CASE 5460: Application of McCLELLAN OIL CORP. for a water-flood project, Eddy County

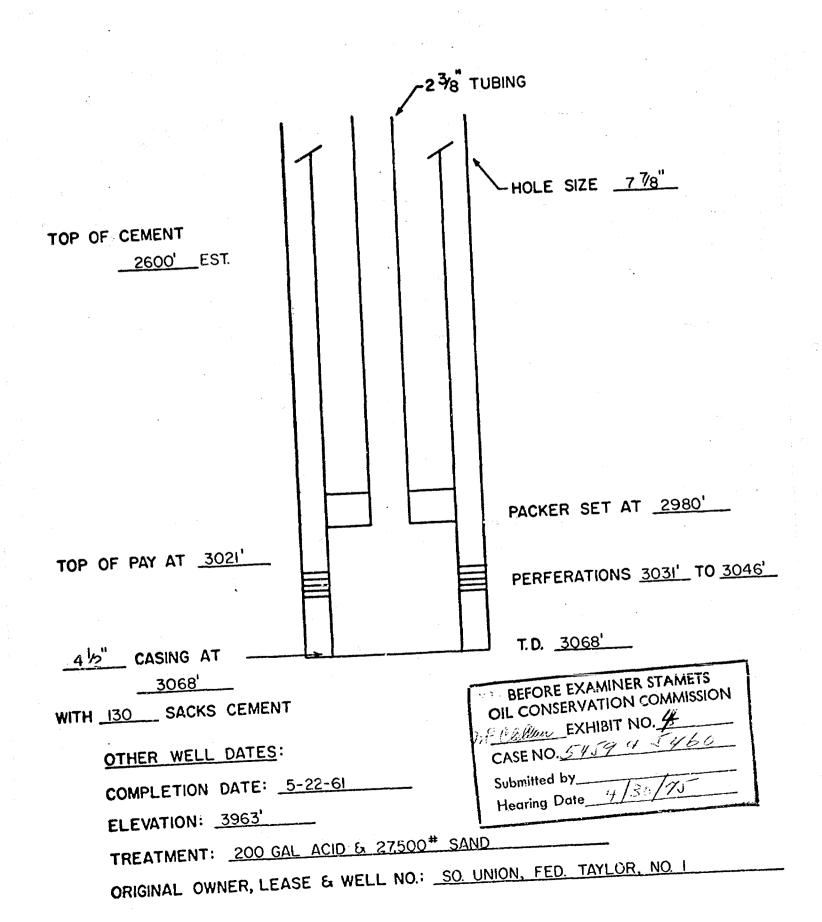
CHSE 110. 5460

Application, Transcripts, Small EXhibts

McCLELLAN OIL CORPORATION EAST HENSHAW PREMIER UNIT WEST HENSHAW GRAYBURG FIELD

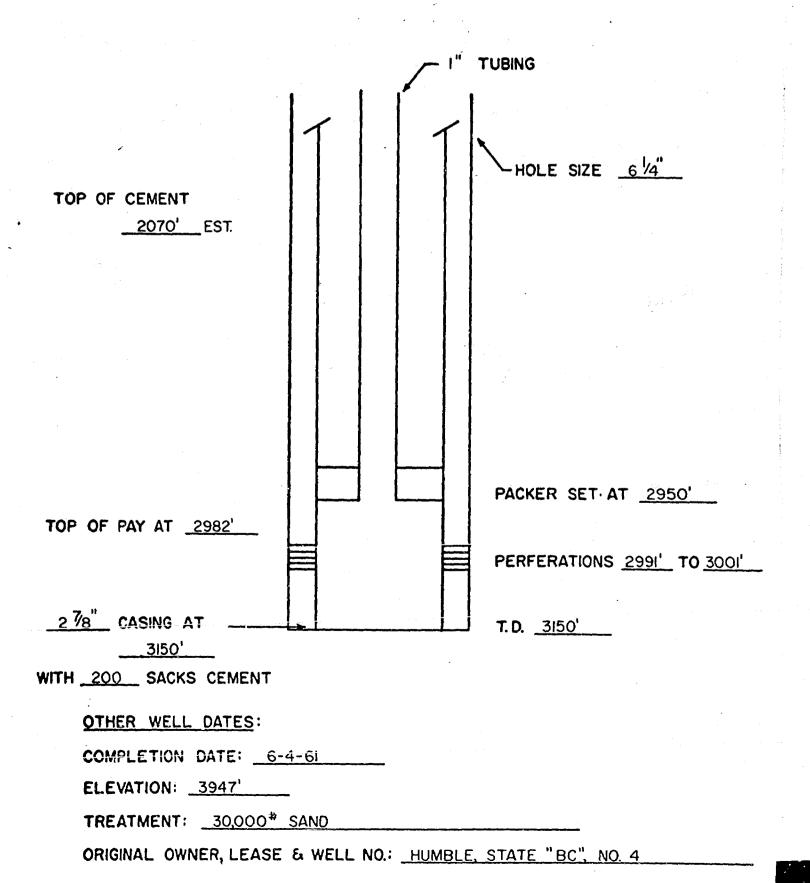
EDDY COUNTY, NEW MEXICO

DIAGRAMMATIC SKETCH
PROPOSED WATER INJECTION WELL
WELL NO. 6-1



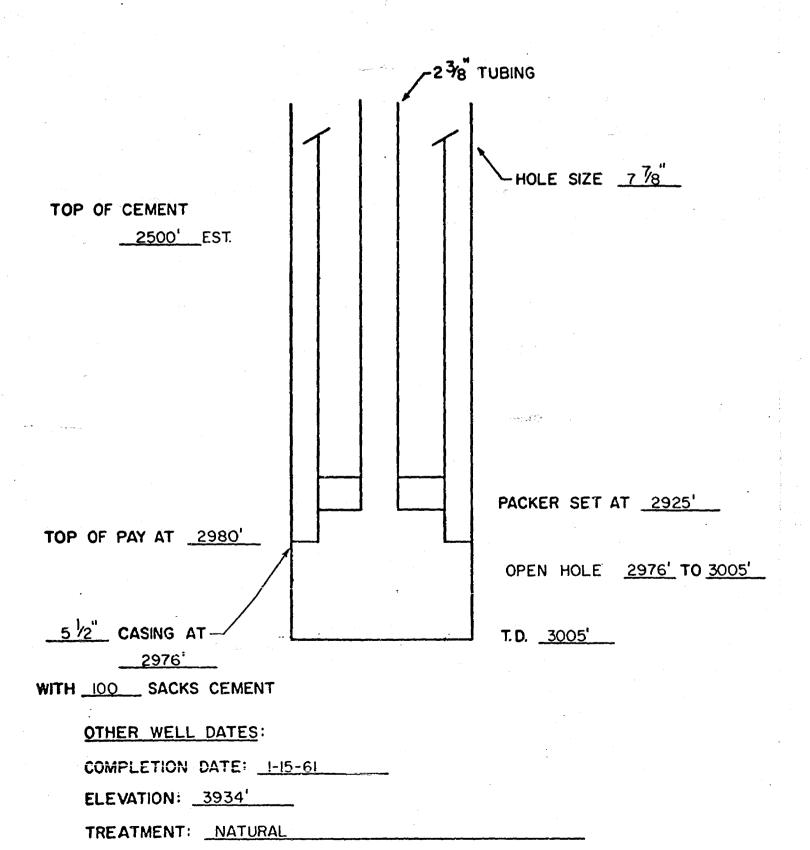
McCLELLAN OIL CORPORATION EAST HENSHAW PREMIER UNIT WEST HENSHAW GRAYBURG FIELD EDDY COUNTY, NEW MEXICO

DIAGRAMMATIC SKETCH
PROPOSED WATER INJECTION WELL
WELL NO. 10-4



EAST HENSHAW PREMIER UNIT WEST HENSHAW GRAYBURG FIELD EDDY COUNTY, NEW MEXICO

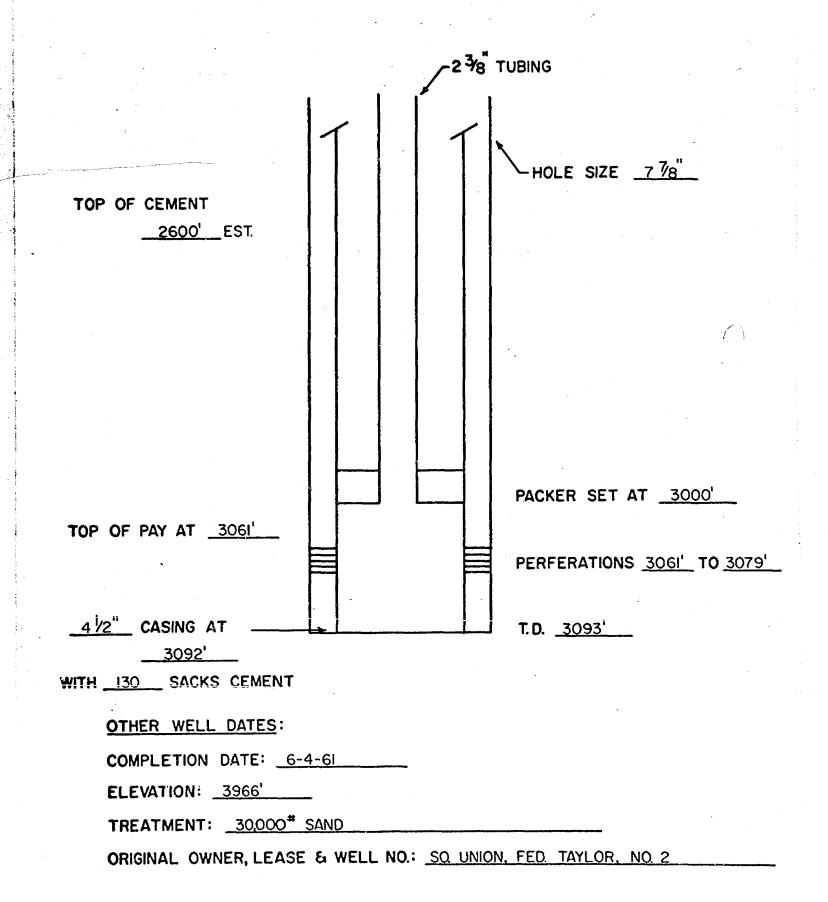
DIAGRAMMATIC SKETCH
PROPOSED WATER INJECTION WELL
WELL NO. 11-1



ORIGINAL OWNER, LEASE & WELL NO .: McCLELLAN, FED., NO. I

EAST HENSHAW PREMIER UNIT WEST HENSHAW GRAYBURG FIELD EDDY COUNTY, NEW MEXICO

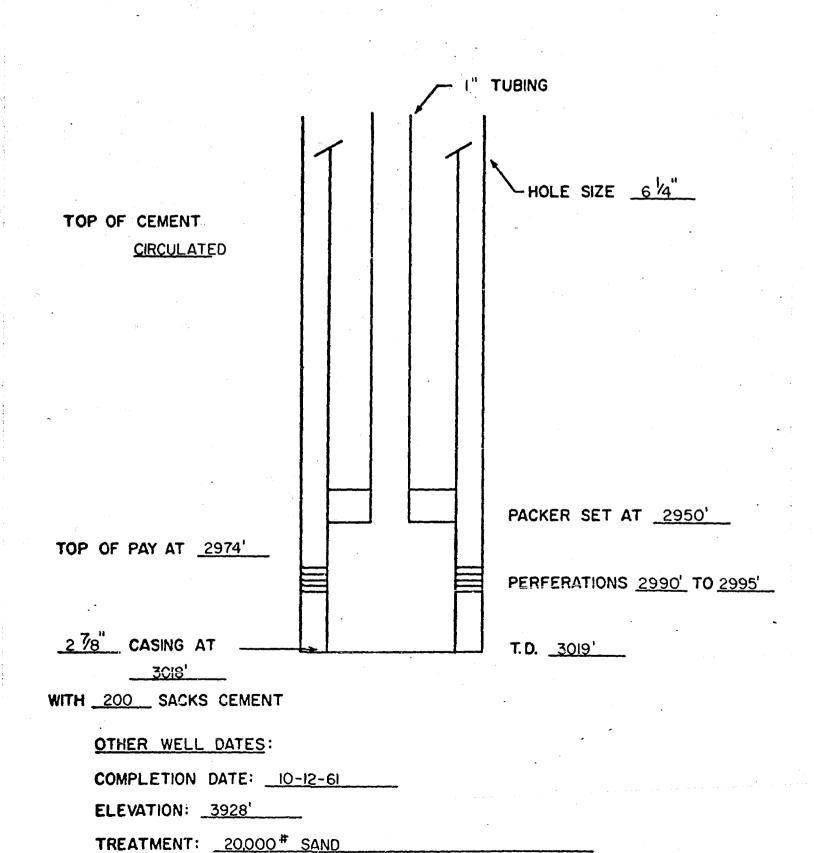
DIAGRAMMATIC SKETCH
PROPOSED WATER INJECTION WELL
WELL NO. 13-2



EAST HENSHAW PREMIER UNIT WEST HENSHAW GRAYBURG FIELD

EDDY COUNTY, NEW MEXICO

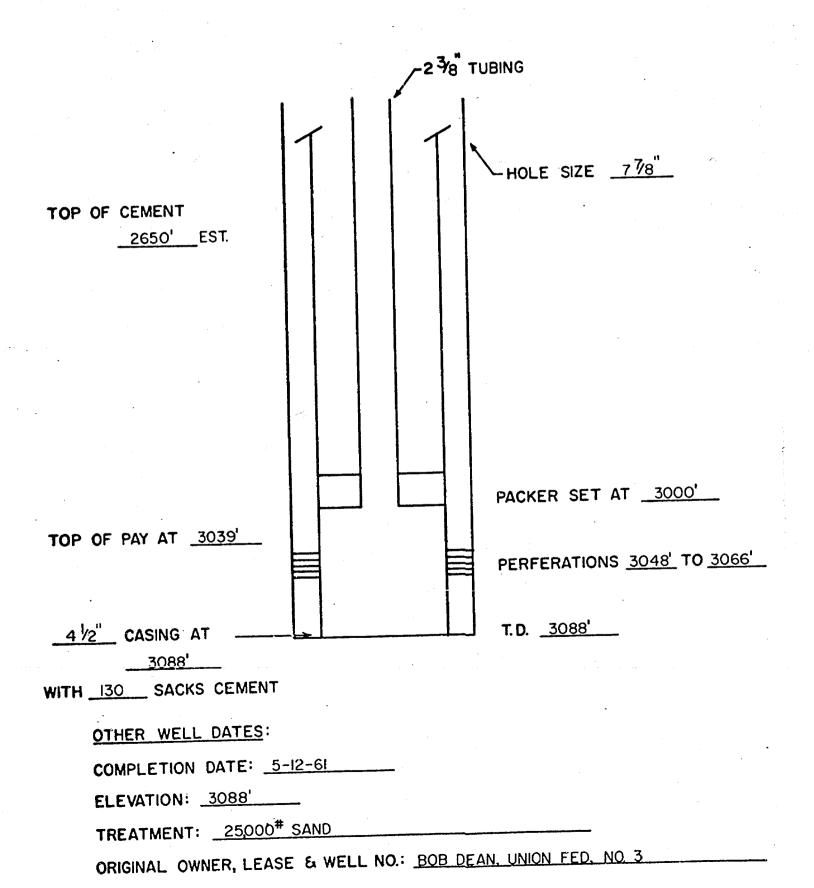
DIAGRAMMATIC SKETCH PROPOSED WATER INJECTION WELL WELL NO. 15-6



ORIGINAL OWNER, LEASE & WELL NO .: HUMBLE, STATE "BC", NO. 6

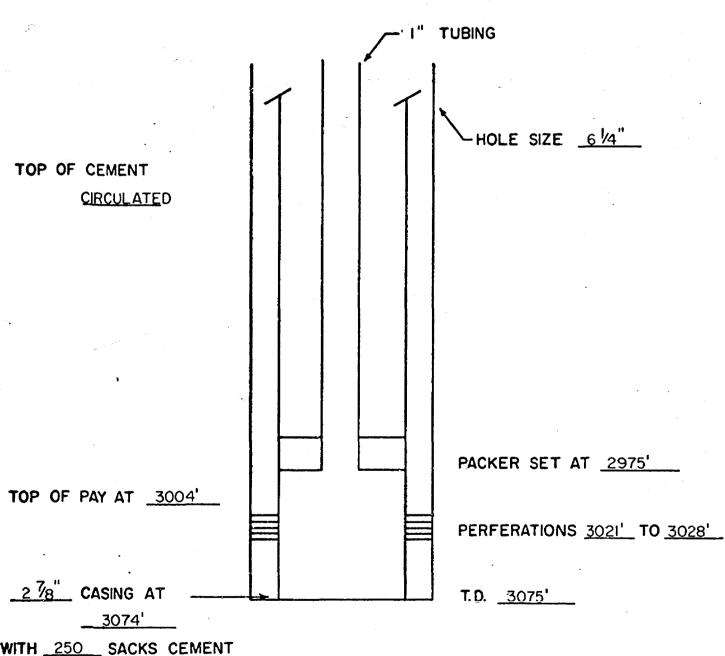
EAST HENSHAW PREMIER UNIT WEST HENSHAW GRAYBURG FIELD EDDY COUNTY, NEW MEXICO

DIAGRAMMATIC SKETCH
PROPOSED WATER INJECTION WELL
WELL NO. 19-3



EAST HENSHAW PREMIER UNIT WEST HENSHAW GRAYBURG FIELD EDDY COUNTY, NEW MEXICO

DIAGRAMMATIC SKETCH PROPOSED WATER INJECTION WELL WELL NO. 24-1



WITH 250 SACKS CEMENT

OTHER WELL DATES:

COMPLETION DATE: 9-6-61

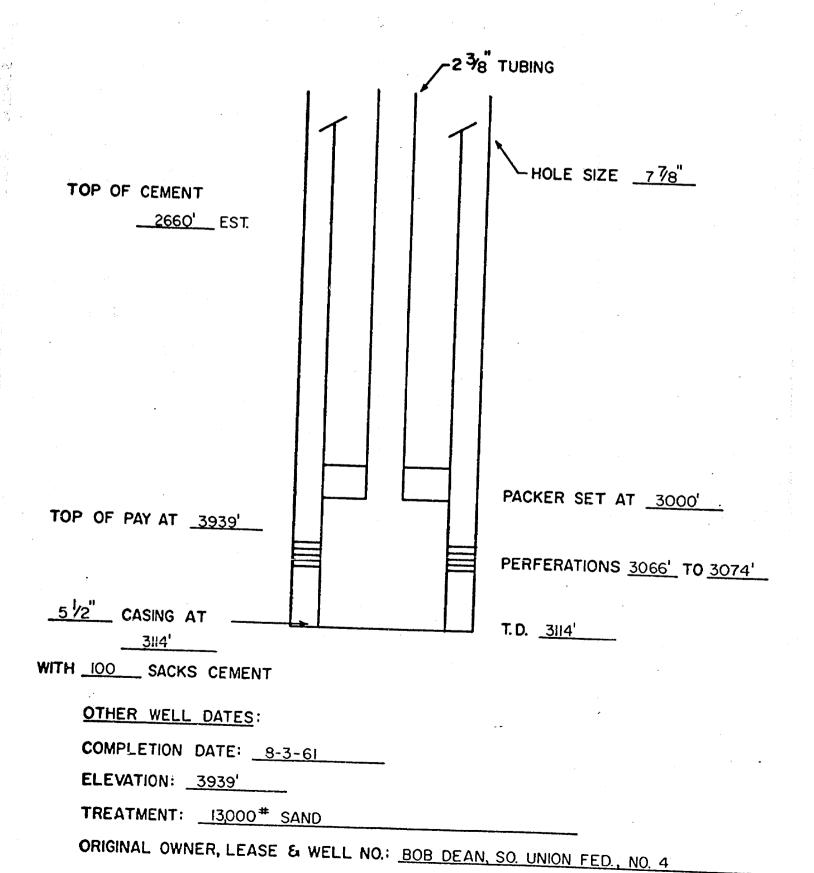
ELEVATION: 3926'

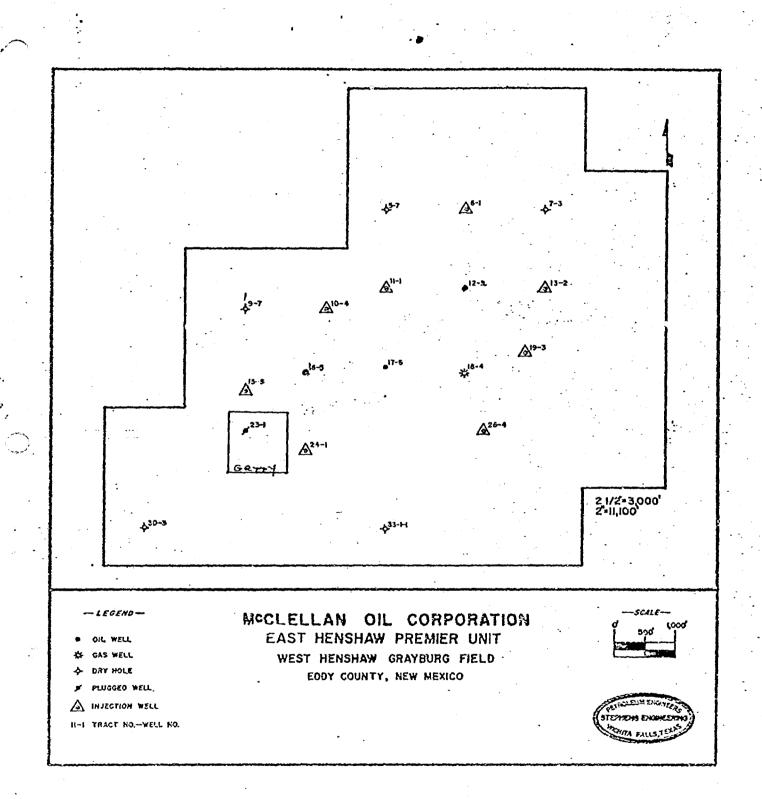
TREATMENT: 250 GAL ACID, 20,000 SAND

ORIGINAL OWNER, LEASE & WELL NO .: HUMBLE, STATE "BN", NO I

EAST HENSHAW PREMIER UNIT WEST HENSHAW GRAYBURG FIELD EDDY COUNTY, NEW MEXICO

DIAGRAMMATIC SKETCH PROPOSED WATER INJECTION WELL WELL NO. 26-4





WATER FLOOD STUDY EAST HENSHAW UNIT

WEST HENSHAW GRAYBURG FIELD

EDDY COUNTY, NEW MEXICO

If you go for the 1% over Ride, See: 1 - 76,5% Income Intrest

87.5 % Income Introd

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LOCATION OF FIELD & UNIT

The West Henshaw-Grayburg field is located on the Northwest Shelf of the Permian Basin in northern Eddy County, New Mexico. Production is from the Premier (Basal Grayburg) Sand of Permian age. The field is situated on a trend of intermittent Premier Sand production extending eastward for approximately 15 miles parrallel to the edge of the Northwest Shelf.

This study is primarily concerned with the easternmost portion of the West Henshaw-Grayburg field in the area of the proposed East Henshaw.

Unit. Within the proposed unit area there are 13 producing wells and 5 dry holes. (See Enclosure #1 Proposed Unit Map).

GEOLOGY

STRUCTURE

Structure on top of the Premier Zone in this local area is homoclinal southeast dip at approximately 120 feet per mile. This generally uniform dip is interrupted by a local southeast plunging nose in the proposed Unit area. (See Enclosure #2). There is no indication that structure directly controls production or productive limits in this portion of the reservoir. RESERVOIR

The top of the Premier Zone is encountered at an approximate depth of 3000 feet and has an average gross thickness of approximately 40 feet. This zone is composed of interbedded red shale and sand with thin stringers of dolomite and anhydrite. Directly underlying the Premier is the San Andres dolomite

The reservoir proper is the gray sand facies of the Premier which is composed of fine, well sorted, loosely cemented quartz grains. The gray sand grades laterally into red, silty sand and red shale with resultant loss of porosity and permeability. Loss of reservoir rock properties, as a result of this facies change, forms the stratigraphic trap from which this field produces.

Throughout the Permier production trend, and within the West Henshaw-Grayburg field itself, the gray sand facies is laterally discontinuous. However, over most of the proposed East Unit Area, the gray sand exhibits good continuity. (See Enclosure #3). Dry holes limit production to the north and south. No dry holes have been drilled to the east, but a general thinning of gray sand in that direction indicates production is limited to the proposed unit area. Production is limited to the northwest and southwest by dry holes. An undrilled location in the NE/4 of the SW/4 of Section 2 prevents assuming that definite separation exists between the

Unit Area and the main portion of the field. For this reason the E/2 of the SW/4 Section 2 has been included in the proposed unit area.

DEVELOPMENT

The first development in the unit area was in 1961 with the completion of the Hal M. Stierwalt No. 1, So. Union Federal. The development continued with all of the wells being completed by April of 1962.

WELL COMPLETION PRACTICES

Well completions in the proposed unit area have varied from 5 1/2" casing over open hole to 2 7/8" tubing for casing. All of the wells have been sard-oil fractured. Five of the wells are completed with the 2 7/8" casing

perforated. All the other wells have $\frac{1}{2}$ casing perforated with the exception of the Hal M. Stierwalt No. 1 So. Union Federal which has open hole under the 5 $\frac{1}{2}$ casing.

PRODUCTION HISTORY

The early production rates were much as expected with all the wells producing as expected during the flush production period. After all of the wells were on production by the pump the production by individual leases and wells has been very erratic and depends a great deal on the maintenance of the well bore, with hot oil, chemical, water, and cleanouts to achieve the best production rates. The primary production rate is now below 3 barrels per day on all but 3 wells in the proposed unit area, the Stierwalt State "BN" No. 1, Tidewater "AC" No. 1, and Hal Stierwalt et al No. 2. Of these three wells, the best producer is the Stierwalt et al No. 2. making 10 to 11 barrels per day. All of the active 11 wells averaged together are now producing 3 barrels per well per day, the limit calculated to be the minimum economic rate. This is hown on the history and predicted performance curve (Enclosure #4). The committee constructed individual lease decline curves which showed that in actuality all of the leases were at the end of the economic primary period and that the cumulative production to January 1, 1967 would be a more realistic parameter to use and would reflect the ultimate primary. This gives the unit area an ultimate primary of 242,394 barrels. These figures are shown by operators on the potential unitivation parameters. Since some production will be made before the Unit becomes effective, an ultimate primary of 243,000 barrels was used for the flood performance calculations.

RESERVOIR DATA

PCROSITY & PERMEABILITY

Of the 18 wells in the proposed unit area, Il were cored through the Premier Sand. Porosities of the cored gray sand intervals average 14.9% with a maximum measurement of 26% and a minimum of 4.5%. Permeabilities in excess of 100 millidarcys were measured from these cores with the great majority of the gray sand falling within the 1 to 10 millidarcy range.

WATER SATURATION

There is no indication of an oil-water contact from any production or drilling data in the unit area. Therefore, capillarity appears to control water saturations. Water saturation of 28 to 43 per cent have been determined from electric log analysis in the greater West Henshaw Area and Core Laboratories has estimated 26 to 38 per cent from the cores analized from the unit area. Since both methods calculate a saturation of 30 to 35 per cent for the average porosity of 14.9 per cent the more conservative 35 per cent has been used.

NET PAY THICKNESS

Since more than half the wells within the proposed unit area were cored in the Premier sand, this data was used as the basis for determining net pay. A gross relationship between porosity and permeability was developed and is graphically represented by Enclosure 35. Not pay was then determined for the cored wells in the following manner:

Pormaability

Porosity

0.5 md. and above

All not pay

0.5 md, - 0.2 md.

All over 11% net pay

Core porosities and, to some extent, permeabilities were correlated to radioactivity and/or electrical log characteristics for the same wells. Using these logs for correlation and interpretation not pay was then picked for the remaining wells in the area. For the producing wells not pay thicknesses average 8.7 feet, with the maximum 14 feet and the minimum 5 feet. From this data the not pay isopach map was constructed and the proposed East Unit Area reservoir volume determined at 4298 acre feet. (See Englesure #6).

FORMATION VOLUME FACTOR

P. V. T. samples were obtained from the Shell, Williams, Federal B-1, July 6, 1959. The samples were taken from the separator. The reservoir pressure was measured at 909 PSI compared to an original pressure of 1030 PSI in the field. The samples were recombined at a gas-oil ratio of 336 cubic feet per barrel and saturation pressure of 1030 PSI and a volume factor of 1.176 were obtained.

WATERFLOOD STUDY

RESIDUAL OIL

No data or methods were available to determine residual oil saturation. However, the literature has many references to these factors from many reservoir over a wide range of values. This data indicates that residual saturations of 25 to 35 per cent are most common in this type of rock. Therefore, a residual oil saturation of 30 per cent has been assumed. FLOOD PATTERN

The flood pattern used in this study was of a peripheral type. (See Enclosure #7). This pattern was chosen as it would give the maximum flood area consistant with high performance sweep efficiency. The Hal M. Stierwalt et al Taylor Federal Well #4, will have to be studied in more detail as to

why the poor performance and non-commercial nature. If the well is found to have a stray gas sand or due to completion, the main sands have not been effected, a work over will be required. If the study finds a small gas cap in the area (information now in hand doesn"t justify this) this well will have to be used as an injection well in place of the Hal M. Stierwalt Southern Union Federal Well No. 4. The other possible change is not a problem but a modification which would leave additional current income available during fillup and give some boost to the secondary. If sufficient water could be injected without the Stierwalt et al Taylor Federal Well No. 2, the use of this well for injection could be delayed or delated entirely. The small size of the reservoir to be flooded allows a large latitude in the flood pattern to be used with the same degree of efficiency.

WATER INJECTION RATE

The water injection rate for the flood has been set for 1000 barrels per day. This rate will require the 5 wells set up in the pattern, PERFORMANCE CURVES

The performance curves have been constructed according to the Hurst method using the displacement factor of 3.5. (See Enclosure #8).

The flood area performance curves were modified to the permeability profile of the flood area by a method developed by Hurst and Van Everdinger. In making the profile the six cores from the Unit wells were used. Only the footages picked from those cores as not feet by the technical committee were used. The effective thickness was then calculated from the flood area developed acres and developed acre-feet. (See Enclosure #9). The basic performance curves were then used with the permusbility profile in the manner shown in

Enclosure #10 to construct the modified performance curves. (See Enclosure #11). CALCULATION OF PRODUCTION PERFORMANCE

The calculations of oil and water production were made from the modified performance curves using the basic data shown by Enclosure #12. The average porosity was taken from the same 6 cores for the Unit. The developed AC-Ft and developed acres for the flood area were picked from the 10 acres grid sheet prepared by the technical committee. This pick was made from the area that was expected to be effected by the sweep of the flood and is shown by the dotted line on Enclosure #7. The Mobile Oil was assumed to be the original oil in place less the produced and residual oil. The production from the Unit after fillup was assumed to come from the flood area only. Using this data the calculations of oil and water productions are presented by Enclosure #13. The calculations have been adjusted by 0.80 to account for the water lost to the "outside" and sand discontinuities. Enclosure #4 shows the expected production curve.

ADDITIONAL DEVELOPMENT

The only additional development recommended for completion of the flood would be the well shown on Enclosure #7. This well located on Tract #25 would give the complete peripheral coverage required for the most efficient recovery of the oil with the flood area. The well would be expected to encounter some 6.5 feet of net sand and develop a net primary reserve of 20,000 barrels with a total reserve of 47,000 barrels. The cost of this well is estimated to be \$30,000 to drill, complete and equip. Drilling the well will be delayed until the flood performance indicates the economic fersibility.

The other development location that would benefit the Unit is the location in the NE/4 of SH/4 Section #2. This location on Tract #22 could be very effective in the flood by extending the flood area of the Unit in an effective manner. It is doubtful that sufficient sand would be encountered in order to make an effective injection well. Therefore, it is not recommended that the well be drilled.

WATER SUPPLY

The water supply for the flood would come from the Double Eagle Water Company of Roswell, New Mexico. They have advised that we could contract for 500,000 barrels at a price of \$0.0275 per barrel with additional water priced at \$0.0275 per barrel. The contract would call for an initial payment of \$2750.00 for the first 100,000 barrels in advance, with the remaining paid by the month. The contract will also require the unit to have 600 barrels of storage on the Unit. The total make up requirement is established to be 1,440,000 barrels.

WATER INJECTION FACILITIES

The water injection facilities are planned as a closed system with provisions for skimming and settling on the produced water side. The produced and supply water will be mixed and injected together. The injection station will consist of one electric motor driven triplex pump. The injection system to be steel lines protected with inhibitor if required. The injection lines will be buried with an external protection.

PRODUCTION FACILITIES

The production facilities will be consolidated and facilities for LACT will be used. This is based on the assumption that the Unit can get a pipe

The Unit has sufficient pumping units to handle the These will have to be moved from the injection wells and line connection. expected load. installed where needed.

The summary of cost to install the flood and drill the additional well INSTALLATION COST recommended as follows:

mended as xi-	Amount
Drill, complete & equip. on well Tract #25 Convert 5 wells to injection service Move and install 5 pumping units & electricity Work over one well HMS et al Fed. #4 Water injection station and system Produced water system Consolidate tank battery, LACT, and test facilities Contingencies	\$30,000 10,000 7,000 10,000 30,000 5,000 13,000 5,000 \$110,000
Total Cost Unit	\$ 144,800
Tangibles Intangibles	\$ 60,200

ECONOMICS

Enclosure #14 shows the economics as derived from the calculated production and run by the Tidewater computer. The input data used here was determined by the committee. Following are definition of abbreviations used on these computer sheets:

000	
L. C. F. I. T. T. O. C. B. F. I.T. A. F. I. T. C. O. E.	- Lifting Costs - Federal Income Tax - Tidewater Oil Co Before F. I. T After F. I. T Cash Operating Expenses and Taxes) After Coerating Expenses and Taxes
	1 - POP

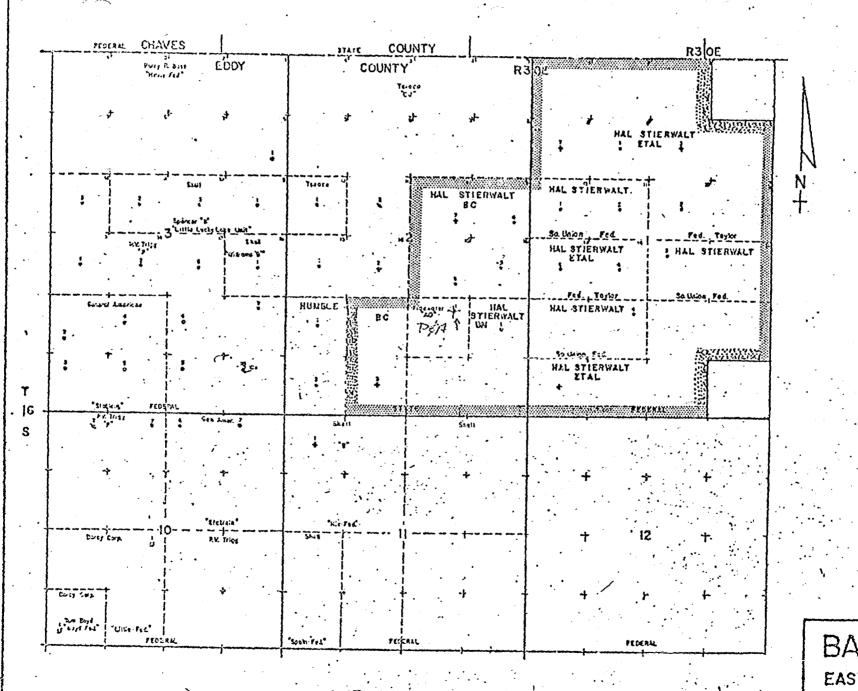
It may be noted that a provision for salvage has not been made for the equipment after the end of the flood.

UNITIZATION

Unitization will be necessary in order to flood the East Henshaw
Unit Area. The development along the lease lines and the one well lease
makes a cooperative flood almost impossible. The technical committee
has derived a set of potential unitization parameters. These parameters
are shown on Enclosure No. 15. The calculated interest to each working
interest are shown on Enclosure No. 16.

The isopach map was constructed as outlined under "Net Pay Thickness" in the Geological Section of the report. From this isopach the unit area was divided into 10 acre grids and the net pay picked for each grid by the five point method. These volumes were accumulated into 40 acre units called tracts shown on Enclosure No. 17. This data was then tabulated and given by tracts by operator. (See Enclosure #18).

The remainder of the parameters were statistically derived, therefore, they need no explanation.

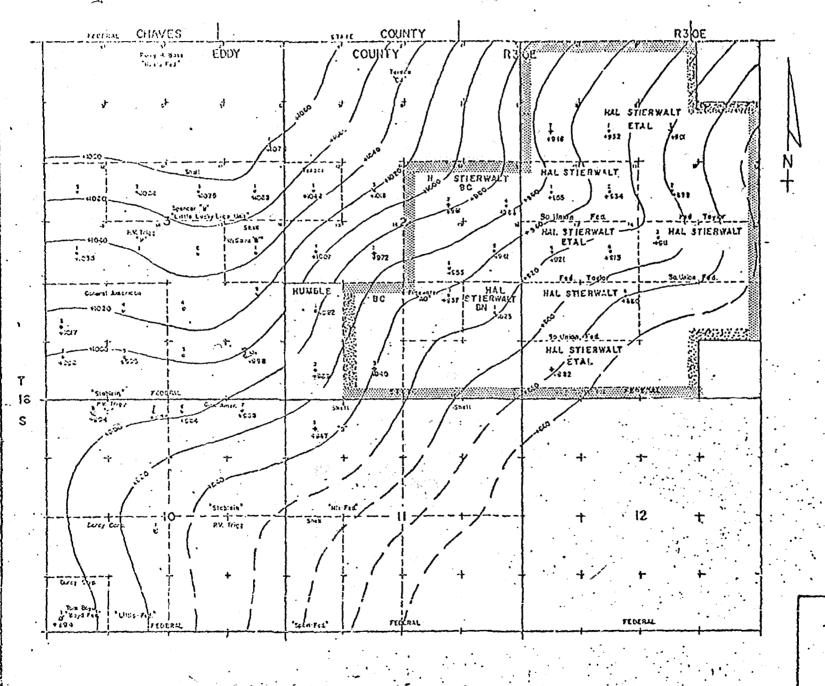


BASE

EAST HENSHAW

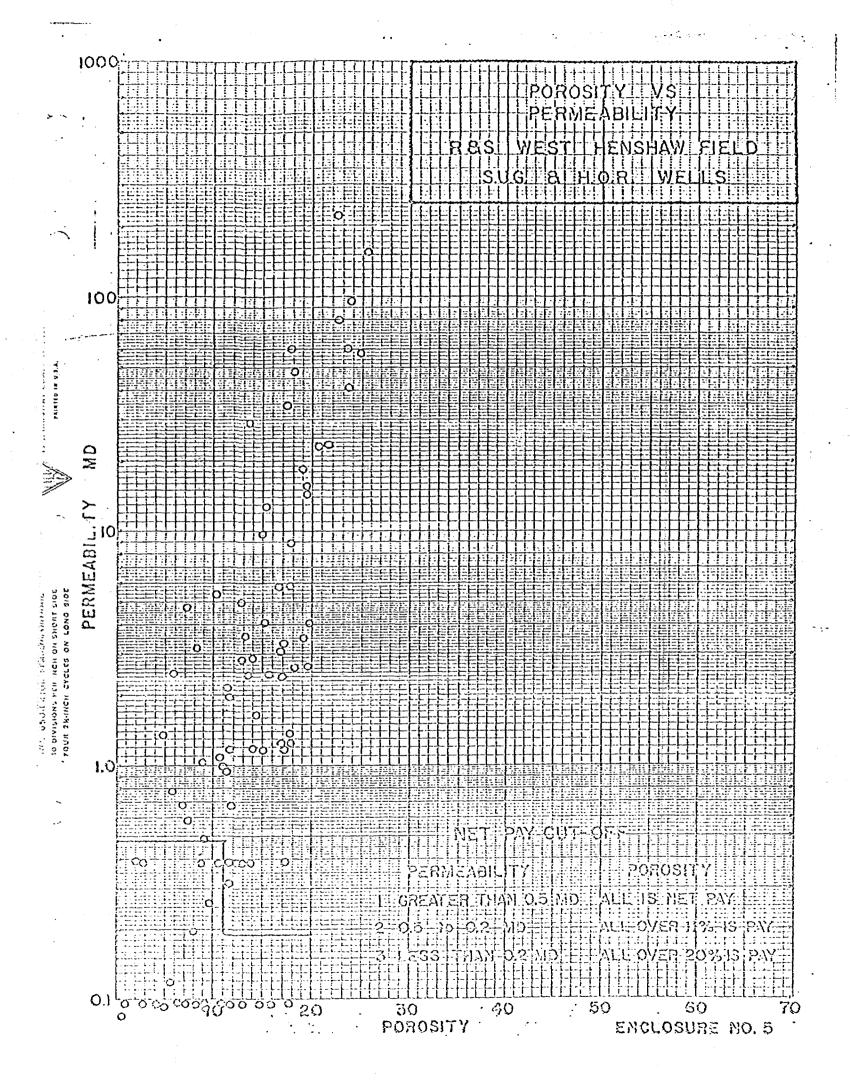
PROPOSED UNIT

AREA PROPOSEO UNIT OUTLINE SCALE: ("=1000"



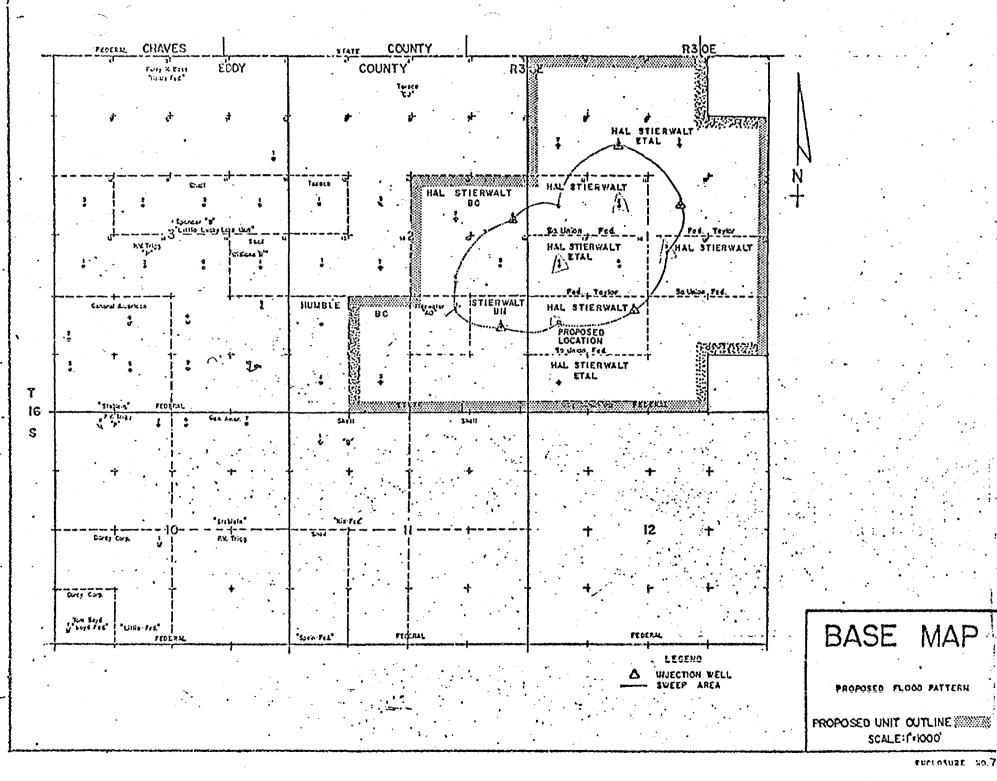
STRUCTURE MAP TOP PREMIER SAND

PROPOSED UNIT
AREA
PROPOSED UNIT OUTLINE



.;

3-64 3 m 20 10m2 SONAS REINER SANOS NET PAY ISOPACH 91 *L2 FECTRAL CHAVES COUNTY COUNTY YCÖ3



PERMEABILITY DISTRIBUTION AND EFFECTIVE THICKNESS IN LAYERS PREMIER SAND, EAST HENSHAW UNIT

To an No	Permeability Range (Md)	No. of Samples	Mean Perm (Md)	Effective Thickness Ft.
Layer No.	128 - 64	6	96	0.880
1	64 - 32	7	48	1.030
2	32 - 16	5	24	0.730
3	16 - 8	6	12	0.880
4	8 - 4	ų	6	0.590
5	4 2	14	3	2.050
6	2 - 1	9	1.5	1.320
7	1 - 0.5	9	0.75	1,320
8	1 - 0.9	60	•	8,800
•			•	_

The Total Thickness Calculated from AC - Ft. in flood area and acres effected. The Permeability from 6 Cores in the Unit Flood Area. Humble State "BC" No. 5 & 6, and State "BN" No. 1. Hal Stierwalt et al Taylor Federal Nos. 1, 2 and 6.

REPRESENTATIVE CALCULATION OF MODIFIED PERFORMANCE CURVES

(1)	(2)	(3) Water	(4)	(5)	(6)	(7) Water	(8)
H Ft.	K Md	Injected & F V S	(1)x(3)	Oil Recovered (\$ Nobil Oil)	(1)x(5)	Production & F V S	(1)x(7)
0.830 1.030 0.730 0.850 0.590	96 48 24 12 6	50.00 25.00 12.50 6.25	44.00 25.75 91.25 55.00	30.60 2.90	26.93 2.99		The statement
2.050 1.320 1.320 8.800	3 1.50 0.75	3.13 1.56 0.78 0.39 10.34	18.44 31.98 10.30 5.15 909.62	3.40	29.92		
0.860 1.030 0.730 0.880 0.590	96 48 24 12 6	100.00 50.00 25.00 12.50 6.25	88.00 51.50 18.25 11.00 3.69	82,20 30,60 2,90	72.34 .31.53 2.12	12.50	11.00
2.050 326 1.320 8.800	3 1.50 0.75	3.13 1.56 0.78 20.67	6,40 2,06 1,03 181,93	12.04	105,98	1,25	11.00
0.880 1.030 0.730 0.850 0.590 2.050 1.320	96 48 24 12 6 3 1,50 0,75	1600.00 800.00 400.00 200.00 100.00 50.00 25.00 12.50	1408.00 824.00 292.00 176.00 59.00 102.50 33.00 16.50	99.60 99.60 99.60 99.60 82.20 30.60 2.90	87.65 102.59 72.71 87.65 48.50 62.73 3.83	1500,00 700,00 300,00 100,00 12,50	1320,00 721.00 219.00 88.00 7.38
8, 800		330,80	2911,00	52,92	465,66	267,66	2355.38

BASIC DATA

			Total Unit	<u> </u>	lood Area
Average Porosity (%) ,		14.9		14.9
Connate Water Satur	ation (%)		35	:	35
Formation Volume Fa	ctor		1.176	•	1.176
Developed Acres	•	•	593	- -	302
Developed Acre Feet			3791		2569
Average Thickness (calc. ft.)		6,4		8.8
Original Oil - In -	Place (MSTB)	•	2420		1705
Residual Oil Satura	tion (%)	. •	30	•	30
Floodable Void Space	e (Mbbls.) (1)		•		1404
Mobil Oil (MSTB) (2)		-		1020
Cumulative Production	on (Mbbls)	•	243		173
Primary Ultimate Pro	oduction (Mbbls.)		243		173
Primary Recovery (%))		10	-	10
Ultimate Recovery Wi	ith Flood (Mbbls.)		584	•	514
Increase Over Primar	ry (Mbbls.)		341	•	341
Recovery With Flood	(%)	÷:	24		30

⁽¹⁾ Floodable void space is pore volume less residual oil saturation.

⁽²⁾ Mobil oil is original oil - in - place (STB) less residual oil (STB) and produced oil (STB).

CALCULATION OF OIL AND WATER PRODUCTION

						•	•	•
Year	Cumulatiye Water Injected	Input % Floodable Void Space	Per Mobils Cum.	Cent Oil Prod.	011 Produced	Corrected 011 Produced (0,8)	Cum. Oil Produced	Avg. Oll Prod. (Bbls / Mo.)
1/4	90,000	6.41						•
1/2	180,000	12.82	6.00	6.00	61,000	48,800	48,800	16,300
3/4	270,000	19.23	11,25	5.25	53,600	42,900	91,700	14,300
1	360,000	25.64	14.75	3.50	35,700	28,600	120,300	9,533
1 1/4	450,000	32.05	18,25	3 . 50	35,700	28,600	143,900	9,533
1 1/2	540,000	38.46	21,25	3.00	30,600	24,500	173,400	8,167
1 3/4	630,000	44.87	23,50	2,25	23,000	18,400	191,800	6,133
\bigcirc	720,000	51.28	25,50	2,00	20,400	16,300	208,100	55,433
3	1,080,000	76.92	31,25	5.75	58,700	47,000	255,100	3,917
Ļ	1,440,000	102.55	34.25	3.00	30,600	24,500	279,600	2,041
5	1,800,000	128,21	37.00	2.75	28,100	22,500	302,100	1,875
6	2,160,000	153.85	39.50	2.50	25,500	20,400	322,500	1,700
7	2,520,600	179.49	41.75	2,25	23,000	18,400	340,900	1,533
8	2,880,000	205.13	43.75	2,00	20,400	16,300	357,200	1,358

Input rate estimated at 1,000 barrels of water per day (200 B/D per well x 5 wells) Floodable void space - 1,404,000 Mobile Oil - 1,020,000 bbls. Economic limit - 1500 bbls, oil per month .

CALCULATION OF OIL AND WATER PRODUCTION

	Cum. % of Void Space Flooded	% of Void Space V Flooded Pro	later oduced	Corrected Water Produced	Cumulative Water Produced	Avg. Wtr. Prod. (Bbls/Mo)	Estimated Total Fluid Production
1/4							67,392
1/2	2				8,424	2,805	67,392
3/4	0.75	0.75	10,530	8,424	-	8,412	64,584
	3.00	2.25	31,590	25,272	33,696	10,286	70,200
1	5.75	2.75	38,610	30,888	64,584	13,103	73,008
1/2	9.25	3.50	49,140	39,312	103,896	15,910	73,008
•		4.25	59,670	47,736	151,632	17,782	75.816
3/4	18.25	4.75	66,690	53,352	204,984	18,719	289,224
2	38.25	20.00	280,800	224.640	429,624	19,889	272,376
3		21.25	298,350	238,680		20,357	275,184
4	81.25	. 21.75	305,370	244,296	912,600	21,293	283,608
5		22.75	319,410	255,528			289,224
6	104.00	23.50	329,540	263,952	1,432,080	21,995	286,416
7	127.50	23.50	329,540	4	1,696,032	21,995	y
8	151.00	٠,٠٠٠		• .			

CASE NO. 94036

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DATA ERRORS -- CASE NO. 94038

LEGEND

Enclosure 14

HECESSARY DATA - CANNOY BE IGNORED.
---- HISSING DESCRIPTIVE INFORMATION.

EAST HENSHAW

POTENTIAL UNITIZATION PARAMETERS

TRACT	OPERATOR	NO. WELLS	PRODUCTIVE ACRES	DEVELOPED ACRES	PRODUCTIVE ACRE-FEET	DEVELOPED ACRE-FEET	CUMULATIVE PRODUCTION TO 1-1-75
1	Stierwalt, Hal M. Federal	. 8	542.7	360	2,552.7	2,275.8	117,918
2	Stierwalt, Hal M. State "BC"	. 3	203.5	153	1,209.4	1,000.4	104,838
3	Stierwalt, Hal M. State "BN"	1	56.0	40	333.7	312.6	30,588
24	Tidewater	1	40.0	40	202.4	202.4	21,730
TOTAL		13	842.2	593	4,298.2	3,791.2	275,074

Recent Production
1973 Production: 4,469
1974 Production: 6,411 11,080

Average daily production from Sec. 1: 3-5 bbls. oil/day Average daily production from Sec. 2: 22-25 bbls. oil/day Producing from Sec. 2: Tract 10-4 & 10-6 Producing from Sec. 1: Tract 11-1, 12-2, 19-3

EAST HENSHAW
POTENTIAL UNITIZATION PARAMETERS

TRACT	OPERATOR	NO. WELLS	PRODUCTIVE ACRES	DEVELOPED ACRES	PRODUCTIVE ACRE-FEET	DEVELOPED ACRE-FEET	CUMULATIVE PRODUCTION TO 1-1-75
1	Stierwalt, Hal M. Federal	61.53846	64.43837	60.70826	59.38998	60.02849	42.86774
2	Stierwalt, Hal M. State "BC"	23.07692	24.16291	25.80101	28.13736	26.38742	38.11265
3	Stierwalt, Hal M. State "BN"	7.69231	6.64925	6.74536	7.76371	8.24541	11.11992
Ц	Tidewater	7.69231	4.74947	6.74537	4.70895	5.33868	7.89969
TOTAL		100.00000	100.00000	100.00000	100.00000	100.00000	100.00000

Pari & Bass Pari & Bass Paris Fis COUNTY EODY R3 SE 0 3 0 3 Tucco HAL STIERWALT (3) (8) HAL STIERWALT (13) <u>(i)</u> **(i)** (4) So. Union HAL STIERWALT HAL STIERWALT 13; (19) 23 Fed. Taylor HAL STIERWAL BN HUNSLE lide din 1 HAL STIERWALT **@ ② 2**3 ' **(27) (1)** 0 12 Usion Fed HAL STIERWALT ·(3) . 69 **(3)** . - ③ • 🚱 Ţ **®** (3) 18 s Ducy Carp

BASE MAP

" 40 ACRE TRACT MAP

TRACT NUMBER
PROPOSED UNIT OUTLINE SEALE: (*=1000)

TECHNICAL COMMITTEES TRACT DETERMINATION OF DEVELOPED ACRE FEET

Tract		Prod.	Unit	Prod.	Dev.	Acre	Dev. Acre
No.	Wells	Wells	Acres	Acres	Acres		Feet
9 ·	State "BC" #7		40.00	17.00		70.1	
10	State "BC" #4	1	40.00	33.00	33.00	19.4 163.6	762 6
13	State "BC" #6	î	40.00	40.00	40.00	297.2	163.6
16	State "BC" #5	ī	40.00	40.00	40.00	482.4	197.2 482.4
22	None		40.00	40.00	*00.04	157.2	157.2*
. 24	State "BN" #1	ı	40.00	40.00	40.00	312.6	312.6
30	State "BC" #3	~	40.00	33.50	, 1,0.00	89.6	0.320
31	None		40.00	3.50	,	1.6	
32	None .	. •	40.00	12.50		19.5	
	012		260.00	. מלמ למ	700 00	•	
•	Stierwalt Total	Į,	360.00	259.50	193.00	1543.1	1313.0
23	State "AO" #1	1	40.00	40.00	40.00	202.4	202.4
	Tidewater Total	1	40.00	40.00	40.00	202.4	202.4
11	S. U. Fed #1	1	40.00	40.00	40.00	324.2	324.2
12	S. U. Fed #2	ī	10.00	40.00	40.00	269.8	269.8
19	S. U. Fed #3	ī	40.00	40.00	40.00	194.0	194.0
20	None		40.00	32.00		49.0	-,4:0
25	None		40.00	40.00	40.00*	253.4	253.4*
26	S. U. Fed #14	1	40.00	40.00	40.00	169.0	169.0
	Hal Stierwalt Tot	al li	_ 2կ0.00	232.00	200.00	1259.4	1210.4
1	None	•	40.66	0.20		0.1	
2	None		40.74	11.00		11.1	
3	None		1,0.82	1.00		.4.	
. 4	None		40.90				
3 4 5 6	Taylor Fed #7		40.00	18.00		39.7	•
	Taylor Fed #1	. 1	ħ0.00	40.00	40.00	206.0	206,0
7	Taylor Fed #3		1,0.00	17.50		211.0	٠.
8	None	_	40.00	1.50	•	.2	
13	Taylor Fed #2	1	1,0.00	1,0.00	10°CO	161.6	161.6
\mathfrak{U}_{i}	None	•	40.00	30.00	10.00	40.3	2
17	Taylor Fed #6	1	Ļ0.00	ьо.00	1,0.00	397.4	397.4
20	Taylor Fed #1 1. None	. 3	10.00	70.00	1,0.CO	300.4	300.lı
23	Rone		70.00 70.00	37 . 50 8.00		78.6	
33	Fed #1-1		40.00	13.00		4.3 19.4	
3):	None	•	l ₁ 0.00	10.00		8.8	
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MCCLELLAN OIL CCPORATION
EAST HENSHAW PREMIER UNIT
HEST HENSHAW GRAYBURG FIELD
EDDY COUNTY, NEW MEXICO

					•				
	Remarks	Dry Hole Acidized w/200 gal., Frac w/27,500#; IFP 144 30PD Set 4 1/2" @3098 w/130 ax; Perf. 3076-88; Acidized	and Araced twice; F & A Set 2 7/8" @3004 w/250 sx; Perf. 2962-66 and 2968-72; Franch twice: P & 4	Prac. w/30,000#; 1FP 816 BOPD Natural IFP - 150 BOPD Frac. w/30,000#; 1FP 170 BOPD Frac. w/30,000#; 1FP 400 BOPD	Frac w/20,000%; IFP 406 BOPD Actac w/20,000%; IFP 227 BOPD Actacac w/300 gal., Frac w/30,000%; IFP 46 BOPD +	Acidized w/100 gal., Frac w/40,000#; 1PP 7,830	Frac w/25,000#; IFP 145 BOPD	Frac w/30,000#; IPP 396 BOPD; P & A 2-72 Acidized w/250 gll., Frac w/20,000#; IPP 444 BOPD Frec w/3,000#; IYP, 47 BOPD Dry Nole Dry Hole	
Completton	Interval	3031-3046	•	2991-3001 2976-3005(0X) 3026-3036 3061-3079	2990-2995 3008-3012 3034-3048	3040-3050	3048-3054	3066-3008 3021-3028 3066-3008	
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BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
in - Clellan EXHIBIT NO. 6(b)
CASE NO. 5459 4 5460
Submitted by
Hearing Date 4/36/75
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Page	4

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION Santa Fe, New Mexico April 30, 1975

EXAMINER HEARING

IN THE MATTER OF:

Case 5459. Application of McClellan Cil Corporation for a unit agreement, Eddy County, New Mexico,

and

Case 5460. Application of McClellan Oil Corporation for a waterflood project, Eddy County, New Mexico.

CASE 5459

CASE 5460

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

APPEARANCES

For the New Mexico Oil Conservation Commission:

William F. Carr, Esq.
Legal Counsel for the
Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant:

Sim B. Christy, Esq. JENNINGS, CHRISTY & COPPLE 600 Hinkle Building Roswell, New Mexico

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PAGE

JACK L. McCLELLAN

Direct Examination by Mr. Christy

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JOE L. JOHNSON, JR.

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Applicant's Exhibits Nos. 1 through 6

Direct Examination by Mr. Christy

Cross Examination by Mr. Stamets

MR. STAMETS: Case 5459.

MR. CARR: Case 5459. Application of McClellan Oil Corporation for a unit agreement, Eddy County, New

MR. CHRISTY: Sim Christy, Jennings, Christy Mexico. and Copple, Roswell, New Mexico, for the Applicant.

May I suggest to the Examiner that it might be more expeditious if we combine this hearing with 5460, which is the next one on the docket.

MR. STAMETS: We will call Case 5460, and they will be combined for purposes of testimony and it looks like two separate Orders would be issued.

MR. CHRISTY: Yes, sir.

MR. CARR: Case 5460. Application of McClellan Oil Corporation for a waterflood project, Eddy County, New Mexico.

MR. CHRISTY: We have two witnesses, Mr. Examiner. (Witnesses sworn.)

I will call Mr. McClellan, please. MR. CHRISTY:

JACK L. McCLELLAN

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

Page.....4

BY MR. CHRISTY:

Q Would you please state your name, address and your occupation?

A Jack L. McClellan, 612 North Kansas, Roswell, New Mexico, geologist and oil producer.

Q Have you previously testified before this regulatory body and had your qualifications as a petroleum geologist accepted?

A Yes.

Q Your Company, McClellan Oil Corporation, is the proposed operator of the unit we are speaking of, is that correct?

A Yes.

Q Do I understand that this is a secondary recovery type of unit to recover hydrocarbons from the Grayburg formation?

A True.

Q Let me hand you Exhibit 1 and ask you if that is a copy of the unit agreement itself, the proposed unit agreement?

A Yes, sir.

Q I note that the proposal is, by definition, the unitized formation in that that is correlated to 2906 to

Page...... 5

3025 feet in the Lane Wells focused log and Humble Oil and Refining State 30 No. 5 Well, is that correct?

- A Yes.
- Q Let me hand you Exhibit 2 and ask you if this is a true copy of that log in the Humble well, the one you referred to in the unit?
 - A Yes, sir. I prepared that.
- Q I believe that the area involved is some 1282.22 acres in Township 16 South, Range 30 East, Eddy County, New Mexico, is that correct?

A Yes.

MR. CHRISTY: Mr. Examiner, I mentioned to you that the Application contains a typographical error in that it refers to Chaves County, whereas the publication is correct, it is Eddy County, and I would like to amend the Application to show Eddy County.

BY MR. CHRISTY:

- Q I believe, further, that there is one Federal tract composed of 882.22 acres or about 63.8 percent of the unit and three State tracts of 400 acres, comprising about 31.2 percent of the unit area, is that correct?
 - A Yes, sir.
 - Q Have you obtained preliminary approval from U.S.G.\$.

CASES 5459,5460

as to the form of the unit?

Yes. This was obtained on 4/11/75.

April 11 of .75?

Yes.

MR. CHRISTY: I will state to the Examiner that this morning I talked to Mr. Ray Graham with the Commissioner's office and he advised me that it had been approved by the State and they were having trouble downstairs getting the letter out, but it is coming out in the next day or two and he would send you a copy. BY MR. CHRISTY:

Let's refer now to Joinder of Working Interest. Do you have substantial approval of the working-interest owners?

There is one tract, the Getty 40-acre tract, I believe; are they going to join or farm out, do you know Yet?

They are going to farm this out to Mr. Hal Stierwalt. This notification was by phone yesterday morning.

MR. STAMETS: Which tract is that?

MR. CHRISTY: The Getty 40-acre tract is Tract 4.

BY MR. CHRISTY:

- Q Now, I believe allocation is on a formula basis, is it not, Mr. McClellan?
 - A Yes.
- Q Would you refer me to the article and the page number where that formula is set forth in the unit agreement?
 - A This is in the Unit Agreement at Page 12.
 - Q The article number?
 - A Article No. 13.
- Q Summarize for us, please, the participation factors?
- A Well, it is 60 times the tract productive acrefeet divided by the unit area productive acrefeet plus 40 times the total, or rather the tract cumulative oil recovery divided by the unit area cumulative oil recovery. This is referred to in Exhibit C, I believe, in the unit agreement.
- Q In other words, Exhibit C gives us the final percentages based upon the formula in Article 13?
 - A Yes.
- Q Do you have a plat of the general area? Let me refer you to Exhibit 3. Is that a plat of the general area showing the leases and wells surrounding?

Page. 8

- A Yes.
- Q What proposed work do you plan to do on the wells themselves, and let me refer you to Exhibit 4?
- A Well, it is a customary-type waterflood. The wells, of course, would have to be worked over first and then these indicate where the perforations are and where the packers will be set, size of casing and tubing. These are, I think, self-explanatory in the balance of the wells. There are some well, of course, the packer depths are different due to the different places of perforations. As I understand these, these are the injection wells.
 - Q There are eight of them?
 - A Yes.
- Q So, Exhibit 4 is your proposed method of water injection, as to now you are going to handle the water injection wells?
 - A Yes, based on a five-spot pattern.
 - Q This is pretty much standard in the area?
 - A Yes.
- Q Now, you previously furnished the Commission the logs on those wells to the extent available, have you not?
 - A Correct.

CASES	5459,	5460
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MR. CHRISTY: We only have one copy, Mr. Examiner, and we would like to have that marked as Exhibit 5.

BY MR. CHRISTY:

Q Would you, briefly, relate to the Examiner the cost factor and recovery factors that you anticipate in this waterflood exploration, how much it is going to cost to do it and what you expect to recover?

A The figures that we had at the offset of this were roughly \$100,000 investment for additional equipment and services. We expect to net about -- recover roughly 92,000 barrels of secondary oil. Of course, these figures, you know, change from time to time due to fluctuating market price of equipment.

Q That would be 92,000 barrels that would not otherwise be recovered?

A This is true. I am sorry. It is 192,000.

Q Generally, what is the geology in this area in the Grayburg?

A This zone is roughly -- runs east and west.

It is a premier zone of the San Andres. It is a very basal zone. I mean, of the Grayburg. It lies immediately on top of the San Andres dolomite. It covers a great deal of area in Eddy County. That's primarily it. It is

Permean Age, of course, and it is being flooded in the area at the present time.

- Do you think, geologically speaking, that this is an area that is susceptible to waterflood recovery?
 - Very definitely.
- Are there any other waterflood units in the area Q in the Grayburg?
 - Yes, there is one adjoining it to the east.
 - Refer to Exhibit 3 on that. Q
- All right. To the east, it is operated by Mobil, and there is a flood-operated to the west by, I believe, Texaco -- Shell.

MR. CHRISTY: That's all.

MR. STAMETS: Are there any questions of the witness? He may be excused.

(Witness dismissed.)

MR. CHRISTY: I call Mr. Johnson, please.

JOE L. JOHNSON, JR.

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. CHRISTY:

Would you please state your name, your address Q

and occupation?

A Joe L. Johnson, Jr., 2409 Brentwood, Wichita Falls, Texas, and I am a consultant petroleum engineer with Stevens Engineering, Wichita Falls.

- Q How long have you been a petroleum engineer, Mr. Johnson.
 - A 24 years.
 - Q Where did you attend college?
 - A Texas A and M.
 - Q Did you receive a degree in petroleum engineering?
- A A degree in petroleum engineering and a degree in chemical engineering.
 - Q What year was that?
 - A I graduated in 1952.
- Q Since then have you been actively engaged as a petroleum engineer?
 - A Yes.
- Q Have you previously testified before other regulatory bodies and had your qualifications accepted as a petroleum engineer?
- A I have testified in New Mexico, Oklahoma and Texas.
 - Q You have testified in New Mexico?

CASES 5459,5460

JOHNSON-DIRECT

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A Yes.

Q Now, let me refer you to what has been marked as Applicant's Exhibit 6 which purports to be a geological report. Would you please briefly summarize that report in connection with this Application?

A The first exhibit indicates the unit area and the wells contained therein. The remaining portion following the first map indicates the discussion of the waterflood survey, prepared by Mr. Stillwell. It also indicates the proposed structure map. It indicates an area of the proposed unit outline and the past performance history, indicated in a graphical manner. It also indicates the porosity and permeability of various cores taken in the zone. It indicates a net-pay isopach map and proposed injection map, or injection-plan map which would identify the proposed injection wells and the line layout and the producing wells. There is Enclosure 9 which indicates the permeability range of the cores previously mentioned and other basic calculations concerning the waterflood area itself.

Q Does it give the cumulative production to date?

A Yes. As of 1/1/75, it gives the cumulative production and that cumulative production is 286,564, shown on Enclosure 15.

JOHNSON-DIRECT

- Q Is the primary production substantially exhausted?
- A Yes.

MR. CHRISTY: I advise the Examiner that is the reason we do not have a Phase 1 and Phase 2, there is no Phase 1 left, so the unit is just going to be strictly a Phase 2 unit.

BY MR. CHRISTY:

Q What quantities of water do you propose to inject in these wells?

A We anticipate a total or maximum injection rate of 1920 barrels and a maximum daily rate per injection well of 240 barrels per well per day in the eight wells proposed for injection purposes.

- Q Have you located a source of supply of this water?
- A Yes.
- Q Is it fresh water or salt water?
- A It would be coming from Double Eagle.
- Q Is is fresh water?
- A It would be basically fresh.
- Q Basically fresh water. Do you have an opinion as to whether or not those proposed injection rates will be sufficient to conduct an economical and sound engineering flood?

JOHNSON-DIRECT

A Yes, they definitely will. We have the history of the two offset-projects previously discussed by Mr. McClellan and these fall right in line with the other two projects.

Q This type of waterflood that you are proposing here, will the pilot be the full flood? In other words, will you start out with a full flood, or will you start out with one or two wells and work up?

A We will start out, probably, with a majority of the wells. These wells will have to be cleaned and work done. It may be that there would be a slight period in which there would not be full injection; however, the finalities really mandatory that we go to the eight-well injection plan as soon as possible due to the fact that it is going to take so long to get the water into ground with this type of system.

Q Do you have a well record on the wells within the unit, and let me refer you to Exhibit 6-B, there being no 6-A?

- A Yes.
- Q Is that the well record on Exhibit 6-B?
- A Yes, it is. I prepared this.
- Q Do you have an opinion as to whether or not the

JOHNSON-DIRECT

granting of this application and the institution of the waterflood project in conformity with the application would result in the prevention of waste?

- A Yes, it would result in the prevention of waste.
- Q Will it permit the maximum recovery of hydrocarbons within the economic limits at this time?
 - A Yes.
- Q Do you see where it will violate the correlative rights of any interested party?
 - A No.

MR. CHRISTY: That's all.

CROSS EXAMINATION

BY MR. STAMETS:

- Q Mr. Johnson, I was looking through Exhibit No. 4 and it would appear that at least some of these wells are clim-hole completions, is that correct?
 - A Yes, sir, they are.
- Q Do you anticipate this type of completion would cause any problems with migration of water up behind the tubing?
 - A No, sir.
- Q Would it be proposed to load the annulus in each of these injection wells and guage it at the surface or

leave it open so that leaks could be detected?

- Yes. It will have a measuring device there.
- Would the operator be willing to instruct his field people to report any leaks from any producing wells or injection wells or plugged and abandoned wells in the area immediately to the Commission?
 - Yes, sir. Α
 - How about the plugged and abandoned wells in there? Do you know if these wells have been plugged and abandoned in such a nature that it would confine any of this injection water in the premier sand?
 - To my knowledge, they have been plugged correctly and would confine them; however, I do not have that information with me at this time.
 - Would that be done subsequent to the hearing, and in your opinion, that this will not be a hazard to other producing zones? Can you send that in subsequent to the hearing?
 - Yes, sir.
 - Referring to Enclosure No. 4 in Exhibit 6, I go back to 1967 and I see a large peak in oil production. Is this representative of what actually happened out there?
 - No, sir. What this is, in the duplication of it,

JOHNSON-CROSS

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what actually occurred is, this is the anticipated performance that the committee that worked this report up had anticipated, putting the flood in prior to 1967 and were unable to do so, and what you are seeing there is a peak of what they anticipated the performance of the flood to do.

- Q So that didn't happen?
- A No, sir.
- Q I believe you said that the Enclosure 15 represented what has actually happened out there?
- A Yes, sir, that is the cumulative production. It indicates the cumulative production among other factors.
- Q I see. Is there any importance to the fact that this was not instituted back in 1967?
- A The price of oil, basically, was the reason for it.

 With the price of oil today, it becomes feasible to install
 the project, whereas before it was a very close economic
 situation.
- Q Will the tubing in the injection wells be cementlined or plastic coated?
- A We do not anticipate doing this initially. The performance of the Sulimar-Queen Unit located immediately north, and also operated by McClellan Oil Corporation, has indicated satisfactory performance with very little corrosive

JOHNSON-CROSS

Page...... 18

nature, utilizing the same type of water. We maintain a high-water quality and a continual corrosion control; therefore, we do not anticipate utilizing a coated system in the injection wells to start with. The system will be coated on all surface lines.

- Q What type of corrosion-monitoring equipment are you using?
 - A We are using corrosion coupons.
- Q Would you use corrosion coupons in this project as well?
 - A Yes.
 - Q Would the test be forwarded to the Commission?
- A Yes. The water quality control here is even more critical than it is in the Sulimar because of the tight nature of the formation.

MR. STAMETS: Are there any other questions of the witness? He may be excused.

(Witness dismissed.)

MR. CHRISTY: I advise the Examiner that Article 23-A of the unit agreement requires 95-percent working interest joinder. When we drew the unit agreement, we thought that the Getty tract was going to come out about 4-percent, but it really came out about 6 percent. Due

to the time limit I will mention in a minute, we may reduce that 95 to 93-percent, and Getty, of course will join, or the farm-out will join subsequently. The reason for it is, there is a time limitation under a contract that the flood must be in operation by June 1. We, therefore, would appreciate the Commission's earliest consideration to the Application.

We offer in evidence Applicant's Exhibits Nos. 1 through 6 inclusive, including Exhibit B, and that is all we have for the Applicant.

MR. STAMETS: The exhibits will be admitted into evidence.

(Whereupon, Applicant's Exhibits Nos. 1 through 6 were marked for identification, and were offered and admitted into evidence.)

MR. CARR: Mr. Examiner, we have received a letter from Hal M. Stierwalt, opposing the waterflood project, and the letter should be made part of the record.

MR. STAMETS: The letter will become part of the record in this case.

Is there anything further in this case? We will take the case under advisement.

CASES 5459,5460

Page.....

STATE OF NEW MEXICO) COUNTY OF SANTA FE)

I, RICHARD L. NYE, Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

COURT REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 5.7.6.2.

heard by me on 1975.

Lichard Examiner Examiner New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2088 - SANTA FE 87501

May 6, 1975

CHAIRMAN

LAND COMMISSIONER PHIL R. LUCERO MEMBER

STATE GEOLOGIST A. L. PORTER, JR. SECRETARY - DIRECTOR

	Re:	CASE NO. 5459 & 5460
Mr. Sim Christy Jennings, Christy & Copple		ORDER NO. R-5009 and R-50
Attorneys at Law Post Office Box 1180		Applicant:

Dear Sir:

Roswell, New Mexico 88201

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

McClellan Oil Corporation

ALP/ir
Copy of order also sent to:
Hobbs OCC
Other R-5009 to Unit Division - Land Office

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 5460 Order No. R-5010

APPLICATION OF MCCLELLAN OIL CORPORATION FOR A WATERFLOOD PROJECT, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on April 30, 1975, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 6th day of May, 1975, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, McClellan Oil Corporation, seeks authority to institute a waterflood project in the East Henshaw Unit Area, West Henshaw-Grayburg Pool, by the injection of water into the Grayburg formation through eight injection wells in Sections 1 and 2, Township 16 South, Range 30 East, NMFM, Eddy County, New Mexico.
- (3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.
- (4) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.
- (5) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.
- (6) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

-2-Case No. 5460 Order No. R-5010

IT IS THEREFORE ORDERED:

(1) That the applicant, McClellan Oil Corporation, is hereby authorized to institute a waterflood project in the East Henshaw Unit Area, West Henshaw-Grayburg Pool, by the injection of water into the Grayburg formation through the following-described wells in Township 16 South, Range 30 East, NMPM, Eddy County, New Mexico:

UNIT TRACT AND WELL NO.	UNIT LETTER	SECTION
Tract 6 Well No. 1	F	1
Tract 10 Well No. 4	I	2
Tract 11 Well No. 1	L	1
Tract 13 Well No. 2	J	1
Tract 15 Well No. 6	Ö	. 2
Tract 19 Well No. 3	0	1
Tract 24 Well No. 1	Q	2
Tract 26 Well No. 4	S	ı

- (2) That injection into each of said wells shall be through tubing set in a packer set within 100 feet of the uppermost perforation in the well or, in the case of open hole completions, within 100 feet of the casing shoe.
- (3) That the casing tubing annulus on each of said injection wells shall be loaded with an inert fluid and equipped with an acceptable leak detection device to determine leakage of the tubing, casing, or packer.
- (4) That the operator shall immediately notify the Supervisor of the Commission's Artesia district office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from around any producing well or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.
- (5) That the operator shall treat the water to be injected to control corrosion, shall install corrosion coupon monitoring equipment on the injection system; and shall file the results of the periodic examination of the coupons with the Santa Fe Office of the Commission.
- (6) That the subject waterflood project is hereby designated the McClellan East Henshaw Unit Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.
- (7) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

-3-Case No. 5460 Order No. R-5010

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

DONE at Santa Fe, New Mexico, on the day and year herein-above designated.

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

I. R. TRUJILLO, Chairman

Phil K. Lucer

PHIL R. LUCERO, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

Hal M. Stierwalt C/O Ramada Inn 5645 East Belknap Haltom City, Texas 76117

Jennings, Christy, & Copple P.O. Box 1180 Roswell, New Mexico 88201

Re: Proposed East Henshaw Unit

Gentlemen;

The application to the New mexico Oil Conservation commission, for the Unit and the Pilot water flood, have just come into my hands. I do not understand the pilot waterflood as stated in both the applications to the OCC and the Commissioner of Public Lands. In the application for secondary recovery operations, Section #3, you refer to eight injection wells, this is not a pilot flood. This is a complete waterflood. If the eight injection wells are the same, as the ones indicated by the equipment list, of over a year ago, I still feel the flood will fail.

If useing the term pilot permits the Commissions to grant approvals, without the proper engineering studies being made, I must protest. If the flood is being planned based on the old engineering report of 1967, a new complete study is nessary, as the conditions in the reservoir have changed considerable, since that study was made. Therefore a flood plan based on the old study would cause waste and subsequent losses to the royalty owners and the investors.

Note that copies of this letter are being sent to all concerned parties.

cc; Commissioner Of Public Lands

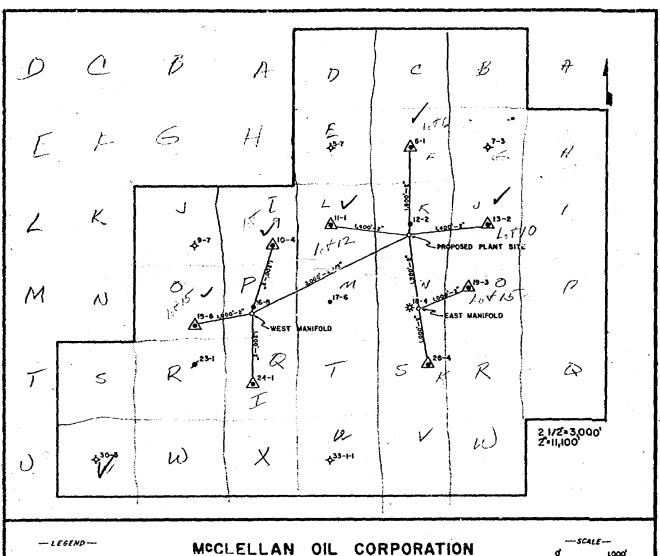
USGS

NMOCC

Getty Oil

Betty Stierwalt

Yours very truly,
Halth Shewalt
Is
Sen Coffin



- - EAST HENSHAW PREMIER UNIT

WEST HENSHAW GRAYBURG FIELD

EDDY COUNTY, NEW MEXICO





A INJECTION WELL II-I TRACT NO.-WELL NO.

OIL WELL

DRY HOLE

PLUGGED WELL

Enclosure Number 7 Can 5460

LAW OFFICES OF

JENNINGS, CHRISTY & COPPLE

P.O. BOX 1180
ROSWELL, NEW MEXICO 88201

TELEPHONE 622-8432 AREA CODE 505

JAMES T. JENNINGS SIM B. CHRISTY IV HIMMEN HENDEN BRIAN W. COPPLE POBERT G. ARMSTRONG

March 25, 1976

New Mexico Oil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico 87501

> Re: East Henshaw Unit Eddy County, New Mexico Case 5459 & 5460 Order R-5009 & R-5010

Gentlemen:

In supplement of the captioned and for your file we enclose herewith copy of Unit and Unit Operating Agreement, Ratification by Exxon and Southern Union Production Company, Ratification in behalf of Hal M. Stierwalt, et ux, and copy of Summary Judgment, Order in Supplement of Summary Judgment and Clerk's Certificate in Cause No. 30570 in the District Court of Eddy County.

Per carbon copy attached we have requested final approval from the Commissioner and U.S.G.S. and when obtained it will be promptly furnished to you.

Meanwhile, if anything further is required, kindly advise and compliance will be promptly met.

Respectfully,

JENNINGS, CHRISTY & COPPLE

SBC:pv Encls.

cc: U. S. Geological Survey

cc: Commissioner of Public Lands

cc: Security National Bank of Roswell

c: Mr. Jack L. McClellan

JAMES T. JENNINGS
SIM B. CHRISTY IV
ROSENSIA SHARE
BRIAN W. COPPLE
ROBERT G. ARMSTRONG

LAW OFFICES OF

JENNINGS, CHRISTY & COPPLE
1012 SECURITY NATIONAL BANK BUILDING
P. O. BOX 1180

ROSWELL, NEW MEXICO 88201

March 25, 1976

TELEPHONE 622-8432 Area Code 505

Getty Oil Company P. O. Box 1231 Midland, Texas 79701

> Re: East Henshaw Unit Eddy County, New Mexico

Gentlemen:

You will remember that heretofore in behalf of the Unit Operator we requested your joinder to the Unit Agreement and Unit Operating Agreement. At that time you advised that there was some oral or tentative farmout arrangement with Mr. Hal M. Stierwalt which you were considering and therefore you declined to join the Unit.

We do not know the status of your proposed farmout with Mr. Stierwalt but you are advised that the Unit Agreement has now been submitted to the Commissioner of Public Lands and the U.S.G.S. for final approval. A copy of the Unit Agreement, Unit Operating Agreement, the Ratifications thereof by certain owners and a proposed Ratification by Getty is enclosed herewith.

If you would care to join the Unit, we would appreciate receiving not less than eight signed copies of the Ratification, whereupon we will process them with the Commissioner and U.S.G.S. and advise you when approval has been obtained. Getty appears to own the working interest in Tract 4 of the Unit.

Respectfully,

JENNINGS, CHRISTY & COPPLE

S. B. Christy-F

SBC:pv Encl.

cc: U. S. Geological Survey

cc: Commissioner of Public Lands

cc: New Mexico Oil Conservation Commission

cc: Mr. Jack L. McClellan

LAW OFFICES OF

JENNINGS, CHRISTY & COPPLE FOR BOX 1180 ROSWELL, NEW MEXICO 88201

AREA CODE 505

JAMES T. JENNINGS
SIM B. CHRISTY IV
HOTER JESSES BRIAN W. COPPLE
ROBERT G. ARMSTRONG

March 25, 1976

United States Geological Survey P. O. Drawer 1857 Roswell, New Mexico 88201

Attention: Mr. James Gillham

Re: East Henshaw Unit Eddy County, New Mexico

Gentlemen:

For consideration of final approval on the captioned we enclose herewith:

- 1. Unit Agreement in quadruplicate.
- 2. Unit Operating Agreement in duplicate.
- 3. Ratification of Unit Agreement by Exxon Corporation in quadruplicate.
- 4. Ratification of Unit Agreement by Southern Union Production Company in quadruplicate.
- 5. Ratification of Unit Agreement and Unit Operating Agreement by Hal M. Stierwalt, et ux, in quadruplicate.
- 6. Summary Judgment, in Cause No. 30570, District Court of Eddy County, New Mexico, in quadruplicate.
- 7. Order in Supplement of Summary Judgment, in Cause No. 30570, District Court of Eddy County, New Mexico, in quadruplicate.
- 8. Certificate of the District Clerk of Eddy County in connection with failure to post supersedeas bond in Cause No. 30570, in quadruplicate.

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JENNINGS, CHRISTY & COPPLE

United States Geological Survey

Page 2

March 25, 1976

You will note that the Summary Judgment provides that a Designation of Operator and a Conveyance of Operating Rights from Hal M.

Stierwalt, et ux, to Jack McClellan (together with a Collateral Assignment of Operating Rights already in escrow) are to be delivered to the Security National Bank of Roswell, New Mexico, as escrow agent, pending your approval of the enclosed Unit Agreement; a copy of the transmittal of this escrow to the Bank is enclosed for your information, together with a xerox of the Designation of Operator and the Conveyance of Operating Rights. Promptly upon your approval of the Unit Agreement, we will submit to you the Designation of Operator in triplicate and will file with the New Mexico Land Office of the Bureau of Land Management the Conveyance of Operating Rights with appropriate Request for Approval and filing fee.

Lastly, you will note that Mr. McClellan only has 30 days from and after March 25, 1976, in which to obtain your approval, and that of the Commissioner of Public Lands of the State of New Mexico, to the Unit Agreement; therefore, your earliest consideration to the enclosures would be appreciated, and if anything further is required we would appreciate your immediate advice due to the time limitation. A copy of our Request for Approval to the Commissioner of Public Lands of the State of New Mexico is enclosed herewith along with a copy of our transmittal to the New Mexico Oil Conservation Commission of certain of the above documents.

Respectfully,

JENNINGS, CHRIS TY & COPPLE

SBC:pv

Encls.

cc: Security National Bank of Roswell

cc: Mr. Jack L. McClellan

cc: Commissioner of Public Lands

cc: New Mexico Oil Conservation Commission

LAW OFFICES OF

JENNINGS, CHRISTY & COPPLE IDER SECURITY NATIONAL BANK BUILDING

P.O. BOX 1180 ROSWELL, NEW MEXICO 88201

March 25, 1976

TELEPHONE 622-8432 AREA CODE 505

Security National Bank of Roswell

P. O. Box 1858 Roswell, New Mexico 88201

JAMES T. JENNINGS

ROBERT G. ARMSTRONG

SIM B. CHRISTY IX

Attention: Charles A. Joplin, President

Re: McClellan v. Stierwalt

D.C. 30570 - Eddy

Gentlemen:

Your files will reflect that you are currently holding, as escrow agent, a certain Collateral Assignment of Operating Rights and the principal sum of \$50,000.00, in connection with the captioned.

For your further information we enclose herewith copy of Summary Judgment and copy of Order in Supplement of Summary Judgment, both rendered in the captioned cause. Pursuant to the Order in Supplement of Summary Judgment, and in behalf of the Clerk of the District Court of Eddy County, we enclose herewith:

- 1. Designation of Operator, in quadruplicate.
- 2. Conveyance of Operating Rights, in quintuplet.

Please refer to Paragraphs 6, 7 and 8 of the Summary Judgment which sets forth your further instructions in connection with this escrow. Appropriate request has been made for the governmental final approval and when obtained a copy will be furnished to you in order that you may complete your escrow.

Respectfully,

JENNINGS, CHRISTY & COPPLE

S. B. Christy T

SBC:pv

Encl.

cc: Clerk of District Court of Eddy County

cc: U. S. Geological Survey

cc: Commissioner of Public Lands

cc: Mr. Jack L. McClellan

UNIT AGREEMENT

FOR THE DEVELOPMENT AND OPERATION OF THE

EAST HENSHAW UNIT

EDDY COUNTY, NEW MEXICO

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UNIT AGREEMENT EAST HENSHAW UNIT EDDY COUNTY, NEW MEXICO

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UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE EAST HENSHAW UNIT EDDY COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as of the 1st day of 1975, by and between the parties subscribing, ratifying or consenting hereto, and herein referred to as "parties hereto".

WITNESSETH:

WHEREAS, The parties hereto are the owners of Working, Royalty, or other Oil and Gas Interests in the Unit Area subject to this Agree-

WHEREAS, The Mineral Leasing Act of February 25, 1920, (41 Stat. ment; and 437, as amended 30 U.S.C. Sections 181 et seq.) authorizes Federal lessees and their representatives to unite with each other, or jointly or separately with others in collectively adopting and operating a unit plan of development or operation of any oil or gas pool, field, or like area, or any part thereof for the purpose of more properly conserving the natural resources thereof whenever determined and certified by the Secretary of the Interior to be necessary or advisable in the public interest; and

WHEREAS, The Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Sec. 3, Chap. 88, Laws 1943 as amended by Section 1 of Chap. 162, Laws of 1951, Chap. 7, Art. 11, Sec. 39, N.M.S. 1953 Ann.) to consent to or approve this Agreement on behalf of the State of New Mexico, insofar as it covers and includes lands and mineral interests of the State of New Mexico; and

WHEREAS, The Commissioner of Public Lands of the State of New Mexico is authorized by an Act of the Legislature (Sec. 3, Chap. 88, Laws of 1943, as amended by Sec. 1, Chap. 162, Laws of 1951, Chap. 7, Art. 11, Sec. 41, N.M.S. 1953 Ann.) to amend with the approval of the lessee, any oil and gas lease embracing State lands so that the length of the term of said lease may coincide with the term of such unitized development and operation of State lands; and

WHEREAS, The Oil Conservation Commission of the State of New Mexico is authorized by law (Chap. 72, Laws of 1935, as amended by Chap. 193, Laws of 1937, Chap. 166, Laws of 1941, and Chap. 168, Laws of 1949) to approve this Agreement, and the conservation provisions hereof; and

WHEREAS, The parties hereto hold sufficient interests in the East Henshaw Unit Area covering the land hereinafter described to give reasonably effective control of operations therein; and

WHEREAS, It is the purpose of the parties hereto to conserve natural resources, prevent waste, and secure other benefits obtainable through development and operation of the Area subject to this Agreement under the terms, conditions and limitations herein set forth;

NOW THEREFORE, In consideration of the premises and the promises herein contained, the parties hereto commit to this Agreement their respective interests in the below-defined Unit Area, and agree severally among themselves as follows:

ARTICLE 1

ENABLING ACT AND REGULATIONS

The Mineral Leasing Act of February 25, 1920, as amended, supra, and all valid pertinent regulations, including operating and unit plan regulations, heretofore issued thereunder or valid, pertinent, and reasonable regulations hereafter issued thereunder are accepted and made a part of this Agreement as to Federal lands, provided such regulations are not inconsistent with the terms of this Agreement; and as to State of New Mexico and privately owned lands, the oil and gas operating regulations in effect as of the effective date hereof governing drilling and producing operations, not inconsistent with the terms hereof or the laws of the State of New Mexico are hereby accepted and made a part of this Agreement.

ARTICLE 2

DEFINITIONS

For the purpose of this Agreement, the following terms and expressions as used herein shall mean:

- 2.1 Commissioner is defined as the Commissioner of Public Lands of the State of New Mexico.
- 2.2 <u>Commission</u> is defined as the Oil Conservation Commission of the State of New Mexico.
- 2.3 <u>Director</u> is defined as the Director of the United States Geological Survey.
- 2.4 Secretary is defined as the Secretary of the Interior of the United States of America.
- 2.5 Department is defined as the Department of the Interior of the United States of America.
- 2.6 <u>Supervisor</u> is defined as the Oil and Gas Supervisor of the United States Geological Survey, for the Area in which the Unit Area is situated.
- 2.7 Unit Area is defined as the land depicted on Exhibit "A" and described by Tracts in Exhibit "B" attached hereto, and said land is hereby designated and recognized as constituting the Unit Area.
- 2.8 Unitized Formation is defined as that portion of the Grayburg Formation commonly known as the Lower Grayburg formation including the productive section in the Premier Sandstone member. The base of the Grayburg is also the base of the Premier Sand and the top of the San Andres formation. This unitized interval is found between 2906 and 3025 feet on the Lane Wells Focused Log dated July 8, 1961, of the Humble Oil and Refining Company New Mexico State "BC" No. 5 Well which is located 3300 feet from the south line and 660 feet from the east line of Section 2, Township 16 South, Range 30 East, Eddy County, New Mexico.
- 2.9 Unitized Substances is defined as all oil, gas, gaseous substances sulphur contained in gas, condensate, distillate and all associated and constituent liquid or liquefiable hydrocarbons within and produced from the Unitized Formation of the Unitized Land.
- 2.10 Working Interest is defined as an interest in Unitized Substances by virtue of a lease, operating agreement or otherwise, including a carried interest, which interest is chargeable with and obligated to pay or bear, either in cash or out of production or otherwise, all or a portion of the cost of drilling, developing, producing and operating the Unitized Formation. Any interest in Unitized Substances which is a Working Interest as of the date the owner thereof executes, ratifies or consents to this agreement shall thereafter be treated as a Working Interest for all purposes of this Agreement.
- 2.11 Royalty Interest is defined as a right to or interest in any portion of the Unitized Substances or proceeds thereof other than a Working Interest and other than an Overriding Royalty Interest.
- 2.12 Working Interest Owner is defined as a party hereto who owns a Working Interest.
- 2.13 Royalty Owner is defined as a party hereto who owns a Royalty Interest.
- 2.14 Tract is defined as each parcel of land described as such and given a Tract number in Exhibit "B".
- 2.15 Tract Participation is defined as the percentage of participation shown on Exhibit "C" for allocating Unitized Substances to a Tract under this Agreement.

- 2.16 Unit Participation is defined as the sum of the percentages obtained by multiplying the Working Interest of a Working Interest Owner in each Tract having Tract Participation by the Tract Participation of such Tract.
- 2.17 Oil and Gas Rights is defined as the right to explore, develop, and operate land within the Unit Area for the production of Unitized Substances, or to share in the production so obtained or the proceeds thereof.
- 2.18 Unit Operator is defined as the party designated by Working Interest Owners under the Unit Operating Agreement to develop and operate the Unitized Formation.
- 2.19 Record Owner is defined as the holder of the record title to a lease covering Federal lands according to the applicable records of the Department of the Interior of the United States of America.
- 2.20 Tract Cumulative Oil Recovery is defined as the total number of barrels of oil produced from the Unitized Formation under such Tract prior to January 1, 1975, as officially reported to the Commission.
- 2.21 Unit Area Cumulative Oil Recovery is defined as the total Tract Cumulative Oil Recovery of all Tracts within the Unit Area that are committed to this agreement in accordance with the provisions hereof.
- 2.22 Productive Acre-Feet is defined as the product of average net feet of pay multiplied by productive acres laterally covered by the area for which the net feet have been averaged as interpreted by the Technical Committee of the Working Interest Owners.
- 2.23 Unit Operating Agreement is defined as any agreement or agreements (whether one or more) entered into (separately or collectively) by and between the Unit Operator and the Working Interest Owners as provided in Article 10, infra, and shall be styled "Unit Operating Agreement, East Henshaw Unit, Eddy County, New Mexico".
- 2.24 Unit Operations is defined as any operation conducted pursuant to this Agreement and the Unit Operating Agreement.
- 2.25 <u>Unit Equipment</u> is defined as all personal property, lease and well equipment, plants, and other facilities and equipment taken over or otherwise acquired for the joint account for use in Unit Operations.
- 2.26 <u>Unit Expense</u> is defined as all cost, expense, or indebtedness incurred pursuant to this Agreement and the Unit Operating Agreement for or on account of Unit Operations.
- 2.27 Overriding Royalty Interest is defined as an interest in or right to receive a portion of the Unitized Substances or the proceeds therefrom as an overriding royalty interest, oil payment interest, net profits contracts, or any other payment or burden, exclusive of a Royalty Interest, which does not carry with it the right to search for or produce Unitized Substances.

- 2.28 Unit Manager is defined as any person or corporation appointed by Working Interest Owners to perform the duties of Unit Operator until the selection and qualification of a successor Unit Operator as provided for in Section 8 hereof.
- 2.29 Outside Substances is defined as any substance obtained from any source other than the Unitized Formation and injected into the Unitized Formation.

ARTICLE 3

UNIT AREA

The following described land is hereby designated and recognized as constituting the Unit Area:

Township 16 South, Range 30 East, New Mexico Principal Meridian

- SECTION 1: Lots 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16, SW/4, N/2 of SE/4, and SW/4 of SE/4.
- SECTION 2: Lots 9, 10, 15, 16, SE/4 and E/2 of SW/4.
- Containing 1282.22 acres, more or less, in Eddy County, New Mexico.

ARTICLE 4

EXHIBITS

- 4.1 Exhibits. Attached hereto are the following exhibits which are incorporated herein by reference:
 - 4.1.1 Exhibit "A", is a map showing, to the extent known to the Unit Operator, the Unit Area and the boundaries and identity of Tracts and leases in said Unit Area.
 - known to the Unit Operator, the acreage comprising each Tract and the percentage of ownership of each Working Interest Owner and each Royalty Owner in each Tract.
 - 4.1.3 Exhibit "C", is a schedule showing the percentage of participation each Tract has in the Unit Area.
- 4.2 Reference to Exhibits. When reference herein is made to an exhibit, the reference is to the exhibit as originally attached, or, if revised, to the latest revision.
- 4.3 Exhibits Considered Correct. An exhibit shall be considered to be correct until revised as herein provided.

4.4 Filing Revised Exhibits. Exhibits "A", "B" and "C" shall be revised by the Unit Operator whenever changes render such revision necessary, and at least two copies of such revision shall be filed with the Commissioner, and not less than four copies thereof shall be filed with the Supervisor.

ARTICLE 5

EXPANSION

The above described Unit Area may when practicable be expanded to include therein any additional Tract or Tracts regarded as reasonably necessary or advisable to conform with the purposes of this Agreement. Such expansion shall be effected in the following manner:

- (a) The Working Interest Owner or Owners of a Tract or Tracts desiring to bring such Tract or Tracts into this Unit, shall file an application therefor with Unit Operator requesting such admission.
- (b) After preliminary concurrence by the Director and Commissioner, Unit Operator shall circulate a notice to each Working Interest Owner of the proposed expansion, setting out the basis for admission, the Unit Participation to be assigned to such Tract or Tracts, and other pertinent data. After negotiation (at Working Interest Owners' meeting or otherwise) if ninety per cent (90%) of the Working Interest Owners (on the basis of Unit Participation) have agreed to such Tract or Tracts being brought into the Unit, then Unit Operator shall:
- (1) Prepare a notice of preposed expansion describing the contemplated changes in the boundaries of the Unit, the reason therefor, the basis for admission of the additional Tract or Tracts, the Unit Participation to be assigned thereto and the proposed effective date thereof, preferably the first day of a month subsequent to the date of notice; and
- (2) Deliver copies of said notice to the Commissioner, Director, each Working Interest Owner (mailing copy of such notice to the last known address of each such Working Interest Owner) and to the lessee and lessor whose interests are proposed to be committed, advising such parties that thirty (30) days will be allowed for submission to the Unit Operator of any objection to such proposed expansion; and

(3) File, upon expiration of said thirty (30) day period as set out in (2) immediately above and provided that objections of not more than ten per cent (10%) of the Working Interest Owners have been filed thereto, with the Commission, Commissioner, and the Supervisor the following: (a) Comprehensive statement as to mailing such notice of expansion; (b) An Application for such expansion; (c) An instrument containing the appropriate joinders in compliance with the participation requirements of Article 14, infra, and (d) a copy of all objections received along with the Operator's response thereto.

The expansion shall, after due consideration of all pertinent information and upon approval by the Commission, Commissioner and the Supervisor, become effective as of the date prescribed in the notice thereof or on such other date as set by the Commission, Commissioner, and the Supervisor in the order or instrument approving such expansion.

ARTICLE 6

UNITIZED LAND AND UNITIZED SUBSTANCES

All land committed to this Agreement as to the Premier sand as defined under Unitized Formation, shall constitute land referred to herein as "Unitized Land" or "Land subject to this Agreement". All oil and gas in or produced from said Unitized Formation of the "Unitized Land" are unitized under the terms of this Agreement and herein are called "Unitized Substances". Surface rights of ingress and egress shall be maintained for the benefit of the Unit.

Nothing herein shall be construed to unitize, pool, or in any way affect the oil, gas and other minerals contained in or that may be produced from any formation other than the Unitized Formation as defined in Article 2.8 of this Agreement.

ARTICLE 7

UNIT OPERATOR

McClellan Oil Corporation is hereby designated as Unit Operator, and by signing this instrument as Unit Operator he agrees and consents to accept the duties and obligations of Unit Operator for the operation, development and production of Unitized Substances as herein provided. Whenever reference is made herein to the Unit Operator, such reference

means the Unit Operator acting in that capacity and not as an owner of interests in Unitized Substances, and when such interests are owned by it the term "Working Interest Owner" when used herein shall include or refer to Unit Operator as the owner of a Working Interest when such an interest is owned by it.

ARTICLE 8

RESIGNATION OR REMOVAL OF UNIT OPERATOR

Unit Operator shall have the right to resign at any time, but such resignation shall not become effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of six (6) months after written notice of intention to resign has been given by Unit Operator to all Working Interest Owners, the Commissioner and the Supervisor, and until all wells are placed in a satisfactory condition for suspension or abandonment whichever is required by the Supervisor, unless a new Unit Operator shall have been selected and accepted and shall have taken over and assumed the duties and obligations of Unit Operator prior to the expiration of said period.

The resignation or removal of Unit Operator shall not release Unit Operator from any liability for any default by it hereunder occurring prior to the effective date of its resignation or removal.

The Unit Operator may, upon default or failure in the performance of its duties or obligations hereunder, be subject to removal by the owners of seventy-five per cent (75%) of the committed Working Interests (on the basis of Unit Participation) exclusive of the Working Interest Owner who is the Unit Operator. Such removal shall be effective upon notice thereof to the Commissioner and the Director.

In all instances of resignation or removal, until a successor Unit Operator is selected and accepted as hereinafter provided, the Working Interest Owners shall be jointly responsible for performance of the duties of Unit Operator, and shall not later than thirty (30) days before such resignation or removal becomes effective, appoint a Unit Manager to represent them in any action to be taken hereunder.

The resignation or removal of Unit Operator under this Agreement shall not terminate its right, title or interest as the owner of a Working Interest or other interest in Unitized Substances, but upon the resignation or removal of Unit Operator becoming effective, such Unit Operator shall deliver possession of all wells, equipment, books, records, materials, appurtenances and any other assets, used in conducting the Unit Operations and owned by the Working Interest Owners (including any and all data and information which it might have gained or assembled by reason of its operation of the Unit Area) to the new duly qualified successor Unit Operator or Unit Manager or to the owners thereof if no such new Unit Operator is elected, to be used for the purpose of conducting Unit Operations hereunder. Nothing herein shall be construed as authorizing removal of any material, equipment and appurtenances needed for the preservation of any wells.

ARTICLE 9

SUCCESSOR UNIT OPERATOR

Whenever the Unit Operator shall tender its resignation as Unit Operator or shall be removed as hereinabove provided, or a change of Unit Operator is negotiated by Working Interest Owners, the Working Interest Owners shall by affirmative vote of at least seventy-five per cent (75%) of their voting interest, based upon the percentages of participation as shown on Exhibit "C", select a successor Unit Operator, provided, however, that should any Working Interest Owner own a voting interest of more than twenty-five per cent (25%), the vote of said party shall not serve to disapprove the selection of a new Unit Operator approved by eighty per cent (80%) or more of the voting interests of the remaining Working Interest Owners, and provided further that the Unit Operator shall not vote to succeed itself. Such selection shall not become effective until (a) a Unit Operator so selected shall accept in writing the duties and responsibilities of Unit Operator, and (b) written notice of such selection shall have been filed with and approved by the Supervisor and the Commissioner. If no successor Unit Operator is selected and qualified as herein provided, the Director and Commissione at their election may declare this Agreement terminated.

ARTICLE 10

ACCOUNTING PROVISIONS AND UNIT OPERATING AGREEMENT

Costs and expenses incurred by Unit Operator in conducting Unit Operations hereunder shall be paid, apportioned among and borne by the Working Interest Owners in accordance with the Unit Operating Agreement. Such Unit Operating Agreement shall also provide the manner in which the Working Interest Owners shall be entitled to receive their respective proportionate and allocated share of the benefits accruing hereto in conformity with their underlying operating agreements, leases or other independent contracts and such other rights and obligations as between Unit Operator and the Working Interest Owners as may be agreed upon by the Unit Operator and the Working Interest Owners; however, no such Unit Operating Agreement shall be deemed either to modify any of the terms and conditions of this Unit Agreement or to relieve the Unit Operator of any right or obligation established under this Unit Agreement, and in case of any inconsistency or conflict between the Unit Agreement and the Unit Operating Agreement, this Unit Agreement shall prevail. Two true copies of any Unit Operating Agreement executed pursuant to this Article shall be filed with the Commissioner and two true copies thereof shall be filed with the Supervisor, prior to approval of this Agreement, and thereafter promptly after any revision or amendment.

ARTICLE 11

RIGHTS AND OBLIGATIONS OF UNIT OPERATOR

Except as otherwise specifically provided herein, the exclusive right, privilege and duty of exercising any and all rights of the parties hereto which are necessary or convenient for prospecting for, producing, storing, allocating and distributing the Unitized Substances are hereby delegated to and shall be exercised by the Unit Operator as herein provided. Upon request by Unit Operator, acceptable evidence of title to said rights shall be deposited with said Unit Operator, and together with this Agreement, shall constitute and define the rights, privileges and obligations of Unit Operator. Nothing herein, however, shall be

construed to transfer title to any land or to any lease or operating agreement, it being understood that under this Agreement the Unit Operator, in its capacity as Unit Operator, shall exercise the rights of possession and use vested in the parties hereto only for the purposes herein specified.

ARTICLE 12

PLAN OF OPERATIONS

It is recognized and agreed by the parties hereto that all of the land subject to this Agreement is reasonably proved to be productive of Unitized Substances and that the object and purpose of this Agreement is to formulate and to put into effect a secondary recovery project in order to effect additional recovery of Unitized Substances, prevent waste and conserve natural resources. The parties hereto agree that the Unit Operator may, subject to the consent and approval of a plan of operation by the Working Interest Owners, the Supervisor, the Commission, and the Commissioner, inject into the Unitized Formation, through any well or wells completed therein, brine, water, air, gas, oil, liquefied petroleum gas, and any other substance or a combination of any of said substances, whether produced from the Unit Area or not, and that the location of input wells and the rates of injection therein and the rate of production shall be governed by standards of good geologic and petroleum engineering practices and conservation methods. After commencement of secondary operations, Unit Operator shall furnish the Commission, the Commissioner, and the Supervisor monthly, injection and production reports for each well in the Unit. The Working Interest Owners, the Supervisor, the Commission, and the Commissioner, shall be furnished periodical reports on the progress of the plan of operation and any revisions or changes thereto; provided however, that any major revisions of the plan of operation involving a basic deviation from the initial plan of operation shall be subject to the consent and approval of the Working interest Owners, the Supervisor, the Commission, and the Commissioner.

The initial plan of operation shall be filed with the Supervisor, the Commission, and the Commissioner concurrently with the filing of this Unit Agreement for final approval. Said initial plan of operation and all revisions thereof shall be as complete and adequate as the Supervisor, the Commission, and the Commissioner may determine to be necessary for timely operation consistent herewith. Reasonable diligence shall be exercised in complying with the obligations of the approved plan of operation.

ARTICLE 13

TRACT PARTICIPATION

Exhibit "C" attached hereto shows the participation allocated to each Tract in the Unit Area based on a presumed 100% commitment. The formula used for the calculations of such percentages is as follows:

60 X (times) Tract Productive Acre Feet
Unit Area Productive Acre Feet

+ (plus)

40 X (times) Tract Cumulative Oil Recovery
Unit Area Cumulative Oil Recovery

If this Unit Agreement is approved with less than 100% Tract Commitment, the percentages of participation shall be revised in accordance with the provisions of Article 14 of this Agreement.

ARTICLE 14

TRACTS QUALIFIED FOR UNIT PARTICIPATION

As the objective of this Agreement is to have lands in the unit area operated and entitled to participation under the terms hereof, it is agreed that, notwithstanding anything else herein, no joinder shall be considered a commitment to this Unit Agreement unless the tract involved is qualified under this section.

On and after the effective date hereof the Tracts within the Unit Area which shall be entitled to participation (as provided in Article 13 hereof) in the production of Unitized Substances therefrom shall be those Tracts within the Unit Area that are qualified as follows:

- (a) Each and all of those Tracts as to which Working Interest
 Owners owning one hundred per cent (100%) of the Working Interest in
 said Tract execute this agreement and the Unit Operating Agreement and
 Royalty Owners owning one hundred per cent (100%) of the Royalty Interest
 in said Tract have subscribed, ratified or consented to this Agreement;
 and
- (b) Each and all of those Tracts in which the owners of not less than ninety-five per cent (95%) of the Working Interest therein execute this Agreement and the Unit Operating Agreement and the owners of not less than seventy-five per cent (75%) of the Royalty Interest therein have executed this Agreement, and in which the Working Interest Owners in said Tract who have executed this Agreement and the Unit Operating Agreement have agreed to indemnify and hold harmless all other parties hereto, in a manner satisfactory to the owners of eightyfive per cent (85%) of the Working Interests qualified under Subarticle 14(a), against any and all claims and demands that may be made by the nonjoining Working Interest Owners or Royalty Owners, or both, on account of the commitment and joinder of such Tract to the Unit Agreement, and operation thereof under such conditions on the basis herein provided, and as to which the owners of eighty-five per cent (85%) of the Working Interests qualified under Subarticle 14(a), exclusive of the Working Interest Owner submitting such Tract, have approved the commitment of such Tract to this Unit Agreement.
- (c) Each Tract as to which Working Interest Owners owning less than 100% of the Working Interest therein have executed this Agreement and the Unit Operating Agreement, regardless of the percentage of Royalty Interest therein which is committed hereto, and, further, as to which:
 - (i) The Working Interest Owner operating any such Tract and all of the other Working Interest Owners in such Tract who have executed this Agreement and the Unit Operating Agreement have joined in a request for qualification of such Tract for Unit

Participation and have executed and delivered an indemnity agreement indemnifying and agreeing to hold harmless the other Working Interest Owners in the Unit Area, their successors and assigns, against all claims and demands which may be made by the owners of Working Interests in such Tract who are not parties hereto and which arise out of the qualification of such Tract for Unit Participation, and

(ii) The owners of eighty per cent (80%) of the committed Working Interest in all Tracts meeting the requirements of Subarticles 14(a) and 14(b) have voted in favor of the qualification of such Tract and acceptance of the indemnity agreement.

Upon the qualification of such a Tract for Unit Participation, the Unit Participation that would have been attributed to the nonsubscribing owners of the Working Interest in such Tract, had they become parties to this Agreement and the Unit Operating Agreement, shall be attributed to the Working Interest Owners in such Tract who have become parties to such agreements, in proportion to their respective Working Interests in the Tract.

If, on the effective date of this Agreement, there is any Tract or Tracts which have not been effectively committed to and made subject to this Agreement by qualifying as above provided, then such Tract or Tracts shall not be entitled to participate hereunder. Unit Operator shall, when submitting this Agreement for final approval by the Commissioner and the Supervisor, or as promptly thereafter as practicable, file therewith a schedule of those Tracts which have been committed and made subject to this Agreement and are entitled to participate in the production from the Unitized Land hereunder. Said schedule shall set forth opposite each such committed Tract the lease number and assignment number, the owner of record of the lease, and the percentages of participation of such Tract which shall be computed using the formula set out in Article 13 (Tract Participation) above. This schedule of participation shall be revised Exhibit "C" and upon approval thereof by the Commissioner

and the Supervisor shall become a part of this Agreement and shall govern the allocation of production of Unitized Substances until a new schedule is approved by the Commissioner and the Supervisor.

ARTICLE 15

ALLOCATION OF UNITIZED SUBSTANCES

All Unitized Substances produced and saved (less, save and except any part of such Unitized Substances used in conformity with good operating practices on Unitized Land for drilling, operating, camp, and other production or development purposes and for pressure maintenance or unavoidable loss) shall be apportioned among and allocated to the committed Tracts within the Unit Area in accordance with the respective Tract Participation then effective hereunder during the respective periods such Unitized Substances were produced, as set forth in the schedule of participation in Exhibit "C". The amount of Unitized Substances so allocated to each Tract, and only that amount, (regardless of whether it be more or less than the amount of the actual production of Unitized Substances from the well or wells, if any, on such Tract) shall, for all intents, uses and purposes, be deemed to have been produced from such Tract.

The Unitized Substances allocated to each Tract shall be distributed among, or accounted for to the parties executing, consenting to or ratifying this Agreement entitled to share in the production from such Tract in the same manner, in the same proportions, and upon the same conditions. as they would have participated and shared in the production from such Tracts, or in the proceeds thereof, had this Agreement not been entered into; and with the same legal force and effect.

No Tract committed to this Agreement and qualified for participation as above provided shall be subsequently excluded from participation hereunder on account of depletion of Unitized Substances, and nothing herein contained shall be construed as requiring any retroactive adjustment for production obtained prior to the effective date of the joinder and qualification of any Tract.

If any Working Interest or Royalty Interest in a Tract hereafter become divided and owned in severalty as to different parts of the Tract, the owners of the divided interests, in the absence of an agreement providing for a different division, shall share in the Unitized Substances allocated to the Tract, or in the proceeds thereof, in proportion to the surface acreage of their respective parts of the Tract.

The Unitized Substances allocated to each Tract shall be delivered in kind to the respective Working Interest Owners and parties entitled thereto by virtue of the ownership of Oil and Gas Rights therein or by purchase from such owners. Each Working Interest Owner and the parties entitled thereto shall have the continuing right to receive such production in kind at a common point within the Unit Area and to sell or dispose of the same as it sees fit. Each such party shall have the right to construct, maintain and operate all necessary facilities for that purpose on Unitized Land, provided the same are so constructed, maintained and operated as not to interfere with operations carried on pursuant hereto. Subject to Article 16 (Royalty Settlement) hereof, any extra expenditure incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the party responsible for the payment of such expense. In the event any party hereto shall fail to take or otherwise adequately dispose of its proportionate share of the production from the Unit Area currently as and when produced, then so long as such conditions continue, Unit Operator, for the account and at the expense of such party and in order to avoid curtailing the operation of the Unit Area, may buy, sell or otherwise dispose of such production to itself or others on a day-to-day basis at not less than the prevailing market price in the area for like production, and the account of such party shall be charged therewith as having received such production. The net proceeds, if any, of the Unitized Substances so disposed of by Unit Operator shall be paid to the Working Interest Owner for payment to the parties entitled thereto under existing contracts.

Any party receiving in kind or separately disposing of all or any part of the Unitized Substances allocated to any Tract, or receiving the proceeds therefrom if the same is sold or purchased by Unit Operator, shall be responsible for the payment of all Royalty on the lease or leases and Tracts contributed by it and received into the Unit, and each such party shall hold each other party hereto harmless against all claims, demands and causes of action for such Royalty on the lease or leases and Tracts contributed by it and received into the Unitized Land.

If, after the effective date of this Agreement, there is any Tract or Tracts that are subsequently committed hereto, as provided in Article 5 (Expansion) hereof, or any Tract or Tracts within the Unit Area not committed hereto as of the effective date hereof but which are subsequently committed hereto under the provisions of Article 33 (Nonjoinder and Subsequent Joinder), and Article 14 (Tracts Qualified for Unit Participation), of if any Tract is excluded from the Unit Area as provided for in Article 31 (Loss of Title), the schedule of participation as shown in Exhibit "C" shall be revised by the Unit Operator and distributed to the Working Interest Owners, the Commissioner, and the Supervisor to show the new percentages of participation of all the then effectively committed Tracts, in any such revision pursuant to this paragraph the Tract Participations of the Tracts committed prior to the revision shall remain in the same ratio one to the other and the revised schedules, upon approval by the Commissioner and the Supervisor, shall govern all the allocation of production from and after the effective date thereof until a new schedule is so approved.

ARTICLE 16

ROYALTY SETTLEMENT

The State of New Mexico and the United States of America and all Royalty Owners who, under an existing contract, are entitled to take in kind a share of the substances produced from any Tract unitized hereunder, shall continue to be entitled to such right to take in kind their share of the Unitized Substances allocated to such Tract, and Unit

Operator shall make deliveries of such Royalty share taken in kind in conformity with the applicable contracts, laws and regulations. Settlement for Royalty Interest not taken in kind shall be made by Working Interest Owners responsible therefor under existing contracts, laws and regulations, on or before the last day of each month for Unitized Substances produced during the preceding calendar month; provided, however, that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any Royalty due under their leases, except that such Royalty shall be computed in accordance with the terms of this Unit Agreement.

If gas obtained from lands not subject to this Agreement is introduced into the Unitized Formation, for use in repressuring, stimulation of production or increasing ultimate recovery in conformity with a plan approved pursuant to Article 12 (Plan of Operations), a like amount of gas, less appropriate deductions for loss from any cause, may be withdrawn from the Unitized Formation, Royalty free as to dry gas but not as to the products extracted therefrom; provided such withdrawal shall be pursuant to such conditions and formulas as may be prescribed or approved by the Supervisor and the Commissioner; and provided further that such right of withdrawal shall terminate as of the effective date of termination of this Agreement.

All royalty due the State of New Mexico and the United States of America and the other Royalty Owners hereunder and payment on account of any Overriding Royalty Interest shall be computed and paid on the basis of all Unitized Substances allocated to the respective Tract or Tracts committed hereto, in lieu of actual production from such Tract or Tracts.

Royalty due the United States shall be computed as provided in the operating regulations and paid in value or delivered in kind as to all Unitized Substances on the basis of the amounts thereof allocated to unitized Federal land as provided herein at the rates specified in the

respective Federal leases, or at such lower rate or rates as may be authorized by law or regulation.

Royalty due the State of New Mexico shall be computed as provided in the operating regulations and paid in value or delivered in kind as to all Unitized Substances on the basis of the amounts thereof allocated to unitized State land as provided herein at the rates specified in the respective State leases.

Each Royalty Owner (other than the State of New Mexico and the United States of America) and each party hereto claiming an Overriding Royalty Interest that executes this Agreement represents and warrants that it is the owner of a Royalty Interest or Overriding Royalty Interest (as applicable) in a Tract or Tracts within the Unit Area as its interest appears in Exhibit "B" attached hereto. If any Royalty Interest in a Tract or Tracts should be lost by title failure or otherwise in whole or in part, during the term of this Agreement, then the Royalty Interest of the party representing himself to be the owner hereof shall be reduced proportionately and the interest of all parties shall be adjusted accordingly.

ARTICLE 17

RENTAL SETTLEMENT

Rentals or minimum royalties due on leases committed hereto shall be paid by Working Interest Owners responsible therefor under existing contracts, laws and regulations, provided that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any rental or minimum royalty in lieu thereof due under their leases. Rental for lands of the State of New Mexico subject to this Agreement shall be paid at the rate specified in the respective leases from the State of New Mexico. Rental or minimum royalty for lands of the United States of America subject to this Agreement shall be paid at the rate specified in the respective leases from the United States of America, unless rental or minimum royalty is waived, suspended, or reduced by law or by approval of the Secretary or his duly authorized representative.

ARTICLE 18

CONSERVATION

Operations hereunder and production of Unitized Substances shall be conducted to provide for the most economical and efficient recovery of said substances without waste, as defined by or pursuant to Federal and State laws and regulations.

ARTICLE 19

DRAINAGE

The Unit Operator shall take appropriate and adequate measures to prevent drainage of Unitized Substances from Unitized Land by wells on land not subject to this Agreement.

ARTICLE 20

LEASES AND CONTRACTS CONFORMED AND EXTENDED

The terms, conditions and provisions of all leases, subleases and other contracts relating to exploration, drilling, development or operation for oil or gas on lands committed to this Agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof, but otherwise to remain in full force and effect, and the parties hereto hereby consent that the Secretary and the Commissioner, respectively, shall and by their approval hereof, or by the approval hereof by their duly authorized representatives, do hereby establish, alter, change or revoke the drilling, producing, rental, minimum royalty and royalty requirements of Federal and State leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this Agreement.

Without limiting the generality of the foregoing, all leases, subleases and contracts are particularly modified in accordance with the following:

(a) The development and operation of lands subject to this Agreement under the terms hereof shall be deemed full performance of all obligations for development and operation with respect to each and every part or separately owned Tract committed to this Agreement, regardless

of whether there is any development of any particular part or Tract of the Unitized Land, notwithstanding anything to the contrary in any lease, operating agreement or other contract by and between the parties hereto, or their respective predecessors in interest, or any of them.

- (b) Drilling, producing or secondary recovery operations performed hereunder upon any Tract of Unitized Lands shall be accepted and deemed to be performed upon and for the benefit of each and every Tract of Unitized Land, and no lease shall be deemed to expire by reason of failure to drill or produce wells situated on land therein embraced.
- (c) Suspension of drilling or producing operations on all Unitized Lands pursuant to direction or consent of the Commissioner and the Secretary or their duly authorized representatives, shall be deemed to constitute such suspension pursuant to such direction or consent as to each and every Tract of Unitized Lands.
- (d) Each lease, sublease, or contract relating to the exploration, drilling, development or operation for oil and gas which by its terms might expire prior to the termination of this Agreement, is hereby extended beyond any such term so provided therein, so that it shall be continued in full force and effect for so long as such land remains committed hereto.
- (e) The segregation of any Federal lease committed to this Agreement is governed by the following provisions in the fourth paragraph of Sec. 17(j) of said Act of February 25, 1920, as amended by the Act of September 2, 1960 (74 Stat. 781-784): "Any (Federal) lease hereafter committed to any such (unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to the lands committed and the lands not committed as of the effective date of unitization; Provided, however, that any such lease as to the nonunitized portion shall continue in force and effect for the term thereof but for not less than two (2) years from the date of such segregation and so long thereafter as oil or gas is produced in paying quantities."

(f) Any lease embracing lands of the State of New Mexico having only a portion of its land committed hereto, shall be segregated as to that portion committed and that not committed, and the terms of such lease shall apply separately to such segregated portions commencing as of the effective date hereof. Notwithstanding any of the provisions of this Agreement to the contrary, any lease embracing lands of the State of New Mexico having only a portion of its land committed hereto shall continue in full force and effect beyond the term provided therein as to all lands embraced in such lease if oil or gas is, or has heretofore been, discovered and are capable of being produced in paying quantities from some part of the lands embraced in such lease committed to this Agreement or, so long as a portion of the Unitized Substances produced from the Unit Area is, under the terms of this Agreement, allocated to the portion of the lands covered by such lease committed to this Agreement, or, at any time during the term hereof, as to any lease that is then valid and subsisting and upon which the lessee or the Unit Operator is then engaged in bona fide drilling, reworking, or secondary recovery operations on any part of the lands embraced in such lease, then the same as to all lands embraced therein shall remain in full force and effect so long as such operations are diligently prosecuted, and if they result in the production of oil or gas, said lease shall continue in full force and effect as to all of the lands embraced therein, so long thereafter as oil or gas in paying quantities is being produced from any portion of said lands.

ARTICLE 21

CORRECTION OF ERRORS

It is hereby agreed by all parties to this Agreement that Unit Operator is empowered to correct any mathematical or clerical errors which might exist in the pertinent exhibits to this Agreement; provided however, that correction of any error other than mathematical or clerical shall be made by Unit Operator only after first having obtained approval of the Commissioner, the Supervisor, and the Working Interest Owners.

ARTICLE 22

COVENANTS RUN WITH LAND

The covenants herein shall be construed to be covenants running with the land with respect to the interest of the parties hereto and their successors in interest until this Agreement terminates, and any grant, transfer or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder by the grantee, transferee or other successor in interest. No assignment or transfer of any Working Interest subject hereto shall be binding upon Unit Operator until the first day of the calendar month after Unit Operator is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument of transfer; and no assignment or transfer of any Royalty Interest subject hereto shall be binding upon the Working Interest Owner responsible therefor until the first day of the calendar month after said Working Interest Owner is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument of transfer.

ARTICLE 23

EFFECTIVE DATE AND TERM

This Agreement shall become binding upon each party as of the date such party signs the instrument by which it becomes a party hereto; and, unless sooner terminated as hereinafter provided, shall become effective as to qualified Tracts after approval by the Secretary of the Interior or his duly authorized delegate, at the time and date as determined by the Working Interest Owners in all the qualified Tracts, and set forth in a certificate filed for record by Unit Operator in Eddy County, New Mexico. The certificate shall also recite the percentage of the Unit Area represented by the Tracts qualified under Article 14, the book and page in which a counterpart of this Agreement has been recorded, and the case number and order number of the order of approval by Governmental authority, if obtained. The certificate shall not be filed until after the following requirements have been met:

- (a) The execution or ratification of this Agreement and the Unit Operating Agreement by Working Interest Owners owning a combined Unit Participation of at least ninety-three per cent (93%), and the execution or ratification of this Agreement by Royalty Owners owning a combined interest of at least seventy-five per cent (75%) of the Royalty Interest, in said Unit Area; and
- (b) The approval of this Agreement by the Commissioner, the Secretary or his duly authorized representative, and the Commission.

If this Agreement is not filed for final approval by the Commissioner, the Secretary or his duly authorized representative and the Commission on or before May 31,1976, this Agreement shall ipso facto expire on said date (hereinafter called "expiration date") and thereafter be of no further force or effect, unless prior thereto this Agreement has been executed or ratified by Working Interest Owners owning a combined Unit Participation of at least ninety per cent (90%) and the owners of at least sixty-five per cent (65%) of the Working Interests committed to this Agreement have voted to extend said expiration date for a period not to exceed six (6) months (hereinafter called "extended expiration date"). If said expiration date is so extended and this Agreement is not filed for final approval by the Commissioner, the Secretary or his duly authorized representative and the Commission on or before said extended expiration date, this Agreement shall ipso facto expire on said extended expiration date and thereafter be of no further force or effect. For the purpose of this Article, ownership shall be computed on the basis of Unit Participation as determined from Exhibit "C" attached to the Unit Operating Agreement.

Unit Operator shall, within thirty (30) days after the effective date of this Agreement, file for record a certificate to the effect that this Agreement has become effective according to its terms and stating further the effective date and the location of the governmental agency offices where copies of this Agreement are filed.

The term of this Agreement shall be for and during the time that Unitized Substances are produced in quantities sufficient to pay the cost of producing same from the Unit Area and as long thereafter as drilling, reworking or other operations (including secondary recovery operations) are prosecuted thereon without cessation of more than ninety (90) consecutive days, unless sooner terminated by Working Interest Owners in the manner hereinafter provided.

This Agreement may be terminated for any reason with the approval of the Commissioner and the Director by Working Interest Owners owning seventy-five per cent (75%) Unit Participation. Notice of any such termination shall be given by Unit Operator to all parties thereto.

Upon termination of this Agreement, the parties hereto shall be governed by the terms and provisions of the leases and contracts affecting the separate Tracts.

If not otherwise covered by the leases unitized under this Agreement, Royalty Owners hereby grant Working Interest Owners a period of six (6) months after termination of this Agreement in which to salvage, sell, distribute or otherwise dispose of the personal property and facilities used in connection with Unit Operations.

ARTICLE 24

RATE OF PROSPECTING, DEVELOPMENT AND PRODUCTION

All production and the disposal thereof shall be in conformity with allocations and quotas made or fixed by any duly authorized person or regulatory body under any Federal or State statute. The Director is hereby vested with authority to alter or modify from time to time, at his discretion, the rate of prospecting and development and within the limits made or fixed by the Commission to alter or modify the quantity and rate of production under this Agreement, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification; provided further that no such alteration or modification shall be effective as to any lands of the

State of New Mexico as to the rate of prospecting and developing in the absence of specific written approval thereof by the Commissioner and as to any lands of the State of New Mexico or privately owned lands subject to this agreement as to the quantity and rate of production in the absence of specific written approval thereof by the Commission.

Powers in this Article vested in the Director shall only be exercised after notice to Unit Operator and opportunity for hearing to be held not less than fifteen (15) days from notice.

ARTICLE 25

NONDISCRIMINATION

In connection with the performance of work under this agreement, Unit Operator agrees to comply with all of the provisions of Section 202(1) to (7), inclusive, of Executive Order 11246 (30 F.R. 12319), as amended by Executive Order 11375, dated October 13, 1967.

ARTICLE 26

APPEARANCES

Unit Operator shall have the right to appear for or on behalf of any and all interests affected hereby before the Commissioner, the Department, and the Commission, and to appeal from any order issued under the rules and regulations of the Commissioner, the Department, or the Commission, or to apply for relief from any of said rules and regulations or in any proceedings relative to operations before the Commissioner, the Department, or the Commission, or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his or its own expense to be heard in any such proceeding.

ARTICLE 27

NOTICES

All notices, demands, objections or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given if made in writing and personally delivered to the party or parties or sent by postpaid registered or certified mail, addressed to such

party or parties at their respective addresses set forth in connection with the signatures hereto or to the ratification or consent hereof or to such other address as any such party or parties may have furnished in writing to the party sending the notice, demand or statement.

ARTICLE 28

NO WAIVER OF CERTAIN RIGHTS

Nothing in this Agreement contained shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any law of the United States or of the State wherein said Unitized Lands are located, or rules or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive.

ARTICLE 29

EQUIPMENT AND FACILITIES NOT FIXTURES ATTACHED TO REALTY

Each Working Interest Owner has heretofore placed and used on its

Tract or Tracts committed to this Agreement various well and lease
equipment and other property, equipment and facilities. It is also
recognized that additional equipment and facilities may hereafter be
placed and used upon the Unitized Land as now or hereafter constituted.

Therefore, for all purposes of this Agreement any such equipment shall be
considered to be personal property and not fixtures attached to realty.

Accordingly, said well and lease equipment and personal property is
hereby severed from the mineral estates affected by this Agreement,
and it is agreed that any such equipment and personal property shall
be and remain personal property of the Working Interest Owners for all
purposes.

ARTICLE 30

UNAVOIDABLE DELAY

All obligations under this Agreement requiring the Unit Operator to commence or continue secondary recovery operations or to operate on or produce Unitized Substances from any of the lands covered by this Agreement shall be suspended while, but only so long as the Unit Operator

despite the exercise of due care and diligence, is prevented from complying with such obligations, in whole or in part, by strikes, acts of God, Federal, State or municipal law or agency, unavoidable accident, uncontrolled delays in transportation, inability to obtain necessary materials in open market, or other matters beyond the reasonable control of the Unit Operator whether similar to matters herein enumerated or not.

ARTICLE 31

LOSS OF TITLE

In the event title to any Tract of Unitized Land shall fail so as to render the Tract inoperable under this Agreement and the true owner cannot be induced to join this Agreement, such Tract shall be automatically regarded as not committed hereto and there shall be such readjustment of future costs and benefits as may be required on account of the loss of such title. In the event of a dispute as to title as to any Royalty, Working Interest or other interest subject thereto, payment or delivery on account thereof may be withheld without liability or interest until the dispute is finally settled; provided, that as to State or Federal land or leases, no payments of funds due the State of New Mexico or the United States of America shall be withheld, but such funds shall be deposited as directed by the Commissioner or the Supervisor (as the case may be), to be held as unearned money pending final settlement of the title dispute, and then applied as earned or returned in accordance with such final settlement.

Unit Operator as such is relieved from any responsibility for any defect or failure of any title hereunder.

ARTICLE 32

BORDER AGREEMENTS

Subject to the approval of the Supervisor and the Commissioner, the Unit Operator, with concurrence of sixty-five per cent (65%) of the Working Interest Owners, based upon the percentages of participation may enter into a border protection agreement or agreements with the Working Interest Owners of adjacent lands along the boundaries of the

Unit Area with respect to the operations in the border area for the maximum ultimate recovery, conservation purposes and proper protection of the parties and interests.

ARTICLE 33

NONJOINDER AND SUBSEQUENT JOINDER

Any Oil or Gas Interest in the lands in the Unit Area not committed hereto prior to submission of this Agreement to the Commissioner and the Director for final approval may thereafter be committed hereto upon compliance with the applicable provisions of this Article and of Article 14 (Tracts Qualified for Unit Participation) hereof, at any time up to the effective date hereof.

It is understood and agreed, however, that from and after the effective date hereof, the right of subsequent joinder as provided in this Article, shall be subject to such requirements or approvals and on such basis as may be agreed upon by ninety per cent (90%) of the Working Interest Owners (based upon the percentages of participation), the Commissioner and the Supervisor. Such joinder by a proposed Working Interest Owner must be evidenced by his execution or ratification of this Agreement and the Unit Operating Agreement. Such joinder by a proposed Royalty Owner must be evidenced by his execution, ratification or consent of this Agreement and must be consented to in writing by the Working Interest Owner responsible for the payment of any benefits that may accrue hereunder in behalf of such proposed Royalty Owner. Except as may be otherwise herein provided, subsequent joinder to this Agreement shall be effective as of the first day of the month following the filing with the Commissioner and the Supervisor of duly executed counterparts of any and all documents necessary to establish effective commitment of any Tract or interest to this Agreement, unless objection to such joinder by the Commissioner or the Director is duly made within sixty (60) days after such filing and such joinder is approved by the Commissioner as to State Lands.

ARTICLE 34

NO PARTNERSHIP

It is expressly agreed that the relation of the parties hereto is that of independent contractors and nothing in this Agreement contained, expressed or implied, or any operations conducted hereunder, shall create or be deemed to create a partnership or association between the parties hereto or any of them.

ARTICLE 35

OIL IN LEASE TANKAGE ON EFFECTIVE DATE

Unit Operator shall make a proper and timely gauge of all lease and other tanks within the Unitized Area in order to ascertain the amount of merchantable oil in such tanks, above the pipe line connections, as of 7:00 a.m. on the effective date hereof. All such oil as is a part of the prior allowable of the well or wells from which the same was produced shall be and remain the property of the Interest Owners entitled thereto the same as if the Unit had not been formed, and the responsible Working Interest Owners shall promptly remove said oil from the Unitized Area. Any such oil not so removed may be sold by the Unit Operator for the account of such Working Interest Owners, subject to the payment of all Royalty to Royalty Owners under the terms and provisions of the applicable lease or leases and other contracts. All such oil and gas in excess of the prior allowable of the well or wells from which the same was produced shall be regarded and treated the same as Unitized Substances produced after the effective date hereof. If, as of the effective date hereof, any Tract is overproduced with respect to the allowable of the well or wells on that Tract and the amount of such overproduction has been sold or otherwise disposed of, such overproduction shall be regarded and included as a part of the Unitized Substances produced after the effective date hereof and the amount thereof charged to such Tract as having been delivered to the persons entitled to Unitized Substances allocated to such Tract.

ARTICLE 36

PERSONAL PROPERTY EXCEPTED

All lease and well equipment, materials, and other facilities heretofore or hereafter placed by any of the Working Interest Owners on the lands subject to this Agreement shall be deemed to be and shall remain personal property belonging to and may be removed by the Working Interest Owners. The rights and interests therein as among Working Interest Owners are covered by the Unit Operating Agreement.

ARTICLE 37

TAXES

Each party hereto shall, for its own account, render and pay its share of any taxes levied against or measured by the amount or value of the Unitized Substances produced from the Unitized Land; provided, however, that if it is required or if it be determined that the Unit Operator or the several Working Interest Owners must pay or advance said taxes for the account of the parties hereto, it is hereby expressly agreed that the parties so paying or advancing said taxes shall be reimbursed therefor by the parties hereto, including Royalty Owners, who may be responsible for the taxes on their respective allocated share of said Unitized Substances. No such taxes shall be charged to the United States nor to any lessor who has a contract with a lessee which requires his lessee to pay such taxes.

ARTICLE 38

JOINDER IN DUAL CAPACITY

Execution as herein provided by any party as either a Working Interest Owner or a Royalty Owner shall commit all interests owned or controlled by such party; provided, however, that if the party is the owner of a Working Interest, he must also execute the Unit Operating Agreement. ARTICLE 39

COUNTERPARTS

This Agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties and may be ratified

or consented to by separate instrument in writing specifically referring hereto, and shall be binding upon all those parties who have executed such a counterpart, ratification or consent hereto with the same force and effect as if all parties had signed the same document, and regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands within the above described Unit Area.

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

ATTEST:

McCLELLAN OIL CORPORATION

•	onic operator			
By <u>Alelous</u> Taylor Deloris Taylor	Jack L. McClellan, President			
Date 4.25-75				
Date 4-25-05	Jack L. McClellan			
Date <u>N-25-75</u>	Sarlara McClellan Barbara McClellan			
Date	Hal M. Stierwalt			
Date	Betty Stierwalt			
	GETTY OIL COMPANY			
Date	Ву			
STATE OF NEW MEXICO				
COUNTY OF CHAVES				
The foregoing instrument was acknowledged before me this day of Q,,,, 1975, by Jack L. McClellan, President of McClellan Oil Corporation, a New Mexico corporation, on behalf of said corporation.				
My Commission Expires:	Sharen P. Miss Notary Public			

STATE OF NEW MEXICO
COUNTY OF CHAVES

	instrument was acknowledged before me this, 1975, by Jack L. McClellan and Barbara
My Commission Expires:	
10/31/22	Sharan P. Miles
	Notary Public
•	
STATE OF NEW MEXICO	
COUNTY OF CHAVES	
The foregoing day of Stierwalt, his wife.	instrument was acknowledged before me this, 1975, by Hal M. Stierwalt and Betty
My Commission Expires:	
· · · · · · · · · · · · · · · · · · ·	
	Notary Public
STATE OF	
COUNTY OF	
	instrument was acknowledged before me this
corporation, on behalf of	said corporation.
My Commission Expires:	
	Notary Public

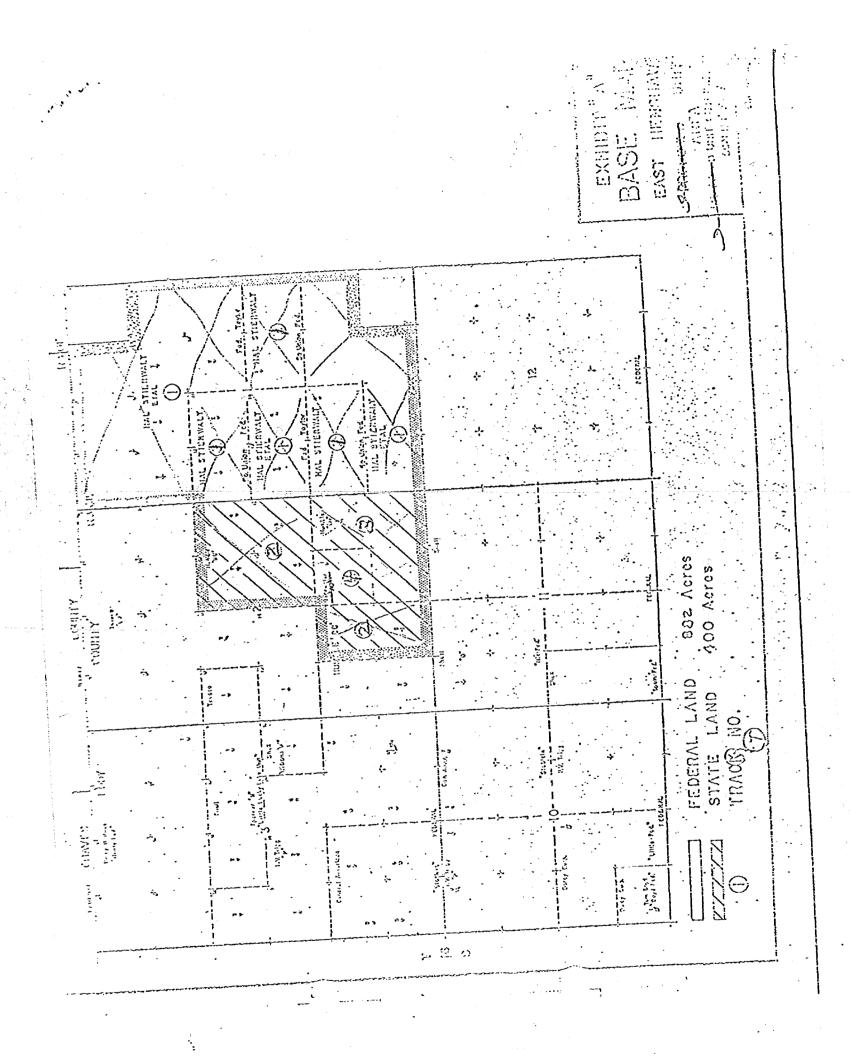


EXHIBIT "A"

TO

UNIT AGREEMENT

EAST HENSHAW UNIT

EDDY COUNTY, NEW MEXICO

EXHIBIT "B"

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UNIT AGREEMENT

EAST HENSEAW UNIT EDDY COUNTY, NEW MEXICO

Schedule of Acreage by Tracts

AND

Percentage of Ownership

funit Participătio		55.81012%
oyalty Working Interest		one Farms, Ltd. Jack L. McClellan 75% W. Chaney Hal M. Stierwalt 25% Taylor and Taylor, her husband Orsdol
Overriding Royalty Owner and Amount	5, 6, 7, 8, 13, 14, 15, SW\$SE%	co. Feathersto 2.25% Elizabeth 2.25% Aileen T. Frank F. T 0.25% Doras Van 0.25% Southern U
ty Lessee of Record	on 1: Lots 2, 3, 4, 5, 9, 10, 11, 12, 1 16, SWk, Nèsek,	Southern Union Prod.
Basic	Section 1:	U.S.A. 122% (A11)
Serial No. and Date of Lease	(Federal Lands)	NW06407-A 2-1-52
	ल	

RANCE 30 EAST,

Bract No.

Acres

882.22

notal One Pederal Tract --- 882.22 Acres or 68.8% of Unit Area

CHEEL "B" GO ONLE AGMENT

ASP HENSHING UNIT

TIG-S, R-30-E, EDDY COUNTY, NEW MEXICO

Acres Fract No. 2	Serial No. and Dete of Lease (State Lands)	Z Lessee of Record n 2. Lots 9, 10, 15, 16, E%SW Humble Oil & Refining Co.	Overriding Royalty Owner and Amount	working interest Owner and Amount Pan Jack L. McCiellan 75% Hal M. Stierwalt	Particion Particion 29.74281%
120 No., 3		Section 2: S%SE%, NE%SE% State Humble Oil & Refining CO. 12% (All)	None	Jack L. McClellan 75% Hal M. Stierwalt 25%	8.43752%
Tract No. 4	(State Lands) 3-6672 9-10-36	Section 2: NW4SEY State Getty Oil Co. 12½% (All)	None	Getty Oil Co. 100%	%55600.9

otal Three State Tracts

EDDY COUNTY, NEW MEXICO

NOTEDIT "B" TO UNIT AGREEMENT NAST BENSHAW UNIT 1-15-8, R-30-E, EDDY COUNTY, NR

EXHIBIT "C" TO UNIT AGREEMENT EAST HENSHAW UNIT EDDY COUNTY, NEW MEXICO

Schedule of Tract Participation

Tract No.		Participation Percentage
1 2 3 4		55.81012% 29.74281% 8.43752% 6.00955%
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UNIT OPERATING AGREEMENT

EAST HENSHAW UNIT
EDDY COUNTY, NEW MEXICO

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UNIT OPERATING AGREEMENT EAST HENSHAW UNIT EDDY COUNTY, NEW MEXICO

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Exhibit "D" (Schedule of Working Interest Ownership and Summary
Exhibit "E" (Accounting Procedure)

UNIT OPERATING AGREEMENT

EAST HENSHAW UNIT EDDY COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as of the 1st day of _______,

197_, by the parties who have signed the original of this instrument,
a counterpart thereof, or other instrument agreeing to become a party
hereto.

WITNESSETH:

WHEREAS, the parties hereto as Working Interest Owners have executed, as of the date hereof, an agreement entitled, "Unit Agreement, East Henshaw Unit, Eddy County, New Mexico", herein referred to as "Unit Agreement", which, among other things, provides for a separate agreement to be entered into by Working Interest Owners to provide for Unit Operations as herein defined;

NOW, THEREFORE, in consideration of the mutual agreements herein set forth, it is agreed as follows:

ARTICLE 1

CONFIRMATION OF UNIT AGREEMENT

1.1 Confirmation of Unit Agreement. The Unit Agreement is hereby confirmed and by reference made a part of this agreement. The definitions in the Unit Agreement are adopted for all purposes of this agreement. If there is any conflict between the Unit Agreement and this agreement, the Unit Agreement shall govern.

ARTICLE 2

EXHIBITS

- 2.1 Exhibits. The following exhibits are incorporated herein by reference:
 - 2.1.1 Exhibits A, B and C of the Unit Agreement.
 - 2.1.2 <u>Exhibit D</u>, attached hereto, is a schedule showing the Working Interest of each Working Interest Owner in each Tract, the portion of each Working Interest Owner's participation attributable to each such interest, and the Unit

Participation of each Working Interest Owner. Exhibit D, or a revision thereof, shall not be conclusive as to the information therein, except it may be used as showing the Unit Participation of Working Interest Owners for purposes of this agreement until shown to be in error and revised as herein authorized.

- 2.1.3 Exhibit E, attached hereto, is the Accounting Procedure applicable to Unit Operations. If there is any conflict between this agreement and Exhibit E, this agreement shall govern.
- 2.2 Revised Exhibits. Whenever Exhibits A, B and C are revised, Exhibit D shall be revised accordingly and be effective as of the same date. Unit Operator shall also revise Exhibit D from time to time as required to conform to changes in ownership of which Unit Operator has been notified as provided in the Unit Agreement.

ARTICLE 3

SUPERVISION OF OPERATIONS BY WORKING INTEREST OWNERS

- 3.1 Overall Supervision. Working Interest Owners shall exercise overall supervision and control of all matters pertaining to Unit Operations pursuant to this agreement and the Unit Agreement. In the exercise of such authority, each Working Interest Owner shall act solely in its own behalf in the capacity of an individual owner and not on behalf of the owners as an entirety.
- 3.2 Specific Authorities and Duties. The matters with respect to which Working Interest Owners shall decide and take action shall include, but not be limited to, the following:
 - 3.2.1 Method of Operation. The method of operation, including the type of pressure maintenance, secondary recovery, or other recovery program to be employed.
 - 3.2.2 <u>Drilling of Wells</u>. The drilling of any well whether for production of Unitized Substances, for use as an injection well, or for any other purposes.

- 3.2.3 Well Recompletions and Change of Status. The recompletion, abandonment, or change of status of any well, or the use of any well for injection or other purposes.
- 3.2.4 Expenditures. The making of any single expenditure in excess of Three Thousand Five Hundred Dollars (\$3,500.00); however, approval by Working Interest Owners of the drilling, reworking, deepening, or plugging back of any well shall include approval of all necessary expenditures required therefor, and for completing, testing, and equipping well, including necessary flow lines, separators, and lease tankage.
- 3.2.5 <u>Disposition of Unit Equipment</u>. The selling or otherwise disposing of any major item of surplus Unit Equipment, if the current price of new equipment similar thereto is Five Hundred Dollars (\$500.00) or more.
- 3.2.6 Appearance Before a Court or Regulatory Agency. The designating of a representative to appear before any court or regulatory agency in matters pertaining to Unit Operations; however, such designation shall not prevent any Working Interest Owner from appearing in person or from designating another representative in its own behalf.
- 3.2.7 Audits. The auditing of the account of Unit Operator pertaining to Unit Operations hereunder; however, the audits shall
 - (a) not be conducted more than once each year except upon the resignation or removal of Unit Operator,
 - (b) be made upon the approval of the majority of Working
 Interest Owners other than Unit Operator, at the
 expense of all Working Interest Owners other than
 Unit Operator,
 - (c) be made at the expense of those Working Interest

 Owners requesting such audit, if less than a majority

 of the Working Interest Owners, other than Unit

 Operator, request such an audit, and

- (d) be made upon not less than thirty (30) days' written notice to Unit Operator.
- 3.2.8 <u>Inventories</u>. The taking of periodic inventories under the terms of Exhibit E.
- 3.2.9 <u>Technical Services</u>. The authorizing of charges of the joint account for services by consultants or Unit Operator's technical personnel not covered by the overhead charges provided by Exhibit E.
- 3.2.10 Assignments to Committees. The appointment of committees to study any problems in connection with Unit Operations.
- 3.2.11 The removal of Unit Operator and the selection of a successor.
 - 3.2.12 The enlargement of Unit Area.
 - 3.2.13 The adjustment and readjustment of investments.
 - 3.2.14 The termination of Unit Agreement.

MANNER OF EXERCISING SUPERVISION

- 4.1 <u>Designation of Representatives</u>. Each Working Interest Owner shall inform Unit Operator in writing of the names and address of the representative and alternate who are authorized to represent and bind such Working Interest Owner with respect to Unit Operations. The representative or alternate may be changed from time to time by written notice to Unit Operator.
- 4.2 Meetings. All meetings of Working Interest Owners shall be called by Unit Operator upon its own motion or at the request of one or more Working Interest Owners having a total Unit Participation of not less than five percent (5%). No meeting shall be called on less than fourteen (14) days' advance written notice, with agenda for the meeting attached. Working Interest Owners who attend the meeting may amend items included in the agenda and may act upon an amended item or other items presented at the meeting. The representative of Unit Operator shall be chairman of each meeting.

- 4.3 <u>Voting Procedure</u>. Working Interest Owners shall decide all matters coming before them as follows:
 - 4.3.1 <u>Voting Interest</u>. Each Working Interest Owner shall have a voting interest equal to its Unit Participation.
 - 4.3.2 <u>Vote Required</u>. Unless provided herein or in the Unit Agreement, Working Interest Owners shall determine all matters by the affirmative vote of two (2) or more Working Interest Owners having a combined voting interest of at least seventy-five percent (75%); provided, however, that if any Working Interest Owner has a voting interest of twenty-five percent (25%) or more, its negative vote or failure to vote shall not serve to disapprove any motion, unless such vote is supported by the vote of one or more Working Interest Owners having a combined voting interest of at least seven percent (7%); and such affirmative vote shall be controlling on all parties.
 - 4.3.3 Vote at Meeting by Non-Attending Working Interest

 Owner. Any Working Interest Owner who is not represented at a

 meeting may vote on any agenda item by letter or telegram addressed to the representative of the Unit Operator if its vote
 is received prior to the vote at the meeting provided such item
 is not amended at the meeting.
 - 4.3.4 Poll Votes. Working Interest Owners may decide by letter or telegram any matter submitted in writing to Working Interest Owners. If a meeting is not requested, as provided in Section 4.2, within seven (7) days after a written proposal is sent to Working Interest Owners, the vote taken by letter or telegram shall become final. Unit Operator will give prompt notice of the results of such voting to all Working Interest Owners.

INDIVIDUAL RIGHTS OF WORKING INTEREST OWNERS

- 5.1 Reservation of Rights. Working Interest Owners severally reserve to themselves all their rights, except as otherwise provided in this agreement and the Unit Agreement.
- 5.2 Specific Rights. Each Working Interest Owner shall have, among others, the following specific rights:
 - 5.2.1 Access to Unit Area. Access to the Unit Area at all reasonable times to inspect Unit Operations, all wells, and the records and data pertaining thereto.
 - 5.2.2 Reports. The right to receive from Unit Operator, upon written request, copies of all reports of any governmental agency, reports of crude oil runs and stocks, inventory reports, and all other information pertaining to Unit Operations. The cost of gathering and furnishing information not ordinarily furnished by Unit Operator to all Working Interest Owners shall be charged to the Working Interest Owner who requests the information.

ARTICLE 6

UNIT OPERATOR

- 6.1 <u>Unit Operator</u>. McClellan Oil Corporation is hereby designated as Unit Operator.
- 6.2 Resignation or Removal Selection of Successor. The resignation or removal of Unit Operator, and the selection of a successor shall be governed by the provisions of the Unit Agreement.

ARTICLE 7

AUTHORITIES AND DUTIES OF UNIT OPERATOR

- 7.1 Exclusive Right to Operate Unit. Subject to the provisions of this agreement and to instructions from Working Interest Owners, Unit Operator shall have the exclusive right and be obligated to conduct Unit Operations.
- 7.2 Workmanlike Conduct. Unit Operator shall conduct Unit Operations in a good and workmanlike manner as would a prudent operator under

the same or similar circumstances. Unit Operator shall freely consult with Working Interest Owners and keep them informed of all matters which Unit Operator, in the exercise of its best judgment, considers important. Unit Operator shall not be liable to Working Interest Owners for damages, unless such damages result from its gross negligence or willful misconduct.

- 7.3 Liens and Encumbrances. Unit Operator shall endeavor to keep the lands and leases in the Unit Area and Unit Equipment free from all liens and encumbrances occasioned by Unit Operations, except the lien and security interest of Unit Operator granted hereunder.
- 7.4 Employees. The number of employees used by Unit Operator in conducting Unit Operations, their selection, hours of labor, and compensation shall be determined by Unit Operator. Such employees shall be the employees of Unit Operator.
- 7.5 Records. Unit Operator shall keep correct books, accounts, and records of Unit Operations.
- 7.6 Reports to Working Interest Owners. Unit Operator shall furnish Working Interest Owners monthly reports of Unit Operations.
- 7.7 Reports to Governmental Authorities. Unit Operator shall make all reports to governmental authorities that it has the duty to make as Unit Operator.
- 7.8 Engineering and Geological Information. Unit Operator shall furnish to a Working Interest Owner, upon written request, a copy of all logs and other engineering and geological data pertaining to wells drilled for Unit Operations.
- 7.9 Expenditures. Unit Operator is authorized to make single expenditures not in excess of Three Thousand Five Hundred Dollars (\$3,500.00) without prior approval of Working Interest Owners. If an emergency occurs, Unit Operator may immediately make or incur such expenditures as in its opinion are required to deal with the emergency. Unit Operator shall report to Working Interest Owners, as promptly as possible, the nature of the emergency and the action taken.

7.10 Wells Drilled by Unit Operator. All wells drilled by Unit Operator shall be at the usual rates prevailing in the area. Unit Operator may employ its own tools and equipment, but the charge therefor shall not exceed the usual rates prevailing in the area, and the work shall be performed by Unit Operator under the same terms and conditions as are usual in the area in contracts of independent contractors doing work of a similar nature.

7.11 Non-Consent Wells. After "Payout" (defined below) if all parties cannot mutually agree upon the drilling of any well on the Unit Area or upon the reworking, deepening or plugging back of a dry hole drilled at the joint expense of all parties or a well jointly owned by all the parties and not then producing in paying quantities on the Unit Area, any party or parties wishing to drill, rework, deepen or plug back such a well may give the other parties written notice of the proposed operation, specifying the work to be performed, the location, proposed depth, objective formation and the estimated cost of the operation. The parties receiving such a notice shall have thirty (30) days (except as to reworking, plugging back or drilling deeper, where a drilling rig is on location, the period shall be limited to forty-eight (48) hours exclusive of Saturday or Sunday) after receipt of the notice within which to notify the parties wishing to do the work whether they elect to participate in the cost of the proposed operation. Failure of a party receiving such a notice to so reply to it within the period above fixed shall constitute an election by that party not to participate in the cost of the proposed operation.

If any party receiving such a notice elects not to participate in the proposed operation (such party or parties being hereafter referred to as "Non-Consenting Party"), then in order to be entitled to the benefits of this section, the party or parties giving the notice and such other parties as shall elect to participate in the operation (all such parties being hereafter referred to as the "Consenting Parties") shall, within thirty (30) days after the expiration of the notice period of thirty (30) days (or as promptly as possible after the expiration

of the 48-hour period where the drilling rig is on location, as the case may be) actually commence work on the proposed operation and complete it with due diligence.

The entire cost and risk of conducting such operations shall be borne by the Consenting Parties in the proportions that their respective interests as shown in Exhibit "B" bear to the total interests of all Consenting Parties. Consenting Parties shall keep the leasehold estates involved in such operations free and clear of all liens and encumbrances of every kind created by or arising from the operations of the Consenting Parties. If such an operation results in a dry hole, the Consenting Parties shall plug and abandon the well at their sole cost, risk and expense. If any well drilled, reworked, deepened or plugged back under the provisions of this section results in a producer of oil and/or gas in paying quantities, the Consenting Parties shall complete and equip the well to produce at their sole cost and risk, and the well shall then be turned over to Operator and shall be operated by it at the expense and for the account of the Consenting Parties. Upon commencement of operations for the drilling, reworking, deepening or plugging back of any such well by Consenting Parties in accordance with the provisions of this section, each Non-Consenting Party shall be deemed to have relinguished to Consenting Parties, and the Consenting Parties shall own and be entitled to receive, in proportion to their respective interests, all of such Non-Consenting Party's interest in the well, its leasehold operating rights, and share of production allowed to the Tract upon which such well is located until the proceeds or market value thereof (after deducting production taxes, royalty, overriding royalty and other interests payable out of or measured by the production from such well accruing with respect to such interest until it reverts) shall equal the total of the following:

(A) 100% of each such Non-Consenting Party's share of the cost of any newly acquired surface equipment beyond the wellhead connections (including, but not limited to, stock tanks, separators, treaters, pumping equipment and piping), plus 100% of each such Non-Consenting

Party's share of the cost of operation of the well commencing with first production and continuing until each such Non-Consenting Party's relinquished interest shall revert to it under other provisions of this section, it being agreed that each Non-Consenting Party's share of such costs and equipment will be that interest which would have been chargeable to each Non-Consenting Party had it participated in the well from the beginning of the operation; and

(B) 125% of that portion of the costs and expenses of drilling, reworking, deepening or plugging back, testing and completing, after deducting any cash contributions received under Section 25, and 125% of that portion of the cost of newly acquired equipment in the well (to and including the wellhead connections), which would have been chargeable to such Non-Consenting Party if it had participated therein.

In the case of any reworking, plugging back or deeper drilling operations, the Consenting Parties shall be permitted to use, free of cost, all casing, tubing and other equipment in the well, but the ownership of all such equipment shall remain unchanged; and upon abandonment of a well after such reworking, plugging back or deeper drilling, the Consenting Parties shall account for all such equipment to the owners thereof, with each party receiving its proportionate part in kind or in value.

Within sixty (60) days after the completion of any operation under this section, the party conducting the operations for the Consenting Parties shall furnish each Non-Consenting Party with an inventory of the equipment in and connected to the well, and an itemized statement of the cost of drilling, deepening, plugging back, testing, completing, and equipping the well for production; or, at its option, the operating party in lieu of an itemized statement of such costs of operation, may submit a detailed statement of monthly billings. Each month thereafter, during the time the Consenting Parties are being reimbursed as provided

above, the Consenting Parties shall furnish the Non-Consenting Parties with an itemized statement of all costs and liabilities incurred in the operation of the well, together with a statement of the quantity of oil and gas produced from it and the amount of proceeds realized from the sale of the well's working interest production during the preceding month. Any amount realized from the sale or other disposition of equipment newly acquired in connection with any such operation which would have been owned by a Non-Consenting Party had it participated therein shall be credited against the total unreturned costs of the work done and of the equipment purchased, in determining when the interest of such Non-Consenting Party shall revert to it as above provided; if there is a credit balance it shall be paid to such Non-Consenting Party.

If and when the Consenting Parties recover from a Non-Consenting Party's relinquished interest the amounts provided for above, the relinquished interests of such Non-Consenting Party shall automatically revert to it and from and after such reversion such Non-Consenting Party shall own the same interest in such well, the operating rights and working interest therein, the material and equipment in or pertaining thereto, and the producting therefrom as such Non-Consenting Party would have owned had it participated in the drilling, reworking, deepening or plugging back of said well. Thereafter, such Non-Consenting Party shall be charged with and shall pay its proportionate part of the further costs of the operation of said well in accordance with the terms of this agreement and the accounting procedure schedule, Exhibit "D", attached hereto.

"Payout" is defined to mean 7:00 a.m. local time on the first day of the month following the month in which Working Interest Owners have received proceeds from the sale of Unitized Substances attributable to the net working interest in the leases covered by the Unit Area (after production taxes but prior to income taxes), 100% of all costs expended by such Working Interest Owners in initiating a waterflood project for secondary recovery of Unitized Substances on all Tracts in the Unit Area,

including but not limited to reworking existing wells, drilling supplemental wells, purchasing and installing well and secondary recovery equipment, conducting Unit Operations under the Unit Operating Agreement and its exhibits.

ARTICLE 8

TAXĖS

- 8.1 Ad Valorem Taxes. Beginning with the first calendar year after the Effective Date hereof (defined in Section 19.1 hereof), Unit Operator shall make and file all necessary ad valorem tax renditions and returns with the proper taxing authorities with respect to all property of each Working Interest Owner used or held by Unit Operator for Unit Operations. Unit Operator shall settle assessments arising therefrom. All such ad valorem taxes shall be paid by Unit Operator and charged to the joint account; however, if the interest of a Working Interest Owner is subject to a separately assessed overriding royalty interest, production payment, or other interest in excess of a one-eighth (1/8) royalty, such Working Interest Owner shall notify Unit Operator of such interest prior to the rendition date and shall be given credit for the reduction in taxes paid resulting therefrom.
- 8.2 Other Taxes. Each Working Interest Owner shall pay or cause to be paid all production, severance, gathering, and other taxes imposed or with respect to the production or handling of its share of Unitized Substances.

ARTICLE 9

INSURANCE

- 9.1 <u>Insurance</u>. Unit Operator, with respect to the Unit Operations, shall do the following:
 - 9.1.1 Comply with the Workmen's Compensation Laws of the State of New Mexico.
 - 9.1.2 Carry Employer's Liability and other insurance required by the laws of the State of New Mexico.
 - 9.1.3 Unit Operator shall require all contractors engaged in work in or on the Unit Area to carry insurance for the benefit and protection of the Working Interest Owners consistent with Unit Operator's minimum requirements.

9.2 Other Insurance. Unit Operator shall not be required to carry any other insurance for the joint account of the parties hereto. Any party may, at its own expense, acquire such insurance as it deems proper to protect itself against any claims, losses, damages or destruction resulting from Unit Operations.

ARTICLE 10

ADJUSTMENT OF INVESTMENTS

- 10.1 <u>Personal Property Taken Over</u>. Upon the Effective Date, Working Interest Owners shall deliver to Unit Operator the following:
 - 10.1.1 <u>Wells</u>. All wells completed in the Unitized Formation.
 - 10.1.2 Well and Lease Equipment. The casing and tubing in each such well, the wellhead connections thereon, and all other lease and operating equipment that is used in the operation of such wells which Working Interest Owners determine is necessary or desirable for conducting Unit Operations.
 - 10.1.3 Records. A copy of all production and well records for such wells.
- Interest Owners shall, on the Effective Date or as soon thereafter as practicable, and at Unit Expense, inventory and evaluate in accordance with the provisions of Exhibit E the personal property taken over under Sections 10.1.1 and 10.1.2, except that casing shall be inventoried for record purposes, but shall be excluded from pricing and investment adjustment. Such inventory shall include and be limited to those items of equipment indicated to be controllable in the 1967 edition of the Material Classification Manual prepared by the Council of Petroleum Accountants Societies of North America (COPAS), except that sucker rods and other items as agreed upon by Working Interest Owners may be included on the inventory in order to insure a more equitable adjustment of investments. All other non-controllable items of lease and well equipment installed within the Unit Area, although excluded from the

inventory, shall nevertheless be taken over by the Unit Operator. Immediately following the completion of such inventory, the material and equipment taken over under Section 10.1.2 shall be priced in accordance with provisions of Section IV, paragraph 2 of Exhibit E, Accounting Procedure, or at an appraised value as determined by the Working Interest Owners. Pricing shall be performed under the supervision of, by the personnel of, and in the offices of, the Unit Operator, with the other Working Interest Owners furnishing such additional pricing help as may be available and necessary.

- Owners of the inventory and evaluation, each Working Interest Owner shall be credited with the value of its interest in all personal property taken over under Section 10.1.2, and shall be charged with an amount equal to that obtained by multiplying the total value of all personal property taken over under Section 10.1.2 by such Working Interest Owner's Phase II Unit Participation as shown in Exhibit D. If the charge against any Working Interest Owner is greater than the amount credited to such Working Interest Owner, the resulting net charge shall be an item of Unit Expense chargeable against such Working Interest Owner. If the credit to any Working Interest Owner is greater than the amount charged against such Working Interest Owner, the resulting net credit shall be paid to such Working Interest Owner, the resulting net credit shall be paid to such Working Interest Owner by Unit Operator out of funds received by it in settlement of the net charges described above.
- 10.4 General Facilities. The acquisition of warehouses, warehouse stocks, lease houses, camps, facility systems, and office buildings necessary for Unit Operations shall be by negotiation by the owners thereof and Unit Operator, subject to the approval of Working Interest Owners. There shall be no adjustment for lease roads or appurtenances thereto.
- 10.5 Ownership of Personal Property and Facilities. Each Working Interest Owner, individually, shall by virtue hereof own an undivided

interest, equal to its Phase II Unit Participation, in all personal property and facilities taken over or otherwise acquired by Unit Operator pursuant to this agreement.

ARTICLE 11

UNIT EXPENSE

- 11.1 Basis of Charge to Working Interest Owners. Unit Operator initially shall pay all Unit Expense. All charges, credits, and accounting for Unit Expense shall be in accordance with Exhibit E. Each Working Interest Owner shall reimburse the Unit Operator for its share of Unit Expense as follows:
 - 11.1.1 Operating Costs and Expenditures. All operating costs and expenses shall be shared and borne by Working Interest Owners in proportion to their then effective Unit Participation.
 - 11.1.2 <u>Investment Expenditures</u>. Beginning at 7:00 a.m. on the Effective Date hereof, all capital expenditures shall be shared and borne by the Working Interest Owners in accordance with their Phase II Unit Participation.
- Date, Unit Operator shall prepare a budget of estimated Unit Expense for the remainder of the calendar year, and, on or before the first day of each October thereafter, shall prepare such a budget for the ensuing calendar year. A budget shall set forth the estimated Unit Expense by quarterly periods. Budgets shall be estimated only, and shall be adjusted or corrected by Working Interest Owners and Unit Operator whenever an adjustment or correction is proper. A copy of each budget and adjusted budget shall be furnished promptly to each Working Interest Owner.
- 11.3 Advance Billings. Unit Operator shall have the right without prejudice to other rights or remedies to require Working Interest Owners to advance their respective shares of estimated Unit Expense by submitting to Working Interest Owners, on or before the 15th day of any month, an itemized estimate thereof for the succeeding month, with a request for payment in advance. Within fifteen (15) days after receipt of the

estimate, each Working Interest Owner shall pay to Unit Operator its share of such estimate. Adjustments between estimated and actual Unit Expense shall be made by Unit Operator at the close of each calendar month, and the accounts of Working Interest Owners shall be adjusted accordingly.

- 11.4 Commingling of Funds. No funds received by Unit Operator under this agreement need be segregated or maintained by it as a separate fund, but may be commingled with its own funds.
- 11.5 Lien and Security Interest of Unit Operator. Each Working Interest Owner grants to Unit Operator a lien upon its Oil and Gas Rights in each Tract, and a security interest in its share of Unitized Substances when extracted, and in its interest in all Unit Equipment, to secure payment of its share of Unit Expense, together with interest thereon at the rate of ten percent (10%) per annum. To the extent that Unit Operator has a security interest under the Uniform Commercial Code of the State of New Mexico, Unit Operator shall be entitled to exercise the rights and remedies of a secured party under said Code. The bringing of a suit and the obtaining of judgment by the Unit Operator for the secured indebtedness shall not be deemed an election of remedies or otherwise affect the lien rights or security interest as security for the payment thereof. In addition, upon default by any Working Interest Owner in the payment of its share of Unit Expense, Unit Operator shall have the right, without prejudice to other rights or remedies, to collect from the purchaser the proceeds from the sale of such Working Interest Owner's share of Unitized Substances until the amount owed by such Working Interest Owner, plus interest, has been paid. Each purchaser shall be entitled to rely upon Unit Operator's written statement concerning the amount of any default.
- 11.6 Unpaid Unit Expense. If any Working Interest Owner fails to pay its share of Unit Expense within sixty (60) days after rendition of a statement therefor by Unit Operator, each Working Interest Owner agrees, upon request by Unit Operator, to pay its proportionate part of the unpaid share of Unit Expense of the defaulting Working Interest

Owner. The Working Interest Owners that pay the share of Unit Expense of a defaulting Working Interest Owner shall be reimbursed by the Unit Operator for the amount so paid, plus any interest collected thereon, upon receipt by Unit Operator of any past due amount collected from the defaulting Working Interest Owner. Any Working Interest Owner so paying a defaulting Working Interest Owner's share of Unit Expense shall be subrogated to the lien and other rights herein granted Unit Operator.

- 11.7 Carved-Out Interest. If any Working Interest Owner shall, after executing this agreement, create an overriding royalty, production payment, net proceeds interest, carried interest, or any other interest out of its Working Interest, such carved-out interest shall be subject to the terms and provisions of this agreement, specifically including, but without limitation, Section 11.5 hereof entitled "Lien and Security Interest of Unit Operator". If the Working Interest Owner creating such carved-out interest (a) fails to pay any Unit Expense chargeable to such Working Interest Owner under this agreement, and the production of Unitized Substances accruing to the credit of such Working Interest Owner is insufficient for that purpose, or (b) withdraws from this agreement under the terms and provisions of Article 17 hereof, the carved-out interest shall be chargeable with a pro rata portion of all Unit Expense incurred hereunder, the same as though such carved-out interest were a Working Interest, and Unit Operator shall have the right to enforce against such carved-out interest the lien and all other rights granted in Section 11.5 for the purpose of collecting the Unit Expense chargeable to the carved-out interest.
- 11.8 Uncommitted Royalty Interest and Overriding Royalty Interest. Should an owner of a Royalty Interest or Overriding Royalty Interest in any Tract fail to become a party of the Unit Agreement, and, as a result thereof, the actual Royalty Interest and/or Overriding Royalty Interest payments with respect to such Tract are more or less than the Royalty Interest and/or Overriding Royalty Interest payments computed on the basis of the Unitized Substances that are allocated to such Tract under

the Unit Agreement, the difference shall be borne by or inure to the benefit of Working Interest Owners, in proportion to their respective Unit Participation; however, the difference to be borne by or inure to the benefit of Working Interest Owners shall not exceed an amount computed on the basis of one-eighth (1/8) of the difference between the Unitized Substances allocated to the Tract and the Unitized Substances produced from the Tract. Such adjustments shall be made by charges and credits to the joint account.

ARTICLE 12

NON-UNITIZED FORMATIONS

- 12.1 Right to Operate. Any Working Interest Owner that now has or hereafter acquires the right to drill for and produce oil, gas, or other minerals, from a formation underlying the Unit Area, other than the Unitized Formation, shall have the right to do so notwithstanding this agreement or the Unit Agreement. In exercising the right, however, such Working Interest Owner shall exercise care to prevent unreasonable interference with Unit Operations. No Working Interest shall produce Unitized Substances through any well drilled or operated by it. If any Working Interest Owner drills any well into or through the Unitized Formation, the Unitized Formation shall be protected in a manner satisfactory to Working Interest Owners so that the production of Unitized Substances will not be affected adversely.
- 12.2 Multiple Completions. On and after the Effective Date hereof, no well shall be multiply completed to produce from the Unitized Formation and any other formation without prior consent of the Working Interest Owners. In the event such consent is given, such multiple completion shall be subject to terms and conditions as may be prescribed by Working Interest Owners.

ARTICLE 13

TITLES

13.1 Warranty and Indemnity. Each Working Interest Owner represents and warrants that it is the owner of the respective working interests set forth opposite its name in Exhibit D, and agrees to indemnify and hold harmless the other Working Interest Owners from any loss

due to failure, in whole or in part, of its title to such interest, except failure to title arising because of Unit Operations; however, such indemnity and any liability for breach of warranty shall be limited to an amount equal to the net value that has been received from the sale or receipt of Unitized Substances attributed to the interest as to which title failed. Each failure of title will be deemed to be effective, insofar as this agreement is concerned, as of 7:00 a.m. on the first day of the calendar month in which such failure is finally determined, and there shall be no retroactive adjustment of Unit Expense, or retroactive allocation of Unitized Substances or the proceeds therefrom, as a result of title failure.

13.2 Failure Because of Unit Operations. The failure of title to any Working Interest in any Tract because of Unit Operations, including non-production from such Tract, shall not change the Unit Participation of the Working Interest Owner whose title failed in relation to the Unit Participations of the other Working Interest Owners at the time of title failure.

ARTICLE 14

LIABILITY, CLAIMS, AND SUITS

- 14.1 <u>Individual Liability</u>. The duties, obligations, and liabilities of Working Interest Owners shall be several and not joint or collective; and nothing herein shall ever be construed as creating a partnership of any kind, joint venture, association, or trust among Working Interest Owners.
- 14.2 <u>Settlements</u>. Unit Operator may settle any single damage claim or suit involving Unit Operations if the expenditure does not exceed Three Thousand Five Hundred Dollars (\$3,500.00) and if the payment is in complete settlement of such claim or suit. If the amount required for settlement exceeds the above amount, Working Interest Owners shall assume and take over the further handling of the claim or suit unless such authority is expressly delegated to Unit Operator. All costs and expense of handling, settling, or otherwise discharging such claim or suit shall be an item of Unit Expense. If a claim is made

against any Working Interest Owner or if any Working Interest Owner is sued on account of any matter arising from Unit Operations over which such Working Interest Owner individually has no control because of the rights given Working Interest Owners and Unit Operator by this agreement and the Unit Agreement, the Working Interest Owner shall immediately notify the Unit Operator, and the claim or suit shall be treated as any other claim or suit involving Unit Operations.

ARTICLE 15

LAWS AND REGULATIONS

Internal Revenue Provision. Notwithstanding any provisions herein that the rights and liabilities of the parties hereunder are several and not joint or collective, or that this agreement and the operations hereunder shall not constitute a partnership, if for Federal income tax purposes this agreement and the operations hereunder are regarded as a partnership, then each of the parties hereto elects to be excluded from the application of all of the provisions of Subchapter K, Chapter 1, Subtitle A, of the Internal Revenue Code of 1954, as permitted and authorized by Section 761 of the Code and the regulations promulgated thereunder. Unit Operator is hereby authorized and directed to execute on behalf of each of the parties hereto such evidence of this election as may be required by the Secretary of the Treasury of the United States or the Federal Internal Revenue Service, including specifically, but not by way of limitation, all of the returns, statements, and the data required by Federal Regulations 1.761-1(a). Should there be any requirement that each party hereto further evidence this election, each party hereto agrees to execute such documents and furnish such other evidence as may be required by the Federal Internal Revenue Service or as may be necessary to evidence this election. Each party hereto further agrees not to give any notices or take any other action inconsistent with the election made hereby. If any present or future income tax laws of the state or states in which the Unit Area is located, or any future income tax law of the United States, contain provisions

Revenue Code of 1954, under which an election similar to that provided by Section 761 of the Code is permitted, each of the parties agrees to make such election as may be permitted or required by such laws. In making this election, each of the parties states that the income derived by such party from the operations under this agreement can be adequately determined without the computation of partnership taxable income.

ARTICLE 16

NOTICES

16.1 Notices. All notices required hereunder shall be in writing and shall be deemed to have been properly served when sent by mail or telegram to the address of the representative of each Working Interest Owner as furnished to Unit Operator in accordance with Article 4.

ARTICLE 17

WITHDRAWAL OF WORKING INTEREST OWNER

17.1 Withdrawal. A Working Interest Owner may withdraw from this agreement by transferring, without warranty to title, either express or implied, to the other Working Interest Owners, all its Oil and Gas Rights, exclusive of Royalty Interests, together with its interest in all Unit Equipment and in all wells used in Unit Operations. Such transfer shall not relieve the Working Interest Owner from any obligation or liability incurred prior to the date of delivery of the instrument of transfer. The interest transferred shall be owned by the transferees in proportion to their respective Unit Participations. The transferees, in proportion to the respective interest so acquired, shall pay transferor, for its interest in Unit Equipment, the net salvage value thereof as determined by Working Interest Owners. After the date of delivery of the instrument of transfer, the withdrawing Working Interest Owner shall be relieved from all further obligations and liability hereunder and under the Unit Agreement, and the rights of such Working Interest Owner hereunder and under the Unit Agreement shall cease insofar as they existed by virtue of the interest transferred.

ABANDONMENT OF WELLS

- 18.1 Rights of Former Owners. If Working Interest Owners decide to permanently abandon any well within the Unit Area prior to termination of the Unit Agreement, Unit Operator shall give written notice thereof to Working Interest Owners of the Tract on which the well is located, and they shall have the option for a period of ninety (90) days after the sending of such notice to notify Unit Operator in writing of their election to take over and own the well. Within ten (10) days after Working Interest Owners of the Tract have notified Unit Operator of their election to take over the well, they shall pay Unit Operator, for credit to the joint account, the amount determined by Working Interest Owners to be the net salvage value of the casing and equipment in and on the well. Working Interest Owners of the Tract, by taking over the well, agree to seal off the Unitized Formation, and upon abandonment to plug the well in compliance with applicable laws and regulations.
- 18.2 Plugging. If the Working Interest Owners of a Tract do not elect to take over a well located within the Unit Area that is proposed for abandonment, Unit Operator shall plug and abandon the well in compliance with applicable laws and regulations.

ARTICLE 19

EFFECTIVE DATE AND TERM

- 19.1 Effective Date. This agreement shall become effective when the Unit Agreement becomes effective.
- 19.2 Term. This agreement shall continue in effect so long as the Unit Agreement remains in effect, and thereafter until (a) all unit wells have been plugged and abandoned or turned over to Working Interest Owners in accordance with Article 20, (b) all Unit Equipment and real property acquired for the joint account have been disposed of by Unit Operator in accordance with instructions of Working Interest Owners, and (c) there has been a final accounting.

ABANDONMENT OF OPERATIONS

- 20.1 <u>Termination</u>. Upon termination of the Unit Agreement, the following will occur:
 - 20.1.1 Oil and Gas Rights. Oil and Gas Rights in and to each separate Tract shall no longer be effected by this agreement, and thereafter the parties shall be governed by the terms and provisions of the leases, contracts, and other instruments affecting the separate Tracts.
 - 20.1.2 Right to Operate. Working Interest Owners of any Tract that desire to take over and continue to operate wells located thereon may do so by paying Unit Operator, for credit to the joint account, the net salvage value as determined by Working Interest Owners of the casing and equipment in and on the wells taken over, and by agreeing upon abandonment to plug each well in compliance with applicable laws and regulations.
 - 20.1.3 <u>Salvaging Wells</u>. 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.
 - 20.1.4 Cost of Abandonment. The cost of abandonment of Unit Operations shall be Unit Expense.
 - 20.1.5 <u>Distribution of Assets</u>. Working Interest Owners shall share in the distribution of Unit Foripment, or the proceeds thereof, in proportion to their Unit Participation. As between the Working Interest Owners, Hal M. Stierwalt and Jack L. McClellan and all other Working Interest Owners claiming by, through or under them (or either of them) the provisions of this Section 20.1.5 shall be subject to the provisions of paragraph 7 of a certain Memorandum of Agreement dated December 31, 1974, between Hal M. Stierwalt, et ux, and Jack L. McClellan, et ux.

EXECUTION

21.1 Original, Counterpart, or Other Instrument. An owner of a Working Interest may become a party of this agreement by signing the original of this instrument, a counterpart hereof, or other instrument agreeing to become a party hereto. The signing of any such instrument shall have the same effect as if all parties had signed the same instrument.

ARTICLE 22

SUCCESSORS AND ASSIGNS

22.1 Successors and Assigns. This agreement shall extend to, be binding upon, and inure to the benefit of the parties hereto, their respective heirs, devisees, legal representatives, successors, and assigns, and shall constitute a covenant running with the lands, leases, and interests covered hereby.

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

ATTEST:	McCLELLAM OIL CORPORATION UNIT OPERATOR
By Willows Taylor Delcris Taylor	By J. McClellan, President
Date april 25,1975	
Date 0 pril 25,1975	Jack L McClellan
Date	Sarlare McClellan Barbara McClellan
Date	Hal M. Stierwalt
Date	Doktor Chiomark
	Betty Stierwalt
	GETTY OIL COMPANY
Date	By

STATE OF NEW MEXICO

COUNTY OF CHAVES

Му

The foregoing instrume 25 day of Corporation, a	ent was acknowledged before me this 5, by Jack L. McClellan, President New Mexico corporation, on behalf of
	or penalt of
My Commission Expires:	
10/31/22	Notary Public Notary Public
	\
GM2 in a series	
STATE OF NEW MEXICO	
COUNTY OF CHAVES	
The foregoing instrumen day of McClellan, his wife.	t was acknowledged before me this , by Jack L. McClellan and Barbara
My Commission Expires:	-
10/31/22	Sharand Mila
	Notary Public
STATE OF NEW MEXICO	
COUNTY OF CHAVES	
The foregoing instrument day of, 1975, Stierwalt, his wife.	was acknowledged before me this by Hal M. Stierwalt and Betty
My Commission Expires:	
	Notary Public
STATE OF	:
COUNTY OF	
The foregoing instrument day of, 1975, by	was acknowledged before me this
of Getty Oil C corporation on behalf of said corpo	-
My Commission Expires:	· · · · · · · · · · · · · · · · · · ·
, 2200.	
	Notary Public
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STATE OF NEW MEXICO

COUNTY (OF	CHA	VE.	S
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day of , 1975,	was acknowledged before me this by Jack L. McClellan, President w Mexico corporation, on behalf of
My Commission Expires:	
· · · · · · · · · · · · · · · · · · ·	Notary Public
STATE OF NEW MEXICO	
COUNTY OF CHAVES	
	was acknowledged before me this by Jack L. McClellan and Barbara
My Commission Expires:	
	Notary Public
STATE OF NEW MEXICO	
COUNTY OF CHAVES	
	was acknowledged before me this by Hal M. Stierwalt and Betty
My Commission Expires:	
	Notary Public
STATE OF	
COUNTY OF	
3.00	Company, a
My Commission Expires:	
	Notary Public

EXHIBIT "D"

 \mathbf{TO}

UNIT OPERATING AGREEMENT

EAST HENSHAW UNIT EDDY COUNTY, NEW MEXICO

Schedule of Tract Participation

Tract No.			:	Participation Percentage
1 2 3		-	* · · · · · · · · · · · · · · · · · · ·	55.81012% 29.74281% 8.43752% 6.00955%
*	TOTAL			100.00000%

Recommended by the Council of Petroleum Accountants Societies of North America.

EXHIBIT

Attached to and made a part of Unit Operating Agreement, East Henshaw Unit, Eddy County, New Mexico

ACCOUNTING PROCEDURE

(JOINT OPERATIONS)

I. GENERAL PROVISIONS

1. Definitions

"Joint Property" shall mean the real and personal property subject to the agreement to which this "Accounting Procedure" is attached.

"Joint Operations" shall mean all operations necessary or proper for the development, operation, protection and maintenance of the Joint Property.

"Operator" shall mean the party designated to conduct the Joint Operations. "Non-Operators" shall mean the nonoperating parties, whether one or more.

"Joint Account" shall mean the account showing the charges and credits accruing because of the Joint Operations and which are to be shared by the Parties.

"Parties" shall mean Operator and Non-Operators.
"Material" shall mean personal property, equipment or supplies acquired or held for use on the Joint Property.
"Controllable Material" shall mean material which at the time is so classified in the Material Classification Manual as most recently recommended by the Council of Petroleum Accountants Societies of North America.

2. Conflict with Agreement

In the event of a conflict between the provisions of this Accounting Procedure and the provisions of the agreement to which this Accounting Procedure is attached, the provisions of the agreement shall control.

XXXXXXXX

4. Statements and Billings

Operator shall bill Non-Operators on or before the last day of each month for their proportionate share of costs and and credits as set forth under Subparagraph

A. Statement in detail of all charges and credits to the Joint Account.

Statement of all charges and credits to the Joint Account, summarized by appropriate classifications indicative of the nature thereof.

Statement of all charges and credits to the Joint Account summarized by appropriate classifications indicative of the nature thereof, except that items of Controllable Material and unusual charges and credits shall be detailed.

5. Payment and Advances by Non-Operators

Each Non-Operator shall pay its proportion of all such bills within fifteen (15) days after receipt thereof. If payment is not made within such time, the unpaid balance shall bear interest at the rate of six per cent (6%) per annum until paid.

6. Adjustments

Payment of any such bills shall not prejudice the right of any Non-Operators to protest or question the correctness thereof; provided however, all bills and statements rendered to Non-Operators by Operator during any calendar vear shall conclusively be presumed to be true and correct after twenty-four (24) months following the end of any such calendar year, unless within the said twenty-four (24) month period a Non-Operator takes written exception thereto and makes claim on Operator for adjustment. No adjustment favorable to Operator shall be made unless it is made within the same prescribed period. The provisions of this paragraph shall not prevent adjustments resulting from a physical inventory of the Joint Property as provided for in Section VII.

A Non-Operator, upon notice in writing to Operator and all other Non-Operators, shall have the right to audit Operator's accounts and records relating to the accounting hereunder for any calendar year within the twenty-four (24) month period following the end of such calendar year; provided however, the making of an audit shall not extend the time for the taking of written exception to and the adjustment of accounts as provided for in Paragraph 6 of this Section I. Where there are two or more Non-Operators, the Non-Operators shall make every reasonable effort to conduct joint or simultaneous audits in a manner which will result in a minimum of inconvenience to the Operator.

II. DIRECT CHARGES

Subject to limitations hereinafter prescribed, Operator shall charge the Joint Account with the following items:

1. Rentals and Royalties

Delay or other rentals and royalties when such rentals and royalties are paid by Operator for the Joint Account of the Parties.

Labor

A. Salaries and wages of Operator's employees directly engaged on the Joint Property in the conduct of the Joint Operations, and salaries or wages of technical employees who are temporarily assigned to and directly employed on the Joint Property.

- B. Operator's cost of holiday, vacation, sickness and disability benefits and other customary allowances paid to the employees whose salaries and wages are chargeable to the Joint Account under Paragraph 2A of this Section II and Paragraph 1 of Section III; except that in the case of those employees only a pro rata portion of whose salaries and wages are chargeable to the Joint Account under Paragraph I of Section III, not more than the same pro rata portion of the benefits and allowances herein provided for shall be charged to the Joint Account. Cost under this Paragraph 2B may be charged on a "when and as paid basis" or by "percentage assessment" on the amount of salaries and wages chargeable to the Joint Account under Paragraph 2A of this Section II and Paragraph I of Section III. If percentage assessment is used, the rate shall be based on the Operator's cost experience.
- C. Expenditures or contributions made pursuant to assessments imposed by governmental authority which are applicable to Operator's labor cost of salaries and wages chargeable to the Joint Account under Paragraphs 2A and 2D of this Section II and Paragraph 1 of Section III
- D. Reasonable personal expenses of those employees whose salaries and wages are chargeable to the Joint Account under Paragraph 2A of this Section II and for which expenses the employees are reimbursed under Operator's usual practice.

3. Employee Benefits

4. Material

Material purchased or furnished by Operator for use on the Joint Property. So far as it is reasonably practical and consistent with efficient and economical operation, only such Material shall be purchased for or transferred to the Joint Property as may be required for immediate use; and the accumulation of surplus stocks shall be avoided.

5. Transportation

Transportation of employees and Material necessary for the Joint Operations but subject to the following limitations:

A. If Material is moved to the Joint Property from the Operator's warehouse or other properties, no charge shall be made to the Joint Account for a distance greater than the distance from the nearest reliable supply store or railway receiving point where like material is available, except by agreement with Non-Operators.

B. If surplus Material is moved to Operator's warehouse or other storage point, no charge shall be made to the Joint Account for a distance greater than the distance to the nearest reliable supply store or railway receiving point, except by agreement with Non-Operators. No charge shall be made to Joint Account for moving Material to other properties belonging to Operator, except by agreement with Non-Operators.

C. In the application of subparagraphs A and B above, there shall be no equalization of actual gross trucking costs of \$100 or less.

6. Services

- A. The cost of contract services and utilities procured from outside sources other than services covered by Paragraph 8 of this Section II and Paragraph 2 of Section III.
- B. Use and service of equipment and facilities furnished by Operator as provided in Paragraph 5 of Section IV.

7. Damages and Losses to Joint Property

All costs or expenses necessary for the repair or replacement of Joint Property made necessary because of damages or losses incurred by fire, flood, storm, theft, accident, or any other cause, except to the extent that the damage or loss could have been avoided through the exercise of reasonable diligence on the part of Operator. Operator shall furnish Non-Operators written notice of damages or losses incurred as soon as practicable after a report thereof has been received by Operator.

8. Legal Expense

All costs and expenses of handling, investigating and settling litigation or claims arising by reason of the Joint Operations or necessary to protect or recover the Joint Property, including, but not limited to, attorneys' fees, court costs, cost of investigation or procuring evidence and amounts paid in settlement or satisfaction of any such litigation or claims; provided, (a) no charge shall be made for the services of Operator's legal staff or other regularly employed personnel (such services being considered to be Administrative Overhead under Section III), except by agreement with Non-Operators, and (b) no charge shall be made for the fees and expenses of outside attorneys unless the employment of such attorneys is agreed to by Operator and Non-Operators.

9. Taxes

All taxes of every kind and nature assessed or levied upon or in connection with the Joint Property, the operation thereof, or the production therefrom, and which taxes have been paid by the Operator for the benefit of the Parties.

10. Insurance Premiums

Premiums paid for insurance required to be carried on the Joint Property for the protection of the Parties.

11. Other Expenditures

Any other expenditure not covered or dealt with in the foregoing provisions of this Section II, or in Section III, and which is incurred by the Operator for the necessary and proper conduct of the Joint Operations.

III. INDIRECT CHARGES

Operator may charge the Joint Account for indirect costs either by use of an allocation of district expense items plus a fixed rate for administrative overhead, and plus the warehousing charges, all as provided for in Paragraphs 1, 2, and 3 of this Section III OR by combining all three of said items under the fixed rate provided for in Paragraph 4 of this Section III, as indicated next below:

OPERATOR SHALL CHARGE THE JOINT ACCOUNT UNDER THE TERMS OF:

- MAKANAKA KANAKA KANAKA
- Paragraph 4. (Combined fixed rate)

1. District Expense

Operator shall charge the Joint Account with a pro rata portion of the salaries, wages and expenses of Operator's production superintendent and other employees serving the Joint Property and other properties of the Operator in the same operating area, whose time is not allocated directly to the properties, and a pro rata portion of the cost of maintaining and operating a production office known as Operator's

office located at or near _________ (or a comparable office if location changed), and necessary sub-offices (if any), maintained for the convenience of the above-described office, and all necessary camps, including housing facilities for employees if required, used in connection with the operations of the Joint Property and other properties in the same operating area. The expense of, less any revenue from, such facilities may, at the option of Operator, include depreciation of investment or a fair monthly rental in lieu of depreciation. Such charges shall be apportioned to all properties served on some equitable basis consistent with Operator's accounting practice.

2., Administrative Overhead

Operator shall charge administrative overhead to the Joint Account at the following rates, which charge shall be in lieu of the cost and expense of all offices of the Operator not covered by Paragraph 1 of this Section III, including salaries, wages and expenses of personnel assigned to such offices. Such charges shall be in addition to the salaries, wages and expenses of employees of Operator authorized to be charged as direct charges as provided in Paragraphs 2 and 3 of Section II.

WELL BASIS (RATE PER WELL PER MONTH)

	DRILLING WELL RATE	PRODUCING WELL RATE (Use Current Producing Depth)				
Well Depth	(Use Total Depth) Each Well	First Five	Next Five	All Wells Over Ten		
* /roseesse	****	***********		**********		
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			***************************************	**************************************		

The cost and expense of services from outside sources in connection with matters of taxation, traffic, accounting, or matters before or involving governmental agencies shall be considered as included in the overhead rates provided for in this Paragraph 2 of Section III, unless such cost and expense are agreed upon between Operator and Non-Operators as a direct charge to the Joint Account.

Operator's Fully Owned Warehouse Operating and Maintenance Expense (Describe fully the agreed procedure to be followed by the Operator.)

Combined Fixed Rates

Operator shall charge the Joint Account for the services covered by Paragraph 1, 2 and 3 of this Section III, the following fixed per well rates:

WELL BASIS (RATE PER WELL PER MONTH)

	DRILLING WELL RATE	PRODUCING WELL RATE (Use Current Producing Depth)			
Well Depth	(Use Total Dopth) Each Well	All xxxxxwells	Next Five	All Wells Over Ten	
All depths	\$600/mo.	\$150/mo.			
	***************************************		7: 12: :774; -b: 42-b: 2222222222222		
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. Said fixed rate (shall) (MKKKKK) include salaries and expenses of production foremen, and pumper.

5. Application of Administrative Overhead or Combined Fixed Rates

The following limitations, instructions and charges shall apply in the application of the per well rates as provided under either Paragraph 2 or Paragraph 4 of this Section III:

A. Charges for drilling wells shall begin on the date each well is spudded and terminate on the date the drilling or completion rig is released, whichever is later, except that no charge shall be made during the suspension of drilling operations for fifteen (15) or more consecutive days.

The status of wells shall be as follows:

- (1) Producing gas wells, injection wells for recovery operations, water supply wells utilized for water flooding operations and salt water disposal wells shall be considered the same as producing wells.
- (2) Wells permanently shut down but on which plugging operations are deferred shall be dropped from the well schedule at the time the shutdown is effected. When such a well is plugged a charge shall be made at the producing well rates.
- (3) Wells being plugged back, drilled deeper, converted to a source or input well, or which are undergoing may type of workover that requires the use of a drilling or workover rig shall be considered the same as drilling
- (4) Temporarily shut-down wells, which are not produced or worked upon for a period of a full calendar month, shall not be included in the well schedule, provided however, wells shut in by governmental regulatory body shall be included in the well schedule only in the event the allowable production is transferred to some other well or wells on the Joint Property. In the event of a unit allowable, all wells capable of producing will be counted in determining the charge.
- (5) Gas wells shall be included in the well schedule if directly connected to a permanent sales outlet even though temporarily shut in due to overproduction or failure of purchaser to take the allowed production.
- Wells completed in multiple horizons, in which the production is not commingled down hole, shall be considered as a producing well for each separately producing horizon.
- C. The well rates shall apply to the total number of wells being drilled or operated under the agreement to which this Accounting Procedure is attached, irrespective of individual leases.
- The well rates shall be adjusted on the first day of April of each year following the effective date of the agreement to which this Accounting Procedure is attached. The adjustment shall be computed by multiplying the rate currently in use by the percentage increase or decrease in the average weekly earnings of Crude Petroleum and Gas Production Workers for the last calendar year compared to the preceding calendar year as shown by "The Index of Average Weekly Earnings of Crude Petroleum and Gas Production Workers" as published by the United States Department of Labor, Bureau of Labor Statistics. The adjusted rates shall be the rates currently in use, plus or minus the computed adjustment.
- 6. For the construction of compressor plants, water stations, secondary recovery systems, salt water disposal facilities, and other such projects, as distinguished from the more usual drilling and producing operations, Operator in addition to the Administrative Overhead or Combined Fixed Rates provided for in Paragraph 2 and 4 of this Section III, shall charge the Joint Account with an additional overhead charge as follows:

- A. Total cost less than \$25,000,xxxxxxxx 5% of total cost*

 B. Total cost more than \$25,000 but less than \$100,000, 5% of total cost.*
- C. Total cost of \$100,000 or more, 5 % of the first \$100,000 plus 2 % of all over \$100,000 of total cost.* Total cost shall mean the total gross cost of any one project. For the purpose of this Paragraph the component parts of a single project shall not be treated separately and the cost of drilling wells shall be excluded.
- The specific rates provided for in this Section III may be amended from time to time by mutual agreement between the Parties hereto if, in practice, the rates are found to be insufficient or excessive.

IV. BASIS OF CHARGES TO JOINT ACCOUNT

Subject to the further provisions of this Section IV, Operator will procure all Material and services for the Joint Property. At the Operator's option, Non-Operator may supply Material or services for the Joint Property.

1. Purchases

Material purchased and service procured shall be charged at the price paid by Operator after deduction of all discounts actually received.

2. Material furnished from Operator's Warehouse or Other Properties

A. New Material (Condition "A")

- (1) Tubular goods, two inch (2") and over, shall be priced on Eastern Mill base (i. e. Youngstown, Ohio: Lorain, Ohio; and Indiana Harbor, Indiana) on a minimum carload basis effective at date of movement and f. o. b. railway receiving point nearest the Joint Property, regardless of quantity. In equalized hauling charges, Operator is permitted to include ten cents (10c) per hundred-weight on all tubular goods furnished from his stocks in lieu of loading and unloading costs sustained.
- (2) Other Material shall be priced at the current replacement cost of the same kind of Material, effective at date of movement and f. o. b. the supply store or railway receiving point nearest the Joint Property where Material of the same kind is available.
- (3) The Joint Account shall not be credited with cash discounts applicable to prices provided for in this Paragraph 2 of Section IV.

B. Used Material (Condition "B" and "C")

(1) Material in sound and serviceable condition and suitable for reuse without reconditioning, shall be classified as Condition "B" and priced at seventy-five per cent (75%) of the current price of new Material.

(2) Material which cannot be classified as Condition "B" but which,

- (a) After reconditioning will be further serviceable for original function as good secondband Material (Condition "B"), or
- (b) Is serviceable for original function but substantially not suitable for reconditioning, shall be classified as Condition "C" and priced at fifty per cent (50%) of current new price.
 (3) Obsolete Material or Material which cannot be classified as Condition "B" or Condition "C" shall be priced

general with its use. Distorial na langur suitable for its arigin

some other purpose, shall be priced on a basis comparable with that of items normally used for such other purpose.

(4) Material involving erection costs shall be charged at applicable percentage of the current knocked-down price of new Material.

3. Premium Prices

Whenever Material is not readily obtainable at prices specified in Paragraphs 1 and 2 of this Section IV because of national emergencies, strikes or other unusual causes over which the Operator has no control, the Operator may charge the Joint Account for the required Material at the Operator's actual cost incurred in procuring such Material, in making it suitable for use, and in moving it to the Joint Property, provided, that notice in writing is furnished to Non-Operators of the proposed charge prior to billing Non-Operators for such Material. Each Non-Operator shall have the right, by so electing and notifying Operator within 10 days after receiving notice from Operator, to furnish in kind all or part of his share of such Material suitable for use and acceptable to Operator.

. Warranty of Material Furnished by Operator

Operator does not warrant the Material furnished. In case of defective Material, credit shall not be passed to the Joint Account until adjustment has been received by Operator from the manufacturers or their agents.

5. Equipment and Facilities Furnished by Operator

- A. Operator shall charge the Joint Account for use of equipment and facilities at rates commensurate with cost of ownership and operation. Such rates shall include cost of maintenance, repairs, other operating expense, insurance, taxes, depreciation and interest on investment not to exceed six per cent (6%) per annum, provided such rates shall not exceed those currently prevailing in the immediate area within which the Joint Property is located. Rates for automotive equipment shall generally be in line with the schedule of rates adopted by the Petroleum Motor Transport Association, or some other recognized organization, as recommeded uniform charges against Joint Property operations. Rates for laboratory services shall not exceed those currently prevailing if performed by outside service laboratories. Rates for trucks, tractors and well service units may include wages and expenses of operator.
- B. Whenever requested, Operator shall inform Non-Operators in advance of the rates it proposes to charge.
- C. Rates shall be revised and adjusted from time to time when found to be either excessive or insufficient.

V. DISPOSAL OF MATERIAL

The Operator may purchase, but shall be under no obligation to purchase, interest of Non-Operators in surplus Condition "A" or "B" Material. The disposition of surplus Controllable Material, not purchased by Operator, shall be subject to agreement between Operator and Non-Operators, provided Operator shall dispose of normal accumulations of junk and scrap Material either by transfer or sale from the Joint Property.

1. Material Purchased by the Operator or Non-Operators

Material purchased by either the Operator or Non-Operators shall be credited by the Operator to the Joint Account for the month in which the Material is removed by the purchaser.

2. Division in Kind

Division of Material in kind, if made between Operator and Non-Operators, shall be in proportion to the respective interests in such Material. The Parties will thereupon be charged individually with the value of the Material received or receivable. Proper credits shall be made by the Operator in the monthly statement of operations.

3. Sales to Outsiders

Sales to outsiders of Material from the Joint Property shall be credited by Operator to the Joint Account at the net amount collected by Operator from vendee. Any claim by vendee related to such sale shall be charged back to the Joint Account if and when paid by Operator.

4. Subject To

The provisions of this Article V are subject to the rights and obligations of certain Working Interest Owners as specified in a certain Memorandum of Agreement, dated December 31, 1974, by and between Hal M. Stierwalt, et ux, to and with Jack L. McClellan, et al

Good used material (Condition "B"), being used Material in sound and serviceable condition, suitable for reuse without reconditioning:

A. At seventy-five per cent (75%) of current new price if Material was charged to Joint Account as new, or

B. At sixty-five per cent (65%) of current new price if Material was originally charged to the Joint Account as secondhand at seventy-five percent (75%) of new price.

4. Other Used Material

Used Material (Condition "C"), at fifty per cent (50%) of current new price, being used Material which:

A. Is not in sound and serviceable condition but suitable for reuse after reconditioning, or

B. Is serviceable for original function but not suitable for reconditioning.

5. Bad-Order Material

Material (Condition "D"), no longer suitable for its original purpose without excessive repair cost but usable for some other purpose at a price comparable with that of items normally used for such other purpose.

6. Junk Material

Junk Material (Condition "E"), being obsolete and scrap Material, at prevailing prices.

7. Temporarily Used Material

When the use of Material is temporary and its service to the Joint Property does not justify the reduction in price as provided for in Paragraph 3 B of this Section VI, such Material shall be priced on a basis that will leave a net charge to the Joint Account consistent with the value of the service rendered.

VII. INVENTORIES

The Operator snall maintain detailed records of Material generally considered controllable by the Industry.

1. Periodic Inventories, Notice and Representation

At reasonable intervals, inventories shall be taken by Operator of the Joint Account Material, which shall include all such Material as is ordinarily considered controllable. Written notice of intention to take inventory shall be given by Operator at least thirty (30) days before any inventory is to begin so that Non-Operators may be represented when any inventory is taken. Failure of Non-Operators to be represented at an inventory shall bind Non-Operators to accept the inventory taken by Operator, who shall in that event furnish Non-Operators with a copy thereof.

2. Reconciliation and Adjustment of Inventories

Reconciliation of inventory with charges to the Joint Account shall be made, and a list of overages and shortages shall be jointly determined by Operator and Non-Operators. Inventory adjustments shall be made by Operator with the Joint Account for overages and shortages, but Operator shall be held accountable to Non-Operator only for shortages due to lack of reasonable diligence.

3. Speciai Inventories

Special inventories may be taken whenever there is any sale or change of interest in the Joint Property. It shall be the duty of the party selling to notify all other Parties as quickly as possible after the transfer of interest takes place. In such cases, both the seller and the purchaser shall be governed by such inventory.

CLERK'S CERTIFICATE

STATE OF NEW MEXICO County of Eddy

> FRANCES M. WILCOX I,

, Clerk of the

DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT, within and for the County of Eddy, State of NEW MEXICO, DO HEREBY CERTIFY that the attached is a full, true and correct copy of the original

> SUMMARY JUDGMENT filed and docketed January 21, 1976;

in cause numbered

Civi1

JACK L. McCLELLAN, BARBARA McCLELLAN and McCLELLAN OIL CORPORATION of said court, wherein are

xis plaintiff S, and

HAL M. STIERWALT and BETTY STIERWALT ATE HAL M. STIERWALT and BETTY STIER Xis defendants, all as shown from the files and records of my said office.

> IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Court at Carlsbad, New Mexico, this 21st day of , A. D. 19 76 . January

> > FRANCES M. WILCOX

Clerk of the District Court

COURTY OF FORY STATE SET THE BEST OF COURTY OF FORY

> IN MY OFFICE

IN THE DISTRICT COURT OF EDDY COUNTY

FIFTH JUDICIAL DISTRICT

Clerk of the District Court

STATE OF NEW MEXICO

JACK L. McCLELLAN, BARBARA McCLELLAN and McCLELLAN OIL CORPORATION,

Plaintiffs,

VS.

NO. 30570

HAL M. STIERWALT and BETTY STIERWALT,

Defendants.

SUMMARY JUDGMENT

Motion for Summary Judgment filed by the Plaintiffs coming on to be heard before the Court after notice to Defendants' attorneys Atwood, Malone, Mann & Cooter (who, with the approval of the Court and consent of the Defendants, withdrew as counsel for the Defendants immediately before the hearing), and Plaintiffs appearing by their attorneys Jennings, Christy & Copple, the Defendant, Hal M. Stierwalt, appearing pro-se, and the Defendant, Betty Stierwalt, not appearing, and the Court having considered the Motion for Summary Judgment, having reviewed the pleadings on file, the transcript and exhibits to the Arbitration Hearing on file, and the instruments attached to the Application for Confirmation of Arbitrators' Award on file, and the Defendants offering no rebutting evidence or affidavits, and having considered argument of counsel for the Plaintiffs and the Defendant, Hal M. Stierwalt;

FINDS:

- 1. The Court has jurisdiction of the subject matter of this action and personal jurisdiction over both the Plaintiffs and the Defendants.
- 2. The Arbitrators' Award on file herein is lawful, fair and equitable, and should be enforced. That such award is free of procurement by corruption, fraud or other undue influence, there was no evident partiality by the arbitrators, the arbitrators did not exceed their powers, that there was no application or motion to postpone Arbitrators' Hearing and that there are otherwise no grounds for vacating the Arbitrators' Award.

Based upon the above findings of facts, the Court concludes as a matter of law:

1. That the Arbitrators' Award on file herein should in all things be approved and an appropriate order issued confirming the Arbitrators' Award and effectuating compliance therewith.

IT IS THEREFORE ORDERED, ADJUDGED AND DECREED THAT within 20 days from the entry of this Summary Judgment:

1. Hal M. Stierwalt and Betty Stierwalt, his wife, are ordered and directed to execute, acknowledge and deliver to the Clerk of the Court for delivery to Security National Bank of Roswell as Escrow Agent under the Memorandum of Agreement three counterparts of that certain Conveyance of Operating Rights, and in view of the dilatory practices of Mr. and Mrs. Stierwalt with respect to the execution and delivery of said conveyance, the provision therein requiring certain governmental approvals on or before May 30, 1975,

is stricken and the date the last of such governmental approvals are obtained, as specified in paragraph 5 below, is substituted in lieu thereof.

- 2. Hal M. Stierwalt and Betty Stierwalt, his wife, are ordered and directed to forthwith execute, acknowledge and deliver to the Clerk of the Court for delivery to Jack McClellan ten counterparts of the Unit Agreement.
- 3. Hal M. Stierwalt and Betty Stierwalt, his wife, are ordered and directed to forthwith execute, acknowledge and deliver to the Clerk of the Court for delivery to Jack McClellan ten counterparts of the Unit Operating Agreement.
- 4. Hal M. Stierwalt is ordered and directed to forthwith execute and deliver to the Clerk of the Court for delivery to Security National Bank of Roswell, Escrow Agent, four manually signed counterparts of "Designation of Operator" on a current form approved by the United States Geological Survey, covering United States Oil and Gas Lease Serial No. NM-06407-A as to Lots 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, SW¹₄, N¹₂SE¹₄, SW¹₄SE¹₄ Section 1, Township 16 South, Range 30 East, N.M.P.M., Eddy County, New Mexico, for depths from the surface to the base of the "Unitized Formation" as defined in Section 2.8 of the Unit Agreement.
- 5. Forthwith upon receipt of the instruments provided for in paragraphs 1, 2, 3 and 4 next hereinabove, Plaintiff Jack McClellan shall attempt to obtain final approval from the United States Geological Survey and from the New Mexico Commissioner of Public Lands of the Unit Agreement and allowance of the institution of a secondary waterflood project as contemplated by the Memorandum of Agreement. Plaintiff

Jack McClellan shall have 30 days after delivery of such documents to Security National Bank of Roswell and himself, as applicable, in which to obtain such approval. Forthwith upon obtaining such approvals, Plaintiff Jack McClellan shall undertake the secondary waterflood operations contemplated by the Unit Agreement in conformity with the order of the New Mexico Oil Conservation Commission.

- 6. Forthwith, upon a showing that the governmental final approvals provided for in paragraph 5 above have been obtained, Security National Bank of Roswell, Escrow Agent, shall deliver to Jack McClellan the Conveyance of Operating Rights, the "Designation of Operator" and the Collateral Assignment of Operating Rights then in its possession.
- 7. Upon compliance with paragraph 6 above, Security National Bank of Roswell shall deliver to Hal M. Stierwalt the cash sum of \$50,000.00 (with accrued interest), now escrowed with said Bank.
- 8. If the governmental final approvals are not obtained by Jack McClellan within the time permitted by paragraph 5 above, then in lieu of paragraphs 6 and 7 above, Security National Bank of Roswell, Escrow Agent, shall redeliver to Hal M. Stierwalt the Conveyance of Operating Rights, the "Designation of Operator" and the 'Collateral Assignment of Operating Rights, and shall deliver to Jack McClellan the cash sum of \$50,000.00 (with accrued interest) presently escrowed with said Bank, whereupon the Memorandum of Agreement shall be deemed terminated and cancelled, and each of the parties hereto shall be returned to the status quo as of November 27, 1973.

- 9. The instruments required by this Summary Judgment to be executed by the Defendants Hal M. Stierwalt and Betty Stierwalt, his wife, as provided in paragraphs 1, 2, 3 and 4 above, are herewith delivered to the Clerk of the Court who shall telephonically notify Plaintiffs' attorneys when the same have been executed, acknowledged and delivered in accordance with this Summary Judgment.
- 10. The Court specifically retains jurisdiction of the subject matter of this action and the personal jurisdiction over the Plaintiffs and the Defendants to enforce this Summary Judgment.
- as against the Defendants, jointly and severally, pursuant to N.M.S.A. 22-3-22, 1953 Comp., upon approval of a Cost Bill filed with the Clerk of the Court.
- 12. The Clerk of the Court shall forthwith upon entry of this Summary Judgment mail a true and correct copy of the same to the Defendant Hal M. Stierwalt at P. O. Box 2119, Fort Worth, Texas, and to the Defendant Betty Stierwalt at 2500 Coronado Drive, Roswell, New Mexico 88201.

ENTERED this 1976 day of January, 1976.

Paul Snead, District Judge

CLERK'S CERTIFICATE

STATE OF NEW MEXICO ss.

County of Eddy

, Clerk of the

DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT, within and for the County of Eddy, State of NEW MEXICO, DO HEREBY CERTIFY that the attached is a full, true and correct copy of the original

ORDER IN SUPPLEMENT OF SUMMARY JUDGMENT

Filed: March 11, 1976

civi1 on the 30570 in cause numbered Jack L. McClellan, et al of said court, wherein Hal M. Stierwalt, et al

is defendant , all as shown from the files and records of my said office.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Court at Carlsbad, New Mexico, , A. D. 19 76 . 11th .day of this

Trances J. I. I ile of the District Court

Docket

FIFTH JUDICIAL DISTRICT STATE OF NEW MEXICO COUNTY OF EDDY

IN THE DISTRICT COURT OF EDDY COUNTRIED WAR 1 1 1976 OFFICE

FIFTH JUDICIAL DISTRICT

FRANCES M. WILCOX Clerk of the District Court

STATE OF NEW MEXICO

JACK L. McCLELLAN, BARBARA McCLELLAN and McCLELLAN OIL CORPORATION,

plaintiffs,

vs.

No. 30570

HAL M. STIERWALT and BETTY STIERWALT,

Defendants.

ORDER IN SUPPLEMENT OF SUMMARY JUDGMENT

The Court having entered Summary Judgment in the above entitled proceeding by Order dated January 19, 1976, and in Paragraph 10 thereof having specifically retained jurisdiction to enforce the Summary Judgment, and it appearing that the Defendants and each of them have failed, neglected and refused to comply with the provisions of such Summary Judgment, and a further hearing having been held before the Court, after notice, on March 2, 1976 at which time the Plaintiff, Jack L. McClellan, was present in person and represented by his attorneys, Jennings, Christy & Copple, and the Defendant, Hal M. Stierwalt, was present in person and represented by his attorney, Max Coll, and the Court being of the opinion that its Summary Judgment should be supplemented so as to effectuate compliance therewith by the appointment of a Special Master to execute, for and in behalf of the Defendants, and

each of them, the instruments therein required to be executed by the Defendants.

ORDERED, that Leroy Carpenter, Sheriff of Chaves County, New Mexico, be, and he hereby is, designated as Special Master to execute, acknowledge and deliver for and in behalf of the Defendants, and each of them, each and all of the instruments and documents provided in said Summary Judgment to be so executed, acknowledged and delivered by the Defendants, and each of them; further,

ORDERED, that said Special Master shall perform the above and foregoing acts not earlier than 11 days nor more than 15 days after the
date of this Order in Supplement of Summary Judgment, and said Special
Master shall not execute, acknowledge and deliver such instruments and
documents if prior thereto he shall be informed that the Defendants
have duly appealed the Summary Judgment and posted supersedeas bond
with respect thereto in the amount set by this Court by Order entered
contemporaneously herewith; and,

ORDERED, that Plaintiffs' attorneys shall, at the date the Special Master is requested to execute, acknowledge and deliver such instruments and documents, furnish to the said Special Master a certificate by the Clerk of this Court, dated not earlier than 11 days from the entry of this Order in Supplement of Summary Judgment to the effect that the Defendants have not so posted said supersedeas bond.

ENTERED this 10 day of Much, 1976.

PAUL SNEAD, DISTRICT JUDGE

FIFTH JUDICIAL DISTRICT STATE OF NEW MEXICO

STATE OF NEW MEXICO

IN THE DISTRICT COURT OF EDDY COUNTY THE MAR 2 2 1976 IN MY OFFICE FRANCES M. WILCOX Clerk of the District Court

JACK L. McCLELLAN, BARBARA McCLELLAN and McCLELLAN OIL CORPORATION,

Plaintiffs,

vs.

No. 30570

HAL M. STIERWALT and BETTY STIERWALT,

Defendants.

CLERK'S CERTIFICATE

STATE OF NEW MEXICO) COUNTY OF EDDY

1, Frances M. Wilcox, Clerk of the District Court of the Fifth Judicial District, within and for the County of Eddy, State of New Mexico, do hereby certify that as of 5:00 P.M., March 22, 1976, the defendants in the above styled and numbered cause have not posted the supersedeas bond as required by the Order Setting Supersedeas Bond filed herein on March 11, 1976.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of said Court at Carlsbad, New Mexico, this 22nd day of March, 1976.

Clerk of the District

CERTIFIED A TRUE COPY

ENTERED ON 20145, 122, 1976 Clock of the District Court

Deputy

LESSEE'S

CONSENT TO AND RATIFICATION OF

- UNLT AGREEMENT

FOR THE DEVELOPMENT AND OPERATION OF THE EAST HENSHAW UNIT

CHANGE COUNTY, NEW MEXICO EDDY

The undersigned Lessee of an Oil and Gas Lease in said Unit Agreement, which embraces certain lands in Township 16 South, Range 30 East, N.M.P.M., hereby ratifies, confirms and joins in the execution of said Unit Agreement (which is incorporated herein by reference) to the same extent and effect as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof. The undersigned does further commit all of the undersigned's right, title and interest in and to the Unitized Substances to the terms, provisions and agreements in said Unit Agreement.

The undersigned acknowledges the receipt of a copy of said Unit Agreement, and further acknowledges that this instrument has been signed and unconditionally delivered at the date shown.

This Ratification shall not impose any monetary or other liability upon the undersigned in connection with operations under said Unit Agreement for all of which Unit Operator shall protect and hold the undersigned harmless.

LESSEE OF RECORD

SOUTHERN UNION PRODUCTION COMPANY ATTEST: By: L. S. Muennink, Executive Vice President Address: Suite 1700 Campbell Centre 8350 N. Central Expressway Dallas, Texas 75206 (Corporate) STATE OF TEXAS DALLAS COUNTY OF The foregoing instrument was acknowledged before me this γ 1976, by L. S. Muennink, Exec. Vice President of , a <u>Delaware</u> Southern Union Production Company corporation, on behalf of said corporation. My Commission Expires:

LESSEE'S CONSENT TO AND RATIFICATION OF UNIT AGREEMENT FOR THE DEVELOPMENT AND OPERATION OF THE EAST HENSHAW UNIT EDDY COUNTY, NEW MEXICO

The undersigned Lessee of an Oil and Gas Lease in said Unit Agreement, which embraces certain lands in Township 16 South, Range 30 East, N.M.P.M., hereby ratifies, confirms and joins in the execution of said Unit Agreement (which is incorporated herein by reference) to the same extent and effect as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof. The undersigned does further commit all of the undersigned's right, title and interest in and to the Unitized Substances to the terms, provisions and agreements in said Unit Agreement.

The undersigned acknowledges the receipt of a copy of said Unit Agreement, and further acknowledges that this instrument has been signed and unconditionally delivered at the date shown.

This Ratification shall not impose any monetary or other liability upon the undersigned in connection with operations under said Unit Agreement for all of which Unit Operator shall protect and hold the undersigned harmless.

LESSEE OF RECORD EXXON CORPORATION NOXXXXXX Address: P. 0. Box 1600 12-31-75 Midland, TX 79701 (Corporate) STATE OF SS. COUNTY OF The foregoing instrument was acknowledged before me this 31st , 1975, by H. Jack Naumann, Attorney in Fact of day of December Exxon Corporation corporation, on behalf of said corporation. My Commission Expires: LEDA F. JIMIT, I COMMUNE OF COMMONDERS, THE COMMON OF THE PROPERTY, STATE OF TEXAS. THE COMMOND CARRESTERS JUNE 1, 1977. Notary Public

CONSENT TO AND RATIFICATION OF UNIT AGREEMENT

AND

UNIT OPERATING AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE
EAST HENSHAW UNIT
EDDY COUNTY, NEW MEXICO

The undersigned Working Interest Owner in the said Unit Agreement and Unit Operating Agreement, which embraces certain lands in Township 16 South, Range 30 East, N.M.P.M., for valuable consideration paid, ratifies, confirms and joins in the execution of said Unit Agreement and Unit Operating Agreement (each of which is incorporated herein by reference) to the same extent and effect as if the undersigned had executed the original of said Unit Agreement and said Unit Operating Agreement, or respective counterparts thereof. The undersigned does further commit all of the undersigned's right, title and interest in and to the Unitized Substances to the terms, provisions and agreements in said Unit Agreement and said Unit Operating Agreement.

The undersigned acknowledges the receipt of a copy of said Unit Agreement and said Unit Operating Agreement, and further acknowledges that this instrument has been signed and unconditionally delivered at the date shown hereon.

WORKING INTEREST OWNER

HAL M. STIERWALT

BETTY STIERWALT

Leroy/Carpenter, Special Master and Sheriff of Chaves County, N.M. c/o Jennings, Christy & Copple

P. O. Box 1180 Roswell, New Mexico 88201

Date: March 25, 1976

STATE OF NEW MEXICO

ss.

COUNTY OF CHAVES

The foregoing instrument was acknowledged before me this 25th day of March, 1976, by Leroy Carpenter, Special Master and Sheriff of Chaves County, New Mexico, as Special Master for and in behalf of Hal M. Stierwalt and Betty Stierwalt, his wife.

My Commission Expires:

2774 y 215, 1918

Notary Public

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Dockets Nos. 11-75 and 12-75 are tentatively set for hearing on May 14 and May 28, 1975. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - APRIL 30, 1975

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM, STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

CASE 5459: Application of McClellan Oil Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the East Henshaw Unit Area coverin. 282 acres, more or less, of State and Federal lands in Township 16 South, Range 30 East, Eddy County, New Mexico.

CASE 5460:

Application of McClellan Oil Corporation for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its East Henshaw Unit Area by the injection of water into the Crayburg formation through eight wells located in Sections 1 and 2, Township 16 South, Range 30 East, West Henshaw-Grayburg Pool, Eddy County, New Mexico.

CASE 5461: Application of General American Oil Company for pool extension, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the extension of the vertical limits of the Grayburg-Jackson (Queen-Grayburg-San Andres) Pool, Eddy County, New Mexico, to include the Seven Rivers formation excepting, however, that area of said Grayburg-Jackson Pool overlain by the Fren-Seven Rivers Pool.

CASE 5462: Application of General American Oil Company for an unorthodox location and administrative procedure, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox oil well location 825 feet from the North line and 1295 feet from the West line of Section 13, Township 16 South, Range 29 East, East High Lonesome Penrose Unit, High Lonesome Pool, Eddy County, New Mexico. Applicant further seeks the establishment of an administrative procedure whereby additional unorthodox producing and injection well locations could be approved for said unit area without hearing.

CASE 5463: Application of J. Gregory Merrion for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle undesignated Mesaverde and Devils Fork-Gallup production in the wellbore of his Edna Well No. 4 located in Unit H of Section 7, Township 24 N cth, Range 6 West, Rio Arriba County, New Mexico.

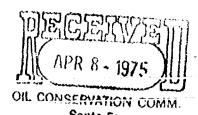
CASE 5464: Application of Petro-Lewis Corporation for a unit agreement, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Media Entrada Unit Area covering 580 acres of Federal lands, Media-Entrada Oil Pool, Township 19 North, Range 3 West, Sandoval County, New Mexico.

CASE 5465: Application of Petro-Lewis Corporation for a pressure maintenance project, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pressure maintenance project in its Media Entrada Unit Area by the injection of water into three wells, being the Fluid Power Pump Wells Nos. 4 and 2 located, respectively, 990 feet from the South line and 1650 feet from the East line, and 2310 feet from the North line and 330 feet from the East line, of Section 15, and the Federal Media Well No. 4 located 990 feet from the South line and 1650 feet from the West line of Section 14, all in Township 19 North, Range 3 West, Media-Entrada Oil Pool, Sandoval County, New Mexico.

CASE 5466: Application of Mark Production Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for an unorthodox gas well location 1650 feet from the South line and 1980 feet from the West line of Section 1, Township 18 South, Range 26 East, Atoka-Pennsylvanian Gas Pool, Eddy County, New Mexico, the W/2 of said Section 1 to be dedicated to the well.

CASE 5467: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Colfax Carbon Dioxide Corporation, F. E. Sauble, American Surety Company of New York, and all other interested parties to appear and show cause why the Tex-Mex Cattle Co. Well No. 1 located in Unit D of Section 2, Township 26 North, Range 24 East, Colfax County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5468: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Kenneth M. Hankins, Great American Insurance Company, and all other interested parties to appear and show cause why the Virginia Branch Well No. 1 located in Unit D of Section 9, Township 10 North, Range 25 East, Guadalupe County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.



Santa Fe BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

IN THE MATTER OF THE APPLICATION
OF McCLELLAN OIL CORPORATION FOR
APPROVAL OF INSTALLATION OF SECONDARY
RECOVERY OPERATIONS IN THE EAST
HENSHAW UNIT, CHAVES COUNTY, NEW MEXICO.

case No. 5460

APPLICATION

COMES NOW McClellan Oil Corporation, proposed Operator of the East Henshaw Unit, chaves county, New Mexico, and pursuant to Rule 701, hereby makes application for approval of the installation of secondary recovery waterflood project and states:

- 1. There is presently pending before the Commission an Application by McClellan Oil Corporation (Applicant) for approval of the East Henshaw Unit Agreement, which Application is incorporated herein by reference.
- 2. Applicant proposes to institute a pilot waterflood project in the East Henshaw Unit Area and in connection therewith attaches hereto:
- A. A plat showing the location of the proposed injection wells and the location of all other wells within a radius of two miles from said proposed injection wells and the formation from which said wells are producing or have produced, being the Premier (Basal-Grayburg) Sand of the Permian Age. The plat also indicates the lessees, if any there be, within said two-mile radius.
- B. A log of all proposed injection wells to the extent available.

DOCKET MAILED

- C. A diametric sketch of the proposed injection wells showing all casing strings, including diameters and setting depths, quantities used and tops of cement, perforated or open hole intervals, tubing strings, including diameters and setting depths, and type and location of packers, if any.
- 3. The depth of the producing zone varies to some extent but is approximately 2906'-3025' subsurface, which zone is in the Premier (Basal-Grayburg) Sand of the Permian Age. The fluid to be injected is fresh water. Initial volumes of water are approximately 1,000 barrels per day for the proposed eight injection wells. At such time as an increase in produced water is experienced, the water will be returned to the reservoir and a lesser amount of new water will be injected.
- 4. In the opinion of Applicant the proposed pilot waterflood project, and any extensions thereof, approved by the Commission, will be in the interest of conservation and the prevention of waste and will not violate the correlative rights of any interested party.

WHEREFORE, Applicant respectfully requests, after notice and hearing, approval of this Application.

McCLELLAN OIL CORPORATION

By_

S. B. Christy IV, as a member of the firm of Jennings, Christy & Copple, P. O. Box 1180,

Roswell, New Mexico 88201 Attorneys for Applicant

cc: McClellan Oil Corporation

cc: Mr. Hal Stierwalt

cc: Getty Oil Company

dr/

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF NEW MEXICO FOR THE PURPOSE OF CONSEDERING:

w &

CASE No. 5460

Order No. R-50/0

All

APPLICATION OF MCCLELLAN OIL CORPORATION
FOR A WATERFLOOD PROJECT, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on April 30 , 1975 at Santa Fe, New Mexico, before Examiner Richard L. Stamets .

NOW, on this day of May 1975, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, McClellan Oil Corporation , seeks authority to institute a waterflood project in the East

 Henshaw Unit Area, West Henshaw-Grayburg Pool, by the injection of water into the Grayburg formation through eight injection wells in Section 1 and 2 , Township 16 MEKEK, South, Range 30 XWESE, East, NMPM, Eddy Grunty, New Mexico.
- (3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.
- (4) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(b) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(b) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applic	cant McClel	llan Oil Corpor	ation
is hereby authorized to			
East Henshaw	Unit Area 1	Vest Henshaw-Gr	ayburg Pool,
by the injection of water	r into the	Grayburg	formation
through the following-des	scribed wells	in Township_	16
MANNER, South, Range	30 жезек ,	East, NMPM, _	Eddy
County, New Mexico:			. *

the McCalar East Hens has Universely Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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

- (5) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.
- (6) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, McClellan Oil Corporation, is hereby authorized to institute a waterflood project in the East Henshaw Unit Area, West Henshaw-Grayburg Pool, by the injection of water into the Grayburg formation through the following-described wells in Township 16 South, Range 30 East, NMPM, Eddy County, New Mexico:

UNIT TRACT AND WELL NO.	UNIT OR LOT	SECTION
Tract 6 Well No. 1	Lot 6 F	. 1
Tract 10 Well No. 4	Lot 9 I	2
Tract 11 Well No. 1	tot 12 L	1
Tract 13 Well No. 2	Lot 10 J	1
Tract 15 Well No. 6	15 O	2
Tract 19 Well No. 3	15 ()	1
Tract 24 Well No. 1	unit I	2
Tract 26 Well No. 4	Unit K 5	1

- (2) That injection into each of said wells shall be through tubing set in a packer set within 100 feet of the uppermost perforation in the well or, in the case of open hole completions, within 100 feet of the casing shoe.
- (3) That the casing tubing annulus on each of said injection wells shall be loaded with an inert fluid and equipped with an acceptable leak detection device to determine leakage of the tubing, casing, or packer.

designated.

- (4) That the operator shall immediately notify the Supervisor of the Commission's Artesia district office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.
- (5) That the operator shall treat the water to be injected to contol corrosion, shall install corrosion coupon monitoring equipment on the injection system; and shall file the results of the periodic examination of the coupons with the Santa Fe Office of the Commission.
- (6) That the subject waterflood project is hereby designated the McClellan East Henshaw Unit Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.
- (7) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.
- (8) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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