
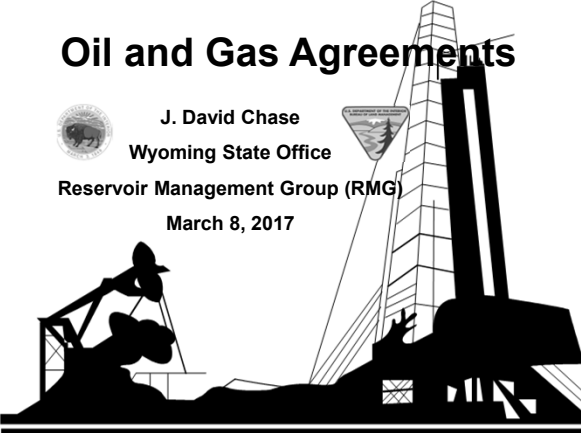


**Oil and Gas Agreements**

 J. David Chase  
Wyoming State Office  
Reservoir Management Group (RMG)  
March 8, 2017



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**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?**

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**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**

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# AGREEMENTS

## Why do we need them?

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### Introduction

- Exploratory Unit Agreements (Conventional Wells)
  1. Rule of Capture
  2. Correlative Rights Doctrine
  3. Benefits of Unit Agreements
  4. Approval Process
    - a. Designation
    - b. Final Approval
  5. Lease Commitment Status
    - a. Fully Committed
    - b. Effectively Committed
    - c. Partially Committed
    - d. Noncommitted

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### 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

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***RULE OF CAPTURE***

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- 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



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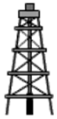
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**RULE OF CAPTURE**

This Rule Essentially Said:



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

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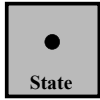
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## Oil and Gas Mapping Symbology



Gas Well



Oil Well



Plugged and Abandoned

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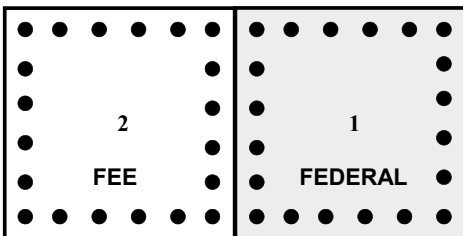
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## RULE OF CAPTURE

RESULT:

WAR OF THE WELLS



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## 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

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### 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

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### 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.

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### 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”

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# Unit Agreement Concepts and Benefits

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## 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!)**

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## Benefits of Unit Agreements

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

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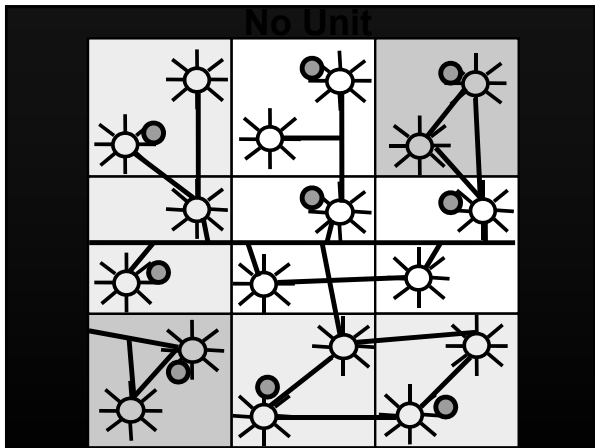
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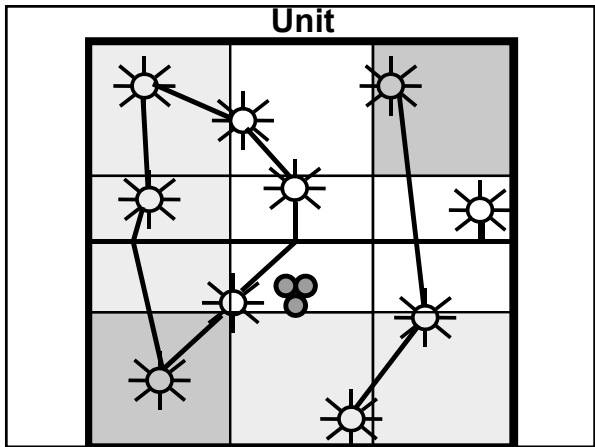
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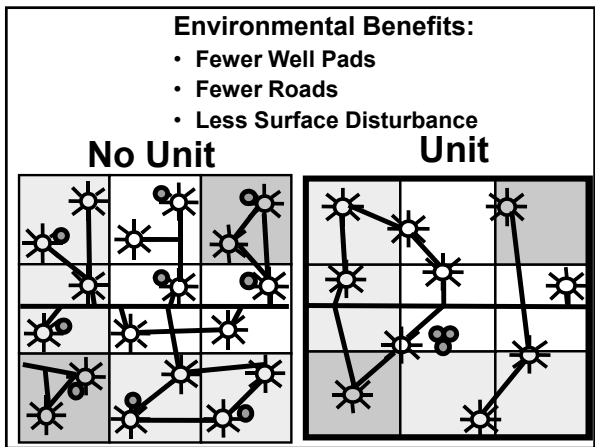
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### **Oil and Gas Reservoir Benefits of Unitization**

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

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### **Lease Benefits of Unitization**

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

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### **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

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## What is BLM's Responsibility?

✓ *BLM is responsible for administering these unit agreements. This includes:*

- ✓ Unit Approval
- ✓ Monitoring
- ✓ Unit Termination

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## Historical

### 5 Oldest Federal Unit Agreements

*Approved*

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

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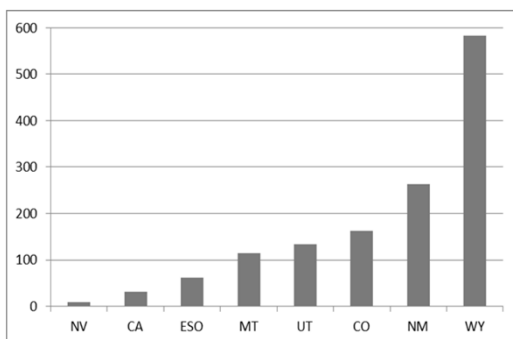
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Total Units by State (No Indian Units)



Data as of December 2016

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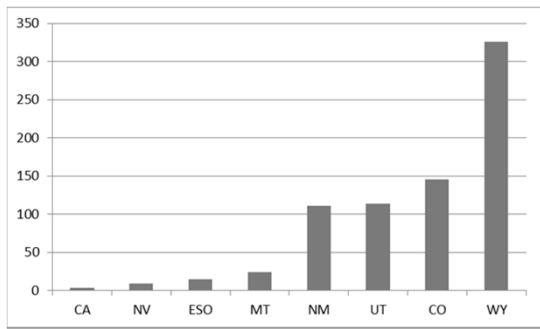
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### Exploratory Units by State (No Indian Units)



Data as of December 2016

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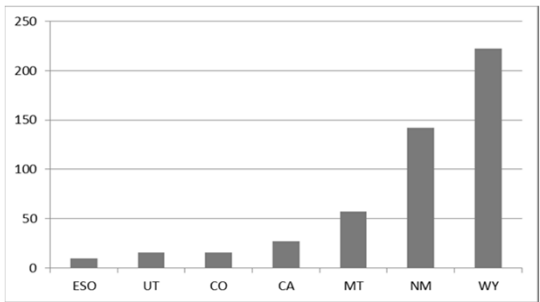
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### Secondary Recovery Units by State (No API or Indian Units)



Data as of December 2016

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### ***API or State Units***

- Typically, these type of units are secondary units.
- Federal participation less than 10 percent.
- BLM has no jurisdictional or administrative responsibilities for these unit agreements.

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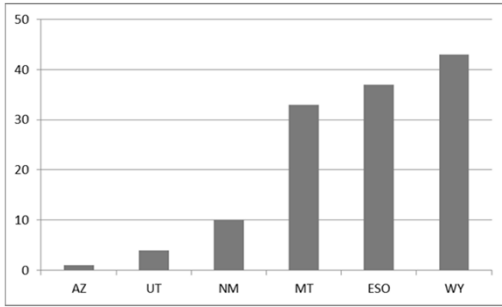
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### API Secondary Recovery Units by State



Data as of December 2016

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



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

### Unit Agreement Approval Process



214 P10 Y1

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## Approval Process

1. Designation
2. Final Approval



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## Approval Process

Agreements containing Indian Lands

1. Designation
  2. BIA gives Final Approval
- BLM provides recommendation to BIA



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## Designation

Application includes:

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



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## 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)
  - Noncommitted acreage does not receive any benefits of the unit



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## Record Title (Lessee of Record)

Entity who owns the Federal lease and who is responsible for all obligations under the lease. The record title owner may assign and relinquish the lease. Overriding royalty and operating rights are severable from record title interests.

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## Operating Rights (Working Interest)

Entity who has the right to enter upon the leased lands to conduct drilling and related operations, including production of oil or gas from such lands in accordance with the terms of the lease. The operating rights are assigned from the record title interest. An operating rights owner may not own a record title interest.

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**Fully Committed Lease**

- Record title owners have signed.
- Working interest owners have signed.
- Basic royalty owners (fee tracts) have signed.
- Overriding royalty owners have signed.

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**Effectively Committed Lease**

- Record title owners have signed.
- Working interest owners have signed.
- Basic royalty owners (fee tracts) have signed.
- Overriding royalty owners have not signed.

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**Partially Committed Lease (Fee)**

- Lessees of record have signed.
- Working interest owners have signed.
- Basic royalty owners have not signed.
- Overriding royalty owners have signed or not signed.

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**Partially Committed Lease (Federal)**

- Record title owners have not signed.
- Working interest owners have signed.
- Overriding royalty owners have signed or not signed

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**Partially Committed Lease (Federal)**

- Leases not subject to segregation.
- Leases are not subject to benefit by unit operations unless there are actual operations and/or production on the lease itself.
- Unitized drilling is permissible on the lease itself.

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**Noncommitted Lease**

- Working interest owners have not signed.
- Lease is not subject to the unit agreement.

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**Lets form an Exploratory  
Unit Agreement**

**We will call the unit:**

**Boxelder Creek**

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**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.

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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.

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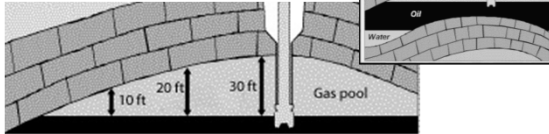
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## Hydrocarbon Reservoirs

- 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




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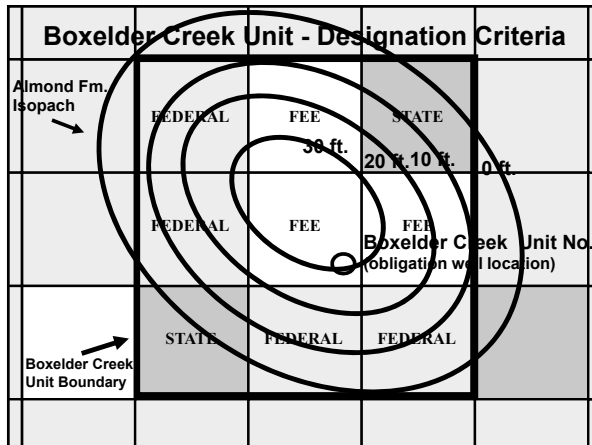
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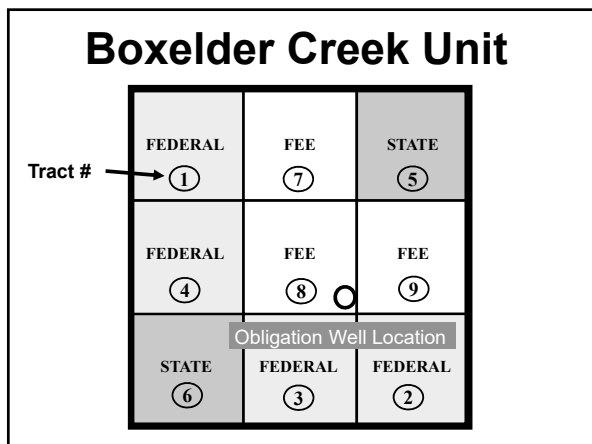
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## Drilling to Discovery

Goal:



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

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## Drilling to Discovery

3 Possible Well Outcomes:

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

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## 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

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## 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.

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## 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 no longer required to be drilled 6 months after previous well completed)
- Participating area will be formed

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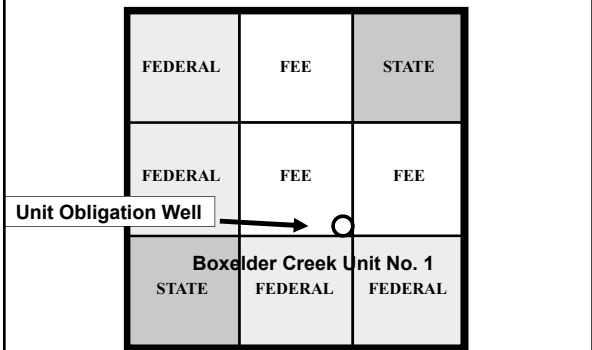
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## Boxelder Creek Unit




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## 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**

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## Exploratory Unit Agreement Participation After Discovery

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## 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:
  - ✓ Costs and revenue of the PA well(s), and
  - ✓ Allocation of royalty

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## 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

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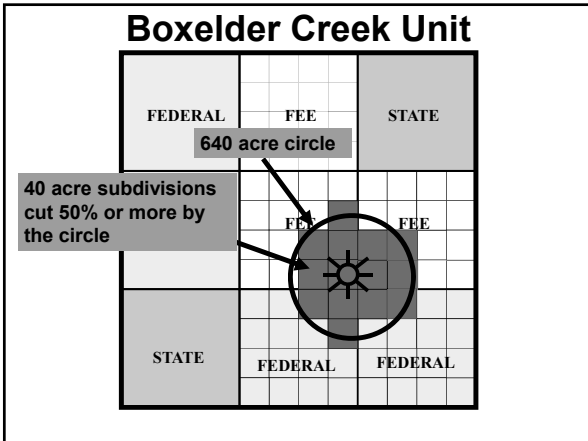
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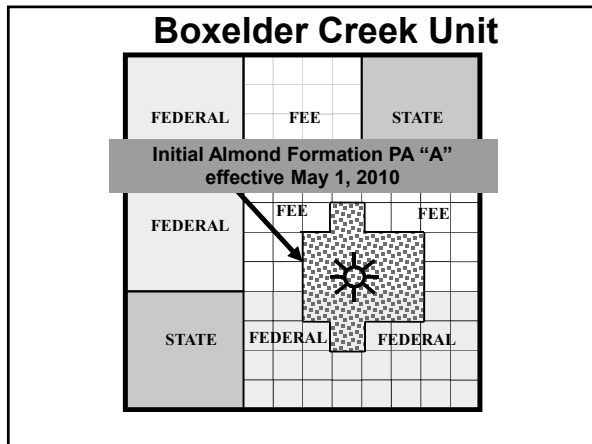
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### Initial Almond Formation PA "A"

<b>560 Total Acres:</b>	
360 Fee acres -	64.3%
200 Federal acres -	<u>35.7%</u>
	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

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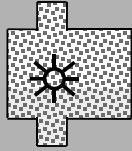
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## Boxelder Creek Unit

### 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




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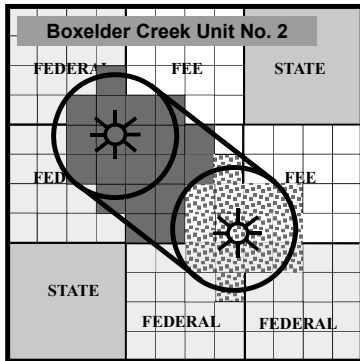
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## Boxelder Creek Unit

### Plan of Development Phase

Year No. 1

- Well #2 drilled
- Positive PWD
- PA revised




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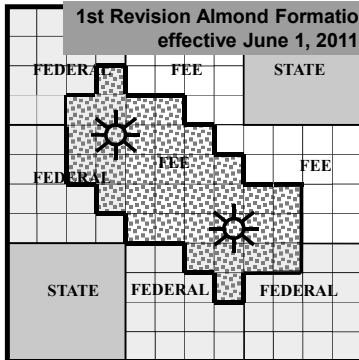
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## Boxelder Creek Unit

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




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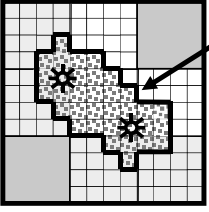
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**1st Revision Almond Formation PA "A"**



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

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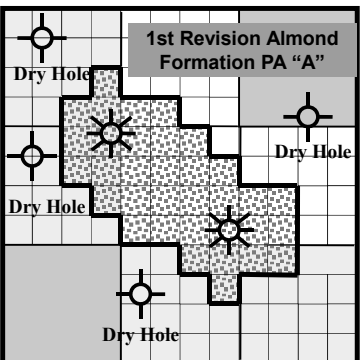
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**Boxelder Creek Unit**

**Plan of Development Phase**



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

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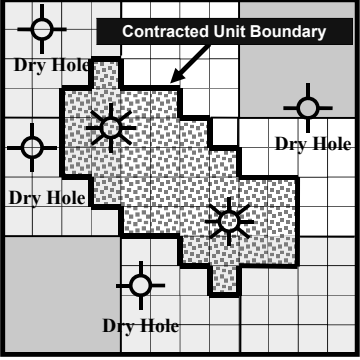
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**Boxelder Creek Unit**

**May 1, 2015**

- 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




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## Summary

- **Exploratory Unit Agreements (Conventional Wells)**
  1. **Rule of Capture**
  2. **Correlative Rights Doctrine**
  3. **Benefits of Unit Agreements**
  4. **Approval Process**
    - a. **Designation**
    - b. **Final Approval**
  5. **Lease Commitment Status**
    - a. **Fully Committed**
    - b. **Effectively Committed**
    - c. **Partially Committed**
    - d. **Noncommitted**

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## 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**

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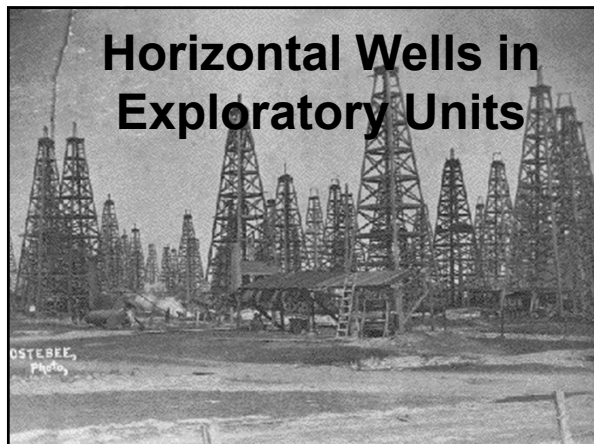
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## Horizontal Wells in Exploratory Units

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## 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**

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- **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”...

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- *An unconventional resource play is one that cannot be fully or economically developed without using horizontal drilling (laterals) and multi-stage hydraulic fracturing technologies because of the low permeability of the tight formation/play (Campanga, 2015; DOE, DOI and EPA, 2014; Cander, 2012; Doust, 2010; and Houldith and Ayers, 2009)*

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## 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.

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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.

- Also true also for coalbed natural gas continuous accumulation plays

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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.

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- 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.
- C. The entire length of the lateral should be located on Federal minerals. In special circumstances the lateral may intersect nonfederal minerals.

Subsequent unit wells do not have a similar requirement.

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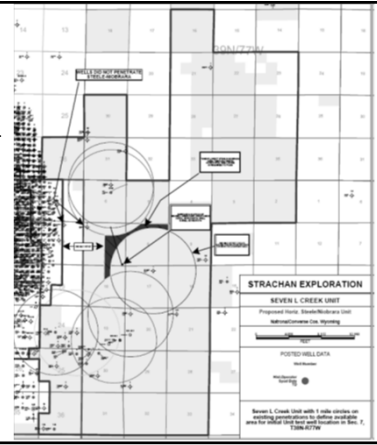
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Sometimes the distance requirement allows for a very small window, but remember that only *a portion* of the wellbore in the target formation needs to meet the requirement.




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- 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.

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**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.

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**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.

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**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:
  - ✓ Costs and revenue of the PA well(s), and
  - ✓ Allocation of royalty

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## 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

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## 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 wellbore 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.

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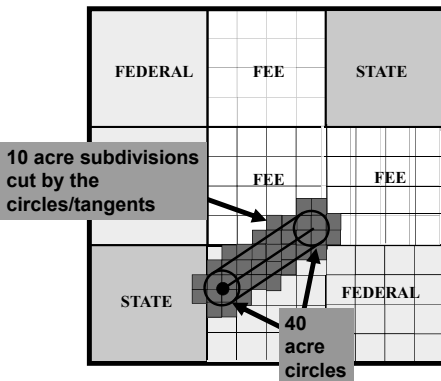
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## Boxelder Creek Unit




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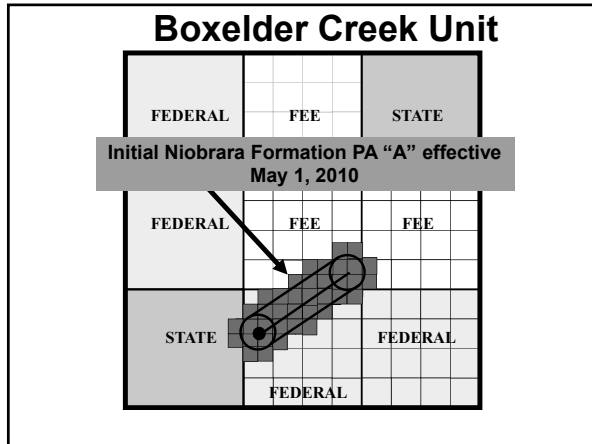
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### Initial Niobrara Formation PA "A"

<b>380 Total Acres:</b>		
130 Fee acres -	34.2%	
20 State acres -	5.3%	
230 Federal acres -	<u>60.5%</u>	
	100.0%	

**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

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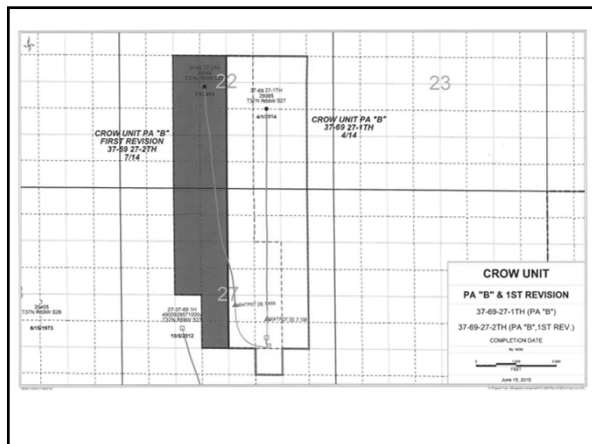
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EXHIBIT "D"  
 SCHEDULE OF LANDS AND TRACT PARTICIPATION FIRST REVISION TO THE TEAPOT FORMATION PARTICIPATING AREA "B"  
 CROW (DEEP) UNIT AREA  
 CONVERSE COUNTY, WYOMING  
 EFFECTIVE JULY 1, 2014

Tr. #	Lease#	Description	Acres	Participation
5	WWV174233	T37N-R6W, 6th P.M. Federal Section 22: S2SENE, S2SWNE, SWSENE Section 27: E2NTSW	70.0000	12.9630%
9	WWV177877	T37N-R6W, 6th P.M. Federal Section 27: W2SENE, W2NESE, NE1SWSE	50.0000	9.2593%
26	PATENTED	T37N-R6W, 6th P.M. Section 22: E2SW, W2SE, W2E2SE	200.0000	37.0370%
28	PATENTED	T37N-R6W, 6th P.M. Section 27: E2NW, W2NE, W2NESE, NWSE	220.0000	40.7407%
Totals			540.0000	100.0000%

TYPE OF LAND	COMMITTED ACRES	NON-COMMITTED ACRES	PERCENT
FEDERAL	120.0000	0	22.2222%
STATE	0.0000	0	0.0000%
PATENTED	420.0000	0	77.7778%
TOTAL	540.0000	0	100.0000%

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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 communitization agreement to protect both the Federal and nonfederal mineral interests.

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An example of a drilling and spacing unit that was approved by the WOGCC after the RMG determined a well to be a nonpaying unit well is in the Canyon Creek Dome Unit.

A communitization agreement was approved for the established drilling and spacing unit.

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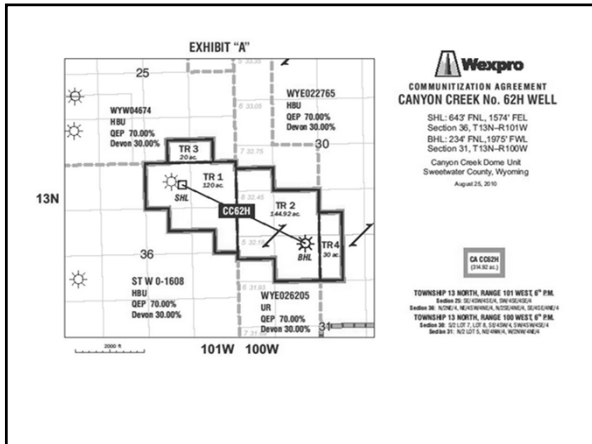
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**Royalty Payments**

**Horizontal Wells**

If the horizontal well is completed in Federal and 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.

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**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**

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## 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*

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## 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

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## 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

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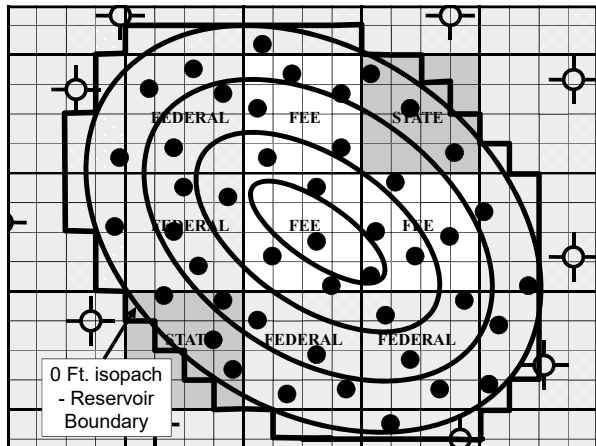
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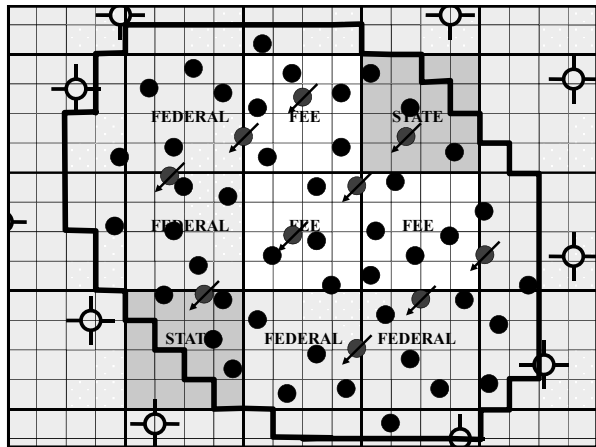
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### Secondary Recovery Unit Agreements

Tract Participation Formula Example:

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

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## Oil Hauling Truck



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## Communitization Agreements



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## Introduction

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

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# Introduction

(cont'd)

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

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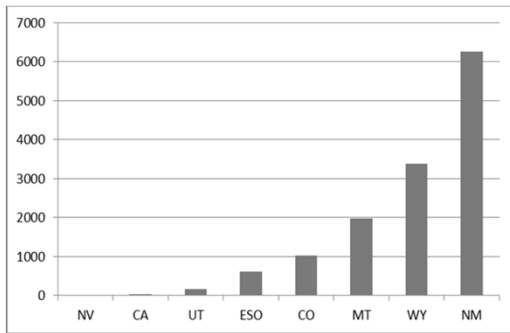
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Communitization Agreements (CAs) by State



Data as of December 2016

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## 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

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## 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

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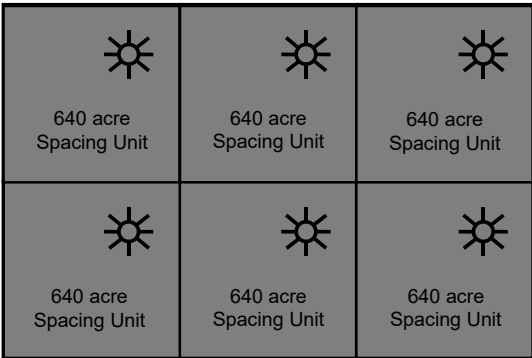
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640 Acre Spacing: 1 well allowed per spacing unit  
Well located in center of NE quarter of each section




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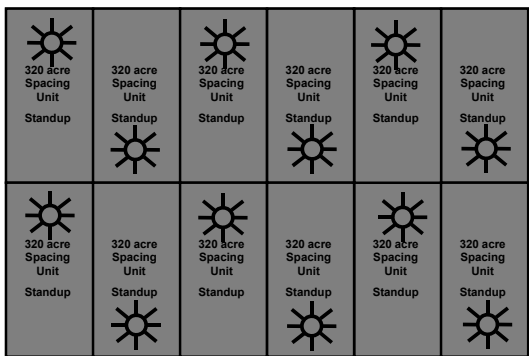
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320 Acre Spacing – Standup:  
Wells in center of NW quarter and center of SE quarter




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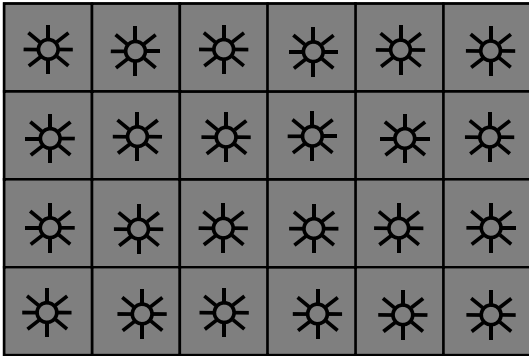
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160 Acre Spacing: 1 well allowed per spacing unit  
Well located in center of each quarter section




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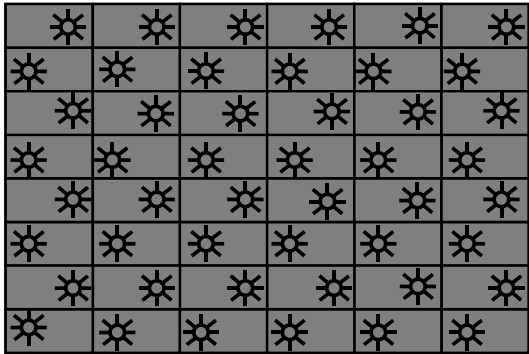
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80 Acre Spacing - Laydown




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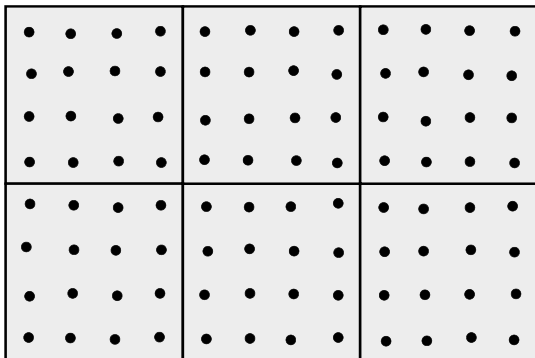
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40 Acre Spacing




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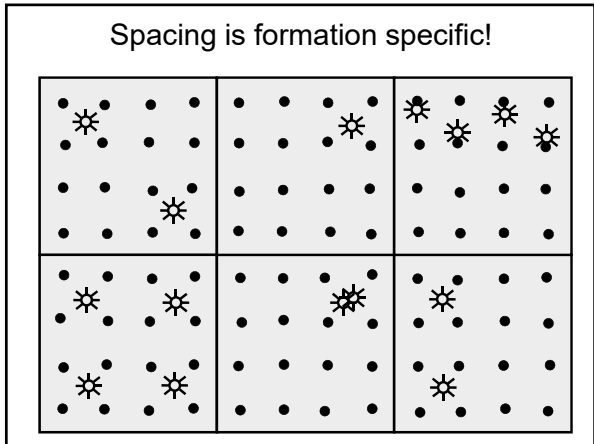
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**Communitization Agreement (CA)**

*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

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**Communitization Agreement (CA)**

*Key Concepts:*

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

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## 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.

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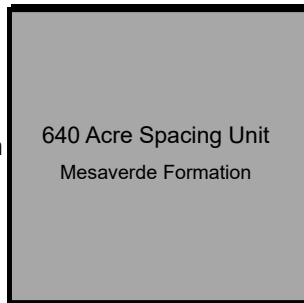
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### For example:

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



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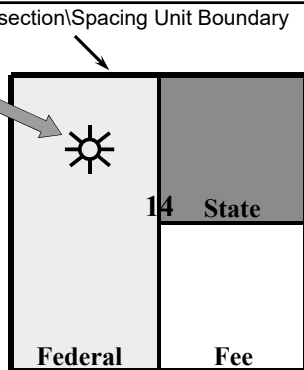
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### For example:

- 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?



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**Form CA** Section/Spacing Unit Boundary

CA Designation

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

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**Communitization Agreements**

*Example:* 2 wells drilled to the Blair Formation

- 320 acre standup spacing for Blair Fm.
- Create 320 acre CA for Blair Fm.
- Costs, revenue and royalty allocation based on proportionate surface acreage within the CA:
  - 50% - Federal
  - 50% - Fee

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**Communitization Agreements**

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

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**Remember Boxelder Creek Contracted Unit?**

PA is for Almond Fm.

**What if:**

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

**Boxelder Creek Unit**

Contracted Unit Boundary

Dry Hole

Dry Hole

Dry Hole

Dry Hole

640 acre spacing - Almond Fm.

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**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**

Contracted Unit Boundary

Dry Hole

Dry Hole

Dry Hole

Dry Hole

640 ac. spacing - Almond Fm.

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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.

**Boxelder Creek Unit**

Contracted Unit Boundary

Dry Hole

Dry Hole

Dry Hole

Dry Hole

640 ac. spacing - Almond Fm.

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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



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## Wyoming CA Adaptations to Help Meet Industry Needs

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

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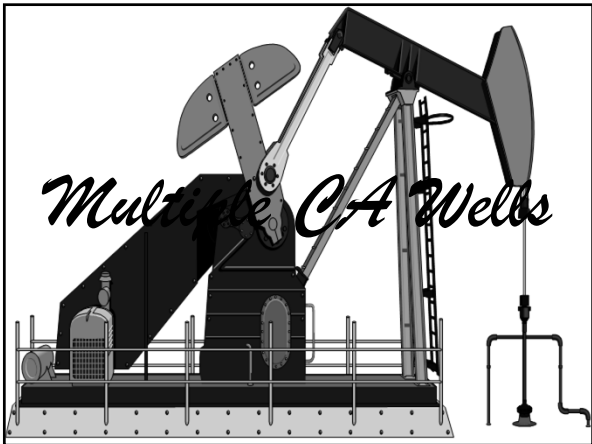
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**Remember:**

**Our 1 Well CA**

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**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.

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**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**

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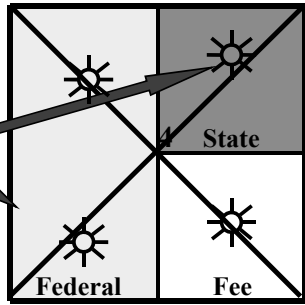
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### Multiple CA Wells

- 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

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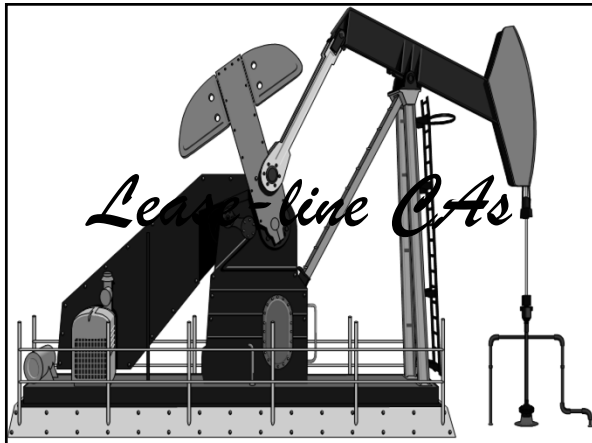
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### Lease-line CAs

- 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

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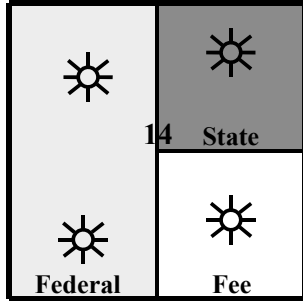
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### Lease-line CAs

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



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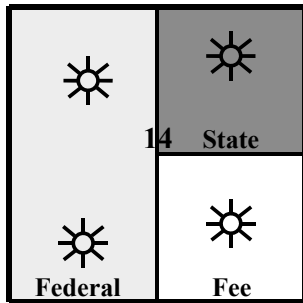
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### Lease-line CAs

- ❖ What happens if wells do not recover all reserves from the 160 acre spacing units?
- Where would you drill an additional well?*



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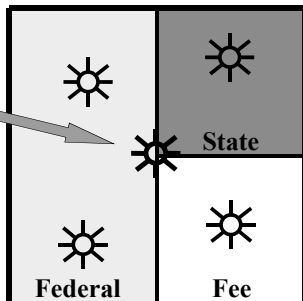
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### Lease-line CAs

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

*How do we allocate costs, revenue and royalty among the spacing units and leases?*



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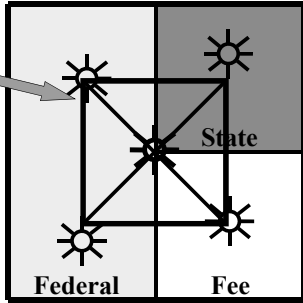
### Lease-line CAs

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%




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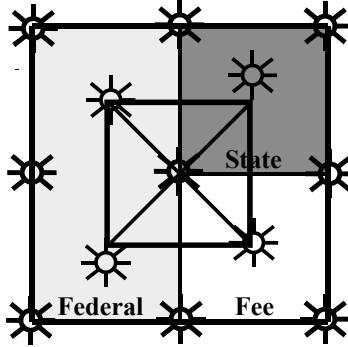
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### Lease-line CAs

Additional possible well locations which would require lease-line CAs

***This isn't Kansas Anymore!***




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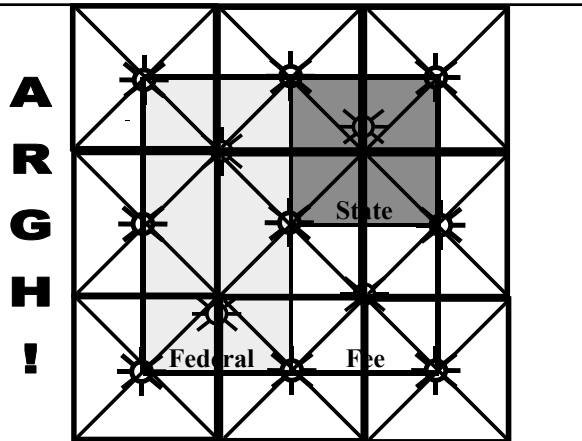
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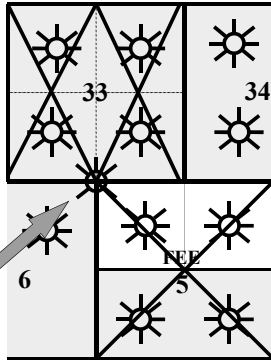
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### Confusing?

- 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?

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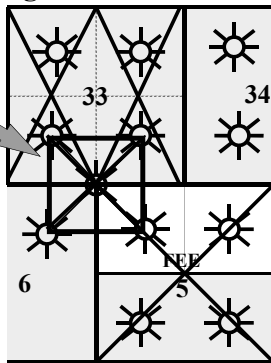
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### Confusing?

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



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## Additional Wyoming CA Adaptations to Help Meet Industry Needs

- *Self Certification*
- *Unleased Federal Lands*

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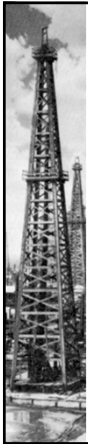
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### **Self Certification Statement for CAs**

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

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### **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 "Unleased Lands Account"
  - Faster payment of Federal royalties

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### **Summary**

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

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# Summary

(cont'd)

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

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## The End

*Plugging Operation - 1937*

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