

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. 9854
Order No. R-9131

APPLICATION OF STEVENS OPERATING
CORPORATION FOR POOL CREATION AND
SPECIAL POOL RULES, CHAVES COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on February 7, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 2nd day of March, 1990, 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, Stevens Operating Corporation (Stevens), seeks the creation of a new pool for the production of oil from the Fusselman formation comprising the S/2 of Section 21 and the N/2 of Section 28, Township 10 South, Range 27 East, NMPM, Chaves County, New Mexico, and for the promulgation of special rules and regulations therefor including provisions for 320-acre oil spacing and proration units, designated well location requirements, a special gas-oil ratio limitation of 20,000 cubic feet of gas per barrel of oil, and a special 320-acre oil allowable of 650 barrels per day.

(3) In addition, the applicant requests that the above-described special pool rules be instituted for a temporary period of nine months in order to allow the operators in the pool time to gather additional reservoir data.

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(4) The evidence presented indicates that the Yates Petroleum Corporation Pathfinder "AFT" State Well No. 3 located 1650 feet from the South line and 2310 feet from the West line (Unit K) of said Section 21, which was drilled and completed in 1988, has discovered a separate common source of supply in the Fusselman formation.

(5) In addition, there are currently two other wells which have recently been drilled to and completed in the Fusselman formation in this area, these being the Stevens Operating Corporation McBride State Com Well No. 1 located 660 feet from the North line and 1980 feet from the West line (Unit C) of said Section 28, and the Yates Petroleum Corporation Pathfinder "AFT" State Well No. 6 located 1980 feet from the North and West lines (Unit F) of said Section 21.

(6) All three of the above-described wells were drilled on 320-acre gas spacing in accordance with Division General Rule No. 104 (C)(II) in anticipation of encountering a gas pool within said Fusselman formation.

(7) The geologic and engineering evidence currently available indicates that the subject reservoir is actually an oil pool which contains a significant gas cap, has definable oil-gas and oil-water contacts, and is bounded by north-south trending faults which limit the extent of the reservoir to portions of Sections 21, 28 and possibly 33.

(8) Yates Petroleum Corporation (Yates), the only other operator in the pool at the present time, appeared at the hearing in opposition to Steven's proposed gas-oil ratio limitation, oil allowable, and nine-month test period and in support of ninety-day temporary special pool rules including 320-acre well spacing, a gas-oil ratio limitation of 2,000 cubic feet of gas per barrel of oil and an oil allowable of 222 barrels per day.

(9) Stevens contends that its proposed gas-oil ratio limitation and oil allowable as described above are necessary: (1) in order to produce liquid hydrocarbons from its McBride State Com Well No. 1, which, according to production test data, is currently incapable of producing oil at a gas producing rate of less than 0.7 MMCFG per day, and (2) in order to obtain necessary test data to determine the most efficient gas-oil ratio and rate of production for the subject reservoir.

(10) The producing characteristics exhibited by the McBride State Com Well No. 1 are due, at least in part, to its current completion, which, according to the evidence presented, may be improper for this type of reservoir.

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(11) The gas-oil ratio and oil allowable proposed by Yates, if approved, would preclude the production of oil from the McBride State Com Well No. 1 unless physical changes in the well's completion are performed.

(12) Although physical changes in the wellbore of said McBride State Com Well No. 1 may ultimately be determined necessary in order to efficiently produce the liquid hydrocarbons from the subject reservoir, there is some evidence available at the present time which indicates that the subject reservoir may be vertically fractured which could render any workover operations on the subject well ineffective.

(13) According to the more complete geologic and seismic evidence presented by Yates in this case, the subject reservoir is limited to an area of approximately 355 acres.

(14) Both Yates and Stevens presented original oil and gas in place estimates for the subject reservoir, and, because these estimates are critical in determining oil and gas allowables for the subject pool, the more conservative estimates provided by Yates should be utilized.

(15) According to Yate's estimates, the original oil and gas in place within the subject reservoir is approximately 9.1 million barrels of oil and 16.4 BCF of gas.

(16) The oil allowable and gas-oil ratio limitation proposed by Stevens, which would amount to a gas allowable of 13 MMCFG per day, may cause serious and irreversible damage to the reservoir by depleting, during the proposed nine month test period, upwards to 43% of the gas contained within the gas cap, which may in turn result in a substantial amount of oil left unrecovered in the reservoir, thereby causing waste.

(17) According to testimony by Stevens, the producing gas rate during the test period would not likely exceed 2.5 MMCFG per day which indicates that the gas-oil ratio and oil allowable proposed by Stevens in this case are excessive and unnecessary.

(18) In addition, according to testimony by Yates, a test period of ninety days should be sufficient time to gather additional reservoir data needed to determine the proper temporary spacing and most efficient rate of production for the subject pool.

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(19) The nine-month test period, oil allowable, and gas-oil ratio limitation proposed by Stevens in this case are unnecessary, excessive, and may cause reservoir damage, and should therefore be effectively reduced.

(20) At the present time, there is insufficient information regarding the appropriate well spacing for the subject pool; however, the geologic evidence presented suggests that due to the limited extent of the reservoir, the proposed 320-acre well spacing is excessive.

(21) In order to prevent the drilling of unnecessary wells during the interim test period and until further data is obtained regarding the appropriate spacing for this pool, the subject pool should be drilled and spaced on 160-acre oil proration units, and the subject pool should be assigned a depth bracket allowable of 382 barrels of oil per day in accordance with the depth bracket allowable provisions of Division General Rule No. 505.

(22) A new pool classified as an oil pool for Fusselman production should be created and designated the Diablo-Fusselman Pool, with horizontal limits comprising the S/2 of Section 21 and the N/2 of Section 28, Township 10 South, Range 27 East, NMPM, Chaves County, New Mexico.

(23) Temporary ninety-day special rules and regulations should be promulgated for the Diablo-Fusselman Pool which provide for 160-acre oil proration units, an oil allowable of 382 barrels of oil per day, and a gas-oil ratio limitation of 6,500 cubic feet of gas per barrel of oil which will: (1) allow Stevens the opportunity to test and produce its McBride State Com Well No. 1, (2) allow sufficient time for both operators to gather additional reservoir data, and (3) should not cause reservoir damage inasmuch as the total volume of gas produced during this test period for the entire pool is approximately 2.7% of the original gas in place.

(24) The temporary special rules and regulations should also provide for restrictive well locations in order to assure orderly development of the pool and protect correlative rights.

(25) This case should be reopened at an examiner hearing in May, 1990, at which time the operators in the subject pool should be prepared to appear and present evidence, testimony and recommendations regarding the proper spacing and most efficient rate of production for the Diablo-Fusselman Pool.

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IT IS THEREFORE ORDERED THAT:

(1) A new pool in Chaves County, New Mexico, classified as an oil pool for Fusselman production, is hereby created and designated the Diablo-Fusselman Pool, with horizontal limits comprising the S/2 of Section 21 and the N/2 of Section 28, Township 10 South, Range 27 East, NMPM.

(2) Stevens Operating Corporation's proposed temporary special rules and regulations for the Diablo-Fusselman Pool, including provisions for 320-acre well spacing, a gas-oil ratio limitation of 20,000 cubic feet of gas per barrel of oil, an oil allowable of 650 barrels of oil per day, and a nine-month test period are hereby modified as described below.

(3) Ninety-day Temporary Special Rules and Regulations for said pool are hereby promulgated as follows:

**SPECIAL RULES AND REGULATIONS
 FOR THE
DIABLO-FUSSELMAN POOL**

RULE 1. Each well completed or recompleted in the Diablo-Fusselman Pool or in the Fusselman formation within one mile thereof, and not nearer to or within the limits of another designated Fusselman Pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules hereinafter set forth.

RULE 2. Each well shall be located on a standard unit containing 160 acres, more or less, substantially in the form of a square, which is a governmental quarter section being a legal subdivision of the United States Public Lands Survey.

RULE 3. The Director of the Oil Conservation Division, hereinafter referred to as the "Division", may grant an exception to the requirements of Rule 2 without hearing when an application has been filed for a non-standard unit consisting of less than 160 acres or the unorthodox size or shape of the tract is due to a variation in the legal subdivision of the United States Public Lands Survey. All operators offsetting the proposed non-standard unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all offset operators or if no offset operator has entered an objection to the formation of the non-standard unit within 30 days after the Director has received the application.

RULE 4. Each well shall be located no nearer than 660 feet to the outer boundary of the proration unit or 330 feet to any governmental quarter-quarter section line or subdivision inner boundary; nor nearer than 1320 feet to the nearest well drilling to or capable of producing from the same pool.

RULE 5. The Division Director may grant an exception to the requirements of Rule 4 without hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to a deeper horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Director has received the application.

RULE 6. The allowable for a standard proration unit (158 through 162 acres) shall be based on a depth bracket allowable of 382 barrels per day with a corresponding gas-oil ratio limitation of 6,500 cubic feet of gas per barrel of oil, and in the event there is more than one well on an 160-acre proration unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion. 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 160 acres.

IT IS FURTHER ORDERED THAT:

(3) The locations of all wells presently drilling to or completed in the Diablo-Fusselman Pool or in the Fusselman formation within one mile thereof are hereby approved; the operator of any well having an unorthodox location shall notify the Artesia district office of the Division in writing of the name and location of the well within 30 days from the date of this order.

(4) Pursuant to Paragraph A. of Section 70-2-18, N.M.S.A. 1987 Comp., contained in Laws of 1969, Chapter 271, existing oil wells in the Diablo-Fusselman Pool shall have dedicated thereto 160 acres in accordance with the foregoing pool rules; or, pursuant to Paragraph C. of said Section 70-2-18, existing wells may have non-standard spacing or proration units established by the Division and dedicated thereto.

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Failure to file new Forms C-102 with the Division dedicating 160 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this order shall subject the well to cancellation of allowable until a non-standard spacing unit has been approved and, subject to said 60-day limitation, each well presently drilling to or completed in the Diablo-Fusselman Pool or in its corresponding vertical limits within one mile thereof, shall receive no more than one-half of a standard allowable for said pool.

(5) This case shall be reopened at an examiner hearing in May, 1990, at which time the operators in the subject pool should be prepared to appear and present evidence, testimony and recommendations regarding the proper spacing and most efficient rate of production for the Diablo-Fusselman Pool.

(6) 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

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