

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. 10060
Order No. R-7766-A

APPLICATION OF CHEVRON U.S.A. INC.
FOR THE EXPANSION OF THE EUNICE
MONUMENT SOUTH UNIT WATERFLOOD
PROJECT AREA AND TO AMEND DIVISION
ORDER NO. R-7766, LEA COUNTY, NEW
MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on August 22, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 19th day of October, 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) Division Case Nos. 10059, 10060 and 10061 were consolidated at the time of the hearing for the purpose of testimony.

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(3) The applicant, Chevron U.S.A. Inc., seeks to expand its Eunice Monument South Unit Waterflood Project Area, as defined and authorized by Division Order No. R-7766, dated December 27, 1984, to include that area comprising its Eunice Monument South Unit Expansion Area B (being the subject of companion Case No. 10059), as fully described in Exhibit "A" attached hereto, by the injection of water into the unitized interval which includes the formations which extend from an upper limit of 100 feet below mean sea level or at the top of the Grayburg formation, whichever is higher, to a lower limit being the base of the San Andres formation, all within the Eunice Monument Grayburg-San Andres Pool, Lea County, New Mexico, through 35 existing wells and 3 wells to be drilled as injectors as shown on Exhibit "B" attached hereto.

(4) The applicant proposes to commence waterflood operations within Expansion Area B utilizing an 80-acre five spot injection pattern using the well numbering system and proposed unit injection wells as identified on Exhibit "B" attached hereto.

(5) The producing formations in the proposed expansion area are in an advanced state of depletion and the area is suitable for waterflooding.

(6) The proposed waterflood expansion should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(7) There are three wells within or adjacent to Expansion Area B which may not have been completed or plugged in a manner which will assure that their wellbores will not serve as a conduit for movement of injected fluid out of the injection interval.

(8) Prior to commencing injection operations within one-half mile of the three wells described above and shown on Exhibit "C" attached hereto, the applicant should cement and/or replug said wells in a manner which will ensure that said wells will not serve as a conduit for movement of injected fluid out of the injection interval and in a manner satisfactory to the supervisor of the Division's Hobbs district office.

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(9) The operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(10) Injection into the proposed injection wells should be accomplished through 2 3/8-inch internally plastic-lined tubing installed in a packer set approximately within 100 feet of the uppermost injection perforation or casing shoe; the casing-tubing annulus in each well should be filled with an inert fluid and a gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(11) The injection wells or injection pressurization 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 from the surface to the top injection perforation.

(12) The Division Director should have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in migration of waters from the Eunice Monument Grayburg-San Andres Pool.

(13) Prior to commencing injection operations into the proposed injection wells, the casing in each well should be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(14) The operator should give advance notification to the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment, of the mechanical integrity pressure tests, and of the conductance of any remedial cement or plugging operations in order that the same may be witnessed.

(15) The project should be designated the Eunice Monument South Unit Expansion Area B Waterflood Project.

(16) The application should be approved and the project should be governed by the provisions of Rules 701 through 708 of the Oil Conservation Division Rules and Regulations.

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IT IS THEREFORE ORDERED THAT:

(1) The applicant, Chevron U.S.A. Inc., is hereby authorized to expand its Eunice Monument South Unit Waterflood Project Area, as defined and authorized by Division Order No. R-7766, dated December 27, 1984, to include that area comprising its Eunice Monument South Unit Expansion Area B, as fully described in Exhibit "A" attached hereto, by the injection of water into the unitized interval which includes the formations which extend from an upper limit of 100 feet below mean sea level or at the top of the Grayburg formation, whichever is higher, to a lower limit being the base of the San Andres formation, all within the Eunice Monument Grayburg-San Andres Pool, Lea County, New Mexico, through 35 existing wells and 3 wells to be drilled as injectors as shown on Exhibit "B" attached hereto.

(2) The project is hereby designated the Eunice Monument South Unit Expansion Area B Waterflood Project.

(3) Prior to commencing injection operations within one-half mile of the three wells described on Exhibit "C" attached hereto, the applicant shall cement and/or replug said wells in a manner which will ensure that said wells will not serve as a conduit for movement of injected fluid out of the injection interval and in a manner satisfactory to the supervisor of the Division's Hobbs district office.

(4) The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(5) Injection into the proposed injection wells shall be accomplished through 2 3/8-inch internally plastic-lined tubing installed in a packer set approximately within 100 feet of the uppermost injection perforation or casing shoe; the casing-tubing annulus in each well shall be filled with an inert fluid and a gauge or approved leak detection device shall be attached to the annulus in order to determine leakage in the casing, tubing or packer.

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(6) The injection wells or injection pressurization 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 from the surface to the top injection perforation.

(7) The Division Director shall have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in migration of waters from the Eunice Monument Grayburg-San Andres Pool.

(8) Prior to commencing injection operations into the proposed injection wells, the casing in each well shall be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(9) The operator shall give advance notification to the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment, of the mechanical integrity pressure tests, and of the conductance of any remedial cement or plugging operations in order that the same may be witnessed.

(10) The operator shall immediately notify the supervisor of the Division's Hobbs district office of the failure of the tubing, casing, or packer in any injection well, the leakage of water or oil from or around any producing well, or the leakage of water or oil from or around any plugged and abandoned well within the project area and shall take such steps as may be timely and necessary to correct such failure or leakage.

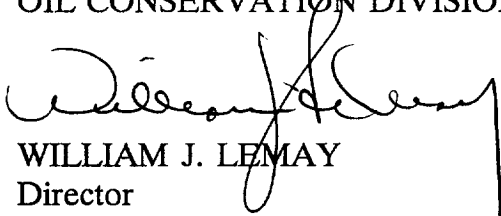
(11) The applicant shall conduct injection operations in accordance with Division Rule Nos. 701 through 708 and shall submit monthly progress reports in accordance with Division Rule Nos. 706 and 1115.

(12) Jurisdiction of this cause is retained for the entry of such further orders as the Division 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 DIVISION



WILLIAM J. LEMAY
Director

S E A L

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CASE NO. 10060
DIVISION ORDER NO. R-7766-A
EXHIBIT "A"
EUNICE MONUMENT SOUTH UNIT EXPANSION AREA B

TOWNSHIP 20 SOUTH, RANGE 36 EAST, NMPM

Section 10: E/2 E/2
Section 11: W/2 NE/4, W/2, SE/4
Section 13: W/2, S/2 SE/4
Section 14: All
Section 15: NE/4 NE/4
Section 23: All
Section 24: N/2, SW/4, W/2 SE/4

ALL IN LEA COUNTY, NEW MEXICO

EXHIBIT "B"
CASE NO. 10060
ORDER NO. R-7766-A
EUNICE MONUMENT SOUTH UNIT EXPANSION AREA B
UNIT INJECTION WELLS

| EXISTING WELLS | | | | |
|-------------------|-------------------------------|-----------------------|--------------------------------|--|
| PREVIOUS OPERATOR | PREVIOUS WELL NAME AND NUMBER | UNIT WELL DESIGNATION | WELL LOCATION | |
| SECTION 10 | | | | |
| Conoco Inc. | Sanderson "B-1" No. 1 | EMSU No. 853 | 660' FNL & 330' FEL (Unit A) | |
| Conoco Inc. | Sanderson "B-1" No. 3 | EMSU No. 862 | 2310' FSL & 330' FEL (Unit I) | |
| SECTION 11 | | | | |
| ARCO Oil and Gas | William P. Byrd No. 1 | EMSU No. 851 | 330' FNL & 2310' FWL (Unit C) | |
| ARCO Oil and Gas | Byrd Gas Com No. 5 | EMSU No. 855 | 1650' FNL & 330' FWL (Unit E) | |
| ARCO Oil and Gas | Mary J. Byrd No. 3 | EMSU No. 857 | 2310' FNL & 2310' FEL (Unit G) | |
| Conoco Inc. | Sanderson "A" No. 1 | EMSU No. 858 | 1980' FSL & 660' FEL (Unit I) | |
| ARCO Oil and Gas | William P. Byrd No. 3 | EMSU No. 860 | 1650' FSL & 2310' FWL (Unit K) | |
| Conoco Inc. | Sanderson "A" No. 6 | EMSU No. 864 | 990' FSL & 990' FWL (Unit M) | |
| Conoco Inc. | Sanderson "A" No. 4 | EMSU No. 866 | 990' FSL & 1650' FEL (Unit O) | |
| SECTION 13 | | | | |
| Shell Western | State "E" No. 1 | EMSU No. 868 | 660' FNL & 1980' FWL (Unit C) | |
| Shell Western | State "E" No. 4 | EMSU No. 879 | 1980' FNL & 680' FWL (Unit E) | |
| Chevron USA, Inc. | Graham State NCT-H No. 2 | EMSU No. 891 | 660' FSL & 660' FWL (Unit M) | |
| Chevron USA, Inc. | R. R. Bell NCT-G No. 2 | EMSU No. 893 | 660' FSL & 1980' FEL (Unit O) | |

| EXISTING WELLS | | | | |
|-------------------|-------------------------------|-----------------------|--------------------------------|--|
| PREVIOUS OPERATOR | PREVIOUS WELL NAME AND NUMBER | UNIT WELL DESIGNATION | WELL LOCATION | |
| SECTION 14 | | | | |
| Conoco Inc. | Sanderson "A" No. 7 | EMSU No. 870 | 660' FNL & 660' FEL (Unit A) | |
| Conoco Inc. | Sanderson "A" No. 11 | EMSU No. 872 | 330' FNL & 2310' FWL (Unit C) | |
| Conoco Inc. | Sanderson "B14" No. 4 | EMSU No. 875 | 1650' FNL & 990' FWL (Unit E) | |
| Conoco Inc. | Sanderson "A" No. 13 | EMSU No. 877 | 1650' FNL & 1650' FEL (Unit G) | |
| Conoco Inc. | Sanderson "A" No. 10 | EMSU No. 883 | 1980' FSL & 660' FEL (Unit I) | |
| Conoco Inc. | Sanderson "B14" No. 2 | EMSU No. 885 | 2310' FSL & 2310' FWL (Unit K) | |
| Conoco Inc. | Sanderson "B14" No. 1 | EMSU No. 889 | 990' FSL & 1650' FEL (Unit O) | |
| SECTION 15 | | | | |
| Conoco Inc. | Sanderson "B-1" No. 8 | EMSU No. 874 | 330' FNL & 330' FEL (Unit A) | |
| SECTION 23 | | | | |
| Conoco Inc. | Reed "B" No. 1 | EMSU No. 899 | 330' FNL & 330' FEL (Unit A) | |
| Amerada Hess | H. W. Andrews No. 7 | EMSU No. 901 | 660' FNL & 2310' FWL (Unit C) | |
| Amerada Hess | H. W. Andrews No. 10 | EMSU No. 903 | 1980' FNL & 660' FWL (Unit E) | |
| Conoco Inc. | Reed "B" No. 8 | EMSU No. 905 | 1980' FNL & 1650' FEL (Unit G) | |
| Conoco Inc. | Reed "B" No. 5 | EMSU No. 914 | 1980' FSL & 330' FEL (Unit I) | |
| Amerada Hess | H. W. Andrews No. 9 | EMSU No. 916 | 1980' FSL & 1980' FWL (Unit K) | |
| Conoco Inc. | Reed "B" No. 9 | EMSU No. 918 | 660' FSL & 660' FWL (Unit M) | |
| Conoco Inc. | Reed "B" No. 6 | EMSU No. 920 | 990' FSL & 1650' FEL (Unit O) | |

| EXISTING WELLS | | | |
|-------------------------------|-------------------------------|-------------------------------|--------------------------------|
| PREVIOUS OPERATOR | PREVIOUS WELL NAME AND NUMBER | UNIT WELL DESIGNATION | WELL LOCATION |
| SECTION 24 | | | |
| Amoco Production Company | Gillully "A" Federal No. 2 | EMSU No. 895 | 660' FNL & 660' FEL (Unit A) |
| Amoco Production Company | Gillully "A" Federal No. 9 | EMSU No. 897 | 660' FNL & 1980' FWL (Unit C) |
| Amoco Production Company | Gillully "A" Federal No. 14 | EMSU No. 907 | 1980' FNL & 660' FWL (Unit E) |
| Amoco Production Company | Gillully "A" Federal No. 11 | EMSU No. 909 | 1980' FNL & 1980' FEL (Unit G) |
| Conoco Inc. | Reed "B" No. 12 | EMSU No. 912 | 1980' FSL & 1980' FWL (Unit K) |
| Conoco Inc. | Reed "B" No. 13 | EMSU No. 922 | 660' FSL & 990' FWL (Unit M) |
| INJECTION WELLS TO BE DRILLED | | | |
| UNIT WELL DESIGNATION | | TENTATIVE WELL LOCATION | |
| SECTION 13 | | | |
| EMSU No. 881 | | 1935' FSL & 705' FWL (Unit L) | |
| SECTION 14 | | | |
| EMSU No. 887 | | 660' FSL & 660' FWL (Unit M) | |
| SECTION 24 | | | |
| EMSU No. 924 | | 705' FSL & 2025' FEL (Unit O) | |

(All in Township 20 South, Range 36 East, NMPPM, Lea County, New Mexico.)

