

**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. 12838
ORDER NO. R-11770**

**APPLICATION OF ENERGEN RESOURCES CORPORATION FOR POOL
EXTENSION, THE PROMULGATION OF SPECIAL POOL RULES, AND
AMENDMENT OF THE DEPTH BRACKET ALLOWABLE FOR THE SAUNDERS-
SAN ANDRES POOL, LEA COUNTY, NEW MEXICO.**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 a.m. on March 21, 2002, at Santa Fe, New Mexico before Examiner Michael E. Stogner.

NOW, on this 29th day of May, 2002, the Division Director, having considered the testimony, the record and the recommendations of the Examiner,

FINDS THAT:

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter.

(2) By Division Order No. R-10091, issued in Case 10947, dated March 28, 1994 and made effective April 1, 1994, the Division created and defined the Saunders-San Andres Pool (Pool Code No. 96196) for the production of oil from the San Andres formation. The horizontal limits for this pool currently comprise the SW/4 of Section 4, Township 15 South, Range 33 East, NMPM, Lea County, New Mexico.

(3) The Saunders-San Andres Pool is currently governed by Division Rule 104.B, which requires standard 40-acre spacing and proration units with wells to be located no closer than 330 feet to the outer boundary of the unit with each unit having a top unit depth-bracket allowable of 80 barrels of oil per day and limiting gas-oil ratio of 2000 cubic feet of gas per barrel of oil (in accordance with Division Rule 505.A).

(4) The Applicant, Energen Resources Corporation ("Energen"), seeks to extend

the horizontal limits of the Saunders-San Andres Pool to include the S/2 NE/4 and the SE/4 of Section 5, Township 15 South, Range 33 East, NMPM, Lea County, New Mexico. The Applicant further seeks the establishment of special pool rules for the Saunders-San Andres Pool increasing the depth-bracket allowable for oil production to 160 barrels of oil per day with a limiting gas-oil ratio at the current level of 2000 cubic feet of gas per barrel of oil. These special pool rules would be made effective retroactively to December 1, 2000.

(5) The discovery well for the Saunders-San Andres Pool was the Charles B. Gillespie, Jr. State "Q" Well No. 1 (**API** No. 30-025-28070), located at a standard oil well location 1980 feet from the South line and 660 feet from the West line (Unit L) of Section 4, which was completed in the San Andres formation on June 4, 1991. The second well within this Pool was the Charles B. Gillespie, Jr. State "Q" Well No. 2 (**API** No. 30-025-32335), located at a standard oil well location 1760 feet from the South and West lines (Unit K) of Section 4, which was completed in the San Andres formation on February 1, 1994. The Applicant acquired the State "Q" Wells No. 1 and 2 on December 1, 2000, but did not assume actual operations of the wells until March 1, 2001. Subsequently, on January 8, 2002, Energen drilled and completed its State "S" Well No. 1 (**API** No. 30-025-35762), located 1980 feet from the South line and 660 feet from the East line (Unit I) of Section 5, Township 15 South, Range 33 East, NMPM, Lea County, New Mexico. As of the date of the hearing, the aforementioned State "Q" Wells No. 1 and 2 and State "S" Well No. 1 were the only wells currently producing from the Saunders-San Andres Pool.

(6) The Applicant testified that at the time of the hearing two additional wells were being completed or would commence drilling in Section 5 to test the Saunders-San Andres Pool: (i) State "T" Well No. 2 (**API** No. 30-025-35857), to be drilled at a standard oil well location 1980 feet from the South and East lines (Unit J); and (ii) State "T" Well No. 3 (**API** No. 30-025-35858), to be drilled at a standard oil well location 990 feet from the South line and 660 feet from the East line (Unit P).

(7) The Applicant presented well log, stratigraphic cross section and geologic contour data, including well log data from its State "S" Well No. 1 and State "T" Well No. 1, supporting its contention that the common source of supply comprising the Saunders-San Andres Pool extends beyond its current horizontal boundaries in the SW/4 of Section 4 to include the S/2 NE/4 and the SE/4 of the adjacent Section 5.

(8) The Applicant presented engineering evidence demonstrating that the State "S" Well No. 1 was completed in January, 2002 when bottom hole pressure testing recorded a pressure of 2340 psi at the perforations. Production also commenced in January, 2002 and averaged 145 barrels of oil per day with a maximum rate for the month of 168 BOPD. In February, the well was produced for seventeen days and was shut-in for the remainder of the

month. Production during February, 2002 averaged 155 BOPD with a maximum rate of 173 BOPD. During the first half of March, 2002 production averaged 162 BOPD with a maximum rate of 174 BOPD.

(9) Production and reservoir pressure data presented by the Applicant shows that the reservoir has experienced only a minimal pressure drop over time, indicating the presence of a water drive.

(10) The Applicant presented additional production data for the State "Q" Well No. 1 and the State "S" Well No. 1 establishing that these two wells are capable of producing at rates in excess of the requested 160 BOPD limit. The Applicant's petroleum engineering witness testified that producing the wells in the reservoir at the requested 160 BOPD rate is below the maximum rate at which the wells are capable of producing and is a reasonable producing rate for the reservoir.

(11) Further, the Applicant presented evidence that production at a rate of 160 BOPD will not result in the premature dissipation of reservoir energy.

(12) The Applicant's petroleum engineering witness also testified that the reservoir can be more efficiently and economically produced at the 160 BOPD rate and, further, that the improved economics brought about by this producing rate will accelerate development of the reservoir, resulting in an increase in the ultimate recovery of reserves.

(13) The evidence indicates that the State "Q" Well No. 2 may be capable of producing at the 160 BOPD rate and that the improved economics resulting from an allowable increase may justify further operations to rework the well.

(14) The production data for the wells and their current producing rates establish that the Saunders-San Andres reservoir is larger than the current 160 acres located in the SW/4 of Section 4.

(15) Engineering evidence established that at the present 80 BOPD allowable rate, the three existing wells in the reservoir would recover an estimated 556,000 barrels of oil, approximately 22 percent of the oil in place. However, if the wells are produced at the increased 160 BOPD rate, the economics will support the drilling of three additional wells, yielding an estimated recovery for six wells in the reservoir of approximately 1,027,000 barrels of oil, or 40 percent of the oil in place.

(16) Additional engineering testimony established that increasing the allowable producing rate to 160 BOPD would not result in any change to the current gas-oil ratio and,

further, that the bubble point pressure of the reservoir is well below abandonment pressure.

(17) Evidence presented by the Applicant established that subsequent to March 1, 2001, when Energen became operator of the State "Q" Wells No. 1 and 2, miscommunications between the pumper in the field and regulatory compliance personnel in Energen's Midland, Texas office resulted in the State "Q" Well No. 1 becoming overproduced for a period. Further testimony established that the periods of overproduction did not result in any harm to the reservoir or to the impairment of correlative rights, as Energen operates the entire pool, including the proposed expansion area.

(18) Making the increased allowable for the pool retroactive to the date when Energen assumed actual operations of the wells in the pool on March 1, 2001 would resolve the overproduction issue and would avoid the otherwise unnecessary economic loss incurred from temporarily shutting-in the wells to make up the overproduction.

(19) The geologic and engineering evidence presented demonstrates that it is reasonable and appropriate to increase the depth-bracket allowable for the Saunders-San Andres Pool to 160 barrels of oil per day.

(20) The evidence presented demonstrates that increasing the allowable to 160 barrels of oil per day will enable the operators in the pool to efficiently produce the hydrocarbons within this reservoir. The Applicant's request to increase the oil allowable for the Saunders-San Andres Pool to 160 barrels of oil per day is reasonable and should be granted.

(21) The geologic and engineering evidence establishes that the Saunders-San Andres common source of supply is larger than the SE/4 of Section 4; therefore, Applicant's request to extend the boundaries of the Saunders-San Andres Pool to include the S/2 NE/4 and the SE/4 of adjacent Section 5 should be approved.

(22) The Applicant provided notice in this case in accordance to Division Rule 1207.A (4).

(23) No offset operator or interest owner appeared at the hearing in opposition to the Application.

(24) Increasing the depth-bracket allowable for the Saunders-San Andres Pool will enable the operators in the pool to efficiently produce the hydrocarbons within this reservoir, will not result in the excessive waste of reservoir energy, should not reduce the ultimate

recovery of oil from this reservoir, and will not violate correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The application of Energen Resources Corporation to increase the depth-bracket allowable for the Saunders-San Andres Pool as established by Division Order No. R-10091 from its current 80 barrels of oil per day limit to 160 barrels of oil per day is hereby approved.

(2) Further, Energen's request to extend the horizontal limits of the Saunders-San Andres Pool to include the S/2 NE/4 and SE/4 of Section 5, Township 15 South, Range 33 East, NMPM in Lea County, New Mexico is approved.

(3) Special pool rules for the Saunders San-Andres Pool are hereby established as follows:

**SPECIAL RULES AND REGULATIONS
FOR THE
SAUNDERS-SAN ANDRES POOL**

RULE 1. The allowable for a standard 40-acre oil spacing and proration unit shall be based on a special depth bracket allowable of 160 barrels of oil per day. In the event there is more than one well on a unit, the operator may produce the allowable assigned to the unit from the wells on the unit in any proportion.

(4) The effective date of these special pool rules shall be made retroactive to March 1, 2001.

(5) Jurisdiction of this case 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

LORI WROTENBERY
Director

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