



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION



POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

ADMINISTRATIVE ORDER DHC-918

UNOCAL Oil & Gas Division
3300 North Butler Avenue
Farmington, NM 87401

Attention: Glen O. Papp

RECEIVED
SEP 23 1993
OIL CON. DIV.]
DIST. 3

*Rincon Unit Well No. 151-M
Unit O, Section 14, Township 27 North, Range 7 West, NMPM,
Rio Arriba County, New Mexico.
Blanco Mesaverde and Basin Dakota Pools*

Dear Mr. Papp:

Reference is made to your recent application for an exception to Rule 303-A of the Division Rules and Regulations to permit the subject well to commingle production from both pools in the wellbore.

It appearing that the subject well qualifies for approval for such exception pursuant to the provisions of Rule 303-C, and that reservoir damage or waste will not result from such downhole commingling, and correlative rights will not be violated thereby, you are hereby authorized to commingle the production as described above and any Division Order which authorized the dual completion and required separation of the two zones is hereby placed in abeyance.

In accordance with the provisions of Rule 303-C-4., total commingled oil production from the subject well shall not exceed 50 barrels per day, and total water production shall not exceed 100 barrels per day. The maximum amount of gas which may be produced daily from the well shall be determined by Division Rules and Regulations or by the gas allowable for each respective prorated pool as printed in the Division's San Juan Basin Gas Proration Schedule.

Assignment of allowable to the well and allocation of production from the well shall be on the following basis:

Blanco Mesaverde Pool	Oil	50%	Gas	26%
Basin Dakota Pool	Oil	50%	Gas	74%

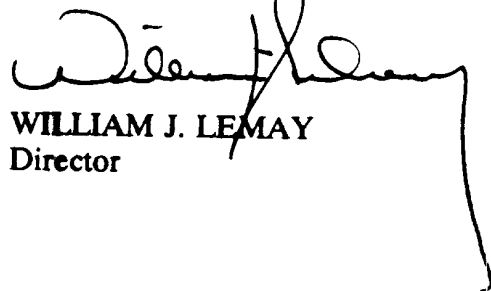
Administrative Order DHC-918
UNOCAL Oil & Gas Division
September 17, 1993
Page 2

FURTHER: The operator shall notify the Aztec District Office of the Division upon implementation of the commingling process.

Pursuant to Rule 303-C-5, the commingling authority granted by the order may be rescinded by the Division Director if, in his opinion, conservation is not being best served by such commingling.

Approved at Santa Fe, New Mexico on this 17th day of September, 1993.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

S E A L

WJL/BES/amg

cc: Oil Conservation Division - Aztec
US Bureau of Land Management - Farmington



STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

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

Date: 8-27-93

attn: David Catron

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 8-10-93
for the UNOCAL RINCON J. #151M
OPERATOR LEASE & WELL NO.

0-14-27N-07W and my recommendations are as follows:
UL-S-T-R

Approve

Yours truly,

Eric Busch

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

UNOCAL ⁷⁶

August 6, 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

RECEIVED
AUG 10 1993
OIL CON. DIV.
DIST. 3

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. 151M
1150' FSL, 1675' FEL
Section 14, 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

EL PASO 78972 10	EL PASO 78972 11	AMOCO 79298B 12
EL PASO 78640 15	RINCON UNIT #151M 14	
22	23	EL PASO 79298C 24

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 Union Oil Company of California		Pool Blanco Mesaverde/Basin Dakota		County Rio Arriba										
Address 3300 N. Butler, Suite 200, Farmington, NM 87401		TYPE OF TEST (%)		Completion ☒ Scheduled ☐ Special ☐										
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	151M	0	14	27N	7W	10/25/92	F 19/64"	275		24	-0-	-0-	221	---
Blanco Mesaverde						11/ 1/92	F 15/64"	455		24	3	-0-	559	---
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

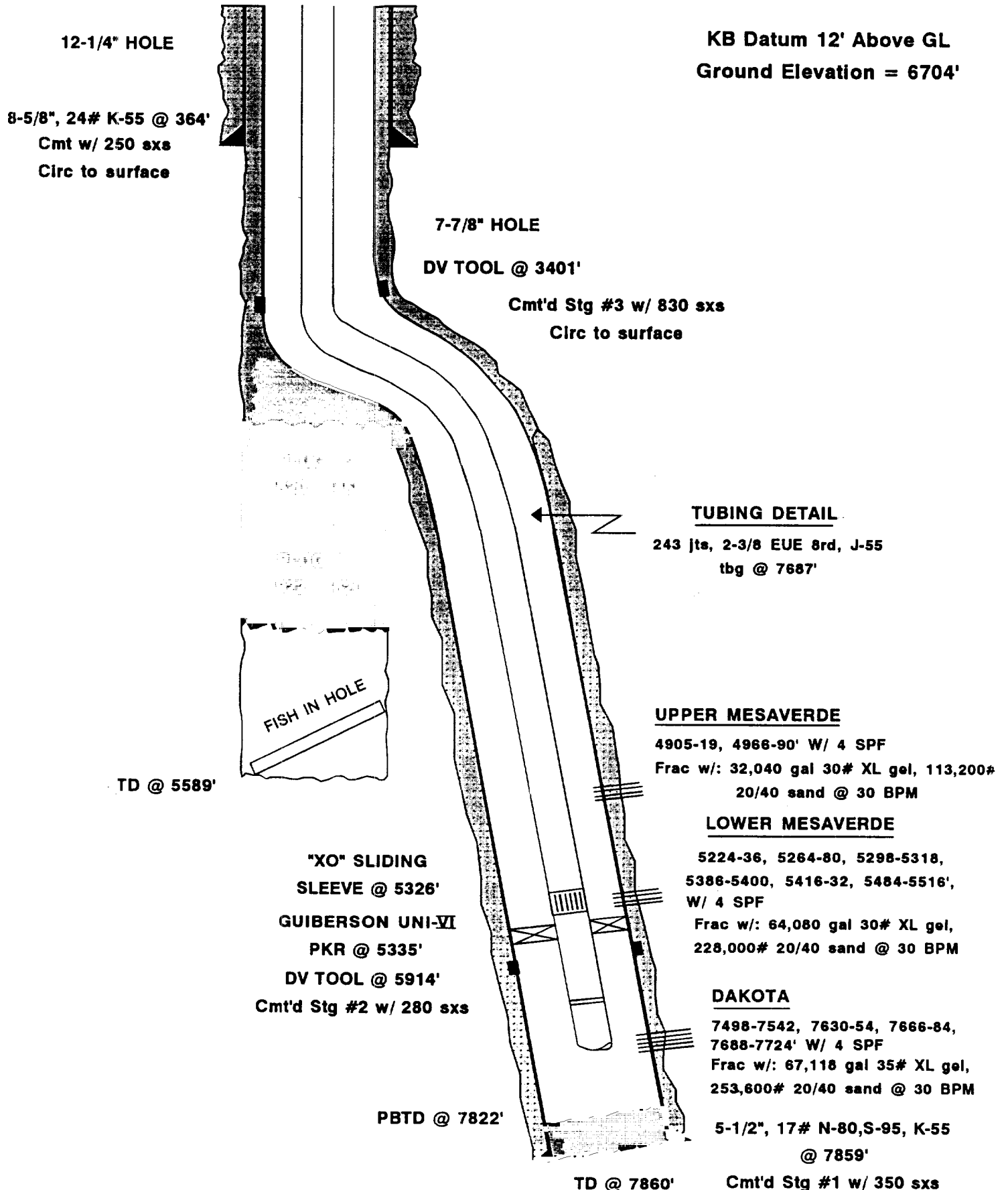
August 6, 1993

(505) 326-7600

Date

Telephone No.

RINCON UNIT NO. 151-M
1150' FSL, 1675' FEL, SEC 14, T27N-R7W
RIO ARRIBA COUNTY, NM



B & R SERVICE, INC.

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

Company Unocal Lease Rincon Well 151-M
County Rio Arriba State N.M. Date 10-25-92
Shut-In _____ Zero Point K.B. Tbg. Pressure 1575
Casing Pressure _____ Tbg. Depth _____ Casing Perf. _____
Max. Temp. _____ Fluid Level None

DEPTH

PSIG

GRADIENT

0	1574	- - -
1000	1634	.060
2000	1693	.059
3000	1748	.055
4000	1800	.052
5000	1851	.051
6000	1904	.053
7000	1956	.052
7500	1981	.050
7611	1987	.054

B & R SERVICE, INC.
P.O. BOX 1018
FARMINGTON, N.M.

FLUID LEVEL SURVEY

COMPANY: UNOCAL CORPORATION COUNTY: RIO ARriba
FIELD: RINCON DATE: _____ STATE: N. MEX.

LEASE AND WELL NO.	LOCATION	TIME	ELEV.	DATUM	CASING PRESSURE PSIG	JOINTS TO FLUID	FEET TO FLUID	FLUID ABOVE DATUM	PRESSURE AT DATUM
10/30/92 RINCON 158 M				MID PERF. 5039'	540	110	3432'	1607'	1231 PSIG
11/01/92 RINCON 151 M				MID PERF. 5211'	750	130	4108'	1103'	1228 PSIG
11/04/92 RINCON 171 M				MID PERF. 4883'	340	152	4758'	125'	394 PSIG
12/17/92 RINCON 184 M				MID PERF. 5127'	965	105	3308'	1819'	1753 PSIG
12/19/92 RINCON 136 E				MID PERF. 4845'	600	118	3729'	1116'	1139 PSIG
12/19/92 RINCON 127 M				MID PERF. 5080'	610	153	4835'	245'	716 PSIG
12/22/92 RINCON 125 M				MID PERF. 5277'	480	154	4882'	395'	789 PSIG
12/22/92 RINCON 137 E				MID PERF. 6712'	1120	205	6765'	0'	1120 PSIG
7/15/93 RINCON 126 M				MID PERF. 5224'	780	155	4898'	326'	921 PSIG
12/4/92 RINCON 168 E				MID PERF. 6608'	1020	203	6415'	193'	1104 PSIG

AVERAGE TUBING LENGTH:
REMARKS:

RINCON UNIT NO. 151 M

After a 7 day SI period:

$$\text{Mesaverde BHP} = 1228 \text{ psi @ } 5211'$$

$$\text{Dakota BHP} = 1987 \text{ psi @ } 7611'$$

$$\text{Gas Gradient} = 0.052 \text{ psi/ft}$$

Adjusting to a common datum of 5211':

$$\text{Mesaverde BHP} = 1228 \text{ psi}$$

$$\text{Dakota BHP} = 1987 - [(0.052)(7611 - 5211)] = 1862 \text{ psi}$$

Therefore the reservoir pressures fall within the 50% requirement.



(505) 325-6622

ANALYSIS NO. UN020031

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON #151M

LINE PRESSURE: 255 PSIG

LOCATION:

SAMPLE TEMP.: 68 DEG.F

COUNTY: RIO ARRIBA, NM

WELL FLOWING: YES

FORMATION: DAKOTA

DATE SAMPLED: 11/01/92

SMPL SRC:

SAMPLED BY: KIVA

REMARKS: TAKEN @ TEST UNIT

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.160	0.0000
CO2	1.144	0.0000
METHANE	89.255	0.0000
ETHANE	5.918	1.5831
PROPANE	1.913	0.5272
I-BUTANE	0.335	0.1096
N-BUTANE	0.514	0.1621
I-PENTANE	0.212	0.0776
N-PENTANE	0.154	0.0558
HEXANE+	0.395	0.1723
TOTAL	100.000	2.6876
COMPRESSIBILITY FACTOR (1/Z)		1.0027
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1122.5
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1103.0
REAL SPECIFIC GRAVITY		0.6442

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 258 PSIG

DATE RUN: 11/02/92

ANALYSIS RUN BY: CHELLE DURBIN



1 5 FARMINGTON AVENUE - FARMINGTON, NM 87401

(505) 325-6622

ANALYSIS NO. UN020028

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 151M

LINE PRESSURE: 250 PSIG

LOCATION:

SAMPLE TEMP.: 70 DEG.F

COUNTY: RIO ARriba

WELL FLOWING: YES

FORMATION: MESA VERDE

DATE SAMPLED: 10/92

SMPL SRC:

SAMPLED BY: TSB-KIVA

REMARKS:

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.290	0.0000
CO2	0.904	0.0000
METHANE	85.350	0.0000
ETHANE	8.071	2.1590
PROPANE	3.234	0.8913
I-BUTANE	0.542	0.1773
N-BUTANE	0.787	0.2481
I-PENTANE	0.297	0.1087
N-PENTANE	0.206	0.0746
HEXANE+	0.319	0.1391
TOTAL	100.000	3.7981
COMPRESSIBILITY FACTOR (1/Z)		1.0030
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1172.2
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1151.8
REAL SPECIFIC GRAVITY		0.6735

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 237 PSIG

DATE RUN: 10/26/92

ANALYSIS RUN BY: CHELLE DURBIN

RINCON UNIT NO. 151 A

C-116 ADJUSTMENT

BASIN DAKOTA

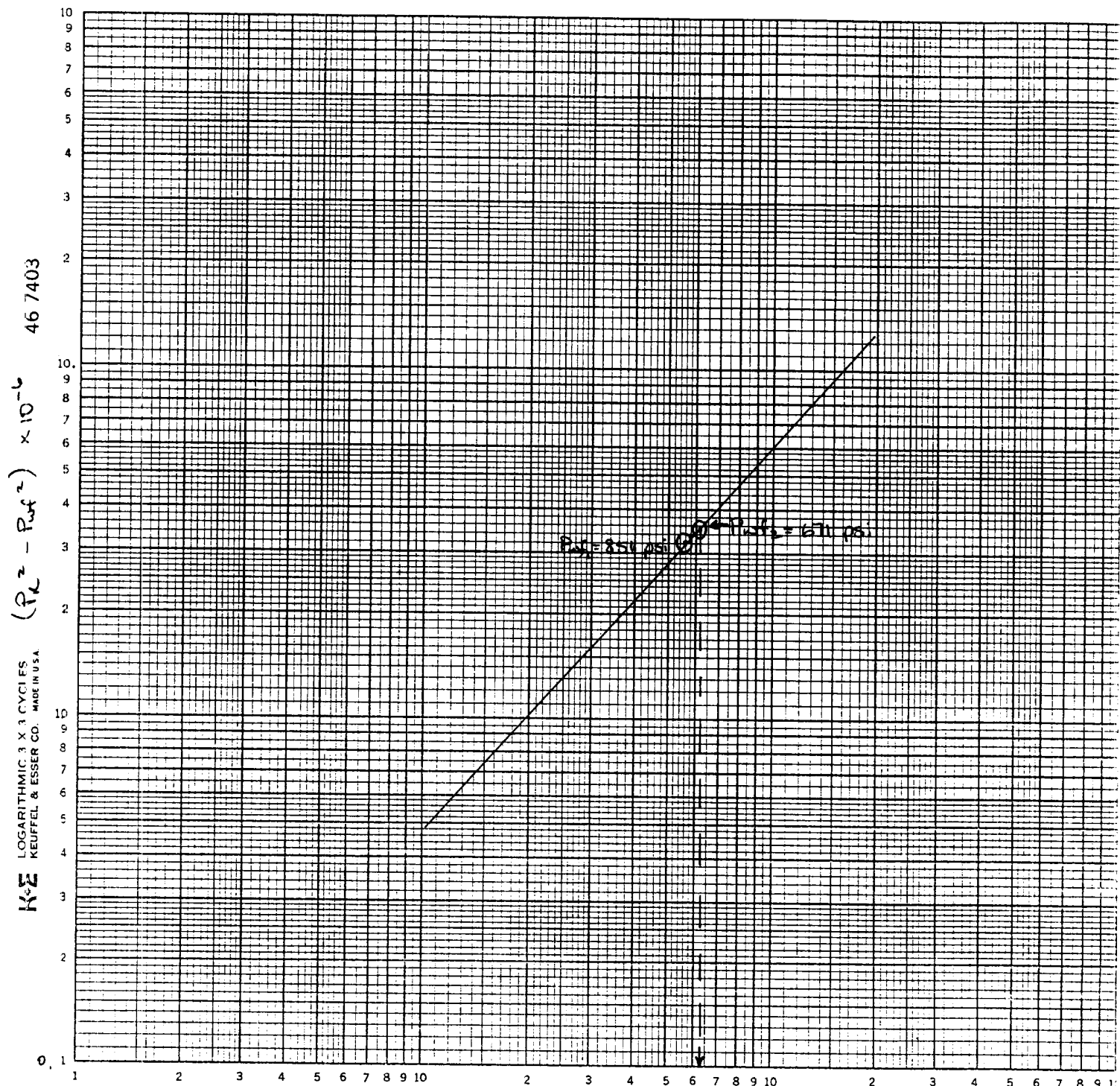
$n=0.75$

$P_R = 1987 \text{ psi @ } 7611'$

$P_{wf1} = 851 \text{ psi @ } 7611'$

$Q_1 = 559 \text{ MCFD}$

$P_{wf2} = 671 \text{ psi @ } 7611'$



$Q_2 = 630 \text{ MCFD}$

$Q \text{ (MCFD)}$

RINCON UNIT NO. 151 M
ALLOCATION FORMULA

(BASED ON ADJUSTED C-116)

GAS PRODUCTION:

Mesaverde Rate	221 MCFD
Dakota Rate	<u>630</u> MCFD
Total Rate	<u>851</u> MCFD

Therefore,

Mesaverde	26%
Dakota	74%

OIL PRODUCTION:

Mesaverde Rate	0 BOPD
Dakota Rate	<u>0</u> BOPD
Total Rate	<u>0</u> BOPD

Therefore,

Mesaverde	50%
Dakota	50%

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

UNOCAL 76

August 6, 1993

Farmington District

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

Dear Sirs:

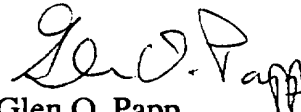
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Rincon Unit No. 151M
1150' FSL, 1675' FEL
Section 14, T27N, R7W
Rio Arriba County, New Mexico

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



Glen O. Papp
Field Superintendent

GOP/DLD/df

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

UNOCAL ⁷⁶

August 6, 1993

Farmington District

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

Dear Sirs:

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Sincerely,

Union Oil Company of California
dba UNOCAL



Glen O. Papp
Field Superintendent

GOP/DLD/df

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



August 6, 1993

Farmington District

Amoco Production Company
P.O. Box 800
Denver, CO 80201

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


Glen O. Papp
Field Superintendent

GOP/DLD/df