

DHC

11.22.95



**Arch Petroleum Inc.**

NEW MEXICO OIL CONSERVATION DIVISION  
RECEIVED

OCT 24 1995 8 52

October 24, 1995

New Mexico Oil Conservation Division  
Energy and Minerals Department  
P. O. Box 2088  
Santa Fe NM 87501

Re: C. D. Woolworth #6  
Unit O, Section 30-T24S-R37E  
Lea County, New Mexico

Gentlemen:

Your administrative approval is requested for an exception to Rule 303-C to permit down-hole commingling of Jalmat Yates Seven Rivers and Langlie Mattix Seven Rivers Queen production in the subject well.

Please find enclosed all pertinent data regarding this application as outlined in Rule No. 303-C.

Sincerely,

Bobbie Brooks  
Production Analyst

Enclosures

cc: New Mexico Oil Conservation Division  
P. O. Box 1980  
Hobbs, NM 88240

Offset Operators

ARCH PETROLEUM INC.

C. D. WOOLWORTH #6

*ANSW*  
Approval is requested for an exception to Rule 303-C to permit down-hole commingling of the Jalmat Yates Seven Rivers and Langlie Mattix Seven Rivers Queen production in the subject well.

The C. D. Woolworth #6 was verbally approved for dual completion in the Jalmat and Langlie Mattix. Permission to surface commingle the Jalmat with the Langlie Mattix was approved on Commingle Order #PC683 dated December 10, 1984.

Both the Jalmat and Langlie Mattix are currently being pumped into a test tank.

The fluids show no evidence of incompatibility; therefore, down-hole commingling is not expected to result in reservoir damage. Ownership in the two pools is common and correlative rights will not be violated.

Should secondary recovery operations become practical in the future, the two zones could be separated at such time without damaging either reservoir.

Offset operators were notified of the intent to down-hole commingle the subject well by letter dated October 4, 1995.

*Bobbie Brooks*

Bobbie Brooks - Production Analyst

10/24/95

EXHIBIT 1

OFFSET OPERATORS OF  
ARCH PETROLEUM INC.  
C. D. WOOLWORTH #6

CONOCO  
P. O. BOX 2197  
HOUSTON, TX 77079-1175

LANEXCO  
P. O. BOX 2730  
MIDLAND, TX 79702-2730

ARCO PERMIAN  
P. O. BOX 1610  
MIDLAND, TX 79702

DOYLE HARTMAN  
500 NORTH MAIN  
MIDLAND, TX 79701

TEXACO E & P, INC.  
4601 DTC BLVD.  
DENVER, CO 80237-2549

MERIDIAN OIL INC.  
P. O. BOX 4239  
HOUSTON, TX 77210-4239

THE ABOVE OPERATORS WERE NOTIFIED BY LETTER DATED OCTOBER 4, 1995 OF THE  
INTENT TO DOWN-HOLE COMMINGLE. SEE SAMPLE LETTER AS EXHIBIT 1A.



**Arch Petroleum Inc.**

**CERTIFIED-RETURN RECEIPT  
REQUESTED**

October 4, 1995

Re: DHC - C. D. Woolworth #6  
Unit O, Sec. 30, T24S, R37E,  
Lea County, New Mexico

To: All offset operators

We are enclosing a copy of our application to downhole commingle the Jalmat and Langlie Mattix zones in the above well.

Please sign and return a copy of this letter to us within 20 days.

Your attention to this will be appreciated.

Sincerely,

A handwritten signature in cursive script that reads 'Bobbie Brooks'.

Bobbie Brooks  
Production Analyst

AGREED AND SIGNED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, 1995.

\_\_\_\_\_

## EXHIBIT 2

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102  
Revised February 10, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-025-28731	<sup>2</sup> Pool Code 33820/37240	<sup>3</sup> Pool Name Jalmat/Langlie Mattix 7RQ
<sup>4</sup> Property Code 014899	<sup>5</sup> Property Name C. D. Woolworth	<sup>6</sup> Well Number 6
<sup>7</sup> OGRID No. 000962	<sup>8</sup> Operator Name ARCH PETROLEUM INC.	<sup>9</sup> Elevation 3253.7

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	30	24S	37E		660	South	1960	East	Lea

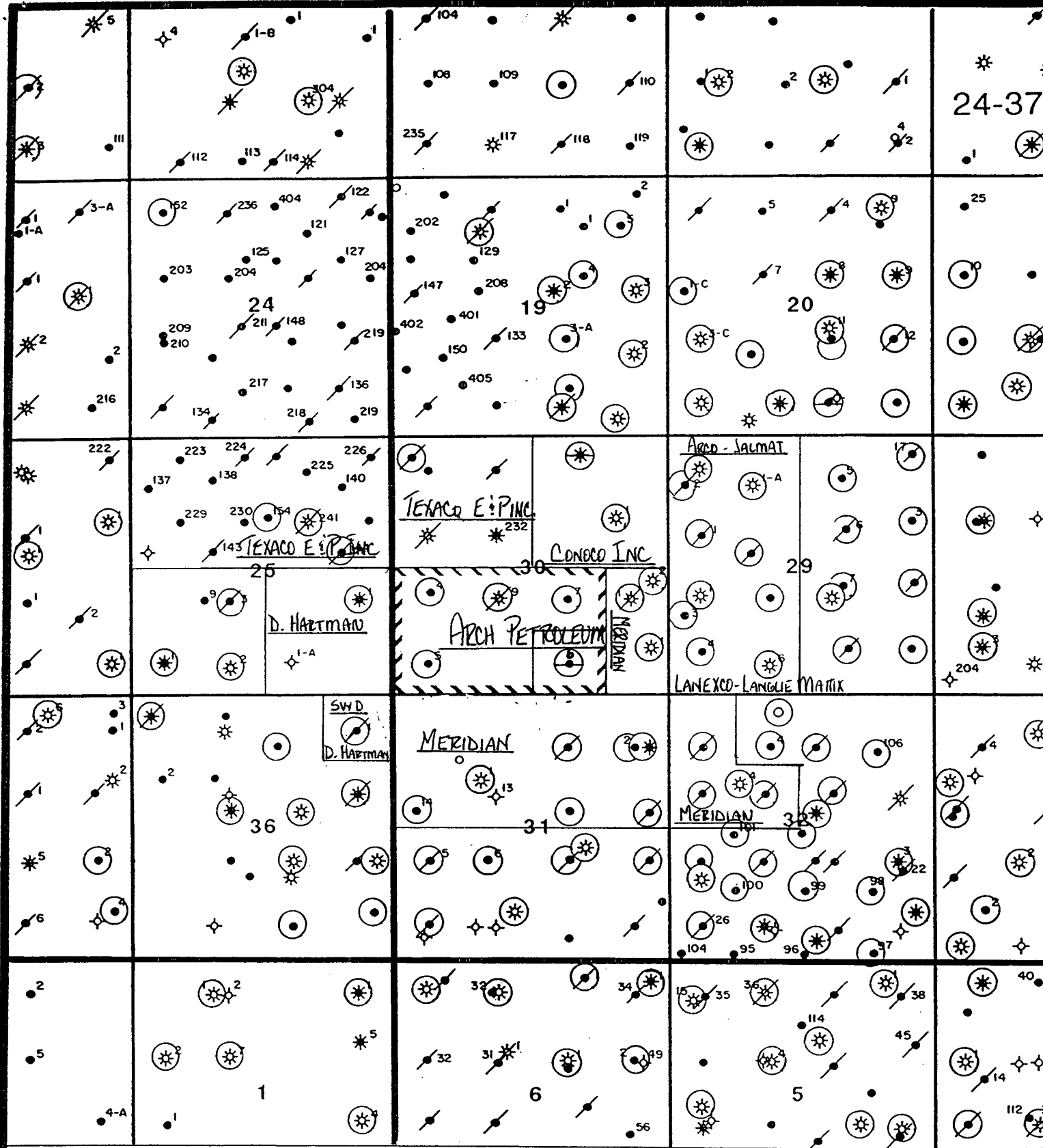
<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres 40	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No. PC683
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16				<b><sup>17</sup> OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature <u>Bobbie Brooks</u> Printed Name <u>Production Analyst</u> Title <u>10/4/95</u> Date
				<b><sup>18</sup> SURVEYOR CERTIFICATION</b> I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.  Date of Survey Signature and Seal of Professional Surveyor:  Certificate Number



C.D. WOOLWORTH LEASE

EXHIBIT 3

Lease	C. D. Woolworth		Well No.	6	
Location	660	FSL	and	1960	FEL
Unit		Section	30	Township	24S
Range	37E	County	Lea	State	New Mexico

Completion date 10-Oct-84

Initial Formation Langlie Mattix

From 3479 to 3602

GE 3254  
KB to GE 13'  
DF to GE

Surface csg	
10 3/4	" OD Surface
Set @	402 ft
Cmt with	400 sx
Cmt circulated	yes

2912  
2920  
2928  
2947  
2958  
2968  
2986  
2995  
3014  
3019  
3033  
3044  
3051  
3068  
3105

Squeezed Jalmat Gas Perfs

3179  
3181  
3183  
3232  
3248  
3260  
3310  
3320  
3339  
3351  
3353  
3378  
3402  
3405  
3408

Jalmat Oil Perfs

3479  
3481  
3515  
3537  
3540  
3552  
3555  
3569  
3571  
3584  
3602

Langlie Mattix Perfs

2 3/8" tubing with seat nipple @  
approximately 3625 FT

PBTD 3691 ft  
TD 3750 ft

Production csg	
7	" OD
26	#
Grade	K-55
Set @	3749 ft
Cmt with	455 sx
TOC @	Surface ft by TS

EXHIBIT 5

ARCH PETROLEUM INC.  
DHC - C. D. WOOLWORTH #6  
JALMAT AND LANGLIE-MATTIX POOLS  
WELL HISTORY

5-30-84: The well was spudded and drilled to a total depth of 3750'. Ten and three-quarter surface pipe was set at 402' and cement was circulated to surface. Seven inch production casing was set at 3749' and cement was circulated to the surface.

6-12-84: Perforated the Jalmat Yates Seven Rivers Queen at 3179, 81, 83, 3232, 48, 3310, 20, 39, 51, 53, 77, 79, 3402, 05, 08 W/(1)JH (sq). 3179-3408' with 400 gals., 7 1/2%, 2500 gals., 15% RCNB's 36,800 gals. foam, 93200# 20/40 sd.

6-13-84: Perforated the Langlie Mattix at 3479, 3481, 3515, 37, 40, 52, 55, 69, 71, 84, 3602 w/(1) 1/2" JH (sq), 3179, 81, 83, 3232, 48, 3310, 20, 39, 51, 53, 77, 79, 3402, 05, 3408, W (1) JH (sq). Acidized 3479-3602' with 8 bbls. acid, 95,000 gals foam, 163, 750# 20/40 sd.

7-6-84: Install pump.

10-4-84: Perforated the Jalmat Yansill Yates Seven Rivers Queen at 2912, 20, 28, 47, 58, 68, 86, 95, 3014, 19, 33, 44, 51, 68, 3105, 17, 28 w (1) 1/2" JH. 2912-3128' with 714 gals. 15%, 5000 gas. 2% KCL FW, 40,000 gals X-link gel, 124,000# 12/20 sd.

Set CIBP at 3150' and completed as Jalmat Gas well on 10-10-84.

8-14-95-9/26/95: MIRU, POH w/rods and pump, Drill out to top of CIBP @ 3150'. Circulate hole clean w/2% KCL water. Drill out to CIBP @ 3454', drill CIBP & C/O to new PBTD of 3,650'. Swabbed Langlie Mattix perms f/3479'-3602'. Install prod. equip. Tested well for 30 days. Well pumping to test tank.

Resume operations, set RBP @ 3446', perforate Jalmat f/3179, 81, 83, 3232, 48, 60, 3310, 20, 39, 51, 53, 78, 3402, 05, 08 w/4 JHPF, Acidize perms f/3179-3408' with a total of 4,500 gal 15% NEFE HCL in 4 acid stages using total of 2,000# GRS, AIR=4 BPM. Pavg=1050". Pmax=1000#", flushed w/25 bbls 2% KCL. Install prod equip. Tested Jalmat prod for 7 days. Well pumping to test tank.



EXHIBIT 6

ARCH PETROLEUM INC.

DHC - C. D. WOOLWORTH #6

JALMAT AND LANGLIE-MATTIX POOLS

RULE 303 (C) (2)

- A. **Operator:** Arch Petroleum Inc., 10 Desta Drive, Suite 420E, Midland, Texas 79705.
- b. **Lease, Well and Location:** C. D. Woolworth #6, Unit O, 660' FSL, 1960 FEL, Section 30-T24S-R37E, Lea County, New Mexico.
- c. **Plats** showing dedicated acreage and offset ownership - Exhibits 2 and 3.
- d. **Production Decline:** The Jalmat gas is expected to decline **10%** per year after an IP of 37 MCFPD while the oil will decline **6%** per year after an IP of 8 BOPD. The Langlie Mattix gas is expected to decline **8%** per year after an IP of 38 MCFPD while the oil will decline **9%** per year after an IP of 8 BOPD.
- f. **Bottom Hole Pressure:** Jalmat BHP at 3408' is estimated to be 202 psi. Langlie Mattix BHP at 3691 is estimated to be 242 psi.
- g. **Fluid Characteristics:** The Jalmat and Langlie Mattix are currently commingled in surface facilities located on the C. D. Woolworth lease per commingling Order PC683 dated 12-10-84. To date, there has been no evidence of fluid incompatibility.
- h. **Value of Commingled Fluids:** Jalmat and Langlie Mattix oil production is currently being commingled in surface storage facilities on the subject lease. Down-hole commingling will not effect the price. Exhibit 8 shows the relative value of commingled and non commingled liquids produced on the lease.
- I. **The suggested allocation** of produced hydrocarbons is based on the percentages of oil and gas produced on the latest C-116.

	Jalmat	Langlie Mattix
Oil	50%	50%
Gas	51%	49%

- j. **Statement of Notification** - Exhibit 1.

Submit 2 copies to Appropriate  
District Office.

DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240  
DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210  
DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico  
Energy, Minerals and Natural Resources Department

# OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

Form C-116  
Revised 1/1/89

## GAS - OIL RATIO TEST

Operator ARCH PETROLEUM INC.		Pool JALMAT YATES 7RQ		County LEA												
Address 10 DESTA DRIVE, STE. 420E, MIDLAND, TX 79705		TYPE OF TEST - (X)		Scheduled <input type="checkbox"/> Completion <input type="checkbox"/> Special <input checked="" type="checkbox"/>												
LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT/BBL.	
		U	S	T	R							WATER BBL.S.	GRAV. OIL	OL BBL.S.		GAS M.C.F.
C. D. WOOLWORTH	6	0	30	24S	37E	10-4-95	P		350		24	108	36.1	8	37	4625

### Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

(See Rule 301, Rule 1116 & appropriate pool rules.)

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

*Bobbie Brooks*  
Signature

BOBBIE BROOKS PRODUCTION ANALYST

Printed name and title

10/4/95 915/685-1961

Date

Telephone No.

## EXHIBIT 7A

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-116  
Revised 1/1/89

## OIL CONSERVATION DIVISION

Submit 2 copies to Appropriate  
District Office.  
DISTRICT I  
P.O. Box 1980, Hobbs, NM 88240  
DISTRICT II  
P.O. Drawer DD, Artesia, NM 88210  
DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

## GAS - OIL RATIO TEST

Operator ARCH PETROLEUM INC.		Pool LANGLIE MATTIX 7RQ		County LEA	
Address 10 Desta Drive, Ste. 420E, Midland, Tx 79705		TYPE OF TEST - (X)		Scheduled <input type="checkbox"/>	
LEASE NAME C. D. WOOLWORTH		WELL NO. 6		DATE OF TEST 9-22-95	
		LOCATION U S T R		CHOKE SIZE	
				TBG. PRESS. 350	
				DAILY ALLOW- ABLE	
		LENGTH OF TEST HOURS 24		Completion <input type="checkbox"/>	
		WATER BBLs. 53		PROD. DURING TEST	
		GRAV. OIL 36.8		OL BBLs. 8	
		GAS M.C.F. 38		Special <input checked="" type="checkbox"/>	
				GAS - OIL RATIO CU.FT/BBL. 4750	

## Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

(See Rule 301, Rule 1116 & appropriate pool rules.)

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

Signature

*Bobbie Brooks*

BOBBIE BROOKS, PRODUCTION ANALYST

Printed name and title  
10-4-95 915/685-1961

Date

Telephone No.

# EXHIBIT 8

## C. D. WOOLWORTH LEASE, TANK BATTERY SECTION 30-T24S-R37E LEA COUNTY, NEW MEXICO

WELLS AND POOL	PRODUCTION		TOTAL	AVG. BOPD
	JULY.' 95	AUG.' 95		
JALMAT & LANGLIE MATTIX - COMBINED C. D. WOOLWORTH #6 - 8 BOPD EACH				16
JALMAT C. D. WOOLWORTH #5,6,7	1592	1964	3556	57
LANGLIE MATTIX C. D. WOOLWORTH #4,7,9	1202	1495	2697	44
	BOPD	GRAVITY	\$/BBL	\$/DAY
JALMAT	65	36.1	\$16.67	\$1083.55
LANGLIE MATTIX	52	36.8	\$16.67	\$866.84
COMMINGLED TOTAL	117	36.1	\$16.67	\$1950.39

NO DIFFERENCE IN POSTED PRICE

DHC-1171



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
HOBBS DISTRICT OFFICE

RECEIVED  
95 NOV 2 AM 8 52

10/30/95

GOVERNOR

POST OFFICE BOX 1980  
HOBBS, NEW MEXICO 88241-1980  
(505) 393-6161

OIL CONSERVATION DIVISION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC \_\_\_\_\_  
DHC   X   \_\_\_\_\_  
NSL \_\_\_\_\_  
NSP \_\_\_\_\_  
SWD \_\_\_\_\_  
WFX \_\_\_\_\_  
PMX \_\_\_\_\_

Gentlemen:

I have examined the application for the:

Arch Petroleum Inc CD Woolworth #6-D 30-245-37e  
Operator                      Lease & Well No.      Unit                      S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton  
Supervisor, District 1

/ed