



# GREENHILL PETROLEUM CORPORATION

16010 BARKER'S POINT LANE, SUITE 325  
HOUSTON, TEXAS 77079  
TELEPHONE (713) 870-0606  
FAX (713) 870-1831

Incorporated in Delaware, U.S.A.

December 5, 1989

Oil Conservation Division  
State of New Mexico  
Energy, Minerals and Natural Resources Department  
P. O. Box 2088  
Santa Fe, New Mexico 87504-2088

Re: Unorthodox Location and Drilling Permit  
Proposed Well No. 60  
Lovington Grayburg San Andres Field  
Lovington San Andres Unit  
Lea County, New Mexico

Gentlemen:


Greenhill Petroleum Corporation respectfully requests the State of New Mexico Oil Conservation Division grant approval of the proposed unorthodox location and the attached permit to drill well No. 60 in the Lovington Grayburg San Andres Field, Lovington San Andres Unit, located in Lea County, New Mexico.

The Lovington San Andres Unit is presently developed and being waterflooded utilizing a 40-acre well density. It is believed that infill development using a 20-acre well density will improve waterflood sweep efficiency and will increase secondary oil recovery. The proposed location for well No. 60 is located in the interior of the unit and is not competitive with offset wells outside the unit. Information gathered as a result of drilling this infill well will be utilized in evaluating additional infill development potential in the unit and ultimately may be used to evaluate the feasibility of tertiary recovery.

Greenhill Petroleum Corporation wishes to commence drilling operations on the two proposed wells as soon as possible and would appreciate a response to this request at your earliest convenience.

Sincerely,

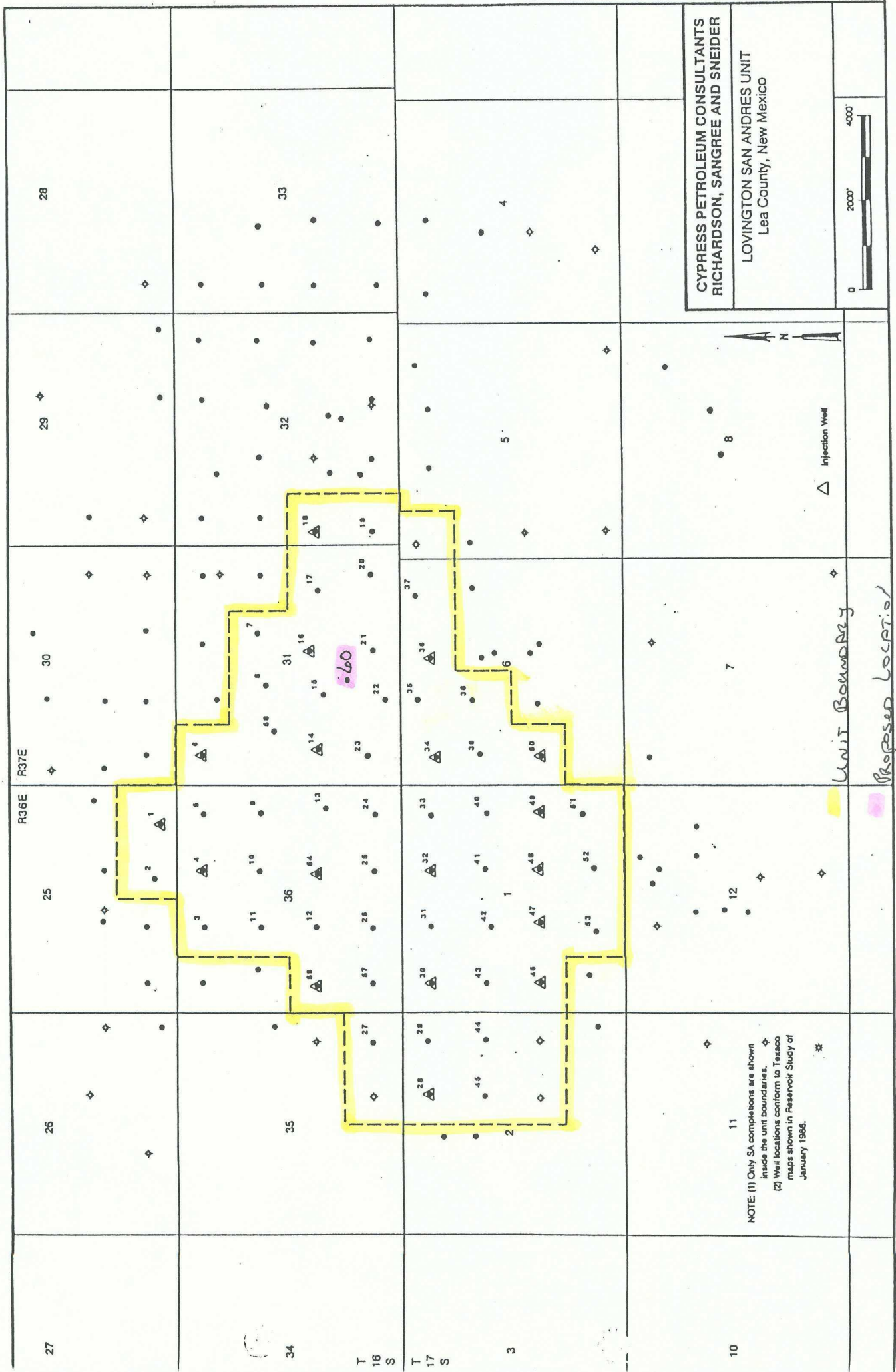
GREENHILL PETROLEUM CORPORATION

  
Gene Linton  
Production Coordinator

GL/tlc

Enclosures

DEC 6 PM 12 45  
RECEIVED  
OIL CONSERVATION DIVISION



CYPRESS PETROLEUM CONSULTANTS  
RICHARDSON, SANGREE AND SNEIDER

LOVINGTON SAN ANDRES UNIT  
Lea County, New Mexico



Submit to Appropriate  
District Office  
State Lease - 6 copies  
Fee Lease - 5 copies

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-101  
Revised 1-1-89

OIL CONSERVATION DIVISION

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

API NO. (assigned by OCD on New Wells)

5. Indicate Type of Lease

STATE ☒ FEE ☐

6. State Oil & Gas Lease No.

B-1505

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work:

DRILL ☒ RE-ENTER ☐ DEEPEN ☐ PLUG BACK ☐

b. Type of Well:

OIL WELL ☒ GAS WELL ☐ OTHER ☐

SINGLE ZONE ☐ MULTIPLE ZONE ☐

7. Lease Name or Unit Agreement Name

Lovington San Andres  
Unit

2. Name of Operator

Greenhill Petroleum Corporation

8. Well No.

60

3. Address of Operator

16010 Barker's Point Lane, #325, Houston, TX 77079

9. Pool name or Wildcat Lovington  
Grayburg San Andres

4. Well Location

Unit Letter N : 1283 Feet From The South Line and 2527 Feet From The West Line

Section 31

Township 16S

Range 37E

NMPM

Lea

County

10. Proposed Depth

5300'

11. Formation

San Andres

12. Rotary or C.T.

Rotary

13. Elevations (Show whether DF, RT, GR, etc.)

3815.7' GL

14. Kind & Status Plug. Bond

Blanket on file

15. Drilling Contractor

TBD

16. Approx. Date Work will start

1-1-90

17.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17-1/2"	13-3/8"	48#	350'	450	Surface
11"	8-5/8"	24#	2050'	700	Surface
7-7/8"	5-1/2"	15.5#	5300'	200	4150'

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE



TITLE

Production Coord.

DATE

12/5/89

TYPE OR PRINT NAME

Gene Linton

(713)

TELEPHONE NO. 870-0606

(This space for State Use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

GREENHILL PETROLEUM CORPORATION  
BOP PROGRAM FOR  
LOVINGTON SAN ANDRES UNIT #60

Casing Program

BOP Program

Size	Depth	Wt	Grade	Configuration	Test Pressure
13 3/8"	350'	48#	H40, STC	RA	200 psi
8 5/8"	2050'	24#	K55, STC	RR or RA	250/1500 psi
5 1/2"	5300'	15#	K55, STC	N/A	

\* RR - Ram Ram  
RA - Ram Annular  
Diverter - Hydrill may be substituted for a diverter.

**NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator <b>GREENHILL PETROLEUM CORPORATION</b>			Lease <b>LOVINGTON SAN ANDRES UNIT</b>		Well No. <b>60</b>
Unit Letter <b>N</b>	Section <b>31</b>	Township <b>16-S</b>	Range <b>37-E</b>	County <b>LEA</b>	
Actual Footage Location of Well: <b>1283</b> feet from the <b>SOUTH</b> line and <b>2527</b> feet from the <b>WEST</b> line					
Ground Level Elev. <b>3815.7</b>	Producing Formation <b>San Andres</b>		Pool <b>Lovington Grayburg San Andres</b>		Dedicated Acreage: <b>20 Acres</b>

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

	<b>CERTIFICATION</b>	
	<p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>_____ Name <b>Gene Linton</b> Position <b>Production Coordinator</b> Company <b>Greenhill Petroleum Corp.</b> Date <b>12/5/89</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.</p> <p>Date Surveyed <b>NOVEMBER 16, 1989</b> Registered Professional Engineer and/or Land Surveyor _____ Certificate No. <b>JOHN W. WEST 676</b> <b>Ronald J. Eldon 3239</b></p>	

Greenhill Petroleum Corp.  
Lovington San Andres Unit Well No. 22  
330' FSL - 1650' FWL  
Spud: 12/13/38

Greenhill Petroleum Corp.  
Lovington San Andres Unit Well No. 37  
330' FSL - 2290' FWL  
Spud: 8/1/53

## (PLAINS UNIT—Cont'd.)

event of subsequent joinder by any party, the unit operator shall file with the Commission within 30 days after such action counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(4) That this order shall become effective upon the approval of said unit agreement by the Director of the United States Geological Survey, and shall terminate ipso facto upon the termination of said unit agreement. The last unit operator shall notify the Commission in writing of such termination.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

**LOVINGTON SAN ANDRES UNIT**  
Lea County, New Mexico

Order No. R-2277, Approving the Lovington San Andres Unit Agreement, Lea County, New Mexico, July 12, 1962.

*Application of Skelly Oil Company for the approval of a unit agreement, Lea County, New Mexico.*

CASE NO. 2593  
Order No. R-2277

**ORDER OF THE COMMISSION**

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on June 28, 1962, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 12th day of July, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

**FINDS:**

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

(2) That the applicant, Skelly Oil Company, seeks approval of the Lovington San Andres Unit Agreement embracing 2,470 acres, more or less, in Township 16 and 17 South, Ranges 36 and 37 East, NMPM, Lea County, New Mexico.

(3) That the proposed unit plan will in principle tend to promote the conservation of oil and gas and the prevention of waste.

**IT IS THEREFORE ORDERED:**

(1) That the Lovington San Andres Unit Agreement is hereby approved.

PROVIDED HOWEVER, That notwithstanding any of the provisions contained in said unit agreement, this approval shall not be considered as waiving or relinquishing, in any manner, any right, duty, or obligation which is now, or may hereafter be, vested in the New Mexico Oil Conservation Commission by law relative to the supervision and control of operations for exploration and development of any lands committed to said Lovington San Andres Unit Agreement, or relative to the production of oil and gas therefrom.

(2) That the unit area shall be:

**LEA COUNTY, NEW MEXICO**

**TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM**

Section 25: S/2 SE/4

Section 35: S/2 SE/4

Section 36: E/2, E/2 NW/4, and SW/4

**TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM**

Section 31: Lots 1, 2, 3, 4, SE/4 NW/4, E/2 SW/4, SW/4 NE/4, and SE/4

Section 32: W/2 SW/4

**TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM**

Section 1: Lots 1, 2, 3, 4, S/2 N/2, SE/4, N/2 SW/4, and SE/4 SW/4

Section 2: Lots 1, 2, S/2 NE/4, N/2 SE/4

**TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM**

Section 5: Lot 4

Section 6: Lots 1, 2, 3, 4, 5, 6, and SE/4 NW/4 containing 2,470 acres, more or less.

(3) That the unit operator shall file with the Commission an executed original or executed counterpart of the unit agreement within 30 days after the effective date thereof. In the event of subsequent joinder by any party, the unit operator shall file with the Commission within 30 days after such action counterparts of the unit agreement reflecting the subscription of those interests having joined or ratified.

(4) That this order shall become effective upon the approval of said unit agreement by the Commissioner of Public Lands for the State of New Mexico, and shall terminate ipso facto upon the termination of said unit agreement. The last unit operator shall notify the Commission in writing of such termination.

(5) That in the event of subsequent joinder by any party owning an interest in Federal lands, said joinder shall become effective only upon the approval of said unit agreement by the Director of the United States Geological Survey.

(6) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

TION IV

R. W. Byram &amp; Co., - Feb., 1968

PROVIDED HOWEVER, That the Kennedy Johnson A Well No. 4 and the well to be drilled in Unit M shall not be placed on injection prior to September 1, 1962.

(2) That the waterflood project shall be governed by Rule 701, including the allowable provisions thereof.

PROVIDED HOWEVER, That unless otherwise agreed to by all parties and evidence thereof furnished the Commission, the transfer of allowables within the project area of this waterflood shall be authorized only insofar as the transfer is made between wells having common royalty ownership.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

LOVINGTON-SAN ANDRES POOL  
(Skelly Unit Waterflood)  
Lea County, New Mexico

Order No. R-2278, Authorizing Skelly Oil Company to Institute a Secondary Recovery Project in the Lovington San Andres Unit Area in the Lovington-San Andres Pool, Lea County, New Mexico, July 12, 1962.

Application of Skelly Oil Company for Approval of a Secondary Recovery Project, Lea County, New Mexico.

CASE NO. 2592  
Order No. R-2278

ORDER OF THE COMMISSION

BY THE COMMISSION: This cause came on for hearing at 9 o'clock a.m. on June 28, 1962, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 12th day of July, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, and being fully advised in the premises,

FINDS:

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

(LOVINGTON-SAN ANDRES (SKELLY UNIT WATERFLOOD) POOL—Cont'd.)

(2) That the applicant, Skelly Oil Company, seeks permission to institute a secondary recovery project in the Lovington-San Andres Pool in the Lovington San Andres Unit Area comprising portions of Townships 16 and 17 South, Ranges 36 and 37 East, NMPM, Lea County, New Mexico, by the injection of water into the San Andres formation through 17 wells located in said unit area.

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

(4) That the waterflood project should be approved and should be governed by the provisions of Rule 701.

IT IS THEREFORE ORDERED:

(1) That the applicant, Skelly Oil Company, is hereby authorized to institute a waterflood project in the Lovington-San Andres Pool in the Lovington San Andres Unit Area comprising portions of Townships 16 and 17 South, Ranges 36 and 37 East, NMPM, Lea County, New Mexico, by the injection of water into the San Andres formation through the following-described 17 wells:

Well	Location
Late Oil Co. Graham #1	Unit D, Sec. 31-16S-37E
Skelly - State "N" #1	Unit B, Sec. 36-16S-36E
Rodman Noel State "AE" #2 (to be drilled)	Unit L, Sec. 36-16S-36E
Tidewater - State "M" #2 (to be drilled)	Unit J, Sec. 36-16S-36E
Skelly - State "O" #2	Unit L, Sec. 31-16S-37E
Skelly - State "O" #4	Unit J, Sec. 31-16S-37E
Tidewater - State "P" #2	Unit L, Sec. 32-16S-37E
Moran Shipp - State "A" #1	Unit D, Sec. 5-17S-37E
Skelly - Caylor #1	Unit B, Sec. 6-17S-37E
Sunray DX - M. Caylor #1	Unit D, Sec. 6-17S-37E
Amerada - State "LA" #6	Unit B, Sec. 1-17S-36E
Pan American - State "E" #3	Unit D, Sec. 1-17S-36E
Pan American - State "E" #10	Unit B, Sec. 2-17S-36E
Mobil - State "R" #4	Unit J, Sec. 2-17S-36E
Amerada - State "LA" #7	Unit L, Sec. 1-17S-36E
Mobil - State "R" #1	Unit J, Sec. 1-17S-36E
Pan American and Amerada - Caylor #1	Unit L, Sec. 6-17S-37E

(2) That the subject waterflood project shall be governed by the provisions of Rule 701, including the allowable provisions thereof and including the provisions with respect to expansion of the waterflood project.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

Order  
Flood  
R-227

Appl  
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