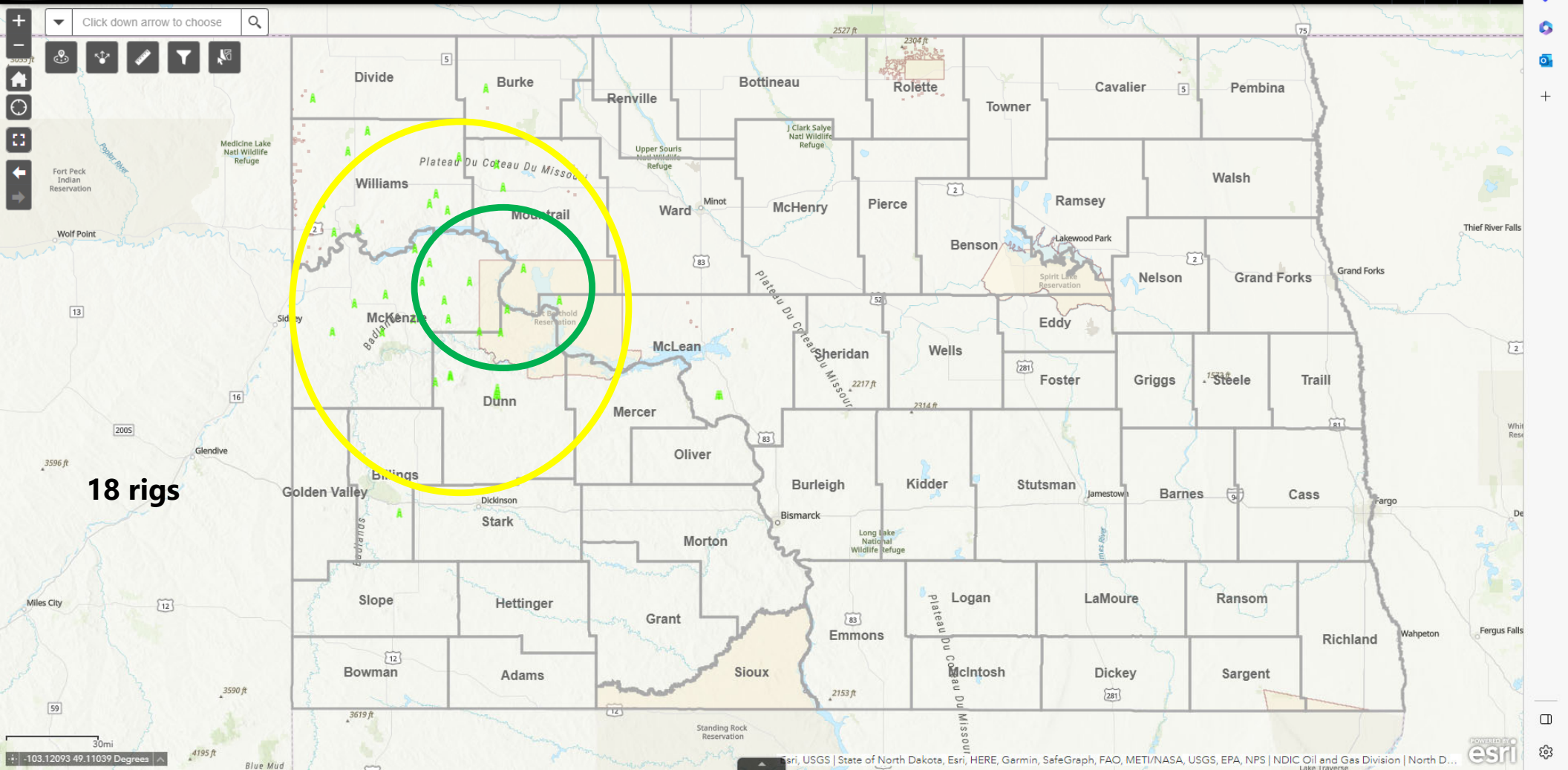
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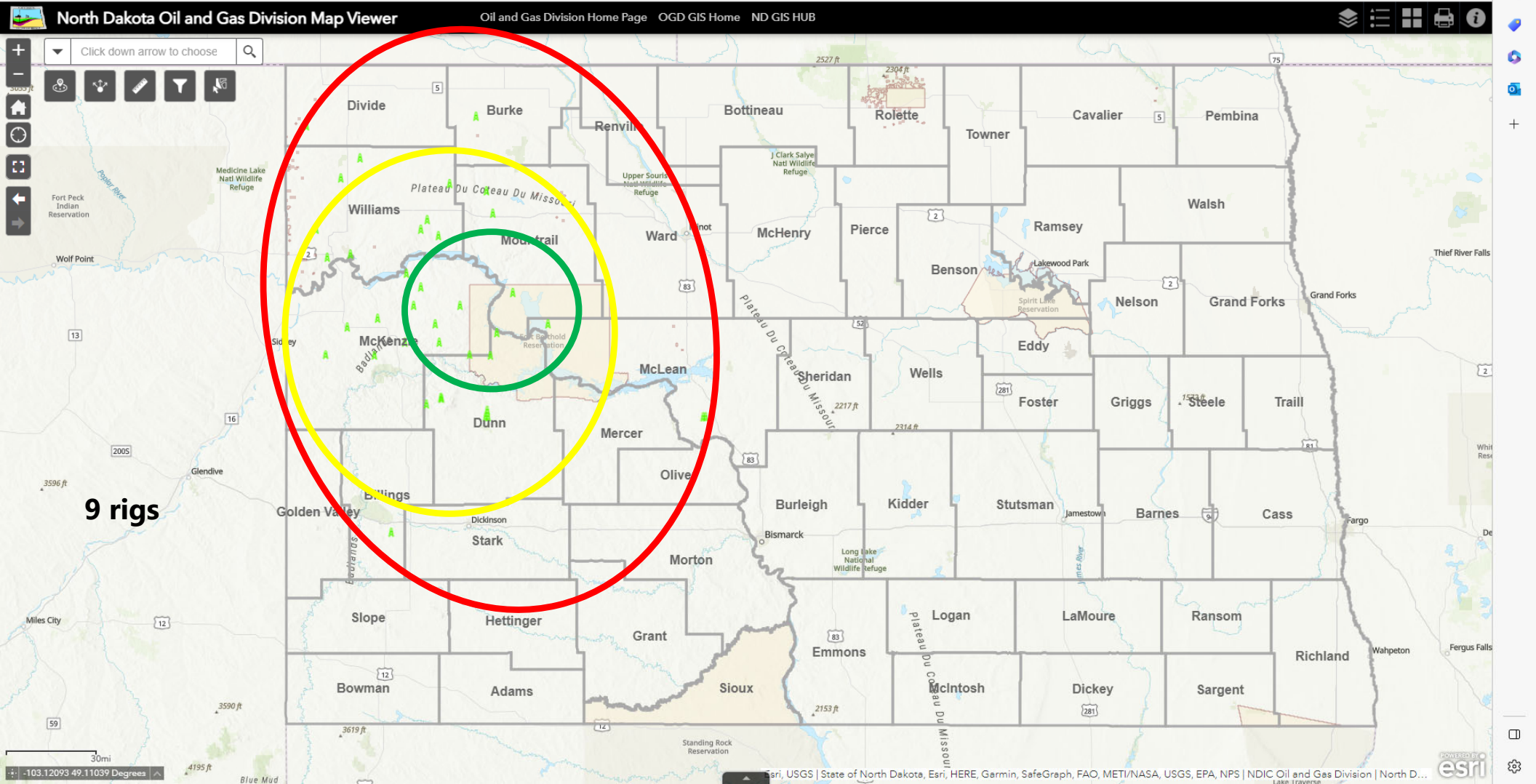


10 rigs





18 rigs

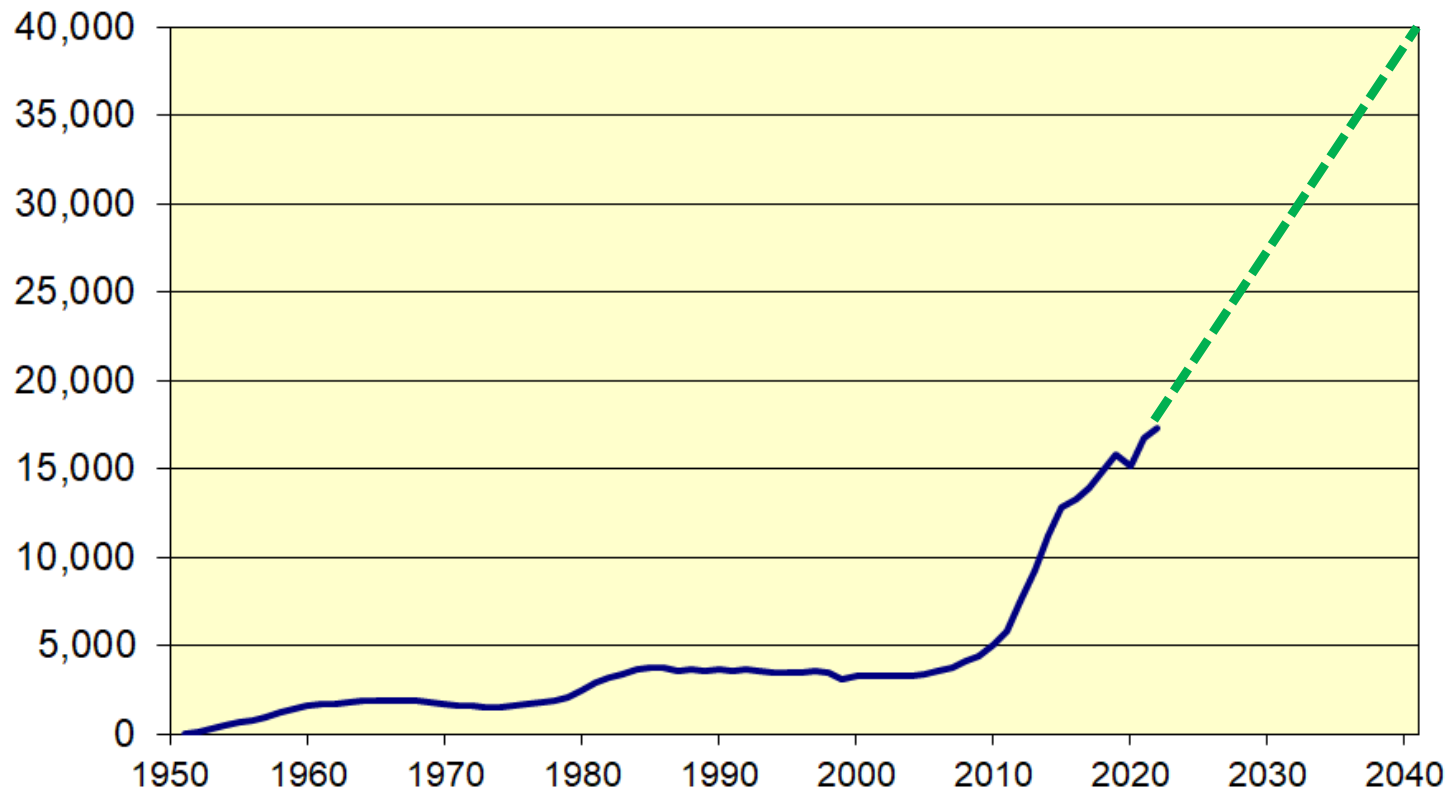


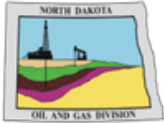
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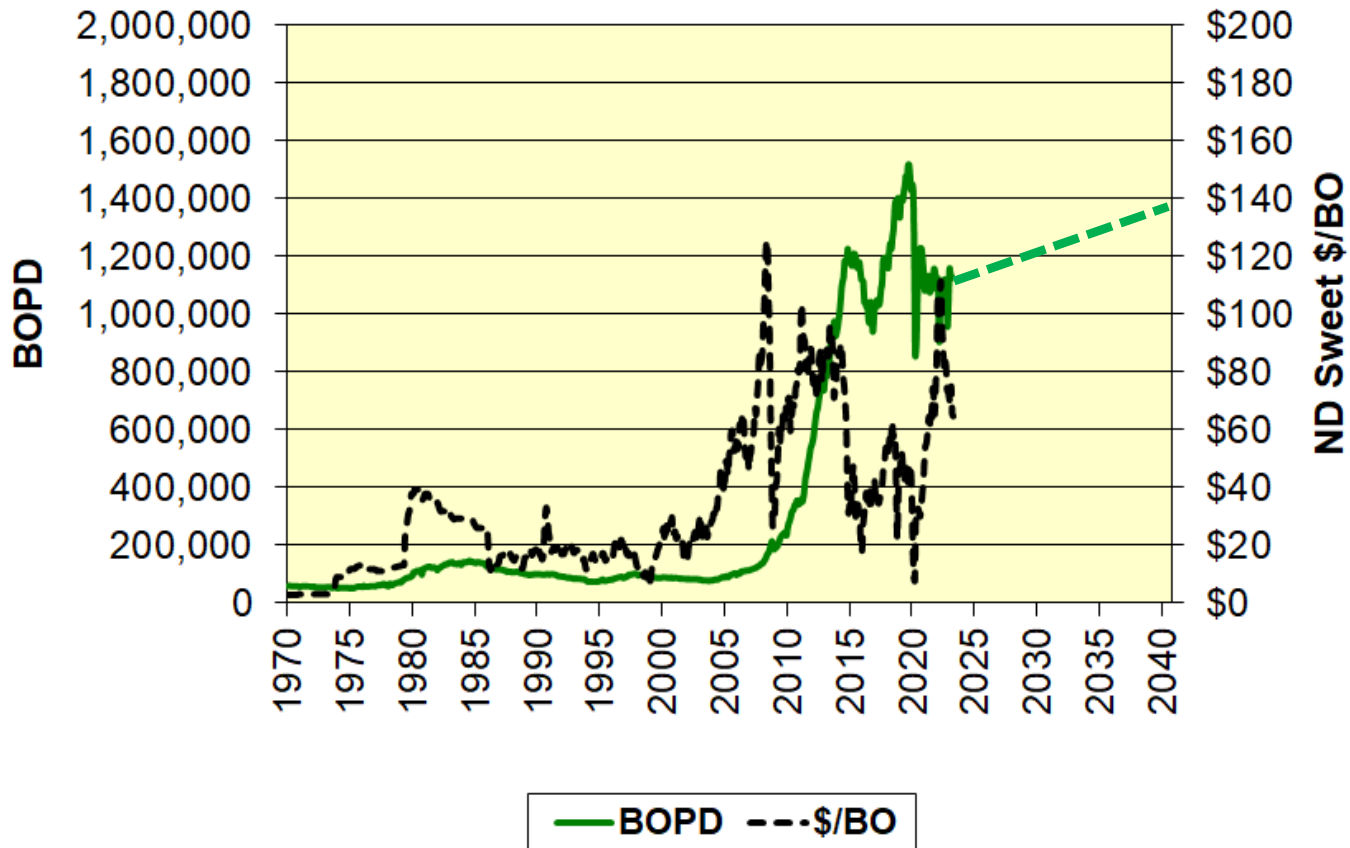


## North Dakota Wells Producing



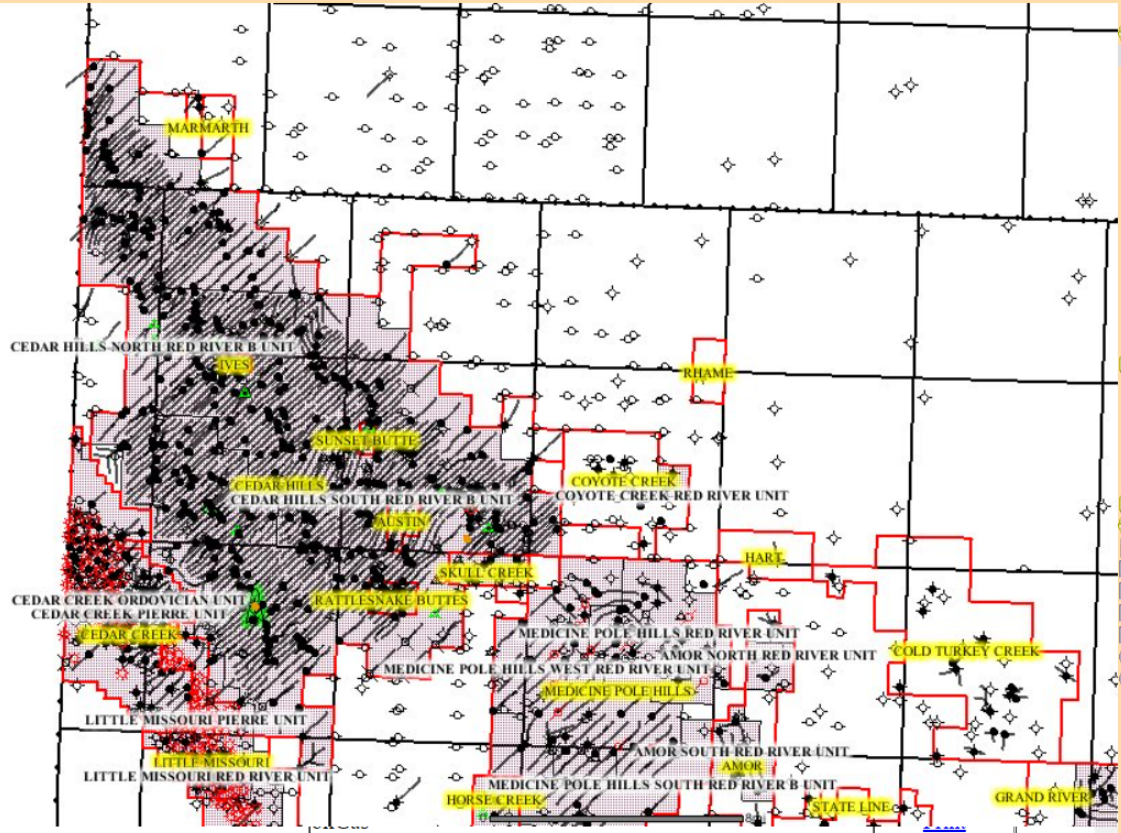


### North Dakota Daily Oil Produced and Price



# Oil and Gas : ArcIMS Viewer

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- Overview Map
- View Entire State
- Previous View
- Clear Selection
- Search
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- Zoom In
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Download Shape Files

**ND OIL & GAS LAYERS**

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- Gas Plants
- Other

**Refresh Map**

Auto Refresh

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

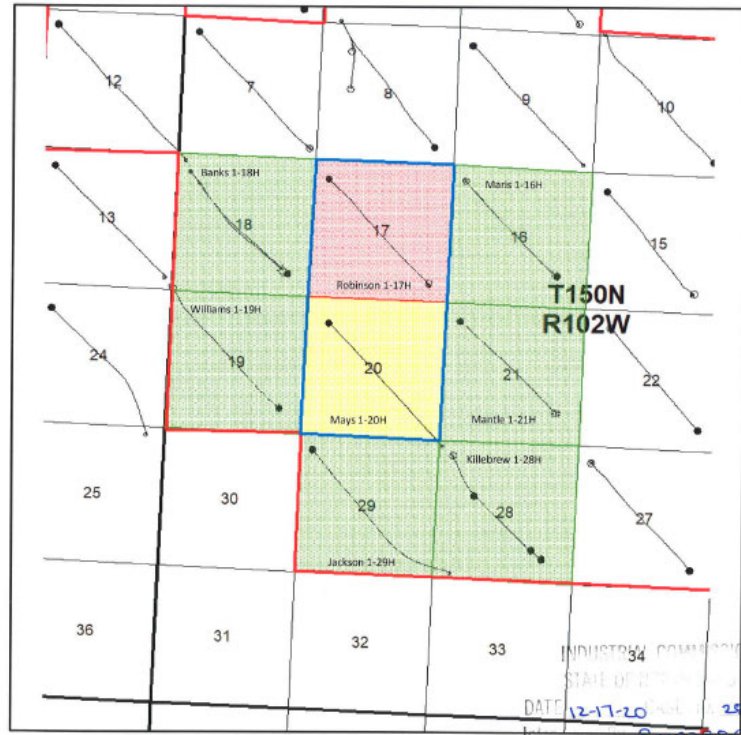
Find

Map Data Last Updated : 7/19/2021



# Mays Waterflood Test Plat

Foreman Butte Field: Madison Pool

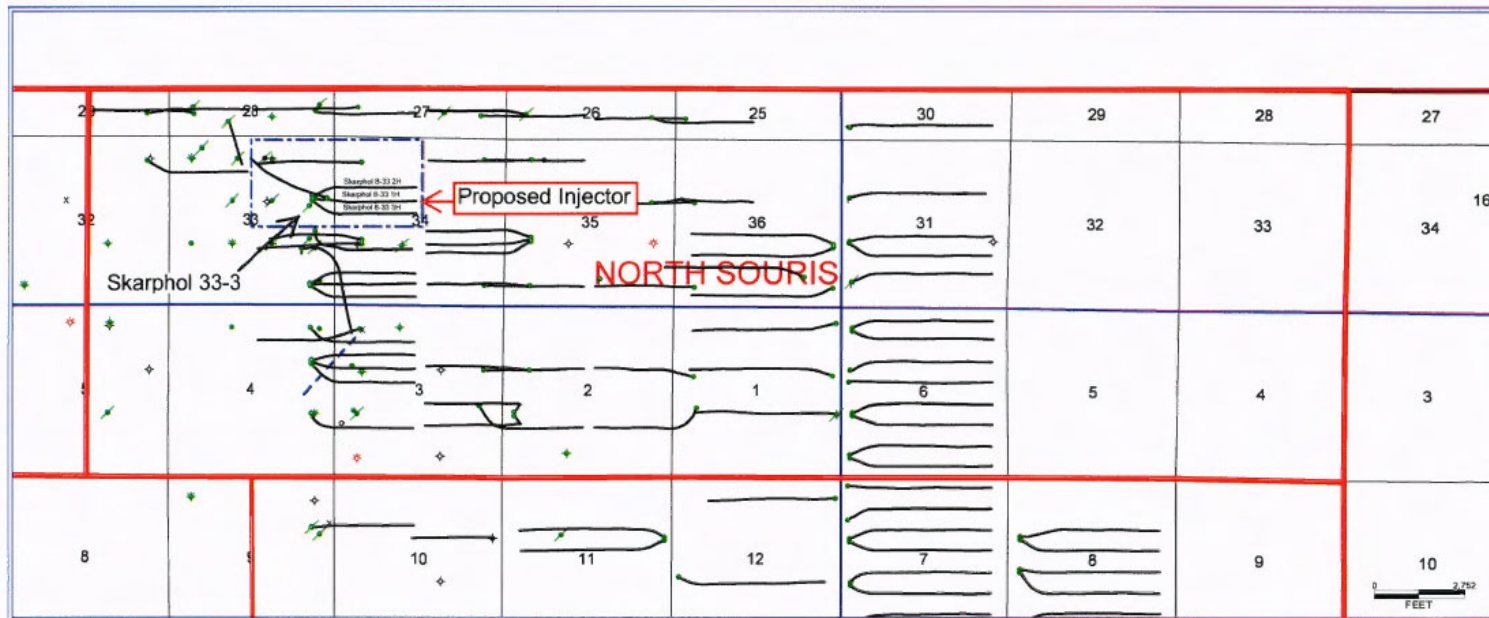


INDUSTRIAL COMMISSION  
STATE OF OKLAHOMA  
DATE 12-17-20  
Initiated by Samson  
Exhibit 4  
Identified by Hatcher

Mays 1-20H – Injector	<span style="display:inline-block; width:15px; height:15px; background-color:yellow;"></span>	Mays/Robinson Unit	<span style="display:inline-block; width:15px; height:15px; border:1px solid blue;"></span>
Robinson 1-17H – Producer	<span style="display:inline-block; width:15px; height:15px; background-color:red;"></span>		
6 Monitoring Wells	<span style="display:inline-block; width:15px; height:15px; background-color:green;"></span>		

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 01/26/21 CASE NO. 28924  
 Introduced By Ballantyne  
 Exhibit 2  
 Identified By Jennings

Ballantyne Oil, LLC  
 Case No. 27266  
 Exhibit 2



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Orphaned Well Site Plugging, Remediation, and Restoration  
Section 40601 of the Infrastructure Investment and Jobs Act

**Grant Timeline**

**2021**

11/15/2021 Enactment of the Infrastructure Investment and Jobs Act. (Section 40601 - )

11/30/2021 Report documented orphan wells as of 11/15/21 to IOGCC

12/30/2021 Notice of Intent to Apply for "Formula" Funding Grant

**2022**

1/29/2022 Posting of "Formula" Funding Grant amounts online

5/14/2022 Application deadline for "Initial-25" Funding Grants

6/13/2022 (If "Initial-25" Grant Received) - Date funds received by state.

9/11/2022 No less than 90% of "Initial-25" Grant funds received must be *obligated*.

10/11/2022 Earliest date to apply for "Performance-Regulatory Improvement" & "Performance-Matching" Grant that *could allow* for earliest receipt of funds.

12/10/2022 Earliest date "Performance-Regulatory Improvement" & "Performance-Matching" Grant funds may be received.

**2023**

6/13/2023 Deadline for "Initial-25" Funding Grants to be *obligated*.



6/30/2023 1st "Performance-Matching" Grant fund expensed.

9/30/2023 Final Report on "Initial-25" Funding Grants due.

**2031**

6/30/2031 Deadline for all "Performance-Matching" Grant eligibility. *Not to exceed a total amount received of \$30,000,000 between 2022-2031 per state.*



**2032**

12/7/2032 Reimbursement for failure to maintain protections under the "Performance-Regulatory Improvement" Grant Due, *if applicable*.

**Table 13. Updated Data on Documented Orphan Wells**

\* Report the number of documented orphan wells as of November 15, 2021, if available. If the reported number relates to a different date, please specify that date.

State	Total Documented Orphan Wells*	Documented Orphan Wells on State and Private Lands*	Date of Reported Number if other than November 15, 2021
Alabama			
Alaska			
Arizona			
Arkansas			
California			
Colorado			
Florida			
Georgia			
Idaho			
Illinois			
Indiana			
Kansas			
Kentucky			
Louisiana			
Maryland			
Michigan			
Mississippi			
Missouri			
Montana			
Nebraska			
Nevada			
New Mexico			
New York			
North Carolina			
North Dakota	232	186	11/30/2021
Ohio			
Oklahoma			
Oregon			
Pennsylvania			
South Carolina			
South Dakota			
Tennessee			
Texas			
Utah			
Virginia			
Washington			
West Virginia			
Wyoming			
Totals - States:			

Please provide an explanation if the orphan well count differs by 10% or more from the count as of December 31, 2020:

The reduction in wells reported between December 31, 2020 and November 30, 2021 is a result of North Dakota's ongoing plugging and reclamation work completed.



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## **HB1014 – DMR budget**

Move website and NorthSTAR from on site servers to cloud

Streamline NorthSTAR

\$11.3 million for salt cavern project

\$1.5 million for critical mineral / rare earth research

\$3 million for litigation

\$3 million for IPIPE

\$50 million for CSEA grants and \$390 million CSEA loans

\$3.2 million for orphan well to water well conversions

## **HB1272**

Creates a new category “enhanced oil recovery potential” for idle wells

### **NDAC 43-02-03-15 (10)**

Enhanced oil recovery potential well bond

### **NDAC 43-02-03-55 (3)**

Enhanced oil recovery potential well integrity requirements



## **HB1286**

Removes oil extraction tax trigger

## **HB1427**

Extraction tax reduction for restimulations

NDIC Certification – file sundry attesting well meets the 3 items in statute.

## **SB2009 & SB2194**

Create and fund royalty owner ombudsman program

## **SB2057**

Amends 38-22-06 to streamline mineral owner notice requirement for CCS

## **SB2058**

Amends 30-08-04 to place all equipment located at or on an oil or gas well sites and underground pipeline surface facilities under NDIC jurisdiction

## **SB2059**

Increases abandoned well fund limit to \$100 million

## **SB2089**

Creates a \$3 million OGRC grant program, added tank vapor capture technologies, gas lift, and temporary gas injection

## **SB2289**

Amends 54-35-18 to require EDTC committee to develop a statewide energy policy

## **SB2209, SB2212, SB2313, SB2314, SB2228, SB2317, SB2383 > NWLA lawsuit**

Carbon dioxide pipelines, storage (also oil & gas), and eminent domain

### **NDAC 43-02-03-16**

Extend a permit to drill to recomplete or drill horizontally for up to one year upon application

Permit and bond for site construction prior to APD

### **NDAC 43-02-03-19.3**

Produced water stored in open receptacles upon approval by the director

### **NDAC 43-02-03-21**

Require an accurate gauge be maintained on the surface casing of any well, not properly plugged and abandoned, to detect any buildup of pressure

### **NDAC 43-02-03-27.1**

Remove "intermediate" from casing definitions in hydraulic fracturing rule

### **NDAC 43-02-03-29.1 (10)**

Must file data sharing plan on underground gathering pipelines



### **NDAC 43-02-03-30**

Apply 10 barrels spill reporting threshold to underground gas gathering pipeline facilities

### **NDAC 43-02-03-31**

Confidentiality for information furnished to the director on refracs except the operator name, well name, location, permit date, confidentiality period, spacing or drilling unit description, spud date, rig contractor, any production runs, or volumes injected into an injection well

### **NDAC 43-02-03-35**

Change responsibility to record reclamation waivers from operator to commission

### **NDAC 43-02-03-35**

Change "state water commission" to "Department of Water Resources"

### **NDAC 43-02-10**

Removes language that is inconsistent with latest version of NDCC 57-51.1



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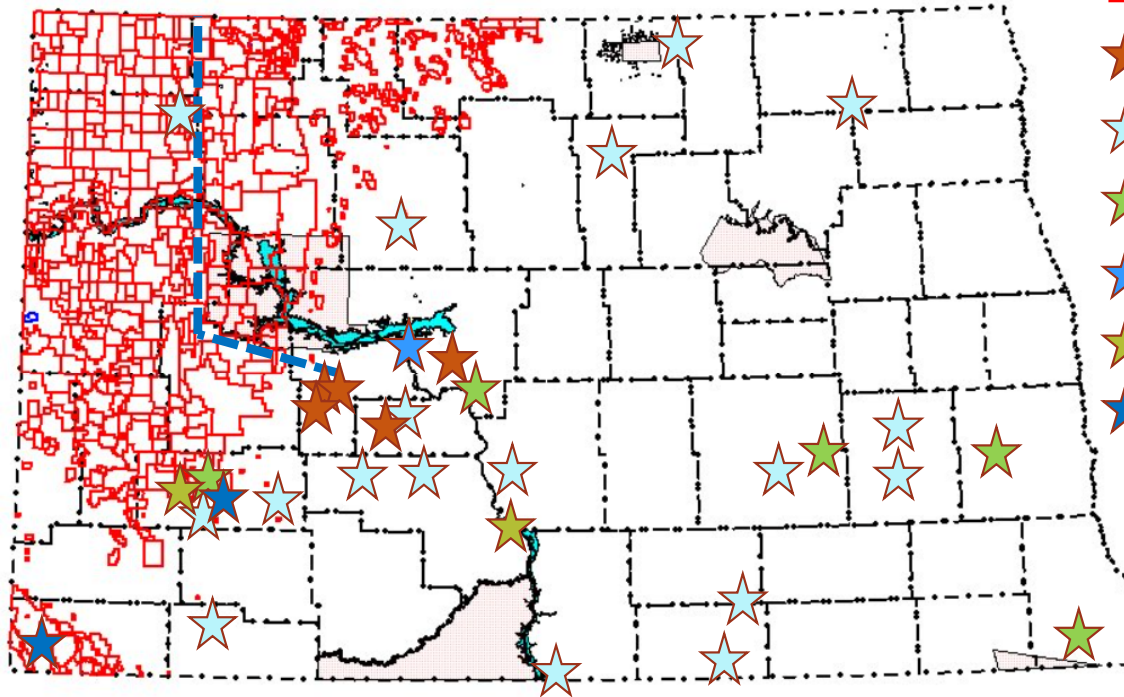
Distance

Find Well

Find Field / Unit

Find Section

Browser Settings  
Suggestion



Oil & Gas

Coal-ElecGen

Wind Farm

Ethanol

Hydro

Refinery

CCUS

Download Shape

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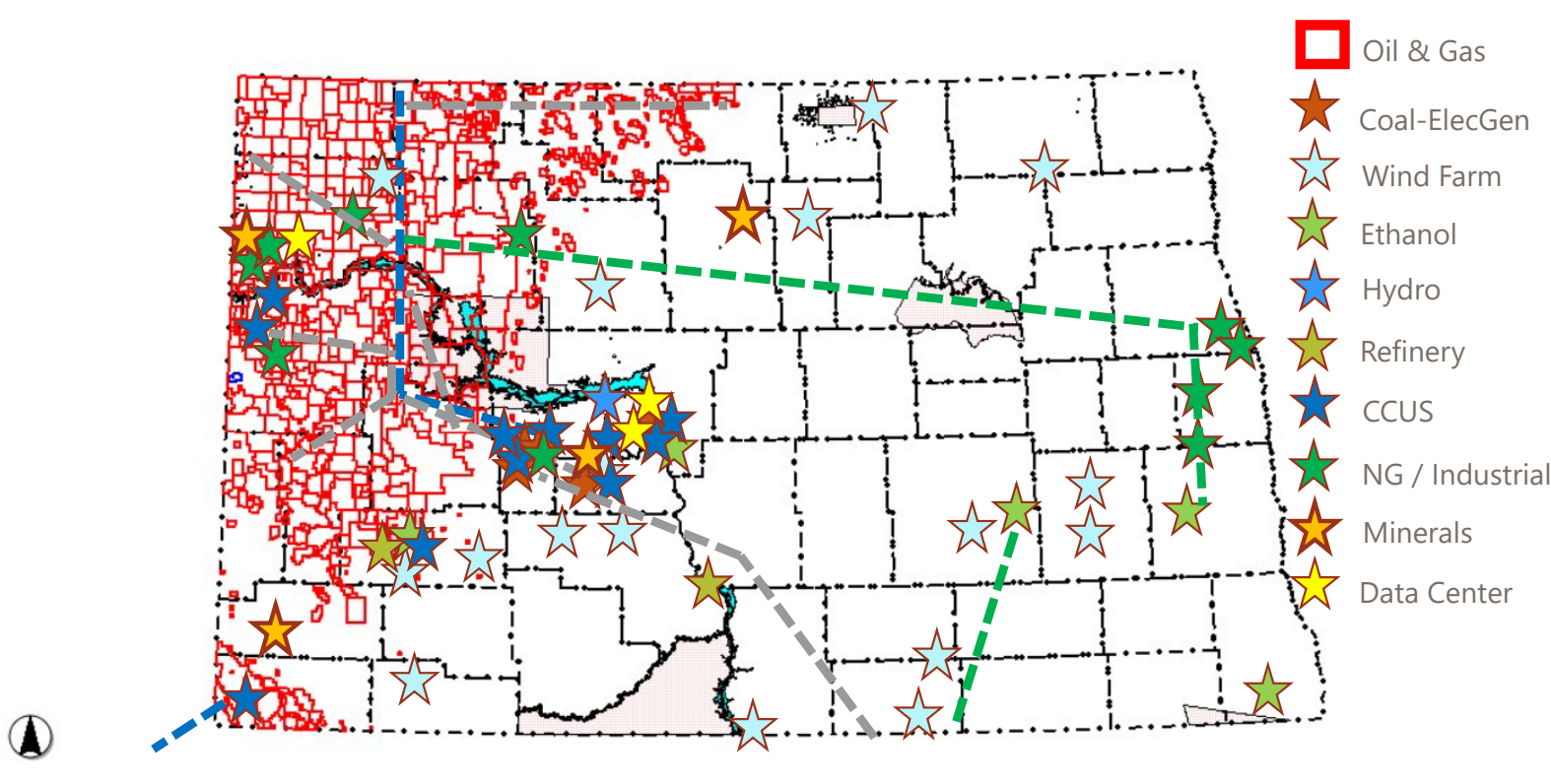
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Map Data Last Updated : 1/24/2025



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- Oil & Gas
- Coal-ElecGen
- Wind Farm
- Ethanol
- Hydro
- Refinery
- CCUS
- NG / Industrial
- Minerals
- Data Center

**ND Energy Landscape >2030**

0 88mi

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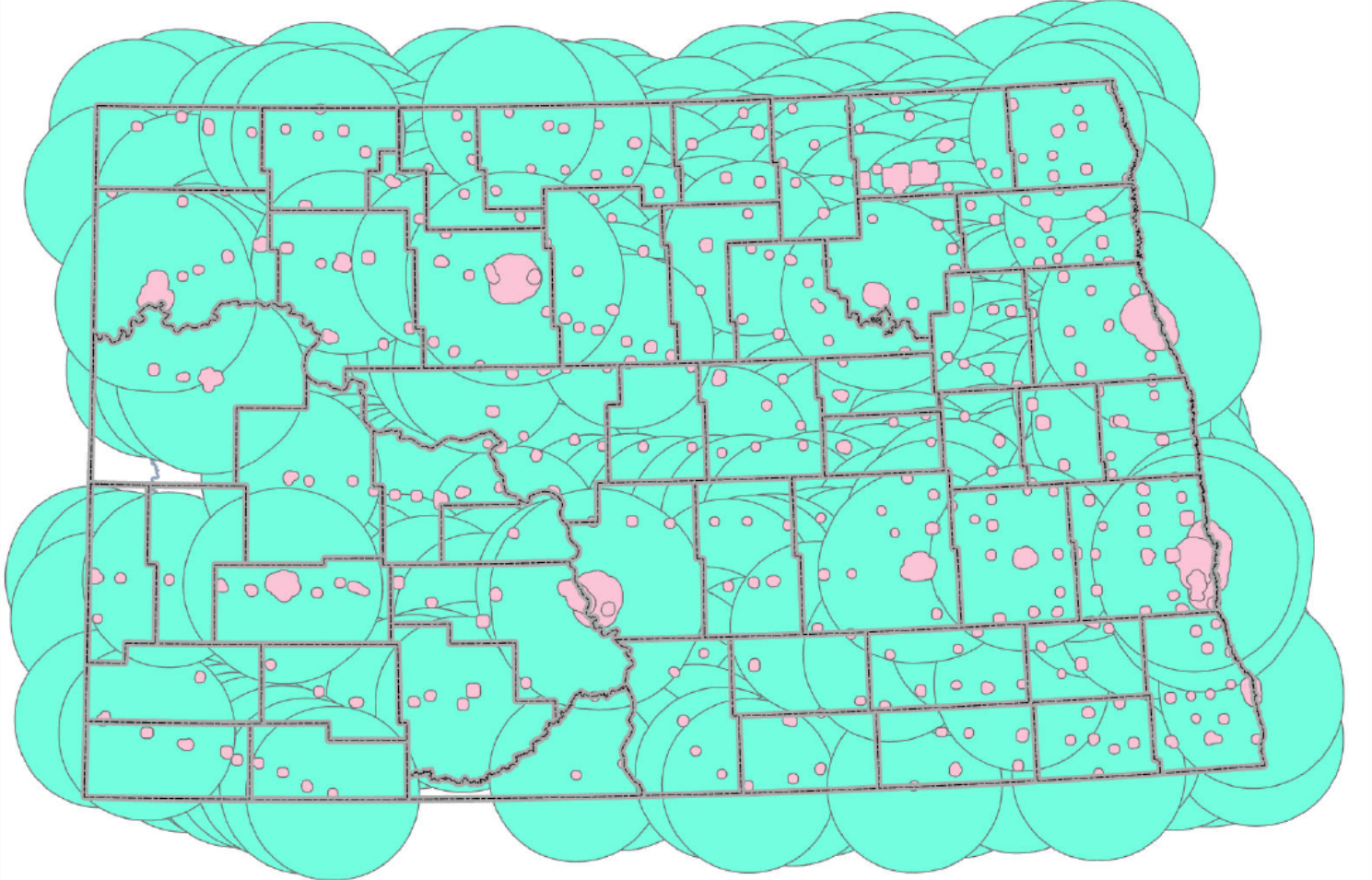
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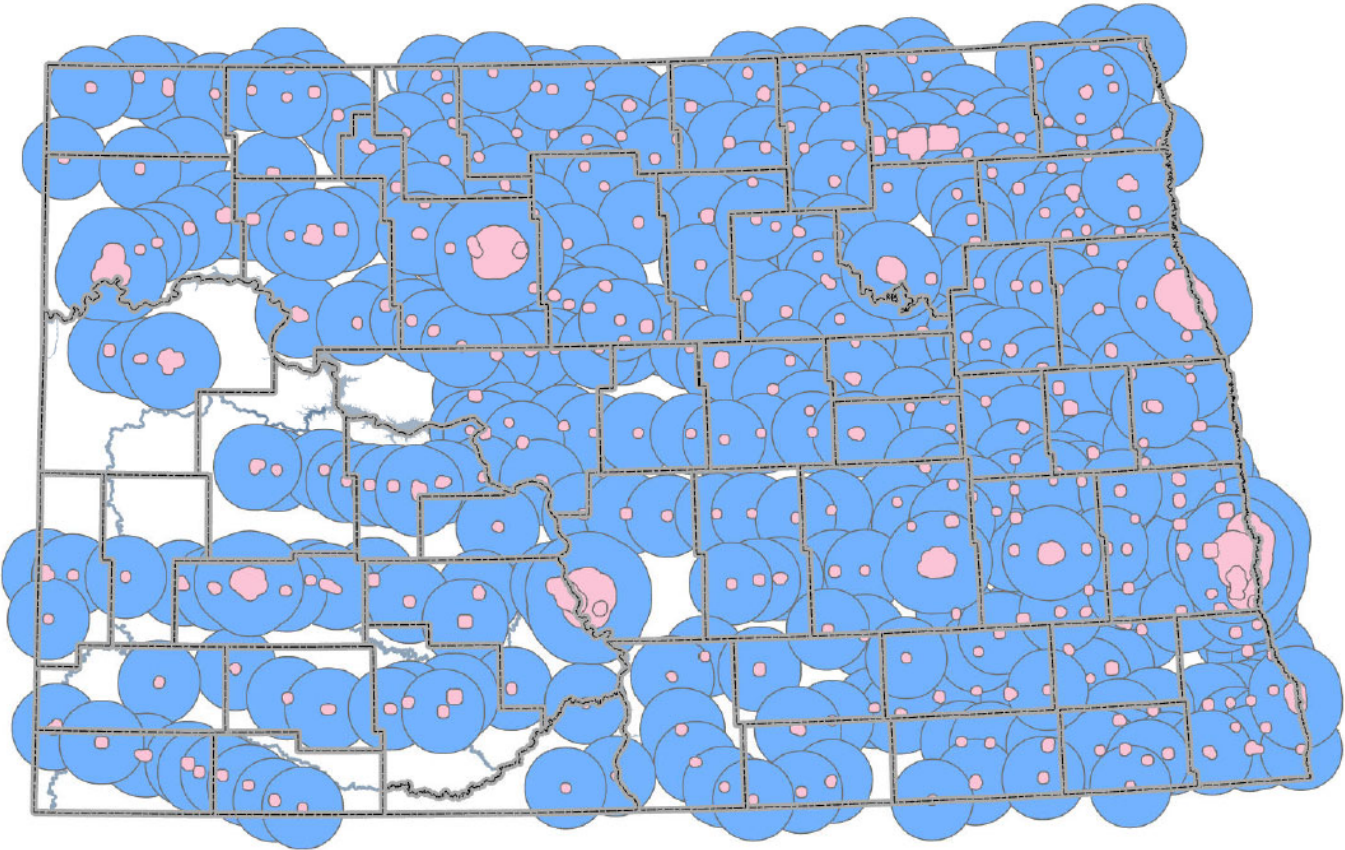
Zoom In

Map Data Last Updated : 1/24/

**Extraterritorial Jurisdiction +25 miles**



**Extraterritorial Jurisdiction + 10 miles**







**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 474; Bismarck, ND 58505