

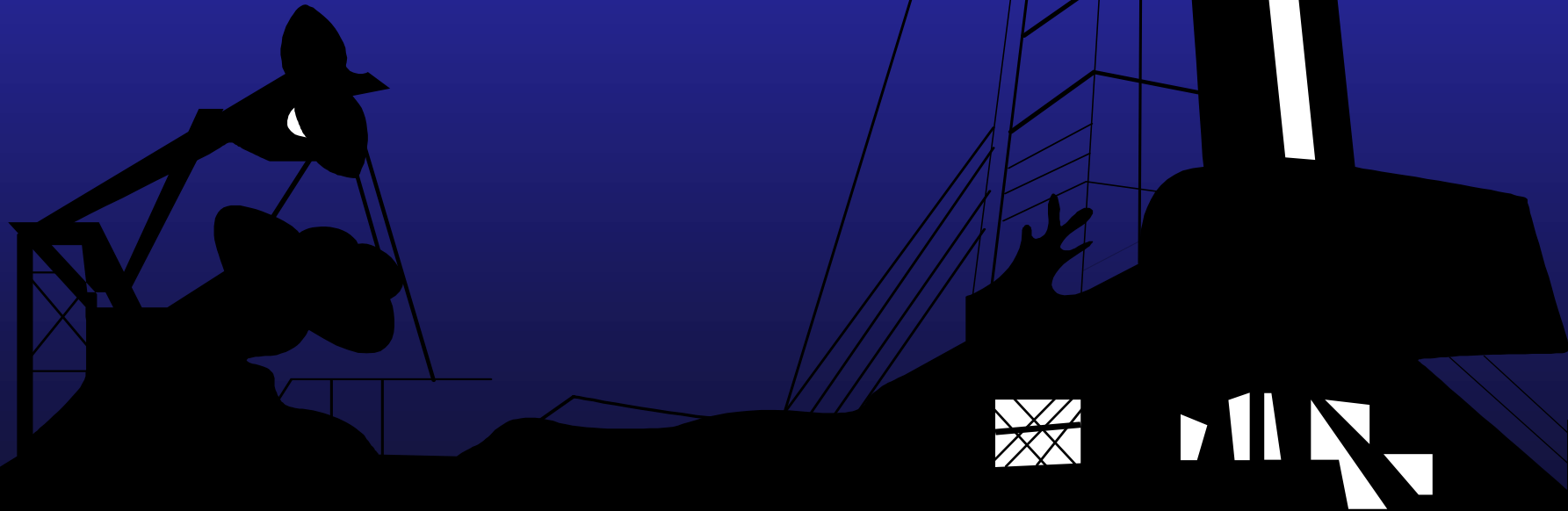
# Oil and Gas Agreements



J. David Chase

Wyoming State Office

Reservoir Management Group (RMG)



# Oil and Gas Agreements “In a Nutshell”

or

Why on God’s Green Earth are  
you making my job so difficult  
with these Darn Agreements?

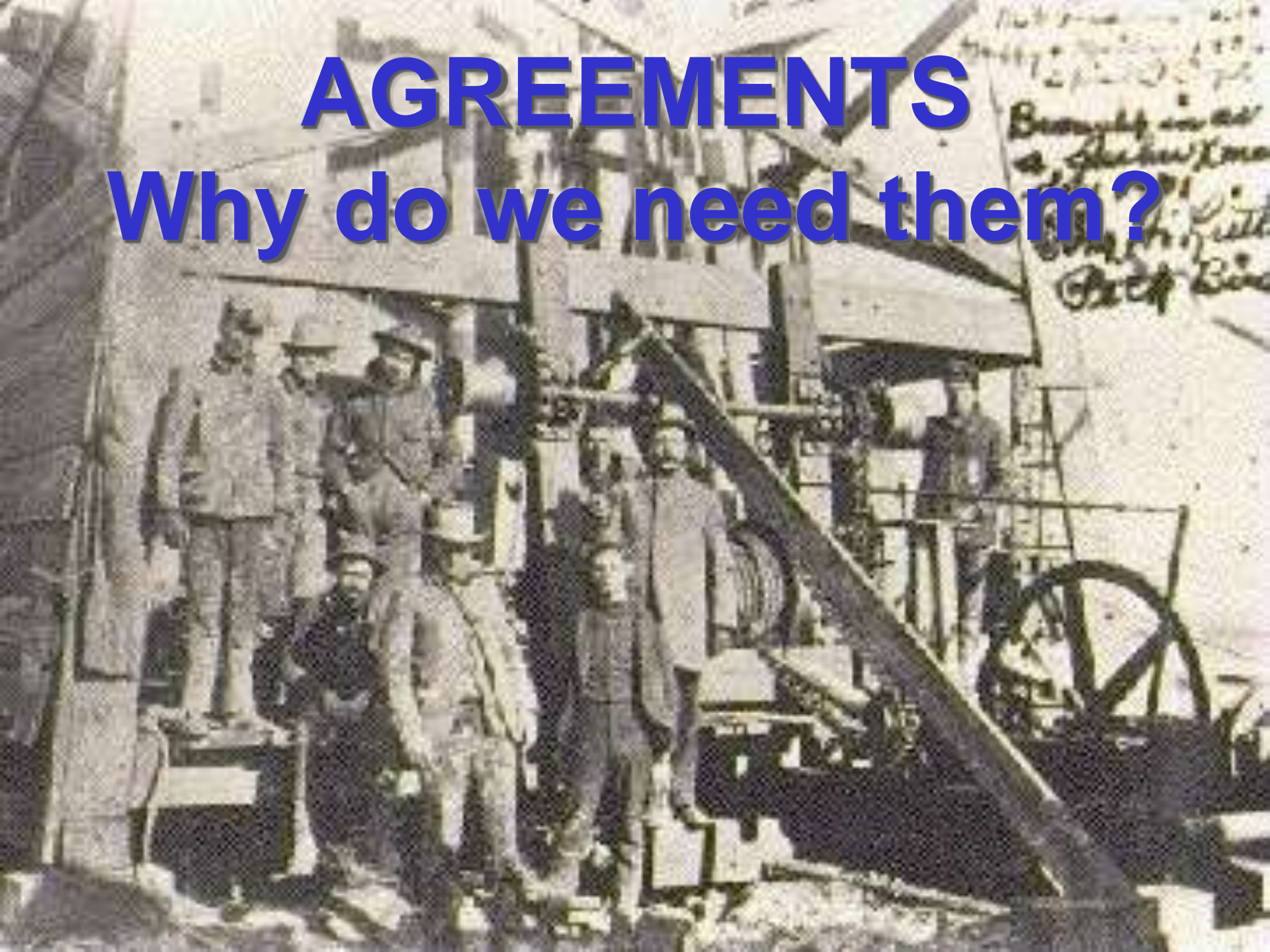
# General Topics



- ❖ **Types of Oil and Gas Agreements:**
  - ❖ **Exploratory Unit Agreements**
  - ❖ **Conventional Oil & Gas**
  - ❖ **Continuous Accumulations (coalbed natural gas, fractured shale, etc.)**
  - ❖ **Enhanced Recovery Unit Agreements**
  - ❖ **Communitization Agreements**
  - ❖ **Gas Storage Agreements**

# AGREEMENTS

Why do we need them?



# Introduction

- **Exploratory Unit Agreements (Conventional Wells)**
  1. **Rule of Capture**
  2. **Correlative Rights Doctrine**
  3. **Benefits of Unit Agreements**
  4. **Unit Names**
  5. **Approval Process**
    - a. **Designation**
    - b. **Final Approval**

# Introduction

(cont'd)

- **Exploratory Unit Agreements (cont'd)**
  - 1. Forming an Exploratory Unit**
  - 2. RMG Policy**
  - 3. Drilling to Discovery**
    - a. Dry Hole**
    - b. Non-Paying Unit Well**
    - c. Paying Unit Well**
  - 4. Participating Areas**
    - a. Initial**
    - b. Revisions**

# ***RULE OF CAPTURE***

# RULE OF CAPTURE

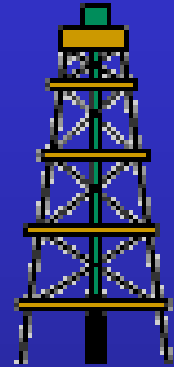
- Was the law of the land in the early days of oil and gas development
- Created by the Pennsylvania Supreme Court in 1889
- Created out of necessity and ignorance
- Ownership of oil and gas was analogized to ownership of groundwater and more importantly, wild animals





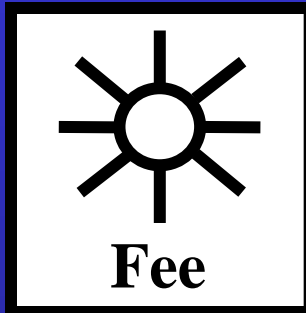
# RULE OF CAPTURE

**This Rule Essentially Said:**

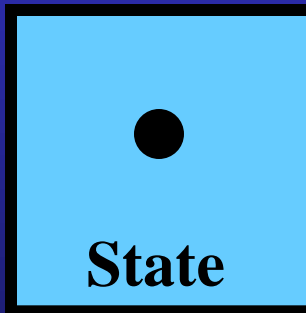


**Whatever oil and gas that I can produce from my well is mine.**

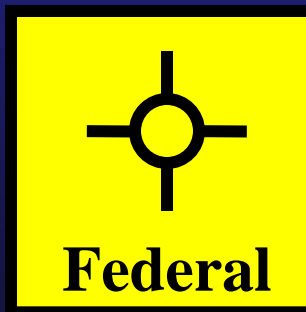
# Oil and Gas Mapping Symbology



**Gas Well**



**Oil Well**

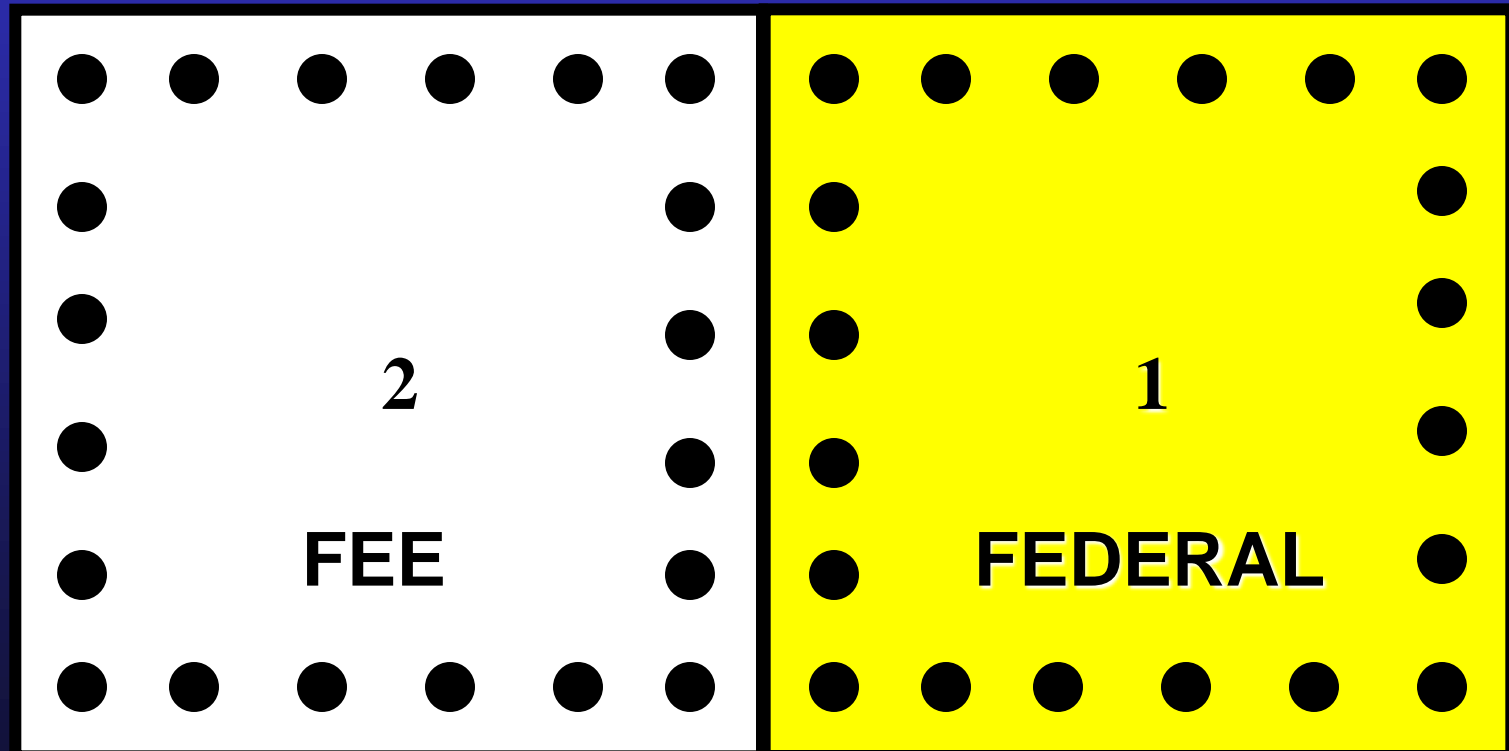


**Plugged and Abandoned**

# RULE OF CAPTURE

**RESULT:**

## WAR OF THE WELLS



# RULE OF CAPTURE

## RESULT:

- ✓ A race for possession by competitive operators
- ✓ Dense drilling along property lines
- ✓ Rapid depletion of reservoir pressure
- ✓ Loss of ultimate recovery
- ✓ Environmental disaster

# Mid 1930s:

- ❖ Courts finally understood that they were dealing with multiple owners of a common oil and gas pool and that the “Rule of Capture” had limits.
- ❖ “Correlative Rights Doctrine” adopted in many states

# Correlative Rights Doctrine

## Key Elements:

- Deals with an opportunity to receive a fair and equitable share of the source of supply, not a guarantee to receive that fair and equitable share.
- An explicit part of most state conservation regulations in the form of pooling, unitization, spacing, or proration.

# Why Do We Need Agreements?

Agreements are a tool used to support the “Correlative Rights Doctrine” and to also negate the effects of the “Rule of Capture”

# Unit Agreement Concepts and Benefits



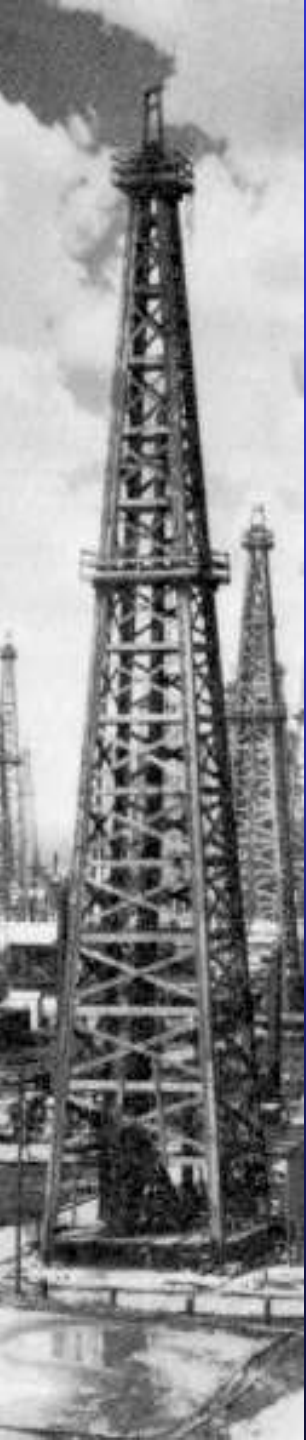
*Acid Well Treating Truck - 1933*



# Unit Agreement Concept

## Key Elements:

- One way to apply the Correlative Rights Doctrine
- Operation of multiple leases as a single lease under a single operator.  
(Remember This!)

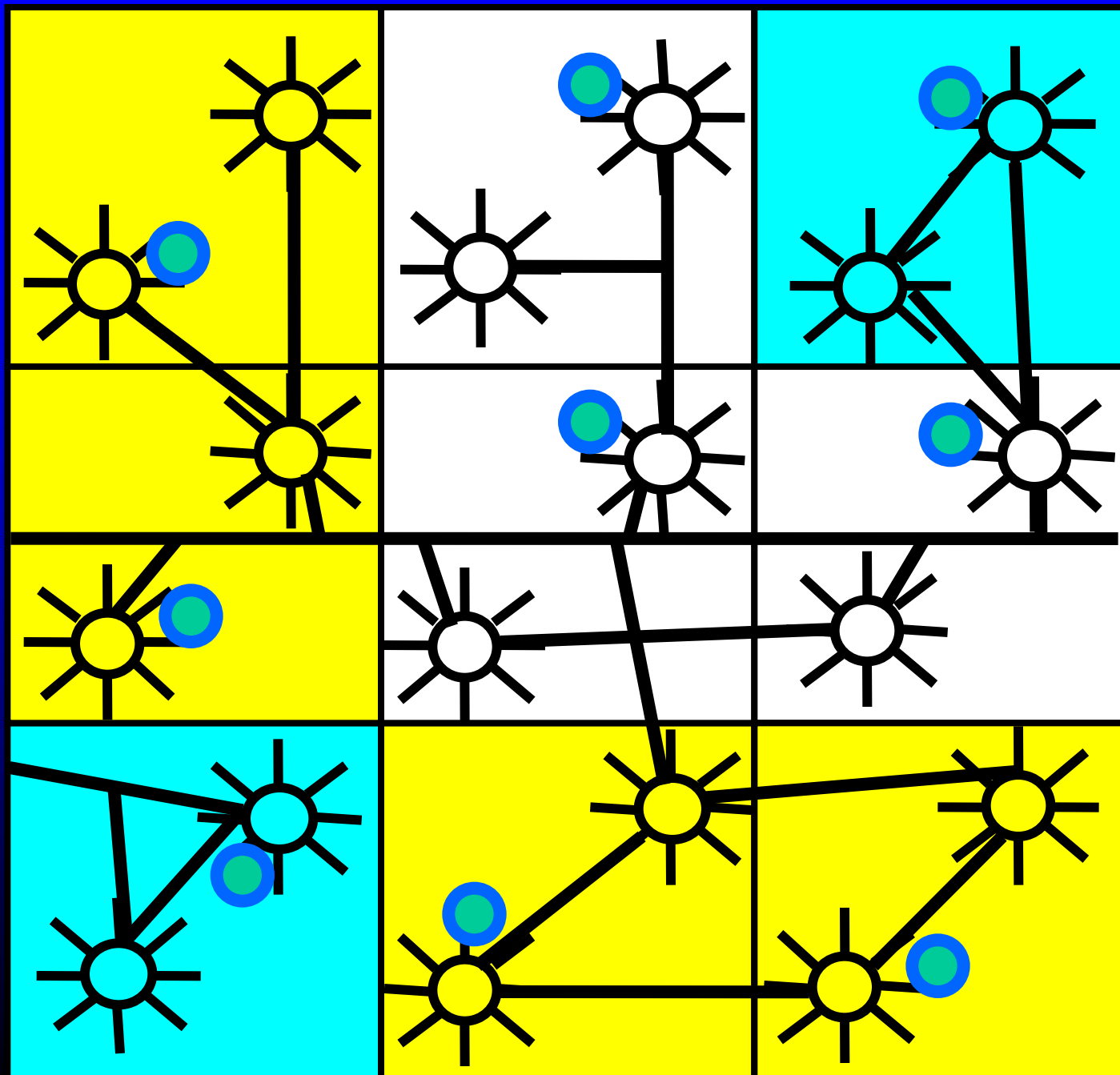




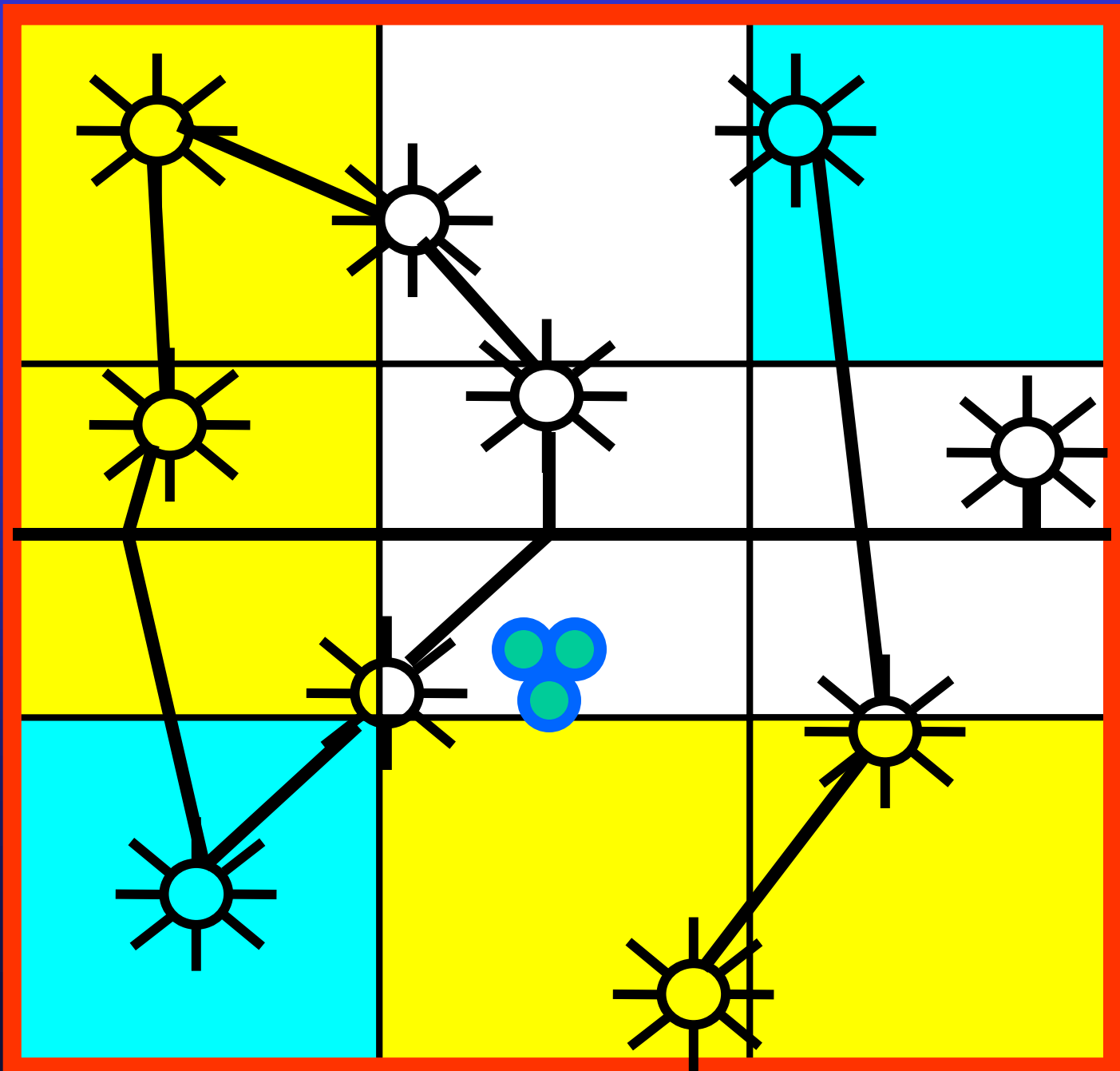
# Benefits of Unit Agreements

- ✓ **Environmental Benefits**
- ✓ **Oil and Gas Reservoir Benefits**
- ✓ **Lease Benefits**

# No Unit



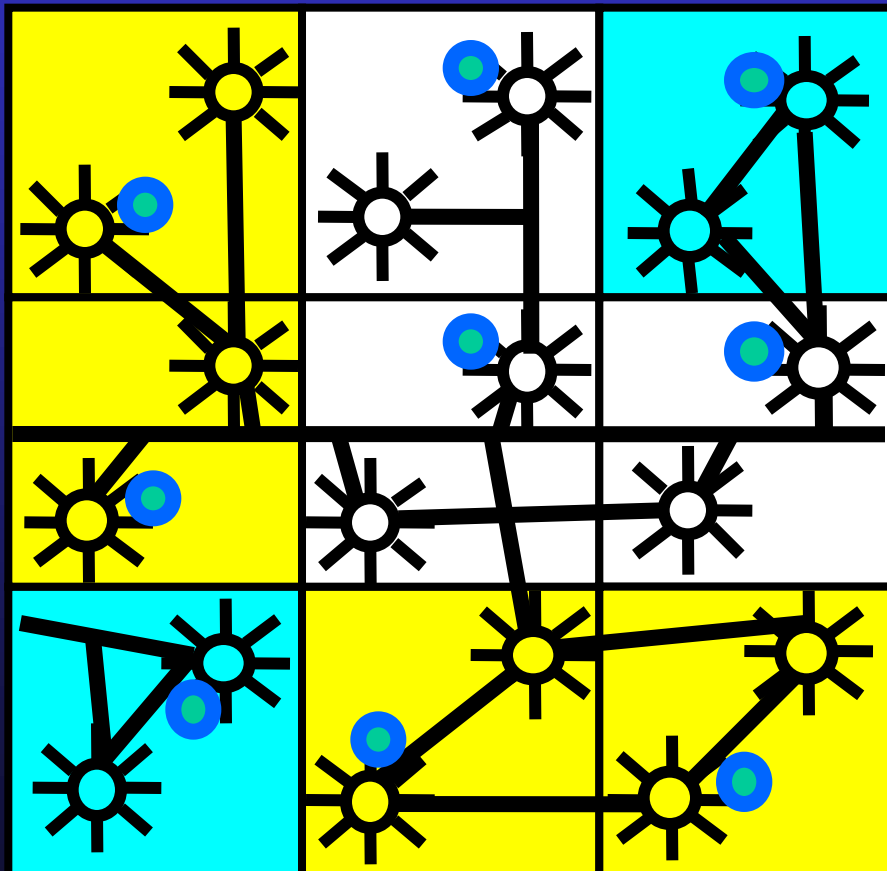
# Unit



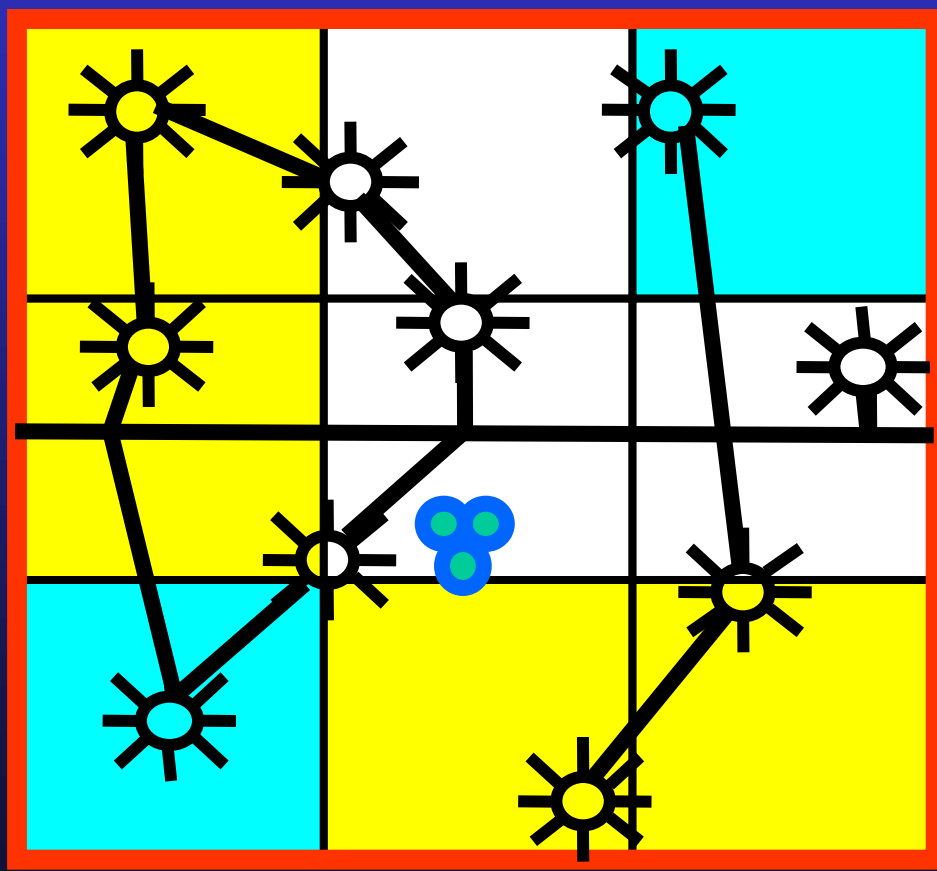
# Environmental Benefits:

- Fewer Well Pads
- Fewer Roads
- Less Surface Disturbance

## No Unit



## Unit





# Oil and Gas Reservoir Benefits of Unitization

- ✓ Drill wells ONLY where needed
- ✓ No regards for lease-lines
- ✓ Reduce waste - higher ultimate recovery



# Lease Benefits of Unitization

- Leases can be extended without actual production on the lease
- Leases get 2 year extension upon unit termination

# Lease Benefits of Unitization

(cont'd)

- Federal leases exempt from statewide acreage limitation (246,080 acres)
- Leases get 2 year extension upon elimination by contraction

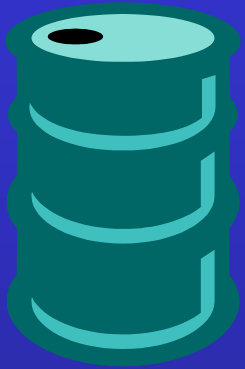




# What is BLM's Responsibility?

- ✓ *BLM is responsible for administering these unit agreements. This includes:*
  - ✓ **Unit Approval**
  - ✓ **Monitoring**
  - ✓ **Unit Termination**

# Oil and Gas Tidbits



**1 barrel of oil = 42 gallons**

**1 barrel of oil makes 19.3 gallons of gasoline**



**1 mcf of gas = 1000 cubic feet**

**The first successful domestic gas well was drilled in Fredonia, NY (27 feet deep) in 1821, 38 years before the first oil well was drilled.**



# Unit Names



Originally:

Units named after a geologic or topographic feature within the unit area

e.g.,. Salt Creek, Whiskey Draw, Wild Horse Butte

However, we eventually had more units than features - - so, we let unit operators be creative

# Suds Draw Unit

**Who is the Unit Operator?**

***COORS***

**One of our operators had an  
obsession with cleanliness**

*Lifebuoy*  
*Irish Spring*

**One of our operators was  
obviously drawn to the links:**

*Mulligan Draw*

*Eagle*

*Rolling Green*

*Bogey*

*Fairway*

*Birdie*

*Sandtrap*

**One of our operators was  
interested in trains:**

*Orange Blossom Special*

*Rock Island*

*Wabash Cannonball*



**One of our operators  
temporarily lost a valley:**

*Lost Valley*

*Found Valley*

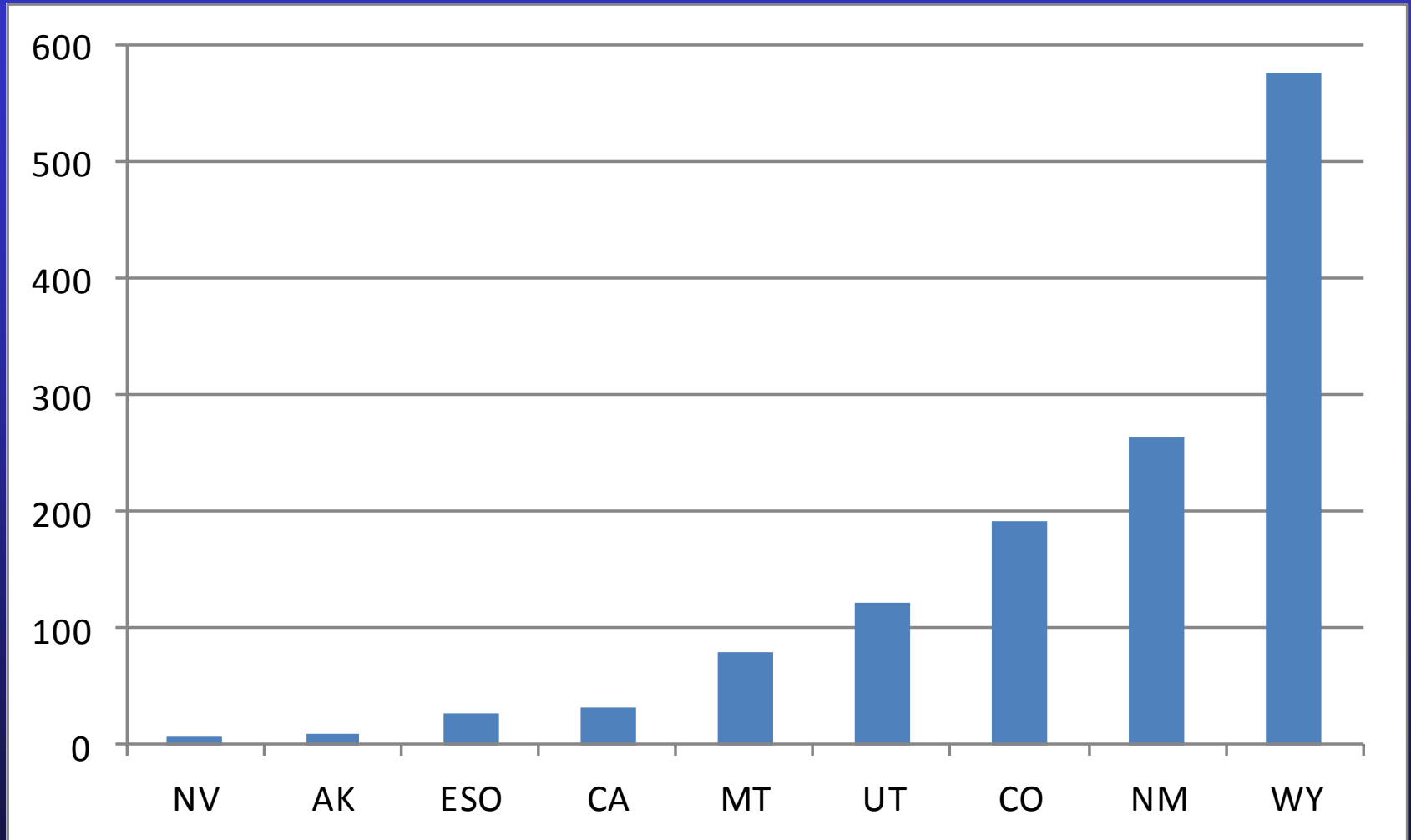
# Historical

## ***5 Oldest Federal Unit Agreements***

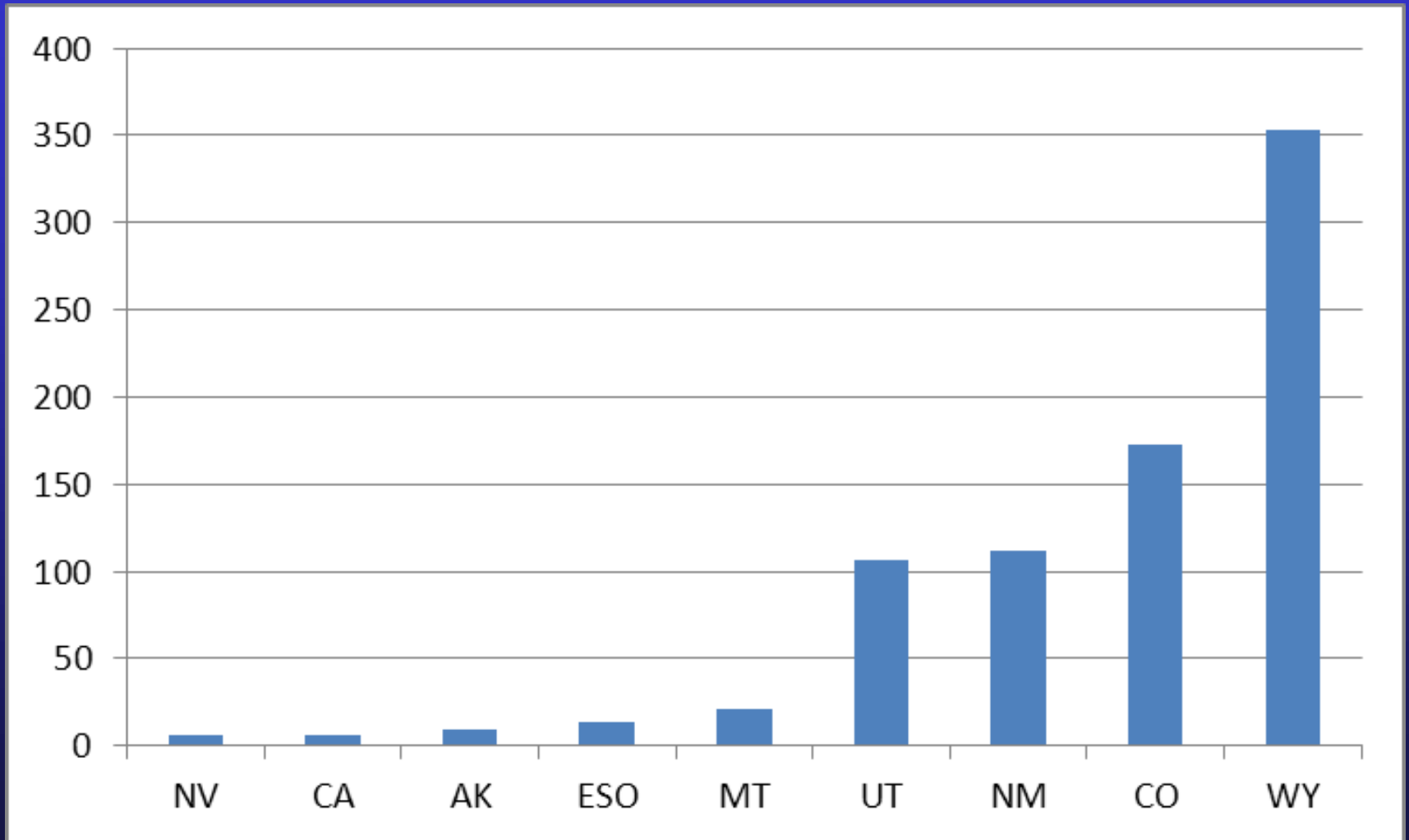
*Approved*

- 1. Little Buffalo Basin (WYO) 1/6/31***
- 2. Big Sand Draw Gas (WYO) 2/11/32***
- 3. Billy Creek (WYO) 4/11/32***
- 4. Pitchfork (WYO) 1/30/32***
- 5. Fourbear (WYO) 9/19/34***

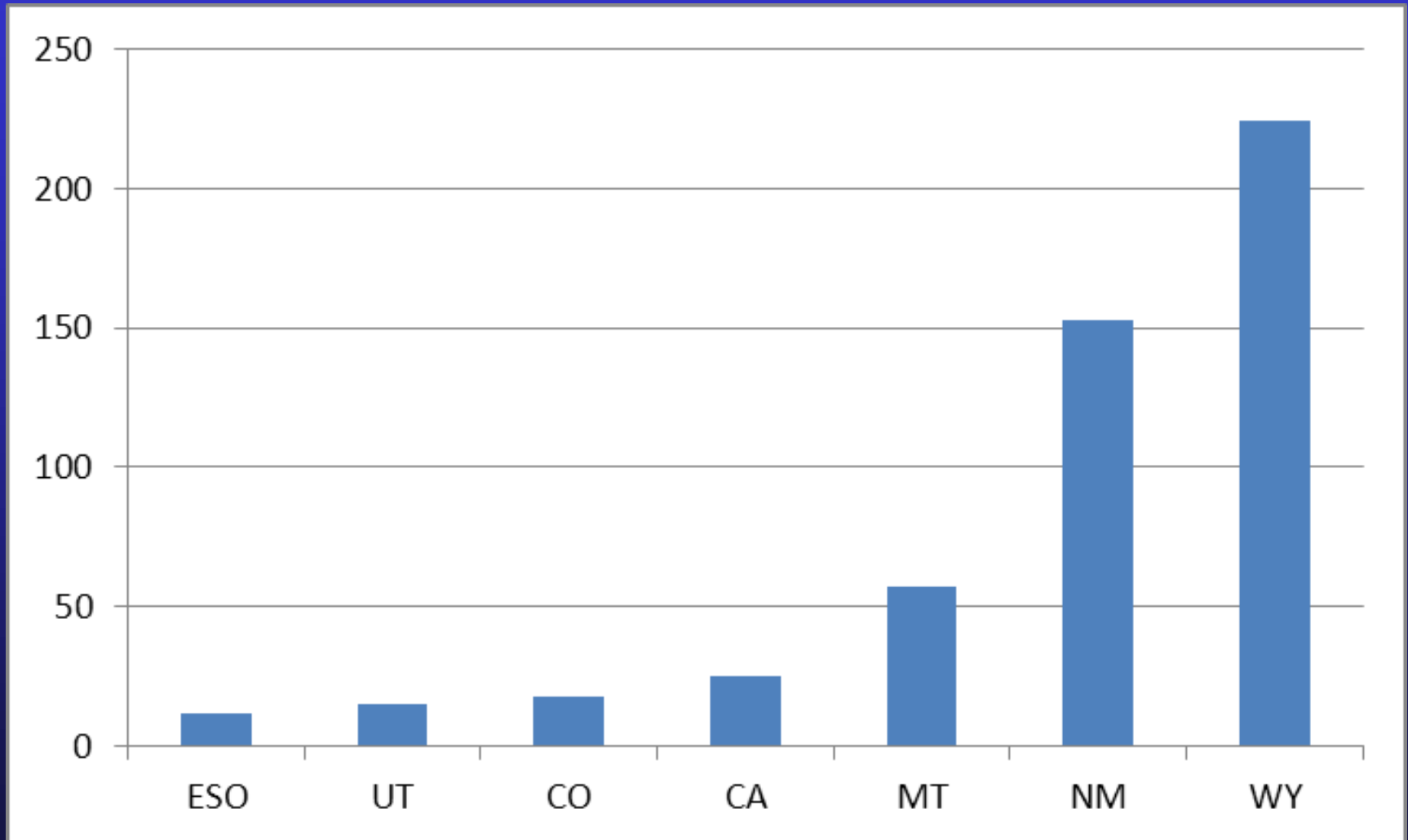
# Total Units by State (No API/Indian Units)



# Exploratory Units by State (No Indian Units)



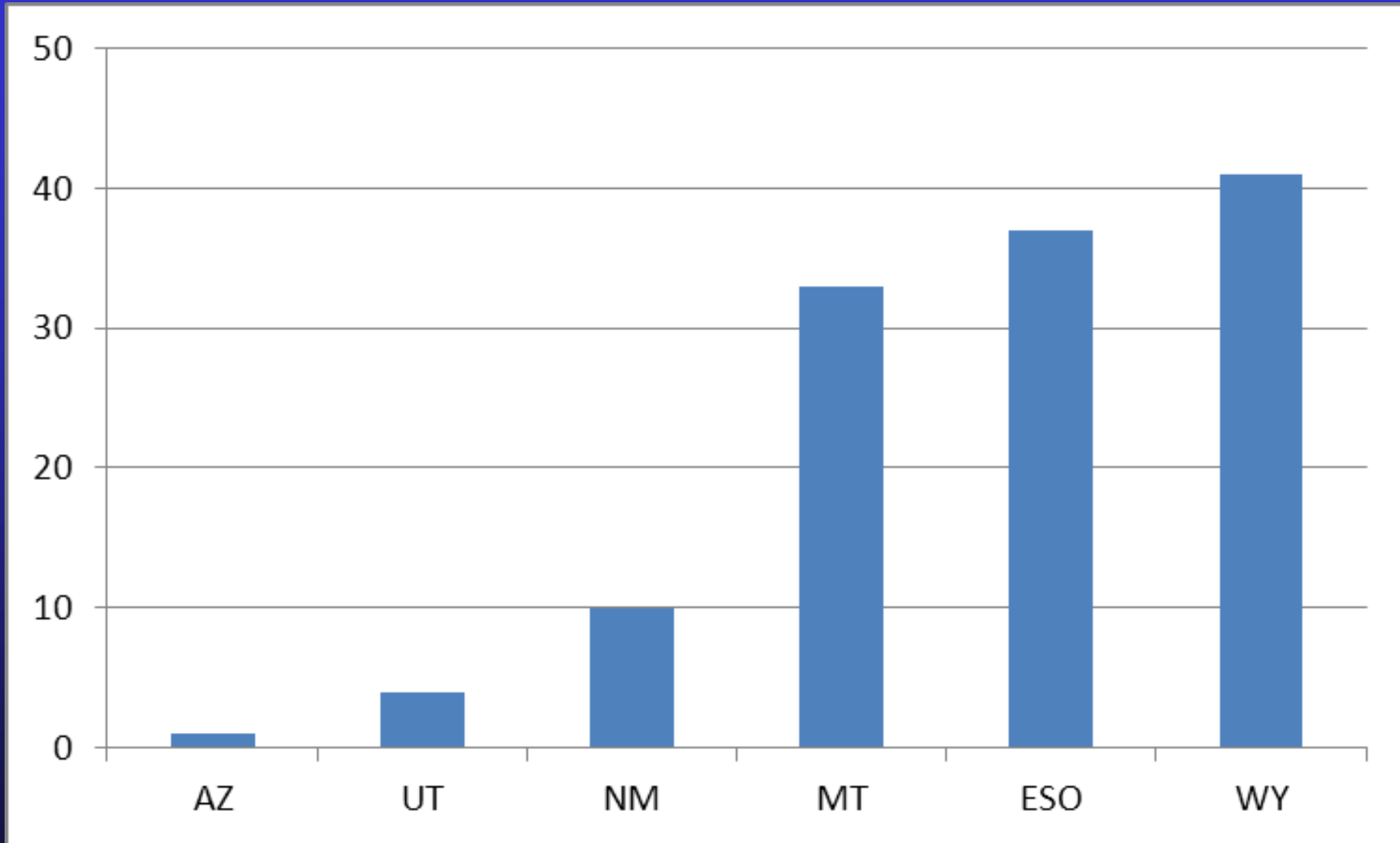
# Secondary Recovery Units by State (No API or Indian Units)



# ***API or State Units***

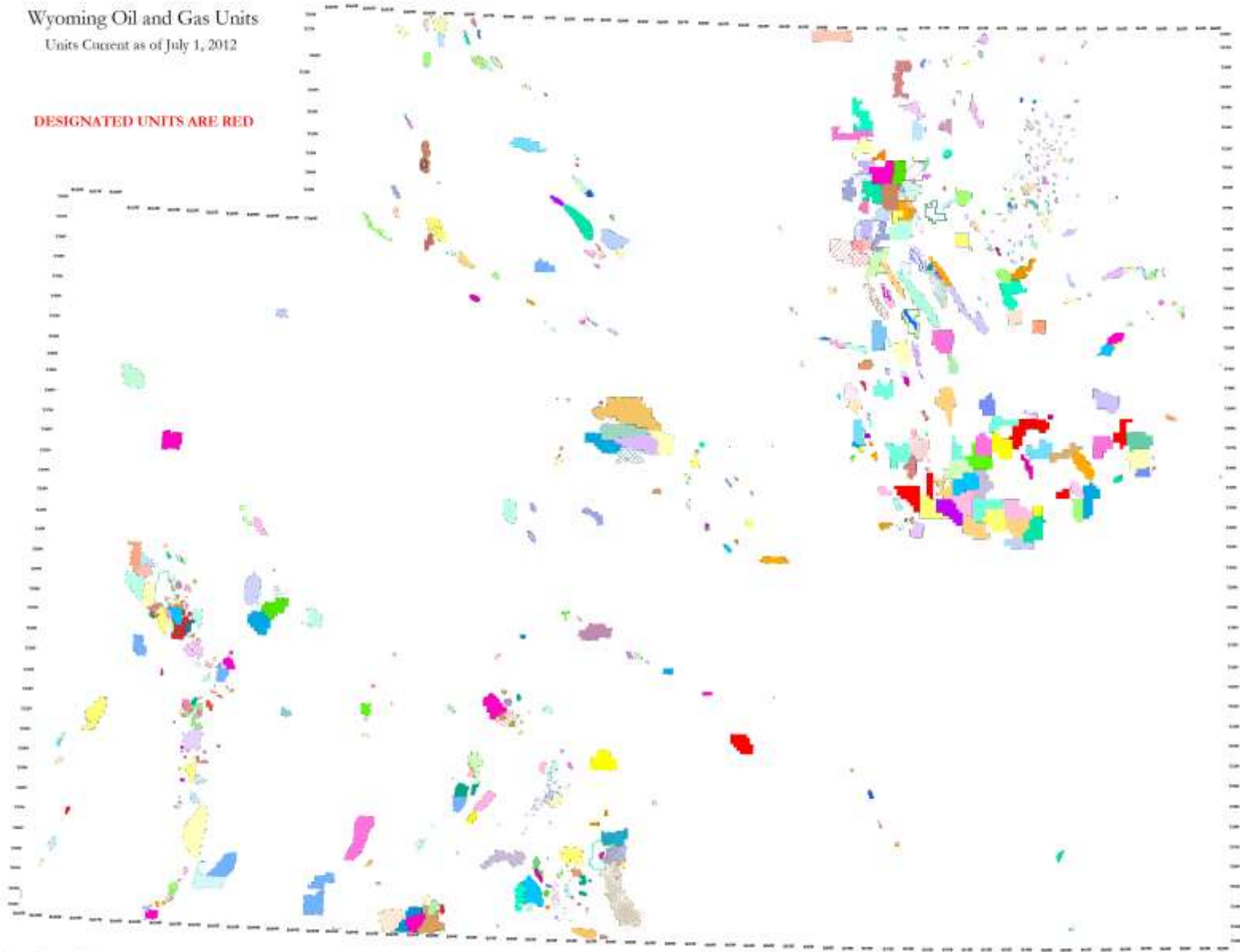
- **Little or no Federal acreage or Federal participation**
- **BLM has no jurisdictional or administrative responsibilities for these unit agreements**

# API Secondary Recovery Units by State



Wyoming Oil and Gas Units  
Units Current as of July 1, 2012

DESIGNATED UNITS ARE RED



Source: Wyoming Department of Energy, Wyoming Oil and Gas Conservation Commission, Wyoming Oil and Gas Units, July 1, 2012



# **The Life and Times of an Exploratory Unit Agreement**



July 24, 1931 - Plug job done at Federal Govt. expense

# Unit Agreement Approval Process



214 P10 VI

# Approval Process

1. Designation
2. Final Approval



# Approval Process

Agreements containing Indian Lands

**1. Designation**

**2. BIA gives Final Approval**

**BLM provides recommendation to BIA**



# Designation

## Application includes:

- ✓ Unit area geology
- ✓ Unit target formation
- ✓ Unitized formations
- ✓ Unit boundary
- ✓ Obligation well location
- ✓ Changes from the standard form
- ✓ Unit operator



# Final Approval

**Applicant must show:**

- **All parties within unit area have been invited to join the unit, and**
- **85% of acreage within the unit area is committed to the unit agreement (effective unit control)**
  - **Non-committed acreage does not receive any benefits of the unit**



# Lets form an Exploratory Unit Agreement

We will call the unit:

# Boxelder Creek

# Designation Criteria

## Boxelder Creek Unit

- Target formation is the Almond
- Standard exploratory agreement form will be used
- Acme Oil will operate the unit
- All formations are unitized



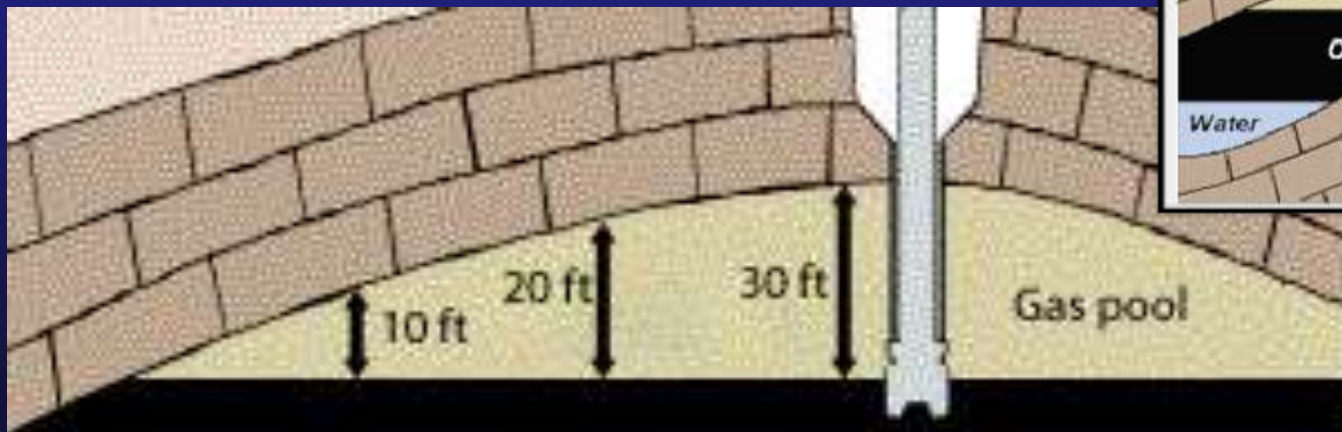
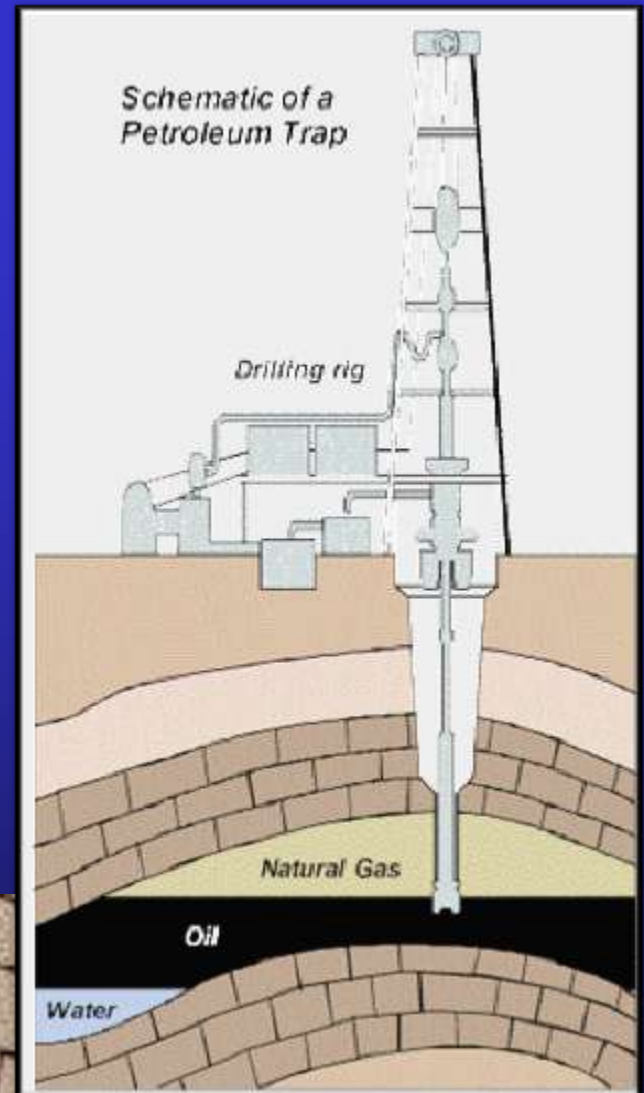
# RMG Policy

1. Exploratory units will not be larger than 25,000 acres.
2. The initial unit obligation well for a vertical well in an exploratory unit shall be located based on the following:
  - a. At least one mile away from any penetration(s) of the formation in which the initial unit obligation well is proposed to test.
  - b. At least one mile away from the unit boundary.

3. The initial unit obligation well should be located on Federal minerals. In special circumstances the initial obligation well may be located on nonfederal minerals where the obligation well would allow adjacent Federal minerals to participate in the production of a well in a unit participating area.

# Hydrocarbon Reservoirs

- Fluid (gas, oil, and/or water) – the “pool”
- Reservoir rock – what holds the oil and gas (or water)
- Pore space – where it is in the reservoir
- Trap – what keeps it in the reservoir



# Boxelder Creek Unit - Designation Criteria

Almond Fm.  
Isopach



FEDERAL

FEE

STATE

30 ft.

20 ft. 10 ft.

0 ft.

FEDERAL

FEE

FEE

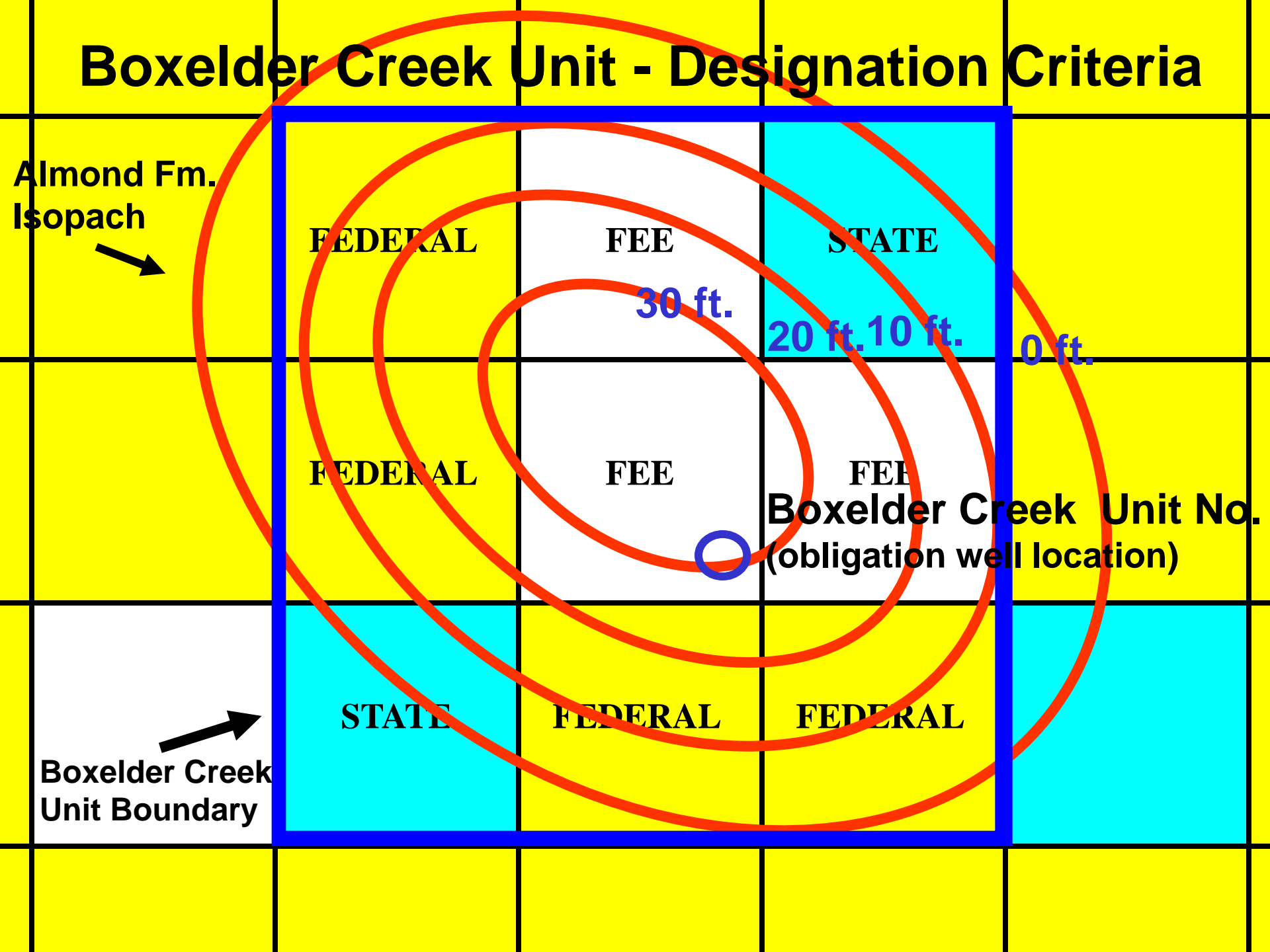
Boxelder Creek Unit No.  
(obligation well location)

STATE

FEDERAL

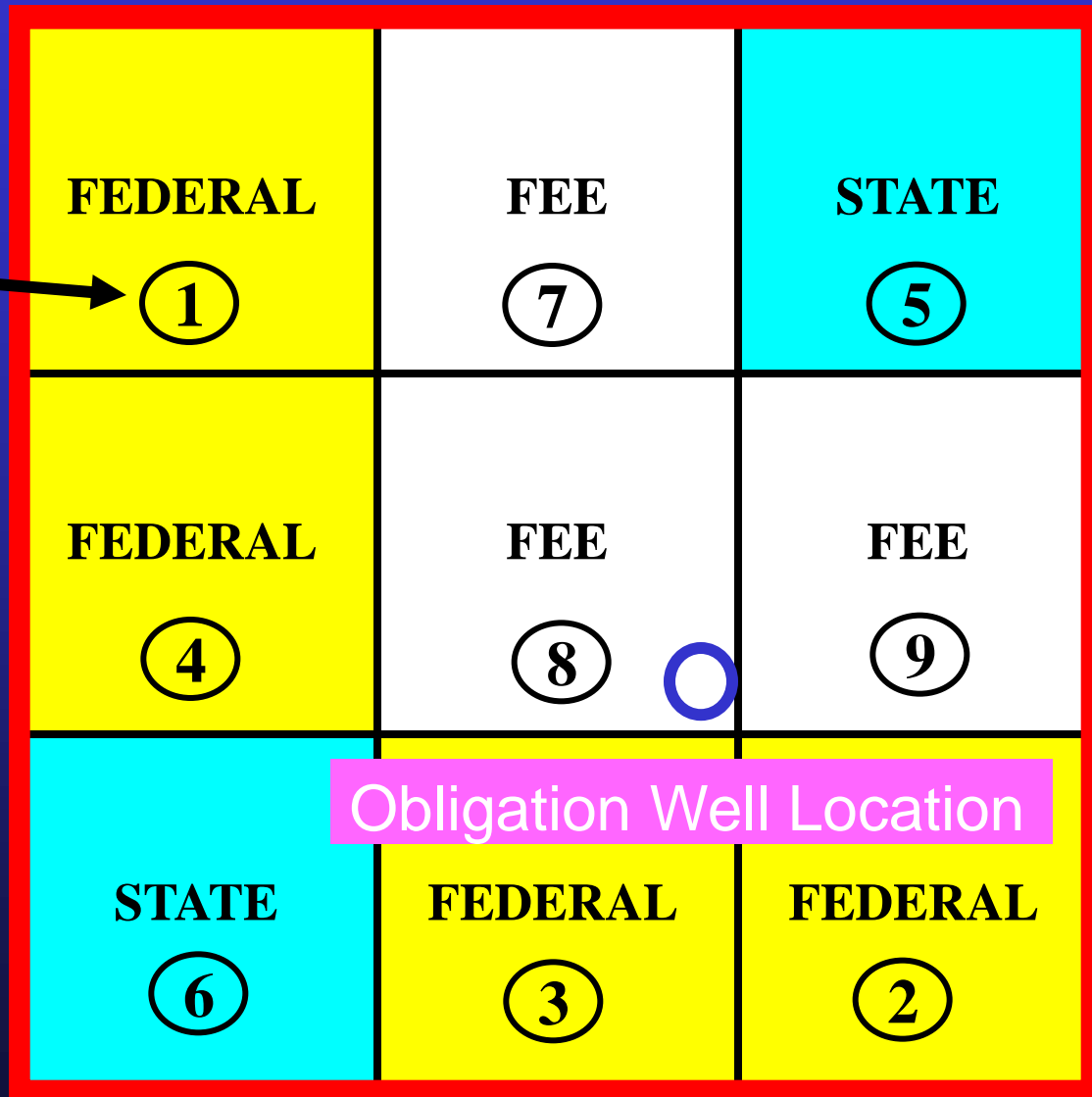
FEDERAL

Boxelder Creek  
Unit Boundary



# Boxelder Creek Unit

Tract #



# Drilling to Discovery

**Goal:**



*Drill a well that is determined to be  
a “Unit Paying Well”*

# Drilling to Discovery

## 3 Possible Well Outcomes:

1. **Dry hole**
2. **Non-paying unit well**
3. **Unit paying well**



# Drilling to Discovery

## 1. Dry Hole

### Implications:

- Unit operator required to drill another well within 6 months of completion of dry hole
- Leases are not HBP (Held by Production) - as a result, leases stand on their own





# Drilling to Discovery

## 2. Non-Paying Unit Well

### Implications:

- All leases committed to the unit agreement are now HBP
  - Result of a Yates, Co. IBLA case - 1983
  - Operator often requests verification of a “Yates” well to ensure extension of all their unit leases.





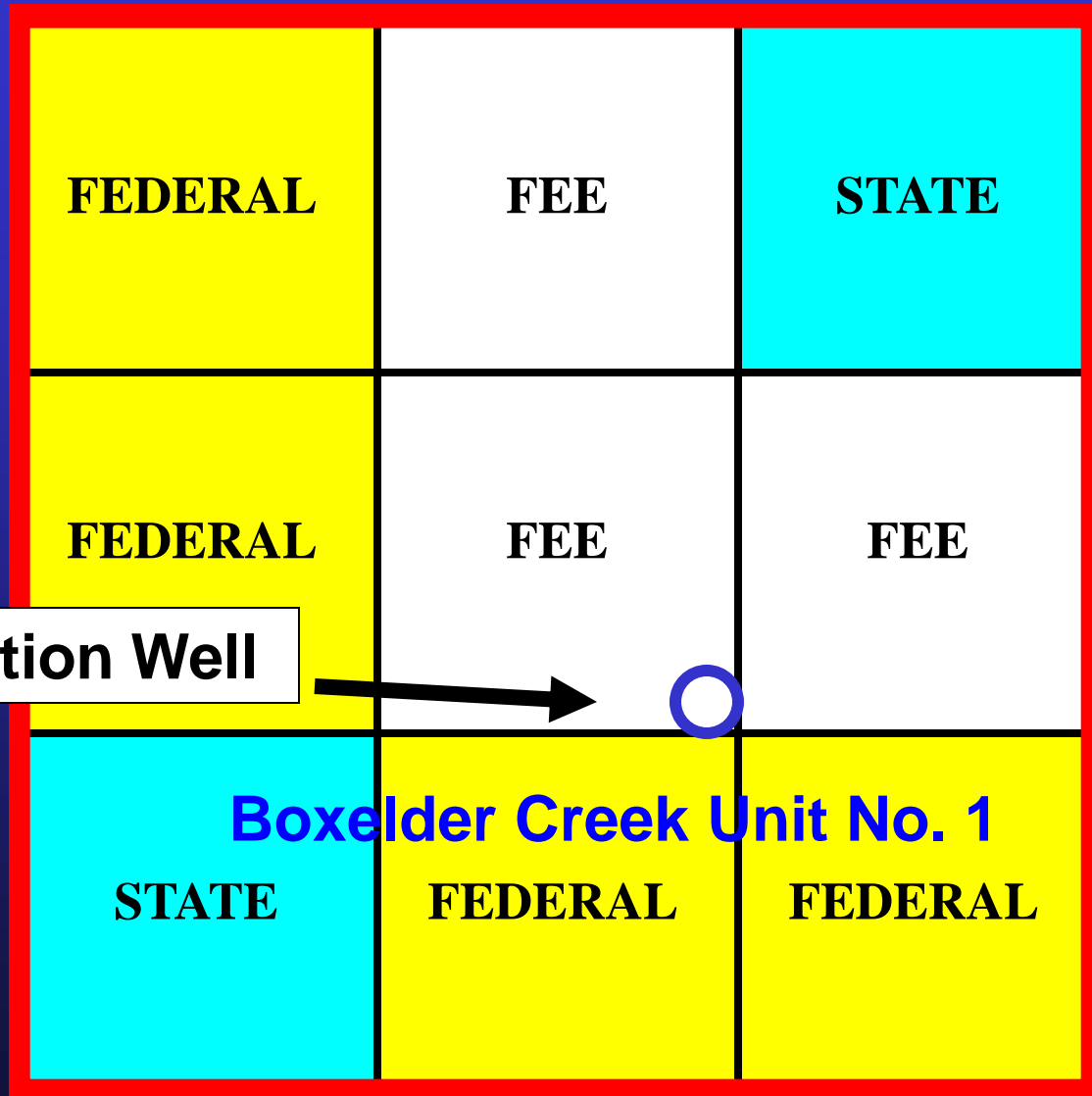
# Drilling to Discovery

## 3. Unit Paying Well

### Implications:

- All leases committed to the unit agreement are now HBP
- Further drilling requirements are now handled under the “Plan of Development”  
(Wells are not required to be drilled 6 mos. after previous well was completed)
- Unit participating area will be formed

# Boxelder Creek Unit



# Drilling to Discovery

## Boxelder Creek Unit

- ✓ Boxelder Creek Unit No. 1 well was completed and showed an initial potential of 2,000 mcf/day.
- ✓ After some production history, the operator sent a “Unit Paying Well Determination” application to the RMG
- ✓ RMG determined that the Boxelder Creek Unit No. 1 well was a “Unit Paying Well”

**IMPORTANT**

Celebration!!!



# Exploratory Unit Agreement Participation After Discovery





# Participation After Discovery

## Participating Area (PA)

### *Definition:*

- ✓ The area that is “reasonably proven productive” by a well that produces in “unit paying” quantities.
- ✓ The area that shares in:
  - ✓ Financial benefits of PA production, and
  - ✓ Costs of the PA well(s)

# Participation After Discovery

**“Reasonably proven productive”**

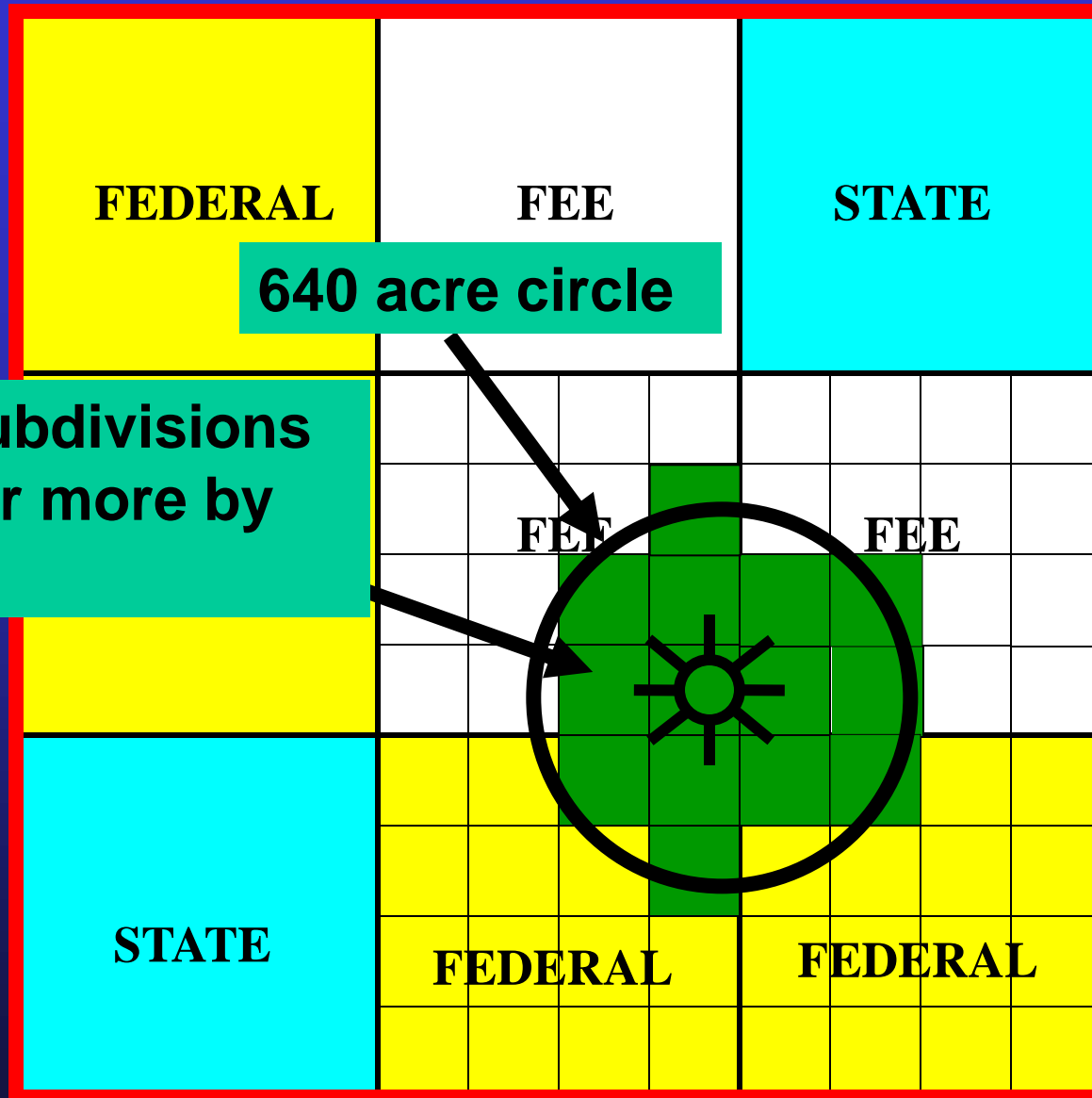
How do we define this in order to come up with the PA boundary?

- ◆ **Circle-tangent method unless additional info available**
  - ◆ **Simple**
  - ◆ **Equitable**
  - ◆ **Well accepted by industry**





# Boxelder Creek Unit



**FEDERAL**

**FEE**

**STATE**

**640 acre circle**

**40 acre subdivisions  
cut 50% or more by  
the circle**

**FEE**

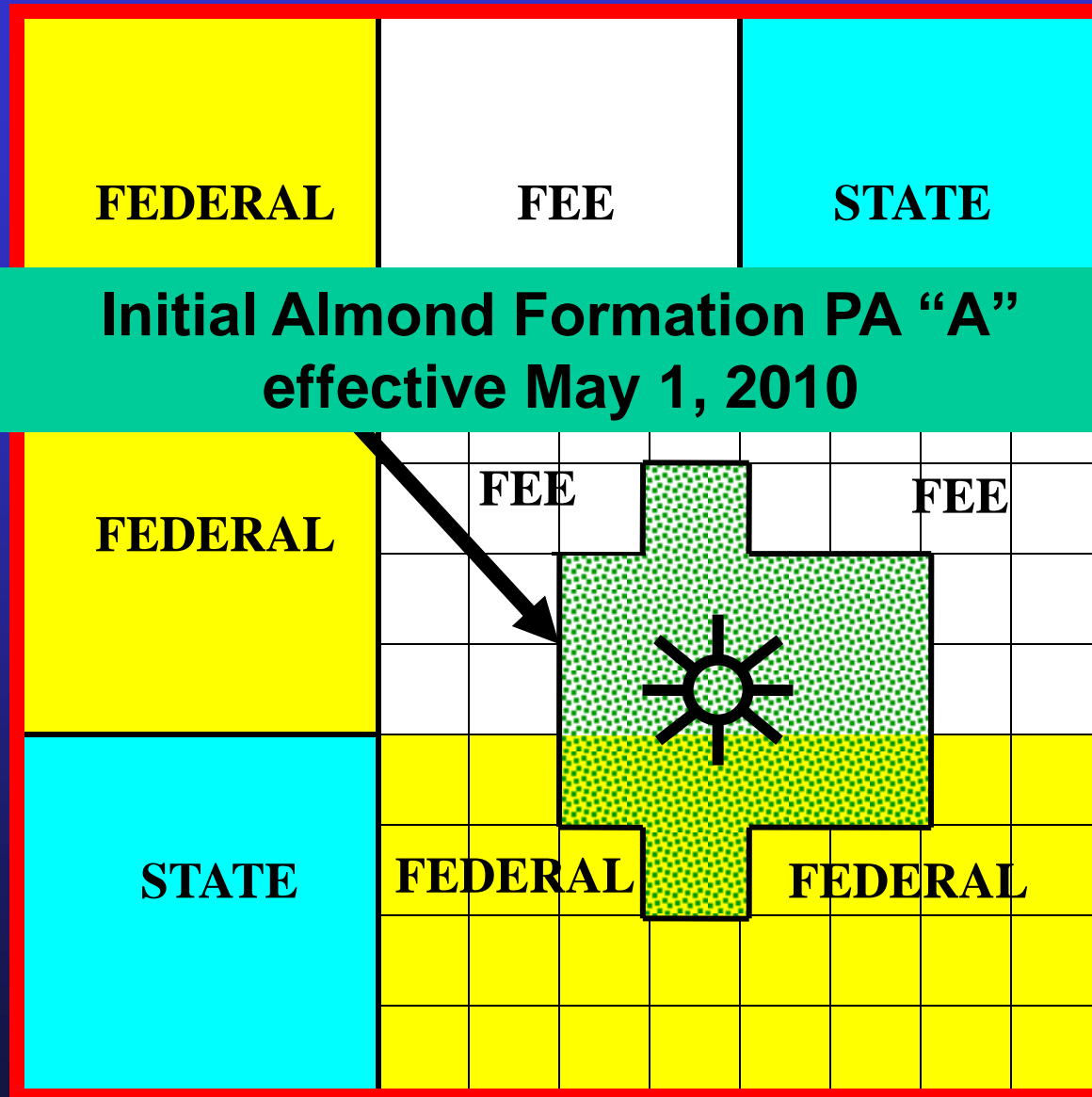
**FEE**

**STATE**

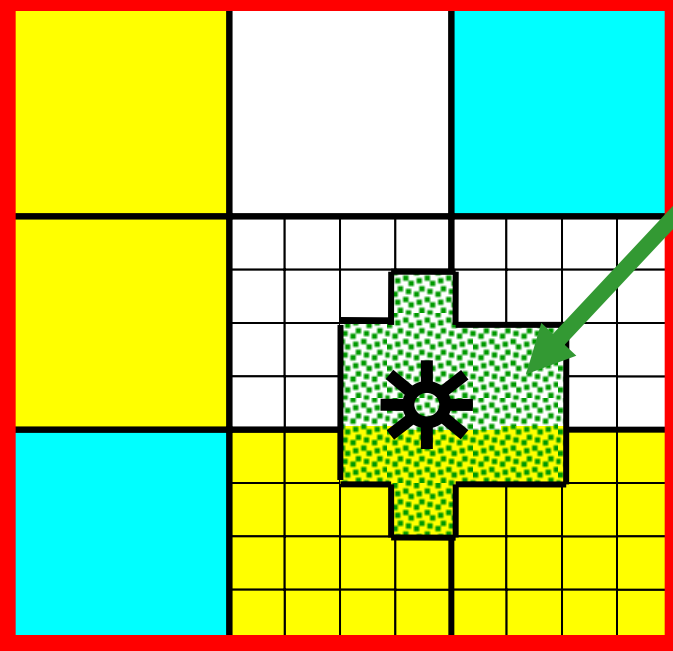
**FEDERAL**

**FEDERAL**

# Boxelder Creek Unit



## Initial Almond Formation PA "A"



560 Total Acres:

360 Fee acres - 64.3%

200 Federal acres - 35.7%

100.0%

## Production Allocation EXAMPLE:

If PA well No. 1 produces 10,000 mcf gas during May, 2010, then

64.3% of gas, or 6,430 mcf attributed to Fee lease(s), and  
35.7% of gas, or 3,570 mcf attributed to the Federal lease(s)

Federal royalty owed = 12 1/2% of gas attributed to the Federal acreage = 12 1/2% \* 3,570 mcf = 446 mcf

# Exploratory Unit Agreement

## Plan of Development Phase

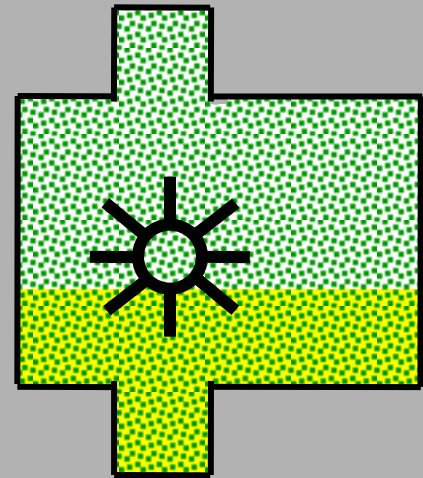


# Boxelder Creek Unit

## Plan of Development Phase

- **Unit operator has 5 yrs from effective date of initial PA to develop area outside existing PA**

## Plan of Development Area

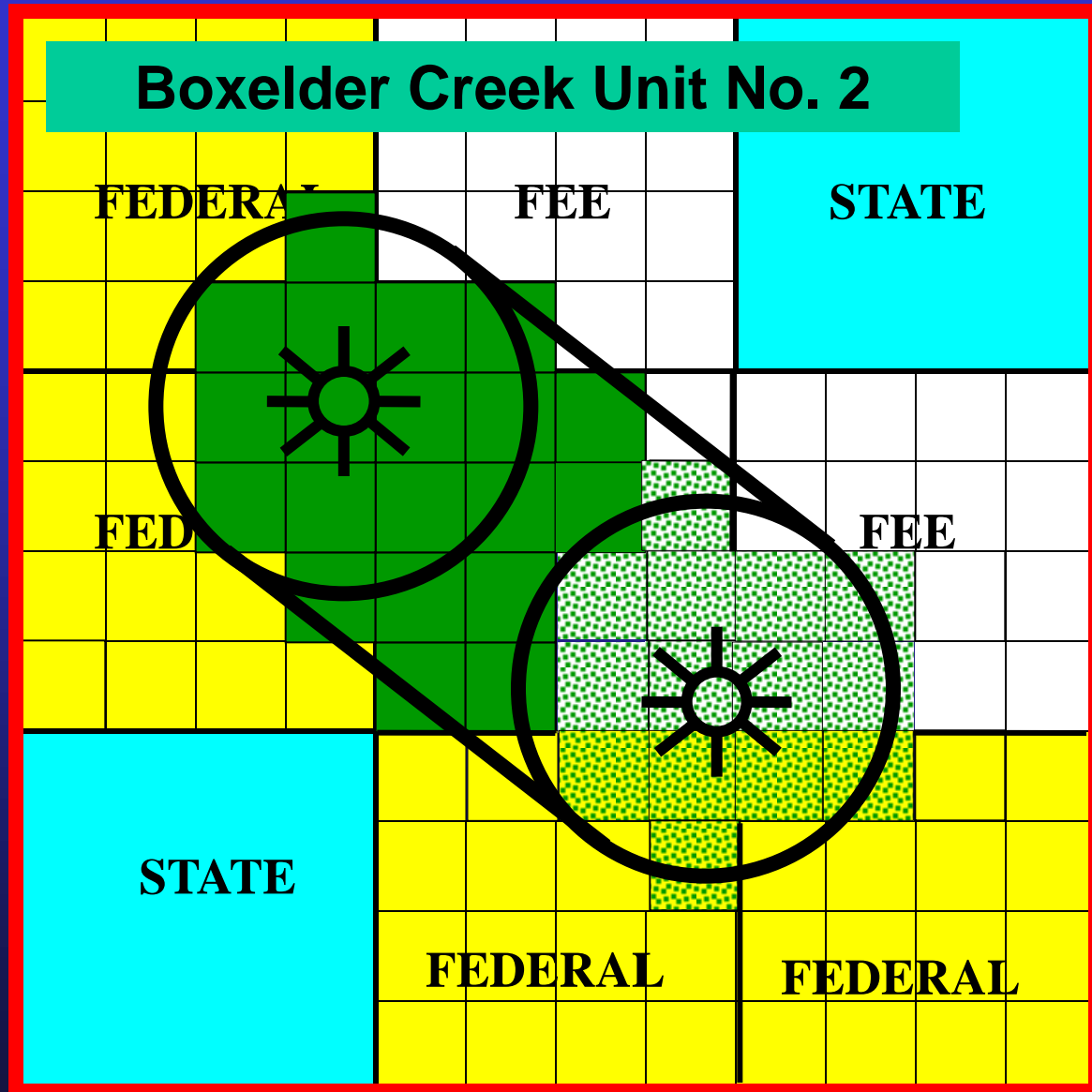


# Boxelder Creek Unit

## Plan Of Development Phase

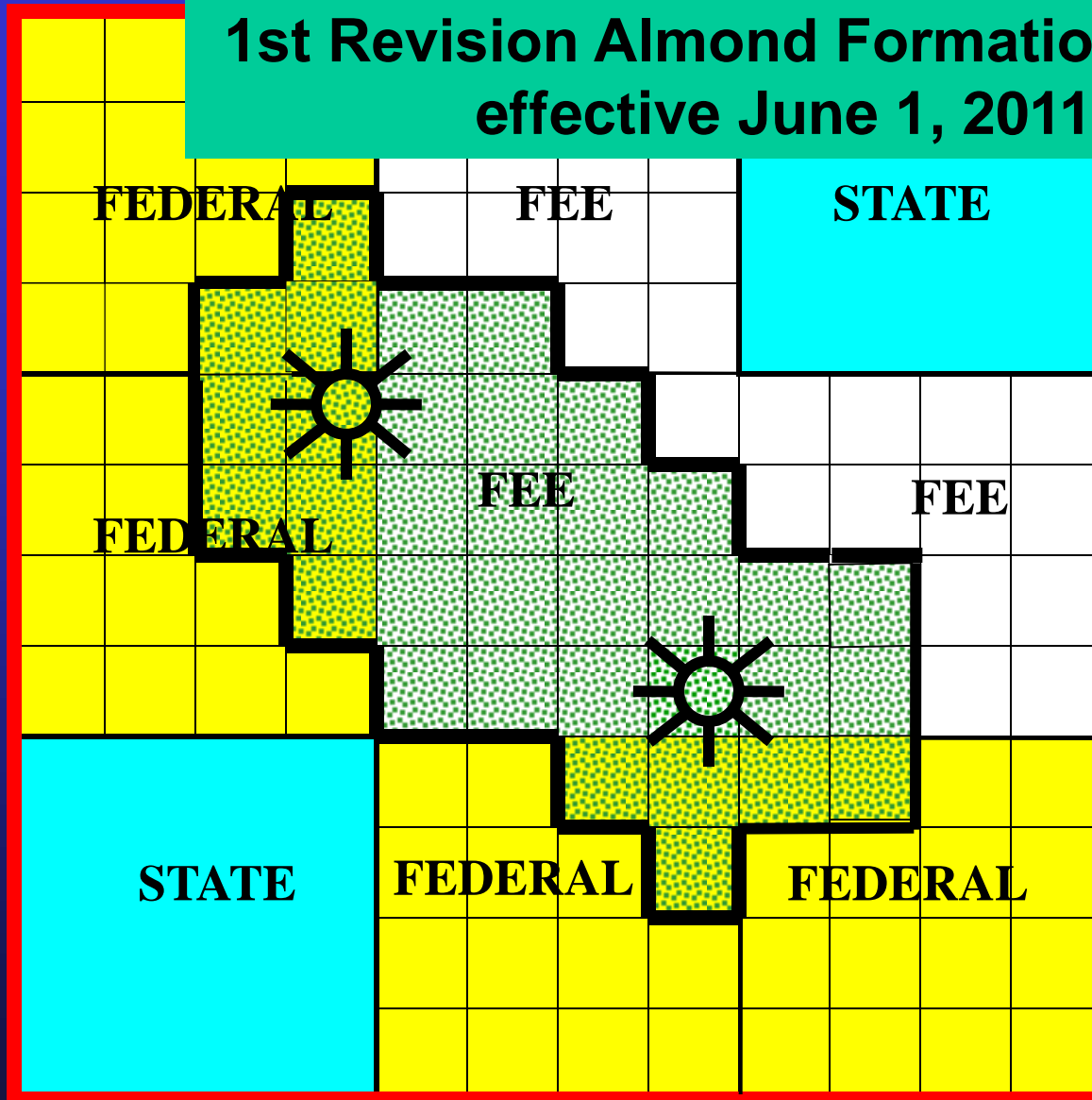
### Year No. 1

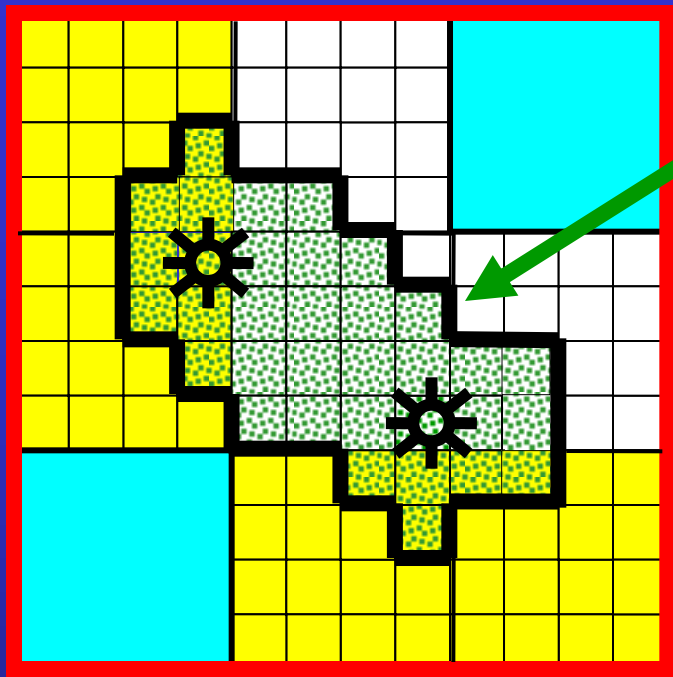
- Well #2 drilled
- Positive PWD
- PA revised



# Boxelder Creek Unit

1st Revision Almond Formation PA "A"  
effective June 1, 2011





**1st Revision Almond Formation PA "A"**

**1,400 Total Acres:**  
 880 Fee acres - 62.9%  
 520 Federal acres - 37.1%  
 100.0%

**Production Allocation EXAMPLE:**

**If PA well No. 1 & 2 together produce 30,000 mcf gas during June, 2011, then:**

**62.9% of gas, or 18,870 mcf attributed to Fee lease(s), and  
 37.1% of gas, or 11,130 mcf attributed to the Fed. lease(s)**

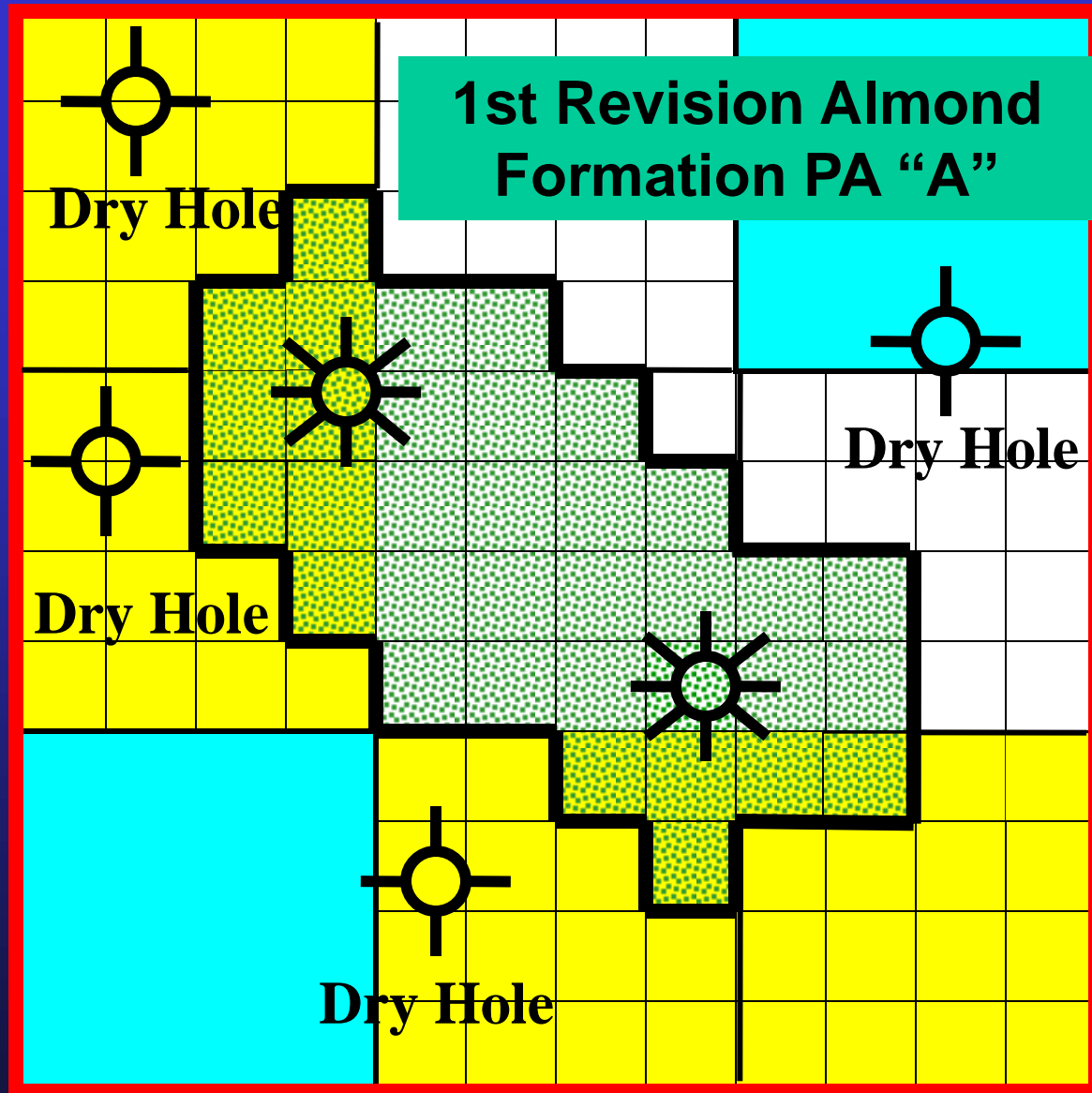
**Federal royalty owed = 12 1/2% of gas attributed to the  
 Federal acreage = 12 1/2% \* 11,130 mcf = 1,391 mcf**



# Boxelder Creek Unit

Plan of  
Development  
Phase

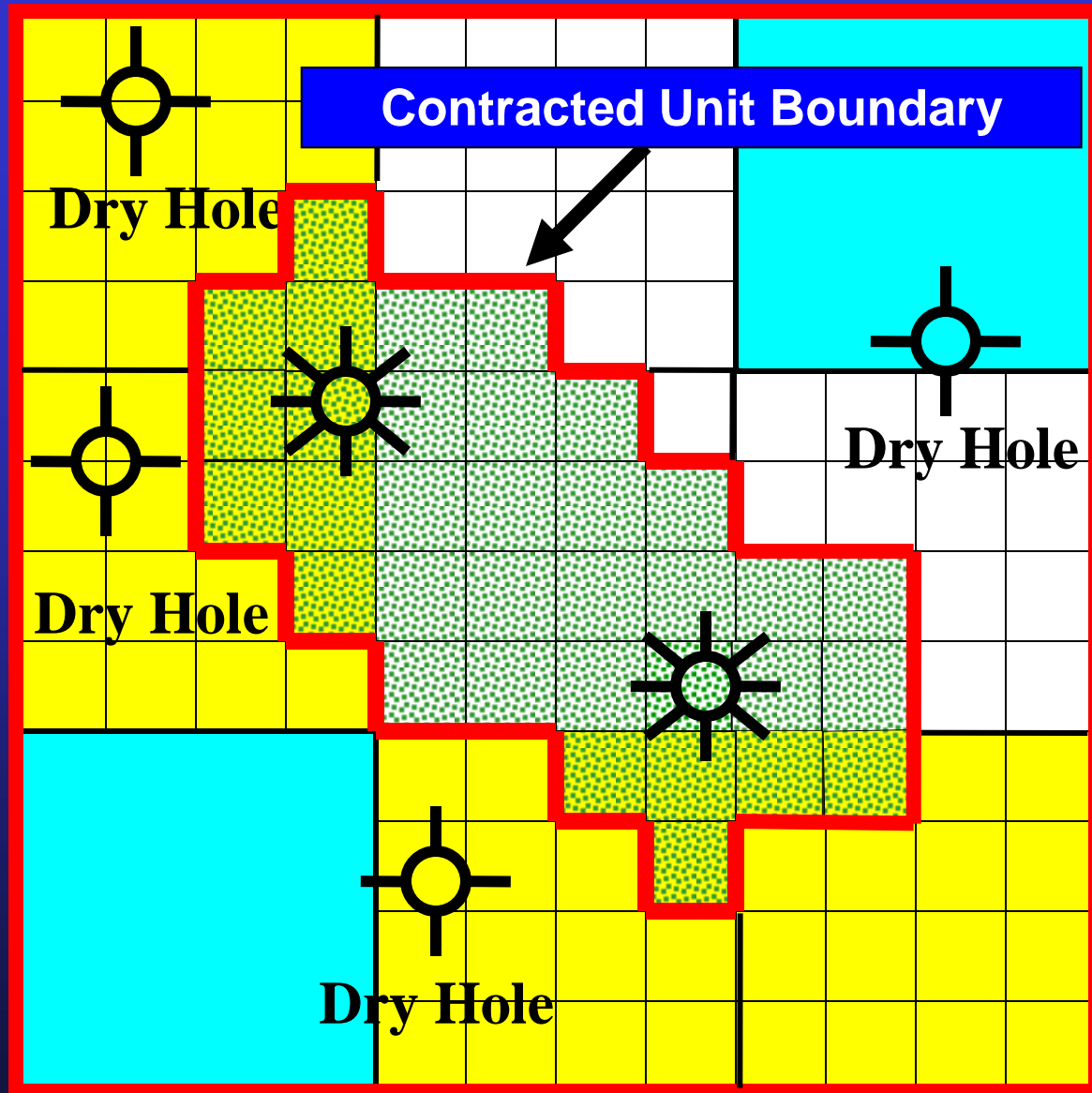
Years 2, 3, 4 and 5  
- 4 dry holes



# Boxelder Creek Unit

May 1, 2005

- Unit boundary contracts to PA boundary (5 yrs after effective date of initial PA)
- Unit continues in effect until last well in PA is plugged



# Summary

- **Exploratory Unit Agreements (Conventional Wells)**
  - 1. Rule of Capture**
  - 2. Correlative Rights Doctrine**
  - 3. Benefits of Unit Agreements**
  - 4. Unit Names**
  - 5. Approval Process**
    - a. Designation**
    - b. Final Approval**

# Summary

(cont'd)

- **Exploratory Unit Agreements (cont'd)**
  - 1. Forming an Exploratory Unit**
  - 2. RMG Policy**
  - 3. Drilling to Discovery**
    - a. Dry Hole**
    - b. Non-Paying Unit Well**
    - c. Paying Unit Well**
  - 4. Participating Areas**
    - a. Initial**
    - b. Revisions**

# Horizontal Wells in Exploratory Units

OSTEBEE,  
Photo

A black and white photograph of an oil field. The foreground shows a dirt road or path. In the middle ground, there is a small, simple wooden building with a gabled roof. Behind the building and extending into the background, there are numerous tall, lattice-structured derricks or oil rigs. The sky is a uniform, light gray, suggesting an overcast day. The overall scene depicts a busy oil extraction site.

# Introduction

- **Exploratory Unit Agreements (Continuous Accumulations/Horizontal Wells)**
  - 1. RMG Policy**
  - 2. Unit Agreement Language Modifications**
  - 3. Initial Participating Areas**
  - 4. Non-Paying Unit Wells**

- Conventional Plays – Horizontal wells are drilled to maximize contact with the productive horizon or fracture system or to follow geologic structures (e.g., anticlinal axis).
- Unconventional Plays – Currently, many horizontal wells are drilled in unconventional plays known as “Resource Plays”...

- *“Resource play” is an industry term, and the definition varies from company to company, professional to professional.*
- *The U.S. Geological Survey uses the term “Continuous Accumulation.”*
  - *Specific geologic and production characteristics [see Schmoker (2003)]*
  - *The RMG has likewise adopted the term “continuous accumulation”*
  - *Includes coalbed natural gas as well as fractured shale plays*



# RMG Policy

1. Exploratory units for continuous accumulation (resource) plays will not be larger than 25,000 acres
  - Assuming development with horizontal wells, all whole sections will be included in the proposed unit area which would allow an exploratory unit to be greater than 25,000 acres, but less than 25,640 acres. A typical section is 640 acres.
  - Coalbed natural gas units will be limited to 25,000 acres.

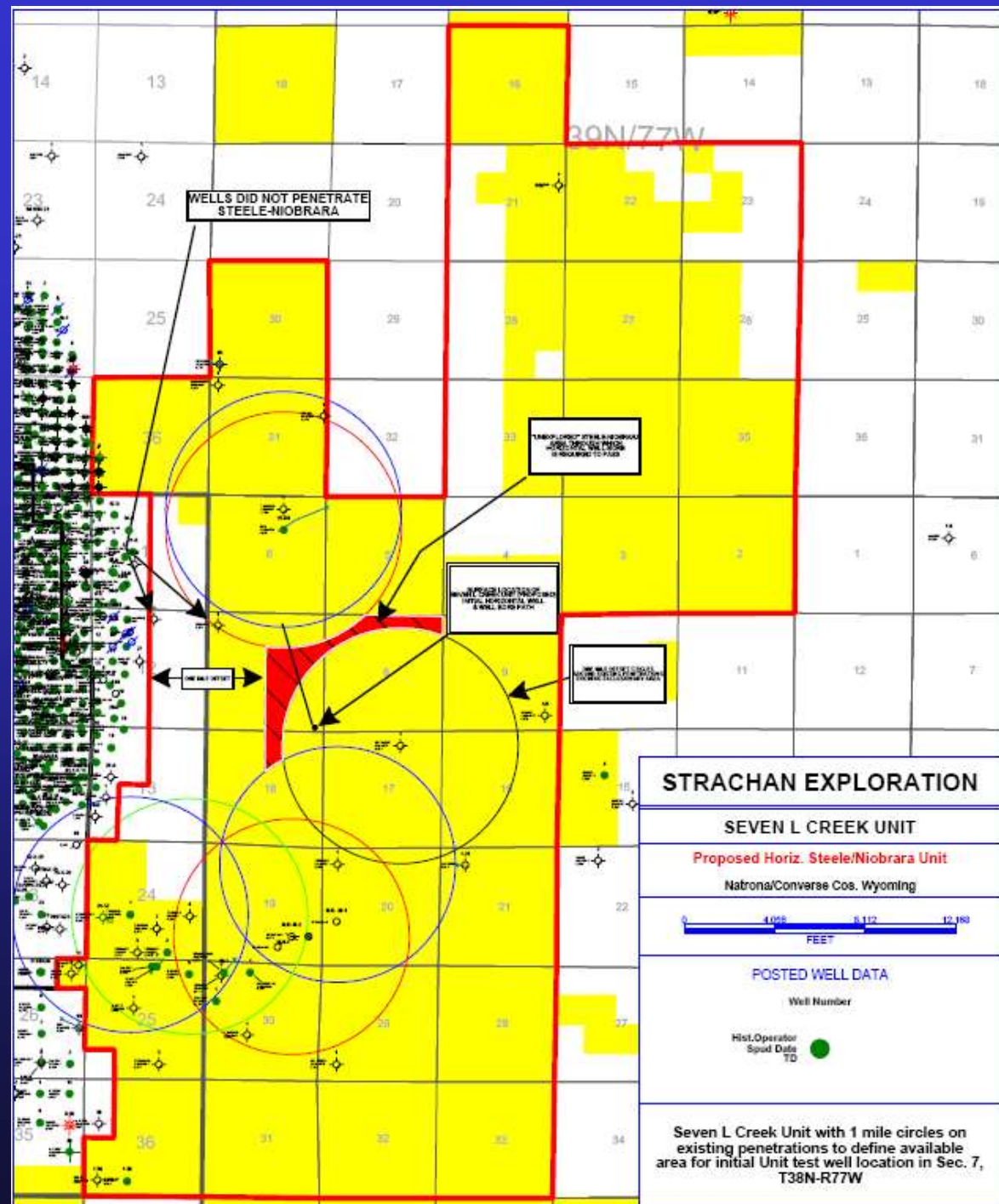
2. Unit boundaries may be based on acreage position if the proposed wells will test formations that fit the definition of a continuous accumulation play.
  - True also for coalbed natural gas continuous accumulation plays

3. The initial unit obligation well for a horizontal well in an exploratory unit shall be located based on the following:
  - A. At least one mile away from any penetration(s) of the formation in which the initial unit obligation well is proposed to test; however, if any portion of the horizontal wellbore within the target formation lies a mile away, then the distance requirement for the initial unit obligation well will have been met.

B. At least one mile away from the unit boundary; however, if any portion of the horizontal wellbore within the target formation lies a mile away, then the distance requirement for the initial unit obligation well will have been met.

❖ Subsequent unit wells do not have a similar requirement.

Sometimes the distance requirement allows for a very small window, but remember that only *a portion* of the wellbore in the target formation needs to meet the requirement.



4. The length of the horizontal lateral within the target formation for the initial unit obligation well will be at least 1,500 feet.
  
5. The unit will not be validated if the unit operator chooses to complete anywhere other than the target formation unless a horizontal test of the target formation has been completed.

# Section 9 Language

## Vertical Obligation Well

- Pursuant to unit plan regulations 43 CFR 3180, the land requested, as outlined on your plat marked "Exhibit 'A', Northwest Poison Spider Unit", is hereby designated as a logical unit area. The unit agreement submitted for the area designation should provide for the drilling of one (1) test well (Initial Drilling Obligation). The test well, located in the SW/4 NW/4, Section 32, T. 34 N., R. 84 W., is to be drilled to a depth of 16,000 feet or 200 feet below the top of the Carlile Formation. The top of the Carlile Formation occurs at 14,810 feet measured depth as shown on the electric and mud logs in the Davis Oil Company Whitting #1 well located in the SW/4 SE/4, Section 2, T. 33 N., R. 84 W. The obligation well is to be drilled at the location specified or another location approved by the authorized officer.

# Section 9 Language

## Horizontal Obligation Well

- Pursuant to unit plan regulations 43 CFR 3180, the land requested, as outlined on your plat marked "Exhibit 'A', West Orpha (Deep) Unit", is hereby designated as a logical unit area. The unit agreement submitted for the area designation should provide for the drilling of one (1) test well (Initial Drilling Obligation). The test well, with a surface location in the NE/4 NW/4, Section 14, T. 33 N., R. 73 W., is to include a horizontal lateral drilled in the Middle Bench of the Niobrara Shale of not less than 1,500 feet in length. The top of the Middle Bench of the Niobrara Shale occurs at 10,590 feet measured depth as shown on the resistivity log in the Oil Field Salvage #1 Catherine well located in the SE/4 NW/4, Section 21, T. 33 N., R. 72 W. The obligation well is to be drilled at the location specified or another location approved by the authorized officer.





# Participation After Discovery

## Participating Area (PA)

### *Definition:*

- ✓ The area that is “reasonably proven productive” by a well that produces in “unit paying” quantities.
- ✓ The area that shares in:
  - ✓ Financial benefits of PA production, and
  - ✓ Costs of the PA well(s)

# Participation After Discovery

**“Reasonably proven productive”**

How do we define this in order to come up with the PA boundary?

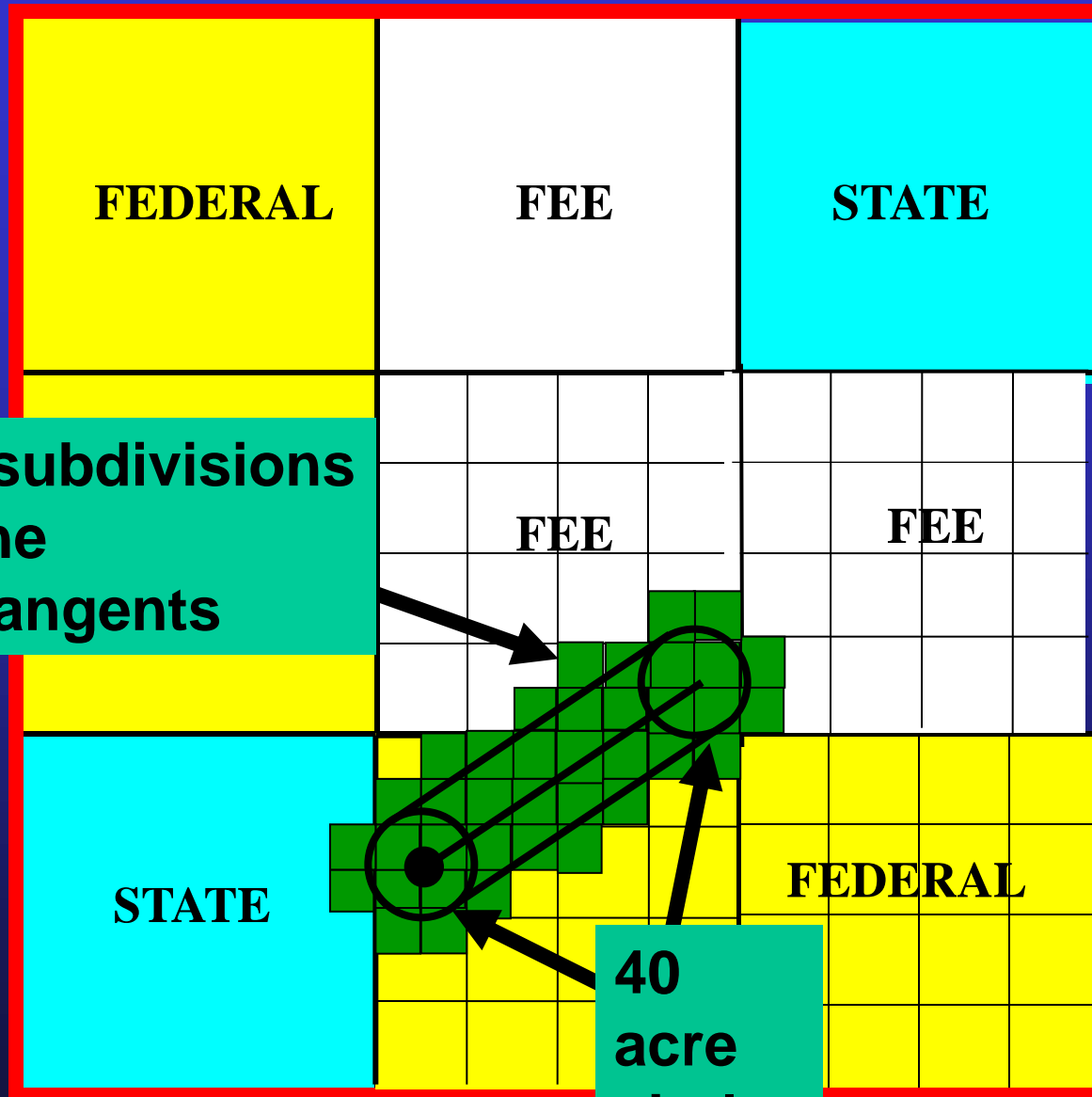
- ◆ **Circle-tangent method unless additional info available**
  - ◆ **Simple**
  - ◆ **Equitable**
  - ◆ **Well accepted by industry**



# Participating Area Considerations

- If the initial unit obligation well is determined to be a unit paying well (i.e., the well will pay out its drilling and completion costs), then an initial participating area (PA) will be formed. The participating area for the horizontal well will be established by constructing 40-acre circles around the end of the lateral and around the entry point of the lateral into the participating area formation and by constructing tangents between them. All 10-acre subdivisions cut by the circles/tangents will be included in the participating area.

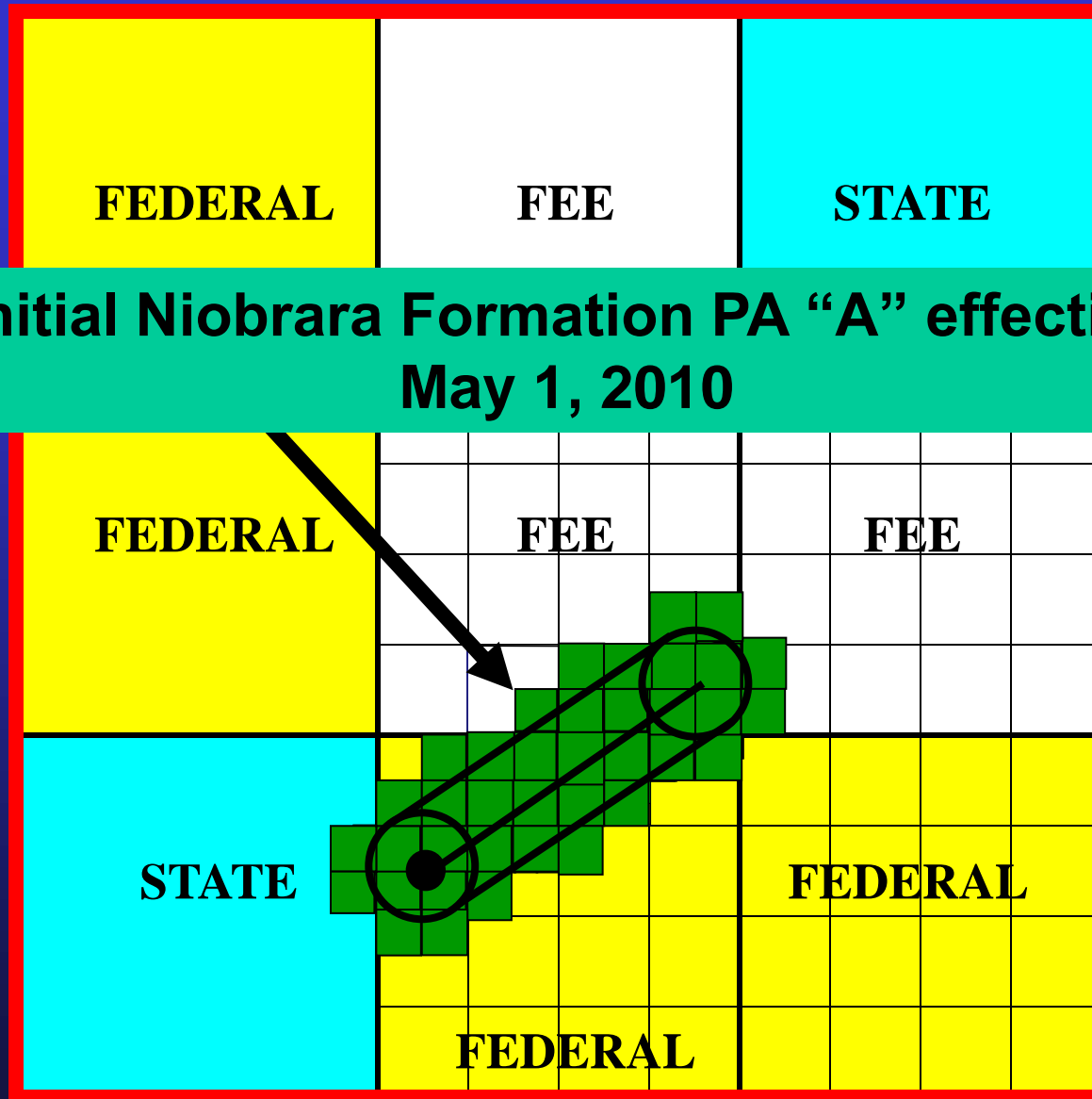
# Boxelder Creek Unit



10 acre subdivisions  
cut by the  
circles/tangents

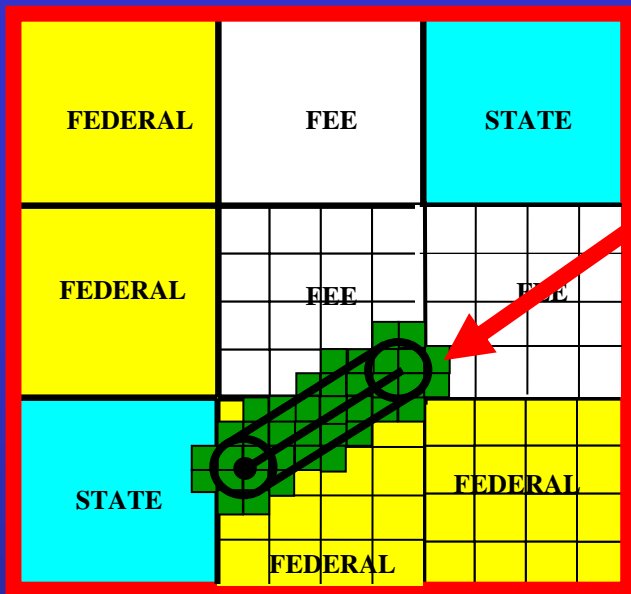
40  
acre  
circles

# Boxelder Creek Unit



Initial Niobrara Formation PA "A" effective  
May 1, 2010

# Initial Niobrara Formation PA "A"



**380 Total Acres:**

130 Fee acres -	34.2%
20 State acres -	5.3%
230 Federal acres -	<u>60.5%</u>
	<b>100.0%</b>

## Production Allocation EXAMPLE:

If PA well No. 1 produces 10,000 bbls oil during May, 2010, then

34.2% of oil, or 3,420 bbls attributed to Fee lease(s),

5.3% of oil, or 530 bbls attributed to the State Lease, and

60.5% of oil, or 6,050 bbls attributed to the Federal lease(s)

Federal royalty owed = 12 1/2% of oil attributed to the Federal acreage = 12 1/2% \* 6,050 bbls = 756 bbls

EXHIBIT "A"  
 INITIAL NIOBRARA FORMATION PARTICIPATING AREA "A"  
 SPILLMAN DRAW (DEEP) UNIT AREA  
 CONVERSE COUNTY, WYOMING  
 EFFECTIVE JANUARY 30, 2010

**Legend**

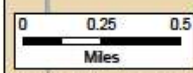
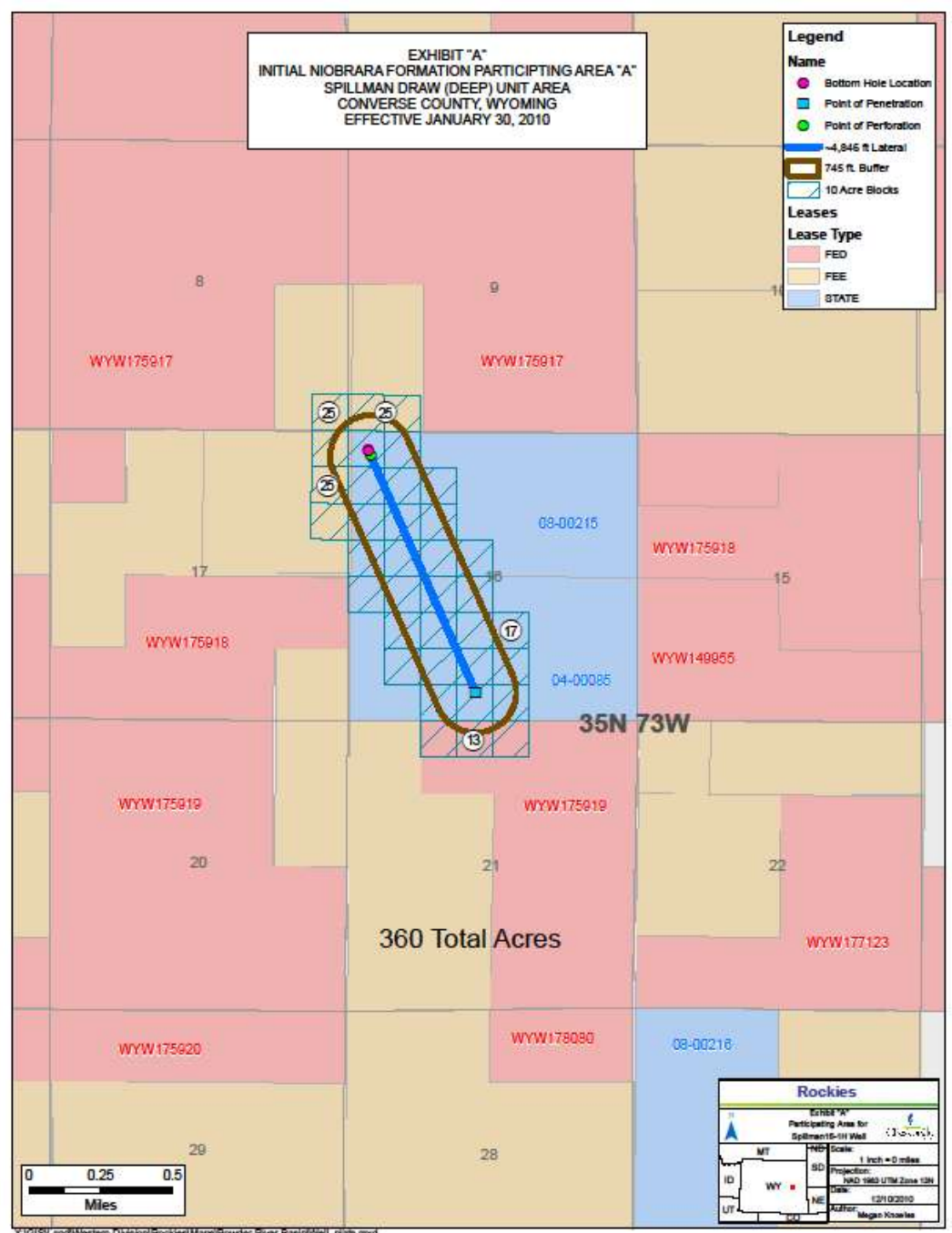
**Name**

- Bottom Hole Location
- Point of Penetration
- Point of Perforation
- ~4,846 ft Lateral
- 745 ft. Buffer
- 10 Acre Blocks

**Leases**

**Lease Type**

- FED
- FEE
- STATE



**Rockies**

EXHIBIT "A"  
 Participating Area for  
 Spillman-III Well

MT SD NE  
 ID WY NE  
 UT

Scale: 1 inch = 0 miles  
 Projection: NAD 1983 UTM Zone 13N  
 Date: 12/10/2010  
 Author: Megan Knowles

**EXHIBIT "B"**  
**SCHEDULE OF LANDS AND TRACT PARTICIPATION**  
**INITIAL NIOBRARA FORMATION PARTICIPATING AREA "A"**  
**SPILLMAN DRAW (DEEP) UNIT AREA**  
**CONVERSE COUNTY, WYOMING**  
**EFFECTIVE JANUARY 30, 2010**

Tr. #	Lease #	Description	Acres	Participation	Working Interest	Percent
13	WYW175919 Federal	<b>T35N-R73W, 6th P.M.</b> Section 21: N2NENW, NWNWNE	30.00	10.0000%	Chesapeake Exploration, LLC RKI/Khody Land and Minerals	50.0000% 50.0000% 100.0000%
17	State	<b>T35N-R73W, 6th P.M.</b> Section 16: W2NW, SWNENW, NWSENW, S2SENW, N2N2SW, SENWSW, NESWSW, S2NESW, SESW, SWNWSE, W2SWSE	270.00	90.0000%	Chesapeake Exploration, LLC RKI/Khody Land and Minerals Larchmont Resources, LLC	47.5000% 50.0000% 2.5000% 100.0000%
25	Patented	<b>T35N-R73W, 6th P.M.</b> Section 8: SESESE Section 9: S2SWSW Section 17: E2NENE, NESENE	60.00	0.0000%	Chesapeake Exploration, LLC RKI/Khody Land and Minerals	50.0000% 50.0000% 100.0000%
<b>TOTALS</b>			<b>360.00</b>	<b>100.0000%</b>		
<b>TYPE OF LAND</b>		<b>COMMITTED ACRES</b>		<b>NON-COMMITTED ACRES</b>		<b>PERCENT</b>
FEDERAL		30.00		0.00		10.0000%
STATE		270.00		0.00		90.0000%
PATENTED		0.00		60.00		0.0000%
<b>TOTAL</b>		<b>300.00</b>		<b>60.00</b>		<b>100.0000%</b>



**EXHIBIT "B"**  
**SCHEDULE OF LANDS AND TRACT PARTICIPATION**  
**AMENDED INITIAL NIOBRARA FORMATION PARTICIPATING AREA "A"**  
**SPILLMAN DRAW (DEEP) UNIT AREA**  
**CONVERSE COUNTY, WYOMING**  
**EFFECTIVE MARCH 2, 2010**

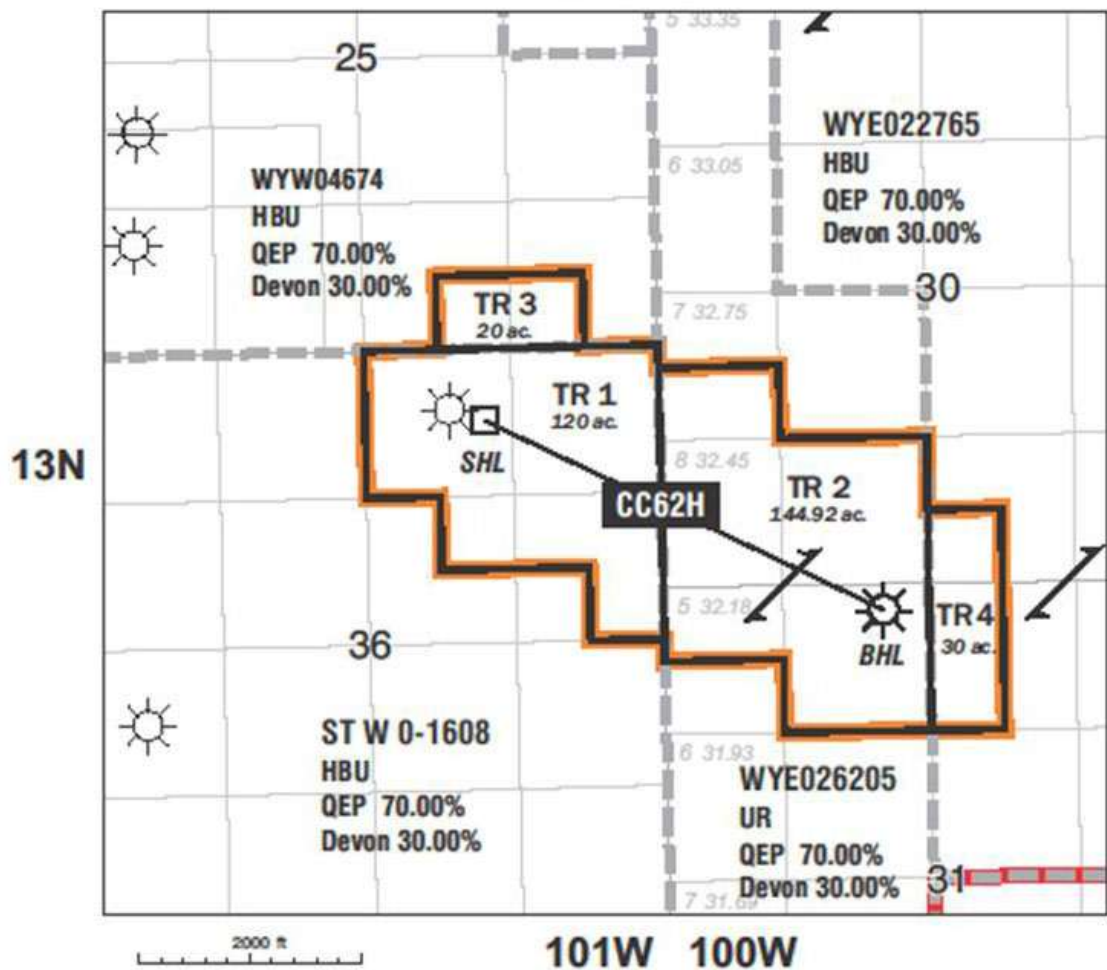
Tr. #	Lease #	Description	Acres	Participation	Working Interest	Percent
13	WYW175919 Federal	<b>T35N-R73W, 6th P.M.</b> Section 21: N2NENW, NWNWNE	30.00	8.3333%	Chesapeake Exploration, LLC RKI/Khody Land and Minerals	50.0000% 50.0000% 100.0000%
17	State	<b>T35N-R73W, 6th P.M.</b> Section 16: W2NW, SWNENW, NWSNW, S2SESW, N2N2SW, SENWSW, NESWSW, S2NESW, SESW, SWNWSE, W2SWSE	270.00	75.0000%	Chesapeake Exploration, LLC RKI/Khody Land and Minerals Larchmont Resources, LLC	47.5000% 50.0000% 2.5000% 100.0000%
25	Patented	<b>T35N-R73W, 6th P.M.</b> Section 8: SESESE <b>Section 9: S2SWSW</b> Section 17: E2NENE, NESENE	60.00	16.6667%	Chesapeake Exploration, LLC RKI/Khody Land and Minerals	50.0000% 50.0000% 100.0000%
<b>TOTALS</b>			360.00	100.0000%		

TYPE OF LAND	COMMITTED ACRES	NON-COMMITTED ACRES	PERCENT
FEDERAL	30.00	0.00	8.3333%
STATE	270.00	0.00	75.0000%
PATENTED	60.00	0.00	16.6667%
<b>TOTAL</b>	<b>360.00</b>	<b>0.00</b>	<b>100.0000%</b>

- If the initial unit obligation well is determined to be a nonpaying unit well, then a drilling and spacing unit may need to be formed if the horizontal lateral intersected Federal and nonfederal mineral interests. In this case, the proposed drilling and spacing unit may be proposed using the same method as would be used in establishing an initial participating area. The WOGCC would approve the drilling and spacing unit and then the Reservoir Management Group would approve a communization agreement to protect both the Federal and nonfederal mineral interests.

- Three examples of drilling and spacing units that were formed where the unit well was determined to be a nonpaying unit well are in the Breckenridge (Shallow) Unit, the Wild West Unit and in the Canyon Creek Dome Unit.
- Communitization agreements will be approved for both drilling and spacing units.

# EXHIBIT "A"



## COMMUNITIZATION AGREEMENT CANYON CREEK No. 62H WELL

SHL: 643' FNL, 1574' FEL  
Section 36, T13N-R101W  
BHL: 234' FNL, 1975' FWL  
Section 31, T13N-R100W

Canyon Creek Dome Unit  
Sweetwater County, Wyoming

August 25, 2010



TOWNSHIP 13 NORTH, RANGE 101 WEST, 6<sup>th</sup> P.M.  
Section 25: SE/4SW/4SE/4, SW/4SE/4SE/4  
Section 36: N/2NE/4, NE/4SW/4NE/4, N/2SE/4NE/4, SE/4SE/4NE/4  
TOWNSHIP 13 NORTH, RANGE 100 WEST, 6<sup>th</sup> P.M.  
Section 30: S/2 LOT 7, LOT 8, SE/4SW/4, SW/4SW/4SE/4  
Section 31: N/2 LOT 5, N/2 4NW/4, W/2NW/4NE/4

# Royalty Payments

## Horizontal Wells

If the surface location of the horizontal well is located on Federal minerals and the horizontal wellbore intersects Federal, fee or state minerals, then 100 percent of the royalty from the horizontal well is paid to the Federal government until such time as a participating area or communitization agreement is approved by the authorized officer.

# Royalty Payments

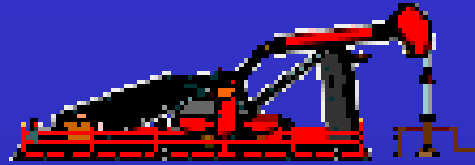
## Horizontal Wells

If the surface location of the horizontal well is located on fee or state minerals and the horizontal wellbore intersects Federal minerals, then no royalty from the horizontal well is paid to the Federal government until such time as a participating area or communitization agreement is approved by the authorized officer.

# Summary

- **Exploratory Unit Agreements (Continuous Accumulations/Horizontal Wells)**
  - 1. RMG Policy**
  - 2. Unit Agreement Language Modifications**
  - 3. Initial Participating Areas**
  - 4. Non-Paying Unit Wells**

# Oil and Gas Tidbits



The deepest well drilled in Wyoming to date was drilled in the Madden Deep Unit between Casper and Shoshoni.

- Deepest well in the Rocky Mountain Region
- 25,764 ft. deep (4.9 miles)
- 1 ½ years to drill
- Cost \$30 million
- Was a dry hole



A black and white historical photograph showing a group of about ten men working in an industrial setting, likely a cementing outfit. They are dressed in heavy work clothes and caps. The scene is filled with equipment, including a large piece of machinery on the left, several wheelbarrows, and numerous sacks of cement scattered on the ground. The workers appear to be in the process of moving or organizing the sacks. The background shows a wooden structure, possibly part of a wellhead or a building. The overall atmosphere is one of busy, manual labor.

# Secondary Recovery Unit Agreements

*Perkins Cementing Outfit, running 750 sacks of cement back of 2971' of 10 1/2" seamless casing in 1 hour and 10 minutes. The largest cement job in the Salt Creek Field. November 1, 1930*



# Secondary Recovery Unit Agreements

How do these agreements differ from  
Exploratory Unit Agreements?

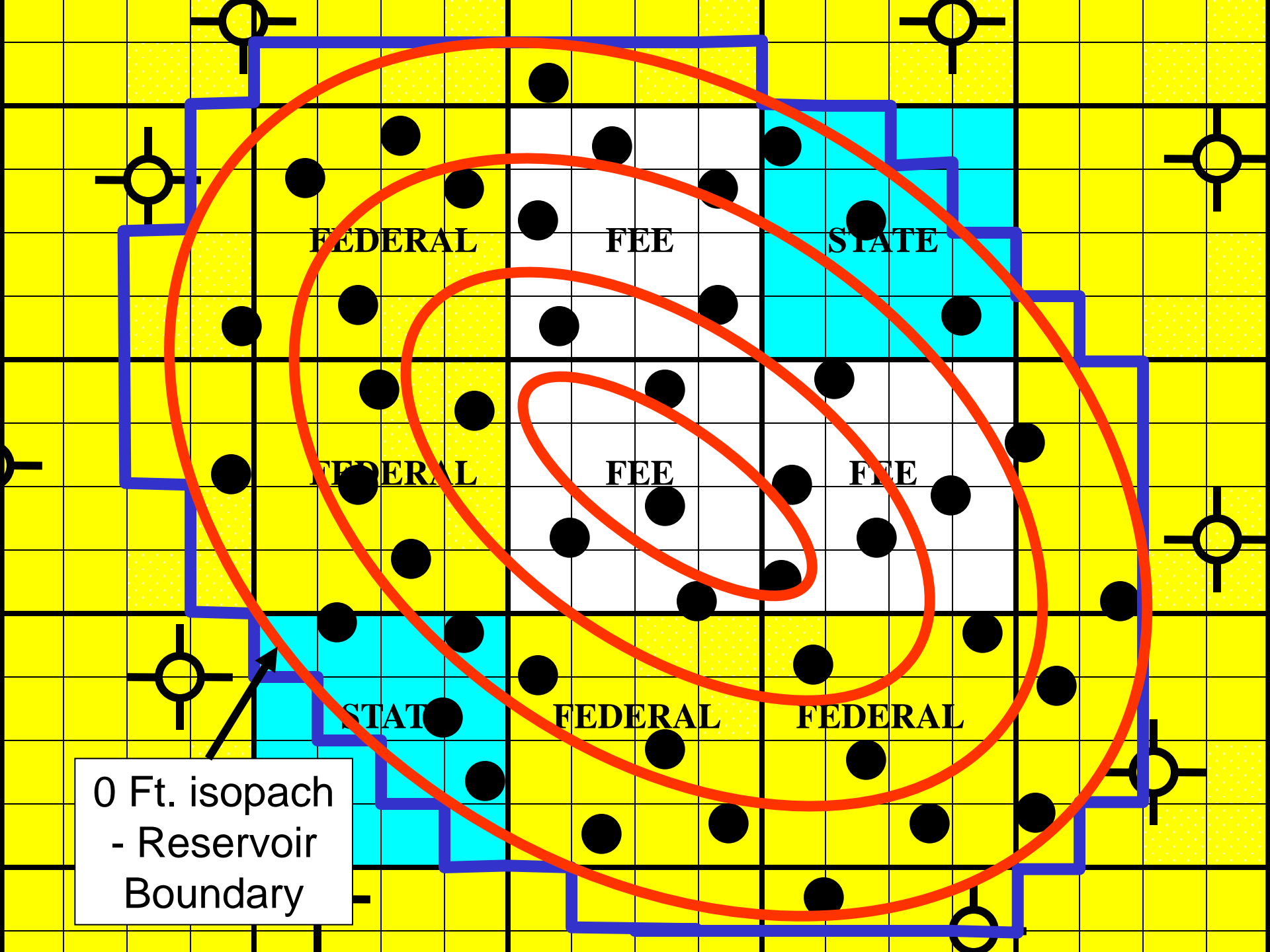
- ❖ Field has been geologically defined
- ❖ Formation specific
- ❖ Entire unit participates from effective date

A black and white photograph of an oil well rig, showing a tall, lattice-structured tower with a derrick at the top. The rig is situated in an industrial setting, possibly a refinery or oil field, with other structures visible in the background.

# Secondary Recovery Unit Agreements

How do these agreements differ from  
Exploratory Unit Agreements?

- ❖ Involves enhanced recovery method (e.g., waterflood)
- ❖ Participation based on formula
- ❖ Can force unitize by state statute



FEDERAL

FEE

STATE

FEDERAL

FEE

FEE

STATE

FEDERAL

FEDERAL

0 Ft. isopach  
- Reservoir  
Boundary



A black and white photograph of an oil rig structure, showing a tall lattice tower with a derrick at the top, set against a cloudy sky. The rig is the primary visual element on the left side of the slide.

# Secondary Recovery Unit Agreements

Tract Participation Formula Example:

Hydrocarbon pore volume	50%
Useable well bores	10%
Cumulative production	<u>40%</u>
	100%

# Oil Hauling Truck



A silhouette of a person climbing a ladder against a sunset background. The person is positioned on the left side of the ladder, reaching up towards the top. The ladder is leaning against a structure on the right. The background is a gradient of orange and yellow, suggesting a sunset or sunrise. The text 'Communitization Agreements' is overlaid in the center of the image.

# Communitization Agreements



# Introduction

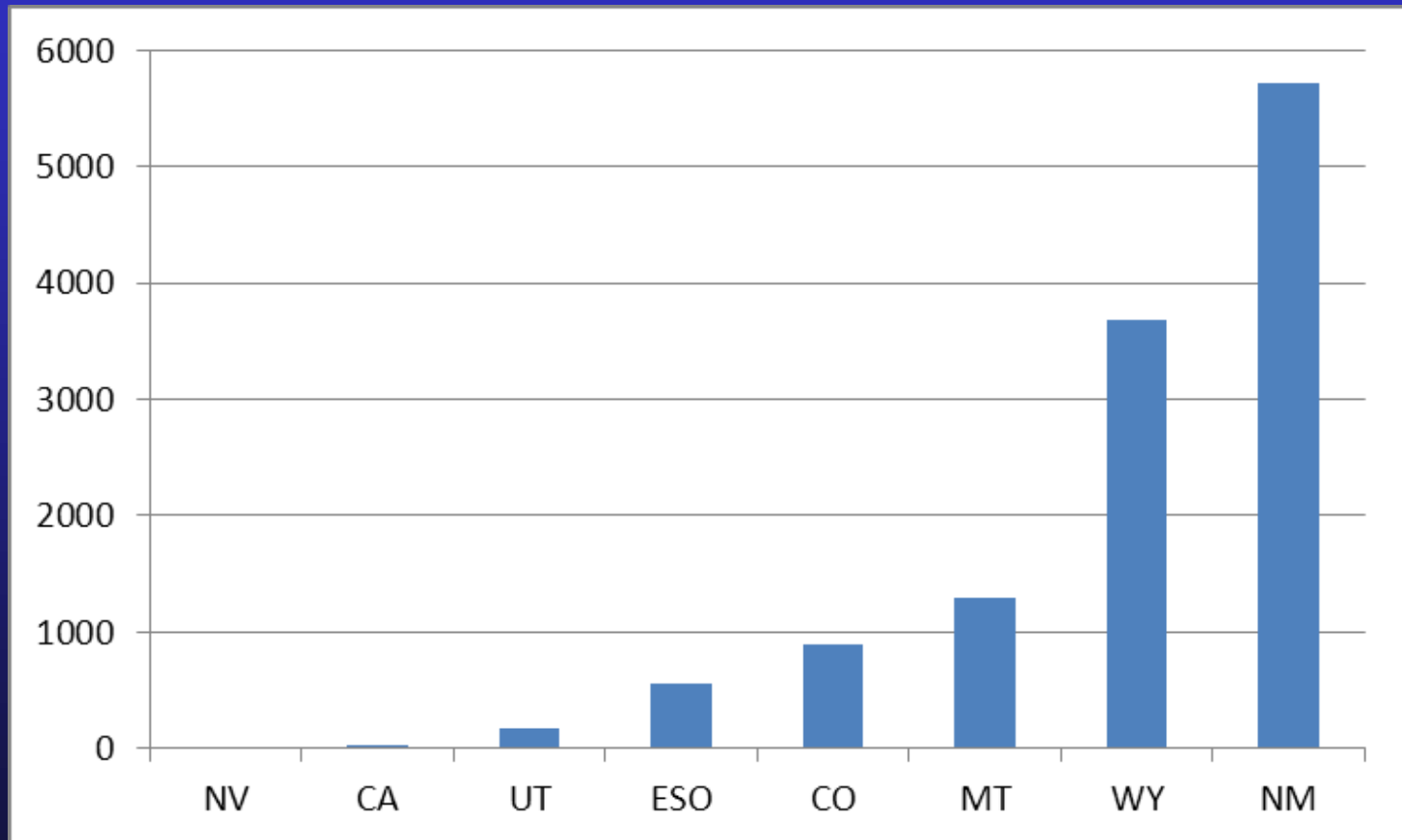
- **Communitization Agreements**
  1. **Oxford Ordinance**
  2. **Well Spacing/Spacing Units**
  3. **Key Concepts/Definition**
  4. **Examples**
    - a. **Simple**
    - b. **Complex**

# Introduction

(cont'd)

- **Communitization Agreements (cont'd)**
  1. **Recent Wyoming CA Adaptations**
    - a. **Multiple CA Wells**
    - b. **Co-operators**
    - c. **Lease-Line CAs**
  2. **Additional Wyoming CA Adaptions**
    - a. **Self-Certification**
    - b. **Unleased Federal Lands**

# Communitization Agreements (CAs) by State



# Communitization Agreements

## Where did the name come from?

1. system characterized by the collective ownership of property for the common advantage of all members.

**Communism**

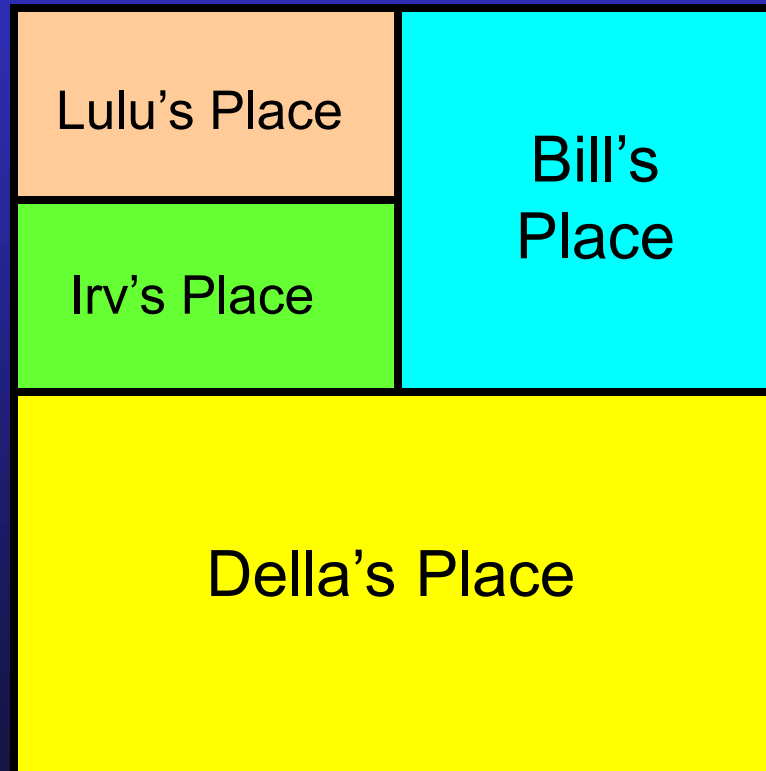
# Oxford Ordinance – 1927

Oxford, Kansas

- Whomever received the drilling permit would make royalty payments to all mineral owners within the city block based on a surface acreage formula.
- All mineral lessees had a right to their share of production if they paid the permit owner their proportionate share of drilling and operating costs.

# Oxford Ordinance – 1927

## City Block



# Oxford Ordinance – 1927

Della got the drilling permit for Della No. 1 Well

Oil production and drilling and operating costs are split as follows:

Lulu:  $\frac{1}{8}$  or 12.5%

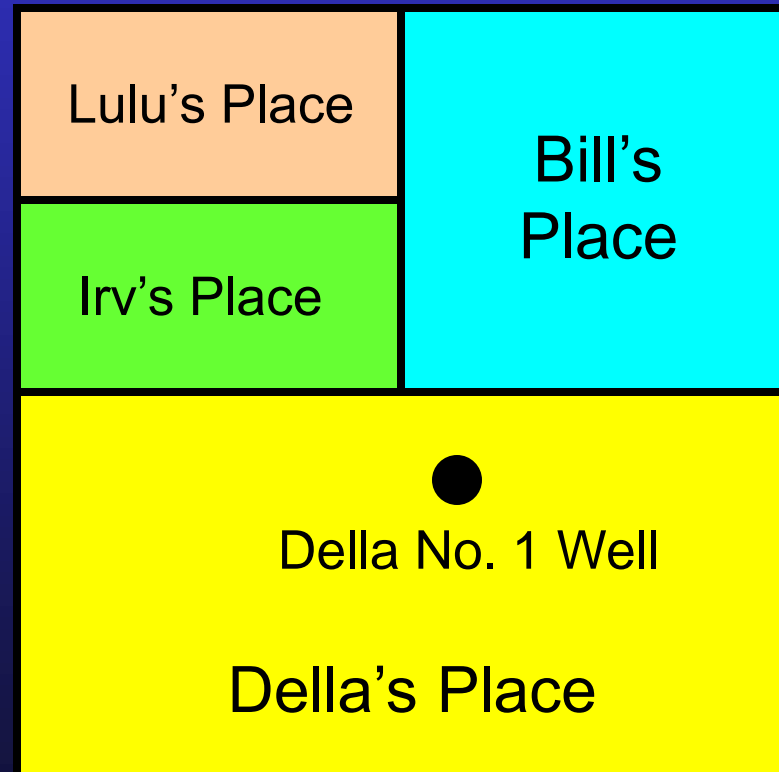
Irv:  $\frac{1}{8}$  or 12.5%

Bill:  $\frac{1}{4}$  or 25%

Della:  $\frac{1}{2}$  or 50%

100%

## City Block





# Well Spacing/Spacing Units

*Limits the number and location of wells in a field*

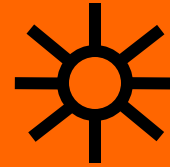
- Crucial tool of state oil and gas regulatory agencies and the BLM
- Prevents overdrilling and unnecessary depletion of reservoir pressure which were brought on by the Rule of Capture
- Provides a fair and uniform drilling pattern



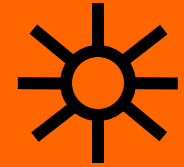
640 Acre Spacing: 1 well allowed per spacing unit  
Well located in center of NE quarter of each section



640 acre  
Spacing Unit



640 acre  
Spacing Unit



640 acre  
Spacing Unit



640 acre  
Spacing Unit



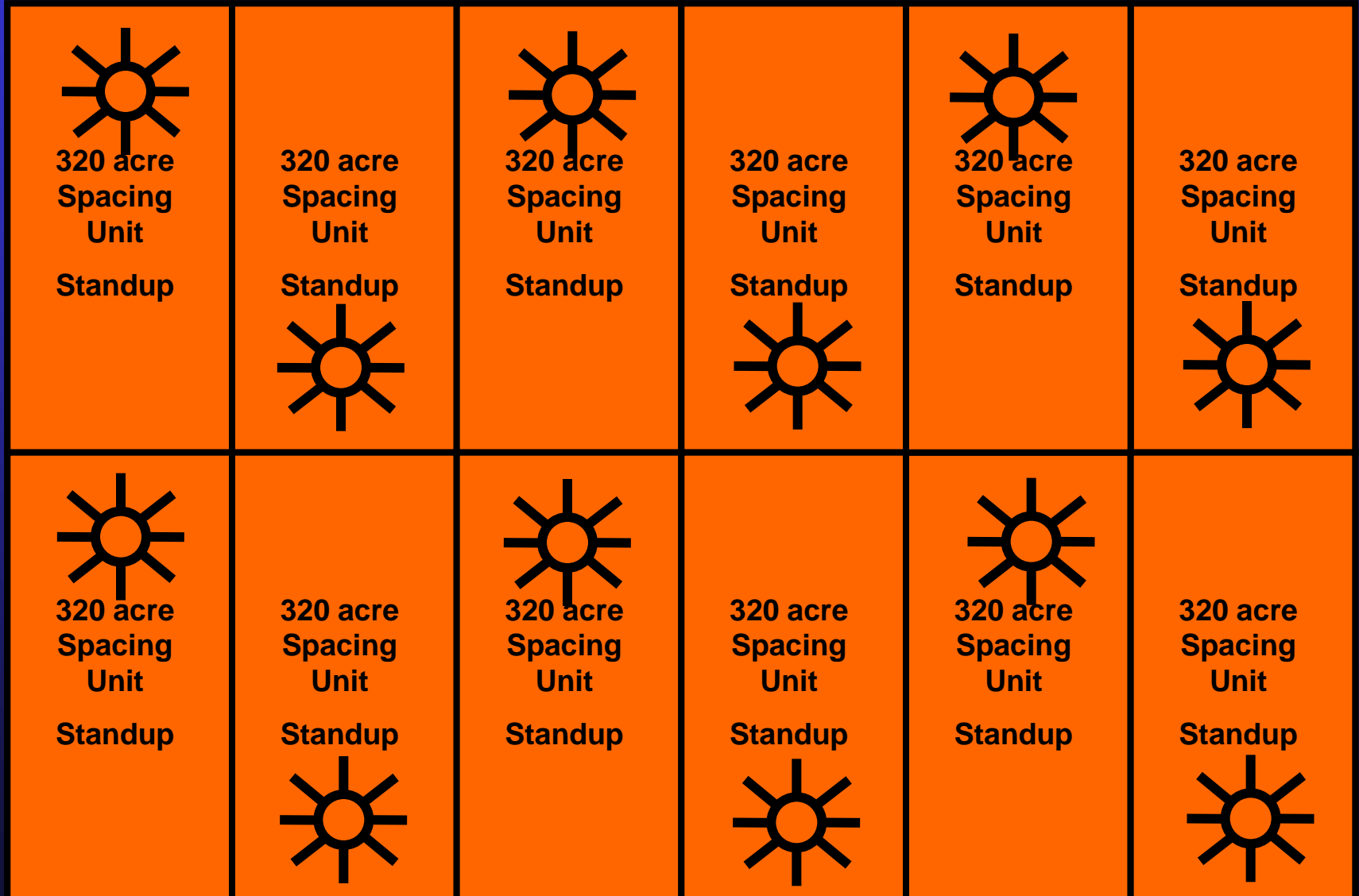
640 acre  
Spacing Unit



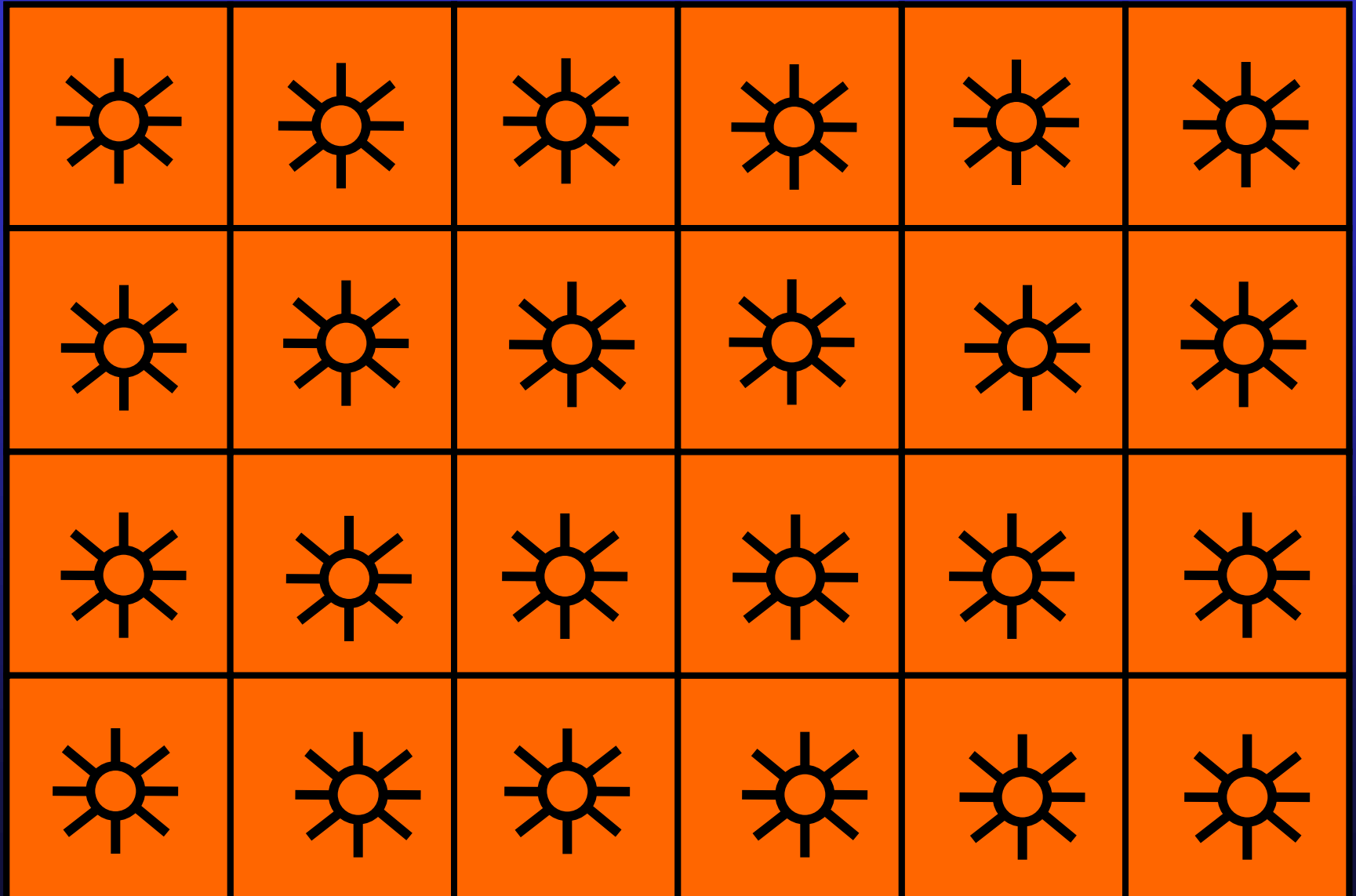
640 acre  
Spacing Unit

# 320 Acre Spacing – Standup:

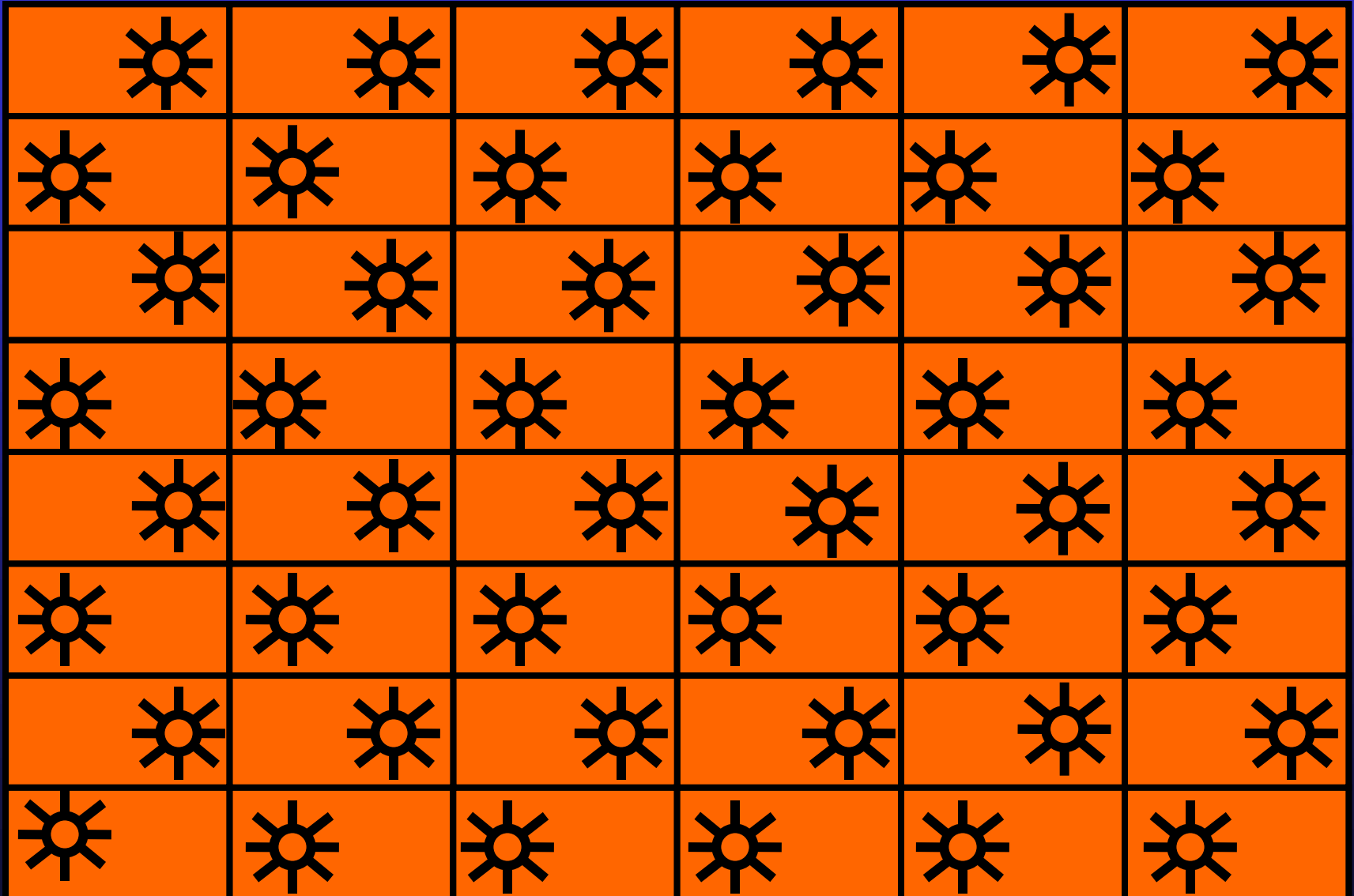
Wells in center of NW quarter and center of SE quarter



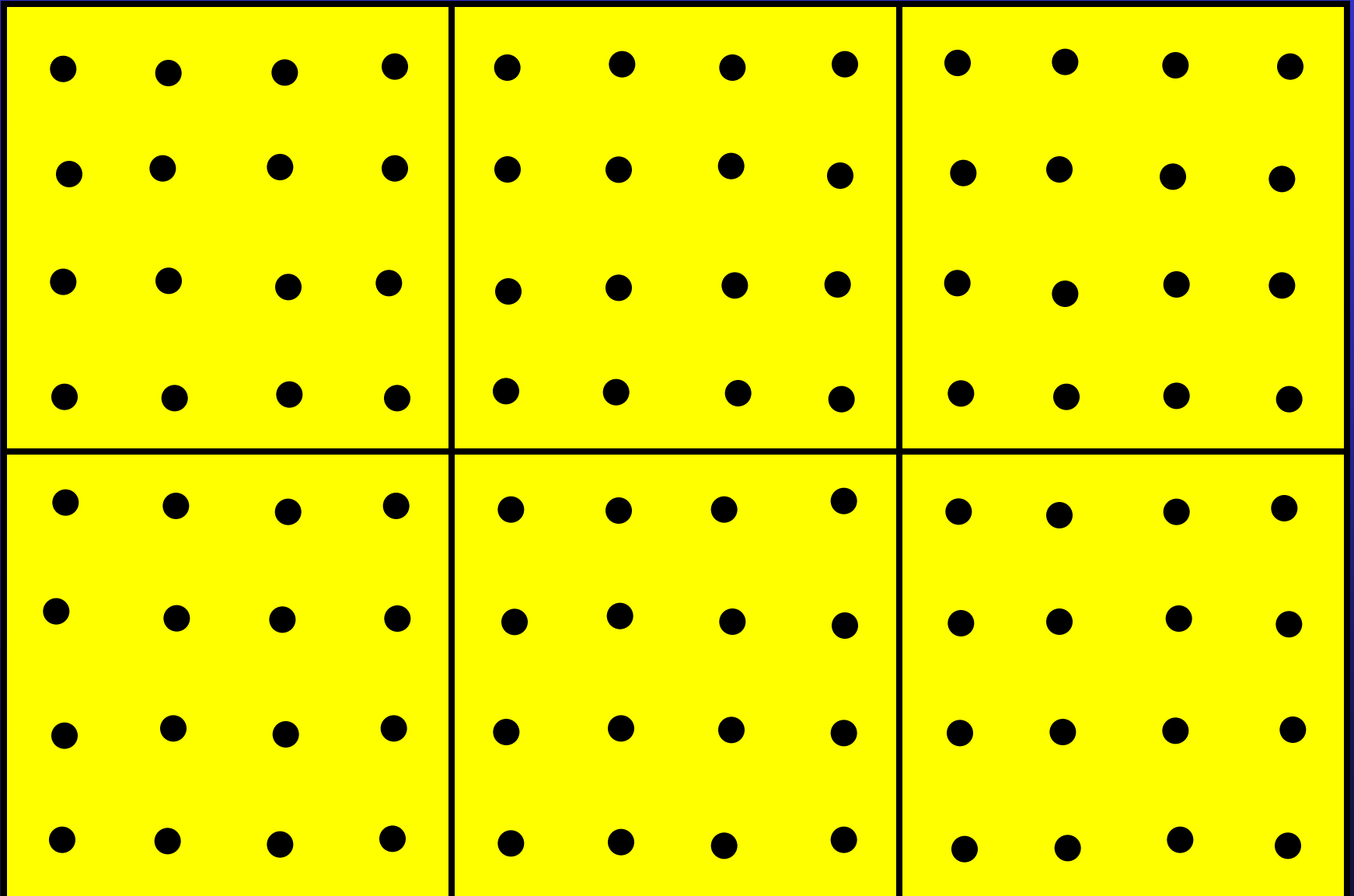
160 Acre Spacing: 1 well allowed per spacing unit  
Well located in center of each quarter section



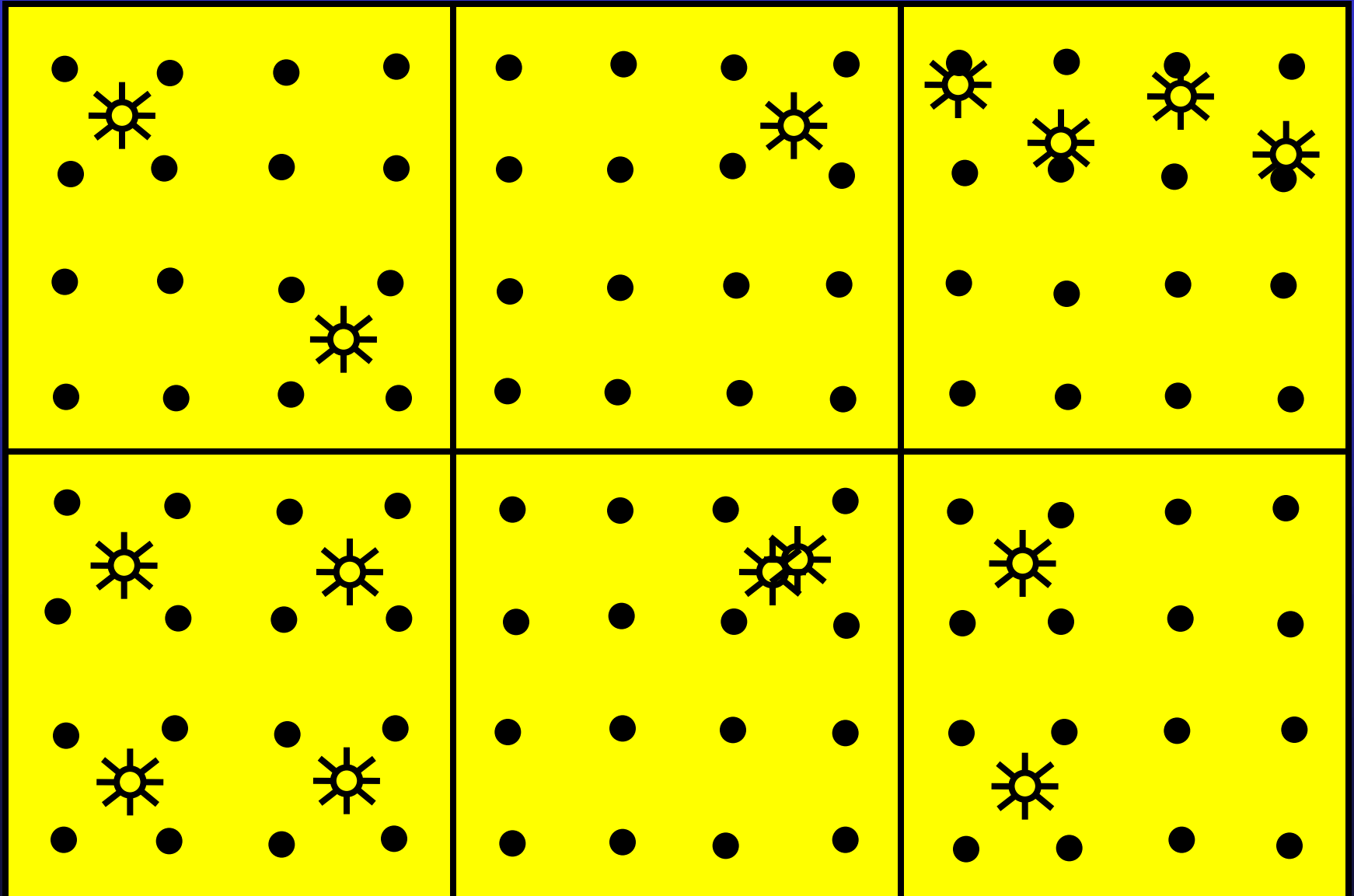
# 80 Acre Spacing - Laydown



# 40 Acre Spacing



# Spacing is formation specific!



A black and white photograph of an oil well derrick, showing its lattice structure and the top section where drilling operations occur. The derrick is set against a background of a cloudy sky.

# Communitization Agreement (CA)

## *Key Concepts:*

- ✓ Related to Spacing
- ✓ Formation Specific
- ✓ 2 Year Term or so long as hydrocarbons can be produced in paying quantities
- ✓ CA leases are exempt from statewide acreage limitation

# Communitization Agreement (CA)

## *Key Concepts:*

- ✓ Involves at least 1 Federal or Indian lease
- ✓ Production and costs usually apportioned among various tracts on a surface acreage basis
- ✓ Contains a Public Interest Requirement (PIR)







# Communitization Agreement (CA)

## *Definition:*

CAs may be approved when a Federal or Indian lease or portions thereof cannot be independently developed and operated in conformity with an established well spacing or well development program.

## *For example:*

- 640 acre section
- Federal, State, and Fee minerals comprise the section
- 640 acre spacing for Mesaverde Fm.

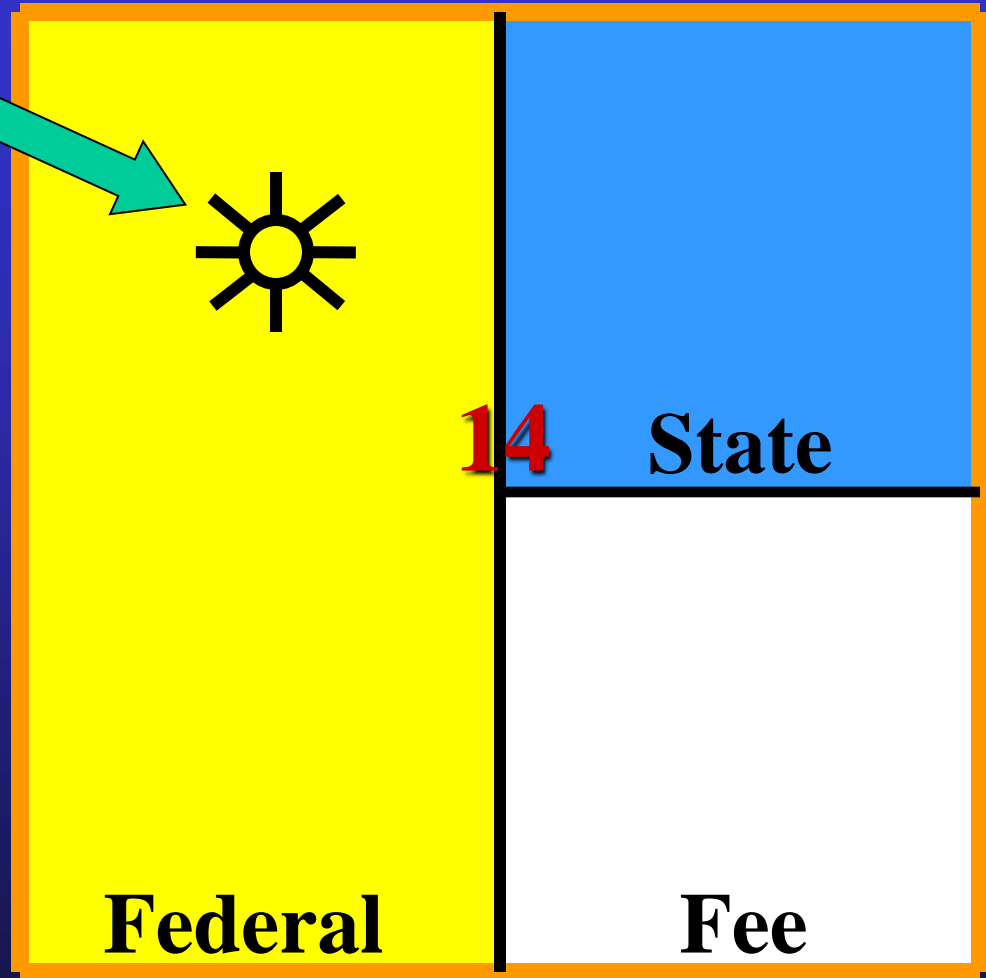
640 Acre Spacing Unit  
Mesaverde Formation

# 640 acre section \ Spacing Unit Boundary

*For example:*

1 well : Mesaverde Fm.

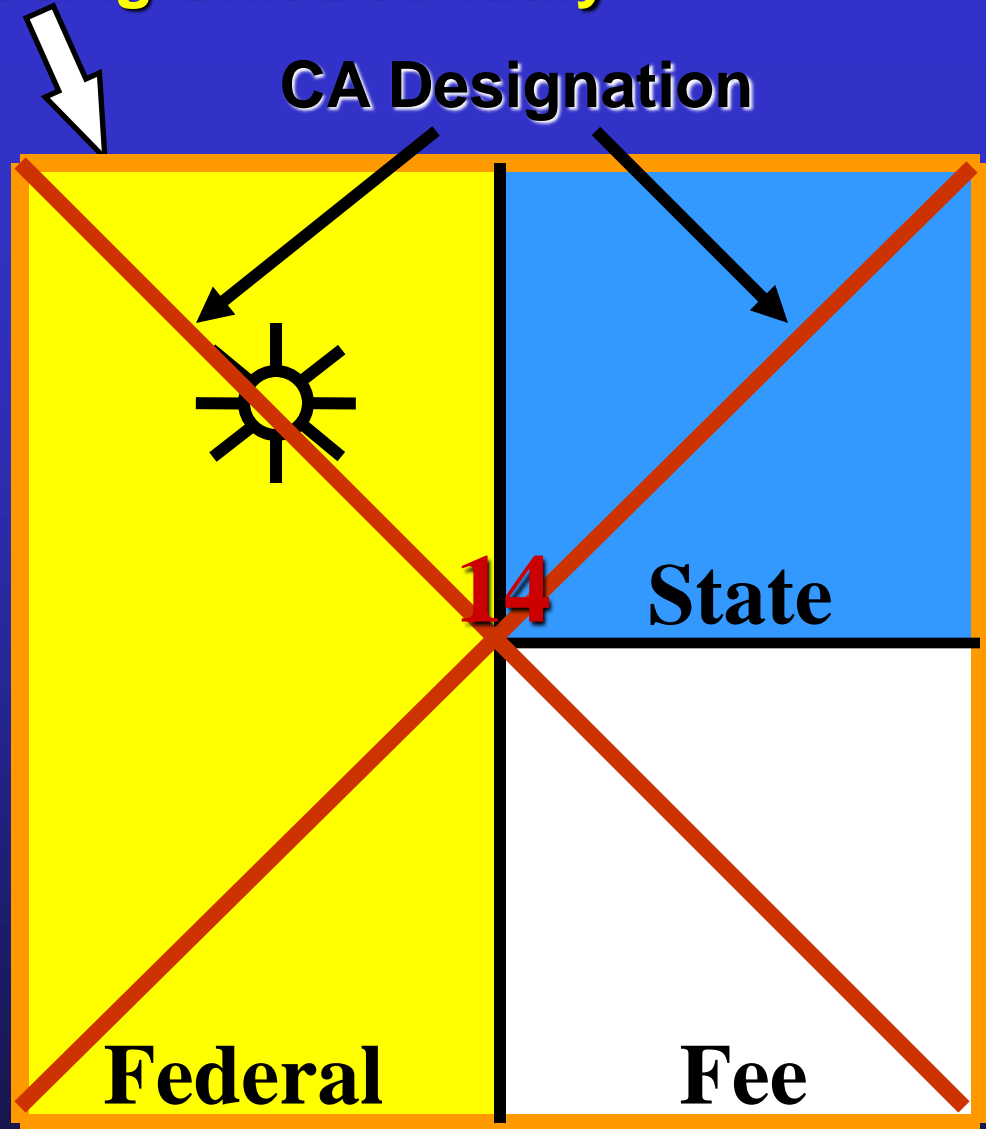
- 640 acre spacing for Mesaverde Fm.
- 1 well allowed/spacing
- State and Fee leases can't be independently developed!
- How can we ensure that all leases get their fair share of the production?



## Section/Spacing Unit Boundary

# Form CA

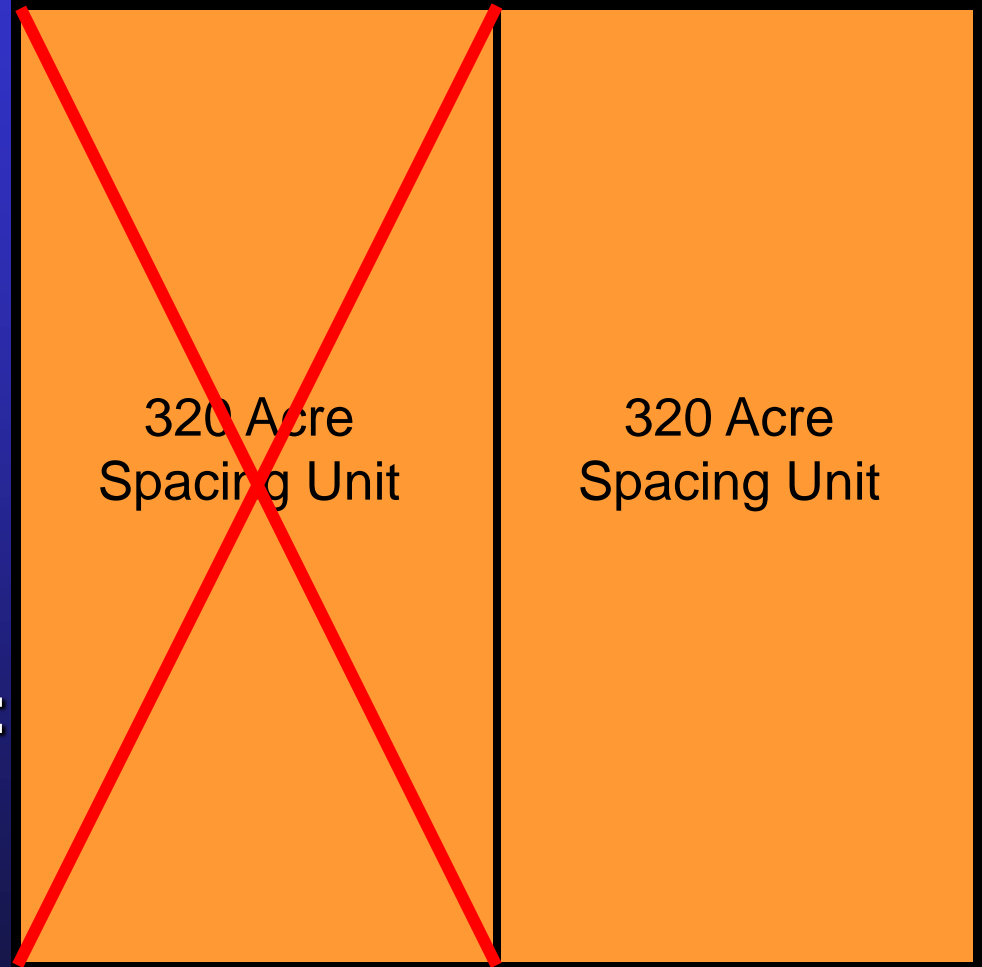
- 640 acre spacing for Mesaverde Fm.
- Create 640 acre CA for Mesaverde Fm.
- CA costs and prod. allocation based on proportionate surface acreage within the CA:
  - 50% - Federal
  - 25% - State
  - 25% - Fee



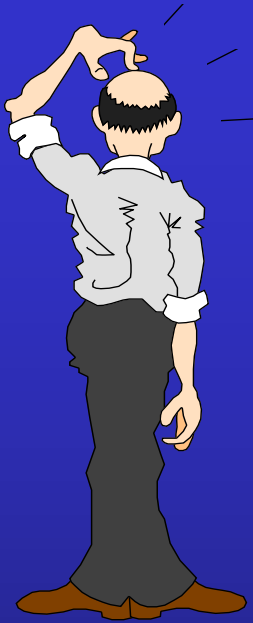
# Communitization Agreements

*Example:* 2 wells drilled to the Blair Formation

- **320 acre standup spacing for Blair Fm.**
- **Create 320 acre CA for Blair Fm.**
- **CA costs and prod. allocation based on proportionate surface acreage within the CA:**
  - **50% - Federal**
  - **50% - Fee**



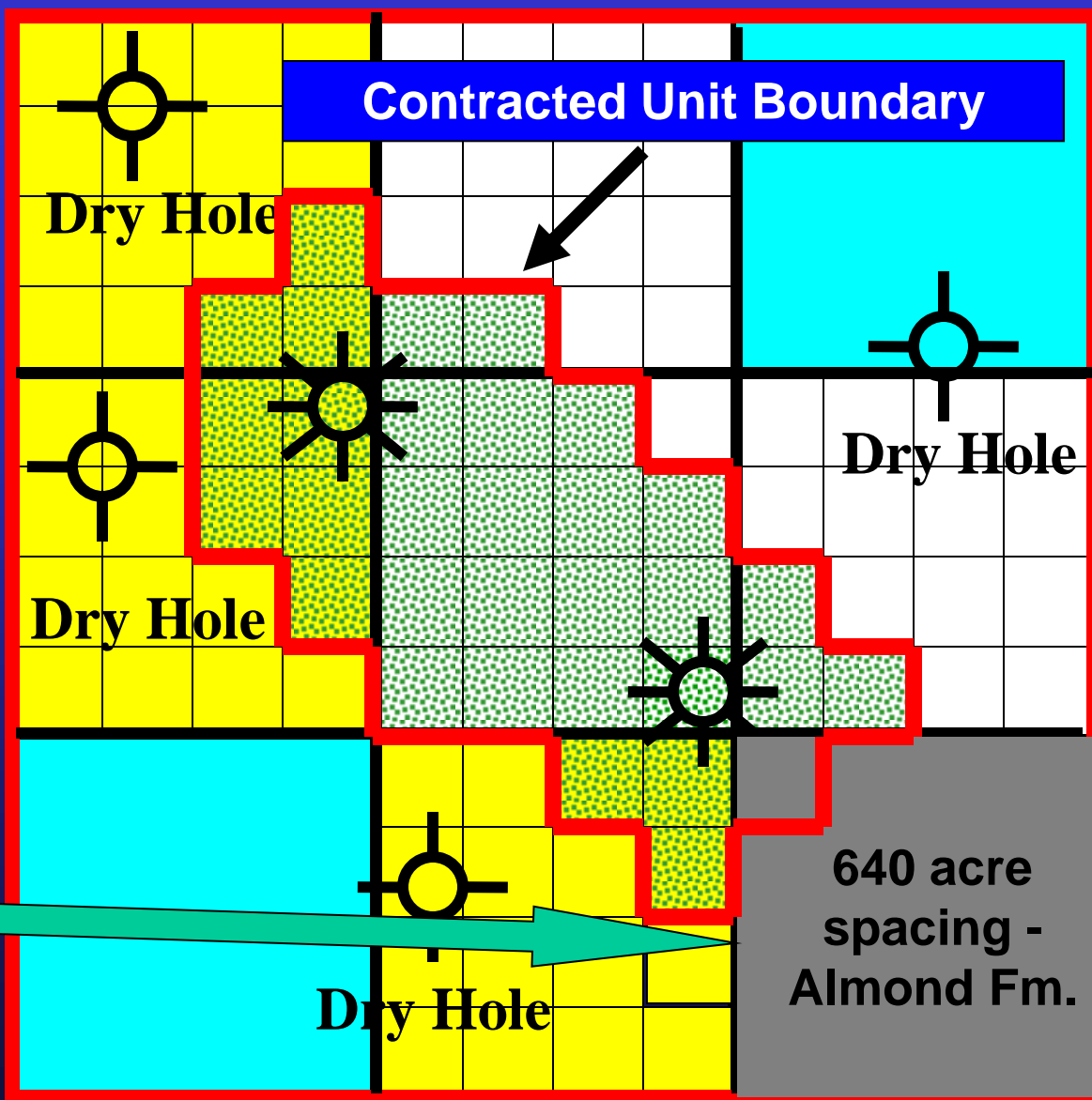
# Communitization Agreements



- ✓ *In theory - fairly simple concept*
- ✓ *In reality - can be very complex*

# Remember Boxelder Creek Contracted Unit?

# Boxelder Creek Unit



PA is for Almond Fm.

## What if:

- Spacing for Almond Fm. in this section outside the unit is 640 acres

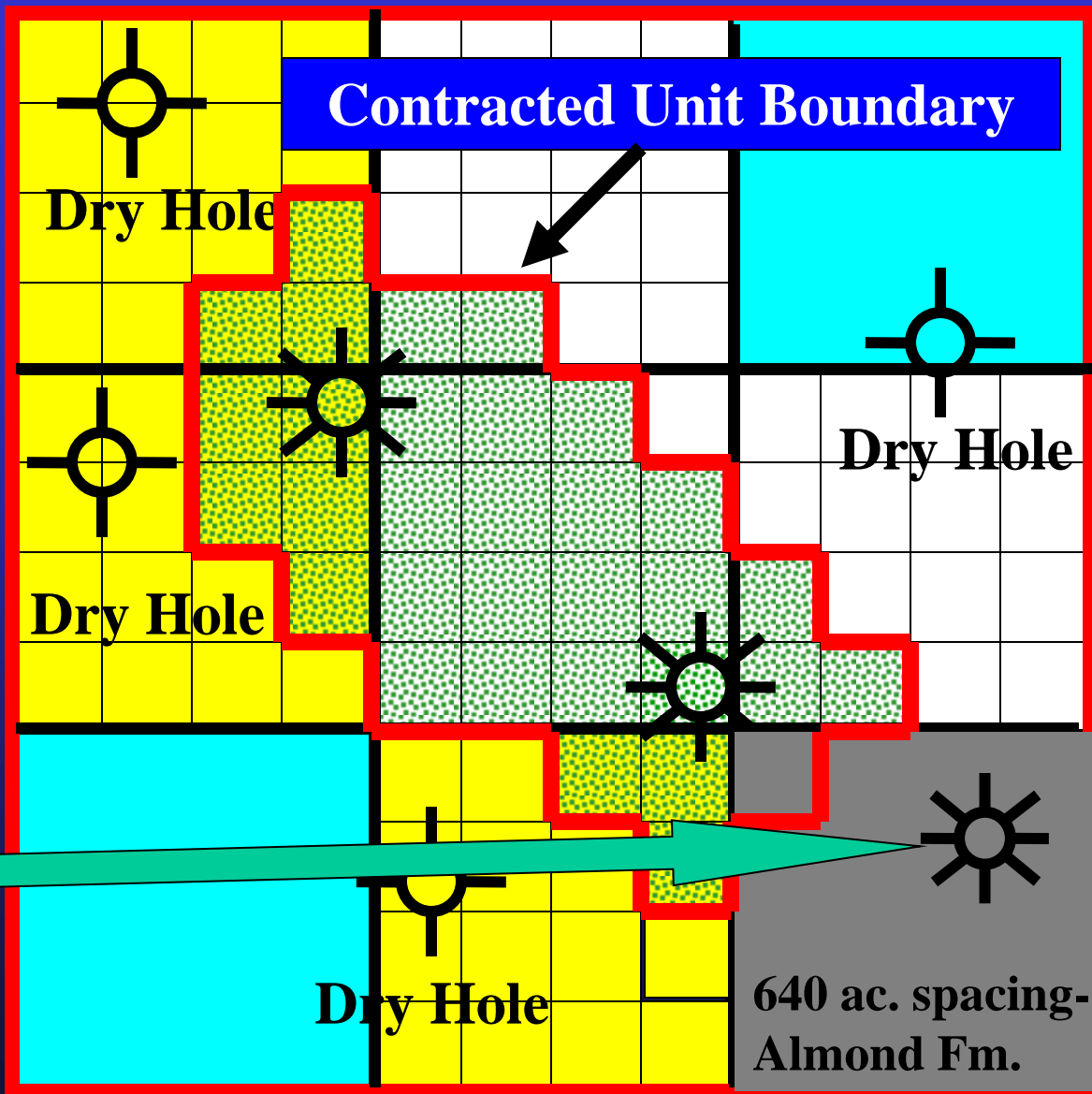
**Remember  
Boxelder  
Creek  
Contracted  
Unit?**

PA is for Almond Fm.

**What if:**

**Well is drilled to  
Almond Fm. in  
this spacing unit**

# Boxelder Creek Unit





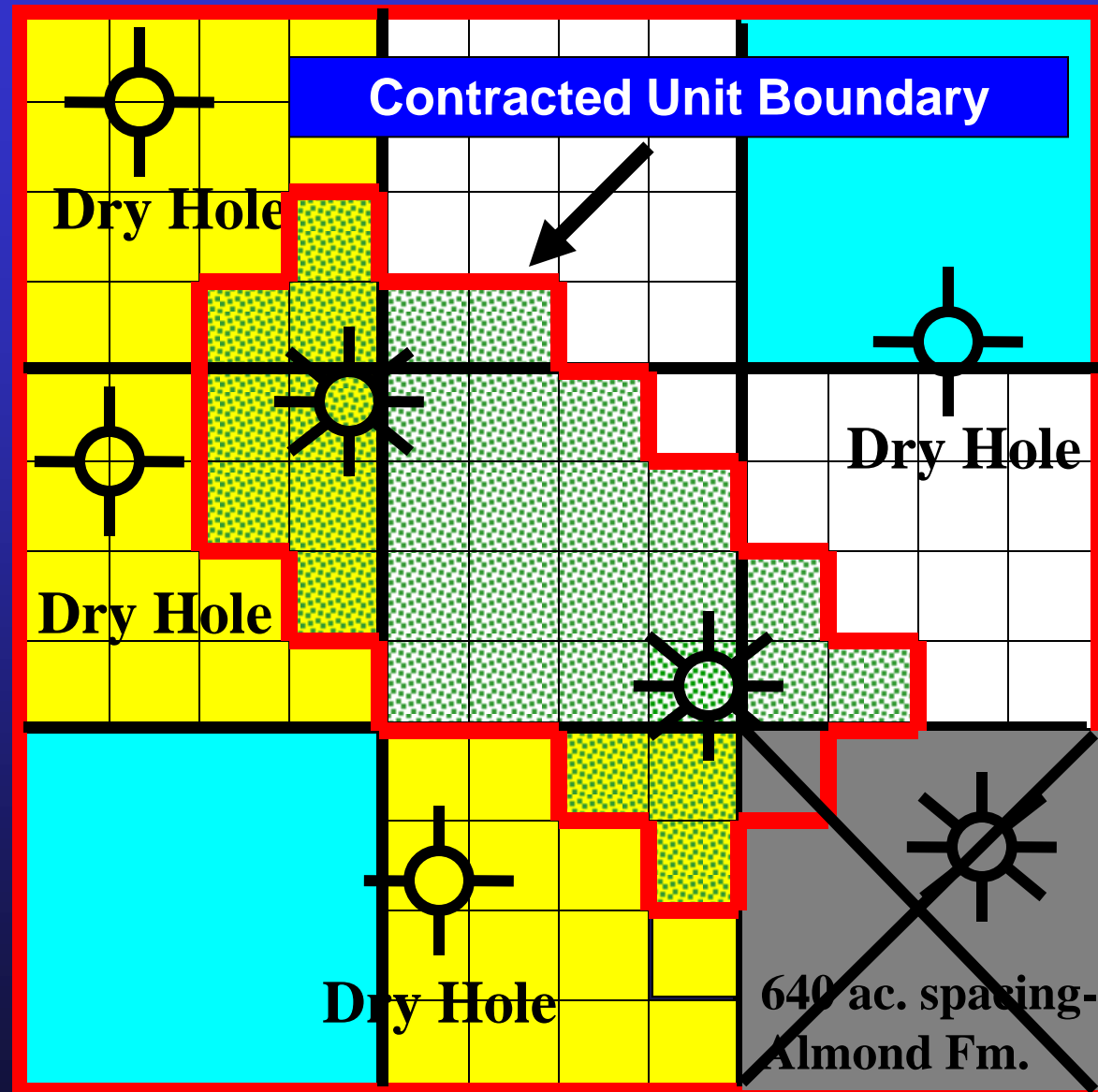
# Boxelder Creek Unit

PA is for Almond Fm.

➤ **Form 640 acre  
CA overlapping  
Boxelder Creek  
Unit**

**CA Well Allocation:**

- 1/16 prod. allocated to Boxelder Creek Unit.
- 15/16 prod. allocated to Federal lease well drilled on.



**Perkins Cementing Outfit, running 750 sacks of cement back of 2971' of 10 1/2" seamless casing in 1 hour and 10 minutes. The largest cement job in the Salt Creek Field. November 1, 1930**



# Recent Wyoming CA Adaptations to Help Meet Industry Needs

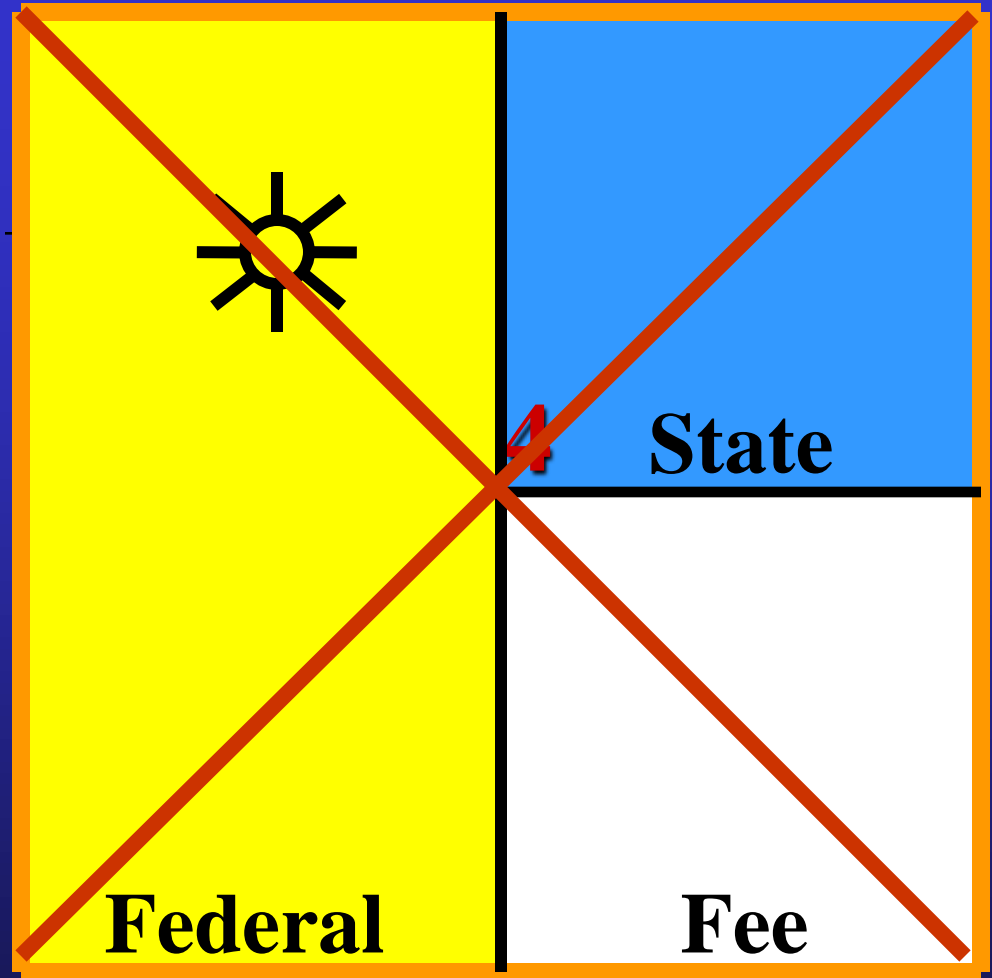
*Multiple CA Wells*      *Lease-line CAs*  
*CA Co-Operators*

# Multiple C/A Wells



**Remember:**

**Our 1 Well CA**



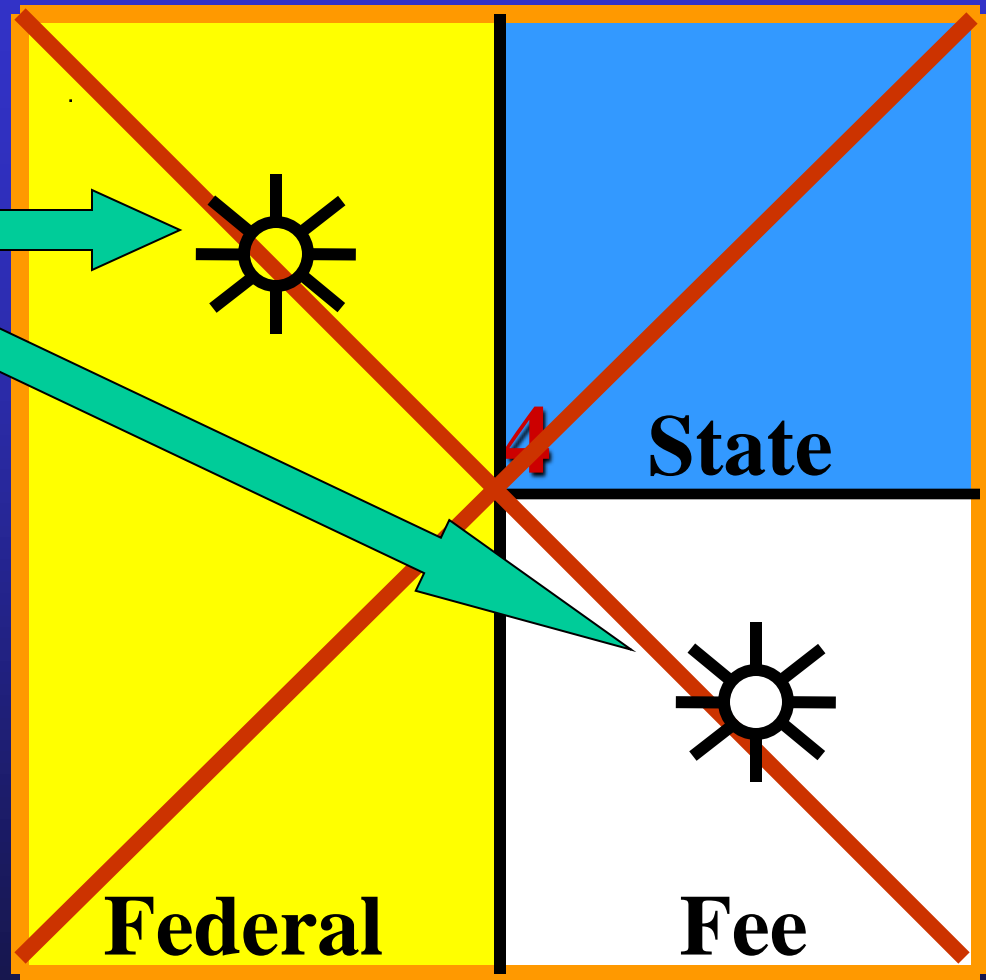
# Single Well CA

## What happens when:

- Wells don't produce all recoverable hydrocarbons from the spacing unit,
- WOGCC/BLM does not down space as a matter of policy, however,
- WOGCC/BLM does approve additional wells in spacing units to improve hydrocarbon recovery.

# Multiple CA Wells

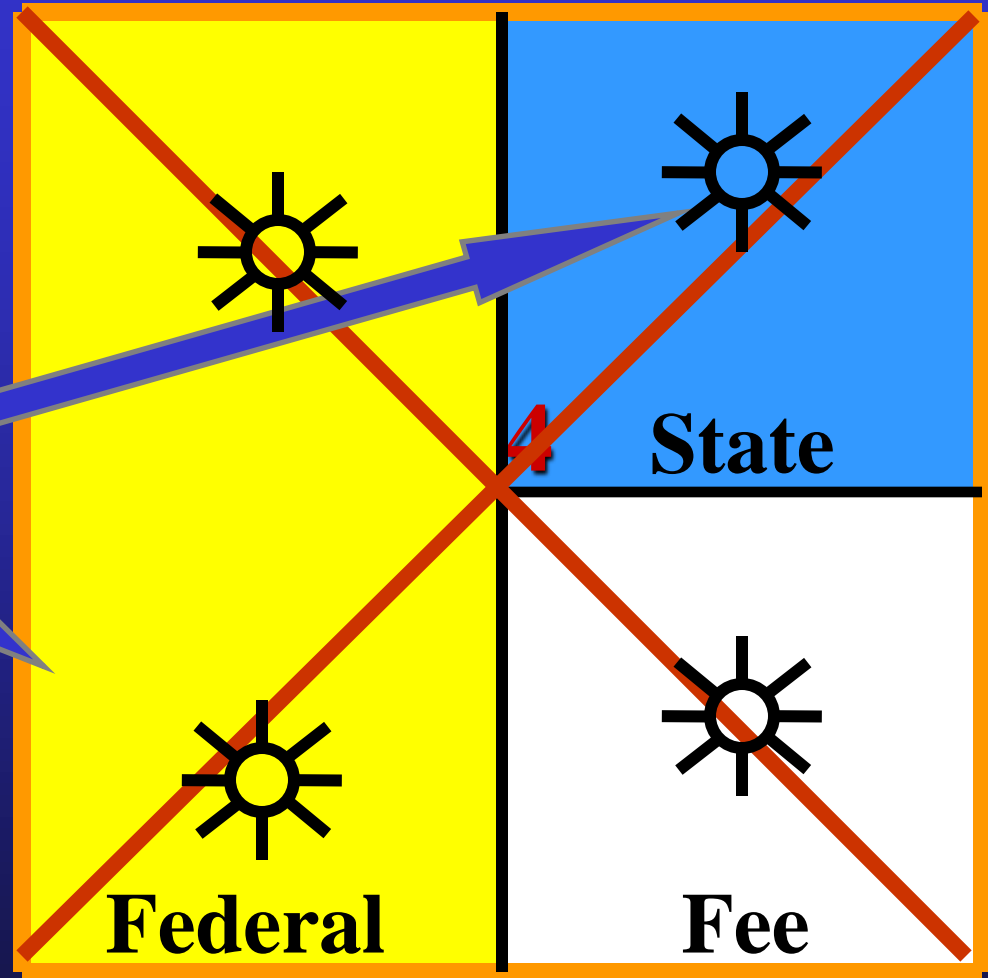
- ❖ Multiple wells can be drilled within the spacing unit/CA.
- ❖ These additional wells operate under terms of the CA if completed in CA formation.
- ❖ Both wells contribute in the CA allocation.



**2 CA Wells**

# Multiple CA Wells

- Additional Wells can even be drilled on the State and Federal leases.
- All wells completed in the CA formation operate under the terms of the CA and contribute to the CA allocation.



4 CA Wells



# CA Co-Operators

The background features several black silhouettes of industrial structures against a solid blue background. On the left, there is a crane-like structure with a hook. In the center, a tall, lattice-structured tower rises. On the right, a large, dark, angular structure with a prominent white vertical stripe is visible. The overall scene suggests an industrial or construction environment.

**Multiple Operators Within the CA**

# CA Co-Operators Evolved as a Result of:

- Wells don't recover hydrocarbons from entire CA.
- WOGCC does not down space as a matter of policy.
- WOGCC does approve additional wells in spacing units to improve recovery, and
- CA operator does not want to undertake sole economic risk of drilling another CA well. However, another operator wants to participate.

# CA Co-Operators

## *Key Concepts:*

- **Number limited only by number of CA wells.**
- **CA operator is held ultimately responsible.**
- **All production from CA is allocated according to the CA agreement.**

# CA Co-Operators

## *Key Concepts:*

- **If Successor CA Operator is approved, current Co-Operators will be recognized by new CA operator.**
- **Only CA operator can designate new Co-Operators.**

# *Lease-line CAs*

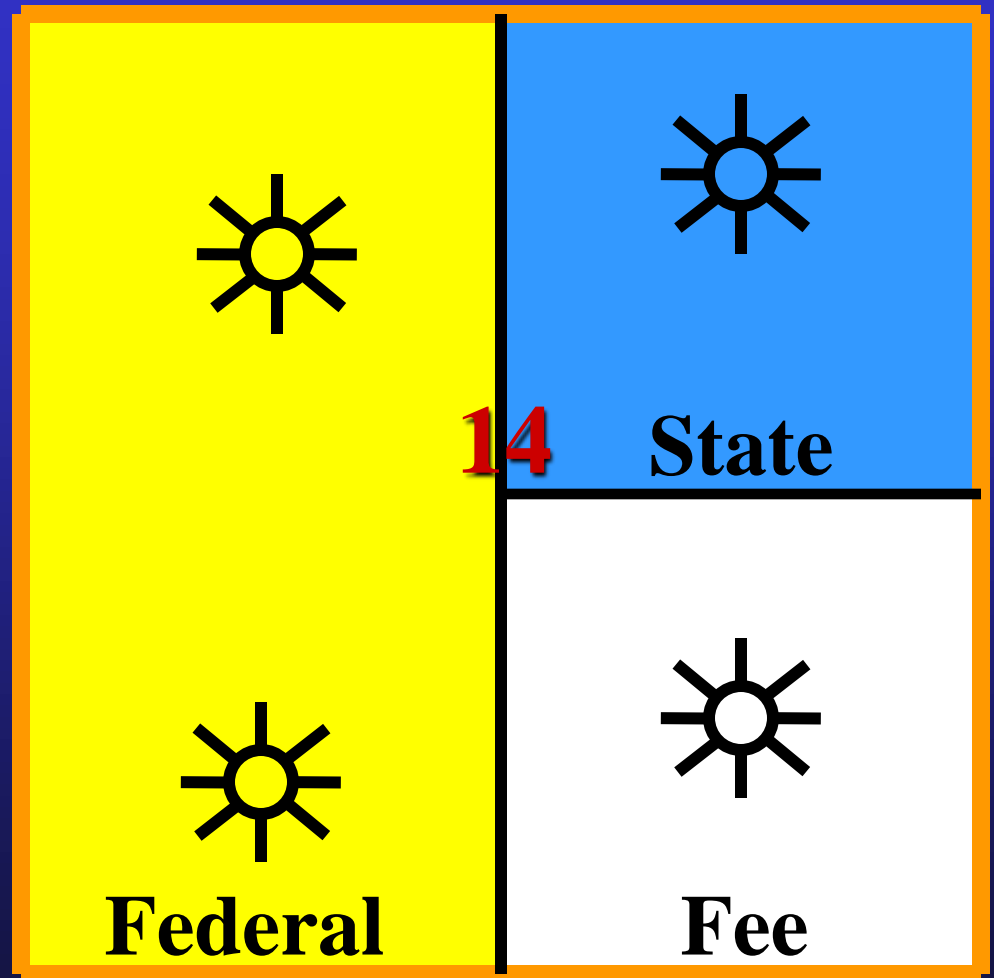
# Lease-line CAs

- ❑ 640 acre Section
- ❑ *Now we are looking at 160 acre spacing.*

160 acre Spacing Unit	160 acre Spacing Unit
160 acre Spacing Unit	160 acre Spacing Unit

# Lease-line CAs

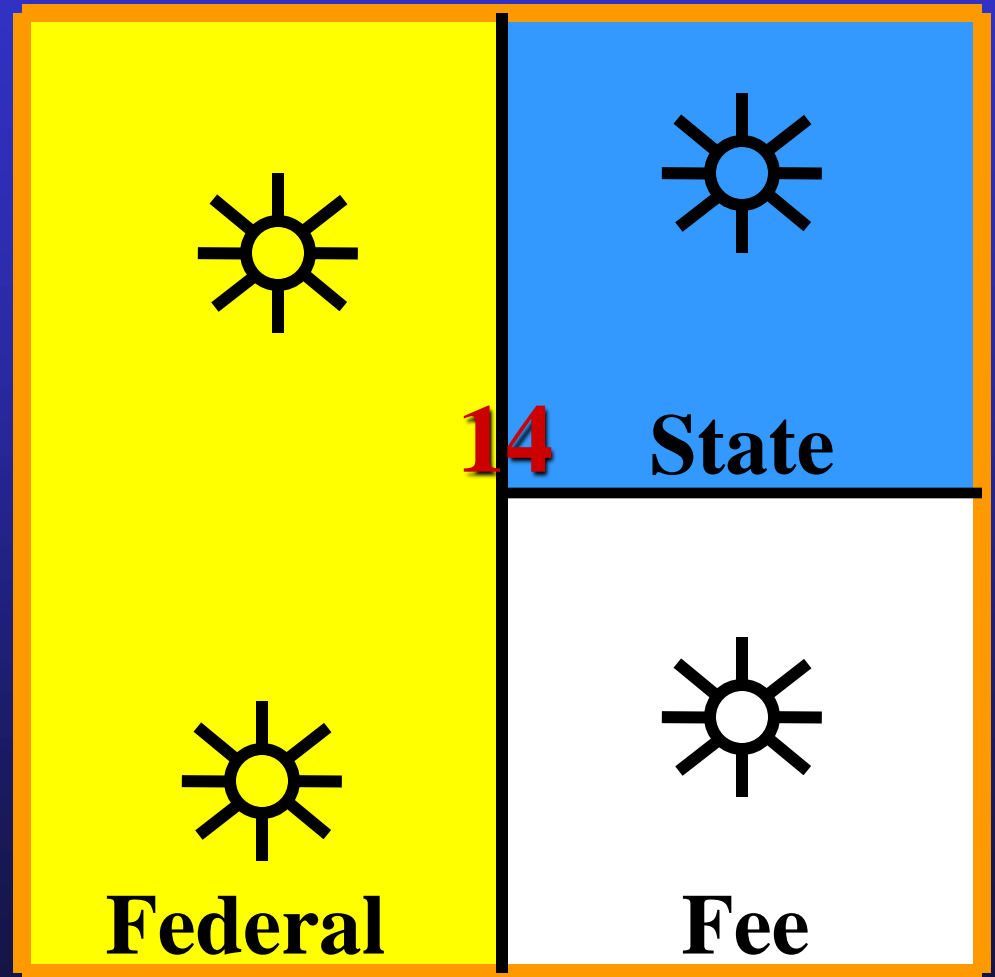
- 640 acre Section
- 160 acre spacing
- 1 Well in each spacing unit
- All is well
- No CA required



# Lease-line CAs

- ❖ What happens if wells don't recover all reserves from the 160 acre spacing units?

*Where would you drill an additional well?*

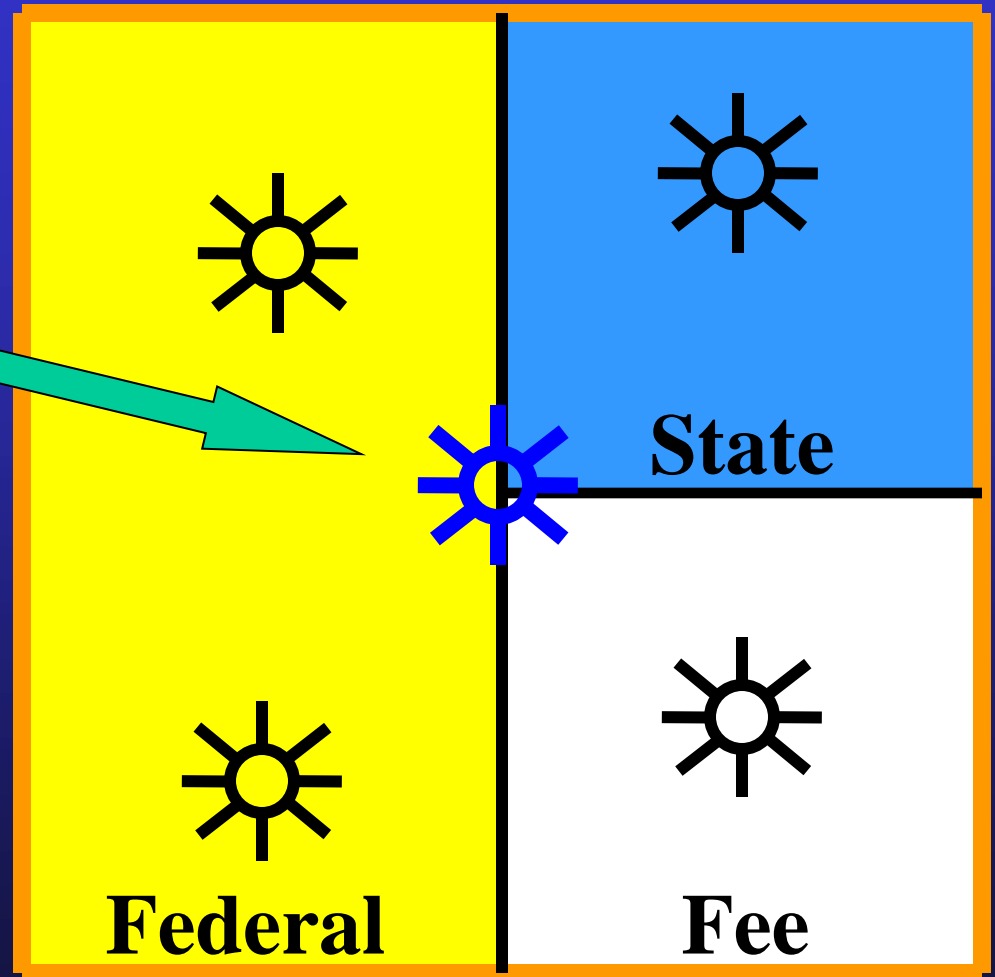




# Lease-line CAs

How about drilling a well in the middle of the section?

*How do we allocate production and costs among the spacing units and leases?*



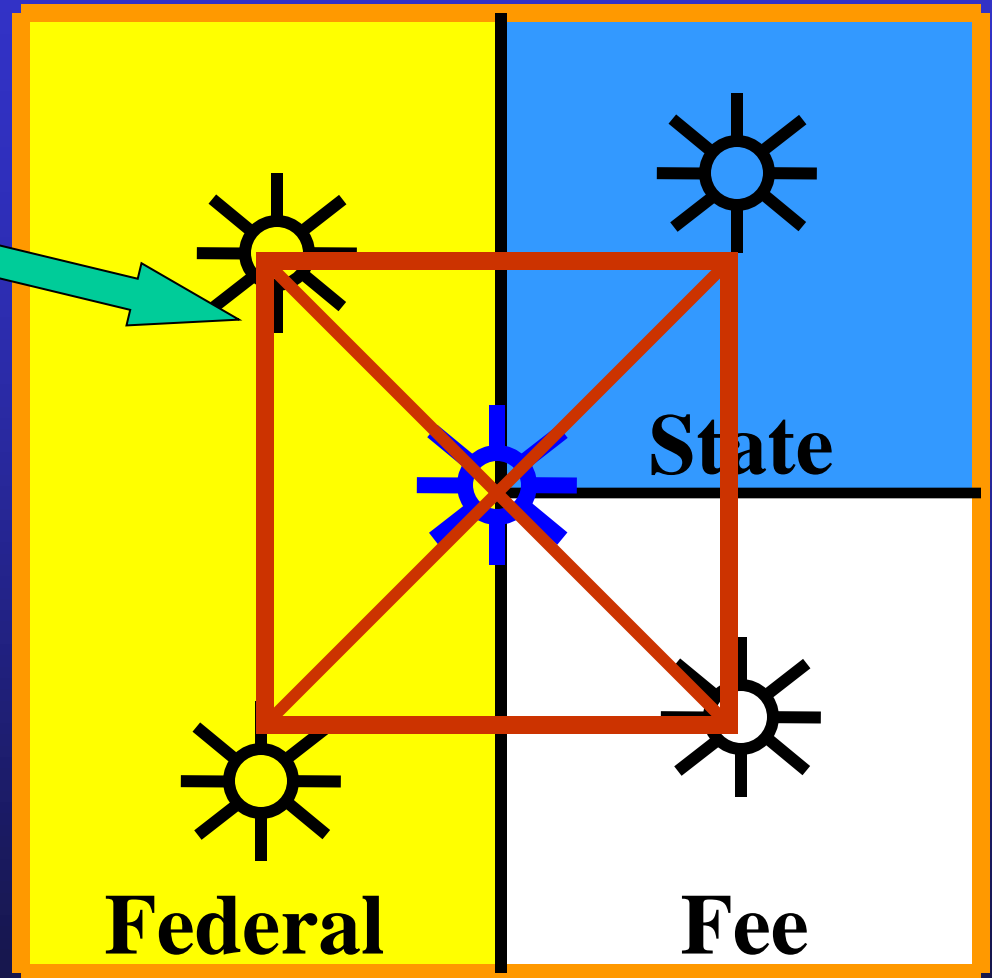
# Lease-line CAs

160 acre lease-line CA formed to allocate between all the leases/spacing units.

4 original wells are omitted from new lease-line CA.

CA Allocation:

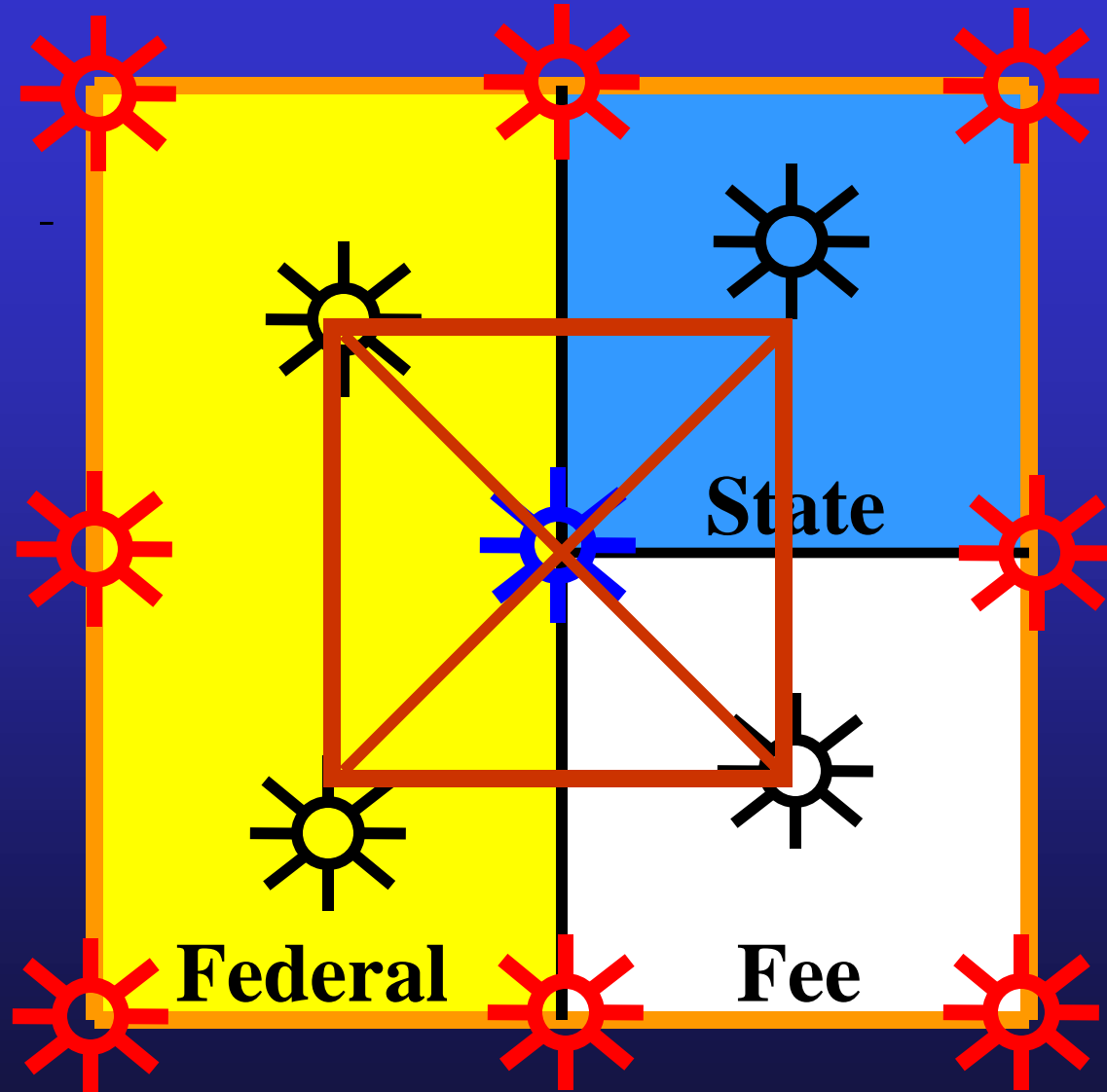
- Federal lease: 50%
- State lease: 25%
- Fee lease: 25%



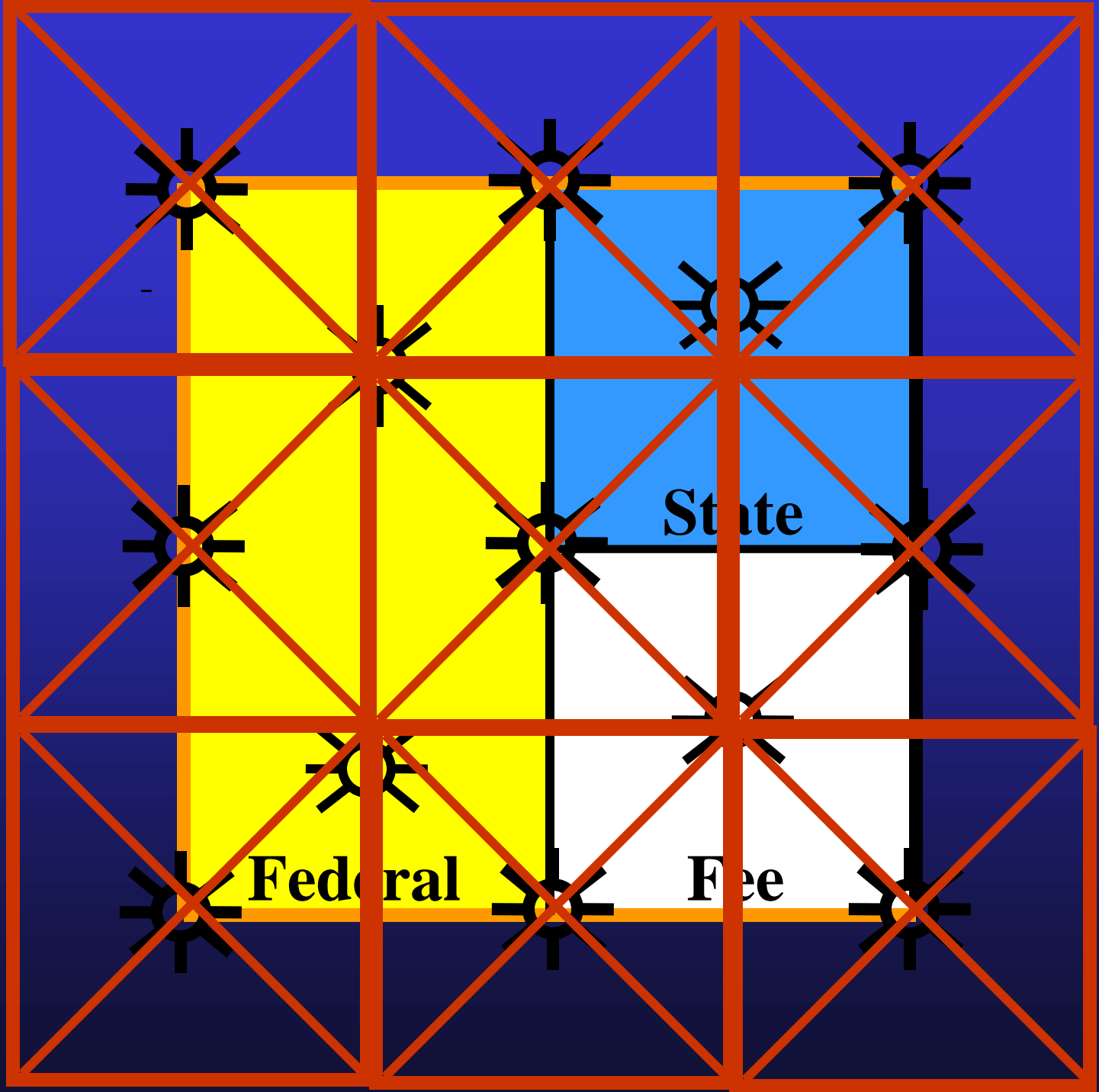
# Lease-line CAs

Additional possible well locations which would require lease-line CAs

*This isn't Kansas Anymore!*



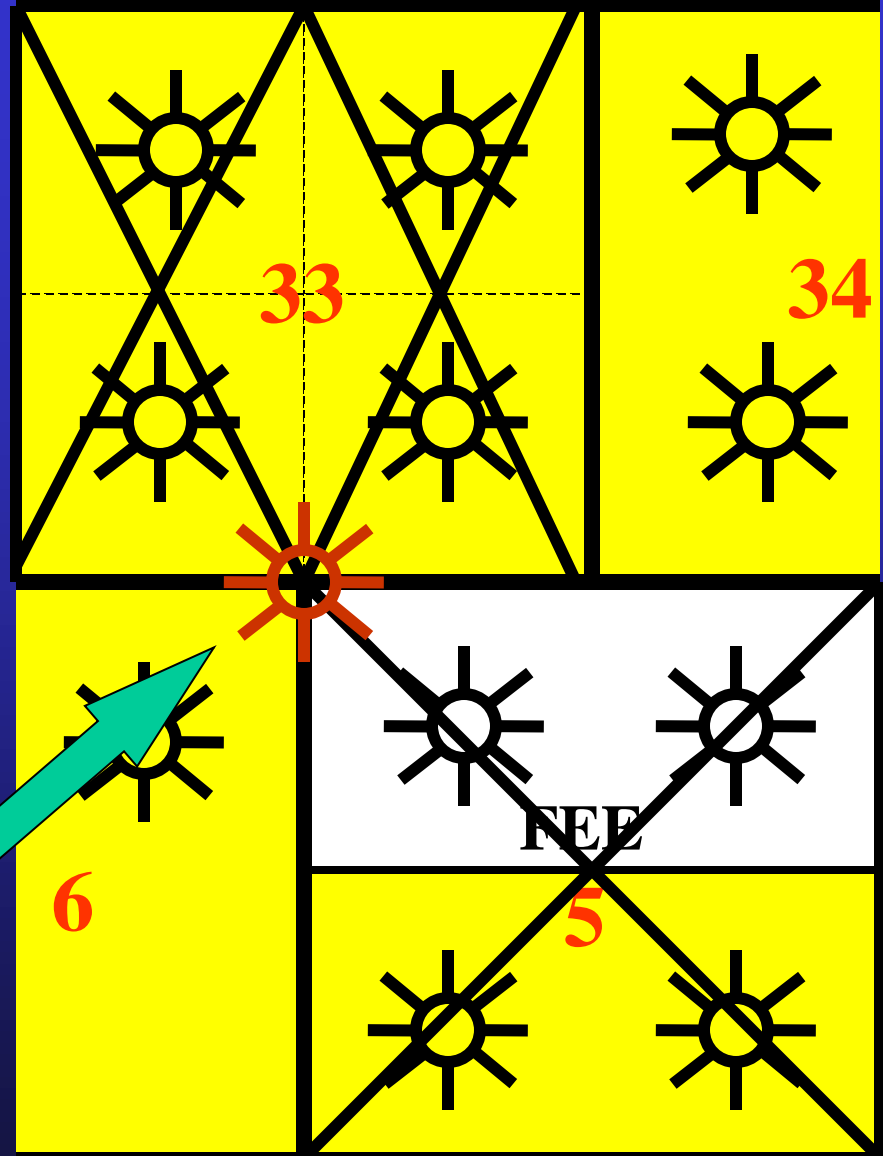
**A  
R  
G  
H  
!**



# Confusing?

- **Sec. 5:** 640 acre CA with multiple wells - Frontier Fm.
- **Sec. 33:** 2 - 320 acre stand-up CAs with multiple wells - Frontier Fm.
- **Sec. 34:** Federal lease
- **Sec. 6:** Federal lease

*Where do you think the operator drilled an additional well to the Frontier Formation?*

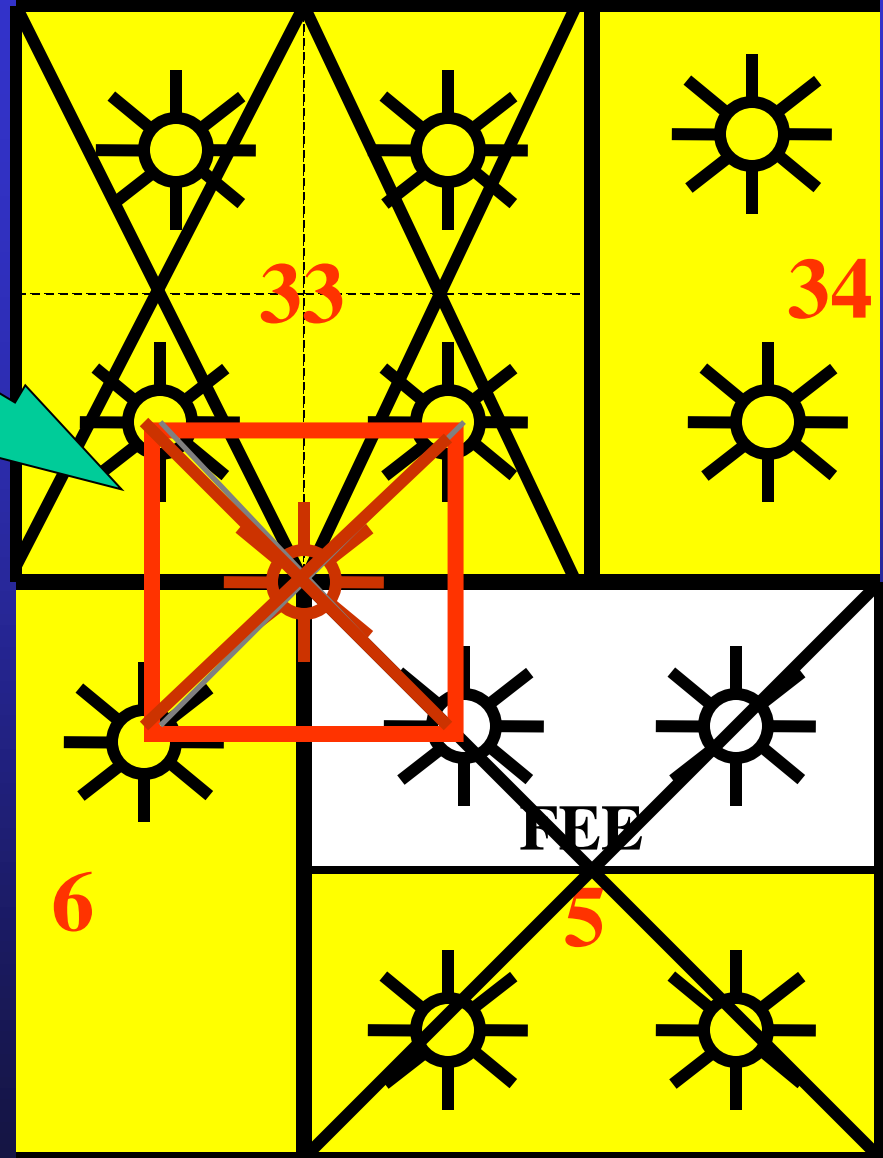


# Confusing?

160 acre lease-line  
CA formed:

## CA Allocation:

- ❖ 25% - CA in E/2 Sec. 33
- ❖ 25% - CA in W/2 Sec. 33
- ❖ 25% - CA in Sec. 5
- ❖ 25% - lease in Sec. 6

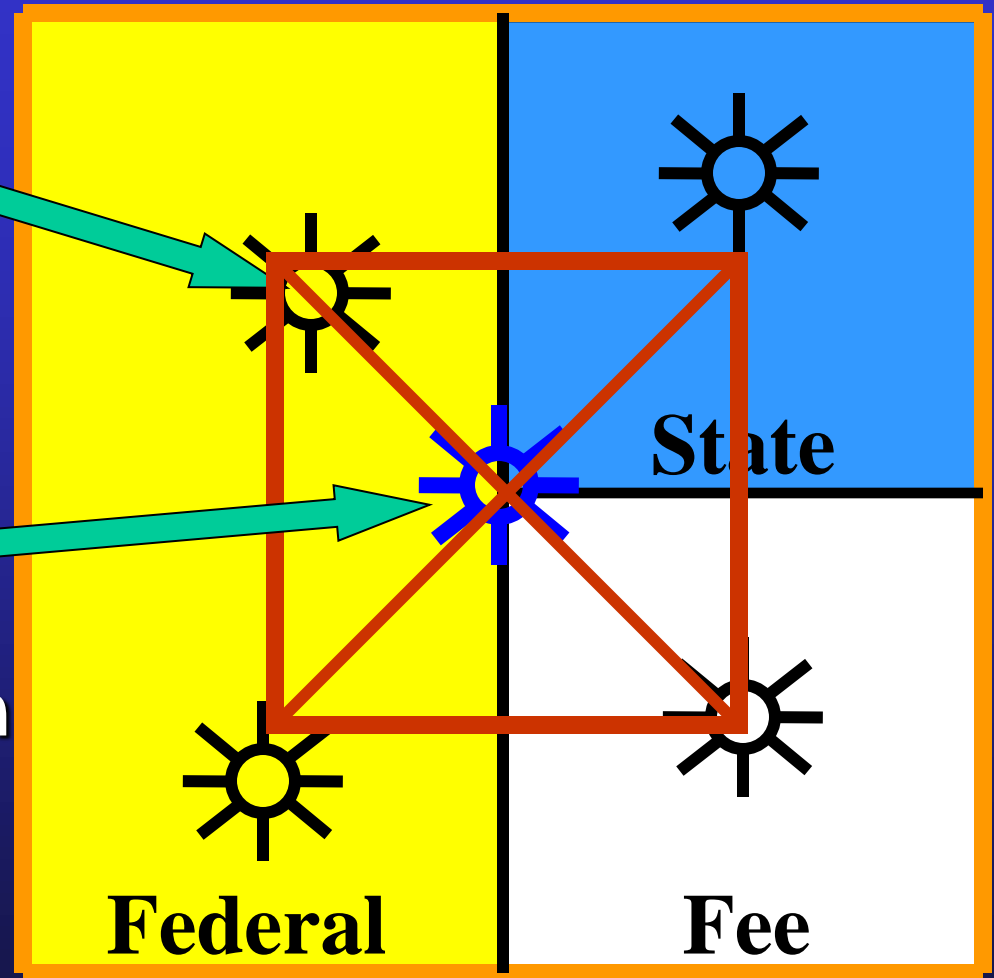


# Single Wellbore CA

Wellbore inside the  
lease-line CA  
boundary

CA is for this single  
wellbore.

Handled with insertion  
of language in Model  
CA form



# Additional Wyoming CA Adaptations to Help Meet Industry Needs

- *Self Certification*
- *Unleased Federal Lands*





# Self Certification Statement for CAs

- ✓ **BLM Wyoming RMG**
- ✓ **CA Operator certifies signatures  
and no changes to CA language**
- ✓ **Speeds approval process**

# For Unleased Federal Land in a Drilling and Spacing Unit

- ✓ CA is to be formed
- ✓ Section 5 (old language) Model CA Form
  - Monies held in escrow
  - Delay in payment of Federal royalties
- ✓ Section 5 (new language) Model CA Form
  - Create “dummy lease”
  - Faster payment of Federal royalties

# Summary

- **Communitization Agreements**
  1. **Oxford Ordinance**
  2. **Well Spacing/Spacing Units**
  3. **Key Concepts/Definition**
  4. **Examples**
    - a. **Simple**
    - b. **Complex**

# Summary

(cont'd)

- **Communitization Agreements (cont'd)**
  1. **Recent Wyoming CA Adaptations**
    - a. **Multiple CA Wells**
    - b. **Co-operators**
    - c. **Lease-Line CAs**
  2. **Additional Wyoming CA Adaptions**
    - a. **Self-Certification**
    - b. **Unleased Federal Lands**

# Coalbed Natural Gas Unit Agreements



*Case Farm Tractor used for partial rig power - 1932*

# Coalbed Natural Gas Units

## Topics:



- ✓ History of CBNG Units in Wyoming
- ✓ CBNG unit design considerations
- ✓ Major changes from model exploratory unit form
- ✓ Issues encountered from BLM perspective
- ✓ Where we are now

**Machine used to clean out the well - 1934**

# **History of CBNG Units in Wyoming**



**Wyoming  
Geologic Basins**

**Jackson  
Hole**

**Bighorn Basin**

**Powder River Basin**

**Wind River Basin**

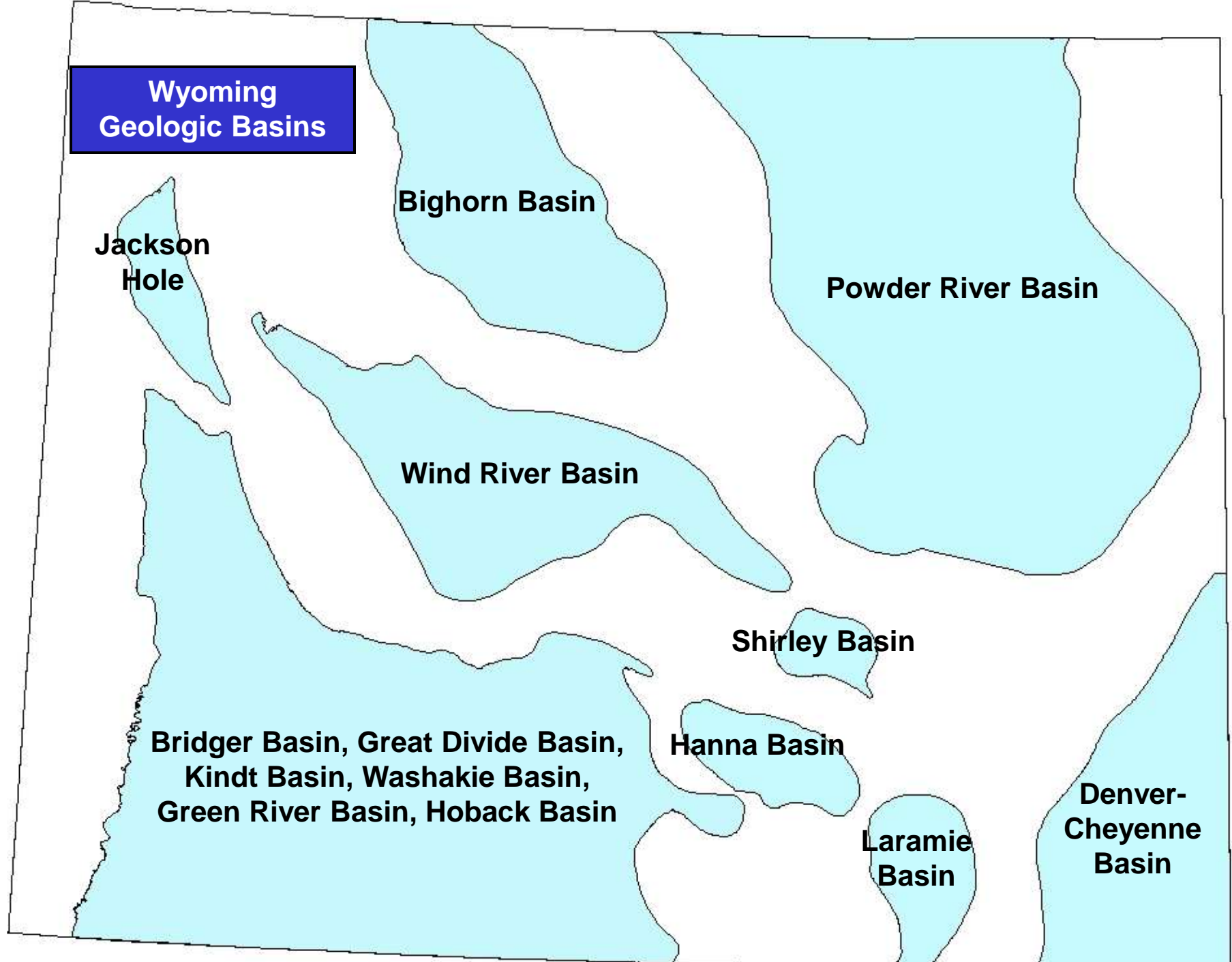
**Shirley Basin**

**Bridger Basin, Great Divide Basin,  
Kindt Basin, Washakie Basin,  
Green River Basin, Hoback Basin**

**Hanna Basin**

**Laramie  
Basin**

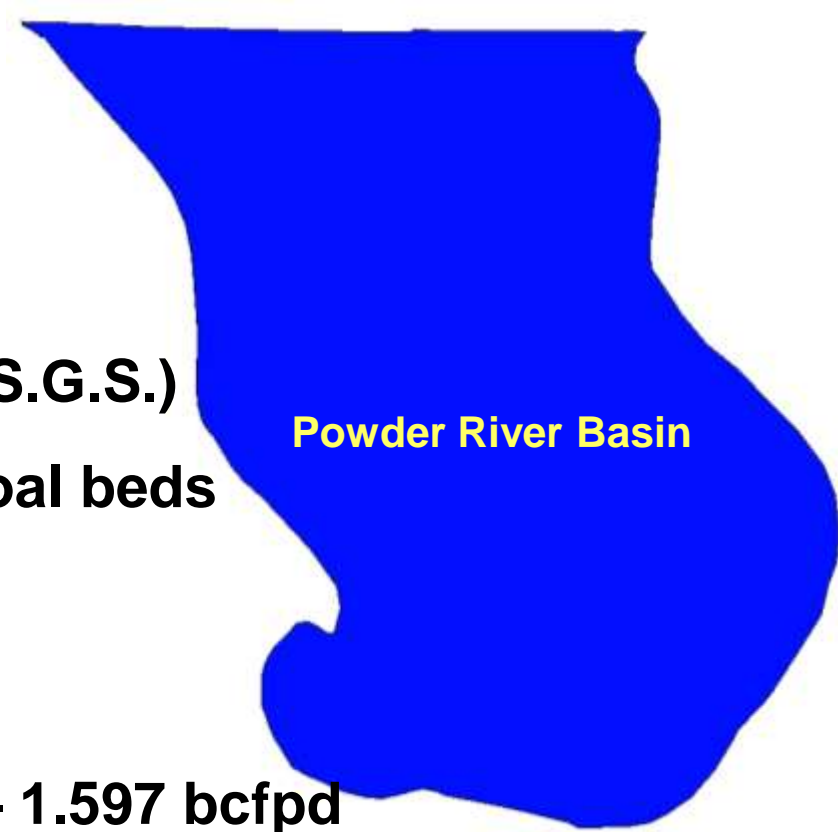
**Denver-  
Cheyenne  
Basin**





# Powder River Basin

- Largest CBNG play in the world (U.S.G.S.)
- 10-14 tcf CBNG recoverable from coal beds
- First economic CBNG production:
  - Rawhide Butte Field – 1989
- Peak production in February 2009 – 1.597 bcfpd
- Current (May 2012) production – 1.132 bcfpd
- Through May 2012: 31,604 wells drilled; 4.970 tcf produced
- Through May 2012: 11,990 producing wells; 11,679 shut-in wells



# History of CBNG Units in Wyoming

- Three Powder River Basin CBNG units in the 1980s
- More recent Powder River Basin activity lured operators again to the benefits that units provide
- First new Wyoming version CBNG unit approved in May 1999

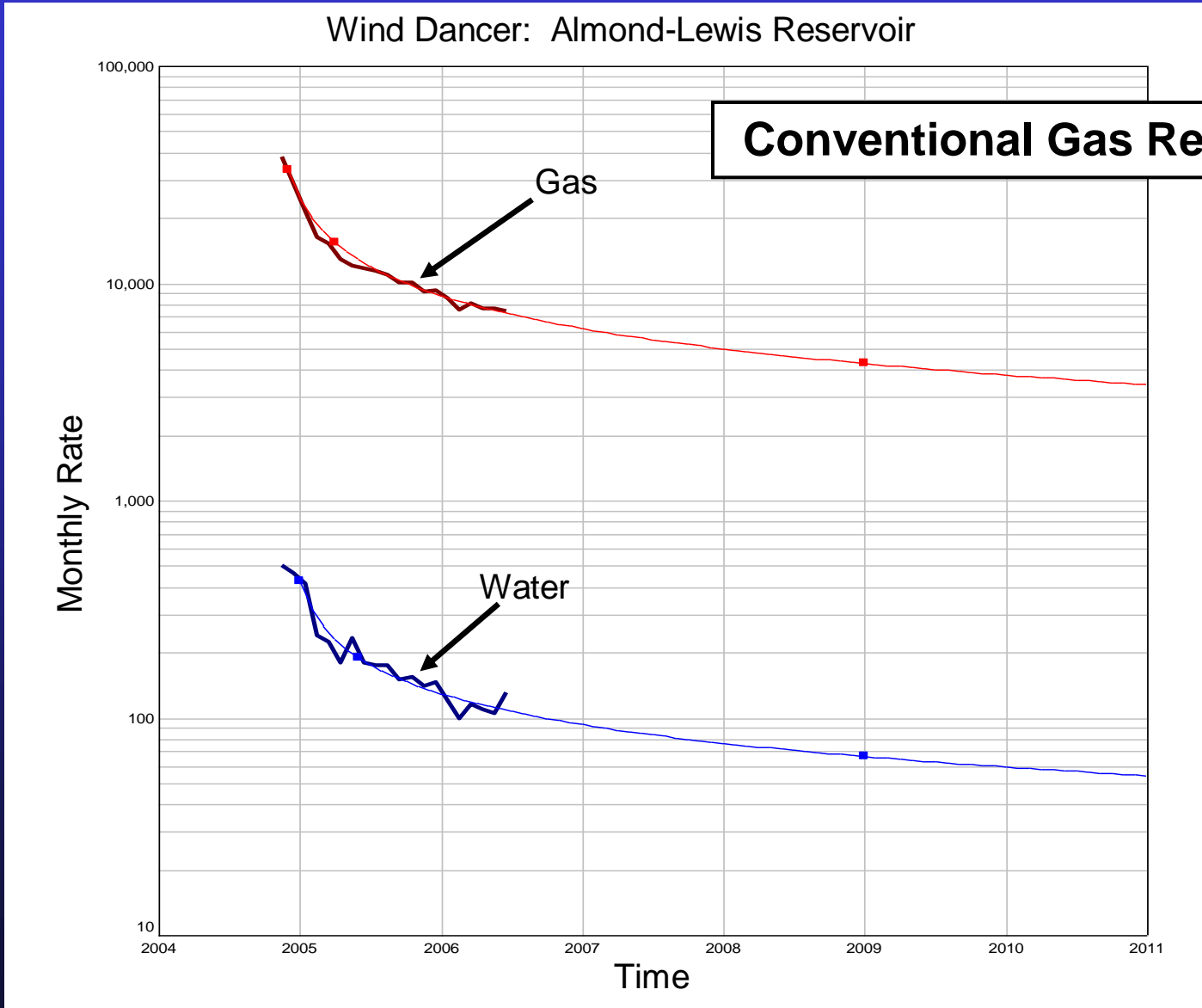




**CBNG**  
**Unit Agreements**  
**- Design Considerations -**

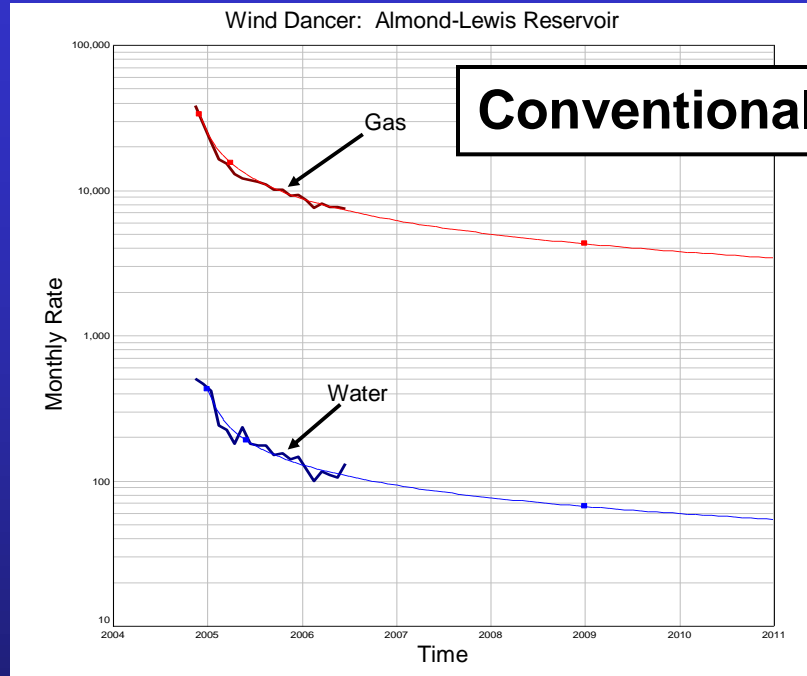
# CBNG Unit Design Considerations

## 1. CBNG Reservoir Characteristics



# CBNG Unit Design Considerations

## 1. CBNG Reservoir Characteristics



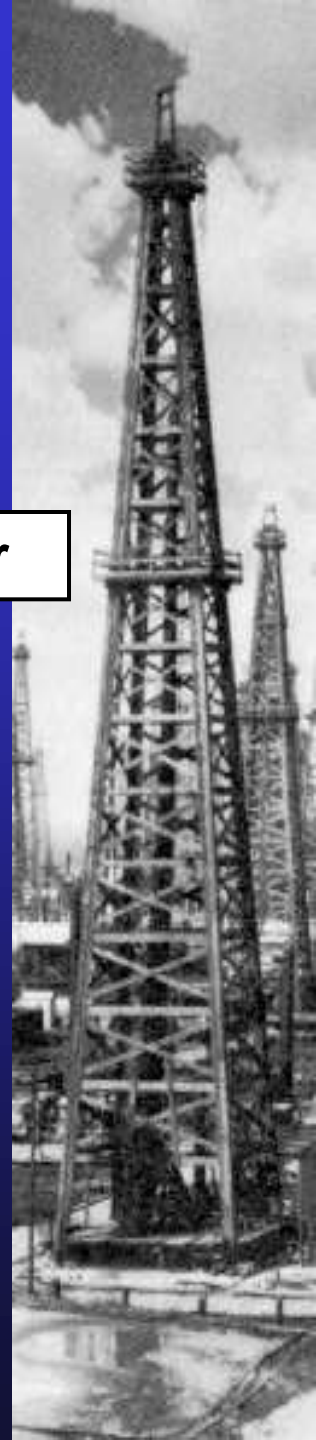
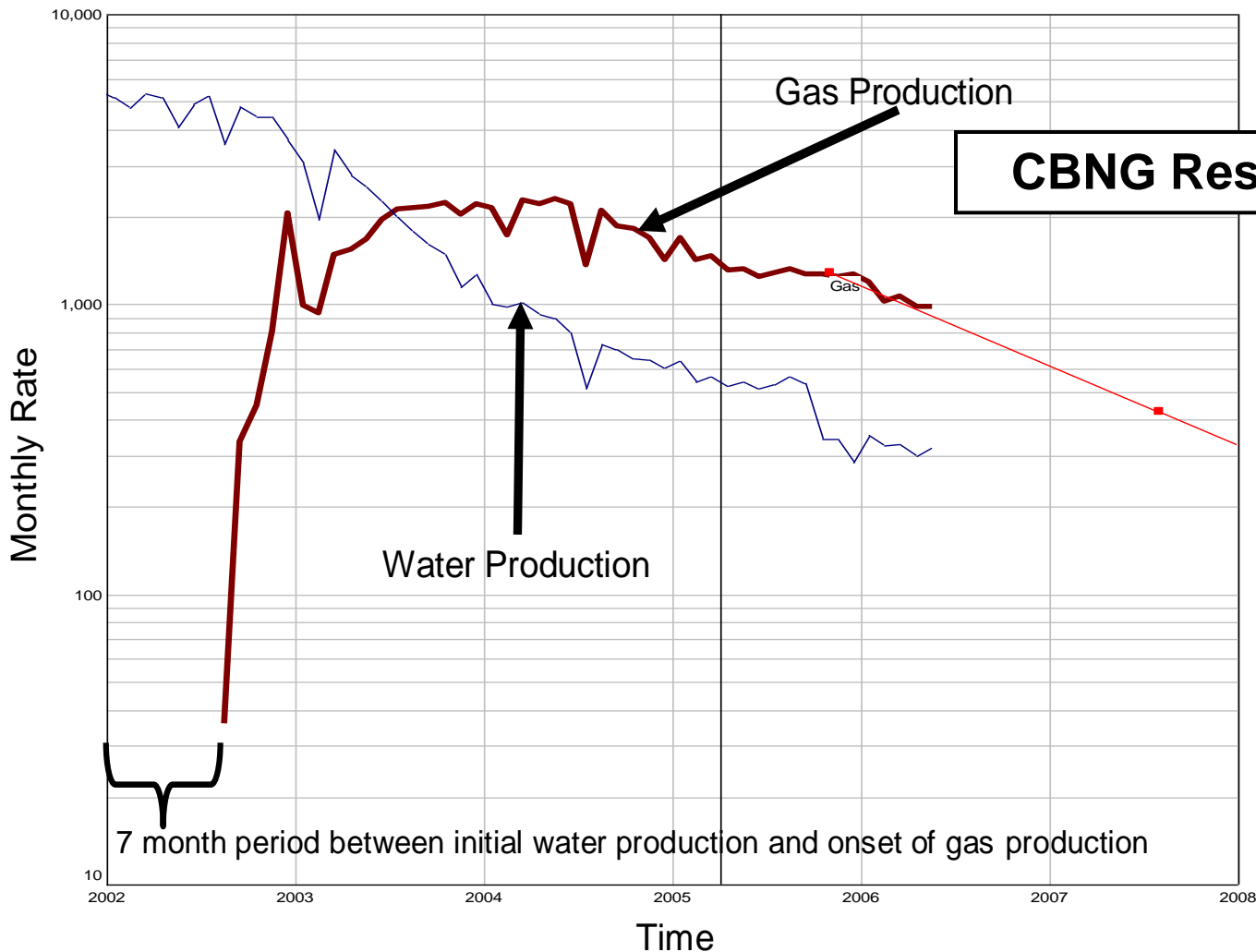
- ✓ Can reasonably predict future well behavior to determine:
  - ✓ Ultimate production
  - ✓ Ultimate Life
  - ✓ Economic viability



# CBNG Unit Design Considerations

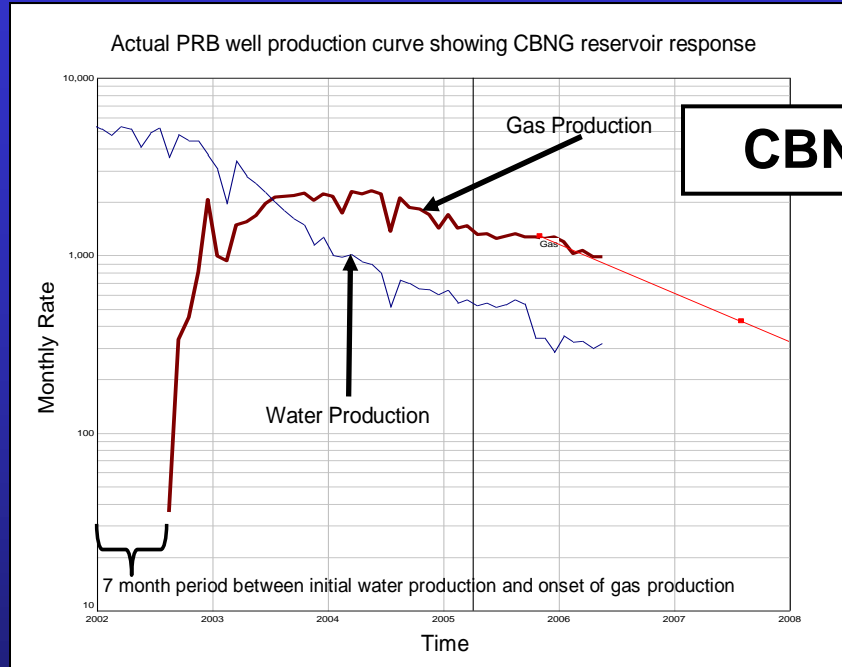
## 1. CBNG Reservoir Characteristics

Actual PRB well production curve showing CBNG reservoir response



# CBNG Unit Design Considerations

## 1. CBNG Reservoir Characteristics

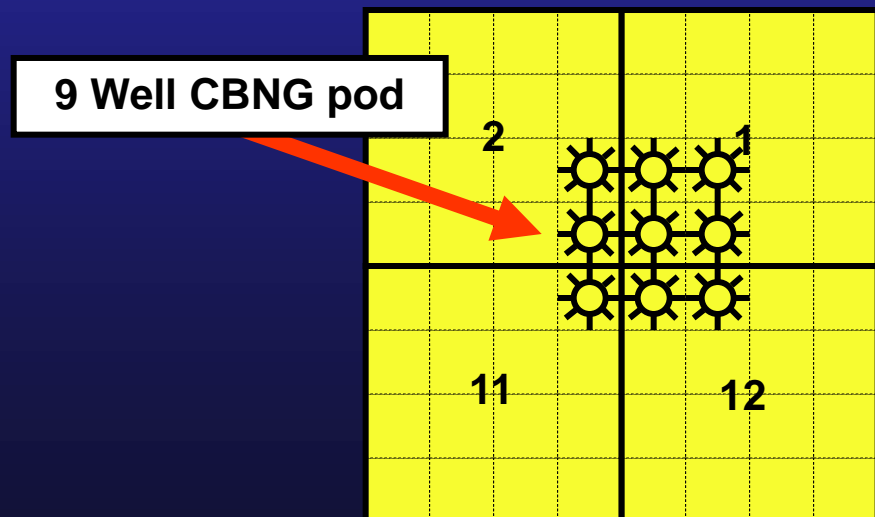


- ✓ Can not reasonably predict well behavior
  - ✓ Ultimate production?
  - ✓ Ultimate life?
  - ✓ Economic viability?
  - ✓ Need different approach for PA inclusion



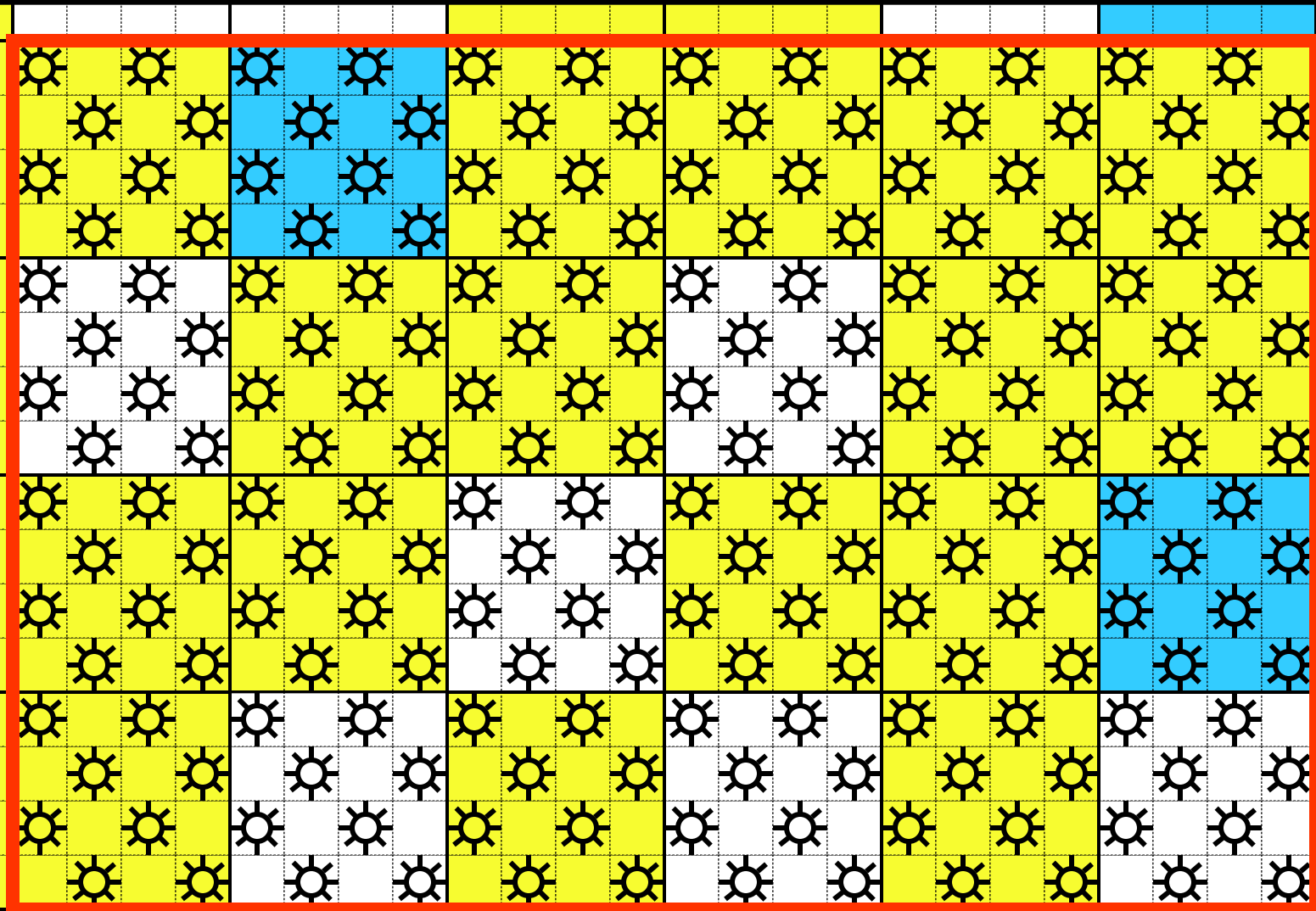
# CBNG Reservoir Characteristics

- ✓ Need to lower reservoir pressure to initiate CBNG production
- ✓ Dewatering wells lower reservoir pressure
- ✓ Dewatering efficiency is gained by drilling wells in a cluster or pod





# CBNG Units – Reservoir Development Model



**Unit Boundary**

# CBNG Unit Design Considerations

1. CBNG Reservoir Characteristics
2. Wells Producing Water (dewatering wells)
3. “Divided Interest” vs. “Undivided Interest”
4. Participating Area Boundary Definition
5. Initial Drilling Obligation
6. Unit Size and Boundary
7. Timely Unit Development



# CBNG Unit Design Considerations

8. Area and Depth Meetings

9. Flexibility

10. CBNG Specific Agreement

11. Plans of Development

12. Effective Control

13. Participating Area Review and Approval



Plugging a well - 1934

# CBNG Units Changes From Model Form Designation Process



214 P10 VI



# CBNG Units

## - Changes from the Model Form -

### Designation Process

- ❖ Area and depth meetings are not required
  - ❖ Geology not driving force



# CBNG Units

## - Changes from the Model Form -

### Designation Process

- ❖ Administrative boundaries allowed with maximum of 25,000 acres
  - ❖ Again, geology not driving force

# CBNG Units

## Changes From Model Form

# Initial Drilling Obligation





# CBNG Units

## - Changes from the Model Form -

### Initial Drilling Obligation

- ❖ Initial drilling obligation will be a pod or cluster of wells
  - ❖ CBNG cannot be efficiently produced with one well



# CBNG Units

## Changes From Model Form

# Unit Contraction



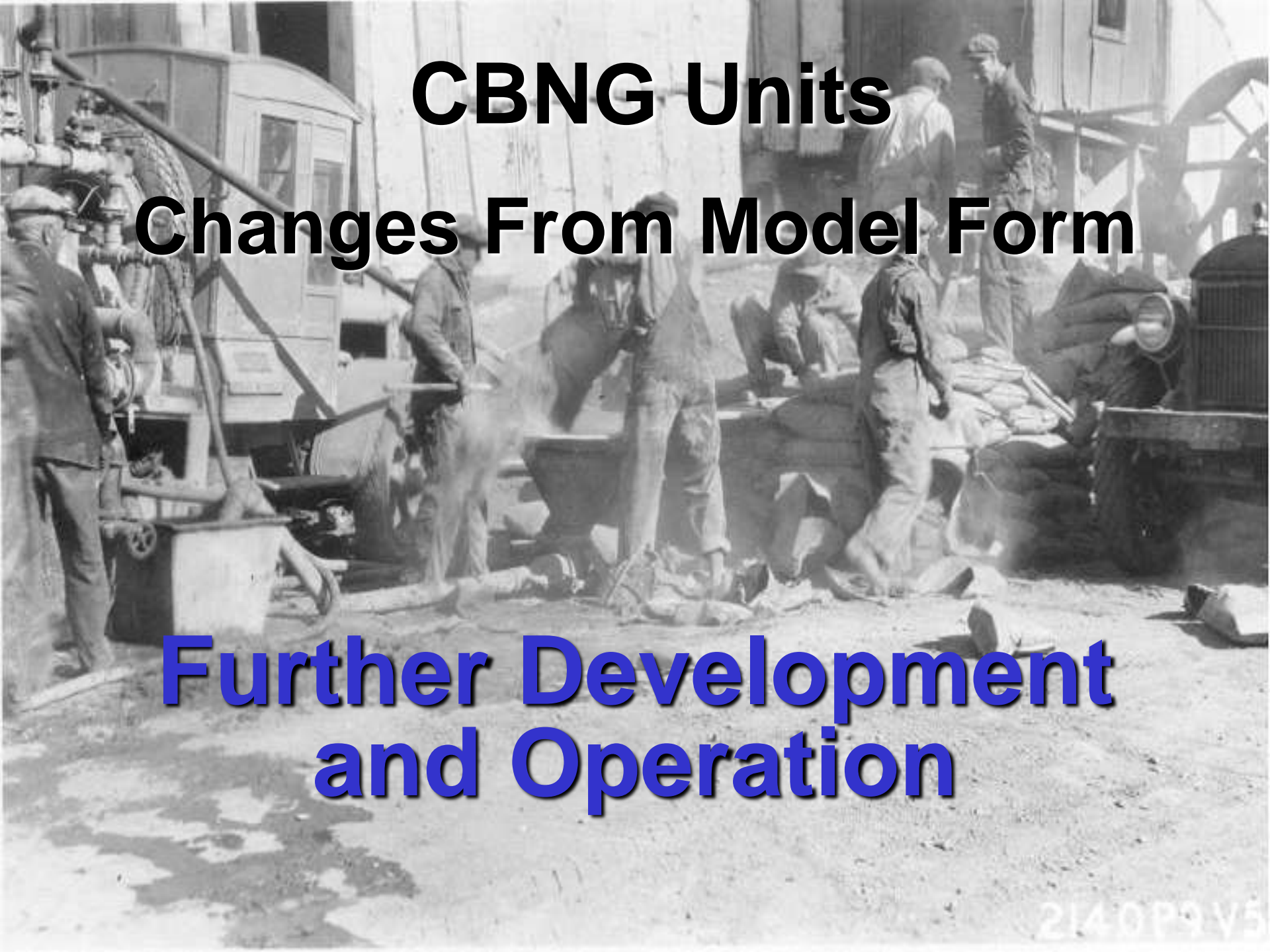


# CBNG Units

## - Changes from the Model Form -

### Unit Contraction

- ❖ Unit boundary will automatically contract to existing PA(s) on 10<sup>th</sup> anniversary of initial PA
  - ❖ No provision to delay contraction if diligent drilling over automatic contraction date



# **CBNG Units Changes From Model Form**

## **Further Development and Operation**



# CBNG Units

## - Changes from the Model Form -

### Further Development and Operation

- ❖ Unit operator required to drill a minimum number of wells each successive year after initial obligation is met, whether an initial PA is formed or not
  - ❖ Carryover of excess wells allowed

# CBNG Units

## Changes From Model Form

# Plan of Development

*Acid Well Treating Truck - 1933*



# CBNG Units

- Changes from the Model Form -

## Plan of Development

- ❖ Plans of development not required.  
However, yearly reviews are required.

# **CBNG Units Changes From Model Form**



**Participation After Discovery**



# CBNG Units

## - Changes from the Model Form -

### Participation After Discovery

- ❖ One well or a combination of wells must meet a “Productivity Requirement” (PR) in order to qualify for inclusion in a PA





# CBNG Units

- Changes from the Model Form -

## Productivity Requirement (PR)

- ❖ Single well
  - ❖ 75 mcf per day for 15 consecutive days



# CBNG Units

## - Changes from the Model Form -

### Productivity Requirement (PR)

- ❖ Combination of Wells
  - ❖ 300 mcf per day cumulative production for combination of wells for 15 consecutive days
  - ❖ Need to set some criteria for establishing the definition of a pod for determination of PR
    - ❖ Based on development spacing



# CBNG Units

## - Changes from the Model Form -

### Productivity Requirement (PR)

- ❖ Combination of Wells
  - ❖ 40 – 80 acre spacing
    - ❖ CBNG wells must be less than 2,000 feet apart
  - ❖ 160 acre spacing
    - ❖ CBNG wells must be less than 4,000 feet apart

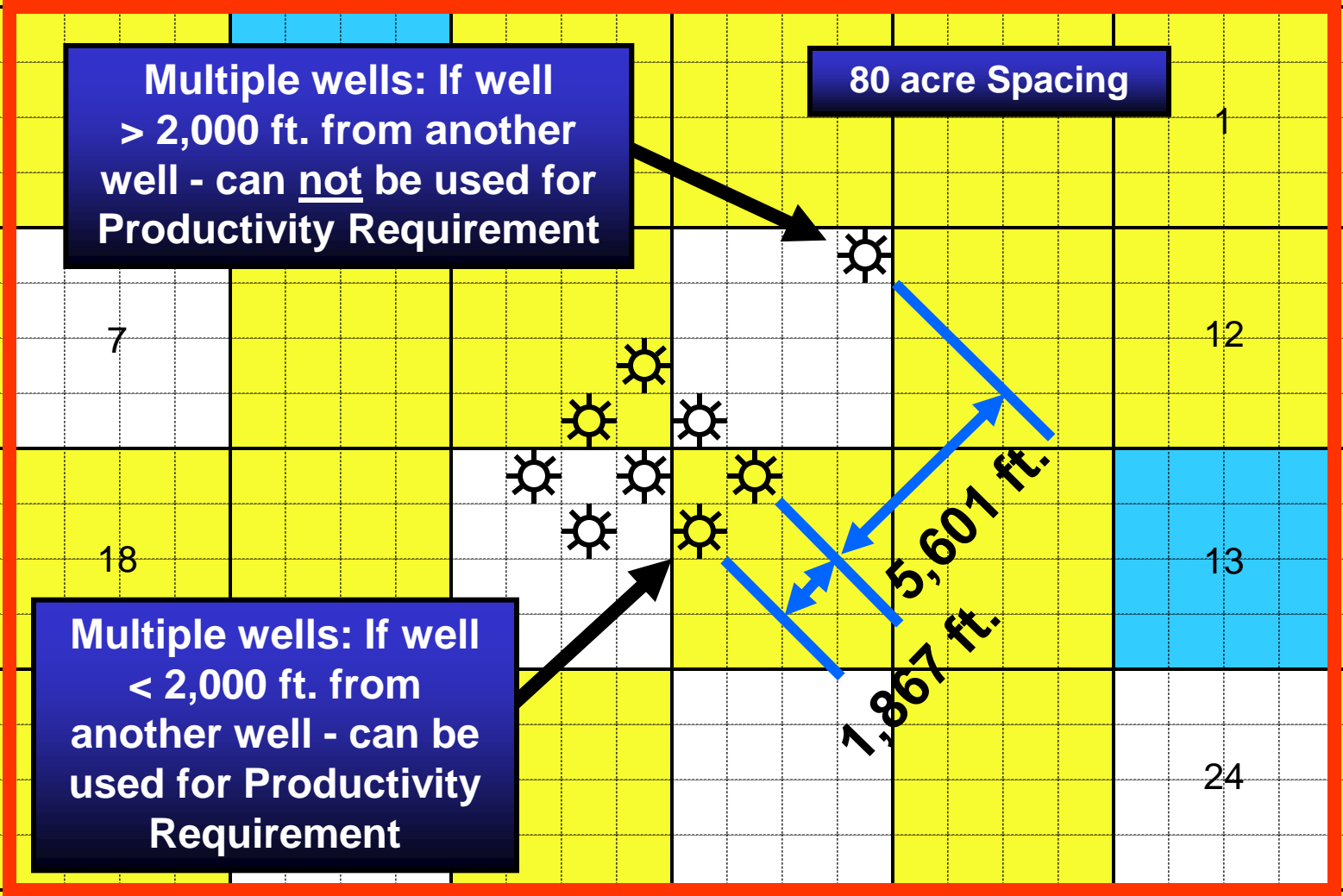
# CBNG Units – Productivity Requirement

Multiple wells: If well > 2,000 ft. from another well - can not be used for Productivity Requirement

Multiple wells: If well < 2,000 ft. from another well - can be used for Productivity Requirement

80 acre Spacing

CBNG Unit Boundary



# CBNG Units – Productivity Requirement

Multiple wells: If well > 4,000 ft. from another well - can not be used for Productivity Requirement

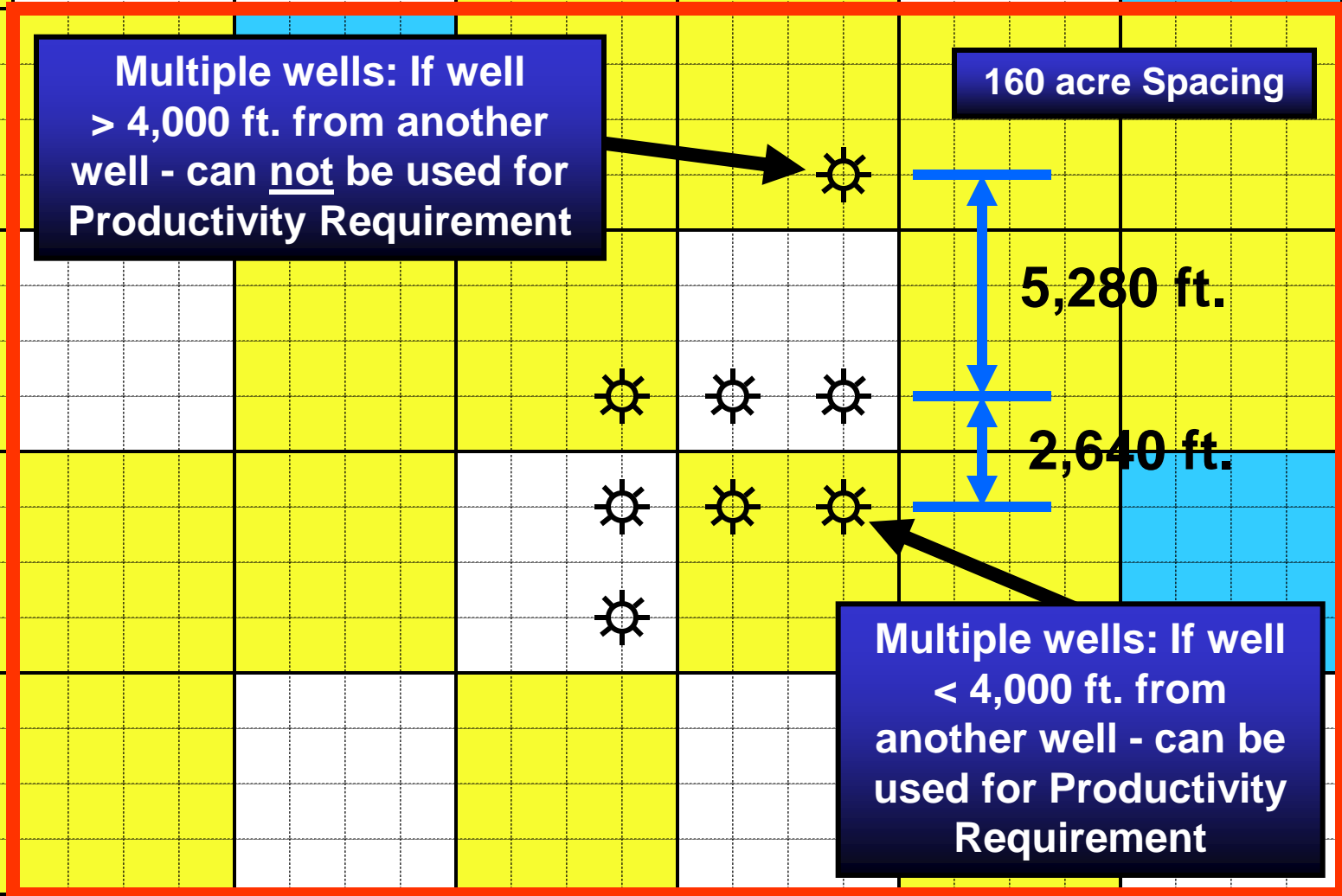
160 acre Spacing

5,280 ft.

2,640 ft.

Multiple wells: If well < 4,000 ft. from another well - can be used for Productivity Requirement

CBNG Unit Boundary





# CBNG Units

## - Changes from the Model Form -

### Productivity Requirement (PR)

- ❖ Once PR met for an initial PA, further revisions of that particular PA do not require any further PR requirements
- ❖ Any new wells/pods apart from existing PA(s) must meet the PR prior to establishment of a new initial PA

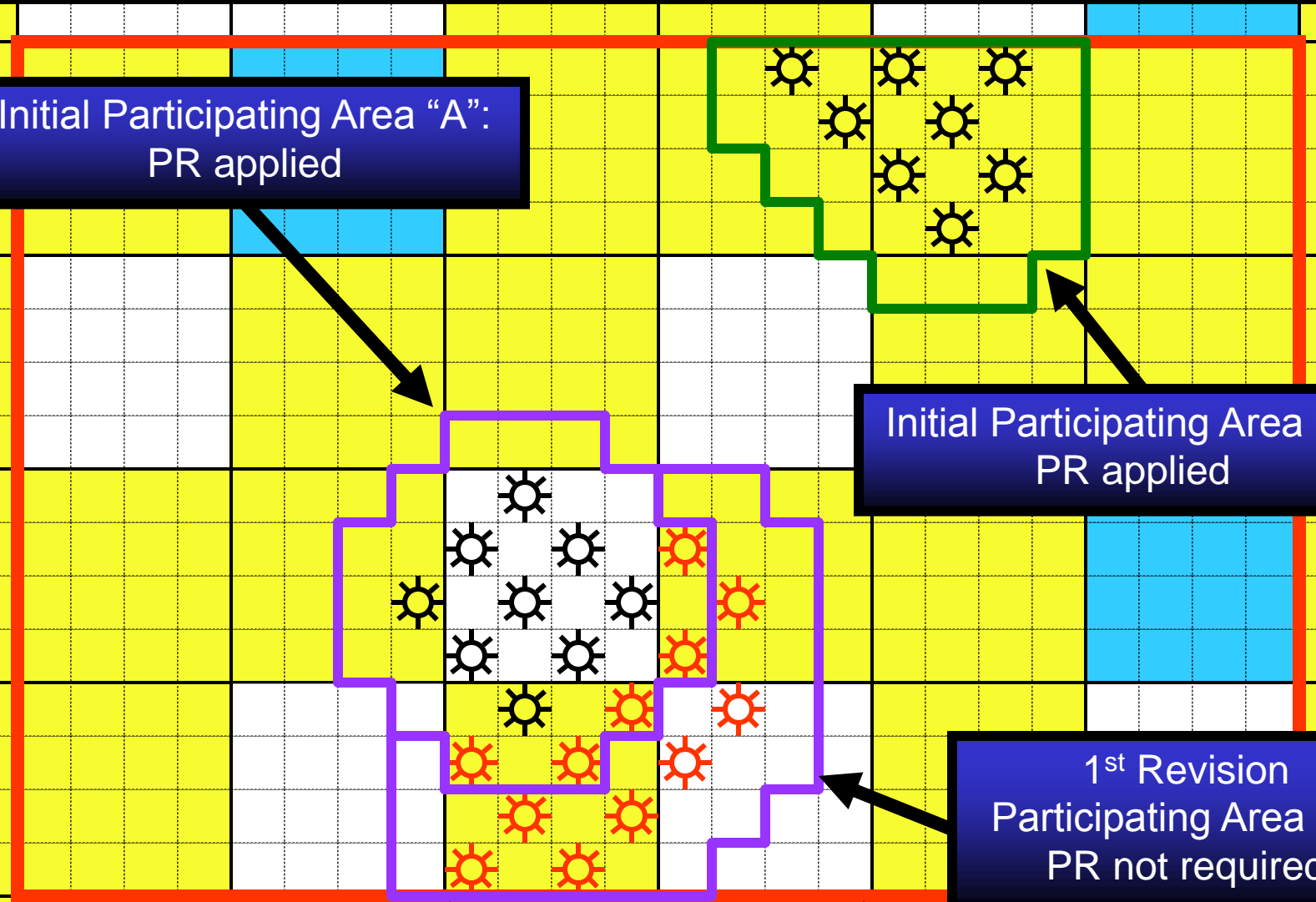
# CBNG Units – Productivity Requirement

Initial Participating Area "A":  
PR applied

Initial Participating Area "B":  
PR applied

1<sup>st</sup> Revision  
Participating Area "A":  
PR not required

Unit Boundary





# CBNG Units

## - Changes from the Model Form -

### PA Boundary Methodology

- ❖ Mechanical Circle Approach
- ❖ 40 acre – 80 acre spacing
  - ❖ PA boundary includes all 40 acre parcels cut by a  $\frac{1}{4}$  mile (1,320') radius circle drawn around any well capable of producing CBNG or any dewatering well which enhances production of the PA
  - ❖ Effective date of initial PA is date of first sales

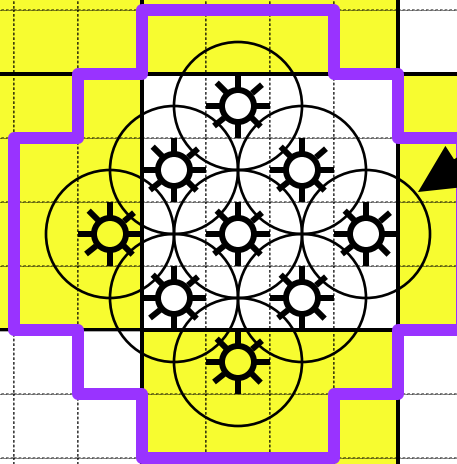


# CBNG Units – Initial Participating Area

Initial Participating Area "A"  
Effective: Date of 1<sup>st</sup> sales

40 acre – 80 acre spacing

$\frac{1}{4}$  mile (1,320') circle  
drawn around:  
- CBNG producer, or  
- dewatering well



Unit Boundary



# CBNG Units

## - Changes from the Model Form -

### PA Boundary Methodology

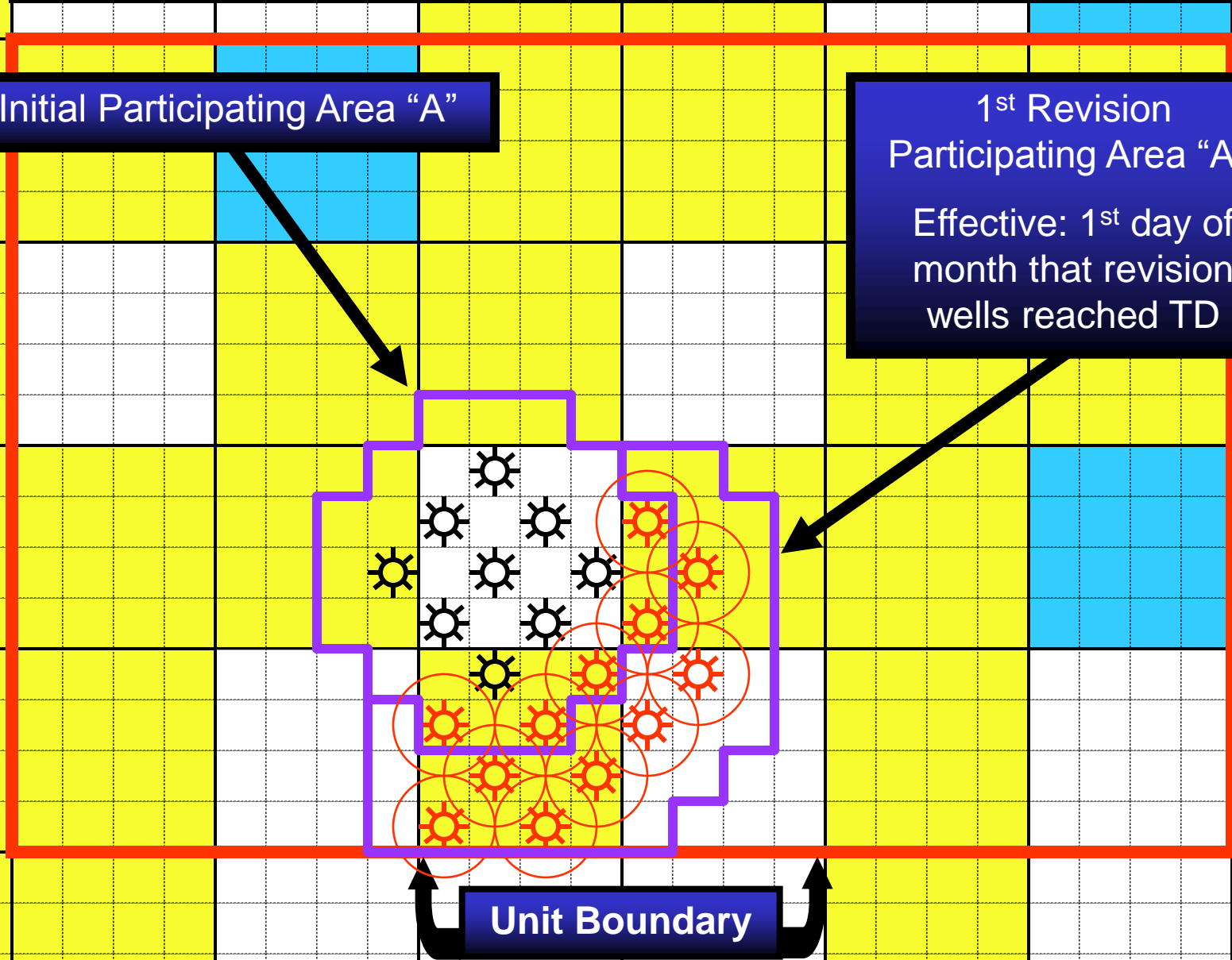
- ❖ PA Revisions
  - ❖ Mechanical circle approach maintained
  - ❖ All wells that reach total depth within a calendar month will be submitted as one PA revision
  - ❖ Effective: First day of month in which PA revision wells reached total depth

# CBNG Units – Participating Areas

Initial Participating Area "A"

1<sup>st</sup> Revision  
Participating Area "A":  
Effective: 1<sup>st</sup> day of  
month that revision  
wells reached TD

Unit Boundary



**Case Farm Tractor used for partial rig power - 1932**

# **CBNG Units**

## **Changes From Model Form**

**Amendment of the  
Unit Agreement**

210.8 P69



# CBNG Units

## - Changes from the Model Form -

### Amendment of the Unit Agreement

- ❖ Terms can be modified by 90 percent of the working interest owners and 60 percent of the basic royalty interest (excluding the Federal royalty interest)

# CBNG Units

## Changes From Model Form

**Required Technical Data**

F.P. 62-356X

210.8 P 182 V3

*Rig, Truck, and Mudding Equipment - Dallas Dome,  
Wyoming: 1935 - Well #5*



# CBNG Units

## - Changes from the Model Form -

### Required Technical Data

- ❖ BLM may modify unit language to require operator to gather technical data
- ❖ Technical data may include:
  - ❖ Drill, complete, and equip groundwater monitoring wells
  - ❖ Collection of whole seam cores
  - ❖ Run detailed suite of well log



# CBNG Units

## - Changes from the Model Form -

### Required Technical Data

- ❖ Data gathering requirements may count toward credit for obligation wells
- ❖ Data used for:
  - ❖ Further understanding of CBNG reservoirs
  - ❖ Planning document technical analysis
  - ❖ Federal drainage technical analysis



# BLM Perspective on CBNG Unit Issues in Wyoming



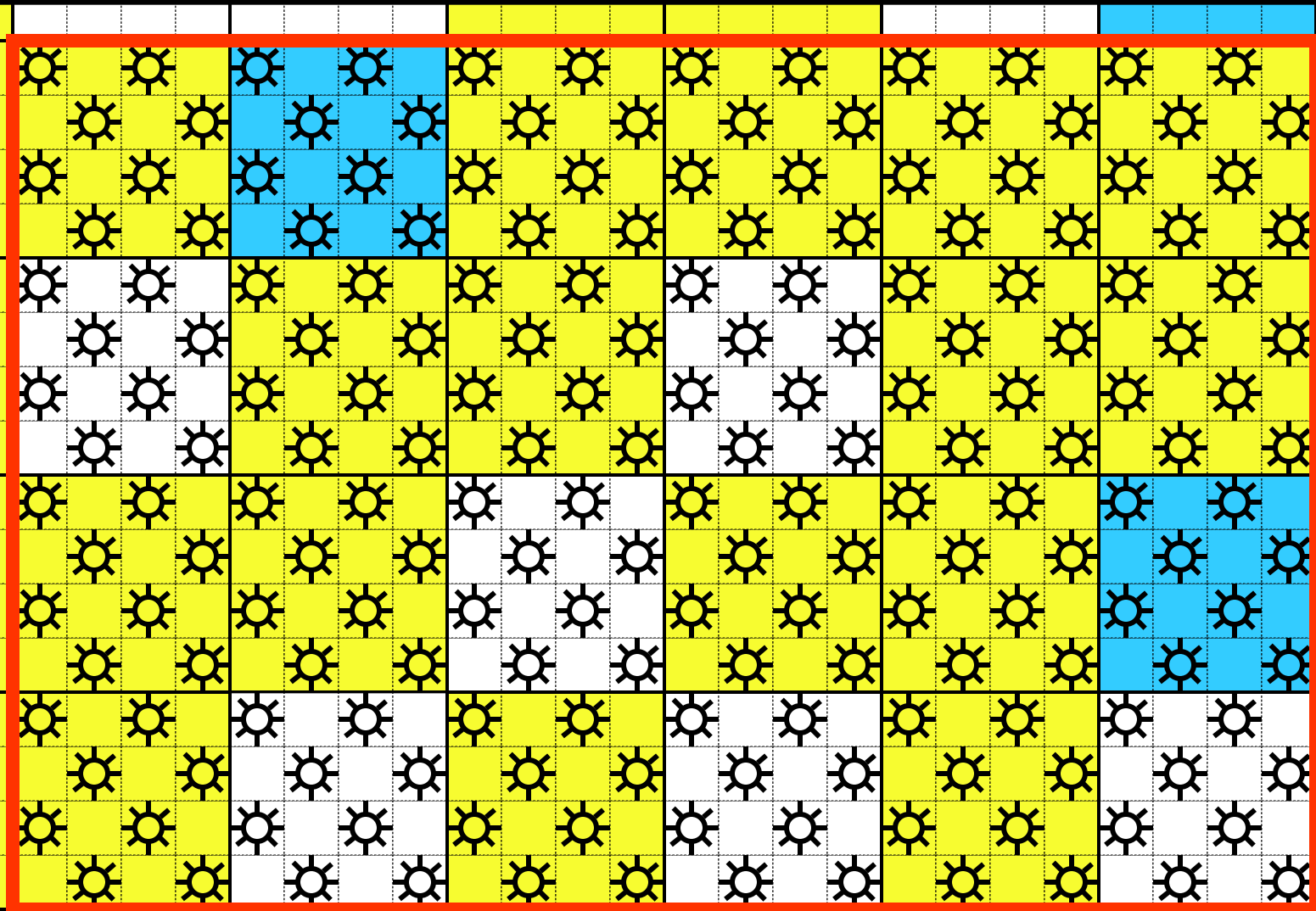
*Oil Hauling Truck*

# CBNG Unit Issues in Wyoming

1. Tracking of wells, obligations, and participating area development is burdensome
2. Frequent changes in locations for initial obligation wells
3. Industry not yet familiar with CBNG unit PA application and approval process
4. Industry struggling to submit timely yearly reviews

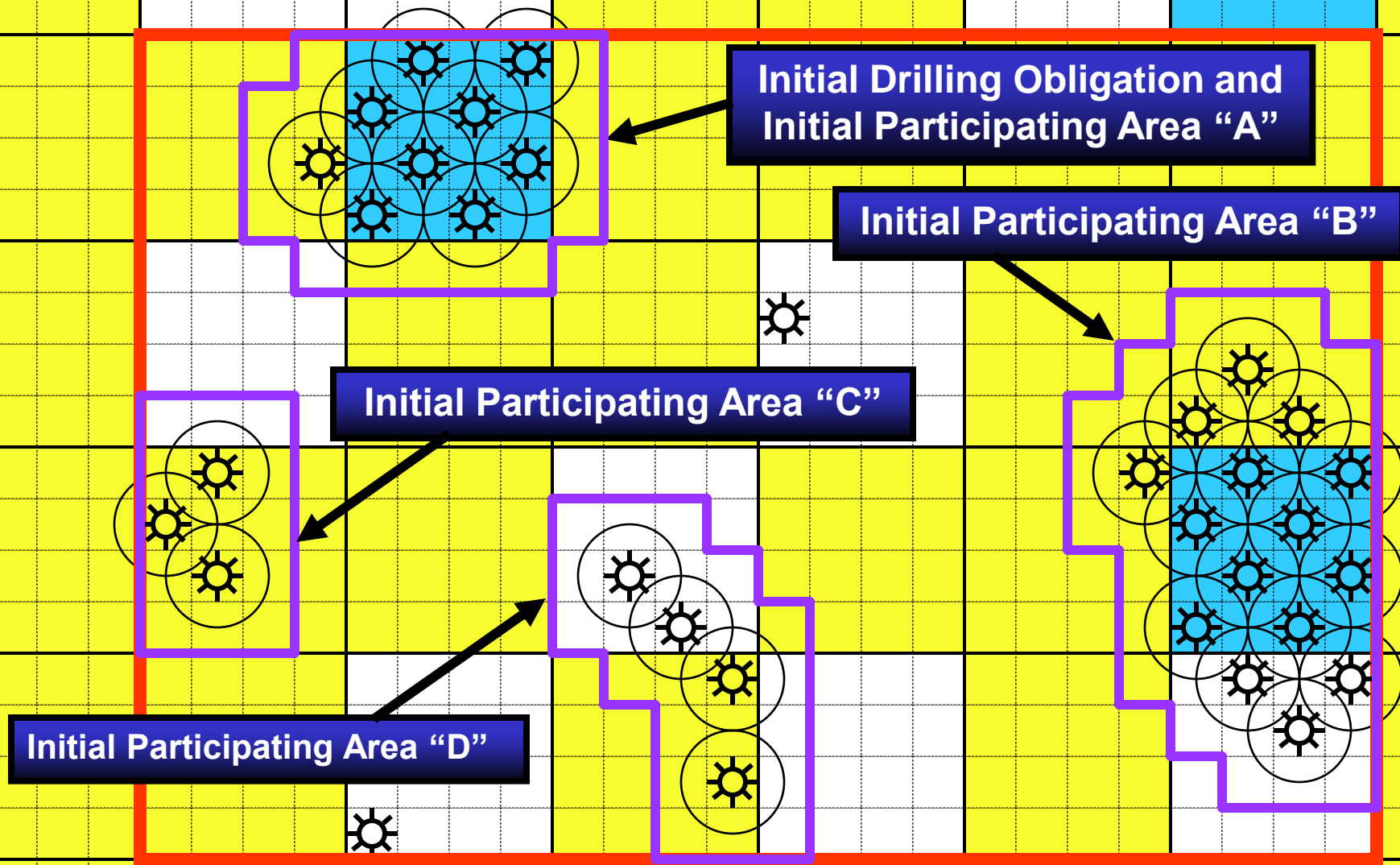


# CBNG Units – Reservoir Development Model



Unit Boundary

# CBNG Units - Reality of Development



**Wyoming Coalbed Natural Gas Units**  
Units Current as of July 1, 2012

**DESIGNATED UNITS ARE RED**



Map prepared by the Wyoming Department of Energy, Natural Resources and Conservation, based on data provided by the Wyoming Geological Survey. The Wyoming Geological Survey is a part of the Wyoming Department of Energy, Natural Resources and Conservation. The Wyoming Geological Survey is not responsible for the accuracy or completeness of the information presented on this map.

# The End



*Plugging Operation - 1937*

# Reporting on Federal Units and Communitization Agreements



Sponsored by RPC Reporting Subcommittee  
September 2012

# Boiler Avenue, Spindletop, 1903





# Reporting Accuracy



From Error Correction to Error Prevention

# Reporting Accuracy



- Accurate reporting is vital to the ONRR mission
- ONRR's goal is for all reporting to go through one electronic interface. In December 2011, EDI reporting is no longer an option.
- Error correction to error prevention – Up-front edits require data to be corrected before submission to ONRR.
- Data Mining processes provide a contemporaneous review to ensure reasonableness of reporting.

# Data Mining



## Current Processes

- Volume Comparison between OGOR and 2014
- Net negative/Net zero reporting
- Repetitive reporting
- Value and volume trending
- Impact of adjustments on price and royalty rate
- PC 03 without PC07 or PC19

## Future Processes

- Adjustments to closed audit periods
- Original line monitoring
- Pricing



# What is Data Mining Finding?



- Missing reports and volumes
- Invalid adjustments
- Agreement Misreporting
  - Missing Agreement Numbers
  - Incorrect reporting of allocations
  - Incorrect lease and/or agreement number used
  - Lease level -vs- agreement level misreporting
  - Incorrect reporting of overlapping agreements

# Establishment of Agreements on ONRR System



# ONRR Establishment of Agreements



- ONRR receives and maintains all allocations schedules of approved agreements
- Reporting is compared to allocations established in ONRR systems
- Don't report on agreement until approval from BLM is received
- Reporting must be adjusted back to effective date of CA, PA or PA revision
- If you don't know a lease or agreement #:
  - Ask your land department
  - Use lists on ONRR website
  - Use LR2000

# Cross Reference Listing

<http://www.onrr.gov/FM/CrossRef.htm>

**Cross-Reference Lease & Agreement Numbers - Windows Internet Explorer**

http://www.onrr.gov/FM/CrossRef.htm

Home Financial Management **Cross-Reference Lease & Agreement Numbers**

ONRR THE OFFICE OF NATURAL RESOURCES REVENUE	VALUATION FEDERAL & INDIAN PRICES/VALUATION	INDUSTRY PAYORS & REPORTERS	PROGRAMS A LIST OF ONRR PROGRAMS	CONTACTS WHO TO CONTACT
140800016793A	891006793A(sp)			
NCR54	6910000540(sp)			
CO050A2085C	65985C1040(sp)			
UTU60786A	U(sp)(sp)(sp)60786A(sp)			

The files below provide lists of information you can use to determine the appropriate MMS converted Agreement number to enter on Form MMS-2014. Remember to refer to the appropriate CSV/ASCII or EDI X-12 record layout.

The files consist of:

**Leases**

- Active Leases - Sorted by State and Agency Lease Number (PDF) (updated 7/6/2012)

**Agreements**

- Active Agreements - sorted by State and Agreement Name (PDF) (updated 7/6/2012)
- Active Agreements - sorted by State and Agency Agreement Number (PDF) (updated 7/6/2012)
- Cross-Reference Lease to Agreement Numbers sorted by Agreement Name (PDF) (updated 7/6/2012)
- Cross-Reference Lease to Agreement Numbers sorted by Agreement Number (PDF) (updated 7/6/2012)
- Cross-Reference Lease to Agreement Numbers sorted by Lease Number (PDF) (updated 7/6/2012)
- Downloadable Text Cross-Reference Lease to Agreement Number (updated 8/8/2012)

Agreements Cross-Referenced to former Accounting Identification (AI)

Click Cross-Reference Lease to Agreement and select preferred sort

# Cross Reference Listings

Address: <http://www.mrm.mms.gov/reportingservices/PDFDocs/CRLNumber.pdf>

Search: Looking For: Prickly Pear in the current PDF document. Results: 1 documents with instances.

Click on binoculars to query by lease body, unit name or unit number.

171 0734850	U	81653X	EXPL	CACTUS ROSE	ALL
171 0734860	U	81653X	EXPL	CACTUS ROSE	ALL
171 0734870	U	81653X	EXPL	CACTUS ROSE	ALL
171 0734890	U	81653X	EXPL	CACTUS ROSE	ALL
171 0734900	U	81653X	EXPL	CACTUS ROSE	ALL
171 0735280	U	80800A	PUNT	WOLVERINE UNIT	INIT. NAVAJO
				WOLVERINE	ALL
				WOLVERINE	ALL
				WOLVERINE	ALL
				WOLVERINE	ALL
				P 3-74	FERRON SANDSTONE
				WELL 3-92	FERRON
				PRICKLY PEAR	ALL
				PRICKLY PEAR	ALL
				PRICKLY PEAR	ALL
				PRICKLY PEAR	INT.WSTC-MSVD A
				PRICKLY PEAR	ALL
				PRICKLY PEAR	ALL
				STIRRUP UNIT	INIT.WAST-MSVD E
				STIRRUP UNIT	WASATCH
				THE MULLIGAN UNIT	ALL
				BUCK CAMP	ALL
				BUCK CAMP	ALL
				BUCK CAMP	ALL
				BUCK CAMP	ALL
				BUCK CAMP	ALL
				BUCK CAMP	ALL
				BIG VALLEY UNIT	ALL
				BLACK DRAGON	ALL
				BONANZA UNIT	ALL
				DRUNKARDS WASH	CONSOL. FERRON A,C
				DRUNKARDS WASH	INT CONS FERRON ACD
				DRUNKARDS WASH UNIT	ALL
				FEE #8-62	FERRON
				8-63 (FEE)	FERRON
				DRUNKARDS WASH	INT CONS FERRON ACD
				DRUNKARDS WASH UNIT	ALL












# BLM Lease & Agreement Info

## www.blm.gov/lr2000

Address  http://www.blm.gov/lr2000/  Go  Links 

**U.S. DEPARTMENT OF THE INTERIOR**  
**BUREAU OF LAND MANAGEMENT**



**LR2000**

Search BLM   Print Page

**LR2000 Home**  
About  
Run Reports  
Tutorial  
Help Guides  
Reference Codes  
Contact Us

**Message Center**

**BLM Open House**  
Reno, Nevada  
Thursday Feb. 28th  
Learn how to use  
**LR2000**  
For more info

LR2000 has a new look and a new simplified report: Oil


### Bureau of Land Management's Land & Mineral Legacy Rehost 2000 System - LR2000

The Bureau of Land Management's Legacy Rehost System called LR2000 provides reports on BLM land and mineral use authorizations for oil, gas, and geothermal leasing, rights-of-ways, coal and other mineral development, land and mineral interests, mining claims, withdrawals, classifications, and more on federal lands or on federal mineral estate.

**To retrieve a Serial Register Page, click "Reports".**


**in LR2000:**

- **Serial Register Page** - provides all online information about the authorization including status, geographic location, authorized land, customer information, acreage, dates (effective, expiration, etc), and other information.
- **Customer Information Reports** - provides all the authorizations, mining claims, etc. for a customer.
- **Geographic Reports** - provides a listing of authorizations, mining claims, title, etc. within a specific geographic area and may include serial number, acreage, authorized land, customer info, federal agency, authorization type and disposition (active, closed, pending, etc). Statistical reports for an area can also be run. [More ...](#)
- **Check out our new Report - Oil and Gas Leases Due to Expire.** This is a very simple report with only a few options but it doesn't require you to know any



#### System Requirements

- IE 6 or higher
- Enable popups
- Enable Scripting

Done  Internet

# BLM Lease & Agreement Info

LR2000 Public Reports Reporting Application - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address <http://www.blm.gov/landandresourcesreports/rptapp/menu.cfm?appCd=2>

U.S. DEPARTMENT OF THE INTERIOR  
**BUREAU OF LAND MANAGEMENT**

Reporting Application

Search BLM Go

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Help Guides  
Reference Codes  
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Report Summaries

**REPORTS MENU FOR LR2000 PUBLIC REPORTS**  
Please Choose a Report

*SIMPLIFIED FREQUENTLY REQUESTED QUERIES*

- Oil And Gas Leases Due To Expire

*PUBLIC ALL SYSTEMS REPORTS*

- Pub All Systems Customer Info
- Pub All Systems Geo Report
- Pub All Systems Geo Supp Report

*PUBLIC CASE RECORDATION REPORTS*

- Pub CR Case Action Info
- Pub CR Case Info
- Pub CR Case Info Cust Land
- Pub CR Duration Of Plans
- Pub CR Geo Report W/Customer
- Pub CR Geo Report w/Land
- Pub CR Serial Register Page
- Pub CR Wind Energy Applications

*PUBLIC LEGAL LAND DESCRIPTION REPORTS*

- Pub LLD Acreage Report
- Pub LLD Summary Report

Click "Pub CR Serial Register Page".

javascript:doSubmit('criteria\_select.cfm?rptId=15&APPCD=2&')

Internet 2:42 PM

# BLM Lease & Agreement Info

Address [http://www.blm.gov/landandresourcesreports/rptapp/criteria\\_select.cfm?rptId=38&APPCD=2&](http://www.blm.gov/landandresourcesreports/rptapp/criteria_select.cfm?rptId=38&APPCD=2&) Go Links »

U.S. DEPARTMENT OF THE INTERIOR  
**BUREAU OF LAND MANAGEMENT**

Reporting Application

Return to Report Menu (Public)

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**PUB CR SERIAL REGISTER PAGE (LR2000 PUBLIC REPORTS)**

Please Choose Which Criteria You Would Like to Filter On Help

- Individual Serial Number(s)
- New Format Serial Entry
- Serial Number Range
- Serial Number(s) from File
- Daily serial register
- Other Query Parameters

Select Criteria

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# BLM Lease & Agreement Info

The screenshot shows a Microsoft Internet Explorer browser window displaying the BLM Reporting Application. The browser's address bar shows the URL: [http://www.blm.gov/landandresourcesreports/rptapp/report\\_filter.cfm#](http://www.blm.gov/landandresourcesreports/rptapp/report_filter.cfm#). The page header includes the BLM logo and the text "U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT". The main heading is "Reporting Application". Below this, there are several small images representing different BLM activities: wind turbines, a person fishing, a bison, cows, and an oil pumpjack. A navigation bar contains "Return to Report Menu" and "Return to Criteria Selection".

The main content area is titled "PUB CR SERIAL REGISTER PAGE (LR2000 PUBLIC REPORTS)" and "Please Set the Limits You Would Like to Filter On". It features a "NEW FORMAT SERIAL ENTRY" form with the following fields and controls:

- GEO STATE:** A drop-down menu currently showing "WY WYOMING". A yellow callout box points to this menu with the text: "Select 'GEO STATE' from drop-down menu."
- LAND OFFICE:** A drop-down menu currently showing "W". A yellow callout box points to this menu with the text: "Select 'LAND OFFICE' from drop-down menu."
- SERIAL NUMBER:** A text input field containing "37977". A yellow callout box points to this field with the text: "Enter Serial Number".
- Enter Value:** A green button located below the Serial Number field. A yellow callout box points to this button with the text: "Click on 'Enter Value'".

Other form elements include a "Clear All" button next to the GEO STATE dropdown, checkboxes for "PREFIX" and "SUFFIX", and "Enter Value" and "Clear" buttons at the bottom of the form. At the very bottom of the page, there are "Run Report" and "Reset" buttons. A footer contains various links: USA.GOV, No Fear Act, DOI, Disclaimer, About BLM, Notices, Get Adobe Reader, Privacy Policy, FOIA, Kids Policy, Contact Us, Accessibility, Site Map, and Home.

# BLM Lease & Agreement Info

Report: Pub CR Serial Register Page - Microsoft Internet Explorer

Address [http://www.blm.gov/landandresourcesreports/rptapp/report\\_filter.cfm](http://www.blm.gov/landandresourcesreports/rptapp/report_filter.cfm)

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**BUREAU OF LAND MANAGEMENT**

Reporting Application

Return to Report Menu    Return to Criteria Selection    (Public)

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**PUB CR SERIAL REGISTER PAGE (LR2000 PUBLIC REPORTS)**  
Please Set the Limits You Would Like to Filter On    Help

*NEW FORMAT SERIAL ENTRY*

GEO STATE: WY WYOMING    Clear All

LAND OFFICE: W

PREFIX:

Serial Number: 37977

SUFFIX:

Enter Value    Clear

Run Report    Reset

Microsoft Internet Explorer

Serial Number CORRECT?  
WYW--- - 037977

OK    Cancel

Click "OK"

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# BLM Lease & Agreement Info

Report: Pub CR Serial Register Page - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address [http://www.blm.gov/landandresourcesreports/rptapp/report\\_filter.cfm](http://www.blm.gov/landandresourcesreports/rptapp/report_filter.cfm)

U.S. DEPARTMENT OF THE INTERIOR  
**BUREAU OF LAND MANAGEMENT**

Reporting Application

Return to Report Menu Return to Criteria Selection (Public)

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**PUB CR SERIAL REGISTER PAGE (LR2000 PUBLIC REPORTS)**  
Please Set the Limits You Would Like to Filter On [Help](#)

*NEW FORMAT SERIAL ENTRY*

GEO STATE

LAND OFFICE

PREFIX

Serial Number

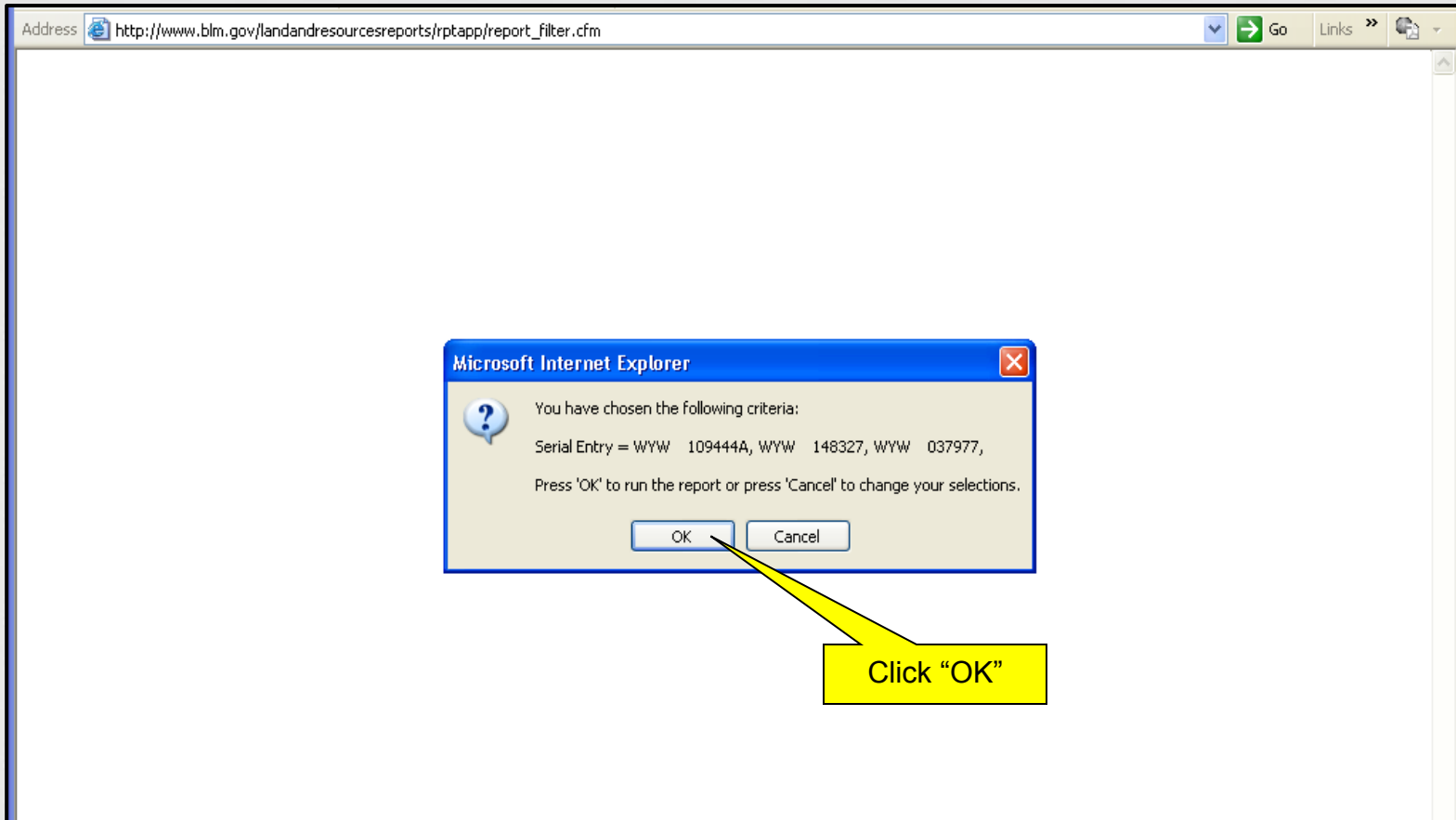
SUFFIX

Click "Run Report"

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# BLM Lease & Agreement Info



# BLM Lease & Agreement Info

Address <http://www.blm.gov/Hyperion/html/OpenDoc?DocInstanceID=1&DocUID=00001096eee68e3-0000-11ac-0a780c388&DocVersion=1&isSmartcut=true> Go Links

Serial Register Page Go

 **DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
CASE RECORDATION  
(MASS) Serial Register Page**

RunDate/Time: 01/30/08 08:58 AM

**01 02-25-1920;041STAT0437;30USC181ETSEQ**  
**Case Type 311211: O&G LSE SIMO PUBLIC LAND**  
**Commodity 459: OIL & GAS L**  
**Case Disposition: AUTHORIZED**

**Total Acres 80.000**  
**Serial Number WYW--- - 037977**

**Serial Number: WYW--- - 037977**  
**Int Rel % Interest**

Name & Address				
CHEVRON USA INC	PO BOX 36366	HOUSTON TX 77236	LESSEE	0.00000000
LEE WILEY MONCRIEF 1988 TRST	PO BOX 2546	FORT WORTH TX 76113	LESSEE	0.00000000
MICHAEL J MONCRIEF GRNTRS TRST	777 TAYLOR ST #1030	FORT WORTH TX 76102	LESSEE	0.00000000
MINDYANNE E MONCRIEF TRUST	777 TAYLOR ST #1030	FORT WORTH TX 761024972	LESSEE	0.00000000
MONCRIEF C B	950 COMMERCE ST	FORT WORTH TX 761025418	LESSEE	0.00000000
MONCRIEF W A	950 COMMERCE ST	FORT WORTH TX 761025418	LESSEE	0.00000000
MONCRIEF W A JR	950 COMMERCE ST	FORT WORTH TX 761025418	LESSEE	0.00000000
MONCRIEF W A JR	950 COMMERCE ST	FORT WORTH TX 761025418	OPERATOR	0.00000000
MONTY BRENNAN MONCRIEF TRUST	777 TAYLOR ST #1030	FORT WORTH TX 761024972	LESSEE	0.00000000
RICHARD JASON MONCRIEF TRUST	777 TAYLOR ST #1030	FORT WORTH TX 761024972	LESSEE	0.00000000
RHAM 1988 TRUST	950 COMMERCE ST	FORT WORTH TX 761025418	LESSEE	0.00000000
T O MONCRIEF TRUST	950 COMMERCE ST	FORT WORTH TX 761025418	LESSEE	0.00000000

**Serial Number: WYW--- - 037977**

Mer Twp	Rng	Sec	S Typ	S Nr	Suff	Subdivision	District/Resource Area	County	Mgmt Agency
06	0370N	0860000030	ALIQ			SWNE;	CASPER FIELD OFFICE	NATRONA	BUREAU OF LAND MGMT

In order to print, you must convert the file to .pdf format.

# BLM Lease & Agreement Info

Address <http://www.blm.gov/Hyperion/ihhtml/Request?DocUID=000001096eee68e3-0000-11ac-0a780c38&DocInstanceID=1&SectionName=Serial%2520Register%25> Go Links

1 / 6 101% Sign Find

**DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
CASE RECORDATION  
(MASS) Serial Register Page**

To print a hard copy,  
Click the printer icon.

Page 1 of 6

**01 02-25-1920;041STAT0437;30USC181ETSEQ**  
**Case Type 311211: O&G LSE SIMO PUBLIC LAND**  
**Commodity 459: OIL & GAS L**  
**Case Disposition: AUTHORIZED**

**Total Acres 80.000**  
**Serial Number WYW--- - 037977**

**Serial Number: WYW--- - 037977**

Name & Address				Int Rel	Interest
CHEVRON USA INC	PO BOX 36366	HOUSTON TX 77236	LESSEE		0.000000000
LEE WILEY MONCRIEF 1988 TRST	PO BOX 2546	FORT WORTH TX 76113	LESSEE		0.000000000
MICHAEL J MONCRIEF GRNTRS TRST	777 TAYLOR ST #1030	FORT WORTH TX 76102	LESSEE		0.000000000
MINDYANNE E MONCRIEF TRUST	777 TAYLOR ST #1030	FORT WORTH TX 761024972	LESSEE		0.000000000
MONCRIEF C B	950 COMMERCE ST	FORT WORTH TX 761025418	LESSEE		0.000000000
MONCRIEF W A	950 COMMERCE ST	FORT WORTH TX 761025418	LESSEE		0.000000000
MONCRIEF W A JR	950 COMMERCE ST	FORT WORTH TX 761025418	LESSEE		0.000000000
MONCRIEF W A JR	950 COMMERCE ST	FORT WORTH TX 761025418	OPERATOR		0.000000000
MONTY BRENNAN MONCRIEF TRUST	777 TAYLOR ST #1030	FORT WORTH TX 761024972	LESSEE		0.000000000
RICHARD JASON MONCRIEF TRUST	777 TAYLOR ST #1030	FORT WORTH TX 761024972	LESSEE		0.000000000
RWM 1988 TRUST	950 COMMERCE ST	FORT WORTH TX 761025418	LESSEE		0.000000000
T O MONCRIEF TRUST	950 COMMERCE ST	FORT WORTH TX 761025418	LESSEE		0.000000000

**Serial Number: WYW--- - 037977**

# LR2000 Serial Register Page

**DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
CASE RECORDATION  
(MASS) Serial Register Page**

RunDate/Time: 01/20/09 08:02 AM

Page 1 of 2

01 02-25-1920;041STAT0437;30USC181

Total Acres  
640.000

Serial Number  
MTM--- - 069248

Case Type 318310: O&G COMMUNITIZATION AGRMT

Commodity 410: NATURAL GAS LC

Case Disposition: AUTHORIZED

Serial Number: MTM--- - 069248

Name & Address

Int Rel % Interest

BLM GREAT FALLS FS	1101 15TH ST NORTH	GREAT FALLS MT 59403	OFFICE OF RECORD	0.00000000
OMIMEX CANADA LTD	2001 BEACH ST STE 810	FORT WORTH TX 761032300	OPERATOR	100.00000000

Serial Number: MTM--- - 069248

Mer Twp	Rng	Sec	STyp	SNr	Suff	Subdivision	District/Resource Area	County	Mgmt Agency
20	0380N	0320E	017			ALIG ALL;	MALTA FIELD OFFICE	PHILLIPS	BUREAU OF LAND MGMT

Serial Number: MTM--- - 069248  
Pending Office

Act Date	Code	Action	Action Remarks
08/01/1980	387	CASE ESTABLISHED	
08/01/1980	501	REFERENCE NUMBER	CA-NCR144;

# Reporting on Federal Units and Communitization Agreements



Properly Allocating Agreement  
Production

# Allocation Schedule

## Leucite Hills Unit, Consolidated Frontier/Dakota PA A 891011626A

EXHIBIT "B"						
Consolidated Frontier/Dakota Participating Area A						
Tract Number	Lease Number or Type of Land	Legal Description	Participating Acreage	Percent of Participation	Working Interest Owners	
<b>Federal</b>						
1	W-053566	T22N, R103W Sec.28; NE¼NW¼, S½NW¼	120.00	9.37500%	Wex Company	53.2805%
					Sam Resources	32.4709%
					Bird Oil	11.5628%
					Dango Production	2.6858%
2	W-053566-A	T22N, R103W Sec.28; NW¼NW¼	40.00	3.12500%	Wex Company	53.2805%
					Sam Resources	32.4709%
					Bird Oil	11.5628%
					Dango Production	2.6858%
3	W-055514	T22N, R103W Sec.28; W½SE¼, NE¼SE¼	120.00	9.37500%	Wex Company	53.2805%
					Sam Resources	32.4709%
					Bird Oil	11.5628%
					Dango Production	2.6858%
4	W-055514-A	T22N, R103W Sec.28; SE¼SE¼	40.00	3.12500%	Wex Company	53.2805%
					Sam Resources	32.4709%
					Bird Oil	11.5628%
					Dango Production	2.6858%
7	W-0265438	T22N, R103W Sec.28; NE¼SW¼	320.00	25.00000%	Wex Company	53.2805%
					Sam Resources	32.4709%
					Bird Oil	11.5628%
					Dango Production	2.6858%
15	Fee	T22N, R103W Sec.29; All	640.00	50.00000%	Wex Company	53.2805%
					Sam Resources	32.4709%
					Bird Oil	11.5628%
					Dango Production	2.6858%

# Allocation Schedule

## Leucite Hills Unit, Consolidated Frontier/Dakota PA A 891011626A

Exhibit "B"  
Consolidated Frontier/Dakota Participating Area A

Summary

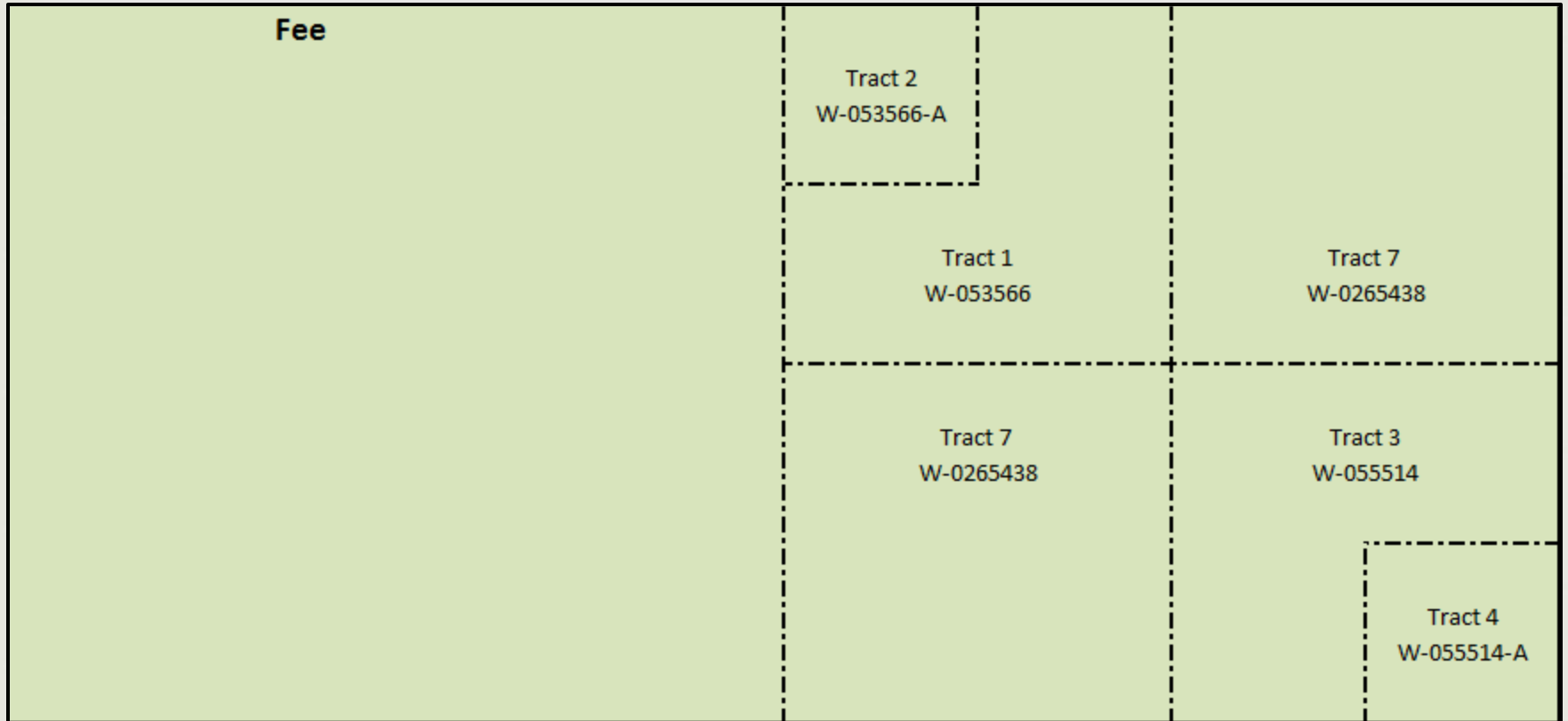
	Total Acreage	Committed Acreage	Non Committed Acreage	Percent of Participation
(5)Federal Lands	640.00	640.00	0.00	50.00%
(1)Fee Lands	640.00	640.00	0.00	50.00%
	<u>1280.00</u>	<u>1280.00</u>	<u>0.00</u>	<u>100.00%</u>

Working Interest Owners

Wex Company	53.2805%
Sam Resources	32.4709%
Brid Oil	11.5628%
Dango Production	<u>2.6858%</u>
	100.0000%

# Exhibit C

## Consolidated Frontier/Dakota Participating Area A





# Properly Allocating Agreement Production



## Allocations for Federal Leases

Sub-division	Tract	Lease Number	Acres	Lease Portion Percent	Mineral Interest Percent	Net Allocation Percentage	Date in Agreement	Allocation Start Date	Allocation End Date
001	001	<u>0480535660</u>	120	9.3750	100.0000	9.3750	11/1/1974	11/1/1974	12/31/9999
002	002	<u>048053566A</u>	40	3.1250	100.0000	3.1250	11/1/1974	11/1/1974	12/31/9999
003	003	<u>0480555140</u>	120	9.3750	100.0000	9.3750	11/1/1974	11/1/1974	12/31/9999
004	004	<u>048055514A</u>	40	3.1250	100.0000	3.1250	11/1/1974	11/1/1974	12/31/9999
005	007	<u>0482654380</u>	320	25.0000	100.0000	25.0000	11/1/1974	11/1/1974	12/31/9999

# Reporting Royalties based on a Participating Area's Allocation Schedule

## Tract #1

5	6	7	10	11	12	13	14	15
LINE NUMBER	RESERVED FOR PREPARER'S USE	MMS LEASE NUMBER	PRODUCT CODE	SALES TYPE CODE	SALES MO/YR (MM/CCYY)	TRANSACTION CODE	ADJUSTMENT REASON CODE	SALES VOLUME (Mcf/bbl/gal/long ton)
	8 API WELL NUMBER	9 MMS AGREEMENT NUMBER						19 ROYALTY VALUE PRIOR TO ALLOWANCES \$
1	PA Example	048 053566 0	01	ARMS	012010	01		187 50
		891 011626 A						

**2000 bbls sold x 9.375% allocation = 187.50**

# Reporting Royalties based on a Participating Area's Allocation Schedule



## Tract #2

Lease # 048053566A – 2,000 bbls x 3.125% = 62.50

## Tract #3

Lease 0480555140 – 2,000 bbls x 9.375% = 187.50

## Tract #4

Lease 048055514A – 2,000 bbls x 3.125% = 62.50

## Tract #7

Lease 0482654380 – 2,000 bbls x 25% = 500

**Don't forget to include the Agreement Number on the 2014**

# Properly Allocating Agreement Production



The following examples demonstrate each  
working interest owner paying royalties

# Working Interest Ownership

## 891011626A



---

Wex Company	53.2805%
Sam Resources	32.4709%
Bird Oil	11.5628%
Dango Production	2.6858%

# Royalty Reporting by **Multiple Payors** By Interest Ownership Percentage

5	6	7	10	11	12	13	14	15
LINE NUMBER	RESERVED FOR PREPARER'S USE	MMS LEASE NUMBER	PRODUCT CODE	SALES TYPE CODE	SALES MO/YR (MM/CCYY)	TRANSACTION CODE	ADJUSTMENT REASON CODE	SALES VOLUME (Mcf/bbl/gal/long ton)
	8	9						19
	API WELL NUMBER	MMS AGREEMENT NUMBER						ROYALTY VALUE PRIOR TO ALLOWANCES \$
1	<b>PA Example</b>	048 053566 0	01	ARMS	012010	01		99 90
		891 011626 A						

**Wex – 2000 bbls x 9.375% x 53.2805% = 99.90**

Royalty Reporting by **Multiple Payors**  
Lease 0480535660, Agreement 891011626A



Tract 1

Sam – 2000 bbls x 9.375% x 32.4709% = 60.88

Bird – 2000 bbls x 9.375% x 11.5628% = 21.68

Dango – 2000 bbls x 9.375% x 2.6858% = 5.04

{Total production-PA} x {% of Participation} x {Working Interest %}

**Don't forget to include the Agreement Number on the 2014**

# Royalty Reporting by **Multiple Payors** Wex Company



## Tract #2

Lease 048053566A: 2000 bbls x 3.125% x 53.2805% = 33.30

## Tract #3

Lease 0480555140: 2000 bbls x 9.375% x 53.2805% = 99.90

## Tract #4

Lease 048055514A: 2000 bbls x 3.125% x 53.2805% = 33.30

## Tract #7

Lease 0482654380: 2000 bbls x 25% x 53.2805% = 266.40

{Total production-PA} x {% of Participation} x {Working Interest %}

**Don't forget to include the Agreement Number on the 2014**



# Royalty Reporting by **Multiple Payors** Sam Resources



## Tract #2

Lease 048053566A: 2000 bbls x 3.125% x 32.4709% = 20.29

## Tract #3

Lease 0480555140: 2000 bbls x 9.375% x 32.4709% = 60.88

## Tract #4

Lease 048055514A: 2000 bbls x 3.125% x 32.4709% = 20.29

## Tract #7

Lease 0482654380: 2000 bbls x 25% x 32.4709% = 162.35

{Total production-PA} x {% of Participation} x {Working Interest %}

**Don't forget to include the Agreement Number on the 2014**

# Royalty Reporting by **Multiple Payors** Bird Oil



## Tract #2

Lease 048053566A: 2000 bbls x 3.125% x 11.5628% = 7.23

## Tract #3

Lease 0480555140: 2000 bbls x 9.375% x 11.5628% = 21.68

## Tract #4

Lease 048055514A: 2000 bbls x 3.125% x 11.5628% = 7.23

## Tract #7

Lease 0482654380: 2000 bbls x 25% x 11.5628% = 57.82

{Total production-PA} x {% of Participation} x {Working Interest %}

**Don't forget to include the Agreement Number on the 2014**

# Royalty Reporting by **Multiple Payors** Dango Production



## Tract #2

Lease 048053566A: 2000 bbls x 3.125% x 2.6858% = 1.68

## Tract #3

Lease 0480555140: 2000 bbls x 9.375% x 2.6858% = 5.04

## Tract #4

Lease 048055514A: 2000 bbls x 3.125% x 2.6858% = 1.68

## Tract #7

Lease 0482654380: 2000 bbls x 25% x 2.6858% = 13.43

{Total production-PA} x {% of Participation} x {Working Interest %}

**Don't forget to include the Agreement Number on the 2014**

# Double Check Totals



	<b>Wex</b>	<b>Sam</b>	<b>Bird</b>	<b>Dango</b>	<b>Total</b>
<b>Tract 1</b>	99.90	60.88	21.68	5.04	187.50
<b>Tract 2</b>	33.30	20.29	7.23	1.68	62.50
<b>Tract 3</b>	99.90	60.88	21.68	5.04	187.50
<b>Tract 4</b>	33.30	20.29	7.23	1.68	62.50
<b>Tract 7</b>	266.40	162.35	57.82	13.43	500.00
	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>
	532.80	324.69	115.64	26.87	1,000.00

# Properly Allocating Agreement Production



The following example demonstrates  
reporting where interest ownership varies by  
lease

# EXHIBIT "B"

## Consolidated Frontier/Dakota Participating Area A 891011626A



Tract Number	Lease Number or Type of Land	Legal Description	Participating Acreage	Percent of Participation	Working Interest Owners	
Federal 1	W-053566	T22N, R103W Sec.....	120.00	9.37500%	Wex Company	50.00%
					Sam Resources	10.00%
					Bird Oil	30.00%
					Dango Production	10.00%
2	W-053566-A	T22N, R103W Sec.....	40.00	3.12500%	Wex Company	10.00%
					Sam Resources	10.00%
					Bird Oil	70.00%
					Dango Production	10.00%
3	W-05514	T22N, R103W Sec.....	120.00	9.37500%	Wex Company	40.00%
					Sam Resources	10.00%
					Bird Oil	30.00%
					Dango Production	20.00%
4	W-05514-A	T22N, R103W Sec.....	40.00	3.125%	Wex Company	40.00%
					Sam Resources	20.00%
					Bird Oil	20.00%
					Dango Production	20.00%
7	W-026438	T22N, R103W Sec.....	320.00	25.0000%	Wex Company	40.00%
					Sam Resources	20.00%
					Bird Oil	20.00%
					Dango Production	20.00%
15	Fee	T22N, R103W	640.00	50.0000%		

# Royalty Reporting when Working Interest Percent is Different for each lease within an agreement

5	6	7	10	11	12	13	14	15
LINE NUMBER	RESERVED FOR PREPARER'S USE	MMS LEASE NUMBER	PRODUCT CODE	SALES TYPE CODE	SALES MO/YR (MM/CCYY)	TRANSACTION CODE	ADJUSTMENT REASON CODE	SALES VOLUME (Mcf/bbl/gal/long ton)
	8	9						19
	API WELL NUMBER	MMS AGREEMENT NUMBER						ROYALTY VALUE PRIOR TO ALLOWANCES \$
1	PA Example	048 053566 0	01	ARMS	012010	01		93 75
		891 011626 A						

**Wex – 2000 bbls x 9.375% x 50% = 93.75**

**Royalty Reporting when Working Interest Percent is  
Different for each lease within an agreement  
Wex Company cont.**



**Tract #2**

Lease 048053566A:  $2000 \text{ bbls} \times 3.125\% \times 10\% = 6.25$

**Tract #3**

Lease 0480555140:  $2000 \text{ bbls} \times 9.375\% \times 40\% = 75$

**Tract #4**

Lease 048055514A:  $2000 \text{ bbls} \times 3.125\% \times 40\% = 25$

**Tract #7**

Lease 0482654380:  $2000 \text{ bbls} \times 25\% \times 40\% = 200$

{Total production-PA} x {% of Participation} x {Working Interest %}

**Don't forget to include the Agreement Number on the 2014**



# Royalty Reporting when Working Interest Percent is Different for each lease within an agreement Sam Resources



## Tract #1

Lease 0480535660;  $2000 \text{ bbls} \times 9.375\% \times 10\% = 18.75$

## Tract #2

Lease 048053566A:  $2000 \text{ bbls} \times 3.125\% \times 10\% = 6.25$

## Tract #3

Lease 0480555140:  $2000 \text{ bbls} \times 9.375\% \times 10\% = 18.75$

## Tract #4

Lease 048055514A:  $2000 \text{ bbls} \times 3.125\% \times 20\% = 12.50$

## Tract #7

Lease 0482654380:  $2000 \text{ bbls} \times 25\% \times 20\% = 100$

{Total production-PA} x {% of Participation} x {Working Interest %}

**Don't forget to include the Agreement Number on the 2014**

# Royalty Reporting when Working Interest Percent is Different for each lease within an agreement Bird Oil



## Tract #1

Lease 0480535660;  $2000 \text{ bbls} \times 9.375\% \times 30\% = 56.25$

## Tract #2

Lease 048053566A:  $2000 \text{ bbls} \times 3.125\% \times 70\% = 43.75$

## Tract #3

Lease 0480555140:  $2000 \text{ bbls} \times 9.375\% \times 30\% = 56.25$

## Tract #4

Lease 048055514A:  $2000 \text{ bbls} \times 3.125\% \times 20\% = 12.50$

## Tract #7

Lease 0482654380:  $2000 \text{ bbls} \times 25\% \times 20\% = 100$

{Total production-PA} x {% of Participation} x {Working Interest %}

**Don't forget to include the Agreement Number on the 2014**

# Royalty Reporting when Working Interest Percent is Different for each lease within an agreement Dango Production



## Tract #1

Lease 0480535660;  $2000 \text{ bbls} \times 9.375\% \times 10\% = 18.75$

## Tract #2

Lease 048053566A:  $2000 \text{ bbls} \times 3.125\% \times 10\% = 6.25$

## Tract #3

Lease 0480555140:  $2000 \text{ bbls} \times 9.375\% \times 20\% = 37.50$

## Tract #4

Lease 048055514A:  $2000 \text{ bbls} \times 3.125\% \times 20\% = 12.50$

## Tract #7

Lease 0482654380:  $2000 \text{ bbls} \times 25\% \times 20\% = 100$

{Total production-PA} x {% of Participation} x {Working Interest %}

**Don't forget to include the Agreement Number on the 2014**

# Double Check Totals



	<b>Wex</b>	<b>Sam</b>	<b>Bird</b>	<b>Dango</b>	<b>Total</b>
<b>Tract 1</b>	93.75	18.75	56.25	18.75	187.50
<b>Tract 2</b>	6.25	6.25	43.75	6.25	62.50
<b>Tract 3</b>	75.00	18.75	56.25	37.50	187.50
<b>Tract 4</b>	25.00	12.50	12.50	12.50	62.50
<b>Tract 7</b>	200.00	100.00	100.00	100.00	500.00
	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>	<b>Total</b>
	400.00	156.25	268.75	175.00	1,000.00

# Properly Allocating Agreement Production



The following example demonstrates  
reporting on a lease that is less than 100%  
Federal

# Reporting Royalties on a Participating Lease with less than 100% Federal Interest



**0482654380**

**80% Federal Interest**

**Total Sales x Federal Portion x Allocation = Sales Volume**

$$2000 \text{ Bbls} \times .80 \times .25 = 400$$

# Reporting Royalties on a Participating Lease with Less than 100% Federal Interest

5	6	7	10	11	12	13	14	15
LINE NUMBER	RESERVED FOR PREPARER'S USE	MMS LEASE NUMBER	PRODUCT CODE	SALES TYPE CODE	SALES MO/YR (MM/CCYY)	TRANSACTION CODE	ADJUSTMENT REASON CODE	SALES VOLUME (Mcf/bbl/gal/long ton)
	8 API WELL NUMBER	9 MMS AGREEMENT NUMBER						19 ROYALTY VALUE PRIOR TO ALLOWANCES \$
4	PA Example	048 265438 0	01	ARMS	012009	01		400 00
		891 011626 A						

$$2000 \text{ Bbls} \times .80 \times .25 = 400$$

# Properly Allocating Agreement Production



The following example demonstrates  
reporting by multiple payors on a lease  
that is less than 100% Federal



# Reporting by multiple payors on a lease that is less than 100% Federal



**Wex Company 53.2805% interest in lease 482654380**

**Total Sales x Federal Portion x Allocation x Ownership % = Sales Volume**

$$2000 \text{ Bbls} \times .80 \times .25 \times .532805 = 213.122$$

# Reporting on a lease that is less than 100% Federal by multiple payors

5	6	7	10	11	12	13	14	15
LINE NUMBER	RESERVED FOR PREPARER'S USE	MMS LEASE NUMBER	PRODUCT CODE	SALES TYPE CODE	SALES MO/YR (MM/CCYY)	TRANSACTION CODE	ADJUSTMENT REASON CODE	SALES VOLUME (Mcf/bbl/gal/long ton)
	8 API WELL NUMBER	9 MMS AGREEMENT NUMBER						19 ROYALTY VALUE PRIOR TO ALLOWANCES \$
4	PA Example	048 265438 0	01	ARMS	012009	01		213 12
		891 011626 A						

$$2000 \text{ Bbls} \times .80 \times .25 \times .532805 = 213.122$$

# Common Reporting Errors



Reporting on Federal Units and  
Communitization Agreements

# Common Reporting Errors



**Missing Agreement number** when reporting royalties on production from an agreement.

## **Incorrect Allocation to Leases**

Entire volume of production from the agreement reported as the sales volume on the 2014.

Agreement production reported to one lease when there are several leases receiving an allocation.

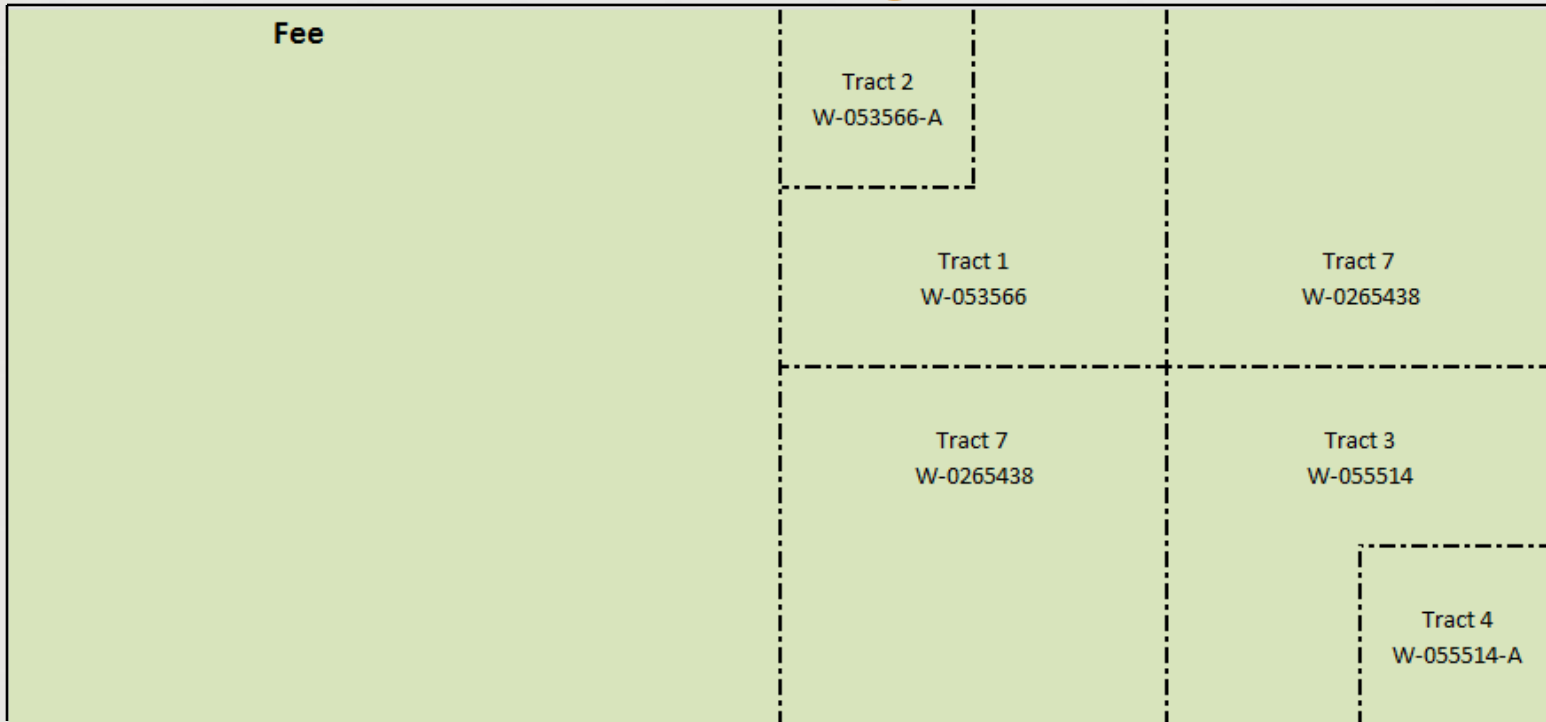
# Adjusting Royalty Reporting



PA Revisions

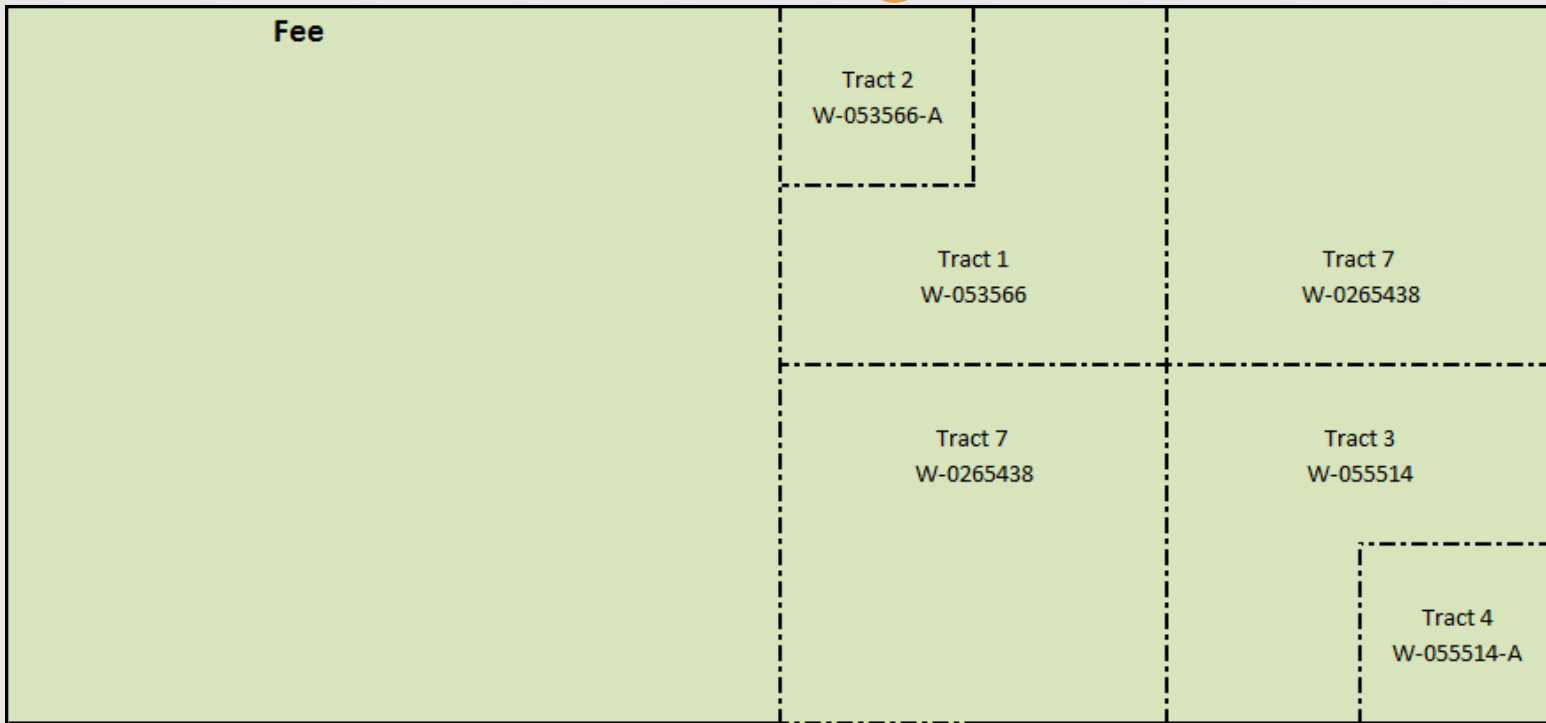
# Exhibit C

## Consolidated Frontier/Dakota Participating Area A



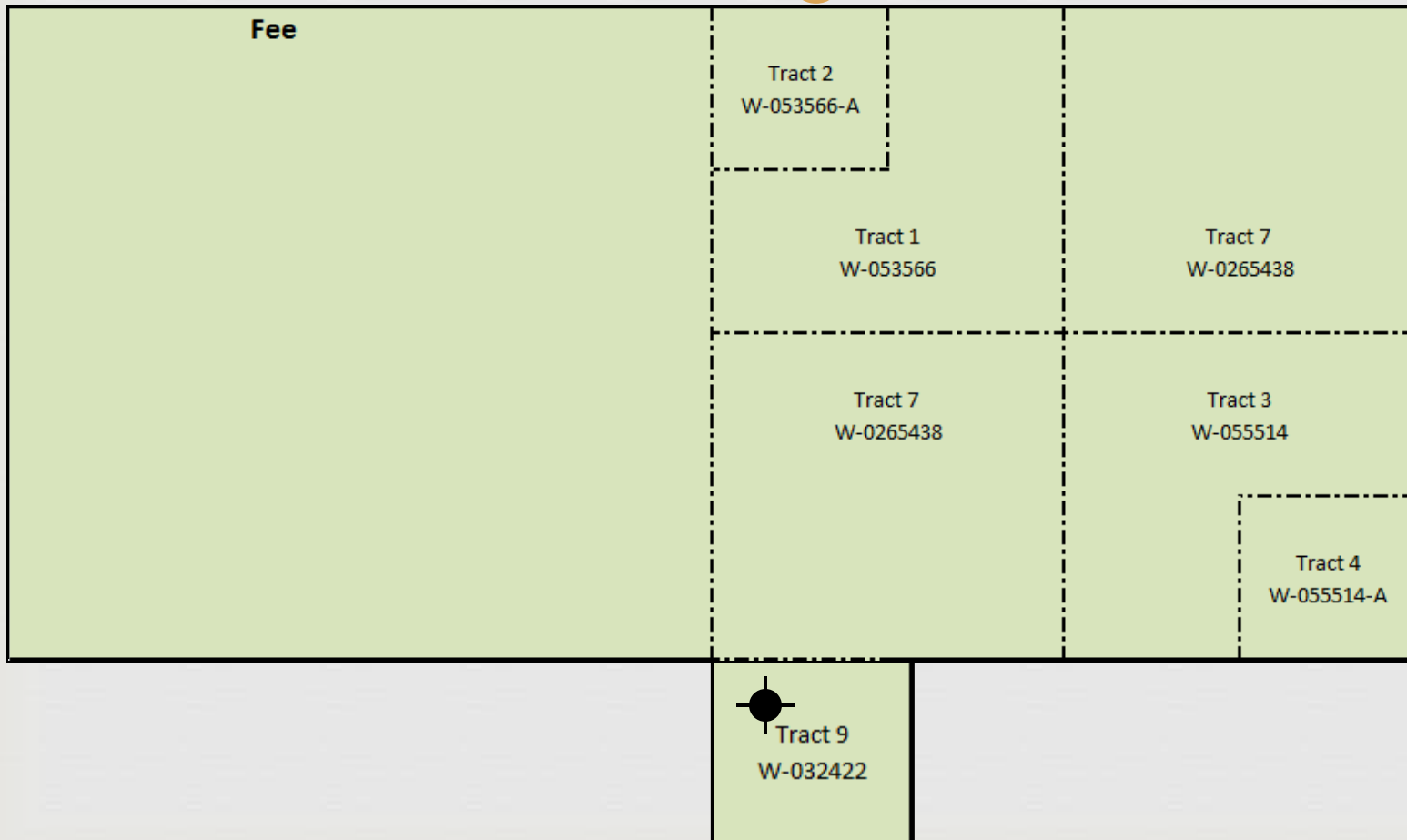
# Exhibit C

## Consolidated Frontier/Dakota Participating Area A



# Exhibit C

## 1<sup>st</sup> Revision Consolidated Frontier/Dakota Participating Area A





**EXHIBIT "B"**

1<sup>st</sup> Revision Consolidated Frontier/Dakota Participating Area A

<b>Tract Number</b>	<b>Lease Number or Type of Land</b>	<b>Legal Description</b>	<b>Participating Acreage</b>	<b>Percent of Participation</b>	<b>Working Interest Owners</b>	
<b>Federal</b>						
1	W-053566	T22N, R103W Sec.28; NE¼NW¼, S½NW¼	120.00	9.09090%	Wex Company Sam Resources Bird Oil Dango Production	53.2805% 32.4709% 11.5628% 2.6858%
2	W-053566-A	T22N, R103W Sec.28; NW¼NW¼	40.00	3.03030%	Wex Company Sam Resources Bird Oil Dango Production	53.2805% 32.4709% 11.5628% 2.6858%
3	W-055514	T22N, R103W Sec.28; W½SE¼, NE¼SE¼	120.00	9.09090%	Wex Company Sam Resources Bird Oil Dango Production	53.2805% 32.4709% 11.5628% 2.6858%
4	W-055514-A	T22N, R103W Sec.28; SE¼SE¼	40.00	3.03030%	Wex Company Sam Resources Bird Oil Dango Production	53.2805% 32.4709% 11.5628% 2.6858%
7	W-0265438	T22N, R103W Sec.28; NE¼SW¼	320.00	24.24240%	Wex Company Sam Resources Bird Oil Dango Production	53.2805% 32.4709% 11.5628% 2.6858%
9	W-032422	T22N, R103W Sec 33, NW1/4NW1/4	40.00	3.03030%	Latecomer Inc	100%
15	Fee	T22N, R103W Sec.29; All	640.00	48.48480%	Wex Company Sam Resources Bird Oil Dango Production	53.2805% 32.4709% 11.5628% 2.6858%

# Don't Forget Adjustments when Moving from Lease to Unit PA

5 LINE NUMBER	6 RESERVED FOR PREPARER'S USE	7 MMS LEASE NUMBER	10 PRODUCT CODE	11 SALES TYPE CODE	12 SALES MO/YR (MM/CCYY)	13 TRANSACTION CODE	14 ADJUSTMENT REASON CODE	15 SALES VOLUME (Mcf/bbl/gal/long ton)
	8 API WELL NUMBER	9 MMS AGREEMENT NUMBER					19 ROYALTY VALUE PRIOR TO ALLOWANCES \$	
1	Reverse Original	048 032422 0	01	ARMS	012010	01	35	-500 00
	Enter Correction	048 032422 0	01	ARMS	012010	01	35	75 76
		891 011626 A						

**2500 bbls sold x 3.0303% allocation = 75.7575**

# Adjusting Royalties based on a Participating Area Revision

5 LINE NUMBER	6 RESERVED FOR PREPARER'S USE	7 MMS LEASE NUMBER			10 PRODUCT CODE	11 SALES TYPE CODE	12 SALES MO/YR (MM/CCYY)	13 TRANSACTION CODE	14 ADJUSTMENT REASON CODE	15 SALES VOLUME (Mcf/bbl/gal/long ton)
	8 API WELL NUMBER	9 MMS AGREEMENT NUMBER							19 ROYALTY VALUE PRIOR TO ALLOWANCES \$	
1	Reverse Originals	048	053566	0	01	ARMS	012010	01	35	-187 50
		891	011626	A						
	Enter Corrections	048	053566	0	01	ARMS	012010	01	35	227 27
		891	011626	A						

**2500 bbls sold x 9.0909% allocation = 227.2725**

# Overlapping Agreements



# No Overlap



**Frontier PA**

**CA  
W-111222**

**Big Bend Unit**

# No Overlap



CA is entirely within Unit but does not intersect a PA

- CA is considered a separate entity
- All CA royalties will be reported on the CA
- All CA production will be reported on the CA

# Total Overlap



**Frontier PA**

**CA  
W-111222**

**Big Bend Unit**

# Total Overlap



CA is entirely within a PA and all CA lands are committed to the PA.

- CA becomes “silent”
- All CA Royalties will be reported on the PA
- All CA production will be reported on the PA



# Partial Overlap



**Frontier PA**

**CA  
W-111222**

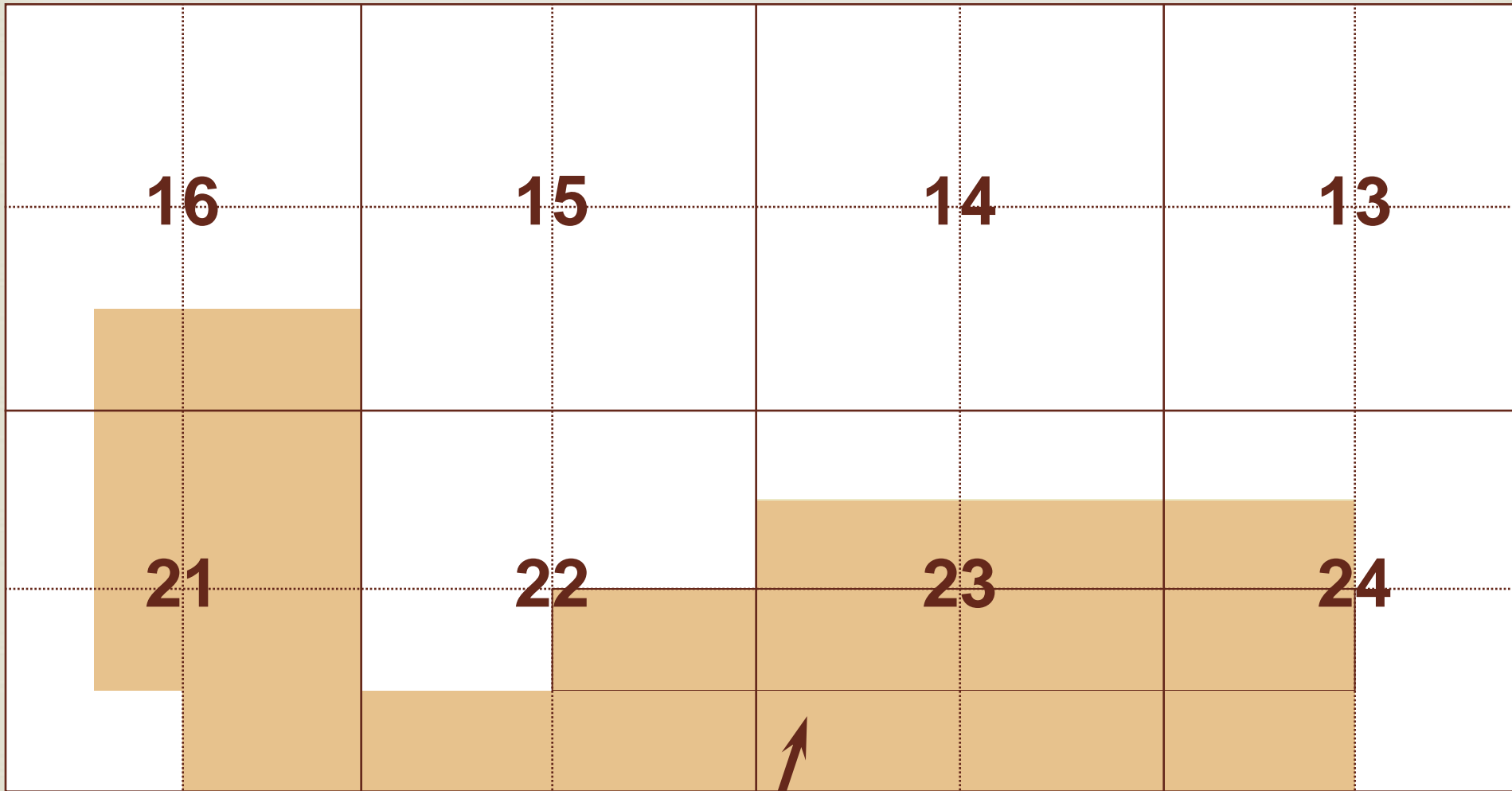
**Big Bend Unit**

# Partial Overlap

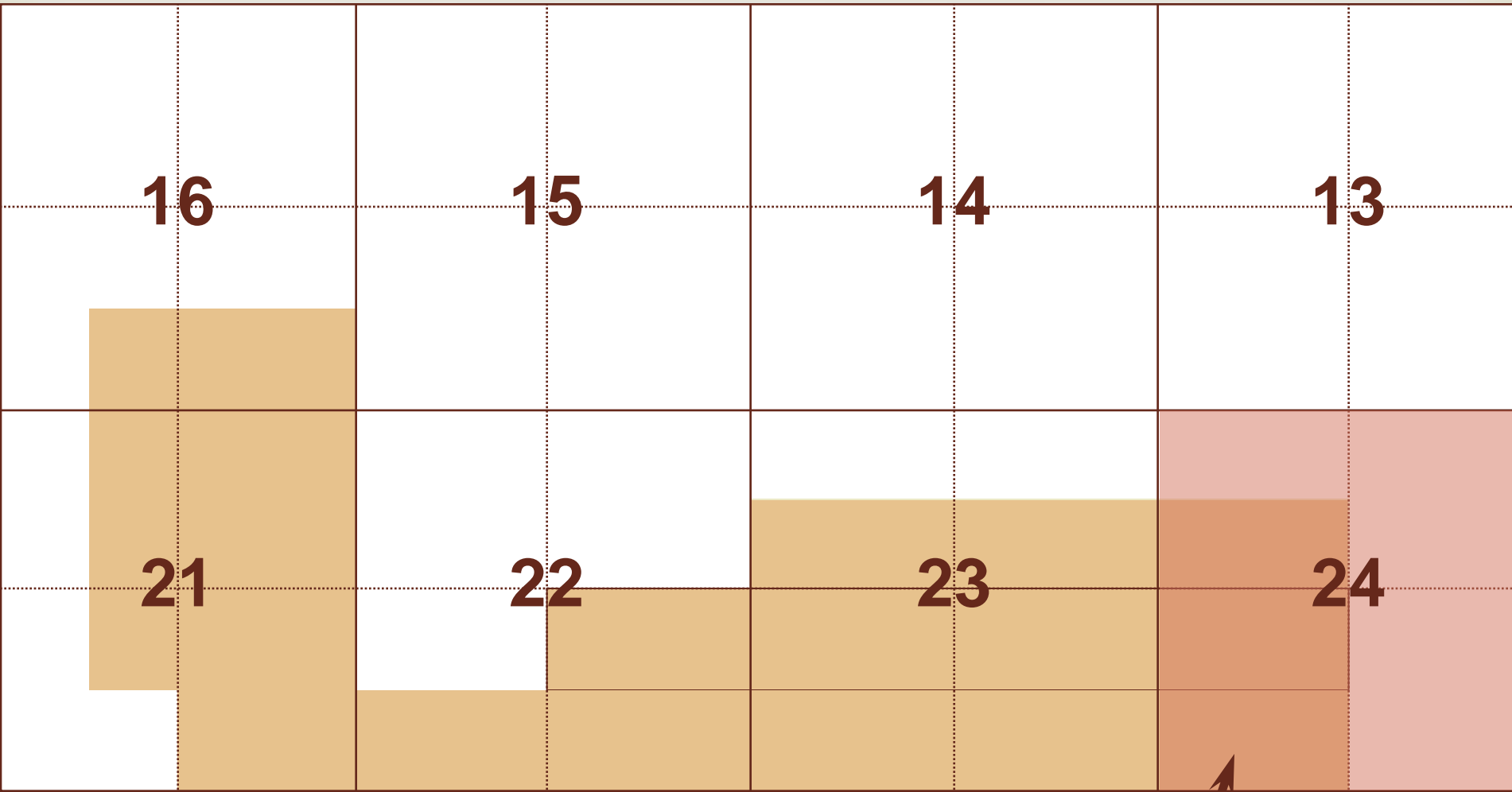


CA is partially within a PA

- Royalties from the portion of the CA outside of the PA will be reported on the CA
- Royalties from overlapped portion will be reported on PA
- All CA production will be reported on the CA.



**Seven Mile Gulch Unit  
Dakota A-B Participating Area**



**Overlapped Portion**

**CA W-129905**

**Communitization Agreement**

**W-129905**

**Tract No. 1**

**280 acres**

**Tract No. 2a**

**240 acres**

**Tract No. 2b**

**120 acres**

**24**

**Seven Mile Gulch**

**Unit Dakota**

**Participating Area**

**“A-B”**

**Boundary**

**Seven Mile Gulch Unit**

**Communitization Agreement  
W-129905  
Exhibit "B"**

<b>LEASE NO.</b>	<b>TRACT</b>	<b>ACRES IN CA</b>	<b>% OF INTEREST</b>
<b>W-24152</b>	<b>1</b>	<b>280</b>	<b>43.75%</b>
<b>W-24152</b>	<b>2A</b>	<b>240</b>	<b>37.5%</b>
<b>W-24152</b>	<b>2B</b>	<b>120</b>	<b>18.75%</b>
		<b>640</b>	<b>100.00%</b>

**\*\*Tract 2A is overlapped by the Dakota Participating Area,  
Seven Mile Gulch Unit**

# LR2000 Serial Register Page

DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT CASE RECORDATION (MASS) Serial Register Page				Run Time: 11:39 AM				
Run Date: 09/04/2012				Page 1 of 1				
01 02-25-1920;041STAT0437;30USC181		Total Acres	Serial Number					
Case Type 318310: O&G COMMUNITIZATION AGRMT		640.000	WYW--- - 129905					
Commodity 410: NATURAL GAS LC								
Case Disposition: AUTHORIZED								
				Serial Number: WYW--- - 129905				
<b>Name &amp; Address</b>		<b>Int Rel</b>	<b>% Interest</b>					
BP AMERICA PRODUCTION COMPANY	PO BOX 3092	HOUSTON TX 772533092	OPERATOR	100.0000000				
				Serial Number: WYW--- - 129905				
Mer Twp	Rng	Sec	STyp	SNr SUFF	Subdivision	District/Field Office	County	Mgmt Agency
06 0200N	1120W	024	ALIQ		ALL	KEMMERER FIELD OFFICE	SWEETWATER	BUREAU OF LAND MGMT
				Serial Number: WYW--- - 129905				
<b>Act Date</b>	<b>Code</b>	<b>Action</b>	<b>Action Remark</b>	<b>Pending Office</b>				
02/01/1991	387	CASE ESTABLISHED						
02/01/1991	516	FORMATION	DKOT, DAKOTA					
02/01/1991	517	AGRMT WITHIN UA/CA	/B/UA-WYW109683X					
02/01/1991	526	ACRES-FED INT 100%	640.00					
02/01/1991	868	EFFECTIVE DATE	/A/					
08/06/1991	854	AGRMT PRODUCING	WYW24152, 19					
10/30/1993	580	PROPOSAL RECEIVED	CA RECD					
05/02/1994	334	AGRMT APPROVED						
05/02/1994	690	AGRMT VALIDATED						
				Serial Number: WYW--- - 129905				
<b>Line Nr</b>	<b>Remarks</b>							
0001	/A/ RECAPITULATION EFFECTIVE 02/01/1991							
0002	TR#	LEASE SERIAL NO	AC COMMITTED	% INTEREST				
0003	1	WYW 24152	280.00	43.75				
0004	2A	WYW 24152	240.00	37.50				
0005	2B	WYW 24152	120.00	18.75				
0006		TOTAL	640.00	100.00				
0007	-							
0008	/B/ SEVEN MILE GULCH UNIT - TR2A IS WITHIN THE							
0009	DAKOTA PARTICIPATING AREA A-B 240.00 ACRES, 37.50%							
0010	OF SEVEN MILE OF SEVEN MILE GULCH, TR2B IS WITHIN							
0011	THE SEVEN MILE GULCH UNIT BUT OUTSIDE OF THE DAKOTA							
0012	PARTICIPATING AREA A-B 120.00 ACRES, 18.75%							
0013	/C/ AMOCO PROD CO TO BP AMERICA PROD CO;							

# LR2000 Serial Register Page

DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT  
 CASE RECORDATION  
 (MASS) Serial Register Page

Run Time: 11:39 AM

Page 1 of 1

Run Date: 09/04/2012

01 02-25-1920;041STAT0437;30USC181

Total Acres

Serial Number

Case Type 318310: O&G COMMUNITIZATION AGRMT

640.000

WYW--- - 129905

Commodity 410: NATURAL GAS LC

Case Disposition: AUTHORIZED

Serial Number: WYW--- - 129905

Name & Address

Int Rel

% Interest

BP AMERICA PRODUCTION  
 COMPANY

PO BOX 3092

HOUSTON TX 772533092

OPERATOR

100.0000000

Serial Number: WYW--- - 129905

Mer Twp Rng Sec

STyp

SNr Suff Subdivision

District/Field Office

County

Mgmt Agency

06 0200N 1120W 024

ALIQ

ALL;

KEMMERER FIELD OFFICE

SWEETWATER

BUREAU OF LAND MGMT



# LR2000 Serial Register Page



Serial Number: WYW--- - 129905				
Act Date	Code	Action	Action Remark	Pending Office
02/01/1991	387	CASE ESTABLISHED		
02/01/1991	516	FORMATION	DKOT; DAKOTA	
02/01/1991	517	AGRMT WITHIN UA/CA	/B/UA-WYW109683X	
02/01/1991	526	ACRES-FED INT 100%	640.00;	
02/01/1991	868	EFFECTIVE DATE	/A/	
08/06/1991	654	AGRMT PRODUCING	WYW24152,19	
10/20/1993	580	PROPOSAL RECEIVED	CA RECD	
05/02/1994	334	AGRMT APPROVED		
05/02/1994	690	AGRMT VALIDATED		

# LR2000 Serial Register Page



Line Nr	Remarks	Serial Number: WYW--- - 129905		
0001	/A/ RECAPITULATION EFFECTIVE 02/01/1991			
0002	TR# LEASE SERIAL NO AC COMMITTED % INTEREST			
0003	1 WYW 24152 280.00 43.75			
0004	2A WYW 24152 240.00 37.50			
0005	2B WYW 24152 120.00 18.75			
0006	TOTAL 640.00 100.00			
0007	-			
0008	/B/ SEVEN MILE GULCH UNIT - TR2A IS WITHIN THE			
0009	DAKOTA PARTICIPATING AREA A-B 240.00 ACRES, 37.50%			
0010	OF SEVEN MILE OF SEVEN MILE GULCH, TR2B IS WITHIN			
0011	THE SEVEN MILE GULCH UNIT BUT OUTSIDE OF THE DAKOTA			
0012	PARTICIPATING AREA A-B 120.00 ACRES, 18.75%			
0013	/C/ AMOCO PROD CO TO BP AMERICA PROD CO;			

# Profile for Agreement W 129905

**MMS**

Profile for Agreement W 129905

MMS Agreement Number:

W 129905

Date:

Run Query

## Brief:

Agreement Number: W 129905  
 Agreement Name: 19  
 Agreement Type: Communitization  
 Majority Land Category: Onshore Agreement  
 PA Name, Formation/Reservoir: DAKOTA

Agency Assigned Number: WYW129905  
 Agency Office Name: Kemmerer Wyoming  
 Legal Description: T20N, R112W  
 Land Classification: Federal  
 Number Of Operators: 1

Comments:

[Agreement Status History](#)

## Agreement Status History:

[Delivery System](#)

Status Code	Status Description	Start Date	End Date
PRDCN	Producing	2/1/1991	12/31/9999

[Dates](#)

[Operators](#)

## Delivery System:

[Payers and Products](#)

Delivery System Number	Type	Name	Product	Start Date	End Date
------------------------	------	------	---------	------------	----------

[Leases](#)

[Lease Royalty Rates](#)

## Dates:

[Pending or Rejected Reduced Royalty Rates for Oil](#)

Date Type Description	Date
CA Effective Date	2/1/1991
Approval Date	5/3/1994

[Accepted Reduced Royalty Rates for Oil](#)

[Related Contracts](#)

[Agreement Acreage History](#)

### Operators:

[Allocations for Indian Leases](#)

Operator Number	Operator Name	Start Date	End Date
10860	BP AMERICA PRODUCTION COMPANY	10/1/1991	12/31/9999

[Allocations for Federal Leases](#)

### Payors and Products:

[Miscellaneous Filings](#)

[Wells](#)

Lease	Payor Number	Payor Name	Product Name	Start Date	End Date
0490241520	10860	BP AMERICA PRODUCTION COMPANY	Condensate	4/1/2003	
0490241520	10860	BP AMERICA PRODUCTION COMPANY	Condensate	3/1/2002	

### Leases:

Agreement Subdivision Number	Lease Number	State	County or Offshore Area and Block	Majority Land Category	OCS Section
001	0490241520	Wyoming	Sweetwater	Public	00

### Lease Royalty Rates:

Lease	Royalty Rate Type	Calc Method	Roy Calc Meth	Low Rate	High Rate	Rate Per Unit	Unit of Measure	Start Date	End Date
0490241520	Royalty	P	01	.0000	.0000	.1250		6/1/1970	12/31/9999

### Pending or Rejected Reduced Royalty Rates for Oil:

Petition Number	Petition Type	Operator	Status	Claim Year	Requested Reduced Rate
-----------------	---------------	----------	--------	------------	------------------------

### Accepted Reduced Royalty Rates for Oil:

Petition Number	Subdiv	Petition Type	Claim Yr	Lease	Tract	Lease Allocation	Reduced Rate	Start Date	End Date
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### Related Contracts:

Sub-division	Related Contract Number	Related Contract Name	Related Contract Type	Related Contract Status	Start Date	End Date	Related Contract Remarks
P01	<a href="#">891014332E</a>	SEVEN MILE GULCH	Agreement Overlap		2/1/1991	12/31/9999	

### Agreement Acreage History:

Allocation Type	Acres	Allocation Percent	Surf Area Effective Date	Surf Area End Date
000	640	100.0000	2/1/1991	12/31/9999

### Allocations for Indian Leases:

Sub-division	Tract	Lease Number	Acres	Lease Portion Percent	Mineral Interest Percent	Net Allocation Percentage	Date in Agreement	Allocation Start Date	Allocation End Date
--------------	-------	--------------	-------	-----------------------	--------------------------	---------------------------	-------------------	-----------------------	---------------------

### Allocations for Federal Leases:

Sub-division	Tract	Lease Number	Acres	Lease Portion Percent	Mineral Interest Percent	Net Allocation Percentage	Date in Agreement	Allocation Start Date	Allocation End Date
001	0000	<a href="#">0490241520</a>	400	62.5000	100.0000	62.5000	2/1/1991	2/1/1991	12/31/9999

### Miscellaneous Filings:

Document No.	Company ID	Start Date	End Date	Decision Date	Prod	Est. Allowance Amt	Act. Allowance Amt	Dual Acct Meth	Filing Status	AI/NAL Ind.
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### Agreement Based Wells:

API Well Number	Well Completion Code	Operator Number	Operator Name	Operator Assigned Well Name	Operator Assigned Well Number	Well Status	Status Start Date	Status End Date
<u>490372283300</u>	S01	10860	BP AMERICA PRODUCTION COMPANY	7 MI GULCH UNIT	19	Prod Gas Completion	12/1/1994	12/31/9999
<u>490372283300</u>	S01	10860	BP AMERICA PRODUCTION COMPANY	7 MILE GULCH UN	19	Prod Gas Completion	10/1/1991	11/30/1994

# Profile for Agreement 891014332E

## MMS Profile for Agreement 891014332E

MMS Agreement Number:

891014332E

Date:

Run Query

### Brief:

Agreement Number: 891014332E  
 Agreement Name: SEVEN MILE GULCH  
 Agreement Type: Primary Unitization  
 Majority Land Category: Onshore Agreement  
 PA Name, Formation/Reservoir: DAKOTA A & B

Agency Assigned Number: 891014332E  
 Agency Office Name: Kemmerer Wyoming  
 Legal Description: P/S 16,21-24: T20N:R112W:  
 Land Classification: Mixed  
 Number Of Operators: 3

Comments:

Agreement Status History

### Agreement Status History:

Delivery System

Status Code	Status Description	Start Date	End Date
PRDCN	Producing	10/1/1991	12/31/9999

Dates

Operators

### Delivery System:

Payors and Products

Delivery System Number	Type	Name	Product	Start Date	End Date
------------------------	------	------	---------	------------	----------

Leases

Lease Royalty Rates

### Dates:

Pending or Rejected

Reduced Royalty Rates for Oil

Date Type Description	Date
PA Effective Date	10/1/1991
PA/Revision Approval Date	12/13/1996

Accepted Reduced Royalty Rates for Oil

[Related Contracts](#)

[Agreement Acreage History](#)

[Allocations for Indian Leases](#)

[Allocations for Federal Leases](#)

[Miscellaneous Filings](#)

[Wells](#)

### Operators:

Operator Number	Operator Name	Start Date	End Date
<a href="#">10860</a>	BP AMERICA PRODUCTION COMPANY	10/1/1991	12/31/9999
<a href="#">39836</a>	KERR-MCGEE OIL & GAS ONSHORE	8/16/2006	10/31/2006
<a href="#">K1433</a>	KERR MCGEE ROCKY MOUNTAIN CORP	7/26/2004	8/2/2005

### Payors and Products:

Lease	Payor Number	Payor Name	Product Name	Start Date	End Date
0490299070	<a href="#">10860</a>	BP AMERICA PRODUCTION COMPANY	Condensate	7/1/2003	
0490241520	<a href="#">10860</a>	BP AMERICA PRODUCTION COMPANY	Processed (Residue) Gas	6/1/2003	

### Leases:

Agreement Subdivision Number	Lease Number	State	County or Offshore Area and Block	Majority Land Category	OCS Section
001	<a href="#">0490241520</a>	Wyoming	Sweetwater	Public	00
002	<a href="#">0490299070</a>	Wyoming	Lincoln	Public	00

### Lease Royalty Rates:

Lease	Royalty Rate Type	Calc Method	Roy Calc Meth	Low Rate	High Rate	Rate Per Unit	Unit of Measure	Start Date	End Date
0490299070	Royalty	P	01	.0000	.0000	.1250		8/1/1971	12/31/9999
0490241520	Royalty	P	01	.0000	.0000	.1250		6/1/1970	12/31/9999

### Pending or Rejected Reduced Royalty Rates for Oil:

Petition Number	Petition Type	Operator	Status	Claim Year	Requested Reduced Rate
-----------------	---------------	----------	--------	------------	------------------------



### Accepted Reduced Royalty Rates for Oil:

Petition Number	Subdiv	Petition Type	Claim Yr	Lease	Tract	Lease Allocation	Reduced Rate	Start Date	End Date
-----------------	--------	---------------	----------	-------	-------	------------------	--------------	------------	----------

### Related Contracts:

Sub-division	Related Contract Number	Related Contract Name	Related Contract Type	Related Contract Status	Start Date	End Date	Related Contract Remarks
P01	<a href="#">W 129633</a>	SEVEN MILE GULCH #20	Agreement Overlap		10/1/1991	12/31/9999	
P01	<a href="#">W 129905</a>	19	Agreement Overlap		2/1/1991	12/31/9999	

### Agreement Acreage History:

Allocation Type	Acres	Allocation Percent	Surf Area Effective Date	Surf Area End Date
000	1360	100.0000	10/1/1991	12/31/9999
FED	319.9998	23.5294	10/1/1991	12/31/9999
FEE	1040.0002	76.4706	10/1/1991	12/31/9999

### Allocations for Indian Leases:

Sub-division	Tract	Lease Number	Acres	Lease Portion Percent	Mineral Interest Percent	Net Allocation Percentage	Date in Agreement	Allocation Start Date	Allocation End Date
--------------	-------	--------------	-------	-----------------------	--------------------------	---------------------------	-------------------	-----------------------	---------------------

**Allocations for Federal Leases:**

Sub-division	Tract	Lease Number	Acres	Lease Portion Percent	Mineral Interest Percent	Net Allocation Percentage	Date in Agreement	Allocation Start Date	Allocation End Date
001	009	<a href="#">0490241520</a>	240	17.6471	100.0000	17.6471	10/1/1991	10/1/1991	12/31/9999
002	012	<a href="#">0490299070</a>	80	5.8823	100.0000	5.8823	10/1/1991	10/1/1991	12/31/9999

**Miscellaneous Filings:**

Document No.	Company ID	Start Date	End Date	Decision Date	Prod	Est. Allowance Amt	Act. Allowance Amt	Dual Acct Meth	Filing Status	AI/NAL Ind.
--------------	------------	------------	----------	---------------	------	--------------------	--------------------	----------------	---------------	-------------

**Agreement Based Wells:**

API Well Number	Well Completion Code	Operator Number	Operator Name	Operator Assigned Well Name	Operator Assigned Well Number	Well Status	Status Start Date	Status End Date
<a href="#">490232208600</a>	A02	10860	BP AMERICA PRODUCTION COMPANY	7 MI GULCH UNIT	7-21	Prod Gas Completion	8/18/2006	12/31/9999
<a href="#">490232208600</a>	A01	39836	KERR-MCGEE OIL & GAS ONSHORE	7 MI GULCH UNIT	7-21	Prod Gas Completion	8/16/2006	12/31/9999
<a href="#">490372589800</a>	S01	10860	BP AMERICA PRODUCTION COMPANY	7 MI GULCH UNIT	5-23	Prod Gas Completion	9/30/2005	12/31/9999

# How do I identify overlapping agreements?



- Overlapped agreement (usually CA) exhibits.
- LR2000
- Agreement Profile
- Your land department



# Royalty Reporting on Communitization Agreement W-129905



<u>Lease Number</u>	<u>Tract Nos.</u>	<u>Total Tract Portion</u>	<u>Total Tract Acreage</u>
049-024152-0	1 & 2B	.625000	400.00
Overlapped - Report on 891-014332-E	2A	<u>.375000</u>	<u>240.00</u>
		1.000000	640.00

**Royalty Reporting on 891-014332-E  
Seven Mile Gulch Unit  
Dakota "A-B" PA**



<b><u>Lease Number</u></b>	<b><u>Tract Nos.</u></b>	<b><u>Tract Portion</u></b>	<b><u>Acreage</u></b>
<b>049-024152-0</b>	<b>009</b>	<b>.176471</b>	<b>240.00</b>
<b>049-029907-0</b>	<b>012</b>	<b>.058823</b>	<b>80.00</b>
<b>State &amp; Fee lands</b>		<b><u>.764706</u></b>	<b><u>1040.00</u></b>
		<b>1.000000</b>	<b>1360.00</b>

# Reporting Royalties on CA W-129905

5 LINE NUMBER	6 RESERVED FOR PREPARER'S USE	7 MMS LEASE NUMBER			10 PRODUCT CODE	11 SALES TYPE CODE	12 SALES MO/YR (MM/CCYY)	13 TRANSACTION CODE	14 ADJUSTMENT REASON CODE	15 SALES VOLUME (Mcf/bbl/gal/long ton)	
	8 API WELL NUMBER	9 MMS AGREEMENT NUMBER								19 ROYALTY VALUE PRIOR TO ALLOWANCES \$	
1		049	024152	0	01	ARMS	102011	01		62	50
		W	129905								
2		049	024152	0	01	ARMS	102011	01		6	62
		891	014332	E							
3		049	029907	0	01	ARMS	102011	01		2	21
		891	014332	E							

**100 x .625 = 62.5 barrels**

**100 x .375 = 37.5 barrels**

**37.5 x .176471 = 6.6176625**

**37.5 x .058823 = 2.2058625**

# Reporting Royalties on the PA

5	6	7	10	11	12	13	14	15
LINE NUMBER	RESERVED FOR PREPARER'S USE	MMS LEASE NUMBER	PRODUCT CODE	SALES TYPE CODE	SALES MO/YR (MM/CCYY)	TRANSACTION CODE	ADJUSTMENT REASON CODE	SALES VOLUME (Mcf/bbl/gal/long ton)
	8 API WELL NUMBER	9 MMS AGREEMENT NUMBER						19 ROYALTY VALUE PRIOR TO ALLOWANCES \$
1		049 024152 0	01	ARMS	102011	01		44 12
		891 014332 E						
2		049 029907 0	01	ARMS	102011	01		14 71
		891 014332 E						

**250 barrels oil produced and sold in 10/2011**

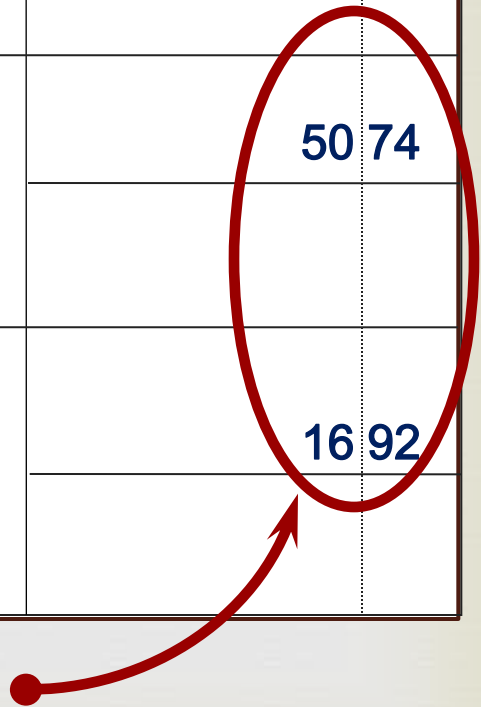
$$250 \times .176471 = 44.11775$$

$$250 \times .058823 = 14.70575$$

# Combining CA & PA Royalties

5	6	7	10	11	12	13	14	15
LINE NUMBER	RESERVED FOR PREPARER'S USE	MMS LEASE NUMBER	PRODUCT CODE	SALES TYPE CODE	SALES MO/YR (MM/CCYY)	TRANSACTION CODE	ADJUSTMENT REASON CODE	SALES VOLUME (Mcf/bbl/gal/long ton)
	8 API WELL NUMBER	9 MMS AGREEMENT NUMBER						19 ROYALTY VALUE PRIOR TO ALLOWANCES \$
1		049 024152 0	01	ARMS	102011	01		62 50
	W	129905						
2		049 024152 0	01	ARMS	102011	01		50 74
	891	014332 E						
3		049 029907 0	01	ARMS	102011	01		16 92
	891	014332 E						

**PA Production + CA Production**





# Reporting Formulas



**Formula for reporting on tracts that are NOT overlapped:**

$$\begin{array}{ccccccc} \text{Total} & & \text{CA} & & \text{Ownership} & & \\ \text{Volume} & \times & \text{Tract} & \times & \% & = & \text{Sales Volume} \\ \text{Sold} & & \% & & & & \end{array}$$

**Formula for reporting on overlapped tracts:**

$$\begin{array}{ccccccc} \text{Total} & & \text{CA} & & \text{Ownership} & & \text{PA} \\ \text{Volume} & \times & \text{Tract} & \times & \% & \times & \text{Tract} = \text{Sales Volume} \\ \text{Sold} & & \% & & & & \% \end{array}$$

# Royalties are Reported at the Lease Level



# Production is Reported at the Agreement Level

