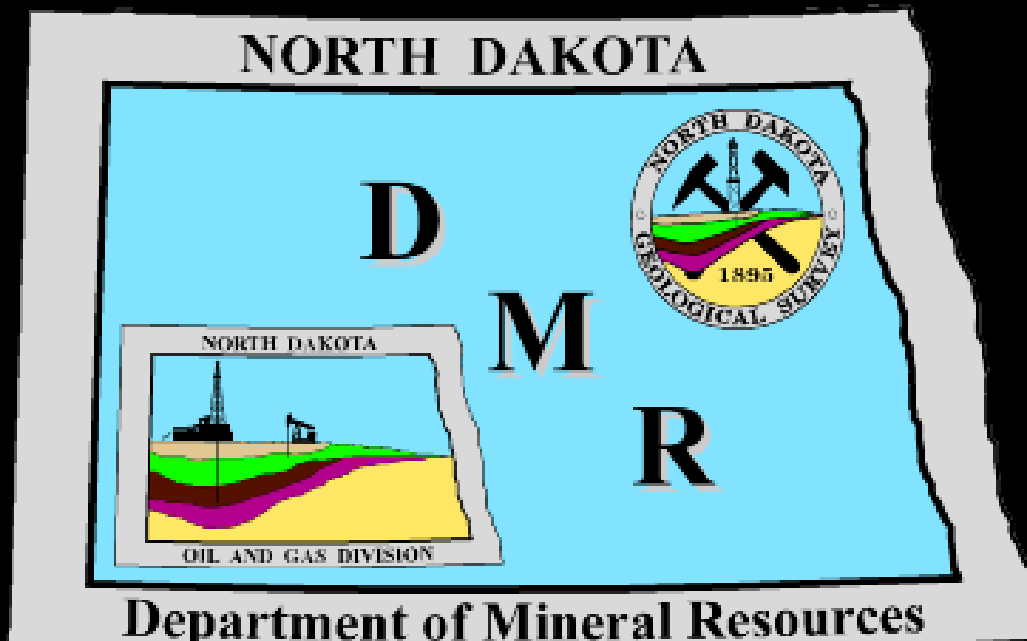


# North Dakota Department of Mineral Resources



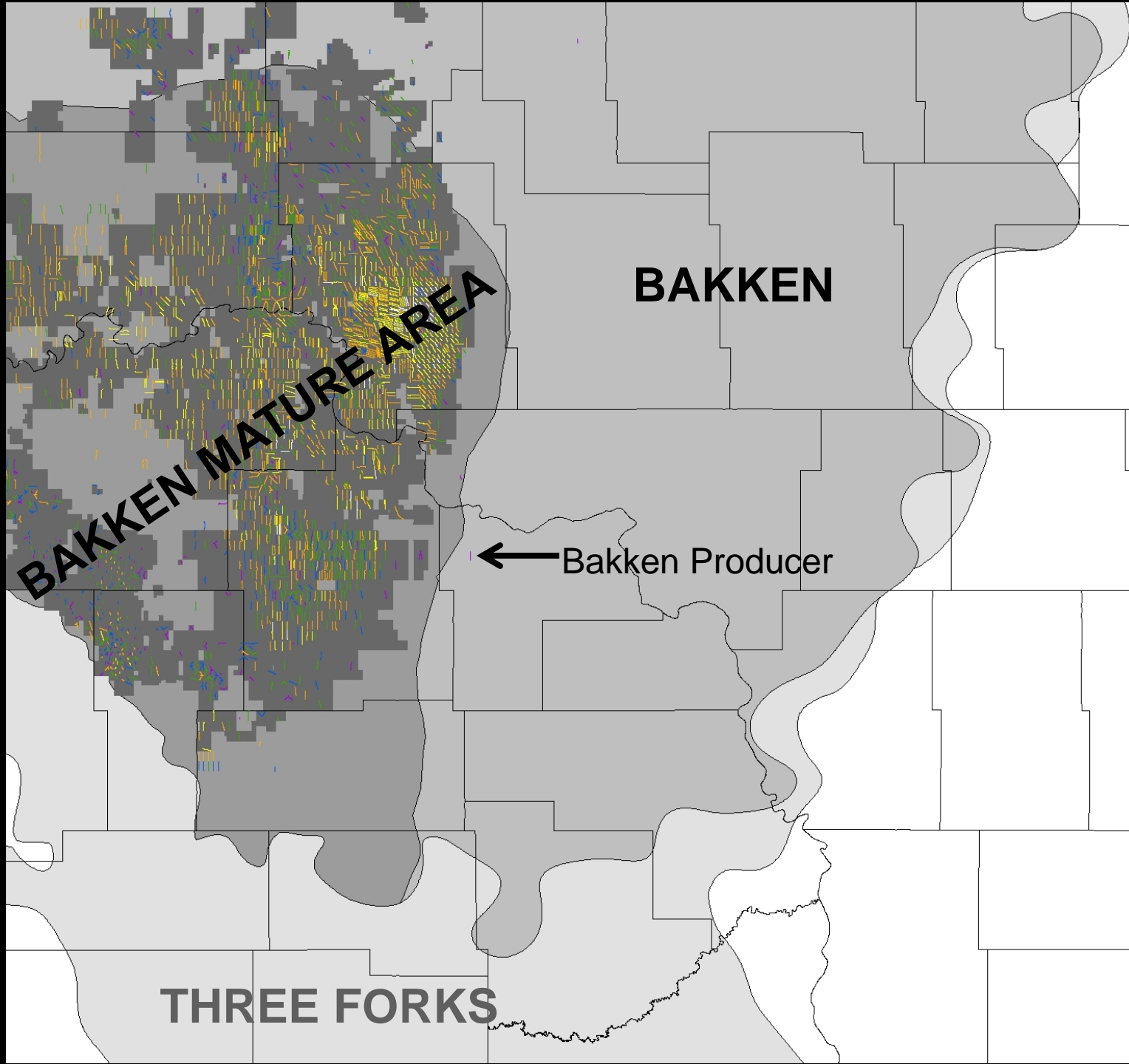
*<http://www.oilgas.nd.gov>*

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

*600 East Boulevard Ave. - Dept 405*

*Bismarck, ND 58505-0840*

*(701) 328-8020      (701) 328-8000*

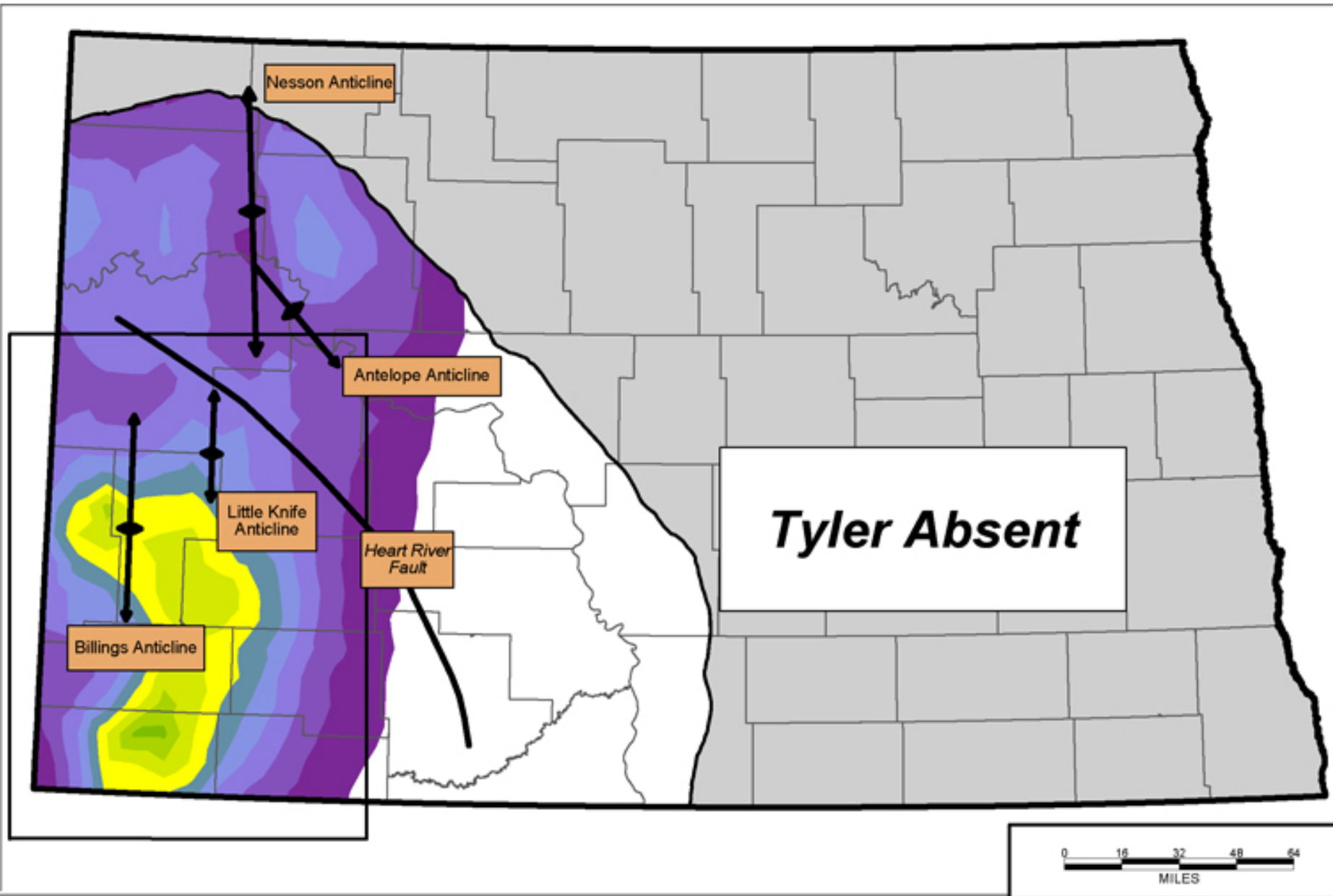


**BAKKEN MATURE AREA**

**BAKKEN**

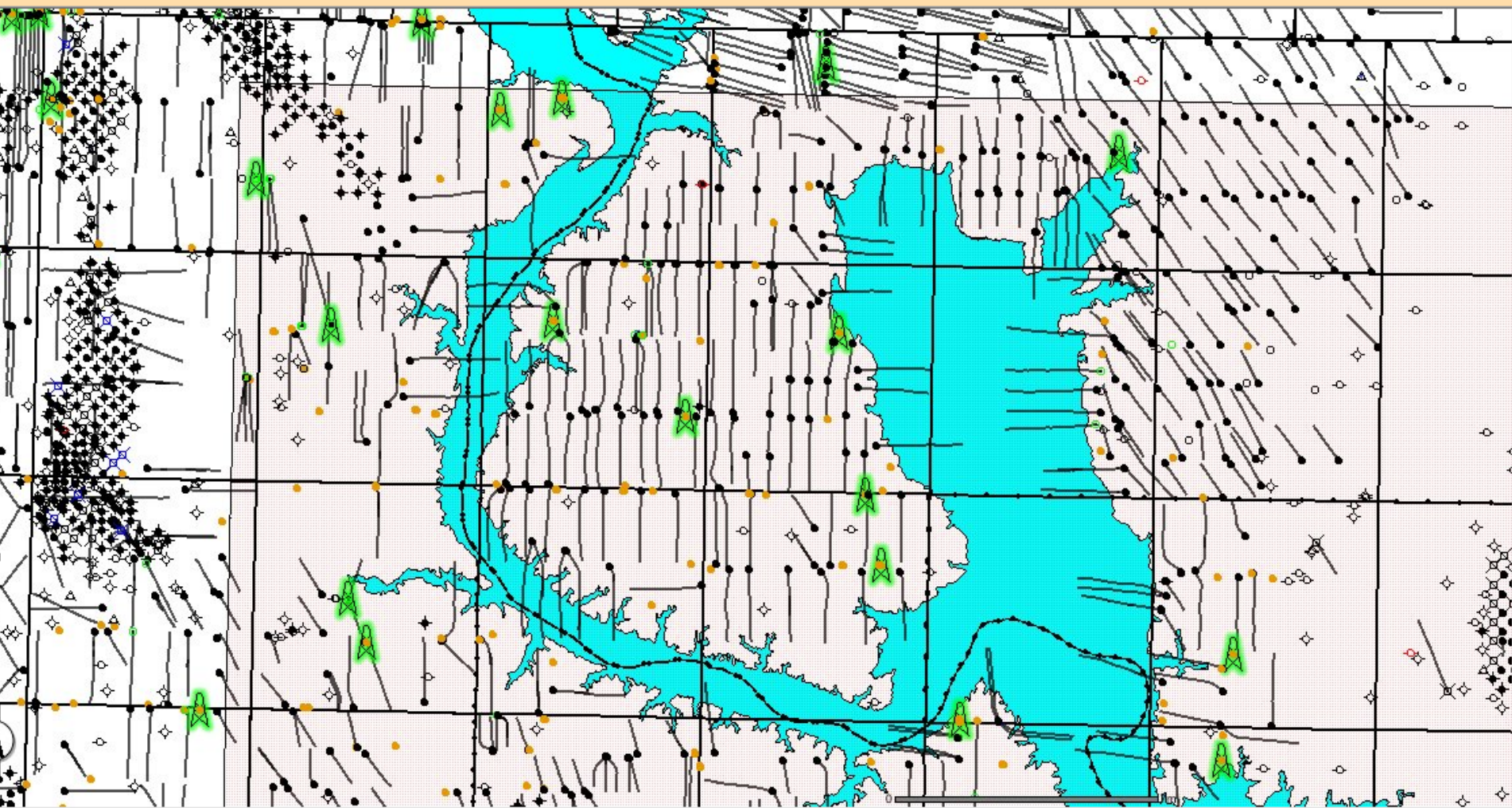
← Bakken Producer

**THREE FORKS**



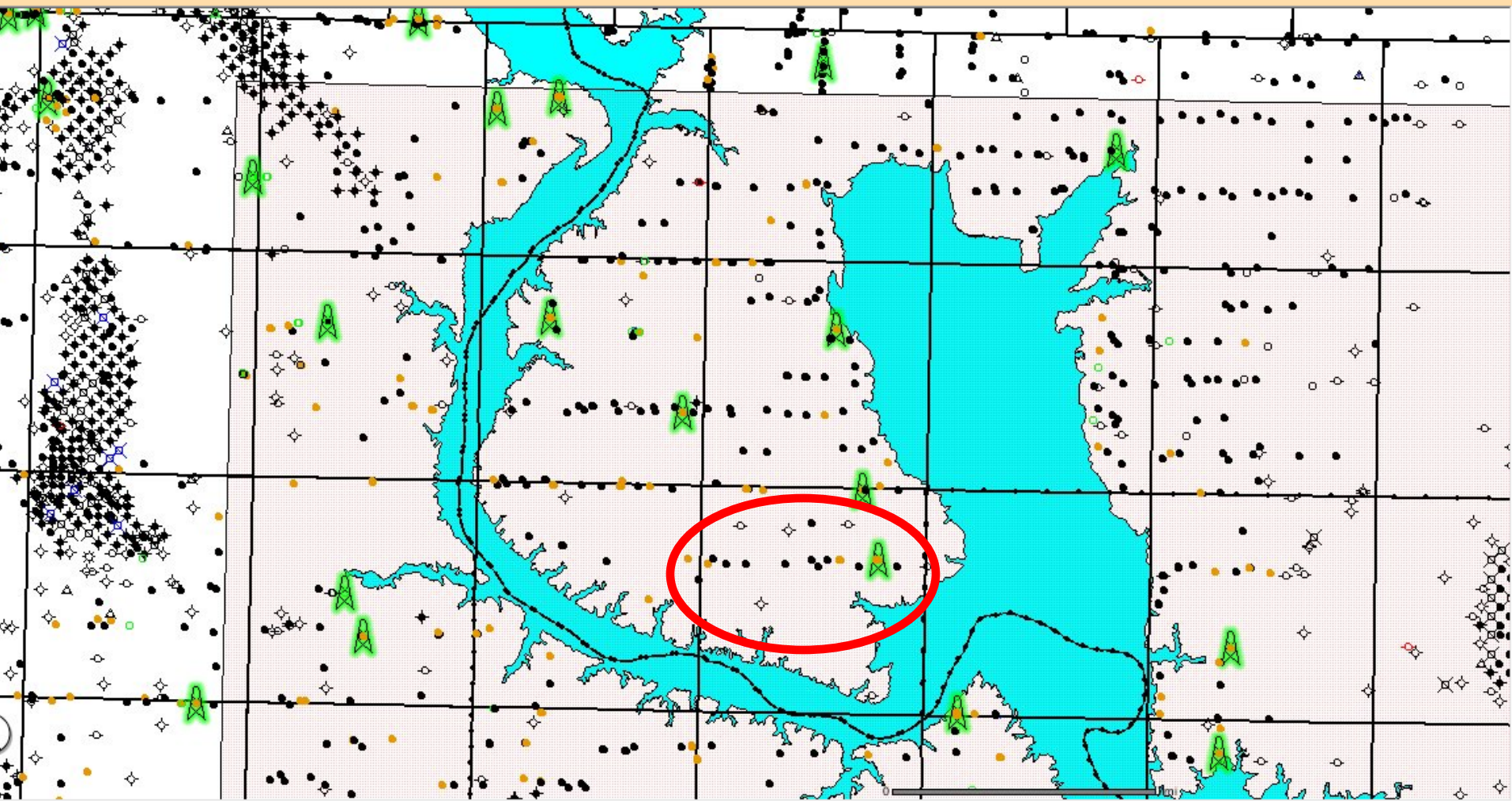


# ArcIMS Viewer





# ArcIMS Viewer



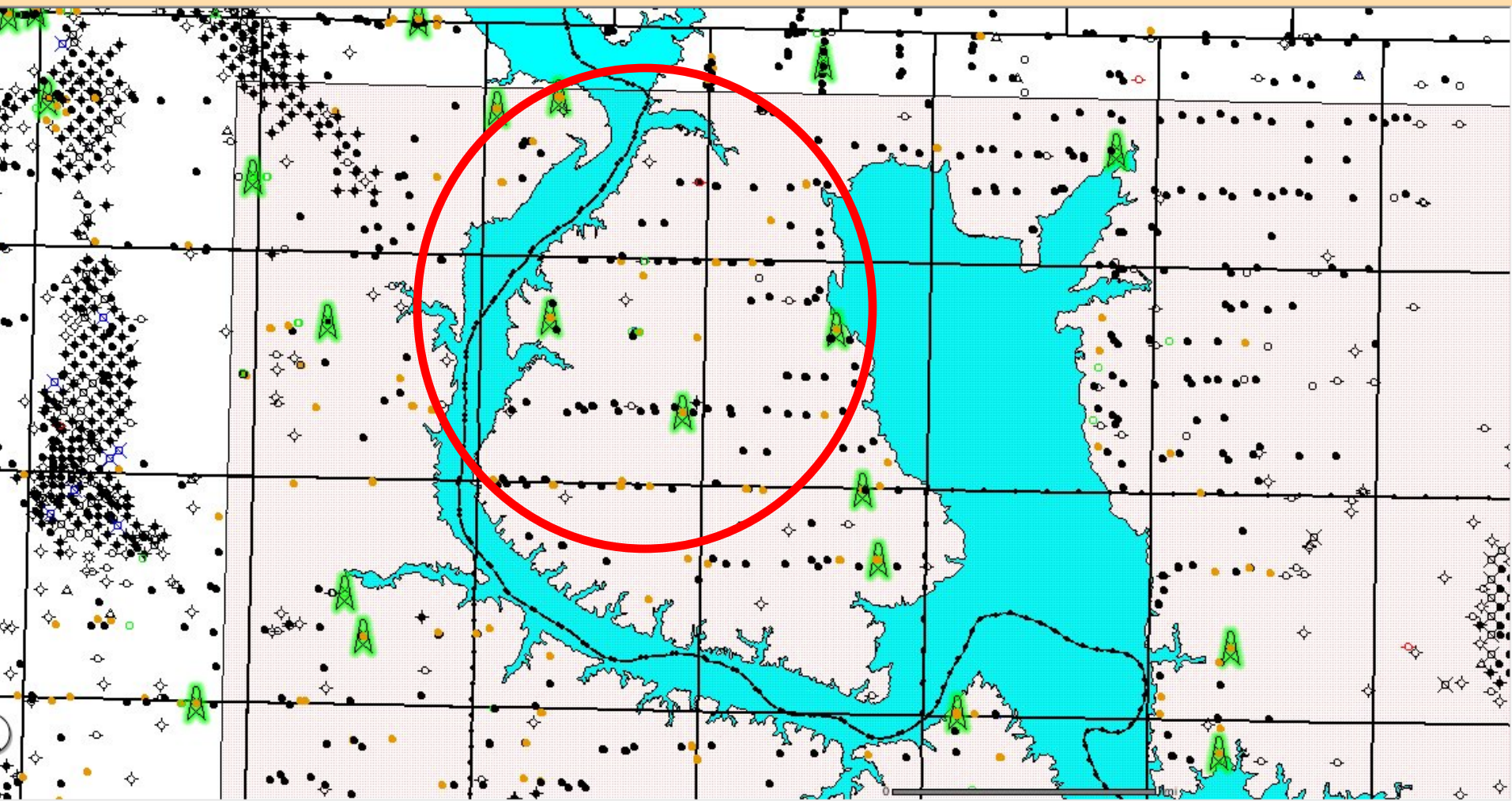




Vern Whitten Photography



# ArcIMS Viewer





Parshall, ND

pizza near NYC

[Get Directions](#) [History](#)

Parshall, ND 58770, USA

**Places**

- My Places
- [Sightseeing Tour](#)  
Make sure 3D Buildings layer is checked
- Temporary Places

**Layers**

- Primary Database
- Borders and Labels
- Places
- Photos
- Roads
- 3D Buildings
- Ocean
- Weather
- Gallery
- Global Awareness
- More

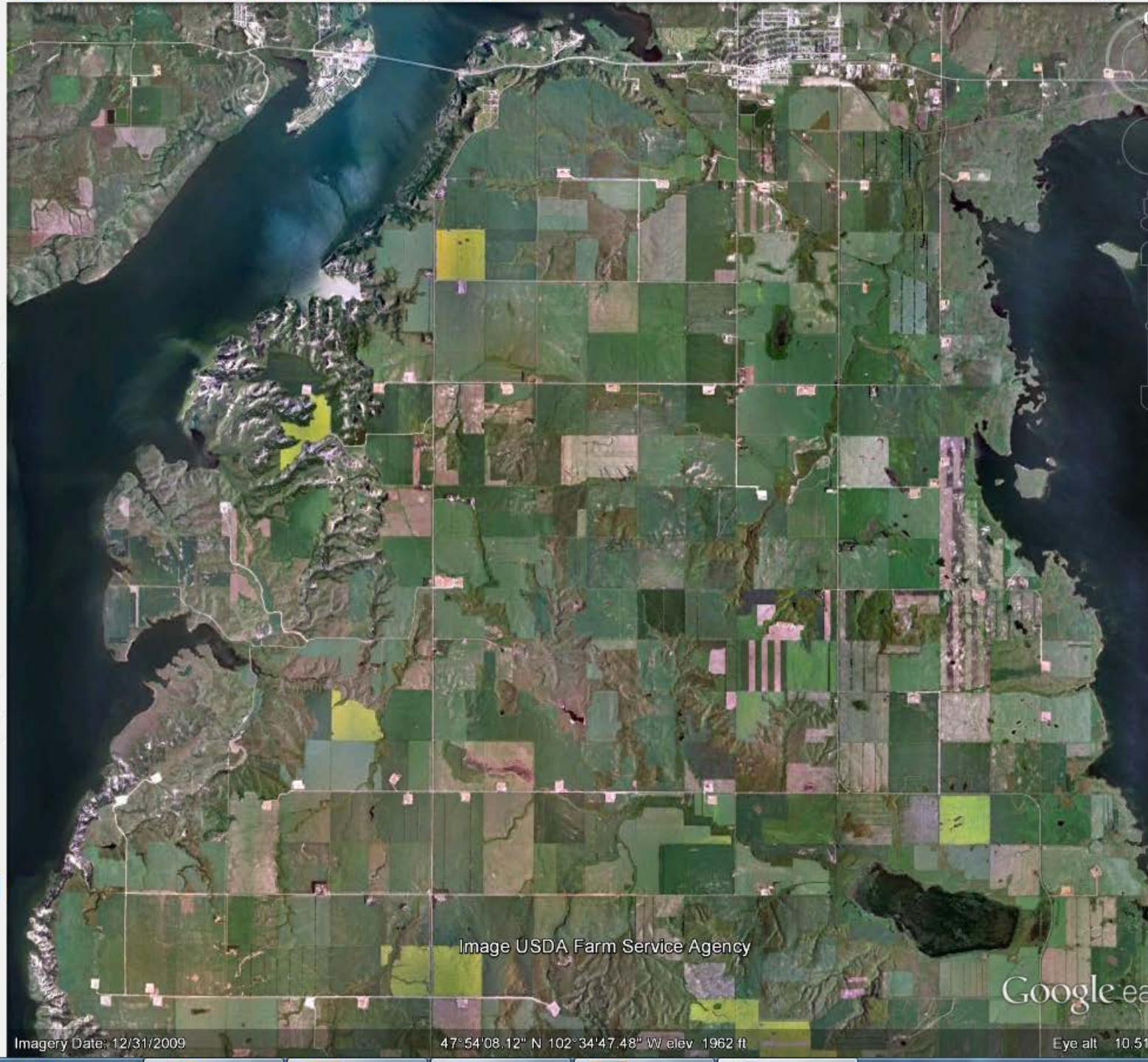


Image USDA Farm Service Agency

Google ea

Imagery Date: 12/31/2009

47°54'08.12" N 102°34'47.48" W elev 1962 ft

Eye alt 10.51



**Search**

Fly To Find Businesses Directions

Fly to e.g., Hotels near JFK

sublette county wy

Sublette, Wyoming

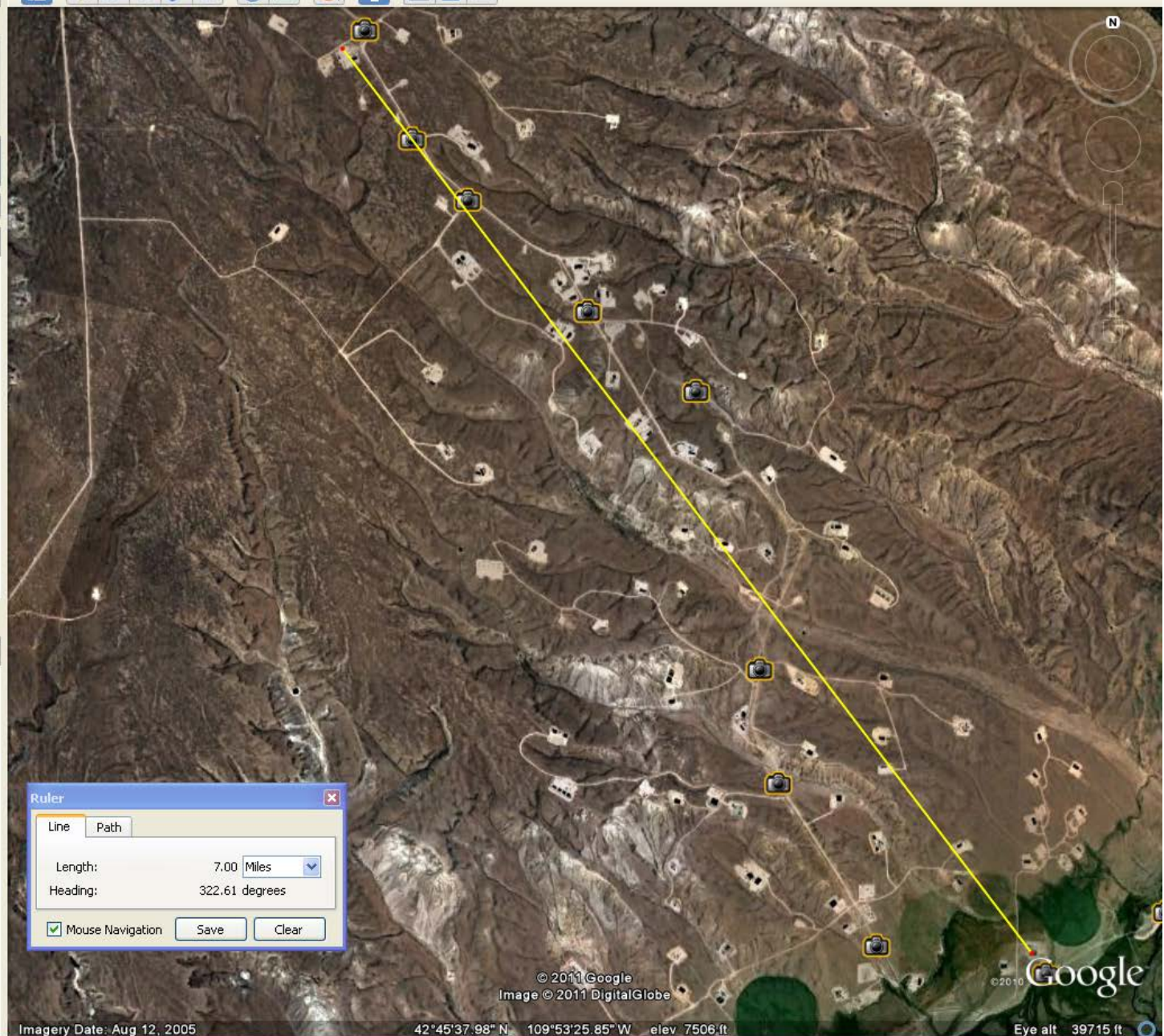
**Places**

My Places

- Sightseeing Tour  
Make sure 3D Buildings layer is checked
- Temporary Places

**Layers** Earth Gallery >>

- Primary Database
- Borders and Labels
- Places
- Photos
- Roads
- 3D Buildings
- Ocean
- Street View
- Weather
- Gallery
- Global Awareness
- More



**Ruler**

Line Path

Length: 7.00 Miles

Heading: 322.61 degrees

Mouse Navigation Save Clear

# Permit Review Process

- 1) Operator records
  - Registered with Secretary of State
  - Bonding in place
  - Organization report filed
- 2) Permit complete
  - Fee paid
  - Survey plat
  - Construction diagram
  - Directional plan
  - Geologic prognosis
  - Mud, casing, and cementing programs
- 3) Compliance with Industrial Commission orders & policies
  - Spacing unit set backs
  - Occupied dwellings
  - Surface owner affidavits



# Permit Review Process

- 4) Topography and Aerial Photography
  - Hazardously near body of water
  - Blocking a drainage
  
- 5) Watch list areas
  - Military installations - USAF
  - Well head protection areas - NDDH
  - Sensitive aquifer areas - NDWC
  - Endangered species - USFWL
  - Fort Berthold communities - TAT
  - Currently working with NDDOT, NDGF, NDPR to define critical areas

# Oil and Gas Subscription: ArcIMS Viewer

Legend / Layers

Overview Map

View Entire State

Previous View

Clear Selection

Search

Generate PDF

Zoom In

Zoom Out

Pan

Rect Identify

Select Object

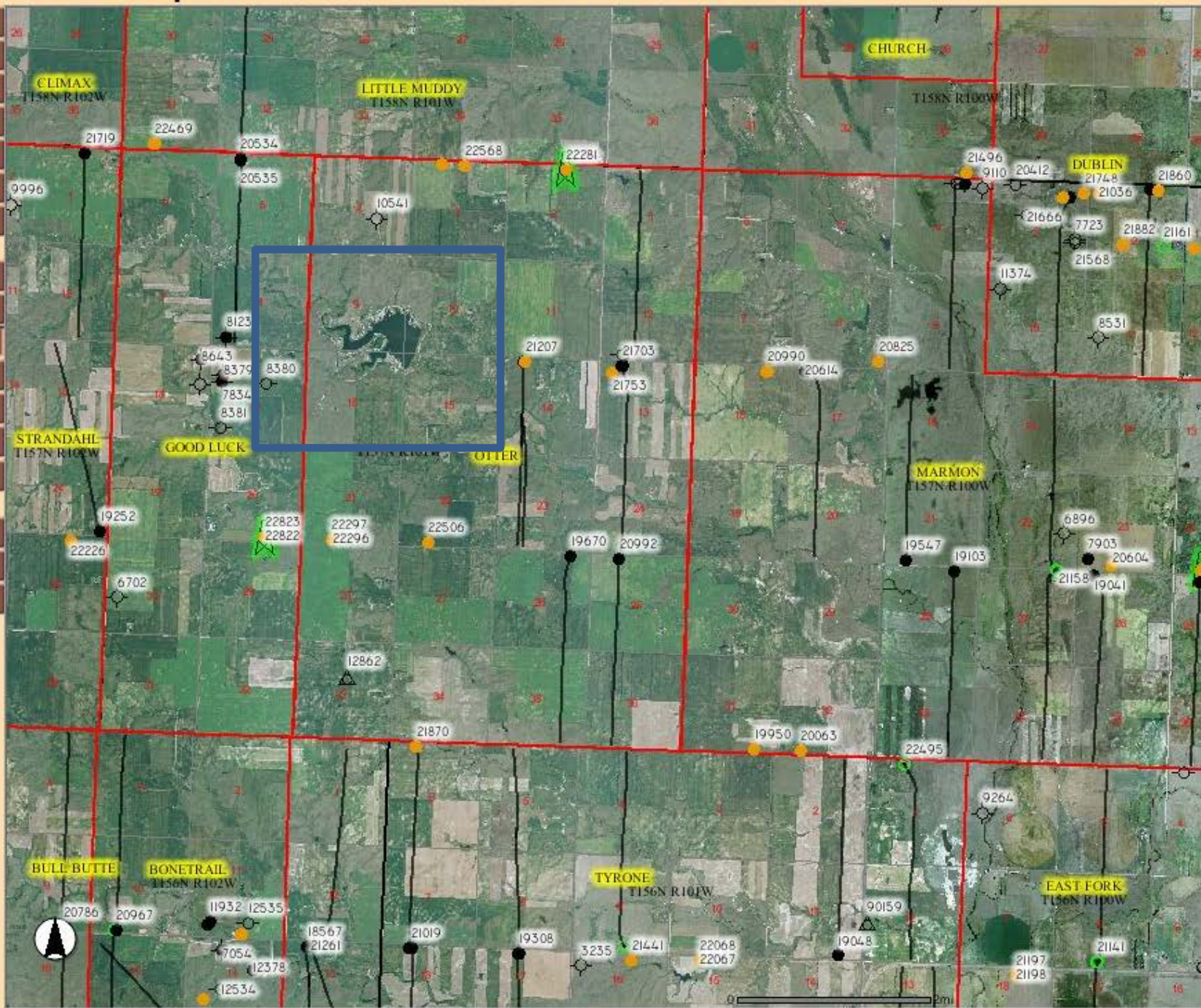
Buffer

Distance

Find Well

Find Field/Unit

Find Section

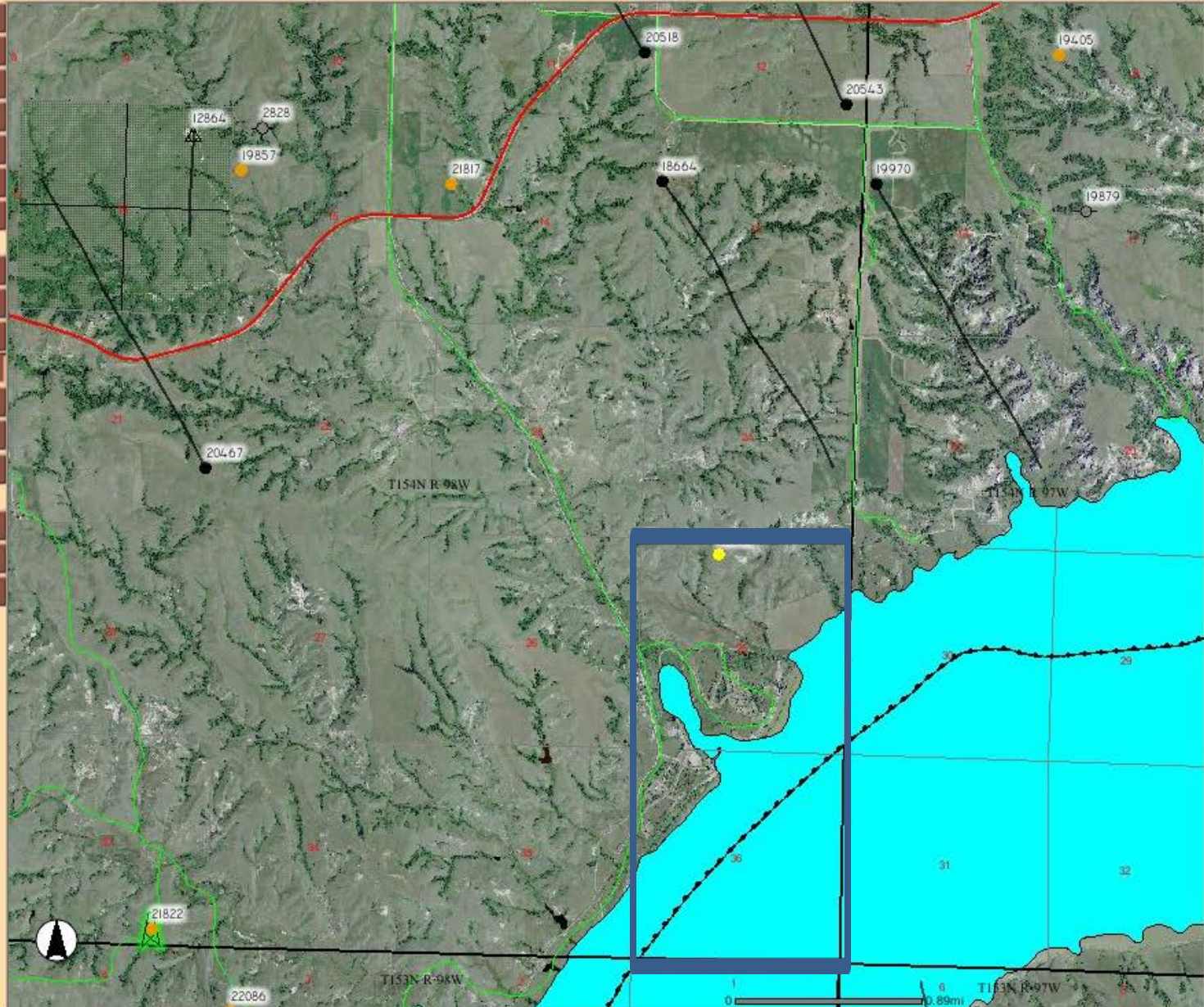




- Legend / Layers
- Overview Map
- View Entire State
- Previous View
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- Search
- Generate PDF

- Zoom In
- Zoom Out
- Pan
- Rect Identify
- Select Object
- Buffer
- Distance

- Find Well
- Find Field/Unit
- Find Section



- ### ND OIL & GAS
- Oil and Gas
  - Wells
  - Rig Location
  - Directional
  - Directional
  - Horizontal
  - Horizontal
  - Cases Dock
  - Oil Fields
  - Unit Bound
  - Inspector
  - Drilling / Sp
  - Seismic
  - Gas Plants
  - Other
  - Reservatio
  - Corporate
  - Rivers and
  - County
  - Major R
  - Major R
  - Missouri
  - Land Own
  - FortBer
  - FortBer
  - Surface
  - BLM Lar
  - US Fore
  - Imagery
  - Topo/DRG 25
  - Topo/DRG 10
  - NAIP 2009

**Refresh M**  
 Auto Ref

- Help:
- A closed group, click to o
  - An open group, click to c
  - A map layer.
  - A hidden group/layer, cl
  - A visible group/layer, cl
  - A visible layer, but not a
  - A partially visible group.
  - An inactive layer, click to
  - The active layer.

**Wells**

Rec	File	Api	Operator	Well Name	TD	Spud Date	Field Name	QQ	Section	Township	Range	Feet NS	FNSL	Feet EW	FEWL	Lat	Lon	Well Type
1	20503	33-105-02148-	XTO ENERGY INC.	WOOD 21X-25			TRUAX	NENW	25	154	98	341 N	1951	W	48.13898412	103.229676	Confidential	Ci



#### DETAILS OF WORK

Drilling and development of the lease will take place in the winter months to mitigate traffic impacts on County Road 15. No road access will be allowed on County Road 15 for trucks carrying equipment to and from the well, besides the agreed upon and approved County Road crossing. XTO Energy is willing to plant trees near the well site to enhance the view shed of the area. XTO Energy will lay the gas gathering lines at the same time as the company constructs the lease road to the well to mitigate the use of flaring. XTO Energy is willing to have a security/traffic guard stationed where the lease road will cross County Road 15 during the drilling and completion operations. This will aid in traffic control and prevent heavy trucks from driving on County Road 15.

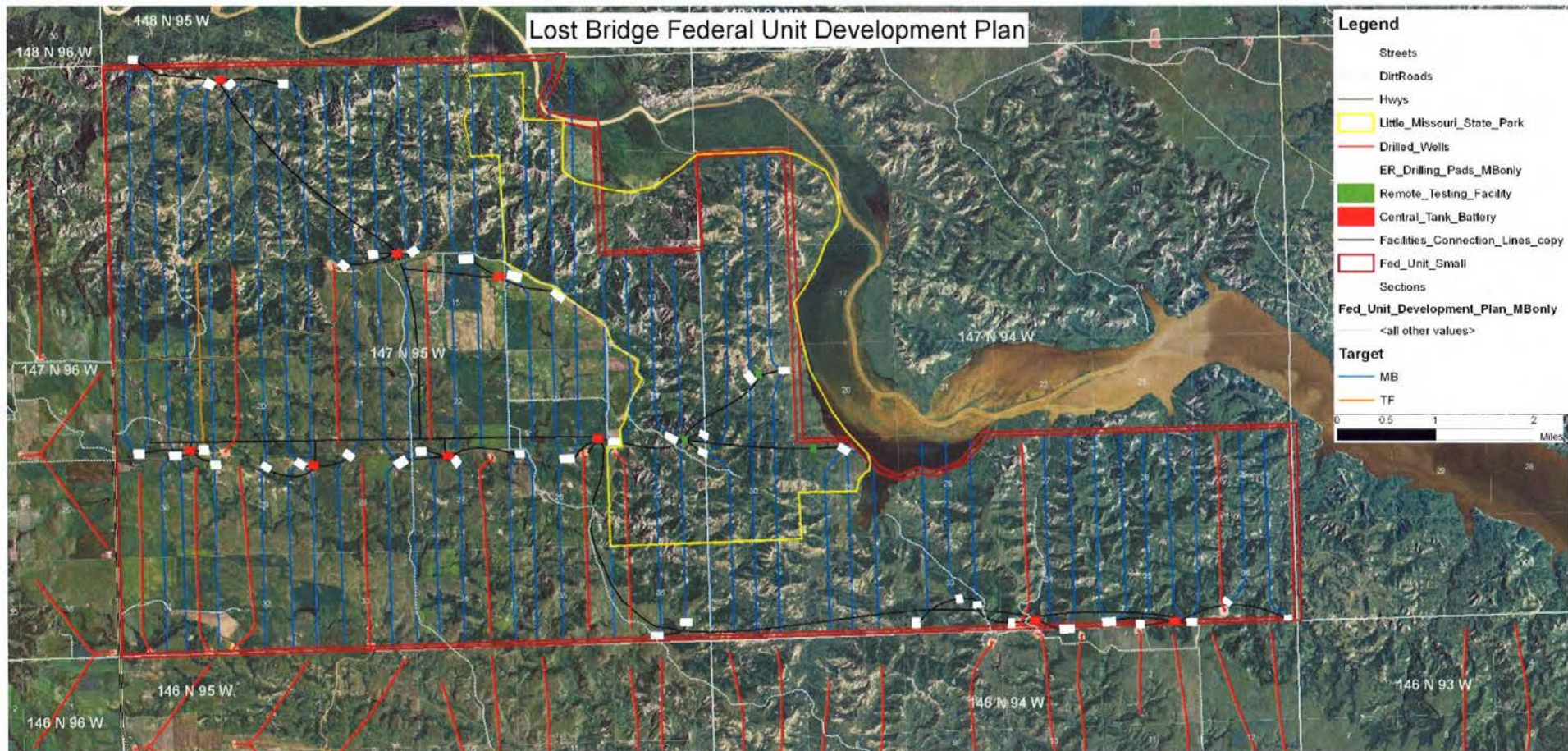


# Lost Bridge Federal Unit Development Plan

**Legend**

- Streets
- DirtRoads
- Hwys
- Little\_Missouri\_State\_Park
- Drilled\_Wells
- ER\_Drilling\_Pads\_MBonly
- Remote\_Testing\_Facility
- Central\_Tank\_Battery
- Facilities\_Connection\_Lines\_copy
- Fed\_Unit\_Small
- Sections
- Fed\_Unit\_Development\_Plan\_MBonly
- <all other values>
- Target**
- MB
- TF

0 0.5 1 2 Miles

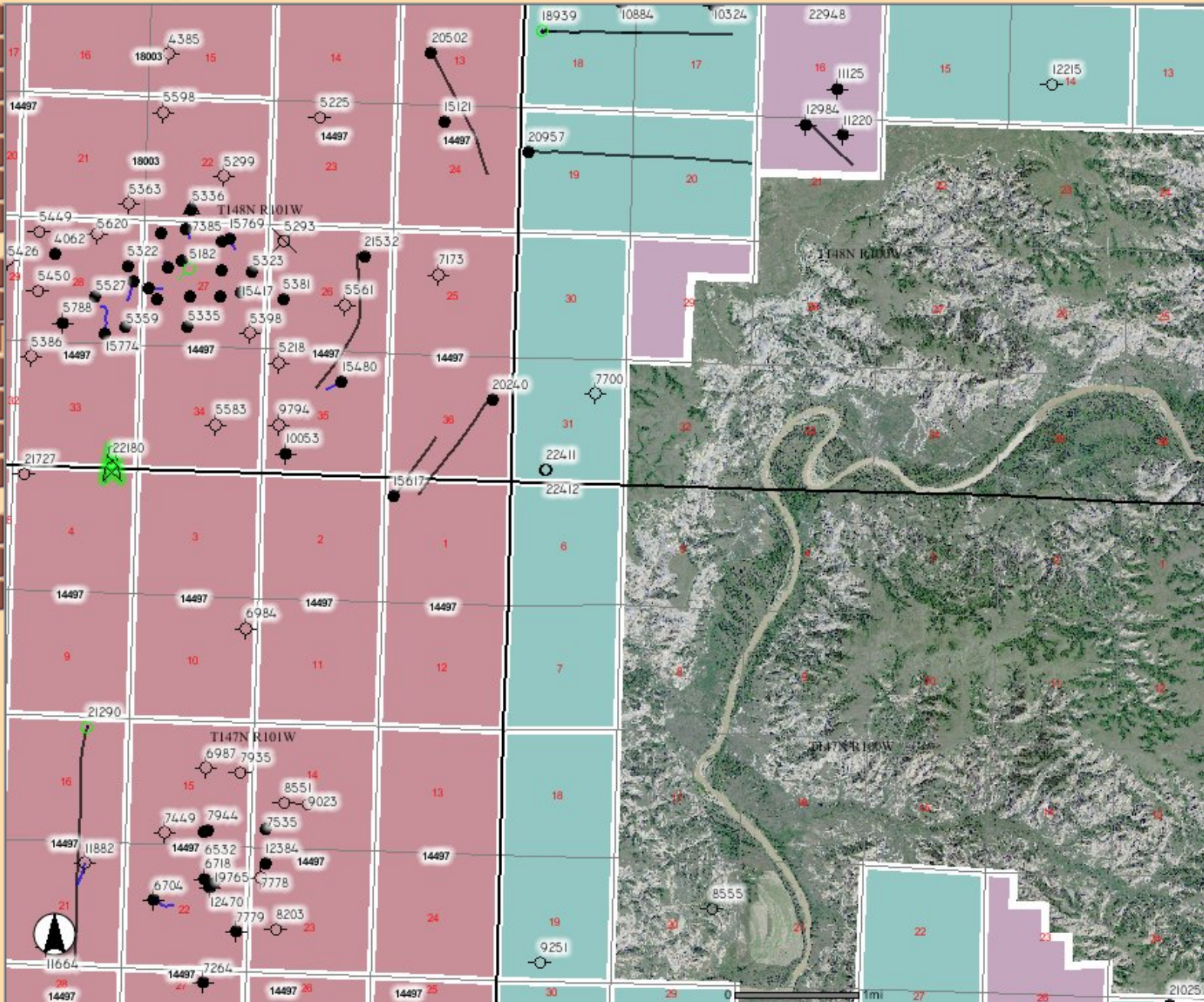




# Oil and Gas Subscription: ArcIMS Viewer

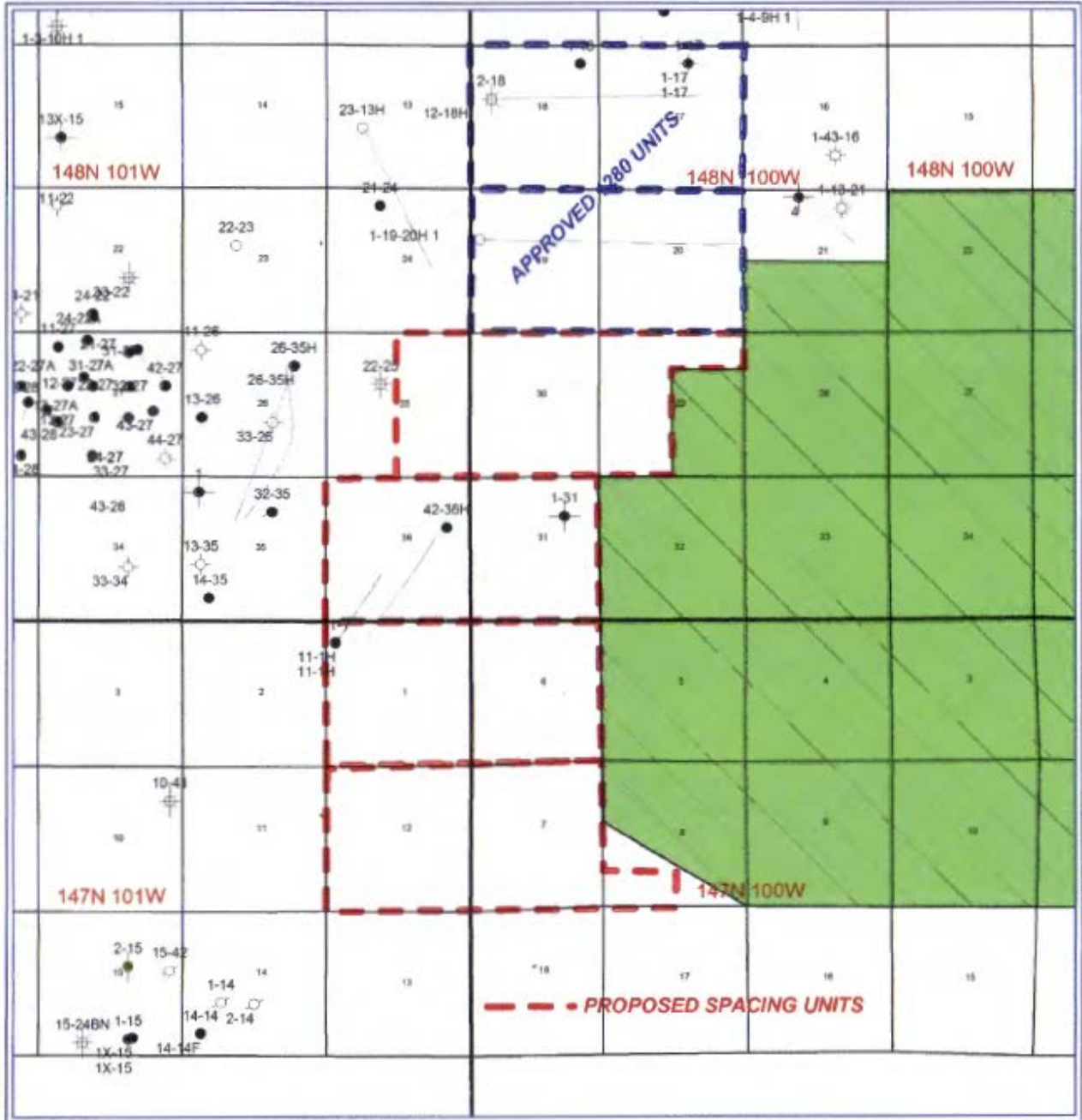
- Legend / Layers
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- View Entire State
- Previous View
- Clear Selection
- Search
- Generate PDF

- Zoom In
- Zoom Out
- Pan
- Rect Identify
- Select Object
- Buffer
- Distance
- Find Well
- Find Field/Unit
- Find Section



Wells  
Selection cleared





INDUSTRIAL COMMISSION  
 STATE OF NORTH DAKOTA  
 DATE 5/30/12 CASE NO. 177  
 Introduced By True Oil  
 Exhibit G-1  
 Identified By Barton

**TRUE OIL LLC**

CASE 17783, 1280 acre spacing units

T147-148N R100-101W  
 Mckenzie County, North Dakota

**EXHIBIT G-1**

0 5,103  
 FEET

By: RJB  
 May 23, 2012





# SUMMARY OF PROPOSED 2012 RULES

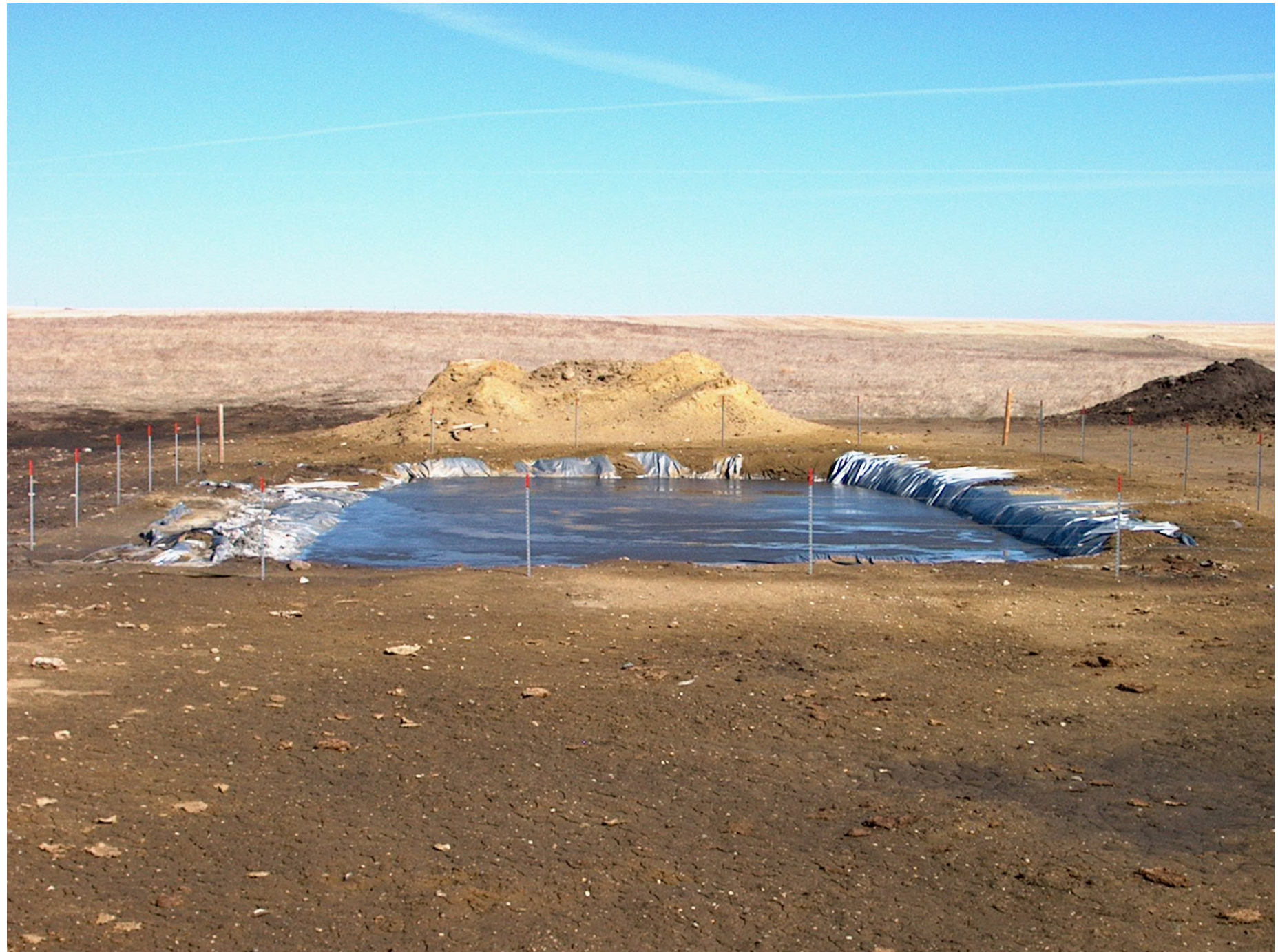
NDAC	RULES	PROPOSED CHANGE
<b>43-02-03 GENERAL RULES</b>		
43-02-03-05	Enforcement of Laws and Rules	Move language to 43-02-03-28 (Safety Regulation)
43-02-03-15	Bonds	Increase \$20,000 bond to \$50,000
		Commercial SWD bond increased from \$20,000 bond to \$50,000
		Eliminates \$50,000 10-well blanket bond
43-02-03-16	Permit to Drill	Consider csg imbrittlement due to H <sub>2</sub> S when considering recompletions
43-02-03-16.3	Recovery of a Risk Penalty	Clarify that "approximate" well loc is to be included in the invitation to participate Requires the drilling or spacing unit be included in the invitation to participate
43-02-03-18	Drilling Units	Allows temporary spacing order effective for up to 3 yrs, not 1-1/2 yrs
43-02-03-19	Site Construction	Amends rule to address only initial well site construction
		Soil stabilization additives and materials require approval from Director
		Must reduce size of well site after completion if not used f/well operations
43-02-03-19.1	Fencing, Screening, and Netting of Pits	Amended to also address "drilling" pits which were newly created
43-02-03-19.2	Disposal of Waste Material	Requires all waste material from undesirable events to be immediately disposed
43-02-03-19.3	Earthen Pits and Open Receptacles	Requires flare pits to be at least 150 feet from wells and tanks
		Allows lined fresh wtr pit for frack water f/1yr in cut w/only drinking wtr chemicals
		Creates new section addressing pits allowing cuttings, but no fluids
43-02-03-19.4	Drilling Pits	Must reclaim pit w/in 30 days after drilling well; Director may grant exceptions
		Allows small lined pit f/trench water and rig wash, but reclaim before MORT
		Must dike pit to keep surface water from entering
		Creates new section allowing reserve pits only for wells < 5000' deep or SWD
43-02-03-19.5	Reserve Pits	Must reclaim pit w/in one yr after completing well
		Must slope surface to promote surface drainage away from reclaimed area
		Requires remedial work f/inadequate sur csg job to be approved by Director
43-02-03-21	Casing, Tubing, and Cementing	Requires surface casing pressure test after cementing
43-02-03-25	Deviation Tests and Directional Surveys	Requires directional surveys to be in reference to true north
43-02-03-27.1	Hydraulic Fracture Stimulation	Creates new section addressing hydraulic fracture stimulation
		Must use popoff valves, rupture disk, remote valve
		Use frack string: no chem disclosure if > 350psi on annulus after frack
		Frack down csg: run csg evaluation f/thickness of csg and cmt w/chem disclosure
43-02-03-28	Safety Regulation	Incorporated language removed from 43-02-03-05 on well shut in f/public safety
		Requires automatic shut-down equip if well is threat to public health or safety
		Prohibits injection equipment from being installed < 500' from occupied dwelling
43-02-03-30.1	Leak and Spill Cleanup	Creates new section and incorporates language from 43-02-03-49&53 Requires operators to respond w/appropriate resources to contain & clean up spills
43-02-03-31	Well Log, Completion and Workover Reports	Run CBL prior to completion
		File two digital copies of logs, instead of one digital and one paper
43-02-03-34.1	Reclamation of Surface	Creates new section to address final restoration after well is plugged No additional requirements: Language taken from 43-02-03-19
43-02-03-49	Oil Spills, Prod Equip, Dikes, and Seals	Amend rule--move spill reference to 43-02-03-30.1
		Must remove "unused" equip rather than "unusable"
43-02-03-51	Treating Plant	Increases minimum bond from \$20,000 to \$50,000 for treating plants
43-02-03-53	Saltwater Handling Facilities	Amend rule--move spill reference to 43-02-03-30.1
		Requires oil recovered from saltwater handling facilities to be reported to Director
		Must remove "unused" equip rather than "unusable"
43-02-03-54	Investigative Powers	Director can timely (instead of "immediately") reply to a complaint
		Allows Director to decline to investigate--can appeal to IC
43-02-03-55	Abandonment of Wells-Suspension of Drilling	Abandonment will now include water source wells and stratigraphic tests
43-02-03-88.1	Special Procedures Administrative Hearings	Allows applications for additional wells on a spacing unit without live testimony
43-02-03-90.2	Official Notice	Comments and objections to hearings must be rec'd prior business day by 5pm
<b>43-02-12 GEOPHYSICAL EXPLORATION REQUIREMENTS</b>		
43-02-12-06	Notification of Work Performed	Director may require progress reports prior to completion of a project

43-02-03-19.4	Drilling Pits	<p data-bbox="832 594 1692 625">Creates new section addressing pits allowing cuttings, but no fluids</p> <p data-bbox="832 629 1818 661">Must reclaim pit w/in 30 days after drilling well; Director may grant exceptions</p> <p data-bbox="832 665 1798 696">Allows small lined pit f/trench water and rig wash, but reclaim before MORT</p> <p data-bbox="832 701 1460 732">Must dike pit to keep surface water from entering</p>
43-02-03-19.5	Reserve Pits	<p data-bbox="832 733 1827 765">Creates new section allowing reserve pits only for wells &lt; 5000' deep or SWD</p> <p data-bbox="832 769 1456 801">Must reclaim pit w/in one yr after completing well</p> <p data-bbox="832 805 1789 836">Must slope surface to promote surface drainage away from reclaimed area</p>









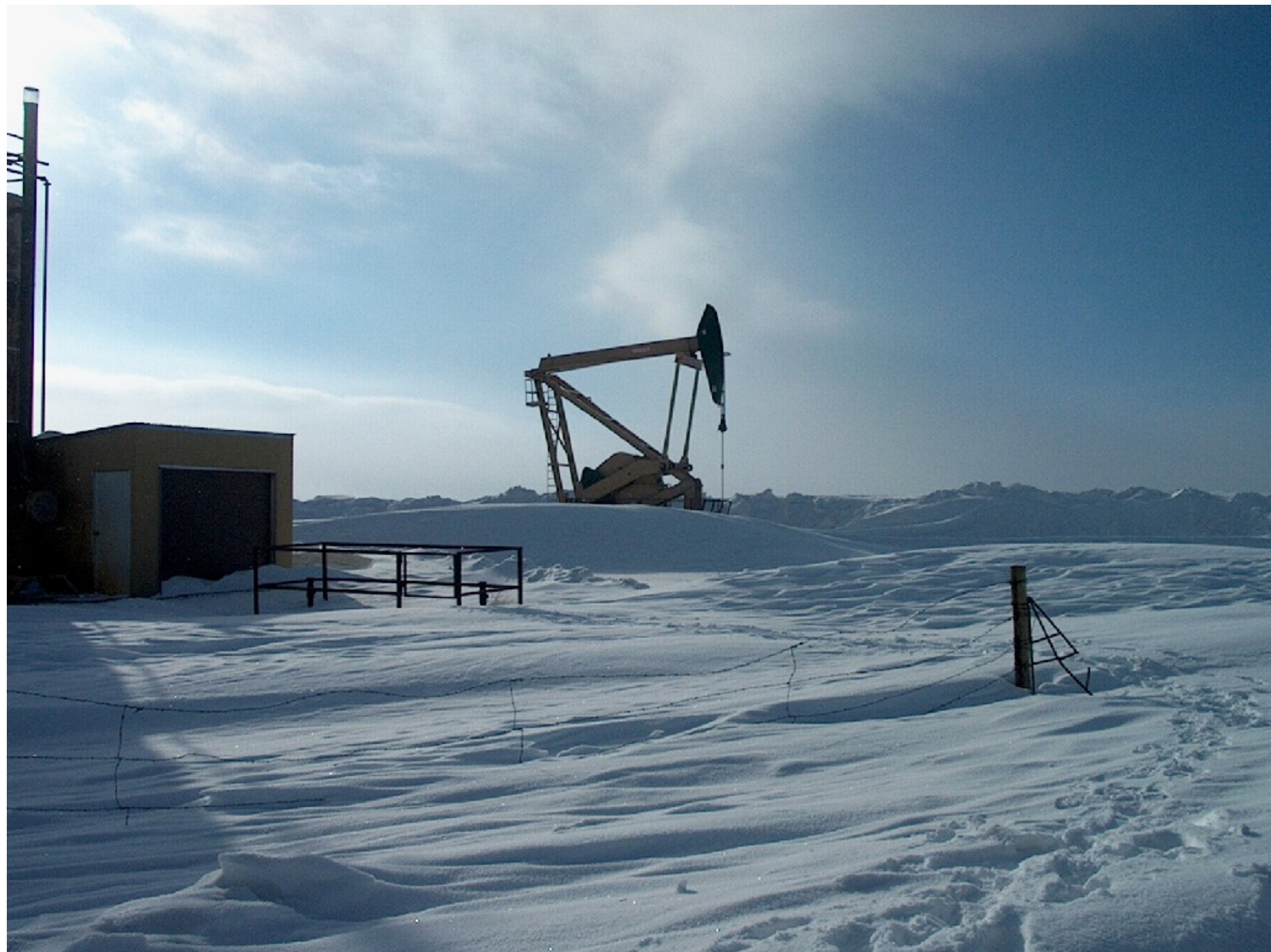




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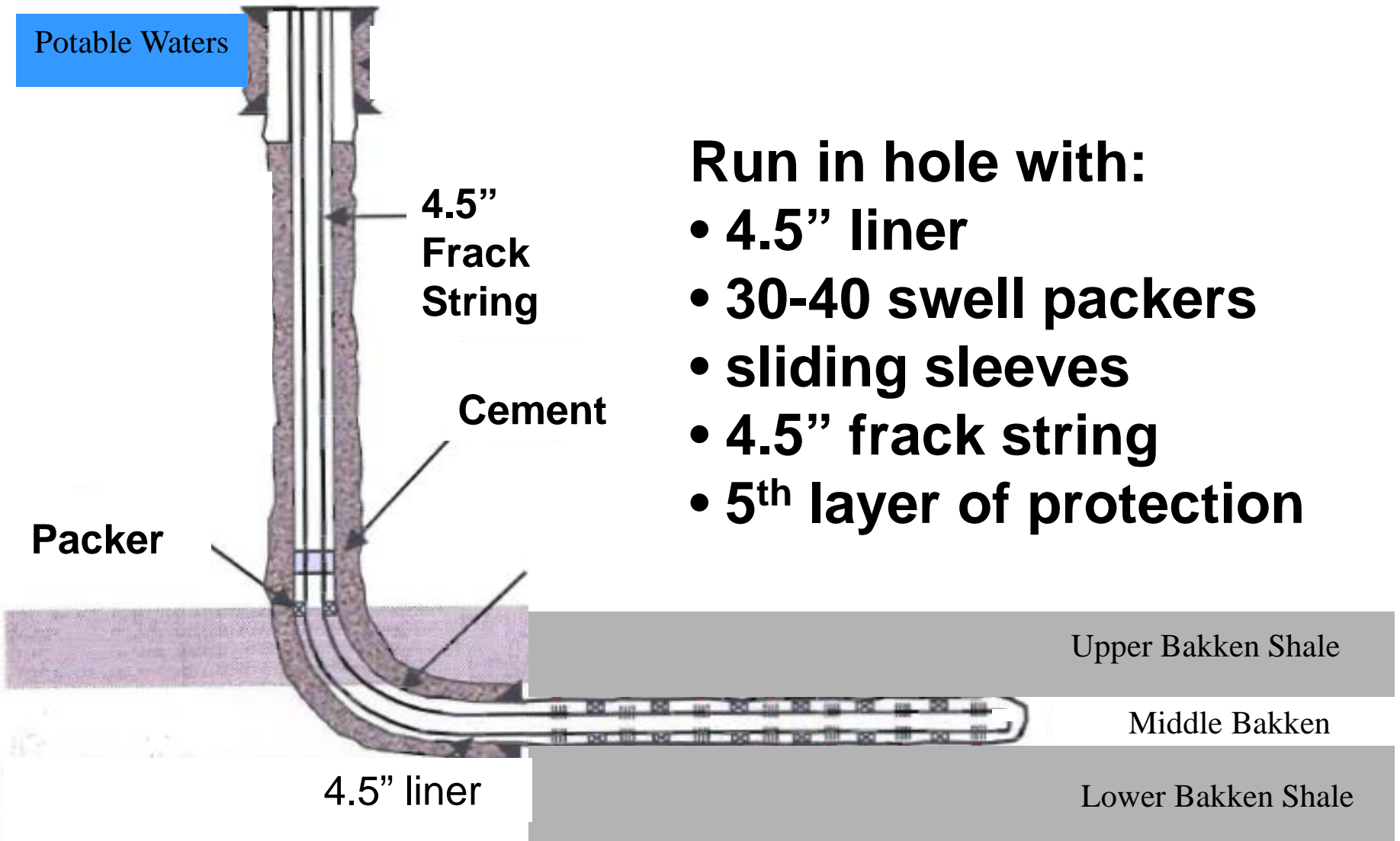




43-02-03-27.1	Hydraulic Fracture Stimulation	Creates new section addressing hydraulic fracture stimulation
		Must use popoff valves, rupture disk, remote valve
		Use frack string: no chem disclosure if > 350psi on annulus after frack
		Frack down csg: run csg evaluation f/thickness of csg and cmt w/chem disclosure

# TYPICAL HORIZONTAL OIL WELL

Potable Waters



4.5"  
Frack  
String

Cement

Packer

4.5" liner

- Run in hole with:
- 4.5" liner
  - 30-40 swell packers
  - sliding sleeves
  - 4.5" frack string
  - 5<sup>th</sup> layer of protection

Upper Bakken Shale

Middle Bakken

Lower Bakken Shale












## Find a Well

[← Back To Search](#)

[Next Page](#)

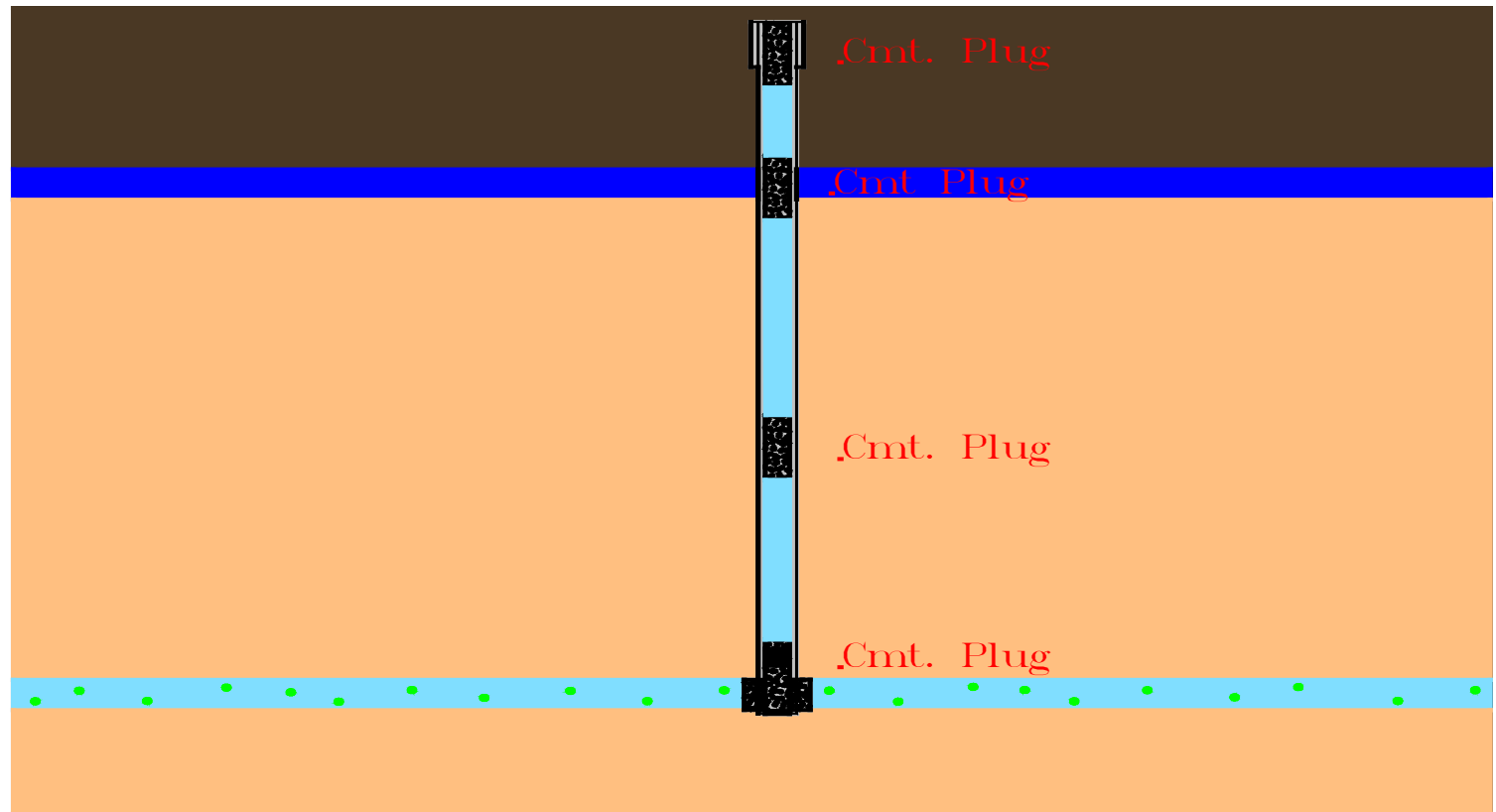
Page  of 5 [Go](#)

	API No.	Job Date	State	County	Operator	WellName	Well Type	Latitude	Longitude	Datum
	33-025-01132	4/13/2011	North Dakota	Dunn	XTO Energy/ExxonMobil	Alwin Federal 12X-19	Oil	47.627564	-102.967017	NAD83
	33-105-01913	4/18/2011	North Dakota	Williams	XTO Energy/ExxonMobil	Lonnie 31X-3	Oil	48.196639	-102.880264	NAD83
	33-105-01824	5/14/2011	North Dakota	Williams	XTO Energy/ExxonMobil	Allen 21X-17	Oil	48.254792	-103.058819	NAD83
	33-105-01825	4/28/2011	North Dakota	Williams	XTO Energy/ExxonMobil	Woodrow 34X-32	Oil	48.198603	-103.053617	NAD83
	33-053-03113	3/22/2011	North Dakota	Mc Kenzie	XTO Energy/ExxonMobil	101 Federal 21X-24	Oil	47.546178	-104.000694	NAD83
	33-105-01948	2/26/2011	North Dakota	Williams	XTO Energy/ExxonMobil	Normark 24X-31	Oil	48.460233	-103.008811	NAD83
	33-105-01899	2/17/2011	North Dakota	Williams	XTO Energy/ExxonMobil	Michael State 31X-16	Oil	48.167464	-103.031950	NAD83
	33-025-01165	5/9/2011	North Dakota	Dunn	Marathon Oil	Lucky Fleckenstien #34-20H	Oil	47.264306	-102.330608	NAD83
	33-025-01173	5/3/2011	North Dakota	Dunn	Marathon Oil	Wardner #24-35H	Oil	47.245872	-102.445641	NAD83

43-02-03-15	Bonds	Increase \$20,000 bond to \$50,000 Commercial SWD bond increased from \$20,000 bond to \$50,000 Eliminates \$50,000 10-well blanket bond
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# PLUG AND ABANDON





Well was plugged in  
07/1998

Reclamation work in  
09/1998

Seeded in Spring of 1999

BTA Oil Producers. JV-P#1. Near Rider Field  
NDIC File No. 14857. SE SE 15-140-103.  
Panoramic Reclamation photo taken looking 070  
towards middle of location. May 1, 2001. dwn.



BTA Oil Producers - JV-P#1 - Rider Field.  
NDIC File No. 14857. SE SE 15-140-103.  
Panoramic photo looking east. Photo taken from butte to west on 7/2/2002.





BTA Oil Producers. JV-P#1. Near Rider and Knutson Fields.  
NDIC File No. 14857. SE SE 15-140-103.  
Panoramic photo looking east from butte west of location.  
Photo taken on May 7th, 2003. dwn.



