

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 28 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". The signature is written in a cursive style with a large, sweeping initial "G".

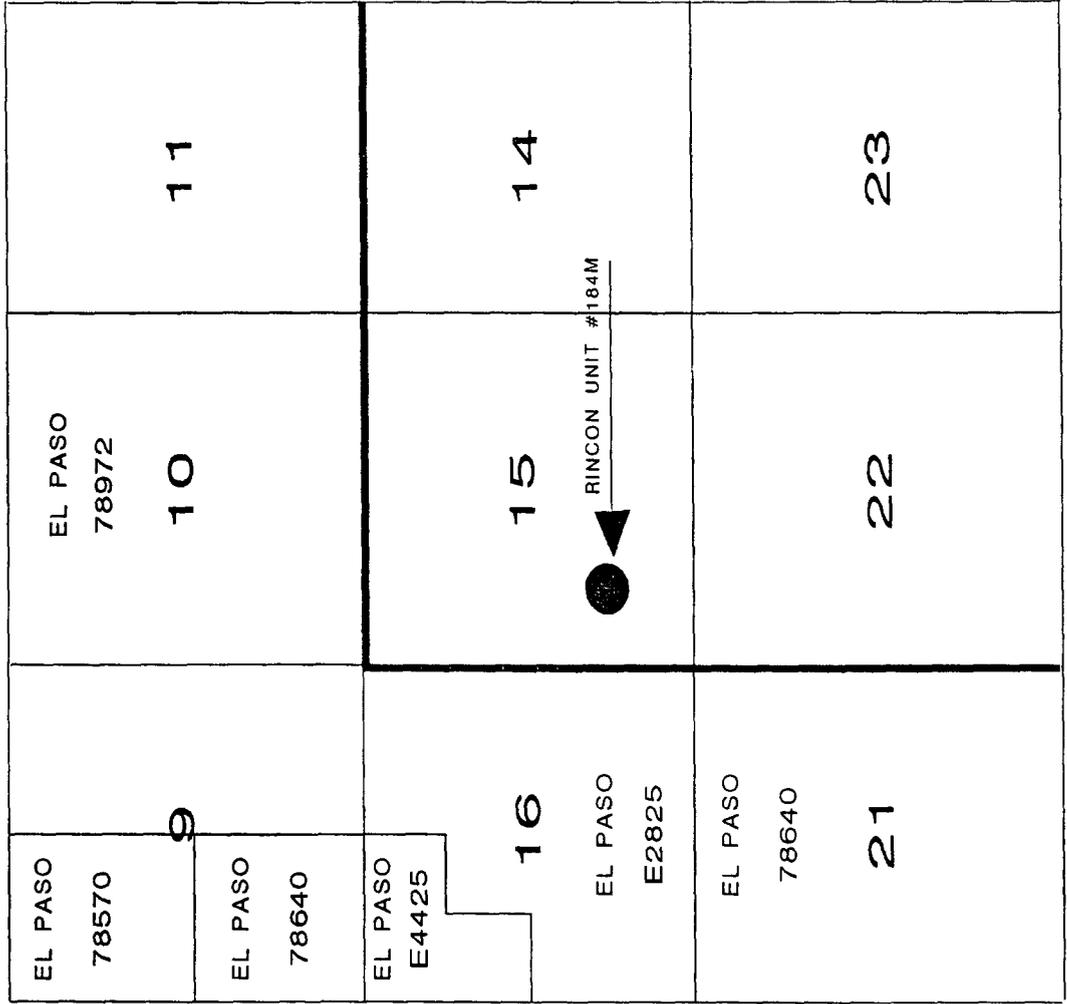
Glen O. Papp
Field Superintendent

Attachments

GOP/DLD/df

OFFSET LEASE OWNERSHIP

R 7 W



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

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

OIL CONSERVATION DIVISION

GAS - OIL RATIO TEST

Operator		Pool		County										
Union Oil Company of California		Blanco Mesaverde/Basin Dakota		Rio Arriba										
Address		TYPE OF TEST - (X)		Completion										
3300 N. Butler, Suite 200, Farmington, NM 87401		Scheduled <input type="checkbox"/>		Special <input type="checkbox"/>										
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	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	12/28/92	F 14/64"	165		24	-0-	-0-	16	--
Blanco Mesaverde						12/16/92	F 17/64"	300		24	4	1	347	347,000
Basin Dakota														

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' DEL 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
pkr @ 5479'

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

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

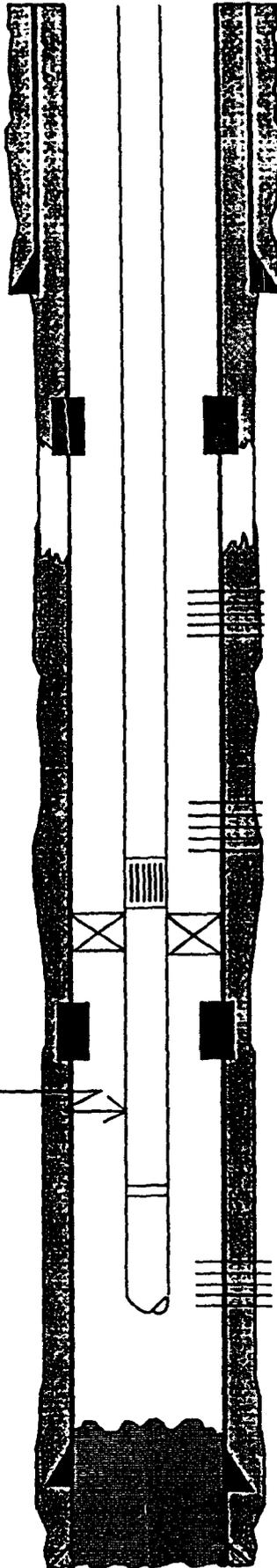
DAKOTA

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

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

$n = 0.75$

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

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

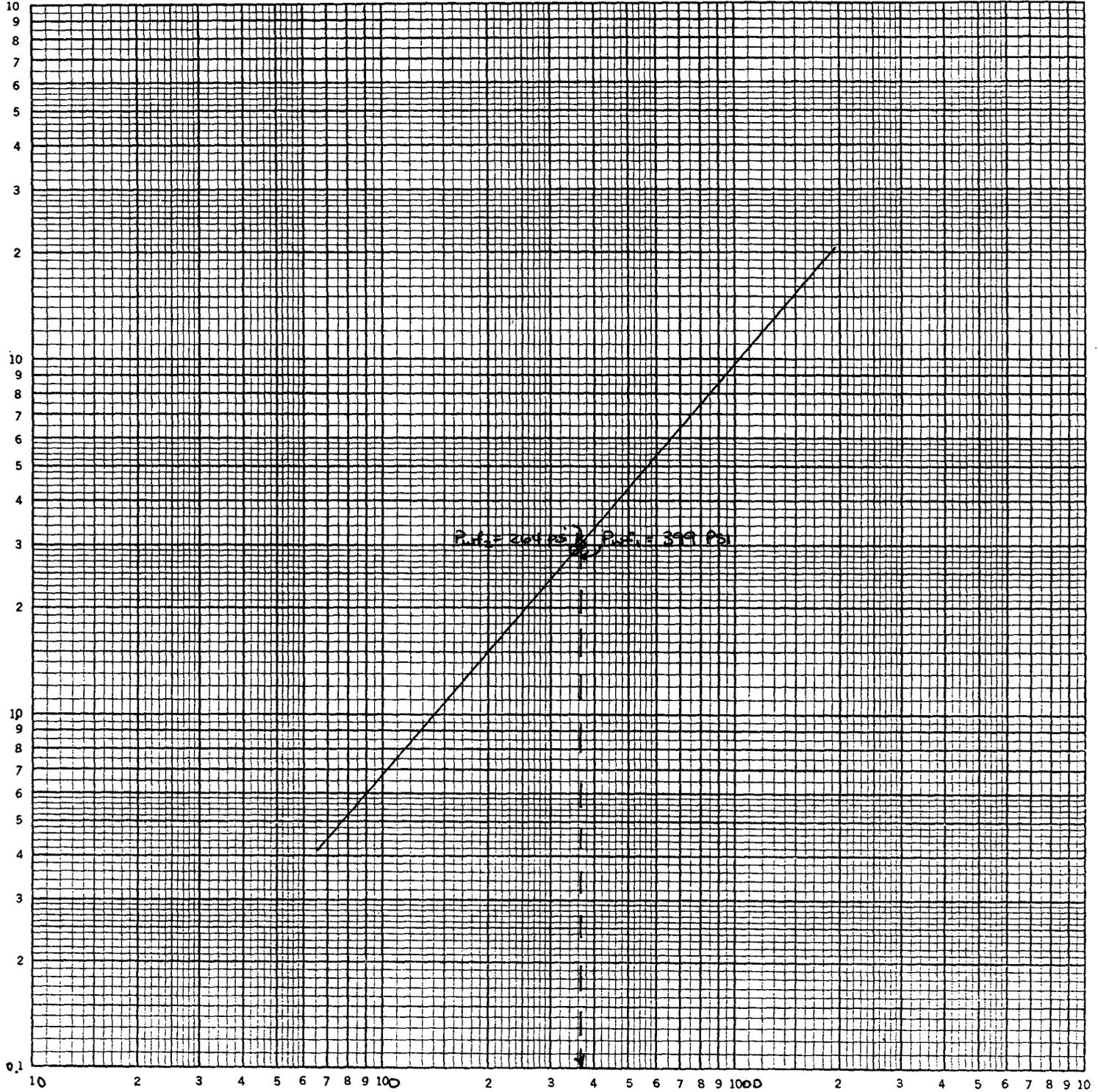
$Q = 347 \text{ MCFD}$

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

46 7403

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

K&E 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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Unocal Corporation
3300 North Butler Avenue
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Fax: (505) 326-6145

UNOCAL 

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:

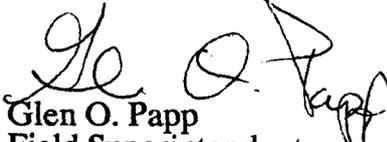
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Sincerely,

Union Oil Company of California
dba UNOCAL


Glen O. Papp
Field Superintendent

GOP/DLD/df

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Unocal Corporation
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:

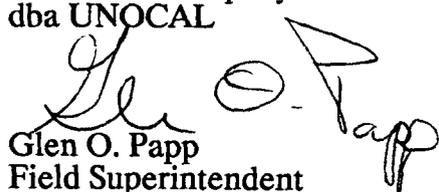
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