

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

IN THE MATTER OF THE HEARING CALLED  
BY THE OIL CONSERVATION DIVISION FOR  
THE PURPOSE OF CONSIDERING:

IN THE MATTER OF CASE 10653  
BEING REOPENED PURSUANT TO  
THE PROVISIONS OF DIVISION  
ORDER NO. R-9842-A, WHICH  
ORDER ESTABLISHED A TEMPORARY  
OIL ALLOWABLE OF 300 BARRELS  
OF OIL PER DAY FOR THE NORTH-  
EAST LEA-DELAWARE POOL IN LEA  
COUNTY, NEW MEXICO.

Reopened Case No. 10653

APPLICATION OF ARMSTRONG  
ENERGY CORPORATION FOR A  
SPECIAL GAS/OIL RATIO FOR THE  
NORTHEAST LEA-DELAWARE POOL,  
LEA COUNTY, NEW MEXICO.

Case No. 11225

Order No. R-9842-B

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on March 16, 1995, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 24th day of July, 1995, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction in each of these caused and the subject matter thereof.

(2) By Order No. R-8233 issued on May 29, 1986, the Division created and defined the Northeast Lea-Delaware Pool which currently comprises the following acreage in Lea County, New Mexico:

**Township 19 South, Range 34 East, N.M.P.M.**

Section 34: E/2  
Section 35: SE/4

**Township 20 South, Range 34 East, N.M.P.M.**

Section 2: All  
Section 3: NE/4 and S/2  
Section 4: SE/4  
Section 9: NE/4  
Section 10: NE/4 and W/2

(3) By Order No. R-9842-A issued in de novo Case No. 10653 on March 10, 1994, the New Mexico Oil Conservation Commission, upon the application of Armstrong Energy Corporation ("Armstrong") established a temporary special oil allowable of 300 barrels of oil per day for the Northeast Lea-Delaware Pool.

(4) Pursuant to the provisions of Order No. R-9842-A, Case 10653 is being reopened at this time in order to allow the operators in the Northeast Lea-Delaware Pool to appear and show cause why the oil allowable for the pool should not revert back to the statewide depth bracket allowable of 107 barrels of oil per day.

(5) Mallon Oil Company ("Mallon"), another operator in the Northeast Lea-Delaware Pool, appeared at the hearing and presented evidence in support of adopting a permanent oil allowable of 300 barrels per day.

(6) At the time of hearing Case 10653 was consolidated with Case 11225 which was called on the application of Armstrong for adoption of a Special Gas-Oil Ratio for the Northeast Lea-Delaware Pool of 3000 cubic feet of gas per barrel of oil produced.

(7) Since the temporary oil allowable for this pool was adopted, additional wells have been drilled in this pool, additional production history and additional bottomhole pressure data from this pool has been obtained and certain production tests have been conducted on wells in this pool.

(8) The evidence established the Northeast Lea-Delaware Pool produces oil from two primary reservoirs, the "first" sand and the "third" sand, that are separated by the "second" sand which contains water. Although the sands below the "third" sand show some potential for development, they are not significant current oil producers.

(9) Geologic and engineering evidence shows the "first" sand to be the main pay in the pool. This sand has a strong edge water drive as evidenced by constant low GOR's, good reservoir pressure and flat production curves, which shows that current production rates result in the efficient displacement of oil.

(10) The evidence shows that the "third" sand exhibits a strong water drive as evidenced by constant GOR's, stable bottomhole pressures, a definable oil-water contact, flat production curves and prolific producing wells.

(11) The two primary reservoirs in the pool have the capacity to exceed the statewide depth bracket allowable of 107 BOPD.

(12) Without the special 300 BOPD allowable and corresponding 3000 to 1 GOR, operators will be restricted to producing from only one of the two primary reservoirs while the offsetting well could produce from the other primary reservoir thereby causing the violation of correlative rights.

(13) The continuation of the special 300 BOPD oil allowable with a corresponding 3000 to 1 GOR will afford the operators in the pool the opportunity to protect correlative rights by concurrently producing both of the two primary reservoirs in the pool in order to prevent uncompensated drainage by offsetting wells.

(14) Mallon presented petroleum engineering evidence which demonstrates that a 300 BOPD allowable is needed to ensure that all producing zones are effectively fracture stimulated, cleaned up and efficiently produced thereby significantly increasing ultimate recovery and preventing waste.

(15) Armstrong's engineering data demonstrates that without pressure drawdown in the reservoir and the development of a secondary gas cap to force updip edge oil into downdip producing wells, approximately 200,000 barrels of oil could be wasted. This additional attic oil can be recovered by increasing the allowable which will cause pressure reduction in the reservoir and a secondary gas cap to form, thus forcing the updip oil downdip to be captured by producing wells.

(16) Continuing to produce wells in this pool under the special oil allowable and the higher rate which will result from the approval of a gas-oil ratio of 3000 cubic feet of gas per barrel of oil produced will not result in the coning of water and will not result in the waste of hydrocarbons.

(17) Unless the requested higher allowable rates are approved, wells in the "first" sand cannot currently be produced and reserves will be drained from this interval thereby impairing the correlative rights of interest owners in this pool.

(18) A permanent special oil allowable of 300 barrels of oil per day for the Northeast Lea-Delaware Pool and a special gas-oil ratio of 3000 cubic feet of gas per barrel of oil produced therefrom are necessary to permit operators to manage this pool to produce it at its maximum efficient rate thereby preventing waste and protecting correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) The Special Oil Allowable of 300 barrels of oil per day for the Northeast Lea-Delaware Pool, Lea County, New Mexico, as promulgated by Commission Order No. R-9842-A, is hereby continued in full force and effect until further order of the Division.

(2) The application of Armstrong Energy Corporation in Case No. 11225 is hereby approved. Special rules and regulations for the Northeast Lea-Delaware Pool in Lea County, New Mexico, previously defined and classified, are hereby promulgated as follows:

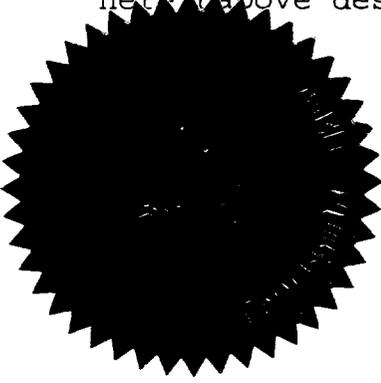
**SPECIAL RULES AND REGULATIONS  
FOR THE  
NORTHEAST LEA-DELAWARE POOL**

**RULE 1.** Each well completed or re-completed within designated boundary of the Northeast Lea-Delaware Pool shall be produced in accordance with the Special Rules herein set forth.

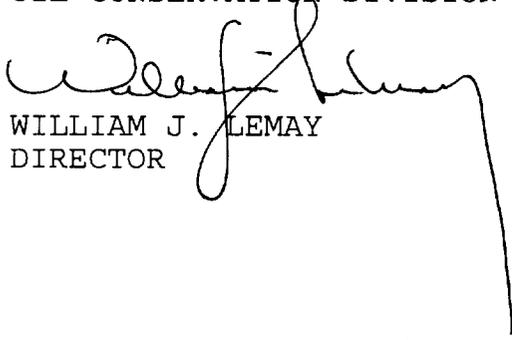
**RULE 2.** The limiting gas/oil ratio for said Northeast Lea-Delaware Pool shall be 3,000 cubic feet of gas per barrel of oil produced; each proration unit in said pool shall produce only that volume of gas equivalent to 3,000 multiplied by the top unit depth bracket allowable set for the pool (which remains to be 300 barrels of oil per day).

(3) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year  
hereabove designated.



STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
DIRECTOR