

Unocal Oil & Gas Division  
Unocal Corporation  
3300 North Butler Avenue  
Suite 200  
Farmington, New Mexico 87401  
Telephone (505) 326-7600  
Fax: (505) 326-6145

RELEASE 8-23-93

OIL CONSERVATION DIVISION  
RECEIVED

93 JUL 2 AM 9 12



July 28, 1993

**CERTIFIED RETURN RECEIPT REQUESTED**

Farmington District

New Mexico Oil Conservation Division  
Attn: Mr. William J. LeMay  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

New Mexico Oil Conservation Division  
Attn: Mr. Frank Chavez  
1000 Rio Brazos Road  
Aztec, New Mexico 87410

Dear Sirs:

Union Oil Company of California (UNOCAL) requests permission to downhole commingle production from the Blanco Mesaverde and Basin Dakota formations in the following well:

Rincon Unit No. 184M  
790' FSL, 1025' FEL  
Section 15, T27N, R7W  
Rio Arriba County, New Mexico

As provided by Order No. R-9893, administrative approval may be granted without notice and hearing.

As required for an exception to rule 303-A, the following information is attached:

1. An acreage dedication plat showing offset lease ownership.
2. A Form C-116 showing current productivity from each zone.
3. A wellbore diagram with completion detail.
4. A bottomhole pressure from each zone and a calculated adjustment to a common datum.
5. Gas analyses from each zone.
6. An allocation formula for commingled production.
7. A copy of the notification letter sent to all offset operators and the Bureau of Land Management.




The Blanco Mesaverde formation is uneconomic to drill as a stand alone well. To develop these reserves, a dual or commingled completion is required. We estimate an ultimate recovery of approximately 750 MMCF from the Mesaverde horizon, which would otherwise remain undeveloped. Also, commingling will allow for better lift of liquids production and benefits from compression.

Both zones produce essentially dry gas. Therefore, the respective formation fluids are compatible. Also, no crossflow will occur between the commingled zones.

If you have any questions, please contact Dana Delventhal at (505)326-7600. Thank you for your consideration in this matter.

Sincerely,

Union Oil Company of California  
dba UNOCAL

A handwritten signature in black ink, appearing to read "Glen O. Papp", is written over the typed name.

Glen O. Papp  
Field Superintendent

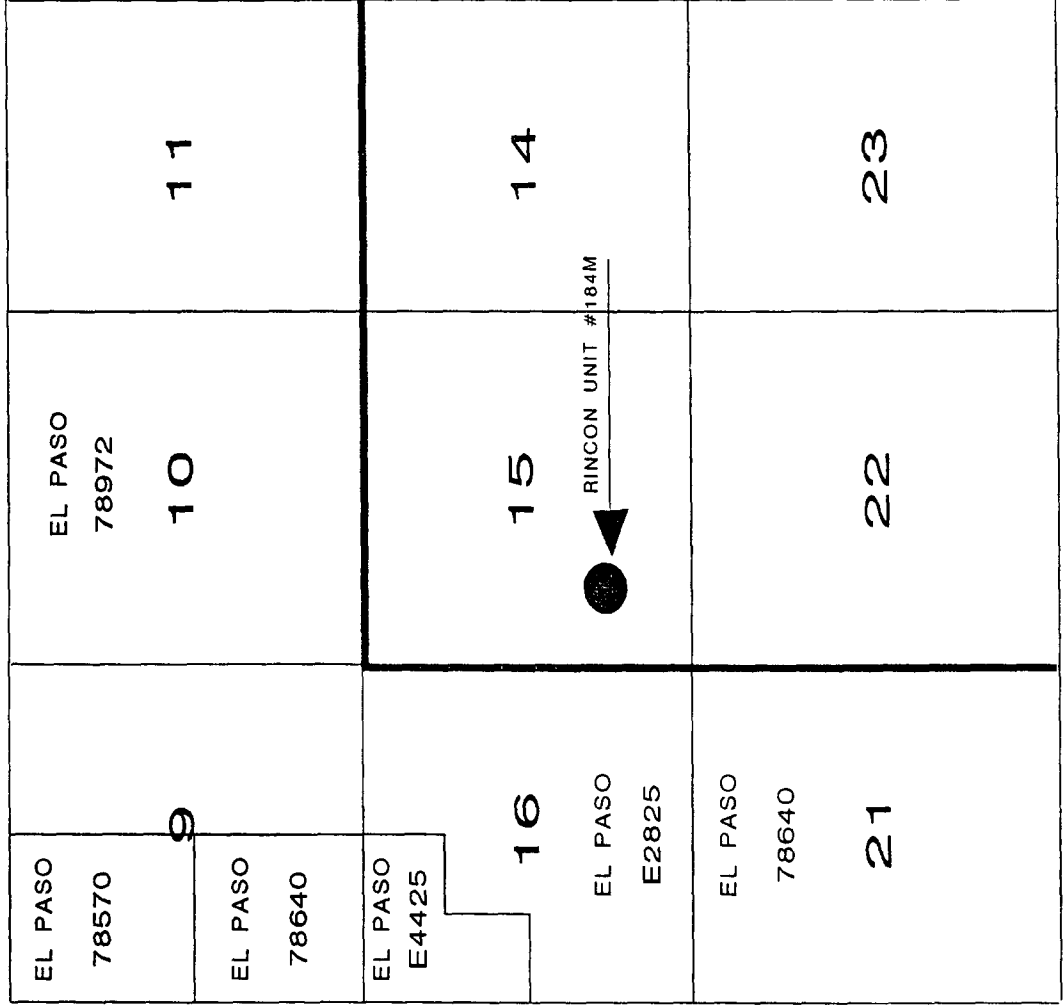
Attachments

GOP/DLD/df



# OFFSET LEASE OWNERSHIP

R 7 W



T 27 N



Submit 2 copies to Appropriate District Office.

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-116  
Revised 1/1/89

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

## OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

### GAS - OIL RATIO TEST

Operator		Pool		County										
Union Oil Company of California		Blanco Mesaverde/Basin Dakota		Rio Arriba										
Address		TYPE OF TEST - (X)		Completion <input checked="" type="checkbox"/> Scheduled <input type="checkbox"/>		Special <input type="checkbox"/>								
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	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.	GRAV. OIL		OIL BBL.
Rincon Unit	184M	P	15	27N	7W									
Blanco Mesaverde						12/28/92	F 14/64"	165		24	-0-	-0-	16	--
Basin Dakota						12/16/92	F 17/64"	300		24	4	1	347	347,000

#### 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

Glen O. Papp Field Superintendent

Printed name and title

July 28, 1993

Date

(505) 326-7600

Telephone No.



**RINCON UNIT NO. 184-M**  
**790' FSL, 102.1' EL SEC 15 T27N R7W**  
**RIO ARRIBA COUNTY, NM**

12 1/4" Hole

**KB DATUM = 12' ABOVE G.L.**  
**GROUND ELEVATION = 6616'**

**8-5/8" 24# J-55 @ 380'**  
**Cmt'd w/ 240 SX - CIRC**  
**To Surface**

7-7/8" Hole

**DV TOOL @ 3621'**  
**Cmt'd Stage #3 w/ 889 sxs- Circ To Surface**  
**Squeezed Leak In DV Tool w/85 sxs**

**TOC @ 4300' By Cement Bond Log**

**UPPER MESA VERDE**

**4824-42, 4876-92, 4922-36, 4974-84, 5046-62,**  
**5130-52', w/4 SPF**

**"XO" Sliding Sleeve**  
**@ 5470'**

**LOWER MESA VERDE**

**5378-5430', w/4 SPF**

**Gulberson Uni VI**  
**pkc @ 5479'**

**TUBING DETAIL**  
**241 Jts 2-3/8" EUE 8rd J-55**  
**@ 7634'**

**DV TOOL @ 5744'**  
**Cmt'd Stage #2 w/330 sxs**

**DAKOTA**

**7406-38, 7530-52, 7566-72, 7584-7606, 7614-20,**  
**7644-60', w/4 SPF**

**5-1/2" 17# N-80, K-55**  
**@ 7750'**  
**Cmt'd Stage 1 w/ 400 sxs**

**PBTD = 7708'**

**TD @ 7750'**



# B & R SERVICE, INC.

P. O. Box 1048  
Farmington, New Mexico 87499  
(505) 325-2393

Company Unocal Lease Rincon Well 184-E  
County Rio Arriba State N.M. Date 12-9-92  
Shut-In \_\_\_\_\_ Zero Point K.B. Tbg. Pressure 525  
Casing Pressure \_\_\_\_\_ Tbg. Depth \_\_\_\_\_ Casing Perf. \_\_\_\_\_  
Max. Temp. \_\_\_\_\_ Fluid Level 4990

<u>DEPTH</u>	<u>PSIG</u>	<u>GRADIENT</u>
0	527	- - -
1000	538	.011
2000	549	.011
3000	561	.012
4000	574	.013
5000	640	.066
6000	1059	.419
7000	1487	.428
7200	1572	.425
7400	1659	.435
7595	1740	.415



# FLUID LEVEL SURVEY

FIELD: \_\_\_\_\_  
RINCON \_\_\_\_\_  
DATE: \_\_\_\_\_  
STATE: N. MEX.

AVERAGE TUBING LENGTH:  
REMARKS:



RINCON UNIT NO. 184 M

After a 7 day SI period:

$$\text{Mesaverde BHP} = 1753 \text{ psi @ } 5127'$$

$$\text{Dakota BHP} = 1740 \text{ psi @ } 7595'$$

$$\text{Gas Gradient} = 0.013 \text{ psi/ft}$$

Adjusting to a common datum of 5127':

$$\text{Mesaverde BHP} = 1753 \text{ psi}$$

$$\text{Dakota BHP} = 1740 - [(0.013)(7595 - 5127)] = 1708 \text{ psi}$$

Therefore the reservoir pressures fall within the 50% requirement.





WELL ANALYSIS COMPARISON  
-----

LEASE: RINCON 184M

DECEMBER 21, 1992

DATE: 12/9/92 12/16/92

NO.: 20043 20046  
MESAVERDE DAKOTA

	MOLE %	MOLE %
	-----	-----
NITROGEN	0.702	0.169
CO2	0.435	1.200
METHANE	86.677	91.707
ETHANE	6.988	4.909
PROPANE	3.594	1.145
I-BUTANE	0.498	0.198
N-BUTANE	0.663	0.283
I-PENTANE	0.171	0.114
N-PENTANE	0.129	0.086
HEXANE+	0.143	0.189
BTU'S	1152.7	1080.4
-----	-----	-----
GPM	3.4034	1.9380
-----	-----	-----
SPEC GRAV	0.6578	0.6182
-----	-----	-----



RINCON UNIT NO. 184 M

C-116 ADJUSTMENT

BASIN DAKOTA

$n = 0.75$

$P_R = 1740 \text{ psi @ } 7595'$

$P_{wf1} = 399 \text{ psi @ } 7595'$

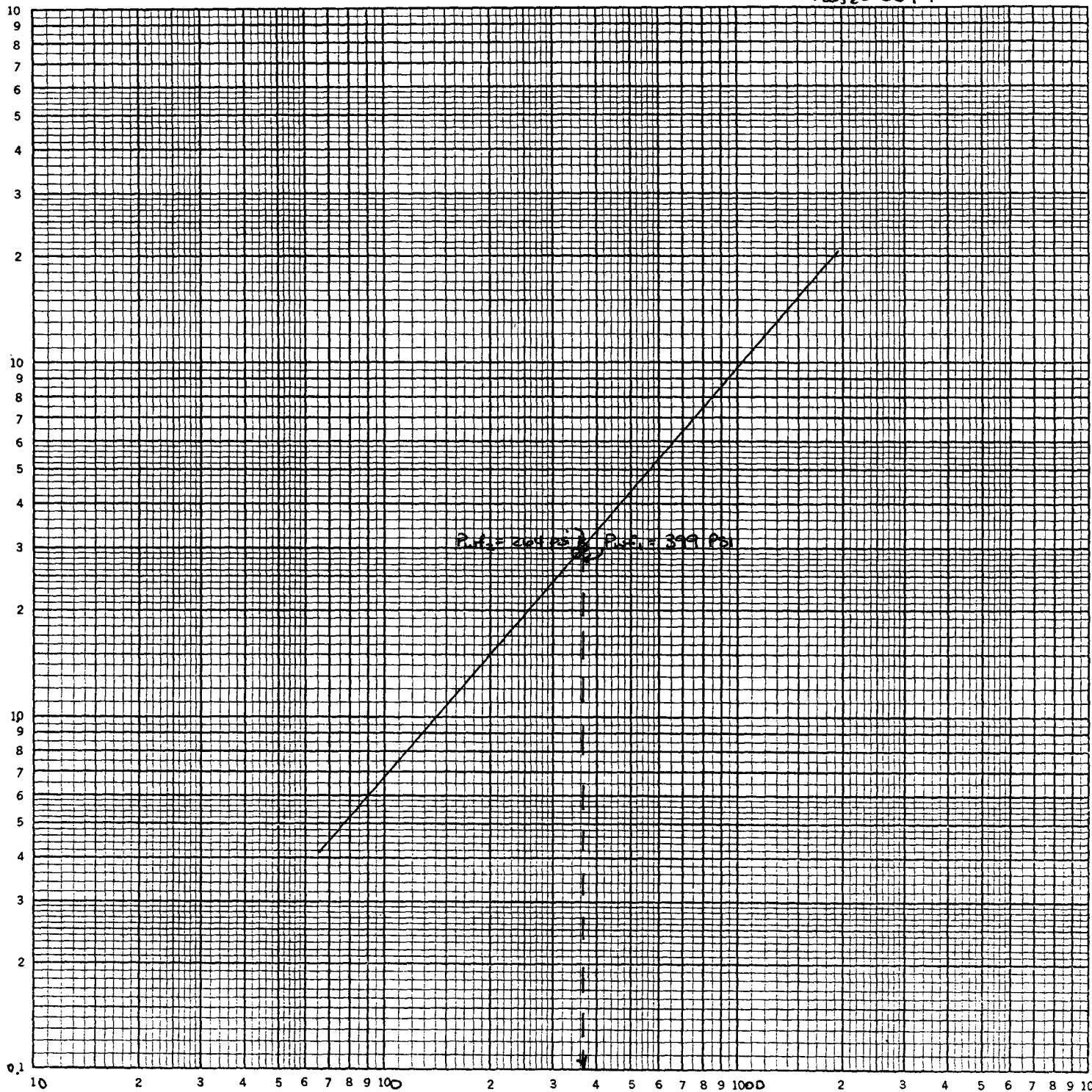
$Q = 347 \text{ MCFD}$

$P_{wf2} = 264 \text{ psi @ } 7595'$

46 7403

$(P_R^2 - P_{wf}^2) \times 10^{-6}$

K<sub>FE</sub> LOGARITHMIC 3 X 3 CYCLES  
KEUFFEL & ESSER CO. MADE IN U.S.A.



$Q_2 = 365 \text{ MCFD}$

$Q \text{ (MCFD)}$



RINCON UNIT NO. 184 M  
ALLOCATION FORMULA  
(BASED ON ADJUSTED C-116)

<u>GAS PRODUCTION:</u>	Mesaverde Rate	16 MCFD
	Dakota Rate	<u>365</u> MCFD
	Total Rate	<u>381</u> MCFD

Therefore,	Mesaverde	4%
	Dakota	96%

<u>OIL PRODUCTION:</u>	Mesaverde Rate	0 BOPD
	Dakota Rate	<u>1</u> BOPD
	Total Rate	<u>1</u> BOPD

Therefore,	Mesaverde	0%
	Dakota	100%



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July 28, 1993

Farmington District

United States Department of the Interior  
Bureau of Land Management  
1235 La Plata Highway  
Farmington, New Mexico 87401

Dear Sirs:

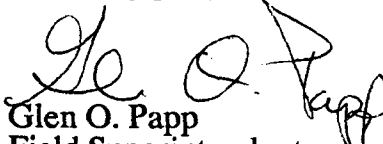
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If you have any objections to this proposal, please notify the NMOCD within twenty (20) days. If you have any questions about this application, please contact Dana Delventhal at (505)326-7600.

Sincerely,

Union Oil Company of California  
dba UNOCAL

  
Glen O. Papp  
Field Superintendent

GOP/DLD/df



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3300 North Butler Avenue  
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July 28, 1993

Farmington District

Meridian Oil Production Inc.  
P.O. Box 4289  
Farmington, New Mexico 87499

Dear Sirs:

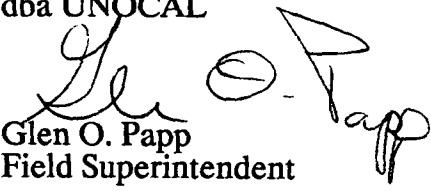
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