

ECONOMIC ANALYSIS
TRACT ~~14~~¹³ - J. R. CONE OPERATED

1) ¹³ Tract ~~14~~ - Before Tax Analysis
Join - Turn over 4 wells

Oil Price	Constant	\$13.84
Gas Price	Constant	53¢/MCF
Total net oil, MBO	751.8	
Total Net gas, MMCF	1737.4	
Total net investment, M\$	1046.1	
Tract participation, Phase I	7.14%	
Tract participation, Phase II	8.37%	
Expected payout, years	3.76	
Expected undiscounted present worth, M\$	7406.7	

2) ¹³ Tract ~~14~~ - Before Tax Analysis
Join - Unit carry one well

Oil Price	Constant	\$13.84
Gas price	Constant	53¢/MCF
Total Net oil, MBO	751.8	
Total net gas, MMCF	1737.4	
Total net investment, M\$	1046.1	
Non-taxable revenue	- 254.0 *	
Tract participation, Phase I	7.14%	
Tract participation, Phase II	8.37%	
Expected payout, years	4.18	
Expected undiscounted present worth, M\$	7152.7	

*Represents the \$200M plus interest and additional tract participation in new well.

Exhibit #4

ECONOMIC ANALYSIS

EAST BLINEBRY AND EAST DRINKARD UNITS

1) Total Unit

	<u>Before Tax</u>	<u>After Tax</u>
Oil Price	Constant \$13.84	--
Gas Price	Constant 53¢/MCF	--
Total net oil, MBO/Net gas BCF	9142.9/22.9	--
Total net investment, M\$	12500.0	--
Expected payout, years	3.37	3.7
Expected economic life, years	21	--
Expected undiscounted present worth, MM\$	82.8	48.6

5901.1934 B161

JH

BEFORE THE	
OIL CONSERVATION COMMISSION	
State of New Mexico	
Case No. <u> </u>	Exhibit No. <u>4</u>
Submitted by <u>CIT - Tulsa, OK</u>	
Hearing Date <u>1-1-70</u>	

EXHIBIT # 5

ECONOMIC ANALYSIS

TRACT 13 - J. R. CONE OPERATED

1) Tract 13

Join - Turn over 4 wells

	Before Tax	After Tax
Oil Price	Constant \$13.84	--
Gas Price	Constant 53¢/MCF	--
Total net oil, MBO	751.8	--
Total net gas, MMCF	1737.4	--
Total net investment, M\$	1046.1	--
Tract participation, Phase I	7.14%	--
Tract participation, Phase II	8.37%	--
Expected payout, years	3.76	4.10
Expected undiscounted present worth, M\$	7406.7	3912

2) Tract 13

Join - Unit carry one well

	Before Tax	After Tax
Oil Price	Constant \$13.84	--
Gas Price	Constant 53¢/MCF	--
Total net oil, MBO	751.8	--
Total net gas, MMCF	1737.4	--
Non-taxable revenue	254.0	--
Tract participation, Phase I	7.14%	--
Tract participation, Phase II	8.37%	--
Expected payout, years	4.18	4.7
Expected undiscounted present worth, M\$	7152.7	3658

3) Tract 13

Join - Unit carry four wells

	Before Tax	After Tax
Oil Price	Constant \$13.84	--
Gas Price	Constant 53¢/MCF	--
Total net oil, MBO	751.8	--
Total net gas, MMCF	1737.4	--
Total net investment, M\$	1046.1	--
Non-taxable revenue	-1006.00 **	--
Tract participation, Phase I	7.14%	--
Tract participation, Phase II	8.37%	--
Expected payout, years	5.24	6.5
Expected undiscounted present worth, M\$	6390.7	2896

*Represents the \$200 M plus interest and recompletion cost in old well.

**Represents the cost of four wellbore penalties plus interest and recompletion costs in old wells.

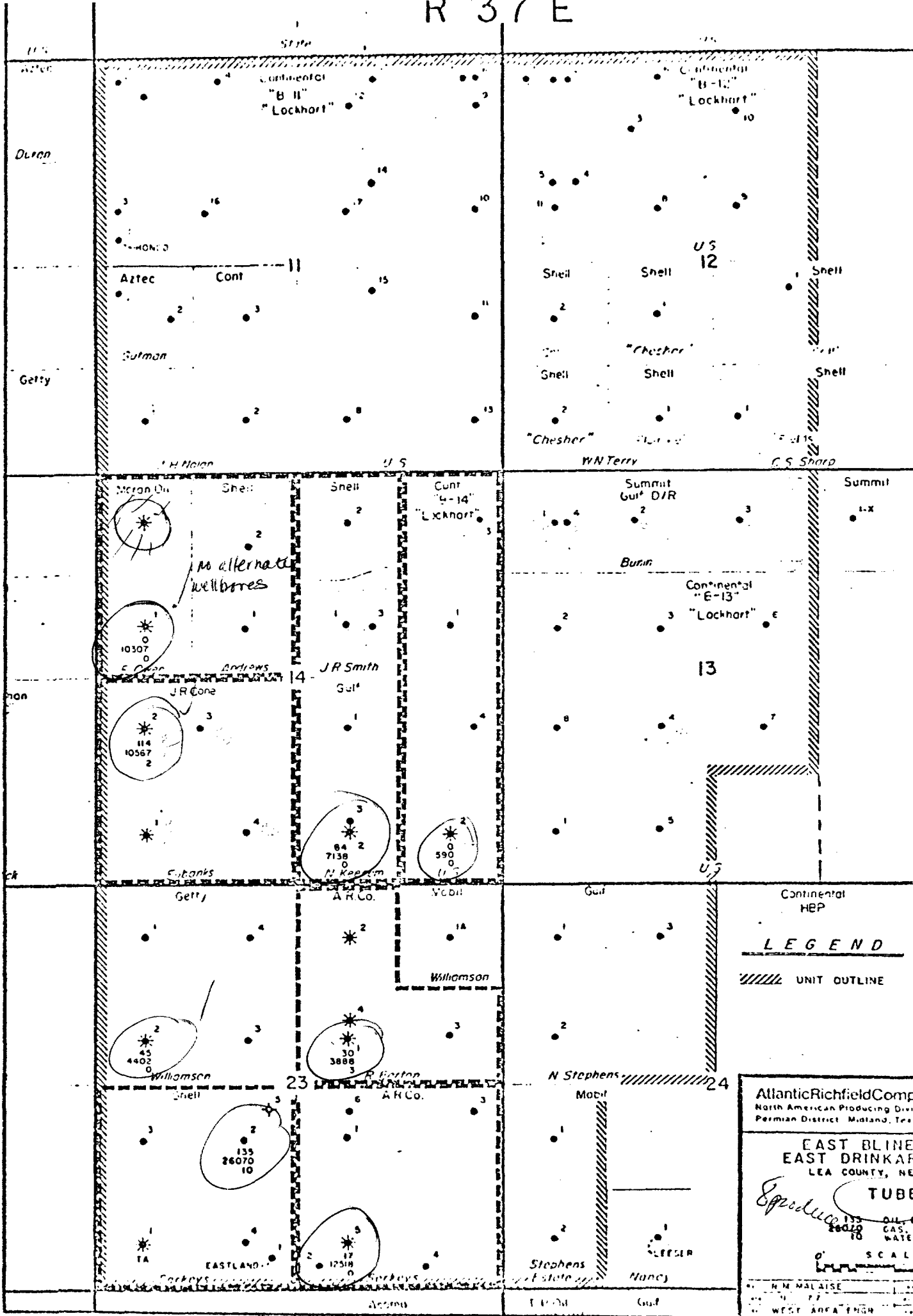
BEFORE THE	
OIL CONSERVATION COMMISSION	
Case No.	Santa Fe, New Mexico
Case No.	5308
Submitted by	Case No. 5308
Hearing Date	2-2-78

ECONOMIC ANALYSIS
TRACT 15 - SUMMIT OPERATED

1) Tract 15		
<u>Join - Turn over 3 wells</u>	<u>Before Tax</u>	<u>After Tax</u>
Oil Price	Constant \$13.84	--
Gas Price	Constant 53¢/MCF	--
Total net oil, MBO/Net gas, BCF	276.3/0.69	
Total net investment, M\$	377.8	--
Expected payout, years	3.7	4.1
Expected economic life, years	21	--
Expected undiscounted present worth, MM\$	2.5	1.46

ARCO Ex # 6
rehearing 2/21

#7



Ex. 1 ARCO PCH. 2-22-78

Suggested Amendment to Section 11.1 of Operating Agreement:

In Line 13 on Page 18, after the word "subdivision" change the period to a semicolon and add the following:

provided, however, if any well to be contributed toward unit operations is completed as a gas well producing from the Tubb formation, the contributing party or parties shall have the option to request the unit operator to drill a new well to be cased to base of the Tubb formation at any ^{location} ~~located~~ designated by such party or parties to be produced in lieu of the contributed well and the new well and the production therefrom shall not be involved in unit operations. If working interest owners approved by a vote and exercise their right as above provided, the party or parties contributing the 40 acre subdivision on which the usable well bore is located shall bear all costs and expenses in connection therewith or in drilling a substitute gas well, as the case may be, up to and including \$200,000.00. If the operation costs in excess of \$200,000.00, the additional cost in excess thereof shall be considered unit costs and charged to the working interest owners on the basis of their Phase II combined unit participation. In case the well drilled is to take the place of a Tubb gas well, the operation shall include the drilling and casing of said well to the base of the Tubb formation and running electrical logs in connection therewith. All expenses incurred in connection with conditioning the contributed well to be used as a unit well shall be borne by the unit working interest owners.

ARCO Ex 8
rehearing 2/21

DATE	_____
OLCCOM	_____
NAME	_____
ADDRESS	_____
CITY	_____
STATE	_____
ZIP	_____

Based on remaining oil in place
equivalent in k.4. volume.

Production 64.544% B1by
35.456% Drinkard

Working interest Owner Combined
Tr 15 Phase I 2.93361 B1by
II 3.00335

Phase I 0.09365 Drinkard
II 0.01381

Exhibit E and C Drinkard

Tr 15 0.26413 Ph. I 0.03896 Ph. II

Exhibit C Blinbry

Tr 15 4.54513 Phase I
4.65318 Phase II

Total investment ~~9242.9~~ \$12,500 M
\$ 8,068 B1by X 454513 = 366.7
\$ 4,432 Drinkard X 46318 = 375.4

Total Net Oil 9142.9 M barrels
5901.2 B1by X 454513 = ~~268.2~~ 415.6 barrels
3241.7 Drink X 46318 = ~~273.3~~ 423.5 barrels

Phase I vs II at recovery ~~570644~~ barrels
after 4-1-76

~~368.316~~ Blinbry 1,038,799
~~202.328~~ Drinkard 570,644

X .0454513 = ~~16,940.4~~ barrels Tr 15
= 47,214.76 barrels Tr 15

UNIT AREA AFFECTED BY THE ELIMINATION
OF TRACTS NO. 13 & 15

TRACT NO. & LEASE	ULTIMATE	ESTIMATED	TOTAL	SWEEP	UNSWEEP	UNSWEEP
	PRIMARY RECOVERY MBO	SECONDARY MBO (.7 x Col. 1)		ACRES	AREA ACRES	
<u>Tract No. 13 Area</u>						
1 Conoco - Lockhart B-14	446.6	312.6	312.6	137.82	22.18	43.3
10 Moran - Owen	767.6	537.3	537.3	27.98	52.02	349.4
11 Shell - Andrews	451.4	315.9	316.0	49.40	30.60	120.8
12 Shell - Smith	723.3	506.3	506.3	76.17	3.83	24.2
13 Cone - Eubanks	1172.2	820.5	820.5	0.0	160.00	820.5
14 Gulf - Keenum	691.5	484.1	484.1	24.97	55.03	333.0
16 Getty - Williamson	563.8	394.7	394.7	81.21	78.79	194.4
17 A.R.Co. - Barton	452.3	316.6	316.6	91.69	28.31	74.7
18 Mobil - Williamson	81.3	57.1	57.1	35.41	4.59	6.6

Tract No. 15 Area										
1	Conoco - Lockhart B-11	2674.4	1872.1	480	475.41	4.59	17.9			
1	Conoco - Lockhart B-13	416.6	291.6	320	290.30	49.70	45.3			
1	Conoco - Lockhart B-14	446.6	312.6	160	158.47	1.53	2.9			
4 & 5	Shell - Coll	237.4	166.2	80	43.20	36.80	70.5			
6 & 7	Shell - Cheshier	203.0	142.1	80	30.10	49.90	88.6			
8	Shell - Plumlee	85.8	60.1	40	13.99	26.01	39.1			
9	Shell - Fields	47.5	33.3	40	14.75	25.25	21.0			
10	Summit - Bunin	422.9	296.0	120	43.40	76.60	132.7			
Total										418.0

GRAND TOTAL

2384.9

Arco

Ex 2A

2/21/78

191.1

1146.9

188.9

5.3



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
FEDERAL CENTER, DENVER, COLORADO 80225

JUL - 8 1977

OIL CONSERVATION
Santa Fe

JUL 8 1977

Clear Rec. 6069
6070

Atlantic Richfield Company
Attention: Mr. Jerry Tweed
P. O. Box 1610
Midland, Texas 79701

Gentlemen:

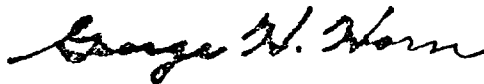
Your letter of June 7, 1977, requests modification of the text of the East Blinebry and East Drinkard unit agreements, Lea County, New Mexico, as designated by this office under separate letters dated January 21, 1977. The modifications requested will amend Section 2 (g) and Section 13 of both unit agreements.

Amendment of Sections 2(g) will redefine the unitized intervals, making them consistent with the New Mexico Oil Conservation Commission's interval definitions for the Blinebry and Drinkard pools as established under Commission Orders No. R-1670 and R-4635. As redefined, the unitized intervals will now be 5,550 feet to 6,007 feet for the Blinebry, and 6,450 feet to 6,730 feet for the Drinkard as encountered in the Roy Barton No. 3 well in the SE $\frac{1}{4}$ sec. 23, T. 21 S., R. 37 E., N.M.P.M.

Amendment of Sections 13 will change the number of accumulated barrels of oil produced necessary to initiate phase II of the participation formulas in both unit agreements. These modifications change the required amount of Blinebry and Drinkard oil produced to initiated phase II to 1,036,799 barrels and 570,644 barrels, respectively. These new volumes provide for a total cumulative Blinebry and Drinkard oil volume of 1,609,443 barrels, as obtained from production decline analysis and approved by working interest owners.


This office concurs in the Supervisor's recommendation that the modifications requested be accepted. Accordingly, your June 7, 1977, request for the above-described modifications of the texts of the East Blinbry and East Drinkard unit agreements are hereby approved.

Sincerely yours,



Regional Conservation Manager
For the Director

cc:

NMOCC, Santa Fe  This Copy for

North American Producing Division
Permian District
Post Office Box 1610
Midland, Texas 79701
Telephone 915 682 8631



November 16, 1977

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

Attn: Mr. Stamets

Re: East Blinbry and East Drinkard Units
Statutory Unitization Hearing

Dear Mr. Stamets:

Concerning the subject hearing and our subsequent telephone conversation, several questions were raised with regards to delineation of cement tops on all of the diagrammatic wellbore diagrams. Attached are corrected copies of those wellbore exhibits which did not have the cement tops shown at the original hearing.

In calculating cement tops, slurry data for Class A and Class C cement was used if not specified otherwise. In most cases a 25% wash-out factor was applied to the cement top calculation.

Example: Use of Slurry Volume

3000 ft. depth, 5½" casing, 7-7/8" hole. Estimated 25% washout, 100 sx Class A behind casing

Cement footage = $100 \text{ sx} / .1733 \text{ cu ft/ft} \times 1.25 \text{ excess factor} \times .72 \text{ sx/cu ft} = 641'$

Cement top = $3000' - 641' = 2359'$

In addition to the cement tops, certain other information is being supplied as requested; specifically, the revised exhibits reflect the following:

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico
November 16, 1977
Page 2

- 1) Exhibit No. 132 Three cement plugs, spotted at 110-140', 25 sx; at 1100', 25 sx plug; and at 2800', 25 sx plug.
- 2) Exhibit No. 138 The current PBD is 7400'. San Andres perforations at 4165-4477'.
- 3) Exhibit No. 150 The perforations below the bridge plug are Drinkard, 6625-6760' and McKee, 7905-8250'.
- 4) Exhibit No. 152 The two cement plugs are from 100' to surface (30 sx) and from 2870-2912 (15 sx).
- 5) Exhibit No. 157 The Wantz Abo perforations are at 6932-7452' and the McKee perforations are at 7627-7941'.
- 6) Exhibit No. 165 The Ellenburger perforations are at 7828-44'.
- 7) Exhibit No. 183 The Penn perforations are at 7185-7390'.
- 8) Exhibit No. 184 The Paddock and McKee perforations are separated with a CIBP at 7500' with one sack of cement on top.
- 9) Exhibit No. 243 The Blinbry perforations at 5745-5827' were squeezed w/150 sx Class C cement.

Very truly yours,

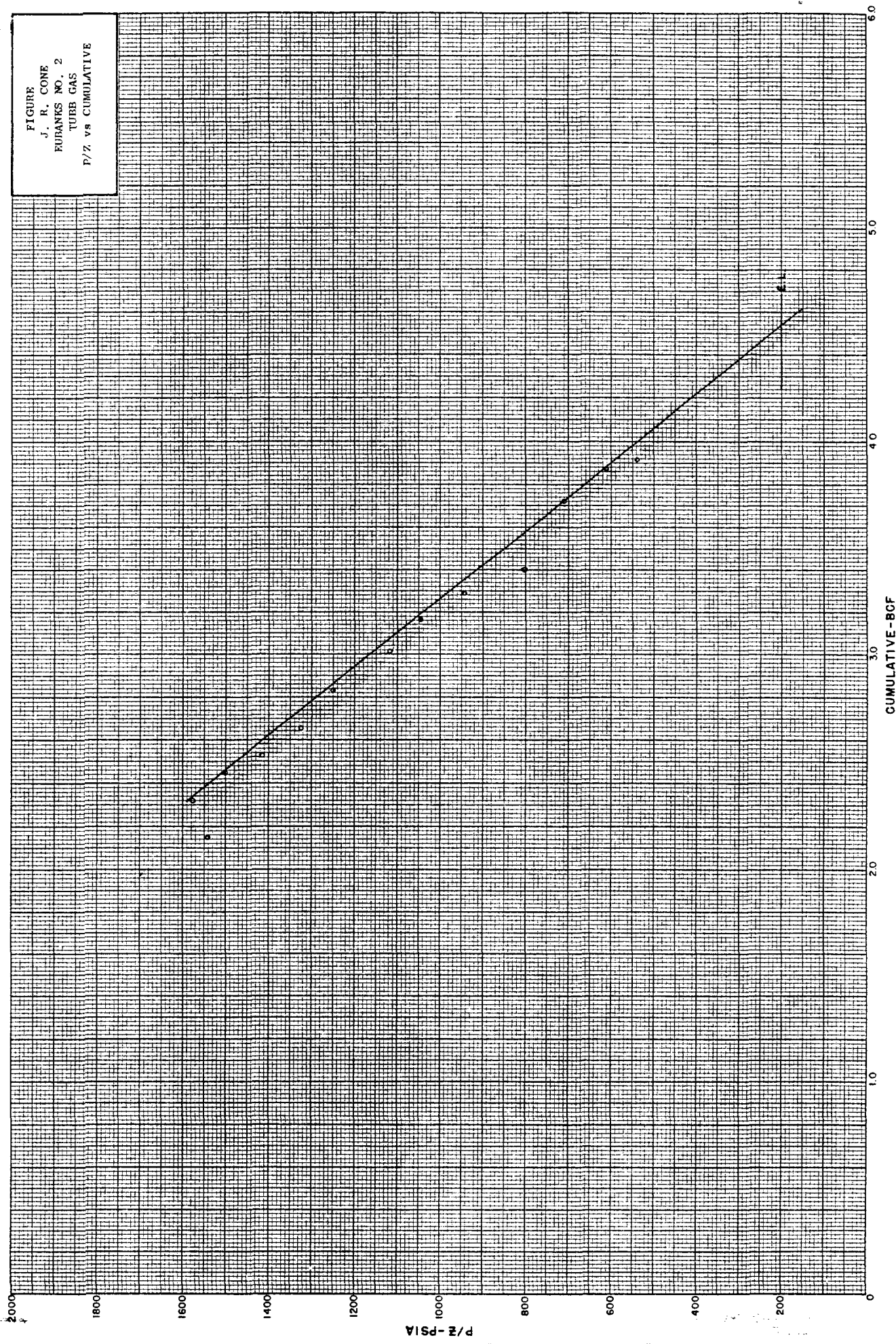

R. M. Malaise

RMM/agp

cc: Mr. William Coleman - Midland (w/o attachment)
Mr. Clarence Hinkle - Roswell (w/attachment)

Arao 262

FIGURE
J. R. CONE
FURANKS NO. 2
TUBB GAS
P/Z vs CUMULATIVE



UNIT AREA AFFECTED BY THE ELIMINATION
OF TRACTS NO. 13 & 15

64,544¹⁰ to E16¹
35,456 " Drink

TRACT NO. & LEASE	ULTIMATE	ESTIMATED	TOTAL	SWEEP	UNSWEEP	UNSWEEP
	PRIMARY RECOVERY MBO	SECONDARY MBO (.7 x Col. 1)				AREA ACRES
Tract No. 13 Area						
1 Conoco - Lockhart B-14	446.6	312.6	160	137.82	22.18	43.3
10 Moran - Owen	767.6	537.3	80	27.98	52.02	349.4
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12 Shell - Smith	723.3	506.3	80	76.17	3.83	24.2
13 Cone - Eubanks	1172.2	820.5	160	0.0	160.00	820.5
14 Gulf - Keenum	691.5	484.1	80	24.97	55.03	333.0
16 Getty - Williamson	563.8	394.7	160	81.21	78.79	194.4
17 A.R.Co. - Barton	452.3	316.6	120	91.69	28.31	74.7
18 Mobil - Williamson	81.3	57.1	40	35.41	4.59	6.6

difference
1146.4
139.932
406.468 Drink

Tract No. 15 Area						
1 Conoco - Lockhart B-11	2674.4	1872.1	480	475.41	4.59	17.9
1 Conoco - Lockhart B-13	416.6	291.6	320	290.30	49.70	45.3
1 Conoco - Lockhart B-14	446.6	312.6	160	158.47	1.53	2.9
4 & 5 Shell - Coll	237.4	166.2	80	43.20	36.80	70.5
6 & 7 Shell - Cheshier	203.0	142.1	80	30.10	49.90	88.6
8 Shell - Plumlee	85.8	60.1	40	13.99	26.01	39.1
9 Shell - Fields	47.5	33.3	40	14.75	25.25	21.0
15-10 Summit - Buntn	422.9	296.0	120	43.40	76.60	132.7
Total						418.0

difference
285.3
100.3
316.1

GRAND TOTAL

Arco

EX, 2A

2/21/78

P35 10/20	Bl prim to 4-1-76	8,009,899 ✓
P35 10/20	Bl remaining prim	974,920 ✓
"	total ult Bl prim	<u>8,984,819</u> (x.7 = 6,289,373)
P36 10/20	est Bl secondary	6,289,374 ✓

P35 10/20	Dr prim to 4-1-76	4,396,148 ✓
P35 10/20	Dr remaining prim	634,522 ✓
"	ult Dr prim	5,030,670 (x.7 = 3,521,469)
P36 10/20	est Dr secondary	3,521,471 ✓

8984819	→ 9,810,841 secondary recovery both zones
<u>5030670</u>	
14015489 x .7	

P35 10/20 9,810,845 ✓ secondary both zones

Page 34-36 Transcript I
Recovery to 4-1-76

Notice of
intent to
explore
Sandoval
9662455

Primary { B161
8,009,899 Prod 4-1-76
974,920 Remaining

Drink
4,396,148
634,500

OK
~~6,287,324 2ndry~~ ~~3,521,071 2ndry~~

~~Secret to~~

~~6,330,730 Secondary~~ ~~3,479,665 Secondary~~

B161 Blinbry

Tract 13 Percent Unit Participation
Phase II Secondary = 0.0614413
 $\times 6,287,324 = 386,301$

Tract 15 Phase II Participation 0.0465318
 $\times 6,287,324 = 292,561$

Drinkard

Tract 13 Phase II 0.124220588
 $\times 3,521,071 = 437,389$

CT.

17-10

915 624 1120

Aug 98 - 1998

All Blinbry around Summit

includes some primary production

9898

Gross

8,584,489 ~~Gross~~ Net to WI

includes some primary oil

gas wells - overhead - operating - not taxes

- (1) Sec 65-14-7D Provisions for credits & charges (equipment) not fair
- (2) " 65-14-6(1) Tr 13⁻¹⁵ not necessary to carry out flood (also premature)
- (3) " 65-14-6(3) additional cost of 2nd dry unreasonably high
- (4) " 64-14-6(4) Tr 13-15 owners will not benefit from unitization
- (5) 2nd dry is premature
- (6) Tr 13-15 could be excluded without damage to Unit
- (7) Tr 13-15 will suffer waste
- (8) Order fails to show reasoning of OCC in reaching ultimate conclusions Findings 6-16 and 17b potential
- (9) Cone owns Tubb gas wells, would have to give up Tubb gas or pay for new wells that 200,000 per well not committed is unreasonable charge for drilling replacement well.

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RATIFICATIONS
WORKING INTEREST PARTICIPATION
EAST BLINEBRY UNIT

	<u>PHASE I</u>	<u>PHASE II</u>
Amoco Production Company	6.6567800	10.7951100
Atlantic Richfield Company	22.1517700	19.9459300
Chevron Oil Company	6.6567800	10.7951100
Continental Oil Company	6.6567800	10.7951100
Devon Corp. & Getty Oil Co.	7,49946	6,5861
Gulf Oil Corporation	5.5095600	6.5861000
John H. Hendrix	.0610123	.0489169
B. M. Jernigan	.838320	.647410
Mobil Oil Company	1.9250200	1.31056
J. E. Moran Trust	.8383200	.6474100
Robert M. Moran	.8383200	.6474100
Mrs. Ross Sears	-	-
Mrs. Sally Seeber	-	-
Shell Oil Company	24.1916700	20.1613100
Southland Royalty Co. (Aztec Oil & Gas)	3.5004800	1.6504600
Morris and Irma Spear	.0915191	.0733758
Mrs. Van J. Vandiver	-	-
S. D. Young	*	*
Linda P. Parrish	*	*
M. C. Parrish, Jr. (Estate)	.38248	.29538
Linda P. Richardson (Trustee)	*	*
	<u>87.767796</u>	<u>89.178231</u>

RATIFICATIONS
WORKING INTEREST PARTICIPATION
EAST DRINKARD UNIT

	<u>PHASE I</u>	<u>PHASE II</u>
Amoco Production Company	6.1509700	5.31316920
Atlantic Richfield Company	14.4847200	18.58815400
Chevron Oil Company	6.1509650	5.31316920
Continental Oil Company	6.1509650	5.31316920
Devon Corp. & Getty Oil Co.	11.64354	5.39561
Gulf Oil Corporation	14.1237100	8.0637100
John Hendrix	.0413320	.0475140
B. M. Jernigan	.546428	1.557383
Mobil Oil Company	1.4395800	2.1440200
J. E. Moran Trust	.5466178	1.5577384
Robert M. Moran	.7116100	1.8527389
Mrs. Ross Sears	.3303675	.5907187
Mrs. Sally Seeber	.1651837	.2953593
Shell Oil Company	22.3280180	23.4165980
Southland Royalty Co. (Aztec Oil & Gas)	6.6799400	4.33109000
Morris and Irma Spear	.0619984	.0712715
Mrs. Van J. Vandiver	.1651837	.2953593
S. D. Young	.3303675	.5907187
Linda P. Parrish	.0970543	.173523
M. C. Parrish, Jr. (Estate)	.2056983	.6325718
Linda P. Richardson (Trustee)	.1406680	.2515129
	<u>91.532554</u>	<u>85.794765</u>

COMBINED PARTICIPATION
EAST BLINEBRY UNIT - EAST DRINKARD UNIT

	<u>PHASE I</u>	<u>PHASE II</u>
Amoco Production Company	6.47741	8.851440
Atlantic Richfield Company	19.43335	19.464520
Chevron Oil Company	6.47744	8.851440
Continental Oil Company	6.47744	8.851440
Devon Corp. & Getty Oil Co.	8.96878	4.99741
Gulf Oil Company	8.56379	7.110000
John Hendrix	.05403	.048420
Mobil Oil Company	1.75290	1.606070
J. E. Moran Trust	.73483	.970040
Robert M. Moran	.79340	1.074770
Mrs. Ross Sears	.11714	.209450
Mrs. Sally Seeber	.05857	.104720
Shell Oil Company	23.53089	21.315510
Southland Royalty Co. (Aztec Oil & Gas)	4.62779	2.600900
Morris and Irma Spear	.08105	.072630
Mrs. Van J. Vandiver	.05857	.104720
S. D. Young	.11714	.20945
Linda P. Parrish	.03441	.06152
M. C. Parrish, Jr. (Estate)	.31980	.41493
Linda P. Richardson (Trustee)	.04987	.08918
	<u>89.46343</u>	<u>87.97861</u>

Outline of testimony OCC Cases Nos. 5997, 5998, 5999 and 6000 -
examiner's docket for September 28, 1977

Cases 5997 and 5999 are applications of Atlantic Richfield Company for approval of the East Drinkard Unit Area and the East Blinebry Unit Area, respectively, which unit areas are co-extensive and cover 3,080 acres in Township 21 South, Range 37 East, Lea County.

Cases 5998 and 6000 are the applications of Atlantic Richfield Company for waterflood projects in connection with both of the above unit areas by injection of water into the Drinkard and Blinebry formations, which are to be unitized.

Inasmuch as all four applications are related, and exhibits will overlap, a motion will be made to consolidate the four cases for the purpose of taking testimony.

The first witness will be Bob Malaise. Qualifications as petroleum engineer.

Are you familiar with the applications of Atlantic Richfield in each of the four cases which have been consolidated for hearing?

What is Atlantic Richfield seeking to accomplish by the respective applications?

(The application in Case No. 5997 is for approval of a unit agreement covering the East Drinkard Unit Area comprising 3,080 acres of federal land and fee lands in Sections 11, 12, 13, 14, 23 and 24, Township 21 South, Range 37 East, Lea County.

Case 5998 is for approval of a waterflood project for the East Drinkard Unit Area by the injection of water into the Drinkard formation through 30 wells.

Case 5999 is an application for the approval of the East Blinebry Unit Area which is co-extensive with the East Drinkard Unit Area.

Case 6000 is for approval of a water project for the East Blinebry Unit Area by the injection of water into the Blinebry formation through 38 wells.)

Show that witness has prepared, or there has been prepared under his direction, certain exhibits for introduction in this case. (thru 256)

STATEMENT:

There will be ²⁶⁰~~268~~ exhibits; however, a good many of these exhibits are diagrammatic sketches of the manner in which injections wells will be completed and also showing the condition of all well bores within the unit boundaries. Testimony offered will be as to these specific groups.

EXHIBIT 1: Refer to Exhibit 1 and explain what this is and what it shows. (Exhibit 1 shows the outlines of the proposed East Blinebry and East Drinkard Units. It also shows all of the wells which have been drilled within the proposed unit area and all well drilled in the surrounding area. Exhibit 1 also shows the zones from which the wells are producing and that a portion of the lands within the unit area are federal lands and the remaining lands are fee lands. It also shows the proposed injection wells within the unit area. These are shown by dotted triangles.)

EXHIBIT 1-A: Refer to Exhibit 1-A and explain what this is and what it shows.

(This exhibit shows all other formations that have been produced from previous completions for those wells within the unit area and within more than two miles surrounding the same.)

How many acres are included within the proposed unit area?
(3,080).

Of the total acreage, how many acres are federal and how many fee?
(1,200 acres of federal lands or 38.95%, 1880 acres of fee lands or 61.04%)

Have the unit areas been designated by the United States Geological Survey as areas logically subject to unitization under the provisions of the Mineral Leasing Act?

(Yes, Exhibits ~~1-B~~ ^{1-B} and ~~1-C~~ ^{1-C} are copies of letters from the Regional Conservation Manager for the Director of the U.S.G.S. approving the areas as logically subject to unitization under the provisions of the Mineral Leasing Act and also approving the proposed forms of unit agreements for both the East Blinebry and East Drinkard Units. In these letters the U.S.G.S. concurs in the Supervisor's recommendation that the proposed basis for allocating unitized substances be accepted.

Three copies of each of the proposed unit agreements and unit operating agreements have been filed with the Conservation Commission with your applications for approval of the unit agreements. Is that right?

Have there been any changes for the purpose of correcting typographical errors in the units and unit operating agreements?

(Yes. There has been no change in substance in either the units or the operating agreements; however, we did find some typographical errors which have been corrected.)

Refer to Exhibits 3 and 4. Are these corrected copies of both unit agreements and both operating agreements.

(Yes. The pages attached to the cover sheet show the changes which have been made, all of which are for the purpose of correcting typographical errors and are not changes in substance.)

^{1-D}
EXHIBIT 5: Refer to Exhibit ~~5~~ ^{1-D} and explain what this is and what it shows. ^{1-D}

(Exhibit ~~5~~ is a structural map contoured on top of the Blinebry marker which is the formation to be unitized. The Blinebry formation as defined

in the unit is that stratigraphic interval encountered in the Sinclair Oil Company Roy Barton No. 3 located 1980 feet from the north line and 660 feet from the east line of Section 23, Township 21 South, Range 37 East, the top of which is shown on the Welex Gamma Ray-Neutron Log dated August 17, 1963 at the subsurface depth of 5,550 feet and the bottom of which is shown at a subsurface depth of 6,007 feet).

^{1-G}
EXHIBIT 5: Refer to Exhibit ^{1-G}~~6~~ and explain what this is and what it shows.

^{1-G}
(Exhibit ~~6~~ is a structural map contoured on top of the Drinkard formation which is being unitized. The Drinkard formation is defined by the unit as being that stratigraphic interval encountered in the Sinclair Oil Company Roy Barton No. 3 located 1980 feet from the north line and 660 feet from the east line of Section 23, Township 21 South, Range 37 East, the top of which is shown on the Welex Gamma Ray-Neutron Log dated August 17, 1963 at the subsurface depth of 6,450 feet and the bottom of which is shown at a subsurface depth of 6,730 feet.)

^{1-E} ^{1-F}
EXHIBIT ~~7~~ and ~~8~~: Refer to Exhibits 7 and 8 and explain what these are and what they show.

^{1-E}
(Exhibit ~~7~~ is a north-south cross section across the Blinebry formation which is to be unitized. Exhibit ^{1-F}~~8~~ is an east-west cross section of the Blinebry formation. These two cross sections show that the Blinebry formation has continuity and is substantially uniform over the entire unit area.)

Ex-1-H. Other floods in area & those proposed.

^{1-I} ^{1-J}
EXHIBITS ~~9~~ and ~~10~~: Refer to Exhibits ^{1-I}~~9~~ and ^{1-J}~~10~~ and explain what these are and what they show.

^{1-I}
(Exhibit ~~9~~ is a north-south cross section of the Drinkard formation which is proposed to be unitized. Exhibit ^{1-J}~~10~~ is an east-west cross

section of the Drinkard formation. These cross sections show the unitized formation has continuity and is substantially uniform over the entire proposed unit area.)

1-D 1-J

Do exhibits ~~5~~ through ~~10~~, being the structural maps and cross sections, support the boundaries of the proposed unit?

Was this same information presented to the Geological Survey and used by them in designating the unit area?

Is Atlantic Richfield designated as unit operator of both units and also in the operating agreements in connection therewith?

Are you familiar with all negotiations which have been carried on for the purpose of effecting unitization and the waterflood projects covering the East Blinbry and East Drinkard Unit Area?

Approximately how long have these negotiations been conducted?

Have the working interest owners within the proposed unit area formed an engineering committee for the purpose of formulating and completing plans for the unitization of both the East Blinbry and East Drinkard Units?

Have all of the working interest owners been given an opportunity to participate in these meetings?

Have all of the owners of working interests had representatives at the various meetings or participated in the meetings?

As a result of the meetings, did the working interest owners reach substantial agreement as to a participating formula for the respective tracts in the units?

Do both unit agreements provide for a tract participation formula?
(Yes, Section 13 of both units provide for a tract participation formula.

These are identical for both units.)

Explain the formula which has been used.

In your opinion, is the participating formula which has been used in the respective units fair, reasonable and equitable?

Does the unit agreement and unit operating agreement for the East Blinebry Unit make any reference to the unitization of the Drinkard formation and does the unit agreement and unit operating agreement for the East Drinkard formation make any reference to unitization of the Blinebry formation?

(Yes. Section 15 of both unit agreements provides for the allocation of unitized substances and each unit refers to the other. Section 15 provides that the parties have agreed that production from the two units may be commingled either in common well bores or surface facilities or both as the unit operator may consider feasible. For the purpose of allocating working interest and royalty interest production for all purposes, all production from the two units is to be allocated and credited as if 64.544% of production had been produced from the unitized formation for the Blinebry Unit and 35.456% had been produced from the unitized formation for the Drinkard Unit, whether or not actually produced therefrom and whether or not actually commingled. This allocation is to continue until all production from both units has been deemed uneconomical and both units have been terminated as provided in Section 23 of both units. Section 15 also provides that the production so allocated and credited shall be deemed to be unitized substances produced and saved from each unit and shall be further allocated to each tract in accordance with the provisions of the respective units.

Does each unit have a tract participation schedule?

(Yes. There is attached to each unit as Exhibit "C" a schedule providing for the ^{allocation}~~participation~~ of unitized substances to the respective tracts in the units.)

How are the royalties and overriding royalties to be determined and paid? (Section 15 of the unit agreements provides that unitized substances allocated to each tract shall be distributed among, or accounted for to, the parties entitled to share in the production from such tract in the same manner and in the same proportions and upon the same conditions they would have participated and shared in production from such tracts or in the proceeds thereof had the respective agreements not been entered into.)

In other words, royalties and overriding royalties are to be paid on the basis of production allocated to the respective tracts in accordance with Schedule "C" attached to each unit agreement. Is that correct? (Yes. However, each working interest owner and parties entitled thereto by virtue of ownership of oil and gas rights shall have the right to receive in kind their respective shares of allocated unitized substances.)
~~from both units.)~~

In your opinion, are the provisions of the respective unit agreements for the commingling of production from the Blinebry and Drinkard formations and the allocation thereof of 64.544% to the Blinebry unit and 35.456% to the Drinkard unit fair and equitable?

Was this allocation agreed upon in the various meetings held for the purpose of negotiating the unit agreements?

~~Were there any particular objections to the allocation of production between the two units?~~

Has the U.S.G.S. agreed to the allocation of production between the two units?

Do the respective units provide for a plan of development?
(Yes. Section 11 of both units recognizes that all of the lands subject to the agreements is reasonably proved to be production of unitized substances and that the object and purpose of the agreement is to formulate and put into effect an improved recovery project in order to effect additional recovery of unitized substances and prevent waste and conserve natural resources. Section 11 also provides for the injection of water for secondary recovery purposes.)

Are both unit agreements and unit operating agreements in substantially the same form?

Are both unit agreements and unit operating agreements in substantially the same form as has heretofore been approved by the Commission where federal and fee lands are involved and where the primary purpose of the unit is to inaugurate and maintain a waterflood project?
(Yes. They contain substantially the same provisions as all such unit agreements as have heretofore been approved by the G.S. as well as the Conservation Commission.)

Is provision made for a voting procedure for a decision on matters to be decided by the working interest owners in respect of which each working interest owner shall have a voting interest equal to its unit participation?
(Yes. Article 4 of each unit operating agreement provides that each working interest owner shall designate a representative and an alternate who are authorized to represent and bind such working interest owner

with respect to unit operations. Provision is made for meetings of representatives of the working interest owners and for a voting procedure and each working interest owner shall have a voting interest equal to its combined unit participation which is in effect at the time the vote is taken.)

Is provision made for the supervision and conduct of the unit operations including the selection, removal or substitution of an operator from among the working interest owners to conduct unit operations?

(Yes. Section 7 of both unit agreements provides for resignation or removal of the unit operator and Section 8 of each unit provides for a successor unit operator to be selected from among the working interest owners. Article 6 of each of the operating agreements provides for the resignation or removal of the unit operator and the selection of a new operator from among the working interest owners. Also, a voting procedure in connection therewith.)

Has provision been made for the credits and charges to be made in the adjustment among the owners in the unit area for their respective investments in wells, tanks, pumps, machinery, materials and equipment contributed to the unit operations?

(Section 9 of each unit agreement provides that costs and expenses incurred by the unit operator in conducting unit operations shall be apportioned among and borne by the working interest owners in accordance with the unit operating agreement. Section 9 also provides that the unit operating agreement shall provide the manner in which the working interest owners shall be entitled to receive their respective proportionate and allocated shares of the benefits accruing in conformity with their underlying operating agreements, leases and other contracts. Article 10 of each unit operating agreement provides that upon the effective date of the units the working interest owners shall deliver to unit operator possession of all wells completed in the unitized formation, together with lease equipment including casing and tubing in the wells. Provision is also

made for the working interest owners to make a determination as soon as practical after the effective date of the unit as to the property determined to be surplus and that property is to be returned to the working interest owners. Provision is also made for making an inventory of all the property taken over and for investment adjustments among the working interest owners.)

Is provision made for governing how the costs of unit operations, including capital investments, shall be determined and charged to the separately owned tracts, and how said costs shall be paid, including a provision providing when, how and by whom the unit production allocated to an owner who did not pay the share of the cost of unit operations charged to such owner for the interest of such owner may be sold and the proceeds applied to the payment of such costs?

(Article 12 of the respective unit operating agreements cover "Unit Expense". 12.1 is the basis of charges to working interest owners. 12.1.1 is capital costs; 12.1.2 capital costs to gas wells only; 12.1.3 is operating costs and expenses. This article also provides for making a budget, advance billings, commingling of funds and lien and security interests of unit operator. 12.6 provides that if any working interest owner fails to pay its share of unit expense within 60 days after rendition of a statement therefor by unit operator, each working interest owner agrees, upon request of unit operator, to pay its proportionate part of the unpaid share of unit expense of the defaulting working interest owner. The working interest owners that pay the share of unit expense of a defaulting working interest owner shall be reimbursed by the unit operator for the amount so paid plus any interest collected thereon upon receipt by unit operator of any past due amount. All working interest owners so paying a defaulting working interest owner's share shall be subrogated to the lien and other rights granted to the unit operator.)

Is the operator given a lien on the interest of each WI owner to secure payment of the obligations of WI owners?

(Yes. Section 12.1 of the operating agreement provides that operator shall have a lien upon the oil and gas rights of each WI owner. In case of default, the operator shall have the right to the proceeds of production of the party in default until the amount due, plus interest, is paid.)

Is provision made for carrying any working interest owner on a limited carried or net profit basis payable out of production?
(Both unit operating agreements contemplate that each working interest owner, as to each 40 acre subdivision which is committed to the unit, will furnish a well bore which in the opinion of the working interest owners is usable for producing unitized substances or for injecting outside substances into the unitized formation. This is covered by Section 11.1 of the respective operating agreements. This section provides that if any 40 acre subdivision does not have a usable well bore, the party or parties contributing the 40 acres shall have the option for 90 days from the effective date within which to restore, redrill, plug back, drill deeper, clean out or use whatever means necessary to provide a usable well bore acceptable to the working interest owners. At the end of the 90 day period, if a usable well bore has not been provided, the working interest owners shall have the right, but not the obligation, to re-enter, rework or clean out any well bore not then producing hydrocarbons or take whatever action deemed necessary by working interest owners, including the drilling a new well, to provide a usable well bore for such 40 acre legal subdivision. If the working interest owners approve by vote drilling of a new well on any 40 acre subdivision on which the unusable well bore is located, the party or parties contributing each such 40 acres shall bear all costs and expenses in connection with the drilling of the new well up to and including \$200,000.00. The costs in excess of \$200,000.00 will be considered unit costs and charged to the working interest owners on the basis of their Phase II combined unit participation. In lieu of paying the \$200,000.00 in cash, the party or parties contributing each such 40 acres may notify the working interest owners that they desire to pay their proportionate part of the costs out of unit production. In such case, the working interest owners have the option but not the obligation to pay said party or parties' share of costs up to and including \$200,000.00. If the working interest owners elect to pay

such costs, the party or parties contributing the 40 acres involved shall be deemed to have relinquished to the working interest owners their share of the production from such 40 acres until the proceeds or market value thereof shall equal the amount paid by the working interest owners, together with interest thereon at the rate specified in the Accounting Procedure attached as Exhibit "F" to the unit operating agreement.

Do you have an estimate of what the cost of drilling a new well might be?

EXHIBIT No. ¹~~11~~: Refer to Exhibit 11 and explain what this is and what it shows.

(Exhibit No. ²~~11~~ is a map showing the East Blinebry and East Drinkard Unit Area and showing all of the injection wells which are to be used. Single triangles are injection wells for the Blinebry only and the double triangles are for dual injection wells for both the Blinebry and Drinkard formations. There are 8 single injectors for the Blinebry and 30 dual injectors for the Blinebry and Drinkard both.)

EXHIBIT No. ³~~12~~: Refer to Exhibit ³~~12~~ and explain what this is.
(This is a list of names and locations of the proposed injection wells.

All of these wells are producing wells which will be converted to injection wells.)

EXHIBIT No. ⁴~~13~~: Refer to Exhibit ⁴~~13~~ and explain what this is.
(This is a list of ownership of all acreage outside the unit area which offset injection wells.)

^{B-5} ⁴²
EXHIBITS ~~B~~ through ~~51~~: Refer to these exhibits and explain.

(Exhibits ^{B-5} ⁴² ~~B~~ through ~~51~~ are full length electric logs with complete headings on the proposed injection wells within the unit boundary. These logs are labeled with the proposed unit number of each injection well. Dual injection wells utilize an upper tubing (UT) designation for the Blinebry completion and a lower tubing (LT) designation for the Drinkard completion. All dual injection wells will be equipped with two strings of tubing which will be plastic lined. The current well name is shown in parenthesis.)

^{B-43} ⁸⁰
EXHIBITS ~~B~~ through ~~80~~: Refer to these exhibits and explain.

(These exhibits are schematic drawings showing the manner in which the 38 injection wells are to be converted. Each of these drawings shows all casing strings, including diameters and setting depths, cement quantities used and tops of cement, as well as tubing strings. The diameter of the tubing will be 2 3/8" OD in the single completions and 2 1/16" OD in the dual completions. Injection packers will be set approximately 75' ^{ft} above the perforations. All tubing used in injection wells will be plastic coated.

In your opinion, will the completion of the injection wells in the manner shown by the schematic drawings confine the injection water to the respective unitized formations?

(Yes.)

In your opinion, are the proposed injection wells located so as to obtain the most efficient sweep and to recover the greatest amount of secondary oil which would not otherwise be recovered?

(Yes.)

B-81

118

EXHIBITS ~~80~~ through ~~117~~: Refer to these exhibits and explain.

(These are schematic drawings of the producing wells in the unit area. Each of these drawings shows all casing strings, including diameters and setting depths, quantities used and tops of cement, open hole interval and tubing strings. All tubing diameters will be 2 3/8" OD.)

B-119

140

EXHIBITS ~~128~~ through ~~159~~: Refer to these exhibits and explain.

(These are schematic drawings of all other well bores within the unit boundaries. Each of these drawings shows all casing strings, including diameters and setting depths, quantities used and tops of cement. Once the unit becomes effective the unitized intervals will be squeezed off in non-unit wells.)

B-141

252

EXHIBITS ~~160~~ through ~~241~~: Refer to these exhibits and explain.

(These are schematic drawings of all wells producing, injection or plugged and abandoned within 1/2 mile of the unit boundary. Each of these drawings shows all casing strings, including diameters and setting depths, cement quantities used and tops of cement, open hole intervals and tubing strings.)

253 254

255

EXHIBITS ~~242~~, ~~243~~ and ~~244~~: Refer to these exhibits and explain.

(Exhibits ~~242~~ and ~~243~~ are graphs of primary performance for the East Blinebry and East Drinkard Units respectively. An engineering committee consisting of working interest owners made an independent estimate of remaining primary reserves by extrapolating individual lease declines for the Blinebry and Drinkard. AS of April 1, 1976 the remaining reserves for the Blinebry were 974,920 barrels of oil and for the Drinkard 634,523 barrels. Exhibits ~~242~~ and ~~243~~ represent time rating of remaining

primary reserves for both zones as calculated by knowing the beginning rate, the ending rate and using a constant percentage decline. Exhibit 274 shows Blinebry and Drinkard wells and their cumulative recoveries as of April 1, 1976. The total cumulative production as of April 1, 1976 for the Blinebry was 8,009,899 barrels and for the Drinkard 4,396,148 barrels.)

Do you have any estimate as to the additional oil which may be recovered by reason of the waterflood project?

(Yes, we expect to recover approximately 9,810,845 barrels of secondary oil which would not otherwise be recovered without waterflooding the unitized formations. The estimated secondary oil for the Blinebry Unit and Drinkard Unit will be 3,521,471 barrels and 6,289,374 barrels respectively. The estimated secondary recovery is based upon a .7 to 1 secondary to primary recovery ratio.)

Has Atlantic Richfield made an estimate of the projected costs of installation and operation of the waterflood projects throughout their anticipated life?

(Yes. The total capital expenditure for both units is estimated to be \$12,500,000.00.) (1977 Cost Estimate)

Based upon an estimated additional secondary recovery of oil of 9,810,845 barrels, based upon the present price of oil and an estimated expenditure of \$12,500,000.00, in your opinion would the waterflood projects be an economic success by returning a reasonable profit?

(Yes.) (Give an estimate of the net profit, if you desire).

(Between 90-100 million before taxes over 21 yr. period)

Each unit operating agreement has attached a form of Accounting Procedure, under which the joint account of the working interest owners is to be charged at the following rates per well per month. Drilling well rate, \$1,188.00; producing well rate \$155.00; injection well rate for each

zone injected through separate tubing strings, \$155.00. In your opinion are these rates reasonable, when compared to similar units in the immediate area?

(Yes. These charges are consistent with operating practices observed in similar secondary recovery projects in the immediate area.)

Have all of the wells within the proposed unit areas reached an advanced stage of depletion and are generally regarded as "stripper" wells?

(Average about 5 bbl per day)

Is Atlantic Richfield requesting a project allowable?

(Yes. We would like to have a project allowable established in accordance with the provisions of Rule 701 of the Commission and it would be helpful if there could also be established an administrative procedure for any changes which may prove necessary in connection with the injection wells.)

Has Atlantic Richfield formulated a plan of operation for the proposed waterflood projects?

(Yes. We plan to simultaneously waterflood the Blinberry and Drinkard formations. Atlantic Richfield will operate both units by injecting water into the injection wells as shown on Exhibit No. ~~1~~².)

When do you anticipate beginning the well conversions for the purpose of injection of water?

(We will begin converting the injection wells as soon as possible after the effective date of the units. It is estimated that the total conversion program will take approximately ~~12~~¹⁸ months.)

What quantity of water do you anticipate will be injected initially?
(Approximately 29,000 barrels per day into the 38 injection wells and it is estimated that if there is no delay in approval of the unit agreements, water injection should be commenced on or about January 1, 1979.)

Is Atlantic Richfield aware of waterflow problems that have been under study in several areas in southeastern New Mexico?

(Yes. Well bore diagrams have been submitted to the Commission on all wells within the proposed unit and within 1/2 mile of the unit boundary. All of these diagrams on active wells indicate adequate cement above the casing shoe. The schematic diagrams on the plugged and abandoned wells surrounding the unit area show that they were properly plugged and should not be a source of water migration out of the waterflood zone.)

Do you intend to run periodic step-rate tests in connection with the injection wells?

(Yes. Step-rate tests will be run on the injection wells to monitor waterflood performance and maximize oil producing rate and ultimate recovery. We plan to keep our injection pressure below the formation parting pressure as indicated by the step-rate tests. This formation parting pressure will continue to increase as reservoir pressure increases. However, ^{we} do not plan at any time to exceed a formation face injection pressure in excess of 1 psi per foot. Initially, we request the ability to inject at a surface pressure of at least ^{.2}~~.25~~ feet per foot, subject to increase as the reservoir pressure increases and which is substantiated by parting pressure tests.)

What will be the source of water for injection purposes?

(Atlantic Richfield as operator will drill 4 water supply wells to the San Andres formation, which wells are as follows:

<u>Well</u>	<u>Location</u>
WSW No. 1	Sec. 23, T. 21 S., R. 37 E.
WSW No. 2	Sec. 14, T. 21 S., R. 37 E.
WSW No. 3	Sec. 14, T. 21 S., R. 37 E.
WSW No. 4	Sec. 11, T. 21 S., R. 37 E.

Have any other wells been drilled to the San Andres formation in the general area of the proposed units for the purpose of obtaining injection water?

(Yes. Exhibit 256 is a copy of the analysis of the San Andres water which was taken from the water supply system in the nearby Central Drinkard Unit operated by Gulf Oil & Minerals.)

What do you anticipate will be the deliverability of each water supply well?

(8,000 to 10,000 barrels of water per day, which is compatible with other water wells drilled to the San Andres.)

Do you also contemplate injecting produced water?

(Yes, as it becomes available.)

Do you anticipate any type of workover program will be necessary for the producing wells?

(The producing wells will be commingled downhole and at the surface between the Blinbry and Drinkard formations. Proper utilization of existing well bores in developing a commingling scheme and simultaneous injection will allow the waterflood project to be economically successful. The producing workover program will begin after the injection plant has been completed and will be coordinated to take advantage of the initial response to the water injection.)

Is time of the essence with respect to inauguration of the proposed waterflood project?

(Yes. It is very doubtful whether it would be possible to go ahead with the waterflood projects if there is any material delay over and above the year or 18 months which is anticipated will be necessary to install all the equipment and start the injection of water.)

If the waterflood projects are not inaugurated as anticipated or the unit agreements are not approved, what would be the result?

(This would mean that there would be a loss or waste of ^{nearly}~~over~~ 9,000,000 barrels of oil which would not be recovered).

In your opinion, will the approval of the unit agreements and the waterflood projects be in the interest of conservation, the prevention of waste and protection of correlative rights?

(Yes.)

Offer Ex's - 1 thru 256)

RATIFICATIONS
WORKING INTEREST PARTICIPATION
EAST BLINEBRY UNIT

	<u>PHASE I</u>	<u>PHASE II</u>
Amoco Production Company	6.6567800	10.7951100
Atlantic Richfield Company	22.1517700	19.9459300
Chevron Oil Company	6.6567800	10.7951100
Continental Oil Company	6.6567800	10.7951100
Devon Corp. & Getty Oil Co.	7,49946	6,5861
Gulf Oil Corporation	5.5095600	6.5861000
John H. Hendrix	.0610123	.0489169
B. M. Jernigan	.838320	.647410
Mobil Oil Company	1.9250200	1.31056
J. E. Moran Trust	.8383200	.6474100
Robert M. Moran	.8383200	.6474100
Mrs. Ross Sears	-	-
Mrs. Sally Seeber	-	-
Shell Oil Company	24.1916700	20.1613100
Southland Royalty Co. (Aztec Oil & Gas)	3.5004800	1.6504600
Morris and Irma Spear	.0915191	.0733758
Mrs. Van J. Vandiver	-	-
S. D. Young	*	*
Linda P. Parrish	*	*
M. C. Parrish, Jr. (Estate)	.38248	.29538
Linda P. Richardson (Trustee)	*	*
	<u>87.767796</u>	<u>89.178231</u>

RATIFICATIONS
WORKING INTEREST PARTICIPATION
EAST DRINKARD UNIT

	<u>PHASE I</u>	<u>PHASE II</u>
Amoco Production Company	6.1509700	5.31316920
Atlantic Richfield Company	14.4847200	18.58815400
Chevron Oil Company	6.1509650	5.31316920
Continental Oil Company	6.1509650	5.31316920
Devon Corp. & Getty Oil Co.	11.64854	5.39561
Gulf Oil Corporation	14.1237100	8.0637100
John Hendrix	.0413320	.0475140
B. M. Jernigan	.546428	1.557383
Mobil Oil Company	1.4395800	2.1440200
J. E. Moran Trust	.5466178	1.5577384
Robert M. Moran	.7116100	1.8527389
Mrs. Ross Sears	.3303675	.5907187
Mrs. Sally Seeber	.1651837	.2953593
Shell Oil Company	22.3280180	23.4165980
Southland Royalty Co. (Aztec Oil & Gas)	6.6799400	4.33109000
Morris and Irma Spear	.0619984	.0712715
Mrs. Van J. Vandiver	.1651837	.2953593
S. D. Young	.3303675	.5907187
Linda P. Parrish	.0970543	.173523
M. C. Parrish, Jr. (Estate)	.2056983	.6325718
Linda P. Richardson (Trustee)	.1406680	.2515129
	<u>91.532554</u>	<u>85.794765</u>

COMBINED PARTICIPATION
EAST BLINEBRY UNIT - EAST DRINKARD UNIT

	<u>PHASE I</u>	<u>PHASE II</u>
Amoco Production Company	6.47741	8.851440
Atlantic Richfield Company	19.43335	19.464520
Chevron Oil Company	6.47744	8.851440
Continental Oil Company	6.47744	8.851440
Devon Corp. & Getty Oil Co.	8.96878	4.99741
Gulf Oil Company	8.56379	7.110000
John Hendrix	.05403	.048420
Mobil Oil Company	1.75290	1.606070
J. E. Moran Trust	.73483	.970040
Robert M. Moran	.79340	1.074770
Mrs. Ross Sears	.11714	.209450
Mrs. Sally Seeber	.05857	.104720
Shell Oil Company	23.53089	21.315510
Southland Royalty Co. (Aztec Oil & Gas)	4.62779	2.600900
Morris and Irma Spear	.08105	.072630
Mrs. Van J. Vandiver	.05857	.104720
S. D. Young	.11714	.20945
Linda P. Parrish	.03441	.06152
M. C. Parrish, Jr. (Estate)	.31980	.41493
Linda P. Richardson (Trustee)	.04987	.08918
	<u>89.46343</u>	<u>87.97861</u>

[illegible]

Royalty Interest
Ratified by Tract

Unit Participation by Tract	
Ratified	Unsigned

Tract #1	1.000000	000000	209529	000000	209529
Tract #1A					
Tract #2	.403212	.596788	.014114	.020890	.035004
Tract #3	.963021	.036978	.056406	.002166	.058572
Tract #4	.954688	.045304	.006502	.000309	.006811
Tract #5	.954664	.045296	.009567	.000454	.010021
Tract #6	.949704	.050152	.000617	.000031	.000648
Tract #7	.974904	.024992	.009105	.000233	.009338
Tract #8	.919216	.080712	.000597	.000052	.000649
Tract #9	.974912	.024992	.000633	.000016	.000649
Tract #10	.921034	.078943	.046946	.004024	.050971
Tract #11	.909079	.090909	.025375	.002537	.027912
Tract #12	.694100	.305876	.029874	.013165	.043039
Tract #13	.626626	.032094	.047791	.028469	.076260
Tract #14	.541672	.458328	.018011	.015239	.033250
Tract #15	.304350	.695650	.013833	.031618	.045451
Tract #16	.565344	.434656	.042397	.032597	.074994
Tract #17	.565360	.434640	.029742	.022866	.052608
Tract #18	.529704	.470296	.005923	.005259	.011182
Tract #19	1.000000	-0+	.140569	-0-	.140569
Tract #20	1.000000	-0-	.082620	-0-	.082620
Tract #21	.809520	.190480	.017683	.004161	.021844
Tract #22	.809528	.190472	.006530	.001537	.008067
			<u>.01637</u>	<u>.106537</u>	<u>.000000</u>

.209529	000000	.209529
.014114	.020890	.035004
.056406	.002166	.058572
.006502	.000309	.006811
.009567	.000454	.010021
.000617	.000031	.000648
.009105	.000233	.009338
.000597	.000052	.000649
.000633	.000016	.000649
.046946	.004024	.050971
.025375	.002537	.027912
.029874	.013165	.043039
.047791	.028469	.076260
.018011	.015239	.033250
.013833	.031618	.045451
.042397	.032597	.074994
.029742	.022866	.052608
.005923	.005259	.011182
.140569	-0-	.140569
.082620	-0-	.082620
.017683	.004161	.021844
.006530	.001537	.008067
.814364	.185636	1.000000

BLINEBRY PHASE II
STATUS OF ROYALTY INTERESTS RATIFICATIONS

	<u>Royalty Interest Ratified by Tract</u>	<u>Unsigned Interest by Tract</u>	<u>Unit Participation by Tract Ratified</u>	<u>Unsigned by Tract</u>	<u>Total Participi by Tract</u>
Tract #1	1.000000	000000	.386311	000000	.386311
Tract #1A					
Tract #2	.403212	.596788	.006655	.009849	.016504
Tract #3	.963021	.036978	.045224	.001736	.046960
Tract #4	.954688	.045304	.009339	.000443	.009782
Tract #5	.954664	.045296	.015937	.000756	.016693
Tract #6	.949704	.050152	.008455	.000447	.008902
Tract #7	.974904	.024992	.012716	.000326	.013043
Tract #8	.919216	.080712	.006995	.000614	.007609
Tract #9	.974912	.024992	.005312	.000136	.005449
Tract #10	.921034	.078943	.034153	.002927	.037081
Tract #11	.909079	.090909	.027893	.002789	.030682
Tract #12	.694100	.305876	.032162	.014173	.046335
Tract #13	.626626	.032094	.038504	.022937	.061441
Tract #14	.541672	.458328	.023226	.019652	.042878
Tract #15	.304350	.695650	.014162	.032370	.046532
Tract #16	.565344	.434656	.027016	.020770	.047786
Tract #17	.565360	.434640	.014333	.011019	.025352
Tract #18	.529704	.470296	.002129	.001890	.004019
Tract #19	1.000000	-0-	.065347	-0-	.065347
Tract #20	1.000000	-0-	.049215	-0-	.049215
Tract #21	.809520	.190480	.018604	.004378	.022982
Tract #22	.809528	.190472	.007980	.001877	.009857
			<u>.851668</u>	<u>.148332</u>	<u>1.000000</u>

258B

DRINKARD PHASE I
STATUS OF ROYALTY INTERESTS RATIFICATIONS

6209 6575 258B
5998
Ct (R) 4-11
Ct 5-9-87

Tract #	Royalty Interest		Unsigned		Unit Participation by Tract		Total Participation by Tract	
	Ratified by Tract	Tract	Interest by Tract	Tract	Ratified	Unsigned	by Tract	by Tract
Tract #1	1.000000	000000			.207599	000000		.207599
Tract #1A					.026429	000000		.026429
Tract #2	.403212	.596788			.026934	.039865		.066799
Tract #3	.963021	.036978			.038212	.001467		.039679
Tract #4	.954688	.045304			.000620	.000029		.000649
Tract #5	.954664	.045296			.009854	.000467		.010318
Tract #6	.949704	.050152			.000617	.000033		.000650
Tract #7	.974904	.024992			.001052	.000027		.001079
Tract #8	.919216	.080712			.010812	.000949		.011761
Tract #9	.974912	.024992			.000633	.000016		.000649
Tract #10	.921034	.078943			.024350	.002087		.026438
Tract #11	.909079	.090909			.017185	.001718		.018903
Tract #12	.694100	.305876			.032726	.014421		.047147
Tract #13	.626626	.032094			.039219	.023363		.062582
Tract #14	.541672	.458328			.063602	.053815		.117417
Tract #15	.304350	.695650			.000804	.001837		.002641
Tract #16	.565344	.434656			.065826	.050609		.116435
Tract #17	.565360	.434640			.018645	.014334		.032979
Tract #18	.529704	.470296			.005036	.004472		.009508
Tract #19	1.000000	-0-			.141886	-0-		.141886
Tract #20	1.000000	-0-			.039022	.039022		.039022
Tract #21	.809520	.190480			.019283	.004537		.023819
Tract #22	.809528	.190472			.003956	.000931		.004887
					.794299	.205701		1.000000

DRINKARD PHASE II
STATUS OF ROYALTY INTERESTS RATIFICATIONS

	Royalty Interest Ratified by Tract	Unsigned Interest by Tract	Unit Participation by Tract Ratified	Unsigned	Total Participation by Tract
Tract #1	1.000000	000000	.168338	000000	.168338
Tract #1A			.047257	000000	.047257
Tract #2	.403212	.596788	.017463	.025847	.043310
Tract #3	.963021	.036978	.043926	.001687	.045613
Tract #4	.954688	.045304	.000123	.000006	.000129
Tract #5	.954664	.045296	.000123	.000006	.000129
Tract #6	.949704	.050152	.000123	.000006	.000129
Tract #7	.974904	.024992	.000126	.000003	.000129
Tract #8	.919216	.080712	.003290	.000289	.003579
Tract #9	.974912	.024992	.000126	.000003	.000129
Tract #10	.921034	.078943	.080124	.006867	.086991
Tract #11	.909079	.090909	.032171	.003217	.035388
Tract #12	.694100	.305876	.041822	.018430	.060253
Tract #13	.626626	.032094	.077847	.046373	.124220
Tract #14	.541672	.458328	.027894	.023603	.051497
Tract #15	.304350	.695650	.000119	.000271	.000390
Tract #16	.565344	.434656	.030504	.023452	.053956
Tract #17	.565360	.434640	.024737	.019018	.043755
Tract #18	.529704	.470296	.004917	.004365	.009282
Tract #19	1.000000	-0-	.125818	-0-	.125818
Tract #20	1.000000	-0-	.058399	-0-	.058399
Tract #21	.809520	.190480	.023589	.005550	.029139
Tract #22	.809528	.190472	.009841	.002316	.012157
			.818677	.181323	1.000000

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PHASE I: COMBINED ROYALTY INTEREST RATIFICATIONS

	<u>Blinebry</u> <u>(64.544%)</u>	<u>Drinkard</u> <u>(35.456%)</u>	<u>Total Combined</u> <u>Royalty Ratified</u>
Royalty Ratified	52.56231%	28.162665%	80.724975%

PHASE II: COMBINED ROYALTY INTEREST RATIFICATIONS

	<u>Blinebry</u> <u>(64.544%)</u>	<u>Drinkard</u> <u>(35.456%)</u>	<u>Total Combined</u> <u>Royalty Ratified</u>
Royalty Ratified	54.970059%	29.027012%	83.997071%

INDEXED THE	
OIL COMMISSION	
6069	2000
6000	2070
Case No.	5998
Submitted by	Atk-Richfield
Hearing Date	Oct 20/77

LIST OF UNSIGNED ROYALTY INTEREST
BY TRACT

Tract No. 2

Estate of Max Gutman,	.0813802	
D. L. Gutman, Trustee		
Daniel L. Gutman	.0271267	
Dorothy Gutman, Trustee	.0406901	
Irrev. Trust, Charles Gutman		
	<u>.149197</u>	<u>.25 = .596788</u>

CHL 607
6009
6000 6030
6000 5998
259
Att. Richard
Oct 20 1971

Tract No. 3

Frederick L. Ercoline, Dec'd	.0019531	
Paul W. Godfrey, Dec'd	.0009765	
(Wife, Helen)		
Ann W. Marshall	.0007162	
Ellie Spear	.0009765	
	<u>.0046223</u>	<u>/.125 = .036978</u>

Tract No. 4

Medora M. Lemaster	.001172	
Muriel T. McNeil Life Estate	.001953	
Moore Trust	.001757	
J. Hiram Moore, Trustee		
Betty Jane, Michael H. Moore		
J. L. and Jessie Reynolds	.000781	
	<u>.005663</u>	<u>/.125 = .045304</u>

Tract No. 5

Medora M. Lemaster	.001171	
Muriel T. McNeil Life Estate	.001953	
Moore Trust	.001757	
J. Hiram Moore, Trustee		
Betty Jane and Michael H. Moore		
J. L. and Jessie Reynolds	.000781	
	<u>.005662</u>	<u>/.125 = .045296</u>

Tract No. 6

Medora M. Lemaster	.001171	
Oscar D. Long, Dec'd	.001388	
(Wife, Lillian I.)		
Muriel T. McNeil Life Estate	.001953	
Moore Trust	.001757	
J. Hiram Moore, Trustee		
Betty Jane and Michael H. Moore		
	<u>.006269</u>	<u>/.125 = .050152</u>

Tract No. 7

Muriel T. McNeil Life Estate	.001953	
Medora M. Lemaster	.001171	
	<u>.003124</u>	<u>/.125 = .024992</u>

Tract No. 8

Medora M. Lemaster	.001171	
Moore Trust	.001757	
J. Hiram Moore, Trustee		
Betty Jane and Michael H. Moore		
Francis R. Reeves	.005208	
Muriel T. McNeil Life Estate	.001953	
	<u>.010089</u>	<u>/.125 = .080712</u>

Tract No. 9

Medora M. Lemaster	.001171		
Muriel T. McNeil Life Estate	.001953		
	<u>.003124</u>	/ .125 =	.024992

Tract No. 10

Joe and Jessie M. Crump Fund, Jessie B. Crump, David C. Blevins, and Ft. Worth Nat'l Bank, Trustees	.011718	/ .148437 =	.078943
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Tract No. 11

Joe and Jessie M. Crump Fund, Jessie B. Crump, David C. Blevins, and Ft. Worth Nat'l Bank, Trustees	.015625	/ .171875 =	.090909
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Tract No. 12

J. R. Cone, et ux	.003906		
Getty Oil Company	.041015		
Jack Markham	.001953		
John J. Atty-in-Fact	.003906		
	<u>.050780</u>	/ .166015 =	.305876

Tract No. 13

Elizabeth Bowers	.019531		
Marion C. Bowers	.004882		
O. R. Eubanks	.001953		
Ronald J. Byers	.005728		
	<u>.032094</u>	/ .08597 =	.373316

Tract No. 14

Jack Markham	.005208		
John J. Atty-in-Fact	.007813		
J. R. Cone, et ux	.010417		
J. Herd	.007812		
Robert J. Byers	.007812		
Constance Byers	.007812		
First Nat'l Bank, Lubbock, Trust, James T. S. Welborn	.010417		
	<u>.057291</u>	/ .125 =	.458328

Tract No. 15

N. B. Bunin Trust, NMP	.125		
	<u>.125</u>	/ .179688 =	.69565

Tract No. 16

Constance Byers	.001785		
John J. Christmann, Jr.	.002287		
Ft. Worth Nat'l Bank, U/W of Roy S. Magruder, Dec'd	.004464		
Elizabeth Hannifin	.004464		
Jack Markham	.002092		
Jack and Mary B. Markham	.004464		
Nora L. Markham	.002232		
Fannie G. Ratcliff, Indp. Exec. U/W, C. B. Markman, Dec'd	.002232		
J. M. Welborn	.001116		
Hubert C. Cone	.001953		
J. R. Cone, et ux	.001116		

Tract No. 16 (Continued)

Texaco, Inc.	.016071		
Mrs. Eula I. Williamson	.010044		
	<u>.565344</u>	/ .125 =	.434656

Tract No. 17

Robert J. Byers	.001785		
John J. Christmann	.002287		
J. R. Cone, et ux	.001116		
Hubert C. Cone	.001953		
Ft. Worth Nat'l Bank, U/W of Roy S. Magruder, Dec'd	.004464		
Elizabeth Hannifin	.004464		
Jack Markham	.006556		
Nora Markam	.002232		
Fannie G. Ratcliff	.002232		
Texaco, Inc.	.016071		
J. M. Welborn	.001116		
Mrs. Eula I. Williamson	.010044		
	<u>.565360</u>	/ .125 =	.434640

Tract No. 18

John J. Christmann	.001171		
Hubert C. Cone	.001953		
Jack Markham	.000976		
Mrs. Eula I. Williamson	.054687		
	<u>.058787</u>	/ .125 =	.470296

Tract No. 21

Stella Donahue	.002976		
Francis M. Stephens	.017858		
Francis M. & Ethel Stephens	.002976		
	<u>.023810</u>	/ .125 =	.190480

Tract No. 22

Stella Donahue	.002976		
Francis M. Stephens	.017857		
Francis M. & Ethel Stephens	.002976		
	<u>.023809</u>	/ .125 =	.190475

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COMBINED PARTICIPATION
UNSIGNED WORKING INTEREST
(EAST BLINEBRY UNIT - EAST DRINKARD UNIT)

	<u>PHASE I</u>	<u>PHASE II</u>
J. R. Cone	1.89406	2.22002
J. H. Herd	.25440	.29818
Hondo Drilling Company	.34116	.61001
Jack Markham	1.66532	1.95192
Ann W. Marshall	.02702	.02421
Redfern Oil Company	.38161	.44728
Summit Energy, Inc.	3.02726	3.01716
Texaco, Inc.	2.94570	3.45264
	<u>10.53657</u>	<u>12.02139</u>

CIL 60		260
6059	6070	
6060	5998	
Summit	at-Rusfeld	
Hearing Date	Oct 20, 77	



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
FEDERAL CENTER, DENVER, COLORADO 80225

IN REPLY REFER TO:

JAN 21 1977

Atlantic Richfield Company
Attention: Mr. Jerry Tweed
P. O. Box 1610
Midland, Texas 79701

No. 6070

Gentlemen:

Your application of September 1, 1976, filed with the Assistant Area Oil and Gas Supervisor, Roswell, New Mexico, requests the designation of the East Drinkard unit area embracing 3,080.00 acres, more or less, in Lea County, New Mexico, as logically subject to exploration and development under the unitization provisions of the Mineral Leasing Act as amended.

Pursuant to unit plan regulations 30 GFR 226 the land requested as outlined on your plat marked "Exhibit 'A' East Drinkard Unit" is hereby designated as a logical unit area.

Your proposed form of unit agreement will be acceptable. One copy of the proposed form is enclosed and one copy is being sent to the Oil and Gas Supervisor, Albuquerque, New Mexico. We hereby concur in the Supervisor's recommendation that the proposed basis for allocating unitized substances be accepted.

If conditions are such that further modification of said standard form is deemed necessary, three copies of the proposed modifications with appropriate justification must be submitted to this office through the Oil and Gas Supervisor for preliminary approval.

In the absence of any other type of land requiring special provisions or of any objections not now apparent, a duly executed agreement identical to the form returned herewith will be approved if submitted in approvable status within a reasonable period of time.

However, notice is hereby given that the right is reserved to deny approval of any executed agreement submitted which, in our opinion, does not have the full commitment of sufficient lands to afford effective control of operations in the unit area.

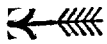
When the executed agreement is transmitted to the Supervisor for approval include the latest status of all acreage. In preparation of Exhibits "A" and "B", follow closely the format of the sample exhibits attached to the standard form of unit agreement for unproved areas (1968 reprint).

Sincerely yours,



Regional Conservation Manager
For the Director

Enclosure

cc:
N.M.O.C.C., Santa Fe  This Copy 1-

J. R. CONE
1423 NORTH AVENUE P
P. O. BOX 871
LUBBOCK, TEXAS 79408

November 2, 1977

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

Attention: Mr. Joe D. Ramey

Re: Case No. 6069, 6000, 6070, & 5998
Atlantic Richfield Company Applica-
tion for Unitization & Operation of
East Blinbry and East Drinkard Units
Lea County, New Mexico

Gentlemen:

In response to your request at the close of the Oil Conservation Commission hearing of the referenced cases on October 20, 1977 we enclose herewith our suggestions for modification of the Unit and Unit Operating Agreement for each of the referenced Units.

The language suggested through the enclosures for modification of the Unit and Unit Operating Agreement is adaptable for both the East Blinbry and East Drinkard Units through insertion of the appropriate phrases "East Plinbry" and "East Drinkard" respectively.

The adoption of the recommended modification of language for the respective Unit and Unit Operating Agreement will in our opinion make these Units much more palatable for the protesting non signers of the Agreement.

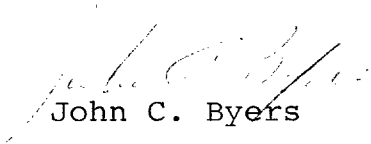
We remain convinced that the most practical solution to the differences between the applicant and protestants to the referenced causes is the modification of exhibits to the Unit and Unit Operating Agreement to an extent that the Unit would eliminate the inclusion of Tract 13 and Tract 15 as defined by the Unit Agreement. This can be accomplished quite easily through Section 14 of the Unit Agreement and ballot vote of the ratifying Working Interest Owners now committed to the Unit. Modification of Exhibits "A", "B" and "C" to the Unit Agreement and Exhibit "E" to the Unit Operating Agreement can be accomplished quite easily to adapt them to a reduced Unit area. Such a reduction from 3,080 to 2,800 acres could not possibly influence initial development efficiency to the extent inferred by Atlantic during the hearing.

Oil Conservation Commission
Page Two

As stated during the hearing, the Working Interest Owners in Tract 13 and Tract 15 of the proposed Units maintain a strong spirit of cooperation between their leases and the proposed Unit if the risk of more than only marginally effective performance of the proposed program could be realistically expected at this time. The modifications proposed here are adequate to prove or disprove the effectiveness of the proposed plan of operation, therefore, if the program is shown to be economically effective then there should be no question as to the desires of the non-consenting owners cooperation toward expansion of the system into their leases.

If we can be of further assistance to you in resolving this matter, we will be pleased to have you call upon us.

Yours very truly,



John C. Byers

JCB:bp
Enclosures

cc: Texaco, Inc.
Attention: Mr. Morris Todd

W. Thomas Kellahin

UNIT AGREEMENT

SECTION 11, page 13

An additional paragraph to be added after that ending at page 13, line 25.

It is recognized by the parties hereto that the Unitized Formation is stratigraphically adjacent to one or more Nonunitized Formations which are productive or known to be productive of oil or gas in commercial quantities.

To the end result that minimum infringement upon the rights of the owners of oil and gas reserves known to be held in these adjacent Nonunitized Formations and that the Unit Working Interest Owners hereto avoid to as great a degree as possible the risk of liability that may result from damage to these Nonunitized reserves; the initial Plan of Operation as provided hereby shall confine initial development of the Unit Area to that portion of the area, as much as can be deemed practical by the Working Interest Owners, the Supervisor and the Commission, to the Northern and Eastern portion of the Unitized Area (generally that occupied by Federal Lands and those immediately adjacent thereto as set out in Exhibit "A" hereto) and confine such operation to this initial development area until such time that the method of operation is proven applicable and economically successful to an extent that in the opinion of the Working Interest Owners, the Supervisor and the Commission the application of such production practices as set out in the Plan of Operation, or modification thereof as herein provided, can without reasonable doubt result in the economic recovery of substantial additional oil and gas reserves and that the application of such practices to the entire Unit Area or an expanded portion thereof will not result in material risk and should in fact result in the economic recovery of additional natural resources that are substantially greater than that of the nonunitized oil and gas, plus that of the Unitized Formations that can be recovered through continued operation of the undeveloped area at that time.

UNIT OPERATING AGREEMENT

Article 10

SECTION 10.4, page 14, line 16

Omit the phrase "except as provided in Article 10.5 hereof"

SECTION 10.5, page 15, line 12

Change the "Phase I" to "Phase II" to make this section conform to Section 10.4

SECTION 10.6, page 15, line 22

Eliminate the entire section such that the Agreement will conform to Section 10.4

Article 11, page 17

SECTION 11.1 Rephrase the entire section to read:

11.1 Well Bore As of the effective date of the Unit Agreement each forty (40) acre subdivision of any tract committed hereto shall be required to have a well bore which in the opinion of the Working Interest Owners is usable for producing Unitized Substances or for injecting Outside Substances into the Unitized Formation. If any forty (40) acre subdivision does not have a usable well bore as above provided, the party or parties contributing the same shall have the option for ninety (90) days from such Effective Date within which they may provide such a usable well bore acceptable to the Working Interest Owners.

At the end of said ninety (90) day period if a usable well bore has not been provided, Working Interest Owners shall have the right, but not the obligation, to re-enter, rework or clean out any well bore not then producing hydrocarbons or to drill a new well to provide a usable well bore in such forty (40) acre subdivision. If Working Interest Owners approve by vote and exercise their right as provided herein, the party or parties contributing the forty (40) acre subdivision in which a usable well bore was not provided shall bear all cost and expenses in connection therewith up to and including the sum of Two Hundred Thousand (\$200,000) Dollars. If the operation to provide such a usable well bore by the Working Interest Owners cost in excess of Two Hundred Thousand (\$200,000) Dollars, the additional cost in excess of Two Hundred Thousand (\$200,000) Dollars shall be borne by the Working Interest Owners as though it were any

Article 11.1 continued

other item of Unit Cost and charged to the Working Interest Owners on the basis of their Phase II Combined Unit Participation. In lieu of said cash payment of the cost of providing such usable well bore up to and including Two Hundred Thousand (\$200,000) Dollars, said party or parties may notify the Working Interest Owners that they elect not to pay in cash their share of the cost as herein provided but instead will bear such cost out of all or a part of its share of Unit Production as provided herein. Upon serving such notice to the Working Interest Owners of their election to have their share of such cost paid out of Unit Production, the party or parties may further elect to have the forty (40) acre subdivision on which the Working Interest Owners elected to provide a usable well bore set aside as a separate Tract to the Unit. Upon receipt of such notification from the party or parties so electing to have the forty (40) acre subdivision set aside as a separate Tract, the Unit Operator will determine new participation percentage for the new tract and that portion of the original tract remaining after separation of the forty (40) acre subdivision in the same manner and based upon the same data as that employed in determining Unit Participation Percentage as set out in Exhibit "C" of the Unit Agreement and defined in Section 13 of the Unit Agreement. The Working Interest Owners would then have the option, but not the obligation, to pay said parties share of cost up to and including Two Hundred Thousand (\$200,000) Dollars. If the Working Interest Owners elect to pay such cost, then upon commencement of operation by the Working Interest Owners in accordance with the provisions of this section the party or parties contributing the forty (40) acre subdivision without a usable well located thereon shall be deemed to have relinquished to the Working Interest Owners, and the Working Interest Owners shall own and be intitled to receive, in proportion to the combined Unit Participation remaining after excluding the interest of the party or parties contributing the forty (40) acre subdivision without a usable well located thereon, all of said party or parties interest in the East Blinebry and East Drinkard Unit

Article 11.1 continued

attributable to the new tract thereto created through subdivision of the original tract, if said original tract contained more than forty (40) acres, as provided herein, until the proceeds or market value thereof after accounting for all cost of development or operation shall equal that amount paid by the Working Interest Owners on behalf of the non contributing parties together with interest thereon at the rate specified in Paragraph 3 of Exhibit "F" hereof.

In the event that the Working Interest Owners, the Supervisor and the Commission approve a subsequent to the initial Plan of Operation as provided in Section 11 of the Unit Agreement which would encourage the expansion of the initial development area into portions of the Unit Area then producing oil, gas or other minerals from nonunitized formations underlying the Unit Area and; in the further event that said subsequent Plan of Operation finds it necessary to convert a well or wells then producing nonunitized oil, gas or other minerals in commercial quantities to a well for the purpose of injecting Outside Substances into the Unitized Formation and; it is further determined that the operation for injection of Outside Substances into the Unitized Formation and production of nonunitized oil, gas or other minerals from the common well bore is not practically feasible or would result in loss of or damage to nonunitized reserves; the Working Interest Owners of the Unit at Unit risk and expense and with the approval of the owners of said nonunitized reserves may recomplete or drill an alternate well on the same tract to render that alternate well productive of nonunitized oil, gas or other minerals from the same formation from which those resources were being recovered through the well bore which is deemed necessary for injection of Outside Substances into the Unitized Formation. If the Working Interest Owners do not elect to so provide an alternate well completion for the purpose of providing the owners of nonunitized oil, gas or other minerals a usable bore hole through which they may recover those resources then being produced, they may pay to those owners of nonunitized reserves an amount of money equal to the value of

Article 11.1 continued

that unrecovered reserve up to and including the sum of Two Hundred Thousand (\$200,000) Dollars. The value of said unrecovered reserve shall be mutually determined by the Working Interest Owners and owners of the nonunitized reserve and approved by the Commission. The payment for unrecovered reserves as above provided for by the Working Interest Owners shall be treated as any other item of expense incurred in Unitized Operations and charged to the Working Interest Owners in accord with their respective Phase II Combined Participation Percentage.

Article 13

SECTION 13.2, line 2, page 24

Delete the words "now or hereafter" and add the words "after the Effective Date Hereof" between the words "completed" and "in" to make the first two lines read: -----

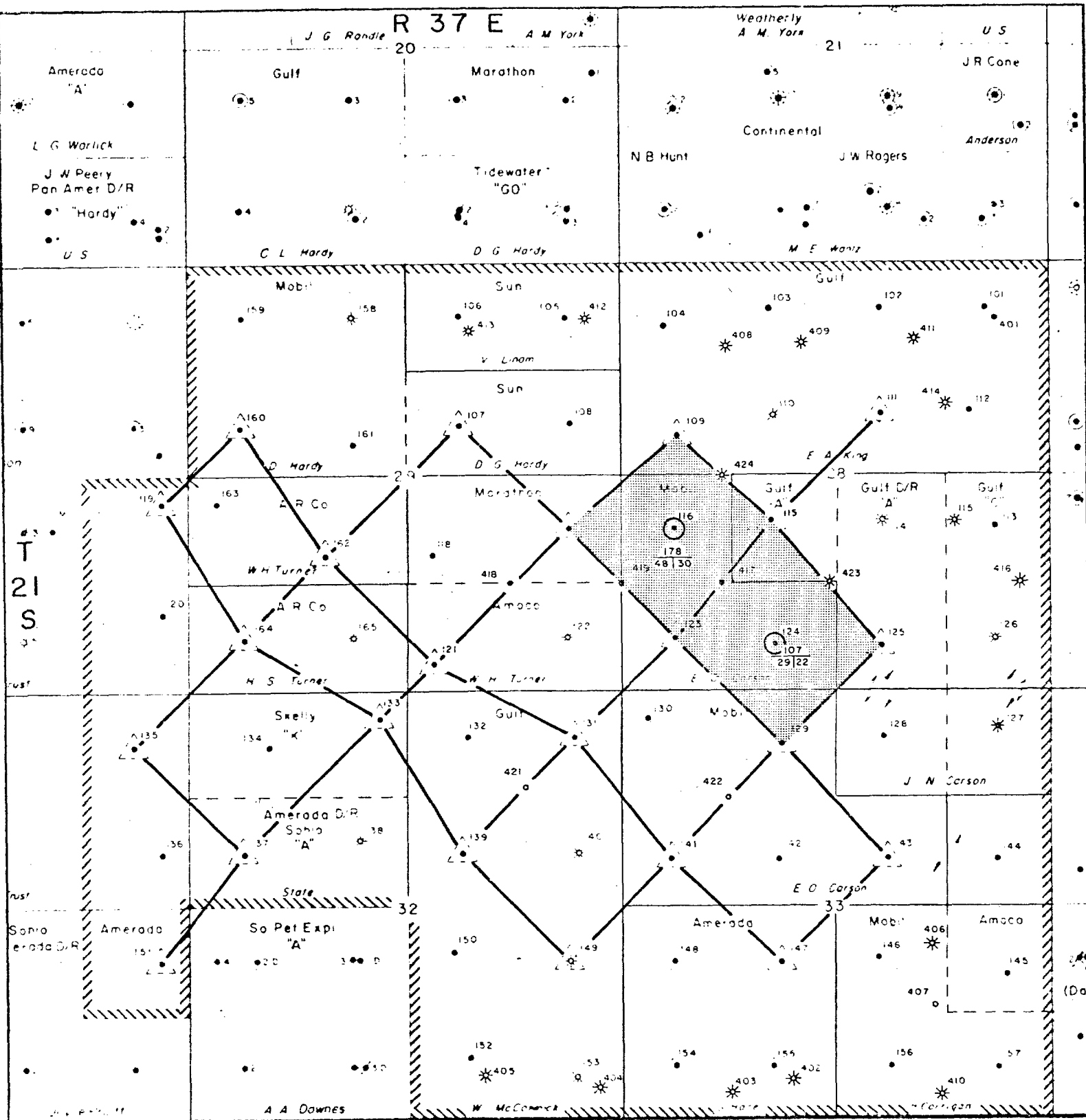
SECTION 13.2, Multiple Completion No well completed after the effective date hereof in the Unitized Formation and -----

SECTION 13.3 (a new paragraph)

13.3 Cooperation Between Owners It is recognized and agreed between the parties hereto that substantial reserves of oil, gas and other minerals are contained in nonunitized formations underlying the Unit Area. It is further acknowledged by the parties hereto that through considerate cooperative operation within existing well bores located within the Unit Area the owners of nonunitized reserves of oil, gas and other minerals can economically recover those reserves while the Working Interest Owners of the Unitized Formation conduct operations in the same well bore for recovery of Unitized Substances. Therefore, to the end that correlative rights may be protected and waste of natural resources avoided through simultaneous production of nonunitized oil, gas and other mineral reserves and Unitized Substances through existing common well bores; the parties hereto approve and encourage the cooperative operation by owners of nonunitized oil and gas rights and the Unit within any well bore now existing in the Unit Area. Both the Unit Operator and Owners of nonunitized oil and gas rights shall

Article 13 continued

respect the rights of each other in day to day operations within such common well bores and shall at all times exercise diligence in avoiding unnecessary interference with each others conduct of his operations by maintaining good communications between the parties and serving notice as far in advance as is practicable before conducting any down hole work in any commonly used bore hole. Any operation conducted in a commonly used bore hole by the Unit Operator shall be at the sole cost, risk and expense of the Unit Working Interest Owners and similarly any operation in such a bore hole by the owners of nonunitized substances shall be at the sole cost, risk and expense of the owners of nonunitized oil, gas and other mineral rights. The owners of nonunitized oil and gas rights and the Unit Working Interest Owners shall have equal rights to conduct operations in any bore hole that has economically recoverable oil and gas reserves in either unitized or nonunitized formations as of the effective date hereof.



ARCO Ex 9
rehearing 2/21

LEGEND

PILOT AREA

SECONDARY PRODUCTION
MB. CUMULATIVE
BOPD B WPD
CURRENT RATE

30
10 | 50

PILOT AREA

OIL COMPANY

Atlantic Richfield Company

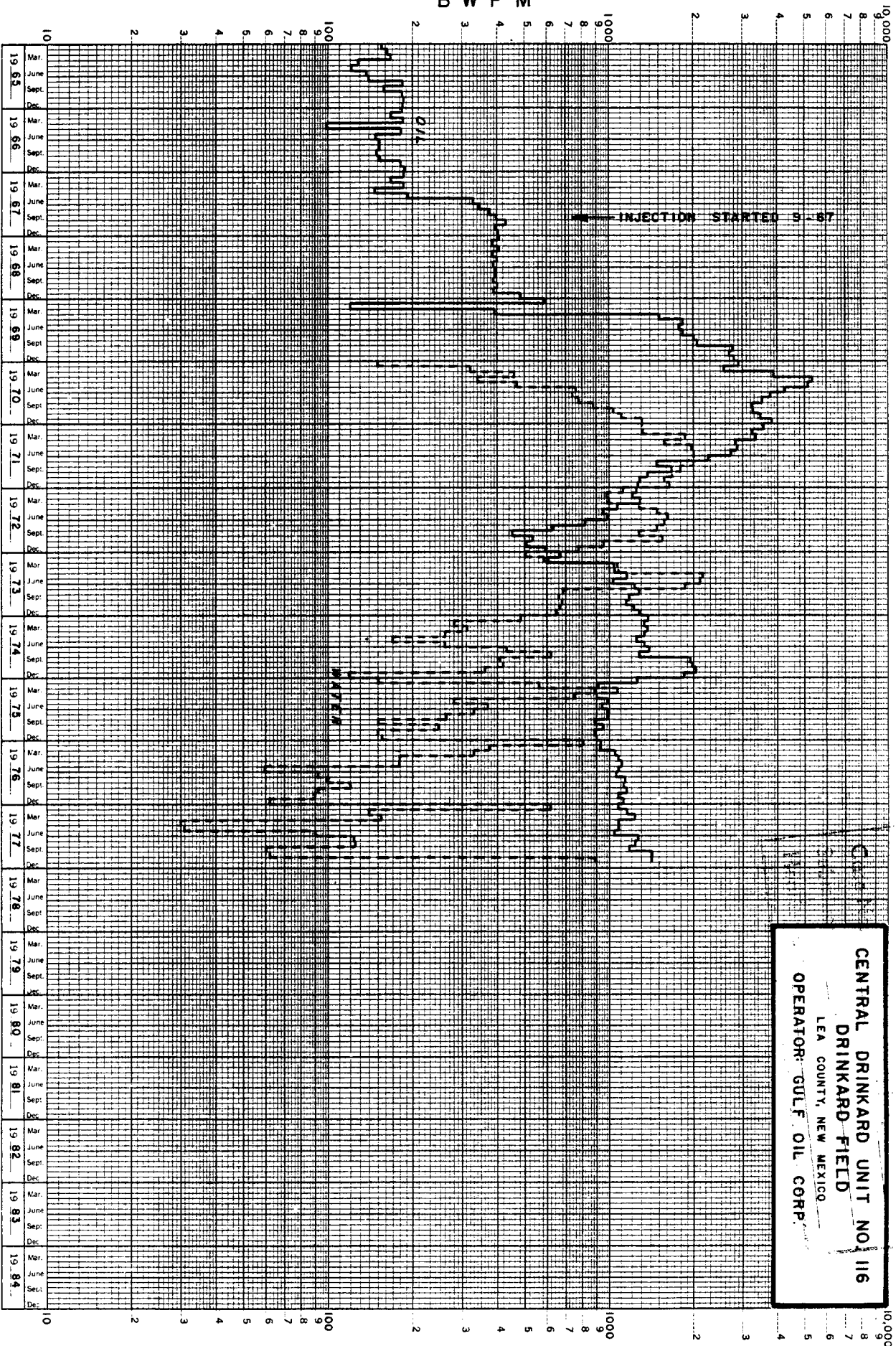
Central Drinkard Unit
LEA COUNTY, NEW MEXICO

PILOT AREA

SCALE 1" = 1000'

DATE 2/21

B O P M
B W P M

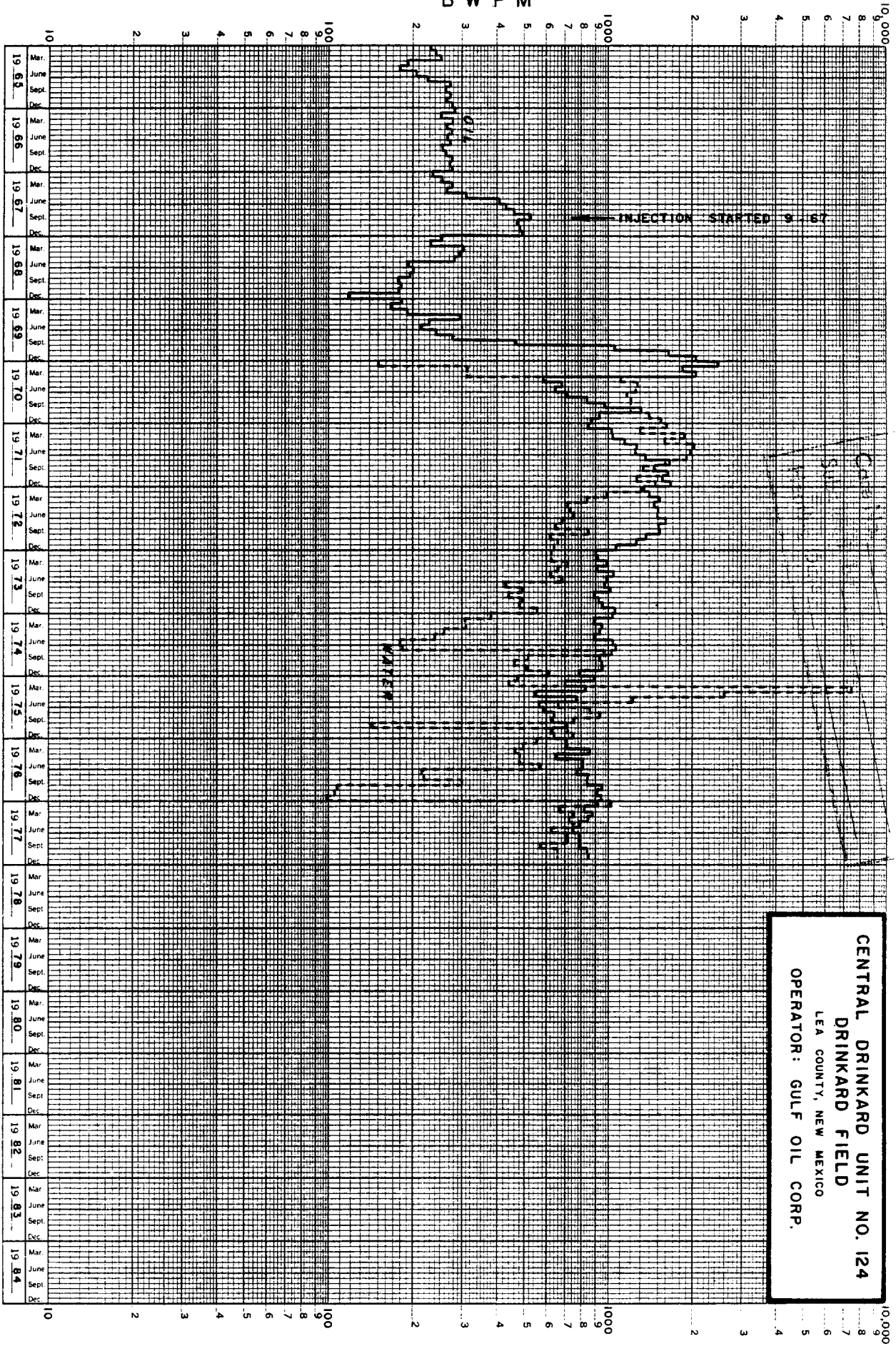


CENTRAL DRINKARD UNIT NO. 116
DRINKARD FIELD
LEA COUNTY, NEW MEXICO
OPERATOR: GULF OIL CORP.

ARCO 2x10
releasing 2/21

PRCO 3-11-11
 hearing 2/21

B O P M
 B W P M



CENTRAL DRINKARD UNIT NO. 124
 DRINKARD FIELD
 LEA COUNTY, NEW MEXICO
 OPERATOR: GULF OIL CORP.

OIL CO.

#11

PRCO 3-11-11
 hearing 2/21

CENTRAL DRINKARD UNIT
Performance Analysis
Dual 5-Spot Pilot
Lea County, New Mexico

5-Spot No. 1
CDU #116 Center Producer

4 Injectors

CDU #109	208.4
CDU #115	164.9
CDU #117	152.2
CDU #123	<u>234.9</u>

5-Spot No. 2
CDU #124 Central Producer

4 Injectors

CDU #15	164.8
CDU #123	234.9
CDU #125	175.9
CDU #129	<u>107.2</u>

Combine 5-Spot
Performance

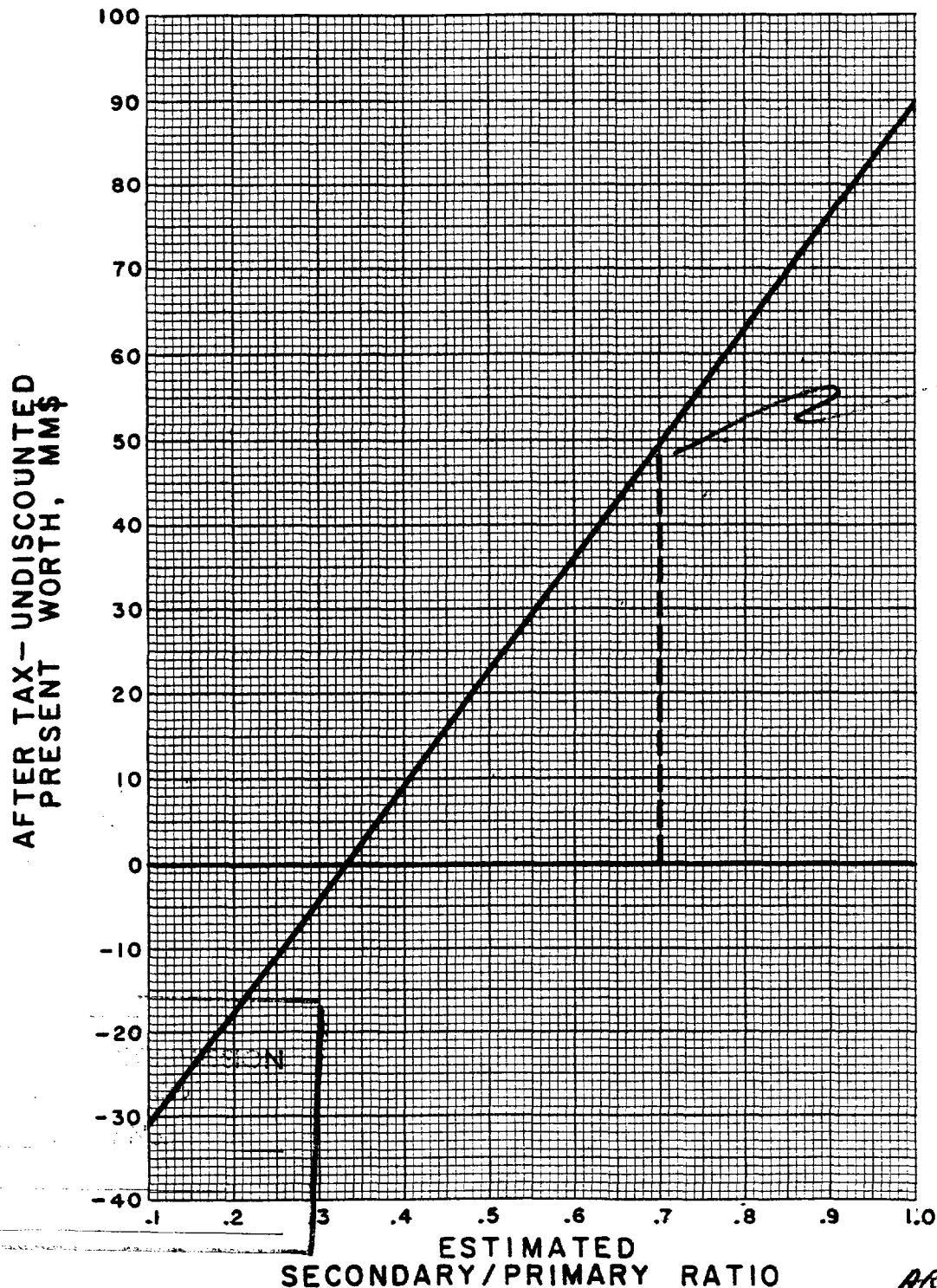
Injector Primary Production, MBO	760.4	682.8	1443.2
Injector One Quarter Primary, MBO	190.1	170.7	360.8
Primary Production, Producer, MBO	CDU #116 197.6	CDU #124 215.4	413.0
Total Primary, Full 80-Acre, 5-Spot, MBO	287.8	386.1	773.9
Total Secondary, MBO, as of 12/1/77	CDU #116 178.0	CDU #124 107.2	285.0
Estimated Remaining Secondary, MBO	124.7	79.0	203.7
Estimated Ultimate Secondary, MBO	302.7	186.2	488.9
Estimated Secondary/Primary Ratio	0.78	0.482	0.632

#12

ARCO Ex 12
releasing 2/21

EAST BLINEBRY
EAST DRINKARD UNITS
LEA COUNTY, NEW MEXICO

SENSITIVITY ANALYSIS
SECONDARY / PRIMARY RATIO



\$48.3 million
@ 70%
efficiency

ARCO Ex 13
reheating 2/21

SUPPLEMENTAL JOINDER TO UNIT AGREEMENT
AND/OR UNIT OPERATING AGREEMENT, EAST BLINEBRY UNIT,
LEA COUNTY, NEW MEXICO

WHEREAS, in Cases Nos. 5998, 6000, 6069 and 6070, Orders Nos. R-5591, R-5592, R-5593 and R-5594, the New Mexico Oil Conservation Commission, on December 27, 1977, approved for statutory unitization and secondary waterflood operations the East Blinebry Unit Area and the East Drinkard Unit Area in accordance with unit agreements and unit operating agreements dated August 1, 1977, as submitted and proposed by Atlantic Richfield Company; and

WHEREAS, said orders are being contested by certain working interest owners (J. R. Cone and Texaco Inc. in Tract 13 and Summit Energy, Inc., in Tract 15), the Commission on January 20, 1978, granted a rehearing requested by said contestants, to be heard February 21, 1978, and thereafter, within 20 days after any further ruling of the Commission, the contestants or any interested party dissatisfied with the Commission's action may appeal to the courts; and

WHEREAS, the expiration date for making said units effective, as heretofore extended by approval of more than 75% of the working interest owners committed to said agreements as provided in Sections 23 thereof, is July 1, 1978, and it is desired to extend such expiration date beyond the period of delay occasioned by any court appeals from final unitization orders of the Commission in the cases now pending before it,

NOW, THEREFORE, each undersigned owner of a royalty interest and each undersigned owner of a working interest within the unit area hereby agrees that the expiration date provided in Section 23 of instrument entitled "Unit Agreement for the Development and Operation of the East Blinebry Unit, Lea County, New Mexico," dated August 1, 1977, for making said unit effective, is hereby extended from July 1, 1978, for the period of any court appeals from final orders of the Oil Conservation Commission, complaining of statutory unitization and waterflood operations approved by the Commission in Cases Nos. 5998, 6000, 6069 and 6070, and Orders Nos. R-5591, R-5592, R-5593 and R-5594, as same may be modified by the Commission, and for a period of 90 days after final conclusion of all such court appeals plus 90 days but in no event beyond July 1, 1980.

As supplemented hereby the unit agreement for the East Blinebry Unit is hereby ratified by each undersigned owner of a royalty interest and both the unit agreement and the unit operating agreement for the East Blinebry Unit is hereby ratified by each undersigned owner of working interest. This instrument may be executed in counterparts and shall bind the interest of each party executing a counterpart whether or not executed by all parties having an interest.

EXECUTED this _____ day of _____, 1978.

RECEIVED THE	
OIL CONSERVATION COMMISSION	
5998	Summit Energy, Inc.
6000	6069
Case No. 6070	Tract No. 14
All Rich	
2/21/78	

(INDIVIDUAL)

STATE OF)

COUNTY OF)

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

My Commission Expires:

Notary Public in and for
_____ County, _____

(JOINT)

STATE OF)

COUNTY OF)

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

My Commission Expires:

Notary Public in and for
_____ County, _____

(CORPORATE)

STATE OF)

COUNTY OF)

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

My Commission Expires:

Notary Public in and for
_____ County, _____

SUPPLEMENTAL JOINDER TO UNIT AGREEMENT
AND/OR UNIT OPERATING AGREEMENT, EAST DRINKARD UNIT,
LEA COUNTY, NEW MEXICO

WHEREAS, in Cases Nos. 5998, 6000, 6069 and 6070, Orders Nos. R-5591, R-5592, R-5593 and R-5594, the New Mexico Oil Conservation Commission, on December 27, 1977, approved for statutory unitization and secondary waterflood operations the East Blinbry Unit Area and the East Drinkard Unit Area in accordance with unit agreements and unit operating agreements dated August 1, 1977, as submitted and proposed by Atlantic Richfield Company; and

WHEREAS, said orders are being contested by certain working interest owners (J. R. Cone and Texaco Inc. in Tract 13 and Summit Energy, Inc., in Tract 15), the Commission on January 20, 1978, granted a rehearing requested by said contestants, to be heard February 21, 1978, and thereafter, within 20 days after any further ruling of the Commission, the contestants or any interested party dissatisfied with the Commission's action may appeal to the courts; and

WHEREAS, the expiration date for making said units effective, as heretofore extended by approval of more than 75% of the working interest owners committed to said agreements as provided in Sections 23 thereof, is July 1, 1978, and it is desired to extend such expiration date beyond the period of delay occasioned by any court appeals from final unitization orders of the Commission in the cases now pending before it,

NOW, THEREFORE, each undersigned owner of a royalty interest and each undersigned owner of a working interest within the unit area hereby agrees that the expiration date provided in Section 23 of instrument entitled "Unit Agreement for the Development and Operation of the East Drinkard Unit, Lea County, New Mexico," dated August 1, 1977, for making said unit effective, is hereby extended from July 1, 1978, for the period of any court appeals from final orders of the Oil Conservation Commission, complaining of statutory unitization and waterflood operations approved by the Commission in Cases Nos. 5998, 6000, 6069 and 6070, and Orders Nos. R-5591, R-5592, R-5593 and R-5594, as same may be modified by the Commission, and for a period of 90 days after final conclusion of all such court appeals plus 90 days but in no event beyond July 1, 1980.

As supplemented hereby the unit agreement for the East Drinkard Unit is hereby ratified by each undersigned owner of a royalty interest and both the unit agreement and the unit operating agreement for the East Drinkard Unit is hereby ratified by each undersigned owner of working interest. This instrument may be executed in counterparts and shall bind the interest of each party executing a counterpart whether or not executed by all parties having an interest.

EXECUTED this _____ day of _____, 1978.

SAVED BY THE
OIL CONSERVATION COMMISSION
5998 6000 6069 6070
Summit Energy, Inc. No. 15
Atl. Rich.
2/21/78

(INDIVIDUAL)

STATE OF)

COUNTY OF)

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

My Commission Expires:

Notary Public in and for
_____ County, _____

(JOINT)

STATE OF)

COUNTY OF)

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

My Commission Expires:

Notary Public in and for
_____ County, _____

(CORPORATE)

STATE OF)

COUNTY OF)

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

My Commission Expires:

Notary Public in and for
_____ County, _____