

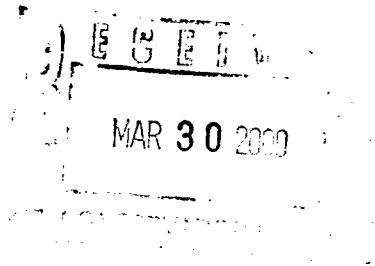


**ARCO Permian**

600 North Marienfeld  
Midland, TX 79701-4373  
P.O. Box 1610  
Midland, TX 79702-1610  
Telephone 915-688-5570  
Facsimile 915-688-5956  
Email [ecasbee@mail.arco.com](mailto:ecasbee@mail.arco.com)

**Elizabeth A. Casbeer**  
Regulatory/Compliance Analyst

AMEND PLC 4/14/00



March 27, 2000

#12394

Bureau of Land Management  
Roswell District  
2909 West Second Street  
Roswell, New Mexico 88201

New Mexico Oil Conservation Division  
ATTN: David Catanach  
2040 S. Pacheco Street  
Santa Fe, New Mexico 87505

RE: Application to Surface Commingle  
Red Lake Area  
Section 3 & 4, T-18-S, R-27-E  
Eddy Co., NM

Gentlemen:

ARCO Permian requests approval to modify current surface commingle permit to allow surface commingling by well test for four leases in Sections 3 and 4, T-18-S, R-27-E Eddy County New Mexico. Oil and gas will continue to be measured and stored off lease as approved in the earlier permit. The four leases are the:

Red Lake 3 Federal - SW/4 of NW/4 of Sec. 3, 40 acres, Lease No. LC028805(B)  
Vermillion 3 Federal - SE/4 of NW/4 of Sec. 3, 40 acres, Lease No. LC055465(B)  
West Red Lake 4 Federal - N/2 of NW/4 of Sec. 4, 79.29 acres, Lease No. LC065478(A)  
Lago Rosa 4 Federal - NW/4 of SW/4 of Sec. 4, 38.85 acres, Lease No. NMNM29280

Our proposal is explained in the attached schematic attachments 1 to 4. The first attachment shows the four leases. The second gives an over view of the commingle plan. The third details the separation and metering equipment for the West Red Lake 4 and Lago Rosa 4 leases. The forth details the separation and metering equipment for the Red Lake 3 and Vermillion 3 leases and the oil storage and sales plan for the oil production.

The wells on these leases have declined from their initial rates to less than 30 BOPD. The separation equipment in use to individually meter each well is needed on other leases to reduce cost of development. Numerous other leases in this area have been granted approval to commingle and allocate by well test. They include Cases 11845, 11846, 11847, 12061, and 12155.

ARCO Permian is the only working interest owner in the four leases. In section 4 the West Red Lake 4 Federal Lease No. LC065478 (A) and the Lago Rosa 4 Federal Lease No. NMNM29280 has slightly differing royalty burdens. Both leases have 1/8th federal burden. The Lago Rosa 4 has a 6.375% overriding royalty interest divided between over 30 individuals. The West Red Lake 4 has a 7.5% overriding royalty interest divided among basically the same 30 individuals.

Oil, gas and water production from the West Red Lake 4 Federal Lease, No. LC065478(A), and the Lago Rosa 4 Federal Lease, No. NMNM29280, will be combined at the satellite battery site in Sec. 4. Gas will be metered and sold at the satellite battery site and allocated to each well based on the well test. Oil from the Sec. 4 leases will flow to a central tank battery for all four leases, commingled with oil from Sec. 3 leases and then sold. Oil sales from the four leases will be allocated back to each well based on well tests. Water will be metered and flow to central tank battery for transfer to the Empire Abo Unit.

In Section 3 two leases, the Red Lake 3 Federal Lease No. LC028805(B) and the Vermillion 3 Federal Lease No. LC055465(B), have identical royalty (sliding scale, federal royalty) and working interest ownership (100% ARCO Permian). Production from each well will be pumped to a central site (located on the Red Lake 3 Federal Lease as shown on attached map) and oil, gas and water will be separated in a three-phase separator. Gas will be sold on location and allocated back to the four wells on these two leases based on well tests. Oil from the Sec. 3 leases will be commingled with oil from the Sec. 4 leases and flow to a common storage for all four leases and then sold. Oil sales from the four leases will be allocated back to each well based on well tests. Water will be metered and pumped to the Empire Abo Unit for use in the pressure maintenance project.

#### **Production and Product Quality**

Production data for all the wells for the last 12 months is attached. In general the production rates vary from a high of 26 BOPD to 5 BOPD. Four of the nine wells are down hole commingled in the Yeso and San Andres. Oil from both zones is very similar and is already commingled and being sold together via LACT to Navajo.

### **Measurement and Allocation Procedures**

The two well testers will be equipped to measure oil, water and gas. Gas will be tested through orifice meters. Oil will be tested with turbine meters for allocation to the sales total. The monthly oil sales volume will be allocated based on NMOCD procedures of multiplying the total sales by the well test volume for a well divided by the total of the well test volume for all wells. At this time we do not anticipate any product being used for beneficial use either on or off lease. Pumping units are powered by electric motors and no heat is used in the separation process.

### **Interest Owner Notification**

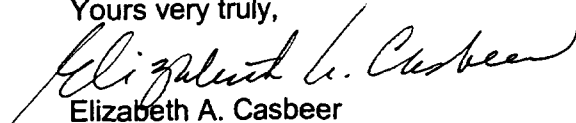
The BLM has also been notified of our project. The overriding royalty interest owners have been notified by certified mail on March 27, 2000, in the West Red Lake 4 Federal Lease No. LC065478(A), Lago Rosa 4 Federal Lease No. NMNM29280, Red Lake 3 Federal Lease No. LC-028805(B), and Vermillion 3 Federal Lease No. LC-055465(B). ARCO Permian holds 100% working interest in all leases.

### **Royalties Will Not Be Reduced - Economic Justification**

ARCO Permian has a well-established production allocation system that will properly allocate all products back to the proper lease and well. Less equipment associated with the leases will reduce operating costs and thus extend economic life and increase ultimate recovery and revenue for the royalty interest holders.

Your cooperation in this matter will be appreciated. If you have any questions, please contact me at 915/688-5570. Please send your approval to proceed to my attention at the address listed above.

Yours very truly,



Elizabeth A. Casbeer  
Regulatory Compliance Analyst

### **Attachments**

xc: Dennis Braaten - 023/MIO  
Larry Henson - EUN  
Central Files - 41/MIO  
R/C Files

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

FORM APPROVED  
Budget Bureau No. 1004-0135  
Expires November 30 2000

5. Lease Serial No.

**LISTED BELOW**

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

**LISTED BELOW**

9. API Well No.

10. Field and Pool, or Exploratory Area  
**RED LAKE (Q-GB-SA)**

11. County or Parish, State

**EDDY**

**NM**

**SUBMIT IN TRIPLICATE - Other instructions on reverse side**

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other

2. Name of Operator

**ARCO Permian**

3a. Address

**P.O. BOX 1610, MIDLAND, TX 79702**

3b. Phone No. (include area code)

**915 688-5570**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

**SECTIONS 3 & 4  
T-18-S, R-27-E**

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

☐ Acidize

☐ Alter Casing

☐ Casing Repair

☐ Change Plans

☐ Convert to Injection

☐ Deepen

☐ Fracture Treat

☐ New Construction

☐ Plug and Abandon

☐ Plug Back

☐ Production (Start/Resume)

☐ Reclamation

☐ Recomplete

☐ Temporarily Abandon

☐ Water Disposal

☐ Water Shut-Off

☐ Well Integrity

☐ Other

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

**PLANS TO SURFACE COMMINGLE, ALLOCATE BASED ON WELL TEST FOR FOUR LEASES:**

**RED LAKE 3 FEDERAL - SW/4/ OF NW/4 OF SEC. 3, 40 ACRES, LEASE NO. LC028805(B)  
VERMILLION 3 FEDERAL - SE/4/ OF NW/4 OF SEC. 3, 40 ACRES, LEASE NO. LC055465(B)  
WEST RED LAKE 4 FEDERAL - N/2 OF NW/4 OF SEC. 4, 79.29 ACRES, LEASE NO. LC065478(A)  
LAGO ROSA 4 FEDERAL - NW/4/ OF SW/4 OF SEC. 4, 38.85 ACRES, LEASE NO. NMNM29280**

**WILL CONTINUE TO MEASURE AND STORE PRODUCTION OFF LEASE AS PREVIOUSLY APPROVED.**

**NMOC APPROVED MAY 21, 1998 - COMMINGLING ORDER PLC-143**

**BLM APPROVED MARCH 30, 1998**

**MAP ATTACHED SHOWING THE LEASE NUMBERS AND LOCATION OF ALL LEASES.**

**SCHEMATIC DIAGRAM ATTACHED SHOWING LEASES, SEPARATION & METERING.**

**ESTIMATED PRODUCTION 30 BOPD & 50-100 MCFPD. (REFERENCE LETTER FOR DETAILS)**

**MEASUREMENT & ALLOCATION PROCEDURES - LACT UNIT (REFERENCE LETTER FOR DETAILS)**

**ALL INTEREST OWNERS WERE NOTIFIED ON MARCH 27, 2000 BY CERTIFIED MAIL. (REFERENCE LETTER FOR DETAILS)**

**ROYALTIES WILL NOT BE REDUCED - PRODUCTS WILL BE METERED SEPARATELY ON SECTION 4. (REFERENCE LETTER FOR DETAILS)**

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Title

**Regulatory Compliance Analyst**

Date **03-27-00**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Title

Date

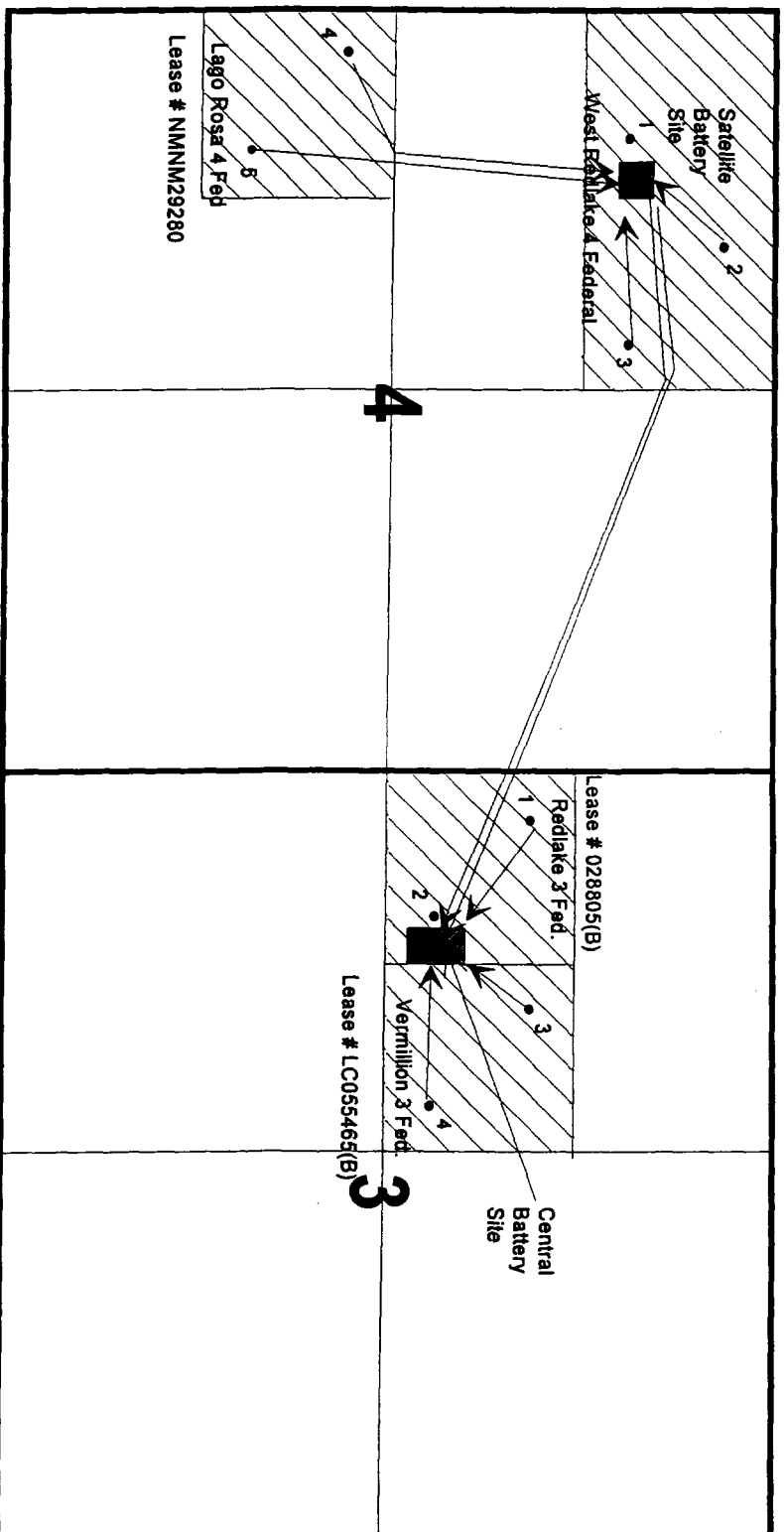
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

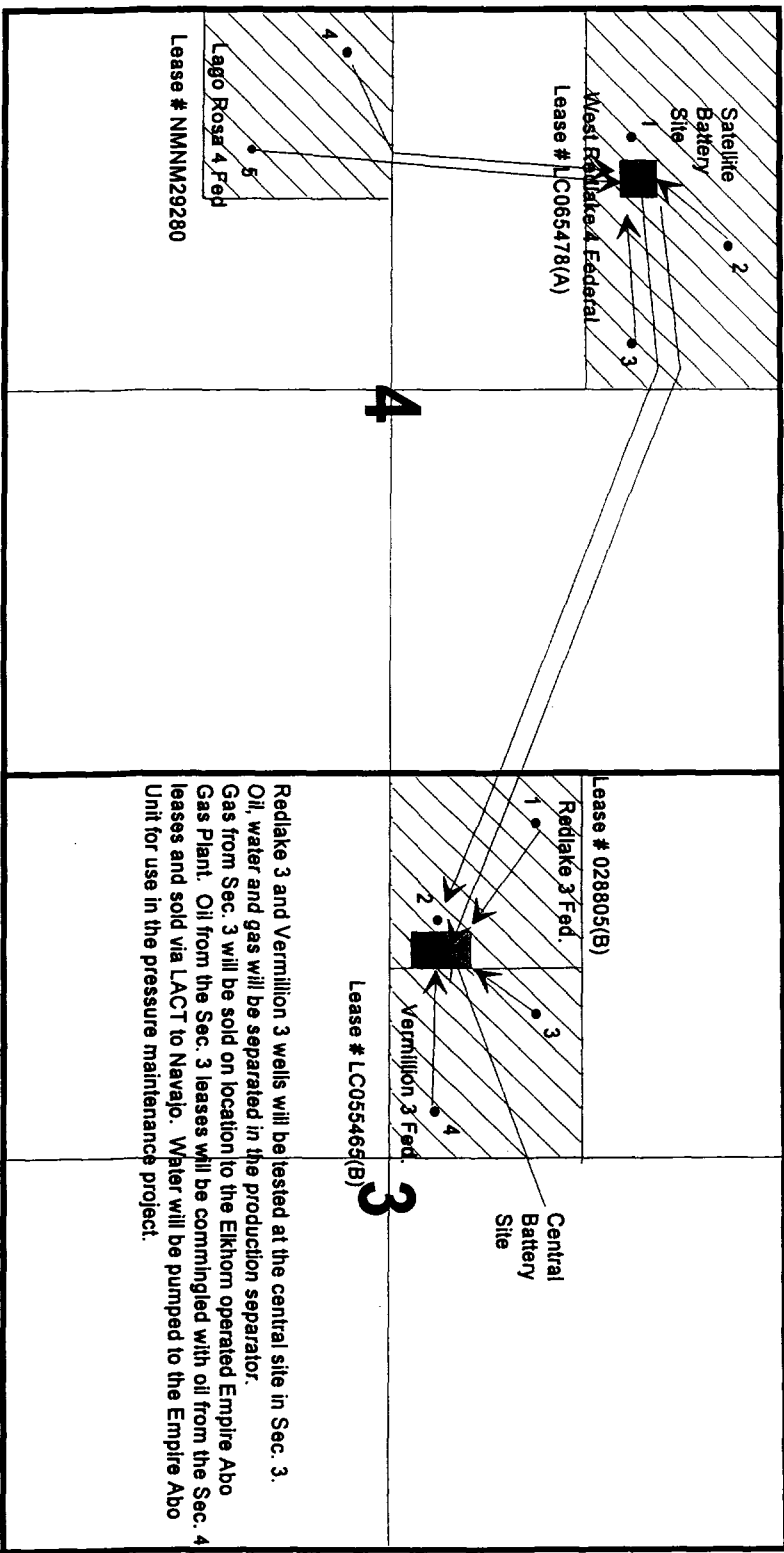
**PROPOSED REDLAKE AREA  
LEASE DESCRIPTION FOR COMMINGLE PLAN  
Located in Sec. 3 and 4 of T18S R27E  
ARCO PERMIAN 3/2000**

Lease # LC065478(A)



# PROPOSED REDLAKE AREA COMMINGLE BY WELL TEST PLAN Located in Sec. 3 and 4 of T18S R27E ARCO PERMIAN 3/2000

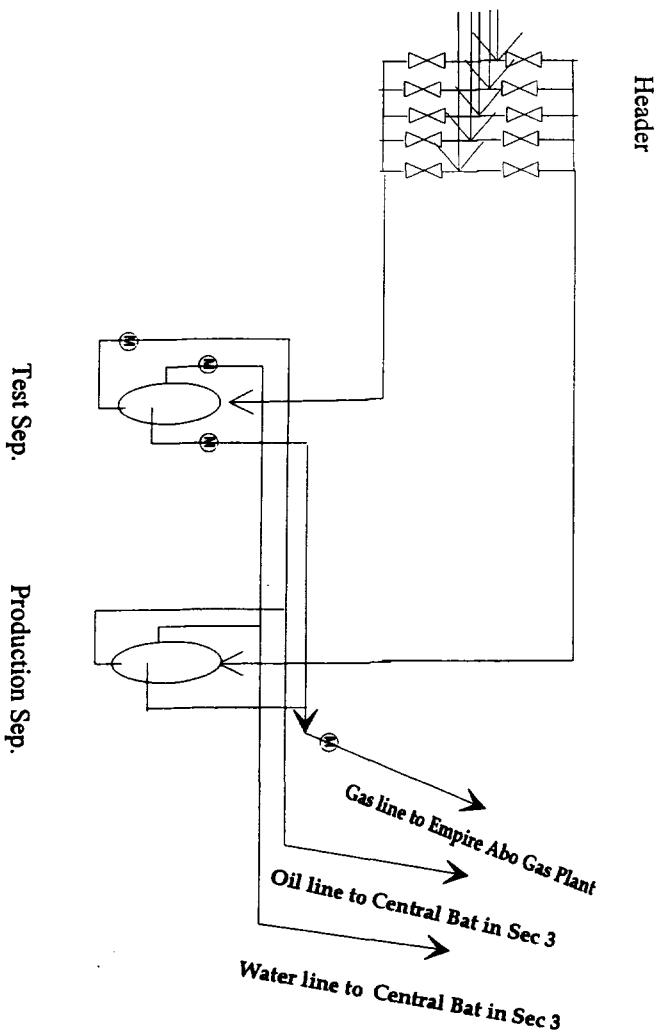
The West Red Lake 4 and the Lago Rosa 4 wells will be tested at the satellite battery site. Oil, water and gas will be separated in the production separator. Oil from the the satellite site will flow to the central tank battery in Sec. 3, be commingled with the Sec. 3 leases, and sold. Gas from Sec. 4 will sold to the Elkhorn operated Empire Abo Gas Plant. Water will flow to the central site and be pumped to the Empire Abo Unit for use in the pressure maintenance project.



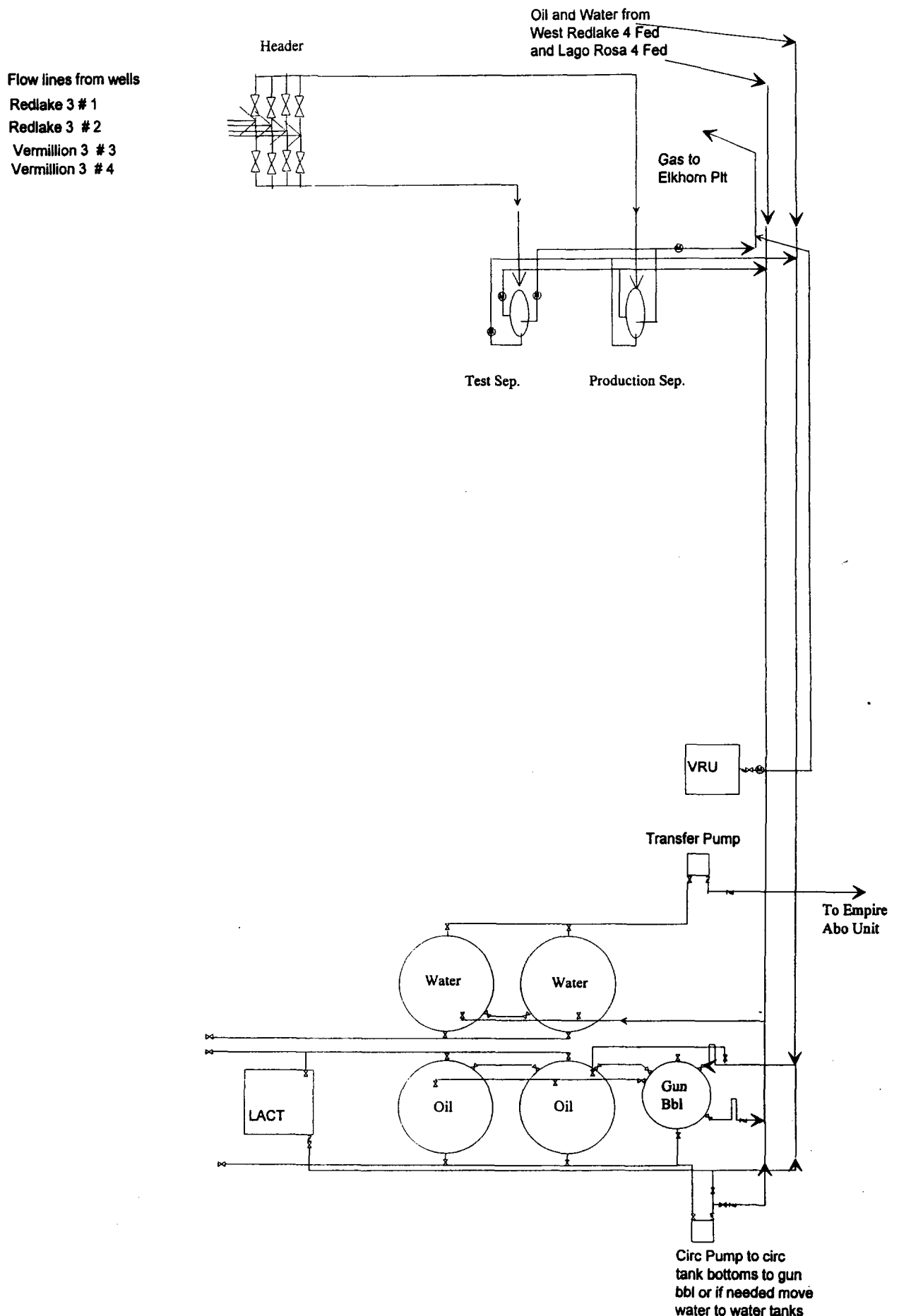
**PROPOSED REDLAKE AREA  
COMMINGLE BY WELL TEST PLAN  
SATELLITE BATTERY SITE SEPARATION AND METERING**  
Located in Sec. 4 of T18S R27E  
ARCO PERMIAN 03/2000

Flow lines from wells:

West Redlake 4 # 1  
West Redlake 4 # 2  
West Redlake 4 # 3  
Lago Rosa 4 # 4  
Lago Rosa 4 # 5



**PROPOSED REDLAKE AREA  
COMMINGLE BY WELL TEST PLAN  
CENTRAL BATTERY SITE SEPARATION, METERING & TANKS**  
Located in Sec. 3 of T18S R27E  
ARCO PERMIAN 3/2000





Wed Mar 8,  
2000  
9:56:22 AM

**Average Daily Production Data for SE NEW MEXICO: J.L. PIERCE: T. FOGLE  
LAGO ROSA 4 FED. 4 - 300153015000 - PO - AC**

Date	Days	Oil	Water	Gas
12/01/1999	31	23	35	68
11/01/1999	30	21	31	74
10/01/1999	31	21	34	82
09/01/1999	30	27	39	104
08/01/1999	31	28	39	123
07/01/1999	31	31	45	124
06/01/1999	30	32	54	139
05/01/1999	31	57	60	157
04/01/1999	30	33	33	150
03/01/1999	31	42	40	160
02/01/1999	28	66	72	125
01/01/1999	31	57	57	125
Average:	30	37	45	119

execution time = 0 seconds

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For questions or comments regarding this program, contact [pagemaster@permian.arco.com](mailto:pagemaster@permian.arco.com)

Wed Mar 8,  
2000  
9:56:33 AM

**Average Daily Production Data for SE NEW MEXICO: J.L. PIERCE: T. FOGLE  
LAGO ROSA 4 FED. 5 - 300153023400 - PO - AC**

Date	Days	Oil	Water	Gas
12/01/1999	31	0	1	27
11/01/1999	30	0	1	29
10/01/1999	31	0	1	30
09/01/1999	30	0	1	33
08/01/1999	29	0	1	40
07/01/1999	31	0	1	45
06/01/1999	30	1	2	47
05/01/1999	31	0	2	53
04/01/1999	19	1	1	64
03/01/1999	20	8	78	23
02/01/1999	28	14	98	25
01/01/1999	31	16	83	26
Average:	28	3	22	37

execution time = 1 seconds

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For questions or comments regarding this program, contact [pagemaster@permian.arco.com](mailto:pagemaster@permian.arco.com)

Yeso

Wed Mar 8,  
2000  
9:56:39 AM

**Average Daily Production Data for SE NEW MEXICO: J.L. PIERCE: T. FOGLE  
LAGO ROSA 4 FED. 5 - 300153023400 - PO - AC**

Date	Days	Oil	Water	Gas
12/01/1999	31	26	76	58
11/01/1999	30	28	81	63
10/01/1999	31	30	83	66
09/01/1999	30	34	85	73
08/01/1999	29	39	93	90
07/01/1999	31	45	110	98
06/01/1999	30	55	150	104
05/01/1999	31	22	205	122
04/01/1999	19	111	141	144
03/01/1999	0	0	0	0
02/01/1999	0	0	0	0
Average:	24	35	93	74

execution time = 0 seconds

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For questions or comments regarding this program, contact [pagemaster@permian.arco.com](mailto:pagemaster@permian.arco.com)

San Andres

Wed Mar 8,  
2000  
9:56:49 AM

**Average Daily Production Data for SE NEW MEXICO: J.L. PIERCE: T. FOGLE  
RED LAKE SEC 3 FEDERAL 1 - 300152980100 - PO - AC**

Date	Days	Oil	Water	Gas
12/01/1999	31	18	50	33
11/01/1999	30	19	49	36
10/01/1999	31	20	49	41
09/01/1999	30	21	51	44
08/01/1999	31	22	49	49
07/01/1999	31	25	57	51
06/01/1999	30	28	70	52
05/01/1999	31	43	70	53
04/01/1999	30	29	47	52
03/01/1999	31	47	141	71
02/01/1999	26	47	78	77
Average:	30	29	65	51

execution time = 1 seconds

For questions or comments regarding this program, contact [pagemaster@permian.arco.com](mailto:pagemaster@permian.arco.com)

Sen Andres

Wed Mar 8,  
2000  
9:58:55 AM

**Average Daily Production Data for SE NEW MEXICO: J.L. PIERCE: T. FOGLE  
RED LAKE SEC 3 FEDERAL 1 - 300152980100 - PO - AC**

Date	Days	Oil	Water	Gas
12/01/1999	31	2	32	10
11/01/1999	30	3	31	11
10/01/1999	31	3	31	13
09/01/1999	30	3	32	13
08/01/1999	31	3	31	14
07/01/1999	31	3	37	15
06/01/1999	30	4	45	15
05/01/1999	31	6	45	16
04/01/1999	30	4	30	15
03/01/1999	31	6	90	20
02/01/1999	26	6	50	21
01/01/1999	31	8	87	24
Average:	30	4	45	16

execution time = 0 seconds

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For questions or comments regarding this program, contact [pagemaster@permian.arco.com](mailto:pagemaster@permian.arco.com)

Yes

Wed Mar 8,  
2000  
9:58:59 AM

**Average Daily Production Data for SE NEW MEXICO: J.L. PIERCE: T. FOGLE  
RED LAKE SEC 3 FEDERAL 2 - 300152980200 - PO - AC**



Date	Days	Oil	Water	Gas
12/01/1999	31	14	38	21
11/01/1999	30	15	38	26
10/01/1999	31	16	40	27
09/01/1999	30	17	41	32
08/01/1999	31	18	47	36
07/01/1999	31	17	53	31
06/01/1999	30	16	35	28
05/01/1999	31	24	35	23
04/01/1999	30	22	35	29
03/01/1999	31	26	56	24
02/01/1999	22	21	50	49
Average:	30	19	43	30



execution time = 0 seconds

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For questions or comments regarding this program, contact [pagemaster@permian.arco.com](mailto:pagemaster@permian.arco.com)

San Andres

Wed Mar 8,  
2000  
9:57:02 AM

**Average Daily Production Data for SE NEW MEXICO: J.L. PIERCE: T. FOGLE  
RED LAKE SEC 3 FEDERAL 2 - 300152980200 - PO - AC**

Date	Days	Oil	Water	Gas
12/01/1999	31	3	103	4
11/01/1999	30	3	102	5
10/01/1999	31	3	108	5
09/01/1999	30	4	111	5
08/01/1999	31	4	126	6
07/01/1999	31	3	143	5
06/01/1999	30	3	96	5
05/01/1999	31	5	96	4
04/01/1999	30	5	95	5
03/01/1999	31	5	152	4
02/01/1999	22	4	135	7
01/01/1999	31	8	133	23
Average:	30	4	117	6

execution time = 0 seconds

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For questions or comments regarding this program, contact [pagemaster@permian.arco.com](mailto:pagemaster@permian.arco.com)

Yes.

Wed Mar 8,  
2000  
9:57:11 AM

**Average Daily Production Data for SE NEW MEXICO: J.L. PIERCE: T. FOGLE  
VERMILLION 3 FEDERAL 3 - 300153015100 - PO - AC**

Date	Days	Oil	Water	Gas
12/01/1999	31	9	32	8
11/01/1999	30	9	31	8
10/01/1999	31	11	32	8
09/01/1999	30	9	33	9
08/01/1999	31	10	31	10
07/01/1999	31	11	36	10
06/01/1999	30	13	40	10
05/01/1999	31	19	42	10
04/01/1999	30	11	25	11
03/01/1999	31	29	45	12
02/01/1999	28	16	65	13
01/01/1999	31	18	57	14
Average:	30	14	39	10

execution time = 1 seconds

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For questions or comments regarding this program, contact [pagemaster@permian.arco.com](mailto:pagemaster@permian.arco.com)



Wed Mar 8,  
2000  
9:57:14 AM

**Average Daily Production Data for SE NEW MEXICO: J.L. PIERCE: T. FOGLE  
VERMILLION 3 FEDERAL 4 - 300153013500 - PO - AC**

Date	Days	Oil	Water	Gas
12/01/1999	31	5	40	6
11/01/1999	30	5	38	7
10/01/1999	31	5	40	7
09/01/1999	30	5	42	7
08/01/1999	31	5	39	9
07/01/1999	31	6	46	10
06/01/1999	30	6	52	9
05/01/1999	31	10	58	10
04/01/1999	20	7	36	11
03/01/1999	31	7	56	9
02/01/1999	28	7	87	10
01/01/1999	31	9	78	13
Average:	30	6	51	9

execution time = 1 seconds

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For questions or comments regarding this program, contact [pagemaster@permian.arco.com](mailto:pagemaster@permian.arco.com)

Wed Mar 8,  
2000  
9:58:03 AM

**Average Daily Production Data for SE NEW MEXICO: J.L. PIERCE: T. FOGLE  
WEST RED LAKE 4 FED 1 - 300152999000 - PO - AC**

Date	Days	Oil	Water	Gas
12/01/1999	31	8	43	14
11/01/1999	30	8	43	14
10/01/1999	31	8	47	15
09/01/1999	30	9	44	15
08/01/1999	31	10	44	18
07/01/1999	31	9	50	17
06/01/1999	30	10	56	17
05/01/1999	31	14	49	17
04/01/1999	30	33	35	21
03/01/1999	31	11	62	19
02/01/1999	28	30	87	18
01/01/1999	31	15	78	19
Average:	30	14	53	17

execution time = 0 seconds

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For questions or comments regarding this program, contact [pagemaster@permian.arco.com](mailto:pagemaster@permian.arco.com)

Wed Mar 8,  
2000  
9:58:07 AM

**Average Daily Production Data for SE NEW MEXICO: J.L. PIERCE: T. FOGLE  
WEST RED LAKE 4 FED 2 - 300153018600 - PO - AC**

Date	Days	Oil	Water	Gas
12/01/1999	31	8	35	16
11/01/1999	30	8	35	18
10/01/1999	31	8	37	18
09/01/1999	30	9	39	21
08/01/1999	31	9	40	26
07/01/1999	31	10	47	29
06/01/1999	30	11	54	80
05/01/1999	31	20	87	28
04/01/1999	30	28	81	36
03/01/1999	31	31	86	87
Average:	31	14	54	36

execution time = 0 seconds

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For questions or comments regarding this program, contact [pagemaster@permian.arco.com](mailto:pagemaster@permian.arco.com)

Wed Mar 8,  
2000  
9:58:10 AM

**Average Daily Production Data for SE NEW MEXICO: J.L. PIERCE: T. FOGLE  
WEST RED LAKE 4 FED 3 - 300153013400 - PO - AC**

Date	Days	Oil	Water	Gas
12/01/1999	31	8	41	31
11/01/1999	30	9	40	35
10/01/1999	31	9	40	38
09/01/1999	30	10	42	37
08/01/1999	31	10	38	41
07/01/1999	31	11	44	47
06/01/1999	30	11	49	41
05/01/1999	31	16	53	45
04/01/1999	30	10	37	49
03/01/1999	31	13	62	56
02/01/1999	28	19	88	61
01/01/1999	31	17	56	61
Average:	30	12	49	45

execution time = 0 seconds

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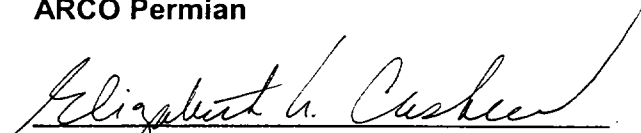
For questions or comments regarding this program, contact [pagemaster@permian.arco.com](mailto:pagemaster@permian.arco.com)

**STATE OF TEXAS**

**COUNTY OF MIDLAND**

**BEFORE ME**, the undersigned authority on this day personally appeared Elizabeth A. Casbeer, an Regulatory Compliance Analyst with **ARCO Permian**, who being by me duly sworn, deposes and states that the persons listed on the foregoing attached list have been sent a copy on March 27, 2000, of the BLM Form 3160-5 entitled, "Sundry Notices and Reports on Wells" regarding surface commingle for the Red Lake 3 Federal, Vermillion 3 Federal, West Red Lake 4 Federal and Lago Rosa 4 Federal Leases, located in Section 3 and 4, T-18-S, R-27-E, Eddy County New Mexico.

**ARCO Permian**

  
Elizabeth A. Casbeer

**SUBSCRIBED AND SWORN TO** before me on March 27, 2000, to certify which witness my hand and seal of office.

  
**NOTARY PUBLIC, STATE OF TEXAS**



LEIGH ANN LANE

Notary Public, State of Texas

My Commission Expires: 12-12-2000

**ARCO Permian  
Surface Commingle Permit  
Royalty Interest Owners  
Red Lake Area Battery  
West Red Lake 4 Federal Lease # 1, 2 & 3; Lago Rosa 4 Federal Lease # 4 & 5;  
Red Lake 3 Federal Lease #1 & 2; Vermillion 3 Federal Lease #3 & 4**

**Edith C. Wheeler Estate  
P.O. Box 64035  
Lubbock, TX 79464**

**James R. McWhorter, AIF for  
Mary J. McWhorter  
769 Canyon Road  
Logan, UT 84321**

**Michael H. Moore  
P.O. Box 3389  
Sherman, TX 75091**

**Ann D. Allison  
P.O. Box 64035  
Lubbock, TX 79464**

**Davis A. Coppedge  
466 Goodwin Drive  
Richardson, TX 75081**

**James T. Coppedge  
P.O. Box 43  
Spencer, IN 47460**

**Brent W. McWhorter, Trustee of the  
McWhorter Family Trust dtd 2/24/89  
6140 East Voltaire  
Scottsdale, AZ 85254**

**Russell Trust  
The First National Bank of Artesia,  
Trustee  
P.O. Box AA  
Artesia, NM 88211-7526**

**Betty Lou Price  
5210 Churubusco Drive  
Austin, TX 78759**

**David H. Arrington  
P.O. Box 2071  
Midland, TX 79702**

**Balwick Limited Partnership  
2516 Lockheed  
Midland, TX 79701**

**Richard K. Davidson  
P.O. Box 387  
La Jara, CO 81140-0387**

**Tom B. Moore  
P.O. Box 3389  
Sherman, TX 75091-3389**

**Barbara Ann Kurz  
8727 Point Park Drive, Apt. #414  
Houston, TX 77095**

**The Family Trust of John Olaf  
Larsgaard  
& Sharon Larue Larsaard (TD 9/18/92)  
7627 146th Ave. E  
Sumner, WA 98390**

**Zanaida Ruth Griffen  
2808 Abingdon Parkway  
Birmingham, AL 35243**

**Fredric Charles Griffin  
P.O. Box 44941  
Phoenix, AZ 86064**

**Vicki Lynn Owens  
P.O. Box 696  
Eunice, NM 88231**

**Scott Charles Henson  
7143 Paladin Way  
Rio Linda, CA 95673**

**Steven Mark Henson  
7143 Paladin Way  
Rio Linda, CA 95673**

**Laura Patricia Lodewick  
511 Newell  
Dallas, TX 75223**

**John Widney Lodewick  
3305 Wentwood  
Dallas, TX 75225**

**Lillian O'Haco McNally  
2801 N. Kentucky Ave., Apt#249  
Roswell, NM 88201**

**William Richard Ballard  
11651 E. Calle Javelina  
Tucson, AZ 85748**

**ARCO Permian  
Surface Commingle Permit  
Royalty Interest Owners  
Red Lake Area Battery  
West Red Lake 4 Federal Lease # 1, 2 & 3; Lago Rosa 4 Federal Lease # 4 & 5;  
Red Lake 3 Federal Lease #1 & 2; Vermillion 3 Federal Lease #3 & 4**

**Janice Gettys  
803 Smith Stratton Street  
Decatur, TX 76234**

**Elizabeth T. Greene  
200 East 22nd Apt#12  
Roswell, NM 88201**

**Conrad & Josephine Keyes Revocable  
Trust  
Conrad & Josephine Keyes, Co-Trustees  
P.O. Box 156  
Ruidoso, NM 88345**

**David W. Thorne  
151 Johnarbor Drive W.  
Rochester, NY 14620-3628**

**Henry F. Thorne  
P.O. Box 36  
Long Pine, NE 69217-0036**

**John E. Thorne  
4575 Braungate Drive  
St. Louis, MO 63128**

**Larue White  
1776 Larch Ave., #303  
Cincinnati, OH 45224**

**Yates Bros.  
105 South 4th Street  
Artesia, NM 88210**

**Joan A. Hudson  
8053 San Vista Circle  
Naples, FL 34109**

**Joan Ann Hudson Davis  
6770 Wolf Creek Court  
Rio Rancho, NM 87124**

**Robert Grant Keyes & Alerta N. Keyes  
H/w JTWROS, in Life Estate  
Remaindermen: Marsha A. Keyes (1/2)  
C/o Norwest Bank NM, N.A.  
Acct. #2213451  
400 N. Pennsylvania Ave.  
Roswell, NM 88201**

**Minerals Management Service  
Royalty Management Program  
Box 5810 TA  
Denver, CO 80217**

	<b>West Red Lake 4</b> Federal Lease Well Nos. 1, 2 & 3 Section 4 T-18-S, R-27-E	<b>Lago Rosa 4</b> Federal Lease Well Nos. 4 & 5 Section 4 T-18-S, R-27-E	<b>Red Lake 3</b> Federal Lease Well Nos. 1 & 2 Section 3 T-18-S, R-27-E	<b>Vermillion 3</b> Federal Lease Well Nos. 3 & 4 Section 3 T-18-S, R-27-E
<b>Royalty Interest</b>				
Mineral Management Service Royalty Management Program Box 5810 TA Denver, CO 80217	0.12500000	0.12500000	0.12500000	0.12500000
<b>Overriding Royalty Interest</b>				
Edith C. Wheeler Estate P.O. Box 64035 Lubbock, TX 79464	0.00058594	0.00058594		
James R. McWhorter, AIF for Mary J. McWhorter 769 Canyon Road Logan, UT 84321	0.00058594	0.00058594		
Michael H. Moore P.O. Box 3389 Sherman, TX 75091	0.00058594	0.00058594		
Ann D. Allison P.O. Box 64035 Lubbock, TX 79464	0.00058594	0.00058594		
Davis A. Coppedge 466 Goodwin Drive Richardson, TX 75081	0.00029297	0.00029297		
James T. Coppedge P.O. Box 43 Spencer, IN 47460	0.00029297	0.00029297		
Brent W. McWhorter, Trustee of the McWhorter Family Trust did 2/24/89 6140 East Voltaire Scottsdale, AZ 85254	0.00058594	0.00058594		



	West Red Lake 4 Federal Lease Well Nos. 1, 2 & 3 Section 4 T-18-S, R-27-E	Lago Rosa 4 Federal Lease Well Nos. 4 & 5 Section 4 T-18-S, R-27-E	Red Lake 3 Federal Lease Well Nos. 1 & 2 Section 3 T-18-S, R-27-E	Vermillion 3 Federal Lease Well Nos. 3 & 4 Section 3 T-18-S, R-27-E
Russell Trust The First National Bank of Artesia, Trustee P.O. Box AA Artesia, NM 88211-7526	0.00937500	0.00562500		
Betty Lou Price 5210 Churubusco Drive Austin, TX 78759	0.00234375	0.00234375		
David H. Arrington P.O. Box 2071 Midland, TX 79702	0.00058593	0.00058593		
Balwick Limited Partnership 2516 Lockheed Midland, TX 79701	0.00156250	0.00156250		
Richard K. Davidson P.O. Box 387 La Jara, CO 81140-0387	0.00058594	0.00058594		
Tom B. Moore P.O. Box 3389 Sherman, TX 75091-3389	0.00058593	0.00058593		
Barbara Ann Kurz 8727 Point Park Drive, Apt. #414 Houston, TX 77095	0.00058594	0.00058594		
Jaffa Miller Address Unknown	0.00937500	0.00937500		
The Family Trust of John Olaf Larsgaard & Sharon Larue Larsaard (TD 9/18/92) 7627 146th Ave. E	0.00187500	0.00112500		

	West Red Lake 4 Federal Lease Well Nos. 1, 2 & 3 Section 4 T-18-S, R-27-E	Lago Rosa 4 Federal Lease Well Nos. 4 & 5 Section 4 T-18-S, R-27-E	Red Lake 3 Federal Lease Well Nos. 1 & 2 Section 3 T-18-S, R-27-E	Vermillion 3 Federal Lease Well Nos. 3 & 4 Section 3 T-18-S, R-27-E
The Family Trust of John Olaf Larsgaard & Sharon Larue Larsaard (TD 9/18/92) 7627 146th Ave. E	0.00187500	0.00112500		
Zanelda Ruth Griffen 2808 Abingdon Parkway Birmingham, AL 35243	0.00093750	0.00056250		
Fredric Charles Griffin P.O. Box 44941 Phoenix, AZ 86064	0.00093750	0.00056250		
Vicki Lynn Owens P.O. Box 696 Eunice, NM 88231	0.00062500	0.00037500		
Scott Charles Henson 7143 Paladin Way Rio Linda, CA 95673	0.00062500	0.00037500		
Steven Mark Henson 7143 Paladin Way Rio Linda, CA 95673	0.00062500	0.00037500		
Laura Patricia Lodewick 511 Newell Dallas, TX 75223	0.00156250	0.00156250		
John Widney Lodewick 33:05 Wentwood Dallas, TX 75225	0.00156250	0.00156250		
Lillian O'Haco McNally 2801 N. Kentucky Ave., Apt#249 Roswell, NM 88201	0.00937500	0.00937500		

	West Red Lake 4 Federal Lease Well Nos. 1, 2 & 3 Section 4 T-18-S, R-27-E	Lago Rosa 4 Federal Lease Well Nos. 4 & 5 Section 4 T-18-S, R-27-E	Red Lake 3 Federal Lease Well Nos. 1 & 2 Section 3 T-18-S, R-27-E	Vermillion 3 Federal Lease Well Nos. 3 & 4 Section 3 T-18-S, R-27-E
William Richard Ballard 11651 E. Calle Javelina Tucson, AZ 85748	0.00234375	0.00234375		
Janice Gettys 803 Smith Stratton Street Decatur, TX 76234	0.00187500	0.00112500		
Elizabeth T. Greene 200 East 22nd Apt#12 Roswell, NM 88201	0.00312500	0.00312500		
Conrad & Josephine Keyes Revocable Trust Conrad & Josephine Keyes, Co-Trustees P.O. Box 156 Ruidoso, NM 88345	0.00117188	0.00117188		
Robert Grant Keyes & Alerta N. Keyes, H/w JTWROS, In Life Estate Remaldermen: Marsha A. Keyes (1/2) & Giselle E. Keyes (1/2) C/o Norwest Bank NM N.A. Acct# 2213451 400 N. Pennsylvania Ave. Roswell, NM 88201	0.00117188	0.00117188		
Marjorie Meyer, Life Estate C/o World Savings & Loan, FSLA Denver - Windsor Gardens #211 Acct #8-324718-9 390 S. Dayton Street Denver, CO 80231	0.00117186	0.00117186		
Jane Thorne Ronca-Washburn 11805 La Charles Ave. NE Abuquerque, NM 8711-4042	0.00104167	0.00104167		

	<b>West Red Lake 4</b> Federal Lease Well Nos. 1, 2 & 3 Section 4 T-18-S, R-27-E	<b>Lago Rosa 4</b> Federal Lease Well Nos. 4 & 5 Section 4 T-18-S, R-27-E	<b>Red Lake 3</b> Federal Lease Well Nos. 1 & 2 Section 3 T-18-S, R-27-E	<b>Vermillion 3</b> Federal Lease Well Nos. 3 & 4 Section 3 T-18-S, R-27-E
David W. Thorne 151 Johnharbor Drive W. Rochester, NY 14620-3628	0.00312500	0.00312500		
Henry F. Thorne P.O. Box 36 Long Pine, NE 69217-0036	0.00104167	0.00104167		
John E. Thorne 4575 Braungate Drive St. Louis, MO 63128	0.00104166	0.00104166		
Larue White 1776 Larch Ave., #303 Cincinnati, OH 45224	0.00187500	0.00112500		
Yates Bros. 105 South 4th Street Artesia, NM 88210	0.00937500	0.00562500		0.05000000
Joan A. Hudson 8053 San Vista Circle Naples, FL 34109			0.05000000	
Joan Ann Hudson Davis 6770 Wolf Creek Court Rio Rancho, NM 87124				
<b>Working Interest</b>				
	0.80000000	0.81125000	0.82500000	0.82500000
Atlantic Richfield Company P. O. Box 1610 Midland, TX 79702				
<b>Total Royalty Interest</b>	0.12500000	0.12500000	0.12500000	0.12500000
<b>Total Overriding Royalty Interest</b>	0.07500000	0.06375000	0.05000000	0.05000000
<b>Total Working Interest</b>	0.80000000	0.81125000	0.82500000	0.82500000
<b>Total Interest</b>	1.00000000	1.00000000	1.00000000	1.00000000