

Entered May 21, 1984
JMR

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 8082
Order No. R-4934-E

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR AMENDMENT TO ORDER
NO. R-4934, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8 a.m. on February 29, 1984, at Santa Fe, New Mexico, before Examiner Michael E. Stogner and on May 9, 1984, before Examiner Richard L. Stamets.

NOW, on this 21st day of May, 1984, the Division Director, having considered the testimony, the record, and the recommendations of the Examiners, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Amoco Production Company, is the operator of the South Hobbs (Grayburg-San Andres) Unit Area, Hobbs Grayburg-San Andres Pool, Lea County, New Mexico, comprised as follows:

LEA COUNTY, NEW MEXICO
TOWNSHIP 18 SOUTH, RANGE 38 EAST, NMPM
Section 33: SE/4 SE/4
Section 34: W/2

TOWNSHIP 19 SOUTH, RANGE 38 EAST, NMPM
Sections 3 through 5: All
Section 6: N/2 and SE/4
Section 8: N/2 NW/4, NE/4, and
N/2 SE/4
Section 9: N/2, N/2 SW/4, and SE/4
Section 10: All
Section 11: SW/4 SW/4
Section 14: W/2 NW/4
Section 15: All
Section 16: NE/4 NE/4

-2-

Case No. 8082

Order No. R-4934-E

(3) That the applicant was granted authority to institute a pressure maintenance project in said unit area by the injection of water into the Grayburg-San Andres formation by Order No. R-4934, dated December 3, 1974.

(4) That applicant seeks to amend the Special Rules and Regulations portion of said Order.

(5) That said unit area shares a common source of supply, the Hobbs Grayburg-San Andres Pool, with the North Hobbs Grayburg-San Andres Unit, operated by Shell Oil Company.

(6) That Shell was granted authority to institute a pressure maintenance project in the North Hobbs Grayburg-San Andres Unit by injection of water into the Grayburg-San Andres formation by Order No. R-6199, dated November 30, 1979.

(7) That the project area should consist of all those proration units within the boundary of the South Hobbs Grayburg-San Andres Unit as hereinabove described in Finding No. (2).

(8) That the project area allowable should be equal to the sum of the basic project area allowable plus the water injection credit allowable as hereinafter defined.

(9) That the basic project area allowable should be equal to 80 barrels of oil per day times the number of 40-acre proration units in the South Hobbs Grayburg-San Andres Unit area upon which are located wells completed in the Hobbs Grayburg-San Andres Pool.

(10) That the water injection credit allowable should be based on the following formula:

$$\text{Water Injection Credit Allowable} = \frac{\text{Net Water}}{\text{Basic Project Area Reservoir Voidage}} - 1 \times [\text{basic project area allowable}]$$

and should be calculated in accordance with the formula and parameters set forth in Exhibits "A" and "B" attached hereto.

(11) That a weighted average project area reservoir pressure should be determined at least annually.

(12) That the project area allowable should be permitted to be produced from the wells within the project area in any proportion.

-3-

Case No. 8082

Order No. R-4934-E

(13) That the Director of the Oil Conservation Division should have authority to approve, without notice and hearing, the drilling of wells at unorthodox locations anywhere within the boundary of the South Hobbs Grayburg-San Andres Unit area, provided however, no unorthodox location shall be closer than ten feet to any quarter-quarter section line, and provided further, that no such unorthodox location shall be closer than 330 feet to the boundary of the unit area, unless such well is covered by a lease-line agreement with the operator of the lands offsetting such well, and a copy of the lease-line agreement accompanies the application for such unorthodox location, or unless such offset operator has waived objection to the proposed unorthodox location in writing, and his waiver accompanies the application.

(14) That the injection wells or system should be equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 0.2 psi per foot of depth to the injection zone. The Division Director should have authority to administratively authorize a pressure limitation in excess of the above upon a showing by the Unit Operator that such higher pressure will not result in fracturing of the confining strata.

(15) That all wells within the unit area should be equipped with risers or in some other acceptable manner so as to facilitate the periodic testing of the bradenhead for pressure or fluid production.

(16) That amendments of various statewide rules and promulgation of the Special Rules and Regulations contained in Order No. R-6199 subsequent to the effective date of Order No. R-4934 render the Special Rules and Regulations promulgated by that Order antiquated.

(17) That the Special Rules and Regulations of Order No. R-4934 should be amended to promulgate the hereinabove cited findings, and that an order embodying said findings is in the interest of conservation, will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the Special Rules and Regulations for the South Hobbs Grayburg-San Andres Unit Pressure Maintenance Project, Lea County, New Mexico, as promulgated by Division Order No. R-4934, are hereby amended, in the entirety, to read as

-4-

Case No. 8082

Order No. R-4934-E

follows:

"SPECIAL RULES AND REGULATIONS
FOR THE
AMOCO SOUTH HOBBS GRAYBURG-SAN ANDRES
PRESSURE MAINTENANCE PROJECT

RULE 1. That the project area shall consist of all those proration units within the boundary of the South Hobbs Grayburg-San Andres Unit Area upon which is completed a well in the Hobbs Grayburg-San Andres Pool.

RULE 2. The project area shall receive a project area allowable and said project area allowable shall be the sum of the basic project area allowable plus the water injection credit allowable.

RULE 3. The basic project area allowable shall be equal to 80 barrels of oil per day times the number of developed 40-acre proration units in the project area.

RULE 4. The water injection credit allowable shall be contingent on full reservoir voidage replacement of all produced fluids and shall be based upon the following formula:

$$\text{Water Injection Credit Allowable} = \frac{\text{Net Water Injected}}{\text{Basic Project Area Reservoir Voidage}} - 1 \times [\text{basic project area allowable}]$$

The water injection credit allowable shall be calculated in accordance with the procedures and parameters depicted on Exhibits "A" and "B" attached hereto. In no event shall the water injection credit allowable be less than zero. Therefore, negative numbers derived from the application of the above formula shall be ignored.

RULE 5. A weighted average project area reservoir pressure shall be determined at least annually.

RULE 6. The project area allowable may be produced from the wells within the project area in any proportion.

RULE 7. The Director of the Oil Conservation Division shall have authority to approve, without notice and hearing, the drilling of wells at unorthodox locations anywhere within the boundary of the South Hobbs Grayburg-San Andres Unit area, provided however, no unorthodox location shall be closer than ten feet to any quarter-quarter section line, and provided

further, that no such unorthodox location shall be closer than 330 feet to the boundary of the unit area, unless such well is covered by a lease-line agreement with the operator of the lands offsetting such well, and a copy of the lease-line agreement accompanies the application for such unorthodox location, or unless such offset operator has waived objection to the proposed unorthodox location in writing, and his waiver accompanies the application.

RULE 8. Application for approval of additional wells to be used for injection shall be filed in accordance with Rule 701 of the Division Rules and Regulations and may be approved administratively by the Division Director without notice and hearing.

RULE 9. Each newly drilled injection or producing well shall be equipped as follows:

a. Minimum of 350 feet of surface casing and production casing run to total depth (approximately 4300 feet), or

b. Surface casing cemented below the "red beds" (approximately 1600 feet) and production casing run to total depth (approximately 4300 feet).

c. Exceptions to the aforesaid casing programs may be granted by administrative approval of the supervisor of the Hobbs District Office of the Division upon good cause shown.

All casing strings shall be cemented to the surface except that in any well in which an intermediate casing string has been run and cemented to the surface, the production string may be cemented back into the base of the intermediate casing.

RULE 10. Water injection shall be accomplished through tubing installed in a packer set as near as is practicable to the uppermost perforation or, in the case of an open hole completion, to the casing shoe. The injection tubing shall be corrosion protected by a non-reactive internal lining or coating. The casing-tubing annulus in each injection well shall be filled with an inert fluid and a surface gauge or approved leak detection device shall be attached to the annulus.

RULE 11. The injection wells or system shall be equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 0.2 psi per foot of depth to the injection zone. The Division

-6-

Case No. 8082

Order No. R-4934-E

Director may administratively authorize a pressure limitation in excess of the above upon a showing by the Unit Operator that such higher pressure will not result in fracturing of the confining strata.

RULE 12. All wells within the unit area shall be equipped with risers or in some other acceptable manner so as to facilitate the periodic testing of the bradenhead for pressure or fluid production.

RULE 13. The Unit Operator shall immediately notify the supervisor of the Hobbs District Office of the Division of the failure of the tubing or packer in any of the injection wells, the leakage of water or oil from or around any producing well, the leakage of water or oil from or around any plugged and abandoned well within the unit area, or any other evidence of fluid migration from the injection zone, and shall take such timely steps as may be necessary or required to correct such failure or leakage.

RULE 14. A casing leak survey in a manner approved by the Division shall be conducted on all wells in the project once each quarter. This survey shall be taken in accordance with a schedule agreed upon by the operator and the Division Hobbs District Office. A Division representative shall witness the casing leak survey at least annually. Results of all casing leak surveys shall be filed with the Hobbs and Santa Fe offices of the Division.

RULE 15. Prior to placing any well on injection, a cement bond log shall be run on said well; also at any time the rods and/or tubing are pulled from any producing well in the project, a cement bond log shall be run on said well. Copies of all cement bond logs shall be sent to the Hobbs District Office of the Division. If any well is found to have an inadequate casing-cement bond, such measures as may be necessary to prevent leakage or migration of fluids within the wellbore shall be taken before placing the well on injection or restoring it to production.

RULE 16. Each month the Unit Operator shall submit to the Division a Pressure Maintenance Project Operator's Report, on a form prescribed by the Division, outlining thereon the data required and requesting a project area allowable.

RULE 17. The Division shall, upon review of the report and after adjustments deemed necessary, calculate the allowable for the project area for the next succeeding month in accordance

-7-

Case No. 8082

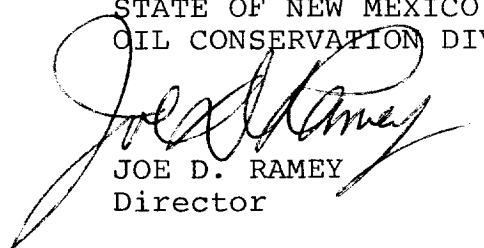
Order No. R-4934-E

with these rules. The allowable so calculated shall be assigned to the unit area and may be produced from the wells in the project area in any proportion."

(2) That 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 herein-above designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

A handwritten signature in dark ink, appearing to read "Joe D. Ramey", is written over the typed name and title.

JOE D. RAMEY
Director

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