

Unocal Oil & Gas Division
Unocal Corporation
3300 North Butler Avenue
Suite 200
Farmington, New Mexico 87401
Telephone (505) 326-7400
Fax: (505) 326-6145

RELEASE 6-15-93

CONSERVATION DIVISION
RECEIVED



'93 MAY 25 AM 9 16

May 21, 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. 129M
1035' FSL, 805' FEL
Section 29, 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 measured 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.

UNOCAL wishes to commingle the production from the Blanco Mesaverde and Basin Dakota formations in order to more effectively lift condensate production and justify installation of compression facilities. This will result in incremental reserves for both formations.

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 6 W

T 27 N	19	20	21 RINCON UNIT
	30	29 129M	28
	31	32	Caulkins Prod etal 3547 33

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 - (X)		Scheduled ☐		Completion ☒		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.	GRAV. OIL		OIL BBL.	GAS M.C.F.
Rincon Unit	129M	P	29	27N	6W	10/19/92	F 11/64"	100		24	6	55	2	110	55,000
Blanco Mesa verde						10/10/92	F 17/64"	260		24	8	0	290	-----	
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

W.L. Irwin District Petroleum Engineer

Printed name and title

11/19/92

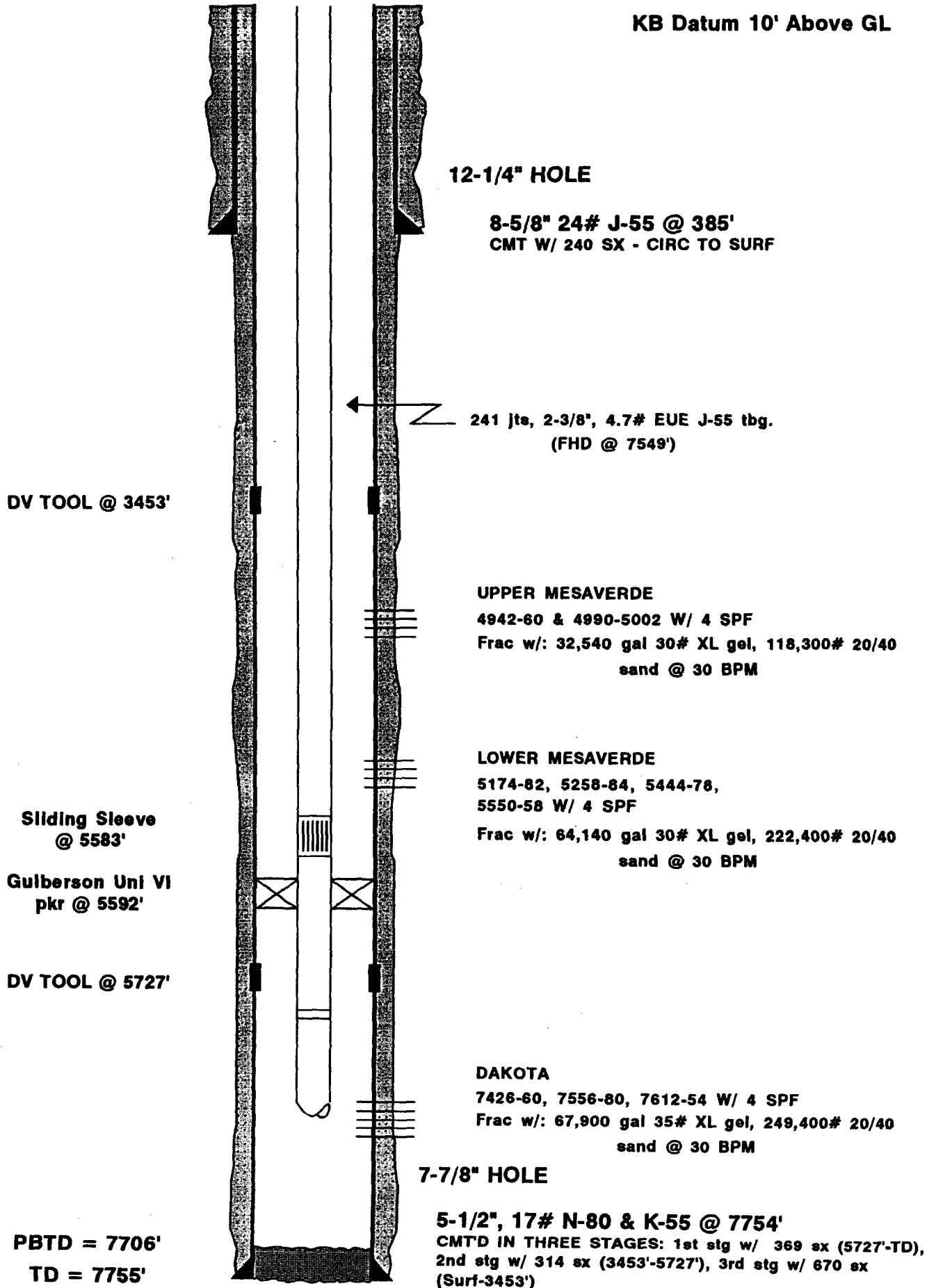
Date

505/326-7600

Telephone No.

RINCON UNIT NO. 129-M
1035' FSL, 805' FEL, SEC 29, T27N-R6W
RIO ARRIBA COUNTY, NM

KB Datum 10' Above GL



B & R SERVICE, INC.

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

Company UNOCAL CORPORATION Lease RINCON Well 129 M (M.V.)
County RIO ARriba State N. MEX. Date 10/24/92
Shut-In _____ Zero Point G.L. Tbg. Pressure 429
Casing Pressure _____ Tbg. Depth _____ Casing Perf. _____
Max. Temp. _____ Fluid Level 4300'

<u>DEPTH</u>	<u>PSIG</u>	<u>GRADIENT</u>
0	429	----
1000	442	.013
2000	456	.014
3000	468	.012
4000	482	.014
5000	792	.310
5500	1010	.436
5596	1053	.430

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

COMPANY NAME... UNOCAL CORPORATION
 DATE 10/31/92
 WELL I.D. RINCON 129M (DAK)
 FIELD I.D. DAKOTA
 RUN # 1
 ENGINEER
 ZERO REFERENCE: G.L.
 START DATE ... 10/10/92
 START TIME ... 09:59:00
 WELL STATUS... SHUT-IN
 GAUGE INFO:
 I.D. KPG-3 PRESSURE 175F
 SERIAL #.... 23973
 RANGE..... 7075 PSIA @ 175F

COMMENTS BHP RECORDED @ 7533' G.L.

FILE # 19

NO.	TIME		PRESSURE	
	DEFL (IN)	HRS	DEFL (IN)	PSI
1	0.0000	0.000	0.2529	887.37
2	0.0095	0.985	0.2573	902.81
3	0.0192	1.990	0.2586	907.37
4	0.0290	3.006	0.2608	915.09
5	0.0384	3.981	0.2632	923.51
6	0.0482	4.997	0.2651	930.18
7	0.0582	6.033	0.2663	934.39
8	0.0678	7.029	0.2672	937.54
9	0.0772	8.003	0.2683	941.40
10	0.0872	9.040	0.2693	944.91
11	0.0966	10.014	0.2699	947.02
12	0.1060	10.989	0.2701	947.72
13	0.1156	11.984	0.2710	950.88
14	0.1255	13.010	0.2720	954.39
15	0.1354	14.036	0.2727	956.84
16	0.1450	15.032	0.2733	958.95
17	0.1544	16.006	0.2737	960.35
18	0.1639	16.991	0.2742	962.11
19	0.1739	18.028	0.2745	963.16
20	0.1834	19.012	0.2750	964.91
21	0.1931	20.018	0.2752	965.61
22	0.2027	21.013	0.2756	967.02
23	0.2124	22.019	0.2759	968.07
24	0.2222	23.035	0.2762	969.12
25	0.2317	24.020	0.2765	970.18
26	0.2909	30.157	0.2771	972.28
27	0.3476	36.035	0.2779	975.09
28	0.4053	42.016	0.2779	975.09
29	0.4652	48.226	0.2782	976.14
30	0.5223	54.145	0.2785	977.19
31	0.5809	60.220	0.2792	979.65
32	0.6384	66.181	0.2792	979.65
33	0.6948	72.028	0.2795	980.70

 * B & R SERVICE, INC. *

Company .: UNOCAL CORPORATION
 Well I.D.: RINCON 129M (DAK)
 Field I.D.: DAKOTA

Date: 10/31/92
 Run#: 1
 Page: 2

NO.	TIME		PRESSURE	
	DEFL (IN)	HRS	DEFL (IN)	PSI
34	0.7526	78.020	0.2796	981.05
35	0.8118	84.157	0.2796	981.05
36	0.8682	90.003	0.2798	981.75
37	0.9277	96.172	0.2805	984.21
38	0.9849	102.101	0.2805	984.21
39	1.0420	108.021	0.2812	986.67
40	1.1025	114.292	0.2812	986.67
41	1.1576	120.005	0.2812	986.67
42	1.2177	126.235	0.2815	987.72
43	1.2762	132.299	0.2815	987.72
44	1.3310	137.980	0.2817	988.42
45	1.3892	144.014	0.2823	990.53
46	1.4475	150.057	0.2823	990.53
47	1.5051	156.029	0.2828	992.28
48	1.5618	161.907	0.2828	992.28
49	1.6208	168.023	0.2830	992.98
50	1.6794	174.098	0.2830	992.98
51	1.7373	180.100	0.2832	993.68
52	1.7956	186.144	0.2832	993.68
53	1.8519	191.980	0.2834	994.39
54	1.9121	198.221	0.2834	994.39
55	1.9691	204.130	0.2835	994.74
56	2.0275	210.184	0.2835	994.74
57	2.0844	216.083	0.2838	995.79
58	2.1415	222.002	0.2840	996.49
59	2.2016	228.233	0.2848	999.30
60	2.2587	234.152	0.2850	1000.00
61	2.3162	240.113	0.2850	1000.00
62	2.3735	246.053	0.2850	1000.00
63	2.4301	251.920	0.2850	1000.00
64	2.4905	258.182	0.2850	1000.00
65	2.5471	264.049	0.2850	1000.00
66	2.6046	270.010	0.2855	1001.77
67	2.6629	276.054	0.2855	1001.77
68	2.7206	282.036	0.2858	1002.84
69	2.7783	288.017	0.2858	1002.84
70	2.8361	294.009	0.2862	1004.26
71	2.8946	300.073	0.2862	1004.26
72	2.9518	306.003	0.2865	1005.32
73	3.0108	312.120	0.2865	1005.32
74	3.0685	318.101	0.2867	1006.03
75	3.1260	324.062	0.2869	1006.74
76	3.1839	330.054	0.2871	1007.45
77	3.2417	336.056	0.2871	1007.45
78	3.2651	338.482	0.2874	1008.51

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

RINCON UNIT NO. 129M

After a 7 day SI period:

$$\text{Mesaverde BHP} = 1053 \text{ psi @ } 5596'$$

$$\text{Dakota BHP} = 993 \text{ psi @ } 7533'$$

$$\text{Gas Gradient} = \frac{(0.01875)(0.65)(1500)}{(0.88)(655)} = 0.03 \text{ psi/ft}$$

Adjusting to a common datum of 5596':

$$\text{Mesaverde BHP} = 1053 \text{ psi}$$

$$\text{Dakota BHP} = 993 - [(0.03)(7533 - 5596)] = 935 \text{ psi}$$

Therefore the reservoir pressures fall within the 50% requirement.



(505) 325-6622

ANALYSIS NO. UN020025

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 129M

LINE PRESSURE: 50 PSIG

LOCATION:

SAMPLE TEMP.: 72 DEG.F

COUNTY: RIO ARriba, NM

WELL FLOWING: YES

FORMATION: MESAVERDE

DATE SAMPLED: 10/16/92

SMPL SRC:

SAMPLED BY: KIVA

REMARKS: TAKEN AT TEST UNIT.

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.520	0.0000
CO2	0.588	0.0000
METHANE	78.797	0.0000
ETHANE	11.284	3.0185
PROPANE	5.585	1.5392
I-BUTANE	0.838	0.2741
N-BUTANE	1.364	0.4301
I-PENTANE	0.423	0.1548
N-PENTANE	0.295	0.1068
HEXANE+	0.306	0.1335
TOTAL	100.000	5.6570
COMPRESSIBILITY FACTOR (1/Z)		1.0036
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1259.6
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1237.7
REAL SPECIFIC GRAVITY		0.7268

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 48 PSIG

DATE RUN: 10/19/92

ANALYSIS RUN BY: CHELLE DURBIN

(505) 325-6622



ANALYSIS NO. UN020024

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 129M

LINE PRESSURE: 249 PSIG

LOCATION:

SAMPLE TEMP.: 68 DEG.F

COUNTY: RINCON/RIO ARRIBA, NM

WELL FLOWING: YES

FORMATION: DAKOTA

DATE SAMPLED: 10/10/92

SMPL SRC:

SAMPLED BY: KIVA

REMARKS:

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.211	0.0000
CO2	1.310	0.0000
METHANE	88.063	0.0000
ETHANE	7.576	2.0266
PROPANE	1.721	0.4743
I-BUTANE	0.328	0.1073
N-BUTANE	0.366	0.1154
I-PENTANE	0.166	0.0607
N-PENTANE	0.103	0.0373
HEXANE+	0.156	0.0680
TOTAL	100.000	2.8897
COMPRESSIBILITY FACTOR	(1/Z)	1.0027
BTU/CU.FT. (DRY) CORRECTED FOR	(1/Z)	1113.7
BTU/CU.FT. (WET) CORRECTED FOR	(1/Z)	1094.3
REAL SPECIFIC GRAVITY		0.6417

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 232 PSIG

DATE RUN: 10/12/92

ANALYSIS RUN BY: CHELLE DURBIN

RINCON UNIT NO. 129M
ALLOCATION FORMULA
(BASED ON C-116)

<u>GAS PRODUCTION:</u>	Mesaverde Rate	110 MCFD
	Dakota Rate	<u>290</u> MCFD
	Total Rate	<u>400</u> MCFD

Therefore,	Mesaverde	27%
	Dakota	73%

<u>OIL PRODUCTION:</u>	Mesaverde Rate	2 BOPD
	Dakota Rate	<u>0</u> BOPD
	Total Rate	<u>2</u> BOPD

Therefore,	Mesaverde	100%
	Dakota	0%

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



November 19, 1992

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. 129M
1035' FSL, 805' FEL
Section 29, 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 "W. L. Irwin".

William L. Irwin
District Petroleum Engineer

WLI/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



November 19, 1992

Farmington District

Caulkins Oil Company
310 North First
Bloomfield, New Mexico 87413

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. 129M
1035' FSL, 805' FEL
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Sincerely,

Union Oil Company of California
dba UNOCAL



William L. Irwin
District Petroleum Engineer

WLI/DLD/df