

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 7-19-93

OIL CONSERVATION DIVISION
RECEIVED

'93 JUN 28 AM 10 49



June 23, 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. 158M
1535' FSL, 1480' FEL
Section 22, T27N, R6W
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


Glen O. Papp
Field Superintendent

Attachments

GOP/DLD/df

OFFSET LEASE OWNERSHIP

R 6 W

16	EL PASO SF079365 15	EL PASO SF079363 14
21	RINCON UNIT #158M 22 	23
28	27	26

T 27 N

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		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 ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT/BBL.	
		U	S	T						R	WATER BBL.S.	GRAV. OIL		OIL BBL.S.
Rincon Unit	158M	J	22	27N	6W									
Blanco Mesaverde						10/23/92	F 16/64"	245		24	-0-	-0-	198	--
Basin Dakota						10/16/92	F 24/64"	75		24	3	-0-	234	--

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
 June 23, 1993 (505) 326-7600
 Date Telephone No.

RINCON UNIT NO. 158-M
1535' FSL, 140' FEL SEC 22 T27N R6W
RIO ARRIBA COUNTY, NM

12 1/4" Hole

KB DATUM = 13' ABOVE G.L.
GROUND ELEVATION = 6426'

8-5/8" 24# K-55 @ 357"
CMT'D W/ 240 SX - CIRC
TO SURFACE

TOC @ 700'
by CALC

7-7/8" Hole

DV TOOL @ 3307'
Cmt'd Stage #3 w/ 645 sxs

UPPER MESA VERDE
4758-82', 4798-4822', 4830-58' W/ 4SPF

LOWER MESA VERDE
4952-68', 5016-28', 5124-34',
5210-26', 5300-20', W/ 4 SPF

"GL" Sliding Sleeve
@ 5331'

Gulberson Uni VI
pkr set @ 5340'

DV TOOL @ 5818'
Cmt'd Stage #2 w/280 sxs

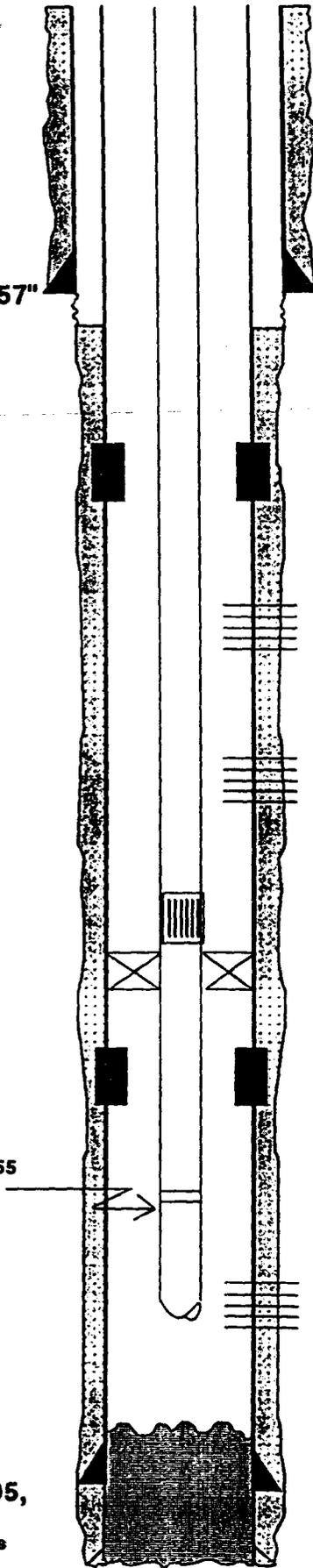
TUBING DETAIL
240 jts 2-3/8" EUE 8rd J-55
@ 7495'

DAKOTA
7300-12', 7322-34', 7420-44',
7478-98', 7508-30', W/ 4 SPF

5-1/2" 17# N-80, S-95,
K-55 @ 7624'
Cmt'd Stage 1 w/ 385 sxs

PBTD = 7582'

TD @ 7630'



B & R SERVICE, INC.

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

Company UNOCAL CORPORATION Lease RINCON Well 158 M (DAK)
County RIO ARRIBA State N. MEX. Date 10/23/92
Shut-In _____ Zero Point G.L. Tbg. Pressure 608
Casing Pressure _____ Tbg. Depth _____ Casing Perf. _____
Max. Temp. _____ Fluid Level 7200'

<u>DEPTH</u>	<u>PSIG</u>	<u>GRADIENT</u>
0	608	----
1000	623	.015
2000	638	.015
3000	652	.014
4000	665	.013
5000	683	.018
6000	698	.015
7000	713	.015
7320	760	.147
7420	802	.420

RINCON UNIT NO. 158 M

After a 7 day SI period:

$$\text{Mesaverde BHP} = 1231 \text{ psi @ } 5039'$$

$$\text{Dakota BHP} = 802 \text{ psi @ } 7420'$$

$$\text{Gas Gradient} = 0.015 \text{ psi/ft}$$

Adjusting to a common datum of 5039':

$$\text{Mesaverde BHP} = 1231 \text{ psi}$$

$$\text{Dakota BHP} = 802 - [(0.015)(7420 - 5039)] = 766 \text{ psi}$$

Therefore the reservoir pressures fall within the 50% requirement.



(505) 325-6622

ANALYSIS NO. UNO20029

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 158M

LINE PRESSURE: 250

LOCATION:

SAMPLE TEMP.: 72

COUNTY:

WELL FLOWING: YES

FORMATION: MESA VERDE

DATE SAMPLED: 10/92

SMPL SRC:

SAMPLED BY: TSB-KIVA

REMARKS:

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.259	0.0000
CO2	0.976	0.0000
METHANE	86.093	0.0000
ETHANE	7.491	2.0038
PROPANE	2.954	0.8141
I-BUTANE	0.542	0.1773
N-BUTANE	0.745	0.2349
I-PENTANE	0.321	0.1175
N-PENTANE	0.204	0.0739
HEXANE+	0.415	0.1810
TOTAL	100.000	3.6025
COMPRESSIBILITY FACTOR (1/Z)		1.0030
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1166.8
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1146.5
REAL SPECIFIC GRAVITY		0.6709

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 29 PSIG

DATE RUN: 10/26/92

ANALYSIS RUN BY: CHELLE DURBIN

(505) 325-6622



ANALYSIS NO. UNO20026

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION
 WELL NAME: RINCON 158M
 LOCATION:
 COUNTY: RIO ARRIBA, NM
 FORMATION: DAKOTA
 SMPL SRC:
 REMARKS:

LINE PRESSURE: 48 PSIG
 SAMPLE TEMP.: 62 DEG.F
 WELL FLOWING: YES
 DATE SAMPLED: 10/19/92
 SAMPLED BY: KIVA

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.798	0.0000
CO2	1.151	0.0000
METHANE	88.783	0.0000
ETHANE	5.864	1.5686
PROPANE	1.814	0.4999
I-BUTANE	0.420	0.1374
N-BUTANE	0.469	0.1479
I-PENTANE	0.248	0.0907
N-PENTANE	0.135	0.0489
HEXANE+	0.318	0.1387
TOTAL	100.000	2.6322
COMPRESSIBILITY FACTOR (1/Z)		1.0027
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1112.2
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1092.9
REAL SPECIFIC GRAVITY		0.6446

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 11 PSIG

DATE RUN: 10/19/92

ANALYSIS RUN BY: CHELLE DURBIN

RINCON UNIT NO. 158 N

BASIN DAKOTA

$n = 0.75$

$P_R = 802 \text{ psi @ } 7420'$

$P_{wf1} = 186 \text{ psi @ } 7420'$

$Q_1 = 234 \text{ MCFD}$

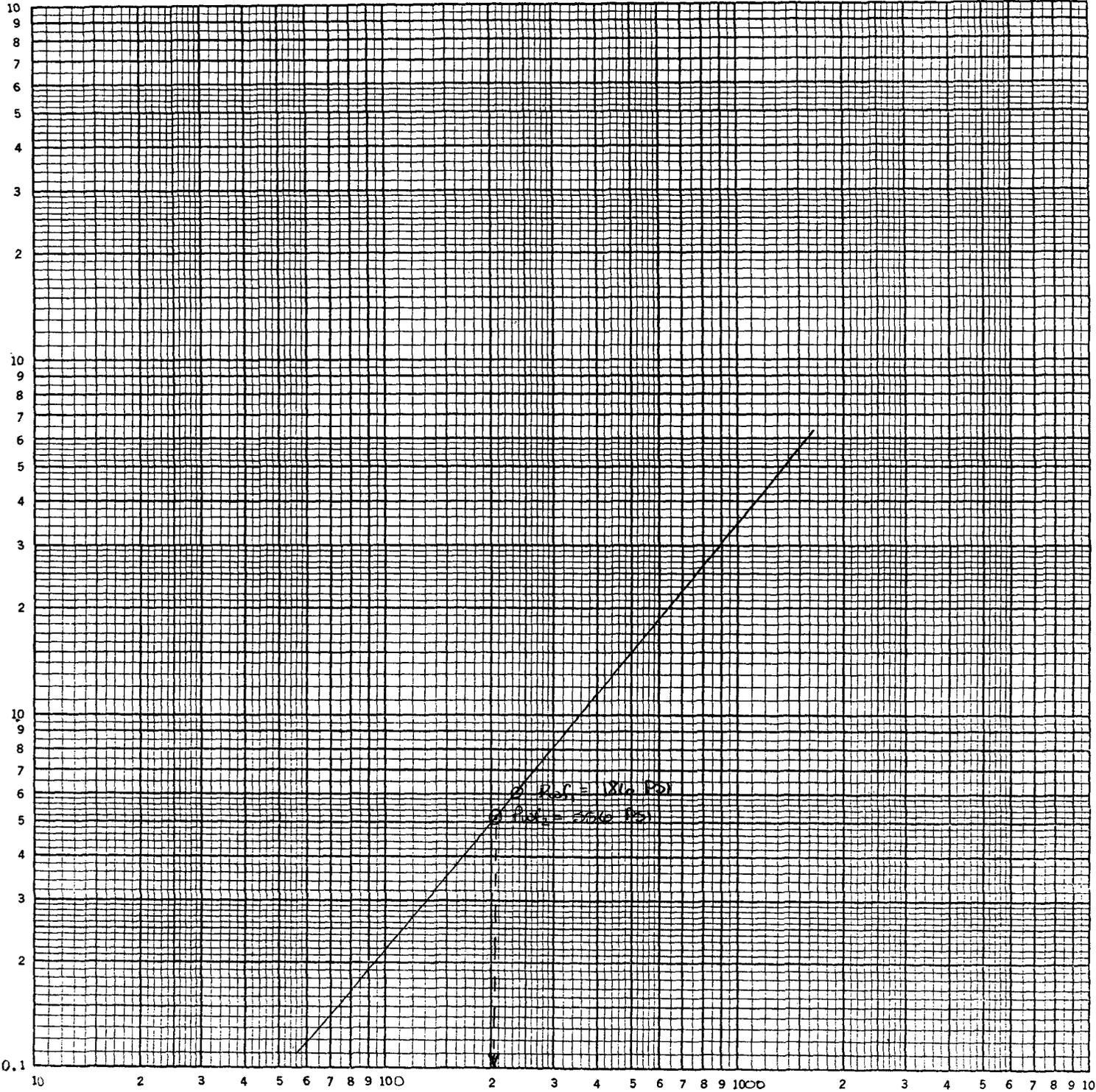
$P_{wf2} = 356 \text{ psi @ } 7420'$

$Q_2 = 205 \text{ MCFD}$

46 7403

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

K_oΣ LOGARITHMIC 3 X 3 CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.



$Q \text{ (MCFD)}$

RINCON UNIT NO. 158 M
ALLOCATION FORMULA
(BASED ON ADJUSTED C-116)

<u>GAS PRODUCTION:</u>	Mesaverde Rate	198 MCFD
	Dakota Rate	<u>205</u> MCFD
	Total Rate	<u>403</u> MCFD

Therefore,	Mesaverde	49%
	Dakota	51%

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

Therefore,	Mesaverde	50%
	Dakota	50%

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



June 23, 1993

Farmington District

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

Dear Sirs:

Union Oil Company of California (UNOCAL) has requested permission from the New Mexico Oil Conservation Division to downhole commingle production from the Blanco Mesaverde and Basin Dakota formations in the following well:

Rincon Unit No. 158 M
1535' FSL, 1480' FEL
Section 22, T27N, R6W
Rio Arriba County, New Mexico

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

A handwritten signature in black ink, appearing to read "Glen O. Papp". The signature is written in a cursive style with a large, stylized initial "G".

Glen O. Papp
Field Superintendent

GOP/DLD/df

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Unocal Corporation
3300 North Butler Avenue
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Farmington, New Mexico 87401
Telephone (505) 326-7600
Fax: (505) 326-6145



June 23, 1993

Farmington District

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

Dear Sirs:

Union Oil Company of California (UNOCAL) has requested permission from the New Mexico Oil Conservation Division to downhole commingle production from the Blanco Mesaverde and Basin Dakota formations in the following well:

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Sincerely,

Union Oil Company of California
dba UNOCAL

A handwritten signature in cursive script that reads "Glen O. Papp".

Glen O. Papp
Field Superintendent

GOP/DLD/df



The New Mexico
DRUG FREE
It's a State of Mind

STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL RESOURCES DIVISION

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE 93 JU 8 AM 8 45

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

Date: 7/6/93

Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

RE: Proposed MC _____
Proposed NSL _____
Proposed WFX _____
Proposed NSP _____

Proposed DHC X _____
Proposed SWD _____
Proposed PMX _____
Proposed DD _____

Gentlemen:

I have examined the application received on 6/28/93

for the Unocal OPERATOR Rincon Unit # 158M LEASE & WELL NO.

J-22-27N-6W and my recommendations are as follows:
UL-S-T-R

Approve

Yours truly,
[Signature]