

CASE 3103: Application of SUNSET
INTERNATIONAL for a waterflood
project, Lea County.

Lea
Spec ltr of Cr. ltr
630 BOPD map
per last 7 day.

CASE NO.

3103

Application,

TRANSCRIPTS,

SMALL Exhibits

ETC.

SUNSET INTERNATIONAL PETROLEUM CORPORATION
ESTIMATED RESERVOIR AND RECOVERY DATA
MAL-GRA UNIT
LEA COUNTY, NEW MEXICO

GRAYBURG

	BARRELS PER ACRE-FOOT
TOTAL PORE SPACE FOR 11.5% POROSITY	892.2
CONNATE WATER SATURATION (35%)	312.3
ORIGINAL WATER SATURATION (65%)	579.9
FORMATION VOLUME FACTOR (1.2)	
ORIGINAL STO IN PLACE	483.2
PRIMARY OIL PRODUCED TO 4-1-64	27.1
REMAINING PRIMARY OIL	2.6
WATER FLOOD RESERVES (OIL)	35
RESIDUAL OIL AFTER WATERFLOODING (42.8% OF PORE SPACE)	384.8

PRIMARY RESERVES

AREA	600
AVERAGE NET PAY	30
PRIMARY ACRE-FOOT	18,000
CUMULATIVE TO 4-1-64	489,188 BO
REMAINING PRIMARY RESERVES	45,812
ULTIMATE PRIMARY RESERVES	535,000

WATERFLOOD RESERVES

AREA	600
AVERAGE NET PAY	30
WATERFLOOD ACRE-FOOT	18,000
WATERFLOOD RECOVERY PER ACRE-FOOT	35
ULTIMATE WATERFLOOD RESERVES	630,000

Fla

70% left & 30% Current

Current

*Primary Production
to 4-1-64 remaining*

*5100 State B 288,511
St D&E 142,905*

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Appl EXHIBIT NO. *9*
CASE NO. *3103*

Carper
PPCo St 50770
PPCo
Reamey 7002

Martin Water Laboratories
BOX 1468 MONAHANS, TEXAS W13-4781
RESULT OF WATER ANALYSES

TO: Mr. L. D. Crumly
503 Oil & Gas Building, Midland, Texas
LABORATORY NO. M6596
SAMPLE RECEIVED 6-2-59
RESULTS REPORTED 6-10-59
COMPANY Caprock Water Co. - Waterflood LEASE Caprock Water Co.
DIVISION Caprock Water (Ogallala Formation)
FIELD OR POOL _____ COUNTY Lea & Eddy STATE New Mexico

SECTION _____ BLOCK _____ SURVEY _____
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Water - taken from raw water supply at edge of Cap. 6-2-59
NO. 2 Water - taken from Skelly Camp residence approx. midpoint of 3" line. 6-2-59
NO. 3 Water - taken from truck loading storage at Loco Hills at end of 3" line. 6-2-59
NO. 4 _____

REMARKS: Analyses performed under the name of Treat-Rite Water Labs. by the undersigned.

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60 degs. F	1.0008	1.0006	1.0007	
pH When Sampled	7.7	7.6	7.5	
pH When Received	7.7	7.6	7.5	
Total Alkalinity as CaCO ₃	176	156	160	
Supersaturation as CaCO ₃	4	4	0	
Undersaturation as CaCO ₃	-	-	164	
Total Hardness as CaCO ₃	188	162	128	
Calcium as CaCO ₃	147	127	36	
Magnesium as CaCO ₃	41	35		
Sodium and/or Potassium	35	32	29	
Sulfate as SO ₄	42	45	47	
Chloride as HCl	0.36	0.20	0.12	
Iron as Fe	0.0	0.0	0.0	
Manganese as Mn	1.3	1.9	1.3	
Barium as Ba	1.5	1.5	0.8	
Turbidity Electric				
Color as Pt				
Dissolved Solids at 103 deg. C			75	
Total Solids at 103 deg. C	68	75	10.1	
Total Solids, Calculated	7.5	8.0	8.4	
Temperature Degs. F.	8.2	7.2	0.0	
Carbon Dioxide, Calculated	0.0	0.0	0.0	
Dissolved Oxygen, Winkler	2,000	2,100	2,100	
Hydrogen Sulfide				
Resistivity OHMS/CC at 60 Degs. F.				
Total Suspended Solids				

All Results Reported As Parts Per Million

Additional Determinations And Remarks: The above analyses are considered sufficiently substantial evidence that this water can be satisfactorily transferred through a bare steel line. A thin protective calcium carbonate scale is anticipated which should greatly reduce corrosion. The transferred water should not require plant filtration but wellhead filters are recommended, as a small amount of insoluble iron will undoubtedly be encountered. These conclusions are based on anticipated reasonable similarity of the above with the water from the wells to be drilled. Contact me for any further details or discussions.

BY Waylan C. Martin, M. A.

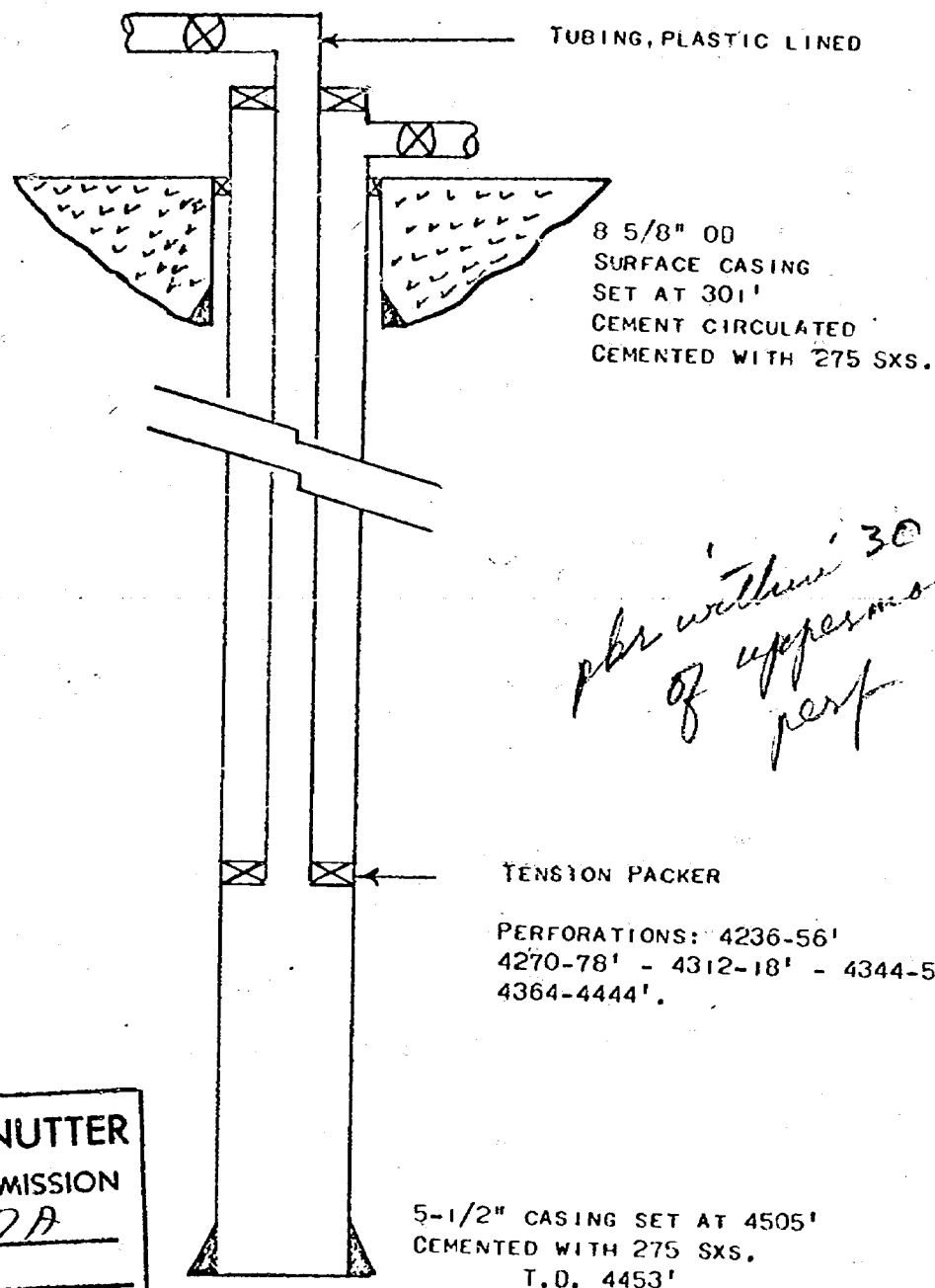
BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION

EXHIBIT NO. 8
CASE NO. 3123

SUNSET INTERNATIONAL PETROLEUM CORPORATION

MAL-GRA UNIT

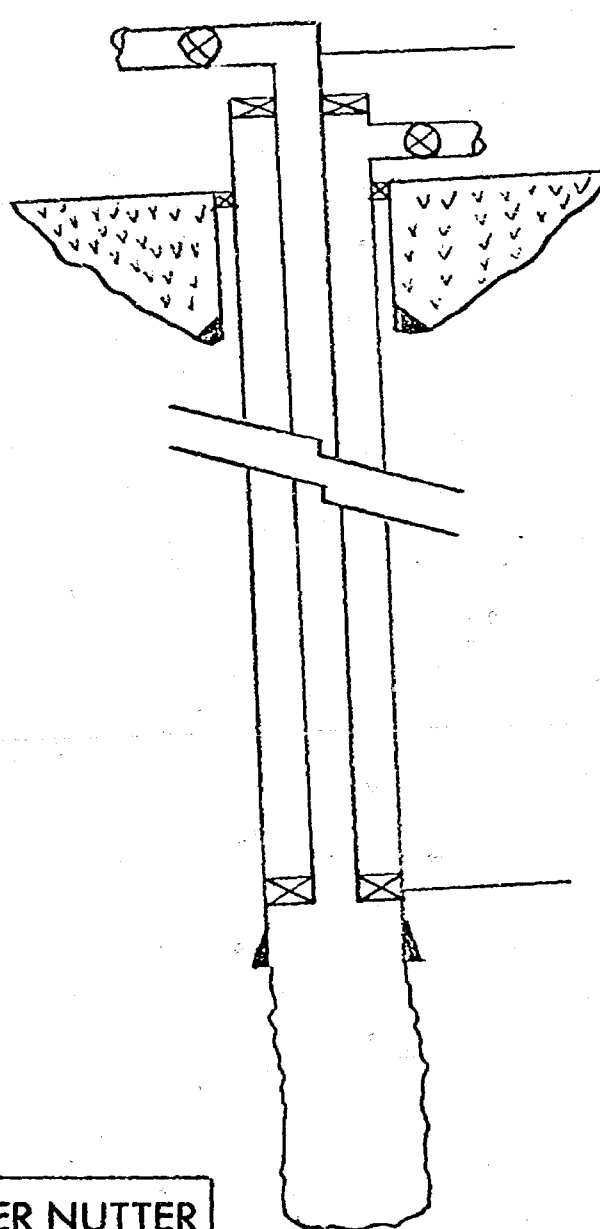
WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
STATE D NO. 1



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
App EXHIBIT NO. 2A
CASE NO. 3103

SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRA UNIT

WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
STATE 8-4



TUBING, PLASTIC LINED

8-5/8" OD
SURFACE CASING
SET AT 304'
CEM. CIRC.

TENSION PACKER
OPEN HOLE

5-1/2" CASING SET AT 4213'
CEMENTED WITH 200 SXS.
T.D. 4350'

*pk in ghae
joint
in open hole
wells*

BEFORE EXAMINER NUTTER

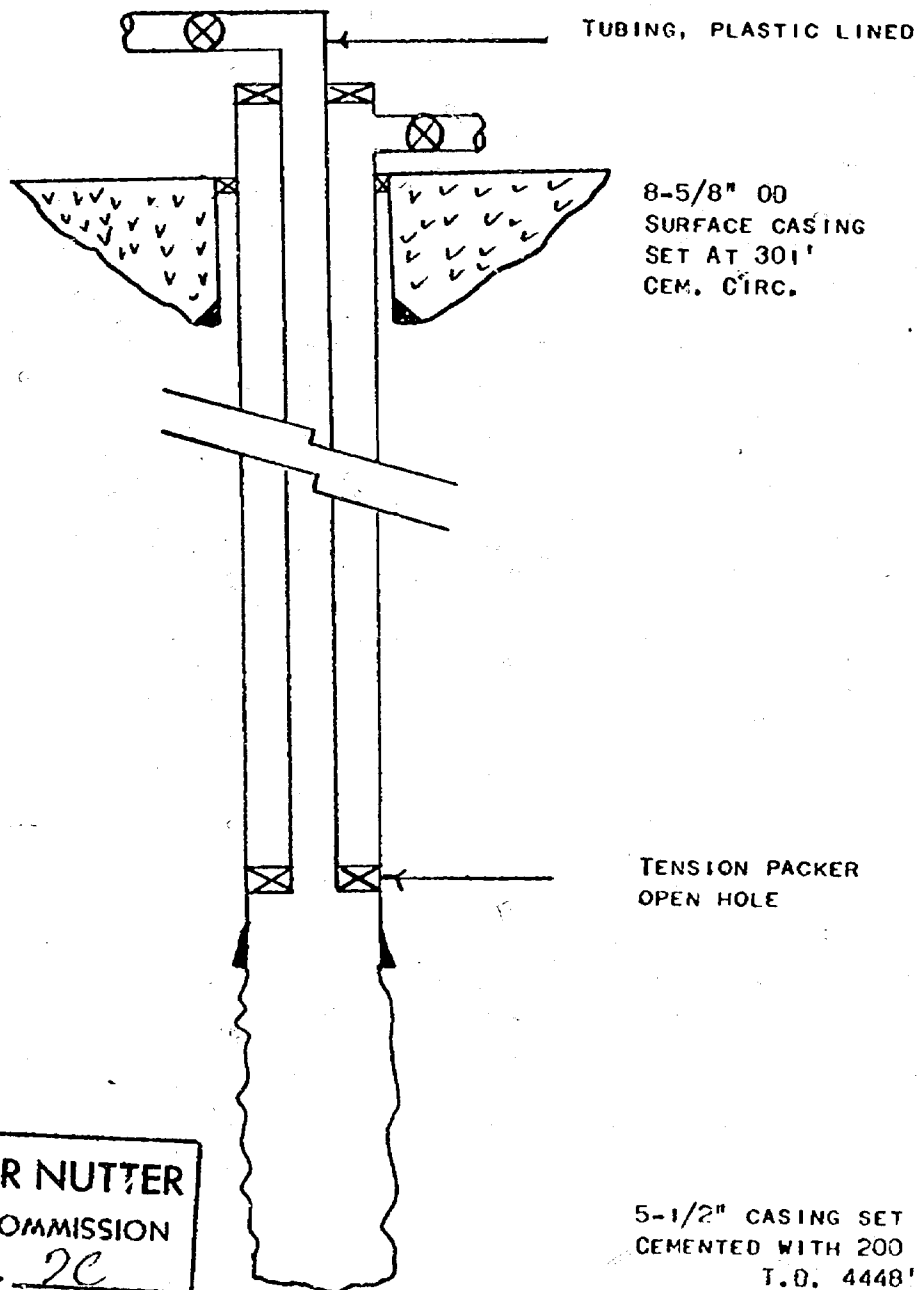
OIL CONSERVATION COMMISSION

Appl EXHIBIT NO. *7B*

CASE NO. *3103*

SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRA UNIT

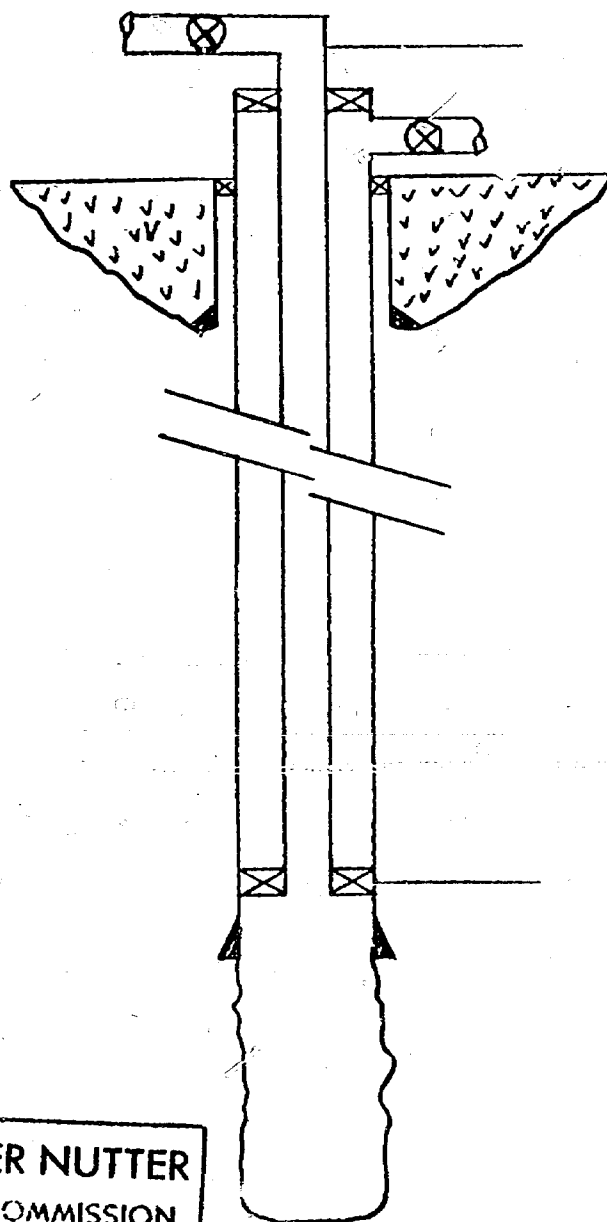
WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
STATE D NO. 4



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Appl EXHIBIT NO. *2C*
CASE NO. *3103*

SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRA UNIT

WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
C P S NO. 1 (CARPER PHILLIPS NO. 1)



TUBING, PLASTIC LINED

8-5/8" OD
SURFACE CASING
SET AT 1394'
CEM. CIRC. W 50 SXS.

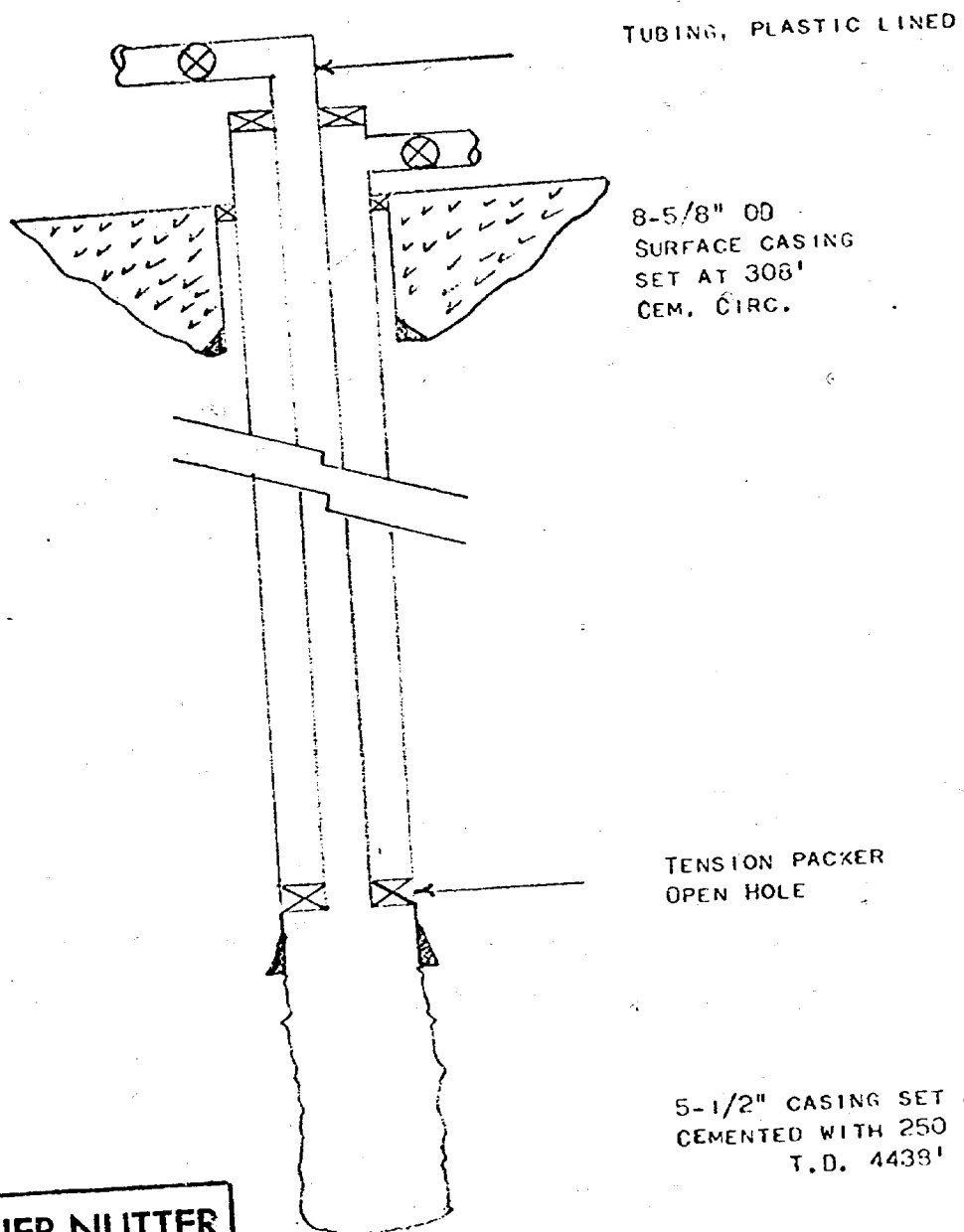
TENSION PACKER
OPEN HOLE

5-1/2" CASING SET AT 4094'
CEMENTED WITH 100 SXS.
T.D. 4506'

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
App/ EXHIBIT NO. 2D
CASE NO. 3103

SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRA UNIT

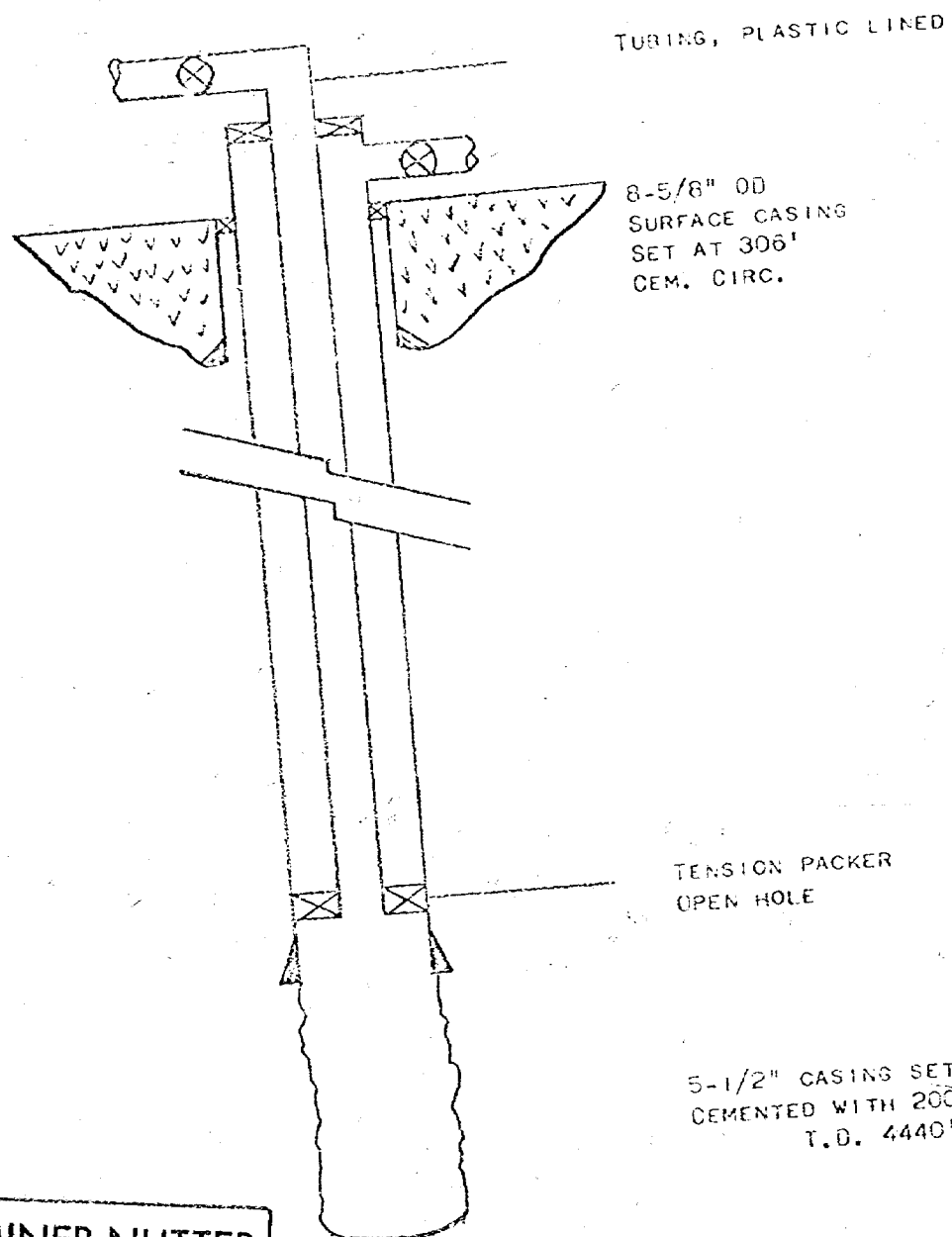
WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
STATE D-5



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Prop EXHIBIT NO. 2E
CASE NO. 3103

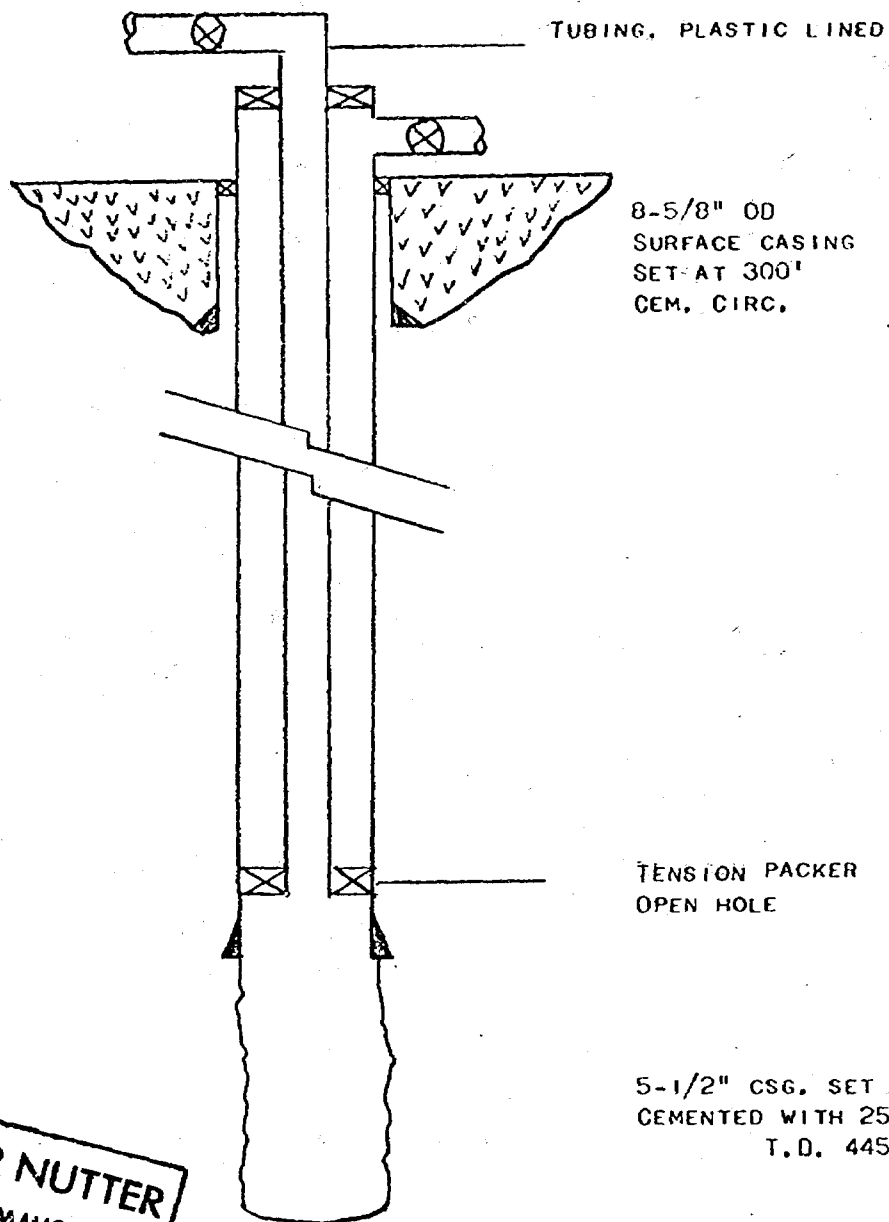
SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRU UNIT

WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
STATE B-3



BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	2F
CASE NO.	3103

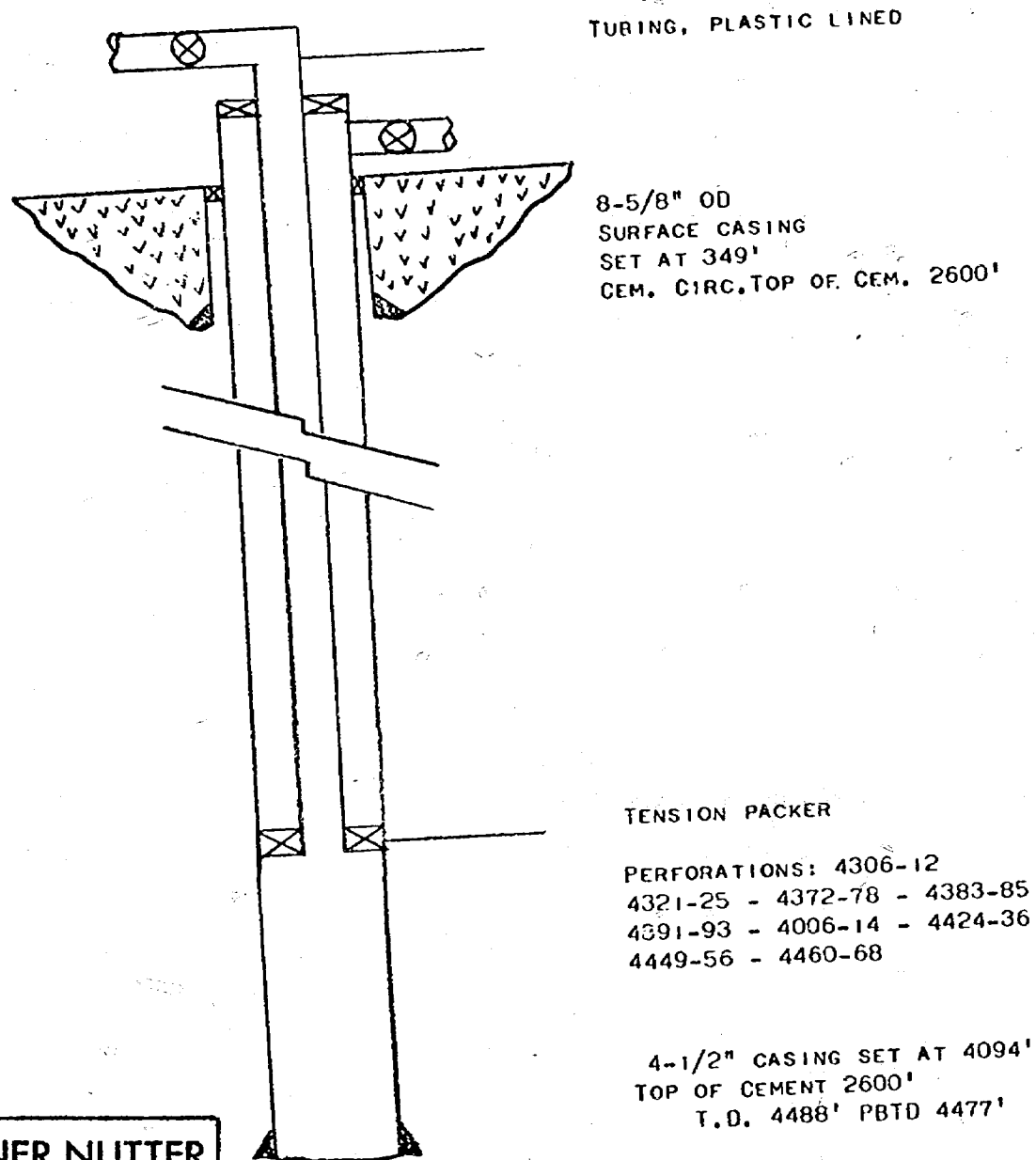
SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRA UNIT
WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
STATE 8-7



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
App EXHIBIT NO. *26*
CASE NO. *3103*

SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GEA UNIT

WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
P L M NO. 12 (PHILLIPS LEAMEX NO. 12)



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
App 1 EXHIBIT NO. 2H
CASE NO. 3103

SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GEA UNIT
CASING RECORDS
PROPOSED INJECTION WELLS
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO

WELL NO.	KOB ELEV.	TOTAL DEPTH	PERFORATED INTERVALS	SURFACE CASING			PRODUCTION CASING		
				SIZE	DEPTH	SXS. CEMENT	SIZE	DEPTH	SX. CEMENT
STATE B-3	4192'	4440'	OH	8-5/8"	306'	CIRC.	5-1/2"	4243'	200
STATE B-4	4112'	4350'	OH	8-5/8"	304'	CIRC.	5-1/2"	4213'	200
STATE B-7	4175'	4452'	OH	8-5/8"	300'	CIRC.	5-1/2"	4190'	250
STATE D-1	4188'	4453'	4236-56 4270-87 4312-18 4344-50 4364-4444	8-5/8"	301'	CIRC.	5-1/2"	4505'	275
STATE D-4	4202'	4448'	OH	8-5/8"	301'	CIRC.	5-1/2"	4243'	200
STATE D-5	4186'	4438'	OH	8-5/8"	308'	CIRC.	5-1/2"	4240'	250
CPS NO. 1 (CARPER PHILLIPS) NO. 12	4195'	4506'	OH	8-5/8"	1394'	50 SXS.	5-1/2"	4094'	100
PLM NO. 12 (PHILLIPS LEAMEX NO. 12)	4192'	4488' TO	4306-12 4321-25 4372-78 4383-85 4391-93 4006-14 4424-36 4449-56 4460-68	8-5/8"	349'	CIRC.	4-1/2"	4486'	TOP OF CEMENT 2600'

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
App EXHIBIT NO. 5
CASE NO. 3103

SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRA UNIT
WELL TESTS JUNE 1964

WELL	OIL	WATER
STATE B-1	4 BBLs.	0
STATE B-2	3	0
STATE B-3	3	0
STATE B-4	3	0
STATE B-5	2	0
STATE B-6	3	0
STATE B-7	3	0
STATE D-1	3	0
STATE D-2	3	0
STATE D-3	2	0
STATE D-4	3	0
STATE D-5	2	0
STATE E-1	1	0
CPS NO. 1 (CARPER PHILLIPS) STATE	2.3	
PLM NO. 12 (PHILLIPS LEAMEX)	6.0	2.1

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Appl EXHIBIT NO. 2
CASE NO. 3103

SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRA UNIT
PRODUCTION BY MONTH

SIPCO
STATE 8
THRU 1955 30,686 BBLs.

JAN.	4783 - 1956
FEB.	5612
MARCH	6246
APRIL	2853
MAY	3791
JUNE	6946
JULY	6986
AUG.	7168
SEPT.	7125
OCT.	7710
NOV.	6837
DEC.	5596

JAN.	5010 - 1957
FEB.	4716
MARCH	4129
APRIL	6834
MAY	5458
JUNE	5626
JULY	5050
AUG.	4349
SEPT.	3858
OCT.	4011
NOV.	3098
DEC.	3452

JAN.	3860 - 1958
FEB.	3040
MARCH	2434
APRIL	3129
MAY	3384
JUNE	3157
JULY	3437
AUG.	2792
SEPT.	2581
OCT.	1523
NOV.	1500
DEC.	3206

JAN.	2679- 1959
FEB.	2563
MARCH	2634
APRIL	2432
MAY	2284
JUNE	2285
JULY	2212
AUG.	2068
SEPT.	2057
OCT.	1564
NOV.	1997
DEC.	2038

*Added to 4-1-64
Total unit production
489188 bbls*

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
App/ EXHIBIT NO. 3
CASE NO. 3103

CONT.

SIPCO

STATE B
THRU 1955 30,686

JAN.	2567 - 1960
FEB.	2396
MARCH	2375
APRIL	2146
MAY	1864
JUNE	2022
JULY	2501
AUG.	2008
SEPT.	1744
OCT.	1856
NOV.	1969
DEC.	2790

JAN.	1549 - 1961
FEB.	1434
MARCH	1670
APRIL	1501
MAY	1472
JUNE	1339
JULY	1393
AUG.	1414
SEPT.	1705
OCT.	1527
NOV.	1334
DEC.	1267

JAN.	1258 - 1962
FEB.	1223
MARCH	1387
APRIL	1258
MAY	1243
JUNE	2223
JULY	931
AUG.	900
SEPT.	816
OCT.	917
NOV.	869
DEC.	961

JAN.	858 - 1963
FEB.	767
MARCH	846
APRIL	1036
MAY	934
JUNE	893
JULY	876
AUG.	947
SEPT.	823
OCT.	857
NOV.	907
DEC.	813

CONT. ON PAGE 3

CONT. FROM PAGE 3

SIPCO
STATE B
THRU 1955 30,686 BBLs.

JAN.	706 - 1964	SEPT.	2097
FEB.	830	OCT.	2083
MARCH	816	NOV.	1806
CUM. 4-1-64		DEC.	1721
288,511			

SIPCO
STATE D & E
THRU 1955 9,535

JAN.	3921 - 1956	JAN.	1909 - 1958
FEB.	2667	FEB.	1878
MARCH	3745	MARCH	1745
APRIL	1692	APRIL	1724
MAY	2806	MAY	1737
JUNE	4510	JUNE	1851
JULY	3691	JULY	1625
AUG.	1964	AUG.	1272
SEPT.	3191	SEPT.	1375
OCT.	2815	OCT.	1322
NOV.	2269	NOV.	1229
DEC.	2315	DEC.	1019
JAN.	2136 - 1957	JAN.	1416 - 1959
FEB.	3016	FEB.	1156
MARCH	2637	MARCH	1185
APRIL	1893	APRIL	1069
MAY	2996	MAY	1016
JUNE	2244	JUNE	968
JULY	2238	JULY	882
AUG.	2463	AUG.	927
		SEPT.	919
		OCT.	1290
		NOV.	955

CONT. FROM PAGE 4

SIPCO
STATE D & E
THRU 1955

DEC.	1116
JAN.	1030 - 1960
FEB.	947
MARCH	921
APRIL	971
MAY	888
JUNE	978
JULY	967
AUG.	858
SEPT.	748
OCT.	797
NOV.	944
DEC.	992
JAN.	932 - 1961
FEB.	731
MARCH	992
APRIL	849
MAY	797
JUNE	749
JULY	720
AUG.	708
SEPT.	749
OCT.	856
NOV.	774
DEC.	666

JAN.	650 - 1962
FEB.	631
MARCH	706
APRIL	642
MAY	613
JUNE	912
JULY	573
AUG.	331
SEPT.	627
OCT.	573
NOV.	615
DEC.	606
JAN.	651 - 1963
FEB.	561
MARCH	603
APRIL	548
MAY	590
JUNE	586
JULY	512
AUG.	524
SEPT.	462
OCT.	520
NOV.	472
DEC.	566
JAN.	527 - 1964
FEB.	508
MARCH	513
CUM. 4-1-64	
142905	

CPS NO. 1
 CARPER PHILLIPS STATE
 THRU 1956
 26,505

JAN.	799 - 1957
FEB.	518
MARCH	822
APRIL	752
MAY	611
JUNE	684
JULY	537
AUG.	612
SEPT.	331
OCT.	585
NOV.	668
DEC.	553

JAN.	156 - 1962
FEB.	167
MARCH	121
APRIL	172
MAY	144
JUNE	129
JULY	140
AUG.	120
SEPT.	104
OCT.	87
NOV.	124
DEC.	109

JAN.	110 - 1963
FEB.	110
MARCH	113
APRIL	109
MAY	129
JUNE	45
JULY	66
AUG.	89
SEPT.	86
OCT.	89
NOV.	93
DEC.	92

JAN.	97 - 1964
FEB.	77
MARCH	93

CUM. 4-1-64
 50770
 RECORDS NOT AVAILABLE FOR SOME
 YEARS.

PLM NO. 12
PHILLIPS LEAMEX NO. 12

NOV. 644 - 1962

DEC. 981

JAN. 720 - 1963

FEB. 521

MARCH 434

APRIL 416

MAY 373

JUNE 302

JULY 337

AUG. 326

SEPT. 249

OCT. 306

NOV. 276

DEC. 211

JAN. 264 - 1964

FEB. 237

MARCH 255

CUM. 4-1-1964
7002



1964 SEP 4 AM

STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS
STATE ENGINEER

September 4, 1964

ADDRESS CORRESPONDENCE TO:
STATE CAPITOL
SANTA FE, N. M.
87501

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Santa Fe, N. M.

Dear Mr. Porter:

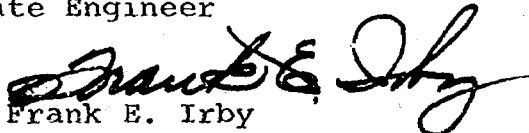
Reference is made to the application of Sunset International Petroleum Corporation for a waterflood project in the Maljamar Pool, Lea County, New Mexico.

Neither the application nor the diagrammatic sketches give any information on the setting of the packer at the end of the tubing, nor do they give any information with regard to the top of the cement surrounding the production string. However, it appears that if the tubing is run and packer set well below the top of the cement surrounding the production string, no threat of contamination to any fresh waters which may exist in the area will occur. Therefore, this office offers no objection to the granting of the application, provided the tubing and packer are set well below the top of the cement surrounding the production string.

Yours truly,

S. E. Reynolds
State Engineer

FEI/ma
cc-Richard S. Morris
F. H. Hennighausen

By: 
Frank E. Irby
Chief
Water Rights Div.

SUNSET INTERNATIONAL PETROLEUM CORPORATION
1205 PETROLEUM LIFE BUILDING
MIDLAND, TEXAS

AUGUST 17, 1964

RE: REQUEST FOR HEARING

2663
3/03
1964 AUG 19 AM 7:41
GEORGE DCC

NEW MEXICO OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO

GENTLEMEN:

WE ARE PREPARING TO COMMENCE A WATER FLOOD ON OUR LEASES
AT THE MALJAMAR POOL SECTIONS 20,21, AND 29, 17S, 33E,
LEA COUNTY, NEW MEXICO. IT IS REQUESTED THAT HEARINGS
BE CALLED FOR THE WATERFLOOD AND FOR THE UNIT AGREEMENT.
IF POSSIBLE, WE WOULD LIKE FOR THE HEARING TO BE AT THE
NEXT SCHEDULED HEARING DATE SEPTEMBER 9, 1964.

YOURS VERY TRULY,

Robert W. Arrendiell

ROBERT W. ARRENDIELL
PRODUCTION MANAGER
WEST TEXAS DIVISION

RWA:MD

DOCKET MAILED

Date 8-28-64

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 9, 1964

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

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

CASE 3099: Application of Leonard Nichols for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the approval of the West Maljamar Unit Area comprising 440 acres more or less, of Federal and fee lands in Sections 4 and 9, Township 17 South, Range 32 East, Lea County, New Mexico.

CASE 3100: Application of Leonard Nichols for a waterflood extension, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the extension of the waterflood project which he operates in Sections 2, 3, 10, and 11, Township 17 South, Range 32 East, Maljamar Pool, Lea County, New Mexico, by the addition of 6 water injection wells in Sections 4 and 9, same township. The original flood was authorized as the Boller-Nichols Waterflood Project, Roberts Pool, by Order No. R-1538.

CASE 3101: Application of John L. Cox for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to whipstock and directionally drill the Texas Pacific South Crossroads Unit Well No. 1, the surface location of which is 1980 feet from the South and West lines of Section 10, Township 10 South, Range 36 East, Lea County, New Mexico, in such a manner as to bottom said well in the South Crossroads Devonian Pool at a point 2310 feet from the South line and 1980 feet from the West line of said Section 10.

CASE 3102: Application of Sunset International Petroleum Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Mal-Gra Unit Area comprising 600 acres, more or less, of State land in Township 17 South, Range 33 East, Lea County, New Mexico.

CASE 3103: Application of Sunset International Petroleum Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in the Maljamar Pool in its Mal-Gra Unit Area by the injection of water into the Grayburg formation through 8 wells in Sections 20 and 21, Township 17 South, Range 33 East, Lea County, New Mexico.

PAGE -2-

Docket No. 24-64

Examiner Hearing - September 9, 1964

CASE 3104:

Application of Sunset International Petroleum Corporation for directional drilling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to whipstock and directionally drill the Humble State Well No. 1, the surface location of which is 1980 feet from the South line and 660 feet from the West line of Section 16, Township 8 South, Range 33 East, Chaves County, New Mexico, in such a manner as to bottom said well in the Tobac-Pennsylvanian Pool at a point within 150 feet of the center of the SW/4 SW/4 of said Section 16.

ir/

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 9/9/64

CASE 310 3

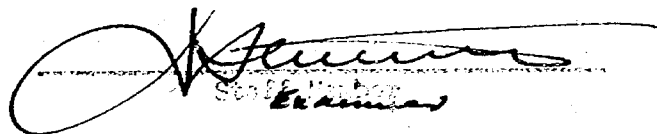
Hearing Date 9am 9/9/64
DSN @ SF

My recommendations for an order in the above numbered cases are as follows:

Enter an order authorizing Sunset Inter-
national to institute a water flood
project on its Mal Gra Unit Area
by the injection ^{of water} into the Grayburg
formation through the following wells:

	Unit	Section
Sunset International Staer B Well No 3	P	20
" " " " 4	N	20
" " " " 7	L	20
Carper Phillips Staer CPS Well No 1	J	20
Sunset International Staer D Well No 1	L	21
" " " " 4	D	21
" " " " 5	N	21
Phillips Petroleum Company Well No 12	F	21

Usual water flood order


James H. Hume

MAIN
1964 SEP 4
BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION OF SUNSET INTERNATIONAL
PETROLEUM CORPORATION FOR APPROVAL
OF A WATERFLOOD PROJECT, MALJAMAR
POOL, LEA COUNTY, NEW MEXICO

Case No. 3103

APPLICATION

Comes now Sunset International Petroleum Corporation by its attorneys and requests approval by the New Mexico Oil Conservation Commission of a waterflood project in the Maljamar Pool, Lea County, New Mexico, and in support of its application states:

1. Applicant is the owner and operator of the following described acreage in Township 17 South, Range 33 East, Lea County, New Mexico:

Section 20: $S\frac{1}{2}$

Section 21: $NW\frac{1}{4}NW\frac{1}{4}$, $S\frac{1}{2}NW\frac{1}{4}$
 $NW\frac{1}{4}SW\frac{1}{4}$, $S\frac{1}{2}SW\frac{1}{4}$

Section 29: $NE\frac{1}{4}NE\frac{1}{4}$.

The above described acreage, comprising 600 acres, more or less, comprises the proposed Mal-Gra Unit Area; approval of the Mal-Gra Unit Agreement is being sought pursuant to the application in Case No. 3102.

2. The above described area is presently developed by 15 wells in the Maljamar Pool, as shown on the plat attached to and made a part of this application. Said wells are in an advanced stage of depletion and are properly designated "stripper" wells.

3. As shown on the plat accompanying this application, the acreage to the North and West of the subject acreage present-

is being waterflooded on a five-spot pattern. Applicant proposes to develop its acreage on a continuation of this pattern by the injection of water into eight injection wells shown on the plat attached hereto and located as follows:

CPS Well No. 1, Unit J, Section 20,
Sipco State "B" Well No. 7, Unit L, Section 20,
Sipco State "B" Well No. 4, Unit N, Section 20,
Sipco State "B" Well No. 3, Unit P, Section 20,

Sipco State "D" Well No. 4, Unit D, Section 21,
PLM Well No. 12, Unit F, Section 21,
Sipco State "D" Well No. 1, Unit L, Section 21,
Sipco State "D" Well No. 5, Unit N, Section 21,

All in Township 17 South, Range 33 East, Lea
County, New Mexico.

4. Attached to this application and made a part hereof is an exhibit of tabulated data showing the total depth, perforated intervals, surface casing, and production casing on each of the proposed injection wells. Also attached to this application and made a part hereof are diagramatic sketches of each of the proposed injection wells. As shown on these sketches, injection will be through tubing and below a packer; injection in this manner will confine injected water to the Maljamar Pool, and will protect fresh water and other producing formations in the area. Attached to this application are copies of logs of each of the proposed injection wells.

5. Applicant proposes to obtain water for use in its proposed waterflood project from the Ogallala formation in the vicinity of the proposed project. An analysis of the water to be used is attached to this application.

6. Approval of the subject application will permit the applicant to recover oil otherwise unrecoverable, and will thereby prevent waste.

Correlative rights will not be impaired by the granting of this application.

WHEREFORE, applicant requests that this application be set for hearing before the Commission or one of its Examiners and that the Commission enter its order approving the proposed waterflood project.

SETH, MONTGOMERY, FEDERICI & ANDREWS

By Richard S. Merrin
P. O. Box 2307
Santa Fe, New Mexico

Attorneys for Applicant Sunset International Petroleum Corporation.

CERTIFICATE OF MAILING

The undersigned, being one of the attorneys for the applicant, hereby certifies that on this 3rd day of September, 1964 a copy of this application with exhibits attached thereto has been mailed to Mr. Frank Irby, Chief, Water Rights Division, Office of the State Engineer, Capitol Building, Santa Fe, New Mexico, in accordance with Rule 701 of the Rules and Regulations of the New Mexico Oil Conservation Commission.

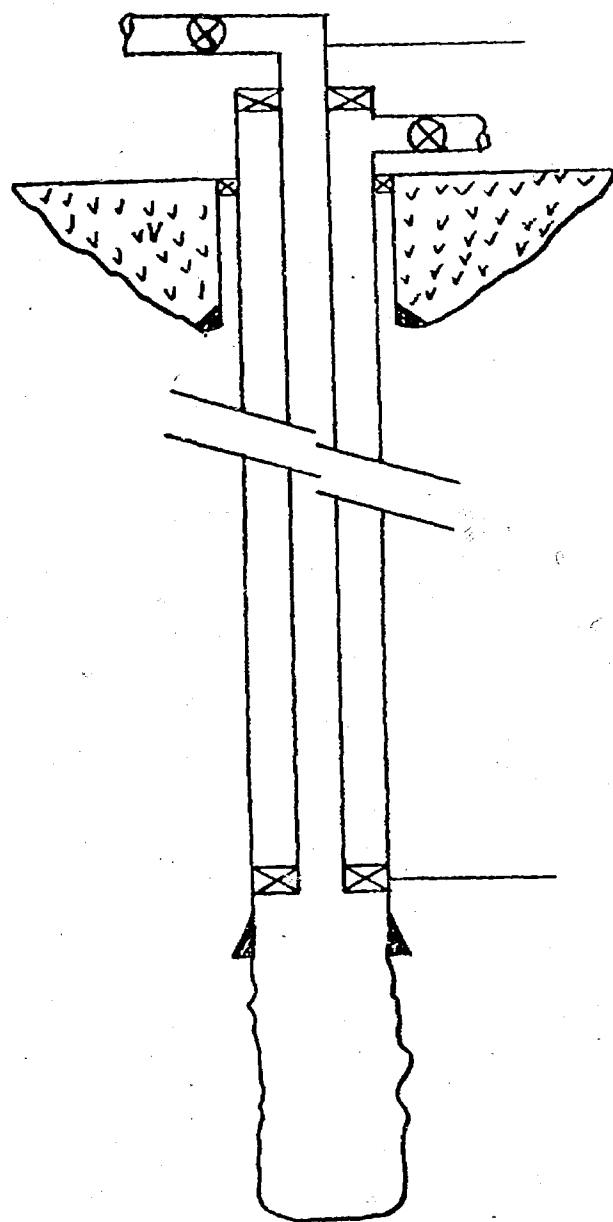
Richard S. Merrin

SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRA UNIT
CASING RECORDS
PROPOSED INJECTION WELLS
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO

WELL NO.	KOB ELEV.	TOTAL DEPTH	PERFORATED INTERVALS	SURFACE CASING			PRODUCTION CASING		
				SIZE	DEPTH	SXS. CEMENT	SIZE	DEPTH	SX. CEMENT
STATE B-3	4192'	4440'	OH	8-5/8"	306'	CIRC.	5-1/2"	4243'	200
STATE B-4	4112'	4350'	OH	8-5/8"	304'	CIRC.	5-1/2"	4213'	200
STATE B-7	4175'	4452'	OH	8-5/8"	300'	CIRC.	5-1/2"	4190'	250
STATE D-1	4188'	4453'	4236-56 4270-87 4312-18 4344-50 4364-4444	8-5/8"	301'	CIRC.	5-1/2"	4505'	275
STATE D-4	4202'	4448'	OH	8-5/8"	301'	CIRC.	5-1/2"	4243'	200
STATE D-5	4186'	4438'	OH	8-5/8"	308'	CIRC.	5-1/2"	4240'	250
C P S NO.1 (CARPER PHILLIPS) NO. 1	4195'	4508'	OH	8-5/8"	1394'	50 SXS.	5-1/2"	4094'	100
P L M NO.12 (PHILLIPS LEAMEX NO. 12)	4192'	4488 TD 4477 PBTD	4306-12 4321-25 4372-78 4383-85 4391-93 4006-14 4424-36 4449-56 4460-68	8-5/8"	349'	CIRC.	4-1/2"	4486'	TOP OF CEM. 2600'

SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRA UNIT

WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
C P S NO. 1 (CARPER PHILLIPS NO. 1)



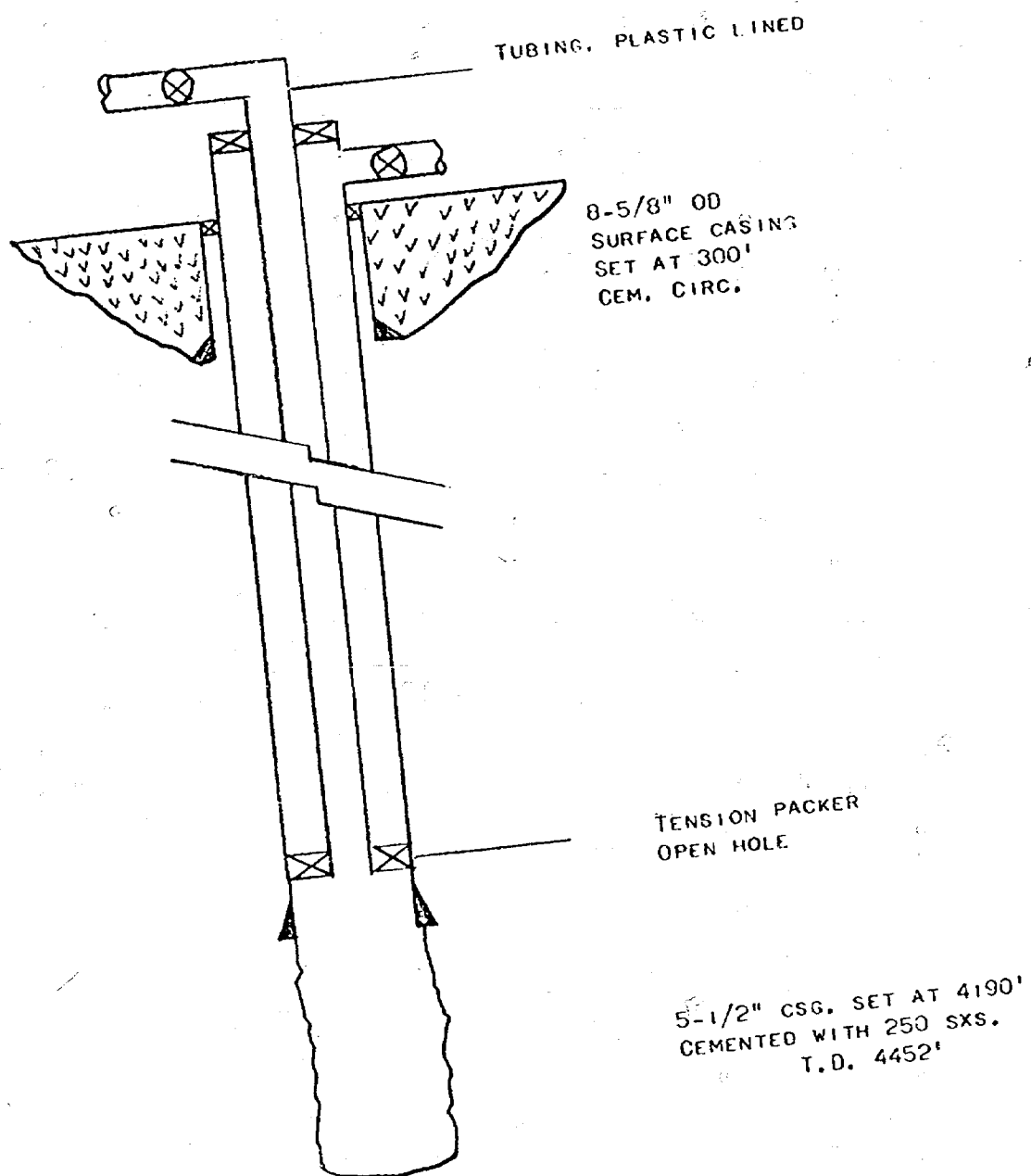
TUBING, PLASTIC LINED

3-5/8" OD
SURFACE CASING
SET AT 1394'
CEM. CIRC. W 50 SXS.

TENSION PACKER
OPEN HOLE

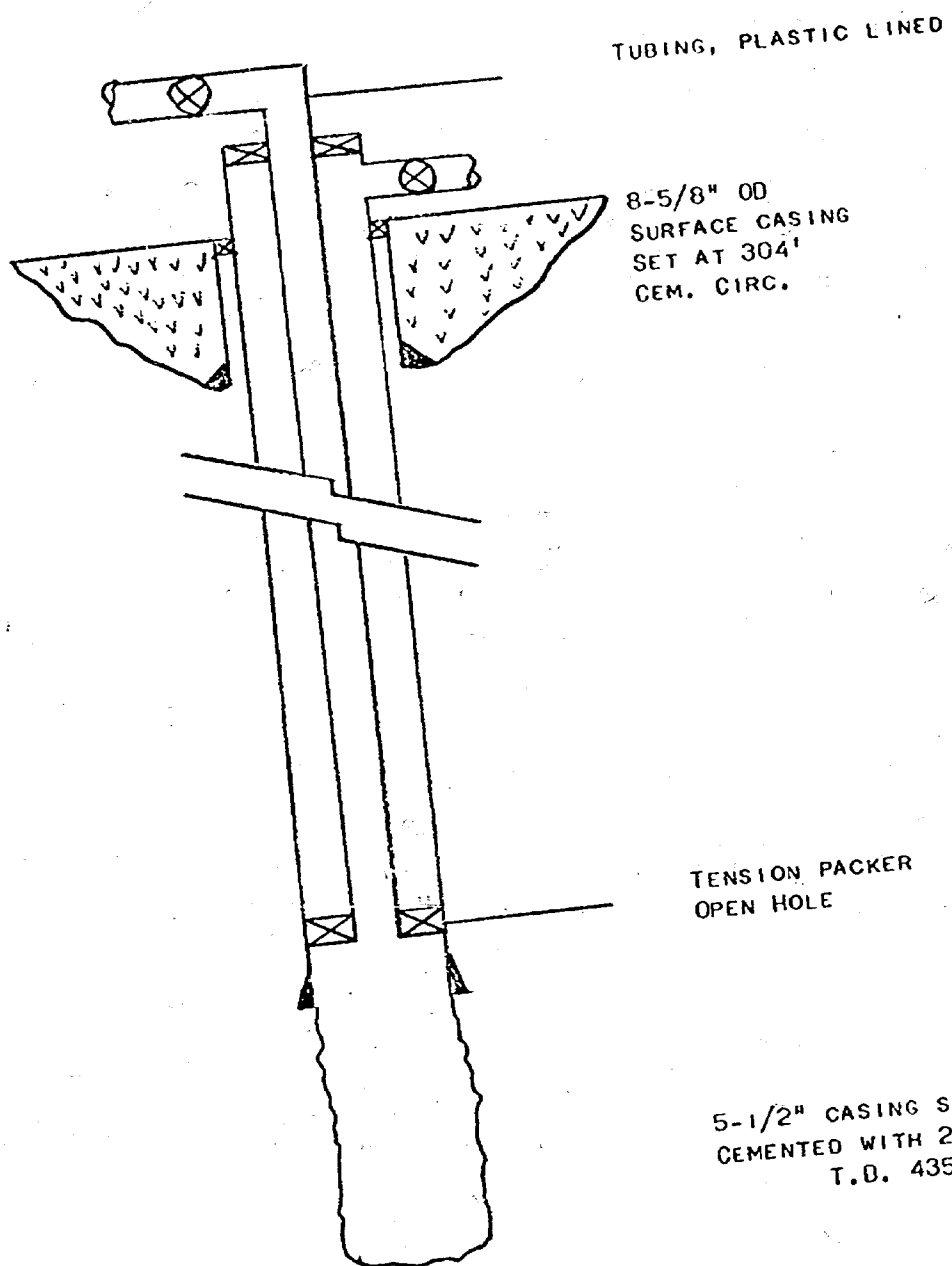
5-1/2" CASING SET AT 4094'
CEMENTED WITH 100 SXS.
T.O. 4506'

SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRA UNIT
WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
STATE B-7



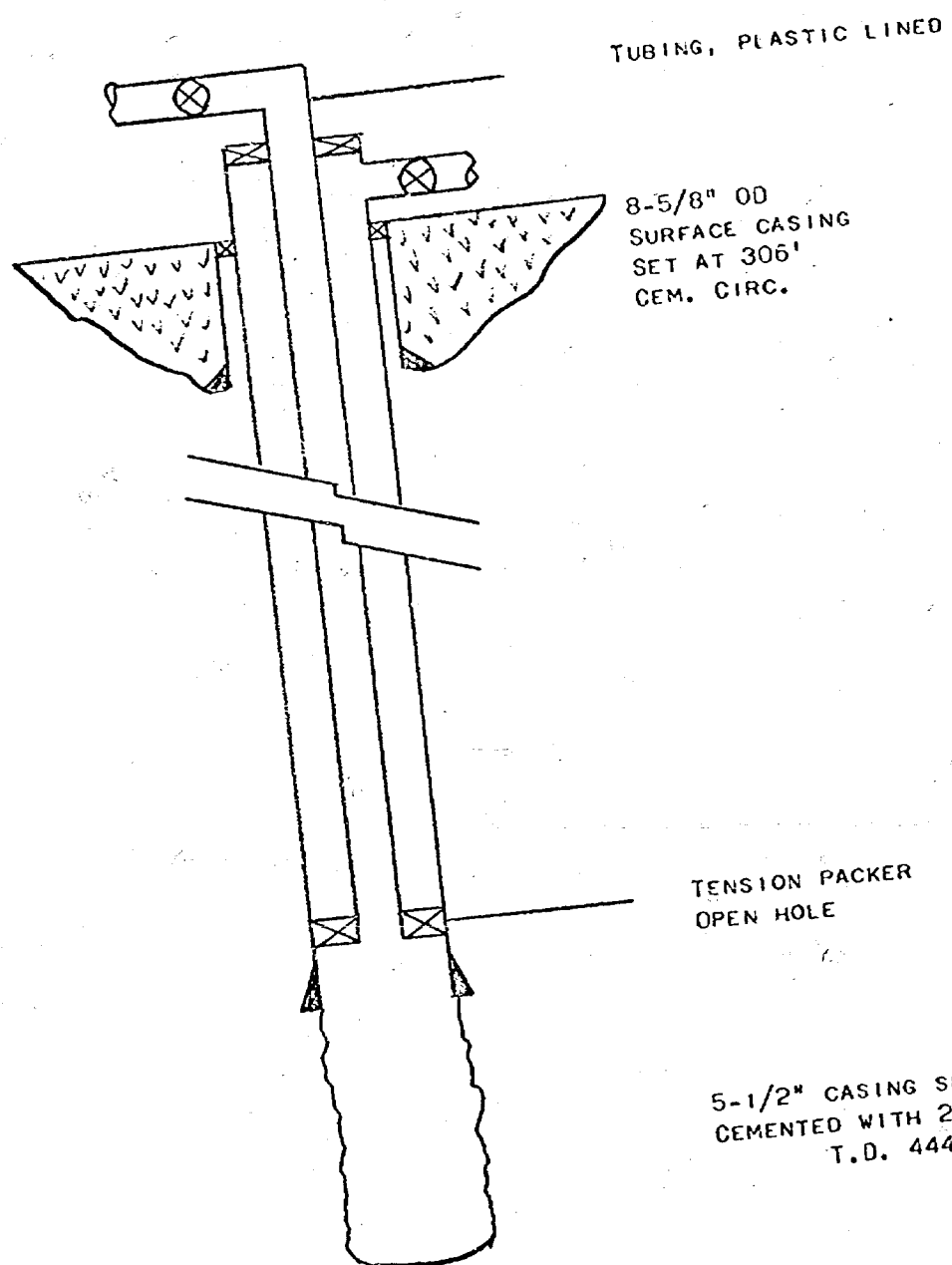
SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRA UNIT

WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
STATE B-4



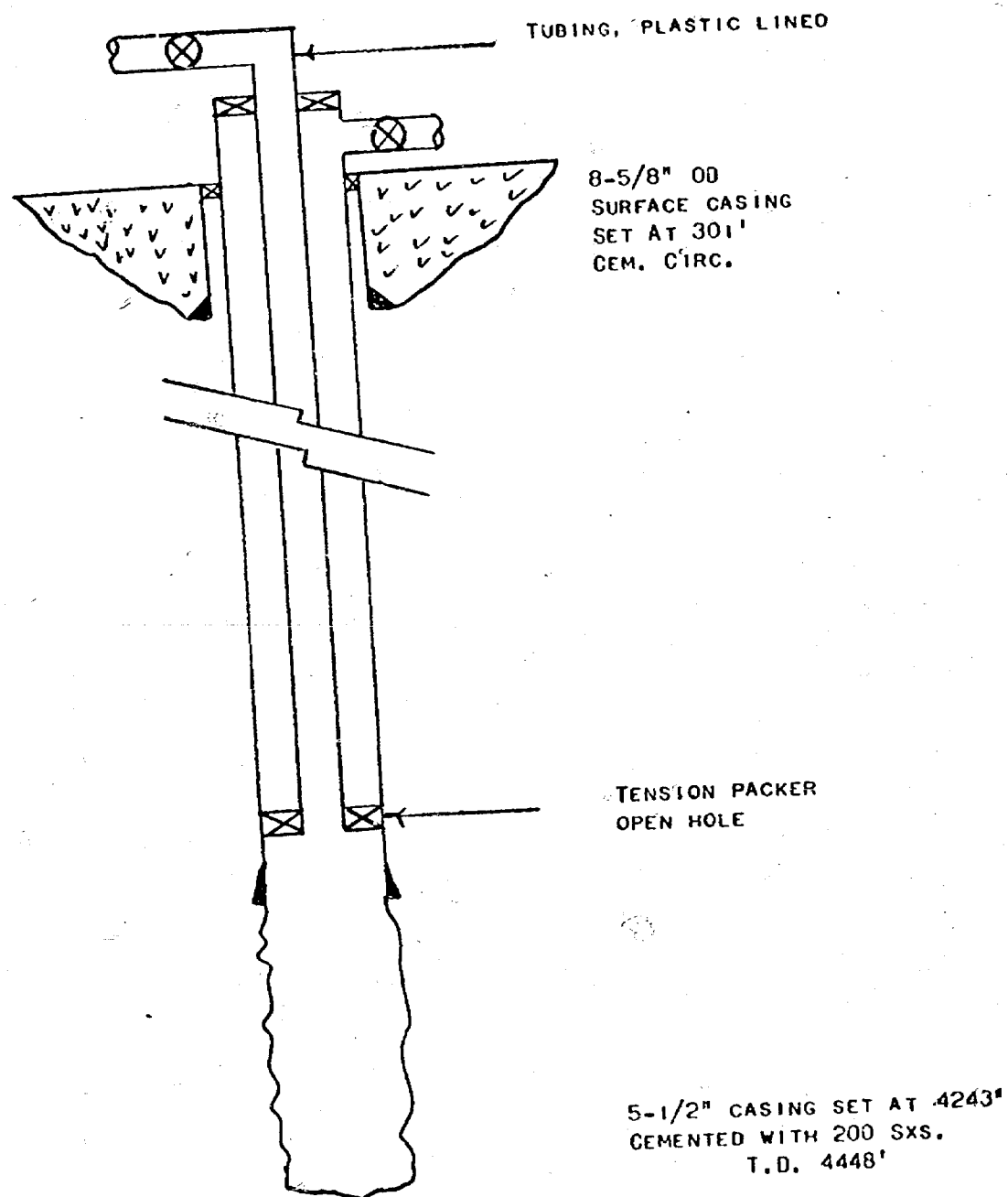
SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRÁ UNIT

WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
STATE B-3



SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRA UNIT

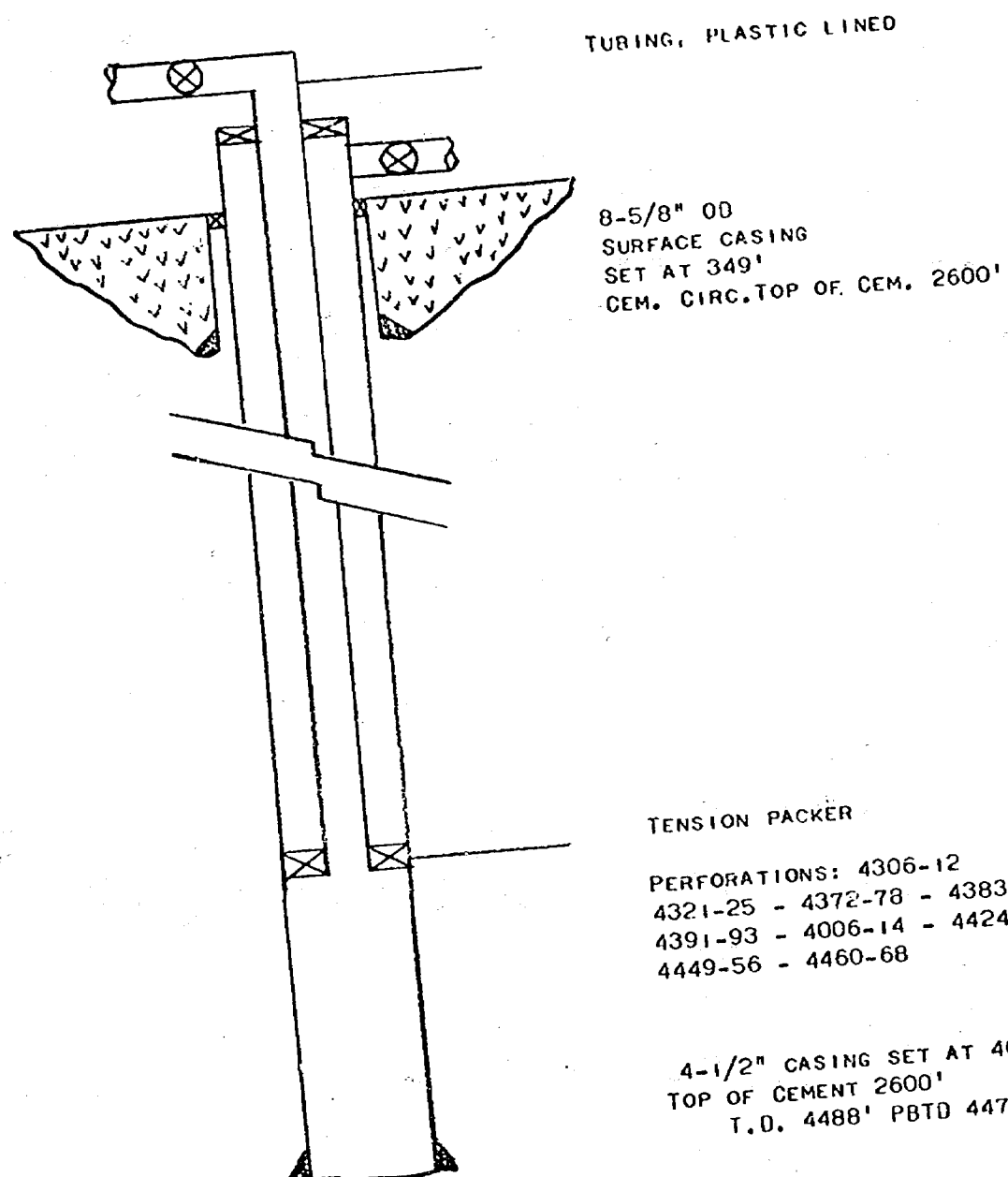
WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
STATE D NO. 4



SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GEA UNIT

WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
P L M NO. 12

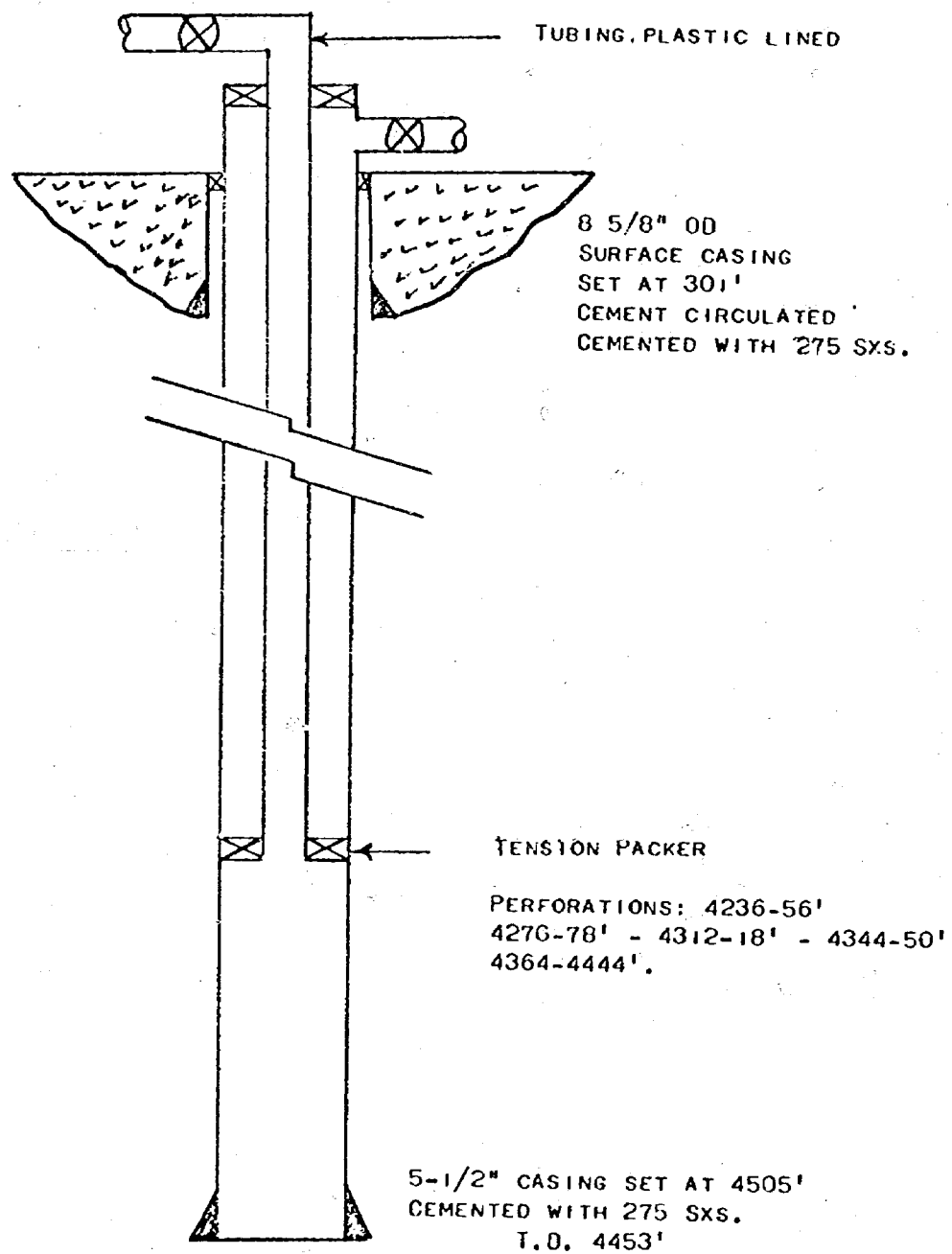
(PHILLIPS LEAMEX NO. 12)



SUNSET INTERNATIONAL PETROLEUM CORPORATION

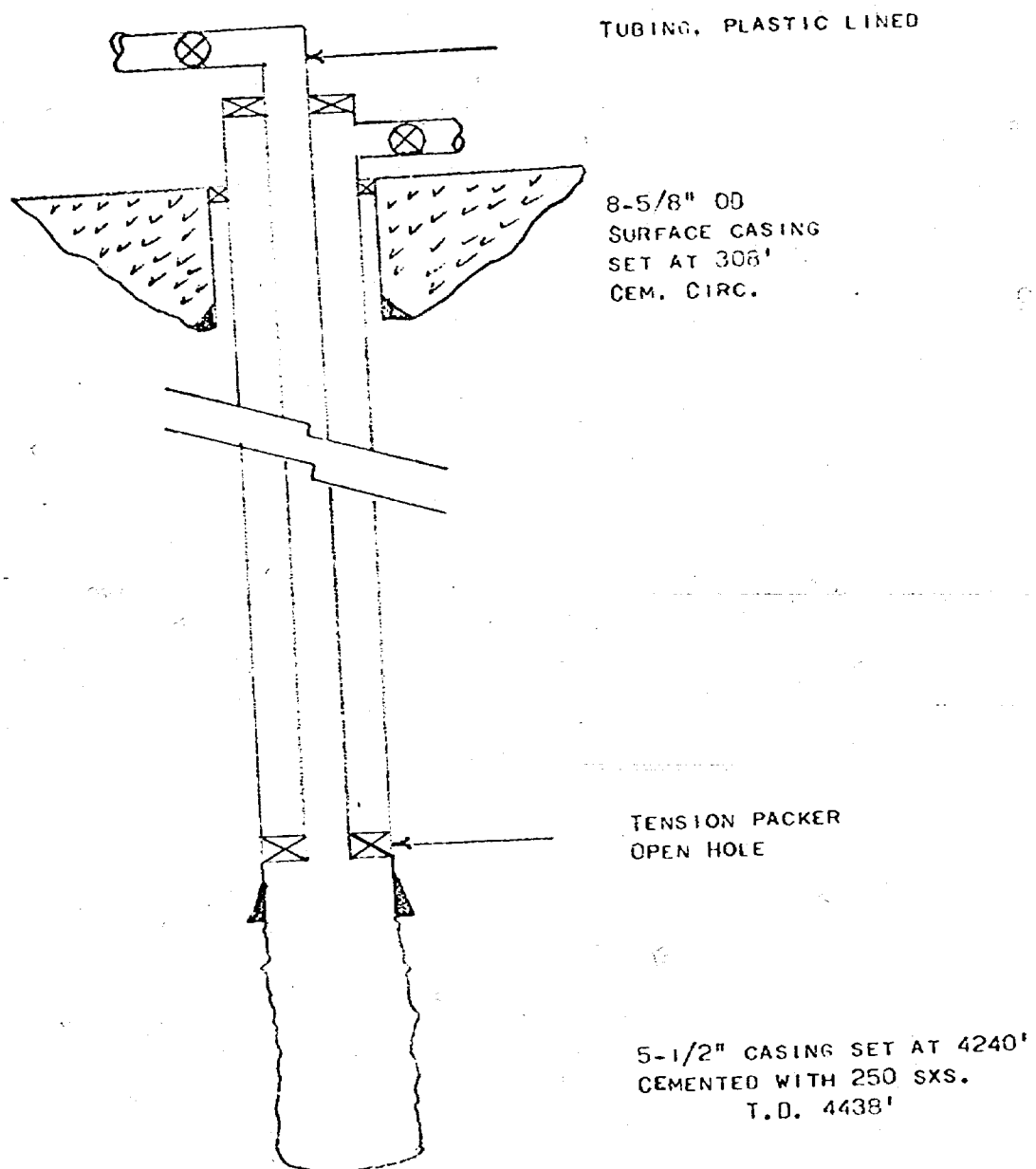
MAL-GRA UNIT

WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
STATE D NO. 1



SUNSET INTERNATIONAL PETROLEUM CORPORATION
MAL-GRA UNIT

WATER INJECTION WELL SCHEMATIC
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO
STATE D-5



Martin Water Laboratories
BOX 1468 MONAHANS, TEXAS W13-4781
RESULT OF WATER ANALYSES

TO: Mr. L. D. Crumly LABORATORY NO. M6596
503 Oil & Gas Building, Midland, Texas SAMPLE RECEIVED 6-2-59
COMPANY Caprock Water Co. - Waterflood LEASE Caprock Water Co. RESULTS REPORTED 6-10-59
DIVISION Caprock Water (Ogallala Formation)
FIELD OR POOL _____ COUNTY Lea & Eddy STATE New Mexico
SECTION _____ BLOCK _____ SURVEY _____

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Water - taken from raw water supply at edge of Cap. 6-2-59
NO. 2 Water - taken from Skelly Camp residence approx. midpoint of 3" line. 6-2-59
NO. 3 Water - taken from truck loading storage at Loco Hills at end of 3" line. 6-2-59
NO. 4 _____

REMARKS: Analyses performed under the name of Treat-Rite Water Labs. by the undersigned.

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60 degs. F	1.0008	1.0006	1.0007	
pH When Sampled	7.7	7.6	7.5	
pH When Received	7.7	7.6	7.5	
Total Alkalinity as CaCO ₃	176	156	160	
Supersaturation as CaCO ₃	4	-	0	
Undersaturation as CaCO ₃	-	4	-	
Total Hardness as CaCO ₃	188	162	164	
Calcium as CaCO ₃	147	127	128	
Magnesium as CaCO ₃	41	35	36	
Sodium and/or Potassium				
Sulfate as SO ₄	35	32	29	
Chloride as NaCl	42	45	47	
Iron as Fe	0.36	0.20	0.12	
Manganese as Mn				
Barium as Ba	0.0	0.0	0.0	
Turbidity Electric	1.3	1.9	1.3	
Color as Pt.	1.5	1.5	0.8	
Dissolved Solids at 103 deg. C				
Total Solids at 103 deg. C				
Total Solids, Calculated	68	75	75	
Temperature Degs. F.	7.5	8.0	10.1	
Carbon Dioxide, Calculated	8.2	7.2	8.4	
Dissolved Oxygen, Winkler	0.0	0.0	0.0	
Hydrogen Sulfide	2,000	2,100	2,100	
Resistivity OHMS/CC at 60 Degs. F.				
Total Suspended Oil				

All Results Reported As Parts Per Million

Additional Determinations And Remarks:

The above analyses are considered sufficiently substantial evidence that this water can be satisfactorily transferred through a bare steel line. A thin protective calcium carbonate scale is anticipated which should greatly reduce corrosion. The transferred water should not require plant filtration but wellhead filters are recommended, as a small amount of insoluble iron will undoubtedly be encountered. These conclusions are based on anticipated reasonable similarity of the above with the water from the wells to be drilled. Contact us for any further details or discussions.

BY

Waylan C. Martin, M. A.

DRAFT

JMD/esr

Sept. 9, 1964

(1)

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. 3103

Order No. R- 2769

APPLICATION OF SUNSET INTERNATIONAL PETROLEUM CORPORATION
FOR A WATERFLOOD PROJECT, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on
September 9, 1964, at Santa Fe, New Mexico, before Examiner
Daniel S. Nutter.

NOW, on this day of September, 1964, 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, Sunset International
Petroleum Corporation,
seeks permission to institute a waterflood project in the

Maljamar in the Mal-Gra Unit Area
Pool by the injection of water into the
Grayburg formation through eight injection wells in
Sections 20 and 21, Township 17 ~~North~~, Range
33 ~~West~~, NMPM, Lea County, New Mexico.
East

(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 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, Sunset International Petroleum Corporation, is hereby authorized to institute a waterflood project in the Maljamar Pool in the Mal-Gra Unit Area by the injection of water into the Grayburg formation through the following-described wells in Township 17 ~~North~~ Range 33 ~~West~~ South East NMPM, Lea County, New Mexico:

	<u>UNIT</u>	<u>SECTION</u>
Sunset International State B Well No. 3	P	20
Sunset International State B Well No. 4	N	20
Sunset International State B Well No. 7	L	20
Carper Phillips State CPS Well No. 1	J	20
Sunset International State D Well No. 1	L	21
Sunset International State D Well No. 4	D	21
Sunset International State D Well No. 5	N	21
Phillips Petroleum Leamex Well No. 12	F	21

(2) That the subject waterflood project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and ¹¹¹⁹~~1120~~ of the Commission Rules and Regulations.

(4) 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.

GOVERNOR
EDWIN L. MECHEM
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER



P. O. BOX 2088
SANTA FE
87501

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

CCC Hall
Mr. Frank J. [unclear]
St. Engineer

Mr. Richard S. Morris
Seth, Montgomery, Federici & Andrews
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico

, 19

Gentlemen:

Enclosed herewith is Commission Order No. R- 2769
No. 3103, approving the Sunset International Mal-Gra
Water Flood Project.

As to allowable,
According to our calculations, indicates that
wells have been placed on active injection, the maximum allowable which this
project will be eligible to receive under the provisions of Rule 701-E-3
is 630 barrels per day.

Please report any error in this calculated maximum allowable immediately,
both to the Santa Fe office of the Commission and the appropriate District
proration office.

In order that the allowable assigned to the project may be kept current,
and in order that the operator may fully benefit from the allowable provisions
of Rule 701, it behooves him to promptly notify both of the aforementioned
Commission offices by letter of any change in the status of wells in the project
area, i.e., when active injection commences, when additional injection or
producing wells are drilled, when additional wells are acquired through purchase
or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status
of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, JR.
Secretary-Director

If water injection is to be through the eight authorized
water injection wells which are to be equipped with plastic lined
tubing and packers. Packers shall be set in the bottom
joint of casing in those wells which are completed open-hole and in
the first joint above the uppermost perforation in wells in which the
casing is set through the pay!

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

September 16, 1964

C
O
P
Y
Mr. Richard S. Morris
Seth, Montgomery, Federici & Andrews
Attorneys at Law
Post Office Box 2307
Santa Fe, New Mexico

Gentlemen:

Enclosed herewith is Commission Order No. R-2769, entered in Case No. 3103, approving the Sunset International Mal-Gra Water Flood Project.

Water injection is to be through the eight authorized water injection wells which are to be equipped with plastic lined tubing and packers. Packers shall be set in the bottom joint of casing in those wells which are completed open-hole and in the first joint of casing above the uppermost perforation in wells in which the casing is set through the pay.

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 630 barrels per day.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate District proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. Porter, Jr.
Secretary-Director

ALP:sg

cc: Oil Conservation Commission - Hobbs
Mr. Frank Irby, State Engineer Office, Santa Fe

DEARNEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, N. M.
PHONE 243-6691

SANTA FE, N. M.
PHONE 963-3571

FARMINGTON, N. M.
PHONE 325-1162

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico
September 9, 1964

EXAMINER HEARING

IN THE MATTER OF:

Application of Sunset International
Petroleum Corporation for a Unit
Agreement, Lea County, New Mexico.

-and-

Application of Sunset International
Petroleum Corporation for a Waterflood
project, Lea County, New Mexico.

BEFORE:

MR. DANIEL S. NUTTER, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We will now call Case No. 3102.

MR. DURRST: Application of Sunset International

Petroleum Corporation for a Unit Agreement, Lea County,

New Mexico. And Case No. 3103, Application of Sunset

International Petroleum Corporation for a Waterflood

Project, Lea County, New Mexico.

Case No. 3102 &

3103

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
September 9, 1964

EXAMINER HEARING

IN THE MATTER OF:

Application of Sunset International
Petroleum Corporation for a Unit
Agreement, Lea County, New Mexico.

-and-

Application of Sunset International
Petroleum Corporation for a Waterflood
project, Lea County, New Mexico.

Case No. 3102 &
3103

BEFORE:

MR. DANIEL S. NUTTER, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We will now call Case No. 3102.

MR. DURRETT: Application of Sunset International
Petroleum Corporation for a Unit Agreement, Lea County,
New Mexico. And Case No. 3103, Application of Sunset
International Petroleum Corporation for a Waterflood
Project, Lea County, New Mexico.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMAS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

MR. MORRIS: If the Examiner please, I am Richard Morris of the law firm of Seth, Montgomery, Federici and Andrews in Santa Fe, appearing on behalf of the Applicant, Sunset International Petroleum Corporation in Cases 3102 and 3103. May I assume these cases are consolidated for the purpose of Hearing?

MR. NUTTER: Cases 3102 and 3103 are consolidated for the purpose of Hearing.

MR. MORRIS: We will have one witness, Mr. Bob Arrendiell, and we will ask that he be sworn at this time.

MR. DURRETT: Will you stand and be sworn, please?

B O B A R R E N D I E L L, having been first duly sworn, was examined and testified as follows:

MR. MORRIS: May we have Exhibits One through Nine marked at this time.

(Whereupon, Applicant's Exhibits One through Nine marked for identification.)

DIRECT EXAMINATION

BY MR. MORRIS:

Q Mr. Arrendiell, will you please state your name, position, by whom you are employed, and where you are located.

A My name is Robert W. Arrendiell, I am employed by Sunset International Petroleum Corporation, and I am Production

Manager of the West Texas Division. I am located in Midland, Texas.

Q Have you previously testified before the New Mexico Oil Conservation Commission or one of it's examiners and have your qualifications been accepted as a matter of record?

A Yes, I have.

MR. MORRIS: If the Examiner please, may Mr. Arrendiell testify as an expert witness?

MR. NUTTER: Yes, sir.

Q (By Mr. Morris) Are you familiar with the Application of Sunset International Petroleum Corporation in Cases 3102 and 3103?

A Yes, sir, I am.

Q Briefly, what is it that Sunset seeks by these Applications?

A Sunset International Petroleum seeks approval of the Mal-Gra Unit Area comprising six hundred acres of State land in Township 17 South, Range 33 East, Lea County, New Mexico; and authority to institute a waterflood project in the Maljamar Pool in this -- in the Mal-Gra Unit Area by injection of water into the Grayburg formation through eight wells in Sections 20 and 21, Township 17 South, Range 33 East, Lea County, New Mexico.

Q Referring to what has been marked as Exhibit Number

One in Case 3102; would you state what that document is, please?

A This is the Unit operating agreement. This is the Unit Agreement between Sunset International Petroleum and the non-operating partners of Mal-Gra Unit, Maljamar Field, Lea County, New Mexico.

Q Referring first to Exhibit "A", to the Unit Agreement which is a plat attached to the agreement, itself; will you point out the pertinent features shown on that plat?

A This is a plat over the development to date in the Maljamar Pool in the Unit Area as outlined by the dotted line.

Q This plat does not show all of the development in the Maljamar Pool?

A No, sir; this is a part of the southeast end of the Maljamar Pool.

Q Are the various leases and tracts within the Unit Area given some designation on that plat?

A They are. They are five leases, the Sunset International Petroleum has three leases. State "B" in Section 20, the State "D" in Section 21 and the State "E" in Section 29. The State "D" and "E" have been communitized by previous order of the New Mexico Oil Conservation Commission.

Also, in Section 20 the Unit Area contains the Carper Drilling Company's Phillip's State "B" Lease, and in Section 21 the Unit Area contains the Phillip's Petroleum



Lemex Number Twelve, and it's 40 acres.

Q Now, are these tracts and tract numbers as shown on this plat deed attached to Exhibit "B" of this Unit Agreement?

A They are, and the --

Q If you will refer to that Exhibit "B". Referring to that Exhibit would you state first who the working interests are in this Unit?

A The working interests are Sunset International Petroleum Corporation, Charles P. Miller, who owns an interest in this Sunset International Petroleum State Lease, Carper Company, and Phillips Petroleum Company.

Q What is the status of each of these interests with respect to their commitment to the Unit Agreement at the present time?

A Phillips Petroleum Company has written us a letter stating they would contribute their Lemex Twelve and it's 40 acres to the Unit; Carper Drilling Company has written us a letter stating they could contribute their Phillips well and its 40 acres to the Unit; Charles P. Miller is presently trying to sell his interest in this Unit; and we talked to him last night and he said that the party that he is dealing with is interested in this Unit, but he won't be able to commit himself or his party, of course, until the first of next week.

Q Has there been a flat refusal by Mr. Miller to enter your Unit?

A No, sir.

Q You are still negotiating with him?

A Yes, sir.

Q And you would negotiate with any subsequent purchaser of this acreage?

A That's right; yes, sir.

Q Who are the over-riding royalty interests in this Unit Area?

A Phillips Petroleum Company owns an over-riding royalty and Charles Miller and wife also own an over-riding royalty.

Q So there are no over-riding royalty interests who are not working interests?

A That's right.

Q So the status of the commitments of the over-riding interests is the same as the status of the working interests?

A That's correct.

Q I believe you said at the outset that all of the acreage in this Unit is owned by the State of New Mexico?

A That's correct.

Q Has the Unit Agreement been submitted to the State Land Office for its consideration?

A It has been.

Q And what is the status of that now?

A ^{Re: a} Mrs. Marian Ray approved the text and the form. We had this in the wrong form at first. She said if we would put it in this form, like Exhibit Number One, it would be satisfactory.

Q Referring to the Unit Agreement, itself, what are the unitized formations?

A The unitized formation is the Grayburg lime formation.

Q No other formations except the Grayburg lime?

A No other formations.

MR. MORRIS: For the Examiner's reference -- I had a hard time finding it too; it is on page two, sub paragraph J of the agreement.

Q (By Mr. Morris) Will you briefly describe the plan of operations contemplated by this Unit Agreement?

A This -- well, let's see. This is an extension of the waterflood for the northwest. We believe that the Grayburg formation underlying this area is a good waterflood prospect. The waterfloods for the northwest have been successful and we plan to extend the waterflood pattern down through this particular area and put it on injection by injecting fresh water into this Grayburg lime through eight wells, and waterflood the area.

Q What does the Unit Agreement contemplate as far as

deanley-meier
realtor
2010-2011
ms.
ms.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY; DAILY COPY, CONVENTIONS

ANNA SIMMS RIDG • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



c. Mr. Anne Michel, in your opinion will operation of your waterflood project under the proposed Unit Agreement promote ease of operation and produce correlative effects?

A. It will. It almost has to be done in order to do that.

Turning now to the Application for Subpoena to
witness these properties, I would refer you first to
what has been marked Exhibit One in Case 3103 and ask you
to state what it is and where it shows.

A Exhibit One is a map showing the product development in the Maljamar Pool, Grayburg lime formations, southeast end of the Maljamar Pool. The dash line shows the Jule area, the blue area immediately to the northwest is the flood presently in progress by Pennzoil. Immediately to the northwest of that enclosed in the brown line is a Baxter flood, and immediately to the northwest of that is a flood by Great Western Drilling Corporation. This plat shows development within two miles of the subject area.

The yellow circles in the suction area are the wells that we plan to put on injection. The wells circled in blue

are the Pennzoil injection wells. The wells circled in brown are the Baxter injection wells, and the orange wells to the northwest are the Great Western injection wells. This shows the waterflood pattern, five spot pattern to the northwest, and it shows that we plan to continue that pattern as we move southeast with this flood.

Q Mr. Arrendiell, I notice that there appears to be at the present time what would appear to be a break in the pattern in that the Pennzoil development is not complete on a five spot pattern as it approaches your proposed waterflood area. Is there any plan for further development by Pennzoil of their injection pattern?

A Mr. Ken Huddleston of Pennzoil has informed us that they plan to convert the Number One Well in the southeast southeast of Section 19 to water injection and the Number Four Well in the southeast southeast of Section -- No, I am sorry; it is in Number Four Well in the southeast of the northeast of 20; and the Number Ten Well, which is the southeast southeast of 17, just as soon as we commence and put our proposed area on injection.

Q Is this a matter of informal understanding or is there an actual lease line agreement?

A We have a lease line agreement which we plan on signing as soon as we know approximately when we will go on injection

here.

That lease line agreement calls for mutual cooperation along that common boundary between Sunset's proposed area and the Pennzoil area, and it also calls on our arrangements about abandoning the well and taking over the well; one side or the other wants to quit.

Q By Pennzoil putting on injection their wells One, Four, and Ten, it would make a perfect five spot pattern coming into your subject property?

A That's correct.

Q You stated that the proposal is to waterflood the Grayburg formation in this area; is the San Andres formation susceptible to waterflooding in this area?

A The San Andres formation lies directly under the Grayburg lime and it has been Pennzoil's experience that where they have the San Andres open it will not take water. This has been determined by injectivity studies. They have run profiles and tests and found that the water will not go into the San Andres lime.

Where the San Andres porosity is almost entirely missing under this proposed area, and for that reason, and for those two reasons we have asked that we unitize only the Grayburg lime.

Q And your injection of water is contemplated only into



the Grayburg, not the San Andres?

A That's correct.

Q Turning now to the status of the production in the waterflood area, would you refer to what has been marked Exhibit Two in this case, state what it shows?

A In Exhibit Two lies the present production over all of the wells in the proposed area. What we call the Hal-Gra Unit Area shows that these wells are at or below the economic limit at this time.

Q From what source and as of what date is this information taken?

A This information is taken from our well records and it is and has been taken as of April 1st, 1964.

Q Referring next to what has been marked as Exhibit Three in this case, would you state what that shows?

A This is a tabulation of the production from the time the leases were developed by months up to April 1st, 1964, including the Sunset International State "B", and the State "D" and "E" and the Phillips Lemex Number Twelve and the Carper Drilling Company and the Phillips State Number One.

Q I notice that this Exhibit has the totals on a lease by lease basis. Do you have the total figure?

A That total, excuse me.

Q For the entire waterflood area?

A That figure totals, the accumulative production to date from the unitized, the proposed unitized area is 489,188 barrels.

Q Referring next to what has been marked Exhibit "A" and "B", "C" and "D"; would you state what they show?

A These exhibits are graphical presentations of the tabulations which are shown on Exhibit Three. We call these production decline curves.

Q And you have a production decline curve on each of the subject leases within the waterflood area?

A That's right. Four "A" is a State "B" lease, Sunset State "B" lease; Four "B" is Sunset "D" and "E" leases. Exhibit Four "C" is Carper Phillips State lease and Four "D" is the Phillips Lemex Twelve.

Q Referring now to what has been marked Exhibit Five in this case, which appears to be a tabulation of data on each of your proposed injection wells; would you summarize the more pertinent data shown on that tabulation?

A This Exhibit shows the total depth of the wells, whether or not the wells are completed open hole or through perforations, cased holes; it shows the amount of cement on the eight and five eighths inch casing and on the five and a half or four and a half inch casing where we do not have temperature surveys, we have shown how much cement has been pumped behind the

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production string into the proposed -- in these proposed injection wells.

Q Turning now to what has been marked Exhibit Six "A" through Six "H", will you state what those are, please?

A These are copies of electric logs on each proposed injection well in the proposed area, and each log is marked with red pencil to show the proposed injection zone.

Q The entire injection interval is shown whether it be perforated by perforations or open hole; is that correct?

A That's correct.

Q Referring now to what has been marked Exhibit Seven "A" through Seven "H", would you state what those are, please?

A These are diagrammatical sketches of each injection well, showing the casing and the open hole or cased hole and tubing with packers, packed off at the well head, valves, eight and five eighths inch casing, and the cement of each proposed injection well.

I might add here we have no scale on this diagram and we propose -- therefore, I will explain our packer's picture in the bottom of each hole.

We propose to run a packer, Guilberson type packer on the bottom of the two inch tubing and set this packer in the shoe joints of the production casing in each injection well so that we can isolate our injection to the Grayburg lime

porosity.

MR. NUTTER: That is on the six wells that are completed open hole. Where would the packer be set on the perforated --

A Well, no, sir. You see, what I mean on those two wells the packer will be set within a few feet, probably within thirty feet above the topmost perforations in those wells.

Q (By Mr. Morris) In each case injection will be through tubing and under packer?

A That's correct.

Q Do you have any plans to fill the annulus between the casing and tubing with any fluid?

A We plan to fill the annulus between the production string and the two inch tubing, treat it with fresh water so we can have an indication of any trouble that might show up.

Q And a pressure gauge will be placed on the annulus?

A Yes, sir.

Q By this method, Mr. Arrendiell, is it your opinion that the water can be injected into each of these injection wells and the injected water confined to the Grayburg formation?

A Yes, sir, I believe.

Q Is it your opinion that this method of injection will afford adequate protection to other productive zones in this area and any fresh water that may exist in this area?



estimate of waterflood reserves (oil) are thirty-five barrels per acre foot. Residual oil after waterflooding is 384.8 barrels per acre foot.

The next paragraph gives the primary reserves information from the proposed Unit area. The area contains 600 acres; average net pay is thirty feet. The primary acre-feet, 18,000; cumulative recovery to 4-1-64 is 489,183 barrels of oil; the remaining primary reserves are 45,812 barrels of oil; and the ultimate primary reserves are 535,000 barrels.

The next paragraph is the waterflood reserves data. The area again is 600 acres; average net pay, thirty feet; waterflood is 18,000; and waterflood recovery per acre foot is 35; and the ultimate waterflood reserves are 630,000 barrels of water.

Q So you expect to recover a little more on secondary than your ultimate primary?

A That is correct.

Q Why is Sunset International seeking approval of this Commission for approval of the waterflood project at this time?

A This area is now at the economic limit on a primary production basis, and it has a large waterflood value. We are offset to the north by a flood in operation, and referring back to Exhibit One, the map of the area with the colors on it; the well offset to the north to the Carper Phillips-State Number One is the Pennzoll well called the Number One well.

to use for injection purposes?

A An analysis has been made by the Caprock Water System.

Q Is that analysis as shown on what has been marked as Exhibit "A" in this case?

A That's correct. This water, excuse me, go ahead.

Q Has this water been found to be compatible for injection into the Grayburg formation?

A Yes, it has. This is the same water that Pennzoil is injecting into this Grayburg lime to the north of us, northwest.

Q Referring to our last Exhibit, Exhibit Number Nine; would you summarize the reservoir data and primary production data shown on that Exhibit from which you have made your statements of the performance of this area or expected performance of this area on secondary recovery?

A The first paragraph covers the Grayburg in general.

The total pore space for eleven and a half percent porosity is 892.2 barrels per acre foot. The Connate water saturation is thirty-five percent, 312.3 barrels per acre foot. The original water saturation is sixty-five percent; 579.9 barrels per acre foot. The formation volume factor of the Grayburg oil is 1.2. We arrived at the original STO in place of 483.2 barrels per acre foot. The primary oil produced to 4-1-64 in the proposed Unit area is 27.1 barrels per acre foot. The remaining primary oil is 2.6 barrels per acre foot. Our

A Yes, I believe it.

Q Would you give the Examiner some information concerning the water system that you plan to install, the source of the water that you have developed and what your water requirements are for this project?

A We have been guided by the experience of the floods to the northwest and we have worked quite closely with Pennzoil and we will obtain our water from the Caprock Water Company. We believe by our best estimates that we will need about seven and two thirds million barrels of water for this project through its entire life. We plan on building a water injection plant that will be rated at 3,000 PSI which we will inject approximately 400 barrels of water per day into each injection well at that pressure, 3,000 PSI during the fill up period which will be approximately five or six months, and then we believe that the injection rate will fall to 300 to 350 barrels of water per day at 3,000 PSI, and we hope to continue that injection rate through the life of the flood.

Q And what will be the source of your water for this project?

A The source of the water is from the Ogallala formation, this is a very shallow water zone. The Caprock produces this water.

Q Has an analysis been made of this water that you plan

It's spot location would be the southwest of the northeast of Section 8, South 33; this well is presently making 150 barrels of oil per day which is up from, say, 17 barrels of oil per day before waterflood was commenced. We need to get this area on injection in order to protect our position in this formation.

Q If the proposed waterflood project is approved by this Commission, what will its effect be upon your other offset operators, particularly those to the south and east?

A When we go on injection here, if it is approved by the Commission, it will urge the operators to the south to put their leases on injection. They are -- excuse me.

Q Go ahead.

A They are presently negotiating to put their water area on injection. We attended some of the earlier meetings and then decided that we had better move ahead of them and put our area on because it was going to take them a little longer than we thought we could stand.

Q So the offsetting areas you would consider right for a waterflood project and plans for that are under consideration?

A That's correct. Their wells are -- their wells are producing about the same as ours, they are at or below the economic limit.

Q Were Exhibits One through Nine either prepared by you or under your direction?

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A That's right, they were.

MR. MORRIS: At this time we offer Applicant's Exhibits One through Nine with all their various parts, into evidence in Case 3103 and we also offer Exhibit One in Case 3102, into evidence.

MR. NUTTER: Exhibit One in Case 3102 and Exhibits One through Nine in Case 3103 are admitted into evidence.

MR. MORRIS: I would like to state for the record that the Application in this Case together with all Exhibits that were furnished to the Commission with the Application have been furnished to the office of the State Engineer. We have received a copy of a letter from that office, the original of which I hope is in the Commission's files on this case.

MR. NUTTER: Is that the letter dated September 4, from Mr. Frank Irby?

MR. MORRIS: Yes, that's correct. I ask that be made a part of the record in this Case, also.

MR. NUTTER: That letter will be a part of the record.

MR. MORRIS: That is all I have at this time.

MR. NUTTER: Mr. Arrendiell, your formula, seventy percent ultimate and thirty percent current; now, you gave us the figures on Exhibit Number Three in Case 3103 of the primary production up to April 1st, of '64, and you also gave us these production decline curves; could you give us what the

remaining reserves of each of the four tracts is as far as primary is concerned, come up to the total ultimate figures?

A Let me see. It might take me just a minute, but I am sure I can give it to you.

On Exhibit "C" which is a part of what we have offered as Exhibit One --

MR. NUTTER: In the Unit Agreement?

A Yes, in the first case, the last page.

It gives the reserves, number of wells, the gross reserves, the ultimate primary in the current production last six months.

MR. NUTTER: So this ultimate primary would be the production decline curve plus the explanation of the curves?

A Yes, sir.

MR. NUTTER: So the remaining oil I could get by subtracting the figures given on Exhibit Three from the ultimate primary here?

A That's correct.

MR. NUTTER: In Exhibit "C" of the Unit Agreement?

A That's correct.

MR. NUTTER: And also your current rate of production is included here in the Exhibit "C" of the Unit Agreement?

A That's correct. Now, let me point out the current production listed on Exhibit "C" of the Unit Agreement is the

last six months of 1963.

MR. NUTTER: Is that what is going to be used in figuring the participation according to this page right here; this is the participation of the tracts?

A That's right.

MR. NUTTER: Good.

I believe that's all I have. Does anyone have any questions of Mr. Arrendiell?

You may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Morris?

MR. MORRIS: No, sir.

MR. NUTTER: Does anyone have anything further they wish to offer in Case 3102 or 3103?

We will take the cases under advisement.

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STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss

I, CHARLES WALKER, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Witness my Hand and Seal this 9th day of October, 1964.

Charles Floyd Walker
NOTARY PUBLIC

My Commission Expires:

March 25, 1968.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3102, 3103 heard by me on 9/9, 1964.
[Signature]
Examiner
New Mexico Oil Conservation Commission

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. 3103
Order No. R-2769

APPLICATION OF SUNSET INTERNATIONAL
PETROLEUM CORPORATION FOR A WATERFLOOD
PROJECT, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on September 9, 1964, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 16th day of September, 1964, 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, Sunset International Petroleum Corporation, seeks permission to institute a waterflood project in the Maljamar Pool in the Mal-Gra Unit Area by the injection of water into the Grayburg formation through eight injection wells in Sections 20 and 21, Township 17 South, Range 33 East, NMPM, Lea 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 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.

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CASE No. 3103
Order No. R-2769

IT IS THEREFORE ORDERED:

(1) That the applicant, Sunset International Petroleum Corporation, is hereby authorized to institute a waterflood project in the Maljamar Pool in the Mal-Gra Unit Area by the injection of water into the Grayburg formation through the following-described wells in Township 17 South, Range 33 East, NMPM, Lea County, New Mexico:

	<u>UNIT</u>	<u>SECTION</u>
Sunset International State B Well No. 3	P	20
Sunset International State B Well No. 4	N	20
Sunset International State B Well No. 7	L	20
Carper Phillips State CPS Well No. 1	J	20
Sunset International State D Well No. 1	L	21
Sunset International State D Well No. 4	D	21
Sunset International State D Well No. 5	N	21
Phillips Petroleum Leamex Well No. 12	F	21


(2) That the subject waterflood project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1119 of the Commission Rules and Regulations.

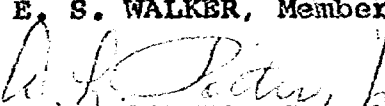
(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

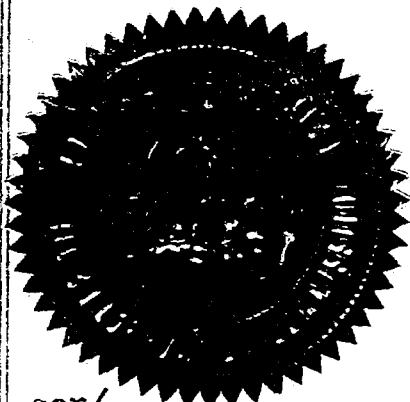
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


JACK M. CAMPBELL, Chairman


E. S. WALKER, Member


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



esr/

UNIT AGREEMENT
MAL-GRA UNIT
MALJAMAR FIELD
LEA COUNTY, NEW MEXICO

UNIT AGREEMENT

MAL-GRA UNIT

MALJAMAR FIELD

LEA COUNTY, NEW MEXICO

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EXHIBITS

EXHIBIT "A": MAP OF UNIT AREA

EXHIBIT "B": LEASEHOLD INFORMATION WITH WORKING
INTEREST PARTICIPATIONS

EXHIBIT "C": ULTIMATE PRODUCTION

UNIT AGREEMENT
FOR THE DEVELOPMENT AND OPERATION OF THE

MAL GRA UNIT

MALJAMAR FIELD

LEA COUNTY, NEW MEXICO

NO. _____

THIS AGREEMENT, ENTERED INTO AS OF THE 1ST DAY OF AUGUST, 1964, BY AND BETWEEN THE PARTIES SUBSCRIBING, RATIFYING, OR CONSENTING HERETO, AND HEREIN REFERRED TO AS "PARTIES HERETO",

W I T N E S S E T H:

WHEREAS, THE PARTIES HERETO ARE THE OWNERS OF WORKING, ROYALTY, OR OTHER OIL OR GAS INTERESTS IN THE UNIT AREA SUBJECT TO THIS AGREEMENT; AND

WHEREAS, THE COMMISSIONER OF PUBLIC LANDS OF THE STATE OF NEW MEXICO IS AUTHORIZED BY AN ACT OF THE LEGISLATURE (SECTION 3, CHAPTER 88, LAWS 1943 AS AMENDED BY SECTION 1 OF CHAPTER 162, LAWS OF 1951) 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 (SECTION 1, CHAPTER 162, LAWS OF 1951) 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 TERMS OF THE UNITIZED DEVELOPMENT AND OPERATION OF STATE LANDS; AND

WHEREAS, THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO IS AUTHORIZED BY LAW (CHAPTER 72, LAWS OF 1935, AS AMENDED BY CHAPTER 193, LAWS OF 1937, CHAPTER 166, LAWS OF 1951, AND CHAPTER 168, LAWS OF 1949) TO APPROVE THIS AGREEMENT, AND THE CONSERVATION PROVISIONS HEREOF; AND

WHEREAS, THE PARTIES HERETO HOLD SUFFICIENT INTERESTS IN THE UNIT AREA SUBJECT TO THIS AGREEMENT TO GIVE REASONABLE EFFECTIVE CONTROL OF OPERATION THEREIN; AND

WHEREAS, IT IS THE PURPOSE OF THE PARTIES HERETO, TO ENABLE INSTITUTION AND CONSUMMATION OF SECONDARY RECOVERY OPERATIONS, TO CONSERVE NATURAL RESOURCES, PREVENT WASTE AND SECURE THE OTHER BENEFITS OBTAINABLE THROUGH DEVELOPMENT AND OPERATION OF THE UNIT AREA SUBJECT TO THIS AGREEMENT UNDER THE TERMS, CONDITIONS, AND LIMITATIONS HEREIN SET FORTH.

NOW, THEREFORE, IN CONSIDERATION OF THE PREMISES AND PROMISES HEREIN CONTAINED, THE PARTIES HERETO COMMIT TO THIS AGREEMENT THEIR RESPECTIVE INTERESTS IN THE BELOW DEFINED UNIT AREA SUBJECT TO THIS AGREEMENT, AND AGREE SEVERALLY AMONG THEMSELVES AS FOLLOWS:

1. DEFINITIONS: FOR THE PURPOSE OF THIS AGREEMENT, THE FOLLOWING TERMS AND EXPRESSIONS AS USED HEREIN SHALL MEAN:
 - (A) "COMMISSION" IS DEFINED AS THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO.
 - (B) "COMMISSIONER" IS DEFINED AS THE COMMISSIONER OF PUBLIC LANDS OF THE STATE OF NEW MEXICO.
 - (C) "PAYING QUANTITIES" IS DEFINED AS PRODUCTION OF UNITIZED SUBSTANCES IN QUANTITIES SUFFICIENT TO PAY FOR THE COST OF PRODUCING SAME FROM WELLS COMPLETED IN THE UNITIZED FORMATION.

- (d) "PRODUCTIVE ACREAGE" IS DEFINED AS AND SHALL MEAN THE ACREAGE REASONABLE PROVEN TO BE PRODUCTIVE OF UNITIZED SUBSTANCES FROM THE UNITIZED FORMATION.
- (e) "ULTIMATE RECOVERY" SHALL MEAN AND REFER TO THE NUMBER OF BARRELS OF OIL AVAILABLE FOR PRODUCTION, AS DETERMINED AND DESCRIBED IN TABLE C ATTACHED HERETO, FROM THE TRACTS HEREINAFTER DESCRIBED IN EXHIBIT A & B BY PRESENTLY KNOWN AND COMMONLY ACCEPTED PRIMARY RECOVERY PRODUCTION METHODS.
- (f) "CURRENT PRODUCTION" SHALL MEAN AND REFER TO THE TOTAL PRODUCTION OF OIL DURING AND INCLUDING THE PERIOD OF JULY TO DECEMBER OF THE YEAR 1963.
- (g) "ROYALTY INTEREST" MEANS A RIGHT TO OR INTEREST IN ANY PORTION OF THE UNITIZED SUBSTANCES OR PROCEEDS THEREOF OTHER THAN WORKING INTEREST.
- (h) "ROYALTY OWNER" MEANS A PARTY HERETO WHO OWNS A ROYALTY INTEREST.
- (i) "SECONDARY PRODUCTION" IS DEFINED AS AND SHALL BE ALL OIL PRODUCED FROM THE UNITIZED FORMATION AFTER THE REMAINING PRIMARY PRODUCTION HAS BEEN PRODUCED.
- (j) "UNITIZED FORMATION" IS DEFINED AS AND SHALL MEAN THAT HERETOFORE ESTABLISHED UNDERGROUND RESERVOIR UNDERLYING UNIT AREA AND COMMONLY KNOWN AS THE GRAYBURG FORMATION OF THE PERMIAN AGE BEING FURTHER IDENTIFIED AS THE PRODUCING FORMATION FOUND IN SUNSET INTERNATIONAL PETROLEUM CORPORATIONS STATE B-1 WELL LOCATED IN THE NE/4 SE/4 SECTION 20 - T17S-R33E, LEA COUNTY, NEW MEXICO BETWEEN THE DEPTHS OF 4,230' AND 4,380'.
- (k) "UNITIZED SUBSTANCES" IS DEFINED AS AND SHALL MEAN ALL OF THE OIL AND GAS CONTAINED IN OR PRODUCED FROM THE UNITIZED FORMATION.
- (l) "UNITIZED LAND" OR "LAND SUBJECT TO THIS AGREEMENT" IS DEFINED AS AND SHALL MEAN THOSE LANDS WITHIN THE UNIT AREA WHICH ARE COMMITTED TO THIS AGREEMENT.
- (m) "UNIT MANAGER" IS DEFINED AS THE PERSON OR CORPORATION APPOINTED BY THE WORKING INTEREST OWNERS TO PERFORM THE DUTIES OF THE UNIT OPERATOR UNTIL THE SELECTION AND QUALIFICATION OF A SUCCESSOR UNIT OPERATOR AS PROVIDED FOR IN SECTION 8 HEREOF.
- (n) "UNIT OPERATING AGREEMENT" IS DEFINED AS AND SHALL MEAN THE AGREEMENT ENTERED INTO (SEPARATELY OR COLLECTIVELY) BY AND BETWEEN THE UNIT OPERATOR AND THE WORKING INTEREST OWNERS AS PROVIDED IN SECTION 9, ENTITLED, "UNIT OPERATING AGREEMENT, MAL-GRA UNIT, LEA COUNTY, NEW MEXICO", OR ANY AMENDMENT OR SUPPLEMENT THERETO.
- (o) "USABLE WELL" IS DEFINED AS A WELL WHICH HAS BEEN DRILLED IN THE UNIT AREA TO THE DEPTH OF THE UNITIZED FORMATION AND HAS CASING IN THE HOLE IN CONDITION FOR USE AS EITHER A PRODUCING WELL OR AN INJECTION WELL, AND ON WHICH WELL THERE HAS BEEN FILED WITH THE STATE OF NEW MEXICO, ON OR BEFORE THE EFFECTIVE DATE OF THIS AGREEMENT, A WELL RECORD AND COMPLETION REPORT (FORM C-105) OR REQUEST FOR OIL ALLOWABLE (FORM C-104) AND WHICH WELL HAS PRODUCED SOME OIL FROM THE UNITIZED FORMATION AND HAS HAD AN ALLOWABLE GRANTED FOR IT BY THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO.
- (p) "WORKING INTEREST" MEANS AN INTEREST IN UNITIZED SUBSTANCES BY VIRTUE OF A LEASE, OPERATING AGREEMENT, FEE TITLE, 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 OR RATIFIES THIS AGREEMENT SHALL THEREAFTER BE TREATED AS A WORKING INTEREST FOR ALL PURPOSES OF THIS AGREEMENT.

- (q) "WORKING INTEREST OWNER" MEANS A PARTY HERETO WHO OWNS A WORKING INTEREST. THE OWNER OF OIL AND GAS RIGHTS THAT ARE FREE OF LEASE OR OTHER INSTRUMENT CONVEYING THE WORKING INTEREST TO ANOTHER SHALL BE REGARDED AS A WORKING INTEREST OWNER TO THE EXTENT OF SEVEN-EIGHTS (7/8) OF HIS INTEREST IN UNITIZED SUBSTANCES, AND AS A ROYALTY OWNER WITH RESPECT TO HIS REMAINING ONE-EIGHTH (1/8) INTEREST THEREIN.

2. UNIT AREA AND PARTICIPATION: THE FOLLOWING DESCRIBED LAND IS HEREBY DESIGNATED AND RECOGNIZED AS CONSTITUTING THE UNIT AREA AS TO WHICH THIS AGREEMENT BECOMES EFFECTIVE, TO WIT:

NEW MEXICO PRINCIPAL MERIDAN, NEW MEXICO

T.17S., R.33E.

SECTION 20: S/2
21: W/2 W/2, SE/4 SW/4 AND SE/4 NW/4
29: NE/4 NE/4

SITUATED IN LEA COUNTY, NEW MEXICO, CONTAINING 600 ACRES, MORE OR LESS, AND SUCH ADDITIONAL LANDS TO WHICH THIS AGREEMENT MAY BE EXTENDED, ALL AS HEREIN PROVIDED

EXHIBIT "A" ATTACHED HERETO IS A MAP SHOWING THE UNIT AREA AND THE BOUNDARIES AND IDENTITY OF TRACTS AND LEASES IN SAID UNIT AREA TO THE EXTENT KNOWN TO THE UNIT OPERATOR. EXHIBIT "B" ATTACHED HERETO IS A SCHEDULE SHOWING TO THE EXTENT KNOWN TO THE UNIT OPERATOR THE ACREAGE COMPRISING EACH TRACT, PERCENTAGE OWNERSHIP OF EACH WORKING INTEREST OWNER IN EACH TRACT, AND THE PERCENTAGES OF PARTICIPATION. HOWEVER, NOTHING HEREIN OR IN SAID SCHEDULE OR MAP SHALL BE CONSTRUED AS A REPRESENTATION BY ANY PARTY HERETO AS TO THE OWNERSHIP OF ANY INTEREST OTHER THAN SUCH INTEREST OR INTERESTS AS ARE SHOWN IN SAID MAP OR SCHEDULE AS OWNED BY SUCH PARTY. EXHIBITS "A" AND "B" SHALL BE REVISED BY THE UNIT OPERATOR WHENEVER CHANGES IN THE UNIT AREA RENDER SUCH REVISION NECESSARY, OR WHEN REQUESTED BY THE COMMISSIONER. TWO COPIES OF SUCH REVISION SHALL BE FILED WITH THE COMMISSIONER.

THE ABOVE DESCRIBED UNIT AREA MAY, WHEN PRACTICABLE, BE EXPANDED TO INCLUDE THEREIN ANY ADDITIONAL TRACT OR TRACTS REGARDED AS REASONABLY NECESSARY OR ADVISABLE FOR THE PURPOSES OF THIS AGREEMENT. SUCH EXPANSION SHALL BE EFFECTED IN THE FOLLOWING MANNER:

- (A) THE OWNER OR OWNERS OF THE WORKING INTEREST IN AND TO A TRACT OR TRACTS DESIRING TO BRING SUCH TRACT OR TRACTS INTO THE UNIT AREA SHALL FILE AN APPLICATION THEREFOR WITH UNIT OPERATOR REQUESTING SUCH ADMISSION.
- (B) 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 WORKING INTEREST OWNERS HAVING NINETY PER CENT (90%) OF THE WORKING INTEREST IN THE UNIT AREA AGREE TO SUCH TRACT OR TRACTS BEING BROUGHT INTO THE UNIT AREA, THEN UNIT OPERATOR SHALL, AFTER PRELIMINARY CONCURRENCE BY THE COMMISSIONER,
- (1) PREPARE A NOTICE OF PROPOSED EXPANSION DESCRIBING THE CONTEMPLATED CHANGES IN THE BOUNDARIES OF THE UNIT AREA, 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 DAY OF NOTICE; AND

- (2) DELIVER COPIES OF SAID NOTICE TO THE COMMISSIONER, 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 AFFECTED, ADVISING SUCH PARTIES THAT THIRTY (30) DAYS WILL BE ALLOWED FOR SUBMISSION TO THE UNIT OPERATOR OF ANY OBJECTIONS TO SUCH PROPOSED EXPANSIONS; AND
- (3) FILE, UPON THE EXPIRATION OF SAID THIRTY (30) DAY PERIOD AS SET OUT IN ITEM 2 IMMEDIATELY ABOVE, WITH THE COMMISSIONER THE FOLLOWING: (A) EVIDENCE OF MAILING COPIES OF SAID NOTICE OF EXPANSION; (B) AN APPLICATION FOR SUCH EXPANSION; (C) AN INSTRUMENT CONTAINING THE APPROPRIATE JOINDERS IN COMPLIANCE WITH THE PARTICIPATION REQUIREMENT OF SECTION 31, "NONJOINDER AND SUBSEQUENT JOINDER", INFRA; AND (D) COPY OF ANY OBJECTIONS RECEIVED.

THE EXPANSION SHALL, AFTER DUE CONSIDERATION OF ALL PERTINENT INFORMATION AND UPON APPROVAL BY THE COMMISSIONER, BECOME EFFECTIVE AS OF THE DATE PRESCRIBED IN THE NOTICE THEREOF.

3. UNITIZED SUBSTANCES AND RIGHTS: ALL OIL AND GAS IN OR THAT MAY BE PRODUCED FROM THE UNITIZED FORMATION UNDERLYING THE LANDS SUBJECT TO THIS AGREEMENT, TOGETHER WITH THE RIGHT TO USE THE SURFACE OF SAID LANDS FOR THE DEVELOPMENT AND OPERATION OF THE UNITIZED FORMATION ARE UNITIZED UNDER THE TERMS OF THIS AGREEMENT. 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 PERMIAN GRAYBURG FORMATION, AS ABOVE DESCRIBED.

4. UNIT OPERATOR: SUNSET INTERNATIONAL PETROLEUM CORPORATION, BEVERLY HILLS, CALIFORNIA, IS HEREBY DESIGNATED AS UNIT OPERATOR AND BY SIGNING THIS INSTRUMENT AS UNIT OPERATOR AGREES AND CONSENTS TO ACCEPT THE DUTIES AND OBLIGATIONS OF UNIT OPERATOR FOR THE OPERATION AND DEVELOPMENT OF THE UNITIZED FORMATION FOR THE 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 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.

5. 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 NOTICE OF INTENTION TO RESIGN HAS BEEN SERVED BY UNIT OPERATOR ON ALL WORKING INTEREST OWNERS AND THE COMMISSIONER, AND UNTIL ALL WELLS THEN SUBJECT HERETO ARE PLACED IN A SATISFACTORY CONDITION FOR SUSPENSION OR ABANDONMENT, UNLESS A NEW UNIT OPERATOR SHALL HAVE TAKEN OVER AND ASSUMED THE DUTIES AND OBLIGATIONS OF UNIT OPERATOR PRIOR TO THE EXPIRATION OF SAID PERIOD.

THE RESIGNATION 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.

THE UNIT OPERATOR MAY BE SUBJECT TO REMOVAL BY EIGHTY-FIVE PER CENT (85%) OF THE COMMITTED WORKING INTERESTS ON THE BASIS OF UNIT PARTICIPATION, IN EFFECT AT THE TIME, EXCLUSIVE OF THE UNIT OPERATOR. SUCH REMOVAL SHALL BE EFFECTIVE UPON NOTICE THEREOF TO THE COMMISSIONER.

IN ALL SUCH INSTANCES OF RESIGNATION OR REMOVAL, UNTIL A SUCCESSOR UNIT OPERATOR IS SELECTED AND APPROVED AS HEREINAFTER PROVIDED, THE WORKING INTEREST OWNERS SHALL BE JOINTLY RESPONSIBLE FOR THE PERFORMANCE OF DUTIES OF THE 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 OR ALL EQUIPMENT, MATERIALS, APPURTENANCES, AND ANY OTHER ASSETS, USED IN CONDUCTING THE UNIT OPERATIONS AND OWNED BY THE WORKING INTEREST OWNERS TO THE NEW DULY QUALIFIED SUCCESSOR UNIT OPERATOR OR THE UNIT MANAGER 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.

6. SUCCESSOR UNIT OPERATOR: WHENEVER THE UNIT OPERATOR SHALL TENDER HIS OR ITS RESIGNATION AS UNIT OPERATOR, OR SHALL BE REMOVED AS HEREINABOVE PROVIDED, THE WORKING INTEREST OWNERS SHALL SELECT A SUCCESSOR UNIT OPERATOR BY A MAJORITY OF THE WORKING INTERESTS ON THE BASIS OF UNIT PARTICIPATION, PROVIDED NO UNIT OPERATOR WHO HAS BEEN REMOVED MAY VOTE FOR SELF SUCCESSION. 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) THE SELECTION SHALL HAVE BEEN APPROVED BY THE COMMISSIONER. IF NO SUCCESSOR UNIT OPERATOR OR UNIT MANAGER IS SELECTED AND QUALIFIED AS HEREIN PROVIDED, THE COMMISSIONER, AT HIS ELECTION, MAY DECLARE THIS UNIT AGREEMENT TERMINATED.

7. 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 AGREEMENT OR AGREEMENTS ENTERED INTO (SEPARATELY OR COLLECTIVELY) BY AND BETWEEN THE WORKING INTEREST OWNERS. 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 THE 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 SECTION SHALL BE FILED WITH THE COMMISSIONER PRIOR TO APPROVAL OF THIS AGREEMENT.

8. 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.

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.

9. 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 IN PAYING QUANTITIES AND THAT THE OBJECT AND PURPOSE OF THIS AGREEMENT IS TO FORMULATE AND PUT INTO EFFECT A SECONDARY RECOVERY PROJECT IN ORDER TO EFFECT THE GREATEST 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 AND THE COMMISSIONER, INJECT INTO THE UNITIZED FORMATION, THROUGH ANY WELL OR WELLS COMPLETED THEREIN, BRINE, WATER, AIR, GAS, OIL, AND ANY ONE OR MORE OTHER 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. SUBJECT TO THE LIKE APPROVAL, THE PLAN OF OPERATIONS MAY BE REVISED AS CONDITIONS MAY WARRANT. THE INITIAL PLAN OF OPERATION SHALL BE FILED WITH 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 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.

10. TRACT PARTICIPATION: TRACT PARTICIPATION OF EACH TRACT IS SHOWN ON EXHIBIT "B" BASED UPON A PARTICIPATION FACTOR DEFINED HEREINAFTER BY FORMULA ON 70% ULTIMATE RECOVERY OF 535,000 BBL. (DEFINED IN SECTION 1) AND 30% CURRENT RATE OF PRODUCTION OF 10,370 BBL. (DEFINED IN SECTION 1).

THE TRACT PARTICIPATION FACTOR SHOWN IN EXHIBIT "B" IS DETERMINED IN ACCORDANCE WITH THE FOLLOWING FORMULA:

$$\text{TRACT PARTICIPATION} = \frac{\text{TRACT ULTIMATE RECOVERY}}{\text{TOTAL ULTIMATE RECOVERY}} \times (70\%) + \frac{\text{TRACT CURRENT PRODUCTION}}{\text{TOTAL CURRENT PRODUCTION}} \times (30\%)$$

IF THE UNIT AREA IS ENLARGED OR REDUCED, THE REVISED TRACT PARTICIPATIONS OF THE TRACTS REMAINING IN THE UNIT AREA AND WHICH WERE WITHIN THE UNIT AREA PRIOR TO THE ENLARGEMENT OR REDUCTION SHALL REMAIN IN THE SAME RATION ONE TO ANOTHER.

11. TRACTS QUALIFIED FOR UNIT PARTICIPATION: ON AND AFTER THE EFFECTIVE DATE HEREOF AND UNTIL THE ENLARGEMENT OR REDUCTION THEREOF, THE UNIT AREA SHALL BE COMPOSED OF THE TRACTS LISTED IN EXHIBIT "B" THAT CORNER OR HAVE A COMMON BOUNDARY (TRACTS SEPARATED ONLY BY A PUBLIC HIGHWAY OR RAILROAD RIGHT OF WAY SHALL BE CONSIDERED TO HAVE A COMMON BOUNDARY), AND THAT OTHERWISE QUALIFY AS FOLLOWS:

- (A) EACH TRACT AS TO WHICH WORKING INTEREST OWNERS OWNING ONE HUNDRED PER CENT (100%) OF THE WORKING INTEREST IN SAID TRACT HAVE SIGNED OR RATIFIED THIS AGREEMENT AND THE UNIT OPERATING AGREEMENT AND AS TO WHICH ROYALTY OWNERS OWNING ONE HUNDRED PERCENT (100%) OF THE ROYALTY INTEREST IN SAID TRACT HAVE SIGNED OR RATIFIED THIS AGREEMENT; AND
- (B) EACH TRACT AS TO WHICH WORKING INTEREST OWNERS OWNING NOT LESS THAN NINETY-FIVE PER CENT (95%) OF THE WORKING INTEREST IN SAID TRACT HAVE SIGNED OR RATIFIED THIS AGREEMENT AND THE UNIT OPERATING AGREEMENT AND AS TO WHICH ROYALTY OWNERS OWNING NOT LESS THAN SEVENTY-FIVE PER CENT (75%) OF THE ROYALTY INTEREST IN SAID TRACT HAVE SIGNED OR RATIFIED THIS AGREEMENT, AND IN WHICH THE WORKING INTEREST OWNERS IN SAID TRACT WHO HAVE SIGNED OR RATIFIED THIS AGREEMENT AND UNIT OPERATING AGREEMENT HAVE AGREED TO INDEMNIFY AND HOLD HARMLESS ALL OTHER PARTIES HERETO, IN A MANNER SATISFACTORY TO THE WORKING INTEREST OWNERS QUALIFIED UNDER (A) AGAINST ANY OR ALL CLAIMS AND DEMANDS THAT MAY BE MADE BY THE NONJOINING OWNERS OF WORKING OR ROYALTY INTERESTS ON ACCOUNT OF THE INCLUSION OF SUCH TRACT IN THE UNIT AREA AND THE OPERATION OF THE UNIT AREA ON THE BASIS HEREIN PROVIDED, AND AS TO WHICH EIGHTY-FIVE PER CENT (85%) OF THE WORKING INTEREST OWNERS QUALIFIED UNDER (A), EXCLUSIVE OF THE WORKING INTEREST OWNER SUBMITTING SUCH TRACT, HAVE APPROVED THE INCLUSION OF SUCH TRACT IN THE UNIT AREA.

IF, ON THE EFFECTIVE DATE OF THIS AGREEMENT, THERE IS ANY TRACT OR TRACTS WHICH HAVE NOT BEEN EFFECTIVELY COMMITTED TO OR 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, 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 UNIT AREA HEREUNDER. SAID SCHEDULE SHALL SET FORTH OPPOSITE EACH SUCH COMMITTED TRACT, THE LEASE NUMBER, ASSIGNMENT NUMBER, THE OWNER OF RECORD AND PERCENTAGE PARTICIPATION OF SUCH TRACT WHICH SHALL BE COMPUTED ACCORDING TO THE PARTICIPATION FORMULA SET OUT ABOVE. THIS SCHEDULE SHALL BECOME REVISED EXHIBIT "B" AND APPROVAL THEREOF BY THE COMMISSIONER, SHALL BECOME A PART OF THIS AGREEMENT AND SHALL GOVERN THE ALLOCATION OF PRODUCTION OF UNITIZED SUBSTANCES UNTIL A NEW SCHEDULE IS FILED AND APPROVED BY THE COMMISSIONER.

12. 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 WITHIN THE UNIT AREA FOR DRILLING, OPERATING, CAMP, AND OTHER PRODUCTION OR DEVELOPMENT PURPOSES AND FOR PRESSURE MAINTENANCE OR UN-AVOIDABLE LOSS) SHALL BE APPORTIONED AMONG AND ALLOCATED TO THE SEVERAL TRACTS WITHIN THE UNIT AREA IN ACCORDANCE WITH THE RESPECTIVE TRACT PARTICIPATION EFFECTIVE HEREUNDER DURING THE RESPECTIVE PERIODS SUCH UNITIZED SUBSTANCES WERE PRODUCED, AS SET FORTH IN EXHIBIT "B". 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 A 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.

NOTHING HEREIN CONTAINED SHALL BE CONSTRUED AS RETROACTIVELY AFFECTING THE OWNERSHIP OF, OR AS REQUIRING ANY RETROACTIVE ADJUSTMENT FOR, PRODUCTION OF OIL OR GAS OBTAINED PRIOR TO THE EFFECTIVE DATE OF THIS AGREEMENT, OR PRIOR TO THE EFFECTIVE DATE OF THE JOINDER OF ANY TRACT, OR THE COMMITMENT OF ANY INTEREST HERETO.

NO TRACT COMMITTED TO THIS AGREEMENT AND QUALIFIED FOR PARTICIPATION AS ABOVE PROVIDED SHALL BE SUBSEQUENTLY EXCLUDED FROM PARTICIPATION HEREUNDER ON ACCOUNT OF THE DEPLETION OF UNITIZED SUBSTANCES.

IF ANY WORKING INTEREST OR ROYALTY INTEREST IN ANY TRACT IS OR BECOMES DIVIDED AND OWNED BY SEVERALTY AS TO DIFFERENT PARTS OF THE TRACT, THE PERCENTAGE PARTICIPATION ATTRIBUTABLE TO SUCH INTEREST, IN THE ABSENCE OF RECORDABLE INSTRUMENT EXECUTED BY THE OWNERS OF THE DIVIDED INTEREST AND FURNISHED TO THE UNIT OPERATOR PROVIDING FOR A DIFFERENT DIVISION, SHALL BE DIVIDED AMONG THE SEPARATE OWNERS IN PROPORTION TO THE SURFACE ACRES OF THEIR RESPECTIVE PARTS OF THE TRACTS.

THE UNITIZED SUBSTANCES ALLOCATED TO EACH TRACT SHALL BE DELIVERED IN KIND TO THE RESPECTIVE 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. SUCH PARTY SHALL HAVE THE RIGHT TO CONSTRUCT, MAINTAIN, AND OPERATE WITHIN THE UNIT AREA ALL NECESSARY FACILITIES FOR THAT PURPOSE, PROVIDED THE SAME ARE SO CONSTRUCTED, MAINTAINED, AND OPERATED NOT TO INTERFERE WITH OPERATIONS CARRIED ON PURSUANT HERETO. SUBJECT TO SECTION 14 HEREOF, ROYALTY SETTLEMENT, ANY EXTRA EXPENDITURES INCURRED BY UNIT OPERATOR BY REASON OF DELIVERY IN KIND OF ANY PORTION OF THE UNITIZED SUBSTANCES SHALL BE BORNE BY THE PARTY RECEIVING THE SAME IN KIND. IN THE EVENT ANY PARTY HERETO SHALL FAIL TO TAKE OR OTHERWISE ADEQUATELY DISPOSE OF ITS PROPORTIONATE SHARE OF THE UNITIZED SUBSTANCES FROM THE UNIT AREA CURRENTLY AS AND WHEN PRODUCED, THEN SO LONG AND ONLY SO LONG, AS SUCH CONDI-

TIONS CONTINUE, UNIT OPERATOR, FOR THE ACCOUNT AND AT THE EXPENSE OF SUCH PARTY IN ORDER TO AVOID CURTAILING THE OPERATION OF THE UNIT AREA, MAY SELL OR ITSELF PURCHASE SUCH PRODUCTION 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 THE SAME. THE PROCEEDS, IF ANY, OF THE UNITIZED SUBSTANCES SO DISPOSED OF BY UNIT OPERATOR, SHALL BE PAID TO THE PARTY ENTITLED THERETO; NOTWITHSTANDING THE FOREGOING UNIT OPERATOR SHALL NOT MAKE A SALE INTO INTERSTATE COMMERCE OF ANY OTHER PARTY'S SHARE OF GAS PRODUCTION WITHOUT FIRST GIVING SUCH OTHER PARTY SIXTY (60) DAYS' NOTICE OF SUCH INTENDED SALE.

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 ROYALTIES, OVERRIDING ROYALTIES, OIL PAYMENTS, NET PROFIT CONTRACTS, AND ALL PAYMENTS OUT OF OR BURDENS ON THE LEASE OR LEASES AND TRACTS CONTRIBUTED BY IT AND RECEIVED INTO THE UNIT AREA AND EACH SUCH PARTY SHALL HOLD EACH OTHER PARTY HERETO HARMLESS AGAINST ALL CLAIMS, DEMANDS, AND CAUSES OF ACTION FOR SUCH ROYALTIES, OVERRIDING ROYALTIES, OIL PAYMENTS, NET PROFIT CONTRACTS, AND OTHER PAYMENTS OUT OF OR BURDENS ON THE LEASE OR LEASES AND TRACTS CONTRIBUTED BY IT TO THE UNIT AREA.

IF, AFTER THE EFFECTIVE DATE OF THIS AGREEMENT, THERE IS ANY TRACT OR TRACTS THAT ARE SUBSEQUENTLY COMMITTED HERETO, AS ABOVE PROVIDED IN SECTION 3, UNIT AREA AND PARTICIPATION, OR ANY TRACT OR TRACTS WITHIN THE UNIT AREA NOT EFFECTIVELY COMMITTED HERETO AS OF THE EFFECTIVE DATE HEREOF BUT WHICH ARE SUBSEQUENTLY COMMITTED HERETO UNDER THE PROVISIONS OF SECTION 29, NONJOINDER AND SUBSEQUENT JOINDER, OR IF ANY TRACT IS EXCLUDED FROM THE UNIT AREA AS PROVIDED FOR IN SECTION 28, LOSS OF TITLE, THE SCHEDULE OF PARTICIPATION AS SHOWN IN EXHIBIT "B" SHALL BE REVISED BY THE WORKING INTEREST OWNERS TO SHOW THE NEW PERCENTAGE PARTICIPATION OF ALL OF THE THEN EFFECTIVELY COMMITTED TRACTS AND THE REVISED EXHIBIT "B" UPON APPROVAL BY THE COMMISSIONER UNDER SECTION 28, LOSS OF TITLE, AND SECTION 29, NONJOINDER AND SUBSEQUENT JOINDER, AND UPON APPLICATION BY THE COMMISSIONER UNDER SECTION 2, UNIT AREA AND PARTICIPATION, SHALL GOVERN THE ALLOCATION OF UNITIZED SUBSTANCES FROM AND AFTER THE EFFECTIVE DATE THEREOF UNTIL A NEW SCHEDULE IS SO APPROVED.

13. ROYALTY SETTLEMENT: THE STATE OF NEW MEXICO AND ALL ROYALTY OWNERS WHO, UNDER EXISTING CONTRACT, ARE ENTITLED TO TAKE IN KIND A SHARE OF THE SUBSTANCES NOW UNITIZED HEREUNDER PRODUCED FROM ANY TRACT, SHALL HEREAFTER BE ENTITLED TO THE 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, DIVISION ORDERS, 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 ROYALTIES DUE UNDER THEIR LEASES, EXCEPT THAT SUCH ROYALTIES SHALL BE COMPUTED IN ACCORDANCE WITH THE TERMS OF THIS UNIT AGREEMENT.

IF GAS OBTAINED FROM LANDS OR FORMATIONS NOT SUBJECT TO THIS AGREEMENT IS INTRODUCED INTO THE UNITIZED LAND FOR USE IN PRESSURE MAINTENANCE, STIMULATION OF PRODUCTION, OR INCREASING ULTIMATE RECOVERY, WHICH SHALL BE IN CONFORMITY WITH A PLAN FIRST APPROVED BY THE COMMISSIONER, A LIKE AMOUNT OF GAS LESS APPROPRIATE DEDUCTIONS FOR LOSS FROM ANY CAUSE MAY BE WITHDRAWN FROM THE FORMATION INTO WHICH THE GAS WAS INTRODUCED, ROYALTY FREE AS TO DRY GAS, BUT NOT AS TO THE PRODUCTS EXTRACTED THEREFROM; PROVIDED THAT SUCH WITHDRAWAL SHALL BE PURSUANT TO SUCH CONDITIONS AND FORMULAS AS MAY BE PRESCRIBED OR APPROVED BY THE COMMISSIONER AS CONFORMING TO GOOD PETROLEUM ENGINEERING PRACTICE; AND, PROVIDED FURTHER THAT SUCH RIGHT OF WITHDRAWAL SHALL TERMINATE ON THE TERMINATION OF THIS AGREEMENT.

IF LIQUEFIED PETROLEUM GASES OBTAINED FROM LANDS OR FORMATIONS NOT SUBJECT TO THIS AGREEMENT BE INJECTED INTO THE UNITIZED LAND FOR THE PURPOSE

OF INCREASING ULTIMATE RECOVERY, WHICH SHALL BE IN CONFORMANCE WITH A PLAN FIRST APPROVED BY THE COMMISSIONER, PART OR ALL OF SUCH LIQUEFIED PETROLEUM GASES, MAY BE WITHDRAWN ROYALTY FREE PURSUANT TO SUCH CONDITIONS AND FORMULAS AS MAY BE PRESCRIBED OR APPROVED BY THE COMMISSIONER.

ALL ROYALTIES DUE THE STATE OF NEW MEXICO AND THE OTHER ROYALTY OWNERS HEREUNDER 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.

EACH ROYALTY OWNER (OTHER THAN THE STATE OF NEW MEXICO) THAT EXECUTES THIS AGREEMENT, REPRESENTS AND WARRANTS THAT IT IS THE OWNER OF A ROYALTY INTEREST 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 IN WHOLE OR IN PART, DURING THE TERM OF THIS AGREEMENT, THEN THE ROYALTY INTEREST OF THE PARTY REPRESENTING HIMSELF TO BE THE OWNER THEREOF SHALL BE REDUCED PROPORTIONATELY AND THE INTEREST OF ALL PARTIES SHALL BE ADJUSTED ACCORDINGLY.

14. OIL IN LEASE TANKS ON EFFECTIVE DATE: UNIT OPERATOR SHALL MAKE PROPER AND TIMELY GAUGE OF ALL LEASE AND OTHER TANKS WITHIN THE UNIT AREA IN ORDER TO ASCERTAIN THE AMOUNT OF MERCHANTABLE OIL ABOVE THE PIPE LINE CONNECTION, IN SUCH TANKS AS OF 7:00 O'CLOCK A. M. ON THE EFFECTIVE DATE HEREOF. ALL SUCH OIL WHICH HAS BEEN PRODUCED LEGALLY SHALL BE AND REMAIN THE PROPERTY OF THE WORKING INTEREST OWNERS ENTITLED THERETO THE SAME AS IF THE UNIT HAD NOT BEEN FORMED; AND SUCH WORKING INTEREST OWNERS SHALL PROMPTLY REMOVE SAID OIL FROM THE UNIT AREA. ANY SUCH OIL NOT SO REMOVED SHALL BE SOLD BY 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.

15. REPORTS: UNIT OPERATOR SHALL FURNISH THE COMMISSIONER, MONTHLY, INJECTION AND PRODUCTION REPORTS FOR EACH WELL IN THE UNIT AREA, AS WELL AS PERIODICAL REPORTS OF THE DEVELOPMENT AND OPERATION OF THE UNIT AREA.

16. RENTAL SETTLEMENT: RENTALS OR MINIMUM ROYALTIES DUE ON LEASES COMMITTED HERETO SHALL BE PAID BY WORKING INTEREST OWNERS RESPONSIBLE THEREFOR UNDER EXISTENT 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.

17. 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 STATE LAWS OR REGULATIONS.

18. DRAINAGE: THE UNIT OPERATOR SHALL TAKE APPROPRIATE AND ADEQUATE MEASURES TO PREVENT DRAINAGE OF UNITIZED SUBSTANCES FROM UNITIZED FORMATION BY WELLS ON LAND NOT SUBJECT TO THIS AGREEMENT.

19. LEASES AND CONTRACTS CONFORMED AND EXTENDED: THE TERMS, CONDITIONS, AND PROVISIONS OF ALL LEASES, SUBLEASES, UNIT AGREEMENTS AND OTHER CONTRACTS RELATING TO EXPLORATION, DRILLING, DEVELOPMENT, OR OPERATION FOR OIL OR GAS OF 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 COMMISSIONER SHALL, AND BY HIS APPROVAL HEREOF, OR BY THE APPROVAL HEREOF BY HIS DULY AUTHORIZED REPRESENTATIVE, DOES HEREBY ESTABLISH, ALTER, CHANGE, OR REVOKE THE DRILLING, PRODUCING, RENTAL, MINIMUM ROYALTY, OR ROYALTY REQUIREMENTS OF 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 SUBJECT TO THIS AGREEMENT, REGARDLESS OF WHETHER THERE IS ANY DEVELOPMENT OF ANY PARTICULAR PART OR TRACT OF THE UNIT AREA, 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 LAND WILL 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, OR HIS DULY AUTHORIZED REPRESENTATIVE, 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, UNIT AGREEMENT, 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 AND DURING THE TERM OF THIS AGREEMENT.
- (E) TERMINATION OF THIS AGREEMENT SHALL NOT AFFECT ANY LEASE WHICH, PURSUANT TO THE TERMS THEREOF OR ANY APPLICABLE LAWS, SHALL CONTINUE IN FORCE AND EFFECT THEREAFTER.
- (F) ANY LEASE EMBRACING LANDS OF THE STATE OF NEW MEXICO, WHICH IS MADE SUBJECT TO THIS AGREEMENT, SHALL CONTINUE IN FORCE BEYOND THE TERM PROVIDED THEREIN AS TO THE LANDS COMMITTED HERETO UNTIL THE TERMINATION HEREOF.
- (G) ANY LEASE EMBRACING LANDS OF THE STATE OF NEW MEXICO HAVING ONLY A PORTION OF ITS LANDS COMMITTED HERETO, SHALL BE SEGREGATED AS TO THE LAND COMMITTED AND AS TO THE LAND NOT COMMITTED AND THE TERMS OF SUCH LEASES SHALL APPLY SEPARATELY AS TO SUCH SEGREGATED PORTIONS COMMENCING AS OF THE EFFECTIVE DATE HEREOF. PROVIDED, HOWEVER, THAT NOTWITHSTANDING ANY OF THE PROVISIONS OF THIS AGREEMENT TO THE CONTRARY, SUCH LEASE 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 IN PAYING QUANTITIES ON 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.

20. MATHEMATICAL ERRORS: IT IS HEREBY AGREED BY ALL PARTIES TO THE AGREEMENT THAT UNIT OPERATOR SHALL BE EMPOWERED TO CORRECT ANY MATHEMATICAL ERRORS WHICH MIGHT EXIST IN THE PERTINENT EXHIBITS TO THIS AGREEMENT UPON APPROVAL OF THE COMMISSIONER.

21. 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, PHOTOSTATIC, OR CERTIFIED COPY OF THE INSTRUMENT OF TRANSFER; AND NO ASSIGNMENT OR TRANSFER OF ANY ROYALTY INTEREST SUBJECT THERETO 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, PHOTOSTATIC, OR CERTIFIED COPY OF THE INSTRUMENT OF TRANSFER.

22. EFFECTIVE DATE AND TERM: THIS AGREEMENT SHALL BECOME BINDING UPON EACH PARTY WHO EXECUTES OR RATIFIES IT AS OF THE DATE OF EXECUTION OR RATIFICATION BY SUCH PARTY AND SHALL BECOME EFFECTIVE AS OF 7:00 O'CLOCK A. M. ON THE FIRST DAY OF THE CALENDAR MONTH NEXT FOLLOWING:

- (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 EIGHTY-FIVE PER CENT (85%), 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 THE LANDS DESCRIBED IN SECTION 3 OF THIS AGREEMENT;
- (B) THE APPROVAL OF THIS AGREEMENT BY THE COMMISSIONER AND THE COMMISSION;
- (C) THE FILING OF AT LEAST ONE COUNTERPART OF THIS AGREEMENT FOR THE RECORD IN THE RECORDS OF LEA COUNTY, NEW MEXICO, BY UNIT OPERATOR; AND PROVIDED FURTHER, THAT IF (A), (B), AND (C) ARE NOT ACCOMPLISHED ON OR BEFORE MARCH 1, 1965, THIS AGREEMENT SHALL IPSO FACTO TERMINATE ON SAID DATE (HEREINAFTER CALLED "TERMINATION 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 WORKING INTEREST OWNERS OWNING A COMBINED UNIT PARTICIPATION OF AT LEAST NINETY PER CENT (90%) COMMITTED TO THIS AGREEMENT HAVE DECIDED TO EXTEND SAID TERMINATION DATE FOR A PERIOD NOT TO EXCEED SIX (6) MONTHS. IF SAID TERMINATION DATE IS SO EXTENDED AND (A), (B), AND (C) ARE NOT ACCOMPLISHED ON OR BEFORE SAID EXTENDED TERMINATION DATE, THIS AGREEMENT SHALL IPSO FACTO TERMINATE ON SAID EXTENDED TERMINATION DATE AND THEREAFTER BE OF NO FURTHER FORCE OR EFFECT. FOR THE PURPOSE OF THIS SECTION, OWNERSHIP SHALL BE COMPUTED ON THE BASIS OF UNIT PARTICIPATION. UNIT OPERATOR SHALL, WITHIN THIRTY (30) DAYS AFTER THE EFFECTIVE DATE OF THIS AGREEMENT, FILE FOR THE RECORD IN THE OFFICE OR OFFICES WHERE A COUNTERPART OF THIS AGREEMENT IS RECORDED, A CERTIFICATE TO THE EFFECT THAT THIS AGREEMENT HAS BECOME EFFECTIVE ACCORDING TO ITS TERMS AND STATING FURTHER THE EFFECTIVE DATE.

THE TERM OF THIS AGREEMENT SHALL BE FOR AND DURING THE TIME THAT UNITIZED SUBSTANCES ARE PRODUCED IN PAYING QUANTITIES FROM THE UNIT AREA AND AS LONG

THEREAFTER AS DRILLING, REWORKING, OR OTHER OPERATIONS (INCLUDING SECONDARY RECOVERY) 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 BY WORKING INTEREST OWNERS OF NINETY PER CENT (90%) UNIT PARTICIPATION WHENEVER SUCH WORKING INTEREST OWNERS DETERMINE THAT UNIT OPERATIONS ARE NO LONGER PROFITABLE, FEASIBLE, OR IN THE INTEREST OF CONSERVATION, WITH THE APPROVAL OF THE COMMISSION AND THE COMMISSIONER. NOTICE OF ANY SUCH APPROVAL TO BE GIVEN BY UNIT OPERATOR TO ALL PARTIES HERETO.

UPON TERMINATION OF THIS AGREEMENT, THE FURTHER DEVELOPMENT AND OPERATION OF THE UNIT AREA AS A UNIT SHALL BE ABANDONED, UNIT OPERATIONS SHALL CEASE, AND THEREAFTER THE PARTIES HERETO SHALL BE GOVERNED BY THE TERMS AND PROVISIONS OF THE LEASES AND CONTRACTS AFFECTING THE SEPARATE TRACTS JUST AS IF THE AGREEMENT HAD NEVER BEEN ENTERED INTO.

IF NOT OTHERWISE COVERED BY THE LEASES UNITIZED UNDER THIS AGREEMENT, ROYALTY OWNERS HEREBY GRANT WORKING INTEREST OWNERS A PERIOD OF THREE (3) 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.

23. RATE OF PRODUCTION: ALL PRODUCTION AND THE DISPOSAL THEREOF SHALL BE IN CONFORMITY WITH ALLOCATIONS AND QUOTAS MADE OR FIXED BY THE COMMISSION AND IN CONFORMITY WITH ALL APPLICABLE LAWS AND LAWFUL REGULATIONS.

24. APPEARANCES: UNIT OPERATOR SHALL, AFTER NOTICE TO THE OTHER PARTIES AFFECTED, HAVE THE RIGHT TO APPEAR FOR OR ON BEHALF OF ANY AND ALL INTERESTS AFFECTED HEREBY BEFORE THE COMMISSIONER OF PUBLIC LANDS, AND THE NEW MEXICO OIL CONSERVATION COMMISSION, AND TO APPEAL FROM ORDER ISSUED UNDER THE REGULATIONS OF SAID COMMISSIONER, OR COMMISSION, OR TO APPLY FOR RELIEF FROM ANY OF SAID REGULATIONS OR IN ANY PROCEEDINGS RELATIVE TO OPERATIONS BEFORE THE SAID COMMISSIONER, OR COMMISSION, OR ANY OTHER LEGALLY CONSTITUTED AUTHORITY, PROVIDED, HOWEVER, THAT THE OTHER INTERESTED PARTY SHALL ALSO HAVE THE RIGHT, AT HIS OWN EXPENSE, TO BE HEARD IN ANY SUCH PROCEEDINGS.

25. NOTICES: ALL NOTICES, DEMANDS, OR STATEMENTS REQUIRED HEREUNDER TO BE GIVEN OR RENDERED TO THE PARTIES HERETO SHALL BE DEEMED FULLY GIVEN, IF GIVEN IN WRITING OR PERSONALLY DELIVERED TO THE PARTY OR SENT BY POSTPAID REGISTERED MAIL, ADDRESSED TO SUCH PARTY OR PARTIES AT THEIR RESPECTIVE ADDRESSES SET FORTH IN CONNECTION WITH THE SIGNATURES HERETO, OR THE RATIFICATION OR CONSENT HEREOF OR TO SUCH OTHER ADDRESS AS ANY SUCH PARTY MAY HAVE FURNISHED IN WRITING TO PARTY SENDING THE NOTICE, DEMAND, OR STATEMENT.

26. NO WAIVER OF CERTAIN RIGHTS: NOTHING CONTAINED IN THIS AGREEMENT 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 STATE WHEREIN SAID UNITIZED LANDS ARE LOCATED, OR OF THE UNITED STATES, 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.

27. UNAVOIDABLE DELAY: ALL OBLIGATIONS UNDER THIS AGREEMENT REQUIRING THE UNIT OPERATOR TO COMMENCE OR CONTINUE DRILLING 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 AGENCIES, UNAVOIDABLE ACCIDENT, UNCONTROLLABLE 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.

28. LOSS OF TITLE: IN THE EVENT TITLE TO ANY TRACT TO UNITIZED LAND SHALL FAIL IN WHOLE OR IN PART AND THE TRUE OWNER CANNOT BE INDUCED TO JOIN THIS UNIT 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 RE-

QUIRED 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 INTERESTS SUBJECT THERETO, PAYMENT OR DELIVERY ON ACCOUNT THEREOF MAY BE WITHHELD WITHOUT LIABILITY FOR INTEREST UNTIL THE DISPUTE IS FINALLY SETTLED; PROVIDED THAT AS TO STATE LAND OR LEASES, NO PAYMENTS OF FUNDS DUE THE STATE OF NEW MEXICO SHOULD BE WITHHELD, BUT SUCH FUNDS SHALL BE DEPOSITED AS DIRECTED BY THE COMMISSIONER OF PUBLIC LANDS OF THE STATE OF NEW MEXICO, 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.

29. NONJOINDER AND SUBSEQUENT JOINDER: IF THE OWNER OF ANY SUBSTANTIAL INTEREST IN A TRACT WITHIN THE UNIT AREA FAILS OR REFUSES TO SUBSCRIBE OR CONSENT IN WRITING TO THIS AGREEMENT, THE WORKING INTEREST OWNER IN THAT TRACT WHO HAS EXECUTED OR RATIFIED THIS AGREEMENT MAY WITHDRAW SAID TRACT FROM THIS AGREEMENT BY WRITTEN NOTICE TO THE UNIT OPERATOR, OR SUCH TRACT MAY BE INCLUDED IN THE UNIT AREA IF THE SAME CAN BE AND IS QUALIFIED AS PROVIDED IN SECTION 11 HEREOF, TRACTS QUALIFIED FOR UNIT PARTICIPATION. SUCH WITHDRAWAL AS ABOVE PROVIDED, SHALL, WITHOUT FURTHER ACTION, ALSO OPERATE TO WITHDRAW ALL ROYALTY INTEREST IN SUCH TRACT OR TRACTS THERETOFORE COMMITTED HERETO. JOINDER IN THE UNIT AGREEMENT BY A WORKING INTEREST OWNER, AT ANY TIME, MUST BE ACCOMPANIED BY APPROPRIATE JOINDER TO THE UNIT OPERATING AGREEMENT IN ORDER FOR THE INTEREST TO BE REGARDED AS EFFECTIVELY COMMITTED TO THIS UNIT AGREEMENT.

ANY OIL OR GAS INTEREST IN THE UNITIZED FORMATION IN LANDS WITHIN THE UNIT AREA NOT COMMITTED HERETO PRIOR TO SUBMISSION OF THIS AGREEMENT TO THE COMMISSIONER FOR FINAL APPROVAL, MAY THEREAFTER BE COMMITTED HERETO UPON COMPLIANCE WITH THE APPLICABLE PROVISIONS OF SECTION 11 HEREOF, AT ANY TIME UP TO THE EFFECTIVE DATE HEREOF AND FOR A PERIOD OF SIX (6) MONTHS THEREAFTER, ON THE SAME BASIS OF PARTICIPATION AS PROVIDED FOR IN SECTION 11 BY THE OWNER OR OWNERS THEREOF SUBSCRIBING OR CONSENTING IN WRITING TO THIS AGREEMENT AND, IF THE INTEREST IS A WORKING INTEREST, BY THE OWNER OF SUCH INTEREST SUBSCRIBING ALSO TO THE UNIT OPERATING AGREEMENT.

IT IS UNDERSTOOD AND AGREED, HOWEVER, THAT AFTER SIX (6) MONTHS FROM THE EFFECTIVE DATE HEREOF, THE RIGHT OF SUBSEQUENT JOINDER AS PROVIDED IN THIS SECTION 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. SUCH JOINDER BY A ROYALTY OWNER MUST BE EVIDENCED BY HIS EXECUTION OR RATIFICATION OF THIS UNIT AGREEMENT AND MUST BE CONSENTED TO IN WRITING BY THE WORKING INTEREST OWNER RESPONSIBLE FOR THE PAYMENT OF ANY BENEFITS THAT MAY ACCRUE HEREUNDER ON BEHALF OF SUCH ROYALTY OWNER. EXCEPT AS MAY OTHERWISE HEREIN BE PROVIDED, SUBSEQUENT JOINDER TO THIS AGREEMENT SHALL BE EFFECTIVE AT 7:00 O'CLOCK A. M. AS OF THE FIRST DAY OF THE MONTH FOLLOWING THE FILING WITH THE COMMISSION AND THE COMMISSIONER OF DULY EXECUTED COUNTERPART OF ALL OR ANY PAPERS NECESSARY TO ESTABLISH EFFECTIVE COMMITMENT OF ANY TRACT TO THIS AGREEMENT AND APPROVED BY THE COMMISSIONER.

30. COUNTERPARTS: THIS AGREEMENT MAY BE EXECUTED IN ANY NUMBER OF COUNTERPARTS, NO ONE OF WHICH NEEDS TO BE EXECUTED BY ALL PARTIES OR 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.

31. 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 UNIT AREA; 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 THE UNITIZED SUBSTANCES. NO SUCH TAXES SHALL BE CHARGED TO THE STATE OF NEW MEXICO OR TO ANY LESSOR WHO HAS A CONTRACT WITH HIS LESSEE WHICH REQUIRED THE LESSEE TO PAY SUCH TAXES.

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE CAUSED THIS AGREEMENT TO BE EXECUTED AND HAVE SET OPPOSITE THEIR RESPECTIVE NAMES, THE DATE OF EXECUTION.

NAME DATE SIGNED

ATTEST, IF A CORPORATION OR
WITNESS, IF AN INDIVIDUAL

SUNSET INTERNATIONAL PETROLEUM CORPORATION

ATTEST:

By _____
VICE PRESIDENT

By _____
SECRETARY

Address _____

CARPER DRILLING COMPANY, INC.

ATTEST:

By _____
TITLE
Address _____

By _____
SECRETARY

PHILLIPS PETROLEUM COMPANY

ATTEST:

By _____
TITLE
Address _____

By _____
SECRETARY

INDIVIDUAL

WITNESS:

CHARLES P. MILLER

JOINT OVER-RIDING ROYALTY INTERESTS

WITNESS:

AND
CHARLES P. MILLER

HIS WIFE

STATE OF _____)
COUNTY OF _____)

SS

CORPORATION ACKNOWLEDGEMENT

ON THIS _____ DAY OF _____, 1964, BEFORE ME APPEARED

_____, TO ME PERSONALLY KNOWN, WHO BEING BY ME DULY
SWORN, DID SAY THAT HE IS THE _____ OF _____

_____, A CORPORATION, AND THAT THE SEAL AFFIXED
TO THE SAID INSTRUMENT IS THE CORPORATE SEAL OF SAID CORPORATION, AND THAT SAID INSTRUMENT WAS SIGNED AND SEALED IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BOARD OF DIRECTORS, AND SAID _____ ACKNOWLEDGED SAID INSTRUMENT TO BE THE FREE ACT AND DEED OF SAID CORPORATION.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, 1964.

MY COMMISSION EXPIRES:

NOTARY PUBLIC IN AND FOR SAID
COUNTY AND STATE

STATE OF _____ }
COUNTY OF _____ } SS

STATE OF _____ }
COUNTY OF _____ } SS

CORPORATION ACKNOWLEDGEMENT

ON THIS _____ DAY OF _____, 1964, BEFORE ME APPEARED

_____, TO ME PERSONALLY KNOWN, WHO BEING BY ME DULY
SWORN, DID SAY THAT HE IS THE _____ OF _____
_____, A CORPORATION, AND THAT THE SEAL AFFIXED
TO SAID INSTRUMENT IS THE CORPORATE SEAL OF SAID CORPORATION, AND THAT SAID INSTRUMENT WAS SIGNED AND SEALED IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BOARD OF DIRECTORS, AND SAID _____ ACKNOWLEDGED SAID INSTRUMENT TO BE THE FREE ACT AND DEED OF SAID CORPORATION.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, 1964

MY COMMISSION EXPIRES:

NOTARY PUBLIC IN AND FOR SAID
COUNTY AND STATE

STATE OF _____ }
COUNTY OF _____ } SS

STATE OF _____ }
COUNTY OF _____ } SS

CORPORATION ACKNOWLEDGEMENT

ON THIS _____ DAY OF _____, 1964, BEFORE ME APPEARED
_____, TO ME PERSONALLY KNOWN, WHO BEING BY ME DULY
SWORN, DID SAY THAT HE IS THE _____ OF _____
_____, A CORPORATION, AND THAT THE SEAL AFFIXED
TO SAID INSTRUMENT IS THE CORPORATE SEAL OF SAID CORPORATION, AND THAT SAID INSTRUMENT WAS SIGNED AND SEALED IN BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS BOARD OF DIRECTORS, AND SAID _____ ACKNOWLEDGED SAID INSTRUMENT TO BE THE FREE ACT AND DEED OF SAID CORPORATION.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS _____ DAY OF _____, 1964

MY COMMISSION EXPIRES:

NOTARY PUBLIC IN AND FOR SAID
COUNTY AND STATE

STATE OF _____ }
COUNTY OF _____ } SS

INDIVIDUAL ACKNOWLEDGEMENT

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY
OF _____, 1964, BY _____

MY COMMISSION EXPIRES: _____

NOTARY PUBLIC IN AND FOR SAID
COUNTY AND STATE

JOINT ACKNOWLEDGEMENT
(HUSBAND AND WIFE)

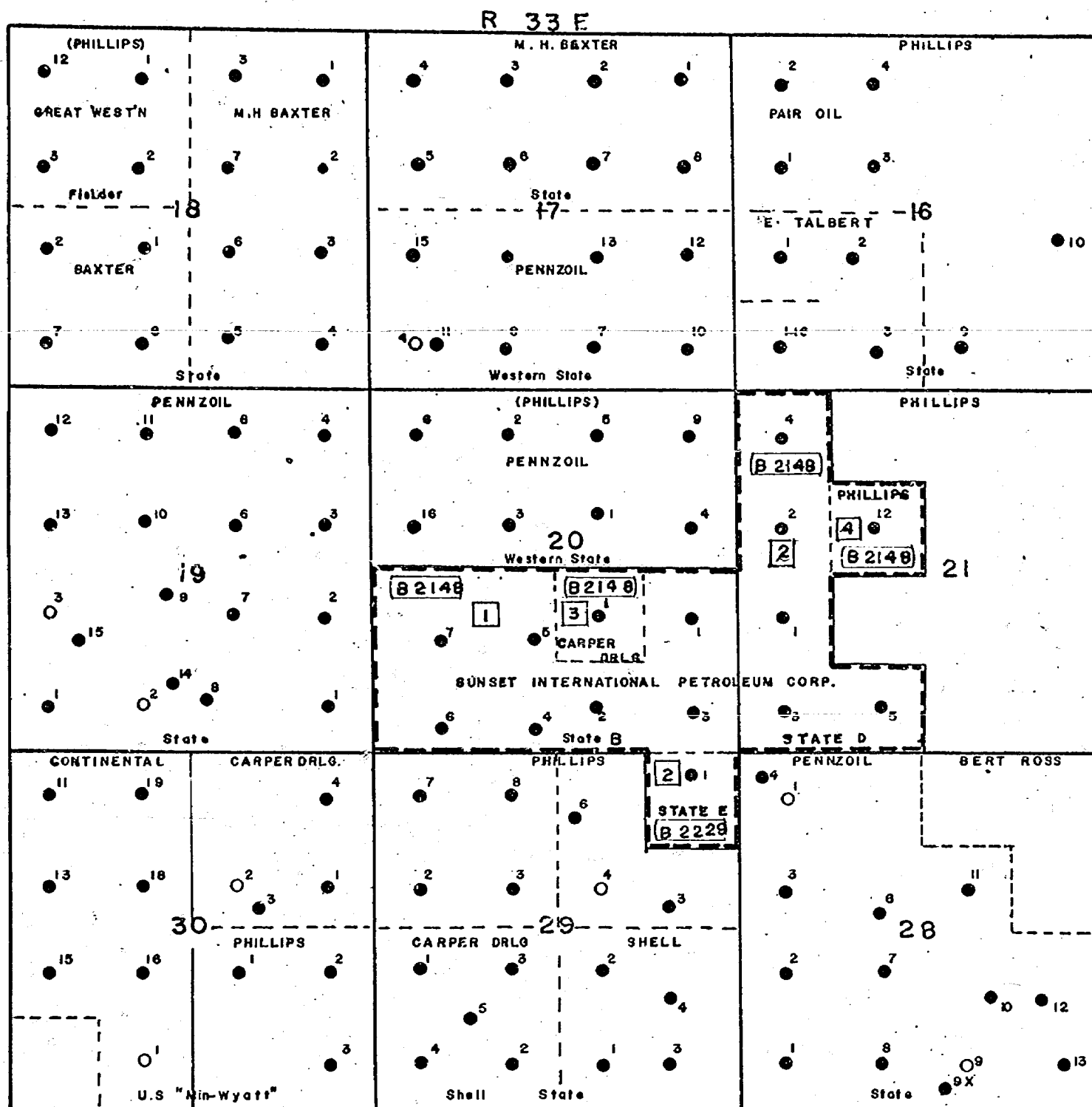
THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS _____ DAY
OF _____, 1964, BY _____ AND _____
HIS WIFE.

MY COMMISSION EXPIRES: _____

NOTARY PUBLIC IN AND FOR SAID
COUNTY AND STATE

STATE OF _____ }
COUNTY OF _____ }

SS



SCALE 1" = 2000'

EXHIBIT "A"
MAL GRA UNIT
LEA COUNTY, NEW MEXICO
--- MAL GRA UNIT BOUNDARY
□ TRACT NUMBER
▭ NEW MEXICO LEASE NUMBER

EXHIBIT "B"
LEASEHOLD INFORMATION WITH WORKING INTEREST PARTICIPATION

MAL-GRA UNIT
MALJAWAR FIELD
LEA COUNTY, NEW MEXICO

LEASE NAME	DESCRIPTION OF LAND	NUMBER NEW MEXICO ACRES	STATE NO.	DATE	BASIC ROYALTY	LESSEE OF RECORD	OVERRIDING ROYALTY OWNERS AND AMOUNT	WORKING INTEREST OWNER & AMOUNT	TRACT PARTICIPATION IN UNIT 70% ULTIMATE 30%
STATE B	SW/4, S/2SE/4 & NE/4 SE/4 Sec. 20	280	B-2148	9-11-33	12 1/2%	PHILLIPS PETR. Co.	PHILLIPS PETR. Co. 5.46875%	SUNSET INT'L PETR. CORP. CHARLES P. MILLER 93.75% 6.25%	.386145 .025743 .14 .00
STATE D	W/2 W/2 & SE/4 of SW/4 Sec. 21	200	B-2148	9-11-33	12 1/2%	PHILLIPS PETR. Co.	PHILLIPS PETR. Co. 5.46875%	SUNSET INT'L PETR. CORP. 100.00%	.205421 .00
AND	AND								
STATE E	NE/4 NE/4 Sec 29	40	B-2229	11-10-33	12 1/2%	PHILLIPS PETR. Co.	PHILLIPS PETR. Co. 5.46875%	SUNSET INT'L PETR. CORP. 100.00%	.068429 .01
PHILLIP STATE	NW/4 SE/4 Sec 20	40	B-2148	9-11-33	12-1/2%	PHILLIPS PETR. Co.	PHILLIPS PETR. Co. 5.46875%	CARPER DRILLING Co. INC. CHARLES P. MILLER & WIFE IRIS 4.10156%	
LEA-MEX	SE/4 NW/4 Sec. 21	40	B-2148	9-11-33	12-1/2	PHILLIPS PETR. Co.	PHILLIPS PETR. Co.	100.00%	.014262 .01
L		600							.700000 .30

EXHIBIT "C" TO UNIT AGREEMENT
MAL-GR A UNIT
MALJAMAR FIELD

LEA COUNTY, NEW MEXICO

TRACT NO.	LEASE NAME	NUMBER WELLS	GROSS RESERVES 1,1/64	ULTIMATE PRIMARY OIL	CURRENT PRODUCTION LAST 6 MOS. 1963	TRACT PARTICIPATION IN UNIT 70% ULTIMATE - 30% CURRENT
1	STATE B	7	29,000 Bbls.	314,800 Bbls.	5,260 Bbls.	0.411888 0.152170
2	STATE D&E	6	15,400	157,000	3,040	0.205421 0.087946
3	PHILLIPS STATE	1	1,700	52,300	540	0.068429 0.15622
4	LEAMEX	1	4,480	10,900	1,530	0.014262 0.014262
	TOTAL	15	50,580	535,000	10,370	0.700000 0.300000