

EXHIBIT "C"

Texaco, Inc.
Attn: R.R. O'Dwyer
P.O. Box 2100
Denver, CO 80201

Marbob Energy Company
Attn: Debra Rich
11352 Lovington Highway
Artesia, NM 88201-0217

Ray Westall
P.O. Box 4
Loco Hills, NM 88255

Yates Petroleum
Attn: Theresa Padilla
Yates Building, Suite 1300
South 4th
Artesia, NM 88210

Anadarko Petroleum
Attn: Bill Griffin
400 W. Illinois, Suite 1300
P.O. Box 2497
Midland, TX 79702

Murphy Operating, Inc.
Attn: Mark Murphy
P.O. Box 2648
Roswell, NM 88201

Kennedy Oil Company
Attn: Peggy Runyon
P.O. Box 47
Mayhill, NM 88339

Morexco, Inc.
Attn: Chuck Morgan
P.O. Box 481
801 West Texas
Artesia, NM 88210

Ernest Closuit, Sr. Trust
c/o Ernest Closuit, Jr.
Fort Worth Club Tower, P-1, Suite B
Fort Worth, Texas 76102

Trinity University
Attn: Mr. Baxter
Oil and Gas Division
715 Stadium Drive
San Antonio, TX 78284

Bureau of Land Management
P.O. Box 1778
Carlsbad, NM 88220

Mailed

Socorro Petro

Amend Ord. R-2268

(WTK) 4-9-90

Jic

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION
OF SOCORRO PETROLEUM COMPANY FOR
A WATERFLOOD EXPANSION AND TO
AMEND DIVISION ORDER R-2268 AND
ADMINISTRATIVE ORDERS WFX-585
AND WFX-587, EDDY COUNTY,
NEW MEXICO

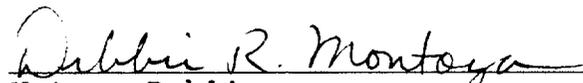
CASE NO. 9929

CERTIFICATE OF MAILING
AND
COMPLIANCE WITH ORDER R-8054

In Accordance with Division Rule 1207 (Order R-8054) I hereby certify that on April 4, 1990, notice of the hearing and a copy of the Application for the above referenced case was mailed by certified mail return-receipt, at least twenty days prior to the hearing set for May 2, 1990, to the interested parties listed on Exhibit "A" attached hereto.


W. Thomas Kellahin

SUBSCRIBED AND SWORN to before me this 1st day of
May, 1990.


Notary Public

My Commission Expires:

July 25, 1993

BEFORE EXAMINER CATANACH OIL CONSERVATION DIVISION <u>Socorro</u> EXHIBIT NO. <u>10</u> CASE NO. <u>9929</u>

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Ernest Closuit, Sr. Trust c/o Ernest Closuit, Jr. Fort Worth Club Tower, P-1 Suite B, Fort Worth, TX 76102 (WTK) RE: Socorro Petro Amend Ord R-2268	4. Article Number P 572 125 166
5. Signature - Addressee X	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
6. Signature - Agent X <i>D. Hobles</i>	Always obtain signature of addressee or agent and DATE DELIVERED.
7. Date of Delivery 12 APR 1990	8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Apr. 1989 *U.S.G.P.O. 1989-238-818 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Bureau of Land Management P.O. Box 1778 Carlsbad, NM 88220 RE: Socorro Petroleum Amend Order R-2268 (WTK)	4. Article Number P 572 125 168
5. Signature - Addressee X	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
6. Signature - Agent X <i>Beth Hill</i>	Always obtain signature of addressee or agent and DATE DELIVERED.
7. Date of Delivery 4/11/90	8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Apr. 1989 *U.S.G.P.O. 1989-238-818 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Trinity University Attn: Mr. Baxter Oil & Gas Division 715 Stadium Drive San Antonio, TX 78284 RE: Socorro Petro Amend Ord R-2268	4. Article Number P 572 125 167
5. Signature - Addressee X	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
6. Signature - Agent X <i>Christ Vaz</i>	Always obtain signature of addressee or agent and DATE DELIVERED.
7. Date of Delivery APR 12 1990	8. Addressee's Address (ONLY if requested and fee paid)

PS Form 3811, Apr. 1989 *U.S.G.P.O. 1989-238-818 DOMESTIC RETURN RECEIPT

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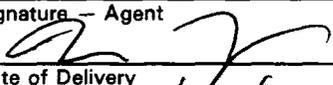
1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Yates Petroleum Attn: Theresa Padilla Yates Building, Suite 1300 South 4th Artesia, NM 88210 (WTK) RE: Socorro Amend Ord. \$-2268	4. Article Number P 572 125 161
Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise	
Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .	
5. Signature - Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery	

PS Form 3811, Mar. 1989 * U.S.G.P.O. 1989-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Texaco, Inc. Attn: R.R. O'Dwyer P.O. Box 2100 Denver, CO 80201 (WTK) Re: Amend Ord. R-2268 Socorro	4. Article Number P 572 125 158
Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise	
Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .	
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X 	
7. Date of Delivery 4/16/90	

PS Form 3811, Apr. 1989 * U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Anadarko Petroleum Attn: Bill Griffin P.O. Box 2497 Midland, TX 79702 RE: Socorro Petro Amend Order R-2268 (WTK)	4. Article Number P 572 125 162
Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise	
Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .	
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X 	
7. Date of Delivery 2-12-90	

PS Form 3811, Apr. 1989 * U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
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1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Kennedy Oil Company Attn: Peggy Runyon P.O. Box 47 Mayhill, NM 38330 Re: Socorro Petrofund Order R-2268 (WTK)	4. Article Number P 572 125 164 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
Signature - Addressee	Always obtain signature of addressee or agent and DATE DELIVERED.
Signature - Agent <i>Peggy Runyon</i>	8. Addressee's Address (ONLY if requested and fee paid)
7. Date of Delivery 4/11/90	

PS Form 3811, Apr. 1989 *U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
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1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Murphy Operating, Inc. Attn: Mark Murphy P.O. Box 2648 Roswell, NM 88201 RE: Socorro Petro. Amend Order R-2268 (WTK)	4. Article Number P 572 125 163 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
5. Signature - Addressee X	Always obtain signature of addressee or agent and DATE DELIVERED.
6. Signature - Agent X <i>Mark Murphy</i>	8. Addressee's Address (ONLY if requested and fee paid)
7. Date of Delivery	

PS Form 3811, Apr. 1989 *U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. (Extra charge) 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Ray Westall P.O. Box 4 Loco Hills, NM 88255 RE: Socorro Petro Amend Order \$-2268 (WTK)	4. Article Number P 572 125 160 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
5. Signature - Address X <i>Ray Westall</i>	Always obtain signature of addressee or agent and DATE DELIVERED.
6. Signature - Agent X <i>Judy Beadle</i>	8. Addressee's Address (ONLY if requested and fee paid)
7. Date of Delivery APR 11 1990	

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-885 DOMESTIC RETURN RECEIPT

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:

AMS 6/12/90 Dale 6/11/90
WJY 6/12/90
CASE NO. 9929
Order No. R-2268-C

APPLICATION OF SOCORRO PETROLEUM
COMPANY FOR WATERFLOOD EXPANSION
AND TO AMEND DIVISION ORDER NO.
R-2268 AND ADMINISTRATIVE ORDERS
WFX-585 AND WFX-587, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on May 2, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this _____ day of June, 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) The applicant, Socorro Petroleum Company, is the current operator of the Keel-West Waterflood Project which was originally approved by Division Order Nos. R-2268, R-2268-A and R-2268-B, and which encompasses, in part, Sections 3, 4, 9 and 10, Township 17 South, Range 31 East, NMPM, Grayburg-Jackson Pool, Eddy County, New Mexico.

(3) The applicant seeks authority to expand said Keel-West Waterflood Project by converting its H. E. West "B" Well No. 24, located 660 feet from the North and East lines (Unit A) of Section 10, Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico, from a producing oil well to a water injection well.

(4) By Order Nos. R-2268 (supplemental), WFX-585 and WFX-587, entered, respectively, October 7, 1989, August 31, 1989, and September 26, 1989, the Division authorized the expansion of said Keel-West Waterflood Project by the conversion of fifteen wells located in said Sections 3, 4, 9 and 10 to water injection wells. These orders further limited the surface injection pressure on said wells to 0.2 psi per foot of depth to the uppermost perforations or approximately 670 psi.

(5) The applicant also seeks authority, in the immediate case, to increase the surface injection pressure on said fifteen injection wells to approximately 450 psi above formation parting pressure as determined from step rate tests conducted on certain injection wells located within the project area. The applicant further seeks to increase the surface injection pressure on its proposed H. E. West "B" Well No. 24, as described above, to 450 psi above formation parting pressure.

(6) At the time of the hearing, the applicant requested that the portion of this case requesting the authority to convert its H. E. West "B" Well No. 24 to an injection well be dismissed inasmuch as a formal application to convert said well has been filed with the Division for administrative approval.

(7) The subject waterflood project was initiated in June, 1962, at which time the Division did not restrict the surface injection pressure on injection wells.

(8) From inception to August, 1986, the former operator of the Keel-West Waterflood Project utilized some ten injection wells previously approved by said Order Nos. R-2268, R-2268-A, and R-2268-B, and located within said Sections 3, 4, 9 and 10, to inject water into the Grayburg and San Andres formations at surface injection pressures as high as 2500 psi.

(9) Decline curve analysis indicates that if sufficient volumes of water are injected into the Grayburg-Jackson Pool in this area, an estimated additional 1.48 million barrels of oil will be recovered.

(10) The evidence presented by the applicant indicates that sufficient volumes of water cannot be injected into the Grayburg-Jackson Pool by those fifteen subsequently approved injection wells at their currently authorized injection pressures.

(11) The applicant presented test data obtained from step rate injection tests conducted on nine of the fifteen subject injection wells which indicates that the average fracture pressure is approximately 1711 psi.

(12) The evidence presented further indicates that injection volumes limited to the formation fracture pressure as established by said step rate tests are not sufficient to recover the additional 1.48 million barrels of oil.

(13) The applicant, through its engineering evidence and testimony, has satisfactorily demonstrated that injection through the fifteen subject injection wells at a pressure of approximately 450 psi above formation fracture pressure is necessary in order to efficiently and effectively waterflood the area and will enable the applicant to recover the additional oil reserves within the Grayburg-Jackson Pool, thereby preventing waste.

(14) The applicant has further demonstrated that injection into the Grayburg and San Andres formations at said injection pressures should not result in the migration of injected water from the Grayburg-Jackson Pool.

(15) According to the evidence presented, there are no fresh water aquifers located above or below the Grayburg-Jackson Pool in this area.

(16) Injection into the fifteen subject injection wells at a surface injection pressure of approximately 450 psi above formation fracture pressure will allow the recovery of additional oil reserves within the Grayburg-Jackson Pool, thereby preventing waste, will not endanger any fresh water aquifers, and should therefore be approved.

(17) The Division Director should have the authority to reduce or rescind said injection pressures should it become apparent that the injected fluid is not being adequately confined to the Grayburg-Jackson Pool.

(18) Inasmuch as the injection pressures authorized by this order are based upon the current formation fracture pressure, which, through continued injection, may increase, the Division Director should also have the authority to administratively increase the surface injection pressures on the fifteen subject injection wells, provided, however, that current step rate tests are accompanied by such request.

(19) Prior to authorizing the requested surface injection pressure for the proposed H. E. West "B" Well No. 24, the applicant should be required to demonstrate that said well has been approved for injection, and should further be required to conduct and submit a step rate test on said well.

IT IS THEREFORE ORDERED THAT:

(1) Division Order Nos. R-2268 (supplemental), WFX-585 and WFX-587 are hereby amended authorizing Socorro Petroleum

Company, to inject water into fifteen previously approved injection wells located within the Keel-West Waterflood Project in Sections 3, 4, 9 and 10, Township 17 South, Range 31 East, NMPM, Grayburg-Jackson Pool, Eddy County, New Mexico, at a surface injection pressure of approximately 450 psi above formation fracture pressure as shown on Exhibit "A" attached hereto.

(2) The Division Director shall have the authority to administratively approve subsequent pressure increases on said wells provided, however, that current step rate tests are accompanied by such requests.

(3) The Division Director shall also have the authority to reduce or rescind said injection pressures should it become apparent that the injected fluid is not being adequately confined to the Grayburg-Jackson Pool.

(4) The portion of this case requesting the expansion of the Keel West Waterflood Project by the conversion of the H. E. West "B" Well No. 24 located 660 feet from the North and East lines (Unit A) of Section 10, Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico, to a water injection well is hereby dismissed.

(5) Prior to authorizing the requested surface injection pressure for said H. E. West "B" Well No. 24, the applicant shall be required to demonstrate that said well has been approved for injection, and shall further be required to conduct and submit a step rate injection test on said well.

(6) 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"
DIVISION ORDER NO. R-2268-C

<u>WELL & LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
H.E. West "A" No. 8 Unit E, Section 3, T-17S, R-31E	2407 PSIG
H.E. West "A" No. 9 Unit I, Section 4, T-17S, R-31E	2250 PSIG
H.E. West "A" No. 11 Unit G, Section 3, T-17S, R-31E	2160 PSIG
H.E. West "A" No. 14 Unit O, Section 4, T-17S, R-31E	2160 PSIG
H.E. West "A" No. 15 Unit A, Section 3, T-17S, R-31E	2160 PSIG
H.E. West "B" No. 12 Unit G, Section 9, T-17S, R-31E	1872 PSIG
H.E. West "B" No. 13 Unit E, Section 10, T-17S, R-31E	2027 PSIG
H.E. West "B" No. 15 Unit G, Section 10, T-17S, R-31E	2236 PSIG
H.E. West "B" No. 16 Unit M, Section 3, T-17S, R-31E	2160 PSIG
H.E. West "B" No. 18 Unit O, Section 3, T-17S, R-31E	2000 PSIG
H.E. West "B" No. 20 Unit O, Section 10, T-17S, R-31E	2160 PSIG
H.E. West "B" No. 21 Unit M, Section 10, T-17S, R-31E	2075 PSIG
H.E. West "B" No. 22Y Unit O, Section 9, T-17S, R-31E	2118 PSIG
H.E. West "B" No. 34 Unit I, Section 10, T-17S, R-31E	2160 PSIG
H.E. West "B" No. 43 Unit M, Section 9, T-17S, R-31E	2470 PSIG

Dockets Nos. 13-90 and 14-90 are tentatively set for May 16, 1990 and May 30, 1990. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 2, 1990
8:15 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

The following cases will be heard before David R. Catanach, Examiner, or Michael E. Stogner, Alternate Examiner:

CASE 9922: Application of Heafitz Energy Management Inc. for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authorization to commingle gas production from the Arena Roja-Pennsylvanian Gas Pool and the Silurian formation within the wellbore of the Falcon Engineering Company Inc. Mexico "P" Federal Well No. 1 located 1980 feet from the North and West lines (Unit F) of Section 21, Township 26 South, Range 35 East. Said well is located approximately 12 miles west-southwest of Jal, New Mexico.

CASE 9923: Application of Santa Fe Energy Operating Partners, L. P. for surface commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Division General Rule 309-A for the surface commingling of North Young-Bone Spring Pool production into a common tank battery from its Sharp Shooter "2" State Well Nos. 1, 2, and 3 located in Units I, H, and J, respectively, of Section 2, Township 18 South, Range 32 East. Said wells are located in an area approximately 5.5 miles south-southeast of Maljamar, New Mexico.

CASE 9924: Application of Strata Production Company to amend Division Order No. R-9097, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks to amend Division Order No. R-9097, which authorized a horizontal directional drilling pilot project in the SE/4 of Section 18, Township 26 South, Range 25 East, being a standard 160-acre gas spacing and proration unit in the Bone Spring formation by expanding the prescribed area limiting the horizontal displacement of the proposed wellbore such that any portion thereof can be no closer than 330 feet from the North line, nor closer than 660 feet from the East and West lines, nor closer than 460 feet from the South line of said 160-acre tract. Said location is approximately 2.5 miles east of Mile Post No. 6 on U.S. Highway 62/180.

CASE 9925: Application of Siete Oil & Gas Corporation for a waterflood project, Eddy and Lea Counties, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a cooperative lease waterflood project in the Shugart (Yates-Seven Rivers-Queen-Grayburg) Pool by the injection of water into said pool through selected perforated intervals from approximately 3768 feet to 4310 feet in three certain existing wells located on the applicant's Conoco Federal, Inca Federal, ARCO Federal, and Geronimo Federal Leases, located in portions of Sections 18 and 19, Township 18 South, Range 32 East, Lea County, and Section 24, Township 18 South, Range 31 East, Eddy County. Said cooperative area is located in an area approximately 8.5 miles south-southwest of Maljamar, New Mexico.

CASE 9926: Application of Mewbourne Oil Company for compulsory pooling and an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface to the base of the Morrow formation underlying the following described acreage in Section 21, Township 18 South, Range 27 East, and in the following described manner: the N/2 to form a standard 320-acre gas spacing and proration unit for any and all formations and/or pools developed on 320-acre spacing within said vertical extent (which presently includes but is not necessarily limited to the Undesignated Red Lake-Pennsylvanian Gas Pool, Undesignated Red Lake Atoka-Morrow Gas Pool, and Undesignated Scoggin Draw-Morrow Gas Pool); the NE/4 to form a standard 160-acre gas spacing and proration unit for any and all formations developed on 160-acre spacing within said vertical extent; and the NE/4 NE/4 to form a standard 40-acre oil spacing and proration unit for any and all formations and/or pools developed on statewide 40-acre oil spacing (which presently includes but is not necessarily limited to the Undesignated Artesia Queen-Grayburg-San Andres Pool, Undesignated East Dayton-Grayburg Pool and Undesignated Empire-Abo Pool). Said units are to be dedicated to a single well to be drilled at a location 660 feet from the North and East lines (Unit A) of said Section 21, being a standard location for zones spaced on 40 and 160 acres and unorthodox for zones spaced on 320 acres. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said area is located approximately 6.5 miles south by east of Riverside, New Mexico.

CASE 9927: Application of Pacific Enterprises Oil Company (USA) for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the top of the Strawn formation to the base of the Morrow formation underlying the E/2 of Section 32, Township 22 South, Range 27 East, forming a standard 320-acre gas spacing and proration unit for any and all formations and/or pools developed on 320-acre spacing (which presently includes but is not necessarily limited to the Undesignated South Carlsbad-Strawn Gas Pool, Undesignated South Carlsbad-Atoka Gas Pool, and South Carlsbad-Morrow Gas Pool). Said unit is to be dedicated to the existing Mary L. Knobel Well No. 1, located at a standard gas well location 1980 feet from the South and East lines (Unit J), which is presently temporarily abandoned in the South Carlsbad-Morrow Gas Pool. Also to be considered will be the cost of re-entering and/or recompleting said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in re-entering and/or recompleting said well. Said unit is located approximately 2 miles west of Otis, New Mexico.

CASE 9439: (Reopened) (Continued from April 18, 1990, Examiner Hearing.)

In the matter of Case 9439 being reopened pursuant to the provisions of Division Order No. R-8770 which Order promulgated temporary special pool rules and regulations including a provision for 80-acre spacing and proration units, designated well locations, and a poolwide exception to Division Rule No. 111 allowing for directional drilling or well deviations of more than five degrees in any 500-foot interval in the Vada-Devonian Pool, Lea County, New Mexico. Operators in the subject pool may appear and show cause why the temporary rules for the Vada-Devonian Pool promulgated herein should not be rescinded.

CASE 9912: (Continued from April 18, 1990, Examiner Hearing.)

Application of Conoco Inc. for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox oil well location 2310 feet from the North line and 660 feet from the West line (Unit E) of Section 35, Township 16 South, Range 37 East, to test either the Undesignated Casey-Strawn Pool or Undesignated Shipp-Strawn Pool, the S/2 NW/4 of said Section 35 to be dedicated to said well forming a standard 80-acre oil spacing and proration unit for either pool. Said unit is located approximately 5.75 miles north of Humble City, New Mexico.

CASE 9928: Application of Oryx Energy Company for two unorthodox gas well locations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for two unorthodox gas well locations in Section 26, Township 22 South, Range 34 East, to test any and all formations and/or pools from the top of the Wolfcamp formation to the base of the Morrow formation that is being developed on 320-acre spacing (which presently includes but is not necessarily limited to the Undesignated Ojo Chiso-Strawn Gas Pool, Undesignated Antelope Ridge-Atoka Gas Pool, Undesignated Antelope Ridge-Morrow Gas Pool, and the Undesignated Ojo Chiso-Morrow Gas Pool). The E/2 is to be dedicated to the existing Ojo Chiso Federal Well No. 2 located 990 feet from the South line and 2030 feet from the East line (Unit O) and the W/2 to be dedicated to the proposed Ojo Chiso Federal Well No. 3 to be drilled 990 feet from the South and West lines (Unit M). Said Section 26 is located approximately 4 miles north-northwest of the San Simon Sink.

CASE 9894: (Continued from April 4, 1990, Examiner Hearing.)

Application of Richmond Petroleum, Inc. for compulsory pooling, unorthodox coal gas well location, and a non-standard gas spacing and proration unit, San Juan and Rio Arriba Counties, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Basin-Fruitland Coal Gas Pool underlying Lots 1 through 4 and the S/2 N/2 of Irregular Section 11, Township 32 North, Range 6 West, forming a non-standard 232.80-acre gas spacing and proration unit for said pool, said unit to be dedicated to a well to be drilled at a non-standard coal gas well location 1130 feet from the North line and 760 feet from the West line (Unit E) of said Section 11. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said unit is bounded to the north by the State of Colorado for one-half mile of either side of Astronomical Monument No. 8 located on the Colorado/New Mexico stateline.

CASE 9895: (Continued from April 4, 1990, Examiner Hearing.)

Application of Richmond Petroleum, Inc. for compulsory pooling and an unorthodox coal gas well location, San Juan and Rio Arriba Counties, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Basin-Fruitland Coal Gas Pool underlying the S/2 of Irregular Section 11, Township 32 North, Range 6 West, forming a standard 320-acre gas spacing and proration unit for said pool, said unit to be dedicated to a well to be drilled at a non-standard coal gas well location 1800 feet from the South line and 230 feet from the West line (Unit L) of said Section 11. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said unit is located 1/2 mile south of Astronomical Monument No. 8 located on the Colorado/New Mexico stateline.

CASE 9929: Application of Socorro Petroleum Company for a waterflood expansion and to amend Division Order R-2268 and Administrative Orders WFX-585 and WFX-587, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Keel-West Waterflood Project, authorized by Division Order Nos. R-2268, R-2268-A and R-2268-B, by converting its H.E. West "B" Well No. 24, located 660 feet from the North and East lines (Unit A) of Section 10, Township 17 South, Range 31 East, Grayburg-Jackson Pool, from a producing oil well to a water injection well with an increased injection pressure exceeding the Division's standard 0.2 psi/ft. limitation. Also, the applicant seeks authorization to increase the surface injection limitation pressure for 15 certain injection wells in the Keel-West Waterflood Project, as previously set in either Division Administrative Orders WFX-585, WFX-587, or Division Order No. R-2268 (supplemental) to comply with the 0.2 psi/ft. standard, to 450 psi above the formation parting pressure as determined from step-rate test taken within the Project Area which covers all of Sections 3 through 10 of said Township 17 South, Range 31 East. Said project area is located approximately 7 miles west of Maljamar, New Mexico.

CASE 9911: (Continued from April 18, 1990, Examiner Hearing.)

Application of Union Oil Company of California for a highly deviated directional drilling pilot project and unorthodox coal gas well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to initiate a highly deviated directional drilling pilot project in the N/2 of Section 20, Township 27 North, Range 6 West, forming a standard 320-acre gas spacing unit in the Basin-Fruitland Coal Gas Pool by commencing its Rincon Unit Well No. 254 at a standard surface location 1581 feet from the North line and 1929 feet from the East line (Unit G) of said Section 20 and drilling to a true vertical depth of approximately 2250 feet and then commencing a medium radius curve in a westerly direction to encounter the top of the Basin-Fruitland Coal Gas Pool at a true vertical depth of approximately 2920 feet at which point the wellbore will be drilled to the base of the Basin-Fruitland Coal Gas Pool at a true vertical depth of approximately 3040 feet and then to a total depth at a true vertical depth of approximately 3100 feet with a terminus at an unorthodox bottomhole location in the NW/4 of Section 20; however, said wellbore will be no closer than 790 feet from the outer boundary of the spacing or proration unit. This unit is located approximately 10 miles south-southwest of Gobernador, New Mexico.

CASE 9930: (This case will be continued.)

Application of Union Oil Company of California to amend Division Order No. R-6375, as amended, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks to amend Division Order No. R-6375, as amended, which authorized downhole commingling of Basin-Dakota and Largo-Gallup production within the Rincon Unit Well No. 164 located 1840 feet from the South line and 1090 feet from the West line (Unit L) of Section 2, Township 26 North, Range 7 West, by reviewing and re-establishing, if necessary, the allocation of production that was set forth by the provisions of said order. The subject well is located approximately 2 miles north-northeast of the El Paso Natural Gas Company Largo Station.

CASE 9931: Application of Arco Oil & Gas Company for pressure maintenance expansion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Empire-Abo Unit Pressure Maintenance Project, authorized by Division Order No. R-4549, as amended, by converting its Empire Abo Unit "J" Well No. 10, located 2310 feet from the North and West lines (Unit F) of Section 3 and Empire Abo Unit "J" Well No. 13, located 1980 feet from the North line and 660 feet from the West line (Unit E) of Section 2, both in Township 18 South, Range 27 East, Empire-Abo Pool, Empire Abo Unit Area, from producing oil wells to gas injection wells. Both wells are located in an area approximately 4.25 miles south-southeast of Riverside, New Mexico.

CASE 9932: Application of Anadarko Petroleum Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Strawn formation underlying the SE/4 NW/4 (Unit F) of Section 33, Township 16 South, Range 38 East, forming a standard 40-acre oil spacing and proration unit for said formation. Said unit is to be dedicated to a well to be drilled at a standard oil well location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said unit is located approximately 7 miles northeast by north of Humble City, New Mexico.

CASE 9918: (Continued from April 18, 1990, Examiner Hearing.)

Application of Mesa Operating Limited Partnership for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Basin-Fruitland Coal Gas Pool underlying Lots 1 and 2, the S/2 NE/4 and the SE/4 (E/2 equivalent) of Section 2, Township 29 North, Range 9 West, forming a standard 320.60-acre gas spacing and proration unit for said pool, to be dedicated to a well to be drilled at a standard coal gas well location in the NE/4 of said Section 2. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said unit is located approximately 1.5 miles east of Turley, New Mexico.

CASE 9919: (Continued from April 18, 1990, Examiner Hearing.)

Application of Mesa Operating Limited Partnership for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Basin-Fruitland Coal Gas Pool underlying Lots 1, 2, 7, 8, 9, 10, 15 and 16 (E/2 equivalent) of Section 33, Township 30 North, Range 10 West, forming a standard 317.04-acre gas spacing and proration unit for said pool, to be dedicated to a well to be drilled at a standard coal gas well location in the NE/4 of said Section 33. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said unit is located approximately 4.5 miles northwest of Blanco, New Mexico.

CASE 9933: Application of Amerind Oil Company Limited Partnership for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Undesignated Shipp-Strawn Pool underlying the W/2 SE/4 of Section 5, Township 17 South, Range 37 East, forming a standard 80-acre oil spacing and proration unit for said pool, to be dedicated to a well to be drilled at a standard oil well location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said unit is located approximately 5.5 miles northwest of Humble City, New Mexico.

CASE 9934: Application of Amerind Oil Company Limited Partnership for compulsory pooling and an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Undesignated Shipp-Strawn Pool underlying the E/2 SW/4 of Section 35, Township 16 South, Range 37 East, forming a standard 80-acre oil spacing and proration unit for said pool. Said unit is to be dedicated to a well to be drilled at an unorthodox oil well location 1300 feet from the South line and 1750 feet from the West line (Unit N) of said Section 35. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well. Said unit is located approximately 5.5 miles north by west of Humble City, New Mexico.

CASE 9907: (Readvertised)

Application of Enron Oil & Gas Company for compulsory pooling and an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface to the base of the Atoka formation underlying the following described acreage in Section 1, Township 24 South, Range 28 East, and in the following described manner: Lots 1, 2, 3, and 4 and the S/2 N/2 (N/2 equivalent) to form a 319.36-acre gas spacing and proration unit for any and all formations and/or pools developed on 320-acre spacing within said vertical extent (which presently includes but is not necessarily limited to either the Undesignated South Culebra Bluff-Atoka Gas Pool or Undesignated Malaga-Atoka Gas Pool); Lots 3 and 4 and the S/2 NW/4 (NW/4 equivalent) to form a 159.52-acre gas spacing and proration unit for any and all formations developed on 160-acre spacing within said vertical extent; Lot 3 and the SE/4 NW/4 (E/2 NW/4 equivalent) to form a 79.80-acre oil spacing and proration unit for the Undesignated South Culebra Bluff-Bone Spring Pool which is developed on 80-acre spacing; and Lot 3 (NE/4 NW/4 equivalent) to form a 39.80-acre oil spacing and proration unit for any and all formations and/or pools developed on statewide 40-acre oil spacing (which presently includes but is not necessarily limited to either the Undesignated Malaga-Delaware Pool or Undesignated North Malaga-Delaware Pool). Said units are to be dedicated to a single well to be drilled 660 feet from the North line and 1680 feet from the West line (Unit L) of said Section 1, which is a standard location for zones spaced on 160 or 40

CASE 9935: Application of Harvey E. Yates Company for a horizontal directional drilling pilot project and special operating rules therefor, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to initiate a horizontal directional drilling pilot project in the S/2 of Section 26, Township 13 South, Range 35 East,, forming a standard 320-acre gas spacing and proration unit in the Northwest Austin-Mississippian Gas Pool. The applicant proposes to utilize its existing Duncan Unit Well No. 3 located 660 feet from the South line and 1980 feet from the West line (Unit N) of said Section 26 by kicking-off from vertical in a northeasterly direction, build angle to approximately 90 degrees, and drill horizontally in the Northwest Austin-Mississippian Gas Pool for approximately 1000 to 1200 feet. Applicant further requests that special operating provisions be established for said project area including the designation of a prescribed area limiting the horizontal extent of the wellbore such that it can be no closer than 1980 feet from the end boundaries nor closer than 660 feet from the side boundaries of said spacing unit. Said project area is located approximately 4 miles west-northwest of McDonald, New Mexico.

CASE 9898: (Continued from April 4, 1990, Examiner Hearing.)

Application of Doyle Hartman for compulsory pooling, a non-standard gas proration unit and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Eumont Gas Pool underlying the SE/4 SW/4 and SE/4 of Section 5 and the NE/4 NE/4 and NE/4 NW/4 of Section 8, all in Township 20 South, Range 37 East, forming a non-standard 280-acre gas spacing and proration unit for said pool. The applicant proposes to dedicate all production from the Eumont Gas Pool to the existing Britt-Laughlin Com. Well No. 5 (formerly the Oxy USA, Inc. Laughlin "8" Well No. 5) located 330 feet from the South line and 2310 feet from the East line (Unit O) of said Section 5 and to the existing Britt-Laughlin Com. Well No. 1 (formerly the Britt "B-8" Well No. 1) located 660 feet from the North line and 1980 feet from the West line (Unit C) of said Section 8 and to a third well to be drilled at an undetermined location in the SE/4 of said Section 5. Applicant further seeks to be designated operator of the non-standard gas proration unit so created and be entitled to recover out of the production therefrom his costs of drilling, completing and equipping a new infill well, plus a 200% risk factor for drilling, completing and equipping such new infill well, and an equitable and proper percentage of the value of the existing wellbores of applicant's Britt-Laughlin Com. Well Nos. 1 and 5, and all costs of supervision and operation of such non-standard gas proration unit, and that such order also provide for any other relief which may be deemed equitable and proper. The subject area is located approximately 2.25 miles south of Monument, New Mexico.

CASE 9936: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating, abolishing, contracting, and extending certain pools in Chaves and Eddy Counties, New Mexico.

- (a) CREATE a new pool in Chaves County, New Mexico, classified as an oil pool for San Andres production and designated as the South Acme-San Andres Pool. The discovery well is the Yates Petroleum Corporation Cactus Flower State Unit Well No. 2 in Unit F of Section 19, Township 8 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 8 SOUTH, RANGE 27 EAST, NMPM

Section 19: E/2

Section 30: NW/4

- (b) CREATE a new pool in Chaves County, New Mexico, classified as a gas pool for Atoka production and designated as the Otterback Ranch-Atoka Gas Pool. The discovery well is the Foran Oil Company State ET Well No. 1 located in Unit C of Section 36, Township 15 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 15 SOUTH, RANGE 27 EAST, NMPM

Section 36: W/2

- (c) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Bone Spring production and designated as the Pierce Crossing-Bone Spring Pool. The discovery well is the Quinoco Petroleum Inc. Queen Lake 20 Fed. Well No. 1 located in Unit E of Section 20, Township 24 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 29 EAST, NMPM

Section 20: NW/4

- (d) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Wolfcamp production and designated as the Russell-Wolfcamp Gas Pool. The discovery well is the Petroleum Corporation of Delaware Superior Fed. Well No. 5 located in Unit K of Section 5, Township 20 South, Range 29 East, NMPM. Said pool would comprise:

TOWNSHIP 20 SOUTH, RANGE 29 EAST, NMPM

Section 5: W/2

- (e) CREATE a new pool in Eddy County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the West Scanlon Draw-Wolfcamp Pool. The discovery well is the Pennzoil Exploration Winchester Fed. Well No. 1 located in Unit H of Section 4, Township 20 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 20 SOUTH, RANGE 28 EAST, NMPM

Section 4: NE/4

- (f) ABOLISH the Rabbit Flats-PrePermian Gas Pool in Chaves County, New Mexico, consisting of the following described acreage:

TOWNSHIP 10 SOUTH, RANGE 26 EAST, NMPM

Section 36: W/2

- (g) CONTRACT the Comanche Springs-PrePermian Gas Pool in Chaves County, New Mexico, by the deletion of the following described acreage:
TOWNSHIP 10 SOUTH, RANGE 27 EAST, NMPM
Section 36: W/2
- (h) EXTEND the South Carlsbad-Strawn Gas Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 22 SOUTH, RANGE 27 EAST, NMPM
Section 32: All
Section 33: S/2
- (i) EXTEND the Comanche Springs-PrePermian Gas Pool in Chaves County, New Mexico, to include therein:
TOWNSHIP 10 SOUTH, RANGE 26 EAST, NMPM
Section 25: S/2
- (j) EXTEND the North Dagger Draw-Upper Pennsylvanian Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 19 SOUTH, RANGE 24 EAST, NMPM
Section 24: W/2
TOWNSHIP 20, SOUTH, RANGE 24 EAST, NMPM
Section 1: SW/4
Section 2: N/2
- (k) EXTEND the South Dagger Draw-Upper Pennsylvanian Associated Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 20 SOUTH, RANGE 24 EAST, NMPM
Section 11: S/2
Section 14: All
- (l) EXTEND the Diamond Mound-Morrow Gas Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 16 SOUTH, RANGE 28 EAST, NMPM
Section 6: E/2
- (m) EXTEND the Grayburg-Morrow Gas Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 17 SOUTH, RANGE 29 EAST, NMPM
Section 14: W/2
- (n) EXTEND the La Huerta-Delaware Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 21 SOUTH, RANGE 27 EAST, NMPM
Section 9: S/2
- (o) EXTEND the East Loving-Delaware Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM
Section 14: NW/4
- (p) EXTEND the North Loving-Atoka Gas Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM
Section 19: E/2
Section 30: E/2
- (q) EXTEND the South Palma Mesa-Pennsylvanian Gas Pool in Chaves County, New Mexico, to include therein:
TOWNSHIP 8 SOUTH, RANGE 27 EAST, NMPM
Section 26: All
- (r) EXTEND the Parkway-Bone Spring Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM
Section 34: NW/4
- (s) EXTEND the Parkway-Delaware Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM
Section 26: SW/4
- (t) EXTEND the Salt Draw-Atoka Gas Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 24 SOUTH, RANGE 28 EAST, NMPM
Section 28: E/2

- (u) EXTEND the South Sand Dunes-Lower Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 24 SOUTH, RANGE 31 EAST, NMPM
Section 15: W/2
Section 16: E/2
- (v) EXTEND the Shugart Yates-Seven Rivers-Queen-Grayburg Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 7: SE/4
- (w) EXTEND the North Shugart-Bone Spring Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 18: NE/4
- (x) EXTEND the Turkey Track Seven Rivers-Queen-Grayburg-San Andres Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM
Section 11: SW/4
- (y) EXTEND the Winchester-Bone Spring Pool in Eddy County, New Mexico, to include therein:
TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM
Section 32: W/2

NOTICE

NOTICE

NOTICE

Comments in Case 9018 scheduled to be heard before the Oil Conservation Commission on May 24, 1990, will be accepted by the Commission until the time of the hearing. Testimony and oral or written comments may be presented at the hearing. Said case 9018 concerns the amendment of Rule 11(b) of Order No. R-8170-A relating to overproduction limits.

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. 9929
Order No. R-2268-C

APPLICATION OF SOCORRO PETROLEUM
COMPANY FOR WATERFLOOD EXPANSION
AND TO AMEND DIVISION ORDER NO.
R-2268 AND ADMINISTRATIVE ORDERS
WFX-585 AND WFX-587, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on May 2, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 14th day of June, 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) The applicant, Socorro Petroleum Company, is the current operator of the Keel-West Waterflood Project which was originally approved by Division Order Nos. R-2268, R-2268-A and R-2268-B, and which encompasses, in part, Sections 3, 4, 9 and 10, Township 17 South, Range 31 East, NMPM, Grayburg-Jackson Pool, Eddy County, New Mexico.

CASE NO. 9929
Order No. R-2268-C
Page -2-

(3) The applicant seeks authority to expand said Keel-West Waterflood Project by converting its H. E. West "B" Well No. 24, located 660 feet from the North and East lines (Unit A) of Section 10, Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico, from a producing oil well to a water injection well.

(4) By Order Nos. R-2268 (supplemental), WFX-585 and WFX-587, entered, respectively, October 7, 1989, August 31, 1989, and September 26, 1989, the Division authorized the expansion of said Keel-West Waterflood Project by the conversion of fifteen wells located in said Sections 3, 4, 9 and 10 to water injection wells. These orders further limited the surface injection pressure on said wells to 0.2 psi per foot of depth to the uppermost perforations or approximately 670 psi.

(5) The applicant also seeks authority, in the immediate case, to increase the surface injection pressure on said fifteen injection wells to approximately 450 psi above formation parting pressure as determined from step rate tests conducted on certain injection wells located within the project area. The applicant further seeks to increase the surface injection pressure on its proposed H. E. West "B" Well No. 24, as described above, to 450 psi above formation parting pressure.

(6) At the time of the hearing, the applicant requested that the portion of this case requesting the authority to convert its H. E. West "B" Well No. 24 to an injection well be dismissed inasmuch as a formal application to convert said well has been filed with the Division for administrative approval.

(7) The subject waterflood project was initiated in June, 1962, at which time the Division did not restrict the surface injection pressure on injection wells.

CASE NO. 9929
Order No. R-2268-C
Page -3-

(8) From inception to August, 1986, the former operator of the Keel-West Waterflood Project utilized some ten injection wells previously approved by said Order Nos. R-2268, R-2268-A, and R-2268-B, and located within said Sections 3, 4, 9 and 10, to inject water into the Grayburg and San Andres formations at surface injection pressures as high as 2500 psi.

(9) Decline curve analysis indicates that if sufficient volumes of water are injected into the Grayburg-Jackson Pool in this area, an estimated additional 1.48 million barrels of oil will be recovered.

(10) The evidence presented by the applicant indicates that sufficient volumes of water cannot be injected into the Grayburg-Jackson Pool by those fifteen subsequently approved injection wells at their currently authorized injection pressures.

(11) The applicant presented test data obtained from step rate injection tests conducted on nine of the fifteen subject injection wells which indicates that the average fracture pressure is approximately 1711 psi.

(12) The evidence presented further indicates that injection volumes limited to the formation fracture pressure as established by said step rate tests are not sufficient to recover the additional 1.48 million barrels of oil.

(13) The applicant, through its engineering evidence and testimony, has satisfactorily demonstrated that injection through the fifteen subject injection wells at a pressure of approximately 450 psi above formation fracture pressure is necessary in order to efficiently and effectively waterflood the area and will enable the applicant to recover the additional oil reserves within the Grayburg-Jackson Pool, thereby preventing waste.

(14) The applicant has further demonstrated that injection into the Grayburg and San Andres formations at said injection pressures should not result in the migration of injected water from the Grayburg-Jackson Pool.

(15) According to the evidence presented, there are no fresh water aquifers located above or below the Grayburg-Jackson Pool in this area.

CASE NO. 9929
Order No. R-2268-C
Page -4-

(16) Injection into the fifteen subject injection wells at a surface injection pressure of approximately 450 psi above formation fracture pressure will allow the recovery of additional oil reserves within the Grayburg-Jackson Pool, thereby preventing waste, will not endanger any fresh water aquifers, and should therefore be approved.

(17) The Division Director should have the authority to reduce or rescind said injection pressures should it become apparent that the injected fluid is not being adequately confined to the Grayburg-Jackson Pool.

(18) Inasmuch as the injection pressures authorized by this order are based upon the current formation fracture pressure, which, through continued injection, may increase, the Division Director should also have the authority to administratively increase the surface injection pressures on the fifteen subject injection wells, provided, however, that current step rate tests are accompanied by such request.

(19) Prior to authorizing the requested surface injection pressure for the proposed H. E. West "B" Well No. 24, the applicant should be required to demonstrate that said well has been approved for injection, and should further be required to conduct and submit a step rate test on said well.

IT IS THEREFORE ORDERED THAT:

(1) Division Order Nos. R-2268 (supplemental), WFX-585 and WFX-587 are hereby amended authorizing Socorro Petroleum Company to inject water into fifteen previously approved injection wells located within the Keel-West Waterflood Project in Sections 3, 4, 9 and 10, Township 17 South, Range 31 East, NMPM, Grayburg-Jackson Pool, Eddy County, New Mexico, at a surface injection pressure of approximately 450 psi above formation fracture pressure as shown on Exhibit "A" attached hereto.

(2) The Division Director shall have the authority to administratively approve subsequent pressure increases on said wells provided, however, that current step rate tests are accompanied by such requests.

CASE NO. 9929
 Order No. R-2268-C
 Page -5-

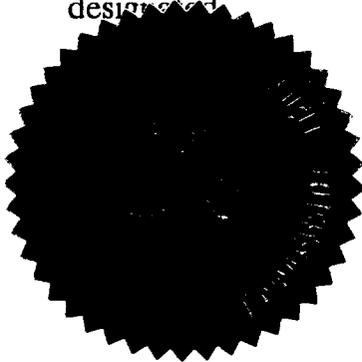
(3) The Division Director shall also have the authority to reduce or rescind said injection pressures should it become apparent that the injected fluid is not being adequately confined to the Grayburg-Jackson Pool.

(4) The portion of this case requesting the expansion of the Keel West Waterflood Project by the conversion of the H. E. West "B" Well No. 24 located 660 feet from the North and East lines (Unit A) of Section 10, Township 17 South, Range 31 East, NMPM, Eddy County, New Mexico, to a water injection well is hereby dismissed.

(5) Prior to authorizing the requested surface injection pressure for said H. E. West "B" Well No. 24, the applicant shall be required to demonstrate that said well has been approved for injection, and shall further be required to conduct and submit a step rate injection test on said well.

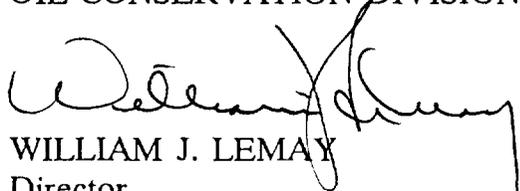
(6) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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



S E A L

STATE OF NEW MEXICO
 OIL CONSERVATION DIVISION


 WILLIAM J. LEMAY
 Director

CASE NO. 9929
 Order No. R-2268-C
 Page -6-

EXHIBIT "A"
 DIVISION ORDER NO. R-2268-C

<u>WELL & LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
H.E. West "A" No. 8 Unit E, Section 3, T-17S, R-31E	2407 PSIG
H.E. West "A" No. 9 Unit I, Section 4, T-17S, R-31E	2250 PSIG
H.E. West "A" No. 11 Unit G, Section 3, T-17S, R-31E	2160 PSIG
H.E. West "A" No. 14 Unit O, Section 4, T-17S, R-31E	2160 PSIG
H.E. West "A" No. 15 Unit A, Section 3, T-17S, R-31E	2160 PSIG
H.E. West "B" No. 12 Unit G, Section 9, T-17S, R-31E	1872 PSIG
H.E. West "B" No. 13 Unit E, Section 10, T-17S, R-31E	2027 PSIG
H.E. West "B" No. 15 Unit G, Section 10, T-17S, R-31E	2236 PSIG
H.E. West "B" No. 16 Unit M, Section 3, T-17S, R-31E	2160 PSIG
H.E. West "B" No. 18 Unit O, Section 3, T-17S, R-31E	2000 PSIG

CASE NO. 9929
Order No. R-2268-C
Page -7-

<u>WELL & LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
H.E. West "B" No. 20 Unit O, Section 10, T-17S, R-31E	2160 PSIG
H.E. West "B" No. 21 Unit M, Section 10, T-17S, R-31E	2075 PSIG
H.E. West "B" No. 22Y Unit O, Section 9, T-17S, R-31E	2118 PSIG
H.E. West "B" No. 34 Unit I, Section 10, T-17S, R-31E	2160 PSIG
H.E. West "B" No. 43 Unit M, Section 9, T-17S, R-31E	2470 PSIG

SUMMARY OF ATLAS WIRELINE SERVICES PRISM LOGS RUN AFTER
TAGGING FRAC MATERIALS W/RADIOACTIVE ISOTOPES

LEASE/WELL NO.	PRISM LOG DATE	INDICATED AREA OF TREATMENT FORMATION IN WHICH FRAC INDICATED TO TERMINATE	REMARKS
West "B" #32	9/14/88	10' Above top perf-in San Andres Vacuum 4' Below bottom perf-in San Andres Jackson	Deeper of 2 fracs Upper not tagged
Keel "B" #40	10/03/88	12' Above top perf-in Grayburg Squarelake 14' Below bottom perf-in San Andres Lovington	No other zones tagged
West "B" #36	11/04/88	2' Above top perf-in San Andres Vacuum 4' Below bottom perf-in San Andres Jackson	Lowest of 3 fracs 2nd & 3rd not tagged
West "A" #14	11/21/88	2' Below top perf-in San Andres Jackson 10' Below bottom perf-in San Andres Jackson	No other zone tagged
Keel "B" #41	11/30/88	15' Above top perf-in Grayburg Metex 10' Below bottom perf-in San Andres Jackson	
West "B" #37	12/21/88	50' Above top perf-in San Andres Vacuum 10' Below bottom perf-in San Andres Jackson	Middle of 3 fracs 1st & Last not tagged
West "B" #38	12/22/88	15' Above top perf-in Grayburg Metex 4' Above bottom perf-in San Andres Jackson	
West "B" #39	2/03/89	46' Above top perf-in Grayburg Loco Hills 4' Above bottom perf-in Grayburg Premier	Upper of 3 fracs Lower Fracs not tagged
West "B" #41	2/21/89	14' Above top perf-in Grayburg Loco Hills 47' Above bottom perf-in San Andres Jackson	
West "B" #42	3/11/89	8' Below top perf-in Grayburg Metex 8' Below bottom perf-in San Andres Jackson	
Keel "B" #45	4/06/89	2' Above top perf-in Grayburg Metex 24' Below bottom perf-in San Andres Jackson	

BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION
Societal
PETROLEUM EXHIBIT NO. 8
CASE NO. 9924

SUMMARY OF TREATING INFORMATION FOR THOSE WELLS
 IN WHICH FRAC MATERIALS WERE TAGGED
 WITH RADIOACTIVE ISOTOPES

LEASE	WELL NO.	SIZE OF TBG. OR CSG. USED IN TREATING-INCH	TREATING RATE BPM	SURF. TREATING PRESSURE Psig	VOLUME OF TREATING FLUID-gal.	TYPE OF TREATING FLUID	AMOUNT OF FRAC SAND lb.
West	B-32	5-1/2	52	3550	60,000	30# x-link gel	120,000
Keel	B-40	2-7/8	18	5000	60,000	30# gel	120,000
West	B-36	5-1/2	22	4150	57,000	30# x-link gel	55,000
West	A-14	5-1/2	47	3600	50,000	30# x-link gel	136,500
Keel	B-41	5-1/2	54	2800	43,000	30# x-link gel	80,000
West	B-37	5-1/2	32	4200	50,000	30# linear gel	110,000
West	B-38	5-1/2	50	3300	60,000	30# x-link gel	130,000
West	B-39	5-1/2	62	3700	60,000	30# x-link gel	110,000
West	B-41	5-1/2	58	3900	70,000	30# x-link gel	150,000
West	B-42	5-1/2	57	3850	60,000	30# x-link gel	130,000
Keel	B-45	5-1/2	60	3300	60,000	30# x-link gel	130,000

BEFORE EXAMINER CATANACH
 OIL CONSERVATION DIVISION
 S. C. R. A. O.
 PETROLEUM EXHIBIT NO. 7
 CASE NO. 9729

SOCORRO PETROLEUM COMPANY
 INCREASED INJECTION PRESSURE
 KEEL WEST WATERFLOOD PROJECT
 PHASE 1 AREA
 EDDY COUNTY, NEW MEXICO

COMPLETION INTERVALS FOR FRACTURED WELLS WITH PRISM LOGS

SECTION	LEASE	WELL	COMPLETION INTERVALS	
			FOOTAGE, FEET	FORMATIONS
10	WEST B	32	3314-3754	METEX - LOVINGTON
9	WEST B	36	3199-3821	LOCO HILLS - JACKSON
4	WEST A	14	3214-3827	LOCO HILLS - JACKSON
3	WEST B	37	3409-3881	METEX - JACKSON
10	WEST B	38	3361-3910	METEX - JACKSON
9	WEST B	39	3254-3824	METEX - JACKSON
10	WEST B	41	3301-3843	LOCO HILLS - JACKSON
10	WEST B	42	3396-3924	METEX - JACKSON

WILLIAMSON PETROLEUM CONSULTANTS, INC.
 310 WEST WALL, SUITE 1200 MIDLAND, TEXAS 79701
 ROY C. WILLIAMSON, JR., P.E. APRIL 30, 1990

BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION
Socorro PETROLEUM EXHIBIT NO. <u>9</u>
CASE NO. <u>9929</u>