

**COGCC Hearing
Wattenberg Horizontal
Rule Making**

Aug. 8 & 9, 2011

Land

Summary

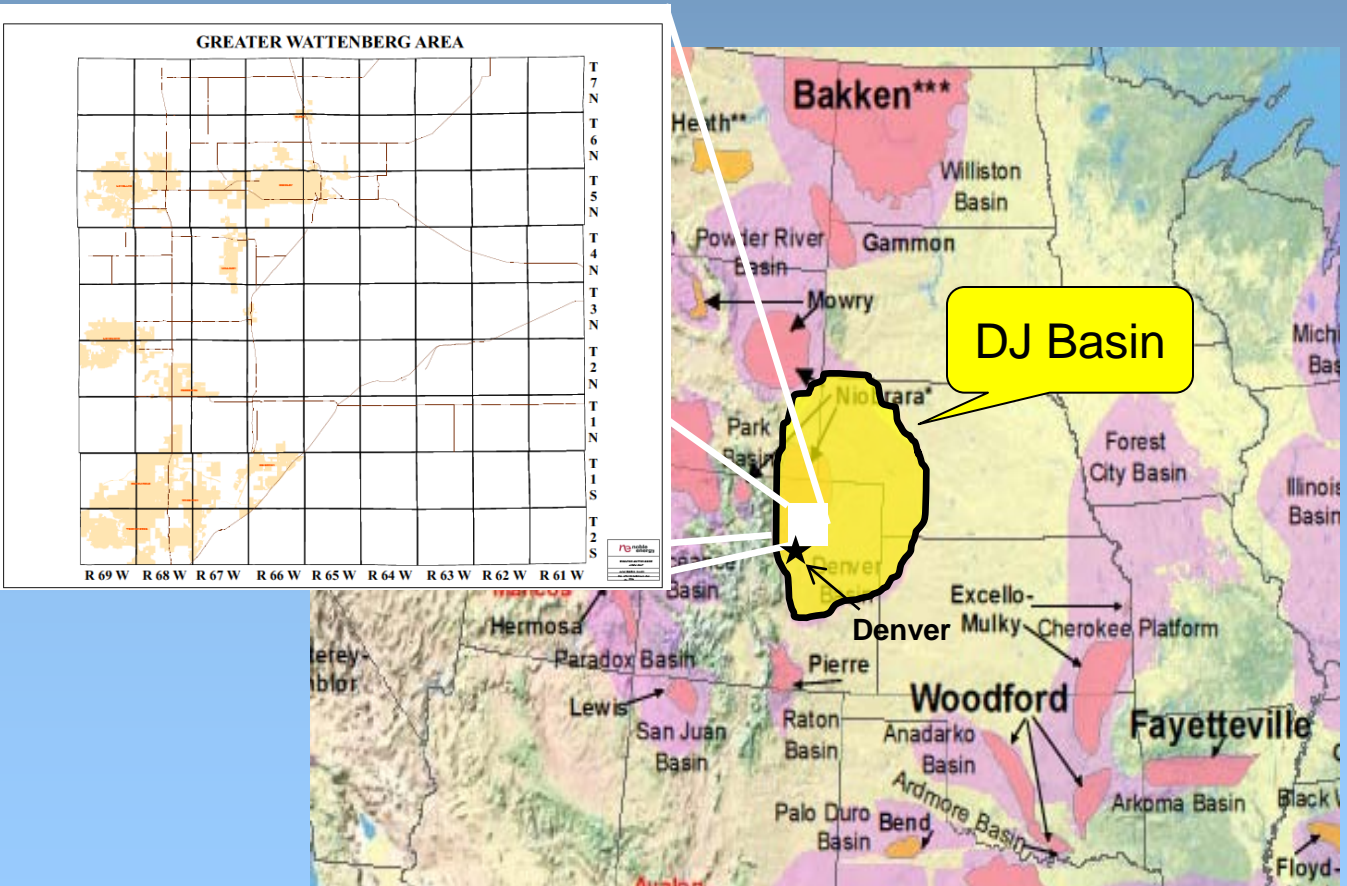
The amendments to 318A allow for the efficient and economic recovery of hydrocarbon resources from the Greater Wattenberg Area while protecting correlative rights and maintaining previously established surface disturbance protections.

Land Outline

- **The Greater Wattenberg Area (GWA) and the Denver Julesburg (DJ) Basin: A geographic description of the GWA**
- **Surface Protections: Preserve Surface Protections by Maintaining Established Drilling Windows**
- **Wellbore Spacing Units: An Introduction to the Rule**
- **Notice to Wellbore Spacing Unit Owners: Timing, Objections and Permitting**

The DJ Basin and GWA

- The DJ Basin covers parts of Colorado, Kansas, Wyoming and Nebraska
- The Greater Wattenberg Area is located within a portion of the DJ Basin located in Northeastern Colorado
- GWA covers 81 Townships, bordered by Denver to the South and Ft Collins to the North



Source: Energy Information Administration

Surface Protections

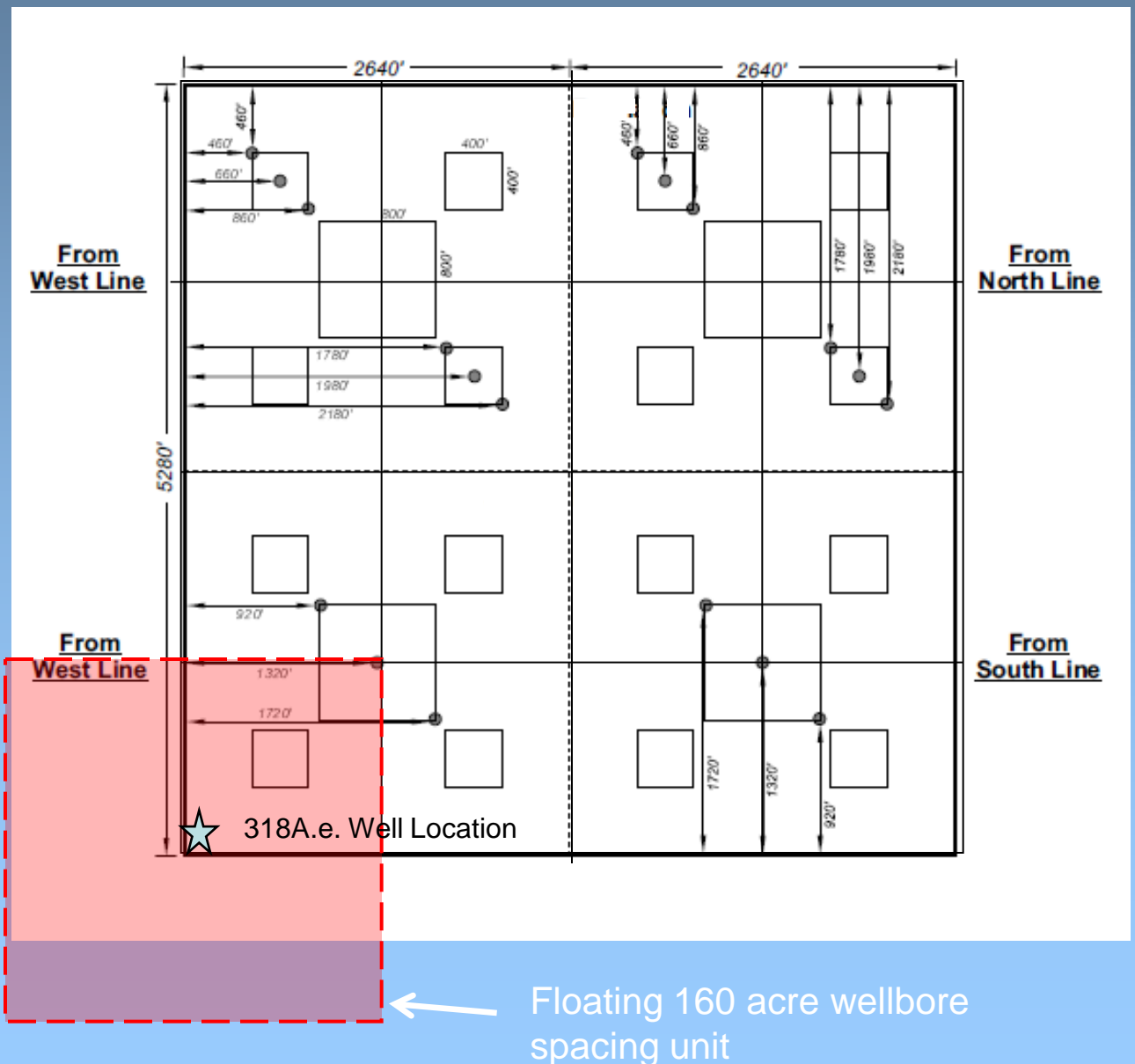
- Operators will still be required to drill wells from within the previously established drilling windows and to twin from existing wells
- Combined Anadarko, Noble, Encana, and PDC operate more than 14,000 wells (that's close to 80% of the wells in GWA)
- The above companies enter into surface use agreements for over 95% of the new wells drilled

Wellbore Spacing Units for Horizontal Wells

- The proposed spacing for horizontal wells is based on the “floating” 160 acre wellbore spacing unit developed for 318A.e.
- “Floating” wellbore spacing units work remarkably well; During the 5 years that Rule 318A.e has been in effect, no well has been contested at a hearing before the Commission
- The “floating” 160 acre spacing unit has been successfully applied by the 4 major operators to over 2,000 interior infill and boundary wells under 318A.e.
- With 318A.e the major operators in GWA use a standard JOA, and the operators are currently working on a standard JOA to govern HZ wells under the proposed rule.

318A.e and Wellbore Spacing Units

- 318A.e introduced the concept of a “floating” 160 acre wellbore spacing unit

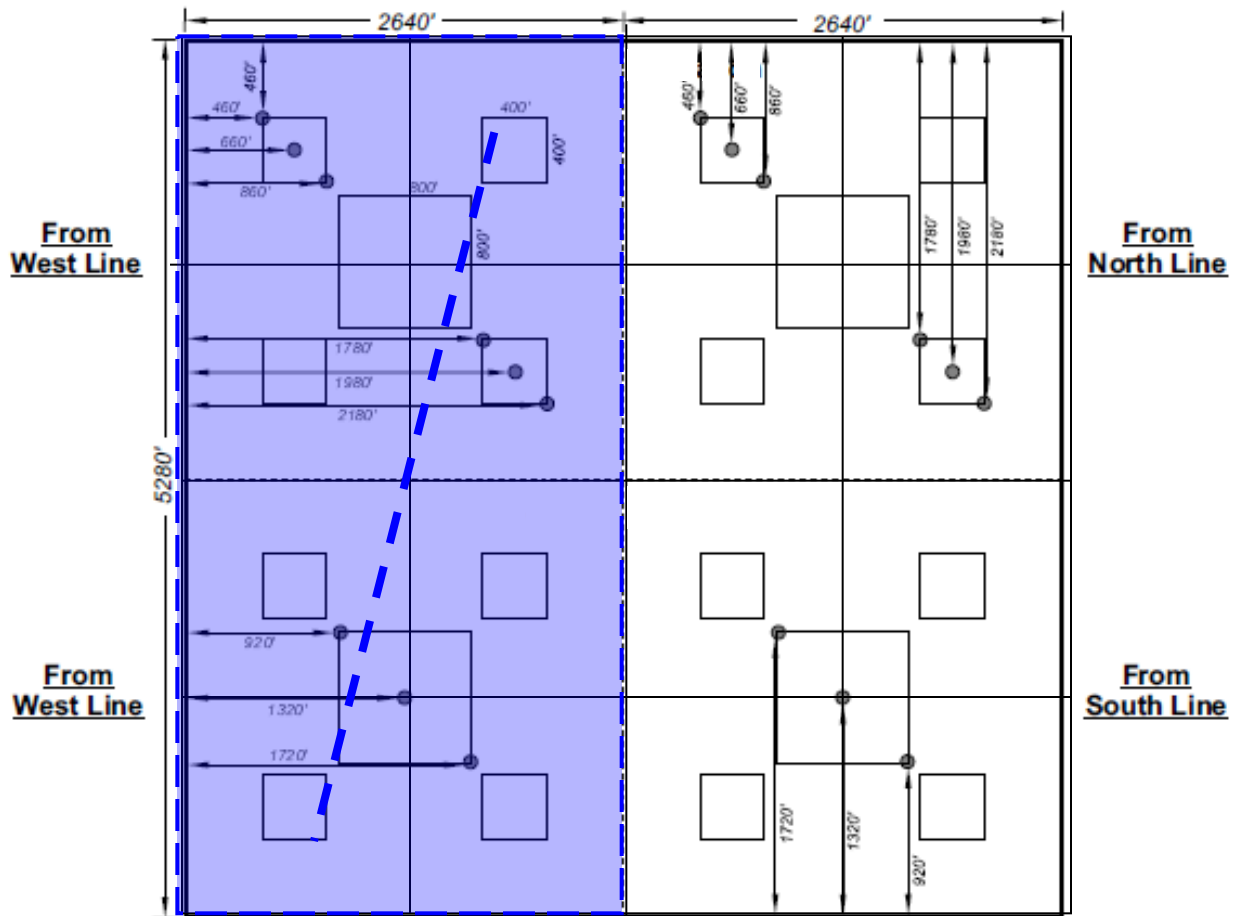


Wellbore Spacing Units for Horizontal Wells

- The proposed wellbore spacing units for horizontal wells will include all governmental 40-acre quarter/quarter sections that are penetrated by or within 460' of the horizontal lateral; correlative rights will be protected
- Proceeds from horizontal wells will be distributed to those interests included in the wellbore spacing unit for that well.
- There will be no change to established spacing units.
- Distribution of proceeds for existing wells will not be altered.

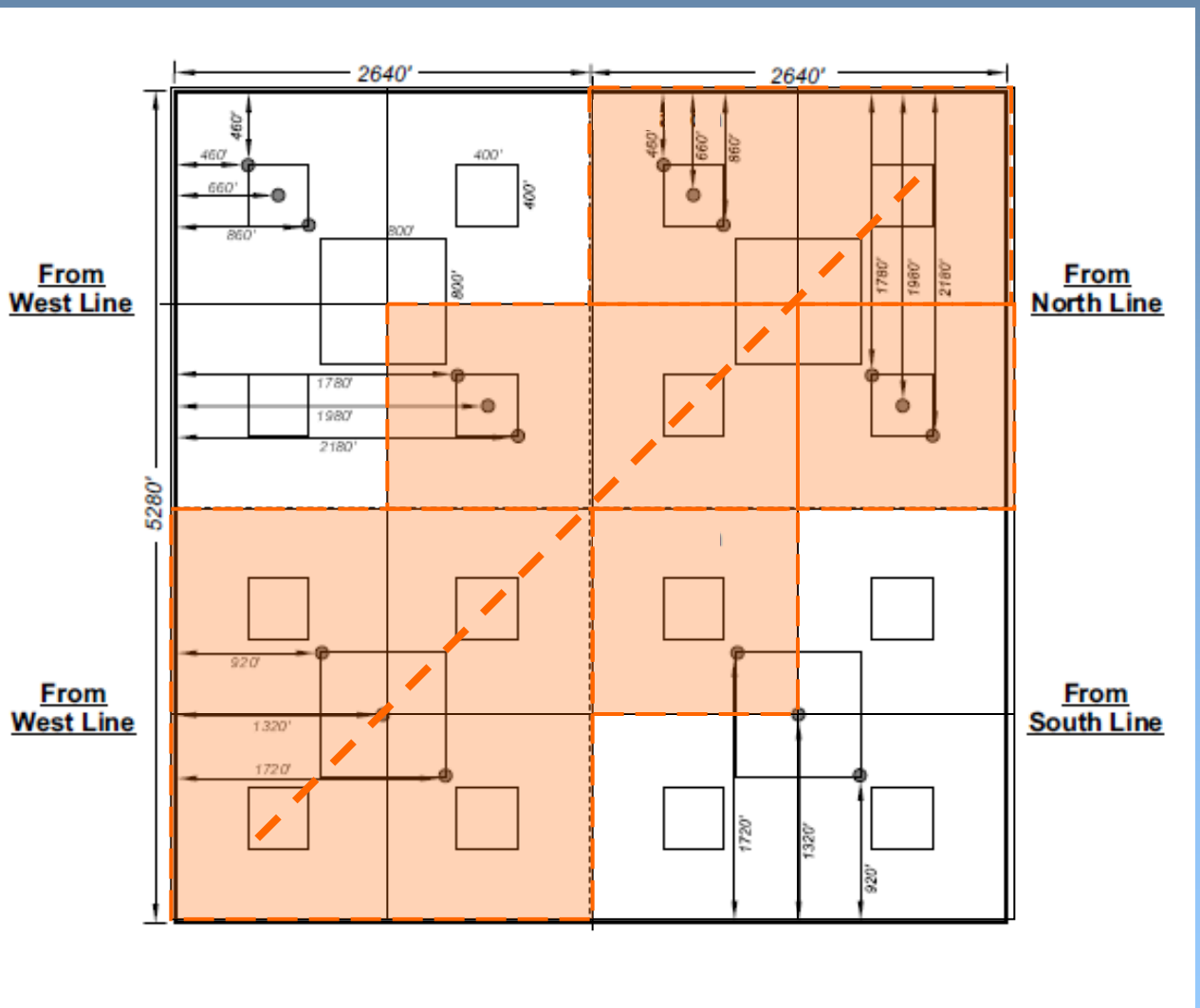
Horizontal Wellbore Spacing Units – Example 1

- W/2 of Section x (320 acres)



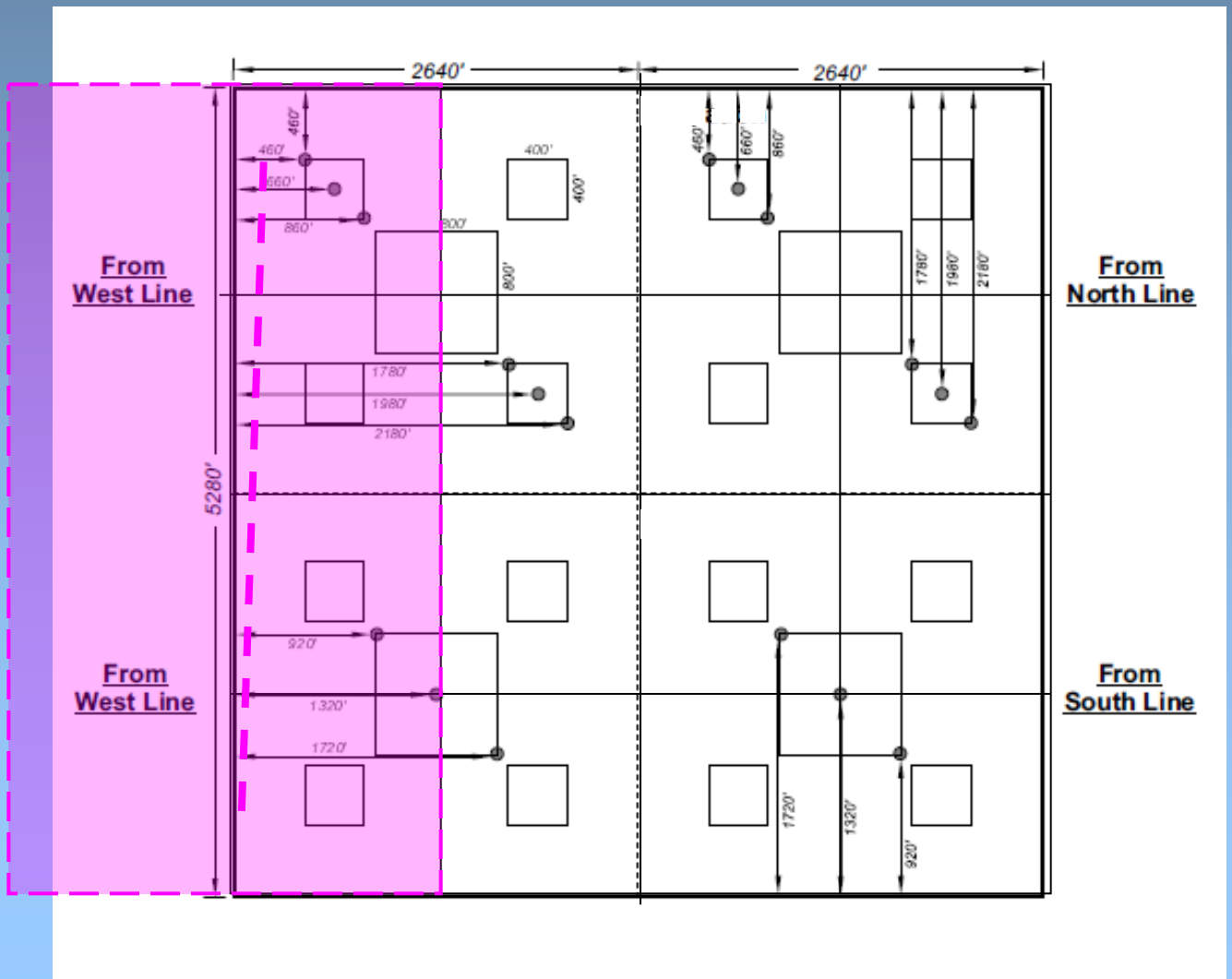
Horizontal Wellbore Spacing Units – Example 3

- SW/4, SE/4NW/4, NW/4SE/4 and NE/4 of Section x (400 acres)



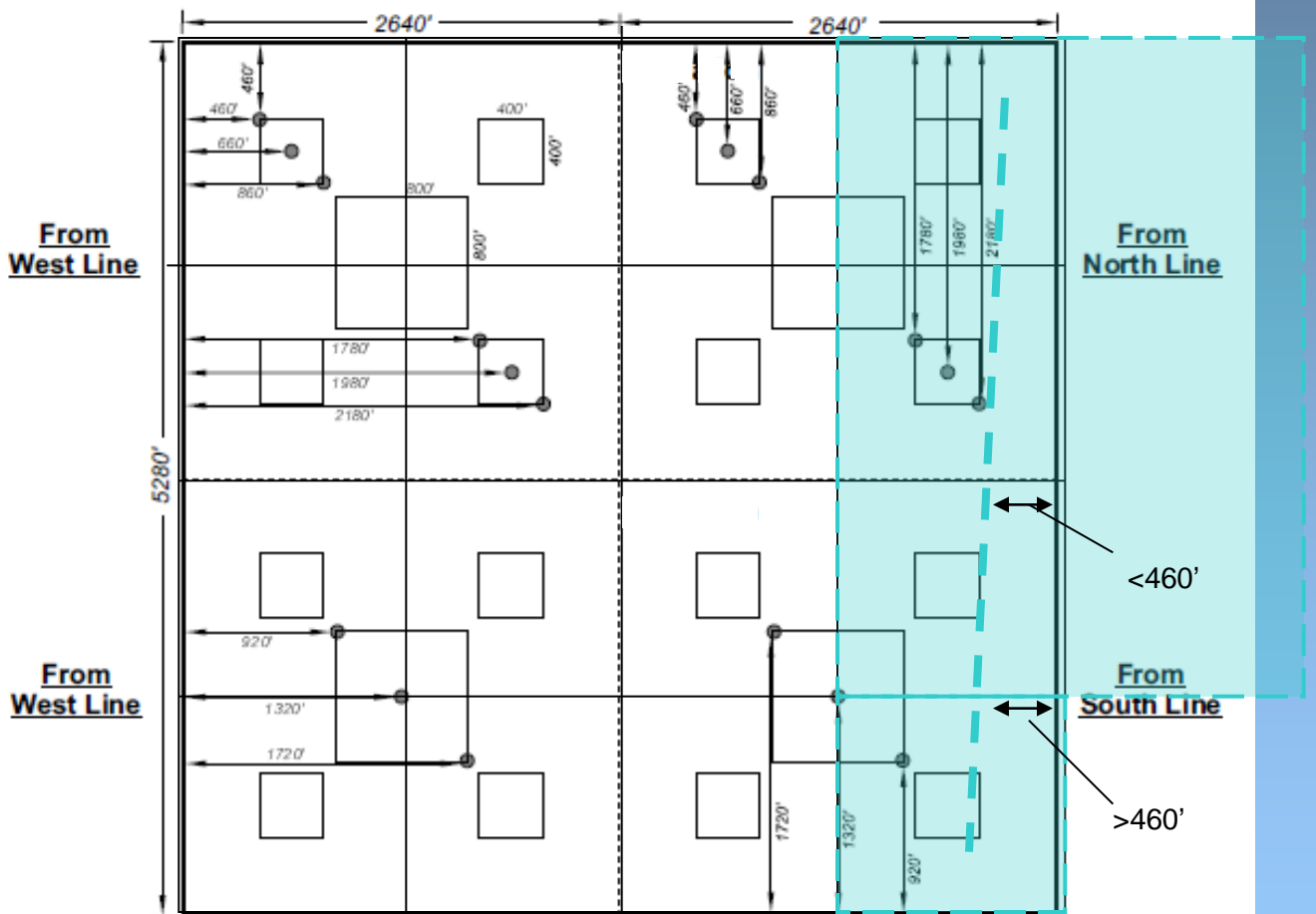
Horizontal Wellbore Spacing Units – Example 4

- E/2E/2 of Section y and W/2W/2 of Section x (320 acres)



Horizontal Wellbore Spacing Units – Example 5

- E/2E/2 of Section x, W/2NW/4 and NW/4SW/4 of Section y (280 acres)



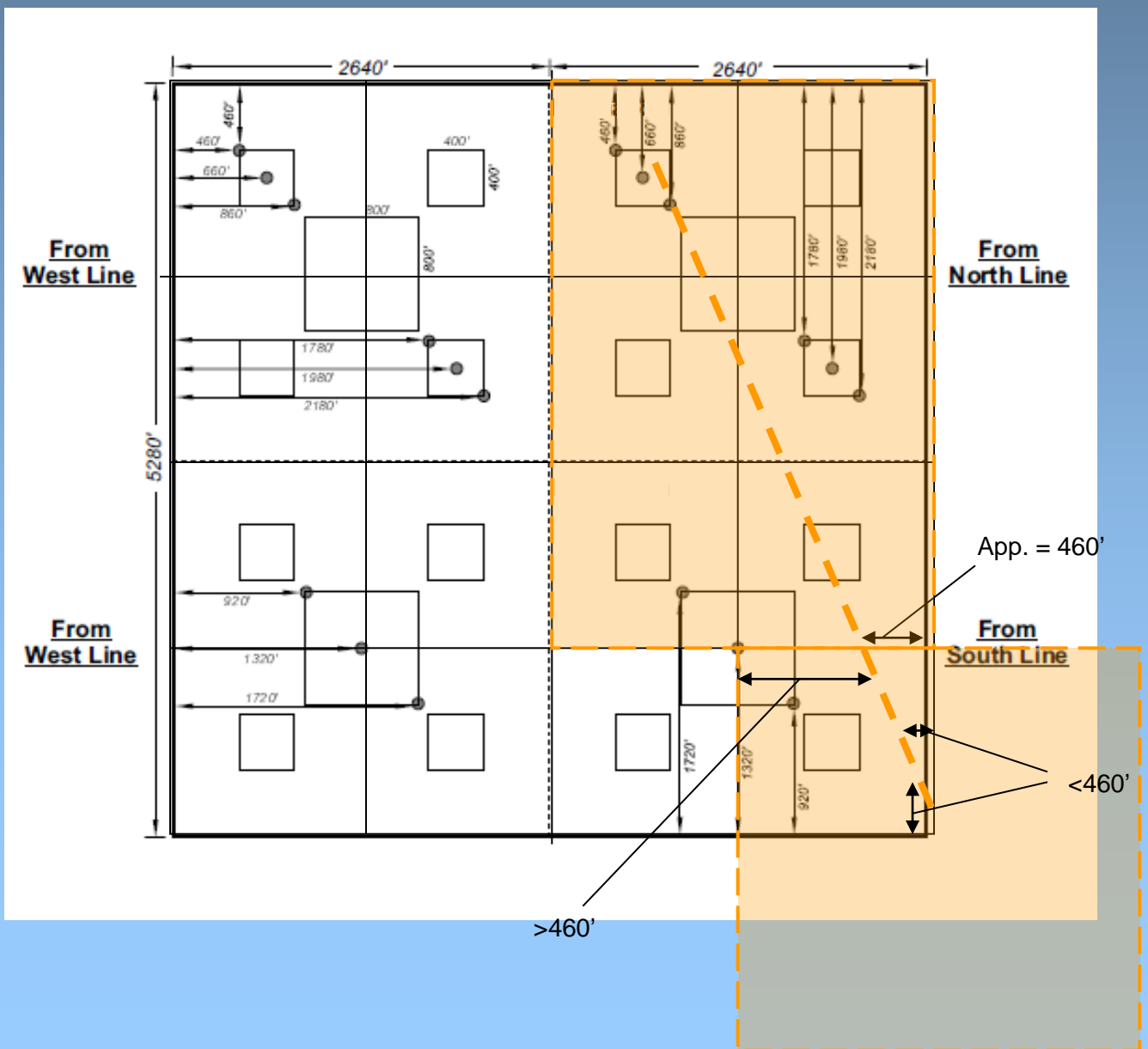
Horizontal Wellbore Spacing Units – Example 6

- E/2W/2 of Section x and NE/4NW/4 of Section z (200 acres)



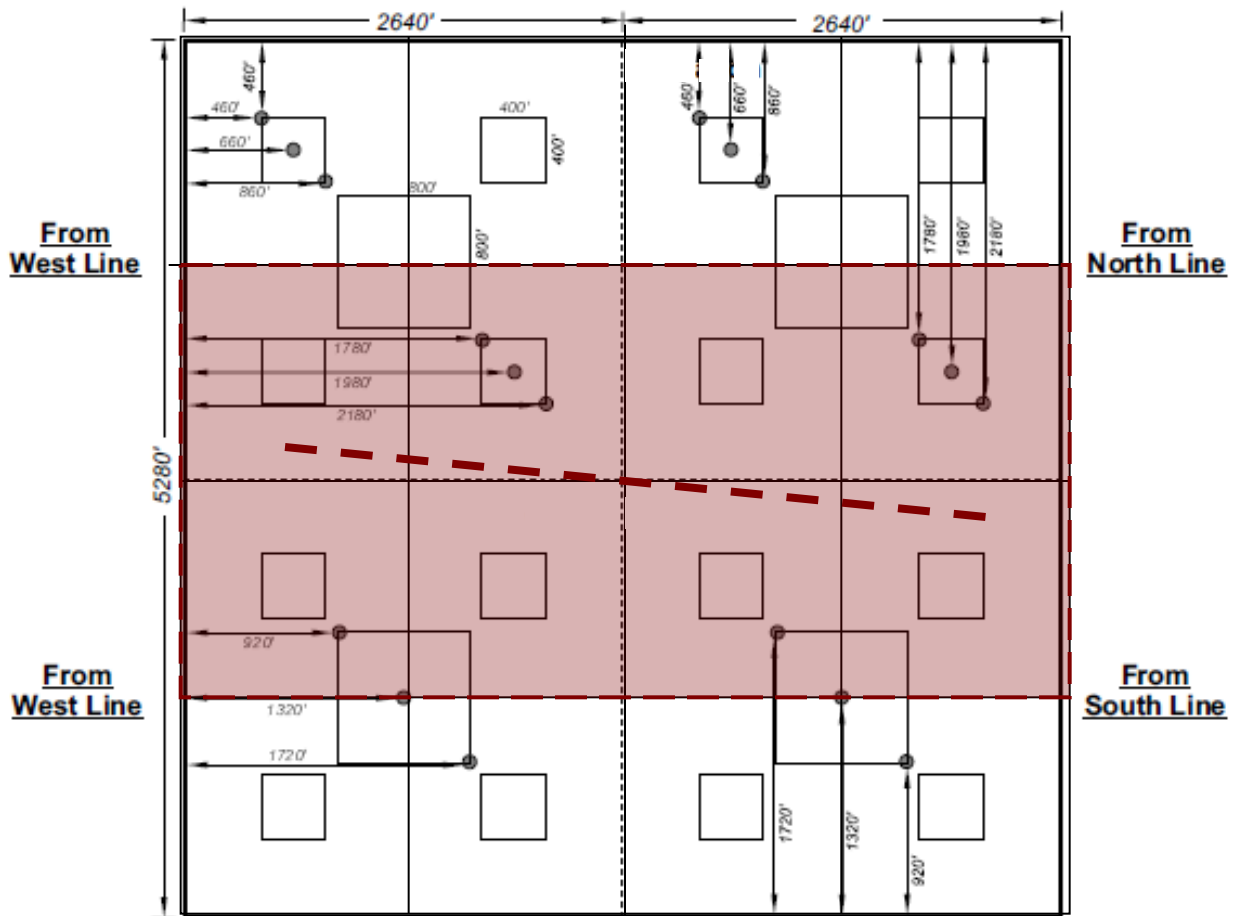
Horizontal Wellbore Spacing Units – Example 7

- NE/4, N/2SE/4 and SE/4SE/4 of Section x, NE/4NE/4 of Sec. z, NW/4NW/4 of Section w and SW/4SW/4 of Section y (400 acres)



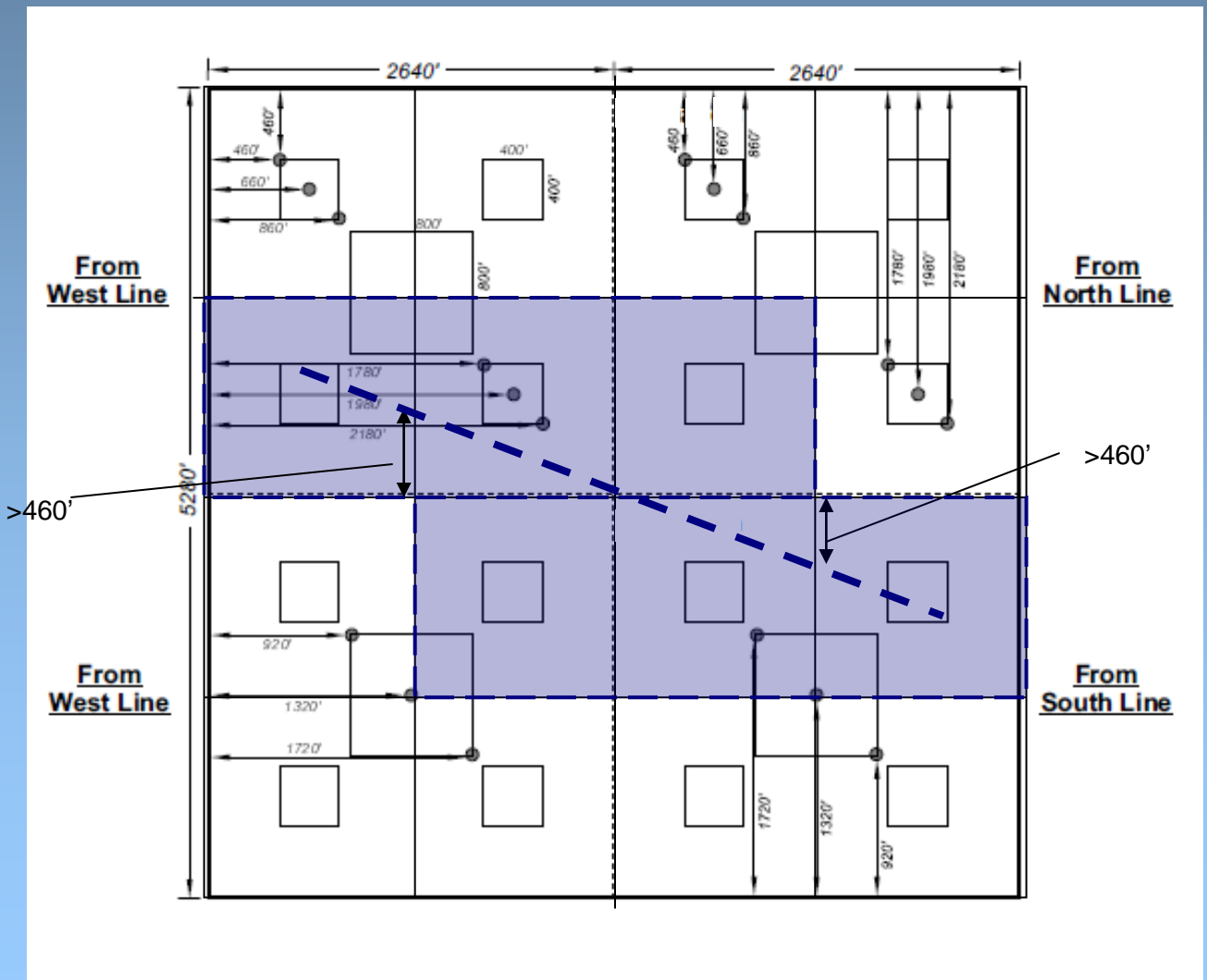
Horizontal Wellbore Spacing Units – Example 8

- S/2N/2 and N/2S/2 of Section x (320 acres)



Horizontal Wellbore Spacing Units – Example 9

- S/2NW/4, NE/4SW/4, SW/4NE/4 and N/2SE/4 of Section x (240 acres)



Notice to Wellbore Spacing Unit Owners & Objections

- The notice period has been extended from 20 Days to 30 Days
- Notification requirements expanded and now must include:
 - Description of the wellbore orientation
 - Anticipated spud date
 - Size and shape of the proposed wellbore spacing unit – with depiction
 - Proposed BHL and SHL locations + footage description for target formation penetration for HZs
 - Survey plat

Notice to Wellbore Spacing Unit Owners & Objections

- All owners in the proposed wellbore spacing unit now have 30 days to object
- Objections must be based on:
 - Claim that proper notice requirements were not met
 - Technical objection that either waste will occur or correlative rights will be adversely affected
 - Operator is not an owner
- Operator and objecting owner will work to resolve the issue
- If this does not occur, operator may file an application and seek a hearing
- If Operator does not seek a hearing, the objection prevails and the well proposal expires

Notice to Wellbore Spacing Unit Owners & Permitting

- An APD or Form 2 must be submitted to the COGCC within 90 days of the expiration of the 30 Day Notice
- If APD is not submitted within 90 days the 30 Day Notice will be deemed withdrawn
- If 30 Day Notice is deemed withdrawn or actually withdrawn, operator may not submit another notice for the same well or wellbore spacing unit for 45 days

Summary

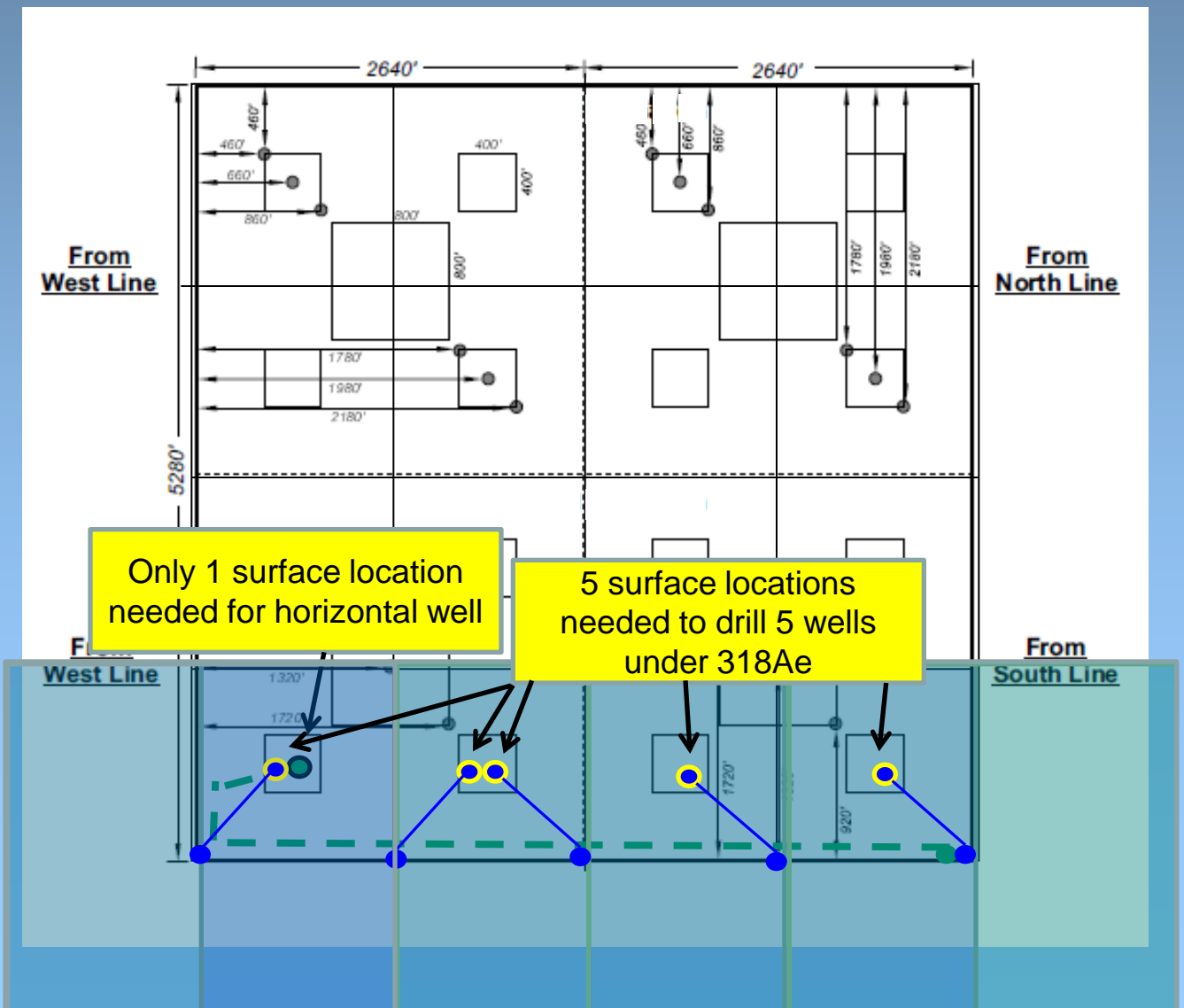
The amendments to 318A:

- Promote the continued efficient and economic recovery of hydrocarbons from GWA
- Maintain previously established surface protections
- Apply the concept of the “floating” wellbore spacing unit - successfully established for 318A.e interior infill and boundary wells – to horizontal wellbore spacing units
- Do not alter previously established spacing units or the distribution of payments established by those units

Additional Information

Horizontal vs. Vertical and Directional Wells

- 1 horizontal well has the potential to replace 5 or more vertical/directional wells with only 1 surface disturbance instead of 5



GWA Operators and Well Counts

| <u>Operator</u> | <u>Well Count</u> |
|--|-------------------|
| NOBLE ENERGY INC | 6770 |
| KERR-MCGEE OIL & GAS ONSHORE LP | 5081 |
| PETROLEUM DEVELOPMENT CORPORATION | 1416 |
| ENCANA OIL & GAS (USA) INC | 1030 |
| K P KAUFFMAN COMPANY INC | 810 |
| MERIT ENERGY COMPANY | 748 |
| UNIOIL | 207 |
| FOUNDATION ENERGY MANAGEMENT LLC | 157 |
| BONANZA CREEK ENERGY OPERATING COMPANY LLC | 154 |
| TEXAS AMERICAN RESOURCES COMPANY | 140 |
| GREAT WESTERN OIL & GAS COMPANY LLC | 114 |
| BAYSWATER EXPLORATION AND PRODUCTION LLC | 95 |
| ENERVEST OPERATING LLC | 85 |
| MAGPIE OPERATING, INC | 84 |
| HRM RESOURCES LLC | 78 |
| CITY & COUNTY OF DENVER | 70 |
| RENEGADE OIL & GAS COMPANY LLC | 63 |
| MACHII-ROSS PETROLEUM CO | 61 |
| MATRIX ENERGY LLC | 57 |
| COLTON LIMITED LIABILITY CO | 48 |
| MINERAL RESOURCES, INC. | 47 |
| BLUE CHIP OIL INC | 41 |
| HILCORP ENERGY COMPANY | 41 |
| TOP OPERATING COMPANY | 36 |
| PETROLEUM MANAGEMENT LLC | 35 |
| ST. JAMES ENERGY OPERATING INC | 33 |
| ORR ENERGY LLC | 28 |
| SYNERGY RESOURCES CORPORATION | 28 |
| FOUNTAINHEAD RESOURCES LTD | 27 |
| CRIMSON EXPLORATION OPERATING INC | 26 |
| SMITH OIL PROPERTIES INC | 21 |
| O'BRIEN ENERGY RESOURCES CORP | 21 |
| ENERGY SEARCH COMPANY | 20 |
| BATES* JAMES EDWARD | 19 |

GWA Operators and Well Counts

| <u>Operator</u> | <u>Well Count</u> |
|---|-------------------|
| SANDLIN OIL CORP | 18 |
| SMITH ENERGY CORP | 18 |
| MONAHAN GAS & OIL INC | 15 |
| TEXAS TEA OF COLORADO LLC DBA TEXAS TEA LLC | 14 |
| PETERSON ENERGY OPERATING INC | 13 |
| HYNDREX RESOURCES | 13 |
| MONAGO OPERATING INC | 12 |
| FRITZLER RESOURCES INC | 12 |
| WHITEWING RESOURCES LLC | 11 |
| OVERLAND RESOURCES LLC | 10 |
| BLUE & GRAY ENERGY INC | 10 |
| TIGGES OIL LLC | 9 |
| TUDEX PETROLEUM INC | 9 |
| APOLLO OPERATING LLC | 9 |
| EDDY OIL COMPANY | 9 |
| CONQUEST OIL COMPANY | 8 |
| MCCARTNEY ENGINEERING LLC | 8 |
| SCHREIDER & COMPANY, INC | 8 |
| SCHNEIDER ENERGY SERVICES INC | 7 |
| CDM OIL & GAS | 7 |
| NATURAL RESOURCE GROUP INC | 6 |
| DIVERSIFIED OPERATING CORPORATION | 6 |
| CCOB OIL INVESTMENTS LLC | 6 |
| EARTHSTONE ENERGY INC | 6 |
| ENPROP INC | 5 |
| 4-H OPERATING CORPORATION | 5 |
| SKAER PROPERTIES LTD PARTNERSHIP | 5 |
| COLORADO INTERSTATE GAS COMPANY | 5 |
| HOMESTEAD OIL INC | 5 |
| PAPE OILFIELD SERVICE INC | 4 |
| HARSH INTERNATIONAL INC | 4 |
| ROCKIES OIL & GAS INC | 3 |
| NOBLE ENERGY PRODUCTION INC | 3 |
| WINDSOR ENERGY GROUP LLC | 3 |
| CHANDLER DJ BASIN LLC | 3 |
| SUNDANCE ENERGY INC | 2 |
| INDUSTRIAL GAS SERVICES INC | 2 |
| CHURCHILL ENERGY INC | 2 |
| RANCHERS EXPLORATION PARTNERS LLC | 2 |
| TIMKA RESOURCES LTD | 2 |
| MCWHINNEY HOLDING COMPANY LLLP | 2 |

GWA Operators and Well Counts

| <u>Operators</u> | <u>Well Count</u> |
|--------------------------------|-------------------|
| WISE WAYNE L | 2 |
| SOVEREIGN ENERGY LLC | 2 |
| ARGONEX COMPANY LLC | 2 |
| M E III CORPORATION | 2 |
| THREE FORKS RESOURCES LLC | 2 |
| HIGH PLAINS DISPOSAL INC | 2 |
| STELBAR OIL CORP INC | 2 |
| RECOVERY ENERGY INC | 2 |
| CUTLER BROTHERS | 1 |
| DRY CREEK PETROLEUM LLC | 1 |
| DUGAN PRODUCTION CORP | 1 |
| LUNDVALL OIL & GAS INC | 1 |
| MOUNTAIN PETROLEUM CORP | 1 |
| SURE OIL COMPANY | 1 |
| RWL ENTERPRISES | 1 |
| TOM FENNO PRODUCTION LLC | 1 |
| BP ENERGY INC | 1 |
| MARKUS PRODUCTION, INC | 1 |
| BUEHLER* HOWARD D & VIRGINIA A | 1 |
| WESTERN OPERATING COMPANY | 1 |
| MOSHER, BROWN, & LEWIS | 1 |
| CGT INC | 1 |
| OXBOW PROPERTIES INC | 1 |
| CHACO ENERGY COMPANY | 1 |
| HAINES* RICHARD | 1 |