

RELEASE 09-13-93

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



OIL CONSERVATION DIVISION
RECEIVED
AUG 17 1993 10 58

August 17, 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. 180M
1140' FNL, 875' FWL
Section 21, 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

17	16	EL PASO SF079365 15
20	21	22
29	28	27

RINCON UNIT #180M



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 ☒ Scheduled ☐ Special ☐									
3300 N. Butler, Suite 200, Farmington, NM 87401													
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	
Rincon Unit	180M	D	21	27N	6W								
Blanco Mesaverde						9/01/92	F 48/64"	230		24	10	-0-	495
Basin Dakota						3/31/93	F 16/64"	295		24	-0-	-0-	294

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

Glen O. Papp

Printed name and title

Field Superintendent

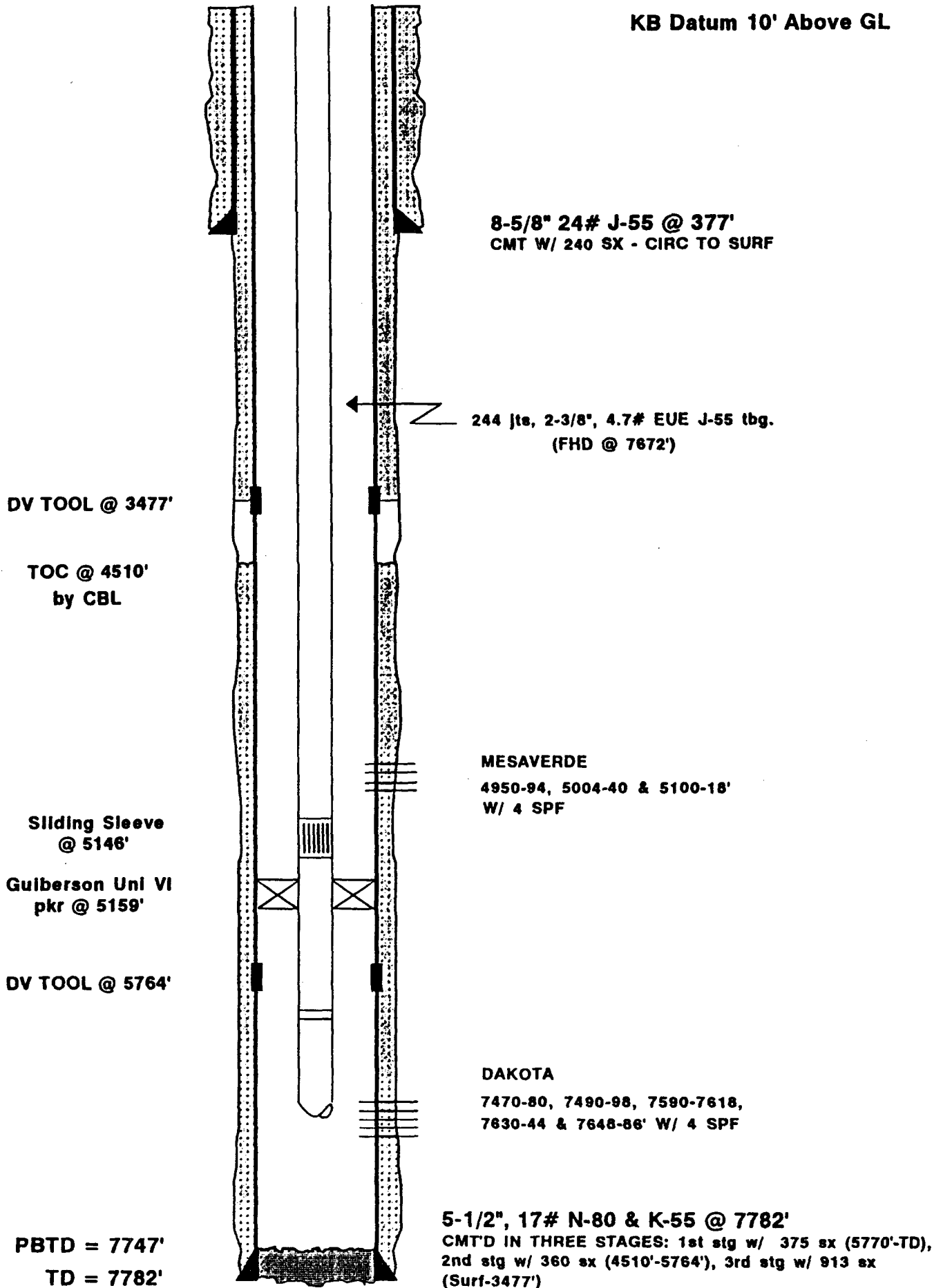
August 17, 1993

Date

(505) 326-7600
Telephone No.

RINCON UNIT NO. 180
1140' FNL, 875' FWL, SEC 21, T27N-R6W
RIO ARRIBA COUNTY, NM

KB Datum 10' Above GL



 * B & R SERVICE, INC. *
 * FARMINGTON, NM 87401 *
 * (505) 325-2393 *

COMPANY NAME...: UNOCAL
 DATE: 09/11/92
 WELL I.D.: RINCON 180M (DAK)
 FIELD I.D.: DAKOTA
 RUN #: 1
 ENGINEER:
 ZERO REFERENCE: G.L.
 START DATE: 08/27/92
 START TIME: 09:40:00
 WELL STATUS....: BUILD-UP
 GAUGE INFO:
 I.D.: RPG-3 PRESSURE
 SERIAL #.....: 68319
 RANGE.....: 3800psig @ 175F

COMMENTS: BHP RECORDED @ 7665' G.L.

FILE #: 12

NO.	TIME		PRESSURE	
	DEFL (IN)	HRS.	DEFL (IN)	PSI
1	0.0000	0.000	0.4518	884.23
2	0.0046	0.168	0.4518	884.23
3	0.0091	0.333	0.4518	884.23
4	0.0136	0.497	0.4518	884.23
5	0.0181	0.662	0.4518	884.23
6	0.0226	0.826	0.4518	884.23
7	0.0274	1.002	0.4518	884.23
8	0.0319	1.166	0.4518	884.23
9	0.0366	1.338	0.4518	884.23
10	0.0412	1.506	0.4518	884.23
11	0.0454	1.660	0.4518	884.23
12	0.0501	1.831	0.4479	876.73
13	0.0546	1.996	0.4479	876.73
14	0.0592	2.164	0.4475	875.96
15	0.0637	2.329	0.4437	868.65
16	0.0685	2.504	0.4130	809.62
17	0.0730	2.669	0.4147	812.88
18	0.0775	2.833	0.4245	831.73
19	0.0821	3.001	0.4292	840.77
20	0.0868	3.173	0.4223	827.50
21	0.0912	3.334	0.4182	819.62
22	0.0957	3.498	0.4159	815.19
23	0.1005	3.674	0.4136	810.77
24	0.1049	3.835	0.4117	807.12
25	0.1096	4.007	0.4098	803.44
26	0.1141	4.171	0.4077	799.42
27	0.1184	4.328	0.4059	795.96
28	0.1230	4.496	0.4048	793.85
29	0.1277	4.668	0.4033	790.96
30	0.1321	4.829	0.4027	789.81
31	0.1369	5.005	0.4024	789.23
32	0.1502	5.491	0.4021	788.65
33	0.1641	5.999	0.4014	787.31

 * B & R SERVICE, INC. *

Company . . : UNOCAL
 Well I.D. . : RINCON 180M (DAK)
 Field I.D. . : DAKOTA

Date: 09/11/92
 Run#: 1
 Page: 2

NO.	TIME		PRESSURE	
	DEFL (IN)	HRS.	DEFL (IN)	PSI
34	0.1779	6.503	0.3996	783.85
35	0.1915	7.001	0.3998	784.23
36	0.2055	7.512	0.3981	780.96
37	0.2195	8.024	0.3985	781.73
38	0.2326	8.503	0.3987	782.12
39	0.2464	9.008	0.3979	780.58
40	0.2600	9.505	0.3984	781.54
41	0.2739	10.013	0.3971	779.04
42	0.2871	10.495	0.3976	780.00
43	0.3007	10.993	0.3974	779.62
44	0.3149	11.512	0.3976	780.00
45	0.3279	11.987	0.3981	780.96
46	0.3422	12.510	0.3983	781.35
47	0.3560	13.014	0.3983	781.35
48	0.3697	13.515	0.3983	781.35
49	0.3827	13.990	0.3980	780.77
50	0.3971	14.517	0.3984	781.54
51	0.4099	14.985	0.3982	781.15
52	0.4243	15.511	0.3985	781.73
53	0.4381	16.016	0.3988	782.31
54	0.4520	16.524	0.3989	782.50
55	0.4654	17.014	0.3989	782.50
56	0.4793	17.522	0.3991	782.88
57	0.4921	17.990	0.3994	783.46
58	0.5061	18.501	0.3995	783.65
59	0.5196	18.995	0.3999	784.42
60	0.5335	19.503	0.4003	785.19
61	0.5469	19.993	0.4005	785.58
62	0.5614	20.523	0.4001	784.81
63	0.5740	20.984	0.4005	785.58
64	0.5885	21.514	0.4000	784.62
65	0.6019	22.004	0.4004	785.38
66	0.6160	22.519	0.4004	785.38
67	0.6296	23.016	0.4006	785.77
68	0.6428	23.499	0.4009	786.35
69	0.6568	24.011	0.4005	785.58
70	0.6703	24.504	0.4008	786.15
71	0.6840	25.005	0.4010	786.54
72	0.6978	25.509	0.4010	786.54
73	0.7114	26.007	0.4012	786.92
74	0.7255	26.522	0.4014	787.31
75	0.7390	27.015	0.4014	787.31
76	0.7525	27.509	0.4013	787.12
77	0.7661	28.006	0.4011	786.73
78	0.7795	28.496	0.4011	786.73
79	0.7935	29.008	0.4008	786.15
80	0.8072	29.509	0.4012	786.92
81	0.8211	30.017	0.4006	785.77
82	0.8489	31.033	0.4004	785.38
83	0.8766	32.046	0.4002	785.00

 * B & R SERVICE, INC. *

Company . . : UNOCAL
 Well I.D. . : RINCON 180M (DAK)
 Field I.D. . : DAKOTA

Date: 09/11/92
 Run#: 1
 Page: 3

NO.	TIME		PRESSURE	
	DEFL (IN)	HRS.	DEFL (IN)	PSI
84	0.9028	33.003	0.4004	785.38
85	0.9307	34.023	0.4002	785.00
86	0.9578	35.014	0.4007	785.96
87	0.9855	36.027	0.4007	785.96
88	1.0123	37.006	0.4008	786.15
89	1.0408	38.048	0.4004	785.38
90	1.0678	39.035	0.3999	784.42
91	1.0950	40.030	0.3995	783.65
92	1.1219	41.013	0.3991	782.88
93	1.1501	42.044	0.3998	784.23
94	1.1767	43.016	0.3999	784.42
95	1.2039	44.011	0.4005	785.58
96	1.2321	45.042	0.4008	786.15
97	1.2588	46.018	0.4003	785.19
98	1.2867	47.038	0.4001	784.81
99	1.3140	48.036	0.4003	785.19
100	1.3403	48.997	0.4006	785.77
101	1.3690	50.046	0.4007	785.96
102	1.3958	51.026	0.4003	785.19
103	1.4229	52.017	0.4009	786.35
104	1.4498	53.000	0.4013	787.12
105	1.4781	54.035	0.4013	787.12
106	1.5053	55.029	0.4014	787.31
107	1.5321	56.009	0.4009	786.35
108	1.5600	57.029	0.4008	786.15
109	1.5872	58.023	0.4012	786.92
110	1.6139	58.999	0.4015	787.50
111	1.6421	60.030	0.4021	788.65
112	1.6698	61.043	0.4021	788.65
113	1.6964	62.015	0.4023	789.04
114	1.7237	63.013	0.4018	788.08
115	1.7506	63.996	0.4018	788.08
116	1.7777	64.987	0.4022	788.85
117	1.8057	66.011	0.4022	788.85
118	1.8329	67.005	0.4020	788.46
119	1.8606	68.018	0.4020	788.46
120	1.8886	69.041	0.4018	788.08
121	1.9154	70.021	0.4019	788.27
122	1.9422	71.001	0.4020	788.46
123	1.9697	72.006	0.4021	788.65
124	2.1332	77.983	0.4026	789.62
125	2.2996	84.066	0.4029	790.19
126	2.4620	90.003	0.4035	791.35
127	2.6262	96.005	0.4044	793.08
128	2.7904	102.008	0.4055	795.19
129	2.9543	108.000	0.4075	799.04
130	3.1186	114.006	0.4090	801.92
131	3.2827	120.005	0.4108	805.38
132	3.4469	126.008	0.4127	809.04
133	3.6109	132.003	0.4137	810.96

 * B & R SERVICE, INC. *

Company . . : UNOCAL
 Well I.D. . : RINCON 180M (DAK)
 Field I.D. . : DAKOTA

Date: 09/11/92
 Run#: 1
 Page: 4

NO.	TIME		PRESSURE	
	DEFL (IN)	HRS.	DEFL (IN)	PSI
134	3.7751	138.006	0.4143	812.12
135	3.9393	144.008	0.4150	813.46
136	4.1033	150.003	0.4157	814.81
137	4.2674	156.002	0.4172	817.69
138	4.4315	162.001	0.4179	819.04
139	4.5967	168.041	0.4188	820.77
140	4.6235	169.020	0.4194	821.92
141	4.6499	169.985	0.4194	821.92
142	4.6775	170.994	0.4195	822.12
143	4.7058	172.029	0.4196	822.31
144	4.7316	172.972	0.4198	822.69
145	4.7594	173.988	0.4223	827.50
146	4.7871	175.001	0.4358	853.46
147	4.8151	176.025	0.4433	867.88
148	4.8421	177.012	0.4482	877.31
149	4.8695	178.013	0.4514	883.46
150	4.8970	179.019	0.4540	888.46
151	4.9056	179.333	0.4546	889.62

***** end data *****

B & R SERVICE, INC.

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

Company Unocal Lease Rincon Well 180-M (Mv)
County Rio Arriba State N.M. Date 9-10-92
Shut-In _____ Zero Point K.B. Tbg. Pressure 510
Casing Pressure _____ Tbg. Depth _____ Casing Perf. _____
Max. Temp. _____ Fluid Level None

DEPTH

PSIG

GRADIENT

0	509	- - -
1000	522	.013
2000	535	.013
3000	548	.013
4000	561	.013
5000	574	.013
5143	585	.077

RINCON UNIT NO. 180 M

After a 7 day SI period:

$$\text{Mesaverde BHP} = 585 \text{ psi @ } 5143'$$

$$\text{Dakota BHP} = 821 \text{ psi @ } 7665'$$

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

Adjusting to a common datum of 5143':

$$\text{Mesaverde BHP} = 585 \text{ psi}$$

$$\text{Dakota BHP} = 821 - [(0.013)(7665 - 5143)] = 788 \text{ psi}$$

Therefore the reservoir pressures fall within the 50% requirement.



(505) 325-6622

ANALYSIS NO. UN030006

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 180M

LINE PRESSURE: 240 PSIG

LOCATION:

SAMPLE TEMP.: 68 DEG.F

COUNTY:

WELL FLOWING: YES

FORMATION: DAKOTA

DATE SAMPLED: 3/30/93

SMPL SRC:

SAMPLED BY: KIVA

REMARKS: TAKEN FROM TEST UNIT.

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.155	0.0000
CO2	1.156	0.0000
METHANE	87.518	0.0000
ETHANE	7.388	1.9763
PROPANE	2.136	0.5887
I-BUTANE	0.470	0.1537
N-BUTANE	0.509	0.1605
I-PENTANE	0.261	0.0955
N-PENTANE	0.143	0.0518
HEXANE+	0.264	0.1152
TOTAL	100.000	3.1416
COMPRESSIBILITY FACTOR	(1/Z)	1.0028
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1135.8
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1116.0
REAL SPECIFIC GRAVITY		0.6528

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 257 PSIG

DATE RUN: 4/4/93

ANALYSIS RUN BY: CHELLE DURBIN



11 FARMINGTON AVENUE - FARMINGTON, NM 87401

(505) 325-6622

ANALYSIS NO. UN020017

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 180M

LINE PRESSURE: 209 PSIG

LOCATION:

SAMPLE TEMP.: 56 DEG.F

COUNTY: RIO ARRIBA, NM

WELL FLOWING: YES

FORMATION: MESAVERDE

DATE SAMPLED: 9/3/92

SMPL SRC:

SAMPLED BY: KIVA MEASURING

REMARKS: TAKEN FROM TEST UNIT AFTER 7 DAY FLOW TEST

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	1.628	0.0000
CO2	1.175	0.0000
METHANE	87.044	0.0000
ETHANE	6.604	1.7666
PROPANE	1.903	0.5245
I-BUTANE	0.426	0.1393
N-BUTANE	0.454	0.1431
I-PENTANE	0.238	0.0871
N-PENTANE	0.137	0.0496
HEXANE+	0.391	0.1706
TOTAL	100.000	2.8808
COMPRESSIBILITY FACTOR	(1/Z)	1.0027
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1113.2
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1093.8
REAL SPECIFIC GRAVITY		0.6544

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 211 PSIG

DATE RUN: 9/4/92

ANALYSIS RUN BY: CHELLE DURBIN

RINCON UNIT NO. 180 M

C-116 ADJUSTMENT

BASIN DAKOTA

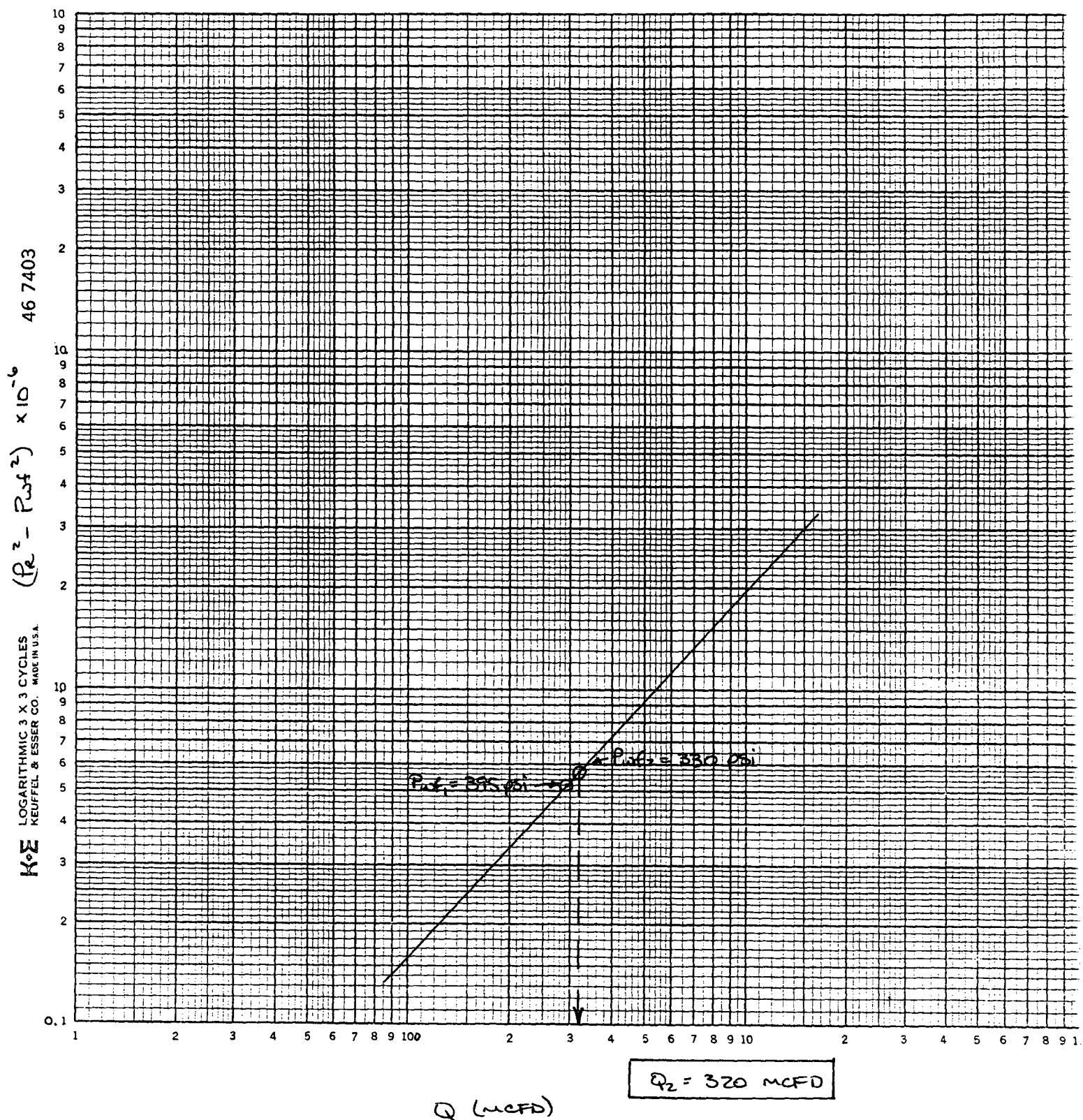
$n = 0.75$

$P_R = 821 \text{ psi @ } 7665'$

$P_{wf1} = 395 \text{ psi @ } 7665'$

$Q_1 = 294 \text{ MCFD}$

$P_{wf2} = 330 \text{ psi @ } 7665'$



RINCON UNIT NO. 180 M
ALLOCATION FORMULA

(BASED ON ADJUSTED C-116)

GAS PRODUCTION:

Mesaverde Rate	495 MCFD
Dakota Rate	<u>320</u> MCFD
Total Rate	<u>815</u> MCFD

Therefore,

Mesaverde	61%
Dakota	39%

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



August 17, 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. 180M
1140' FNL, 875' FWL
Section 21, 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 dark ink, appearing to read "Glen O. Papp", with a stylized flourish at the end.

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 17, 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:

Rincon Unit No. 180M
1140' FNL, 875' FWL
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Rio Arriba County, New Mexico

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Sincerely,

Union Oil Company of California
dba UNOCAL


Glen O. Papp
Field Superintendent

GOP/DLD/df