

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:

(Reopened) CASE NO. 11280

IN THE MATTER OF CASE NO. 11280 BEING REOPENED PURSUANT TO THE PROVISIONS OF DIVISION ORDER NO. R-10389, WHICH ORDER CREATED THE SOUTH BLACK RIVER-DELAWARE POOL IN EDDY COUNTY, NEW MEXICO, AND PROMULGATED TEMPORARY SPECIAL RULES AND REGULATIONS INCLUDING A LIMITING GAS-OIL RATIO OF 10,000 TO ONE AND THE ASSIGNMENT OF A SPECIAL DEPTH BRACKET OIL ALLOWABLE.

CASE NO. 11447

APPLICATION OF ENSERCH EXPLORATION INC. TO AMEND THE SPECIAL POOL RULES FOR THE SOUTH BLACK RIVER-DELAWARE POOL TO INCREASE THE LIMITING GAS-OIL RATIO TO 20,000 TO ONE, EDDY COUNTY, NEW MEXICO.

NOMENCLATURE
ORDER NOS. R-10389-A
and R-10489-A

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on January 11, 1996, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 18th day of March, 1996 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 of this cause and the subject matter thereof.

(2) By Order No. R-10389 entered in Case No. 11280 on June 8, 1995, the New Mexico Oil Conservation Division, upon application of Dalen Resources Oil & Gas Company:

- (a) created and defined the South Black River-Delaware Pool for the production of oil from the entire Delaware Mountain Group with horizontal limits comprising the SE/4 NE/4 of Section 2, Township 25 South, Range 26 East, NMPM, Eddy County, New Mexico;
- (b) caused the PJ-Delaware Pool to be contracted by deleting from it the E/2 of Section 35, Township 24 South, Range 26 East, NMPM, Eddy County, New Mexico and the NE/4 of said Section 2;
- (c) promulgated temporary special rules and regulations therefor including a provision for a limiting gas-oil ratio of 10,000 cubic feet of gas per barrel of oil; and,
- (d) assigned a special poolwide depth bracket oil allowable, pursuant to Division General Rule 505(d) of 250 barrels of oil per day.

(3) Pursuant to the provisions of said Order No. R-10389, this case was reopened to allow the operators in the subject pool to appear and present geologic and engineering evidence and testimony relative to the continuation of these rules and regulations on a permanent basis.

(4) Subsequent to the issuance of said Order No. R-10389 the Division inadvertently extended the PJ-Delaware Pool to include the SE/4 of said Section 2 by Order No. R-10489, issued in Case 11401 and dated October 13, 1995.

(5) The Division in the issuance of an order in this case should include any necessary corrections to the PJ and South Black River-Delaware Pool boundaries.

(6) This matter was consolidated for hearing with Case No. 11447 in which Enserch Exploration, Inc. ("Enserch") seeks to amend the above-described special rules and regulations allowing for an increase in the limiting gas-oil ratio to 20,000 cubic feet of gas per barrel of oil.

(7) At the time of the hearing, Chevron U.S.A. Production Company, an owner of certain offsetting mineral interests in Section 1, Township 25 South, Range 26 East, NMPM, Eddy County, New Mexico, entered an appearance through counsel in this matter.

(8) Testimony presented by Enserch and Division records indicate that there are currently four wells completed within the reservoir common with the South Black River-Delaware Pool: the Enserch Murchison "2" State Well No. 4 (API No. 30-015-28602) located in Unit A of said Section 2; the Murchison "2" State Well No. 1 (API No. 30-015-28288) located in Unit H; the Murchison "2" State Well No. 2 (API No. 30-015-28463) located in Unit I; and, the Chevron U.S.A. Production Company Marquardt Federal Well No. 7 (API No. 30-015-28562) in Unit L of said Section 1.

(9) Geologic evidence presented by Enserch indicates that within this area, the Basal Brushy Canyon Sand interval within the lower Delaware Mountain Group found between approximately 5,100 feet and 5,160 feet contains a productive gas sand layer that is overlaid by two thin productive oil sands.

(10) Currently there is no evidence available to demonstrate that a single gas cap was originally present in this reservoir or what ultimate effect this single gas productive stringer may have on ultimate recovery from the reservoir.

(11) The fracture stimulation of the oil bearing sands by Enserch of its Murchison "2" State Well No. 1 in Unit H of said Section 2 has resulted in a fracturing through to the lower gas sand resulting in production at a high gas oil ratio. The evidence further established that it is neither practicable nor economical to produce the two oil sands separately from the underlying gas sand.

(12) Said Murchison "2" State Well No. 1 is producing from the Delaware formation but production is being curtailed under the current gas-oil ratio limitation of 10,000 cubic feet of gas per barrel of oil.

(13) If this well were to be produced under the statewide gas-oil ratio limitation of 2,000 to one, liquids could not be efficiently produced from the reservoir and substantial volumes of said liquids would remain trapped as the reservoir energy is

depleted by gas production.

(14) Gas produced by applicant's well in this pool is comprised of solution gas from oversaturated crude oil and gas from a separate gas zone. The engineering and geologic evidence further demonstrates that the establishment of a gas-oil ratio limitation of 20,000 cubic feet of gas per barrel of oil and an oil allowable of 250 barrels per day should not result in excessive dissipation of reservoir energy, thereby causing waste, should allow the operators in the pool the opportunity to economically recover the oil and gas reserves from the various producing intervals of the pool, and will otherwise protect correlative rights.

(15) Additional evidence presented at the hearing demonstrates the existence of another potentially productive oil sand at approximately 4,800 feet, which the applicant proposes to complete and produce in conjunction with the lower oil sands and gas sand. The evidence further established that production of the 4,800 foot sand separate from the lower Brushy Canyon sands would be uneconomical. Production under the special depth bracket allowable of 250 barrels of oil per day will enable applicant to produce reserves from the 4,800' sand which it would otherwise be unable to recover without economic waste.

(16) The higher GOR limitation will enable operators to adequately drain and develop the oil and gas intervals within the entire Delaware unit in a sound and prudent manner. Further, making the temporary pool rules currently in effect for the South Black River-Delaware Pool permanent is in the best interest of conservation, will prevent waste and promote further development in and around the current pool boundaries.

(17) No operators or interest owners within the pool, or any other interested parties objected to the continuation of the special pool rules or to the increased 20,000 to 1 GOR limit. Chevron U.S.A. Production Company supported this application and further supported making the Temporary Pool Rules permanent.

IT IS THEREFORE ORDERED THAT:

(1) Decretory Paragraph No. (I) on page 3 of Division (nomenclature) Order No. R-10489, issued in Case 11401 and dated October 13, 1995, which extended the PJ-Delaware Pool to include the SE/4 of Section 2, Township 25 South, Range 26 East, NMPM, Eddy County, New Mexico, shall be deleted.

(2) The South Black River-Delaware Pool in Eddy County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 25 SOUTH, RANGE 26 EAST, NMPM

Section 2: SE/4.

(3) The limiting gas-oil ratio for the South Black River-Delaware Pool shall be increased to 20,000 cubic feet of gas per barrel of oil.

(4) The "*Special Rules and Regulations for the South Black River-Delaware Pool*", Eddy County, New Mexico, as promulgated by Division Order No. R-10389, including the aforementioned gas-oil ratio limitation of 20,000 cubic feet of gas per barrel of oil, are hereby made permanent until further order of the Division.

(5) Decretory Paragraph No. (3) on page 7 of Division Order No. R-10389, issued in Case 11280 and dated June 8, 1995, being one in the same shall be amended to read in its entirety as follows:

**"SPECIAL RULES AND REGULATIONS
FOR THE
SOUTH BLACK RIVER-DELAWARE POOL**

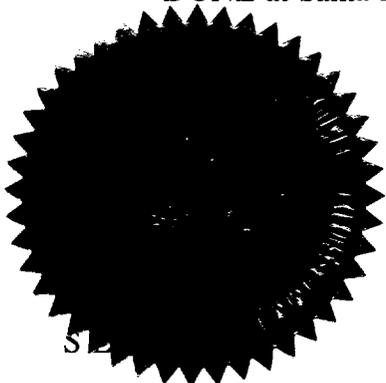
RULE 1. A special depth bracket allowable of 250 barrels of oil per day shall apply to the South Black River-Delaware Pool.

RULE 2. The limiting gas-oil ratio for the South Black River-Delaware Pool shall be 20,000 cubic feet of gas per barrel of oil produced."

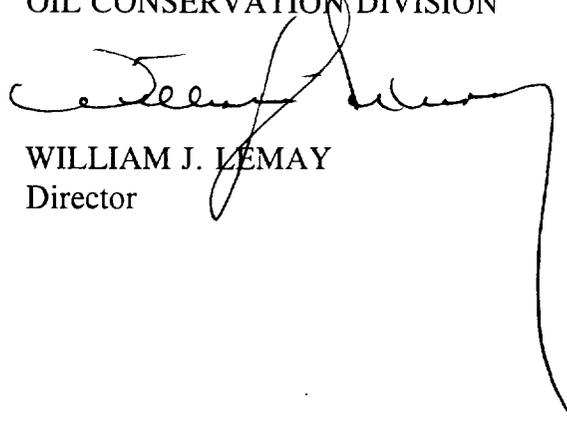
(6) All other provisions of said Order No. R-10389 shall remain in full force and affect until further notice.

(7) 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 hereinabove designated.



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read 'William J. Lemay', written over the typed name and title.

WILLIAM J. LEMAY
Director