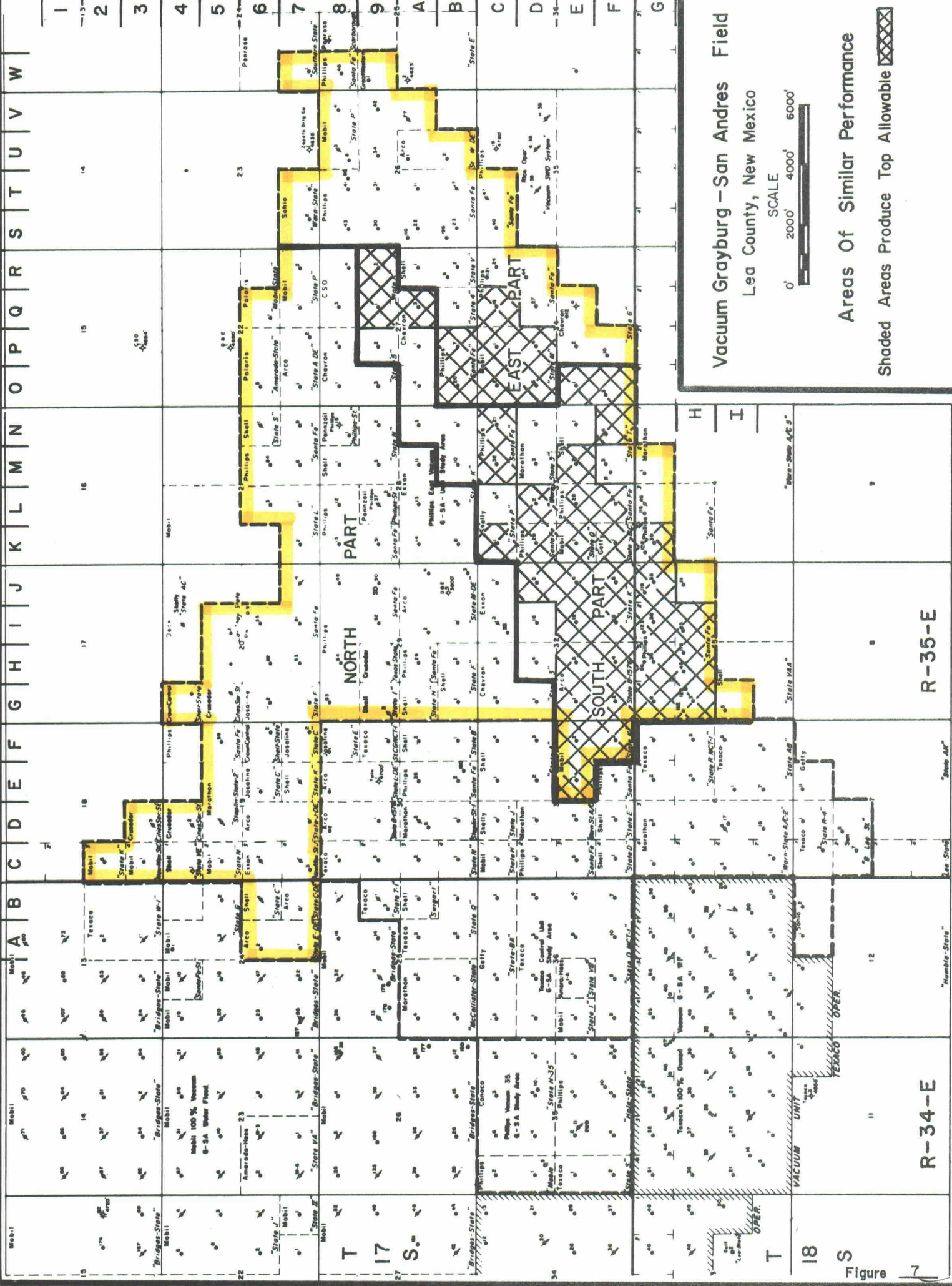


Journal of

LOG SHOWING
UNITIZED INTERVAL



The unitized interval will be the vertical interval that appears between a depth of 4050' and 5050' on the Lane wells acoustic log Run #1, dated 4-14-64 on the Humble Oil and Refining Company New Mexico State "K" #19. This well is located 330' FSL, 330' FSL, Sec. 28, Township 17 South, Range 35 East, Lea County, New Mexico. The unitized interval is to include all subsurface points throughout the unit area between these identified correlative depths.



Vacuum Grayburg-San Andres Field
 Lea County, New Mexico
 SCALE 0' 2000' 4000' 6000'
 Areas Of Similar Performance
 Shaded Areas Produce Top Allowable

R-35-E

R-34-E

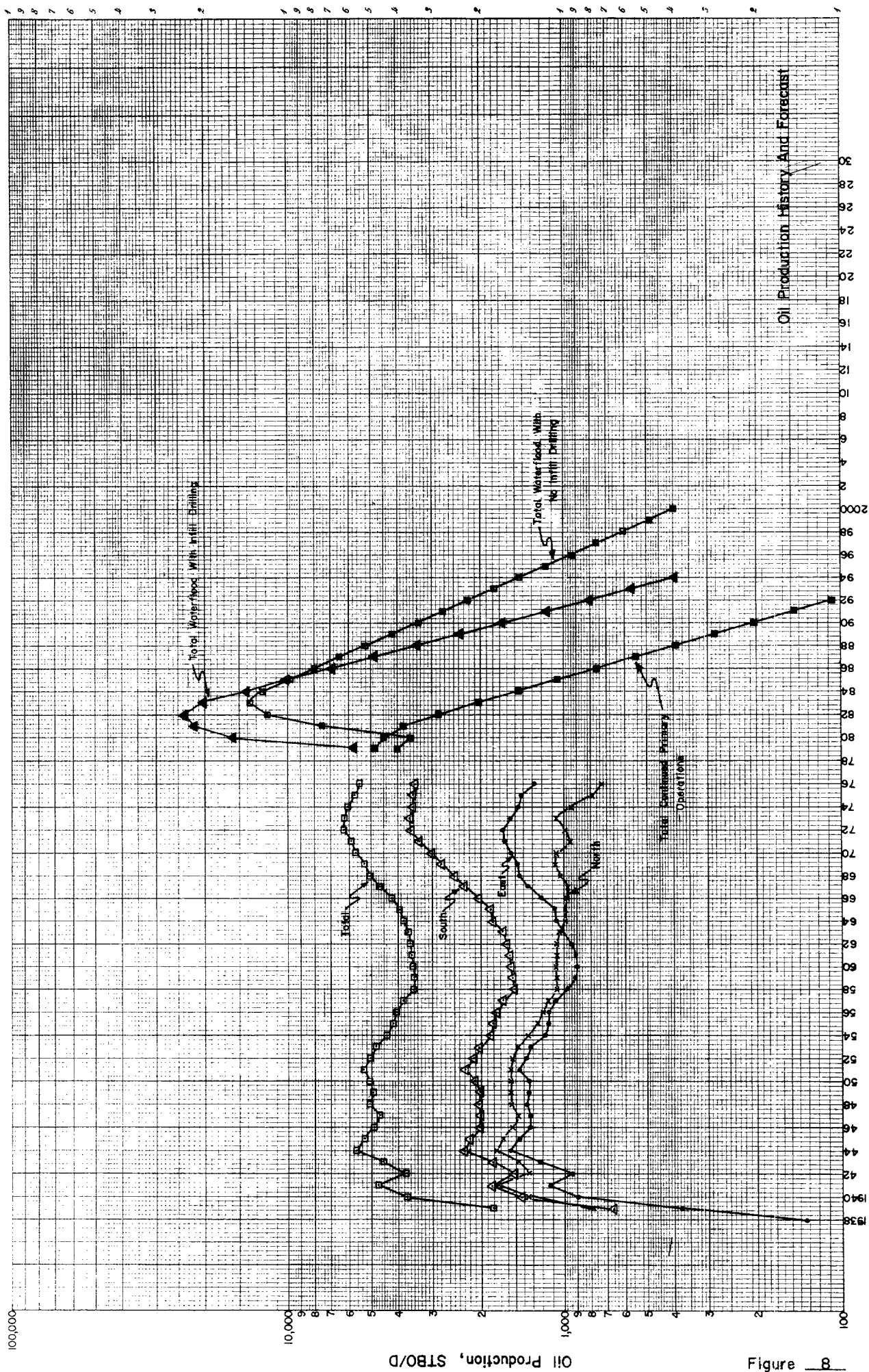
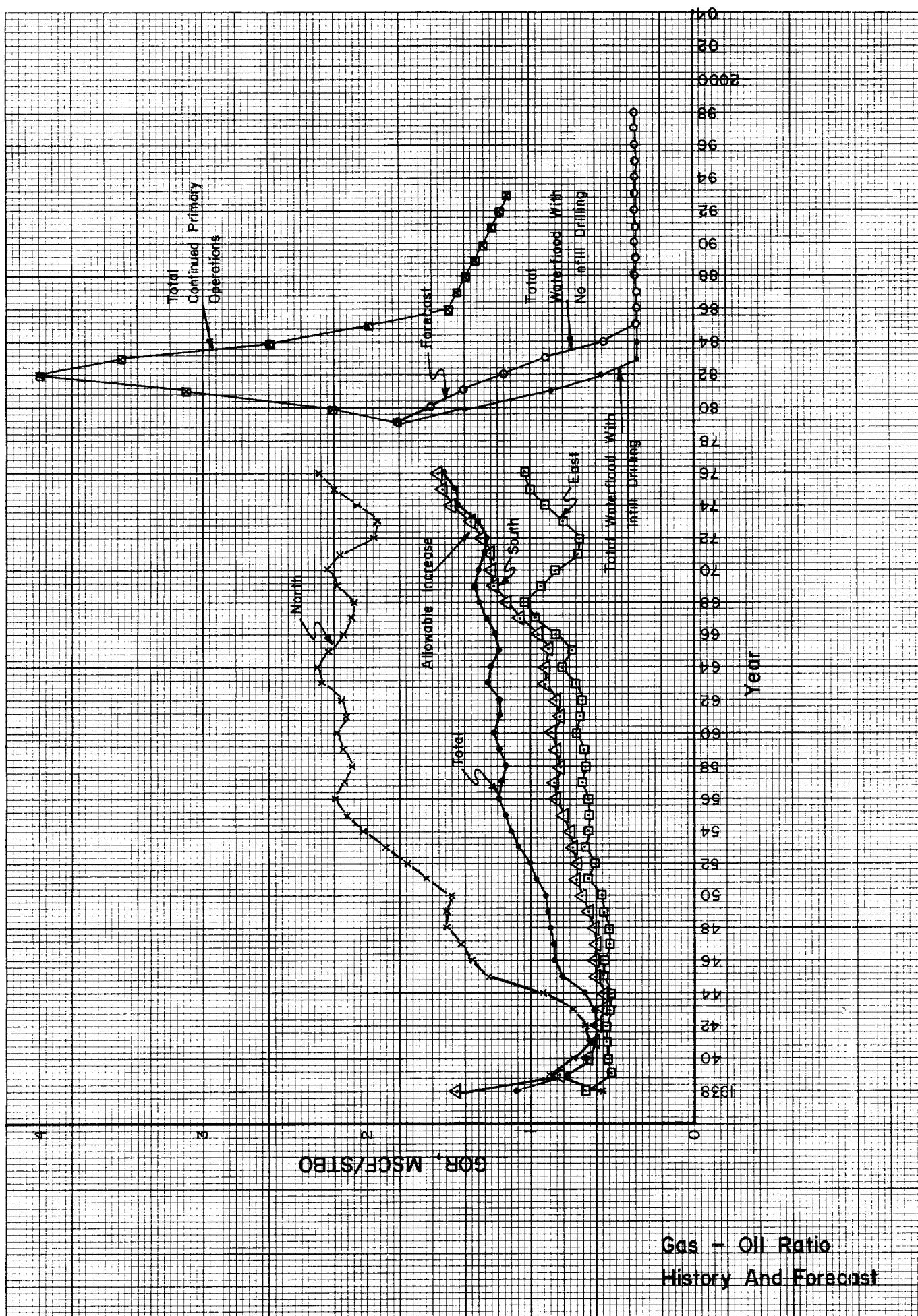


Figure 8

Oil Production, STB/D



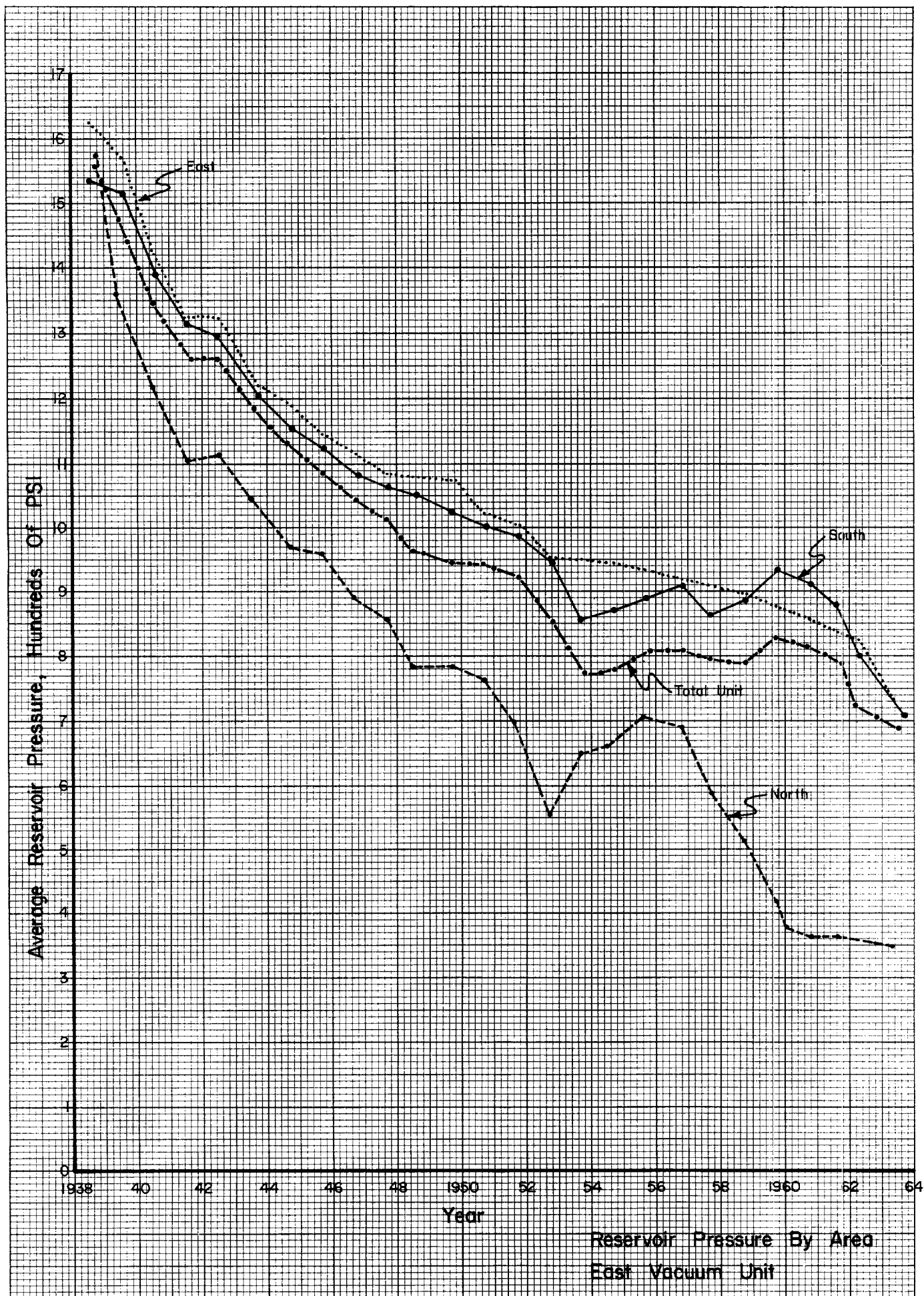
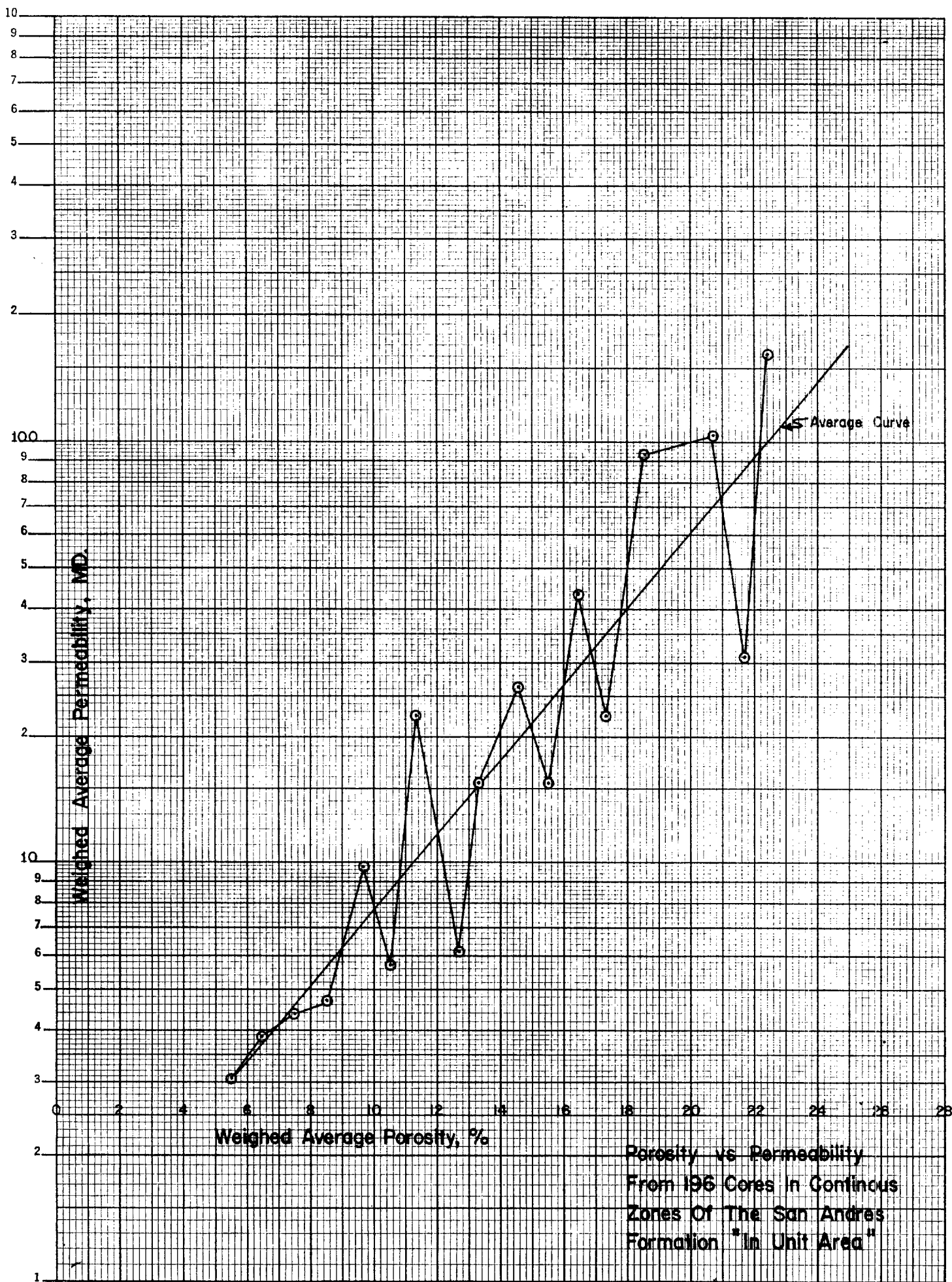
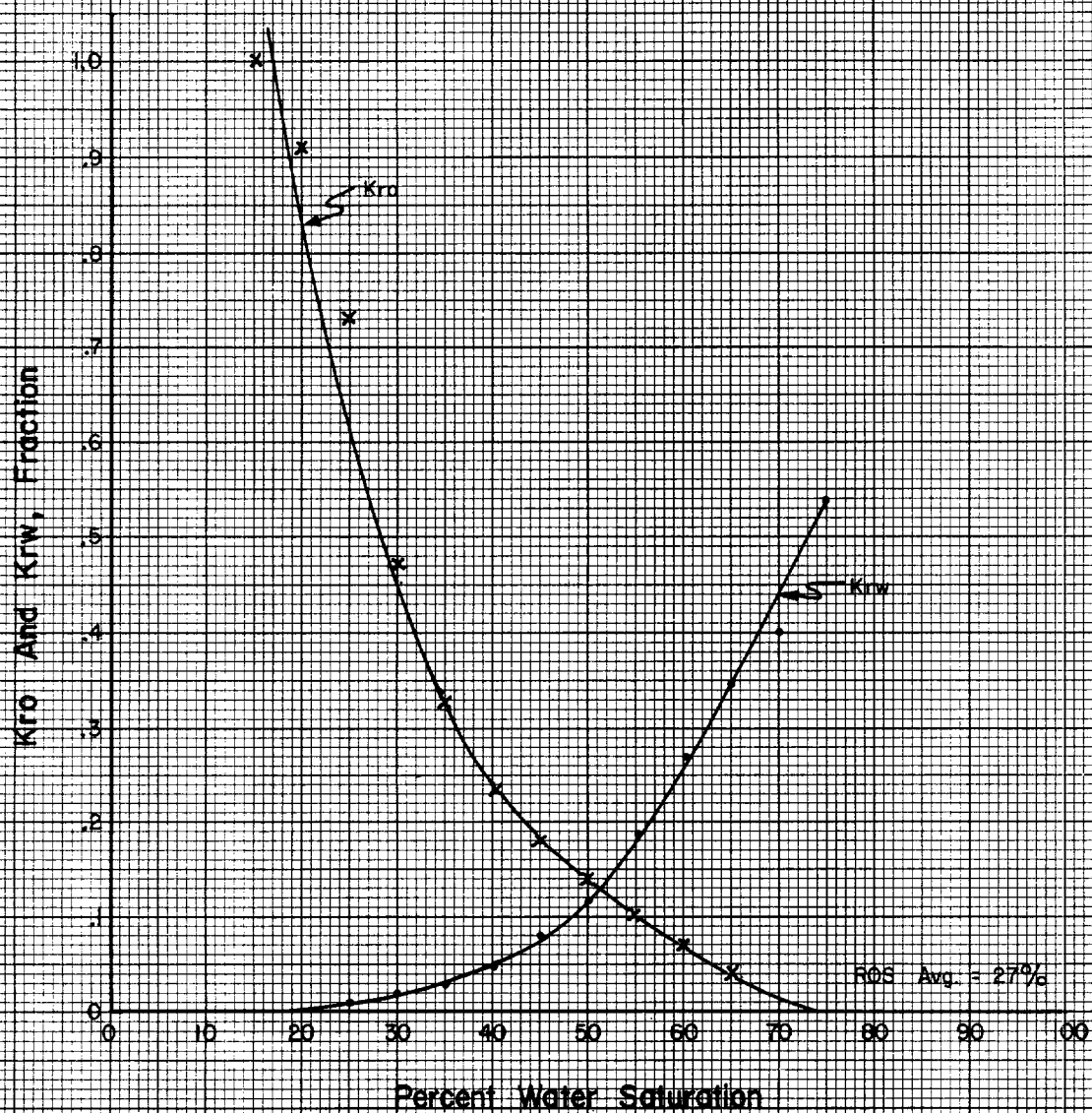


Figure 10





Phillips Santa Fe 128
Relative Permeability Curves

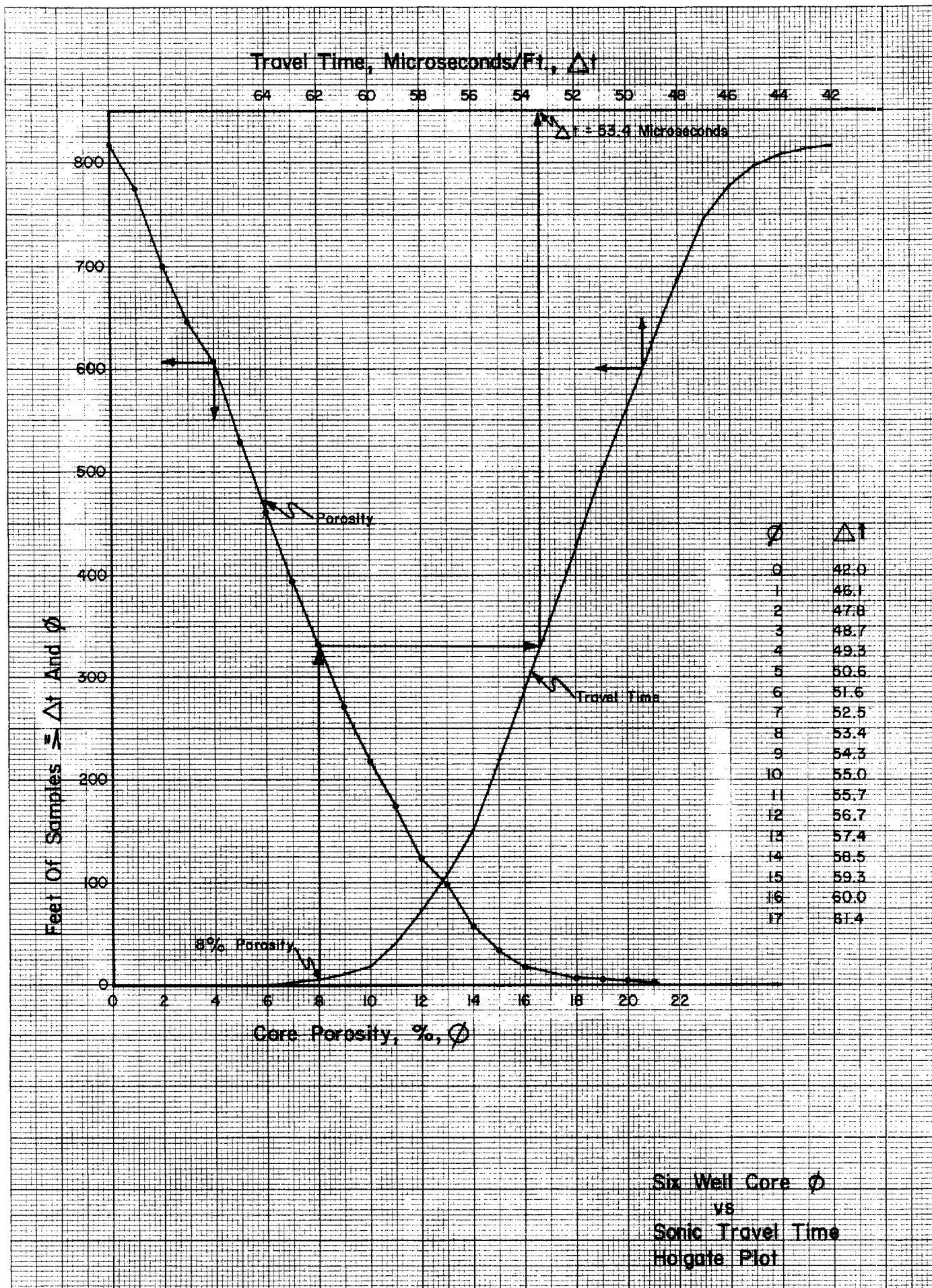


Figure 13

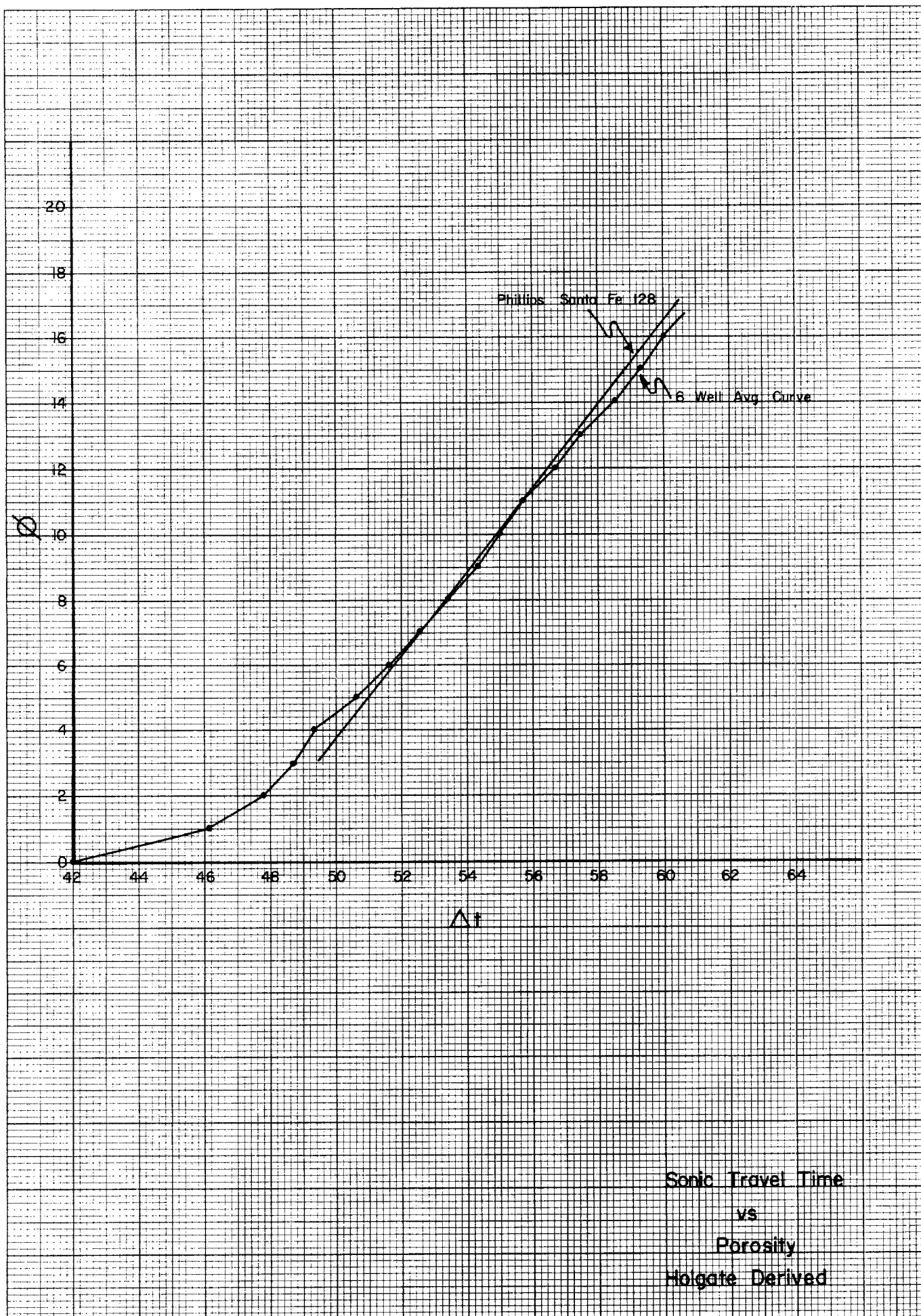
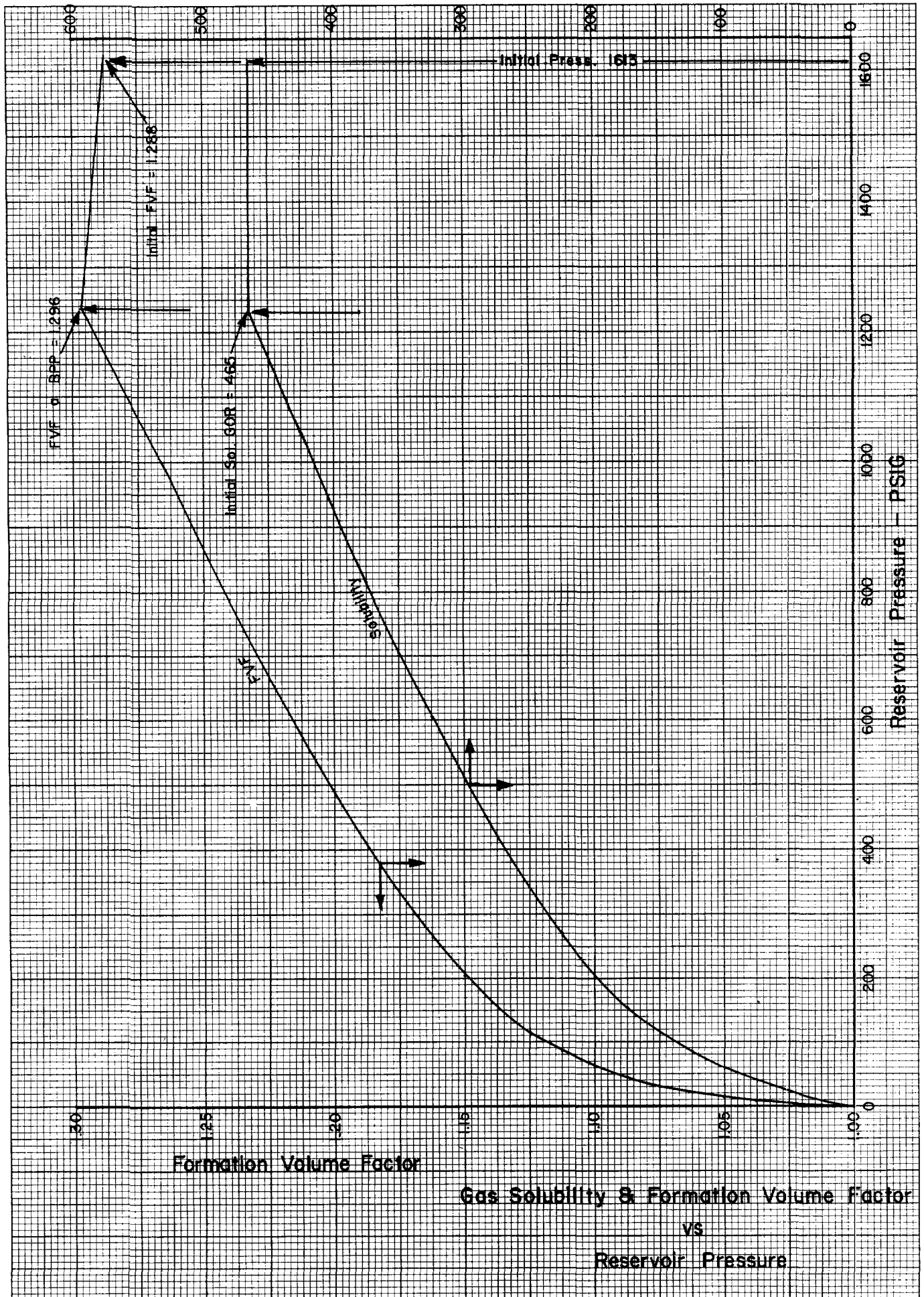
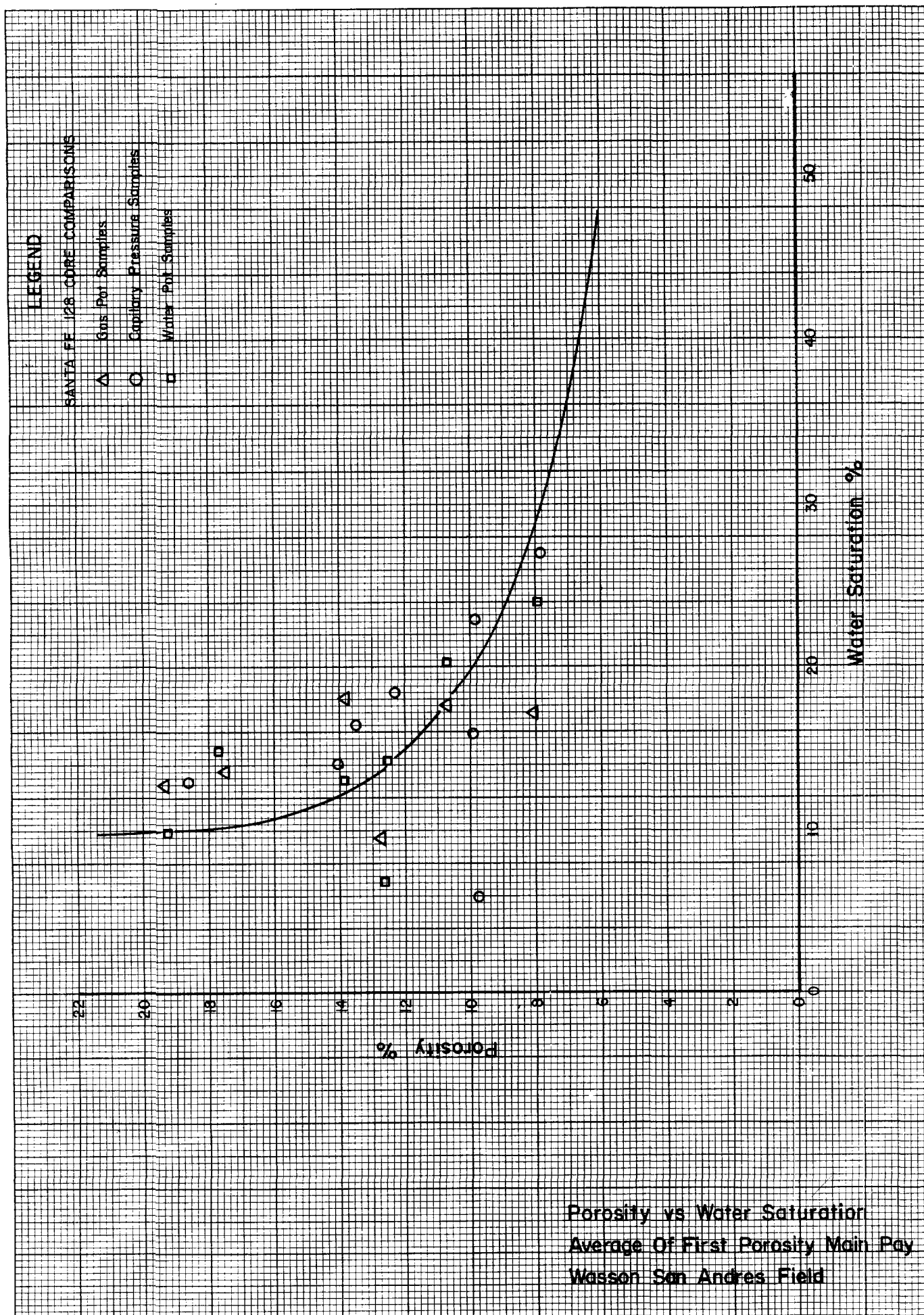
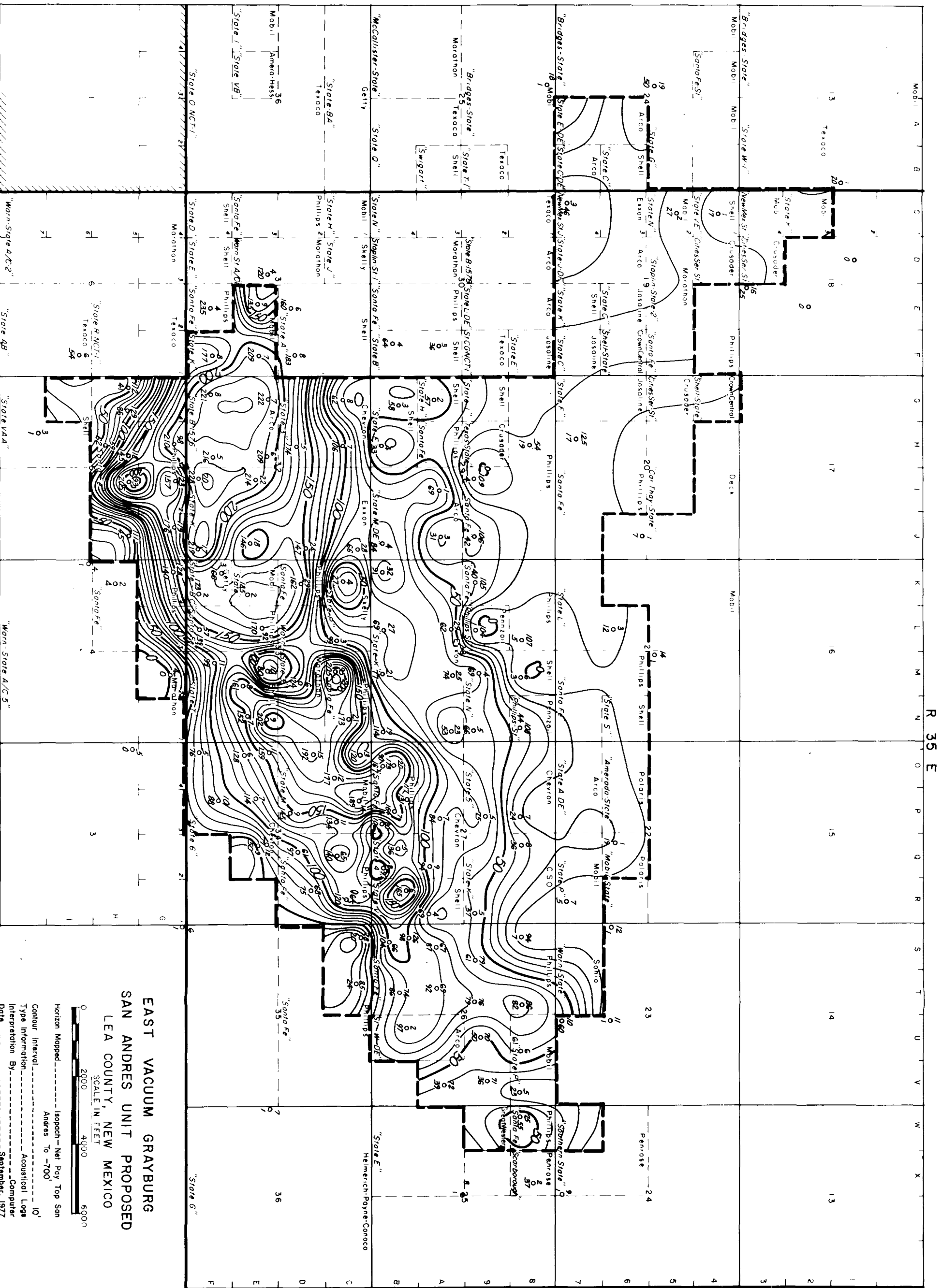


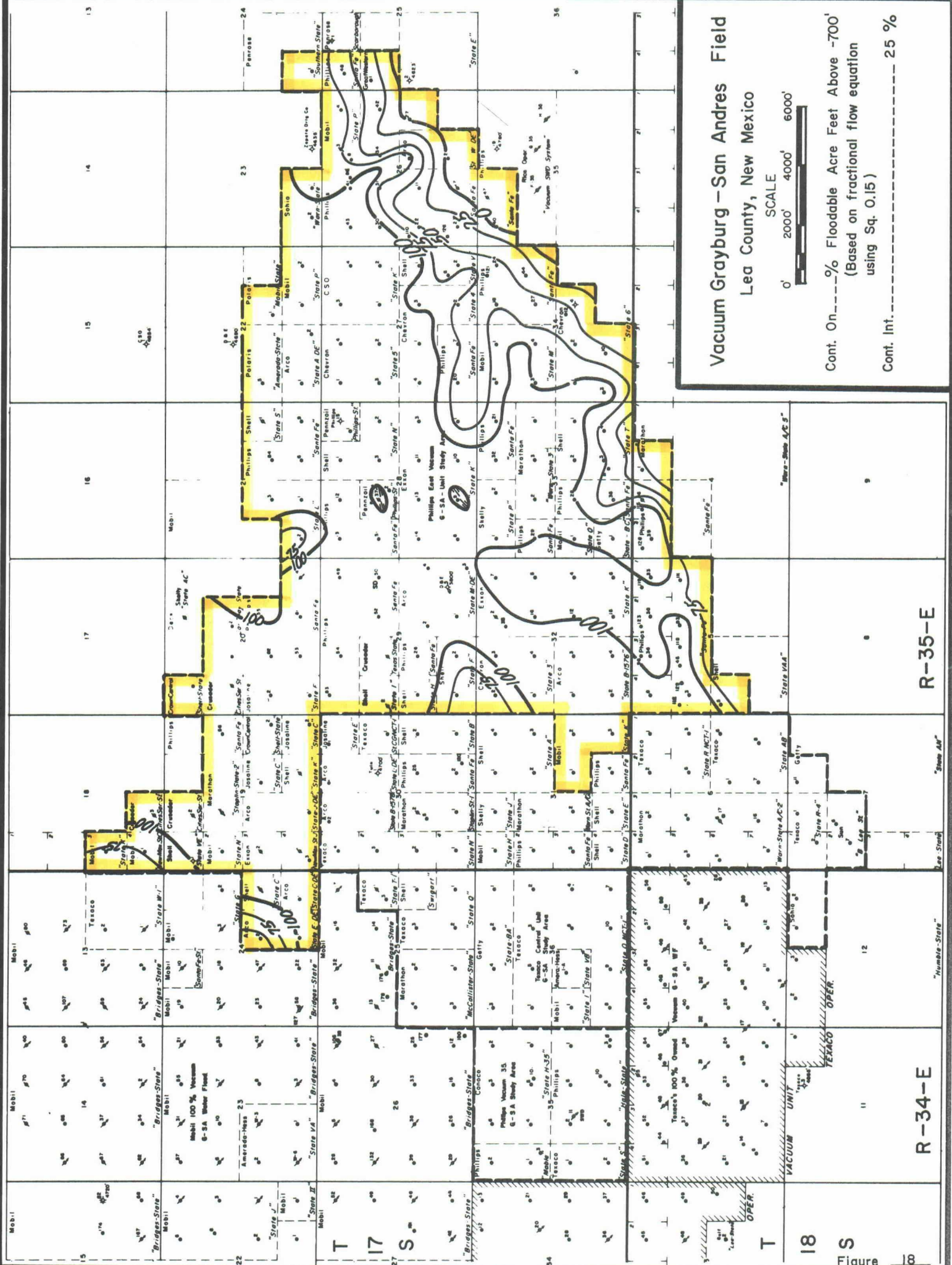
Figure 14

Gas - Oil Ratio - Cu. Ft./Bbl.









Vacuum Grayburg-San Andres Field
Lea County, New Mexico

SCALE
0' 2000' 4000' 6000'

Cont. On-----% Floodable Acre Feet Above -700'
(Based on fractional flow equation
using Sq. 0.15)

Cont. Int.-----25 %

R-35-E

R-34-E

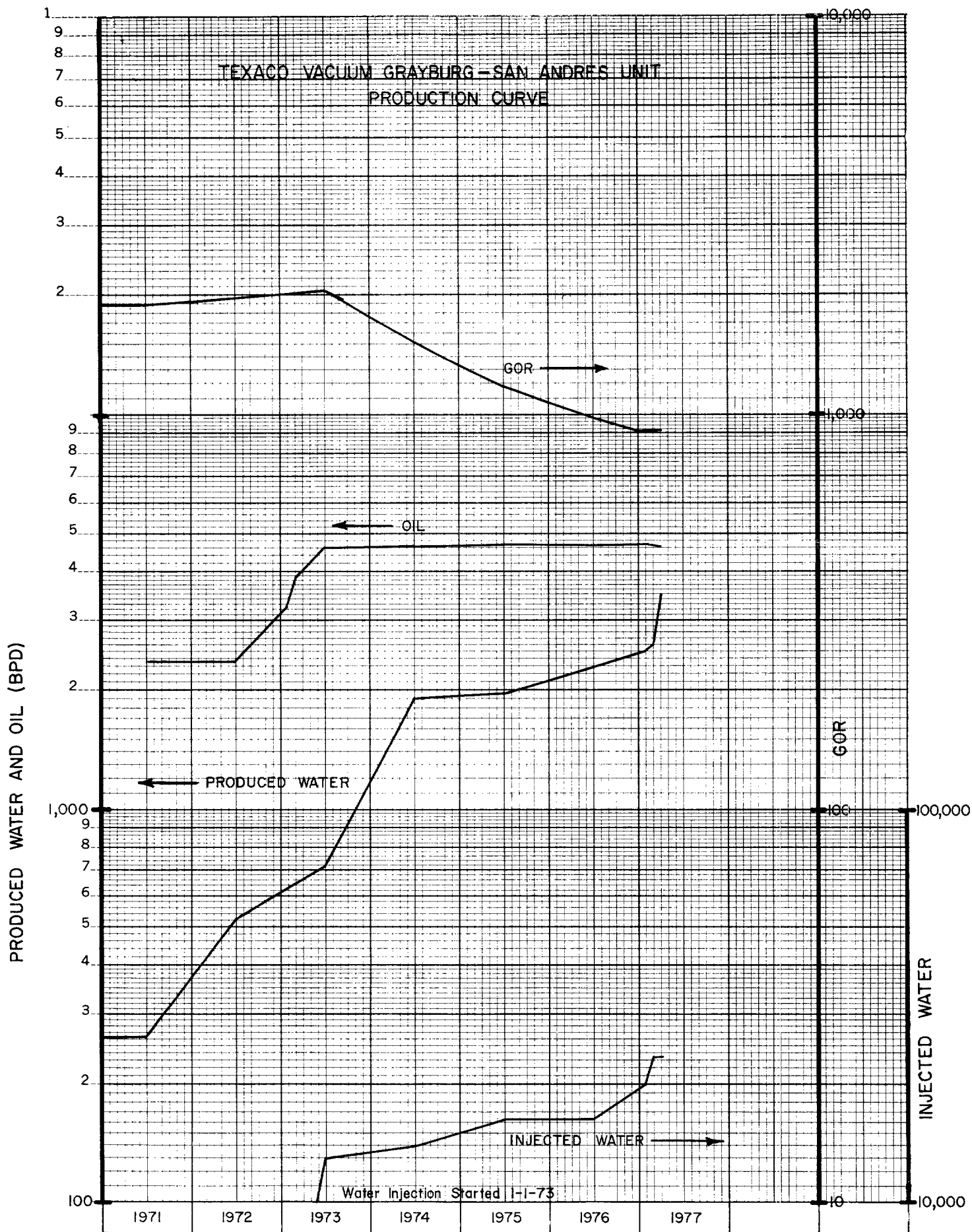
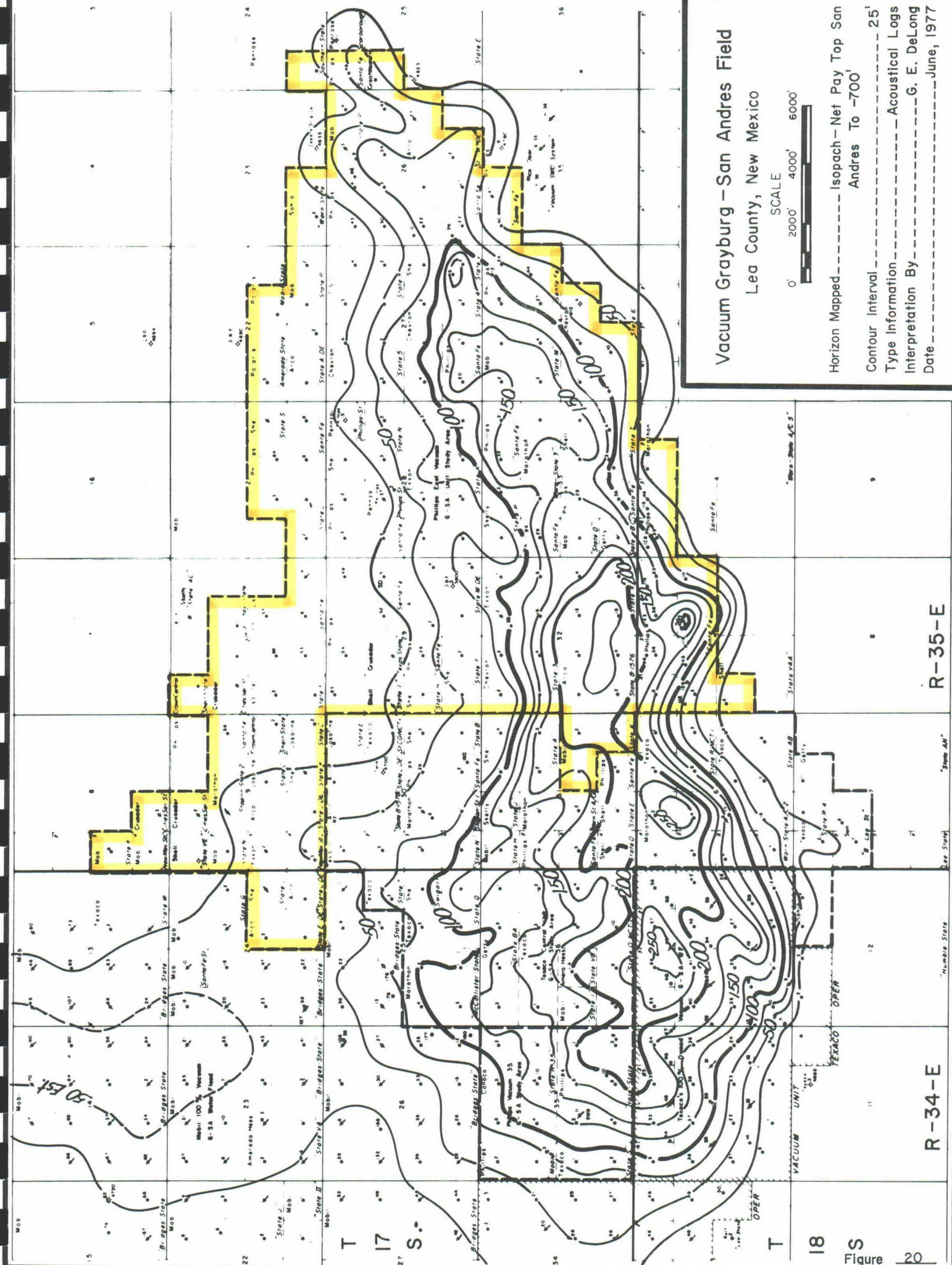


Figure 19



Vacuum Grayburg-San Andres Field

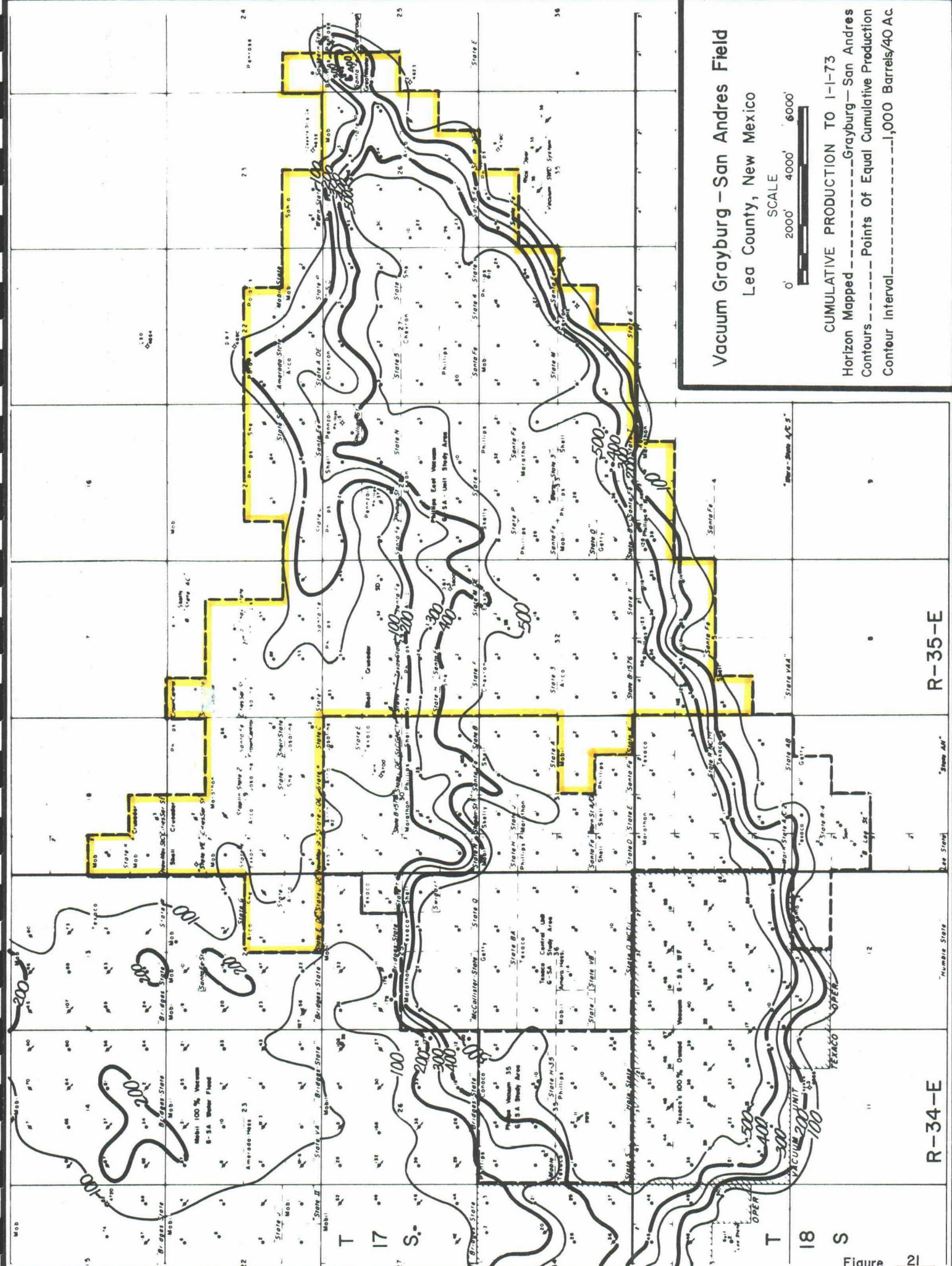
Lea County, New Mexico



Isopach-Net Pay Top San Andres To -700'
Contour Interval 25'
Type Information Acoustical Logs
Interpretation By G. E. DeLong
Date June, 1977

R-35-E

R-34-E



Vacuum Grayburg - San Andres Field

Lea County, New Mexico

SCALE

0' 2000' 4000' 6000'

CUMULATIVE PRODUCTION TO 1-1-73

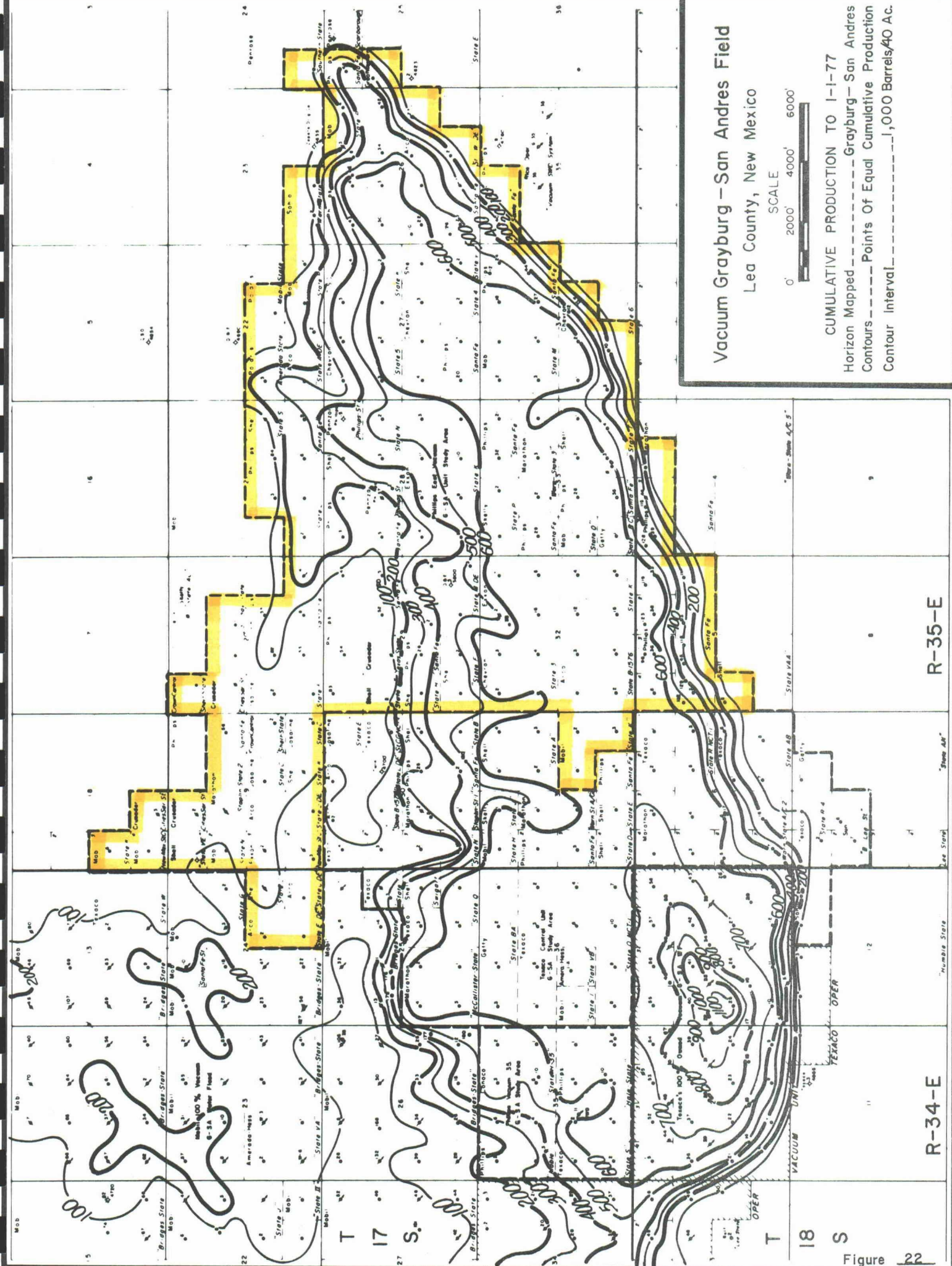
Horizon Mapped ----- Grayburg-San Andres

Contours ----- Points Of Equal Cumulative Production

Contour Interval ----- 1,000 Barrels/40 Ac

R-34-E

R-35-E



Vacuum Grayburg-San Andres Field

Lea County, New Mexico



CUMULATIVE PRODUCTION TO 1-1-77
 Horizon Mapped ----- Grayburg-San Andres
 Contours ----- Points Of Equal Cumulative Production
 Contour Interval ----- 1,000 Barrels/40 Ac.

Figure 22

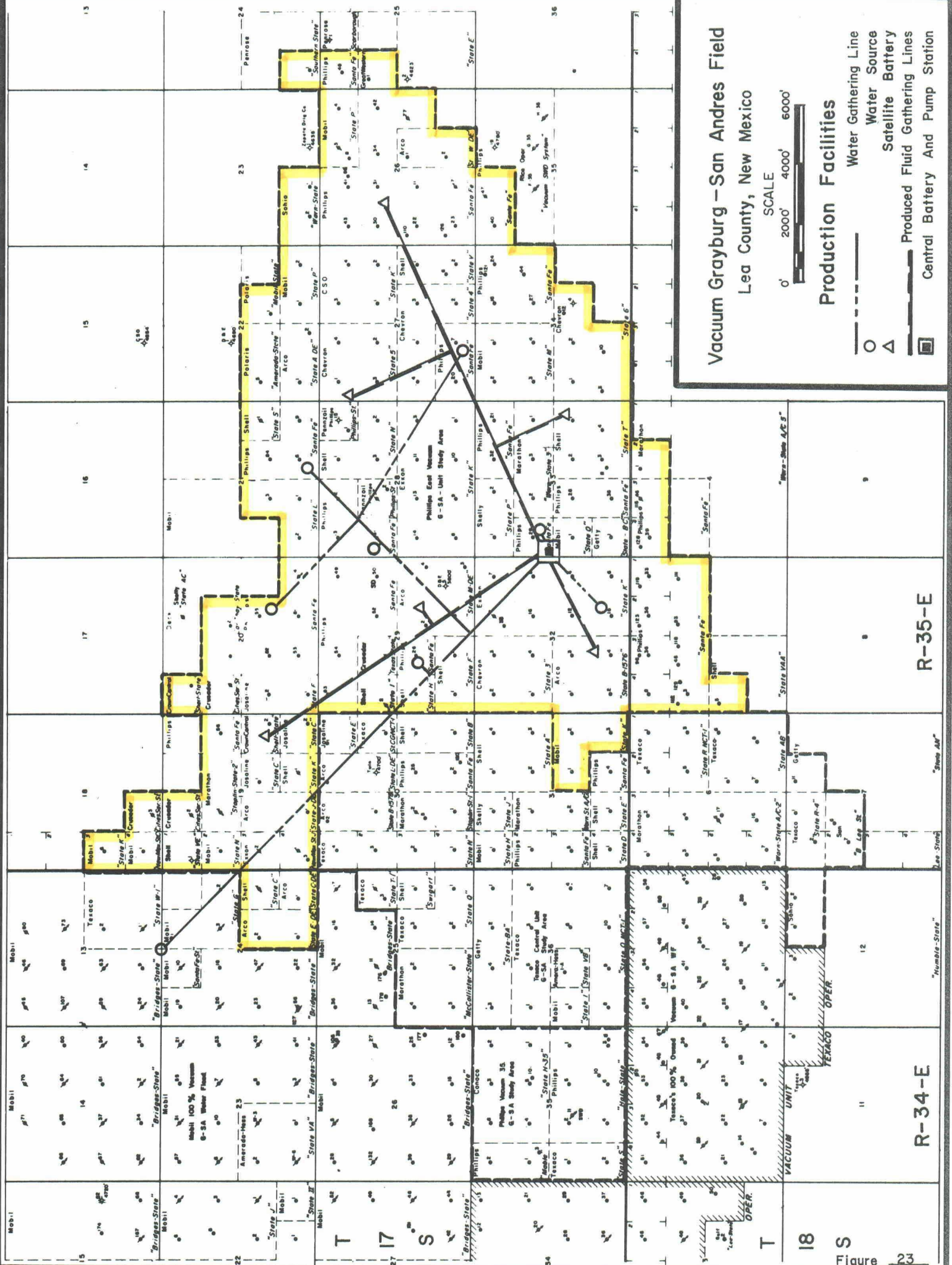
Vacuum Grayburg - San Andres Field

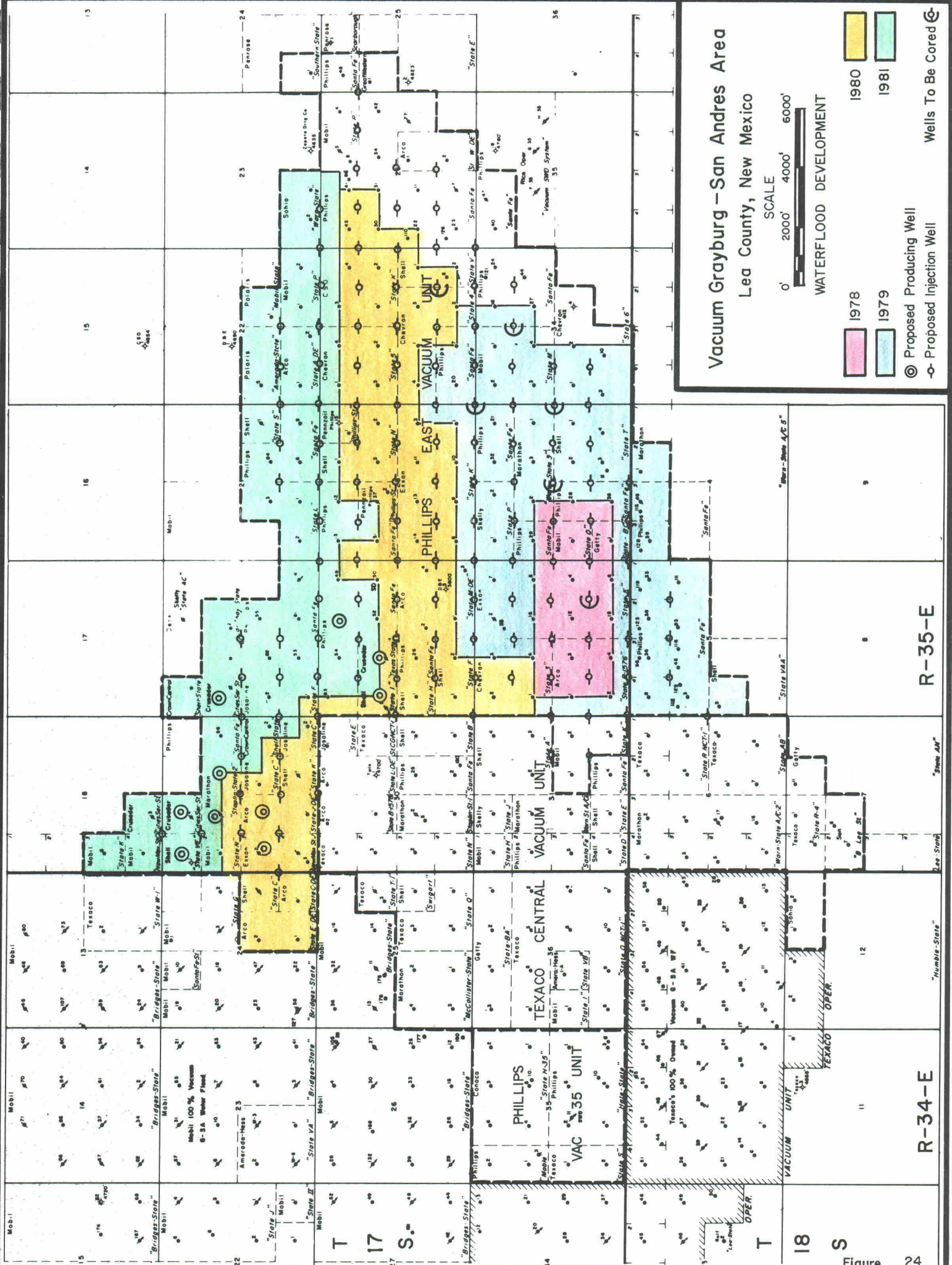
Lea County, New Mexico

SCALE
0' 2000' 4000' 6000'

Production Facilities

- Water Gathering Line
- Water Source
- Satellite
- Battery
- Produced Fluid Gathering Lines
- Central Battery And Pump Station





Vacuum Grayburg-San Andres Area

Lea County, New Mexico

SCALE
0' 2000' 4000' 6000'

WATERFLOOD DEVELOPMENT

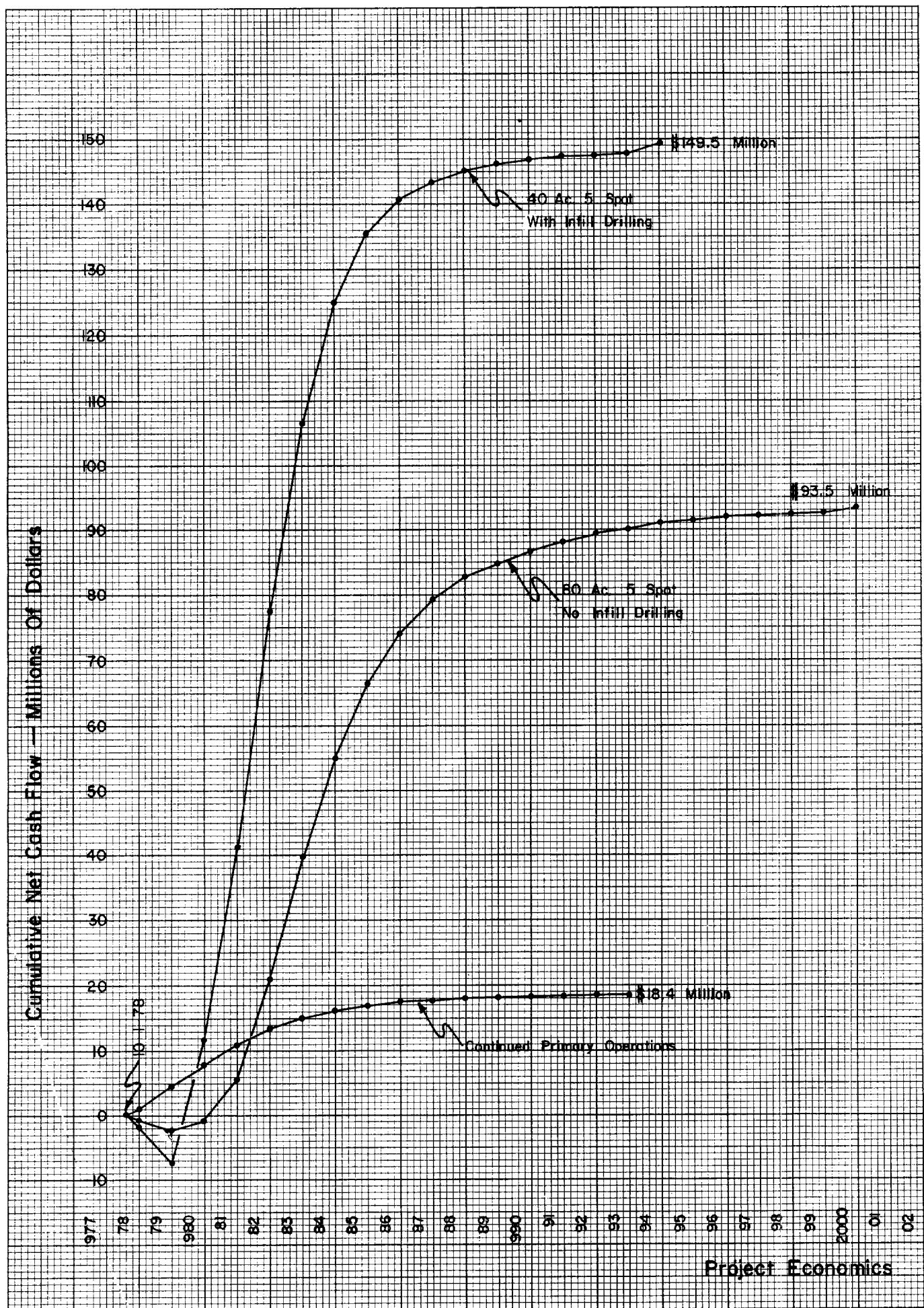
1978
1979
1980
1981

© Proposed Producing Well
⊗ Proposed Injection Well

Wells To Be Cored

R-35-E

R-34-E



METHOD OF ALLOCATION

The following is a sample calculation of allocation of future primary reserves assigned to tracts producing at top allowable and with annual production decline rates less than 13 percent.

Conditions

Ultimate Primary Recoverable Reserves	5,992,000
Less Future Primary Determined from Decline Curves	461,000
Less Cumulative Production, January 1, 1977	<u>4,993,224</u>
Remaining Primary Reserves to be Allocated	537,776
Decline Rate when Wells begin Decline	28% per year
Economic Limit	2 bopd

The three tracts producing under these conditions are shown in the table below:

Line		<u>Tract A</u>	<u>Tract B</u>	<u>Tract C</u>	<u>Total</u>
1	Category	Top Allowable	13% Decline	Top Allowable	
2	Reserves Produced During Decline	86,666	64,444	86,666	237,776
3	Initial Rate, barrels/day	80	60	80	220
4	Percent Remaining Floodable, acre-feet (from map, Fig. 19)	100	75	56.25	
5	Line 3 x Line 4	80	45	45	170
6	Percent of Flat Rate Reserves:				
	$\frac{\text{Line 5} \times 100}{\text{Total Line 5}} =$	47	26.5	26.5	100
7	Flat Rate Reserves, Based on percent acre-feet	141,000	79,500	79,500	300,000
8	Percent of Total Initial Production Rate:				
	$\frac{\text{Line 3} \times 100}{\text{Total Line 3}} =$	36.4	27.3	36.4	100
9	Flat Rate Reserves, Based on initial production rates	109,091	81,818	109,091	300,000
10	Reserves Allocated:				
	$\text{Line 2} + \frac{\text{Line 7} + \text{Line 9}}{2} =$	211,711	145,104	180,961	537,776

CALCULATION OF WATER SATURATIONS FROM WELL TESTS
BY USE OF FRACTIONAL FLOW FORMULA

The fractional flow formula has long been used as a practical tool in determining the water saturation necessary to obtain a given percent water cut in reservoirs with 100 percent liquid saturation. The following premises are necessary to make the formula applicable in reservoirs with three-phase saturation:

1. Three-phase flow does not exist. Water only contacts the oil. The oil bank ahead of the water absorbs the free gas before the water arrives.
2. The only two systems of two-phase flow that exist are oil-water and oil-gas.

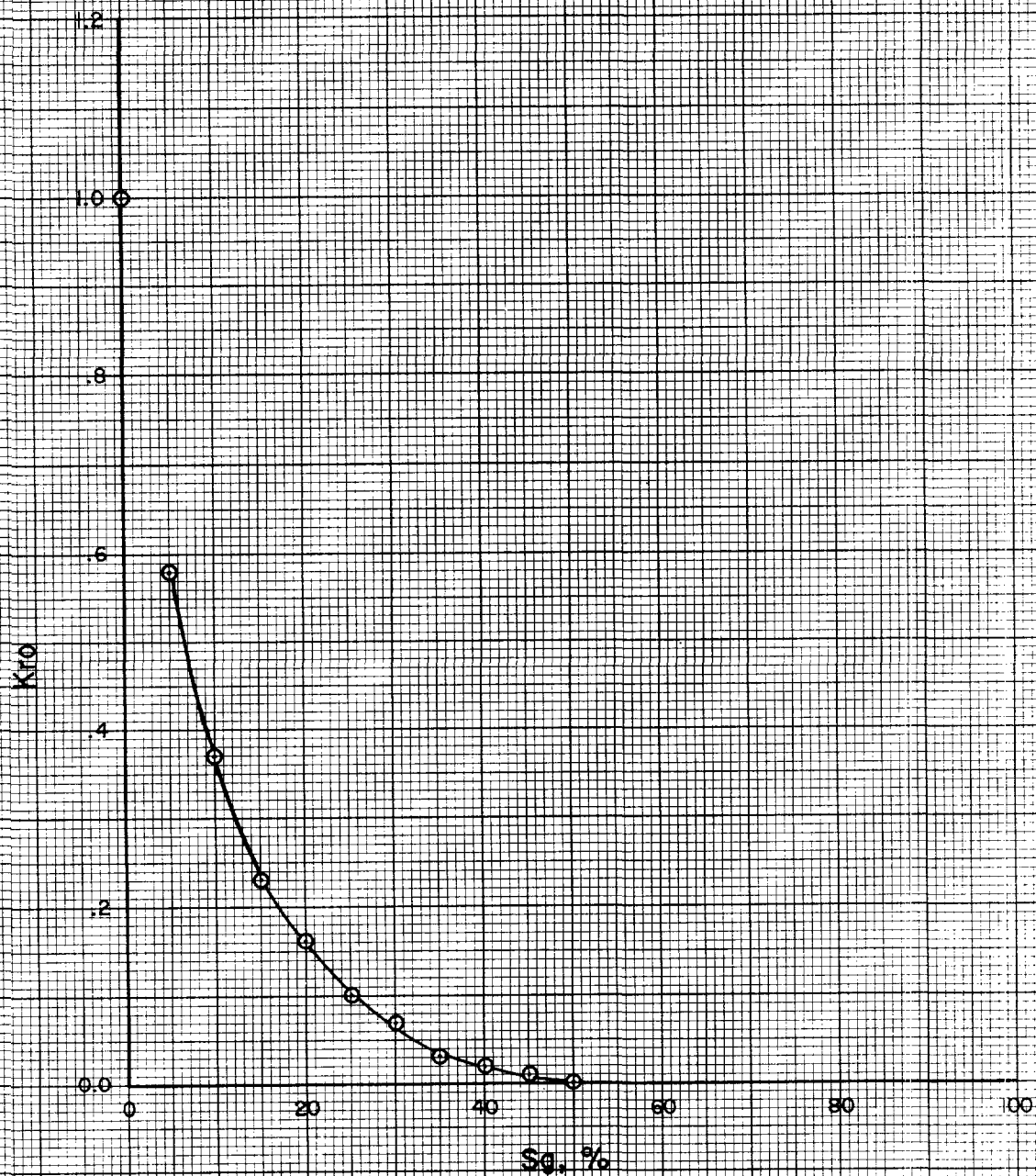
The water relative permeability is only affected by oil, but the oil relative permeability is affected by gas in the oil-gas system and water in the oil-water system. If a gas saturation can be calculated in the oil-gas system, then the permeability to oil in this system can be calculated from the oil-gas relative permeability curve.

In order to calculate the gas saturation in 1972 and K_{ro} at that saturation, production data for 14 wells with pressure histories within the water encroachment area were compiled. Average daily per well production rates for these wells in 1972 were 64 barrels of oil, 65 barrels of water, and 93 Mcf of gas. They produced 51 percent water and at a gas-oil ratio of 1,465 compared to a gas-oil ratio of only 1,252 for the total unit. An average reservoir pressure of 637 psi was calculated from individual well cumulative production versus bottom-hole pressure data.

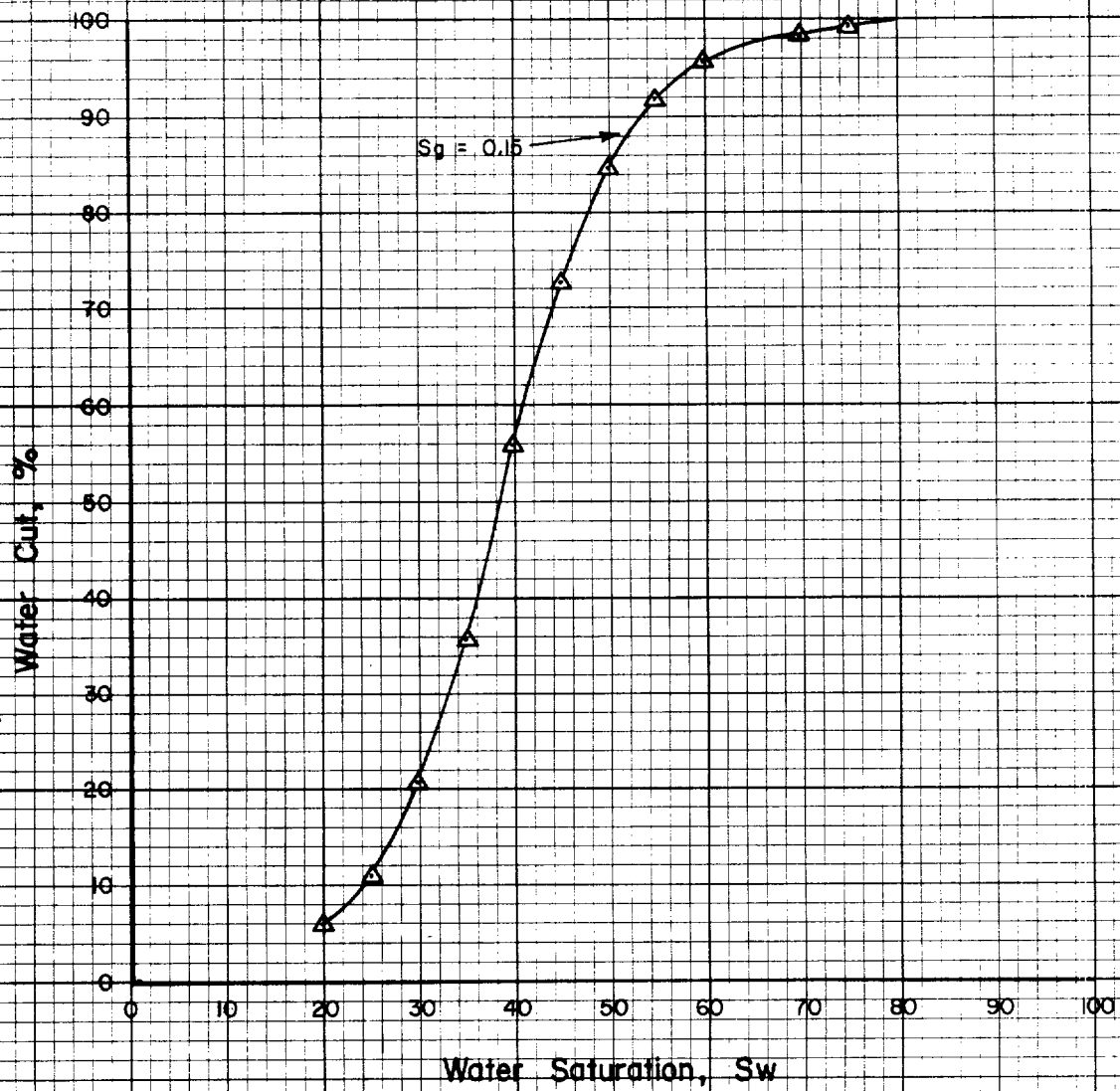
Turner material balance calculations for depletion type reservoirs were made with the K_g/K_o values changed until the reservoir pressure of 637 psi occurred at approximately the same time as the gas-oil ratio of 1,465. The gas saturation at this point (15 percent) was read from the material balance calculations and entered into the oil-gas permeability curve (Appendix B, Figure 1) to obtain the relative oil permeability. This was used to reduce the permeability to oil in the fractional flow equations. Appendix B, Figure 2, shows the fractional flow curve obtained by this method.

Based on the oil-water relative permeability curves shown in Figure 12, 30 percent residual oil saturation and a connate water saturation of 20 percent were used in calculating the remaining floodable acre-feet from the calculated water saturation. The formula used was:

$$\text{Percent floodable acre-feet remaining} = (.70 - S_w) + .50.$$



Relative Oil Permeability
vs
Gas Saturation
Average Phillips Santa Fe 128 Cores



Phillips, Santa Fe 128-S. A. Zone
Fractional Flow Curve

PRODUCTION AND OPERATING COST FORECAST

Year	Continued Primary				80-Acre, 5-Spot				40-Acre, 5-Spot			
	Oil M Barrels Per Year	Gas MMcf Per Year	Lifting Cost, \$M Per Year		Oil M Barrels Per Year	Gas MMcf Per Year	Lifting Cost, \$M Per Year		Oil M Barrels Per Year	Gas MMcf Per Year	Lifting Cost, \$M Per Year	
1978	444	799	375		365	657	426		510	953	414	
(3 Mos.)												
1979	1,776	3,198	1,500		1,460	2,628	1,533		2,117	3,811	1,659	
1980	1,645	3,620	1,389		1,314	2,102	1,674		5,872	8,221	2,245	
1981	1,407	4,361	1,188		2,738	3,833	1,985		8,043	7,238	3,191	
1982	1,041	4,162	879		4,380	5,037	1,993		8,760	4,906	3,377	
1983	749	2,623	749		5,037	4,533	1,997		7,446	2,606	3,391	
1984	539	1,403	539		4,495	2,517	2,009		5,212	1,824	3,386	
1985	388	777	388		3,649	1,277	2,009		3,649	1,277	3,374	
1986	280	419	336		2,943	1,030	2,009		2,554	894	3,357	
1987	201	292	280		2,374	831	2,009		1,788	626	2,873	
1988	145	203	232		1,915	670	2,009		1,252	438	2,070	
1989	104	141	187		1,545	541	2,009		876	307	1,484	
1990	75	98	150		1,246	436	1,678		613	215	1,088	
1991	54	68	119		1,005	352	1,369		429	150	789	
1992	39	47	94		811	284	1,118		300	105	578	
1993	28	32	73		654	229	917		210	74	300	
1994					527	185	755		147	51	150	
1995					425	149	634					
1996					343	120	525					
1997					277	97	438					
1998					223	78	371					
1999					180	63	316					
2000					145	51	276					
Total upper-tier oil, M barrels					11,335				27,333			

Increased value of infill drilling due to price difference alone =
(1,000) (27,333 - 11,335) (12.00 - 5.25) = \$108 x 10⁶.

Base production control level = 2,040 M barrels per year.

APPENDIX C
Table B

LIFTING COST CATEGORIES

<u>Category</u>	<u>Units</u>	<u>Annual Cost Per Unit</u>
Injection Surveys	Injection Wells	\$ 1,000.00
Treating Costs	Thousands of Barrels of Fluid Produced	\$ 4.00
Maintenance Costs	Total Wells	\$ 5,800.00
Electricity Cost	Producing Wells	\$ 6,879.00
Operator Cost	Operators (3 needed)	\$16,667.00
Fuel Gas Costs	Thousands of Barrels of Water Injected	\$ 4.73

APPENDIX C
Table C

DRILLING WELL AND WORKOVER COSTS

<u>Area</u>	<u>Type</u>	<u>Casing</u>	<u>Total Wells</u>	<u>Cost Per Well</u>		
				<u>Tangible</u>	<u>Intangible</u>	<u>Total</u>
North	Injection	4-1/2"	70	\$39,700	\$ 96,000	\$135,700
All	Producing	4-1/2"	10	40,300	115,000	155,300
South	Injection	5-1/2"	51	50,000	103,000	153,000
South	Injection with Coring	5-1/2"	6	50,000	136,900	186,900
All	Deepen Old Well	All	100 (40-acre) 50 (80-acre)	2,600	19,200	21,800
All	Convert Old Well to Injection	All	65	4,000	30,200	34,200

INVESTMENT SCHEDULE

1978

	80-Acre, 5-Spot			40-Acre, 5-Spot		
	Tangibles	Intangibles	Total	Tangibles	Intangibles	Total
Tank Battery Consolidation	\$ 494,500	\$ 30,200	\$ 524,700	\$ 652,600	\$ 30,200	\$ 682,800
Water Treatment and Injection Plant	492,200	25,900	518,100	693,500	25,900	719,400
Fresh Water Make-up Supply	184,700	9,600	194,300	213,500	9,600	223,100
Drill 10 Injection Wells	0	0	0	500,300	1,063,200	1,563,500
1 Well -- S/2 with core						
9 Wells -- S/2 no core						
Convert 10 Producers to Injection	40,300	301,800	342,100	0	0	0
Lift Equipment Revision	299,000	86,300	385,300	598,000	172,500	770,500
Total (1978)	\$1,510,700	\$ 453,800	\$ 1,964,500	\$ 2,657,900	\$ 1,301,400	\$ 3,959,300

1979

Tank Battery Consolidation	\$1,483,500	\$ 90,600	\$ 1,574,100	\$ 1,957,900	\$ 90,600	\$ 2,048,500
Water Treatment and Injection Plant	1,476,600	77,600	1,554,200	2,080,400	77,600	2,158,000
Fresh Water Make-up Supply	554,200	28,900	583,100	640,400	28,900	669,300
Drill 43 Injection Wells	0	0	0	2,099,400	4,527,000	6,626,400
4 Wells -- S/2 with core						
34 Wells -- S/2 no core						
5 Wells -- N/2						
Convert 20 Producers to Injection	80,500	603,500	684,000	0	0	0
Deepen Producing Wells	52,900	384,100	437,000	92,600	672,200	764,800
Lift Equipment Revision	897,000	258,800	1,155,800	1,794,000	517,500	2,311,500
Total (1979)	\$4,544,700	\$1,443,500	\$ 5,988,200	\$ 8,664,700	\$ 5,913,800	\$14,578,500

INVESTMENT SCHEDULE--Continued

1980

	80-Acre, 5-Spot		40-Acre, 5-Spot	
	Tangibles	Intangibles	Total	Total
Drill 43 Injection Wells				
1 Well -- S/2 with core	\$ 0	\$ 0	\$ 0	\$ 6,024,400
8 Wells -- S/2 no core				
34 Wells -- N/2				
Drill 3 Producers	120,800	345,000	465,800	465,800
Convert 20 Producers to Injection	80,500	603,500	684,000	0
Deepen Producing Wells	52,900	384,100	437,000	764,800
Total (1980)	\$ 254,200	\$1,332,600	\$ 1,586,800	\$ 7,255,000

1981

	80-Acre, 5-Spot		40-Acre, 5-Spot	
	Tangibles	Intangibles	Total	Total
Drill 31 N/2 Injection Wells				
Drill 7 Producers	\$ 0	\$ 0	\$ 0	\$ 4,206,700
Convert 15 Producers to Injection	281,800	805,000	1,086,800	1,086,800
Deepen Producing Wells	60,400	452,600	513,000	0
	26,500	192,100	218,600	655,600
Total (1981)	\$ 368,700	\$1,449,700	\$ 1,818,400	\$ 5,949,100
GRAND TOTAL	\$6,678,300	\$4,679,600	\$11,357,900	\$31,741,900

EXHIBIT _____

**PHILLIPS PETROLEUM COMPANY**HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.NATURAL RESOURCES GROUP
Exploration and Production

November 30, 1977

Re: Proposed East Vacuum Gray-
burg - San Andres Unit
Lea County, New Mexico

The Working Interest Owners
(Mailing List Attached)

Gentlemen:

This is to invite you to attend a meeting in Odessa Texas on December 15 at 9:00 A.M. to further discuss formation of the captioned unit. The meeting will be held in the Reddy Kilowatt Room in Texas Electric's building at 520 N. Lincoln.

You have been furnished a copy of the Engineering Committee's report and all responding engineering representatives have indicated that, in their view, the parameter table in the report can be used as a basis for negotiating tract participations. Under the circumstances we will not plan to have a review of the report as such. We will, nevertheless, receive and note such comments about the report as anyone wishes to make.

Many of you have an interest in the Central Vacuum Unit. We plan to make only such changes in the verbiage of the Central Vacuum Unit's agreements as are appropriate for the East Vacuum Unit and will furnish you copies of the resulting agreements, hopefully for your signature, at such time as participation negotiation is complete. If there are any provisions in the Central Vacuum Unit's agreements that you find particularly onerous, please advise me at your earliest convenience in order that consideration can be given to deleting them. I will have available at the meeting a limited number of copies of the Central Vacuum Unit's agreements to furnish those of you who have no interest in the unit.

We foresee that the major part of the discussion on the 15th will be with respect to participation. Presuming that sufficient progress will be made in this regard to warrant commencement on the agreements, you will also be requested to approve pre-unitization expenses that will, as a result, shortly commence.

Yours very truly,

DEPOSE EXAMINER NUTTER

OIL CONSERVATION DIVISION

*Phillips*EXHIBIT NO. 7CASE NO. 6366

PHILLIPS PETROLEUM COMPANY

J. E. Chrisman

JEC:mb

MINUTES OF WORKING INTEREST OWNERS MEETING
DECEMBER 15, 1977

EAST VACUUM GRAYBURG-SAN ANDRES UNIT, PROPOSED
LEA COUNTY, NEW MEXICO

A meeting of the Working Interest Owners of the East Vacuum Grayburg-San Andres Unit, Proposed, was held on December 15, 1977, in the Reddy Room of the Texas Electric Service Company Building, Odessa, Texas. The meeting was called to order by the Chairman, Mr: J. E. Chrisman, Phillips Petroleum Company. Representatives attending the meeting are listed below:

Name	Company	Location
G. Thane Akins	Atlantic Richfield Company	Midland, Texas
Michael Griffin	Atlantic Richfield Company	Midland, Texas
Glenn George	Chevron U.S.A., Inc.	Midland, Texas
Willie Goudeau	Chevron U.S.A., Inc.	Midland, Texas
Mike Mabry	Cities Service Company	Midland, Texas
J. A. Warren	Crown Central Petroleum Corp.	Midland, Texas
Michael Kelly	Elk Oil Company	Roswell, New Mexico
J. M. Shepherd	Exxon Company, U.S.A.	Midland, Texas
W. E. Nolan	Exxon Company, U.S.A.	Midland, Texas
O. V. Struckey	Getty Oil Company	Midland, Texas
E. R. Frazier	Mobil Oil Corporation	Houston, Texas
A. J. Hankinson, Jr.	Mobil Oil Corporation	Houston, Texas
J. Raney	Pennzoil Company	Midland, Texas
Charles A. Brown	Pennzoil Company	Midland, Texas
Bill Spires	Polaris Production Corporation	Midland, Texas
W. E. Buck	Shell Oil Company	Houston, Texas
P. L. Bondor	Shell Oil Company	Houston, Texas
A. J. Fore	Shell Oil Company	Houston, Texas
W. B. Taylor, Jr.	Phillips Petroleum Company	Houston, Texas
J. E. Chrisman	Phillips Petroleum Company	Houston, Texas
J. E. Curzon	Phillips Petroleum Company	Bartlesville, Oklahoma
W. W. Allen	Phillips Petroleum Company	Odessa, Texas
W. J. Mueller	Phillips Petroleum Company	Odessa, Texas
R. L. Loper	Phillips Petroleum Company	Odessa, Texas
R. E. Dowden	Phillips Petroleum Company	Odessa, Texas
Gene DeLong	Phillips Petroleum Company	Odessa, Texas

Those in attendance represented approximately 90 percent of the working interest in the proposed unit based upon surface acres.

Mr. J. E. Chrisman opened the meeting with a short review of the proposed project and stated it was Phillips' opinion that the area should be unitized as quickly as possible.

The Engineering-Geological report was reviewed and the following points were noted:

1. Table I is an operator listing and not necessarily a true working interest owners parameter total. Five operators listed do not have 100 percent working interest in all tracts. A working interest owners parameter percentage tabulation was then distributed and a copy is attached to these minutes for all owners not present at the meeting.
2. The current production parameter shown for the Bettis, Boyle and Stovall Tracts Nos. 1907 and 2005 was modified by the Engineering-Geological Committee to reflect true current production. These tracts had been purchased by the current operator in 1976 and production was not renewed until November, 1976. Mobil Oil Corporation moved and Chevron seconded that the modification be accepted by the working interest owners. Motion carried with 79.32 percent voting "yes", 10.498 percent passing, and no dissenting votes.

Shell Oil Company requested clarification of Figure 24 in the Engineering-Geological report as to why no injection wells were shown on the eastern edge tracts. Mr. Chrisman stated that this was an oversight and that Phillips planned full development of the entire unitized area. Eleven injection wells should have been shown on these tracts and the economics for 20-acre development less primary are as follows:

Investment, \$M	33,294
Net Cash Flow, \$M	130,204
Average Annual Rate of Return, percent	144
Number of Times Investment Returned	4.91
Payout, years	2.36
Present Value at 10 Percent, \$M	82,844

Mr. R. E. Dowden advised those present that no "disapprovals" were received on his letter ballot to the Engineering-Geological Committee members regarding their acceptance of the report and parameter table. Mr. E. R. Frazier with Mobil moved that the Engineering-Geological report be accepted as fulfillment of the charges to the Engineering-Geological Committee and as a basis for negotiation of participation formula. Chevron seconded the motion. Voting was handled on surface acres; 69.66 percent voted "yes", 20.18 percent passed, and there were no disapprovals.

It appeared the consensus of those present was that the development time shown in the report (four years) was too long and should be expedited if practical. The Exxon representative requested that Phillips include in the minutes an explanation as to how the unit oil allowable will be handled. This explanation is as follows:

Upon unitization, the unitized area allowable will be as it was prior to unitization; that is, the sum of the individual well allowables based upon

Minutes of Working Interest Owners Meeting
East Vacuum Grayburg-San Andres Unit, Proposed
Page 3

their ability to produce but not to exceed 80 barrels of oil per day per 40-acre proration unit. Upon initiation of water injection, a project area will be established within the unit boundary. The project area will encompass each 40-acre proration unit upon which is located an active water injection well and all their direct and diagonal offsetting 40-acre proration units with an active producing well. The project area allowable will be a basic allowable equal to 80 barrels of oil per day times the number of developed 40-acre proration units in the project area plus a bonus or water injection credit allowable equal up to an additional 80 barrels of oil per day for each 40-acre proration unit but contingent upon full reservoir voidage replacement.

Two participation formulas were then proposed and voted upon. These formulas and the voting results are attached. Since neither obtained sufficient approval and no others were proposed, a reconvening date was discussed. It was the consensus of those present to meet on Wednesday of the third week in January; however, due to availability of the Reddy Room, the meeting date has been set for Thursday, January 19, 1977, at 10:00 A.M.

Meeting adjourned.

WJM:dva

FORMULA NO. 1 (Phillips')

Phase I -- 100 percent current production until 2,000,000 barrels oil
produced after date of unitization.

Phase II -- 20.0 percent current production.
10.0 percent future primary.
27.5 percent cumulative production.
22.5 percent hydrocarbon pore volume.
20.0 percent ultimate primary.

FORMULA NO. 2 (Mobil's)

Phase I -- 75 percent future primary.
25 percent current production for duration of remaining
primary reserves.

Phase II -- 100 percent secondary oil.

	Formula No. 1			Formula No. 2		
	Phase I	Phase II	Voted	Phase I	Phase II	Voted
Atlantic	7.410	9.331	Pass	9.481	10.895	Pass
Chevron	14.476	13.340	Yes	13.053	11.018	No
Cities Service	3.846	2.926	Pass	4.052	1.026	Pass
Crown Central	0.044	0.077	Yes	0.011	0.211	No
Elk Oil	0.000	0.476	Pass	0.000	0.283	Pass
Exxon	13.254	13.983	No	12.872	16.755	Yes
Getty	3.716	3.147	No	3.546	3.156	Yes
Mobil	12.948	11.608	No	13.083	13.015	Yes
Pennzoil	0.125	0.191	Pass	0.103	0.347	Pass
Phillips	32.041	31.180	Yes	30.809	28.605	No
Polaris	0.155	0.248	Pass	0.109	0.110	Pass
Shell	8.510	9.505	Pass	9.257	8.766	No
Totals	46.561	44.597	Yes	29.501	32.926	Yes
	29.918	28.738	No	53.130	48.600	No
	20.046	22.677	Pass	13.745	12.661	Pass

EAST VACUUM GRAYBURG-SAN ANDRES UNIT, PROPOSED
LEA COUNTY, NEW MEXICO

WORKING INTEREST OWNERS

Amerada Hess Corporation
Attention: Mr. R. W. Mullins
P. O. Box 2040
Tulsa, Oklahoma 74102

Amoco Production Company
Attention: Mr. J. L. Hoyt, Jr.
P. O. Box 3092
Houston, Texas 77001

Amoco Production Company
P. O. Drawer A
Levelland, Texas 79336

Arapaho Petroleum, Inc.
P. O. Box 1271
Breckenridge, Texas 76024

Atlantic Richfield Company
Attention: Mr. G. Thane Akins
P. O. Box 1610
Midland, Texas 79702

Atlantic Richfield Company
Attention: Mr. J. D. Henry
P. O. Box 2819
Dallas, Texas 75221

H. M. Bettis, Inc.
P. O. Box 1168
Graham, Texas 76046

W. T. Boyle and Company
P. O. Box 57
Graham, Texas 76046

Chevron U.S.A., Inc.
Attention: Mr. E. E. Hagan
P. O. Box 1660
Midland, Texas 79702

Cities Service Company
Attention: Mr. E. F. Motter
P. O. Box 1919
Midland, Texas 79702

Cities Service Company
Attention: Mr. K. D. Van Horn
P. O. Box 1919
Midland, Texas 79702

Crown Central Petroleum Corporation (2)
Attention: Mr. L. E. Lott
1002 Wilco Building
Midland, Texas 79701

Davoil, Inc.
P. O. Box 12507
Fort Worth, Texas 76116

Millard Deck
P. O. Box 1047
Eunice, New Mexico 88231

Elk Oil Company
Attention: Mr. Joseph J. Kelly
P. O. Box 310
Roswell, New Mexico 88201

Exxon Company, U.S.A. (2)
Attention: Mr. J. M. Shepherd
P. O. Box 1600
Midland, Texas 79702

Getty Oil Company
Attention: Mr. Audra B. Cary
P. O. Box 1231
Midland, Texas 79702

Getty Oil Company
Attention: Mr. Joe King
P. O. Box 1231
Midland, Texas 79702

Great Western Drilling Company
Attention: Mr. F. L. Ballard
P. O. Box 1659
Midland, Texas 79702

Mr. Jack D. Hensley
2015 Bayside Drive
Corona Del Mar, California 92625

EAST VACUUM GRAYBURG-SAN ANDRES UNIT, PROPOSED
Working Interest Owners
Page 2

Mr. Larry O. Hulsey
P. O. Box 1143
Graham, Texas 76046

Kokomo Oil Company
P. O. Box 4188
Odessa, Texas 79760

Mr. Boyd Laughlin
P. O. Box 1540
Midland, Texas 79702

Mr. T. W. Little
Suite 207
4925 Davis Boulevard
Fort Worth, Texas 76118

Marathon Oil Company
Attention: Mr. G. A. Naert
P. O. Box 552
Midland, Texas 79702

Mr. Hamilton E. McRae
P. O. Box 1540
Midland, Texas 79702

Mr. Kenneth Midkiff
2308 32nd Street
Snyder, Texas 79754

Mobil Oil Corporation (2)
Attn: Joint Interest Administrator
Three Greenway Plaza-East
Houston, Texas 77046

Mobil Oil Corporation
Attention: Mr. E. R. Frazier
Three Greenway Plaza-East
Houston, Texas 77046

Mr. Davis Payne
P. O. Box 1749
Midland, Texas 79702

Petrosearch, Inc.
825 Petroleum Club Building
Denver, Colorado 80202

Pennzoil Company
Attention: Mr. J. C. Raney
P. O. Drawer 1828
Midland, Texas 79702

Pennzoil Company
Attention: Mr. C. A. Brown
P. O. Drawer 1828
Midland, Texas 79702

Penrose Production Company
Attention: Mr. H. S. Winston
1205 Commerce Building
Fort Worth, Texas 76102

Phillips Petroleum Company
Attention: Mr. W. W. Allen
518 Phillips Building
Odessa, Texas 79701

Phillips Petroleum Company
Attention: Mr. J. E. Chrisman
P. O. Box 1967
Houston, Texas 77001

Phillips Petroleum Company
Attention: Mr. J. E. Curzon
650 Frank Phillips Building
Bartlesville, Oklahoma 74004

Polaris Production Corporation
Attention: Mr. Davis Payne
P. O. Box 1749
Midland, Texas 79702

Mr. D. E. Radtke
P. O. Box 1703
Midland, Texas 79702

Mr. C. W. Seely
1907 Fort Worth National Bank Building
Fort Worth, Texas 76102

Shell Oil Company
Attention: Mr. W. E. Buck
P. O. Box 991
Houston, Texas 77001

EAST VACUUM GRAYBURG-SAN ANDRES UNIT, PROPOSED

Working Interest Owners

Page 3

Sohio Petroleum Company
Attention: Mr. H. P. Dreher
50 Penn Place, Suite 1100
Oklahoma City, Oklahoma 73118

Sohio Petroleum Company
Attention: Mr. R. J. Broussard
P. O. Box 3000
Midland, Texas 79702

Mr. Norman D. Stovall, Jr.
P. O. Box 10
Graham, Texas 76046

S. B. Street and Company
P. O. Box 206
Graham, Texas 76046

Texaco Inc.
Attention: Mr. D. T. McCreary
P. O. Box 3109
Midland, Texas 79702

Texaco Inc.
Attention: District Engineer
P. O. Box 728
Hobbs, New Mexico 88240

Turnco, Inc.
P. O. Box 1168
Graham, Texas 76046

Wainoco, Inc.
1100 Milam Building, Suite 600
Houston, Texas 77002



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production

January 6, 1978

Re: Proposed East Vacuum Grayburg-
San Andres Unit
Lea County, New Mexico

WORKING INTEREST OWNERS
(Mailing List Attached)

Gentlemen:

It has become necessary to postpone the Working Interest Owners' meeting scheduled for Thursday, January 19 to Thursday, February 2. All other arrangements will be the same - the Reddy Room of Texas Electric's Building in Odessa, Texas at 10:00 AM.

It will be appreciated if all in attendance will have a formula to propose which they believe will result in each Working Interest Owner being allocated his fair share of future production.

Phillips will offer the following compromise formula at the meeting:

Until a volume of oil has been produced equal to the Engineering Committee's determination of remaining primary,

100% "Current Production"

Thereafter,

1/3 Ultimate Primary
1/3 Hydrocarbon Pore Volume
1/3 "Secondary Oil"

Yours very truly,

PHILLIPS PETROLEUM COMPANY


J. E. Chrisman

JEC:mb
Attch.



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production

January 11, 1978

Re: Proposed East Vacuum Grayburg-
San Andres Unit
Lea County, New Mexico

WORKING INTEREST OWNERS:


Gentlemen:

The East Vacuum Grayburg San Andres Unit Working Interest Owners meeting is being further postponed to eliminate another conflict which has surfaced. The meeting is now scheduled for February 9 in the First National Bank's meeting room in MIDLAND, Texas, at 10:00 A.M.

I am enclosing two copies of a "Unit Participation Worksheet" for your use in determining what the participation of each Working Interest would be with a formula of your choice. If you will have one of these forms completed for your formula and have sufficient copies made for handout at the meeting it should considerably accelerate the proceeding. A copy of the Working Interest Owner Parameter Table was furnished with the Minutes of the December 15, 1977 meeting.

Yours very truly,

PHILLIPS PETROLEUM COMPANY


J. E. Chrisman

JEC:mb
Attnh.

MINUTES OF WORKING INTEREST OWNERS MEETING
FEBRUARY 9, 1978

EAST VACUUM GRAYBURG-SAN ANDRES UNIT, PROPOSED
LEA COUNTY, NEW MEXICO

A meeting of the Working Interest Owners of the East Vacuum Grayburg-San Andres Unit, Proposed, was held February 9, 1978, in the Meeting Room of the First National Bank, Midland, Texas. The meeting was called to order by the Chairman, Mr. J. E. Chrisman, Phillips Petroleum Company. Representatives attending the meeting are listed below:

<u>Name</u>	<u>Company</u>	<u>Location</u>
G. Thane Akins	Atlantic Richfield Company	Midland, Texas
Michael Griffin	Atlantic Richfield Company	Midland, Texas
Tom Porter	Atlantic Richfield Company	Midland, Texas
Jerry Tweed	Atlantic Richfield Company	Midland, Texas
W. A. Goudeau	Chevron U.S.A., Inc.	Midland, Texas
Glenn George	Chevron U.S.A., Inc.	Midland, Texas
Mike S. Mabry	Cities Service Company	Midland, Texas
J. A. Warren	Crown Central Petroleum Corp.	Midland, Texas
J. M. Shepherd	Exxon Company, U.S.A.	Midland, Texas
W. E. Nolan	Exxon Company, U.S.A.	Midland, Texas
O. V. Stuckey	Getty Oil Company	Midland, Texas
E. R. Frazier	Mobil Oil Corporation	Houston, Texas
A. J. Hankinson, Jr.	Mobil Oil Corporation	Houston, Texas
J. C. Raney	Pennzoil Company	Midland, Texas
Davis Payne	Polaris Production Corporation	Midland, Texas
P. M. Barry	D. E. Radtke	Midland, Texas
W. E. Buck	Shell Oil Company	Houston, Texas
A. J. Fore	Shell Oil Company	Houston, Texas
W. B. Taylor, Jr.	Phillips Petroleum Company	Houston, Texas
J. E. Chrisman	Phillips Petroleum Company	Houston, Texas
J. E. Curzon	Phillips Petroleum Company	Bartlesville, Oklahoma
R. E. Dowden	Phillips Petroleum Company	Oklahoma City, Oklahoma
W. W. Allen	Phillips Petroleum Company	Odessa, Texas
W. J. Mueller	Phillips Petroleum Company	Odessa, Texas
R. J. Roper	Phillips Petroleum Company	Odessa, Texas
Gene DeLong	Phillips Petroleum Company	Odessa, Texas

Those in attendance represented approximately 87.5 percent of the working interest in the proposed unit area based upon surface acres.

Mr. G. Thane Akins, Atlantic Richfield Company, stated that the current production parameter used in the Engineering-Geological Report was not representative for their State B-1576 lease (Tract No. 3203). Well No. 1 on this lease had been shut in during the entire parameter period (July 1, 1976, to January 1, 1977) due to cumulative overproduction of the casinghead gas allowable. Mr. Akins then furnished each operator present a tabulation of the current production percentages for the proposed unit area based upon the six-month period June 1, 1977 to December 1, 1977. This tabulation indicated the Atlantic Richfield Company's State B-1576 lease had a current production percentage of 5.135 percent as compared to the 4.009 percent during the parameter period July 1, 1976 to January 1, 1977. A discussion of representative periods for the current production parameter then ensued. Mr. Akins moved that "the current production parameter for the proposed East Vacuum Grayburg-San Andres Unit be updated to the 12-month period January 1, 1977, to January 1, 1978, with correction for any change in overproduction status." The Chairman seconded to obtain a vote on the motion. Based upon the current production parameter as approved in the Engineering-Geological Report, the voting results were as follows:

Yes		No		Pass	
ARCO	7.410	Cities Service	3.846	Chevron	14.476
Exxon	13.254	Crown Central	0.044	Pennzoil	0.125
Mobil	12.948	Getty	3.716	Phillips	32.044
Payne	0.038			Shell	8.510
Radtke	0.038				
Total	33.688		7.606		55.155

Atlantic Richfield then requested a poll of the working interest owners present to see if any votes would change if the motion were amended to state "add an additional current production parameter . . ." instead of "update the current production parameter . . ." No change in voting was reported.

The consensus of the majority present appeared to be that a modification to Atlantic Richfield's current production parameter was more desirable than initiating the possible "snowballing" effect of updating a single parameter. A similar modification to the current production parameter had previously been approved by the working interest owners for the Bettis, Boyle, and Stovall Tracts Nos. 1907 and 2005. Mr. Goudeau, Chevron, then moved that "a change be made in the current production parameter for the Atlantic Richfield State B-1576 lease to yield a representative value for their Well No. 1." Getty seconded the motion and with the exception of one pass (Payne) all votes were affirmative.

Following a short recess, Mr. Chrisman presented a production curve for the Atlantic Richfield State B-1576 lease that showed an extrapolated line across

the parameter period July 1, 1976, to January 1, 1977, connecting the actual production prior with the production after. The area between this line and the reported production for the period yielded an adjustment of +13,472 barrels. Chevron moved and Getty seconded that this figure be accepted as the representative value in the prior motion. All votes were affirmative. The revised current production parameter for all working interest owners is shown on the attachment to these minutes.

The following participation formulas were then proposed and voted upon (voting details are shown in the attachment):

FORMULA NO. 3 (Phillips')

Phase I -- 100 percent current production (for duration of remaining
primary reserves).
Phase II -- 1/3 ultimate primary.
1/3 hydrocarbon pore volume.
1/3 secondary oil.

Voting results:

Phase I: Yes - 49.916 percent
No - 46.583 "

Phase II: Yes - 44.586 percent
No - 49.935 "

FORMULA NO. 4 (Chevron's)

Phase I -- 50 percent current production) for duration of remaining
50 percent future primary) primary reserves.
Phase II -- 1/3 cumulative production.
1/3 hydrocarbon pore volume.
1/6 floodable acre-feet.
1/6 secondary oil.

Voting results:

Phase I: Yes - 17.446 percent
No - 38.990 "
Pass - 39.948 "

Phase II: Yes - 14.147 percent
No - 40.985 "
Pass - 39.251 "

FORMULA NO. 5 (Exxon's)

(This formula weighs the future primary and secondary oil parameters on the basis of cumulative produced lower and upper tier oil volumes utilizing the production forecast in the Engineering-Geological Report.)

Phase I -- 44.2 percent future primary.
55.8 percent secondary oil
(for 8,915,000 barrels of oil from October 1, 1978).

Minutes of Working Interest Owners Meeting
East Vacuum Grayburg-San Andres Unit, Proposed
Page 4

Phase II -- 12.2 percent future primary.
87.8 percent secondary oil.

Voting results:

Phase I: Yes - 42.323 percent
No - 52.594 "

Phase II: Yes - 43.840 percent
No - 50.294 "

FORMULA NO. 6 (Mobil's)
(Same as Formula No. 2.)

Phase I -- 75 percent future primary.
25 percent current production
(for duration of remaining primary reserves).

Phase II -- 100 percent secondary oil.

Voting results:

Phase I: Yes - 39.207 percent
No - 57.023 "
Pass - 0.103 "

Phase II: Yes - 44.032 percent
No - 49.457 "
Pass - 0.347 "

FORMULA NO. 7 (Shell's)

Phase I -- 100 percent current production for 18 months after unitization.

Phase II -- 100 percent future primary extending to 12 million barrels of oil from January 1, 1977.

Phase III -- 25 percent ultimate primary.
75 percent secondary oil.

Voting results:

Phase I: Yes - 15.927 percent
No - 66.250 "
Pass - 14.322 "

Phase II: Yes - 17.164 percent
No - 66.536 "
Pass - 12.579 "

Phase III: Yes - 13.934 percent
No - 68.406 "
Pass - 11.898

Mr. J. E. Chrisman suggested reconvening in two weeks on Thursday, February 23, 1978. No objection was made to this suggested date.

Meeting adjourned.

WJM:dva
Attachments

EAST VACUUM GRSA UNIT 02-13-78

COMPANY	CR-PRO	FU-PRI	CUM-PR	U-P-RS	AC-FT	OOIP	HCPV &	FAC-FF	SECOIL	ACRES
AMERADA	0.0	0.0	0.0	0.0	0.117	0.079		0.133	0.039	0.569
AMCCC	0.063	0.008	0.173	0.151	0.150	0.105		0.034	0.024	0.205
ARAPAH	0.003	0.001	0.001	0.001	0.007	0.004		0.007	0.005	0.035
ARCO	8.685	10.171	9.340	9.470	11.553	10.529		11.695	10.895	9.679
BEATTIS H M	0.031	0.021	0.072	0.064	0.113	0.079		0.129	0.038	0.410
BOYLE W T	0.022	0.043	0.067	0.063	0.113	0.079		0.129	0.038	0.410
BRCCN D 1	0.001	0.002	0.003	0.003	0.004	0.003		0.004	0.003	0.270
BRCCN D 2	14.278	12.579	14.098	13.858	11.971	11.279		11.844	11.018	9.678
CHEVRON SV	3.793	4.120	3.180	3.320	1.229	0.909		1.394	1.026	2.277
CRCN CENT	0.044	0.0	0.058	0.049	0.273	0.186		0.310	0.211	1.136
CRCN INC	0.022	0.003	0.063	0.054	0.053	0.037		0.012	0.008	0.101
DAVCIL	0.148	0.134	0.183	0.179	0.018	0.014		0.019	0.015	1.139
DECK M	0.0	0.0	0.143	0.121	0.436	0.253		0.491	0.263	1.707
DELX CIL CO	13.071	12.744	13.861	13.684	15.230	15.596		16.454	16.755	10.193
EXXON CO	0.065	0.136	0.197	0.187	0.171	0.117		0.187	0.127	10.509
SEW NATL BK	3.664	3.489	2.966	3.049	2.535	2.795		2.875	3.156	1.708
GETTY CIL	0.041	0.005	0.115	0.098	0.097	0.068		0.022	0.015	0.184
GT WESTERN	0.005	0.004	0.007	0.007	0.011	0.012		0.013	0.013	0.036
HENSLEY JD	0.018	0.012	0.040	0.036	0.062	0.044		0.071	0.049	0.228
HULSEY L O	0.009	0.006	0.026	0.023	0.011	0.006		0.011	0.007	0.078
KCKCVO CIL	0.002	0.002	0.004	0.003	0.006	0.005		0.006	0.007	0.018
LAUGHLIN W	0.038	0.025	0.125	0.110	0.030	0.017		0.034	0.019	0.240
LITTLE T W	2.812	3.116	2.971	2.994	3.879	4.118		4.330	4.573	3.129
MARATHON	0.003	0.002	0.004	0.003	0.006	0.005		0.006	0.007	0.018
MCRAT F	12.769	13.128	10.073	10.556	12.392	12.549		12.984	13.015	10.147
MOBIL CIL	0.038	0.025	0.125	0.110	0.030	0.017		0.034	0.019	0.240
PAYNE D	0.001	0.001	0.010	0.008	0.052	0.034		0.052	0.033	0.199
PENROSE	0.123	0.096	0.189	0.175	0.282	0.307		0.319	0.347	0.929
PENNZOIL	0.023	0.010	0.007	0.007	0.046	0.029		0.052	0.032	0.249
PETROSERCH	31.602	30.397	30.970	30.878	29.380	31.281		26.489	25.609	30.739
PHILLIPS	0.038	0.025	0.125	0.110	0.030	0.017		0.034	0.019	0.240
PRADKE D E	0.003	0.001	0.001	0.001	0.007	0.004		0.007	0.005	0.036
SEELY C W	8.394	9.505	10.304	10.178	3.887	8.812		8.909	8.766	10.493
SHELL CIL	0.044	0.091	0.131	0.125	0.114	0.078		0.124	0.085	0.300
SOHIO PET	0.031	0.021	0.072	0.064	0.113	0.079		0.129	0.088	0.410
STCVALL N	0.031	0.021	0.072	0.064	0.113	0.079		0.129	0.088	0.410
STREET S B	0.0	0.0	0.025	0.021	0.161	0.143		0.182	0.162	0.569
TEXACO INC	0.031	0.021	0.072	0.064	0.113	0.079		0.129	0.088	0.410
TURNCO INC	0.019	0.014	0.072	0.064	0.113	0.079		0.129	0.088	0.410
WAINCO	0.002	0.002	0.029	0.026	0.043	0.047		0.049	0.053	0.142
*ALSH MARY		0.0	0.015	0.012	0.078	0.050		0.078	0.050	0.205
TOTAL	100.000	100.000	100.000	100.000	100.000	100.000		100.000	100.000	100.000

COMPARISON OF UNIT EQUITIES

PARTICIPATION FORMULA

FORMULA

HCPV &

NO. SURFACE	PHASE ACRES	CR-PSC	CU-PRI	CUM-PR	U-P-P-S	AC-EY	OOIP	FAC-FY	SECCIL	ACRFS
		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.000
1 Phillips	I	100.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	II	20.000	10.000	27.500	20.000	0.0	22.500	0.0	0.0	0.0
2 Mobil	I	25.000	75.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	II	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.000	0.0
3 Phillips	I	100.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	II	0.0	0.0	0.0	23.334	0.0	33.333	0.0	33.333	0.0
4 Chevron	I	50.000	50.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	II	0.0	0.0	23.334	0.0	0.0	33.333	16.666	16.667	0.0
5 Exxon	I	0.0	44.200	0.0	0.0	0.0	0.0	0.0	55.800	0.0
	II	0.0	12.200	0.0	0.0	0.0	0.0	0.0	87.800	0.0
6 Mobil (Re-vote #2)	I	25.000	75.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	II	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.000	0.0
7 Shell	I	100.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	II	0.0	100.000	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	III	0.0	0.0	0.0	25.000	0.0	0.0	0.0	75.000	0.0

COMPARISON OF UNIT EQUITIES -- PARTICIPATION PERCENT

Surface Acres	Formula No. 1		Formula No. 2		Formula No. 3		Formula No. 4	
	I	II	I	II	I	II	I	II
COMPANY								
AMEBACA	0.569	0.013	0.0	0.089	0.0	0.056	0.0	0.053
AMCCC	0.285	0.116	0.022	0.024	0.063	0.093	0.035	0.104
ARCAHO	0.076	0.002	0.001	0.005	0.003	0.003	0.002	0.004
ARCC	0.679	9.586	9.799	10.895	8.685	10.298	9.428	10.388
BEYLLIS H M	0.410	0.059	0.023	0.088	0.031	0.077	0.026	0.086
BOYLE W T	0.410	0.059	0.023	0.088	0.031	0.077	0.026	0.086
BROWN D 1	0.270	0.052	0.038	0.056	0.022	0.057	0.032	0.053
BROWN D 2	0.014	0.002	0.002	0.003	0.001	0.003	0.001	0.003
CHEVRON	9.678	13.300	13.004	11.018	14.278	12.652	13.428	12.259
CITIES SV	2.277	2.915	4.038	1.026	3.793	1.755	3.956	1.766
CROWN CENT	1.138	0.076	0.011	0.211	0.044	0.149	0.022	0.168
DAVOIL INC	0.101	0.041	0.008	0.008	0.022	0.033	0.012	0.037
DECK M	1.139	0.134	0.137	0.015	0.148	0.069	0.141	0.073
ELK CIL CO	1.707	0.120	0.0	0.283	0.0	0.219	0.0	0.261
EXXON CO	10.183	13.946	12.826	16.755	13.071	15.345	12.907	15.354
FW NATL RK	0.569	0.144	0.118	0.127	0.065	0.144	0.100	0.157
GETTY OIL	1.708	3.136	3.533	3.156	3.664	3.000	3.576	2.925
GT WESTERN	0.184	0.075	0.014	0.015	0.041	0.060	0.023	0.067
HENSLEY JD	0.036	0.007	0.004	0.013	0.005	0.011	0.004	0.011
HULSEY L O	0.078	0.033	0.013	0.049	0.018	0.043	0.015	0.048
KOKOMO OIL	0.078	0.015	0.007	0.007	0.009	0.012	0.007	0.014
LAUGHLIN	0.018	0.003	0.002	0.007	0.002	0.005	0.002	0.005
LITTLE T W	0.240	0.070	0.028	0.019	0.038	0.049	0.031	0.056
MARATHON	3.129	3.216	3.040	4.573	2.812	3.895	2.964	3.847
MCRAE F	0.018	0.003	0.002	0.007	0.002	0.005	0.002	0.005
MIDKIFF K	0.028	0.002	0.001	0.004	0.003	0.003	0.002	0.003
MOBIL CIL	10.147	11.571	13.038	13.015	12.769	12.040	12.948	11.874
PAYNE D	0.240	0.070	0.028	0.019	0.038	0.049	0.031	0.056
PENROSE	0.190	0.012	0.090	0.033	0.001	0.025	0.000	0.029
PENNZOIL	0.926	0.190	0.103	0.347	0.123	0.276	0.109	0.276
PETROSERCH	0.249	0.015	0.013	0.032	0.023	0.023	0.016	0.026
PHILLIPS	30.736	31.091	30.638	29.609	31.602	30.256	30.999	29.933
RADTKE D E	0.240	0.070	0.028	0.019	0.038	0.049	0.031	0.056
SEELY C W	0.036	0.002	0.001	0.005	0.003	0.003	0.002	0.004
SOHIO PET	10.458	9.481	9.227	8.766	8.394	9.252	8.949	9.318
STCVAL N	0.380	0.056	0.079	0.085	0.044	0.096	0.067	0.104
STREET S P	0.410	0.059	0.023	0.088	0.031	0.077	0.026	0.086
TEXACO INC	0.410	0.059	0.023	0.088	0.031	0.077	0.026	0.086
TURNCO INC	0.569	0.043	0.0	0.162	0.0	0.109	0.0	0.113
WAINOCO	0.142	0.059	0.023	0.088	0.031	0.077	0.026	0.086
WALSH MARY	0.285	0.029	0.015	0.053	0.019	0.042	0.016	0.042
		0.018	0.002	0.050	0.002	0.037	0.001	0.043
TOTAL	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000
Yes	45.924	44.467	29.397	32.926	49.916	44.586	17.446	14.147
No	29.504	28.653	52.940	48.604	46.583	49.935	38.990	40.985
Pass	21.033	22.362	13.968	12.570	0	0	39.948	39.251

COMPARISON OF UNIT EQUITIES -- PARTICIPATION PERCENT

COMPANY	Formula No. 5			Formula No. 6			Formula No. 7			
	I	Vote	II	I	Vote	II	I	Vote	II	III
AMERACA	0.350		0.078	0.0		0.049	0.0		0.0	0.067
AMCCO	0.017		0.022	0.022		0.024	0.063		0.008	0.056
ARAPAC	0.003		0.005	0.001		0.005	0.003		0.001	0.004
ARCO	10.575	Y	10.807	9.799	Y	10.335	9.695	N	10.171	10.539
BETTIS H M	0.058		0.080	0.024		0.043	0.031		0.021	0.082
BOYLE W T	0.052		0.080	0.023		0.048	0.031		0.021	0.082
BROWN D 1	0.050		0.054	0.038		0.056	0.022		0.043	0.053
BROWN D 2	0.003		0.003	0.002		0.004	0.001		0.002	0.003
CHEVRON	11.708	N	11.208	13.004	N	11.018	14.278	P	12.579	11.728
CITIES SV	2.394	N	1.403	4.038	N	1.026	3.793	Y	4.120	1.602
CROWN CENT	0.118	Y	0.185	0.011	Y	0.211	0.044	P	0.0	0.170
DAVCIL INC.	0.006		0.007	0.008		0.008	0.022		0.003	0.019
DECK W	0.068		0.030	0.137		0.015	0.148		0.134	0.056
ELK OIL CO	0.158		0.248	0.0		0.283	0.0		0.0	0.242
EXXON CO	14.982	Y	16.266	12.826	Y	16.755	13.071	N	12.744	15.987
FEW NATL BK	0.131		0.123	0.118		0.127	0.065		0.136	0.142
GETTY CIL	3.303	Y	3.197	3.533	Y	3.156	3.664	Y	3.489	3.129
GT WESTERN	0.011		0.014	0.014		0.015	0.041		0.005	0.036
HENSLEY JD	0.009		0.012	0.004		0.013	0.005		0.004	0.011
HULSEY L O	0.033		0.044	0.013		0.049	0.018		0.012	0.046
KCKCMO CIL	0.007		0.007	0.007		0.007	0.009		0.006	0.011
LAUGHLIN	0.005		0.006	0.002		0.007	0.002		0.002	0.006
LITTLE T W	0.022		0.020	0.028		0.019	0.038		0.025	0.042
MARATHON	3.929		4.395	3.040		4.573	2.812		3.116	4.178
MCRAE H	0.005		0.006	0.002		0.007	0.002		0.002	0.006
MIDKIFF K	0.003		0.004	0.001		0.004	0.003		0.001	0.003
MURIL CIL	13.065	Y	13.029	13.038	Y	13.015	12.769	N	13.128	12.400
PAYNE D	0.022	Y	0.020	0.028	N	0.019	0.038	Y	0.025	0.042
PENRCSE	0.018		0.029	0.000		0.033	0.001		0.0	0.027
PENNZCIL	0.236	Y	0.316	0.103	P	0.347	0.123	N	0.096	0.304
PETRCSECH	0.022		0.029	0.013		0.032	0.023		0.010	0.026
PHILLIPS	29.395	N	28.827	30.698	N	28.609	31.602	N	30.397	29.176
RADTKE D E	0.022	Y	0.020	0.028	N	0.019	0.038	Y	0.025	0.042
SEELY C W	0.003		0.005	0.001		0.005	0.003		0.001	0.004
SHELL CIL	0.093	N	0.086	9.227	N	8.766	8.394	Y	9.505	9.119
SOHIO PET	0.088		0.086	0.079		0.085	0.044		0.091	0.095
STCVALL N	0.058		0.080	0.023		0.088	0.031		0.021	0.082
STREET S 3	0.058		0.080	0.023		0.088	0.031		0.021	0.082
TEXACO INC	0.090		0.142	0.0		0.162	0.0		0.0	0.127
TURNCO INC	0.058		0.080	0.023		0.088	0.031		0.021	0.082
WAINOCO	0.036		0.043	0.015		0.053	0.019		0.014	0.046
WALSH MARY	0.028		0.044	0.000		0.050	0.002		0.0	0.040
TOTAL	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000
Yes	42.323		43.840	39.207		44.032	15.927		17.164	13.934
No	52.594		50.294	57.023		49.457	66.250		66.536	68.406
Pass	0		0	0.103		0.347	14.322		12.579	11.898



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production

February 10, 1978

Re: East Vacuum Grayburg-San Andres Unit
Lea County, New Mexico

WORKING INTEREST OWNERS:

Arrangements have been made with Pioneer Natural Gas to hold the next meeting of the Working Interest Owner's Committee in Pioneer's meeting room in Midland on February 23, beginning at 10 A.M. We will forward copies of the minutes of yesterday's meeting at a later date.

Yours very truly,

PHILLIPS PETROLEUM COMPANY


J. E. Chrisman

JEC:mb

MINUTES OF WORKING INTEREST OWNERS MEETING
FEBRUARY 23, 1978

EAST VACUUM GRAYBURG-SAN ANDRES UNIT, PROPOSED
LEA COUNTY, NEW MEXICO

A meeting of the Working Interest Owners of the East Vacuum Grayburg-San Andres Unit, Proposed, was held February 23, 1978, in the Pioneer Natural Gas Company's Flame Room, Midland, Texas. The meeting was called to order by the Chairman, Mr. J. E. Chrisman, Phillips Petroleum Company. Representatives attending the meeting are listed below:

<u>Name</u>	<u>Company</u>	<u>Location</u>
G. Thane Akins	Atlantic Richfield Company	Midland, Texas
Michael Griffin	Atlantic Richfield Company	Midland, Texas
W. A. Goudeau	Chevron U.S.A., Inc.	Midland, Texas
Glenn George	Chevron U.S.A., Inc.	Midland, Texas
Mike S. Mabry	Cities Service Company	Midland, Texas
J. M. Shepherd	Exxon Company, U.S.A.	Midland, Texas
W. E. Nolan	Exxon Company, U.S.A.	Midland, Texas
O. V. Stuckey	Getty Oil Company	Midland, Texas
A. J. Hankinson, Jr.	Mobil Oil Corporation	Houston, Texas
J. C. Raney	Pennzoil Company	Midland, Texas
Charles A. Brown	Pennzoil Company	Midland, Texas
Davis Payne	Polaris Production Corp.	Midland, Texas
W. B. Taylor, Jr.	Phillips Petroleum Company	Houston, Texas
J. E. Chrisman	Phillips Petroleum Company	Houston, Texas
J. E. Curzon	Phillips Petroleum Company	Bartlesville, Oklahoma
W. W. Allen	Phillips Petroleum Company	Odessa, Texas
W. J. Mueller	Phillips Petroleum Company	Odessa, Texas
R. J. Roper	Phillips Petroleum Company	Odessa, Texas

Those in attendance represented approximately 75.6 percent of the working interest in the proposed unit area based upon surface acres and approximately 88 percent based upon the current production parameters. (Notification had been received earlier from Shell Oil Company that illness would probably prevent their representatives from attending.)

Mr. Shepherd, Exxon, requested the following correction to the Minutes of the Working Interest Owners meeting held February 9, 1978. The interpretation given under Formula No. 5 (Exxon's) should read as follows: (This formula considers the future primary and secondary oil parameters utilizing the production forecast in the Engineering-Geological Report.)

Minutes of Working Interest Owners Meeting
East Vacuum Grayburg-San Andres Unit, Proposed
Page 2

The following participation formulas were then proposed and voted upon (voting details are shown in the attachment to these minutes):

FORMULA NO. 8 (Phillips')

Phase I -- 75 percent current production.
25 percent future primary
(for duration of remaining primary reserves plus six
million barrels).

Phase II -- 25 percent ultimate primary.
25 percent hydrocarbon pore volume.
50 percent secondary oil.

Voting results:

Phase I: Yes	- 52.800 percent	Phase II: Yes	- 46.583 percent
No	- 34.904 "	No	- 38.428 "

FORMULA NO. 9 (Phillips')

Phase II (only): 1/3 ultimate primary.
1/3 hydrocarbon pore volume.
1/3 secondary oil.

Voting results:

Phase II: Yes	- 44.388 percent
No	- 40.683 "

FORMULA NO. 10 (Cities Service's)

Phase I -- 100 percent future primary
(for duration of remaining primary reserves).

Phase II -- 10 percent hydrocarbon pore volume.
25 percent floodable acre-feet.
45 percent secondary oil.
20 percent surface acres.

Voting results:

Phase I: Yes	- 14.291 percent	Phase II: Yes	- 12.171 percent
No	- 72.458 "	No	- 70.670 "

Minutes of Working Interest Owners Meeting
East Vacuum Grayburg-San Andres Unit, Proposed
Page 3

FORMULA NO. 11 (Phillips')

Phase I -- 75 percent current production.
25 percent future primary
(for duration of remaining primary reserves).

Phase II -- 25 percent ultimate primary.
25 percent hydrocarbon pore volume.
50 percent secondary oil.

Voting results:

Phase I: Yes	- 7.646 percent	Phase II: Yes	- 4.946 percent
No	- 66.205 "	No	- 68.272 "
Pass	- 13.853 "	Pass	- 11.793 "

FORMULA NO. 12 (Mobil's)

Phase I -- 25 percent current production.
75 percent future primary
(for duration of remaining primary reserves).

Phase II -- 25 percent hydrocarbon pore volume.
75 percent secondary oil.

Voting results:

Phase I: Yes	- 39.299 percent	Phase II: Yes	- 43.569 percent
No	- 47.768 "	No	- 41.375 "

FORMULA NO. 13 (For strictly scientific reasons, no formula presented.)

FORMULA NO. 14 (Getty's)

Phase I -- 50 percent current production.
50 percent future primary
(for duration of remaining primary reserves).

Phase II -- 25 percent hydrocarbon pore volume.
75 percent secondary oil.

Voting results:

Phase I: Yes	- 16.592 percent	Phase II: Yes	- 19.868 percent
No	- 26.843 "	No	- 22.901 "
Pass	- 43.947 "	Pass	- 42.175 "

FORMULA NO. 15 (Phillips')

Phase I -- 50 percent current production.
50 percent future primary
(for duration of remaining primary reserves).

Phase II -- 30 percent hydrocarbon pore volume.
70 percent secondary oil.

Voting results:

Phase I: Yes	- 34.684 percent	Phase II: Yes	- 32.794 percent
No	- 26.812 "	No	- 22.872 "
Pass	- 25.855 "	Pass	- 29.282 "

FORMULA NO. 16 (Mobil's)

Phase I -- 25 percent current production.
75 percent future primary
(for duration of remaining primary reserves).

Phase II -- 30 percent hydrocarbon pore volume.
70 percent secondary oil.

Voting results:

Phase I: Yes	- 26.370 percent	Phase II: Yes	- 26.708 percent
No	- 47.740 "	No	- 41.498 "
Pass	- 12.929 "	Pass	- 16.742 "

FORMULA NO. 17 (Chevron's)

Phase I -- 50 percent current production.
50 percent future primary
(for duration of remaining primary reserves).

Phase II -- 30 percent ultimate primary.
70 percent secondary oil.

Voting results:

Phase I: Yes	- 20.960 percent	Phase II: Yes	- 16.711 percent
No	- 66.282 "	No	- 67.868 "
Pass	- 0.109 "	Pass	- 0.295 "

FORMULA NO. 18 (Phillips')

Phase I -- 50 percent current production.
50 percent future primary
(for duration of remaining primary reserves).

Phase II -- 10 percent ultimate primary.
20 percent hydrocarbon pore volume.
70 percent secondary oil.

Voting results:

Phase I: Yes	- 34.684 percent	Phase II: Yes	- 32.765 percent
No	- 48.711 "	No	- 50.925 "
Pass	- 3.956 "	Pass	- 1.233 "

FORMULA NO. 19 (Atlantic Richfield's)

Phase I -- 30 percent current production.
70 percent future primary
(for duration of remaining primary reserves).

Phase II -- 30 percent hydrocarbon pore volume.
70 percent secondary oil.

Voting results:

Phase I: Yes	- 26.286 percent	Phase II: Yes	- 26.708 percent
No	- 47.869 "	No	- 41.498 "
Pass	- 12.946 "	Pass	- 16.742 "

Mr. J. E. Chrisman suggested reconvening in two weeks on Thursday, March 9, 1978, at 10:00 A.M., in Exxon's First Floor Conference Room, Exxon Building, Midland, Texas. There were no objections to this suggested date.

Meeting adjourned.

Attached to these minutes is a revised Figure 26 (Tract Numbers) to the Engineering-Geological Report. Former Tract No. 1904 had to be divided, with the eastern undeveloped half now designated as Tract No. 1911, due to diversification in working interest ownership.

WJM:dva
Attachments

COMPARISON OF UNIT EQUITIES -- PARTICIPATION PERCENT

COMPANY	Formula No. 8			Formula No. 9			Formula No. 10			
	Phase I	Phase II	Vote	Phase I	Phase II	Vote	Phase I	Phase II	Vote	
AMERADA	0.0	0.064	0.0	0.056	0.0	0.0	0.0	0.195	0.0	0.0
AMOCO	0.049	0.076	0.0	0.093	0.0	0.0	0.006	0.087	0.0	0.0
ARAPAH	0.002	0.004	0.0	0.003	0.0	0.0	0.001	0.012	0.0	0.0
ARCO	9.056	10.447	No	10.298	No	No	10.171	10.815	Yes	0.0
BETTIS H M	0.028	0.080	0.0	0.077	0.0	0.0	0.021	0.162	0.0	0.0
BOYLE W T	0.028	0.080	0.0	0.077	0.0	0.0	0.021	0.162	0.0	0.0
BROWN D I	0.027	0.057	0.0	0.057	0.0	0.0	0.043	0.105	0.0	0.0
BROWN D 2	0.001	0.003	0.0	0.003	0.0	0.0	0.002	0.005	0.0	0.0
CHEVRON	13.853	11.793	Yes	12.052	Yes	Yes	12.579	10.983	No	0.0
CITIES SV	3.875	1.572	Yes	1.755	Yes	Yes	4.120	1.356	Yes	0.0
CROWN CENT	0.033	0.164	0.0	0.1.3	0.0	0.0	0.003	0.419	0.0	0.0
DAVAIL INC	0.017	0.027	0.0	0.033	0.0	0.0	0.003	0.030	0.0	0.0
DECK M	0.144	0.056	0.0	0.069	0.0	0.0	0.134	0.241	0.0	0.0
ELK OIL CO	0.0	0.235	0.0	0.219	0.0	0.0	0.0	0.617	0.0	0.0
EXXON CO	12.989	15.697	No	15.345	No	No	12.744	15.249	No	0.0
FW NATL BK	0.083	0.139	Yes	0.144	0.0	0.0	0.136	0.229	0.0	0.0
GETTY OIL	3.620	3.039	Yes	3.000	No	No	3.489	2.760	No	0.0
GT WESTERN	0.032	0.049	0.0	0.060	0.0	0.0	0.005	0.056	0.0	0.0
HENSLEY JD	0.005	0.011	0.0	0.011	0.0	0.0	0.004	0.017	0.0	0.0
HULSEY L O	0.016	0.044	0.0	0.043	0.0	0.0	0.012	0.090	0.0	0.0
KOKOMO OIL	0.008	0.011	0.0	0.012	0.0	0.0	0.006	0.022	0.0	0.0
LAUGHLIN	0.002	0.005	0.0	0.005	0.0	0.0	0.002	0.009	0.0	0.0
LITTLE T W	0.035	0.041	0.0	0.049	0.0	0.0	0.025	0.067	0.0	0.0
MARATHON	2.888	4.064	0.0	3.895	0.0	0.0	3.116	4.178	0.0	0.0
MCRAE H	0.002	0.005	0.0	0.005	0.0	0.0	0.002	0.009	0.0	0.0
MIDKIFF K	0.002	0.003	0.0	0.003	0.0	0.0	0.001	0.009	0.0	0.0
MUBIL OIL	12.859	12.284	No	12.040	No	No	13.128	12.387	No	0.0
PAYNE D	0.035	0.041	Yes	0.049	Yes	Yes	0.025	0.067	No	0.0
PENROSE	0.001	0.027	0.0	0.025	0.0	0.0	0.0	0.069	0.0	0.0
PENNZOIL	0.116	0.294	Yes	0.276	Yes	Yes	0.096	0.452	No	0.0
PETROSERCH	0.020	0.025	0.0	0.023	0.0	0.0	0.010	0.080	0.0	0.0
PHILLIPS	31.301	29.844	Yes	30.256	Yes	Yes	30.397	28.772	No	0.0
RADTKE D E	0.035	0.041	0.0	0.049	0.0	0.0	0.025	0.067	0.0	0.0
SLEELY C W	0.002	0.004	0.0	0.003	0.0	0.0	0.001	0.012	0.0	0.0
SHELL OIL	8.672	9.130	0.0	9.252	0.0	0.0	9.505	9.153	0.0	0.0
SOHIO PET	0.056	0.093	0.0	0.096	0.0	0.0	0.091	0.153	0.0	0.0
STUVAL N	0.028	0.080	0.0	0.077	0.0	0.0	0.021	0.162	0.0	0.0
STREET S B	0.028	0.080	0.0	0.077	0.0	0.0	0.021	0.162	0.0	0.0
TEXACO INC	0.0	0.122	0.0	0.109	0.0	0.0	0.0	0.246	0.0	0.0
TUPACO INC	0.028	0.080	0.0	0.077	0.0	0.0	0.021	0.162	0.0	0.0
WAINOCO	0.018	0.045	0.0	0.042	0.0	0.0	0.014	0.069	0.0	0.0
WALSH MARY	0.001	0.040	0.0	0.037	0.0	0.0	0.0	0.104	0.0	0.0
TOTAL	100.000	100.000	0.0	100.000	0.0	0.0	100.000	100.000	0.0	0.0
Yes	52.800	46.583		44.388			14.291	12.171		
No	34.904	38.428		40.683			72.458	70.670		
Pass	0	0		0			0	0		
Total	87.704	85.011		85.071			86.749	82.841		

COMPARISON OF UNIT EQUITIES -- PARTICIPATION PERCENT

Formula No. 11

COMPANY	Formula No. 11		Vote
	Phase I	Phase II	
AMELADA	0.0	0.064	0.0
AMOCO	0.049	0.076	0.0
ARAPAH0	0.002	0.004	0.0
ARCO	9.056	10.447	No
BETTIS H M	0.028	0.080	0.0
BOYLE W T	0.027	0.080	0.0
BROWN D I	0.027	0.057	0.0
BROWN D 2	0.001	0.003	Pass
CHEVRON	13.853	11.793	Pass
CITIES SV	3.875	1.572	Yes
CROWN CENT	0.033	0.164	0.0
DAVOIL INC	0.017	0.027	0.0
DECK M	0.144	0.056	0.0
ELK OIL CO	0.0	0.235	0.0
EXXON CO	12.989	15.697	No
FW NATL BK	0.083	0.139	0.0
GETTY OIL	3.620	3.039	Yes
GT WESTERN	0.032	0.049	0.0
HENSLEY JD	0.005	0.011	0.0
HULSEY L O	0.016	0.044	0.0
KOKOMO OIL	0.008	0.011	0.0
LAUGHLIN	0.002	0.005	0.0
LITTLE T W	0.035	0.041	0.0
MARATHON	2.888	4.064	0.0
MCRAE H	0.002	0.005	0.0
MIDKIFF K	0.002	0.003	0.0
MOBIL OIL	12.859	12.284	No
PAYNE D	0.035	0.041	Yes
PENROSE	0.001	0.027	0.0
PENNZOIL	0.116	0.294	Yes
PETROSERCH	0.020	0.025	0.0
PHILLIPS	31.301	29.844	No
RADTKE D E	0.035	0.041	0.0
SEELY C W	0.002	0.004	0.0
SHELL OIL	8.672	9.130	0.0
SOHIO PET	0.056	0.093	0.0
STOVALL N	0.028	0.080	0.0
STRIET S B	0.028	0.080	0.0
TEXACO INC	0.0	0.122	0.0
TURNCO INC	0.028	0.060	0.0
WAINOCO	0.018	0.045	0.0
WALSH MARY	0.001	0.040	0.0
TOTAL	100.000	100.000	0.0

Yes

No

Pass

Total

7.646

4.946

68.272

11.793

85.011

87.704

85.011

Formula No. 12

COMPANY	Formula No. 12		Vote
	Phase I	Phase II	
AMELADA	0.0	0.086	0.0
AMOCO	0.022	0.044	0.0
ARAPAH0	0.001	0.005	0.0
ARCO	9.799	10.803	Yes
BETTIS H M	0.023	0.086	0.0
BOYLE W T	0.023	0.086	0.0
BROWN D I	0.038	0.055	0.0
BROWN D 2	0.001	0.003	0.0
CHEVRON	13.004	11.083	No
CITIES SV	4.038	0.997	No
CROWN CENT	0.011	0.205	0.0
DAVOIL INC	0.008	0.015	0.0
DECK M	0.137	0.015	0.0
ELK OIL CO	0.0	0.275	0.0
EXXON CO	12.826	16.465	Yes
FW NATL BK	0.118	0.124	0.0
GETTY OIL	3.533	3.066	Yes
GT WESTERN	0.014	0.028	0.0
HENSLEY JD	0.004	0.013	0.0
HULSEY L O	0.013	0.048	0.0
KOKOMO OIL	0.007	0.007	0.0
LAUGHLIN	0.002	0.006	0.0
LITTLE T W	0.028	0.018	0.0
MARATHON	3.040	4.459	0.0
MCRAE H	0.002	0.006	0.0
MIDKIFF K	0.001	0.004	0.0
MOBIL OIL	13.038	12.898	Yes
PAYNE D	0.028	0.018	No
PENROSE	0.000	0.033	0.0
PENNZOIL	0.103	0.337	Yes
PETROSERCH	0.013	0.031	0.0
PHILLIPS	30.698	29.277	No
RADTKE D E	0.028	0.018	0.0
SEELY C W	0.001	0.005	0.0
SHELL OIL	9.227	8.777	0.0
SOHIO PET	0.079	0.083	0.0
STOVALL N	0.023	0.086	0.0
STRIET S B	0.023	0.086	0.0
TEXACO INC	0.0	0.157	0.0
TURNCO INC	0.023	0.086	0.0
WAINOCO	0.015	0.051	0.0
WALSH MARY	0.000	0.050	0.0
TOTAL	100.000	100.000	0.0

43.569

41.375

0

84.944

87.067

0.0

Formula No. 14

COMPANY	Formula No. 14		Vote
	Phase I	Phase II	
AMELADA	0.0	0.086	0.0
AMOCO	0.035	0.044	0.0
ARAPAH0	0.002	0.005	0.0
ARCO	9.428	10.803	No
BETTIS H M	0.026	0.086	0.0
BOYLE W T	0.026	0.086	0.0
BROWN D I	0.032	0.055	0.0
BROWN D 2	0.001	0.003	0.0
CHEVRON	13.428	11.083	No
CITIES SV	3.956	0.997	No
CROWN CENT	0.022	0.205	0.0
DAVOIL INC	0.012	0.015	0.0
DECK M	0.141	0.015	0.0
ELK OIL CO	0.0	0.275	0.0
EXXON CO	12.907	16.465	Yes
FW NATL BK	0.100	0.124	0.0
GETTY OIL	3.576	3.066	Yes
GT WESTERN	0.023	0.028	0.0
HENSLEY JD	0.004	0.013	0.0
HULSEY L O	0.015	0.048	0.0
KOKOMO OIL	0.007	0.007	0.0
LAUGHLIN	0.002	0.006	0.0
LITTLE T W	0.031	0.018	0.0
MARATHON	2.964	4.459	0.0
MCRAE H	0.002	0.006	0.0
MIDKIFF K	0.002	0.004	0.0
MOBIL OIL	12.948	12.898	Pass
PAYNE D	0.031	0.018	No
PENROSE	0.000	0.033	0.0
PENNZOIL	0.109	0.337	Yes
PETROSERCH	0.016	0.031	0.0
PHILLIPS	30.999	29.277	Pass
RADTKE D E	0.031	0.018	0.0
SEELY C W	0.002	0.005	0.0
SHELL OIL	8.949	8.777	0.0
SOHIO PET	0.067	0.083	0.0
STOVALL N	0.026	0.086	0.0
STRIET S B	0.026	0.086	0.0
TEXACO INC	0.0	0.157	0.0
TURNCO INC	0.026	0.086	0.0
WAINOCO	0.016	0.051	0.0
WALSH MARY	0.001	0.050	0.0
TOTAL	100.000	100.000	0.0

19.868

22.901

42.175

84.944

87.382

0.0

COMPARISON OF UNIT EQUITIES -- PARTICIPATION PERCENT

Formula No. 15

COMPANY	Phase I		Vote
	Phase I	Phase II	
AMERADA	0.0	0.086	0.0
AMOCO	0.035	0.048	0.0
ARAPAH	0.002	0.005	0.0
ARCO	9.428	10.785	No
BETVISH M	0.026	0.085	0.0
BOYLE W T	0.026	0.085	0.0
BROWN D I	0.032	0.055	0.0
BROWN D 2	0.001	0.003	0.0
CHEVRON	13.428	11.096	No
CITIES SV	3.956	0.991	No
CROWN CENT	0.022	0.203	0.0
DAVOIL INC	0.012	0.017	0.0
DECK M	0.141	0.015	0.0
ELK OIL CO	0.0	0.274	0.0
EXXON CO	12.907	16.407	Pass
FW NATL BK	0.100	0.124	0.0
GETTY OIL	3.576	3.048	Yes
GT WESTERN	0.023	0.031	0.0
HENSLEY JD	0.004	0.013	0.0
HULSEY L O	0.015	0.047	0.0
KOKOMO OIL	0.007	0.007	0.0
LAUGHLIN	0.002	0.006	0.0
LITTLE T W	0.031	0.018	0.0
MARATHON	2.964	4.436	0.0
MCRAE H	0.002	0.006	0.0
MIDKIFF K	0.002	0.004	0.0
MOBIL OIL	12.948	12.875	Pass
PAYNE D	0.031	0.018	0.0
PENROSE	0.000	0.033	0.0
PENNZOIL	0.109	0.335	Yes
PETROSERCH	0.016	0.031	0.0
PHILLIPS	30.999	29.411	Yes
RADTKE D E	0.031	0.018	0.0
SEELY C W	0.002	0.005	0.0
SHELL OIL	8.949	8.780	0.0
SCHIO PET	0.067	0.083	0.0
STOVALL N	0.026	0.085	0.0
STREET S B	0.026	0.085	0.0
TEXACO INC	0.0	0.156	0.0
TURNCO INC	0.026	0.085	0.0
WAINOCO	0.016	0.051	0.0
WALSH MARY	0.001	0.050	0.0
TOTAL	100.000	100.000	0.0
Yes	34.684	32.794	
No	26.812	22.872	
Pass	25.855	29.282	
Total	87.351	84.948	

Formula No. 16

COMPANY	Phase I		Vote
	Phase I	Phase II	
AMERADA	0.0	0.086	0.0
AMOCO	0.022	0.048	0.0
ARAPAH	0.001	0.005	0.0
ARCO	9.799	10.785	Yes
BETVISH M	0.023	0.085	0.0
BOYLE W T	0.023	0.085	0.0
BROWN D I	0.038	0.055	0.0
BROWN D 2	0.002	0.003	0.0
CHEVRON	13.004	11.096	No
CITIES SV	4.038	0.991	No
CROWN CENT	0.011	0.203	0.0
DAVOIL INC	0.008	0.017	0.0
DECK M	0.137	0.015	0.0
ELK OIL CO	0.0	0.274	0.0
EXXON CO	12.826	16.407	Pass
FW NATL BK	0.118	0.124	0.0
GETTY OIL	3.533	3.048	Yes
GT WESTERN	0.014	0.031	0.0
HENSLEY JD	0.004	0.013	0.0
HULSEY L O	0.013	0.047	0.0
KOKOMO OIL	0.007	0.007	0.0
LAUGHLIN	0.002	0.006	0.0
LITTLE T W	0.028	0.018	0.0
MARATHON	3.040	4.436	0.0
MCRAE H	0.002	0.006	0.0
MIDKIFF K	0.001	0.004	0.0
MOBIL OIL	13.038	12.875	Yes
PAYNE D	0.028	0.018	0.0
PENROSE	0.000	0.033	0.0
PENNZOIL	0.103	0.335	Pass
PETROSERCH	0.013	0.031	0.0
PHILLIPS	30.698	29.411	No
RADTKE D E	0.028	0.018	0.0
SEELY C W	0.001	0.005	0.0
SHELL OIL	9.227	8.780	0.0
SCHIO PET	0.079	0.083	0.0
STOVALL N	0.023	0.085	0.0
STREET S B	0.023	0.085	0.0
TEXACO INC	0.0	0.156	0.0
TURNCO INC	0.023	0.085	0.0
WAINOCO	0.015	0.051	0.0
WALSH MARY	0.000	0.050	0.0
TOTAL	100.000	100.000	0.0
Yes	26.370	26.708	
No	47.740	41.498	
Pass	12.929	16.742	
Total	87.039	84.948	

Formula No. 17

COMPANY	Phase I		Vote
	Phase I	Phase II	
AMERADA	0.0	0.062	0.0
AMOCO	0.035	0.062	0.0
ARAPAH	0.002	0.004	0.0
ARCO	9.428	10.467	No
BETVISH M	0.026	0.081	0.0
BOYLE W T	0.026	0.081	0.0
BROWN D I	0.032	0.058	0.0
BROWN D 2	0.001	0.003	0.0
CHEVRON	13.428	11.870	Yes
CITIES SV	3.956	1.717	Yes
CROWN CENT	0.022	0.162	0.0
DAVOIL INC	0.012	0.022	0.0
DECK M	0.141	0.064	0.0
ELK OIL CO	0.0	0.234	0.0
EXXON CO	12.907	15.034	No
FW NATL BK	0.100	0.145	0.0
GETTY OIL	3.576	3.124	Yes
GT WESTERN	0.023	0.040	0.0
HENSLEY JD	0.004	0.011	0.0
HULSEY L O	0.015	0.045	0.0
KOKOMO OIL	0.007	0.012	0.0
LAUGHLIN	0.002	0.006	0.0
LITTLE T W	0.031	0.046	0.0
MARATHON	2.964	4.099	0.0
MCRAE H	0.002	0.006	0.0
MIDKIFF K	0.002	0.003	0.0
MOBIL OIL	12.948	12.277	No
PAYNE D	0.031	0.046	0.0
PENROSE	0.000	0.025	0.0
PENNZOIL	0.109	0.295	Pass
PETROSERCH	0.016	0.024	0.0
PHILLIPS	30.999	29.290	No
RADTKE D E	0.031	0.046	0.0
SEELY C W	0.002	0.004	0.0
SHELL OIL	8.949	9.190	0.0
SCHIO PET	0.067	0.097	0.0
STOVALL N	0.026	0.081	0.0
STREET S B	0.026	0.081	0.0
TEXACO INC	0.0	0.120	0.0
TURNCO INC	0.026	0.081	0.0
WAINOCO	0.016	0.045	0.0
WALSH MARY	0.001	0.039	0.0
TOTAL	100.000	100.000	0.0
Yes	20.960	16.711	
No	66.282	67.868	
Pass	0.109	0.295	
Total	87.351	84.874	

COMPARISON OF UNIT EQUITIES -- PARTICIPATION PERCENT

Formula No. 18

COMPANY	Phase I	Phase II	Vote
AMEPADA	0.0	0.078	0.0
AMOCO	0.035	0.053	0.0
ARAPAH	0.002	0.004	0.0
ARCO	9.428	10.679	No
BETTIS H M	0.026	0.084	0.0
BOYLE W T	0.026	0.084	0.0
BROWN D I	0.032	0.056	0.0
BROWN D 2	0.001	0.003	0.0
CHEVRON	13.428	11.354	No
CITIES SV	3.956	1.233	Pass
CROWN CENT	0.022	0.190	0.0
DAVOIL INC	0.012	0.018	0.0
DECK M	0.141	0.031	0.0
ELK OIL CO	0.0	0.261	0.0
EXXON CO	12.907	16.216	No
FW NATL BK	0.100	0.131	0.0
GETTY OIL	3.576	3.073	Yes
GT WESTERN	0.023	0.034	0.0
HENSLEY JD	0.004	0.012	0.0
HULSEY L D	0.015	0.047	0.0
KOKOMO OIL	0.007	0.008	0.0
LAUGHLIN	0.002	0.006	0.0
LITTLE T W	0.031	0.028	0.0
MARATHON	2.964	4.324	0.0
MCRAE H	0.002	0.006	0.0
MIDKIFF K	0.002	0.003	0.0
MOBIL OIL	12.948	12.676	No
PAYNE D	0.031	0.028	0.0
PENROSE	0.000	0.031	0.0
PENNZOIL	0.109	0.322	Yes
PETROSERCH	0.016	0.029	0.0
PHILLIPS	30.999	29.370	Yes
RADTKE D E	0.031	0.028	0.0
SEELY C W	0.002	0.004	0.0
SHELL OIL	8.949	8.916	0.0
SOHIO PET	0.067	0.088	0.0
STOVALL N	0.026	0.084	0.0
STREET S B	0.0	0.144	0.0
TEXACO INC	0.026	0.084	0.0
TURNCO INC	0.016	0.049	0.0
WAINOCO	0.001	0.046	0.0
WALSH MARY			
TOTAL	100.000	100.000	0.0

Yes

No

Pass

Total

32.765

50.925

1.233

84.923

34.684

48.711

3.956

87.351

Yes

No

Pass

Total

32.765

50.925

1.233

84.923

34.684

48.711

3.956

87.351

Formula No. 19

COMPANY	Phase I	Phase II	Vote
AMEPADA	0.0	0.086	0.0
AMOCO	0.024	0.048	0.0
ARAPAH	0.002	0.005	0.0
ARCO	9.725	10.785	Yes
BETTIS H M	0.024	0.085	0.0
BOYLE W T	0.024	0.085	0.0
BROWN D I	0.037	0.055	0.0
BROWN D 2	0.002	0.003	0.0
CHEVRON	13.089	11.096	No
CITIES SV	4.022	0.991	No
CROWN CENT	0.013	0.203	0.0
DAVOIL INC	0.009	0.017	0.0
DECK M	0.138	0.015	0.0
ELK OIL CO	0.0	0.274	0.0
EXXON CO	12.842	16.407	Pass
FW NATL BK	0.115	0.124	0.0
GETTY OIL	3.541	3.048	Yes
GT WESTERN	0.016	0.031	0.0
HENSLEY JD	0.004	0.013	0.0
HULSEY L D	0.014	0.047	0.0
KOKOMO OIL	0.007	0.007	0.0
LAUGHLIN	0.002	0.006	0.0
LITTLE T W	0.029	0.018	0.0
MARATHON	3.025	4.436	0.0
MCRAE H	0.002	0.006	0.0
MIDKIFF K	0.002	0.004	0.0
MOBIL OIL	13.020	12.875	Yes
PAYNE D	0.029	0.018	0.0
PENROSE	0.000	0.033	0.0
PENNZOIL	0.104	0.335	Pass
PETROSERCH	0.014	0.031	0.0
PHILLIPS	30.758	29.411	No
RADTKE D E	0.029	0.018	0.0
SEELY C W	0.002	0.005	0.0
SHELL OIL	9.172	8.780	0.0
SOHIO PET	0.077	0.083	0.0
STOVALL N	0.024	0.085	0.0
STREET S B	0.024	0.085	0.0
TEXACO INC	0.0	0.156	0.0
TURNCO INC	0.024	0.085	0.0
WAINOCO	0.015	0.051	0.0
WALSH MARY	0.001	0.050	0.0
TOTAL	100.000	100.000	0.0

26.286

47.869

12.946

87.101

26.286

47.869

12.946

87.101

Yes

No

Pass

Total

32.765

50.925

1.233

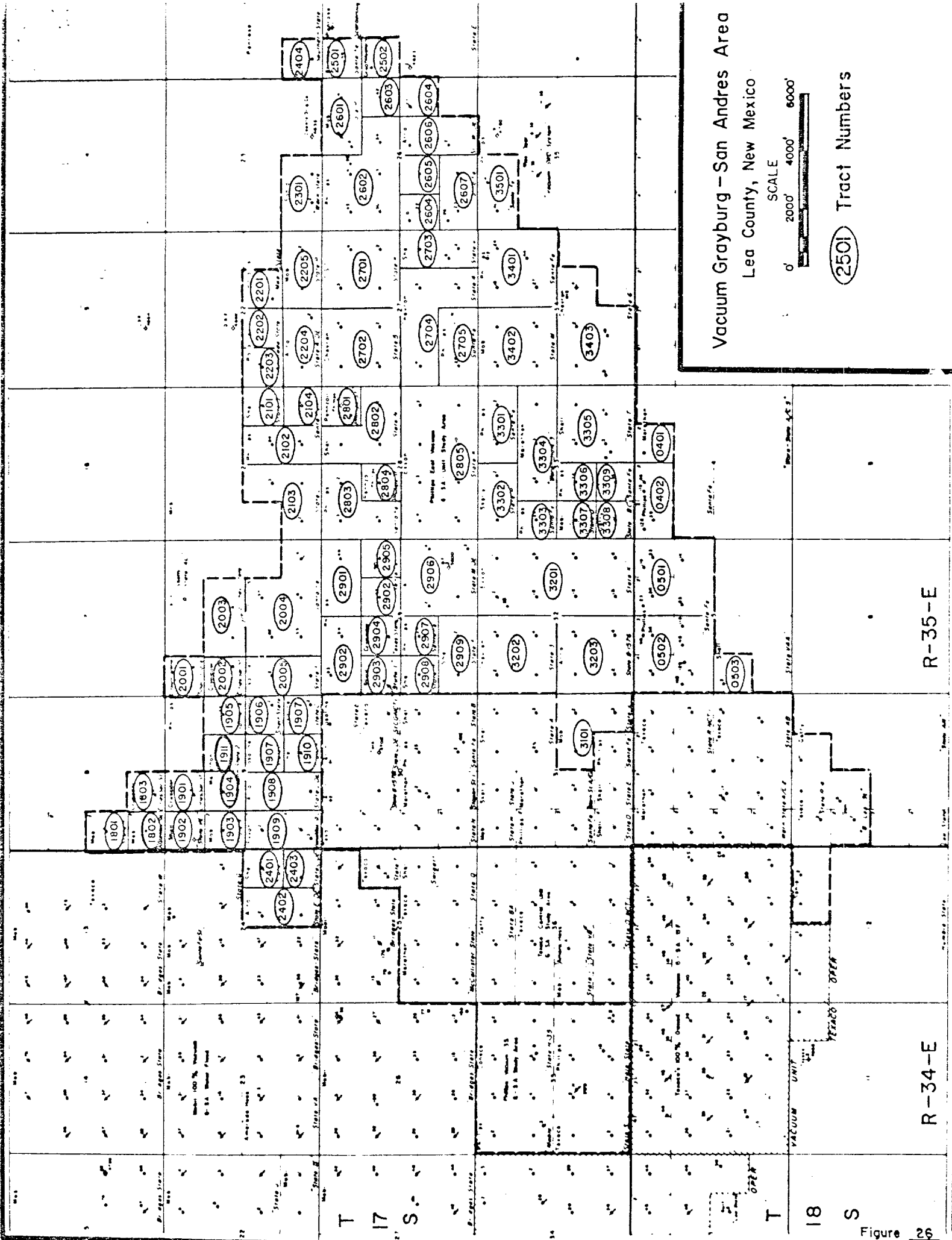
84.923

34.684

48.711

3.956

87.351



Vacuum Grayburg-San Andres Area

Lea County, New Mexico

SCALE

0' 2000' 4000' 6000'

2501 Tract Numbers

R-35-E

R-34-E

MINUTES OF WORKING INTEREST OWNERS MEETING
MARCH 9, 1978

FILE COPY

EAST VACUUM GRAYBURG-SAN ANDRES UNIT, PROPOSED
LEA COUNTY, NEW MEXICO

JAN 20 1978

A meeting of the Working Interest Owners of the East Vacuum Grayburg-San Andres Unit, Proposed, was held March 9, 1978, in the Assembly Room, Exxon Building, Midland, Texas. The meeting was called to order by the Chairman, Mr. J. E. Chrisman, Phillips Petroleum Company. Representatives attending the meeting were:

<u>Name</u>	<u>Company</u>	<u>Location</u>
S. R. Denton	Amoco Production Company	Houston, Texas
G. Thane Akins	Atlantic Richfield Company	Midland, Texas
Michael Griffin	Atlantic Richfield Company	Midland, Texas
Tom Porter	Atlantic Richfield Company	Midland, Texas
W. A. Goudeau	Chevron U.S.A., Inc.	Midland, Texas
G. E. George	Chevron U.S.A., Inc.	Midland, Texas
J. M. Shepherd	Exxon Company, U.S.A.	Midland, Texas
W. E. Nolan	Exxon Company, U.S.A.	Midland, Texas
O. V. Stuckey	Getty Oil Company	Midland, Texas
E. R. Frazier	Mobil Oil Corporation	Houston, Texas
A. J. Hankinson, Jr.	Mobil Oil Corporation	Houston, Texas
W. E. Buck	Shell Oil Company	Houston, Texas
W. B. Taylor, Jr.	Phillips Petroleum Company	Houston, Texas
J. E. Chrisman	Phillips Petroleum Company	Houston, Texas
J. E. Curzon	Phillips Petroleum Company	Bartlesville, Oklahoma
W. W. Allen	Phillips Petroleum Company	Odessa, Texas
W. J. Mueller	Phillips Petroleum Company	Odessa, Texas
R. J. Roper	Phillips Petroleum Company	Odessa, Texas

Those in attendance represented approximately 83 percent of the working interest in the proposed unit area based upon surface acres and approximately 92.5 percent based upon the current production parameter.

Formulas Nos. 20 through 25 were proposed and voted upon (formulas and voting details are shown in the attachment to these minutes).

Arrangements were made to reconvene in approximately three weeks on Wednesday, March 29, 1978, at 10:00 A.M., in Exxon's First Floor Assembly Room, Exxon Building, Midland, Texas.

Under separate cover, you will receive Unit and Unit Operating Agreements. These will be preliminary drafts for review and discussion at the March 29, 1978, meeting.

Meeting adjourned.

RJR:dva
Attachments

Formula No. 20 (ARCO)

(Re-vote Formula No. 14)

Ph. I: 50% CR-PRO, 50% FU-PRI

duration of rem. primary.

Ph. II: 25% HPVOIP, 75% Sec. Oil

COMPANY	Phase I	Phase II	Vote
AMERADA	0.00	0.000	Pass
AMUCO	0.000	0.044	Pass
ARAPAHU	0.002	0.005	Yes
ARCO	9.420	10.005	Yes
BETTIS, H M	0.020	0.080	No
BOYLL W I	0.020	0.000	
BROWN D I	0.032	0.055	
BROWN D Z	0.001	0.005	
CHEVRON	15.420	11.005	
CITIES SV	5.950	0.997	
CROWN CENT	0.022	0.205	
DAVAIL INC	0.012	0.015	
DECK M	0.141	0.015	
ELK OIL CO	0.0	0.275	Yes
EXXON CO	12.907	10.405	Yes
FW NATL BK	0.100	0.124	
GERTY OIL	5.570	3.000	
GT WESTERN	0.025	0.028	
HENSLEY JD	0.004	0.015	
HULSEY L D	0.015	0.040	
KOKOMO OIL	0.007	0.007	
LAUGHLIN	0.002	0.000	
LITTLE T W	0.051	0.010	
MARATHON	2.504	0.455	
MCRAC H	0.002	0.000	
MIDKIFF K	0.002	0.004	Yes
MOBIL OIL	12.940	12.058	
PAYNE D	0.031	0.010	
PENRUSE	0.000	0.033	
PENNZOIL	0.109	0.537	Pass
PLTRUSEMCH	0.010	0.051	
PHILLIPS	50.999	29.277	Pass
RADTKE D E	0.051	0.010	
SEELY C W	0.002	0.005	
SHELL OIL	8.949	0.777	
SOMLO P L I	0.067	0.005	
STUVAL N	0.020	0.080	
STRELF S B	0.020	0.080	
TLXACO INC	0.0	0.157	
TURNCO INC	0.020	0.080	
WAINUCU	0.010	0.051	
WALSH MARY	0.001	0.050	
TOTAL	100.000	100.000	
	38.859	43.232	Yes
	13.428	11.083	No
	39.983	38.098	Pass
	92.270	92.413	Total

Formula No. 21 (Shell)

Ph. I: 100% FU-PRI

duration of rem. primary.

Ph. II: 100% Secondary Oil.

Phase I	Phase II	Vote
0.0	0.009	No
0.001	0.024	No
0.001	0.005	Yes
10.171	10.095	Yes
0.021	0.066	
0.021	0.020	
0.043	0.050	
0.002	0.005	
12.579	11.018	No
4.120	1.026	
0.0	0.211	
0.002	0.006	
0.134	0.015	
0.0	0.283	Yes
12.744	10.755	Yes
0.136	0.127	
3.489	3.150	Yes
0.005	0.015	
0.004	0.013	
0.012	0.049	
0.006	0.007	
0.002	0.007	
0.005	0.019	
3.110	4.575	
0.002	0.007	
0.001	0.004	Yes
13.128	13.015	
0.025	0.019	
0.0	0.033	
0.096	0.347	
0.010	0.032	No
30.397	28.609	
0.025	0.019	
0.001	0.005	Yes
9.505	8.700	
0.091	0.005	
0.021	0.088	
0.021	0.008	
0.0	0.102	
0.021	0.088	
0.014	0.053	
0.0	0.050	
100.000	100.000	
49.037	52.587	Yes
42.984	39.651	No
0	0	Pass
92.021	92.238	Total

Formula No. 22 (Phillips)

(Re-vote Formula No. 15)

Ph. I: 50% CR-PRO, 50% FU-PRI

duration of rem. primary.

Ph. II: 30% UPVOIP, 70% Sec. oil

Phase I	Phase II	Vote
0.0	0.030	Pass
0.0035	0.048	Pass
0.002	0.005	No
9.428	16.785	No
0.020	0.085	No
0.026	0.085	No
0.032	0.055	No
0.001	0.003	No
13.428	11.096	No
3.956	0.991	No
0.022	0.203	No
0.012	0.017	No
0.141	0.015	No
0.0	0.274	No
12.907	16.407	No
0.100	0.124	No
3.576	3.048	No
0.023	0.031	No
0.004	0.013	No
0.012	0.047	No
0.007	0.007	No
0.002	0.006	No
0.031	0.018	No
2.904	4.436	No
0.002	0.006	No
0.002	0.004	No
12.946	12.875	No
0.031	0.018	No
0.000	0.033	No
0.109	0.335	No
0.010	0.031	No
30.999	29.411	Yes
0.031	0.018	Yes
0.002	0.005	Yes
8.949	8.780	Yes
0.067	0.083	Yes
0.020	0.085	Yes
0.020	0.085	Yes
0.0	0.156	Yes
0.020	0.085	Yes
0.010	0.051	Yes
0.001	0.050	Yes
100.000	100.000	Yes
30.999	29.411	Yes
52.287	54.211	No
8.984	8.828	Pass
92.270	92.450	Total

Formula No. 23 (Chevron)

Ph. I: 50% CR-PRO, 50% FU-PRI
duration of rem. primary.
70% Secondary Oil.

COMPANY	Phase I	Phase II	Vote
AMERADA	0.000	0.000	Pass
AMOCO	0.000	0.000	Pass
ARAPAHU	0.000	0.000	No
ARCO	0.000	0.000	No
BETTIS M M	0.000	0.000	Yes
BOYLE W T	0.000	0.000	Yes
BROWN D 1	0.000	0.000	Yes
BROWN D 2	0.000	0.000	Yes
CHEVRON	0.000	0.000	Yes
CITIES SV	0.000	0.000	Yes
CROWN CENT	0.000	0.000	Yes
DAVOIL INC	0.000	0.000	Yes
DECK M	0.000	0.000	Yes
ELK OIL CO	0.000	0.000	Yes
EXXON CO	0.000	0.000	Yes
FW NATL BN	0.000	0.000	Yes
GETTY OIL	0.000	0.000	Yes
GT WESTERN	0.000	0.000	Yes
HENSLEY JD	0.000	0.000	Yes
HULSEY L B	0.000	0.000	Yes
KOKOMO OIL	0.000	0.000	Yes
LAUGHLIN	0.000	0.000	Yes
LITTLE T W	0.000	0.000	Yes
MAKATHON	0.000	0.000	Yes
MCRACK	0.000	0.000	Yes
MIDKIFF K	0.000	0.000	Yes
MUGIL OIL	0.000	0.000	Yes
PAYNE D	0.000	0.000	Yes
PENROSE	0.000	0.000	Yes
PENNZOIL	0.000	0.000	Yes
PETROBRAS	0.000	0.000	Yes
PHILLIPS	0.000	0.000	Yes
RADIKE D E	0.000	0.000	Yes
SEELY C W	0.000	0.000	Yes
SHELL OIL	0.000	0.000	Yes
SUNCO PET	0.000	0.000	Yes
STOVALL N	0.000	0.000	Yes
STREET S B	0.000	0.000	Yes
TLXACU INC	0.000	0.000	Yes
TURNCO INC	0.000	0.000	Yes
WAINOCU	0.000	0.000	Yes
WALSH MARY	0.000	0.000	Yes
TOTAL	100.000	100.000	Yes
	44.427	40.615	Yes
	35.283	39.820	No
	12.560	11.959	Pass
	-92.270	92.394	Total

Formula No. 24 (Getty)

Ph. I: 45% CR-PRO, 55% FU-PRI
duration of rem. primary.
Ph. II: 25% HPVOIP, 75% Sec. Oil

COMPANY	Phase I	Phase II	Vote
AMERADA	0.000	0.000	No
AMOCO	0.000	0.000	No
ARAPAHU	0.000	0.000	Pass
ARCO	0.000	0.000	Pass
BETTIS M M	0.000	0.000	No
BOYLE W T	0.000	0.000	No
BROWN D 1	0.000	0.000	No
BROWN D 2	0.000	0.000	No
CHEVRON	0.000	0.000	No
CITIES SV	0.000	0.000	No
CROWN CENT	0.000	0.000	No
DAVOIL INC	0.000	0.000	No
DECK M	0.000	0.000	No
ELK OIL CO	0.000	0.000	No
EXXON CO	0.000	0.000	No
FW NATL BN	0.000	0.000	No
GETTY OIL	0.000	0.000	No
GT WESTERN	0.000	0.000	No
HENSLEY JD	0.000	0.000	No
HULSEY L B	0.000	0.000	No
KOKOMO OIL	0.000	0.000	No
LAUGHLIN	0.000	0.000	No
LITTLE T W	0.000	0.000	No
MAKATHON	0.000	0.000	No
MCRACK	0.000	0.000	No
MIDKIFF K	0.000	0.000	No
MUGIL OIL	0.000	0.000	No
PAYNE D	0.000	0.000	No
PENROSE	0.000	0.000	No
PENNZOIL	0.000	0.000	No
PETROBRAS	0.000	0.000	No
PHILLIPS	0.000	0.000	No
RADIKE D E	0.000	0.000	No
SEELY C W	0.000	0.000	No
SHELL OIL	0.000	0.000	No
SUNCO PET	0.000	0.000	No
STOVALL N	0.000	0.000	No
STREET S B	0.000	0.000	No
TLXACU INC	0.000	0.000	No
TURNCO INC	0.000	0.000	No
WAINOCU	0.000	0.000	No
WALSH MARY	0.000	0.000	No
TOTAL	100.000	100.000	No
	16.534	15.964	Yes
	44.316	40.404	No
	31.393	36.045	Pass
	92.248	92.413	Total

Formula No. 25 (Phillips)

Ph. I: 50% CR-PRO, 50% FU-PRI
duration of rem. primary.
Ph. II: 100% HPVOIP For 10 MBO past pri.
Ph. III: 100% Secondary Oil.

COMPANY	Phase I	Phase II	Phase III	Vote
AMERADA	0.000	0.000	0.000	Pass
AMOCO	0.000	0.000	0.000	Pass
ARAPAHU	0.000	0.000	0.000	No
ARCO	0.000	0.000	0.000	No
BETTIS M M	0.000	0.000	0.000	No
BOYLE W T	0.000	0.000	0.000	No
BROWN D 1	0.000	0.000	0.000	No
BROWN D 2	0.000	0.000	0.000	No
CHEVRON	0.000	0.000	0.000	No
CITIES SV	0.000	0.000	0.000	No
CROWN CENT	0.000	0.000	0.000	No
DAVOIL INC	0.000	0.000	0.000	No
DECK M	0.000	0.000	0.000	No
ELK OIL CO	0.000	0.000	0.000	No
EXXON CO	0.000	0.000	0.000	No
FW NATL BN	0.000	0.000	0.000	No
GETTY OIL	0.000	0.000	0.000	No
GT WESTERN	0.000	0.000	0.000	No
HENSLEY JD	0.000	0.000	0.000	No
HULSEY L B	0.000	0.000	0.000	No
KOKOMO OIL	0.000	0.000	0.000	No
LAUGHLIN	0.000	0.000	0.000	No
LITTLE T W	0.000	0.000	0.000	No
MAKATHON	0.000	0.000	0.000	No
MCRACK	0.000	0.000	0.000	No
MIDKIFF K	0.000	0.000	0.000	No
MUGIL OIL	0.000	0.000	0.000	No
PAYNE D	0.000	0.000	0.000	No
PENROSE	0.000	0.000	0.000	No
PENNZOIL	0.000	0.000	0.000	No
PETROBRAS	0.000	0.000	0.000	No
PHILLIPS	0.000	0.000	0.000	No
RADIKE D E	0.000	0.000	0.000	No
SEELY C W	0.000	0.000	0.000	No
SHELL OIL	0.000	0.000	0.000	No
SUNCO PET	0.000	0.000	0.000	No
STOVALL N	0.000	0.000	0.000	No
STREET S B	0.000	0.000	0.000	No
TLXACU INC	0.000	0.000	0.000	No
TURNCO INC	0.000	0.000	0.000	No
WAINOCU	0.000	0.000	0.000	No
WALSH MARY	0.000	0.000	0.000	No
TOTAL	100.000	100.000	100.000	No
	30.999	31.281	28.609	Yes
	22.856	21.808	21.913	No
	38.415	39.857	41.716	Pass
	92.270	92.946	92.238	Total



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production

March 14, 1978

Re: Proposed East Vacuum (Grayburg-
San Andres) Unit
Lea County, New Mexico

THE WORKING INTEREST OWNERS:

Gentlemen:

Enclosed, as promised at the March 9 Meeting of Working Interest Owners, are drafts of the Unit and Unit Operating Agreements, less exhibits. Please be prepared to offer your comments at the next meeting, scheduled for March 29.

Yours very truly,

PHILLIPS PETROLEUM COMPANY


J. E. Chrisman

JEC:mb
Encl.

MINUTES OF WORKING INTEREST OWNERS MEETING
MARCH 29, 1978

EAST VACUUM GRAYBURG-SAN ANDRES UNIT, PROPOSED
LEA COUNTY, NEW MEXICO

A meeting of the Working Interest Owners of the East Vacuum Grayburg-San Andres Unit, Proposed, was held March 29, 1978, in the Assembly Room, Exxon Building, Midland, Texas. The meeting was called to order by the Chairman, Mr. J. E. Chrisman, Phillips Petroleum Company. Representatives attending the meeting were:

<u>Name</u>	<u>Company</u>	<u>Location</u>
A. L. Cole	Amoco Production Company	Houston, Texas
G. Thane Akins	Atlantic Richfield Company	Midland, Texas
Michael Griffin	Atlantic Richfield Company	Midland, Texas
Tom Porter	Atlantic Richfield Company	Midland, Texas
W. A. Coudeau	Chevron U.S.A., Inc.	Midland, Texas
Bert O. Gunn, Jr.	Chevron U.S.A., Inc.	Midland, Texas
J. C. Prindle	Chevron U.S.A., Inc.	Midland, Texas
M. S. Mabry	Cities Service Company	Midland, Texas
J. M. Shepherd	Exxon Company, U.S.A.	Midland, Texas
W. E. Nolan	Exxon Company, U.S.A.	Midland, Texas
J. B. Campbell	Exxon Company, U.S.A.	Midland, Texas
J. B. White	Exxon Company, U.S.A.	Midland, Texas
O. V. Stuckey	Getty Oil Company	Midland, Texas
A. J. Hankinson, Jr.	Mobil Oil Corporation	Houston, Texas
Davis Payne	Polaris Production Corp.	Midland, Texas
W. E. Buck	Shell Oil Company	Houston, Texas
Robert E. Davis	Texaco Inc.	Midland, Texas
W. B. Taylor, Jr.	Phillips Petroleum Company	Houston, Texas
J. E. Chrisman	Phillips Petroleum Company	Houston, Texas
J. E. Curzon	Phillips Petroleum Company	Bartlesville, Oklahoma
W. W. Allen	Phillips Petroleum Company	Odessa, Texas
W. J. Mueller	Phillips Petroleum Company	Odessa, Texas
R. J. Roper	Phillips Petroleum Company	Odessa, Texas

Those in attendance represented approximately 86.0 percent of the working interest in the proposed unit area based upon surface acres and approximately 96.4 percent based upon the current production parameters.

The drafts of the Unit Agreement and Unit Operating Agreement were discussed in detail. Changes in content, spelling, and phraseology were agreed upon. Additional legal opinions will be obtained on several sections of the agreements.

In regard to the Insurance Provision of the Unit Operating Agreement, both Exxon and Chevron stated that they would prefer being self-insured.

Considerable discussion centered on the expense and investment allocations. Exxon proposed the following:

1) Operating and Overhead Expense

All operating and overhead expense shall be allocated on phase in effect.

2) Investment Expenditures

a) All expenditures of a primary nature including tank battery consolidations, artificial lift, and drilling of producing wells shall be charged on Phase I participation.

b) All expenditures of a secondary nature associated with injection stations, injection lines, water source, drilling and equipping injection wells, make-up water system, and conversion expenses shall be charged on Phase II participation.

3) Initial Inventory

Value of initial inventory shall be allocated on the basis of Phase I participation and adjusted to Phase II participation at the beginning of Phase II.

Vote No. 26 was taken combining the above allocation with the Participation Formula of Article 13 of the Unit Agreement. Voting results:

<u>Company</u>	<u>Phase I</u>	<u>Phase II</u>	<u>Vote</u>
Amoco Production Company	0.035	0.044	Pass
Atlantic Richfield Company	9.428	10.803	Yes
Chevron U.S.A., Inc.	13.428	11.083	No
Cities Service Company	3.956	0.997	Pass
Exxon Company, U.S.A.	12.907	16.465	Yes
Getty Oil Company	3.576	3.066	Yes
Mobil Oil Corporation	12.948	12.898	Yes
Phillips Petroleum Company	30.999	29.277	No
Shell Oil Company	8.949	8.777	No
Yes	38.859	43.232	
No	53.376	49.137	
Pass	3.991	1.041	
Total	96.226	93.410	

Minutes of Working Interest Owners Meeting
East Vacuum Grayburg-San Andres Unit, Proposed
Page 3

Phillips proposed the following modification to Exxon's expense and investment allocation:

1) Operating and Overhead Expense

- a) Operating expense and overhead up to and including \$800 per month per producing well be allocated on Phase I.
- b) Expenses above \$800 per month per producing well be allocated on Phase II.
- c) For duration of Phase I.

2) Investment Expenditures

Same as Exxon's proposal but with Inventory Adjustment from Phase I to Phase II at the beginning of Phase II.

3) Initial Inventory

Same as Exxon's.

Vote No. 27 was taken combining the above allocation with the Participation Formula of Article 13 of the Unit Agreement. Voting results:

<u>Company</u>	<u>Phase I</u>	<u>Phase II</u>	<u>Vote</u>
Amoco Production Company	0.035	0.044	Pass
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Cities Service Company	3.956	0.997	Pass
Exxon Company, U.S.A.	12.907	16.465	No
Getty Oil Company	3.576	3.066	Pass
Mobil Oil Corporation	12.948	12.898	Pass
Phillips Petroleum Company	30.999	29.277	Yes
Shell Oil Company	8.949	8.777	Pass
Yes	30.999	29.277	
No	26.335	27.548	
Pass	38.892	36.585	
Total	96.226	93.410	

The Chairman, Mr. J. E. Chrisman, advised that the Accounting Procedure would be distributed. He requested that anyone having any suggestions or recommendations to contact him or to distribute them.

Meeting adjourned.

RJR:dva

MINUTES OF WORKING INTEREST OWNERS MEETING
MARCH 29, 1978

EAST VACUUM GRAYBURG-SAN ANDRES UNIT, PROPOSED
LEA COUNTY, NEW MEXICO

A meeting of the Working Interest Owners of the East Vacuum Grayburg-San Andres Unit, Proposed, was held March 29, 1978, in the Assembly Room, Exxon Building, Midland, Texas. The meeting was called to order by the Chairman, Mr. J. E. Chrisman, Phillips Petroleum Company. Representatives attending the meeting were:

<u>Name</u>	<u>Company</u>	<u>Location</u>
A. L. Cole	Amoco Production Company	Houston, Texas
G. Thane Akins	Atlantic Richfield Company	Midland, Texas
Michael Griffin	Atlantic Richfield Company	Midland, Texas
Tom Porter	Atlantic Richfield Company	Midland, Texas
W. A. Goudeau	Chevron U.S.A., Inc.	Midland, Texas
Bert O. Gunn, Jr.	Chevron U.S.A., Inc.	Midland, Texas
J. C. Prindle	Chevron U.S.A., Inc.	Midland, Texas
M. S. Mabry	Cities Service Company	Midland, Texas
J. M. Shepherd	Exxon Company, U.S.A.	Midland, Texas
W. E. Nolan	Exxon Company, U.S.A.	Midland, Texas
J. B. Campbell	Exxon Company, U.S.A.	Midland, Texas
J. B. White	Exxon Company, U.S.A.	Midland, Texas
O. V. Stuckey	Getty Oil Company	Midland, Texas
A. J. Hankinson, Jr.	Mobil Oil Corporation	Houston, Texas
Davis Payne	Polaris Production Corp.	Midland, Texas
W. E. Buck	Shell Oil Company	Houston, Texas
Robert E. Davis	Texaco Inc.	Midland, Texas
W. B. Taylor, Jr.	Phillips Petroleum Company	Houston, Texas
J. E. Chrisman	Phillips Petroleum Company	Houston, Texas
J. E. Curzon	Phillips Petroleum Company	Bartlesville, Oklahoma
W. W. Allen	Phillips Petroleum Company	Odessa, Texas
W. J. Mueller	Phillips Petroleum Company	Odessa, Texas
R. J. Roper	Phillips Petroleum Company	Odessa, Texas

Those in attendance represented approximately 86.0 percent of the working interest in the proposed unit area based upon surface acres and approximately 96.4 percent based upon the current production parameters.

The drafts of the Unit Agreement and Unit Operating Agreement were discussed in detail. Changes in content, spelling, and phraseology were agreed upon. Additional legal opinions will be obtained on several sections of the agreements.

In regard to the Insurance Provision of the Unit Operating Agreement, both Exxon and Chevron stated that they would prefer being self-insured.

Considerable discussion centered on the expense and investment allocations. Exxon proposed the following:

1) Operating and Overhead Expense

All operating and overhead expense shall be allocated on phase in effect.

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a) All expenditures of a primary nature including tank battery consolidations, artificial lift, and drilling of producing wells shall be charged on Phase I participation.

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Value of initial inventory shall be allocated on the basis of Phase I participation and adjusted to Phase II participation at the beginning of Phase II.

Vote No. 26 was taken combining the above allocation with the Participation Formula of Article 13 of the Unit Agreement. Voting results:

<u>Company</u>	<u>Phase I</u>	<u>Phase II</u>	<u>Vote</u>
Amoco Production Company	0.035	0.044	Pass
Atlantic Richfield Company	9.428	10.803	Yes
Chevron U.S.A., Inc.	13.428	11.083	No
Cities Service Company	3.956	0.997	Pass
Exxon Company, U.S.A.	12.907	16.465	Yes
Getty Oil Company	3.576	3.066	Yes
Mobil Oil Corporation	12.948	12.898	Yes
Phillips Petroleum Company	30.999	29.277	No
Shell Oil Company	8.949	8.777	No
Yes	38.859	43.232	
No	53.376	49.137	
Pass	3.991	1.041	
Total	96.226	93.410	

Phillips proposed the following modification to Exxon's expense and investment allocation:

1) Operating and Overhead Expense

- a) Operating expense and overhead up to and including \$800 per month per producing well be allocated on Phase I.
- b) Expenses above \$800 per month per producing well be allocated on Phase II.
- c) For duration of Phase I.

2) Investment Expenditures

Same as Exxon's proposal but with adjustment of all expenditures of a primary nature from Phase I to Phase II at the beginning of Phase II.

3) Initial Inventory

Same as Exxon's.

Vote No. 27 was taken combining the above allocation with the Participation Formula of Article 13 of the Unit Agreement. Voting results:

<u>Company</u>	<u>Phase I</u>	<u>Phase II</u>	<u>Vote</u>
Amoco Production Company	0.035	0.044	Pass
Atlantic Richfield Company	9.428	10.803	Pass
Chevron U.S.A., Inc.	13.428	11.083	No
Cities Service Company	3.956	0.997	Pass
Exxon Company, U.S.A.	12.907	16.465	No
Getty Oil Company	3.576	3.066	Pass
Mobil Oil Corporation	12.948	12.898	Pass
Phillips Petroleum Company	30.999	29.277	Yes
Shell Oil Company	<u>8.949</u>	<u>8.777</u>	Pass
Yes	30.999	29.277	
No	26.335	27.548	
Pass	<u>38.892</u>	<u>36.585</u>	
Total	96.226	93.410	

The Chairman, Mr. J. E. Chrisman, advised that the Accounting Procedure would be distributed. He requested that anyone having any suggestions or recommendations to contact him or to distribute them.

Meeting adjourned.



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production

March 30, 1978

Re: Proposed East Vacuum (Gray-
burg San Andres) Unit
Lea County, New Mexico

TO WORKING INTEREST OWNERS:

Enclosed is a copy of the Accounting Procedure from which I quoted overhead rates at the Working Interest Owners' meeting yesterday. As advised, it will be necessary to adjust the rates based on the actual BLS wage index adjustment for the year of 1977.

Minutes of yesterday's meeting will follow under separate cover.

Yours very truly,

PHILLIPS PETROLEUM COMPANY


J. E. Chrisman

JEC:mb
Attch.



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production

May 2, 1978

Re: Proposed East Vacuum Grayburg-
San Andres Unit
Lea County, New Mexico

WORKING INTEREST OWNERS

Gentlemen:

This is to call a meeting of the Working Interest Owners Committee on Tuesday May 23 in Phillips' new office building in Odessa, Texas. The meeting will commence at 10:00 AM. We will be prepared to remain in continuous session until a sufficient percentage agrees on participation and cost allocations as to permit us to proceed with our Unit Expeditior obligations.

After May 7 our Odessa location will be at 4001 Penbrook, just East of Winwood Mall on E. 42nd Street. Our Odessa telephone number remains 915-337-8611.

Yours very truly,

PHILLIPS PETROLEUM COMPANY


J. E. Chrisman

JEC:mb

MINUTES OF WORKING INTEREST OWNERS MEETING
MAY 23, 1978

EAST VACUUM GRAYBURG-SAN ANDRES UNIT, PROPOSED
LEA COUNTY, NEW MEXICO

A meeting of the Working Interest Owners of the East Vacuum Grayburg-San Andres Unit, Proposed, was held May 23, 1978, in the Conference Room of the Phillips Building, Odessa, Texas. The meeting was called to order by the Chairman, Mr. J. E. Chrisman, Phillips Petroleum Company. Representatives attending the meeting were:

<u>Name</u>	<u>Company</u>	<u>Location</u>
A. L. Cole	Amoco Production Company	Houston, Texas
G. Thane Akins	Atlantic Richfield Company	Midland, Texas
Michael Griffin	Atlantic Richfield Company	Midland, Texas
Tom Porter	Atlantic Richfield Company	Midland, Texas
W. A. Goudeau	Chevron U.S.A., Inc.	Midland, Texas
J. C. Prindle	Chevron U.S.A., Inc.	Midland, Texas
Mike S. Mabry	Cities Service Company	Midland, Texas
Mary Curliss	Cities Service Company	Midland, Texas
J. M. Shepherd	Exxon Company, U.S.A.	Midland, Texas
John B. White	Exxon Company, U.S.A.	Midland, Texas
W. E. Nolan	Exxon Company, U.S.A.	Midland, Texas
David Williams	Getty Oil Company	Midland, Texas
E. R. Frazier	Mobil Oil Corporation	Houston, Texas
Davis Payne	Polaris Production Corporation	Midland, Texas
W. E. Buck	Shell Oil Company	Houston, Texas
W. B. Taylor, Jr.	Phillips Petroleum Company	Houston, Texas
J. E. Chrisman	Phillips Petroleum Company	Houston, Texas
J. E. Curzon	Phillips Petroleum Company	Bartlesville, Oklahoma
R. E. Hoobler	Phillips Petroleum Company	Bartlesville, Oklahoma
W. J. Mueller	Phillips Petroleum Company	Odessa, Texas

Those in attendance represented approximately 85.44 percent of the working interest in the proposed unit area based upon surface acres and approximately 96.34 percent based upon the current production parameter.

Mr. W. A. Coudeau (Chevron) proposed participation Formula No. 28 which is stated along with voting details in the attached tabulation.

The voting results were as follows:

	<u>Phase I</u>	<u>Phase II</u>
Yes	66.283%	65.670%
No	20.480%	16.956%
Pass	<u>9.494%</u>	<u>10.842%</u>
Total	96.257%	93.468%

Mr. J. M. Shepherd (Exxon) proposed participation Formula No. 29 (re-vote of Formulas Nos. 14 and 20) which is stated along with voting details in the attached tabulation.

The voting results were as follows:

	<u>Phase I</u>	<u>Phase II</u>
Yes	69.858%	72.509%
No	17.384%	12.080%
Pass	<u>9.015%</u>	<u>8.839%</u>
Total	96.257%	93.428%

Mr. W. A. Goudeau (Chevron) proposed participation Formula No. 30 which is stated along with voting details in the attached tabulation.

The voting results were as follows:

	<u>Phase I</u>	<u>Phase II</u>
Yes	73.858%	72.786%
No	3.956%	1.020%
Pass	<u>18.443%</u>	<u>19.646%</u>
Total	96.257%	93.452%

Mr. Chrisman stated that Formula No. 30 appeared to be the optimum possible participation formula among the interests represented and that Phillips would proceed with unitization on that basis. No objections were received.

Mr. Chrisman commented briefly on unit investments and asked Mr. W. J. Mueller to outline the probable plan of development for the first two years of operation of the unit. This plan would optimize current producing rate during the development phase and is based on prospective regulatory approval of a development plan involving drilling additional wells initially on limited production proration units and unlimited allowable after reservoir voidage replacement is achieved. The review demonstrated that numerous wells will change classification (producing versus injecting) during or immediately following this period. It was pointed out by the Chairman that this plan of operation was modified from that in the Engineering-Geological Report.

Phillips proposed that the operating expenses be shared on the basis of the phase in effect and that all investment charges that relate to or optimize secondary recovery be paid for on the basis of Phase II participation factors with all others shared on composite participations. The composite participations are to be a reserve weighted average of Phase I and Phase II factors. There shall be only one investment adjustment and that will be as of the effective date of the unit on the basis of composite participations. Ownership in all facilities after the investment adjustment will be on the basis of final phase participations. Exxon suggested the voting be on the basis of Phase II participation percentages. No objections were voiced.

Voting results: Yes - 29.3%; No - 16.435%; Pass - 47.698%.

Exxon then proposed that all capital expenditures be shared on the basis of the composite participations during Phase I, and during Phase II on the final phase participations. All other conditions the same as Phillips' proposal.

Voting results: Yes - 45.735%; No - 12.132%; Pass - 35.566%.

A revised proposal was then made by Phillips, as follows:

1. Operating expenses be shared on basis of participation factors for phase in effect.
2. A single initial investment adjustment will be made, as of the effective date of the unit, on the basis of "composite" participation factors.
3. The first 15 million dollars total unit investment charges, including well deepening costs and all other costs normally considered as investment charges in oil field accounting practices will be shared on the basis of "composite" participation factors. The 15 million dollars will not include materials included in the unit inventory at the effective date of the unit.
4. All investment charges in excess of the initial unit inventory and the first 15 million dollars of investment charges will be on the basis of the final phase participation factors.
5. Ownership in all unit facilities and equipment, including the initial unit inventory, the first 15 million dollars of investment charges and all subsequent investment charges will be on the basis of the final phase participation factors.
6. The "composite" participation factors will be calculated as the weighted average of Phase I and Phase II participation factors, weighted according to the total unit Phase I oil volume remaining to be produced as of the effective date of the unit and final phase reserves of 40,794,740 barrels of oil.

Minutes of Working Interest Owners Meeting
East Vacuum Grayburg-San Andres Unit, Proposed
Page 4

At the suggestion of several operators present, Phillips will submit a ballot on the above basis for participation in charges and ownership to all working interest owners. (Two copies of this ballot are enclosed with these minutes. Please return an executed copy to Phillips Petroleum Company, Attention: Mr. J. E. Chrisman, P. O. Box 1967, Houston, Texas, 77001.)

A non-discrimination clause was discussed and Exxon agreed to submit their recommended proposal for a non-discrimination clause exhibit to the Unit Operating Agreement.

Mr. Chrisman reported that the owner of Tract 2003 requested that his tract be excluded from the unit area. It was the consensus of those present to leave the tract in the unit area in accordance with the State of New Mexico Statutory Unitization Regulations.

Mr. R. E. Hoobler (Phillips) pointed out that a rate revision had been made in the Accounting Procedure to allow for the Bureau of Labor Statistics Wage Index escalation which was effective April 1, 1978. The revised rates are as follows:

Combined producing rate	-- \$ 158.00
Drilling rate	-- \$1,580.00

The proposed loaned equipment provision was discussed. Exxon suggested that the loan period be for one year. There were no objections.

The Chairman advised that a revised draft of the Unit Agreement and Unit Operating Agreement, including the revisions suggested at the previous meeting, will be submitted to the owners as soon as a consensus is reached concerning the handling of unit investment charges. Another meeting is planned to finalize these agreements.

The meeting was adjourned at 2:45 P.M.

Formula No. 28 (Chevron)

Ph. I: 50% CR-PRO, 50% FU-PRI
duration of rem. primary.

Ph. II: 2% U-P-RS, 25% HPV
73% Sec. Oil

COMPANY	Phase I		Vote
	Phase I	Phase II	
AMERADA	0.0	0.085	
AMOCO	0.035	0.047	Pass
ARAPAHO	0.002	0.005	
ARCO	9.428	10.775	Pass
BETTIS H M	0.026	0.085	
BOYLE W T	0.026	0.085	
BROWN D 1	0.032	0.055	
BROWN D 2	0.001	0.003	
CHEVRON	13.428	11.140	Yes
CITIES SV	3.956	1.043	No
CROWN CENT	0.022	0.202	
DAVOIL INC	0.012	0.016	
DECK M	0.141	0.018	
ELK OIL CO	0.0	0.272	
EXXON CO	12.907	16.404	Yes
FW NATL BK	0.100	0.126	
GETTY OIL	3.576	3.064	No
GT WESTERN	0.023	0.030	
HENSLEY JD	0.004	0.013	
HULSEY L O	0.015	0.047	
KOKOMO OIL	0.007	0.007	
LAUGHLIN	0.002	0.006	
LITTLE T W	0.031	0.020	
MARATHON	2.964	4.428	
MCRAE H	0.002	0.006	
MIDKIFF K	0.002	0.004	
MOBIL OIL	12.948	12.649	No
PAYNE D	0.031	0.020	Pass
PENROSE	0.000	0.033	
PENNZOIL	0.109	0.334	
PETROSERCH	0.016	0.031	
PHILLIPS	30.999	29.322	Yes
RADTKE D E	0.031	0.020	
SEELY C W	0.002	0.005	
SHELL OIL	8.949	5.806	Yes
SOHIO PET	0.067	0.084	
STOVALL N	0.026	0.085	
STREET S B	0.026	0.085	
TEXACO INC	0.026	0.154	
TURNCO INC	0.016	0.085	
WAINOCO	0.016	0.051	
WALSH MARY	0.001	0.049	
TOTAL	100.000	160.600	
	66.283	65.670	Yes
	20.480	16.956	No
	9.494	10.842	Pass
	96.257	93.468	Total

Formula No. 29 (Exxon)

(Re-vote Formulas Nos. 14 and 20)

Ph. I: 50% CR-PRO, 50% FU-PRI
duration of rem. primary.

Ph. II: 25% HPV, 75% Sec. Oil

COMPANY	Phase I		Vote
	Phase I	Phase II	
AMERADA	0.0	0.086	
AMOCO	0.035	0.044	Pass
ARAPAHO	0.002	0.005	
ARCO	9.428	10.803	Yes
BETTIS H M	0.026	0.086	
BOYLE W T	0.026	0.086	
BROWN D 1	0.032	0.055	
BROWN D 2	0.001	0.003	
CHEVRON	13.428	11.083	No
CITIES SV	3.956	0.997	No
CROWN CENT	0.022	0.205	
DAVOIL INC	0.012	0.015	
DECK M	0.141	0.015	
ELK OIL CO	0.0	0.275	
EXXON CO	12.907	16.465	Yes
FW NATL BK	0.100	0.124	
GETTY OIL	3.576	3.066	Yes
GT WESTERN	0.023	0.028	
HENSLEY JD	0.004	0.013	
HULSEY L O	0.015	0.048	
KOKOMO OIL	0.007	0.007	
LAUGHLIN	0.002	0.006	
LITTLE T W	0.031	0.018	
MARATHON	2.964	4.459	
MCRAE H	0.002	0.006	
MIDKIFF K	0.002	0.004	
MOBIL OIL	12.948	12.898	Yes
PAYNE D	0.031	0.018	Pass
PENROSE	0.000	0.033	
PENNZOIL	0.109	0.337	
PETROSERCH	0.016	0.031	
PHILLIPS	30.999	29.277	Yes
RADTKE D E	0.031	0.018	
SEELY C W	0.002	0.005	
SHELL OIL	8.949	8.777	Pass
SOHIO PET	0.067	0.083	
STOVALL N	0.026	0.086	
STREET S B	0.026	0.086	
TEXACO INC	0.026	0.157	
TURNCO INC	0.016	0.086	
WAINOCO	0.016	0.051	
WALSH MARY	0.001	0.050	
TOTAL	100.000	100.000	
	69.858	72.509	Yes
	17.384	12.080	No
	9.015	8.839	Pass
	96.257	93.428	Total

Formula No. 30 (Chevron)

Ph. I: 50% CR-PRO, 50% FU-PRI
duration of rem. primary.

Ph. II: 1% U-P-RS, 25% HPV
74% Sec. Oil

COMPANY	Phase I		Vote
	Phase I	Phase II	
AMERADA	0.0	0.086	
AMOCO	0.035	0.046	Pass
ARAPAHO	0.002	0.005	
ARCO	9.428	10.789	Pass
BETTIS H M	0.026	0.086	
BOYLE W T	0.026	0.086	
BROWN D 1	0.032	0.055	
BROWN D 2	0.001	0.003	
CHEVRON	13.428	11.112	Yes
CITIES SV	3.956	1.020	No
CROWN CENT	0.022	0.203	
DAVOIL INC	0.012	0.016	
DECK M	0.141	0.016	
ELK OIL CO	0.0	0.274	
EXXON CO	12.907	16.435	Yes
FW NATL BK	0.100	0.125	
GETTY OIL	3.576	3.065	Yes
GT WESTERN	0.023	0.029	
HENSLEY JD	0.004	0.013	
HULSEY L O	0.015	0.048	
KOKOMO OIL	0.007	0.007	
LAUGHLIN	0.002	0.006	
LITTLE T W	0.031	0.019	
MARATHON	2.964	4.443	
MCRAE H	0.002	0.006	
MIDKIFF K	0.002	0.004	
MOBIL OIL	12.948	12.874	Yes
PAYNE D	0.031	0.019	Pass
PENROSE	0.000	0.033	
PENNZOIL	0.109	0.335	
PETROSERCH	0.016	0.031	
PHILLIPS	30.999	29.300	Yes
RADTKE D E	0.031	0.019	
SEELY C W	0.002	0.005	
SHELL OIL	8.949	8.792	Pass
SOHIO PET	0.067	0.084	
STOVALL N	0.026	0.086	
STREET S B	0.026	0.086	
TEXACO INC	0.026	0.156	
TURNCO INC	0.016	0.086	
WAINOCO	0.016	0.051	
WALSH MARY	0.001	0.050	
TOTAL	100.000	100.000	
	73.858	72.786	Yes
	3.956	1.020	No
	18.443	19.646	Pass
	96.257	93.452	Total



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production
June 12, 1978

THE WORKING INTEREST OWNERS
PROPOSED EAST VACUUM GRAYBURG-SAN ANDRES UNIT


Gentlemen:

Six operators having approximately sixty per cent Unit Participation have returned approved ballots on the proposed method for handling investment. No negative votes have been received. From telephone contacts of the larger unapproved owners we expect to have well in excess of seventy-five per cent approval momentarily. As a result, we are enclosing copies of the final draft of the agreements for your review. It will be much appreciated if you will furnish any written comment by June 28. We will then make such revisions at a meeting of Working Interest Owners in our office in Odessa at 10:00 A.M. on July 6.

In reviewing the enclosed, please bear in mind that the Texaco operated Central Vacuum Unit Agreements, which were recently approved by the State of New Mexico, served as models. We would anticipate that the State's approval of our agreements would be facilitated by as few changes as are absolutely necessary.

Yours very truly,

PHILLIPS PETROLEUM COMPANY


J. E. Chrisman

JEC:mb
Encl.

EXXON COMPANY, U.S.A.
POST OFFICE BOX 1600 • MIDLAND, TEXAS 79702

June 21, 1978

FILED
JUN 24 1978

PRODUCTION DEPARTMENT
MIDCONTINENT DIVISION

J. M. SHEPHERD
TRAINING INTERESTS MANAGER

Proposed East Vacuum
Unit Agreement and
Unit Operating Agreement

Phillips Petroleum Company
P. O. Box 1967
Houston, Texas 77001

Attention: Mr. J. E. Chrisman

Gentlemen:

As requested in your letter of June 12, 1978, tabulated below are our comments in regard to the proposed Unit Agreement and Unit Operating Agreement. These are being supplied to you prior to the Working Interest Owners meeting at your Odessa office on July 6, 1978. We anticipate being in attendance at this meeting. Our comments are as follows.

UNIT AGREEMENT

1. Page 1 - It is suggested that the date of this Agreement and the Operating Agreement be either August or September in lieu of the April noted.
2. Page 1 - The word "agreement" should be capitalized where it refers to this particular Agreement. There are several places in the preamble to the Agreement where the word is not capitalized but it is capitalized in Paragraph 1, which is proper.
3. Page 2, Paragraph 2 (j) - According to the definition of "Composite Unit Participation" this number will change with each month's production of oil. We are not able to calculate the Composite Unit Participation factors for our tracts because we apparently did not use the same estimate of primary production prior to the effective date of the Unit as you did. This participation factor will have to be calculated according to this definition after the Unit is effective and accumulated production is available.
4. Page 2, Paragraph 2 (n) - There should be a comma between the words "lease" and "operating agreement" on the third line.
5. Page 3, Paragraph 3, EXHIBIT B - The one-sentence paragraph starting "Said schedule shall become" should be included under the explanation of EXHIBIT B since it refers to it. It should not be a separate paragraph in this section.
6. Page 9, Paragraph 23 - The words "gas" and "gaseous substances" on line 3 should be separated by a comma.

UNIT OPERATING AGREEMENT

1. Page 1 - This Agreement should be dated either August or September as previously mentioned.
2. Page 1, Article 2.1.2 - The word "agreement" should be capitalized in the second line from the bottom of this paragraph. This word should also be capitalized throughout this Agreement where it is used to refer to this particular Agreement.
3. Page 1, Article 2.2 - As previously advised, EXHIBIT C will require revision after unitization to calculate a true Composite Unit Participation.
4. Page 2, Article 3.2.6 - This audit provision is not acceptable. The audit provision in your previous draft, to which there has been no exception taken, should be used. It is as follows:

3.2.6 Audits. The auditing of the accounts of Unit Operator pertaining to Unit Operations hereunder; provided that the audits shall:

- (a) not be conducted more than once each year except upon the resignation or removal of Unit Operator, and
- (b) be made upon the approval of the owner or owners of a majority of Working Interest other than that of Unit Operator, at the expense of all Working Interest Owners other than Unit Operator, or
- (c) be made at the expense of those Working Interest Owners requesting such audit, if owners of less than a majority of Working Interest, other than that of Unit Operator, request such an audit, and
- (d) be made upon not less than thirty (30) days' written notice to Unit Operator.

5. Page 4, Article 7.11 - The spelling of the word "to" on line 3 should be corrected.

6. Page 5, Article 8.1 - Include as the second paragraph in this Article, the following:

"If the ad valorem taxes are based in whole or in part upon separate valuations of each party's working interest, then notwithstanding anything to the contrary herein, charges to the joint account shall be made and paid by the parties hereto in accordance with the tax value generated by each party's working interest."

UNIT OPERATING AGREEMENT

7. Page 5, Article 10.1.1 - The word "which" should be added in the second line to read "and which contributed".
8. Page 5, Paragraph 10.1.2.2 - This paragraph should be expanded to provide that if equipment on loan is not returned within 12 months, it should be purchased by the Unit on the same basis as other equipment included in the initial inventory.
9. Page 6, Article 10.3.1 - The word "property" on line 6 is misspelled.
10. Page 6, Article 10.5 - The word "Phase" should be omitted on line 3.
11. Page 6, Article 12.1.1 - the words "for the phase" on the third line should be omitted.
12. Page 6, Article 12.1.2 - This paragraph should be revised to read "Each Working Interest Owner's share of the first 15 million dollars." The word "expense" should be omitted on lines 5 and 7.
13. Page 7, Article 12.3 - the spelling of the word "Operator" should be corrected in the first line.
14. Page 9, Article 17.1 - Many non-discrimination paragraphs are included in the EXHIBIT F supplied with this Agreement; however, the provision dealing with hiring of the handicapped has been omitted; it should be included.
15. Page 9, Article 19.1 - The "salvage value" on line 12 of this Article conflicts with "Unit Equipment" immediately preceding it. This conflict should be resolved.
16. Page 10, Article 20.1 - This Article should be expanded to provide that if the salvage value of a well is less than zero the Working Interest Owner would accept the well without payment from the Unit Working Interest Owners.
17. EXHIBIT C - As previously mentioned, the Composite Unit Participation cannot be calculated until after unitization.
18. EXHIBIT D, Page 3, Article II 10 - Include the following language in this paragraph:

"If the ad valorem taxes are based in whole or in part upon separate valuations of each party's working interest, then notwithstanding anything to the contrary herein, charges to the joint account shall be made and paid by the parties hereto in accordance with the tax value generated by each party's working interest."

Add to II. 10
EX D

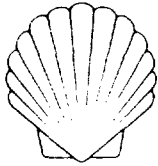
Proposed East Vacuum
Unit Agreement and
Unit Operating Agreement
June 21, 1978
Page Four

We would be pleased to discuss any of these comments with you. If you have any questions, call Mr. J. B. Campbell of this office at AC 915/684-4411, extension 455.

Yours very truly,


J. M. Shepherd

JBC/ag



SHELL OIL COMPANY

P.O. BOX 991
HOUSTON, TEXAS 77001
June 26, 1978

FILE COPY
JUN 27 1978

Subject: Unit and Unit Operating Agreements
Phillips - East Vacuum (Grayburg -
San Andres) Unit - Lea County, New Mexico

Phillips Petroleum Company
P. O. Box 1967
Houston, Texas 77001

Gentlemen:

With reference to your letter of June 12, 1978, we offer the following comments concerning the Unit and Unit Operating Agreements for the proposed East Vacuum (Grayburg - San Andres) Unit.

Unit Agreement

Section 2(J) - It is suggested that the definition of "Composite Unit Participation" appear only in the Unit Operating Agreement as it pertains only to Working Interest Owners.

Section 18.1. - The word "Imputed" should precede the word "Stripper" in the title of the section.

Exhibit "B" - It appears that the heading of the last two columns should read "Tract Participation" rather than "Unit Participation". It may also be noted that the terms "initial" and "final" are not defined and do not appear in any reference in body of agreement to tract participation. They appear only in reference to "Composite Unit Participation". Suggest consideration be given to defining the terms or clarify by including such terms in Section 13.

Unit Operating Agreement

Article 2.1.2 - No reference is made to "Composite Participation", yet such is shown in the exhibit. However, it is suggested that "Composite Participation" be deleted from the exhibit, as the exact values cannot be determined until after the effective date. Also, the use of the phrase "total unit participation" may need to be reviewed as Unit Participation is defined as the sum of the percentages obtained by multiplying the Working Interest of such Working Interest in each tract by the tract participation of such tract.

Article 3.2.3 - In order to allow unit operator complete flexibility and to avoid any misunderstanding, suggest the word "recompletion" be deleted from the article.

Article 10.3.1 - The seventh line provides Working Interest Owners Composite Unit Participation, as shown ... in Exhibit C. The values shown are not those that will be used and therefore, suggest that "as shown" be deleted.

Article 12.1.2 - In addition to deepening cost, it is requested that it be specifically stated that investment expense include all costs to convert wells to injection and all costs of battery consolidation.

Article 20 - It is suggested that casing be given no value in determining the salvage value, if such casing was contributed by the Working Interest Owner.

Article 22.1.1 - Same as for Article 20.

Yours very truly,

R. L. Howard
For

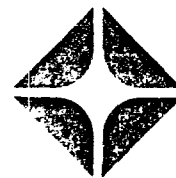
R. L. Howard
Division Production Manager
Mid-Continent Division

WEB:BDH

North American Producing Division
Permian District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 684-0114

David W. Sipperly
District Land Manager

FILE
JUN 21 1978



June 27, 1978

Phillips Petroleum
Box 1967
Houston, Texas 77001

Attention: Mr. J. E. Chrisman

Subject: Proposed East Vacuum Unit
Lea County, New Mexico

Gentlemen:

By your letter dated June 12, 1978, you requested comments and suggestions with regards to the proposed drafts of the Unit Agreement and Unit Operating Agreement.

UNIT AGREEMENT:

2(j) The last sentence shall be changed to read "Final phase reserves are estimated to be 40,794,740 barrels." As presently written, the Unit is making a promise to all royalty owners that at least 40,794,740 barrels will be produced.

2(k) The correlation of "Unitized Formation" should be tied to a specific log.

8. The affirmative vote in line 7 shall be increased to a higher percentage such as 80%.

9. With regard to the second to the last sentence, Atlantic feels the Unit Agreement should be the prevailing Agreement for conflicts and inconsistencies which may arise between Royalty Owners and Working Interest Owners. The Unit Operating Agreement should prevail as to conflicts strictly among Working Interest Owners.

17. At the end of line 2, the words "and the other Working Interest Owners" shall be inserted after the words "Unit Operator".

19. The last sentence of the second paragraph could possibly be more specific.

31. The word "warranted" in line 4 shall be replaced by "represented". Atlantic Richfield will only represent title.

33. The words "The Working Interest Owners" shall be changed to "Each Working Interest Owner".

UNIT OPERATING AGREEMENT:

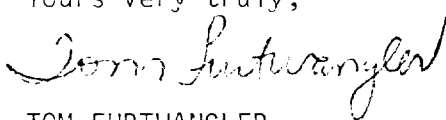
1.1 At the end of the last sentence the following words to be added are "as to any such conflict between the Working Interest Owners and Royalty Owners."

9. A provision 9.1.4 to be added to allow Working Interest Owners to self insure.

13.2 In line 5 after the word "completion" the word "is" to be deleted and the words "prescribed and" inserted.

Atlantic wishes you would consider these comments before the July 6th meeting. Atlantic may wish to make additional suggestions and comments at the meeting.

Yours very truly,



TOM FURTWANGLER
LAND DEPARTMENT

TF:bk

xc: Curt Krehbiel, 120-Midland
Thane Akins, 106-Midland



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production

July 10, 1978

MINUTES OF WORKING INTEREST OWNERS MEETING PROPOSED EAST VACUUM GRAYBURG-SAN ANDRES UNIT LEA COUNTY, NEW MEXICO

Representatives of the Working Interest Owners in the proposed East Vacuum Grayburg-San Andres Unit met in Phillips' office in Odessa, Texas on July 6, 1978, starting at 10:00 a.m. A list of those who attended is attached.

The Chairman announced that ballots of approval had been received from the Working Interest Owners on Unit Expeditors' method of allocating operating and investment expenditures in the following percentages.

Initial Phase - 77.02%, Final Phase - 77.69% and Composite
Participation - 77.57%.

The Chairman also announced it is the opinion of Unit Expeditors' DOE experts that a declining Base Production Control Level can be obtained for the Unit. It will be necessary that each lease operator submit detail on production not currently available to Unit Expeditors. A request will be made for these data under separate cover.

A page by page review of the Agreements was then made. Typographical errors, errors in capitalization, etc. were corrected and the following major changes were made:

UNIT AGREEMENT

The definition of Composite Unit Participation was removed.

The first paragraph of Article 33 on Taxes was reworded.

UNIT OPERATING AGREEMENT

A definition of Composite Unit Participation was added.

Article 2.1.2 was expanded with the addition of the following verbiage. "The Composite Unit Participation as shown on Exhibit "C" was tentative and will be recalculated following the effective date of the Unit in accordance with Article 1.2 of this Agreement."

Article 3.2.6 concerning Audits was reworded.

Article 7.9 on expenditures was expanded to provide information copies of AFE's in excess of \$5,000 upon individual Working Interest Owner's request.

Article 8.1 on Ad Valorem taxes was expanded.

Article 10.1.1.2 was revised to provide for unit purchase of loaned equipment in the event it is retained for unit operations over 12 months.

Article 12.1.2 on investment expenditures was revised.

Articles 20 & 22.1.2 were revised to provide that casing contributed by Working Interest Owners would be excluded in determining the net salvage value, and if such value is less than zero the Working Interest Owner electing take-over will agree to accept the value without payment from the Unit. well

The Composite Unit Participation shown on Exhibit "C" will be shown as tentative.

A handicap clause will be added to Exhibit "F".

A discussion then developed as to a conflict between Article 3.2.8 and III.1.ii of Exhibit "D". The latter provides that technical personnel directly employed on the joint property shall not have their salaries, wages and expenses covered by the overhead rates. The former provides that all charges for technical services not covered by Exhibit "D" shall be approved by the Working Interest Owners. The overhead rates proposed are insufficient if Article 3.2.8 is left as written. Proposals to modify or eliminate Article 3.2.8 were rejected, consequently it will be necessary for Unit Expeditors to provide a revised Accounting Procedure which modifies the producing well rate to include provisions for charging salaries, wages and expenses of technical personnel directly employed on the joint property. This rate is being calculated and a ballot will be provided under separate cover as quickly as it becomes available.

There being no further business the meeting adjourned at 1:30 p.m.

Respectfully Submitted,


J. E. Chrisman

JEC:mb
Attch.

WORKING INTEREST OWNERS MEETING
EAST VACUUM GRAYBURG-SAN ANDRES UNIT, PROPOSED

ATTENDANCE LIST

Name	Company	Location
J. H. Morrison	Phillips	Houston
W. B. Taylor	✓	✓
J. H. Brown	✓	✓
J. H. Linder	✓	Geithorn 6
J. B. CAMPBELL	EXXON	MIDLAND
W. E. Buck	Shell	Houston
O. H. Strickley	Getty	Midland, Tex
G. A. NAERT	Marathon	Midland
W. R. Gordon	✓	✓
E. L. Brown	✓	✓
A. R. Venter	Amoco	Houston
Mike S. Mabrey	Citgo	Midland
Michael Muffin	ARCO	MIDLAND
Paul H. Knickel	✓	✓
Bill Cobb	✓	✓
Robert Rogers	Phillips	Odessa



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production

July 11, 1978

THE WORKING INTEREST OWNERS
PROPOSED EAST VACUUM GRAYBURG-SAN ANDRES UNIT

Gentlemen:

At the July 6 meeting of Working Interest Owners it was pointed out that a conflict exists between Article 3.2.8 of the Unit Operating Agreement and Article III.1.ii of the Accounting Procedure (Exhibit D). As now written it would be necessary for Unit Operator to obtain approval from the Working Interest Owners for its technical employees directly employed on the Joint Property (or substitute contract personnel) each time a service is rendered. The Fixed Rate Overhead rate proposed was calculated on the basis of each technical service being directly charged to the joint account, which is our normal accounting practice. As a result it will be necessary to modify either Article 3.2.8 of the Unit Operating Agreement or the election under Article III.1.ii of the Accounting Procedure, along with increasing the accompanying overhead rate. It is Unit Operator's preference to modify Article 3.2.8 of the Unit Operating Agreement by striking the word "overhead". This, nevertheless, was unacceptable to at least one of the representatives at the July 6 meeting. The alternate is to change the election under Article III.1.ii of the Accounting Procedure and increase the Producing Well Overhead Rate to \$182 per month.

The attached ballot has been drawn such that you may approve a change to eliminate the conflict which exists, while indicating your preference of which change to make. Your early consideration and return of the ballot will be appreciated as this should permit us to finalize the agreements.

Yours very truly,

A handwritten signature in dark ink, appearing to read "J. E. Chrisman".

J. E. Chrisman

JEC:mb
Attch.

B A L L O T N O . 2

EAST VACUUM GRAYBURG-SAN ANDRES UNIT

APPROVE modifying, as outlined below, either Article 3.2.8 of the Unit Operating Agreement or Article III.1.ii of the Accounting Procedure (Exhibit D) to permit Unit Operator to be reimbursed for routine technical services.

PREFERENCE (PLEASE INDICATE):

- () Modify Article 3.2.8 of the Unit Operating Agreement to read,
 "Technical Services. The authorization of charges to the
 joint account for services by consultants or Unit Operator's
 technical personnel not covered by the charges provided by
 Exhibit D."
- () .Modify Article III.1.ii of the Accounting Procedure to read,
 "The salaries, wages and Personal Expenses of Technical Em-
 ployees and/or the cost of professional consultant services
 and contract services of technical personnel directly em-
 ployed on the Joint Property shall (X) shall not () be
 covered by the Overhead rates." and increase the Produc-
 ing Well Rate of Article III.1.A(1) to \$182.

Working Interest Owner

Representative

7/ /78
Date

* * * * *
* * * * *
* * * * *

DISAPPROVE any modification to permit Unit Operator to be reimbursed for routine technical services without an additional meeting of the Working Interest Owners.

Working Interest Owner

Representative

7/ /78
Date



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production

August 23, 1978

THE WORKING INTEREST OWNERS PROPOSED EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT

Gentlemen:

Following the July 6 meeting of Working Interest Owners, all agreed changes in the Agreements were made and copies were furnished the Commissioner of Public Lands of the State of New Mexico. I have received his approval as to form, with the exception that the tracts must be renumbered and listed chronologically on Exhibit B. This change is in process.

The table below reflects the desires of all parties who have voted on the overhead problem. It will be noted the largest percentage ownership, excluding that owned by Unit Operator, desires a change in the accounting procedure over a change in Article 3.2.8 of the Unit Operating Agreement. As to those voting for "Other", you received copies of Exxon's comments with which Sohio advised they concurred. Mobil preferred the change in accounting procedure but specified that the overhead also include first level supervisors. Mr. Stovall did not express a preference. Unit Operator will join the majority and incorporate the change in the signature copies of the Agreements.

RESULTS OF BALLOT NO. 2

	<u>MODIFY ART.</u> <u>3.2.8 OF UOA</u>		<u>CHANGE</u> <u>ACCTG. EX. "D"</u>		<u>OTHER</u>	
	<u>1st Ph.</u>	<u>2nd Ph.</u>	<u>1st Ph.</u>	<u>2nd Ph.</u>	<u>1st Ph.</u>	<u>2nd Ph.</u>
Atlantic Richfield Co.			9.42660	10.78894		
Donaldson Brown Trusts	.00169	.00291				
Chevron			13.42826	11.11033		
Cities Service			3.95617	1.01965		
Davoil, Inc.			.01260	.01613		
Exxon					12.90800	16.43527
Getty			3.57697	3.06443		
Marathon	2.96402	4.44374				
Hamilton McRae			.00120	.00158		
Mobil					12.94784	12.87426
Penrose Zachary Opr.Co.	.00056	.03326				
Shell			8.94934	8.79189		
Sohio					.06713	.08332
Norman D. Stovall					.02634	.08593
	<u>2.96627</u>	<u>4.37991</u>	<u>39.34114</u>	<u>34.79295</u>	<u>25.94931</u>	<u>29.47878</u>

You are all no doubt aware that the Department of Energy has amended Part 212 of Chapter II, Title 10 of the Code of Federal Regulations, effective September 1, 1978, which will increase the regulatory benefit to new units containing properties classified as stripper well properties at the effective date of unitization. We believe it is necessary to amend Article 18 of the Unit Agreement to insure that there is no misunderstanding among the owners as to how allocation will be handled under the revised regulation. We have drawn up a revised Article 18, two copies of which are enclosed. It is requested that you return one approved copy to me. Example cases are attached to demonstrate how the allocation procedure will work. You will note that this procedure will permit each owner to retain any pre-unitization regulatory benefits he may have while the remaining primary reserves are being produced, and all owners will share any regulatory benefits which result by virtue of unitization. We believe this is the intent of all the parties.

Following is our budget of Unit Expenditures for implementing the waterflood. We anticipate holding a meeting about the middle of September to give you any detail pertaining to this that you may require.

BUDGETED EXPENDITURES (1000's)

	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>TOTAL</u>
Producing Wells	\$3,039	\$ 3,832	\$ 6,372	\$13,244
Injection Wells	0	6,391	5,893	12,284
Line Agreement Injection Wells	0	0	1,977	1,977
Central Tank Battery	1,752	910	0	2,662
Satellite Stations	1,498	2,473	0	3,971
Automation	1,335	1,398	0	2,733
Lift Equipment Additions	200	2,532	2,054	4,786
Well Deepening	0	2,000	2,200	4,200
Water Injection System	750	736	0	1,486
Water Supply System	875	0	0	875
TOTAL	\$9,449	\$20,272	\$18,497	\$48,218

The New Mexico pooling statute provides that the Conservation Division may issue a unitization order following fulfillment of certain requirements, excluded from which is the necessity to have 75 per cent approval of the Working and Royalty interests. When this percentage is obtained the unit can then be made effective. As a result, we will request a unitization hearing as soon as Ballot No. 3 is approved. We hope to have the hearing scheduled for October 4. Meanwhile, signature copies of the Agreements will be mailed and can be processed for your approval. By doing these two things concurrently, it should be possible for the unit to become effective on November 1, 1978.

Your early return of an approved copy of Ballot No. 3 is requested.

Yours very truly,

PHILLIPS PETROLEUM COMPANY


J. E. Chrisman



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production

August 23, 1978

BALLOT NO. 3

Re: Proposed East Vacuum Grayburg-San Andres Unit

REVISED VERBIAGE FOR UNIT AGREEMENT:

18. CERTIFICATION OF UNIT PRODUCTION. It is anticipated, at the effective date of unitization, crude oil produced, saved and sold from the East Vacuum Grayburg-San Andres Unit will be subject to the Energy Policy and Conservation Act (Public Law 94-163) as well as rules and regulations of the Department of Energy, or its successor, herein referred to as "DOE". As of the date of this Agreement, these rules and regulations entitle certain Tracts to regulatory benefits. It is the intent of the parties hereto that until 12,343,300 barrels of oil have been produced subsequent to December 31, 1976, each Tract shall retain such regulatory benefit as it was entitled to receive under competitive operation and it shall share with all Tracts such additional regulatory benefit as may result from unitized operation by existing or future rules and regulations of DOE. Following production of the said 12,343,300 barrels any regulatory benefit received by any Tract shall be shared with all Tracts. In each instance where a regulatory benefit is shared it shall be shared on the basis of Tract Participation.

As of the date of this Agreement, DOE rules and regulations define "imputed stripper well" crude oil and "new crude oil" and provide regulatory benefits for qualifying volumes of each. In addition, "Base Production Control Level" is defined and identifies the oil produced which equals such volume as "old oil".

A. Imputed stripper well crude oil will be allocated among the Tracts as follows:

1. When the Tract's allocated share of Unitized Substances is equal to or less than its contribution to the Unit's imputed stripper well crude oil volume at the effective date of unitization, the entire volume of Unitized Substances allocated to it will be imputed stripper well crude oil.
2. When the Tract's allocated share of Unitized Substances is more than its contribution to the Unit's imputed stripper well crude oil volume at the effective date of unitization (and the latter such volume is not zero) the volume of Unitized Substances allocated to it will be imputed stripper well crude oil and new crude oil, except if insufficient volume of new crude oil remains to be allocated after allocation among the Tracts which contributed to the Unit's imputed new crude oil volume, the deficiency shall be made up with old oil. The volume of

stripper well crude oil will consist in part of a first volume equal to its contribution to the Unit's imputed stripper well crude oil volume at the effective date of unitization and in part of the remaining imputed stripper well crude oil (after subtraction of all such first volumes) allocated among all Tracts based on Tract Participation.

3. Imputed stripper well crude oil not allocated above will be allocated among all remaining Tracts based on Tract Participation.

B. New crude oil will be allocated among the Tracts as follows:

1. When the Tract's allocated share of Unitized Substances is equal to or less than its contribution to the Unit's imputed new crude oil volume at the effective date of unitization, the entire volume of Unitized Substances (less any volume allocated to it under Paragraph A above) will be new crude oil.
2. When the Tract's allocated share of Unitized Substances is more than its contribution to the Unit's imputed new crude oil volume at the effective date of unitization, the volume of Unitized Substances allocated to it will be all new crude oil (less any volume allocated to it under Paragraph A-2 above) if it did not contribute to the Unit's Base Production Control Level, or new crude oil, imputed stripper well crude oil and old oil if it did contribute to the Unit's Base Production Control Level. In the latter event, the new crude oil will consist in part of a first volume equal to its contribution to the Unit's imputed new crude oil volume at the effective date of unitization and in part of the remaining new crude oil (after subtraction of all such first volumes and after subtraction of all volumes allocated under Paragraphs A-2 and B-1 above). Such remaining new crude oil will be allocated among all the Tracts which contributed to the Unit's Base Production Control Level on the basis of Tract Participation. Should the sum of such first and second parts exceed any Tract's allocated share of Unitized Substances, the excess will be distributed among the remaining Tracts which contributed to the Unit's Base Production Control Level on the basis of Tract Participation.

- C. Old crude oil shall comprise the remainder of the Unitized Substances and shall be distributed among the Tracts so as to make up the difference between each Tract's allocated share of Unitized Substances and that allocated to it above.

Proposed East Vacuum Grayburg-San Andres Unit
August 23, 1978
Page No. 3

This Article 18 shall remain in effect only so long as necessary for the Unit to comply with applicable laws, rules and regulations of appropriate governmental authorities. Should such laws, rules and regulations hereafter change substantially so as to alter the basis for the distribution of Unit Production as set forth above, then in such event an amended method of allocation among the Unit ownership shall be implemented by the Unit Operator which as nearly as possible achieves the stated intention hereof. In any event this Article 18 will automatically terminate in its entirety upon the production of 12,343,300 barrels of oil from the Unit Area subsequent to December 31, 1976. This Article 18 is deemed supplementary to the other provisions of this Agreement and the provisions of the Unit Operating Agreement so that nothing contained herein shall alter the terms of such Agreement (except Article 14 hereof) including but not limited to the portions hereof dealing with Tract Participation, the allocation of Unitized Substances, and the allocation of investment and operating costs.

APPROVED BY: _____

COMPANY

8/ /78
DATE

EXAMPLE CALCULATIONS

ALLOCATION OF UNIT PRODUCTION

REVISED - Article 18 Language

In order to implement Article 18, Unit Operator will act as the clearing house for oil sales with each crude purchaser paying 100%, including tax, to Unit Operator and Unit Operator disbursing the proceeds applicable to each Tract to the Tract operators. The Tract operator, or its agent, will be responsible to disburse the revenues to each owner in the Tract. Unit Operator will pay the New Mexico taxes assessed on crude oil sales and state royalty where applicable.

(This procedure will permit remittance to owners during the month following oil sale, rather than a delay of one month if the four purchasers in the field - Arco, Mobil, Texaco and Cities Service - were to reconcile the various types of oil sales due the different owners.)

<u>SAMPLE UNIT</u>	<u>PARTICIPATION FACTOR</u>	<u>CONTRIBUTION TO UNIT IMPUTED STRIPPER</u>	<u>CONTRIBUTION TO UNIT BPCL</u>	<u>NEW OIL</u>
Tr. A	.02	20	0	0
Tr. B	.03	20	0	0
Tr. C	.30	0	200	0
Tr. D	.55	0	460	200
Tr. E	<u>.10</u>	<u>0</u>	<u>0</u>	<u>100</u>
TOTAL	1.00	40	660	300

Unit BPCL = 660

Unit Minimum Stripper = 40

Unit New Oil = 300

TOTAL 1000

NOTE: Values chosen for illustration only - they do not reflect actual volumes being produced.

CASES

1 - Unit Prod. = 1000

2 - Unit Prod. = 800

3 - Unit Prod. = 1500

4 - Unit Prod. = 3000

CASE I - UNIT PRODUCTION - 1000

IMPUTED STRIPPER = 40

IMPUTED NEW OIL = 300

INITIAL UNIT BPCL = 660

OLD OIL = 660

1. ALLOCATION OF OIL VOLUME

Tr. A	-	.02 x 1000	=	20
Tr. B	-	.03 x 1000	=	30
Tr. C	-	.30 x 1000	=	300
Tr. D	-	.55 x 1000	=	550
Tr. E	-	.10 x 1000	=	<u>100</u>
TOTAL				1000

2. ALLOCATION OF IMPUTED STRIPPER OIL

Tr. A	-	20
Tr. B	-	20
Tr. C	-	0
Tr. D	-	0
Tr. E	-	0

Total Imputed Stripper Allocated = 40

3. ALLOCATION OF NEW OIL

Tr. A	-	0
Tr. B	-	0
Tr. C	-	0
Tr. D	-	200
Tr. E	-	100

Total New Oil Allocated = 300

4. ALLOCATION OF OLD OIL

Tr. A	-	20 - 20	=	0
Tr. B	-	30 - 20	=	10*
Tr. C	-	300 - 0 - 0	=	300
Tr. D	-	550 - 0 - 200	=	350
Tr. E	-	100 - 0 - 100	=	0
Total Old Oil Allocated =				<u>660</u>

TOTAL 1000

*Normally would be new oil - See exception in Paragraph A-2 of Article 18.

CASE II - UNIT PRODUCTION = 800

IMPUTED STRIPPER = 40

IMPUTED NEW OIL = 300

INITIAL UNIT BPCL = 660

OLD OIL = 460

1. ALLOCATION OF OIL VOLUME

Tr. A	-	.02 x 800	=	16
Tr. B	-	.03 x 800	=	24
Tr. C	-	.30 x 800	=	240
Tr. D	-	.55 x 800	=	440
Tr. E	-	.10 x 800	=	<u>80</u>
				800

2. ALLOCATION OF IMPUTED STRIPPER OIL

Tr. A		=	16
Tr. B	$20 + 4 \times \frac{.03}{.98}$	\approx	20.1
Tr. C	$4 \times \frac{.30}{.98}$	\approx	1.2
Tr. D	$4 \times \frac{.55}{.98}$	\approx	2.3
Tr. E	$4 \times \frac{.10}{.98}$	\approx	.4

Total Imputed Stripper Oil Allocated = 40

3. ALLOCATION OF NEW OIL

Tr. A	16 - 16	=	0
Tr. B	24 - 20.1	=	3.9
Tr. C	$16.5 \times \frac{.30}{.85}$	\approx	5.8
Tr. D	$200 + 16.5 \times \frac{.55}{.85}$	\approx	210.7
Tr. E	80 - .4	=	79.6

Total New Oil Allocated = 300

4. ALLOCATION OF OLD OIL

Tr. A	16 - 16	=	0
Tr. B	24 - 20.1 - 3.9	=	0
Tr. C	240 - 1.2 - 5.8	=	233
Tr. D	440 - 2.3 - 210.7	=	227
Tr. E	80 - .4 - 79.6	=	0

Total Old Oil Allocated = 460

TOTAL 800

CASE III - UNIT PRODUCTION = 1500

$$\text{IMPUTED STRIPPER} = 40 \times \frac{1500}{1000} = 60$$

NEW OIL = 780

INITIAL UNIT BPCL = 660

OLD OIL = 660

1. ALLOCATION OF OIL VOLUME

Tr. A	-	.02 x 1500	=	30
Tr. B	-	.03 x 1500	=	45
Tr. C	-	.30 x 1500	=	450
Tr. D	-	.55 x 1500	=	825
Tr. E	-	.10 x 1500	=	<u>150</u>
				1500

2. ALLOCATION OF IMPUTED STRIPPER OIL

Tr. A	20 + 20 x .02	=	20.4
Tr. B	20 + 20 x .03	=	20.6
Tr. C	20 x .30	=	6
Tr. D	0 x .55	=	11
Tr. E	20 x .10	=	2

Total Imputed Stripper Oil Allocated = 60

3. ALLOCATION OF NEW OIL

Tr. A	30 - 20.4	=	9.6
Tr. B	45 - 20.6	=	24.4
Tr. C	$398 \times \frac{.30}{.85}$	=	141
Tr. D	$200 + 398 \times \frac{.55}{.85}$	=	457
Tr. E	150 - 2	=	148

Total New Oil Allocated = 780

4. ALLOCATION OF OLD OIL

Tr. A	30 - 20.4 - 9.6	=	0
Tr. B	45 - 20.6 - 24.4	=	0
Tr. C	450 - 6 - 141	=	303
Tr. D	825 - 11 - 457	=	357
Tr. E	150 - 2 - 148	=	0
	Total Old Oil Allocated	=	<u>660</u>
	TOTAL		1500

CASE IV - UNIT PRODUCTION = 3000

IMPUTED STRIPPER - $40 \times \frac{3000}{1000} = 120$

NEW OIL = 2286

UNIT BPCL = 594

(10% Decline in Unit BPCL Assumed)

OLD OIL = 594

1. ALLOCATION OF OIL VOLUME

Tr. A	-	.02 x 3000	=	60
Tr. B	-	.03 x 3000	=	90
Tr. C	-	.30 x 3000	=	900
Tr. D	-	.55 x 3000	=	1650
Tr. E	-	.10 x 3000	=	<u>300</u>
				3000

2. ALLOCATION OF IMPUTED STRIPPER OIL

Tr. A	20 + 80 x .02	=	21.6
Tr. B	20 + 80 x .03	=	22.4
Tr. C	80 x .30	=	24
Tr. D	80 x .55	=	44
Tr. E	80 x .10	=	8

Total Imputed Stripper Oil Allocated = 120

3. ALLOCATION OF NEW OIL

Tr. A	60 - 21.6	=	38.4
Tr. B	90 - 22.4	=	67.6
Tr. C	$1688 \times \frac{.30}{.85}$	=	596
Tr. D	$200 + 1688 \times \frac{.30}{.85}$	=	1292
Tr. E	300 - 8	=	292

Total New Oil Allocated = 2286

4. ALLOCATION OF OLD OIL

Tr. A	60 - 21.6 - 38.4	=	0
Tr. B	90 - 22.4 - 67.6	=	0
Tr. C	900 - 24 - 596	=	280
Tr. D	1650 - 44 - 1292	=	314
Tr. E	300 - 8 - 292	=	0

Total Old Oil Allocated = 594

TOTAL 3000



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production

September 26, 1978

THE WORKING INTEREST OWNERS
PROPOSED EAST VACUUM GRAYBURG-SAN ANDRES UNIT

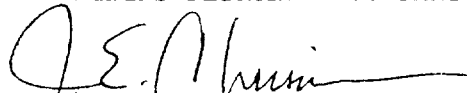
Gentlemen:

Enclosed are two copies each of the signature copies of the Unit and Unit Operating Agreements and three copies of a ratification form. Please return two copies of the ratification form, approved and acknowledged.

Mr. Jason Kellahin in Santa Fe, New Mexico has been asked to make application for a unitization hearing to be held hopefully on October 25. We have delayed asking him to make application awaiting the results of Ballot No. 3. Working interest owners owning 66.38% of first phase and 69.58% final phase have now approved. Under the statutory unitization procedure it is not necessary to have 75% approval of the Agreements before the Division of Conservation can issue a unitization order, but we would like to have as much approval as possible by the hearing date and must have 75% shortly thereafter to make the Unit effective on December 1. As a result, your early processing will be appreciated.

Yours very truly,

PHILLIPS PETROLEUM COMPANY


J. E. Chrisman

JEC:mb
Encl.

cc: J. E. Curzon
J. W. Maharg
W. J. Mueller

September 28, 1978

Mrs. Elizabeth B. Burgland
Ancillary Executrix of Est. of
Fredrick H. Burgland
937 Dayton Drive
Galesburg, Ill. 61401

Dear Mrs. Burgland:

Shell Oil Company, Working Interest Owner of Tract 2957 in the proposed East Vacuum Grayburg-San Andres Unit, has identified you as having a 6.25% overriding royalty interest in this tract. This letter is to advise you that an effort is being made to form the unit for secondary recovery operation and to solicit your joinder. Phillips will be operator; we expect the hearing to be held on October 25 by the New Mexico Division of Conservation in Santa Fe; we hope to have the unit made effective on December 1, 1978.

A committee of technical personnel comprised of representatives from the major working interest owners has estimated that future oil recovery from the proposed unit area will be increased from approximately 12 million barrels to approximately 53 million barrels with implementation of a 40 acre five spot waterflood, which is planned. If the unit is not formed they expect operations to terminate during the year 1992. Waterflood operations are expected to extend through 1994. A two phase basis of participation has been adopted. This is detailed in the attached Unit Agreement. Your Unit Participation will be .01281% during the initial phase and .02912% during the final phase. If the unit is as successful as the committee of technical personnel estimated, your interest will receive approximately 13,000 barrels of future oil production. They concluded your tract would produce 34,200 barrels from 1-1-78 in the absence of unitization. Your share of this would be approximately 2,140 barrels, part of which you have already received. Thus your potential increased production through unitization is about 11,000 barrels.

In addition to the enclosed copy of the Unit Agreement, which is for your permanent records, I am enclosing three copies of a ratification form. I will

Mrs. Elizabeth B. Burgland
September 28, 1978
Page No. 2

appreciate your signing this form in the presence of a Notary Public and returning two copies to me.

Yours very truly,

PHILLIPS PETROLEUM COMPANY

J. E. Chrisman

JEC:mb
Attch.

September 29, 1978

Mr. Harold E. Jones
159 Mid America Building
Midland, TX 79701

Dear Mr. Jones:

Crown Central Petroleum Corporation, Working Interest Owner of Tracts 1912 and 2079 in the proposed East Vacuum Grayburg San Andres Unit has identified you as having a one percent overriding royalty interest in these tracts. This letter is to advise you that an effort is being made to form the unit for secondary recovery operation and to solicit your joinder. Phillips will be operator; we expect the hearing to be held on October 25 by the New Mexico Division of Conservation in Santa Fe; we hope to have the unit made effective on December 1, 1978.

A committee of technical personnel comprised of representatives from the major working interest owners has estimated that future oil recovery from the proposed unit area will be increased from approximately 12 million barrels to approximately 53 million barrels with implementation of a 40 acre five spot waterflood operation, which is planned. If the unit is not formed they expect operations to terminate during the year 1992. Waterflood operations are expected to extend through 1994. A two phase basis of participation has been adopted. This is detailed in the attached Unit Agreement. Your Unit Participation will be as follows:

	<u>Initial</u>	<u>Final</u>
Tract 1912	.00011%	.00133%
Tract 2079	.00011%	.00070%
TOTAL	.00022%	.00203%

If the unit is as successful as the committee of technical personnel estimated, your interest will receive approximately 850 barrels of future oil production. They concluded that your two tracts will not recover additional oil in the absence of a secondary recovery program.

Mr. Harold E. Jones
September 29, 1978
Page No. 2

In addition to the enclosed copy of the Unit Agreement, which is for your permanent records, I am enclosing three copies of a ratification form. I would appreciate your signing this form, having your signature properly acknowledged, and returning two copies to me.

Yours very truly,

PHILLIPS PETROLEUM COMPANY

ORIGINAL SIGNED BY

J. E. CHRISMAN

J. E. Chrisman

JEC:mb
Attch.



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production
October 5, 1978

THE WORKING INTEREST OWNERS
EAST VACUUM GRAYBURG SAN ANDRES UNIT

Gentlemen:

Enclosed are corrected pages for the signature copies of the agreements forwarded with my letter of September 26, 1978. Enclosed page 6 of the Unit Agreement corrects a typographical error on line 3 to refer to "all" Tracts, replacing "11" Tracts. Enclosed page 3 of the Unit Operating Agreement and enclosed page 3 of Exhibit "D" provide for inclusion of the method of charging overhead approved by Ballot No. 2. Alternate pages were inadvertently substituted during agreement assembly following Phillips' execution. If you have ratified the agreements and previously forwarded two properly acknowledged copies, please furnish me written advice that your ratification applies to the agreements as corrected by substitution of the enclosed pages. If you have not yet ratified the agreements, your ratification will apply to the corrected agreements.

Any inconvenience this has caused you is regretted.

Yours very truly,

PHILLIPS PETROLEUM COMPANY


J. E. Chrisman

JEC:mb
Attch.

TEXAS-NEW MEXICO PIPE LINE COMPANY

C. L. BOWEN
DISTRICT MANAGER

P. O. BOX 2528
HOBBS, NEW MEXICO 88240

October 11, 1978

PROPOSED PHILLIPS-OPERATED EAST
VACUUM GRAYBURG-SAN ANDRES UNIT
VACUUM FIELD, LEA COUNTY, N.M.

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 79762

Attention: J. W. Maharg

As requested in your letter of October 4, 1978, enclosed is the original and two (2) copies of our letter to the New Mexico Oil Conservation Commission concerning the gathering and transportation of crude from the subject project.

If we can be of further assistance, please advise.

Yours very truly,

C.L. Bowen
C. L. Bowen *By L.H. Nung*

LHN-MMC
Encl.

Mobil Pipe Line Company

P.O. Box 633, Midland, Texas 79702

October 18, 1978

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 79762

Attention Mr. J. W. Maharg

150 - EAST VACUUM GRAYBURG-
SAN ANDRES UNIT
VACUUM FIELD
LEA COUNTY, NEW MEXICO
CRUDE OIL PURCHASING
FILE W5-Mu-65-78

Gentlemen:

Please be advised that Mobil Pipe Line Company will handle the anticipated increased production resulting from the above unit operations, if favorable economics exist, by either direct connection to the proposed central battery LACT Unit or by favorable negotiation with another crude gatherer in the area.

Very truly yours,



T. A. Watson
Division Manager

TAW:fg

May 24, 1978

Mr. Milland Deck
P.O. Box 1047
Eumice, New Mexico 88231

Dear Mr. Deck:

Pursuant to your request that your Carthay State Lease not be included in the proposed East Vacuum Grayburg San Andres Unit, I brought the matter up at the Working Interest Owners' meeting on May 23.

The Working Interest Owners decided to leave the tract in the unit area, as you will note from a copy of the Minutes of the Meeting, which will be mailed under separate cover. This action was taken after discussion of several instances of identical circumstances in which the removed tracts were ultimately watered out by unit operations and judgments against the unit Working Interest Owners were handed down for damages.

If you would be willing to indemnify the unit Working Interest Owners against like action, I feel they would favorably reconsider your request. I would be happy to sponsor your cause at the next meeting, which will be held in about three weeks, if in the meantime you will furnish me an indemnification agreement signed by you and your partners.

Very truly yours,

J. E. Chrisman

JEC/aj

BEFORE EXAMINER NUTTER	
OIL CONSERVATION DIVISION	
<u>Phillips</u>	EXHIBIT NO. <u>8</u>
CASE NO. <u>6366</u>	

EXHIBIT _____

FILE COPY
OCT 19 1978

P. O. Box 1047
Eunice, New Mexico 88231

October 6, 1978

Phillips Petroleum Company
Box 1967 6910 Fannin Street
Houston, Texas 77001

RE: Proposed East Vacuum Grayburg-San Andres Unit

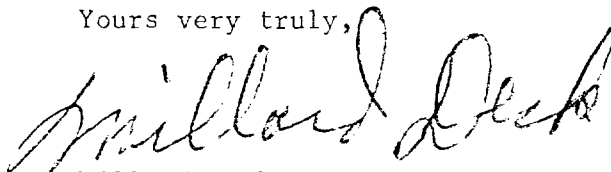
Attention: J. E. Chrisman

Gentlemen:

My partners and myself are not interested in joining the flood on the above unit however we would be interested in selling our interest in the Carthay State New Mexico Lease Number B-2388, located in the South East Quarter of the North West Quarter and the South West Quarter of the North East Quarter of Section 20, Township 17 South, Range 35 East, Lea County, New Mexico. These two wells are completed in the Vacuum Grayburg San Andres.

Your consideration to this matter will be sincerely appreciated.

Yours very truly,

A handwritten signature in cursive script that reads "Millard Deck". The signature is written in dark ink and is positioned above the printed name.

Millard Deck

MD:sjb



PHILLIPS PETROLEUM COMPANY

HOUSTON, TEXAS 77001
BOX 1967 6910 FANNIN ST.

NATURAL RESOURCES GROUP
Exploration and Production

October 11, 1978

Mr. Millard Deck
P. O. Box 1047
Eunice, New Mexico 88231

Dear Mr. Deck:

Thank you for your October 6 letter confirming your telephone advice that you and your partners are not interested in joining the East Vacuum Grayburg San Andres Unit. Phillips, nevertheless, will proceed with its application to have the unit formed under the New Mexico Statute, as I advised you. We anticipate favorable action by the New Mexico Division of Conservation, but will try to honor your request by making you and your partners a bona fide offer for your interest prior to your having to make water-flood investments.

As I further advised you, I will make our interchange of correspondence an exhibit at the forthcoming hearing so that you will not have to rely upon my word alone that an offer will be forthcoming. Meanwhile, if you have certified the Carthay State as stripper, I will appreciate your forwarding a copy of the certification to me for our use in establishing a Unit Base Production Control Level for the Department of Energy.

Yours very truly,

PHILLIPS PETROLEUM COMPANY



J. E. Chrisman

JEC:lcd

EXHIBIT _____
EAST VACUUM GRAYBURG--SAN ANDRES UNIT

VOTE ON BALLOT NO. 1

FOR Proposed Basis of Sharing Expense and Investments.

	<u>INITIAL PART.</u>	<u>FINAL PART.</u>	<u>TENTATIVE COMP. PART.</u>
Amerada Hess Corp.	-	.08543	.07013
Arapaho Petroleum Inc.	.00233	.00447	.00409
H. M. Bettis, Inc.	.02633	.08593	.07526
Donaldson Brown Trust 1	.03216	.05537	.05121
Donaldson Brown Trust 2	.00169	.00291	.00269
Chevron USA, Inc.	13.42826	11.11033	11.52545
Cities Service Co.	3.95617	1.01965	1.54556
Davoil, Inc.	.01260	.01613	.01550
Exxon Company, U.S.A.	12.90800	16.43527	15.80355
Getty Oil Company	3.57697	3.06443	3.15622
Larry O. Hulsey	.01464	.04773	.04180
Marathon Oil Company	2.96402	4.44374	4.17874
Mobil Oil Corp.	12.94784	12.87426	12.88744
Phillips Petroleum Company	30.99935	29.29786	29.60259
D. E. Radtke	.03146	.01955	.02169
Shell Oil Company	8.94934	8.79189	8.82009
Sohio Petroleum Company	.06713	.08332	.08042
Norman D. Stovall, Jr.	.02634	.08593	.07526
Wainoco Oil & Gas Company	<u>.01688</u>	<u>.05151</u>	<u>.04531</u>
TOTAL <u>FOR</u>	89.96151	87.57571	88.00300
NOT VOTING	10.03849	12.42429	11.99700
	<u> </u>	<u> </u>	<u> </u>
TOTAL	100.00000	100.00000	100.00000

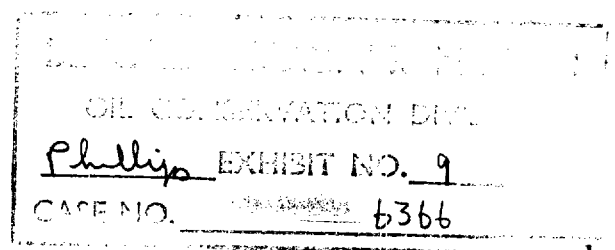


EXHIBIT
EAST VACUUM GRAYBURG SAN ANDRES UNIT

VOTE ON BALLOT NO. 2

	MODIFY ART. 3.2.8 OF UNIT OPER.AGREEMENT		CHANGE ACCOUNTING PROCEDURE		OTHER	
	INIT.PART.	FINAL PART.	INIT.PART.	FINAL PART.	INIT.PART.	FINAL PART.
Atlantic Richfield Co.			9.42660	10.78894		
Donaldson Brown Trusts	.00169	.00291				
Chevron USA Inc.			13.42826	11.11033		
Cities Service Co.			3.95617	1.01965		
Davoil Inc.			.01260	.01613		
Exxon Company,U.S.A.					12.90800	16.43527
Getty Oil Co			3.57697	3.06443		
Marathon Oil Co.	2.96402	4.44374				
Hamilton McRae			.00120	.00158		
Mobil Oil Corp.					12.94784	12.87426
Neville G. Penrose Est.	.00056	.03326				
Phillips Petroleum Company			30.99935	29.29786		
Shell Oil Co.			8.94934	8.79189		
Sohio Petroleum Co.					.06713	.08332
Norman D. Stovall					.02634	.08593
	<u>2.96627</u>	<u>4.47991</u>	<u>70.35049</u>	<u>64.09081</u>	<u>25.94931</u>	<u>29.47878</u>

*Method of reimbursing
unit operator
for technical
services*

REPORT SUBMITTED BY
OIL CONSERVATION DIV.
Phillips EXHIBIT NO. 10
6366

EXHIBIT _____
EAST VACUUM GRAYBURG-SAN ANDRES UNIT

VOTE ON BALLOT NO. 3

FOR Change In Article 18 of the Unit Agreement.

	<u>INITIAL PART.</u>	<u>FINAL PART.</u>
Atlantic Richfield Co.	9.42660	10.78894
Cities Service Co.	3.95617	1.01965
Davoil Inc.	.01260	.01613
Exxon Company U.S.A.	12.90800	16.43527
Mobil Oil Corporation	12.94784	12.87426
Phillips Petroleum Co.	30.99935	29.29786
Sohio Petroleum Co.	.06713	.08332
Norman D. Stovall	.02634	.08593
Total <u>FOR</u>	70.34403	70.60136

AGAINST Change

Shell Oil Co.	8.94934	8.79189
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Not Voting

20.70663	20.60675
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TOTAL

100.00000	100.00000
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*stripper oil
allocation*

BEFORE EXAMINER MUTTER
OIL CONSERVATION DIVISION
<i>Phillips</i> EXHIBIT NO. <u>11</u>
CASE NO. <u>6366</u>

EXHIBIT
SCHEDULE SHOWING THAT ADDITIONAL COSTS WILL NOT EXCEED
ADDITIONAL INCOME PLUS A REASONABLE PROFIT -- (NO ESCALATION IN OIL PRICES INCLUDED)

YEAR	OIL SALES (BBLs)			Increased Revenue Int. Income-\$	Total Expense \$	Waterflood Investment \$	Income Before F.I.T. and Salvage \$
	Waterflood	Remaining Primary	Difference				
1	1,860,040	1,345,025	515,015	\$ 4,871,543	\$ 2,899,661	\$29,721,008	(\$27,749,126)
2	4,018,650	1,272,390	2,746,260	29,489,344	5,591,297	18,496,992	5,401,055
3	5,315,860	1,210,340	4,105,520	43,927,136	7,219,695		36,707,441
4	8,220,165	1,148,655	7,071,510	76,257,760	10,299,523		65,958,237
5	8,329,665	1,090,620	7,239,045	76,889,200	10,587,313		66,301,887
6	6,795,205	894,250	5,900,955	61,005,376	10,276,474		50,728,902
7	4,749,380	636,195	4,113,185	39,804,944	8,950,674		30,854,270
8	3,287,920	450,775	2,837,145	24,667,248	8,092,918		16,574,330
9	2,301,690	319,740	1,981,950	14,486,586	4,383,536		10,103,050
10	1,607,460	227,030	1,380,430	7,323,939	3,867,804		3,456,135
11	1,117,995	161,695	956,300	4,614,048	3,511,752		1,102,296
12	778,180	115,705	662,475	3,192,366	2,353,904		838,462
13	544,215	81,760	462,455	2,227,388	2,179,813		47,575
14	376,315	58,035	318,280	1,531,850	2,086,371		(554,521)
15	263,165	40,880	222,285	1,069,035	1,295,335		(226,300)
16	182,500	28,905	153,595	737,916	1,236,513		(498,597)
17	128,335	-	128,335	642,295	1,411,888		(769,593)
			40,794,740	\$392,737,974	\$86,244,471	\$48,218,000	\$258,275,503

NOTE: Oil price based on present Department of Energy prices continuing indefinitely.

Oil based on present oil prices

Does not include all royalties 56.1 million additional tax 23.1 million

RECEIVED BY: WYLLER
 DATE: 6/3/68
 FILED: 12

VACUUM GRAYBURG-SAN ANDRES
LEA COUNTY, NEW MEXICO.
40-ACRE PRORATION UNIT
ALLOWABLE---80 BOPD.

FAST VACUUM UNIT				LATEST TEST DATA				MONTHLY AVERAGE				ALLOWABLE ALLOCATION				
TRACT	WELL	LOCATION UNIT-SEC	WELL STATUS	DATE MO-YR	OIL B/D	GAS MCF/D	WATER B/D	GOR CF/B	INJ PSIG	OIL BOPD	GAS MCFPD	WATER BOPD	GOR CF/B	BASIC PROJECT	INJ. CREDIT	OCTOBER TOTAL
0449	001	C 4	-							(Not Completed)						
0449	002	D 4	-							(Not Completed)						
0449	039	D 4	P	2-80	23	16	Tr	696		0	0	0	0	23	0	23
0449	115	C 4	P	2-80	15	3	8	200		14	3	8	214	15	0	15
0449	128	D 4	P	2-80	93	27	14	290		82	102	5	1244	93	0	93
0524	002	C 5	-							(Not Completed)						
0524	003	E 5	P	2-80	5	17	0	3400		0	0	0	0	5	0	5
0524	004	F 5	-							(Not Completed)						
0524	005	E 5	-							(Not Completed)						
0524	006	C 5	-							(Not Completed)						
0524	008	D 5	P	7-80	54	103	1	1907		59	143	1	2424	54	0	54
0524	036	C 5	P	3-80	13	23	2	1769		0	0	0	0	13	0	13
0524	045	F 5	P	2-80	11	19	1	1727		0	0	0	0	11	0	11
0524	098	C 5	P	7-80	55	34	5	618		50	39	5	780	55	0	55
0524	112	E 5	P							0	0	0	0	0	0	0
0524	118	F 5	P	7-80	42	36	81	857		56	60	107	1071	42	0	42
0524	129	E 5	P	2-80	6	24	1	4000		18	92	4	5111	6	0	6
0546	001	B 5	P	7-80	149	265	1	1779		119	285	0	2395	149	0	149
0546	002	G 5	-							(Not Completed)						

EAST VACUUM UNIT				LATEST TEST DATA						MONTHLY AVERAGE				ALLOWABLE ALLOCATION			
TRACT	WELL	LOCATION UNIT-SEC	WELL STATUS	DATE MO-YR	OIL B/D	GAS MCF/D	WATER B/D	GOR CF/B	INJ PRESS PSIG	OIL BOPD	GAS MCFPD	WATER BMPD	GOR CF/B	BASIC PROJECT	INJ. CREDIT	OCTOBER TOTAL	
0546	033	A 5	P	10-79	28	21	1	750		0	0	0	0	28	0	28	
0546	038	B 5	P	2-80	25	35	-	1400		0	0	0	0	25	0	25	
0546	093	G 5	P	3-80	227	73	27	322		73	35	68	479	227	0	227	
0546	119	A 5	P	7-80	48	69	1	1438		51	93	1	1824	48	0	48	
0546	123	B 5	P	7-80	17	40	1	2353		8	24	0	3000	17	0	17	
2060	053	N 20	S											0	0	0	
2060	081	Ø 20	P	2-80	1	1	Tr	1000		1	0	0	0	1	0	1	
2150	001	P 21	-							(Not Completed)							
2150	009	P 21	S											0	0	0	
2155	006	Ø 21	S											0	0	0	
2175	001	N 21	P	6-80	4	4	-	1000		4	4	0	1000	4	0	4	
2175	002	M 21	P	1-80	11	1	-	91		10	2	0	200	11	0	11	
2230	001	M 22	P	4-80	12	39	Tr	3250		9	38	0	4222	12	0	12	
2230	002	N 22	P	5-80	10	8	Tr	800		8	8	0	1000	10	0	10	
2230	003	N 22	-							(Not Completed)							
2505	048	D 25	P	2-80	10	1	17	100		9	1	15	111	10	0	10	
2576	001	E 25	P							0	0	0	0	0	0	0	
2614	001	J 26	P	5-80	30	1	80	33		26	0	71	0	30	0	30	
2622	001	E 26	P	8-80	41	31	45	756		30	29	33	967	41	0	41	
2622	002	G 26	-							(Not Completed)							
2622	003	D 26	-							(Not Completed)							
2622	005	C 26	-							(Not Completed)							
2622	006	F 26	-							(Not Completed)							
2622	030	E 26	P	7-80	42	34	40	810		44	45	42	1023	42	0	42	

TRACT	EAST VACUUM UNIT			LATEST TEST DATA						MONTHLY AVERAGE				ALLOWABLE ALLOCATION		
	WELL	LOCATION UNIT-SEC	WELL STATUS	DATE MO-YR	OIL B/D	GAS MCF/D	WATER B/D	GOR CF/B	INJ PRESS PSIG	OIL BOPD	GAS MCFPD	WATER BMPD	GOR CF/B	BASIC PROJECT	INJ. CREDIT	OCTOBER TOTAL
2721	001	M 27	-							(Not Completed)						
2721	002	N 27	-							(Not Completed)						
2721	007	N 27	P	6-80	112	79	1	705		85	68	1	800	112	0	112
2721	020	M 27	P	6-80	53	106	17	2000		40	92	13	2300	53	0	53
2738	001	D 27	S											0	0	0
2738	002	F 27	P	6-80	31	53	0	1710		28	61	0	2179	31	0	31
2738	003	E 27	P	6-80	12	25	0	2083		11	29	0	2636	12	0	12
2738	004	C 27	S											0	0	0
2738	005	D 27	P	5-80	25	3	---	120		23	4	0	174	25	0	25
2738	008	F 27	-							(Not Completed)						
2738	009	E 27	-							(Not Completed)						
2739	001	K 27	P	6-80	21	10	13	476		19	12	12	632	21	0	21
2739	002	Ø 27	P	6-80	18	8	89	444		16	9	81	563	18	0	18
2739	003	J 27	P	6-80	36	15	75	417		33	17	68	515	36	0	36
2739	004	L 27	P	6-80	30	19	7	633		27	22	6	815	30	0	30
2739	005	K 27	P	6-80	64	18	241	281		56	20	213	357	64	0	64
2739	006	Ø 27	P	6-80	21	15	257	714		19	28	253	1474	21	0	21
2739	007	K 27	-							(Not Completed)						
2739	008	L 27	-							(Not Completed)						
2801	001	P 28	P	6-80	35	12	53	343		30	14	45	467	35	0	35
2801	002	M 28	P							---	---	---	---	0	0	0
2801	003	I 28	P	6-80	12	12	2	1000		11	15	24	1364	12	0	12
2801	004	Ø 28	P	6-80	12	17	---	1417		11	26	0	2364	12	-	12

TRACT	EAST VACUUM UNIT			LATEST TEST DATA					MONTHLY AVERAGE					ALLOWABLE ALLOCATION		
	WELL	LOCATION UNIT-SEC	WELL STATUS	DATE MO-YR	OIL B/D	GAS MCF/D	WATER B/D	GOR CF/B	INJ PRESS PSIG	OIL BOPD	GAS MCFPD	WATER BMPD	GOR CF/B	BASIC PROJECT	INJ. CREDIT	OCTOBER TOTAL
2801	008	M 28	P	6-80	9	12	0	1333		8	15	0	1875	9	0	9
2801	009	N 28	P	6-80	16	15	0	938		15	20	0	1333	16	0	16
2801	010	Ø 28	P	6-80	30	19	1	633		28	26	1	929	30	0	30
2801	011	J 28	P	6-80	17	12	0	706		16	15	0	938	17	0	17
2801	012	M 28	-							(Not Completed)						
2801	013	K 28	P	6-80	14	2	0	143		13	3	0	231	14	0	14
2801	014	L 28	P	6-80	3	1	0	333		3	2	0	667	3	0	3
2801	015	Ø 28	-							(Not Completed)						
2801	016	J 28	-							(Not Completed)						
2801	017	L 28	-							(Not Completed)						
2819	001	B 28	P	10-79	2	12	0	6000		2	14	0	7000	2	0	2
2819	002	H 28	P	10-79	19	341	0	17947		17	393	0	23118	19	0	19
2819	003	G 28	P	10-79	16	12	0	750		15	14	0	933	16	0	16
2819	004	G 28	P	6-80	4	44	2	11000		3	462	24	154000	4	0	4
2851	001	A 28	P	4-80	3	15	0	5000		1	5	0	5000	3	0	3
2864	001	E 28	-							(Not Completed)						
2864	012	C 28	S							0	0	0	0	0	0	0
2864	013	D 28	P							0	0	0	0	0	0	0
2864	051	E 28	S							0	0	0	0	0	0	0
2865	002	F 28	P	5-80	1	16	0	16000		1	11	0	11000	1	0	1
2913	001	Ø 29	P	10-79	18	21	2	1167		16	24	2	1500	18	0	18
2913	002	J 29	S							0	0	0	0	0	0	0
2913	003	P 29	P	10-79	11	48	0	4364		10	55	0	5500	11	0	11
2913	004	I 29	P	10-79	6	20	0	3333		5	23	0	4600	6	0	6

TRACT	EAST VACUUM UNIT			LATEST TEST DATA							MONTHLY AVERAGE					ALLOWABLE ALLOCATION		
	WELL	LOCATION UNIT-SEC	WELL STATUS	DATE MO-YR	OIL B/D	GAS MCF/D	WATER B/D	GOR CF/B	INJ PRESS PSIG	OIL BORD	GAS MCFPD	WATER BMPD	GOR CF/B	BASIC PROJECT	INJ. CREDIT	OCTOBER TOTAL		
2913	006	P	29	P	2-80	16	50	28	3125		15	39	26	2600	16	0	16	
2913	009	Ø	29	-							(Not Completed)							
2913	010	J	29	-							(Not Completed)							
2923	001	G	29	-							(Not Completed)							
2923	002	C	29	P	7-80	2	4	0	2000	1	2	0	2000	2	0	2		
2923	052	G	29	P	1-80	8	1	--	125	3	0	0	0	8	0	8		
2923	054	C	29	P						0	0	0	0	0	0	0		
2941	001	K	29	-						(Not Completed)								
2941	026	K	29	P	6-80	4	1	--	250	4	1	0	250	4	0	4		
2944	049	A	29	S										0	0	0		
2947	050	H	29	S										0	0	0		
2957	001	L	29	P	4-80	10	13	Tr	1300	9	15	0	1667	10	0	10		
2963	001	M	29	P	5-80	5	11	23	2200	5	3	21	600	5	0	5		
2963	002	N	29	P	10-79	13	26	108	2000	12	29	98	2417	13	0	13		
2963	003	N	29	P	5-80	4	16	11	4000	4	21	11	5250	4	0	4		
2980	002	F	29	-						(Not Completed)								
3202	001	I	32	P	6-80	216	325	--	1505	197	375	0	1904	216	0	216		
3202	003	B	32	P	6-80	20	22	78	1100	17	126	67	7412	20	0	20		
3202	004	I	32	P	6-80	56	36	2	643	30	1	1	32	56	0	56		
3202	005	H	32	P	6-80	60	22	15	367	55	25	14	456	60	0	60		
3202	006	P	32	P	6-80	68	47	41	691	58	51	35	879	68	0	68		
3202	007	A	32	P	6-80	27	35	3	1296	25	40	3	1600	27	0	27		
3202	010	A	32	-						(Not Completed)								
3202	011	I	32	-						(Not Completed)								

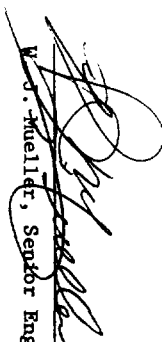
EAST VACUUM UNIT				LATEST TEST DATA						MONTHLY AVERAGE				ALLOWABLE ALLOCATION			
TRACT	WELL	LOCATION UNIT-SEC	WELL STATUS	DATE MO-YR	OIL B/D	GAS MCF/D	WATER B/D	GOR CF/B	INJ PRESS PSIG	OIL BOPD	GAS MCFPD	WATER BMPD	GOR CF/B	BASIC PROJECT	INJ. CREDIT	OCTOBER TOTAL	
3202	012	J	32	P	6-80	59	35	32	593	50	38	27	760	59	0	59	
3202	013	P	32	-						(Not completed)							
3202	014	P	32	-						(Not completed)							
3202	015	Ø	32	P	6-80	10	29	74	2900	8	31	61	3875	10	0	10	
3202	016	G	32	P	6-80	26	61	3	2346	22	66	3	3000	26	0	26	
3202	033	B	32	P	6-80	20	41	--	2050	15	40	0	2667	20	0	20	
3229	002	M	32	S						0	0			0	0	0	
3229	003	K	32	P	7-80	100	90	0	900	86	98	0	1140	100	0	100	
3229	004	N	32	P	7-80	79	73	0	924	72	84	0	1167	79	0	79	
3229	005	M	32	P	7-80	304	195	0	641	73	59	0	808	304	0	304	
3229	007	K	32	P	7-80	50	49	109	980	52	86	134	1654	50	0	50	
3229	008	N	32	P	7-80	236	140	13	593	214	234	22	1093	236	0	236	
3229	009	N	32	P	7-80	188	232	43	1234	132	238	30	1803	188	0	188	
3236	002	D	32	P	11-79	63	115	0	1825	57	173	0	3035	63	0	63	
3236	003	C	32	P	4-80	68	114	43	1676	62	131	39	2113	68	0	68	
3236	004	F	32	P	11-79	103	--	0	----	94	0	0	0	103	0	103	
3236	006	F	32	-						(Not completed)							
3236	007	C	32	-						(Not completed)							
3308	001	D	33	P	4-80	87	14	0	161	79	16	0	203	87	0	87	
3308	002	C	33	P	4-80	32	7	9	219	29	8	8	276	32	0	32	
3308	003	C	33	P	3-80	225	38	25	169	205	41	0	200	225	0	225	
3308	004	D	33	-						(Not completed)							
3308	005	C	33	-						(Not completed)							
3315	001	I	33	P	7-80	79	82	60	1038	98	96	74	980	79	0	79	
3315	002	J	33	P	7-80	31	22	38	710	59	52	73	881	31	0	31	

TRACT	EAST VACUUM UNIT			LATEST TEST DATA							MONTHLY AVERAGE					ALLOWABLE ALLOCATION		
	WELL	LOCATION UNIT-SEC	WELL STATUS	DATE MO-YR	OIL B/D	GAS MCF/D	WATER B/D	GOR CF/B	INJ PRESS PSIG	OIL BOPD	GAS MCFPD	WATER BOPD	GOR CF/B	BASIC PROJECT	INJ. CREDIT	OCTOBER TOTAL		
3373	001	K 33	-	6-80	102	84	--	823		93	96	0	1032	102	0	102		
3373	028	K 33	P	6-80						(Not completed)								
3374	001	L 33	P	6-80	105	128	6	1219		77	119	4	1545	105	0	105		
3440	001	L 34	P	7-80	77	1	7	13		76	1	7	13	77	0	77		
3440	002	K 34	P	7-80	16	8	164	500		12	7	121	583	16	0	16		
3440	005	L 34	-							(Not completed)								
3456	001	C 34	P	4-80	51	32	0	627		46	4	0	87	51	0	51		
3456	002	D 34	P	4-80	78	96	10	1231		71	110	9	1549	78	0	78		
3456	003	E 34	P	4-80	74	48	22	649		67	7	3	104	74	0	74		
3456	004	F 34	P	4-80	84	36	74	429		77	42	67	545	84	0	84		
3456	005	C 34	P	2-80	68	25	256	368		62	46	179	742	68	0	68		
3456	008	C 34	-							(Not completed)								
3456	009	F 34	-							(Not completed)								
3456	010	F 34	-							(Not completed)								
3467	001	B 34	P	6-80	20	14	197	700		15	21	215	1400	20	0	20		
3467	018	B 34	P	6-80	57	29	72	509		43	25	55	581	57	0	57		
3467	024	A 34	S											0	0	0		
3467	121	A 34	P	6-80	9	9	102	1000		6	7	72	1167	9	0	9		
3568	040	D 35	S											0	0	0		
TOTAL PRODUCTION										5132	6399	4368	1247	6264	0	6264		

EAST VACUUM UNIT				MONTHLY AVERAGE					ALLOWABLE ALLOCATION		
TRACT	WELL	LOCATION UNIT-SEC	WELL STATUS	INJ PRESS PSIG	OIL BOPD	GAS MCFPD	WATER BOPD	GOR CF/B	BASIC PROJECT	INJ. CREDIT	OCTOBER TOTAL
0524	001	C 5	I	0			325				
2622	004	F 26	I	0			954				
2642	001	H 26	I	0			1021				
2717	005	P 27	I	0			989				
2717	007	I 27	I	0			856				
2738	006	D 27	I	0			413				
2738	007	E 27	I	0			864				
2801	005	L 28	I	0			560				
2801	006	J 28	I	0			633				
2801	007	N 28	I	0			776				
2864	002	C 28	I	0			201				
2913	007	I 29	I	0			601				
2913	008	Ø 29	I	0			487				
2944	001	B 29	I	0			227				
2963	004	M 29	I	0			419				
3202	008	G 32	I	0			64				
3202	009	Ø 32	I	0			677				
3315	006	J 33	I	0			850				
3328	003	M 33	I	0			386				
3374	002	L 33	I	0			645				
3456	006	D 34	I	0			519				
3456	007	E 34	I	0			408				
TOTAL INJECTION							12,875				

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

MVN/brb


W.J. Mueller, Senior Engineering Specialist 9/26/80

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
PRESSURE MAINTENANCE PROJECT

(N.M.O.C.D. ORDER R- 5897)

VACUUM GRAYBURG-SAN ANDRES POOL, LEA COUNTY, NEW MEXICO

WATER INJECTION CREDIT ALLOWABLE CALCULATION DATA

ATTACHMENT TO August, 1980, REPORT

$$\text{Water Injection Credit Allowable} = \left[\frac{W_i - W_p}{B_{PAA} \left[B_o + \frac{(R_p - R_s)}{(1,000)} B_g \right]} - 1 \right] B_{PAA}$$

- $W_i = \underline{12,875}$ = Average daily water injection, barrels per day, project area only.
- $W_p = \underline{4,368}$ = Average daily water produced, barrels per day, project area only.
- $B_{PAA} = \underline{9,120}$ = Basic project area allowable, 80 bopd x 114 (number of developed 40-acre tracts in project area).
- $\underline{561}$ = Weighted average project area reservoir pressure, psig, from March, 1980, survey data.
- $B_o = \underline{1.21}$ = Oil formation volume factor, reservoir barrels per stock tank barrel (Exhibit B).
- $R_p = \underline{1,247}$ = Producing gas-oil ratio, cubic feet per barrel, project area only.
- $R_s = \underline{313}$ = Solution gas-oil ratio, cubic feet per barrel (Exhibit B).
- $B_g = \underline{4.87}$ = Gas formation volume factor, reservoir barrels per Mcf (Exhibit B).

Water injection credit allowable for October, 1980, = -7643 barrels of oil per day.

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

AFE Status Report as of 9-15-80

AFE No.	Description	Authorization		Spent to Date	Date Completed	Remarks
		Original	Supplement			
P-2157	Additional Lift Equipment	\$ 200,000	(1) \$2,532,000*	\$6,396,000	2,213,243.42	*Phase II. Phase III.
P-2160	Central Tank Battery	1,752,000	910,000*	2,662,000	4,760,099.73	*Phase II.
P-2161	Satellites	1,498,000	2,473,000*	3,971,000	3,697,366.43	*Phase II.
P-2162	Automated Supervisory System	1,335,000	1,398,000*	2,733,000	160,844.51	*Phase II.
P-2163	Water Injection System	750,000	736,000*	1,486,000	2,418,396.28	*Phase II.
P-2164	Water Supply System	875,000		875,000	828,170.64	
P-2165	Drill Well No. 3229 005	307,403	89,450	396,853	405,267.30	7-79
P-2166	"	3202 001		267,438	261,285.85	7-79
P-2167	"	3202 003		253,061	273,539.45	9-79
P-2168	"	3328 002		334,024	270,464.00	10-79
P-2169	"	3308 003**		323,376	349,096.72	9-79 **Original 3366 001.
P-2171	"	3333 004		257,532	180,519	438,051
P-2172	"	3456 005		323,376	288,871.00	8-79
P-2173	"	2801 002		320,712	347,667.77	7-80
P-2174	"	2801 004		326,039	282,939.80	9-79
P-2175	"	2739 005**		326,039	305,610.57	10-79 **Original 2721 001.
PHASE I: 10--Producing Wells						
		Total Estimate	\$3,308,969	\$3,230,872.51	Total	
		Average	330,896	323,087.25	Average	

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

AFE Status Report as of 9-15-80

AFE No.	Description	Authorization		Total	Spent		Date Completed	Remarks
		Original	Supplement		to Date			
P-2265	Drill Well No. 2230 003	\$ 191,719		\$ 191,719	\$155,078.88		7-80	
P-2266	" 2622 002	178,924		178,924	185,281.00		7-80	
P-2267	" 2622 001	234,423		234,423	254,931.00		12-79	
P-2268	" 2720 005	234,423	\$54,300	288,723	290,862.28		11-79	
P-2269	" 2738 005	234,423	34,427	268,850	303,420.00		2-80	
P-2270	" 2819 004	191,719		191,719	192,873.94			
P-2271	" 2864 001	191,719		191,719	151,004.70			
P-2272	" 2923 001	191,719		191,719	149,168.00			
P-2273	" 2980 002	191,719		191,719	129,066.88			
P-2274	" 2648 001	178,924	50,315	229,239	259,951.48		7-80	
P-2275	" 2739 006	234,423		234,423	254,051.52		1-80	
P-2276	" 2913 006	234,423		234,423	240,541.58		3-80	
P-2277	" 2963 003	234,423		234,423	232,231.91		5-80	
P-2278	" 3467 001	192,224		192,224	183,167.11		5-80	
P-2279	" 3236 005	234,423	47,777	282,200	284,460.02		11-79	
P-2280	" 3440 005	192,224		192,224	166,451.00			
P-2281	" 3315 005	255,725		255,725	249,079.06		5-80	
P-2282	" 0546 001	234,423		234,423	218,254.00		6-79	
P-2283	" 2059-003	166,900	41,657	208,557	207,533.31		7-80	
P-2284	" 1910-003	166,900		166,900	188,458.76		5-80	
P-2285	" 2622-003	198,140		198,140	169,043.20		7-80	
P-2286	" 2271-003	198,140		198,140	150,611.69		7-80	
P-2287	" 2738-006	198,140		198,140	185,053.95		7-80	
P-2288	" 2150-001	166,900	26,100	193,000	192,767.60			
P-2289	" 2864-002	166,900	28,764	195,664	188,663.42		5-80	

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

AFE Status Report as of 9-15-89

AFE No.	Description	Authorization		Spent to Date	Date		Remarks
		Original	Supplement		Completed	Completed	
P-2290	Drill Well No. 2944-001	\$ 166,900	47,528	\$ 214,428	\$213,236.33		
P-2291	2923-002	166,900	\$59,682	226,582	229,194.07		
P-2292	2642-001	198,140		198,140	209,765.38	3-80	
P-2293	2622 004**	198,140		198,140	226,578.84	5-80	**Original 2658 W01.
P-2294	2717 007**	285,360		285,360	246,403.29	12-79	**Original 2739 W08.
P-2295	2738 007**	198,140		198,140	217,705.58	7-80	**Original 2739 W07.
P-2296	2801-006	198,140		198,140	163,359.00	5-80	
P-2297	2801 005	198,140		198,140	235,341.83	5-80	
P-2298	2913 007	198,140		198,140	207,932.25	7-80	
P-2299	2941 001	198,140		198,140	147,432.90	7-80	
P-2300	2717-005	285,360		285,360	260,646.53	7-80	
P-2301	3456 006	198,140	110,837	308,977	343,655.59	10-79	
P-2302	3332 001	198,140		198,140	161,989.00	1-80	
P-2303	2801 007**	198,140	29,000	227,140	258,514.30	1-80	**Original 3308 W04.
P-2304	2913 008**	198,140		198,140	232,976.40	1-80	**Original 3202 W09.
P-2305	2963 004**	198,140		198,140	173,621.45	7-80	**Original 3236 W04.
P-2306	3456 007**	198,140		198,140	169,791.19	2-80	**Original 3440 W06.
P-2307	3315 006	285,360		285,360	240,695.45	2-80	
P-2308	3374 002	198,140		198,140	250,112.05	12-79	
P-2309	3202 008	285,360		285,360	270,033.04	1-80	
P-2310	3229 006	198,140		198,140	194,591.00	7-80	
P-2311	3328-003	198,140		198,140	189,335.37	2-80	
P-2312	3202-009	285,360		285,360	226,658.78	2-80	
P-2313	0524 001	198,140		198,140	273,866.80	3-80	

PHASE II: 49 Wells.

Total Estimate \$10,753,387 \$10,535,442.71 Total

Average \$219,456.88 \$ 215,009.03

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

AFE Status Report as of 9-15-80

AFE No.	Description	Original	Authorization		Spent	Date	Remarks
			Supplement	Total			
P-2916	Drill Well No. 2717-003	252,850		252,850	\$155,685.00		
P-2917	Drill Well No. 2720-007	269,350		269,350	177,338.00		
P-2918	Drill Well No. 2801-015	252,850		252,850	155,212.00		
P-2919	Drill Well No. 2801-012	252,850		252,850	154,452.00		
P-2920	Drill Well No. 3202-010	310,555		310,555			
P-2921	Drill Well No. 3236-007	269,350		269,350	170,604.00		
P-2922	Drill Well No. 3236-006	252,850		252,850	152,084.00		
P-2923	Drill Well No. 3456-008	269,350		269,350	169,978.00		
P-2924	Drill Well No. 3456-009	252,850		252,850	160,180.00		
P-2925	Drill Well No. 3333-006	252,850		252,850	169,285.00		
P-2926	Drill Well No. 3333-005	252,850		252,850	152,662.00		
P-2928	Drill Well No. 3332-002	269,350		269,350	238,884.00		
P-2929	Drill Well No. 3315-008	252,850		252,850	198,457.00		
P-2930	Drill Well No. 3345-001	269,350		269,350	163,050.00		
P-2931	Drill Well No. 3333-008	269,350		269,350	190,442.00		
P-2932	Drill Well No. 3308-004	269,350		269,350	190,252.00		
P-2933	Drill Well No. 3202-014	269,350		269,350	187,311.00	7-80	

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

AFE Status Report as of 9-15-80

AFE No.	Description	Original	Authorization		Spent	Date	Remarks
			Supplement	Total	to Date	Completed	
P-2934	Drill Well No. 3202-011	269,350		269,350	\$174,772.00		
P-2935	Drill Well No. 3229-007	269,350		269,350	228,615.19	7-80	
P-2936	Drill Well No. 3229-009	269,350		269,350	235,655.96	7-80	
P-2937	Drill Well No. 3229-008	252,850		252,850	158,335.26	7-80	
P-2938	Drill Well No. 2721-002	252,850		252,850	171,683.00		
P-2939	Drill Well No. 3308-005	269,350,		269,350	162,599.00		
P-2940	Drill Well No. 2721-001	252,850		252,850	159,470.00		
P-2941	Drill Well No. 2658-001	252,850		252,850	185,065.00		
P-2942	Drill Well No. 2739-007	269,350		269,350	142,806.00		
P-2943	Drill Well No. 3373-001	252,850		252,850	172,905.00		
P-2944	Drill Well No. 3456-010	269,350		269,350	188,827.00		
P-2945	Drill Well No. 3333-007	269,350		269,350	174,147.00		
P-2946	Drill Well No. 3202-013	252,850		252,850	161,396.00		

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

AFE Status Report as of 9-15-80

AFE No.	Description	Original	Authorization		Total	Spent		Date	Completed	Remarks
			Supplement			to Date				
P-7172	Injection Well No. 0524-005	\$324,619			\$324,619	-\$197,573.00				
P-7173	Injection Well No. 3127-007	323,406			323,406	220,724.00				
P-7174	Injection Well No. 3127-005	323,885			323,885	205,645.00				
P-7175	Injection Well No. 3127-006	323,880			323,880	212,581.00				
P-7176	Injection Well No. 3236-008	323,919			323,919	81,616.00				
P-7177	Injection Well No. 2963-005	236,865			236,865	136,468.00				
P-7178	Injection Well No. 2957-002	236,865			236,865	139,926.00				
P-7179	Injection Well No. 2923-003	236,865			236,865	153,190.00				
P-7180	Injection Well No. 1911-002	236,865			236,865	153,476.00				
P-7181	Injection Well No. 2418-002	236,865			236,865	141,861.00				

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

AFE Status Report as of 9-15-80

AFE No.	Description	Original	Authorization		Spent to Date	Date Completed	Remarks
			Supplement	Total			
P-K017	Drill Well No. 3127-004	269,350		269,350	\$ 69,449.00		
P-K018	Drill Well No. 0524-002	269,350		269,350	144,666.00		
P-K019	Drill Well No. 0524-006	242,750		242,750			
P-K020	Drill Well No. 0524-004	242,750		242,750			
P-K021	Drill Well No. 0546-002	242,750		242,750			
P-K022	Drill Well No. 0449-002	242,750		242,750			
P-K023	Drill Well No. 0449-001	242,750		242,750			
P-K024	Drill Well No. 2913-010	338,320		338,320	250,608.00		
P-K025	Drill Well No. 2738-009	312,720		312,720			
P-K026	Drill Well No. 2622-006	312,720		312,720	254,397.00		
P-K027	Drill Well No. 3315-007	242,750		242,750			
P-K028	Drill Well No. 3315-009	242,750		242,750			
P-K029	Drill Well No. 3440-006	242,750		242,750			
P-K030	Drill Well No. 3467-002	242,750		242,750			
P-K031	Drill Well No. 2717-004	269,350		269,350			
P-K032	Drill Well No. 2648-002	242,750		242,750			
P-K033	Drill Well No. 2913-009	242,750		242,750			

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

AFE Status Report as of 9-15-80

<u>AFE No.</u>	<u>Description</u>	<u>Original</u>	<u>Authorization</u>		<u>Total</u>	<u>Spent</u>	<u>Date</u>	<u>Completed</u>	<u>Remarks</u>
			<u>Supplement</u>	<u>Total</u>		<u>to Date</u>			
P-K034	Drill Well No. 2801-017	255,850		255,850					
P-K035	Drill Well No. 2801-016	255,850		255,850					
P-K036	Drill Well No. 2739-008	269,350		269,350					
P-K037	Drill Well No. 2738-008	242,750		242,750					
P-K038	Drill Well No. 2720-006	242,750		242,750					
P-K039	Drill Well No. 2622-005	242,750		242,750					
P-K040	Drill Well No. 1904-002	255,850		255,850					
P-K041	Drill Well No. 1952-002	229,750		229,750					
P-K042	Drill Well No. 1825-002	229,750		229,750					

UNITIZED 12-01-78
UNITIZED AREA 7,025 ACRES
DEVELOPED 6,360 ACRES
FIRST INJECTION 12-12-79
PROJECT AREA 720 ACRES

PHILLIPS PETROLEUM COMPANY
EAST VACUUM GRAYBURG-SAN ANDRES UNIT REPORT
VACUUM (GB-SA) FIELD, LEA COUNTY, NEW MEXICO

CUMULATIVE TO 12-01-78:
OIL 69,214,210 BBLs
GAS 77,056,250 MCF
WATER 14,564,983 BBLs

	SEP 79	OCT 79	NOV 79	DEC 79	JAN 80	FEB 80
OIL PRODUCTION -BBLs						
MONTHLY	126,798	133,136	132,367	130,885	141,831	144,721
DAILY AVERAGE	4,226	4,294	4,412	4,222	4,575	4,990
CUMULATIVE SINCE UNITIZATION	1,267,701	1,400,837	1,533,204	1,664,089	1,805,920	1,950,641
GAS PRODUCTION -MCF						
MONTHLY	180,509	198,889	175,432	168,792	180,977	176,059
DAILY AVERAGE	6,016	6,415	5,847	5,444	5,837	6,071
GAS-OIL RATIO	1,423	1,493	1,325	1,289	1,276	1,216
CUMULATIVE SINCE UNITIZATION	1,888,226	2,087,115	2,262,547	2,431,339	2,612,316	2,788,375
WATER PRODUCTION -BBLs						
MONTHLY	121,342	113,761	102,334	112,208	107,383	122,063
DAILY AVERAGE	4,044	3,669	3,411	3,619	3,463	4,209
WATER-OIL RATIO	.95	.85	.77	.85	.75	.84
CUMULATIVE SINCE UNITIZATION	1,127,582	1,241,343	1,343,677	1,455,885	1,563,268	1,685,331
GAS INJECTION -MCF						
MONTHLY						
DAILY AVERAGE						
CUMULATIVE						
WATER INJECTION -BRLs						
MONTHLY				162	3,494	9,332
DAILY AVERAGE				5	112	321
NET INJECTION WATER-OIL RATIO	.00	.00	.00	-.85	-.73	-.77
CUMULATIVE	817,214	817,214	817,214	817,376	820,870	830,202
WELL STATUS						
PRODUCERS-	163/ 22/	162/ 23/	161/ 24/	161/ 24/	171/ 27/	173/ 25/
INJECTORS-	1/ 1/	1/ 1/	1/ 1/	1/ 1/	3/ 1/	3/ 1/
WATER SUPPLY-	4/ 2/	/ 6/	/ 6/	2/ 4/	/ 4/	/ 4/
WATER DISPOSAL -	/ /	/ /	/ /	/ /	/ /	/ /
TOTAL--	168/ 25/	163/ 30/	162/ 31/	164/ 29/	174/ 32/	176/ 30/
WT. AVG. RESERVOIR PRESSURE--PSI	600	600	600	600	600	600
NET RESERVOIR VOLUME-- BBLs/DAY	29,587	30,952	28,169	26,641	28,030	29,505

REMARKS:
1. REMAINING INITIAL PHASE OIL AT MARCH 1, 1980, WAS 6,987,787 BARRELS.

TO: NMOC DISTRICT 1 (3)
ATTN: MR. JERRY SEXTON
POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240

EAST VACUUM UNIT PRESSURE MAINTENANCE PROJECT
(NMOC ORDER R-5897)
PHILLIPS PETROLEUM COMPANY, OPERATOR
REPORT FOR FEBRUARY, 1980

VACUUM GRAYBURG-SAN ANDRES
LEA COUNTY, NEW MEXICO
40-ACRE PRORATION UNIT
ALLOWABLE--80 BOPD.

PROJECT AREA--2760 ACRES--69 DEVELOPED 40-ACRE PRORATION UNITS.
TOTAL REQUESTED ALLOWABLE FOR APRIL, 1980, IS 4728 BOPD.

EAST VACUUM UNIT				LATEST TEST DATA						MONTHLY AVERAGE				ALLOWABLE ALLOCATION		
TRACT	WELL	LOCATION UNIT-SEC	WELL STATUS	DATE MO-YR	OIL B/D	GAS MCF/D	WATER B/D	GOR CF/B	INJ PRESS PSIG	OIL BOPD	GAS MCFPD	WATER BWPD	GOR CF/B	BASIC PROJECT	INJ. CREDIT	APRIL TOTAL
0524	001	C 5	P	2-80	126	72	20	571		46	21	7	457	126	0	126
0524	036	C 5	P	8-79	31	31	2	1000		8	7	1	875	31	0	31
0524	098	C 5	P	2-80	57	27	3	474		20	7	1	350	57	0	57
0546	001	B 5	----							(Not Completed)						
0546	033	A 5	P	10-79	28	21	1	750		32	31	1	969	28	0	28
0546	038	B 5	P	2-80	25	35	----	1400		49	56	0	1143	25	0	25
0546	119	A 5	P	2-80	56	64	0	1143		36	33	0	917	56	0	56
0546	123	B 5	P	1-80	23	78	1	3391		18	40	16	2222	23	0	23
2614	001	J 26	P	1-80	28	1	81	36		28	6	39	214	28	0	28
2622	001	E 26	P	11-79	46	23	51	500		25	13	33	520	46	0	46
2622	002	G 26	----							(Not Completed)						
2622	003	D 26	----							(Not Completed)						
2622	030	E 26	P	8-79	30	21	53	700		31	8	5	258	30	0	30
2622	031	F 26	P	2-80	42	30	13	714		21	7	7	333	42	0	42
2622	034	G 26	P	8-79	23	5	200	217		5	12	40	2400	23	0	23
2622	041	C 26	P	2-80	49	51	9	1041		33	17	6	515	49	0	49
2622	043	D 26	P	2-80	26	27	0	1038		26	14	0	538	26	0	26
2622	086	C 26	P	2-80	33	13	21	394		21	4	13	190	33	0	33
2631	022	L 26	P	7-79	11	2	45	182		6	4	29	667	11	0	11
2631	110	L 26	P	7-79	19	28	96	1474		5	4	27	800	19	0	19


EAST VACUUM UNIT					LATEST TEST DATA						MONTHLY AVERAGE				ALLOWABLE ALLOCATION			
TRACT	WELL	LOCATION UNIT-SEC	WELL STATUS	DATE MO-YR	OIL B/D	GAS MCF/D	WATER B/D	GOR CF/B	INJ PRESS PSIC	OIL BOPD	GAS MCFPD	WATER BOPD	GOR CF/B	BASIC PROJECT	INJ. CREDIT	APRI TOTAL		
2648	023	M 26	P	8-79	12	9	284	746		11	3	6	273	12	0	12		
2648	126	M 26	P	8-79	33	19	26	576		18	6	134	333	33	0	33		
2658	011	K 26	P	7-79	9	----	0	----		6	----	0	----	9	0	9		
2672	008	B 26	P	9-79	3	12	98	4000		3	5	108	1667	3	0	3		
2717	001	I 27	S	7-79	69	17	6	246		0	0	0	0	69	0	69		
2717	002	P 27	P	8-79	10	2	83	200		45	14	256	311	10	0	10		
2717	006	P 27	P	7-79	62	22	328	355		35	11	198	314	62	0	62		
2717	007	I 27	P	11-79	100	----	5	----		84	95	26	1131	100	0	100		
2721	007	N 27	P	2-80	112	28	0	250		93	33	0	355	112	0	112		
2721	020	M 27	P	2-80	66	100	14	1518		82	135	17	1646	66	0	66		
2738	001	D 27	P	9-79	1	3	0	3000		0	0	0	0	1	0	1		
2738	002	F 27	P	1-80	33	55	4	1667		23	60	0	2609	33	0	33		
2738	003	E 27	P	2-80	17	19	1	1118		11	20	1	1818	17	0	17		
2738	004	C 27	P	9-79	1	1	----	1000		0	0	0	0	1	0	1		
2738	005	D 27	P	2-80	17	3	Tr	176		6	2	0	333	17	0	17		
2739	001	K 27	S	2-80	18	13	15	722		----	----	----	----	18	0	18		
2739	002	Ø 27	P	12-79	52	13	55	250		19	21	71	1105	52	0	52		
2739	003	J 27	P	9-79	45	16	34	356		52	46	78	885	45	0	45		
2739	004	L 27	P	10-79	36	----	1	----		31	58	19	1871	36	0	36		
2739	005	K 27	P	12-79	68	30	243	441		70	28	239	400	68	0	68		
2739	006	Ø 27	P	1-80	34	24	237	706		3	4	42	1333	34	0	34		
2801	001	P 28	P	1-80	33	19	45	576		29	36	47	1241	33	0	33		
2801	002	M 28	P	10-79	0	7	0	----		(Not Produced)				0	0	0		
2801	003	I 28	P	12-79	21	26	1	1238		14	29	1	2071	21	0	21		
2801	004	Ø 28	P	1-80	16	28	----	1750		2	4	0	2000	16	0	16		
2801	006	J 28	P	1-80	44	23	1	523		22	60	0	2727	44	0	44		

EAST VACUUM UNIT				LATEST TEST DATA						MONTHLY AVERAGE				ALLOWABLE ALLOCATION			
TRACT	WELL	LOCATION UNIT-SEC	WELL STATUS	DATE MO-YR	OIL B/D	GAS MCF/D	WATER B/D	GOR CF/B	INJ PRESS PSIG	OIL BOPD	GAS MCFPD	WATER BOPD	GOR CF/B	BASIC PROJECT	INJ. CREDIT	APRIL TOTAL	
2801	008	M 28	P	12-79	11	24	---	2182		9	38	0	4222	11	0	11	
2801	009	N 28	P	2-80	24	17	---	708		18	31	0	1722	24	0	24	
2801	010	Ø 28	P	12-79	29	33	1	1138		28	62	0	2214	29	0	29	
2801	011	J 28	P	12-79	21	22	---	1048		12	23	0	1917	21	0	21	
2801	013	K 28	P	10-79	18	37	0	2056		16	7	0	438	18	0	18	
2801	014	L 28	P	2-80	4	10	---	2500		4	25	0	6250	4	0	4	
2819	002	H 28	P	10-79	19	341	0	17947		9	59	0	6556	19	0	19	
2851	001	A 28	P	8-79	3	17	0	5667		0	0	0	---	3	0	3	
2913	001	Ø 29	P	10-79	18	21	2	1167		15	23	0	1533	18	0	18	
2913	002	J 29	P	9-79	0	---	0	---		---	---	---	---	0	0	0	
2913	003	P 29	P	9-79	19	50	0	2632		14	50	0	3571	19	0	19	
2913	004	I 29	P	9-79	8	26	0	3375		6	28	0	4667	8	0	8	
2913	006	P 29	P	2-80	16	50	28	3125		5	22	9	4400	16	0	16	
2913	007	I 29	---							(Not Completed)							
2941	001	K 29	---							(Not Completed)							
2941	026	K 29	P	1-80	8	1	---	125		0	0	0	---	8	0	8	
2963	002	N 29	P	10-79	13	26	108	2000		0	0	0	---	13	0	13	
2963	003	N 29	---							(Not Completed)							
3202	001	I 32	P	1-80	246	407	Tr	1654		124	265	0	2137	246	0	246	
3202	003	B 32	P	2-80	19	39	Tr	2053		19	50	0	2632	19	0	19	
3202	004	I 32	P	2-80	66	42	---	636		---	---	---	---	66	0	66	
3202	005	H 32	P	2-80	66	45	17	682		108	98	28	907	66	0	66	
3202	006	P 32	P	2-80	77	39	30	506		124	84	48	677	77	0	77	
3202	007	A 32	P	2-80	32	39	5	1219		45	73	7	1622	32	0	32	
3202	008	G 32	P	12-79	243	158	---	649		124	48	10	387	243	0	243	
3202	012	J 32	P	2-80	66	34	36	515		119	81	65	681	66	0	66	

EAST VACUUM UNIT					LATEST TEST DATA					MONTHLY AVERAGE					ALLOWABLE ALLOCATION			
TRACT	WELL	LOCATION UNIT-SEC	WELL STATUS	DATE MO-YR	OIL B/D	GAS MCF/D	WATER B/D	GOR CF/B	INJ PRESS PSIG	OIL BOPD	GAS MCFPD	WATER BMPD	GOR CF/B	BASIC PROJECT	INJ. CREDIT	APR TOT		
3202	015	Ø	P	12-79	68	64	8	941		0	0	0	---	68	0	6		
3202	033	B	P	2-80	24	39	1	1625		31	67	1	2161	24	0	2		
3229	003	K	P	8-79	103	18	0	175		90	23	0	256	103	0	10		
3229	004	N	P	8-79	77	76	0	987		74	108	0	1459	77	0	7		
3236	003	C	P	9-79	60	80	0	1333		61	67	0	1098	60	0	6		
3308	001	D	P	9-79	98	15	0	153		96	24	0	250	98	0	9		
3308	002	C	P	9-79	38	34	14	895		7	109	0	15571	38	0	3		
3308	003	C	P	12-79	19	27	2	1421		7	109	0	15571	19	0	1		
3328	001	M	P	1-80	100	1	10	10		113	34	41	301	100	0	10		
3328	002	M	P	10-79	177	88	8	497		107	64	156	598	177	0	17		
3328	003	M	P	2-80	52	1	33	19		13	---	8	---	52	0	5		
3332	001	A	P	1-80	132	55	31	417		31	28	3	903	132	0	13		
3332	021	A	P	2-80	58	125	29	2155		0	0	0	---	58	0	5		
3332	032	B	P	9-79	68	139	---	2044		75	218	0	2907	68	0	6		
3333	001	H	P	10-79	15	2	46	133		46	26	141	565	15	0	1		
3333	002	F	P	2-80	119	115	0	966		65	47	2	723	119	0	11		
3333	004	H	P	2-80	50	51	175	1020		19	107	67	5632	50	0	5		
3345	035	N	P	12-79	76	82	46	1078		80	72	60	900	76	0	7		
3366	029	E	P	12-79	87	97	65	1115		80	82	75	1025	87	0	8		
3373	028	K	P	2-80	85	70	8	824		80	48	8	600	85	0	8		
3374	001	L	P	2-80	109	114	9	1046		60	61	5	1017	109	0	10		
3456	001	C	P	1-80	50	25	0	500		50	52	0	1040	50	0	5		
3456	002	D	P	10-79	107	214	7	2000		51	51	6	1000	107	0	10		
3456	003	E	P	10-79	67	109	4	1627		45	44	2	978	67	0	6		
3456	004	F	P	1-80	76	35	70	461		35	37	71	1057	76	0	7		

EAST VACUUM UNIT				LATEST TEST DATA						MONTHLY AVERAGE				ALLOWABLE ALLOCATION			
TRACT	WELL	LOCATION UNIT-SEC	WELL STATUS	DATE MO-YR	OIL B/D	GAS MCF/D	WATER B/D	GOR CF/B	INJ PRESS PSIG	OIL BOPD	GAS MCFPD	WATER BMPD	GOR CF/B	BASIC PROJECT	INJ. CREDIT	APR TOTAL	
3456	005	C 34	P	2-80	68	25	256	368		37	16	125	432	68	0	68	
3456	007	E 34	P	1-80	85	62	42	729		33	7	56	212	85	0	85	
3467	001	B 34	----							(Not Completed)							
3467	018	B 34	P	10-79	60	33	45	550		79	57	57	722	60	0	60	
3467	024	A 34	S							----	----	----	----				
3467	121	A 34	P	9-79	9	8	96	889		21	26	227	1238	9	0	9	
3568	040	D 35	S							----	----	----	----				
TOTAL PRODUCTION										3354	3605	2746	1075	4728	0	4728	
2622	004	F 26								Injection will start in March.							
2717	005	P 27								Injection will start in March.							
2738	007	E 27					135		0				136				
2801	007	N 28					80		0				40				
2913	008	Ø 29								Injection will start in March.							
3202	009	Ø 32								Injection will start in March.							
3374	002	L 33					210		0				106				
3456	006	D 34					100		0				80				
TOTAL INJECTION																362	

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


W. J. Mueller 3/25/80
Senior Engineering Specialist

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

AFE Status Report as of 3-15-80

AFE No.	Description	Authorization		Spent to Date	Date Completed	Remarks
		Original	Supplement			
P-2157	Additional Lift Equipment	\$ 200,000 (1)	\$2,532,000*	\$6,396,000	\$1,977,811.41	*Phase II.
P-2160	Central Tank Battery	1,752,000	(2) 3,664,000 910,000*	2,662,000	3,419,812.07	*Phase II.
P-2161	Satellites	1,498,000	2,473,000*	3,971,000	2,578,271.05	*Phase II.
P-2162	Automated Supervisory System	1,335,000	1,398,000*	2,733,000	154,429.63	*Phase II.
P-2163	Water Injection System	750,000	736,000*	1,486,000	1,933,137.37	*Phase II.
P-2164	Water Supply System	875,000		875,000	773,828.37	
P-2165	Drill Well No. 3229 005	307,403	89,450	396,853	405,267.30	
P-2166	" 3202 001	267,438		267,438	261,145.77	
P-2167	" 3202 003	253,061		253,061	273,539.45	
P-2168	" 3328 002	334,024		334,024	270,464.00	
P-2169	" 3308 003**	323,376		323,376	324,079.57	**Original 3366 001.
P-2171	" 3333 004	257,532	180,519	438,051	438,051.00	
P-2172	" 3456 005	323,376		323,376	288,871.00	
P-2173	" 2801 002	320,712		320,712	346,145.17	
P-2174	" 2801 004	326,039		326,039	282,939.80	
P-2175	" 2739 005**	326,039		326,039	304,339.46	**Original 2721 001.

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

AFE Status Report as of 3-15-80

AFE No.	Description	Authorization		Spent to Date	Date Completed	Remarks
		Original	Supplement			
P-2265	Drill Well No. 2230 003	\$ 191,719	\$	\$ 127,265.00		
P-2266	" 2622 002	178,924		142,070.00		
P-2267	" 2622 001	234,423		254,563.61		
P-2268	" 2720 005	234,423		290,490.74		
P-2269	" 2738 005	234,423		278,111.96		
P-2270	" 2819 004	191,719		157,201.00		
P-2271	" 2864 001	191,719		147,513.00		
P-2272	" 2923 001	191,719		149,168.00		
P-2273	" 2980 002	191,719		92,690.00		
P-2274	" 2648 001	178,924		190,768.00		
P-2275	" 2739 006	234,423		231,131.07		
P-2276	" 2913 006	234,423		208,543.18		
P-2277	" 2963 003	234,423		206,363.91		
P-2278	" 3467 001	192,224		163,344.00		
P-2279	" 3236 005	234,423		282,524.33		
P-2280	" 3440 005	192,224		166,451.00		
P-2281	" 3315 005	255,725		169,613.00		
P-2282	" 0546 001	234,423		192,365.00		
P-2283	" 2059-003	166,900		143,214.00		
P-2284	" 1910-003	166,900		145,284.00		
P-2285	" 2622-003	198,140		149,747.00		
P-2286	" 2271-003	198,140		135,425.00		
P-2287	" 2738-006	198,140		161,126.00		
P-2288	" 2150-001	166,900		169,073.00		
P-2289	" 2864-002	166,900		163,478.00		

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

AFE Status Report as of 3-15-80

AFE No.	Description	Authorization		Spent to Date	Date Completed	Remarks
		Original	Supplement			
P-2290	Drill Well No. 2944-001	\$ 166,900	\$ 166,900	\$ 165,853.00		
P-2291	" 2923-002	166,900	166,900	150,739.00		
P-2292	" 2642-001	198,140	198,140	151,784.00		
P-2293	" 2622 004**	198,140	198,140	153,809.99		**Original 2658 W01.
P-2294	" 2717 007**	285,360	285,360	245,349.36		**Original 2739 W08.
P-2295	" 2738 007**	198,140	198,140	217,071.00		**Original 2739 W07.
P-2296	" 2801-006	198,140	198,140	163,359.00		
P-2297	" 2801 005	198,140	198,140	166,789.00		
P-2298	" 2913 007	198,140	198,140	185,210.57		
P-2299	" 2941 001	198,140	198,140	139,688.00		
P-2300	" 2717-005	285,360	285,360	191,359.00		
P-2301	" 3456 006	198,140	198,140	317,130.48		
P-2302	" 3332 001	198,140	198,140	161,989.00		
P-2303	" 2801 007**	198,140	198,140	232,721.04		**Original 3308 W04.
P-2304	" 2913 008**	198,140	198,140	171,849.32		**Original 3202 W09.
P-2305	" 2963 004**	198,140	198,140	145,352.00		**Original 3236 W04.
P-2306	" 3456 007**	198,140	198,140	147,106.00		**Original 3440 W06.
P-2307	" 3315 006	285,360	285,360	209,315.00		
P-2308	" 3374 002	198,140	198,140	198,054.00		
P-2309	" 3202 008	285,360	285,360	223,800.00		
P-2310	" 3229 006	198,140	198,140	167,588.00		
P-2311	" 3328-003	198,140	198,140	176,826.00		
P-2312	" 3202-009	285,360	285,360	201,656.00		
P-2313	" 0524 001	198,140	198,140	187,873.00		

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

AFE Status Report as of 3-15-80

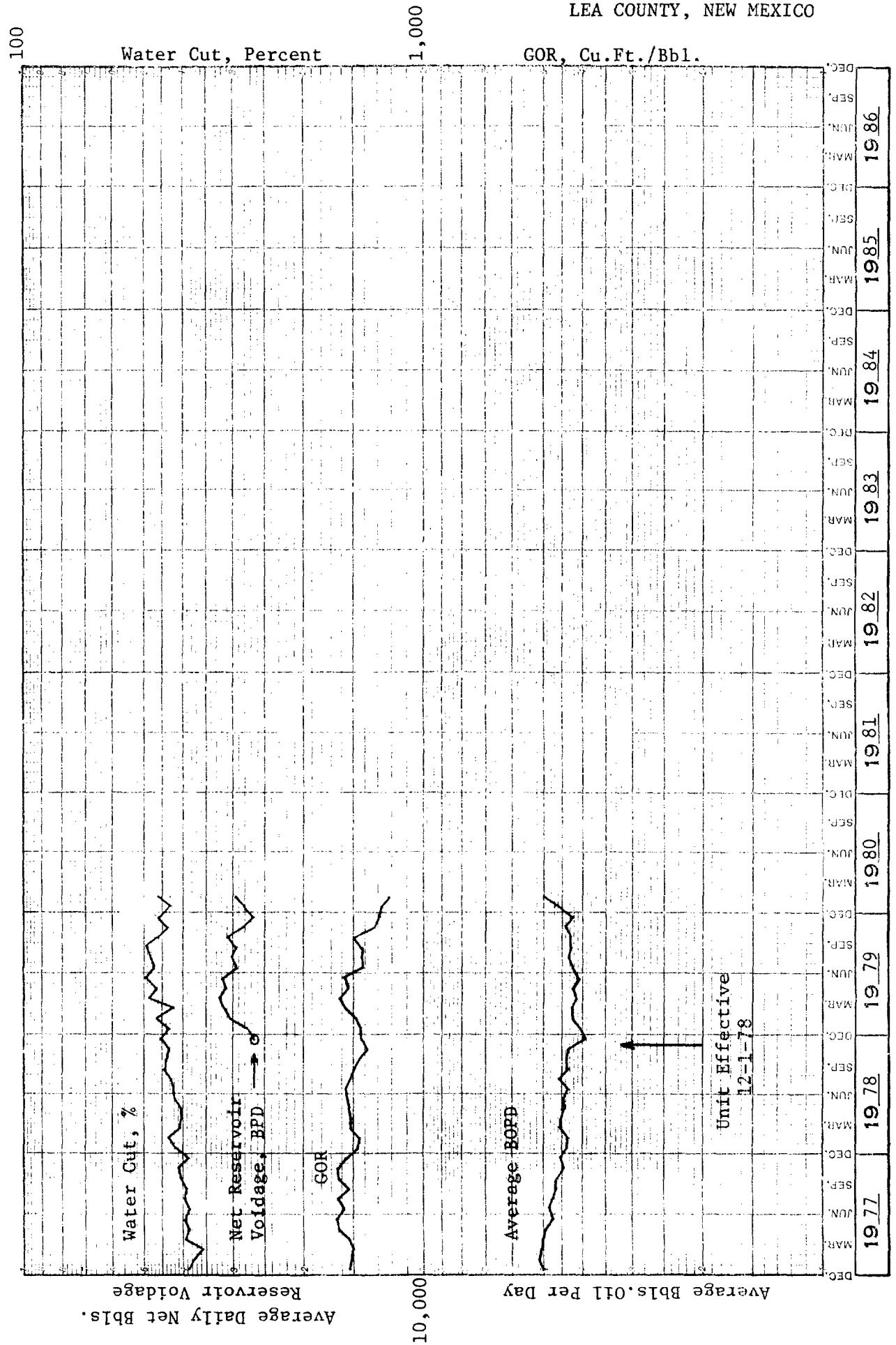
AFE No.	Description	Original	Authorization		Spent to Date	Date Completed	Remarks
			Supplement	Total			
P-2916	Drill Well No. 2717-003	252,850		252,850	\$		
P-2917	Drill Well No. 2720-007	269,350		269,350			
P-2918	Drill Well No. 2801-015	252,850		252,850			
P-2919	Drill Well No. 2801-012	252,850		252,850			
P-2920	Drill Well No. 3202-010						
P-2921	Drill Well No. 3236-007	269,350		269,350			
P-2922	Drill Well No. 3236-006	252,850		252,850			
P-2923	Drill Well No. 3456-008	269,350		269,350			
P-2924	Drill Well No. 3456-009	252,850		252,850			
P-2925	Drill Well No. 3333-006	252,850		252,850			
P-2926	Drill Well No. 3333-005	252,850		252,850			
P-2928	Drill Well No. 3332-002	269,350		269,350			
P-2929	Drill Well No. 3315-008	252,850		252,850	13,592.00		
P-2930	Drill Well No. 3345-001	269,350		269,350			
P-2931	Drill Well No. 3333-008	269,350		269,350	66,417.00		
P-2932	Drill Well No. 3308-004	269,350		269,350	166,159.00		
P-2933	Drill Well No. 3202-014	269,350		269,350	187,311.00		

EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

APF Status Report as of 3-15-80

APF No.	Description	Authorization		Spent to Date	Date Completed	Remarks
		Original	Supplement			
P-2934	Drill Well No. 3202-011	269,350		\$ 174,772.00		
P-2935	Drill Well No. 3229-007	269,350		155,462.00		
P-2936	Drill Well No. 3229-009	269,350		191,432.00		
P-2937	Drill Well No. 3229-008	252,850		95,595.00		
P-2938	Drill Well No. 2721-002	252,850				
P-2939	Drill Well No. 3308-005	269,350,				
P-2940	Drill Well No. 2721-001	252,850				
P-2941	Drill Well No. 2658-001	252,850				
P-2942	Drill Well No. 2739-007	269,350				
P-2943	Drill Well No. 3373-001	252,850				
P-2944	Drill Well No. 3456-010	269,350				
P-2945	Drill Well No. 3333-007	269,350				
P-2946	Drill Well No. 3202-013	252,850				

PHILLIPS PETROLEUM COMPANY
EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO



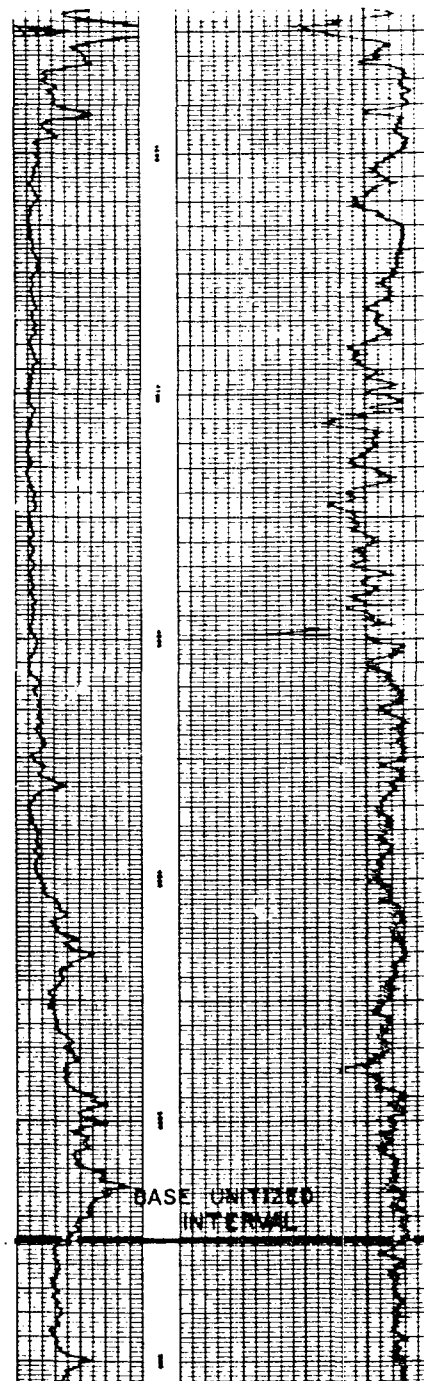
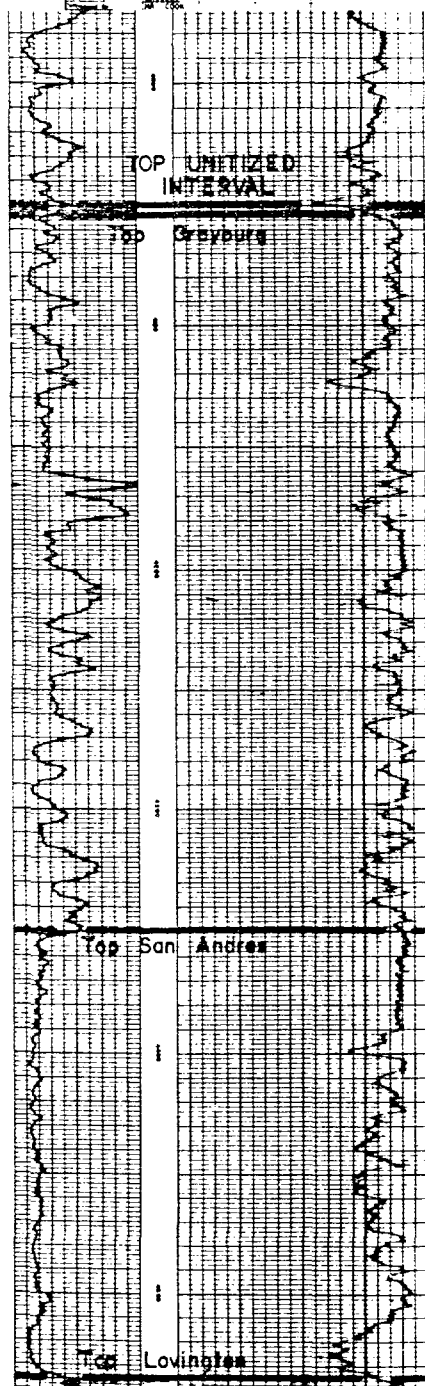
PRINTED IN U.S.A. GRAPH PAPER NO. 3257, TEN YEARS BY MONTHS X 2 3/4 INCH CIRCLES RATIO RULING.

EXHIBIT 16
EAST VACUUM GRAYBURG-SAN ANDRES UNIT
LEA COUNTY, NEW MEXICO

PROPOSED EXHIBIT "G" FOR UNIT OPERATING AGREEMENT

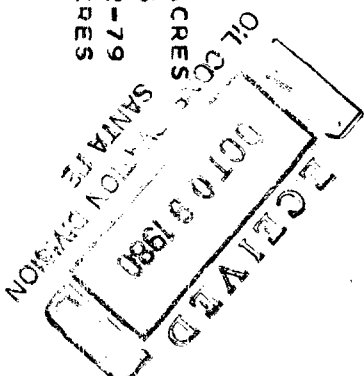
BUSINESS ETHICS POLICY COMPLIANCE:

1. Operator agrees to comply with all laws and lawful regulations applicable to any activities carried out in the name of or on behalf of Non-operators under the provisions of this agreement and/or any amendments to it.
2. Operator agrees that all financial settlements, billings and reports rendered to Non-operators as provided for in this agreement and/or any amendments to it, will, to the best of its knowledge and belief, reflect properly the facts about all activities and transactions handled for the account of Non-operators, which data may be relied upon as being complete and accurate in any further recording and reporting made by Non-operators for whatever purpose.
3. Operator agrees to notify Non-operators promptly upon discovery of any instance where the Operator fails to comply with provision (1) above or where Operator has reason to believe data covered by (2) above is no longer accurate and complete.

[illegible]

The unitized interval will be the vertical interval that appears between a depth of 4050' and 5050' on the Lane wells acoustic log Run #1, dated 4-14-64 on the Humble Oil and Refining Company New Mexico State "K" #19. This well is located 330' FSL, 330' FEL, Sec. 28, Township 17 South, Range 35 East, Lea County, New Mexico. The unitized interval is to include all subsurface points throughout the unit area between these identified correlative depths.

UNITIZED 12-01-78
UNITIZED AREA 7,025 ACRES
DEVELOPED 6,360 ACRES
FIRST INJECTION 12-12-79
PROJECT AREA 4,560 ACRES



PHILLIPS PETROLEUM COMPANY
EAST VACUUM GRAYBURG-SAN ANDRES UNIT
VACUUM (GB-SA) FIELD, LEA COUNTY, NEW MEXICO

CUMULATIVE TO 12-01-78
OIL 69,214,210 BBLs
GAS 77,056,250 MCF
WATER 14,564,983 BBLs

6366

OIL PRODUCTION -BBLs

MONTHLY

MAR 80

APR 80

MAY 80

JUN 80

JUL 80

AUG 80

DAILY AVERAGE

162,814

152,223

157,270

149,221

159,499

180,530

CUMULATIVE SINCE UNITIZATION

5,252

5,074

5,073

4,974

5,145

5,823

GAS PRODUCTION -MCF

MONTHLY

2,113,125

2,265,348

2,422,618

2,571,839

2,731,338

2,911,868

DAILY AVERAGE

215,730

196,775

220,974

209,331

212,848

229,720

GAS-OIL RATIO

6,959

6,559

7,128

6,977

6,866

7,410

CUMULATIVE SINCE UNITIZATION

1,325

1,292

1,405

1,402

1,334

1,272

WATER PRODUCTION -BBLs

MONTHLY

127,641

143,605

161,986

137,177

133,835

149,267

DAILY AVERAGE

4,117

4,786

5,225

4,572

4,317

4,815

WATER-OIL RATIO

.78

.94

1.02

.91

.83

.82

CUMULATIVE SINCE UNITIZATION

1,812,926

1,956,531

2,118,517

2,255,694

2,389,529

2,538,796

GAS INJECTION -MCF

MONTHLY

DAILY AVERAGE

CUMULATIVE

WATER INJECTION -BBLs

MONTHLY

30,629

32,871

165,543

248,035

299,376

399,153

DAILY AVERAGE

988

1,095

5,340

8,267

9,657

12,875

NET INJECTION WATER-OIL RATIO

-.59

-.72

.02

.74

1.03

1.38

CUMULATIVE

863,339

896,210

1,061,753

1,309,788

1,609,164

2,008,317

WELL STATUS

PRODUCERS-

ACTIVE/SI/PGA

185/ 23/ 2

186/ 22/ 2

183/ 22/ 5

182/ 22/ 6

182/ 22/ 6

INJECTORS-

ACTIVE/SI/PGA

22/ 1/

22/ 1/

22/ 1/

22/ 1/

22/ 1/

WATER SUPPLY-

ACTIVE/SI/PGA

/ /

/ /

/ /

/ /

/ /

WATER DISPOSAL -

ACTIVE/SI/PGA

/ /

/ /

/ /

/ /

/ /

TOTAL--

ACTIVE/SI/PGA

207/ 24/ 2

208/ 23/ 2

205/ 23/ 5

204/ 23/ 6

204/ 23/ 6

WT. AVG. RESERVOIR PRESSURE--PSI

561

561

561

561

561

561

NET RESERVOIR VOIDAGE-- BBLs/DAY

35,368

34,038

33,003

28,719

26,480

26,196

REMARKS:

1. REMAINING INITIAL PHASE OIL AT SEPTEMBER 1, 1980, WAS 6,188,370 BARRELS.

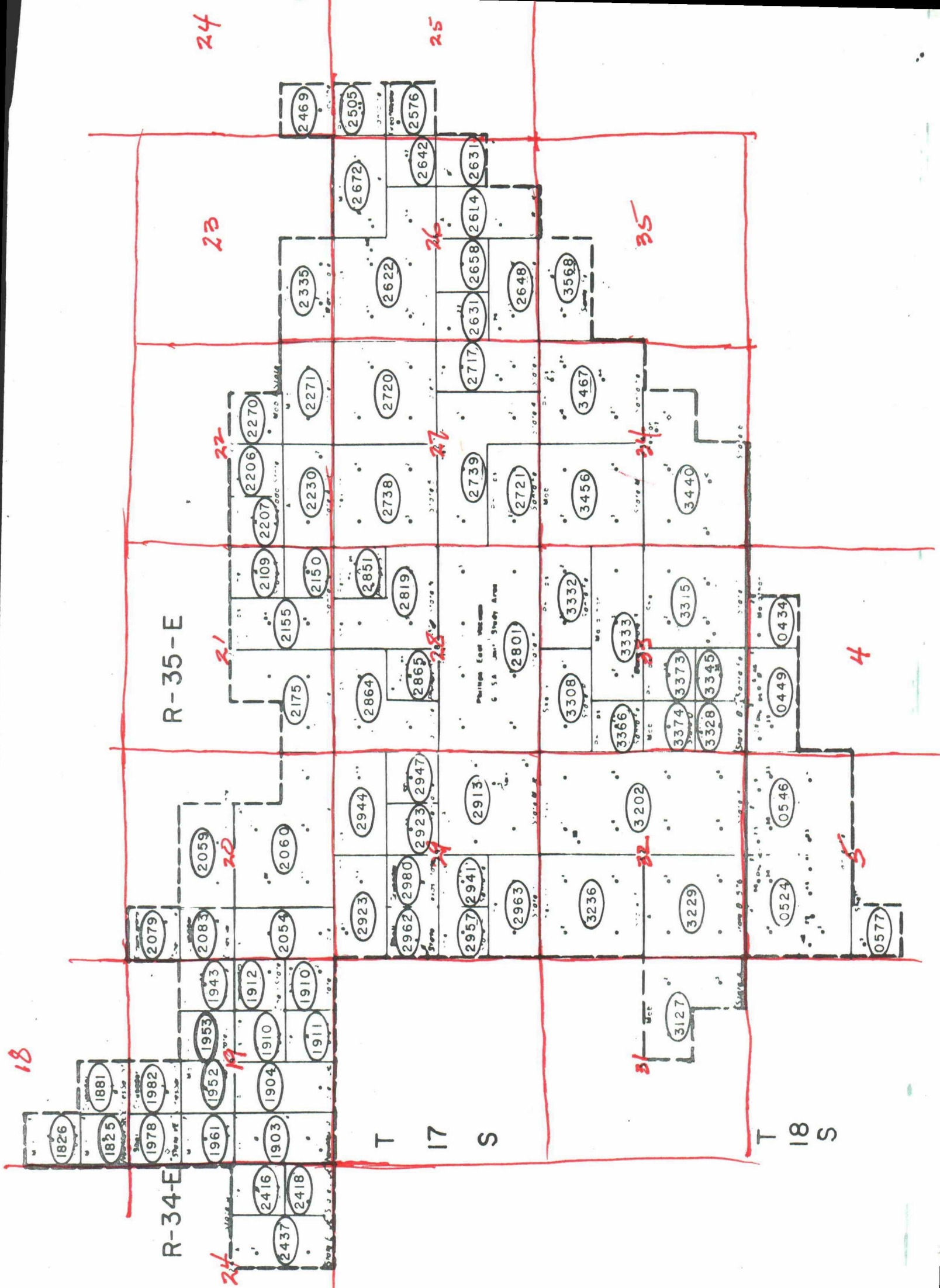


EXHIBIT "A"
 TO UNIT AGREEMENT
 EAST VACUUM GRAYBURG SAN ANDRES UNIT
 LEA COUNTY, NEW MEXICO

1 Mile

UNIT AREA

The East Vacuum Grayburg-San Andres Unit shall comprise that 7,025.30 acre area shown on the plat labeled Exhibit "A" to Unit Agreement East Vacuum Grayburg San Andres Unit, Lea County, New Mexico, including the following lands:

In Township 17 South, Range 34 East,
The SE $\frac{1}{4}$ Sec. 24

In Township 17 South, Range 35 East,

The NW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 18

The SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 18

The SE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 18

The S $\frac{1}{2}$, NE $\frac{1}{4}$, Sec. 19

The NW $\frac{1}{4}$, Sec. 19

The SW $\frac{1}{4}$, Sec. 19

The SE $\frac{1}{4}$, Sec. 19

The W $\frac{1}{2}$, NW $\frac{1}{4}$, Sec. 20

The SE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 20

The SW $\frac{1}{4}$, NE $\frac{1}{4}$ Sec. 20

The SW $\frac{1}{4}$, Sec. 20

The W $\frac{1}{2}$, SE $\frac{1}{4}$, Sec. 20

The SE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 20

The SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 21

The E $\frac{1}{2}$, SW $\frac{1}{4}$, Sec. 21

The SE $\frac{1}{4}$, Sec. 21

The SW $\frac{1}{4}$, Sec. 22

The W $\frac{1}{2}$, SE $\frac{1}{4}$, Sec. 22

The SE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 22

The S $\frac{1}{2}$, SW $\frac{1}{4}$, Sec. 23

The SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 24

The W $\frac{1}{2}$, NW $\frac{1}{4}$, Sec. 25

The NW $\frac{1}{4}$, Sec. 26

The NE $\frac{1}{4}$, Sec. 26

The SW $\frac{1}{4}$, Sec. 26

The W $\frac{1}{2}$, SE $\frac{1}{4}$, Sec. 26

The NE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 26

Section 27

Section 28

Section 29

The N $\frac{1}{2}$, SE $\frac{1}{4}$, Sec. 31

The SE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 31

Section 32

Section 33

The NW $\frac{1}{4}$, Sec. 34

The NE $\frac{1}{4}$, Sec. 34

The SW $\frac{1}{4}$, Sec. 34

The NW $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 34

The N $\frac{1}{2}$, NW $\frac{1}{4}$, Sec. 35

In Township 18 South, Range 35 East.

The N $\frac{1}{2}$, NW $\frac{1}{4}$, Sec. 4

The NW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 4

The NW $\frac{1}{4}$, Sec. 5

The NE $\frac{1}{4}$, Sec. 5

The NW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 5

UNITIZED FORMATION

The Unitized Formation will consist of the Grayburg-San Andres Formation identified between the depths of 4050 feet (103 feet subsea) and 5050 feet (1103 feet subsea) on the Lane Wells acoustic log Run #1 dated 4-14-64 in Exxon's New Mexico State "K" No. 19, located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 28, T-17-S, R-35-E, Lea County, New Mexico, and is to include all subsurface points throughout the Unit Area correlative to these identified depths.

OUTLINE OF DEVELOPMENT PLANS

DRILLING AND CONSTRUCTION

1979

Drill twenty-eight wells which will initially serve as producing wells and thirty-one water injection wells (Principally in Sections 27, 28, 29, 32, 33).

Construct centralized tank battery and install automatic well control equipment.

Install water injection stations and field distribution system.

1980

Drill twenty-six wells which will initially serve as producing wells and twenty-eight water injection wells. Also drill or participate in 10 water injection wells in cooperation with the Central Vacuum Grayburg-San Andres Unit (Completing development except along northern border of unit).

1981 +

Drill such additional wells as performance indicates are justified.

WATER INJECTION

1979

Commence injection of produced water along with such extraneous water as can be handled by gravity and/or temporary injection facilities.

1980

Commence full scale operation of permanent injection facilities.

East Vacuum Grading - San Andres Unit Agreement
WIO Approvals As Of 11-21-78

PART B

WORKING INTEREST OWNER	TRACT	UNIT PARTICIPATION - %		
		INITIAL	FINAL	COMPOSITE* (TENTATIVE)
Amerada Hess Corp.	2206	-	.08543	.07013
Amoco Production Co.	2576	.03547	.04542	.04364
Arapaho Petroleum	2270	.00233	.00447	.00409
Atlantic Richfield Co.	1904	.06411	.58090	.48835
	2230	.34300	.30083	.30838
	2437	.87720	.16590	.29329
	2418	.13176	.30137	.27099
	2614	.51529	.42296	.43950
	2913	1.75146	2.00209	1.95720
	3229	5.74378	7.01489	6.78724
OWNER TOTAL		9.42660	10.78894	10.54495
H. M. Bettis, Inc.	1910	.02370	.06498	.05759
	2054	.00263	.02095	.01767
OWNER TOTAL		.02633	.08593	.07526
L. O. Box	2059	.03533	.00408	.00968
W. T. Boyle & Co.	1910	.02370	.06498	.05759
	2054	.00264	.02095	.01767
OWNER TOTAL		.02634	.08593	.07526
Donaldson Brown A/C 1	2335	.03189	.03957	.03819
	2469	.00027	.01580	.01302
OWNER TOTAL		.03216	.05537	.05121
Donaldson Brown A/C 2	2335	.00168	.00208	.00201
	2469	.00001	.00083	.00068
OWNER TOTAL		.00169	.00291	.00269
John R. Bryant	2059	.01766	.00204	.00484
Chevron U.S.A. Inc.	2738	.85895	1.49111	1.37789
	2739	3.57513	2.99166	3.09615
	3236	4.81994	3.56440	3.78926
	3440	4.17424	3.06316	3.26215
OWNER TOTAL		13.42826	11.11033	11.52545
Cities Service Co.	2720	3.95617	1.01965	1.54556
Crown Central Petroleum Co.	1912	.01092	.13261	.11082
	2079	.01082	.07001	.05941
OWNER TOTAL		.02174	.20262	.17023
Davoil, Inc.	2576	.01260	.01613	.01550
Millard Deck	2059	.08831	.01019	.02418
Elk Oil Co.	1881	-	.04169	.03422
	1982	-	.05858	.04809
	2083	-	.02307	.01894
OWNER TOTAL		-	.12334	.10125
Exxon Co.	1903	-	.62367	.51197
	2801	3.36943	5.34834	4.99393
	3202	9.53857	10.46326	10.29765
OWNER TOTAL		12.90800	16.43527	15.80355
Ft. Worth National Bank Trustee #1979	2335	.10069	.12497	.12062
Getty Oil Co.	3308	2.05778	1.28872	1.42645
	3328	1.51919	1.77571	1.72977
OWNER TOTAL		3.57697	3.06443	3.15622
Great Western Drilling Co.	2576	.02287	.02929	.02814
Jack D. Hensley	2851	.00181	.00973	.00831
	2865	.00241	.00315	.00302
OWNER TOTAL		.00422	.01288	.01133
Larry O. Hulsey	1910	.01318	.03609	.03199
	2054	.00146	.01164	.00981
OWNER TOTAL		.01464	.04773	.04180
John M. Kelly Est.	1881	-	.04633	.03803
	1982	-	.06509	.05343
	2083	-	.02563	.02104
OWNER TOTAL		-	.13705	.11250

PART B - CONTINUED

WORKING INTEREST OWNER	TRACT	UNIT PARTICIPATION - %		
		INITIAL	FINAL	COMPOSITE* (TENTATIVE)
Joseph J. Kelly	1881	-	.00463	.00380
	1982	-	.00651	.00534
	2083	-	.00256	.00210
OWNER TOTAL		-	.01370	.01124
Kokomo Oil Co.	2270	.00233	.00447	.00409
	2207	.00549	.00236	.00292
OWNER TOTAL		.00782	.00683	.00701
Boyd Laughlin	2851	.00091	.00486	.00415
	2865	.00120	.00158	.00151
OWNER TOTAL		.00211	.00644	.00566
T. W. Little	2270	.00404	.00774	.00708
	2207	.02742	.01181	.01461
OWNER TOTAL		.03146	.01955	.02169
Hamilton McRae	2851	.00091	.00486	.00415
	2865	.00120	.00158	.00151
OWNER TOTAL		.00211	.00644	.00566
Marathon Oil Co.	0434	.06395	.05966	.06043
	1952	-	.14278	.11721
	1953	-	.09214	.07564
	3333	2.90007	4.14916	3.92546
OWNER TOTAL		2.96402	4.44374	4.17874
Kenneth Midkiff	2270	.00186	.00358	.00327
Mobil Oil Corp.	1826	.24714	.08909	.11740
	1825	.12327	.07567	.08419
	1961	.08302	.08458	.08430
	2175	.25813	.23742	.24113
	2271	.13155	.17975	.17112
	2672	.20862	.63057	.55500
	3127	4.43564	4.57057	4.54640
	3374	1.52442	1.54153	1.53847
	3456	5.93605	5.46508	5.54943
OWNER TOTAL		12.94784	12.87426	12.88744
Davis Payne	2270	.00404	.00775	.00708
	2207	.02742	.01181	.01461
OWNER TOTAL		.03146	.01956	.02169
Pennzoil Co.	2851	.04720	.25296	.21611
	2865	.06252	.08188	.07341
OWNER TOTAL		.10972	.33484	.29452
Neville G. Penrose Est.	2469	.00056	.03326	.02740
Petro Search, Inc.	2270	.01630	.03128	.02860
Phillips Petroleum Company	0149	1.82837	1.61531	1.65347
	0546	4.91331	4.84507	4.85730
	0524	5.88423	4.14654	4.45775
	1943	.03964	.15124	.13125
	2060	.43773	.37941	.38985
	2155	.09904	.16750	.15524
	2150	.02695	.13931	.11919
	2505	.29267	.22031	.23327
	2622	3.96585	1.47884	1.92425
	2642	.15483	.09621	.10671
	2631	.58700	.57020	.57321
	2658	.24243	.33494	.31837
	2648	.44568	.54475	.52701
	2721	2.85287	2.44676	2.51949
	2864	.08098	.37561	.32284
	2944	.00902	.28466	.23529
	2923	.08595	.40873	.35092
	2947	-	.37286	.30608
	2941	.04540	.36837	.31053
	3332	2.91244	3.46424	3.36542
	3366	1.48641	1.44414	1.45171
	3373	1.48621	1.61649	1.59316
	3345	1.46480	1.31282	1.34004
	3467	1.65754	2.38560	2.25521
	3568	-	.12795	.10503
OWNER TOTAL		30.99935	29.29786	29.60259

PART B - CONTINUED

WORKING INTEREST OWNER	TRACT	UNIT PARTICIPATION - %		
		INITIAL	FINAL	COMPOSITE* (TENTATIVE)
D. E. Radtke	2270	.00404	.00774	.00708
	2207	.02742	.01181	.01461
OWNER TOTAL		.03146	.01955	.02169
C. W. Seely	2270	.00233	.00447	.00409
Shell Oil Co.	0577	.60190	.22541	.29284
	1978	-	.10264	.08426
	1911	-	.25707	.21103
	1953	-	.09214	.07564
	2109	-	.05420	.04449
	2416	-	.18642	.15303
	2717	1.59428	1.41489	1.44702
	2819	.91257	.92386	.92184
	2962	-	.27131	.22272
	2957	.20489	.46592	.41917
	2963	.91042	.66249	.70689
OWNER TOTAL	3315	4.72528	4.13554	4.24116
Sohio Petroleum Co.	2335	.06713	.08332	.08042
Norman D. Stovall, Jr.	1910	.02370	.06498	.05759
	2054	.00264	.02095	.01767
OWNER TOTAL		.02634	.08593	.07526
S. B. Street & Co.	1910	.02370	.06498	.05759
	2054	.00264	.02094	.01766
OWNER TOTAL		.02634	.08592	.07525
Texaco, Inc.	2980	-	.15587	.12795
Turnco, Inc.	1910	.02370	.06498	.05759
	2054	.00264	.02094	.01766
OWNER TOTAL		.02634	.08592	.07525
Wainoco, Inc.	2851	.00726	.03892	.03325
	2865	.00962	.01259	.01206
OWNER TOTAL		.01688	.05151	.04531
Mrs. Mary D. Walsh	2469	.00085	.04988	.04110
		100.00000	100.00000	100.00000

95.91259 95.82331

*Estimated values only. Actual Composite Unit Percentages will be calculated effective simultaneously with the unit becoming effective.

2nd Originals

34. CONFLICT OF SUPERVISION. Neither the Unit Operator nor the Working Interest Owners or any of them shall be subject to any forfeiture, termination, or expiration of any rights hereunder or under any leases or contracts subject hereto, or to any penalty or liability on account of delay or failure in whole or in part to comply with any applicable provisions thereof to the extent that the said Unit Operator, Working Interest Owners, or any of them are hindered, delayed or prevented from complying therewith by reason of the failure of the Unit Operator to obtain, in the exercise of due diligence, the concurrence of proper representatives of the State of New Mexico in and about any matters or things concerning which it is required herein that such concurrence be obtained. The parties hereto, including the Commissioner, agree that all powers and authority vested in the Commissioner in and by any provisions of this contract are vested in the Commissioner and shall be exercised by him pursuant to the provisions of the laws of the State of New Mexico and subject, in any case, to appeal or judicial review as may now or hereafter be provided by the laws of the State of New Mexico.

35. NO PARTNERSHIP. It is expressly agreed that the relation of the parties hereto is that of independent contractors and nothing in this Agreement contained, express or implied, or any operations conducted hereunder, shall create or be deemed to have created a partnership or association between the parties hereto or any of them.

36. NO SHARING OF MARKET. This Agreement is not intended to provide, and shall not be construed to provide, directly or indirectly, for any cooperative refining, joint sale, or marketing of Unitized Substances.

37. BORDER AGREEMENT. Subject to the approval of the Commissioner, the Unit Operator with Working Interest Owners approval in accordance with the voting procedure in Section 4.3.2 of the Unit Operating Agreement, may enter into a border-protection agreement or agreements with the owners of land adjacent to the committed Tracts with respect to the operations in the border area for the maximum ultimate recovery, conservation purposes and property protection of the parties and interest.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first written and have set opposite their respective names the date of execution and the address of each of the respective executing parties.

PHILLIPS PETROLEUM COMPANY
UNIT OPERATOR AND WORKING INTEREST OWNER

P. O. Box 1957
Houston, Texas 77001

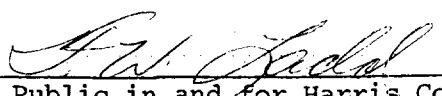
By: 
A. J. WILLIS, Attorney in Fact

DATE: September 8, 1978

THE STATE OF TEXAS X

COUNTY OF HARRIS X

The foregoing instrument was acknowledged before me this 8th
day of September, 1978, by A. J. WILLIS, Attorney-in-Fact for
PHILLIPS PETROLEUM COMPANY, a Delaware Corporation, on behalf of said corpora-
tion.


Notary Public in and for Harris County,
Texas

My Commission Expires:

Nov. 30, 1978

F. W. LADD
Notary Public in and for Harris County, Texas
My Commission Expires November 30, 1978
Bonded by Alexander Lovett, Lawyers Surety Co.

is abandoned and by paying to Unit Operator, for credit to the joint account, the salvage value, less estimated plugging costs of the casing and other equipment up to and including the well head in and on any wells taken over, as estimated by Unit Operator and approved by Working Interest Owners. Casing contributed by the Working Interest Owners as provided in Article 10.1 will be excluded.

22.1.3 Salvaging Wells. Unit Operator shall salvage as much of the casing and equipment in or on wells not taken over by Working Interest Owners of separate Tracts as can economically and reasonably be salvaged, and shall cause the wells to be plugged and abandoned in compliance with applicable laws and regulations.

22.1.4 Cost of Salvaging. Working Interest Owners shall share the cost of salvaging, liquidation, or other distribution of assets and properties used in Unit Operation in proportion to their respective Unit Participations.

22.1.5 Distribution of Assets. Working Interest Owners shall share in the distribution of Unit Equipment, or the proceeds thereof, in proportion to their Unit Participation.

ARTICLE 23

EXECUTION

23.1 Original, Counterpart or Other Instrument. A party may become a party to this Agreement by signing the original of this instrument, a counterpart thereof, or other instrument agreeing to be bound by the provisions hereof. The signing of any such instrument shall have the same effect as if all the parties had signed the same instrument.

ARTICLE 24

SUCCESSORS AND ASSIGNS

24.1 Successors and Assigns. The provisions hereof shall be covenants running with the lands, leases and interests covered hereby, and shall be binding upon and inure to the benefit of the respective heirs, devisees, legal representatives, successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the dates opposite their respective signatures.

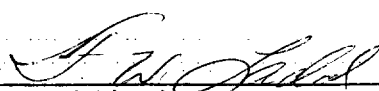
PHILLIPS PETROLEUM COMPANY
UNIT OPERATOR AND WORKING INTEREST OWNER

By: 
A. J. WILLIS, Attorney-in-Fact

THE STATE OF TEXAS X

COUNTY OF HARRIS X

The foregoing instrument was acknowledged before me this 8th day of September, 1978, by A. J. WILLIS, Attorney-in-Fact for PHILLIPS PETROLEUM COMPANY, a Delaware Corporation, on behalf of said corporation.


Notary Public in and for Harris County,
Texas

My Commission Expires:

Nov. 30, 1978

NOTARY PUBLIC
My Comm. Expires 11/30/78
E. J. Willis

OCT 18 1978

STUBBEMAN, McRAE, SEALY, LAUGHLIN & BROWDER

ATTORNEYS AT LAW

MIDLAND, TEXAS

MIDLAND SAVINGS BUILDING-ZIP CODE 79701

300 WEST WALL STREET

P. O. BOX 1540-ZIP CODE 79702

A. C. 915 682-1616

AUSTIN, TEXAS

1800 AMERICAN BANK TOWER-ZIP CODE 78701

314 WEST 5TH STREET

P. O. BOX 2286-ZIP CODE 78768

A. C. 512 476-3502

October 11, 1978

JAMES W. WILSON
OF COUNSEL

ADDRESS REPLY TO:

Midland Office

FRANK STUBBEMAN (1935-1978)
HAMILTON E. McRAE
TOM SEALY
BOYD LAUGHLIN
FRED M. CASSIDY
WM. B. BROWDER, JR.
WALTER C. BEARDSLEY
W. F. PENNEBAKER
DURWARD M. GOOLSBY
JAMES L. PARDEE
JAMES G. NOLAND
ROBERT J. COWAN
MILTON L. BANKSTON
WALTER K. BOYD, JR.
HARRELL FELDT
SMITH RAY
J. P. WORD
J. J. BOWDEN
NICHOLAS C. TAYLOR
T. B. WRIGHT
JOE D. MEROONEY
ALVIN WALVOORD, JR.
RODNEY W. SATTERWHITE
HAL L. KEMPF
JOE R. GREENHILL, JR.
THOS. L. LOWRY
JAMES V. HAMMETT, JR.
JO ANNE CHRISTIAN
DANIEL W. HERO
DAVID K. BROOKS
JOSEPH V. CRAWFORD
PATRICIA A. ENGLISH
GREGORY D. HOOSER
WM. F. SANDERSON, JR.
AL W. SCHORRE, JR.
JAMES CHRISMAN PHILLIPS
MARK K. LEAVERTON
RANDAL M. KIRK
JACK D. LADD
MICHAEL R. STOLTZ
J. STOCKTON WILLIAMS, JR.
EDWARD R. TINSLEY, III
WOFFORD DENIUS
STEPHEN T. KRIER

Mr. J. E. Chrisman
Phillips Petroleum Company
P. O. Box 1967
Houston, Texas 77001

Re: East Vacuum Grayburg San Andres Unit

Dear Mr. Chrisman:

When your letter arrived enclosing the corrected pages for the Unit Agreement and Unit Operating Agreement forwarded with your letter of September 26, this year, I had already returned the ratified copies to you.

Therefore this is to notify you that my ratification does apply to the agreements as corrected by substitution of the new pages.

Yours very truly,

Hamilton E. McRae
Hamilton E. McRae

HEM:abk

-FILE COPY
OCT 9 1978

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 9/29/78

Hamilton E. McRae

DATE: 9/29/78

THE STATE OF TEXAS)
COUNTY OF MIDLAND)

The foregoing instrument was acknowledged before me this 29th day of September, 1978, by HAMILTON E. McRAE.

My commission expires
Sept. 14, 1979

Alice B. Kelly
Notary Public

PENROSE AND ZACHARY OPERATING COMPANY

1205 COMMERCE BUILDING
FORT WORTH, TEXAS 76102

October 16, 1978

Mr. J. E. Chrisman
Phillips Petroleum Company
Post Office 1967
6910 Fannin Street
Houston, Texas 77001

Dear Mr. Chrisman:

In accordance with your letter of October 5, 1978 this is to advise that our ratification applies to the agreements as corrected by substitution of the enclosed pages received with your letter.

Sincerely yours,

J. M. ZACHARY

By 

CR/hm

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and


WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: / /78

DATE: 10 / 4 /78



SINGLE ACKNOWLEDGMENT

THE STATE OF TEXAS, }
COUNTY OF TEXAS }

BEFORE ME, the undersigned, a Notary Public in and for said County and State, on this day personally appeared
J. M. Zachary
known to me to be the person whose name he subscribed to the foregoing instrument, and acknowledged to
me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 4th day of October A. D. 19 78

(L. S.)

842—BAPPINGTON PRINTING CO., FORT WORTH, TEXAS


Notary Public in and for Tarrant County, Texas.

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and


WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DAVOIL, INC.

DATE: 10 9 /78



President

DATE: / /78

SINGLE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

My Commission Expires:

CORPORATE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF TARRANT X

The foregoing instrument was acknowledged before me this 9th
day of October, 1978, BY J. L. Brannon,
President for Davoil, Inc.,
a corporation, on behalf of said corporation.



Samuel Valentine

Notary Public in and for Tarrant
County, Texas

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

Shell Oil Company

DATE: 11/17/78


Robert L. Avary, ATTORNEY-IN-FACT.

DATE: / /78

STATE OF TEXAS

COUNTY OF HARRIS

The foregoing instrument was acknowledged before me this 17th day
of November, 1978, by Robert L. Avary, Attorney in Fact for SHELL
OIL COMPANY, a Delaware corporation, on behalf of the corporation.

My Commission Expires:

DIANA NUCKOLS

Notary Public in and for Harris County, Texas

My Commission Expires May 16, 1980

Diana Nuckols
Notary Public in and for Harris County,
Texas

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

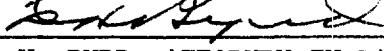
WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.






NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 11/16/78

EXXON CORPORATION

BY: 
L. H. BYRD, ATTORNEY IN FACT

Div. Litig. 
Div. Geol. 
Jt. Int. 
Div. Acct. 
Div. Law 

DATE: / /78

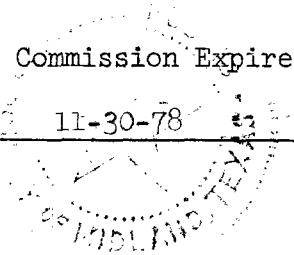
STATE OF TEXAS Ø
 : ss
COUNTY OF MIDLAND Ø

The foregoing instrument was acknowledged before me this 16th day
of November 1978 by L. H. Byrd,
Attorney in Fact of Exxon Corporation a New Jersey
corporation, on behalf of said corporation.

My Commission Expires:

11-30-78

Lena P. Jehle
Notary Public in and for Said County



RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10 / 27 / 78

MARATHON OIL COMPANY

C. L. Roberts

C. L. Roberts, Manager

Houston Division Onshore Operations

DATE: / / 78

SINGLE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

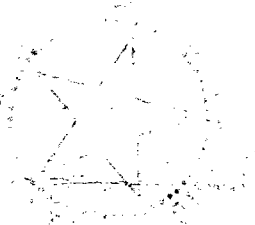
My Commission Expires:

CORPORATE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF HARRIS X

The foregoing instrument was acknowledged before me this 27th
day of October, 1978, BY C. L. Roberts, Mgr., Houston Division
Onshore Operations for Marathon Oil Company,
a corporation, on behalf of said corporation.



Pat Bryant
Notary Public in and for Harris
County, Texas

My Commission Expires:

October 14, 1980

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

CITIES SERVICE COMPANY

DATE: 10 / 31 / 78


Vice-President

DATE: / / 78

STATE OF OKLAHOMA)

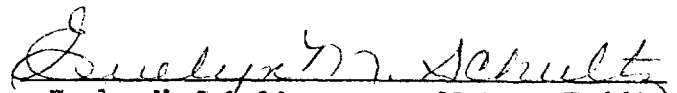
) SS

COUNTY OF TULSA)

The foregoing instrument was acknowledged before me this 31st
day of October, 1978, by David A. Hentschel, Vice President
of Cities Service Company, a Delaware corporation, on behalf of
said corporation.

My Commission Expires:

JUL 25 1980


Evelyn M. Schultz Notary Public

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 11 17 /78

DATE: 1 /78

x Mary W. Fleming Walsh
By J Edward Walsh

SINGLE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF TARRANT X

The foregoing instrument was acknowledged before me this 7th
day of November, 1978, by J. Howard Thrish for
Mary B. Fleming Thrish.

Deana Matlock
Notary Public in and for Tarrant
County, Texas

My Commission Expires:

6-3-79

CORPORATE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, BY _____,
_____ for _____,
a corporation, on behalf of said corporation.

Notary Public in and for _____
County, _____

My Commission Expires:

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

ATLANTIC RICHFIELD COMPANY

DATE: 10 / 13 / 78

By: C. E. Cardwell, Jr.
C. E. Cardwell, Jr.
Attorney-in-Fact

DATE: / / 78

SINGLE ACKNOWLEDGMENT

STATE OF TX

COUNTY OF TX

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

My Commission Expires:

CORPORATE ACKNOWLEDGMENT

STATE OF Texas X

COUNTY OF Midland X

The foregoing instrument was acknowledged before me this 13th
day of October, 1978, BY C. E. Cardwell, Jr.,
attorney in fact for Atlantic Richfield Company,
a corporation, on behalf of said corporation.

Yvonne Brooks Yvonne Brooks
Notary Public in and for Midland
County, Texas

My Commission Expires:
June 30 1980

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10 / 20 / 78

Wacbas Oil & Gas Co.

DATE: 10 / 20 / 78

Wacbas Oil & Gas Co.

STATE OF TEXAS §

COUNTY OF HARRIS §

The foregoing instrument was acknowledged before me this 26th
day of October, 1978, by Carle F. Sharp, Operations Manager for
WAINOCO OIL & GAS COMPANY, a Texas Corporation, on behalf of said
corporation.

Patricia Budro

PATRICIA BUDRO
Notary Public in and for Harris County, Texas
My Commission Expires 2-17-79

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

CHEVRON U.S.A. INC.

DATE: 10/19/78

By E. O. Hensley
Assistant Secretary

STATE OF COLORADO)
) SS
COUNTY OF ARAPAHOE)

Before me, the undersigned authority, a Notary Public in and for said County, personally appeared E. O. Hensley to me personally known, who being by me duly sworn did say that he, with the capacity designated by his signature on the document to which this certificate is attached, is an officer or agent, of Chevron U.S.A. Inc., a corporation organized and existing under and by virtue of the laws of the State of California, and that he as such officer or agent and in such capacity being authorized by its Bylaws and/or Board of Directors so to do, signed, sealed, executed and acknowledged before me the foregoing instrument on behalf of said Corporation as his voluntary act and deed and the voluntary act and deed of said Corporation for the uses, purposes and consideration therein expressed and contained by signing the name of the Corporation by him as such officer or agent and that the seal, if any, affixed to said instrument is the Corporate seal of said Corporation, and he further acknowledges to me that said Corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my official signature and affixed my notarial seal of office on this the 19th day of October, 19 78.

My commission expires: _____

Gregg D. Dickett
Notary Public

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

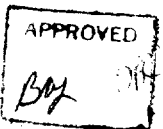
WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

Amoco Production Company



DATE: 10/18/78

W.D. Graham

DATE: 1 / 1978

ATTORNEY AT LAW

BEFORE ME, the undersigned authority, a Notary Public in and for said County and State, on this day personally appeared W. L. GRISHAM, ATTORNEY-IN-FACT of AMOCO PRODUCTION COMPANY, a corporation, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same as the act and deed of said corporation, for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND and seal of office this 18th day of October, 1978.

SANDRA J. BROWN
Notary Public in Harris County, Texas
My Commission Expires 4-28-80

Sandra J. Brown
Notary Public in and for Harris
County, Texas

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and


WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10 / 30 / 78



ARAPAHO PETROLEUM, INC.

DATE: / / 78

SINGLE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

My Commission Expires:

CORPORATE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF STEPHENS X

The foregoing instrument was acknowledged before me this 30th
day of October, 1978, BY Bob D. Griffin,
_____ for Arapaho Petroleum, Inc.,
a corporation, on behalf of said corporation.

Earlene Louen
Notary Public in and for Stephens
County, Texas

My Commission Expires:
March 8, 1979

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10/12 /78


Harold E. Jones

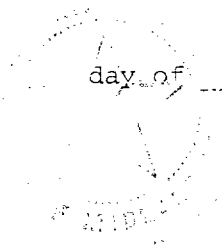
DATE: / /78

SINGLE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF MIDLAND X

The foregoing instrument was acknowledged before me this 12th
day of October, 1978, by Harold E. Jones.


Leah Anne K. Summers
Notary Public in and for Midland
County, Texas

My Commission Expires:

3/31/79

CORPORATE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, BY _____,
_____ for _____,
a corporation, on behalf of said corporation.

Notary Public in and for _____
County, _____

My Commission Expires:

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

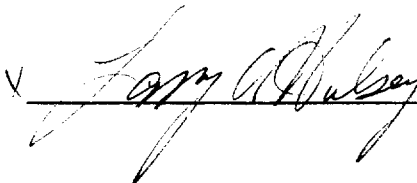
WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

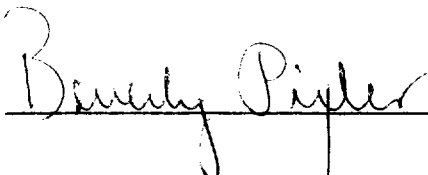
NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10 / 11 / 78

✓ 

DATE: 10 / 11 / 78



SINGLE ACKNOWLEDGMENT

STATE OF Texas X

COUNTY OF Youn X

The foregoing instrument was acknowledged before me this 12th
day of October, 1978, by Larry O. Pulsey.

Beverly S. Pixler
Notary Public in and for Youn
County, Texas
Beverly S. Pixler

My Commission Expires:

7/1/80

CORPORATE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, BY _____,
_____ for _____,
a corporation, on behalf of said corporation.

Notary Public in and for _____
County, _____

My Commission Expires:

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10/12/78

Boyd Laughlin

DATE: / /78

THE STATE OF TEXAS X
COUNTY OF MIDLAND X

The foregoing instrument was acknowledged before me this 12th day of October, 1978, by BOYD LAUGHLIN.

My Commission Expires
March 31, 1979.

Juanita Sherrod
Notary Public

Juanita Sherrod

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10/11/78

Kokomo Oil Co.
by Richard D. Hendley Pres.

DATE: 1/ /78

SINGLE ACKNOWLEDGMENT

STATE OF _____ X

COUNTY OF _____ X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

My Commission Expires:

CORPORATE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF MIDLAND X

The foregoing instrument was acknowledged before me this 11th
day of OCTOBER, 1978, BY SIDNEY S. LINDLEY,
PRESIDENT for VERKOME OIL CO.,
a corporation, on behalf of said corporation.

Shirley Bassett
Notary Public in and for MIDLAND
County, TEXAS

My Commission Expires:

6-30-80

NOV 17 1978

RATIFICATION OF AGREEMENTS ENTITLED
 "UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
 EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
 LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 1 / 1978

W. D. Street

DATE: 1 / 1978

By Special Agent

ATTEST: Richard C. Milam

SINGLE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

My Commission Expires:

CORPORATE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, BY _____
_____ for _____

a corporation, on behalf of said corporation.

Notary Public in and for _____
County, _____

My Commission Expires:

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10 / 10 / 78

H.M. BEARDS, JR.
President - PRES.

DATE: / / 78

SINGLE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

My Commission Expires:

CORPORATE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF YOUNG X

The foregoing instrument was acknowledged before me this 11th
day of OCTOBER, 1978, BY H. M. BETTIS,
PRES. for H. M. BETTIS, INC.,
a corporation, on behalf of said corporation.

Geraldine O. Melan
Notary Public in and for Young
County, Texas

My Commission Expires:

11-31-78

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10/11/78

DATE: 1/ /78

TURNER, J. A. C.
Leg. J. Miller, Pres.

SINGLE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

My Commission Expires:

CORPORATE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF YOUNG X

The foregoing instrument was acknowledged before me this 11th
day of OCTOBER, 1978, BY H. M. BETTIS
PRES. for TURNCO, INC.,

a corporation, on behalf of said corporation.

Geraldine C. Milan
Notary Public in and for Young
County, Texas

My Commission Expires:

12-31-78

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

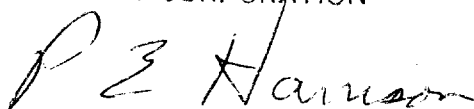
WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10 / 11 / 78

MOBIL OIL CORPORATION



Attorney-in-Fact

DATE: / / 78

Attorney-in-Fact

NEW MEXICO SINGLE ACKNOWLEDGMENT

STATE OF _____X

COUNTY OF _____X

The foregoing instrument was acknowledged before me this
____ day of _____, 19____, by _____.

Notary Public

* * * * *

NEW MEXICO CORPORATION ACKNOWLEDGMENT

STATE OF Texas _____X

COUNTY OF Harris _____X

The foregoing instrument was acknowledged before me this
11 day of October, 1978, by P. E. Harrison
of Mobil Oil Corporation, Attorney-in-Fact
a New York
corporation, on behalf of said corporation.

Bonnie B. Arbus
Notary Public

Notary Public
My Commission Expires _____

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10/16/78

Norman L. Stahl Jr.

DATE: / /78

SINGLE ACKNOWLEDGMENT

STATE OF Texas X

COUNTY OF Young X

The foregoing instrument was acknowledged before me this 16
day of October, 1978, by NORMAN D. STANFILL SR.

Joyce Boydston
Notary Public in and for Texas
County, TX

My Commission Expires:

June 30, 1980

CORPORATE ACKNOWLEDGMENT

STATE OF _____ X

COUNTY OF _____ X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, BY _____,
_____ for _____,
a corporation, on behalf of said corporation.

Notary Public in and for _____
County, _____

My Commission Expires:

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

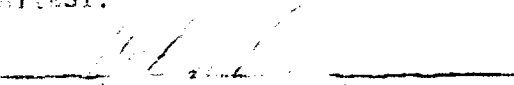
WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

ATTEST:

GREAT WESTERN DRILLING COMPANY


Assistant Secretary

DATE: 10 / 11/78


President

DATE: / /78

STATE OF TEXAS X

COUNTY OF MIDLAND X

BEFORE ME, the undersigned authority, on this day personally appeared JOHN HAMPTON, known to me to be the person whose name is subscribed to the foregoing instrument as PRESIDENT of GREAT WESTERN DRILLING COMPANY, a Texas corporation, and acknowledged to me that he executed the same for the purposes and consideration therein expressed, in the capacity stated, and as the act and deed of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this 11 day of Oct., 1978.

Lester Little
Notary Public in and for Midland
County, Texas

My Commission Expires:

Nov 30, 1978

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

PENNZOIL COMPANY

DATE: 10/ 3 /78

By: H. W. Hollingshead, Jr. *H. W. Hollingshead, Jr.*
Agent and Attorney-in-Fact

DATE: / /78

STATE OF TEXAS

County of MIDLAND

CORPORATION ACKNOWLEDGMENT (New Mexico Short Form)

The foregoing instrument was acknowledged before me this 3rd day of October, 1978
by H. W. HOLLINGSHEAD, JR., Agent and Attorney-in-Fact for
PENNZOIL COMPANY a Delaware corporation
on behalf of said corporation.

My Commission Expires: December 31, 1978

Marjorie L. Matthews
Notary Public

MARJORIE L. MATTHEWS

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 11 / 1 /78

MICHAEL HED

DATE: / /78

P. A. Dwyer
Senior Vice President

WMB
11/1/78
Rum

RECORDED
DEAL
1920

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

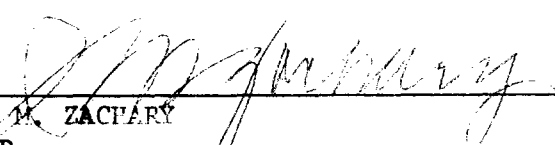
WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

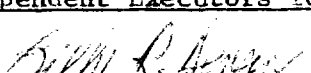
IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 1 / 78

DATE: 10 / 20 / 78


J. M. ZACHARY
AND

The First National Bank of Fort Worth, Co-
Independent Executors for Neville G. Penrose Est.

BY: 
Vice President & Trust Officer

STATE OF TEXAS)

COUNTY OF TARRANT)

BEFORE ME, the undersigned authority, on this day personally appeared BILLY R. HENSON, Vice President and Trust Officer, known to me to be the person and officer whose name is subscribed to the foregoing instrument, and acknowledged to me that the same was the act of THE FIRST NATIONAL BANK OF FORT WORTH, Independent Co-Executor, a corporation, and that he executed the same as the act of the corporation for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 20th day of October, 1978.

My Commission expires
October 15, 1979

Selaine Lotcher
Notary in and for
Tarrant County, Texas

STATE OF TEXAS)

COUNTY OF TARRANT)

BEFORE ME, the undersigned, a Notary Public in and for said County and State, on this 12 day of November, 1978, personally appeared J. M. ZACHARY, to me personally known to be the identical person who executed the foregoing instrument, and acknowledged to me that he executed the same as his free and voluntary act and deed for the uses and purposes therein set forth, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 12 day of November, 1978.

My Commission expires:

12-31-78

Mary Ann Edwards
Notary in and for
Tarrant County, Texas

SEAL

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest-Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

Shell Oil Company

DATE: 11/17/78


Robert L. Avary, ATTORNEY-IN-FACT

DATE: / /78

STATE OF TEXAS
COUNTY OF HARRIS

The foregoing instrument was acknowledged before me this 17th day
of November, 1978, by Robert L. Avary, Attorney in Fact for SHELL
OIL COMPANY, a Delaware corporation, on behalf of the corporation.

My Commission Expires:

DIANA NUCKOLS

Notary Public in and for Harris County, Texas

My Commission Expires May 16, 1980

Diana Nuckols
Notary Public in and for Harris County,
Texas

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

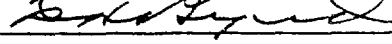
WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.






NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 11 / 16 / 78

EXXON CORPORATION

BY: 
L. H. BYRD, ATTORNEY IN FACT

Div. Legal 
Div. Geol. 
Jt. Int. 
Div. Acct. 
Div. Law 

DATE: / / 78

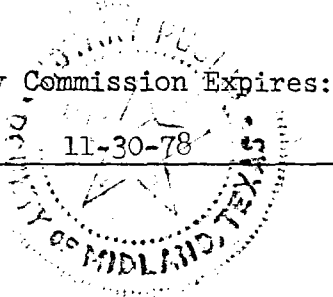
STATE OF TEXAS §
 : ss
COUNTY OF MIDLAND §

The foregoing instrument was acknowledged before me this 16th day
of November 1978 by L. H. Byrd,
Attorney in Fact of Exxon Corporation a New Jersey
corporation, on behalf of said corporation.

My Commission Expires:

11-30-78

Lena G. Jehle
Notary Public in and for Said County



RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

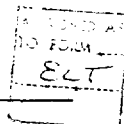
IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10 127/78

MARATHON OIL COMPANY

C. L. Roberts
C. L. Roberts, Manager

Houston Division Onshore Operations



DATE: 1 / 78

SINGLE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

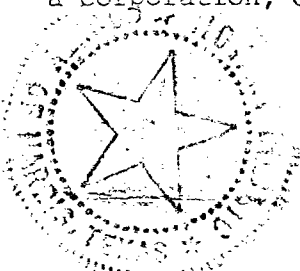
My Commission Expires:

CORPORATE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF HARRIS X

The foregoing instrument was acknowledged before me this 27th
day of October, 1978, BY C. L. Roberts, Mgr., Houston Division
Onshore Operations for Marathon Oil Company,
a corporation, on behalf of said corporation.



Pat Bryant
Notary Public in and for Harris
County, Texas

My Commission Expires:

October 14, 1980

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and


WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

CITIES SERVICE COMPANY

DATE: 10 / 31 / 78



Vice-President

DATE: / / 78

STATE OF OKLAHOMA)

) SS

COUNTY OF TULSA)

The foregoing instrument was acknowledged before me this 31st
day of October, 1978, by David A. Hentschel, Vice President
of Cities Service Company, a Delaware corporation, on behalf of
said corporation.

My Commission Expires:
JUL 25 1980

Evelyn M. Schultz
Evelyn M. Schultz Notary Public

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10/20/78

Wainco Oil and Gas Co.

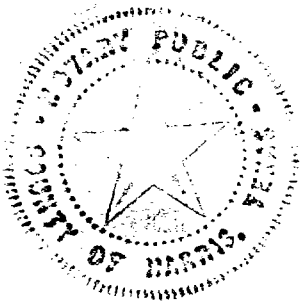
DATE: 10/20/78

Jack Johnson

STATE OF TEXAS §

COUNTY OF HARRIS §

The foregoing instrument was acknowledged before me this 20th
day of October, 1978, by Carle F. Sharp, Operations Manager for
WAINOCO OIL & GAS COMPANY, a Texas Corporation, on behalf of said
corporation.



Patricia Budro

PATRICIA BUDRO

Notary Public in and for Harris County, Texas

My Commission Expires 8-17-79

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

CHEVRON U.S.A. INC.

DATE: 10/19/78

By E. O. Hensley
Assistant Secretary

STATE OF COLORADO)
) SS
COUNTY OF ARAPAHOE)

Before me, the undersigned authority, a Notary Public in and for said County, personally appeared E. O. Hensley to me personally known, who being by me duly sworn did say that he, with the capacity designated by his signature on the document to which this certificate is attached, is an officer or agent, of Chevron U.S.A. Inc., a corporation organized and existing under and by virtue of the laws of the State of California, and that he as such officer or agent and in such capacity being authorized by its Bylaws and/or Board of Directors so to do, signed, sealed, executed and acknowledged before me the foregoing instrument on behalf of said Corporation as his voluntary act and deed and the voluntary act and deed of said Corporation for the uses, purposes and consideration therein expressed and contained by signing the name of the Corporation by him as such officer or agent and that the seal, if any, affixed to said instrument is the Corporate seal of said Corporation, and he further acknowledges to me that said Corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my official signature and affixed my notarial seal of office on this the 19th day of

October, 19 78.

My commission expires SEP 23 1982
Notary Public in and for the
State of Colorado, residing
at Denver, Colorado.

Peggy D. Bickett
Notary Public

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

Amoco Production Company



DATE:

10/18/78

A handwritten signature in dark ink, appearing to read "W. N. Grisham". The signature is fluid and cursive.

ATTORNEY-IN-FACT

DATE:

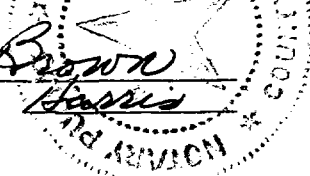
1 / 78

BEFORE ME, the undersigned authority, a Notary Public in and for said County and State, on this day personally appeared L. L. GRISHAM, ATTORNEY-IN-FACT of AMOCO PRODUCTION COMPANY, a corporation, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same as the act and deed of said corporation, for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND and seal of office this 18th day of October, 1978.

SANDRA J. BROWN
Notary Public in Harris County, Texas
My Commission Expires 4-28-80

Sandra J. Brown
Notary Public in and for Harris
County, Texas



RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

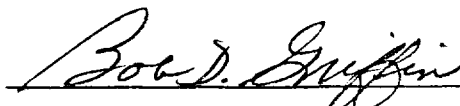
WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10/30/78


ARAPAHO PETROLEUM, INC.

DATE: 1/ /78

SINGLE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

My Commission Expires:

CORPORATE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF STEPHENS X

The foregoing instrument was acknowledged before me this 30th
day of October, 1978, BY Bob D. Griffin,
_____ for Arapaho Petroleum, Inc.,
a corporation, on behalf of said corporation.

Earlene Louw
Notary Public in and for Stephens
County, Texas

My Commission Expires:

March 8, 1979

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

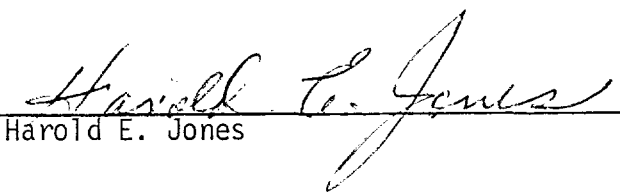
WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10/12 /78

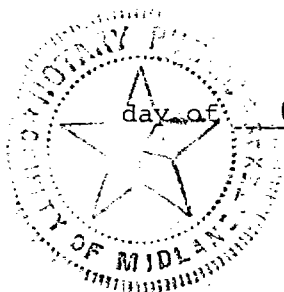

Harold E. Jones

DATE: / /78

SINGLE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF MIDLAND X



The foregoing instrument was acknowledged before me this 12th

day of October, 1978, by Harold E. Jones.

Archie D. Simmons
Notary Public in and for Midland
County, Texas

My Commission Expires:

3/31/79

CORPORATE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____

day of _____, 1978, BY _____,

_____ for _____,

a corporation, on behalf of said corporation.

Notary Public in and for _____
County, _____

My Commission Expires:

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

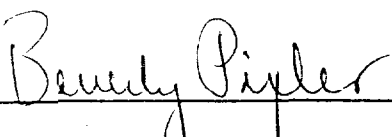
NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10 / 11 / 78



DATE: 10 / 11 / 78



SINGLE ACKNOWLEDGMENT

STATE OF Texas X

COUNTY OF Young X

The foregoing instrument was acknowledged before me this 11th
day of October, 1978, by Larry C. Hulsey

Beverly S. Pixler
Notary Public in and for Young
County, Texas

My Commission Expires:

7/13/80

Beverly S. Pixler

CORPORATE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, BY _____,
_____ for _____,
a corporation, on behalf of said corporation.

Notary Public in and for _____
County, _____

My Commission Expires:

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

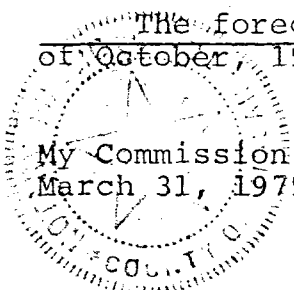
DATE: 10/12/78

Boyd Laughlin

DATE: 1 / 1 /78

THE STATE OF TEXAS X
COUNTY OF MIDLAND X

The foregoing instrument was acknowledged before me this 12th day of October, 1978, by BOYD LAUGHLIN.



Juanita Sherrod
Notary Public

Juanita Sherrod

OCT 1 1978

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10 / 11 / 78

Kahome Oil Co.
by Sidney Dudley, Pres

DATE: / / 78

SINGLE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

My Commission Expires:

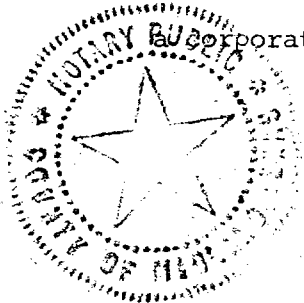
CORPORATE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF Midland X

The foregoing instrument was acknowledged before me this 11th
day of October, 1978, BY Sidney S. Lindley,
PRESIDENT for Kokomo Oil Co,

_____, on behalf of said corporation.



Shirley Barnett
Notary Public in and for Midland
County, TEXAS

My Commission Expires:

6-30-80

FILE COPY

NOV 17 1978

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

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NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 11/16/78

S. B. Street & Co

DATE: 1 / 1978

By Spencer S. Street & Co.

ATTEST: Rosalinda Corralan

SINGLE ACKNOWLEDGMENT

STATE OF TX

COUNTY OF TX

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

My Commission Expires:

CORPORATE ACKNOWLEDGMENT

STATE OF Texas X

COUNTY OF Young X

The foregoing instrument was acknowledged before me this 12
day of November, 1978, BY Samuel B. Street, Jr.,
for S.B. Street & Company,

a corporation, on behalf of said corporation.



Claudia Shaw
Notary Public in and for Young
County, Texas

My Commission Expires:
11-30-80

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

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WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10 / 11 / 78

N.M. BETTIS, JR.
N. Bettis - PRES.

DATE: 1 / / 78

SINGLE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____


My Commission Expires:

CORPORATE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF YOUNG X

The foregoing instrument was acknowledged before me this 11th
day of OCTOBER, 1978, BY H.M. Bettis
PRES. for H.M. BETTIS, INC.,
a corporation, on behalf of said corporation.



Notary Public in and for Young
County, Texas

My Commission Expires:

11-31-78

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 10 10 1978

DATE: 1 / 1978

TURNCO, INC

by J. Anderson - PRES.

SINGLE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____


My Commission Expires:

CORPORATE ACKNOWLEDGMENT

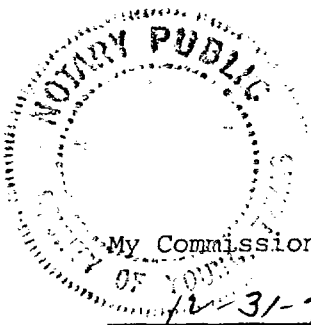
STATE OF TEXAS X

COUNTY OF YOUNG X

The foregoing instrument was acknowledged before me this 11th
day of October, 1978, BY H. M. Bettis
PRES. for TURNCO, INC.,
a corporation, on behalf of said corporation.



Notary Public in and for Young
County, Texas



OCT 18 1978

STUBBEMAN, McRAE, SEALY, LAUGHLIN & BROWDER

ATTORNEYS AT LAW

MIDLAND, TEXAS

MIDLAND SAVINGS BUILDING-ZIP CODE 79701

300 WEST WALL STREET

P. O. BOX 1540-ZIP CODE 79702

A.C. 915 682-1616

AUSTIN, TEXAS

1800 AMERICAN BANK TOWER-ZIP CODE 78701

314 WEST 6TH STREET

P. O. BOX 2286-ZIP CODE 78768

A.C. 512 476-3502

October 11, 1978

JAMES W. WILSON
OF COUNSEL

ADDRESS REPLY TO:

Midland Office

FRANK STUBBEMAN (1935-1978)
HAMILTON E. McRAE
TOM SEALY
BOYD LAUGHLIN
FRED M. CASSIDY
WM. B. BROWDER, JR.
WALTER C. BEARDSLEY
W. F. PENNEBAKER
DURWARD M. GOOLSBY
JAMES L. PARDEE
JAMES G. NOLAND
ROBERT J. COWAN
MILTON L. BANKSTON
WALTER K. BOYD, JR.
HARRELL FELDT
SMITH RAY
J. P. WORD
J. J. BOWDEN
NICHOLAS C. TAYLOR
T. B. WRIGHT
JOE D. MURPHY
ALVIN WALVORD, JR.
RODNEY W. SATTERWHITE
HAL L. KEMPF
JOE R. GREENHILL, JR.
THOS. L. LOWRY
JAMES V. HAMMETT, JR.
JO ANNE CHRISTIAN
DANIEL W. HERD
DAVID K. BROOKS
JOSEPH V. CRAWFORD
PATRICIA A. ENGLISH
GREGORY D. HOOPER
WM. F. SANDERSON, JR.
AL W. SCHORRE, JR.
JAMES CHRISTIAN PHILLIPS
MARK K. LEAVERTON
RANDAL M. KIRK
JACK D. LADD
MICHAEL R. STOLTZ
J. STOCKTON WILLIAMS, JR.
EDWARD R. TINSLEY, III
WOFFORD DENNIS
STEPHEN T. KRIER

Mr. J. E. Chrisman
Phillips Petroleum Company
P. O. Box 1967
Houston, Texas 77001

Re: East Vacuum Grayburg San Andres Unit

Dear Mr. Chrisman:

When your letter arrived enclosing the corrected pages for the Unit Agreement and Unit Operating Agreement forwarded with your letter of September 26, this year, I had already returned the ratified copies to you.

Therefore this is to notify you that my ratification does apply to the agreements as corrected by substitution of the new pages.

Yours very truly,

Hamilton E. McRae
Hamilton E. McRae

HEM:abk

-FILE COPY
OCT 9 1978

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 9/29/78

Hamilton E. McRae

DATE: 9/29/78

THE STATE OF TEXAS)
COUNTY OF MIDLAND)

The foregoing instrument was acknowledged before me this 29th day of September, 1978, by HAMILTON E. McRAE.

My commission expires
Sept. 14, 1979

Alice B. Kelly
Notary Public

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

ATLANTIC RICHFIELD COMPANY

DATE: 10 11 1978

By: C. E. Cardwell, Jr.
C. E. Cardwell, Jr.
Attorney-in-Fact

DATE: 1 / 1978

SINGLE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

My Commission Expires:

CORPORATE ACKNOWLEDGMENT

STATE OF Texas X

COUNTY OF Midland X

The foregoing instrument was acknowledged before me this 13th
day of October, 1978, BY C. E. Cardwell, Jr.,
Attorney in Fact for Atlantic Richfield Company,
a corporation, on behalf of said corporation.

Yvonne Brooks Yvonne Brooks
Notary Public in and for Midland
County, Texas

My Commission Expires:

June 30, 1980

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 11 / 2 / 78

DATE: 1 / / 78

x Mary D. Fleming Walsh
Ry. J. Howard Walsh

SINGLE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF TARRANT X

The foregoing instrument was acknowledged before me this 7th
day of November, 1978, by I Howard Thelsh for
Mary B. Fleming Thelsh.



Deane Matlock
Notary Public in and for Tarrant
County, Texas

My Commission Expires:

6-3-79

CORPORATE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, BY _____,
_____ for _____,
a corporation, on behalf of said corporation.

Notary Public in and for _____
County, _____

My Commission Expires:

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

PENNZOIL COMPANY

DATE: 10/ 3 /78

By: H. W. Hollingshead, Jr.

H. W. Hollingshead, Jr.
Agent and Attorney-in-Fact

DATE: / /78

STATE OF TEXAS
County of MIDLAND

CORPORATION ACKNOWLEDGMENT (New Mexico Short Form)

The foregoing instrument was acknowledged before me this 3rd day of October, 19 78
by H. W. HOLLINGSHEAD, JR. Agent and Attorney-in-Fact for
PENNZOIL COMPANY a Delaware corporation
on behalf of said corporation.

My Commission Expires: December 31, 1978

Notary Public

MARJORIE L. MATTHEWS

PENROSE AND ZACHARY OPERATING COMPANY

1205 COMMERCE BUILDING
FORT WORTH, TEXAS 76102

332-7407

October 16, 1978

Mr. J. E. Chrisman
Phillips Petroleum Company
Post Office 1967
6910 Fannin Street
Houston, Texas 77001

Dear Mr. Chrisman:

In accordance with your letter of October 5, 1978 this is to advise that our ratification applies to the agreements as corrected by substitution of the enclosed pages received with your letter.

Sincerely yours,

J. M. ZACHARY

By 

CR/hm

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and


WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: / /78

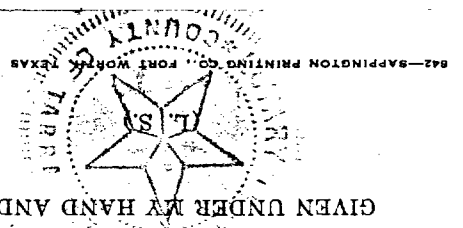
DATE: 10 / 4 /78



THE STATE OF TEXAS,
COUNTY OF TEXAS

BEFORE ME, the undersigned, a Notary Public in and for said County and State, on this day personally appeared J. M. Zachary known to me to be the person whose name he subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 4th day of October A. D. 19 78



Notary Public in and for Tarrant County, Texas.

[Handwritten Signature]

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

ATTEST:

GREAT WESTERN DRILLING COMPANY


Assistant Secretary

DATE: 10 / 11 / 78


President

DATE: / / 78

STATE OF TEXAS X

COUNTY OF MIDLAND X

BEFORE ME, the undersigned authority, on this day personally appeared JOHN HAMPTON, known to me to be the person whose name is subscribed to the foregoing instrument as PRESIDENT of GREAT WESTERN DRILLING COMPANY, a Texas corporation, and acknowledged to me that he executed the same for the purposes and consideration therein expressed, in the capacity stated, and as the act and deed of said corporation.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this 11 day of Oct., 1978.

Laverne Little
Notary Public in and for Midland
County, Texas

My Commission Expires:
Nov 30, 1978

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

MOBIL OIL CORPORATION

DATE:

10 / 11 / 78



Attorney-in-Fact

DATE:

 / / 78

Attorney-in-Fact

NEW MEXICO SINGLE ACKNOWLEDGMENT

STATE OF _____X

COUNTY OF _____X

The foregoing instrument was acknowledged before me this
____ day of _____, 19____, by _____.

Notary Public

* * * * *

NEW MEXICO CORPORATION ACKNOWLEDGMENT

STATE OF Texas _____X

COUNTY OF Harris _____X

The foregoing instrument was acknowledged before me this
____ day of October, 1978, by P. E. Harrison
Attorney-in-Fact
of Mobil Oil Corporation, a New York
corporation, on behalf of said corporation.

Bonnie B. Robison
Notary Public

BONNIE B. ROBISON
Notary Public in Harris County, Texas
My Commission Expires April 7, 1980

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

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WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

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IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE:

10/11/78

Norman D. Strickland

DATE:

1 / 78

SINGLE ACKNOWLEDGMENT

STATE OF Texas X

COUNTY OF Young X

The foregoing instrument was acknowledged before me this 16

day of October, 1978, by NORMAN D. STOVALL JR.



Jayce Beepston
Notary Public in and for Young
County, Texas

My Commission Expires:
June 30, 1978

CORPORATE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____

day of _____, 1978, BY _____,

_____ for _____,

a corporation, on behalf of said corporation.

Notary Public in and for _____
County, _____

My Commission Expires:

OCT 12 1978



Suite 509, Ridglea Bank Bldg. • P. O. Box 12507 • Fort Worth, Texas 76116 • 817-737-6678

J. L. Brannon
President-Treasurer

October 9, 1978

J. E. Chrisman
Phillips Petroleum Company
Box 1967
Houston, Texas 77001

Re: East Vacuum Grayburg-
San Andres Unit

Dear Mr. Chrisman:

In accordance with your October 4, 1978, letter, we are enclosing two fully executed and acknowledged copies of the ratification forms. The ones that were sent prior did not include the acknowledgment forms.

This letter also applies to the ratification of the agreements as corrected by substitution of page 6 of the Unit Agreement and page 3 of the Unit Operating Agreement.

Very truly yours,

DAVOIL, INC.

A handwritten signature in cursive script that reads "J. L. Brannon".
President

J. L. Brannon

JLB:gv
Encls.

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and


WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DAVOIL, INC.

DATE: 10 9 /78



President

DATE: / /78

SINGLE ACKNOWLEDGMENT

STATE OF X

COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of _____, 1978, by _____.

Notary Public in and for _____
County, _____

My Commission Expires:

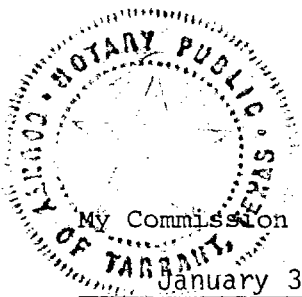
CORPORATE ACKNOWLEDGMENT

STATE OF TEXAS X

COUNTY OF TARRANT X

The foregoing instrument was acknowledged before me this 9th
day of October, 1978, BY J. L. Brannon,
President for Davoil, Inc.,

a corporation, on behalf of said corporation.



Simone Valentine
Notary Public in and for Tarrant
County, Texas

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

WHEREAS, each of the undersigned owners of a working interest or interests hereby acknowledges receipt of a true and correct copy of said Unit Agreement, and a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Operating Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Operating Agreement; and

WHEREAS, Exhibits "A" and "B", attached to and made a part of said Unit Agreement, identify the separately owned tracts which will become a part of the Unit; and

WHEREAS, each of the undersigned represents that it is a Royalty Owner or Working Interest Owner, or both, as defined in said Unit Agreement, in one or more of the Tracts identified by said Exhibits; and

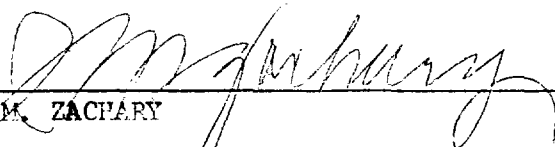
WHEREAS, each undersigned Royalty Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and each undersigned Working Interest Owner, being familiar with the contents thereof, desires to ratify and confirm said Unit Agreement and said Unit Operating Agreement.

NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 1 / 78

DATE: 10 / 20 / 78


J. M. ZACHARY
AND

The First National Bank of Fort Worth, Co-
Independent Executors for Neville C. Penrose Est.

BY: 
Vice President & Trust Officer

STATE OF TEXAS)

COUNTY OF TARRANT)

BEFORE ME, the undersigned authority, on this day personally appeared BILLY R. HENSON, Vice President and Trust Officer, known to me to be the person and officer whose name is subscribed to the foregoing instrument, and acknowledged to me that the same was the act of THE FIRST NATIONAL BANK OF FORT WORTH, Independent Co-Executor, a corporation, and that he executed the same as the act of the corporation for the purposes and consideration therein expressed, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 20th day of October, 1978.

My Commission expires
October 25, 1979

Delaine Gotcher
Notary in and for
Tarrant County, Texas

STATE OF TEXAS)

COUNTY OF TARRANT)

BEFORE ME, the undersigned, a Notary Public in and for said County and State, on this 14 day of November, 1978, personally appeared J. M. ZACHARY, to me personally known to be the identical person who executed the foregoing instrument, and acknowledged to me that he executed the same as his free and voluntary act and deed for the uses and purposes therein set forth, and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 14 day of November, 1978.

My Commission expires:

Mary Ann Munoz
Notary in and for
Tarrant County, Texas

12-31-78

RATIFICATION OF AGREEMENTS ENTITLED
"UNIT AGREEMENT" AND "UNIT OPERATING AGREEMENT"
EAST VACUUM (GRAYBURG-SAN ANDRES) UNIT
LEA COUNTY, NEW MEXICO

KNOW ALL PERSONS BY THESE PRESENTS, THAT:

WHEREAS, each of the undersigned owners of a royalty interest or interests hereby acknowledges receipt of a true and correct copy of that certain agreement dated September 1, 1978, entitled "Unit Agreement, East Vacuum (Grayburg-San Andres) Unit, Lea County, New Mexico," which said agreement is hereinafter referred to as the Unit Agreement; and

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NOW THEREFORE, each of the undersigned who is the owner of a royalty interest or interests only does hereby ratify and confirm said Unit Agreement, and each of the undersigned who is the owner of a working interest or interests only or the owner of both a working interest or interests and royalty interest or interests does hereby ratify and confirm said Unit Agreement and said Unit Operating Agreement, each owner with respect to all of its interests in all of the separately owned Tracts identified by said Exhibits, thereby becoming a party thereto.

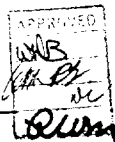
IN WITNESS WHEREOF, each of the undersigned parties has executed this instrument on the date set forth below opposite its signature.

DATE: 11 / 1 / 78

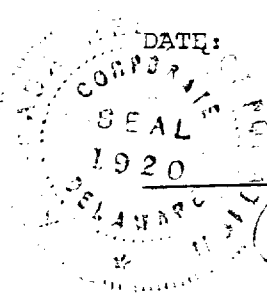
AMERADA HESS CORPORATION

DATE: 1 / 78

P. A. Dyer
P. A. Dyer
Senior Vice President



J. T. ...
Assistant Secretary



TRACT NO.	LEASE NAME AND LAND DESCRIPTION	NO. OF ACRES	NEW MEXICO		BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY		WORKING INT. OWNER	% W.I. IN TRACT	% TRACT PARTICIPATION	
			STATE LSE. NO.	E-7585			OWNER AND AMOUNT	Texaco, Inc.			INITIAL	FINAL
2980	Crusader Texas State SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 29 T-17-S, R-35-E	40.00		E-7585	.125	Texaco, Inc.	None	Texaco, Inc.	100.00	-	-	.15587
1881	Cities Service State 2 SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 18, T-17-S, R-35-E	40.00		K-6023-1	.125	Elk Oil Co.	John M. Kelly Est. .075	Elk Oil Co. Joseph J.Kelly John M.Kelly Est.	45.00 5.00 50.00	-	-	.09265
1982	Cities Service State 2 NE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 19, T-17-S, R-35-E	40.00		K-6023-1	.125	Elk Oil Co.	John M. Kelly Est. .075	Elk Oil Co. Joseph J.Kelly John M.Kelly Est.	45.00 5.00 50.00	-	-	.13018
2083	Cities Service State 1 SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 20, T-17-S, R-35-E	40.00		K-6023-1	.125	Elk Oil Co.	John M. Kelly Est. .075	Elk Oil Co. Joseph J.Kelly John M.Kelly Est.	45.00 5.00 50.00	-	-	.05126

TRACT NO.	LEASE NAME AND LAND DESCRIPTION	NO. OF ACRES	NEW MEXICO		BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY		WORKING INT. OWNER	% W.I. IN TRACT	% TRACT PARTICIPATION	
			STATE LSE. NO.	E-7585			OWNER AND AMOUNT	None			INITIAL	FINAL
2980	Crusader Texas State SE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 29 T-17-S, R-35-E	40.00		E-7585	.125	Texaco, Inc.			Texaco, Inc.	100.00	-	.15587
1881	Cities Service State 2 SE $\frac{1}{4}$ SW $\frac{1}{4}$ Sec. 18, T-17-S, R-35-E	40.00		K-6023-1	.125	Elk Oil Co.	John M. Kelly Est. .075		Elk Oil Co. Joseph J.Kelly John M.Kelly Est.	45.00 5.00 50.00	-	.09265
1982	Cities Service State 2 NE $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 19, T-17-S, R-35-E	40.00		K-6023-1	.125	Elk Oil Co.	John M. Kelly Est. .075		Elk Oil Co. Joseph J.Kelly John M.Kelly Est.	45.00 5.00 50.00	-	.13018
2083	Cities Service State 1 SW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 20, T-17-S, R-35-E	40.00		K-6023-1	.125	Elk Oil Co.	John M. Kelly Est. .075		Elk Oil Co. Joseph J.Kelly John M.Kelly Est.	45.00 5.00 50.00	-	.05126

TRACT NO.	LEASE NAME AND LAND DESCRIPTION	NO. OF ACRES	NEW MEXICO		BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY OWNER AND AMOUNT	WORKING INT. OWNER	% W.I. IN TRACT	% TRACT PARTICIPATION	
			STATE LSE. NO.							INITIAL	FINAL
1910	State C NW¼ SE¼ & SE¼ SE¼ Sec. 19, T-17-S, R-35-E	80.00	B-1398-14	.125	Joe B. Singer	Shell Oil Co. .125	H.M.Bettis, Inc. W.T.Boyle & Co. Norman D.Stovall, Jr.	18.00 18.00 18.00		.13168	.36099
1911	State K SW¼ SE¼ Sec. 19, T-17-S, R-35-E	40.00	B-1398-21	.125	Shell Oil Co.	None	Shell Oil Co.	100.00	-		.25707
1912	Shell, State NE¼ SE¼ Sec. 19, T-17-S, R-35-E	40.00	B-1398-24	.125	Crown Central Petroleum Corp.	Harold E. Jones .01 Shell Oil Co. .0625 When production is below 16 B/D and .125 otherwise	Crown Central Petroleum Corp.	100.00		.01092	.13261
2913	State M DE SE¼ Sec. 29, T-17-S, R-35-E	160.00	B-1399-10	.125	Atlantic Rich-field Co.	Shell Oil Co. .125	Atlantic Rich-field Co.	100.00		1.75146	2.00209
2614	State W DE W¼ SE¼ Sec. 26, T-17-S, R-35-E	80.00	B-1399-10	.125	Shell Oil Co.	Shell Oil Co. .125	Atlantic Rich-field Co.	100.00		.51529	.42296
3315	State T SE¼ Sec. 33, T-17-S, R-35-E	160.00	B-1400-3	.125	Shell Oil Co.	None	Shell Oil Co.	100.00		4.72528	4.13554
2416	State C NE¼ SE¼ Sec. 24, T-17-S, R-34-E	40.00	B-1404-2	.125	Shell Oil Co.	None	Shell Oil Co.	100.00		-	.18642
2717	State V E¼ SE¼ Sec. 27, T-17-S, R-35-E	80.00	B-1404-2	.125	Shell Oil Co.	None	Shell Oil Co.	100.00		1.59428	1.41489
2418	State C DE SE¼ SE¼ Sec. 24, T-17-S, R-34-E	40.00	B-1404-3	.125	Atlantic Rich-field Co.	Shell Oil Co. .125	Atlantic Rich-field Co.	100.00		.13176	.30137
2819	State N W¼ NE¼ & SE¼ NE¼ Sec.28, T-17-S, R-35-E	120.00	B-1423-1	.125	Shell Oil Co.	None	Shell Oil Co.	100.00		.91257	.92386
2720	State K NE¼ Sec. 27 T-17-S, R-35-E	160.00	B-1482-3	.125	Cities Service Co.	None	Cities Service Company	100.00		3.95617	1.01965

TRACT NO.	LEASE NAME AND LAND DESCRIPTION	NO. OF ACRES	NEW MEXICO		BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY		WORKING INT. OWNER	% W.I. IN TRACT	% TRACT PARTICIPATION	
			STATE LSE. NO.	NO.			OWNER AND AMOUNT	OWNER			INITIAL	FINAL
1910	State C NW¼ SE¼ & SE¼ SE¼ Sec. 19, T-17-S, R-35-E	80.00	B-1398-14	.125	Joe B. Singer	Shell Oil Co. .125	H.M.Bettis, Inc. W.T.Boyle & Co. Norman D.Stovall, Jr.	18.00 18.00 18.00	.13168	.36099		
1911	State K SW¼ SE¼ Sec. 19, T-17-S, R-35-E	40.00	B-1398-21	.125	Shell Oil Co.	None	Shell Oil Co.	100.00	-	.25707		
1912	Shell, State NE¼ SE¼ Sec. 19, T-17-S, R-35-E	40.00	B-1398-24	.125	Crown Central Petroleum Corp.	Harold E. Jones .01 Shell Oil Co. .0625 When production is below 16 B/D and .125 otherwise	Crown Central Petroleum Corp.	100.00	.01092	.13261		
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2717	State V E¼ SE¼ Sec. 27, T-17-S, R-35-E	80.00	B-1404-2	.125	Shell Oil Co.	None	Shell Oil Co.	100.00	1.59428	1.41489		
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2720	State K NE¼ Sec. 27 T-17-S, R-35-E	160.00	B-1482-3	.125	Cities Service Co.	None	Cities Service Company	100.00	3.95617	1.01965		

17. FAILURE TO TAKE IN KIND. If any party fails to take in kind or separately dispose of such party's share of Unitized Substances, Unit Operator shall have the right, but not the obligation, for the time being and subject to revocation at will by the party owning the share, to purchase or sell to others such share; however, all contracts of sale by Unit Operator of any other party's share of Unitized Substances shall be only for such reasonable periods of time as are consistent with the minimum needs of the industry under the circumstances, but in no event shall any such contracts be for a period in excess of one year. The proceeds of the Unitized Substances so disposed of by Unit Operator shall be paid to the Working Interest Owner of each affected Tract or a party designated by such Working Interest Owner who shall distribute such proceeds to the parties entitled thereto. Notwithstanding the foregoing, Unit Operator shall not make a sale into interstate commerce of any other party's share of gas production without first giving such other party sixty (60) days notice of such intended sale.

18. CERTIFICATION OF UNIT PRODUCTION. It is anticipated, at the effective date of unitization, crude oil produced, saved and sold from the East Vacuum Grayburg-San Andres Unit will be subject to the Energy Policy and Conservation Act (Public Law 94-163) as well as rules and regulations of the Department of Energy, or its successor, herein referred to as "DOE". As of the date of this Agreement, these rules and regulations entitle certain Tracts to regulatory benefits. It is the intent of the parties hereto that until 12,343,300 barrels of oil have been produced from the Unit Area subsequent to December 31, 1976, each Tract shall retain such regulatory benefit as it was entitled to receive under competitive operation and it shall share with all Tracts such additional regulatory benefit as may result from unitized operation by existing or future rules and regulations of DOE. Following production of the said 12,343,300 barrels any regulatory benefit received by any Tract shall be shared with all Tracts. In each instance where a regulatory benefit is shared it shall be shared on the basis of Tract Participation.

As of the date of this Agreement, DOE rules and regulations define "imputed stripper well" crude oil and "new crude oil" and provide regulatory benefits for qualifying volumes of each. In addition, "Base Production Control Level" is defined and identifies the oil produced which equals such volume as "old oil".

A. Imputed stripper well crude oil will be allocated among the Tracts as follows:

1. When the Tract's allocated share of Unitized Substances is equal to or less than its contribution to the Unit's imputed stripper well crude oil volume at the effective date of unitization, the entire volume of Unitized Substances allocated to it will be imputed stripper well crude oil.
2. When the Tract's allocated share of Unitized Substances is more than its contribution to the Unit's imputed stripper well crude oil volume at the effective date of unitization (and the latter such volume is not zero) the volume of Unitized Substances allocated to it will be imputed stripper well crude oil and new crude oil, except if insufficient volume of new crude oil remains to be allocated after allocation among the Tracts which contributed to the Unit's imputed new crude oil volume, the deficiency shall be made up with old oil. The volume of stripper well crude oil will consist in part of a first volume equal to its contribution to the Unit's imputed stripper well crude oil volume at the effective date of unitization and in part of the remaining imputed stripper well crude oil (after subtraction of all such first volumes) allocated among all Tracts based on Tract Participation.
3. Imputed stripper well crude oil not allocated above will be allocated among all remaining Tracts based on Tract Participation.

17. FAILURE TO TAKE IN KIND. If any party fails to take in kind or separately dispose of such party's share of Unitized Substances, Unit Operator shall have the right, but not the obligation, for the time being and subject to revocation at will by the party owning the share, to purchase or sell to others such share; however, all contracts of sale by Unit Operator of any other party's share of Unitized Substances shall be only for such reasonable periods of time as are consistent with the minimum needs of the industry under the circumstances, but in no event shall any such contracts be for a period in excess of one year. The proceeds of the Unitized Substances so disposed of by Unit Operator shall be paid to the Working Interest Owner of each affected Tract or a party designated by such Working Interest Owner who shall distribute such proceeds to the parties entitled thereto. Notwithstanding the foregoing, Unit Operator shall not make a sale into interstate commerce of any other party's share of gas production without first giving such other party sixty (60) days notice of such intended sale.

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3. Imputed stripper well crude oil not allocated above will be allocated among all remaining Tracts based on Tract Participation.

Dan Nutter Case 6366

Applicants

Exhibits 3 thru 12
(complete except
for Exhibits 1, 2,
and 13)

FILE COPY

AUG 4 1978

State of New Mexico



Commissioner of Public Lands

July 31, 1978

PHIL R. LUCERO
COMMISSIONER

P. O. BOX 1148
SANTA FE, NEW MEXICO 87501

Phillips Petroleum Company
P. O. Box 1967
Houston, Texas 77001

Re: Proposed-East Vacuum Grayburg-San
Andres Unit
Lea County, New Mexico

ATTENTION: Mr. J. E. Chrisman

Gentlemen:

We have reviewed the unexecuted copy of unit agreement, Exhibits "A" and "B", for the proposed East Vacuum Grayburg-San Andres Unit, Lea County, New Mexico. The form of agreement meets the requirements of the Commissioner of Public Lands, therefore, your agreement has been approved as to form and content.

As agreed by our telephone conversation of this date, Exhibit "B" should reflect all tracts in numerical order and your leases listed in chronological order. All corrections on Exhibit "B" are outlined in red in the enclosed xerox copy of Exhibit "B".

When submitting your agreement for final approval, the following are required by this office.

1. Application for final approval stating Tracts committed and Tracts not committed.
2. Two executed copies of Unit Agreement-One must contain original signatures, together with two copies of Exhibits "A" and "B".
3. One executed copy of Operating Agreement.
4. Two sets of all ratifications from Lessees of Record and Working Interest owners.
5. Order of the New Mexico Oil Conservation Commission.

BEFORE EXAMINER NUTTER	
OIL CONSERVATION DIVISION	
Phillips	EXHIBIT NO. 3
CASE NO. 6366	EXHIBIT

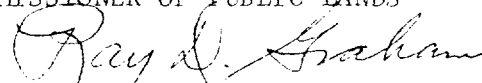
Phillips Petroleum Company
P. O. Box 1967
Houston, Texas 77001
July 31, 1978
Page 2.

6. Filing fee in the amount of Two Hundred (\$200.00) Dollars.
7. Re-designation of well names and numbers.
8. Initial Plan of Operation

If we may be of further help please do not hesitate to call on us.

Very truly yours,

PHIL R. LUCERO
COMMISSIONER OF PUBLIC LANDS

BY: 
RAY D. GRAHAM, Director
Oil and Gas Division

PRL/RDG/s
encl.

September 26, 1978

Re: Proposed East Vacuum Grayburg-
San Andres Unit
Lea County, New Mexico

Mr. Ray D. Graham, Director Oil & Gas Div.
Commission of Public Lands
State of New Mexico
P. O. Box 1148
Santa Fe, N. M. 87501

Dear Mr. Graham:

Mr. Kellahin has been asked to prepare our application to the Division of Conservation for creation of the East Vacuum Grayburg San Andres Unit. We hope to have the hearing on October 25. The Agreements will be identical with the copies furnished you except for a revised acreage total of 7,025.30 on p. 2 of the Unit Agreement, revised Exhibits A, B, and C and revised Article 18 of the Unit Agreement. Copies of these revisions are enclosed. Article 18 was revised to get rid of any confusion which may have resulted among the Working Interest Owners from the DOE's recent stripper regulation revision.

I very much appreciate the courtesy extended me when I was in your office on July 24 and your helpfulness in getting all the data included in Exhibit "B" correctly stated. I believe the order now agrees with your preference, and retaining the section number as the first two digits of the Tract number will be helpful in locating the Tracts.

Unless you feel that acknowledgment of the enclosed revisions is necessary, your July 31 letter will serve our purposes.

Yours very truly,

PHILLIPS PETROLEUM COMPANY

ORIGINAL SIGNED BY
J. E. CHRISMAN

J. E. Chrisman

JEC:mb
Encl.

cc: Mr. Jason Kellahin

EXHIBIT 4

EAST VACUUM GRAYBURG-SAN ANDRES UNIT

DETERMINATION OF UNIT PARTICIPATION

OWNED BY OVERRIDING ROYALTY INTEREST OWNERS

TRACT NO.	ORRI & OWNER	TRACT PART. %		UNIT PART. - %	
		INITIAL	FINAL	INITIAL	FINAL
1904	.0625 Exxon	.06411	.58090	.00401	.03631
2207	.075 Amerada Hess	.08775	.03779	.00658	.00283
1910	.125 Shell	.13168	.36099	.01646	.04512
1912	.01 Harold E. Jones	.01092	.13261	.00011	.00133
	.0625B Shell			.00068	.00829
2913	.125 Shell	1.75146	2.00209	.21893	.25026
2614	.125 Shell	.51529	.42296	.06441	.05287
2418	.125 Shell	.13176	.30137	.01647	.03767
2335	.0625 Marathon	.20139	.24994	.01259	.01562
2851	.0546875 Phillips	.05809	.31133	.00318	.01703
2054	.03125 Marathon	.01465	.11637	.00046	.00364
* [2957	.0625 Fredrick H. Burgland Est.	.20489	.46592	.01281	.02912
2059	.0546875 Phillips	.14130	.01631	.00773	.00089
2865	.0546875 Phillips	.07695	.10078	.00421	.00551
2270	.125 Mobil	.03727	.07150	.00466	.00894
* [2079	.01 Harold E. Jones	.01082	.07001	.00011	.00070
	.0625B Shell			.00068	.00438
1881	.075 John M.Kelly Est.	-	.09265	-	.00695
1982	.075 John M.Kelly Est.	-	.13018	-	.00976
2083	.075 John M.Kelly Est.	-	.05126	-	.00384
				.37408	.54106

Plus Basic Royalty	12.5	12.5
Total Royalty	12.87408	13.04106
W. I. Ownership	87.12592	86.95894
% of Total Royalty Owned by State	97.09432	95.85110

* only overriding
royalty owners who
are not also
WI owners

BEFORE REVENUE OFFICER	
OIL CONSERVATION DIVISION	
Phillips	EXHIBIT NO. 4
CASE NO.	6366

PART B

WORKING INTEREST OWNER	TRACT	UNIT PARTICIPATION - %		
		INITIAL	FINAL	COMPOSITE* (TENTATIVE)
Amerada Hess Corp.	2206	-	.08543	.07013
Amoco Production Co.	2576	.03547	.04542	.04364
Arapaho Petroleum	2270	.00233	.00447	.00409
Atlantic Richfield Co.	1904	.06411	.58090	.48835
	2230	.34300	.30083	.30838
	2437	.87720	.16590	.29329
	2418	.13176	.30137	.27099
	2614	.51529	.42296	.43950
	2913	1.75146	2.00209	1.95720
	3229	5.74378	7.01489	6.78724
OWNER TOTAL		9.42660	10.78894	10.54495
H. M. Bettis, Inc.	1910	.02370	.06498	.05759
	2054	.00263	.02095	.01767
OWNER TOTAL		.02633	.08593	.07526
L. O. Box	2059	.03533	.00408	.00968
W. T. Boyle & Co.	1910	.02370	.06498	.05759
	2054	.00264	.02095	.01767
OWNER TOTAL		.02634	.08593	.07526
Donaldson Brown A/C 1	2335	.03189	.03957	.03819
	2469	.00027	.01580	.01302
OWNER TOTAL		.03216	.05537	.05121
Donaldson Brown A/C 2	2335	.00168	.00208	.00201
	2469	.00001	.00083	.00068
OWNER TOTAL		.00169	.00291	.00269
John R. Bryant	2059	.01766	.00204	.00484
Chevron U.S.A. Inc.	2738	.85895	1.49111	1.37789
	2739	3.57513	2.99166	3.09615
	3236	4.81994	3.56440	3.78926
	3440	4.17424	3.06316	3.26215
OWNER TOTAL		13.42826	11.11033	11.52545
Cities Service Co.	2720	3.95617	1.01965	1.54556
Crown Central Petroleum Co.	1912	.01092	.13261	.11082
	2079	.01082	.07001	.05941
OWNER TOTAL		.02174	.20262	.17023
Davoil, Inc.	2576	.01260	.01613	.01550
Millard Deck	2059	.08831	.01019	.02418
Elk Oil Co.	1881	-	.04169	.03422
	1932	-	.05858	.04809
	2083	-	.02307	.01894
OWNER TOTAL		-	.12334	.10125
Exxon Co.	1903	-	.62367	.51197
	2801	3.36943	5.34834	4.99393
	3202	9.53857	10.46326	10.29765
OWNER TOTAL		12.90800	16.43527	15.80355
Ft. Worth National Bank Trustee #1979	2335	.10069	.12497	.12062
Getty Oil Co.	3308	2.05778	1.28872	1.42645
	3328	1.51919	1.77571	1.72977
OWNER TOTAL		3.57697	3.06443	3.15622
Great Western Drilling Co.	2576	.02287	.02929	.02814
Jack D. Hensley	2851	.00181	.00973	.00831
	2865	.00241	.00315	.00302
OWNER TOTAL		.00422	.01288	.01133
Larry O. Hulsey	1910	.01318	.03609	.03199
	2054	.00146	.01164	.00981
OWNER TOTAL		.01464	.04773	.04180
John M. Kelly Est.	1881	-	.04633	.03803
	1982	-	.06509	.05343
	2083	-	.02563	.02104
OWNER TOTAL		-	.13705	.11250

EAST VACUUM GRAYBURG-SAN ANDRES UNIT

WORKING INTEREST APPROVAL

AS OF 10-24-78

EXHIBIT 5

PART B - CONTINUED

WORKING INTEREST OWNER	TRACT	UNIT PARTICIPATION - %		
		INITIAL	FINAL	COMPOSITE* (TENTATIVE)
Joseph J. Kelly	1881	-	.00463	.00380
	1982	-	.00651	.00534
	2083	-	.00256	.00210
OWNER TOTAL		-	.01370	.01124
Kokemo Oil Co.	2270	.00233	.00447	.00409
	2207	.00549	.00236	.00292
OWNER TOTAL		.00782	.00683	.00701
Boyd Laughlin	2851	.00091	.00486	.00415
	2865	.00120	.00158	.00151
OWNER TOTAL		.00211	.00644	.00566
T. W. Little	2270	.00404	.00774	.00708
	2207	.02742	.01181	.01461
OWNER TOTAL		.03146	.01955	.02169
Hamilton McRae	2851	.00091	.00486	.00415
	2865	.00120	.00158	.00151
OWNER TOTAL		.00211	.00644	.00566
Marathon Oil Co.	0434	.06395	.05966	.06043
	1952	-	.14278	.11721
	1953	-	.09214	.07564
	3333	2.90007	4.14916	3.92546
	OWNER TOTAL	2.96402	4.44374	4.17874
Kenneth Midkiff Mobil Oil Corp.	2270	.00186	.00358	.00327
	1826	.24714	.08909	.11740
	1825	.12327	.07567	.08419
	1961	.08302	.08458	.08430
	2175	.25813	.23742	.24113
	2271	.13155	.17975	.17112
	2672	.20862	.63057	.55500
	3127	4.43564	4.57057	4.54640
	3374	1.52442	1.54153	1.53847
	3456	5.93605	5.46508	5.54943
	OWNER TOTAL	12.94784	12.87426	12.88744
Davis Payne	2270	.00404	.00775	.00708
	2207	.02742	.01181	.01461
OWNER TOTAL		.03146	.01956	.02169
Pennzoil Co.	2851	.04720	.25296	.21611
	2865	.06252	.08188	.07841
OWNER TOTAL		.10972	.33484	.29452
Neville G. Penrose Est.	2469	.00056	.03326	.02740
Petro Search, Inc.	2270	.01630	.03128	.02860
Phillips Petroleum Company	0149	1.82837	1.61531	1.65347
	0546	4.91331	4.84507	4.85730
	0524	5.88423	4.14654	4.45775
	1943	.03964	.15124	.13125
	2060	.43773	.37941	.38985
	2155	.09904	.16750	.15524
	2150	.02695	.13931	.11919
	2505	.29267	.22031	.23327
	2622	3.96585	1.47884	1.92425
	2642	.15483	.09621	.10671
	2631	.58700	.57020	.57321
	2658	.24243	.33494	.31837
	2643	.44568	.54475	.52701
	2721	2.85287	2.44676	2.51949
	2864	.08098	.37561	.32284
	2944	.00902	.28466	.23529
	2923	.08595	.40873	.35092
	2947	-	.37286	.30608
	2941	.04540	.36837	.31053
	3332	2.91244	3.46424	3.36542
	3366	1.48641	1.44414	1.45171
	3373	1.48621	1.61649	1.59316
	3345	1.46480	1.31282	1.34004
	3467	1.65754	2.38560	2.25521
	3568	-	.12795	.10503
OWNER TOTAL		30.99935	29.29786	29.60259

PART B - CONTINUED

WORKING INTEREST OWNER	TRACT	UNIT PARTICIPATION - %		
		INITIAL	FINAL	COMPOSITE*
				(TENTATIVE)
D. E. Radtke	2270	.00404	.00774	.00708
	2207	.02742	.01181	.01461
OWNER TOTAL		.03146	.01955	.02169
C. W. Seely	2270	.00233	.00447	.00400
Shell Oil Co.	0577	.60190	.22541	.29234
	1978	-	.10264	.08426
	1911	-	.25707	.21103
	1953	-	.09214	.07564
	2109	-	.05420	.04449
	2416	-	.18642	.15303
	2717	1.59428	1.41489	1.44702
	2819	.91257	.92386	.92184
	2962	-	.27131	.22272
	2957	.20489	.46592	.41917
	2963	.91042	.66249	.70639
OWNER TOTAL	3315	4.72528	4.13554	4.24116
Sohio Petroleum Co.	2335	.06713	.08332	.08042
Norman D. Stovall, Jr.	1910	.02370	.06498	.05759
	2054	.00264	.02095	.01767
OWNER TOTAL		.02634	.08593	.07526
S. B. Street & Co.	1910	.02370	.06498	.05759
	2054	.00264	.02094	.01766
OWNER TOTAL		.02634	.08592	.07525
Texaco, Inc.	2980	-	.15587	.12795
Turnco, Inc.	1910	.02370	.06498	.05759
	2054	.00264	.02094	.01766
OWNER TOTAL		.02634	.08592	.07525
Wainoco, Inc.	2851	.00726	.03892	.03325
	2865	.00962	.01259	.01206
OWNER TOTAL		.01688	.05151	.04531
Mrs. Mary D. Walsh	2469	.00085	.04988	.04110
		100.00000	100.00000	100.00000

10-24-78 TOTAL W.I.O. SIGN UP 44,116 4/2 95001

*Estimated values only. Actual Composite Unit Percentages will be calculated effective simultaneously with the unit becoming effective.