COGCC Hearing Wattenberg Horizontal Rule Making Aug. 8 & 9, 2011 Land

### Summary

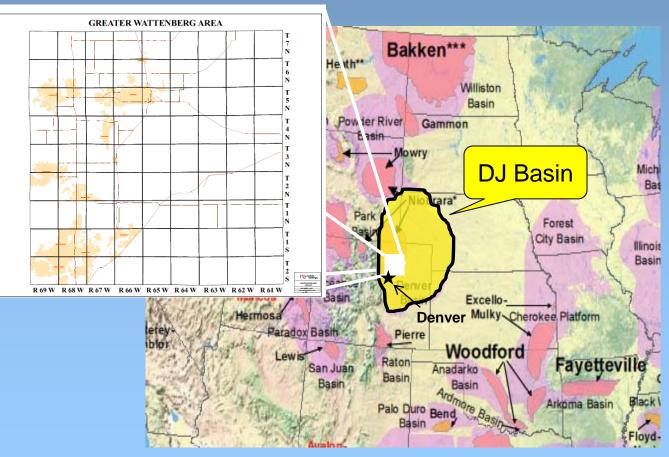
The amendments to 318A allow for the efficient and economic recovery of hydrocarbon resources from the Greater Wattenberg Area while protecting correlative rights and maintaining previously established surface disturbance protections.

# 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

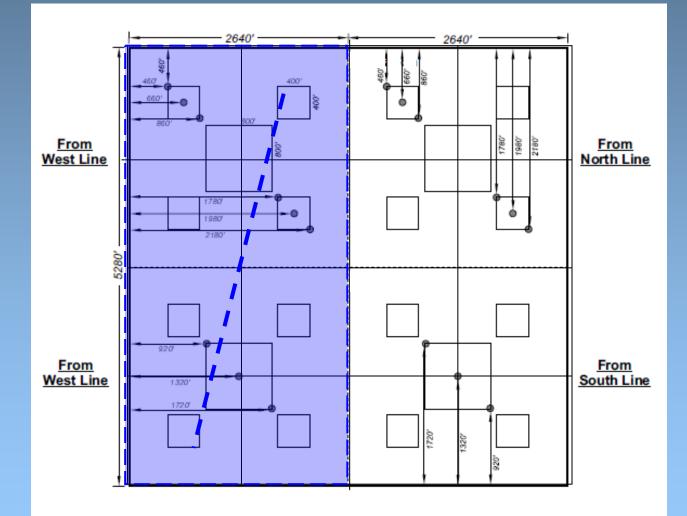
 318A.e introduced the concept of a "floating" 160 acre wellbore spacing unit



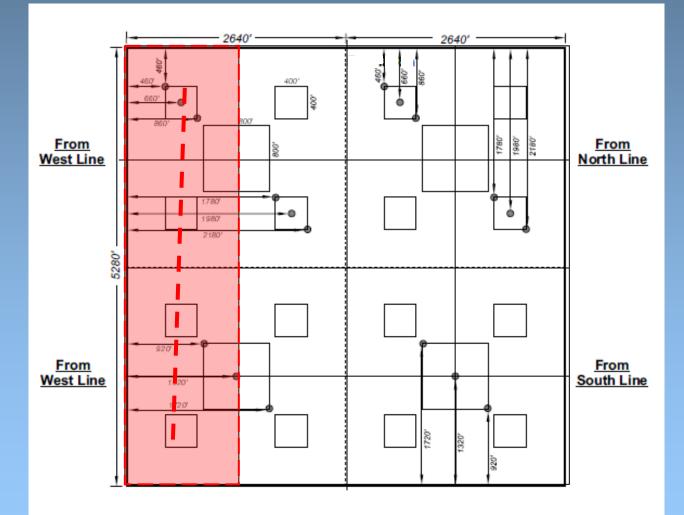
#### Wellbore Spacing Units for Horizontal Wells

- 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.

• W/2 of Section x (320 acres)



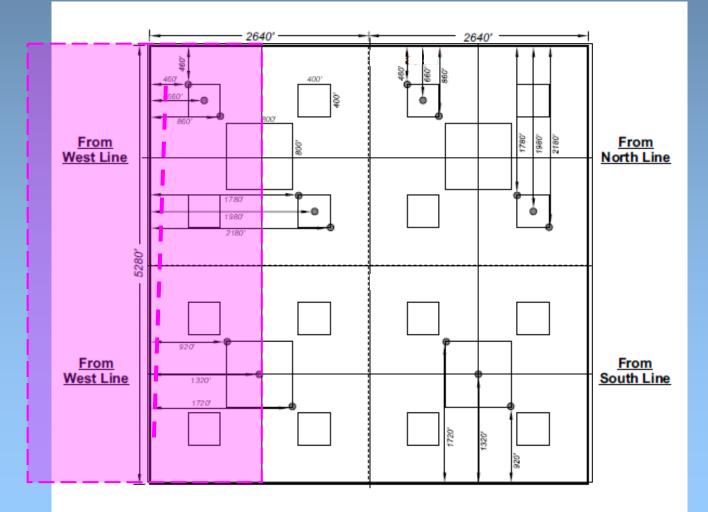
• W/2W/2 of Section x (160 acres)



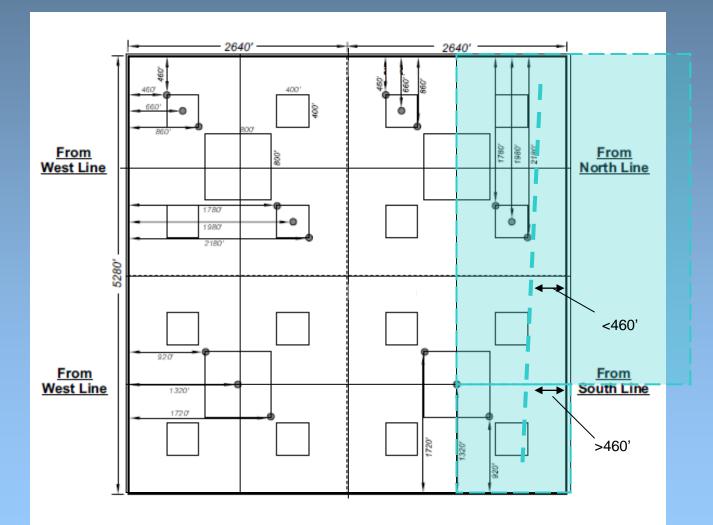
 SW/4, SE/4NW/4, NW/4SE/4 and NE/4 of Section x (400 acres)



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



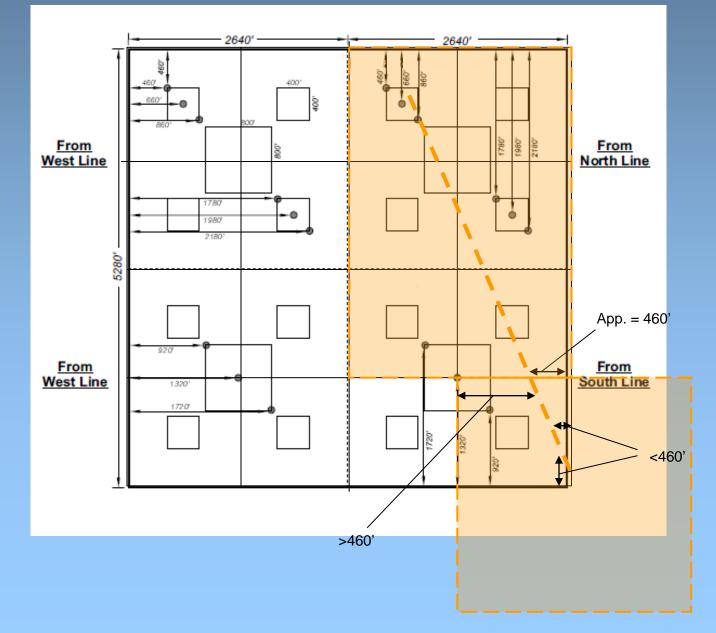
 E/2E/2 of Section x, W/2NW/4 and NW/4SW/4 of Section y (280 acres)



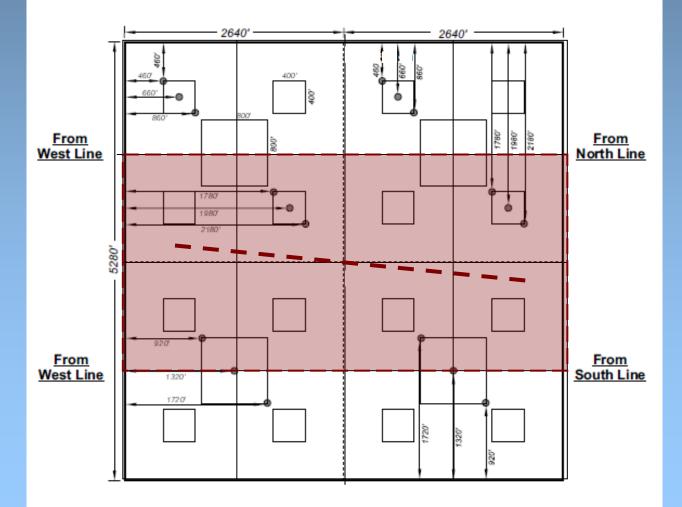
 E/2W/2 of Section x and NE/4NW/4 of Section z (200 acres)



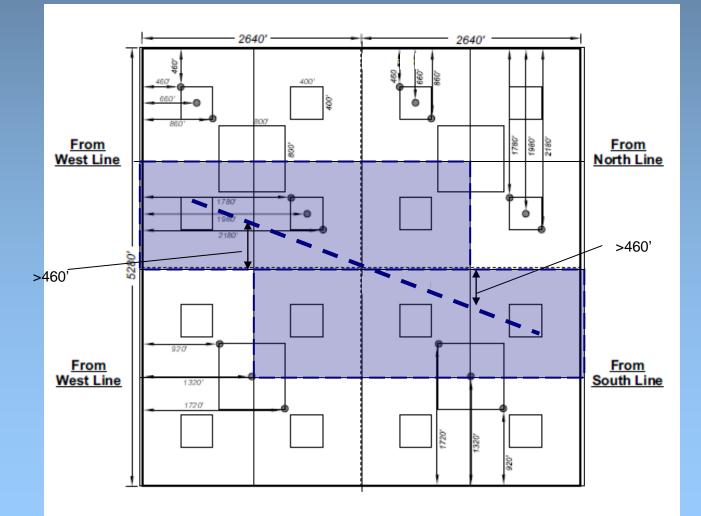
 NE/4, N/2SE/4 and SE/4SE/4 of Section x, NE/4NE/4 of Sec. z, NW/4NW/4 of Section w and SW/4SW/4 of Section y (400 acres)



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



 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



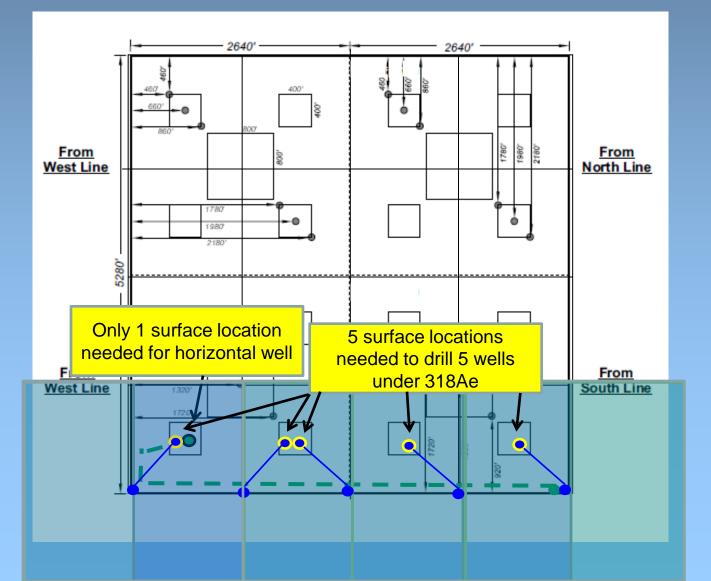
The amendments to 318A:

- 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

Operator	<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	
CRIMSON EXPLORATION OPERATING INC	26
SMITH OIL PROPERTIES INC	
O'BRIEN ENERGY RESOURCES CORP	
ENERGY SEARCH COMPANY	20
BATES* JAMES EDWARD	19

# GWA Operators and Well Counts

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DIVERSIFIED OPERATING CORPORATION6CCOB OIL INVESTMENTS LLC6EARTHSTONE ENERGY INC6ENPROP INC54-H OPERATING CORPORATION5SKAER PROPERTIES LTD PARTNERSHIP5COLORADO INTERSTATE GAS COMPANY5HOMESTEAD OIL INC5PAPE OILFIELD SERVICE INC4HARSH INTERNATIONAL INC4ROCKIES OIL & GAS INC3NOBLE ENERGY PRODUCTION INC3WINDSOR ENERGY GROUP LLC3CHANDLER DJ BASIN LLC3SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	CDM OIL & GAS	7
CCOB OIL INVESTMENTS LLC6EARTHSTONE ENERGY INC5ENPROP INC54-H OPERATING CORPORATION5SKAER PROPERTIES LTD PARTNERSHIP5COLORADO INTERSTATE GAS COMPANY5HOMESTEAD OIL INC5PAPE OILFIELD SERVICE INC4HARSH INTERNATIONAL INC4ROCKIES OIL & GAS INC3NOBLE ENERGY PRODUCTION INC3WINDSOR ENERGY GROUP LLC3CHANDLER DJ BASIN LLC3SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	NATURAL RESOURCE GROUP INC	6
EARTHSTONE ENERGY INC6ENPROP INC54-H OPERATING CORPORATION5SKAER PROPERTIES LTD PARTNERSHIP5COLORADO INTERSTATE GAS COMPANY5HOMESTEAD OIL INC5PAPE OILFIELD SERVICE INC4HARSH INTERNATIONAL INC4ROCKIES OIL & GAS INC3NOBLE ENERGY PRODUCTION INC3WINDSOR ENERGY GROUP LLC3CHANDLER DJ BASIN LLC3SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	DIVERSIFIED OPERATING CORPORATION	6
ENPROP INC54-H OPERATING CORPORATION5SKAER PROPERTIES LTD PARTNERSHIP5COLORADO INTERSTATE GAS COMPANY5HOMESTEAD OIL INC5PAPE OILFIELD SERVICE INC4HARSH INTERNATIONAL INC4ROCKIES OIL & GAS INC3NOBLE ENERGY PRODUCTION INC3WINDSOR ENERGY GROUP LLC3CHANDLER DJ BASIN LLC3SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	CCOB OIL INVESTMENTS LLC	6
4-H OPERATING CORPORATION5SKAER PROPERTIES LTD PARTNERSHIP5COLORADO INTERSTATE GAS COMPANY5HOMESTEAD OIL INC5PAPE OILFIELD SERVICE INC4HARSH INTERNATIONAL INC4ROCKIES OIL & GAS INC3NOBLE ENERGY PRODUCTION INC3WINDSOR ENERGY GROUP LLC3CHANDLER DJ BASIN LLC3SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	EARTHSTONE ENERGY INC	6
SKAER PROPERTIES LTD PARTNERSHIP5COLORADO INTERSTATE GAS COMPANY5HOMESTEAD OIL INC5PAPE OILFIELD SERVICE INC4HARSH INTERNATIONAL INC4ROCKIES OIL & GAS INC3NOBLE ENERGY PRODUCTION INC3WINDSOR ENERGY GROUP LLC3CHANDLER DJ BASIN LLC3SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	ENPROP INC	5
COLORADO INTERSTATE GAS COMPANY5HOMESTEAD OIL INC5PAPE OILFIELD SERVICE INC4HARSH INTERNATIONAL INC4ROCKIES OIL & GAS INC3NOBLE ENERGY PRODUCTION INC3WINDSOR ENERGY GROUP LLC3CHANDLER DJ BASIN LLC3SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	4-H OPERATING CORPORATION	5
HOMESTEAD OIL INC5PAPE OILFIELD SERVICE INC4HARSH INTERNATIONAL INC4ROCKIES OIL & GAS INC3NOBLE ENERGY PRODUCTION INC3WINDSOR ENERGY GROUP LLC3CHANDLER DJ BASIN LLC3SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	SKAER PROPERTIES LTD PARTNERSHIP	5
PAPE OILFIELD SERVICE INC4HARSH INTERNATIONAL INC4ROCKIES OIL & GAS INC3NOBLE ENERGY PRODUCTION INC3WINDSOR ENERGY GROUP LLC3CHANDLER DJ BASIN LLC3SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	COLORADO INTERSTATE GAS COMPANY	5
HARSH INTERNATIONAL INC4ROCKIES OIL & GAS INC3NOBLE ENERGY PRODUCTION INC3WINDSOR ENERGY GROUP LLC3CHANDLER DJ BASIN LLC3SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	HOMESTEAD OIL INC	5
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WINDSOR ENERGY GROUP LLC3CHANDLER DJ BASIN LLC3SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	ROCKIES OIL & GAS INC	3
WINDSOR ENERGY GROUP LLC3CHANDLER DJ BASIN LLC3SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	NOBLE ENERGY PRODUCTION INC	
CHANDLER DJ BASIN LLC3SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2		
SUNDANCE ENERGY INC2INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	CHANDLER DJ BASIN LLC	
INDUSTRIAL GAS SERVICES INC2CHURCHILL ENERGY INC2	SUNDANCE ENERGY INC	
CHURCHILL ENERGY INC 2		
RANCHERS EXPLORATION PARTNERS LLC 2	RANCHERS EXPLORATION PARTNERS LLC	
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
RWLENTERPRISES	1
TOM FENNO PRODUCTION LLC	
BP ENERGY INC	
MARKUS PRODUCTION, INC	
BUEHLER* HOWARD D & VIRGINIA A	
WESTERN OPERATING COMPANY	
MOSHER, BROWN, & LEWIS	
CGT INC	
OXBOW PROPERTIES INC	
CHACO ENERGY COMPANY	
HAINES* RICHARD	