

# MILLER STRATVERT

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November 15, 2005

## **HAND-DELIVERED**

Ms. Florene Davidson  
New Mexico Oil Conservation Division  
1220 South St. Francis  
Santa Fe, New Mexico 87504

Re: NMOCD Case No. 13609; Application of Mack Energy Corporation for an Amendment to Order No. R-3127-A Extending the Vertical Limits of the Grayburg-Jackson West Cooperative Unit and for the Expansion of Injection Operations, Eddy County, New Mexico

Dear Florene:

Enclosed for filing is an Application in the referenced matter. Also enclosed in hard copy and on disk is a proposed advertisement for the Division's use.

Please schedule the hearing for the December 15, 2005 Examiner hearing docket. Thank you for your assistance.

Very truly yours,

MILLER STRATVERT P.A.



J. Scott Hall

JSH/glb  
Enclosures

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**STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE APPLICATION OF MACK  
ENERGY CORPORATION FOR AN AMENDMENT TO  
ORDER NO. R-3127-A EXTENDING THE VERTICAL  
LIMITS OF THE GRAYBURG-JACKSON WEST  
COOPERATIVE UNIT AND FOR THE EXPANSION  
OF INJECTION OPERATIONS,  
EDDY COUNTY, NEW MEXICO**

CASE NO. 13609

**APPLICATION**

Applicant, Mack Energy Corporation, through its undersigned attorneys, Miller Stratvert P.A. (J. Scott Hall) hereby makes application for an order amending the previous orders of the Division approving the Grayburg-Jackson West Cooperative Unit Agreement (Order Nos. R-3127 and R-3127-A) to extend the vertical limits of the Unitized Formation to include all formations from the top of the Seven Rivers formation to the base of the Glorieta-Yeso (Paddock) formation. Applicant further seeks authorization to expand injection operations to include those intervals to the base of the Paddock formation. In support thereof, Applicant would show the Division:

1. Applicant is the Operator of the Grayburg-Jackson West Cooperative Unit, the Unit Area of which is comprised of approximately 2,400 acres of State of New Mexico and fee lands located in Eddy County, New Mexico, more particularly describes as follows:

**Township 17 South, Range 29 East, NMPM**

Section 15: W1/2SW1/4  
Section 16: All  
Section 21: All  
Section 22: W1/2W1/2, E1/2NW1/4,  
NE1/4SW1/4, NW1/4NE1/4  
Section 27: W1/2SW1/4  
Section 28: All

2. The Grayburg-Jackson West Cooperative Unit Agreement was originally approved by the Oil Conservation Commission on October 4, 1966 by Order No. R-3127 which was subsequently amended on March 4, 1968 by Order No. R-3127-A to include an additional 300 acres. The Unitized Formation under the Unit Agreement is that portion of the Grayburg San Andres formation encountered between the depths of 2,200' and 3,600' underlying the Unit Area. The Unit, as approved, was formed for the purposes of conducting primary and secondary recovery operations in the Unit Area. The original Unit Agreement was approved by the Commissioner of Public Lands on September 28, 1966 and the Amended Unit Agreement which expanded the Unit to include additional lands was subsequently approved by the Commissioner on March 8, 1968.

3. The expanded vertical limits of the Unitized Formation to be included within the Unit Area, as amended, will extend from the top of the Seven Rivers formation to the base of the Glorieta-Yeso (Paddock) formation, being those depths from 1,116' to 4,636' below the Kelly Bushing as shown on the Schlumberger Platform Express Three Detector Litho-Density Compensated Neutron/HNGS Log of the Diamondbacks State No. 1 Well located 2,040' FNL and 2,140' FEL of Section 28, T17S, R29E, Eddy County, New Mexico.

4. Both primary and secondary recovery operations by means of a waterflood are being conducted in the Unitized Formation as currently defined. Applicant proposes initially to conduct primary operations in the expanded intervals of the Unitized Formation and anticipates that secondary recovery operations may be implemented at a subsequent date as circumstances may warrant.

5. Unit operations are currently being conducted through 111 wells, 10 of which are injectors. Unit wells currently being utilized for injection operations are as follows:

001 M-28-17S-29E  
003 O-28-17S-29E  
009 K-28-17S-29E  
011 E-28-17S-29E  
015 G-28-17S-29E  
019 C-28-17S-29E  
029 I-21-17S-29E  
033 K-21-17S-29E  
047 C-21-17S-29E  
058 L-16-17S-29E

6. The proposed extended Unitized Formation is currently within the vertical limits and portions of the horizontal boundaries of the East Empire Yeso-Pool (96610). By way of separate application to the Division, Applicant also proposes the expansion of the horizontal boundaries of the Grayburg-Jackson San Andres Pool (28509) and the contraction of the East Empire-Yeso Pool within the unit in the following geographic area:

Township 17 South, Range 29 East, NMPM

Section 22: N/2 SW/4, SW/4 SW/4  
Section 27: W/2 SW/4  
Section 28: N/2

7. Other than an amendment to the Grayburg-Jackson West Cooperative Unit Agreement describing the expanded Unitized Formation, no other amendments to the Unit Agreement or Unit Operating Agreement are proposed.

8. Working interest and mineral interest ownership in the currently defined Unitized Formation and the proposed expanded intervals is identical.

9. The Application of unit operations to the expanded Unitized Formation in the Grayburg-Jackson (Seven Rivers-Queen-Grayburg-San Andres) Pool and the Glorieta-Yeso (Paddock) formations will result with reasonable probability in the increased recovery of substantially more oil and/or gas from the unitized area than would otherwise be recovered.

Expansion of the Unitized Formation to include the additional depths will also benefit the working interest owners and the royalty owners in the Unit Area.

10. Expansion of the unitized formation within the Unit Area of the Grayburg-West Cooperative Unit to include the Seven Rivers, Queen, Grayburg, San Andres, Grayburg-Jackson, and the Glorieta-Yeso (Paddock) formations is in the best interest of conservation, the prevention of waste and the protection of correlative rights.

WHEREFORE, Applicant Mack Energy Corporation requests that this Application be set for hearing before one of the Division's examiners on December 15, 2005 and that after notice and hearing, the Division enter its order granting the relief requested above.

MILLER STRATVERT P.A.

By: 

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**CASE NO. 13609 ; Application of Mack Energy Corporation for an Amendment to Order No. R-3127-A Extending the Vertical Limits of the Grayburg-Jackson West Cooperative Unit and for the Expansion of Injection Operations, Eddy County, New Mexico.** Applicant seeks an order amending the previous orders of the Division approving the Grayburg-Jackson West Cooperative Unit Agreement to extend the vertical limits of the unitized formation to include all formations from the top of the Seven Rivers formation to the base of the Glorieta-Yeso (Paddock) formation. Applicant also seeks authorization to expand waterflood injection operations to include all intervals within the extended vertical limits of the unitized formation in the Grayburg-Jackson West Cooperative Unit comprised of approximately 2,400 acres of State of New Mexico and fee lands in the following acreage:

Township 17 South, Range 29 East, NMPM

Section 15: W1/2SW1/4

Section 16: All

Section 21: All

Section 22: W1/2W1/2, E1/2NW1/4,  
NE1/4SW1/4, NW1/4NE1/4

Section 27: W1/2SW1/4

Section 28: All

The subject lands are located in the immediate vicinity of Loco Hills, New Mexico.