

**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:**

**CASE NO. 10746
Order No. R-9952**

**APPLICATION OF DEVON ENERGY
CORPORATION FOR SPECIAL POOL
RULES, EDDY COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on July 15, 1993, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 30th day of August, 1993, 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) The applicant, Devon Energy Corporation, seeks the promulgation of Special Rules and Regulations for the East Catclaw Draw-Delaware Pool, Eddy County, New Mexico, including a provision for a gas-oil ratio limitation of 6,000 cubic feet of gas per barrel of oil.

(3) By Order No. R-9418 dated January 23, 1991, the Division created the East Catclaw Draw-Delaware Pool. The discovery well for the pool was the Chi Operating Inc. Oxy State Well No. 1 located in Unit K of Section 9, Township 21 South, Range 26 East, NMPM, Eddy County, New Mexico.

(4) The East Catclaw Draw-Delaware Pool, which currently comprises all of Section 9 and the NW/4 of Section 16, is governed by Division General Rules and Regulations, including a gas-oil ratio limitation of 2,000 cubic feet of gas per barrel of oil and an oil allowable of 80 barrels of oil per day.

(5) Division records indicate that there are currently six wells producing from the East Catclaw Draw-Delaware Pool within Section 9, all operated by Chi Operating Inc.

(6) The applicant has recently drilled its Cactus State Well No. 1 located 960 feet from the North line and 1860 feet from the West line (Unit C) of Section 16, Township 21 South, Range 26 East, NMPM, and has completed this well in the East Catclaw Draw-Delaware Pool.

(7) Applicant's geologic evidence indicates that within the East Catclaw Draw-Delaware Pool there are numerous distinct sand intervals which are being singly or multiply produced within the various wells in the pool.

(8) Division records indicate that the Cactus State Well No. 1 was perforated in the Chi "D" interval from 3,170 feet to 3,220 feet on March 17, 1993. The average producing rate for this interval was 82 BOPD and 173 MCFGD at an average GOR of 2,517.

(9) On April 17, 1993, the applicant perforated the Chi "B" and "C" intervals from 3,040-3,070 feet and 3,080-3,100 feet, respectively. The average producing rate for the commingled stream is approximately 87 BOPD and 437 MCFGD at an average GOR of 5,257.

(10) Geologic evidence further indicates that the producing interval in the applicant's well is located slightly up-structure from the wells currently being produced in Section 9.

(11) Applicant's request for a gas-oil ratio limitation of 6,000 cubic feet of gas per barrel of oil is based primarily upon production information obtained from the aforesaid Cactus State Well No. 1 during the period from March 24, 1993 through July 5, 1993.

(12) Applicant contends that choking back the well in order to produce at a rate of less than 80 barrels of oil per day results in a significant increase in gas production and a corresponding increase in the producing gas-oil ratio.

(13) Gas-oil ratio fluctuations within the subject well do not appear to be related to choke settings.

(14) The applicant, who testified that there is likely vertical segregation between the producing intervals in the pool, has not conducted any type of production profile log on the subject well in order to determine the amount and type of production attributable to each zone.

(15) The applicant has not conducted any PVT analysis on any of the producing intervals within the subject well in order to determine fluid properties at reservoir conditions.

(16) Applicant did not present evidence or testimony as to the reservoir drive mechanism(s) within each of the producing intervals.

(17) Applicant's evidence indicates that the existing producing wells in the field have exhibited, throughout their producing history, similar fluctuations in the producing gas-oil ratio as have been exhibited by the Cactus State Well No. 1.

(18) Within the past several months, the producing gas-oil ratio within existing wells in the pool has averaged less than 2,000 cubic feet of gas per barrel of oil.

(19) The applicant has not satisfactorily demonstrated that a gas-oil ratio limitation of 6,000 cubic feet of gas per barrel of oil within the East Catclaw Draw-Delaware Pool will not cause the premature abatement of reservoir energy, thereby resulting in decreased oil recovery, thereby causing waste.

(20) The application should be denied.

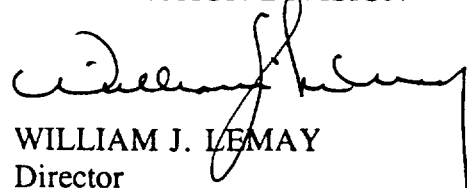
IT IS THEREFORE ORDERED THAT:

(1) The application of Devon Energy Corporation for the promulgation of Special Rules and Regulations for the East Catclaw Draw-Delaware Pool, Eddy County, New Mexico, including a provision for a gas-oil ratio limitation of 6,000 cubic feet of gas per barrel of oil is hereby denied.

(2) Jurisdiction of this cause is hereby 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


WILLIAM J. LEMAY
Director

S E A L

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

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

**DE NOVO
CASE NO. 10746
Order No. R-9952-A**

**APPLICATION OF DEVON ENERGY CORPORATION
FOR SPECIAL POOL RULES, EDDY COUNTY,
NEW MEXICO.**

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on September 22, 1993, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 10th day of November, 1993, the Commission, a quorum being present, having considered the testimony and the record, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Devon Energy Corporation, seeks the promulgation of temporary Special Rules and Regulations for the East Catclaw Draw-Delaware Pool, Eddy County, New Mexico, including a provision for a gas-oil ratio limitation of 6,000 cubic feet of gas per barrel of oil.

(3) By Order No. R-9418 dated January 23, 1991, the Division created the East Catclaw Draw-Delaware Pool. The discovery well for the pool was the Chi Operating Inc. Oxy State Well No. 1 located in Unit K of Section 9, Township 21 South, Range 26 East, NMPM, Eddy County, New Mexico.

(4) The East Catclaw Draw-Delaware Pool, which currently comprises all of Section 9 and the NW/4 of Section 16, is governed by Division General Rules and Regulations, including a gas-oil ratio limitation of 2,000 cubic feet of gas per barrel of oil and an oil allowable of 80 barrels of oil per day per forty acre proration unit.

(5) Division records indicate that there are currently six wells producing from the East Catclaw Draw-Delaware Pool within Section 9, all operated by Chi Operating Inc.

(6) The applicant has recently drilled its Cactus State Well No. 1 located 960 feet from the North line and 1860 feet from the West line (Unit C) of Section 16, Township 21 South, Range 26 East, NMPM, and has completed this well in the East Catclaw Draw-Delaware Pool.

(7) Applicant's geologic evidence indicates that within the East Catclaw Draw-Delaware Pool there are numerous distinct sands covering a 500 feet interval which are oil productive, singularly or in combinations in the various wells in the pool.

(8) Division records indicate that the Cactus State Well No. 1 was perforated in the Chi "B" "C" and "D" intervals from 3,040 feet to 3,220 feet. The average producing rate for this producing interval was approximately 80 BOPD and 400 to 500 MCFGPD of associated gas. This reservoir produces oil by solution gas drive.

(9) Geologic evidence further indicates that the producing interval in the applicant's well is located slightly up-structure from the wells currently being produced in Section 9.

(10) Applicant's request for a gas-oil ratio limitation of 6,000 cubic feet of gas per barrel of oil is based primarily upon production testing information obtained from the aforesaid Cactus State Well No. 1 which showed the well not to be rate-sensitive and that producing the well at higher rates would not waste reservoir energy.

(11) A production profile log was run on the Cactus State Well No. 1 on September 18, 1993 to determine the relative contribution to total production of each set of perforations. Results show that approximately 95 percent of both oil and gas production was coming out of the top perforated interval from 3040 to 3070 feet with minor amounts of oil and gas coming out of the two lower zones confirming the initial interpretation of a solution gas drive reservoir where no zone was a predominate gas producer.

(12) The applicant testified that ultimate recovery would not be reduced by producing the Cactus State Well No. 1 at a higher rate because the gas-oil ratio was shown to be independent of producing rates in the various choke tests performed.

(13) Applicant's evidence indicates that other producing wells in the field have exhibited throughout their producing history fluctuations in producing gas-oil ratios but that higher deliverability wells have tended to produce in excess of the 2,000 to 1 GOR limit.

(14) Applicant testified that granting the application would result in a faster payout, enhancing the economic feasibility of drilling additional wells to develop the field.

(15) Applicant requested that an order granting this application be retroactive to June 1, 1993 but the only justification for this request was the overproduced status of the Cactus State Well. A retroactive order would not affect payout of wells yet to be drilled and therefore is not necessary to encourage field development and should be denied.

(16) No offset operator and/or interest owner appeared at the hearing in opposition to the application.

(17) Temporary Special Pool Rules for the East Catclaw Draw-Delaware Pool providing for a gas-oil ratio limitation of 6,000 cubic feet of gas per barrel of oil for a period of 18 months would encourage the drilling of new wells in the field with the corresponding acquisition of additional information, such as PVT data, which will help resolve remaining unanswered issues while continuing to protect correlative rights and prevent waste.

IT IS THEREFORE ORDERED THAT:

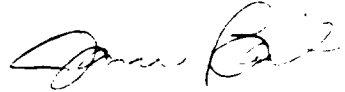
(1) The application of Devon Energy Corporation for the promulgation of Special Rules and Regulations for the East Catclaw Draw-Delaware Pool, Eddy County, New Mexico, providing for 40 acre oil proration units and 80 BOPD allowable but increasing the gas-oil ratio limitation to 6,000 cubic feet of gas per barrel of oil is hereby approved for a period of 18 months beginning November 1, 1993.

(2) Jurisdiction of this cause is hereby retained for the entry of such further orders as the Commission may deem necessary.

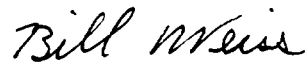
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DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

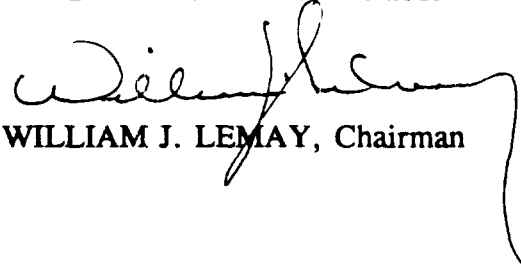
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



JAMI BAILEY, Member



WILLIAM W. WEISS, Member



WILLIAM J. LEMAY, Chairman

S E A L

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

CASE NO. 10746 DE NOVO
Order No. R-9952-B

APPLICATION OF DEVON ENERGY CORPORATION
FOR SPECIAL POOL RULES, EDDY COUNTY,
NEW MEXICO.

NUNC PRO TUNC ORDER

BY THE COMMISSION:

It appearing to the Commission that Order No. R-9952-A dated November 10, 1993, does not correctly state the intended order of the Commission,

IT IS THEREFORE ORDERED THAT:

(1) A new Finding Paragraph No. (18) should be added to said Order No. R-9952-A to read in its entirety as follows:

"(18) This case should be reopened at an examiner hearing in May, 1995, at which time the applicant should appear and show cause why the limiting gas-oil ratio for the East Catclaw Draw-Delaware Pool should not revert back to the statewide standard 2,000 to one."

(2) A new Decretory Paragraph No. (2) should be added to said Order No. R-9952-A to read in its entirety as follows:

"(2) This case shall be reopened at an examiner hearing in May, 1995, to permit the operators in the subject pool to appear and show cause why the limiting gas-oil ratio for the East Catclaw Draw-Delaware Pool should not revert back to the statewide standard 2,000 to one."

(3) Decretory Paragraph No. (2) on page 3 of said Division Order No. R-9952-A should be amended to read No. "(3)".

(4) The corrections set forth in this order be entered nunc pro tunc as of November 10, 1993.

Case No. 10746 De Novo

Order No. R-9952-B

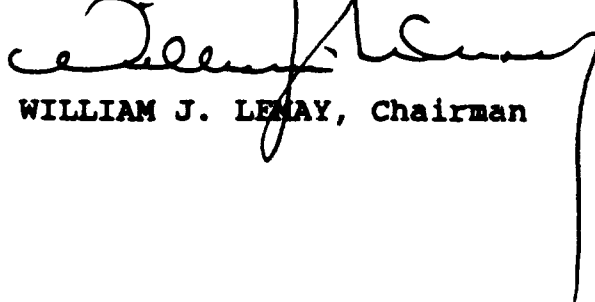
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DONE at Santa Fe, New Mexico, on this 16th day of December,
1993.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JAMI BAILEY, Member

WILLIAM W. WEISS, Member

A handwritten signature in black ink, appearing to read 'William J. Lemay', written over the typed name below. The signature is cursive and extends to the right, with a long vertical line at the end.

WILLIAM J. LEMAY, Chairman

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

CASE NO. 10746(Reopened)
ORDER NO. R-9952-C

IN THE MATTER OF CASE 10746 BEING REOPENED PURSUANT TO THE PROVISIONS OF DIVISION ORDER NO. R-9952-A, AS AMENDED, WHICH PROMULGATED SPECIAL RULES AND REGULATIONS FOR THE EAST CATCLAW DRAW-DELAWARE POOL, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on May 18, 1995, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 5th day of June, 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 of this cause and the subject matter thereof.
- (2) By Order No. R-9952-A, dated November 10, 1993, as amended by Order No. R-9952-B, the New Mexico Oil Conservation Commission established for an 18 month temporary period a special gas-oil ratio ("GOR") for the East Catclaw Draw-Delaware Pool in Eddy County, New Mexico of 6,000 cubic feet of gas per barrel of oil.
- (3) Pursuant to the provisions of said Order No. R-9952-A, this case was reopened to allow the operators in the subject pool to present evidence supporting the continuation of the 6,000 to one GOR limit for the pool on a permanent basis.
- (4) Devon Energy Corporation, the original applicant in this matter, appeared at the hearing and provided testimony, which indicates that an increase in the gas-oil ratio for the East Catclaw Draw-Delaware Pool will not result in the decreased ultimate oil recovery from the reservoir.
- (5) No other operator in the subject pool or interested parties appeared at the hearing in opposition to the continuation of the 6,000 to one GOR limit.

(6) The provisions of said Order No. R-9952-A, as amended, should remain in full force and effect until further order of the Division.

IT IS THEREFORE ORDERED THAT:

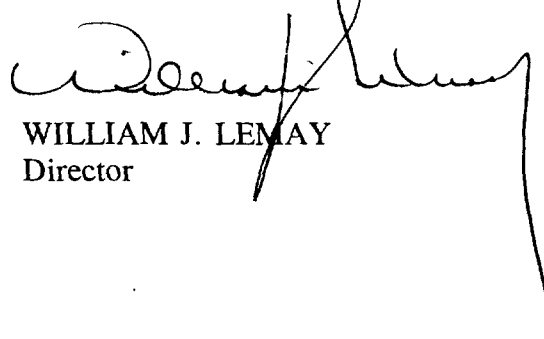
(1) The provisions established for the East Catclaw Draw-Delaware Pool in Eddy County, New Mexico, by Order No. R-9952-A, dated November 10, 1993, as amended by Order No. R-9952-B, including a gas-oil ratio limitation of 6,000 cubic feet of gas per barrel of oil, is hereby continued in full force and effect until further order of the Division.

(2) 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



WILLIAM J. LEMAY
Director