



North Dakota Update

September 23, 2021

NDPC Annual



- Statistics
- 2021-2022 Administrative Rules
- Non-core Development
- EOR
- Other



- **Statistics**
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Oil Production

| | | |
|------|---|----------------|
| June | 1,133,498 barrels/day (final) | |
| July | 1,077,789 barrels/day (all-time high 1,519,037 BOPD Nov 2019) | NM = 1,124,333 |
| | 1,036,839 barrels/day or 96% from Bakken and Three Forks | |
| | 40,951 barrels/day or 4% from legacy pools | |

Gas Production and Capture

| | | |
|-----------------|-------------------|---|
| June Production | 2,987,829 MCF/day | |
| 92% Capture | 2,746,109 MCF/day | |
| July Production | 2,874,922 MCF/day | (all-time high 3,145,172 MCFD Nov 2019) |
| 90% Capture | 2,577,512 MCF/day | (all-time high 2,899,998 MCFD Mar 2020) |

July Gas Capture

| | | |
|-------------------|-----|----------------|
| Statewide | 90% | 79,903,000 MCF |
| Statewide Bakken | 90% | 77,934,000 MCF |
| Non-FBIR Bakken | 90% | 67,752,000 MCF |
| FBIR Bakken | 91% | 15,447,000 MCF |
| Trust FBIR Bakken | 93% | 13,406,000 MCF |
| Fee FBIR | 78% | 2,600,000 MCF |

Permits

June 75 drilling and 0 seismic
 July 40 drilling and 0 seismic
 August 79 drilling and 0 seismic (all-time high 370 in 10/2012)

Rig Count

July 23
 August 28 (all-time high 218 on 5/29/12)
 Federal surface 0
 NM 82

CURRENT ACTIVE DRILLING RIG LIST

COMPILED AS OF 12 PM CENTRAL TIME
 9/16/2021 - 27 ACTIVE RIGS

| RIG ID | WELL OPERATOR | WELL NAME & NUMBER | CURRENT LOCATION | COUNTY | FILE NO. | API | START DATE | **NEXT LOCATION |
|----------------|---|---|--------------------|-----------|----------|------------|------------|-----------------|
| UNIT 414 | SLAWSON EXPLORATION COMPANY, INC. | RAINMAKER (FEDERAL) 8-25-38TFHPNC | SW SE 24 152N 93W | MOUNTRAIL | 30415 | 3306103489 | 09/15/2021 | |
| H & P 454 | CONTINENTAL RESOURCES, INC. | FLINT CHIPS FEDERAL 16-5HSL | NW NE 08 147N 96W | DUNN | 38151 | 3302504190 | 09/15/2021 | |
| STONEHAM 16 | PETROSHALE (US) INC. | ANDERSON SOUTH 2TFH | SE SE 15 149N 96W | MCKENZIE | 36618 | 3305309112 | 09/14/2021 | |
| NABORS B22 | KRAKEN OPERATING, LLC | MADDIE LW 10-15-22 #1H | NE NE 09 158N 99W | WILLIAMS | 38558 | 3310505668 | 09/15/2021 | |
| CYCLONE 38 | CONTINENTAL RESOURCES, INC. | PLETAN 8-18HSL | LOT 1 18 146N 95W | DUNN | 38395 | 3302504284 | 09/14/2021 | |
| 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 X27 | HESS BAKKEN INVESTMENTS II, LLC | BL-OLSON- 155-96-0310H-3 | LOT 3 03 155N 96W | WILLIAMS | 37145 | 3310505382 | 09/12/2021 | |
| NABORS B6 | CONTINENTAL RESOURCES, INC. | DOLEZAL FIU 10-5H1 | SE SW 32 146N 95W | DUNN | 38355 | 3302504271 | 09/03/2021 | |
| PATTERSON 808 | WHITING OIL AND GAS CORPORATION | WESTIN TTT 11-25H | NW NW 25 154N 92W | MOUNTRAIL | 31036 | 3306103670 | 09/12/2021 | FRED TTT |
| H & P 492 | CONTINENTAL RESOURCES, INC. | LCU RECKITT FEDERAL 11-22H CHAROLAIS SOUTH FEDERAL 13-10H | NE SE 22 153N 99W | WILLIAMS | 36958 | 3310505318 | 09/12/2021 | |
| NABORS B27 | CONTINENTAL RESOURCES, INC. | | NE NW 15 153N 94W | MCKENZIE | 37911 | 3305309560 | 09/07/2021 | |
| NABORS X24 | HESS BAKKEN INVESTMENTS II, LLC | EN-ZUNICH- 156-94-3328H-9 | SW SW 33 156N 94W | MOUNTRAIL | 38310 | 3306104887 | 09/09/2021 | |
| NABORS X28 | HESS BAKKEN INVESTMENTS II, LLC | AN-NORBY- 152-94-0409H-9 | LOT 1 04 152N 94W | MCKENZIE | 38178 | 3305309656 | 09/13/2021 | |
| CYCLONE 35 | DENBURY ONSHORE, LLC | CHSU 11-35NHR 15 | NW NW 35 131N 105W | BOWMAN | 38437 | 3301101559 | 09/11/2021 | |
| NABORS B1 | CONTINENTAL RESOURCES, INC. | TALLAHASSEE FIU 7-21H | SE SW 21 153N 101W | MCKENZIE | 38185 | 3305309659 | 09/12/2021 | |
| H & P 515 | PETRO-HUNT, L.L.C. | BOSS 154-99-18C-21-1HS | LOT 4 18 154N 99W | WILLIAMS | 38364 | 3310505623 | 09/12/2021 | |
| H & P 516 | OVINTIV PRODUCTION INC. | ROLLA 152-97-1-12-5HLW | LOT 4 01 152N 97W | MCKENZIE | 38082 | 3305309631 | 09/01/2021 | |
| AES 4 | CONTINENTAL RESOURCES, INC. | DENNIS FIU 6-8H | NW NE 08 147N 96W | DUNN | 38128 | 3302504172 | 09/10/2021 | |
| NABORS X-10 | MARATHON OIL COMPANY | EMILEY 14-12TFH | SW SW 12 146N 94W | DUNN | 38307 | 3302504249 | 09/06/2021 | |
| TRUE 40 | ENERPLUS RESOURCES USA CORPORATION | FB LEVIATHAN 151-94-27A-34-13B | NE NE 27 151N 94W | MCKENZIE | 35490 | 3305308748 | 09/06/2021 | |
| H & P 259 | MARATHON OIL COMPANY | FERDINAND 14-24TFH | NW NW 25 146N 94W | DUNN | 38315 | 3302504255 | 09/06/2021 | |
| H & P 456 | CONTINENTAL RESOURCES, INC. | LCU RALPH FEDERAL 8-27H | NE SW 22 153N 99W | WILLIAMS | 36996 | 3310505336 | 09/03/2021 | |
| NABORS B26 | LIBERTY RESOURCES MANAGEMENT COMPANY, LLC | MCGINNITY E 159-95-31-30-1MBH | LOT 1 06 158N 95W | WILLIAMS | 37477 | 3310505451 | 09/07/2021 | |
| PATTERSON 901 | CONTINENTAL RESOURCES, INC. | CLEAR CREEK FEDERAL 13-35H | SE SE 35 152N 97W | MCKENZIE | 37883 | 3305309531 | 08/29/2021 | |
| NOBLE 1 | ZAVANNA, LLC | EDGAR 1-10 SWD | SW SW 10 151N 100W | MCKENZIE | 37550 | 3305309417 | 08/30/2021 | |
| H & P 640 | HUNT OIL COMPANY | BLUE RIDGE 159-100-6-7H3 | LOT 3 06 159N 100W | WILLIAMS | 38386 | 3310505626 | 08/27/2021 | |
| T&S DRILLING 2 | KODA RESOURCES OPERATING, LLC | STOUT 34-1 SWD | SW SW 34 160N 102W | DIVIDE | 38288 | 3302301452 | 08/18/2021 | |

* MIRU - MOVING IN, RIGGING UP.

** NEXT LOCATION - ANTICIPATED RIG LOCATIONS OBTAINED FROM RIG CREWS, MAY NOT BE RELIABLE, AND ARE SUBJECT TO CHANGE AT ANY TIME.

Wells Waiting on Completion

June 680

July 521

13 operators have 1-10

4 operators have 15-25

3 operators have 35-50

1 operator has 159

Inactive Wells

June 1,839

July 2,082

Completions

June 41

July 47

August 53

Producing Wells

June 16,844

July 16,881 (preliminary)(NEW all-time high 16,881 July 2021)

14,590 wells or 86% are now unconventional Bakken – Three Forks wells

2,291 wells or 14% produce from legacy conventional pools



- Statistics
- 2021-2022 Administrative Rules
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- Other

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

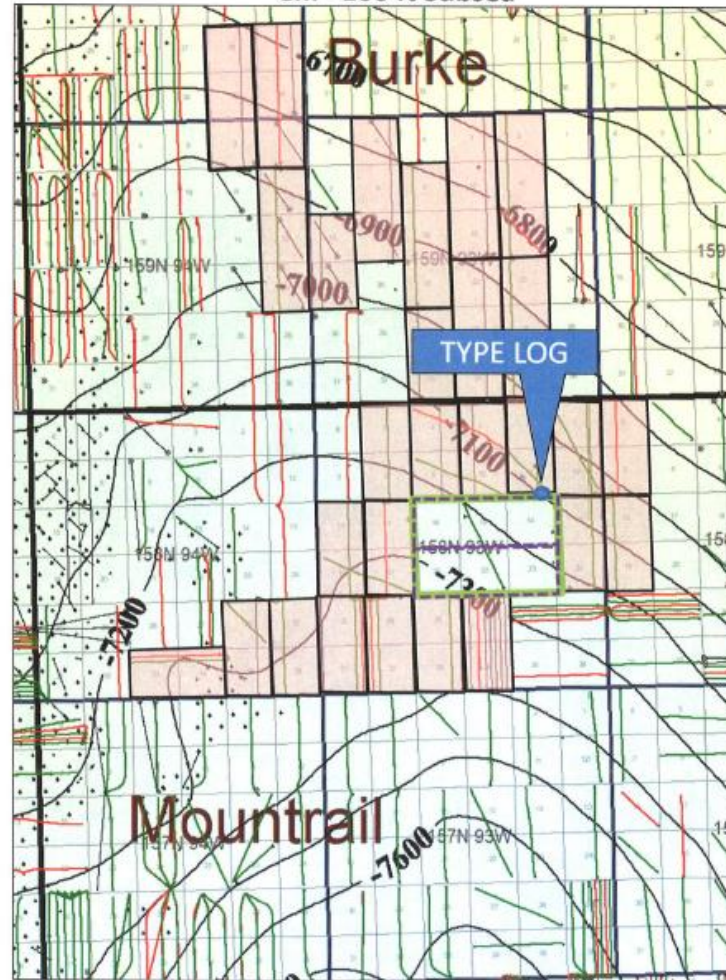
Microsoft Word - Rule Changes.2022.2021-08-31.Final.Filed with LC (nd.gov)

| | | |
|---------------|--|--------|
| 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

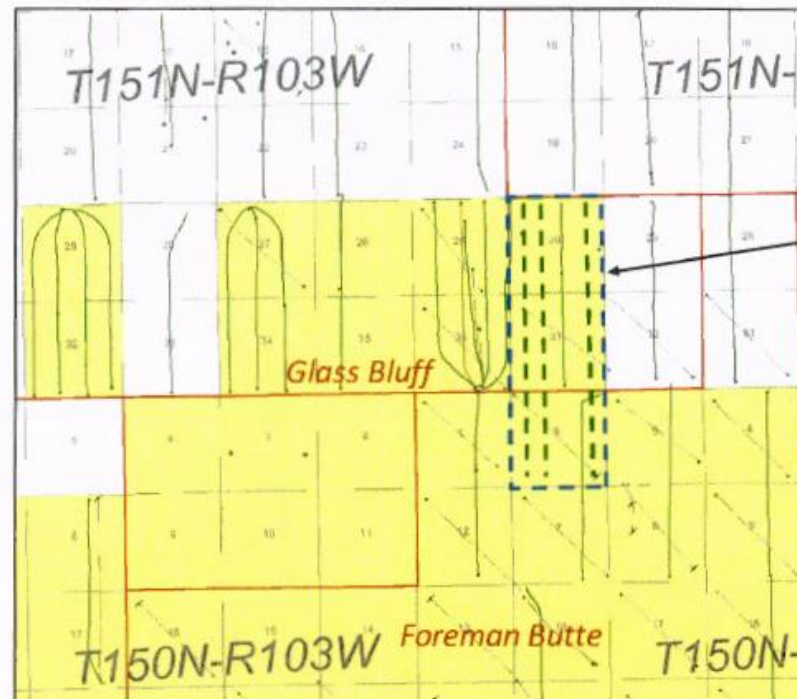


Exhibit G-1
Case No. 28831



| Legend | Case Status |
|--------|------------------------|
| | Heard in May/June 2021 |
| 1 | 28855 |
| 2 | 28856 |
| 3 | 28857 |
| 4 | 28858 |

Kraken Operating, LLC
Case Nos. 28855, 28856,
28857, 28858
July 28, 2021
Supp. Exhibit A



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

Whiting's working interest =
56.43%

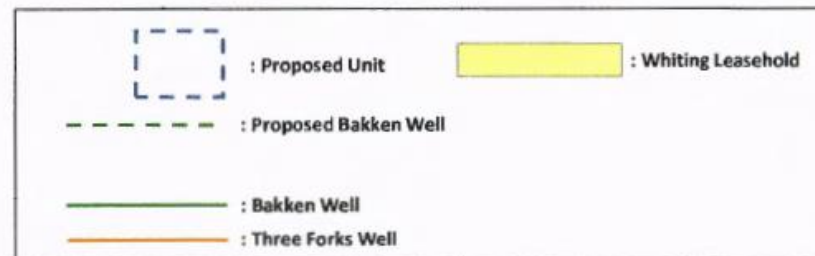
INDUSTRIAL COMMISSION
STATE OF NORTH DAKOTA


DATE 7/28/21 CASE NO. 28861

Introduced By Whiting

Exhibit L2

Identified By Mansfield



| | |
|---|-------------------|
|  Whiting Oil and Gas Corporation | |
| 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 & 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.



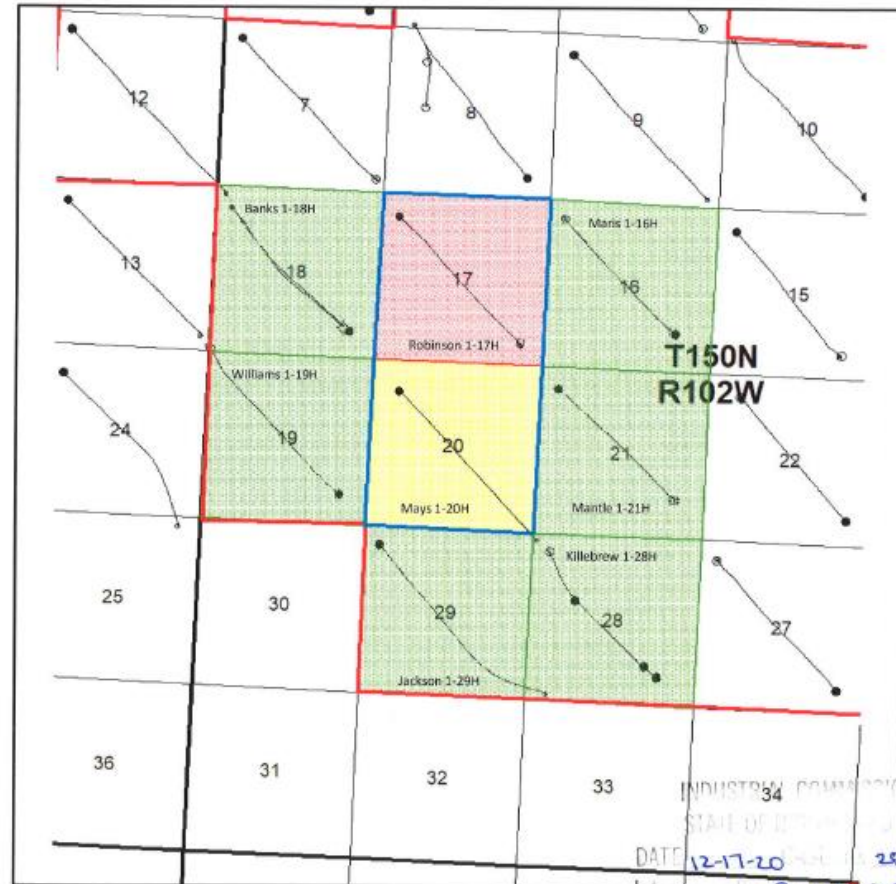
| | | | |
|----------------------------------|-----------------------------|--------|-----------------------|
| <input checked="" type="radio"/> | CEDAR HILLS | oilGas | Print |
| <input type="radio"/> | CENTENNIAL | oilGas | Print |
| <input type="radio"/> | CHAMA | oilGas | Print |
| <input type="radio"/> | CHARBONNEAU | oilGas | Print |
| <input type="radio"/> | CHARLIE BOB | oilGas | Print |





Find

Map Data Last Updated : 7/19/2021

Mays Waterflood Test Plat

Foreman Butte Field: Madison Pool

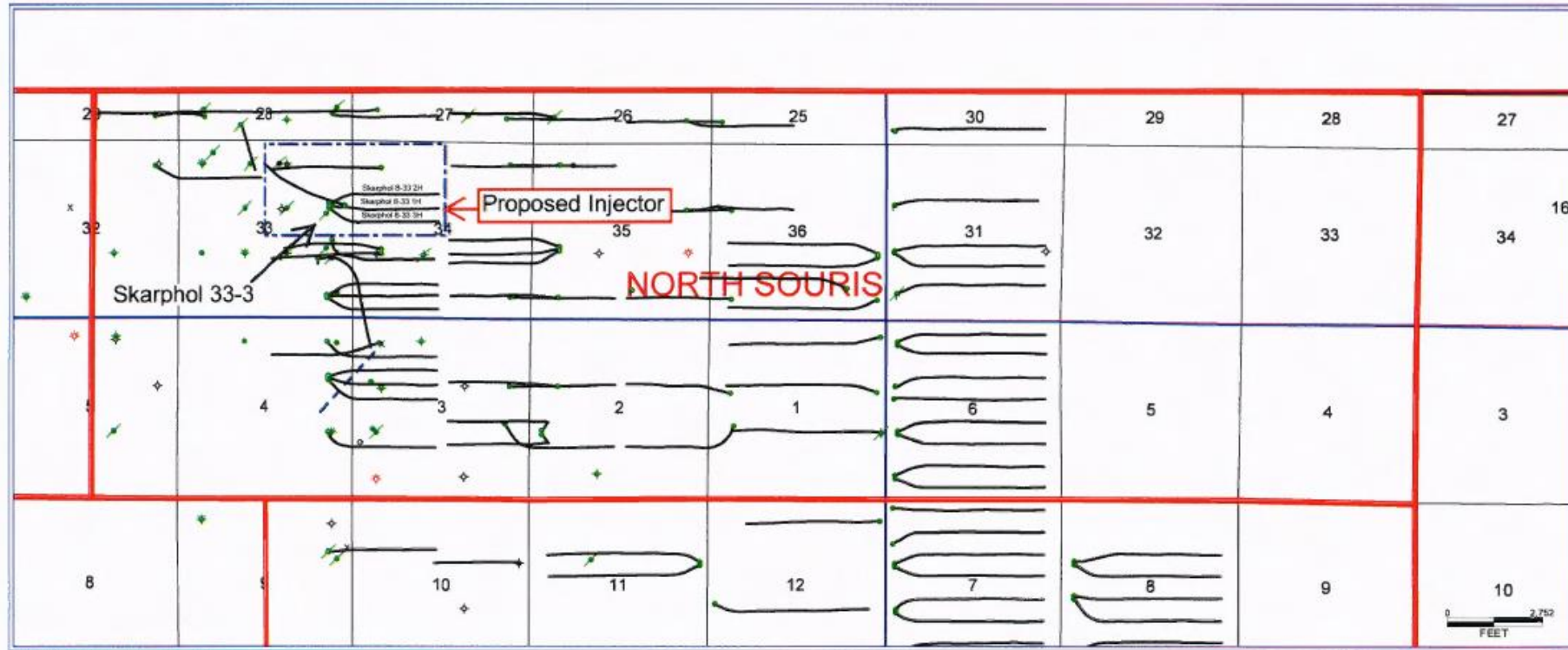


| | | | |
|---------------------------|---|--------------------|---|
| Mays 1-20H – Injector |  | Mays/Robinson Unit |  |
| Robinson 1-17H – Producer |  | | |
| 6 Monitoring Wells |  | | |

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



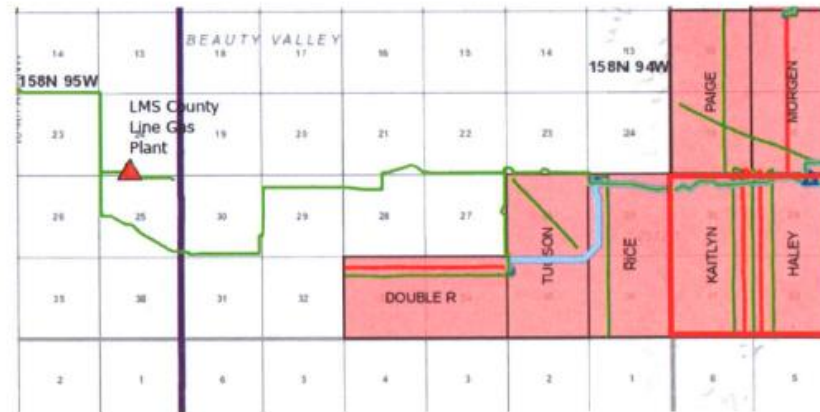
North Souris Field Boundary

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



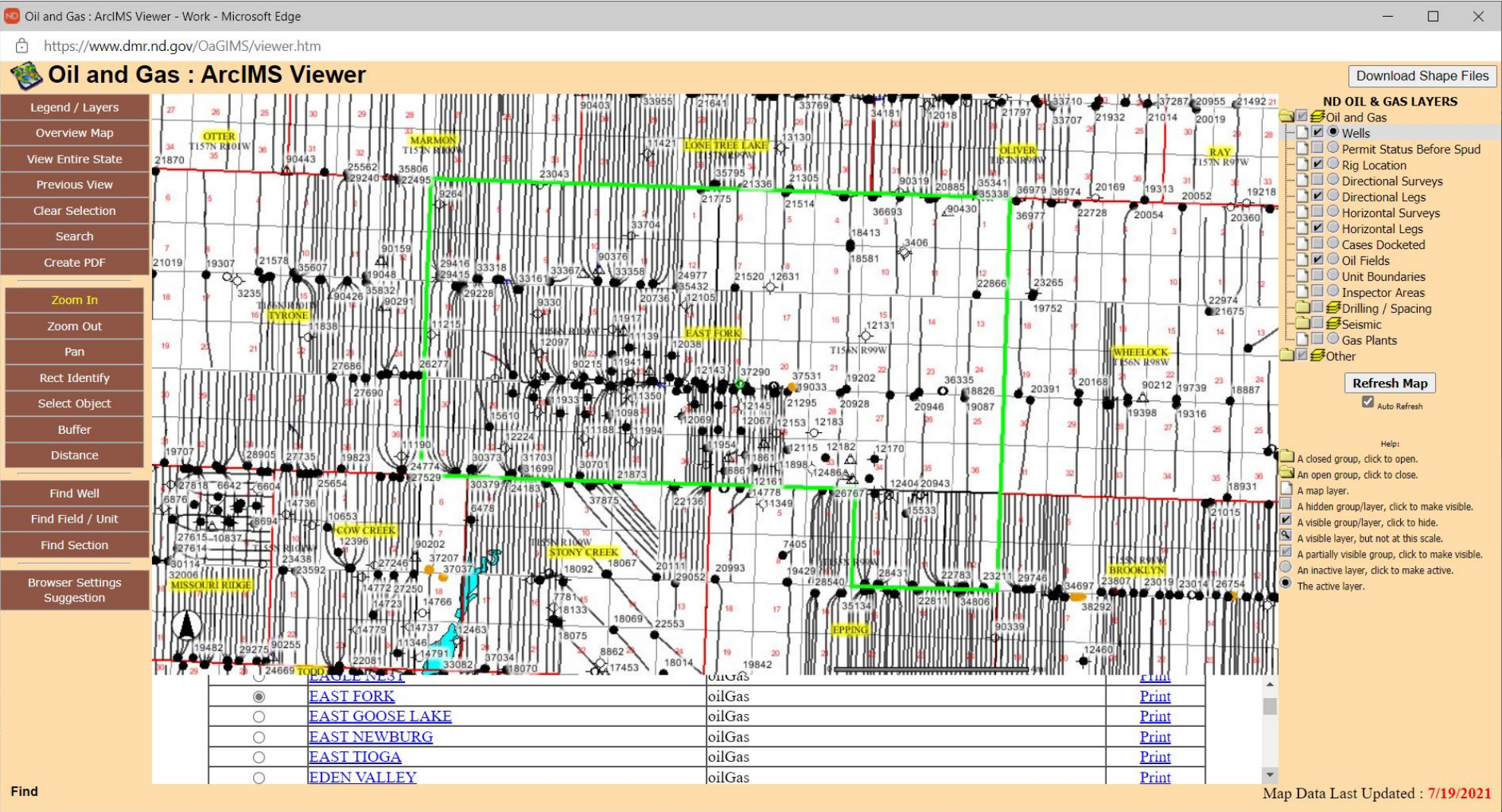
- 2560-acre Spacing Unit of Interest
- Existing Middle Bakken Horizontal
- Existing Three Forks Horizontal
- Existing Gas Pipeline (LMS)
- Existing Water Pipeline (LMS)

- 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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SENATE BILL NO. 2328

(Senators Patten, J. Roers, Schaible)

(Representatives Howe, Mock)

AN ACT to create and enact a new section to chapter 57-51.1 of the North Dakota Century Code, relating to a **credit for oil produced from a well site using an onsite flare mitigation system**; to provide for application; and to provide an expiration date.

On 7/7/21 North Dakota sued the Department of Interior (DOI), Secretary of Interior Debra Haaland, Bureau of Land Management (BLM), Director of the BLM Nada Culver, and Director of the Montana-Dakotas BLM John Mehlhoff in US District Court for the District of North Dakota.

The lawsuit requests the court:

Compel the Federal Defendants to hold quarterly lease sales.

Prohibit the Federal Defendants from cancelling quarterly lease sales.

Enjoin the Secretary implementing a moratorium on federal lease sales.

Declare that Federal Defendants are in violation of MLA, FLPMA, NEPA, and APA.

Grant other relief sought and as the court deems proper to remedy the violations.

Of 811 tracts nominated for pending lease sales in ND:

566 are pending NEPA or surface manager concurrence

236 are fully evaluated, and waiting for scheduled auction – value to ND 1,011 wells and \$4.8 billion

9 were planned for auction Q1 and Q2 2021 – value to ND 20 wells and \$82.3 million

It is too late to notice and hold Q3 sale – 2 tracts impacted - value to ND 23 wells and \$157.6 million



North Dakota
Department of Mineral Resources
www.dmr.nd.gov

Phone: 701.328.8020 Email: oilandgasinfo@nd.gov
Mailing Address: 600 East Boulevard Ave. Dept 405; Bismarck, ND 58505