



PHILLIPS PETROLEUM COMPANY

4001 PENBROOK
ODESSA, TEXAS 79762

EXPLORATION AND PRODUCTION
Permian Profit Center

Lease 1111111
RECORDS COPY
ODINSA CENTRAL FILES

November 13, 1997

DEC 17 2001

Re: Request for Certificate of
Qualification for an Enhanced Oil
Recovery Project, East Vacuum
Grayburg-San Andres Unit
Vacuum Grayburg-San Andres Pool
Lea County, New Mexico

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87504

Attention Mr. Michael Stogner

Gentlemen,

Phillips Petroleum Company respectfully requests to amend the certificate of qualification to include the lease line expansion project at the East Vacuum Grayburg San Andres Unit. Attached for you reference is data required for this amendment. Please contact Eric Hollar at (915) 368-1475 or myself at (915) 368-1488 if you have any questions.

Yours very truly,

L. M. Sanders
Senior Regulatory Analyst

**Application for a Certificate of Qualification for the lease line expansion project at the East Vacuum
Grayburg San Andres Unit**

October 20, 1997

The following data is provided in accordance with procedure requirements for a Certificate of Qualification for the expansion of an Enhanced Oil Recovery Project. Data provided is for a lease line expansion project, East Vacuum Grayburg San Andres Unit, Vacuum Grayburg San Andres Pool, Lea County, New Mexico.

- a. Operators name and address: Phillips Petroleum Company
4001 Penbrook Street
Odessa, Texas 79762
- b. Description of the project area:
 1. Plat outlining the project area. See Attachment 1, Plat of Existing and Proposed expansion to the East Vacuum Grayburg San Andres unit Enhanced Oil Recovery Project.
 2. Description of the project area.

The proposed expansion to the current CO₂ flood project area is approximately defined as follows: the NW/4, SE/4 equivalent, the W/2, NE/4, SE/4 equivalent, the NE/4, NE/4, SE/4 equivalent, the NW/4, SE/4, SE/4 equivalent, and the S/2, SE/4, SE/4 equivalent of Section 31, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico; and the SW/4, SW/4, NW/4 equivalent, the NW/4, NW/4, SW/4 equivalent, and the SW/4, SW/4, SW/4 equivalent of Section 32, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico; and the NW/4, NW/4, NW/4 equivalent of Section 5, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 156 acres, more or less.
 3. Total acres. The current project covers approximately 3151 acres, and the proposed lease line expansion to this project covers approximately 156 acres.
 4. Name of subject pool and formation. Vacuum Grayburg San Andres Pool
San Andres Formation
- c. Status of operations in the project area:
 1. The project area is currently unitized under the name East Vacuum Grayburg San Andres Unit, having been approved under Division Order R-5871 on November 27, 1978.
- d. Method of recovery to be used:
 1. Fluids to be injected. Phillips Petroleum Company will inject pure carbon dioxide (CO₂) or a mixture of natural gas and CO₂ from the Ryan-Holmes liquid recovery plant in operation at the East Vacuum Grayburg San Andres unit. Produced water will also be used as an injectant in a water-alternating-gas (WAG) cycle.

2. Division Order approving the project. This project was approved by the Division in order number R-5897 dated December 1, 1981.

e. Description of the project:

1. A list of producing wells. See Attachment 2 for a list of producing wells in the current project area and a list of producing wells in the expanded project area.
2. A list of injection wells. See Attachment 3 for a list of injection wells in the current project area and a list of injection wells in the expanded project area.
3. Capital cost of additional facilities.

Total capital cost of the project is as follows:

Drill and complete four lease line producing wells:	\$ 736,700
Drill and complete four lease line injection wells:	630,925
Convert seven existing lease line wells to CO2 WAG service:	352,597
Construct a production tank battery for lease line fluids:	78,500
Total Capital Cost:	\$ 1,798,722

Note: Costs shown are 50% of the entire lease line project. The additional 50% will be paid for by the Central Vacuum Unit, operated by Texaco. The cost of the four lease line injection wells includes coring 500 feet of pay zone in one well.

4. Total project cost.

Total project costs include initial capital expenditures as well as the cost of injected fluids and over a period of eleven years as detailed in the forecasts provided. The project will also require routine maintenance, but these costs are not included in the following detail:

Initial capital costs:	\$ 1,798,722
Cost of injected CO2:	8,059,200
Cost of injected water:	1,034,775
Total Project Cost:	\$ 10,892,697

Note: Costs shown are 50% of the entire lease line project. The additional 50% will be paid for by the Central Vacuum Unit, operated by Texaco. Costs shown are based on a flat rate per MCF CO2 and barrel of water and are not discounted with time.

5. The estimated total value of the additional production that will be recovered as a result of this project:

The following is the incremental oil production forecast for the lease line project area:

(Table begins on next page.)

5. Continued.

Year	Oil Production (MBOPY)	NGL Production (MBOPY)
1998	61.92	1.10
1999	93.94	3.97
2000	117.67	6.53
2001	136.75	8.64
2002	150.08	10.11
2003	157.06	9.78
2004	157.49	10.75
2005	151.17	10.78
2006	137.91	11.75
2007	117.59	10.42
2008	87.02	8.57
Totals	1368.61	92.41

Production figures shown are for EVGSAU only. The EVGSAU portion is computed by adding 50% of the production from the lease line wells, and 100% of the production from interior EVGSAU wells responding to lease line injection. The additional 50% of the production from the lease line wells will be credited to the Central Vacuum Unit.

6. Anticipated date for commencement of injection:

The anticipated date for commencement of injection is February 1, 1998.

7. Type of fluid to be injected and the anticipated volumes:

See item d.1 above for a description of the fluids to be injected. The forecasted injection volumes are as follows:

Year	CO2 Injection (MCFD)	Water Injection (BWPDP)
1998	12,000	0
1999	6,000	6,000
2000	6,000	6,000
2001	6,000	6,000
2002	6,000	6,000
2003	6,000	6,000
2004	6,000	6,000
2005	6,000	6,000
2006	6,000	6,000
2007	6,000	6,000
2008	3,000	3,000

Volumes shown are 100% of the projected project volumes. The Central Vacuum Unit will be billed for 50% of these volumes.

8. If application is made for an expansion of an existing project, explain what changes in technology will be used or what additional geographic area will be added to the project area:

8. Continued.

This expansion is entirely geographic in nature. The expanded area is defined in section b.2 above. See Attachment 1 for a detail of the current project and the proposed lease line expansion.

- f. Production data: Provide graphs, charts and other supporting data to show the production history and production forecast of oil, gas, casinghead gas and water from the project area.

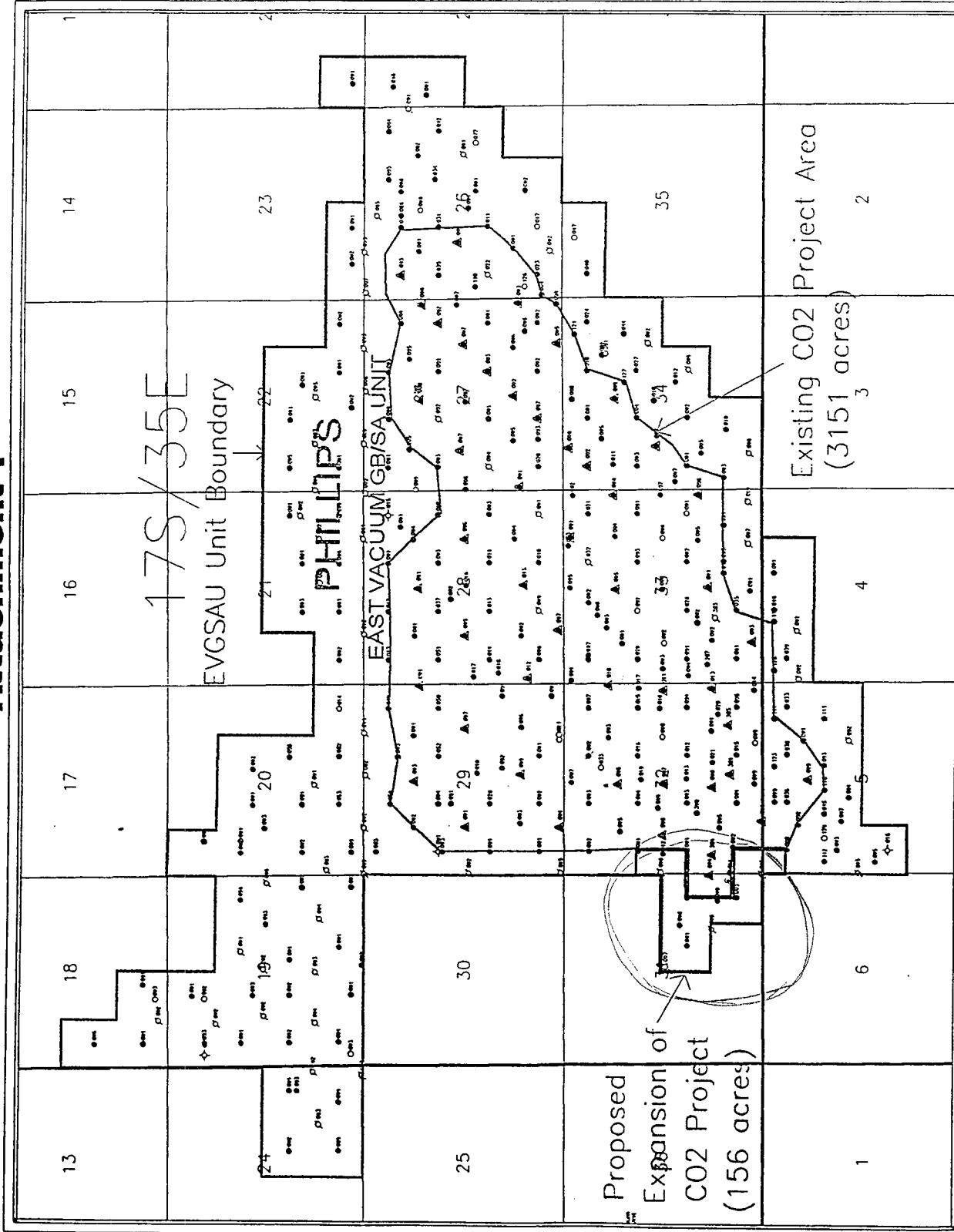
Attachment 4: Historical production plot (oil, gas, water) for the current East Vacuum Grayburg San Andres Uni project area.

Attachment 5: Historical production plot (oil, gas, water) for the wells currently in the lease line project expansion area.

Attachment 6: Forecast production plot (oil, gas) for the lease line expansion project.

Attachment 7: Map of the proposed lease line development.

Attachment 1



LEGEND

- EVGSAU Unit Boundary
- C02 Project Area
- Proposed C02 Expansion

Scale 1:48000.

1000. 0. 1000. 2000. 3000. 4000. 5000. feet

Phillips Petroleum

Attachment 1

East Vacuum Grayburg San Andres Unit

Existing and Proposed C02 Expansion

DATE	BY
01/28	01/28

Attachment 2

Current CO₂ Project Area Producing Wells:

Tract	Well	Tract	Well	Tract	Well
0449	115	0449	128	0524	002
0524	008	0524	036	0524	098
0524	118	0546	001	0546	038
0546	093	0546	119	0546	123
2622	001	2622	030	2622	031
2622	041	2631	110	2648	001
2648	004	2648	023	2658	011
2717	001	2717	002	2717	006
2720	001	2720	003	2720	004
2720	005	2720	007	2721	003
2721	020	2738	003	2738	004
2738	005	2739	001	2739	002
2739	005	2739	006	2739	007
2739	008	2800	016	2801	002
2801	003	2801	004	2801	008
2801	010	2801	011	2801	013
2801	014	2801	017	2801	018
2819	001	2819	002	2819	003
2819	004	2864	001	2864	012
2864	013	2864	051	2865	002
2865	037	2913	001	2913	002
2913	003	2913	004	2913	006
2913	010	2923	001	2923	052
2923	054	2941	026	2944	003
2944	049	2947	050	2957	001
2962	003	2963	001	2963	002
2963	003	2980	001	2980	002
2980	004	3127	002	3127	003
3127	009	3202	001	3202	003
3202	004	3202	005	3202	006
3202	007	3202	012	3202	014
3202	015	3202	016	3202	017
3202	018	3202	019	3202	021
3220	020	3229	001	3229	002
3229	003	3229	004	3229	005
3229	009	3229	010	3229	012
3229	013	3229	041	3229	390
3236	001	3236	002	3236	003
3236	004	3236	005	3236	007
3236	009	3308	001	3308	002
3308	003	3308	004	3308	005
3308	006	3308	007	3315	002
3315	003	3315	004	3315	005
3315	011	3328	001	3328	002
3332	002	3332	003	3332	021
3333	001	3333	003	3333	004
3333	007	3333	008	3345	035
3366	001	3366	029	3373	002
3373	028	3374	001	3374	003
3374	004	3374	387	3440	001

Attachment 2

Current CO₂ Project Area Producing Wells: (continued)

Tract	Well	Tract	Well	Tract	Well
3440	003	3440	007	3456	001
3456	003	3456	004	3456	005
3456	008	3456	011	3467	018
3467	121	3467	127		

Expanded Area Producing Wells:

Tract	Well	Tract	Well	Tract	Well
0524	008	3127	001	3127	002
3127	003	3127	008	3127	009
3229	001	3229	002	3229	010
3229	011	3229	012	3236	001

Attachment 3

Current CO₂ Project Area Injection Wells:

Tract	Well	Tract	Well	Tract	Well
2622	043	2720	002	2721	007
2739	003	3456	002	2717	007
2738	007	2801	005	2801	006
2801	007	2941	001	3456	006
2622	004	2913	007	2963	004
3229	006	3332	001	3328	003
3456	007	2717	005	3229	007
3229	008	3202	011	3315	008
3236	006	3333	005	3333	006
3373	001	3456	009	2717	003
2721	001	2721	002	2801	012
2801	015	3202	013	3127	004
0524	006	2913	009	2720	006
2738	008	2865	001	2947	001
2980	003	3202	010	0524	001
3202	384	3202	385	3229	386

Expanded CO₂ Project Area Injection Wells:

Tract	Well	Tract	Well	Tract	Well
3127	005 ✓	3127	006 ✓	3127	007 ✓
3236	008 ✓				

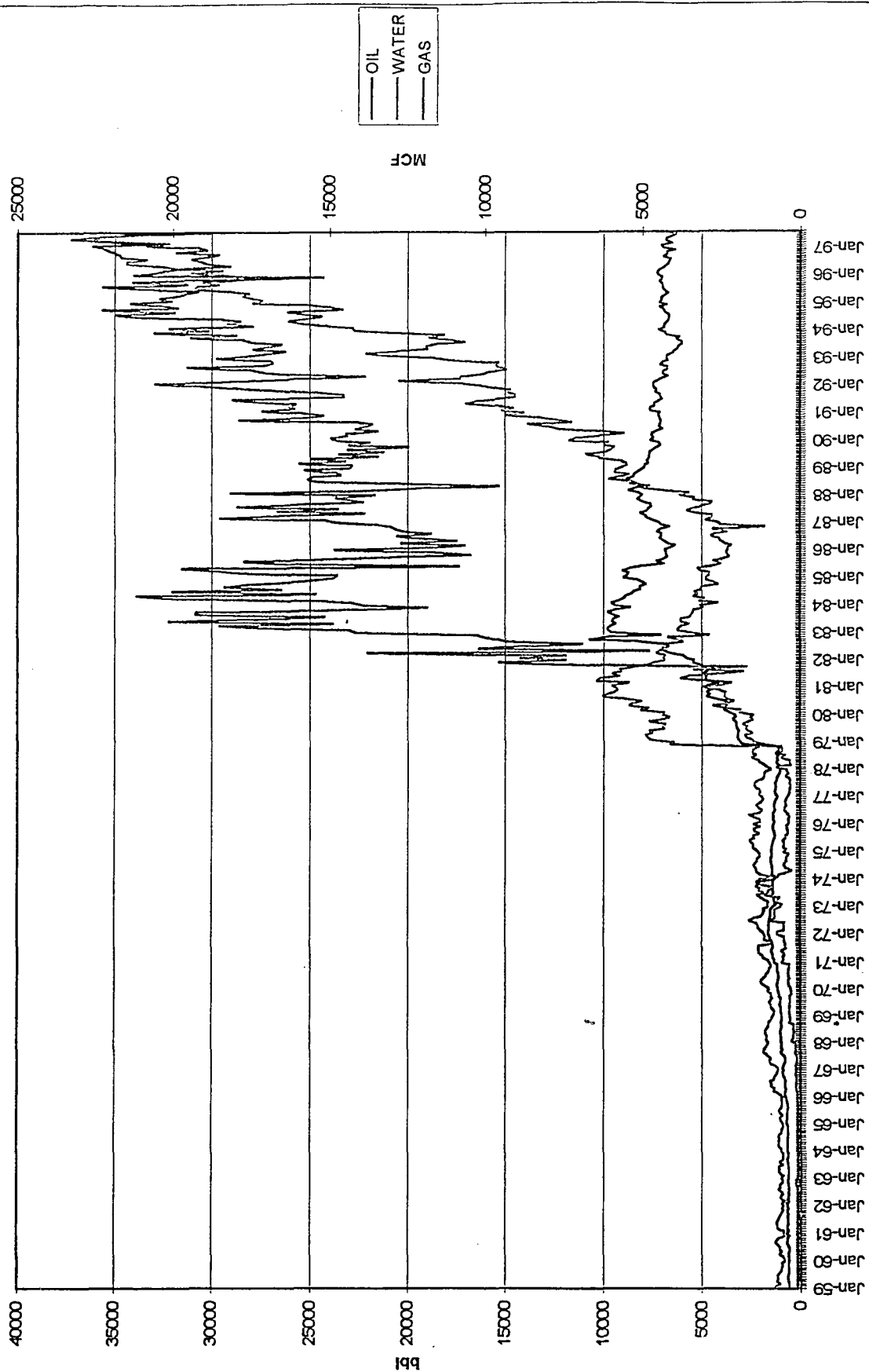
Expanded CO₂ Project Area New Injection Wells:

Tract	Well	Tract	Well	Tract	Well
3127	395	3127	396	3127	398
3127	400 399				

← revised #
CHH
10/25/01

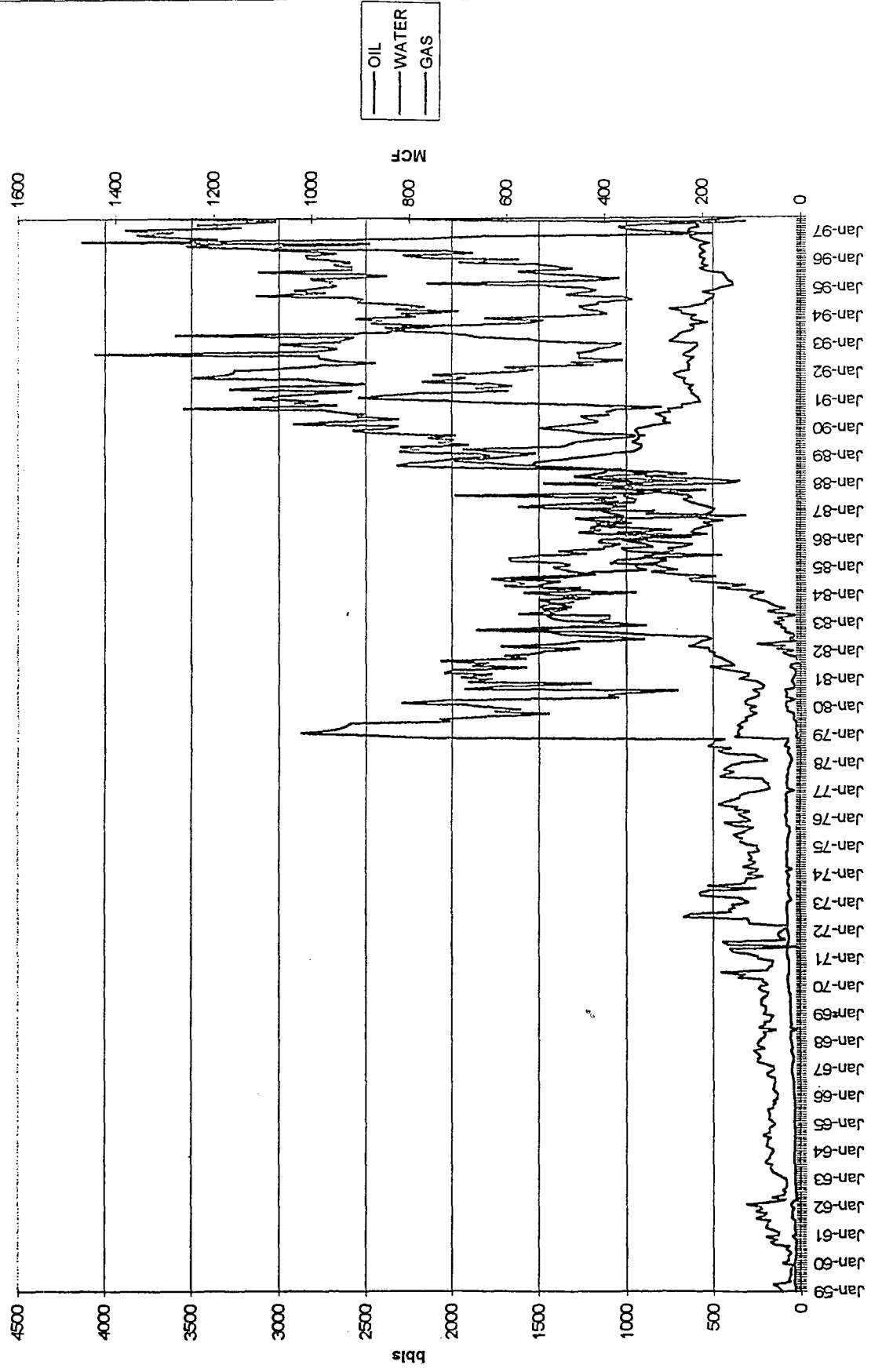
Attachment 4

Historical Production (per day) in CO2 Project Area

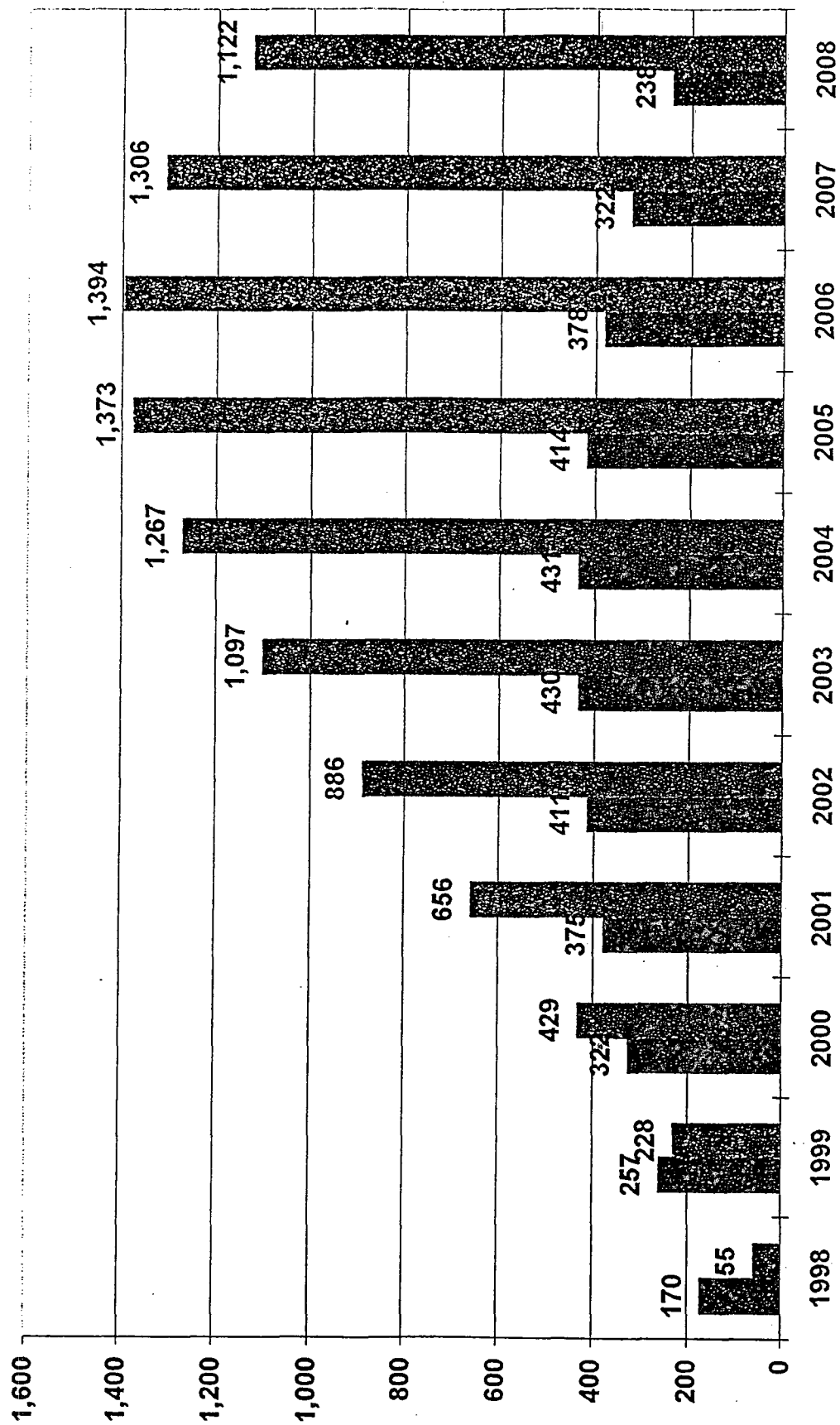


Attachment 5

Historical Production (per day) in Project Expansion Area

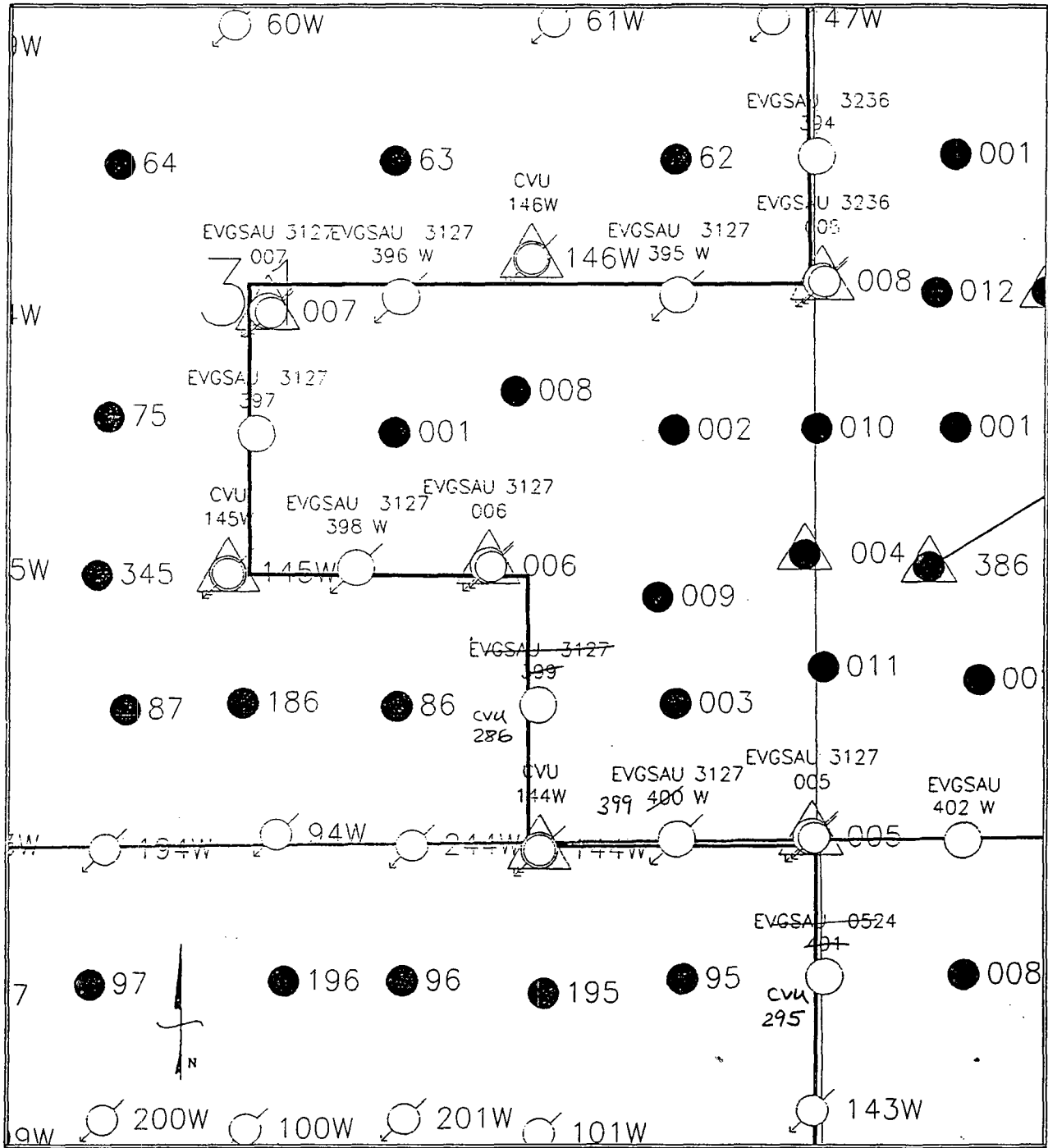


Attachment 6 Lease Line Expansion Oil and Gas Production Forecast



■ Oil Production, BOPD ■ Gas Production, MCFD

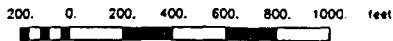
Attachment 7



LEGEND

- ⚙️ Proposed WAG Injector Conversion
- Proposed Production Well
- ⚙️ Proposed New Water Injector

Scale 1:9000.



Phillips Petroleum

Proposed Lease/line Wells
Central Vacuum / EVGSAU
Lea County, New Mexico

10/24/77

11-9027-571



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



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

February 2, 1994

Department of Taxation and Revenue
P.O. Box 630
Santa Fe, NM 87509-0630

Attention: Dick Minzner, Secretary

**RE: Certification of EOR Project
Phillips Petroleum Company
East Vacuum Grayburg-San Andress Unit**

Dear Secretary Minzner:

Enclosed is a copy of the certification issued to Phillips Petroleum Company for its East Vacuum Grayburg-San Andress Unit EOR project, certified by this Division on December 15, 1993, to be a qualified Enhanced Oil Recovery Project. If the operator applies for certification of positive production response within five years from that date, this project will be eligible for the *Recovered Oil Tax Rate* as provided in Laws of 1992, Chapter 38.

Only oil production from that portion of the lands identified in the certification which is actually developed for enhanced recovery will be eligible for the reduced tax rate. At the time positive production response is certified, we will identify for you the specific lands and wells within the project which qualify for the *Recovered Oil Tax Rate*.

Sincerely,

William J. LeMay
Director

WJL/amg

Enclosures

Lease Matters

RECORDS COPY
ODessa CENTRAL FILES



PHILLIPS PETROLEUM COMPANY

4001 PENBROOK
ODESSA, TEXAS 79762

EXPLORATION AND PRODUCTION
Permian Profit Center

November 13, 1997

EOL-11

Re: Request for Certificate of
Qualification for an Enhanced Oil
Recovery Project, East Vacuum
Grayburg-San Andres Unit
Vacuum Grayburg-San Andres Pool
Lea County, New Mexico

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87504

Attention Mr. Michael Stogner

Gentlemen,

Phillips Petroleum Company respectfully requests to amend the certificate of qualification to include the lease line expansion project at the East Vacuum Grayburg San Andres Unit. Attached for you reference is data required for this amendment. Please contact Eric Hollar at (915) 368-1475 or myself at (915) 368-1488 if you have any questions.

Yours very truly,

L. M. Sanders
Senior Regulatory Analyst



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



BRUCE KING
GOVERNOR

December 6, 1993

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

Phillips Petroleum Company
Attention: L.M. Sanders
4001 Penbrook
Odessa, TX 79762

**CERTIFICATION OF ENHANCED OIL RECOVERY PROJECT
FOR RECOVERED OIL TAX RATE**

The New Mexico Oil Conservation Division hereby certifies that the following Enhanced Oil Recovery Project has been approved by the Division as a secondary project, pursuant to the provisions of the *New Mexico Enhanced Oil Recovery Act* (Laws of 1992, Chapter 38). In order to qualify for the *Recovered Oil Tax Rate*, you must apply for certification of positive production response within five years from the date of this certification. Only production from that portion of the project area identified herein which is actually developed for enhanced recovery will qualify for the reduced tax rate.

If operation of this project is terminated for any reason, the operator of the project must notify this Division and the Secretary of the Taxation and Revenue Department not later than the thirtieth day after termination.

NAME OF PROJECT: East Vacuum Grayburg-San Andres Unit

OCD ORDER NO. R-6856-B

OPERATOR: Phillips Petroleum Company
ADDRESS: Attention: L.M. Sanders
4001 Penbrook
Odessa, TX 79762

CERTIFICATION DATE: December 15, 1993

PROJECT AREA:

Area 1:

That portion of Lot No. 3 being the SW/4 NW/4 NE/4 NW/4 equivalent, the W/2 SW/4 NE/4 NW/4 equivalent, and the SE/4 SW/4 NE/4 NW/4 equivalent, that portion of Lot No. 4 being the S/2 N/2 NW/4 NW/4 equivalent, and the S/2 NW/4 NW/4 equivalent, N/2 SW/4 NW/4, N/2 S/2 SW/4 NW/4, NW/4 SE/4 NW/4, and N/2 SW/4 SE/4 NW/4 all in Section 5, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 85 acres, more or less.

EOR Project Certification
East Vacuum Grayburg-San Andres Unit

Area 2:

S/2 N/2 NE/4 SW/4, S/2 NE/4 SW/4, SE/4 NE/4 NW/4 SW/4, E/2 SE/4 NW/4 SW/4, E/2 NE/4 SW/4 SW/4, NE/4 SE/4 SW/4 SW/4, N/2 SE/4 SW/4, N/2 S/2 SE/4 SW/4, SW/4 NE/4 NE/4 SE/4, S/2 NW/4 NE/4 SE/4, SW/4 NE/4 SE/4, W/2 SE/4 NE/4 SE/4, S/2 N/2 NW/4 SE/4, S/2 NW/4 SE/4, N/2 SW/4 SE/4, N/2 S/2 SW/4 SE/4, W/2 NE/4 SE/4 SE/4, NW/4 SE/4 SE/4, N/2 SW/4 SE/4 SE/4, and NW/4 SE/4 SE/4 SE/4 all in Section 32, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 180.00 acres, more or less.

Area 3:

S/2 SW/4 NE/4 NE/4, S/2 NE/4 NW/4 NE/4, W/2 NW/4 NE/4, SE/4 NW/4 NE/4, N/2 SW/4 NE/4, SW/4 SW/4 NE/4, N/2 SE/4 SW/4 NE/4, N/2 NW/4 SE/4 NE/4, NE/4 NE/4 NW/4, S/2 NW/4 NE/4 NW/4, S/2 NE/4 NW/4, S/2 SE/4 NW/4 NW/4, NE/4 SW/4 NW/4, S/2 NW/4 SW/4 NW/4, S/2 SW/4 NW/4, SE/4 NW/4, N/2 NE/4 SW/4, SW/4 NE/4 SW/4, N/2 SE/4 NE/4 SW/4, E/2 NW/4 SW/4, N/2 NW/4 NW/4 SW/4, SE/4 NW/4 NW/4 SW/4, NE/4 SW/4 NW/4 SW/4, N/2 NE/4 SW/4 SW/4, N/2 NW/4 SE/4 SW/4, and N/2 NW/4 NW/4 SE/4 all in Section 33, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 275.00 acres, more or less.

Area 4:

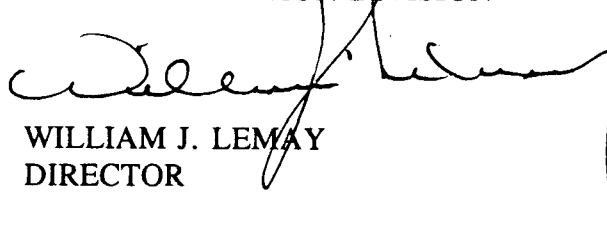
S/2 SW/4 NE/4 NE/4, S/2 SE/4 NW/4 NE/4, NE/4 SW/4 NE/4, S/2 NW/4 SW/4 NE/4, S/2 SW/4 NE/4, S/2 NE/4 SE/4 NE/4, W/2 SE/4 NE/4, SE/4 SE/4 NE/4, S/2 SE/4 SE/4 NW/4, E/2 NE/4 NE/4 SW/4, NE/4 SE/4, N/2 NW/4 SE/4, E/2 SW/4 NW/4 SE/4, SE/4 NW/4 SE/4, E/2 NE/4 SW/4 SE/4, and N/2 SE/4 SE/4 of Section 33 and S/2 SW/4 SW/4 NW/4, W/2 SW/4 NE/4 SW/4, S/2 NE/4 NW/4 SW/4, W/2 NW/4 SW/4, SE/4 NW/4 SW/4, N/2 NE/4 SW/4 SW/4, and NW/4 SW/4 SW/4 of Section 34, all in Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 250.00 acres, more or less.

Area 5:

S/2 SW/4 NE/4 NE/4, NW/4 NE/4, N/2 SW/4 NE/4, N/2 S/2 SW/4 NE/4, N/2 NW/4 SE/4 NE/4, NE/4 NW/4, S/2 SE/4 NW/4 NW/4, N/2 NE/4 SW/4 NW/4, N/2 SE/4 NW/4, and N/2 S/2 SE/4 NW/4 all in Section 32, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 160 acres, more or less.

APPROVED BY:

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
DIRECTOR

S E A L



PHILLIPS PETROLEUM COMPANY

ODESSA, TEXAS 79762
4001 PENBROOK

EXPLORATION AND PRODUCTION GROUP
Permian Basin Region

November 29, 1993

**Re: Request for Certificate of Qualification
for an Enhanced Oil Recovery Project,
East Vacuum Grayburg-San Andres Unit
Vacuum Grayburg-San Andres Pool
LEA COUNTY, NEW MEXICO**

Oil Conservation Division
State Land Office Building
310 Old Santa Fe Trail, Room 206
Santa Fe, New Mexico 87501

Attention: Mr. Robert G. Stovall

Gentlemen:

Phillips Petroleum Company respectfully requests from the Oil Conservation Division a Certificate of Qualification pursuant to Order No. R-6856-B for the following described project:

Project Name: East Vacuum Grayburg-San Andres Unit

Order No: R-6856-B

Project Operator: Phillips Petroleum Company
4001 Penbrook Street
Odessa, Texas, 79762

Certificate Date: December 15, 1993

Project Area:

Area 1:

That portion of Lot No. 3 being the SW/4 NW/4 NE/4 NW/4 equivalent, the W/2 SW/4 NE/4 NW/4 equivalent, and the SE/4 SW/4 NE/4 NW/4 equivalent, that portion of Lot No. 4 being the S/2 N/2 NW/4 NW/4 equivalent, and the S/2 NW/4 NW/4 equivalent, N/2 SW/4 NW/4, N/2 S/2 SW/4 NW/4, NW/4 SE/4

NW/4, and N/2 SW/4 SE/4 NW/4 all in Section 5, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 85 acres, more or less.

Area 2:

S/2 N/2 NE/4 SW/4, S/2 NE/4 SW/4, SE/4 NE/4 NW/4 SW/4, E/2 SE/4 NW/4 SW/4, E/2 NE/4 SW/4 SW/4, NE/4 SE/4 SW/4 SW/4, N/2 SE/4 SW/4, N/2 S/2 SE/4 SW/4, SW/4 NE/4 NE/4 SE/4, S/2 NW/4 NE/4 SE/4, SW/4 NE/4 SE/4, W/2 SE/4 NE/4 SE/4, S/2 N/2 NW/4 SE/4, S/2 NW/4 SE/4, N/2 SW/4 SE/4, N/2 S/2 SW/4 SE/4, W/2 NE/4 SE/4 SE/4, NW/4 SE/4 SE/4, N/2 SW/4 SE/4 SE/4, and NW/4 SE/4 SE/4 SE/4 all in Section 32, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 180.00 acres, more or less.

Area 3:

S/2 SW/4 NE/4 NE/4, S/2 NE/4 NW/4 NE/4, W/2 NW/4 NE/4, SE/4 NW/4 NE/4, N/2 SW/4 NE/4, SW/4 SW/4 NE/4, N/2 SE/4 SW/4 NE/4, N/2 NW/4 SE/4 NE/4, NE/4 NE/4 NW/4, S/2 NW/4 NE/4 NW/4, S/2 NE/4 NW/4, S/2 SE/4 NW/4 NW/4, NE/4 SW/4 NW/4, S/2 NW/4 SW/4 NW/4, S/2 SW/4 NW/4, SE/4 NW/4, N/2 NE/4 SW/4, SW/4 NE/4 SW/4, N/2 SE/4 NE/4 SW/4, E/2 NW/4 SW/4, N/2 NW/4 NW/4 SW/4, SE/4 NW/4 NW/4 SW/4, NE/4 SW/4 NW/4 SW/4, N/2 NE/4 SW/4 SW/4, N/2 NW/4 SE/4 SW/4, and N/2 NW/4 NW/4 SE/4 all in Section 33, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 275.00 acres, more or less.

Area 4:

S/2 SW/4 NE/4 NE/4, S/2 SE/4 NW/4 NE/4, NE/4 SW/4 NE/4, S/2 NW/4 SW/4 NE/4, S/2 SW/4 NE/4, S/2 NE/4 SE/4 NE/4, W/2 SE/4 NE/4, SE/4 SE/4 NE/4, S/2 SE/4 SE/4 NW/4, E/2 NE/4 NE/4 SW/4, NE/4 SE/4, N/2 NW/4 SE/4, E/2 SW/4 NW/4 SE/4, SE/4 NW/4 SE/4, E/2 NE/4 SW/4 SE/4, and N/2 SE/4 SE/4 of Section 33 and S/2 SW/4 SW/4 NW/4, W/2 SW/4 NE/4 SW/4, S/2 NE/4 NW/4 SW/4, W/2 NW/4 SW/4, SE/4 NW/4 SW/4, N/2 NE/4 SW/4 SW/4, and NW/4 SW/4 SW/4 of Section 34, all in Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 250.00 acres, more or less.

Area 5:

S/2 SW/4 NE/4 NE/4, NW/4 NE/4, N/2 SW/4 NE/4, N/2 S/2 SW/4 NE/4, N/2 NW/4 SE/4 NE/4, NE/4 NW/4, S/2 SE/4 NW/4 NW/4, N/2 NE/4 SW/4 NW/4, N/2 SE/4 NW/4, and N/2 S/2 SE/4 NW/4 all in Section 32, Township 17 South,

Range 35 East NMPM, Lea County, New Mexico, comprising 160 acres, more or less.

Each of the five Project Areas shall be defined in terms of the unit wells, which would actually qualify for the recovered oil tax rate and shall initially comprise the following wells in the above described areas in Lea County, New Mexico:

AREA 1: East Vacuum Grayburg-San Andres Unit		AREA 2: East Vacuum Grayburg-San Andres Unit	
Tract No.	Well No.	Tract No.	Well No.
INJECTION WELLS		INJECTION WELLS	
0524	129	3202	1
PRODUCING WELLS		3229	8
0524	2	PRODUCING WELLS	

AREA 1: EAST VACUUM GRAYBURG-SAN ANDRES UNIT		AREA 2: EAST VACUUM GRAYBURG - SAN ANDRES UNIT	
TRACT NO.	WELL NO.	TRACT NO.	WELL NO.
0524	3	3202	4
0524	7	3202	6
0524	8	3202	12
0524	45	3202	15
0524	112	3202	20
		3202	21
		3229	3
		3229	4
		3229	5
		3229	13

AREA 3: EAST VACUUM GRAYBURG- SAN ANDRES UNIT		AREA 4: EAST VACUUM GRAYBURG- SAN ANDRES UNIT	
TRACT NO.	WELL NO.	TRACT NO.	WELL NO.
INJECTION WELLS		INJECTION WELLS	
3333	2	3315	1
3333	5	3315	6
3374	2	3315	8
PRODUCING WELLS		PRODUCING WELLS	
3308	2	3333	1
3308	3	3333	4
3308	6	3333	7
3328	2	3315	2
3333	3	3315	4

AREA 3: EAST VACUUM GRAYBURG- SAN ANDRES UNIT		AREA 4: EAST VACUUM GRAYBURG- SAN ANDRES UNIT	
TRACT NO.	WELL NO.	TRACT NO.	WELL NO.
3333	8	3315	5
3366	1	3440	1
3366	29	3440	3
3373	2	3440	5
3373	28	3440	7
3374	1		
3374	3		

AREA 5: EAST VACUUM GRAYBURG-SAN ANDRES UNIT	
TRACT NO.	WELL NO.
INJECTION WELLS	
3202	3
3236	6
PRODUCING WELLS	
3202	3
3202	16
3202	19
3236	3
3236	4
3236	5
3236	7

Your efforts in expediting this request for a Certificate of Qualification is appreciated. A copy of the referenced order is attached for your convenience.

Very truly yours

PHILLIPS PETROLEUM COMPANY



L. M. Sanders, Supervisor
Regulatory Affairs

LMS:JM:ehg
Attach.

RegPro:JMapl:EORProj.OCD

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:

1993 15 1 AON

1993 15 1 AON

CASE NO. 10779
Order No. R-6856-B

APPLICATION OF PHILLIPS PETROLEUM COMPANY TO QUALIFY FIVE
PORTIONS OF ITS EAST VACUUM GRAYBURG-SAN ANDRES UNIT PRESSURE
MAINTENANCE PROJECT FOR THE RECOVERED OIL TAX RATE PURSUANT TO
THE 'NEW MEXICO ENHANCED OIL RECOVERY ACT,' LEA COUNTY, NEW
MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 A.M. on July 29, 1993, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 12th day of November, 1993, 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 following orders of the Division have been issued for the Phillips Petroleum Company East Vacuum Grayburg-San Andres Pressure Maintenance Project:

- (a) Order No. R-5871, issued in Case No. 6366 and dated November 27, 1978, approved the application of Phillips Petroleum Company for statutory unitization of the following described 7,025.3 acres, more or less, of State lands in Lea County, New Mexico, also known as the East Vacuum Grayburg-San Andres Unit Area:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 24: SE/4

cc: Jim Stevens
Larry Hallowell
Dan Wier
Larry Sanders
LAURA KARLAK, Bulet

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM

- Section 18: Lots 3 and 4 (W/2 SW/4 equivalent) and SE/4 SW/4
Section 19: Lots 1 through 4 (W/2 W/2 equivalent), S/2 NE/4, E/2 W/2, and SE/4
Section 20: SW/4 NE/4, W/2 NW/4, SE/4 NW/4, SW/4, W/2 SE/4, and SE/4 SE/4
Section 21: NE/4 SW/4, S/2 SW/4, and SE/4
Section 22: SW/4, W/2 SE/4, and SE/4 SE/4
Section 23: S/2 SW/4
Section 24: SW/4 SW/4
Section 25: W/2 NW/4
Section 26: N/2, SW/4, N/2 SE/4, and SW/4 SE/4
Sections 27 through 29: All
Section 31: N/2 SE/4 and SE/4 SE/4
Sections 32 and 33: All
Section 34: N/2, SW/4, and NW/4 SE/4
Section 35: N/2 NW/4

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM

- Section 4: Lots 2, 3, and 4 (NW/4 NE/4 and N/2 NW/4 equivalent)
Section 5: Lots 1 through 4 and S/2 S/2 (N/2 equivalent) and NW/4 SW/4

- (b) Order No. R-5897, issued in Case No. 6367 and dated January 26, 1979, authorized Phillips Petroleum Company to institute a pressure maintenance project (therein designated the East Vacuum Grayburg-San Andres Unit Pressure Maintenance Project Area) by the injection of water into the Vacuum Grayburg-San Andres Pool on the above-described Unit, Lea County, New Mexico.
- (c) Order No. R-6856, issued in Case 7426 and dated December 16, 1981, amended Order No. R-5897 by authorizing Phillips Petroleum Company to inject carbon dioxide along with water through 45 certain wells within the following described area therein designated a "Qualified Tertiary Project Area" that lies wholly within the East Vacuum Grayburg-San Andres Unit Pressure Maintenance Project Area:

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM

Section 26: N/2, SW/4, N/2 SE/4, and SW/4 SE/4
Sections 27 through 29: All
Section 31: N/2 SE/4 and SE/4 SE/4
Sections 32 and 33: All
Section 34: N/2, SW/4, and NW/4 SE/4
Section 35: N/2 NW/4

TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM

Section 4: Lots 2, 3, and 4 (NW/4 NE/4 and N/2 NW/4 equivalent)
Section 5: Lots 1 through 4 and S/2 S/2 (N/2 equivalent) and NW/4 SW/4

- (d) Order No. R-6856-A, issued in Reopened Case 7426, on September 19, 1990, provided for the reinjection of hydrocarbon contaminated carbon dioxide into said Qualified Tertiary Project Area.

(3) At this time the applicant, Phillips Petroleum Company, seeks an order pursuant to the Rules and Procedures for Qualification of Enhanced Oil Recovery Projects and Certification for the Recovered Oil Tax Rate, as promulgated by Division Order No. R-9708, qualifying five portions of its East Vacuum Grayburg-San Andres Unit Pressure Maintenance Project, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico, for the recovered oil tax rate pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(4) The proposed five areas under consideration specifically comprise the following described lands:

Area 1:

That portion of Lot No. 3 being the SW/4 NW/4 NE/4 NW/4 equivalent, the W/2 SW/4 NE/4 NW/4 equivalent, and the SE/4 SW/4 NE/4 NW/4 equivalent, that portion of Lot No. 4 being the S/2 N/2 NW/4 NW/4 equivalent, and the S/2 NW/4 NW/4 equivalent, N/2 SW/4 NW/4, N/2 S/2 SW/4 NW/4, NW/4 SE/4 NW/4, and N/2 SW/4 SE/4 NW/4 all in Section 5, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 85 acres, more or less.

Area 2:

S/2 N/2 NE/4 SW/4, S/2 NE/4 SW/4, SE/4 NE/4 NW/4 SW/4, E/2 SE/4 NW/4 SW/4, E/2 NE/4 SW/4 SW/4, NE/4 SE/4 SW/4 SW/4, N/2 SE/4 SW/4, N/2 S/2 SE/4 SW/4, SW/4 NE/4 NE/4 SE/4, S/2 NW/4 NE/4 SE/4, SW/4 NE/4 SE/4, W/2 SE/4 NE/4 SE/4, S/2 N/2 NW/4 SE/4, S/2 NW/4 SE/4, N/2 SW/4 SE/4, N/2 S/2 SW/4 SE/4, W/2 NE/4 SE/4 SE/4, NW/4 SE/4 SE/4, N/2 SW/4 SE/4 SE/4, and NW/4 SE/4 SE/4 SE/4 all in Section 32, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 180.00 acres, more or less.

Area 3:

S/2 SW/4 NE/4 NE/4, S/2 NE/4 NW/4 NE/4, W/2 NW/4 NE/4, SE/4 NW/4 NE/4, N/2 SW/4 NE/4, SW/4 SW/4 NE/4, N/2 SE/4 SW/4 NE/4, N/2 NW/4 SE/4 NE/4, NE/4 NE/4 NW/4, S/2 NW/4 NE/4 NW/4, S/2 NE/4 NW/4, S/2 SE/4 NW/4 NW/4, NE/4 SW/4 NW/4, S/2 NW/4 SW/4 NW/4, S/2 SW/4 NW/4, SE/4 NW/4, N/2 NE/4 SW/4, SW/4 NE/4 SW/4, N/2 SE/4 NE/4 SW/4, E/2 NW/4 SW/4, N/2 NW/4 NW/4 SW/4, SE/4 NW/4 NW/4 SW/4, NE/4 SW/4 NW/4 SW/4, N/2 NE/4 SW/4 SW/4, N/2 NW/4 SE/4 SW/4, and N/2 NW/4 NW/4 SE/4 all in Section 33, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 275.00 acres, more or less.

Area 4:

S/2 SW/4 NE/4 NE/4, S/2 SE/4 NW/4 NE/4, NE/4 SW/4 NE/4, S/2 NW/4 SW/4 NE/4, S/2 SW/4 NE/4, S/2 NE/4 SE/4 NE/4, W/2 SE/4 NE/4, SE/4 SE/4 NE/4, S/2 SE/4 SE/4 NW/4, E/2 NE/4 NE/4 SW/4, NE/4 SE/4, N/2 NW/4 SE/4, E/2 SW/4 NW/4 SE/4, SE/4 NW/4 SE/4, E/2 NE/4 SW/4 SE/4, and N/2 SE/4 SE/4 of Section 33 and S/2 SW/4 SW/4 NW/4, W/2 SW/4 NE/4 SW/4, S/2 NE/4 NW/4 SW/4, W/2 NW/4 SW/4, SE/4 NW/4 SW/4, N/2 NE/4 SW/4 SW/4, and NW/4 SW/4 SW/4 of Section 34, all in Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 250.00 acres, more or less.

Area 5:

S/2 SW/4 NE/4 NE/4, NW/4 NE/4, N/2 SW/4 NE/4, N/2 S/2 SW/4 NE/4, N/2 NW/4 SE/4 NE/4, NE/4 NW/4, S/2 SE/4 NW/4 NW/4, N/2 NE/4 SW/4 NW/4, N/2 SE/4 NW/4, and N/2 S/2 SE/4 NW/4 all in Section 32, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 160 acres, more or less.

(5) All of the above-described areas are located wholly within the "Qualified Tertiary Project Area" approved by said Order No. R-6856, as amended.

(6) Evidence indicates Phillips proceeded with its carbon dioxide/water injection phase within said "Qualified Tertiary Project Area" in 1985. According to Division records there are currently forty-two active and three inactive carbon dioxide/water injection wells within the boundary of said "Qualified Tertiary Project Area". Said flood operations have thus far been conducted on 80-acre inverted nine-spot patterns.

(7) Primary oil recovery from the entire pressure maintenance project has been approximately 78,000,000 barrels of oil. As of January 1993, total oil production from said Unit was approximately 117,099,100 barrels of oil. Under the current 80-acre invert nine-spot patterns, ultimate secondary and tertiary oil recovery is estimated to be 66,548,800 barrels of oil.

(8) Said pressure maintenance project is currently producing at a rate of 7,900 BOPD and 38,000 BWPD from 199 active producers with 100 currently active injection wells (both water and carbon dioxide/water injectors). Approximately 26,000,000 barrels of recoverable oil reserves remain under the current mode of operations.

(9) Phillips seeks to expand portions of this "Qualified Tertiary Project Area" by means of a significant change in the process used for the displacement of crude oil which will be a modification of well configurations in the five above-described selected areas of the Unit. This proposed expansion will require that the applicant drill and equip a total of eight new producing wells, convert four existing producing wells to injection, reactivate one producing well, and upgrade existing tank batteries and injection facilities as follows:

AREA 1: There is presently no injection activity in this particular area, carbon dioxide/water injection will commence by converting the East Vacuum G/SA Unit, Tract 0524, Well No. 129 and the drilling of an infill producing well (East Vacuum G/SA Unit, Tract 0524, Well No. 7) in the

SW/4 SE/4 NW/4 (the SW/4 of Unit F). The entire area including the following five existing wells; East Vacuum G/SA Unit, Tract 0524, Well Nos. 2, 3, 8, 45, and 112; should be affected by this change which will change, somewhat, the process used for displacement of crude oil by the introduction of carbon dioxide into this virgin area;

AREA 2: Three additional infill producing wells are to be drilled (East Vacuum G/SA Unit, Tract 3202, Well Nos. 20 and 21 and the East Vacuum G/SA Unit, Tract 3229, Well No. 13) within the area and the existing East Vacuum G/SA Unit, Tract 3202, Well No. 1, in Unit I, will be converted to a carbon dioxide/water injection well. There is currently one carbon dioxide/water injection well within the area, the East Vacuum G/SA Unit, Tract 3229, Well No. 8. The impact of these changes should affect the areal sweep as to allow carbon dioxide to contact areas that are currently not being contacted with carbon dioxide from the existing injection well located in the area. As a consequence, the following seven producing wells should experience an improvement in oil recovery through this improved sweep efficiency; East Vacuum G/SA Unit, Tract 3202, Well Nos. 4, 6, 12, and 15 and the East Vacuum G/SA Unit, Tract 3229, Well Nos. 3, 4, and 5;

AREA 3: There are currently two carbon dioxide/water injectors in this area, the East Vacuum G/SA Unit, Tract 3333, Well No. 5 and the East Vacuum G/SA Unit, Tract 3374, Well No. 2. This area is being converted from two 80-acre nine-spot patterns to a 160-acre line drive pattern. The existing East Vacuum G/SA Unit, Tract 3333, Well No. 2 will be converted to injection and three additional producing wells (the East Vacuum G/SA Unit, Tract 3308, Well No. 6, East Vacuum G/SA Unit, Tract 3366, Well No. 1, and East Vacuum G/SA Unit, Tract 3373, Well No. 2) will be drilled offset to the line drive injection. The combination of these changes will alter the displacement process significantly by increasing the areal sweep to allow carbon dioxide to contact new areas that are currently not being contacted with carbon dioxide. In addition to the three new infill wells, the following nine existing producers should experience an improvement in oil recovery through improved sweep efficiency; the East Vacuum G/SA Unit, Tract 3308, Well Nos. 2 and 3, the East Vacuum G/SA Unit, Tract 3366, Well No. 29, the East Vacuum G/SA Unit, Tract 3373, Well No. 28, the East Vacuum G/SA Unit, Tract 3333, Well Nos. 3 and 8, the East Vacuum G/SA Unit, Tract 3328, Well No. 2, and the East Vacuum G/SA Unit, Tract 3374, Well Nos. 1 and 3;

AREA 4: There are currently two carbon dioxide/water injectors in this area, the East Vacuum G/SA Unit, Tract 3315, Well Nos. 6 and 8. This area is being converted from one 80-acre nine-spot pattern and one 70-acre seven spot pattern to a 150-acre line drive pattern. The existing East Vacuum G/SA Unit, Tract 3315, Well No. 1 will be converted to injection and an additional well (the East Vacuum G/SA Unit, Tract 3440, Well No. 7) is to be drilled to accomplish these changes in operations. The combination of these changes should alter the oil displacement process significantly by changing the areal sweep to allow carbon dioxide to contact new areas that are currently not being contacted with carbon dioxide. In addition, the following nine wells should experience an improvement in oil recovery through this improved sweep efficiency; the East Vacuum G/SA Unit, Tract 3333, Well Nos. 1, 4, and 7, the East Vacuum G/SA Unit, Tract 3440, Well Nos. 1, 3, and 5, and the East Vacuum G/SA Unit, Tract 3315, Well Nos. 2, 4, and 5; and,

AREA 5: The conversion of the East Vacuum G/SA Unit, Tract 3202, Well No. 33, along with the existing carbon dioxide/water injector East Vacuum G/SA Unit, Tract 3236, Well No. 6, will alter this pattern from an 80-acre inverted nine-spot pattern to an 80-acre line drive pattern. This change will alter the oil displacement process by changing the areal sweep to allow carbon dioxide to contact new areas that are currently not being contacted with carbon dioxide. The following seven wells should experience an improvement in oil recovery through this improved sweep efficiency; the East Vacuum G/SA Unit, Tract 3202, Well Nos. 3, 16, and 19 and the East Vacuum G/SA Unit, Tract 3236, Well Nos. 3, 4, 5, and 7.

(10) Applicant's engineering evidence indicates that with a significant change or modification in the injection patterns with the drilling of said additional producers and the conversion of existing wells to injection, an estimated additional 1.056 million barrels of oil will be recovered in the five "Expanded Use Areas" having a current undiscounted value of \$19,505,308.00.

(11) The costs of the required additional facilities in the five "Expanded Use Areas" are estimated to be approximately \$3,958,825.00 and the total project costs are estimated to be approximately \$5,976,249.00.

(12) The geologic evidence presented by Phillips demonstrated that portions of the reservoir in the "Expanded Use Areas" contains distinct stringers each vertically isolated from the others with none continuous over the entire southern portion of the unit resulting in the existing 80-acre waterflood pattern being too large to overcome the areal discontinuities found in the Pool.

(13) Based on the testimony presented in this case the proposed enhanced oil recovery project is economically and technically feasible and has not been prematurely filed.

(14) Each of the subject five "Expanded Use Areas" that are included in the "Qualified Tertiary Project Area" of Phillips' East Vacuum Grayburg-San Andres Unit Pressure Maintenance Project Area should be qualified an "Enhanced Oil Recovery Project" (EOR) pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(15) In order for the applicant to be eligible for said EOR credit, the operator should advise the Division, after an appropriate application for injection is processed, when the injection into each additional injection well commences and at such time, request the Division certify the project to the New Mexico Taxation and Revenue Department.

(16) The application should be approved and the EOR Project should be governed by the provisions of the "Rules and Procedures for Qualifications of Enhanced Oil Recovery Projects" and "Certification for Recovered Oil Tax Rate" as promulgated by Division Order No. R-9708.

(17) Each of the five "enhanced oil recovery project areas" should initially comprise those producing wells listed by Phillips that are to be affected by the expanded carbon dioxide/water injection in the five subject areas.

(18) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identify the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to the Department of Taxation and Revenue those lands and wells which are eligible for the credit.

IT IS THEREFORE ORDERED THAT:

(1) The application of Phillips Petroleum Company to qualify five individual and separate portions of its East Vacuum Grayburg-San Andres Unit Pressure Maintenance Project, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5), is hereby approved.

(2) The subject "enhanced oil recovery project areas" shall initially comprise the following five described areas in Lea County, New Mexico:

Area 1:

That portion of Lot No. 3 being the SW/4 NW/4 NE/4 NW/4 equivalent, the W/2 SW/4 NE/4 NW/4 equivalent, and the SE/4 SW/4 NE/4 NW/4 equivalent, that portion of Lot No. 4 being the S/2 N/2 NW/4 NW/4 equivalent, and the S/2 NW/4 NW/4 equivalent, N/2 SW/4 NW/4, N/2 S/2 SW/4 NW/4, NW/4 SE/4 NW/4, and N/2 SW/4 SE/4 NW/4 all in Section 5, Township 18 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 85 acres, more or less.

Area 2:

S/2 N/2 NE/4 SW/4, S/2 NE/4 SW/4, SE/4 NE/4 NW/4 SW/4, E/2 SE/4 NW/4 SW/4, E/2 NE/4 SW/4 SW/4, NE/4 SE/4 SW/4 SW/4, N/2 SE/4 SW/4, N/2 S/2 SE/4 SW/4, SW/4 NE/4 NE/4 SE/4, S/2 NW/4 NE/4 SE/4, SW/4 NE/4 SE/4, W/2 SE/4 NE/4 SE/4, S/2 N/2 NW/4 SE/4, S/2 NW/4 SE/4, N/2 SW/4 SE/4, N/2 S/2 SW/4 SE/4, W/2 NE/4 SE/4 SE/4, NW/4 SE/4 SE/4, N/2 SW/4 SE/4 SE/4, and NW/4 SE/4 SE/4 SE/4 all in Section 32, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 180.00 acres, more or less.

Area 3:

S/2 SW/4 NE/4 NE/4, S/2 NE/4 NW/4 NE/4, W/2 NW/4 NE/4, SE/4 NW/4 NE/4, N/2 SW/4 NE/4, SW/4 SW/4 NE/4, N/2 SE/4 SW/4 NE/4, N/2 NW/4 SE/4 NE/4, NE/4 NE/4 NW/4, S/2 NW/4 NE/4 NW/4, S/2 NE/4 NW/4, S/2 SE/4 NW/4 NW/4, NE/4 SW/4 NW/4, S/2 NW/4 SW/4 NW/4, S/2 SW/4 NW/4, SE/4 NW/4, N/2 NE/4 SW/4, SW/4 NE/4 SW/4, N/2 SE/4 NE/4 SW/4, E/2 NW/4 SW/4, N/2 NW/4

NW/4 SW/4, SE/4 NW/4 NW/4 SW/4, NE/4 SW/4 NW/4 SW/4, N/2 NE/4 SW/4 SW/4, N/2 NW/4 SE/4 SW/4, and N/2 NW/4 NW/4 SE/4 all in Section 33, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 275.00 acres, more or less.

Area 4:

S/2 SW/4 NE/4 NE/4, S/2 SE/4 NW/4 NE/4, NE/4 SW/4 NE/4, S/2 NW/4 SW/4 NE/4, S/2 SW/4 NE/4, S/2 NE/4 SE/4 NE/4, W/2 SE/4 NE/4, SE/4 SE/4 NE/4, S/2 SE/4 SE/4 NW/4, E/2 NE/4 NE/4 SW/4, NE/4 SE/4, N/2 NW/4 SE/4, E/2 SW/4 NW/4 SE/4, SE/4 NW/4 SE/4, E/2 NE/4 SW/4 SE/4, and N/2 SE/4 SE/4 of Section 33 and S/2 SW/4 SW/4 NW/4, W/2 SW/4 NE/4 SW/4, S/2 NE/4 NW/4 SW/4, W/2 NW/4 SW/4, SE/4 NW/4 SW/4, N/2 NE/4 SW/4 SW/4, and NW/4 SW/4 SW/4 of Section 34, all in Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 250.00 acres, more or less.

Area 5:

S/2 SW/4 NE/4 NE/4, NW/4 NE/4, N/2 SW/4 NE/4, N/2 S/2 SW/4 NE/4, N/2 NW/4 SE/4 NE/4, NE/4 NW/4, S/2 SE/4 NW/4 NW/4, N/2 NE/4 SW/4 NW/4, N/2 SE/4 NW/4, and N/2 S/2 SE/4 NW/4 all in Section 32, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico, comprising 160 acres, more or less.

(3) Each of the five Project Areas shall be defined in terms of the unit wells which would actually qualify for the recovered oil tax rate and shall initially comprise the following wells in the above described areas in Lea County, New Mexico:

AREA 1: EAST VACUUM GRAYBURG-SAN ANDRES UNIT		AREA 2: EAST VACUUM GRAYBURG-SAN ANDRES UNIT	
Tract No.	Well No.	Tract No.	Well No.
INJECTION WELLS		INJECTION WELLS	
0524	129	3202	1
PRODUCING WELLS		3229	8
0524	2	PRODUCING WELLS	

AREA 1: EAST VACUUM GRAYBURG-SAN ANDRES UNIT		AREA 2: EAST VACUUM GRAYBURG-SAN ANDRES UNIT	
Tract No.	Well No.	Tract No.	Well No.
0524	3	3202	4
0524	7	3202	6
0524	8	3202	12
0524	45	3202	15
0524	112	3202	20
		3202	21
		3229	3
		3229	4
		3229	5
		3229	13

AREA 3: EAST VACUUM GRAYBURG-SAN ANDRES UNIT		AREA 4: EAST VACUUM GRAYBURG-SAN ANDRES UNIT	
Tract No.	Well No.	Tract No.	Well No.
INJECTION WELLS		INJECTION WELLS	
3333	2	3315	1
3333	5	3315	6
3374	2	3315	8
PRODUCING WELLS		PRODUCING WELLS	
3308	2	3333	1
3308	3	3333	4
3308	6	3333	7
3328	2	3315	2
3333	3	3315	4

AREA 3: EAST VACUUM GRAYBURG-SAN ANDRES UNIT		AREA 4: EAST VACUUM GRAYBURG-SAN ANDRES UNIT	
Tract No.	Well No.	Tract No.	Well No.
3333	8	3315	5
3366	1	3440	1
3366	29	3440	3
3373	2	3440	5
3373	28	3440	7
3374	1		
3374	3		

AREA 5: EAST VACUUM GRAYBURG-SAN ANDRES UNIT	
Tract No.	Well No.
INJECTION WELLS	
3202	3
3236	6
PRODUCING WELLS	
3202	3
3202	16
3202	19
3236	3
3236	4
3236	5
3236	7

(4) The operator shall advise the Division when the additional injection phase of the project commences into any of the new injection wells.

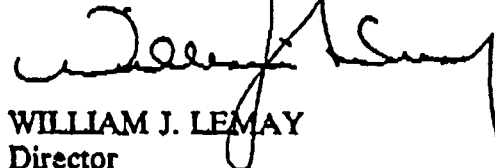
(5) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identify the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to the Department of Taxation and Revenue those lands and wells which are eligible for the credit.

(6) Said EOR project shall be governed by the provisions of the "Rules and Procedures for Qualifications of Enhanced Oil Recovery Projects" and "Certification for Recovered Oil Tax Rate" as promulgated by Division Order No. R-9708.

(7) 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

SEAL