

BEFORE THE

OIL CONSERVATION DIVISION

NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

IN THE MATTER OF THE APPLICATION  
OF ENERGEN RESOURCES CORPORATION TO  
INCREASE THE GAS-OIL RATIO LIMITATION  
FOR THE WEST LOVINGTON-STRAWN POOL,  
LEA COUNTY, NEW MEXICO.

CASE NO. 12850

RECEIVED  
OIL CONSERVATION DIVISION  
MAY 14 2013

APPLICATION

ENERGEN RESOURCES CORPORATION, through its undersigned counsel, applies pursuant to 19 NMAC 15.G.506 (D) for an order increasing the gas-oil ratio limitation for the West Lovington-Strawn Pool in Lea County, New Mexico, and in support of its Application, states:

1. Applicant is the Operator of the West Lovington Strawn Unit, ("WLSU"), encompassing the designated and undesignated West Lovington-Strawn Pool underlying the following lands in Lea County, New Mexico:

TOWNSHIP 15 SOUTH, RANGE 35 EAST NMPM

- Section 28: S/2 S/2
- Section 32: E/2 E/2
- Section 33: All
- Section 34: S/2 NE/4, W/2, and SE/4
- Section 35: W/2 SW/4

TOWNSHIP 16 SOUTH RANGE 35 EAST NMPM

- Section 1: Lots 1 through 11 and the N/2 and SE/4 equivalents of Lot 12

TOWNSHIP 16 SOUTH RANGE 36 EAST NMPM

- Section 5: Lots 3, 4 and 5
- Section 6: Lots 1, 2, 6, 7 and 8

2. The West Lovington Strawn-Pool currently comprises the following described lands in Lea County, New Mexico:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

- Section 28: S/2 SW/4, SE/4
- Section 32: E/2 E/2
- Section 33: All
- Section 34: S/2 NE/4, W/2, and SE/4
- Section 35: W/2 SW/4

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM

- Section 1: Lots 1 through 11 and the N/2 and SE/4 equivalents of Lot 12

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

- Section 5: Lots 3, 4, and 5
- Section 6: Lots 1, 2, 6, 7, and 8.

3. The West Lovington Strawn Pool was originally known as the “East Big Dog Strawn Pool” created by the Division on September 23, 1992 under Order No. R-9722, issued in Case No. 10530. Order No. R-9722 also established temporary special rules and regulations for the East Big Dog Strawn Pool and provided for an 80-acre depth bracket allowable of 445 barrels per day. Subsequently, on January 26, 1993, the Division changed the nomenclature of the East Big Dog Strawn Pool to the West Lovington Strawn Pool in Order No. R-9722-A (Case No. 10660).

4. In October 1995, under the authority of Division Order No. R-10448 issued in Case No. 11194 on August 29, 1995, the Unit Operator instituted the West Lovington Strawn Unit pressure maintenance project by the commencement of gas injection operations within the WLSU. Order No. 10448, by adoption of Rule 6 of the Special Pool Rules for the East Big Dog Strawn Pool, established a project allowable for the pressure maintenance project as follows:

- (19) The project allowable shall be equal to the top unit allowable for the West Lovington Strawn Pool (445 barrels of oil per day) times the number of developed (production or injection) proration units within the project area. Unless additional

producing or injection wells are drilled within the project area, the allowable should be established at 4,895 barrels of oil per day.

(20) The transfer of allowables between wells within the project area should be permitted.

5. In Case No. 11599, in Order No. R-9722-C/R-10448-A, the Division made a single depth bracket oil allowable of 250 barrels of oil per day applicable to the entire reservoir, effectively abolishing the special project allowable for the WLSU, including the provision permitting the assignment of an allowable to injection wells. Order No. R-9722-C/R-10448-A adopted an amended Rule 6 for the Special Rules and Regulations for the West Lovington Strawn Pool as follows:

“Rule 6: A standard pro-ration unit (79 through 81 acres) shall be subject to an 80-acre depth bracket allowable of 250 barrels of oil per day. The allowable assigned to a non-standard proration unit shall bear the same ratio to a standard allowable as the acreage in such non-standard unit bears to 80-acres.”

6. On August 20, 2001, in Consolidated Order No. R-9722-F/R-10448-D (Case No. 12680), the Division reinstated the project allowable equal to the top unit allowable for the pool at 250 barrels of oil a day times the number of developed (production or injection) proration units and permitted the transfer of allowables among wells within the WLSU project area.

7. Throughout the pool’s producing history, the standard gas-oil ratio limitation of 2,000 cubic feet of gas per barrel of oil established under Division Rule 506(A) has been applicable to the pool. As the successful implementation of pressure maintenance operations has progressed over time, the re-injection of reservoir gas volumes along with the injection of increasing volumes of extraneous gas has enabled the recovery of additional oil reserves, but has also resulted in an overall increase in the ratio of gas-to-oil production. Moreover, with the transfer of allowables among wells within the pool made permissible by Consolidated Order No. R-9722-F/R-10448-D, the 2,000 cubic feet

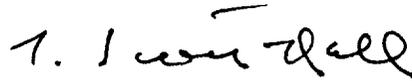
of gas per barrel limitation is no longer practicable because the unit is approaching and will soon exceed the field gas production limits due to the increasing ratio of gas production to oil production. The increase in such production may require the wells within the unit to be shut-in if the gas production limits are exceeded.

8. Increasing the gas-oil ratio limitation from 2,000 cubic feet of gas per barrel of oil to 4,000 cubic feet of gas per barrel of oil will enable the operator of the pool to more efficiently produce the hydrocarbons within the reservoir, and is otherwise in the interests of conservation, the prevention of waste and the protection of correlative rights.

WHEREFORE, Applicant requests that after notice and hearing, the relief requested above be granted.

MILLER, STRATVERT & TORGERSON, P.A.

By: \_\_\_\_\_



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