

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. 10063  
ORDER NO. R-9337

APPLICATION OF OXY USA, INC. FOR A  
WATERFLOOD PROJECT, LEA COUNTY,  
NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on September 5, 1990 at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 29<sup>th</sup> 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) At the time of the hearing, this case was consolidated with Division Case Nos. 10062 and 10064 for the purpose of testimony.
- (3) The applicant, OXY USA, Inc., seeks authority to institute a waterflood project on its proposed Central Corbin Queen Unit Area (Division Case No. 10062), Lea County, New Mexico, by the injection of water into the Central Corbin-Queen Pool through twelve certain wells as listed in Exhibit "A", attached hereto and made a part hereof, to be converted from producing Queen oil wells to injection wells.
- (4) It is proposed that the waterflood project area coincide with the boundary of the Central Corbin Queen Unit Area in Lea County, New Mexico as further described below, which was the subject of Division Case No. 10062 and was heard in conjunction with this case:

TOWNSHIP 18 SOUTH, RANGE 33 EAST, NMPM

- Section 3: Lot 4, SW/4 NW/4, and W/2 SW/4
- Section 4: Lots 1, 2 and 3, S/2 N/2, and S/2
- Section 8: E/2 NE/4
- Section 9: N/2, N/2 SW/4, SE/4 SW/4, and SE/4
- Section 10: W/2 NW/4 and NW/4 SW/4

(5) The wells in the proposed project area are in an advanced state of depletion and should therefore be properly classified as "stripper wells."

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

(7) 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 into other formations or onto the surface from injection, production or plugged and abandoned wells.

(8) The applicant's testimony indicates that the following two previously abandoned wells are located within one-half mile of the proposed Federal "AE" Well No. 12 injection well located in Unit E of said Section 3:

<i>Well Name and No.</i>	<i>Footage Location (Unit)</i>	<i>Section - Township - Range</i>
Henderson, Dexter, Black - Wyatt Well No. 1	330' FS & WL (Unit M)	34-17S-33E
Carper Drilling Company - Corbin Well No. 3-B	660' FNL - 1980' FWL (Unit C)	3-18S-33E

(9) Prior to commencement of injection into said Federal "AE" Well No. 12, the operator should demonstrate that the wells described in Finding Paragraph No. 8 above have either been replugged or have been previously plugged and abandoned in such a manner as to ensure that they do not provide an avenue of escape for waters from the proposed injection zone and in accordance with a program that is satisfactory to the supervisor of the Division's district office in Hobbs.

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(10) Injection into each well should be accomplished through plastic-lined tubing installed in a packer set at approximately 100 feet above the uppermost perforation; the casing-tubing annulus in each well should be filled with an inert fluid; and a pressure gauge or approved leak-detection device should be attached to the annulus in order to determine leaks in the casing, tubing or packer.

(11) The injection wells or pressurization system for each well should be so equipped as to limit injection pressure at the wellhead to no more than 840 psi.

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

(13) The Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such high pressure will not result in migration of the injected waters from the Queen formation.

(14) The operator should give advance notice to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(15) The subject application should be approved and the project should be governed by the provisions of Rules 702 through 708 of the Division Rules and Regulations.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, OXY USA Inc., is hereby authorized to institute a waterflood project on its proposed Central Corbin Queen Unit Area (Division Case No. 10062), by the injection of water into the Central Corbin-Queen Pool through twelve wells listed in Exhibit "A", attached hereto and made a part hereof, which will be converted from producing Queen oil wells to injection wells.

(2) The waterflood project, hereby designated the Central Corbin Queen Unit Waterflood Project, shall be comprised of the following described area in Lea County, New Mexico:

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TOWNSHIP 18 SOUTH, RANGE 33 EAST, NMPM

Section 3: Lot 4, SW/4 NW/4, and W/2 SW/4  
Section 4: Lots 1, 2 and 3, S/2 N/2, and S/2  
Section 8: E/2 NE/4  
Section 9: N/2, N/2 SW/4, SE/4 SW/4, and SE/4  
Section 10: W/2 NW/4 and NW/4 SW/4

PROVIDED HOWEVER THAT:

(3) Injection into the Federal "AE" Well No. 12, located in Unit E of said Section 3, shall not commence until the Henderson, Dexter, Black-Wyatt Well No. 1, located in Unit M of Section 34, Township 17 South, Range 33 East, NMPM, Lea County, New Mexico, and the Carper Drilling Company - Corbin Well No. 3B, located in Unit C of Section 3, Township 18 South, Range 33 East, NMPM, Lea County, New Mexico, have either been properly replugged or are shown to have been adequately plugged and abandoned in a manner that is satisfactory to the supervisor of the Division's district office at Hobbs.

(4) Injection into each well described in Exhibit "A" shall be accomplished through plastic-lined tubing installed in a packer set at approximately 100 feet above the uppermost perforation.

(5) The casing-tubing annulus in each injection well shall be filled with an inert fluid; and a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak-detection device in order to determine leakage in the casing, tubing or packer.

(6) Prior to commencing injection operations, the casing in each of the subject wells shall be pressure-tested to assure the integrity of such casing in a manner that is satisfactory to the supervisor of the Division's Hobbs District Office.

(7) Each injection well or pressurization system for each well shall be equipped with a pressure-limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 840 psi.

(8) The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Queen formation.

(9) The operator shall notify the supervisor of the Hobbs District Office of the Division in advance of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test 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 of said injection wells or the leakage of water from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

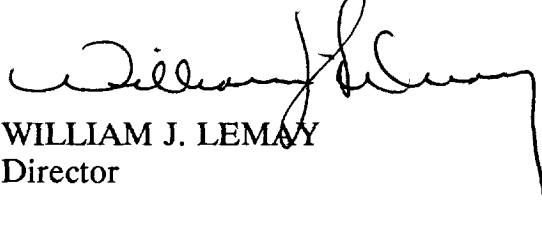
(11) Said waterflood project shall be governed by the provisions of Rules 701 through 708 of the Division Rules and Regulations.

(12) Monthly progress reports shall be submitted to the Division in accordance with Rules 706 and 1115.

(13) 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

S E A L

Exhibit "A"  
OXY USA, Inc.  
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	Well Name and Number	Footage Location	Unit Letter	Section	Injection Interval (feet)
1	Federal "AE" Well No. 12*	1980' FNL - 560' FWL	E	3	4211' - 4215'
2	Corbin Fee Well No. 1	330' FS & WL	M	3	4219' - 4266'
3	Federal "AE" Well No. 9	660' FNL - 1980' FWL	C	4	4152' - 4166'
4	Federal "AI" Well No. 3	2310' FN & EL	G	4	4163' - 4260'
5	Federal "AE" Well No. 4	1980' FSL - 660' FEL	I	4	4200' - 4217'
6	Federal "AE" Well No. 5	1980' FS & WL	K	4	4174' - 4180'
7	Federal "AE" Well No. 3	660' FS & WL	M	4	4243' - 4247'
8	Federal "AE" Well No. 1	660' FSL - 1980' FEL	O	4	4221' - 4241'
9	Federal "AA" Well No. 4	660' FNL - 790' FEL	A	9	4213' - 4242'
10	Federal "AD" Well No. 1	660' FNL - 1980' FWL	C	9	4206' - 4232'
11	Federal "AA" Well No. 3	1980' FN & EL	G	9	4236' - 4262'
12	Federal "AD" Well No. 4	1980' FS & WL	K	9	4258' - 4271'

All in Township 18 South, Range 33 East, NMPM  
Lea County, New Mexico.

\* well located within 1/2 mile of two potential inadequately plugged and abandoned wells.