

**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:**

**NOMENCLATURE
CASE NO. 11280
Order No. R-10389**

**APPLICATION OF DALEN RESOURCES OIL
& GAS COMPANY FOR POOL CREATION, A
SPECIAL GAS-OIL RATIO, AND FOR THE
ASSIGNMENT OF A SPECIAL DEPTH
BRACKET OIL ALLOWABLE, EDDY COUNTY,
NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on May 4, 1995, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 8th 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) The applicant, Dalen Resources Oil & Gas Company (Dalen), seeks the creation of a new pool for the production of oil from the Delaware formation comprising the SE/4 NE/4 of Section 2, Township 25 South, Range 26 East, NMPM, Eddy County, New Mexico, and for the promulgation of special rules and regulations including a gas-oil ratio limitation of 10,000 cubic feet of gas per barrel of oil and a special depth bracket oil allowable of 250 barrels per day.

(3) The applicant further proposed that the vertical limits of the pool be defined so as to include only the Brushy Canyon member of the Delaware formation.

NOMENCLATURE
CASE NO. 11280
ORDER NO. R-10389
PAGE -2-

(4) Matador Petroleum Corporation (Matador) and Chevron USA Production Company (Chevron), both leasehold owners in the vicinity of the proposed pool, appeared at the hearing through legal counsel and presented statements at the conclusion of proceedings.

(5) The applicant has recently drilled its Murchison "2" State Well No. 1 located 1980 feet from the North line and 660 feet from the East line (Unit H) of Section 2, Township 25 South, Range 26 East, NMPM. The well was drilled to a total depth of 8,631 feet, plugged back to a depth of 5,270 feet, and was completed in the Brushy Canyon member of the Delaware formation through the perforated interval from 5,133 feet to 5,166 feet. The well IP'd at an initial producing rate of approximately 115 BOPD, 645 MCFGD and 79 BWPD.

(6) According to applicant's testimony, the Murchison "2" State Well No. 1 is currently capable of production in excess of 250 BOPD.

(7) The Murchison "2" State Well No. 1 is located approximately 1.125 miles from the outer boundary of the Southwest Sulphate-Delaware Pool which comprises the E/2 SE/4 of Section 11, the W/2 SW/4 of Section 12 and the E/2 of Section 14, Township 25 South, Range 26 East, NMPM. The well is also located approximately 1.06 miles from the outer boundary of the PJ-Delaware Pool which currently comprises the NW/4 of Section 35, Township 24 South, Range 26 East, NMPM.

(8) Division records indicate that by Order No. R-10376 dated May 24, 1995, the Division, at the request of its Artesia District Office, extended the boundaries of the PJ-Delaware Pool to include the E/2 of Section 35, Township 24 South, Range 26 East, and the NE/4 of Section 2, Township 25 South, Range 26 East, NMPM.

(9) The vertical limits of both the Southwest Sulphate-Delaware Pool and the PJ-Delaware Pool comprise the entire Delaware formation.

(10) Geologic evidence presented by the applicant indicates that the producing interval within the PJ-Delaware Pool is located in the Middle Brushy Canyon member from a depth of approximately 4,823 feet to 4,827 feet. Division records indicate that the Moore Federal Com Well No. 2, located in Unit E of Section 35, produced from the PJ-Delaware Pool for a short period of time only before being plugged and abandoned after cumulatively producing 590 BO and 10,698 MCFG.

(11) There are currently no other wells producing from the PJ-Delaware Pool.

NOMENCLATURE
CASE NO. 11280
ORDER NO. R-10389
PAGE -3-

(12) Geologic evidence further indicates that the producing interval within the Southwest Sulphate-Delaware Pool is located in the Bell Canyon member from a depth of approximately 1,928 feet to 2,098 feet. Six wells have historically produced from this pool and four wells are still active. Generally in this pool wells are only drilled to a depth sufficient to penetrate the producing interval.

(13) The geologic evidence presented indicates that the producing interval within the proposed new Delaware pool is separated from the producing intervals in the PJ-Delaware Pool and Southwest Sulphate-Delaware Pool by approximately 306 feet and 3,035 feet, respectively.

(14) The evidence presented indicates that the Murchison "2" State Well No. 1 has discovered a new common source of supply in the Brushy Canyon member of the Delaware formation.

(15) The geologic evidence presented further indicates that when fully developed, the pool should encompass portions of Sections 35 and 36, Township 24 South, Range 26 East, NMPM, and portions of Sections 1, 2, 11 and 12, Township 25 South, Range 26 East, NMPM.

(16) Applicant's geologic testimony indicates that there are additional intervals in both the Brushy Canyon and Cherry Canyon members of the Delaware formation within its Murchison "2" State Well No. 1 which are potentially productive.

(17) Applicant's evidence and testimony does not adequately demonstrate that the potential producing intervals in the Cherry Canyon member will produce sufficient hydrocarbons to justify the drilling of a stand alone well to produce such reserves.

(18) Applicant's evidence and testimony does not adequately demonstrate that establishing the new Delaware pool with its proposed vertical limits will prevent the drilling of unnecessary wells, prevent waste or otherwise protect correlative rights.

(19) When establishing Delaware pools, it is generally the practice of the Division to include the entire Delaware formation within the pool.

(20) Pending the gathering of additional geologic and engineering data which may justify applicant's proposed vertical limits, the new Delaware pool established herein should comprise the entire Delaware formation.

NOMENCLATURE
CASE NO. 11280
ORDER NO. R-10389
PAGE -4-

(21) A new pool for the production of oil from the Delaware formation should be created and designated the South Black River-Delaware Pool. The vertical limits should comprise the entire Delaware formation and the horizontal limits should comprise the SE/4 NE/4 of Section 2, Township 25 South, Range 26 East, NMPM, Eddy County, New Mexico.

(22) The PJ-Delaware Pool should be contracted by the deletion therefrom of the E/2 of Section 35, Township 24 South, Range 26 East, NMPM, and the NE/4 of Section 2, Township 25 South, Range 26 East, NMPM, Eddy County, New Mexico.

(23) The applicant further seeks the promulgation of special rules and regulations for the South Black River-Delaware Pool including a gas-oil ratio limitation of 10,000 cubic feet of gas per barrel of oil and a special depth bracket allowable of 250 barrels of oil per day and in support thereof presented geologic and engineering evidence and testimony.

(24) Applicant seeks to establish the special depth bracket allowable for the following reasons:

- a) the interval currently completed in the Murchison "2" State Well No. 1 is capable of producing in excess of 250 BOPD;
- b) Chevron has staked three Delaware well locations offsetting the Murchison "2" State Well No. 1. If Chevron chooses to perforate a productive interval in its new wells that is not currently perforated in applicant's well, applicant contends that a higher allowable will enable it to complete and produce additional intervals in its well thereby protecting its correlative rights from offset drainage which may occur.

(25) Applicant's request to establish a special gas-oil ratio limitation of 10,000 cubic feet of gas per barrel of oil is based upon its contention that within the gross section being produced in its Murchison "2" State Well No. 1, there are three separate and distinct producing intervals. The applicant, which has designated these intervals as the A, B and C intervals, contends that the A and B intervals are predominantly oil productive, and that the C interval is predominantly gas productive.

(26) Applicant further contends that the A, B and C intervals are located in such close proximity that even if a specific interval is not perforated, communication with the other producing intervals will occur due to fracture stimulation treatments.

(27) Applicant testified that the reservoir situation in the South Black River-Delaware Pool is analogous to the East Herradura Bend-Delaware Pool. Evidence and testimony presented in Case No. 10541 (application for the promulgation of special rules and regulations for the East Herradura Bend-Delaware Pool) established the existence of a gas bearing stringer in the Brushy Canyon member of the Delaware formation. As a result of such evidence and testimony, a gas-oil ratio limitation of 10,000 cubic feet of gas per barrel of oil was established for said pool.

(28) Applicant's engineering evidence and testimony in this case indicates that:

- a) preliminary PVT data obtained from the Murchison "2" State Well No. 1 suggests that the subject reservoirs are likely solution-gas drive;
- b) there is no evidence to indicate the presence of a gas cap in any of the producing intervals in the subject well;
- c) a comparison of the heating values and liquid content of gas produced from several Brushy Canyon (Delaware) pools in this area indicates that the gas obtained from the Murchison "2" State Well No. 1 is most similar to that obtained from wells producing from the East Herradura Bend-Delaware Pool early in its producing life which further supports the existence of a gas bearing zone.
- d) test data shows that if wells in this pool are produced under the statewide gas-oil ratio limitation of 2,000:1, liquids cannot be efficiently produced from the reservoir and substantial volumes of liquids may remain trapped as the reservoir energy is depleted by gas production.

(29) Preliminary engineering and geologic evidence and testimony indicates that the establishment of a gas-oil ratio limitation of 10,000 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.

(30) Both Chevron and Matador support Dalen's application in this case, however, both parties request the promulgation of the proposed pool rules for a temporary period of six months in order to allow the gathering of additional engineering and geologic data to be utilized in the promulgation of permanent pool rules.

(31) The evidence indicates that considerable drilling should occur within the Black River-Delaware Pool within the next several months.

(32) The applicant has no objection to Matador's and Chevron's request.

(33) The special rules and regulations for the South Black River-Delaware Pool promulgated herein should remain in effect for a temporary period of six months in order to allow the operators in the pool additional time to gather geologic and engineering data necessary in order to promulgate permanent rules and regulations.

(34) This case should be reopened at an Examiner hearing in January, 1996, at which time the operators in the South Black River-Delaware Pool should appear and present geologic and engineering evidence and testimony relative to the promulgation of permanent rules and regulations.

IT IS THEREFORE ORDERED THAT:

(1) A new pool for the production of oil from the Delaware formation is hereby created and designated the South Black River-Delaware Pool. The vertical limits of the pool shall comprise the entire Delaware formation and the horizontal limits of the pool shall comprise the following described area in Eddy County, New Mexico:

TOWNSHIP 25 SOUTH, RANGE 26 EAST, NMPM
Section 2: SE/4 NE/4

(2) The PJ-Delaware Pool is hereby contracted by the deletion therefrom of the following described acreage in Eddy County, New Mexico:

TOWNSHIP 24 SOUTH, RANGE 26 EAST, NMPM

Section 35: E/2

TOWNSHIP 25 SOUTH, RANGE 26 EAST, NMPM

Section 2: NE/4

(3) Pursuant to the application of Dalen Resources Oil & Gas Company, Temporary Special Rules and Regulations for the South Black River-Delaware Pool are hereby promulgated as follows:

**TEMPORARY 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 10,000 cubic feet of gas per barrel of oil produced.

(4) This case shall be reopened at an Examiner hearing in January, 1996, at which time the operators in the South Black River-Delaware Pool shall appear and present geologic and engineering evidence and testimony relative to the promulgation of permanent rules and regulations.

(5) Jurisdiction 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

(2) The PJ-Delaware Pool is hereby contracted by the deletion therefrom of the following described acreage in Eddy County, New Mexico:

TOWNSHIP 24 SOUTH, RANGE 26 EAST, NMPM

Section 35: E/2

TOWNSHIP 25 SOUTH, RANGE 26 EAST, NMPM

Section 2: NE/4

(3) Pursuant to the application of Dalen Resources Oil & Gas Company, Temporary Special Rules and Regulations for the South Black River-Delaware Pool are hereby promulgated as follows:

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

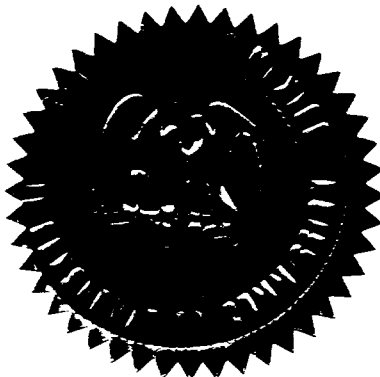
RULE 1. A special depth bracket allowable of 250 barrels of oil per day shall apply to the South Black River-Delaware Pool.

RULE 2. The limiting gas-oil ratio for the South Black River-Delaware Pool shall be 10,000 cubic feet of gas per barrel of oil produced.

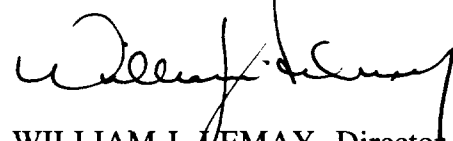
(4) This case shall be reopened at an Examiner hearing in January, 1996, at which time the operators in the South Black River-Delaware Pool shall appear and present geologic and engineering evidence and testimony relative to the promulgation of permanent rules and regulations.

(5) Jurisdiction 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