

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. 9478  
Order No. R-8760

APPLICATION OF MURPHY OPERATING  
CORPORATION FOR A WATERFLOOD PROJECT,  
CHAVES AND ROOSEVELT COUNTIES, NEW  
MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on September 14, 1988, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 5th day of October, 1988, 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. 9478 and 9477 were consolidated at the time of the hearing for the purpose of testimony.

(3) The applicant, Murphy Operating Corporation, seeks authority to institute a waterflood project in its Haley Chaveroo San Andres Unit Area (Division Case No. 9477) located in portions of Townships 7 and 8 South, Range 33 East, NMPM, Chaves and Roosevelt Counties, New Mexico, by the injection of water into the San Andres formation from a depth of approximately 4158 feet to approximately 4470 feet (or the correlative stratigraphic interval) as found on the

CASE NO. 9478  
Order No. R-8760  
Page -2-

Gamma Ray/Bulk Density Log run on the Murphy Operating Corporation Hobbs "T" Well No. 15 located 990 feet from the South line and 1980 feet from the East line (Unit O) of Section 34, Township 7 South, Range 33 East, NMPM, Roosevelt County, New Mexico, Chaveroo-San Andres Pool, through twenty-three injection wells within the Unit Area shown on Exhibit "A" attached hereto and made a part hereof.

(4) The project area should consist of that area within the boundary of the Haley Chaveroo San Andres Unit Area, as described in Division Order No. R-8750 issued in said Case No. 9477.

(5) The record in this case indicates that by Order No. R-4597 entered in Case No. 5023 on July 23, 1973, the Division authorized the applicant in said case, Skelly Oil Company, to institute a waterflood project on its Hobbs "T" Lease in Sections 33 and 34, Township 7 South, Range 33 East, NMPM, Roosevelt County, New Mexico, said project designated the Skelly Hobbs "T" Chaveroo Waterflood Project, by the injection of water into the San Andres formation in its Hobbs "T" Well No. 11 located 660 feet from the South and East lines (Unit P) of said Section 33.

(6) The evidence in this case indicates that said Hobbs "T" Lease, which encompasses 560 acres, more or less, is now contained within the Haley Chaveroo San Andres Unit Area.

(7) The Skelly Hobbs "T" Chaveroo Waterflood Project, as described above, should be terminated.

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

(9) The proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste, and should otherwise protect correlative rights.

CASE NO. 9478  
Order No. R-8760  
Page -3-

(10) 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 from injection, production, or plugged and abandoned wells.

(11) Injection should be accomplished through plastic-lined tubing installed in a packer set approximately 100 feet above the uppermost injection perforation in each well, or in the case of open hole completion, within 100 feet of the casing shoe. The casing-tubing annulus in each injection well should be filled with an inert fluid and a surface pressure gauge or approved leak-detection device should be attached to the annulus.

(12) 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 uppermost injection perforation. 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 fracturing of the confining strata.

(13) Prior to commencing injection operations, the casing in each of the proposed injection wells 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) All wells within the Unit Area should be equipped with risers or in some other acceptable manner to facilitate the periodic testing of the bradenhead for pressure or fluid production.

(15) The applicant further proposed the establishment of an administrative procedure for the approval without hearing of the drilling of wells at orthodox and unorthodox locations, and also for the expansion of said waterflood project within the unit boundaries.

CASE NO. 9478  
Order No. R-8760  
Page -4-

(16) The project area allowable should be equal to the ability of the wells to produce and shall not be subject to the depth bracket allowable for the pool nor to the market demand percentage factor.

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

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Murphy Operating Corporation, is hereby authorized to institute and operate a waterflood project in the Haley Chaveroo San Andres Unit Area within the Chaveroo-San Andres Pool, Roosevelt and Chaves Counties, New Mexico, by the injection of water into the San Andres formation from a depth of approximately 4158 feet to approximately 4470 feet (or the correlative stratigraphic interval) as found on the Gamma Ray/Bulk Density Log run on the Murphy Operating Corporation Hobbs "T" Well No. 15 located 990 feet from the South line and 1980 feet from the East line (Unit O) of Section 34, Township 7 South, Range 33 East, NMPM, Roosevelt County, New Mexico, through twenty-three injection wells located within said Unit Area, and described in Exhibit "A" attached to this order and by reference made a part hereof.

(2) Injection shall be accomplished through plastic-lined tubing installed in a packer set approximately 100 feet above the uppermost injection perforation in each well, or in the case of open hole completion, within 100 feet of the casing shoe. 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.

(3) 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 uppermost injection perforation. The Division Director may administratively

CASE NO. 9478  
Order No. R-8760  
Page -5-

authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in fracturing of the confining strata.

(4) All wells within the project area shall be equipped with risers or some other acceptable equipment so as to facilitate the periodic testing of the bradenhead for pressure or fluid production.

(5) Prior to commencing injection operations, the casing in each of the proposed injection 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.

(6) The Director of the Oil Conservation Division shall have authority to approve, without hearing, the drilling of wells at unorthodox locations anywhere within the boundary of the Haley Chaveroo 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 outer 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. Applications for such additional producing or injection wells shall be made in accordance with the appropriate General Rules of the Division.

(7) The operator shall immediately notify the supervisor of the Division's Hobbs district office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil 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.

CASE NO. 9478  
Order No. R-8760  
Page -6-

(8) The subject waterflood project is hereby designated the Haley Chaveroo San Andres Waterflood Project and shall be governed by the provisions of Rules 701 through 708 of the Division Rules and Regulations.

(9) The project area for the Haley Chaveroo San Andres Waterflood Project shall comprise the entire area within the Haley Chaveroo San Andres Unit as described in Division Order No. R-8750, entered in Case No. 9477.

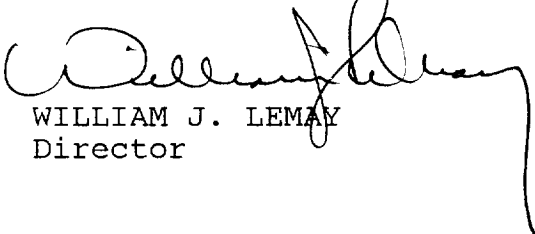
(10) The Skelly Hobbs "T" Chaveroo Waterflood Project, previously approved by Division Order No. R-4597, entered in Case No. 5023 on July 23, 1973, and encompassing portions of Sections 33 and 34, Township 7 South, Range 33 East, NMPM, Roosevelt County, New Mexico, is hereby terminated.

(11) Monthly progress reports of the waterflood project herein authorized shall be submitted to the Division in accordance with Rules 706 and 1115 of the Division Rules and Regulations.

(12) 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"  
CASE NO. 9478  
ORDER NO. R-8760  
HALEY CHAVEROO SAN ANDRES UNIT  
UNIT INJECTION WELLS

<u>WELL</u>	<u>UNIT WELL DESIGNATION</u>	<u>WELL LOCATION AND MAX. INJECTION PRESSURE</u>
Hobbs "U" Well No. 2	33-2	660 FNL & 1980 FEL (Unit B) Section 33, T-7S, R-33E Max. Pressure- 855 PSIG
NM "AZ" State No. 5	33-4	660 FNL & 660 FWL (Unit D) Section 33, T-7S, R-33E Max. Pressure- 853 PSIG
Hobbs "T" Well No. 1	33-6	1980 FNL & 1980 FWL (Unit F) Section 33, T-7S, R-33E Max. Pressure- 857 PSIG
Hobbs "T" Well No. 5	33-8	1980 FNL & 660 FEL (Unit H) Section 33, T-7S, R-33E Max. Pressure- 846 PSIG
Hobbs "T" Well No. 3	33-10	1980 FSL & 1980 FEL (Unit J) Section 33, T-7S, R-33E Max. Pressure- 845 PSIG
Hobbs "T" Well No. 2	33-12	1980 FSL & 660 FWL (Unit L) Section 33, T-7S, R-33E Max. Pressure- 855 PSIG
NM "AZ" State No. 6	33-14	660 FSL & 1980 FWL (Unit N) Section 33, T-7S, R-33E Max. Pressure- 854 PSIG
Hobbs "T" Well No. 11	33-16	660 FSL & 660 FEL (Unit P) Section 33, T-7S, R-33E Max. Pressure- to be determined
NM "AZ" State No. 12	34-2	660 FNL & 1980 FEL (Unit B) Section 34, T-7S, R-33E Max. Pressure- 849 PSIG
Hobbs "T" Well No. 9	34-4	660 FNL & 660 FWL (Unit D) Section 34, T-7S, R-33E Max. Pressure- 851 PSIG
NM "AZ" State No. 9	34-6	1980 FNL & 1980 FWL (Unit F) Section 34, T-7S, R-33E Max. Pressure- 842 PSIG

<u>WELL</u>	<u>UNIT WELL DESIGNATION</u>	<u>WELL LOCATION AND MAX. INJECTION PRESSURE</u>
NM "AZ" State No. 14	34-8	1980 FNL & 660 FEL (Unit H) Section 34, T-7S, R-33E Max. Pressure- 832 PSIG
Hobbs "T" Well No. 8	34-10	1980 FSL & 1980 FEL (Unit J) Section 34, T-7S, R-33E Max. Pressure- 846 PSIG
Hobbs "T" Well No. 7	34-12	1980 FSL & 660 FWL (Unit L) Section 34, T-7S, R-33E Max. Pressure- 845 PSIG
Hobbs "T" Well No. 13	34-14	990 FSL & 1980 FWL (Unit N) Section 34, T-7S, R-33E Max. Pressure- 850 PSIG
NM "AZ" State No. 15	34-16	660 FSL & 660 FEL (Unit P) Section 34, T-7S, R-33E Max. Pressure- 840 PSIG
State "BF" Well No. 2	3-2	660 FNL & 1980 FEL (Unit B) Section 3, T-8S, R-33E Max. Pressure- 840 PSIG
State "BF" Well No. 5	3-4	330 FNL & 990 FWL (Unit D) Section 3, T-8S, R-33E Max. Press.-To be determined
State "BF" Well No. 7	3-6	1980 FNL & 1980 FWL (Unit F) Section 3, T-8S, R-33E Max. Pressure- 853 PSIG
State "BF" Well No. 4	3-8	1980 FNL & 660 FEL (Unit H) Section 3, T-8S, R-33E Max. Pressure- 840 PSIG
State "BF" Well No. 8	3-10	1980 FSL & 1980 FEL (Unit J) Section 3, T-8S, R-33E Max. Pressure- 848 PSIG
Annarco Well No. 1	3-14	990 FSL & 2310 FWL (Unit N) Section 3, T-8S, R-33E Max. Press.- To be determined
State "BF" Well No. 9	3-16	990 FSL & 660 FEL (Unit P) Section 3, T-8S, R-33E Max. Pressure- 851 PSIG