

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
811 South First St., Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd, Aztec, NM 87410
DISTRICT IV
2040 S. Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
2040 S. Pacheco
Santa Fe, New Mexico 87505-6428
APPLICATION FOR DOWNHOLE COMMINGLING

Form C-107-A
Revised March 17, 1999
APPROVAL PROCESS:
☒ Administrative ☐ Hearing
EXISTING WELLBORE
☒ YES ☐ NO

UNION OIL COMPANY OF CALIFORNIA (UNOCAL) 1004 N. BIG SPRING, MIDLAND, TX 79702
Operator Address
RINCON UNIT 231E D - 12 - 26N - 7W RIO ARRIBA
Lease Well No. Unit Ltr. - Sec - Twp - Rge County
Spacing Unit Lease Types: (check 1 or more)
OGRID NO. 023708 Property Code 011510 API NO. 30-039-25489 Federal ☒ State ☐ (and/or) Fee ☐

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	BLANCO MESAVERDE - 72319		BASIN DAKOTA - 71599
2. Top and Bottom of Pay Section (Perforations)	4989 - 5056		7075 - 7156
3. Type of production (Oil or Gas)	GAS		GAS
4. Method of Production (Flowing or Artificial Lift)	FLOWING		FLOWING
5. Bottomhole Pressure Oil Zones - Artificial Lift: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a. (Current) 339 psia b. (Original) 1151 psia	a. MAY 25 1999 b. COMPLETED	a. 345 psia b. 1370 psia
6. Oil Gravity (EAPI) or Gas BTU Content	1331 BTU		1292 BTU
7. Producing or Shut-In?	Producing		Producing
Production Marginal? (yes or no)	YES		YES
* If Shut-In, give date and oil/gas/water rates of last production Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data	Date: Rates:	Date: Rates:	Date: Rates:
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: 2-99 Rates: 177 MCFD, 3.7 BOPD, .5 BWPD	Date: Rates:	Date: 2-99 Rates: 50 MCFD, .9 BOPD, .1 BWPD
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	Oil: 81 % Gas: 78 %	Oil: % Gas: %	Oil: 19 % Gas: 22 %

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.
10. Are all working, overriding, and royalty interests identical in all commingled zones? ☐ Yes ☒ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ☒ Yes ☐ No (R-9893)
Have all offset operators been given written notice of the proposed downhole commingling? ☒ Yes ☐ No
11. Will cross-flow occur? ☐ Yes ☒ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☐ Yes ☐ No (If No, attach explanation)
12. Are all produced fluids from all commingled zones compatible with each other? ☒ Yes ☐ No
13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)
14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☒ Yes ☐ No
15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). **231E SURF COMMGLE APPV DHC-906 3-27-95**
16. ATTACHMENTS:
* C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
* Production curve for each zone for at least one year. (If not available, attach explanation.)
* For zones with no production history, estimated production rates and supporting data.
* Data to support allocation method or formula.
* Notification list of all offset operators.
* Notification list of working, overriding, and royalty interests for uncommon interest cases.
* Any additional statements, data, or documents required to support commingling.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Heather Dahlgren TITLE: Senior Engineering Tech DATE: 5/21/99
TYPE OR PRINT NAME HEATHER DAHLGREN TELEPHONE NO. (915) 685-7665

May 21, 1999

Supplemental Data for C-107-A, Rincon Unit Well No. 231E

Well History: The Rincon Unit Well No. 231E was originally completed as a Dakota / Mesaverde surface commingled well in August 1995. Approval to surface commingle was granted by **Administrative Order DHC-906** issued March 27, 1995. Unocal plans to add a Pictured Cliffs completion to this well and downhole commingle the Dakota / Mesaverde. This well work is planned for July, 1999.

Allocation of Production: Unocal proposes to use the existing fixed allocation as shown on the C-107A. Production tests have confirmed this allocation percentage and Unocal feels this percentage accurately represents the production capabilities of these two horizons.

EXHIBIT "A"

RINCON UNIT

**Wells Approved for Surface Commingling
Blanco Mesaverde and Basin Dakota Pools**

Division Order PC-906

<i>Well Number</i>	<i>Location</i>
124A	2025' FNL & 1610' FWL, 34-27N-07W
131E	1145' FSL & 1525' FWL, 36-27N-07W
134E	800' FSL & 800' FEL, 12-26N-07W
149M	1900' FNL & 1365' FWL, 30-27N-06W
166E	1980' FNL & 1980' FWL, 32-27N-06W
176E	1505' FNL & 1850' FWL, 31-27N-06W
178E	1450' FSL & 1450' FEL, 23-27N-07W
185E	1550' FSL & 1505' FEL, 22-27N-07W
193M	1000' FNL & 1190' FWL, 35-27N-07W
227E	800' FSL & 800' FWL, 28-27N-07W
231E	1145' FNL & 790' FWL, 12-26N-07W
303E	1850' FNL & 830' FEL, 33-27N-07W
304	1850' FNL & 1480' FEL, 11-26N-07W
304M	1020' FSL & 795' FEL, 11-26N-07W

OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE BOARD					
16 11411	2619. 54 N 88° 16' W	2619. 54			
	157. 46 AC ±	2631. 26 S 0° 35' 25" W	158. 78 AC ±		
2609. 31 E 26° 32' N	2617. 48 S 87° 47' 07" E		2617. 30		2653. 20 E 39° N
	157. 29 AC ±	2630. 63	158. 59 AC ±		
2609. 31 E 26° 32' N	2615. 58 N 87° 19' W	2615. 58			

17 OPERATOR CERTIFICATION

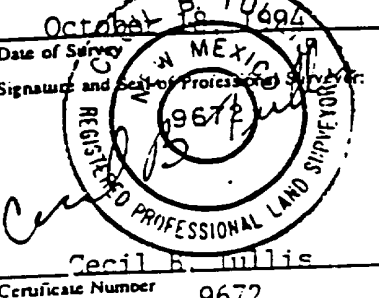
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

[Signature]
 Signature _____
Jim Benson
 Printed Name _____
Drilling Superintendent
 Title _____
November 28, 1994
 Date _____

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plan was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

October 18, 1994
 Date of Survey _____
[Signature]
 Signature and Seal of Professional Surveyor: _____

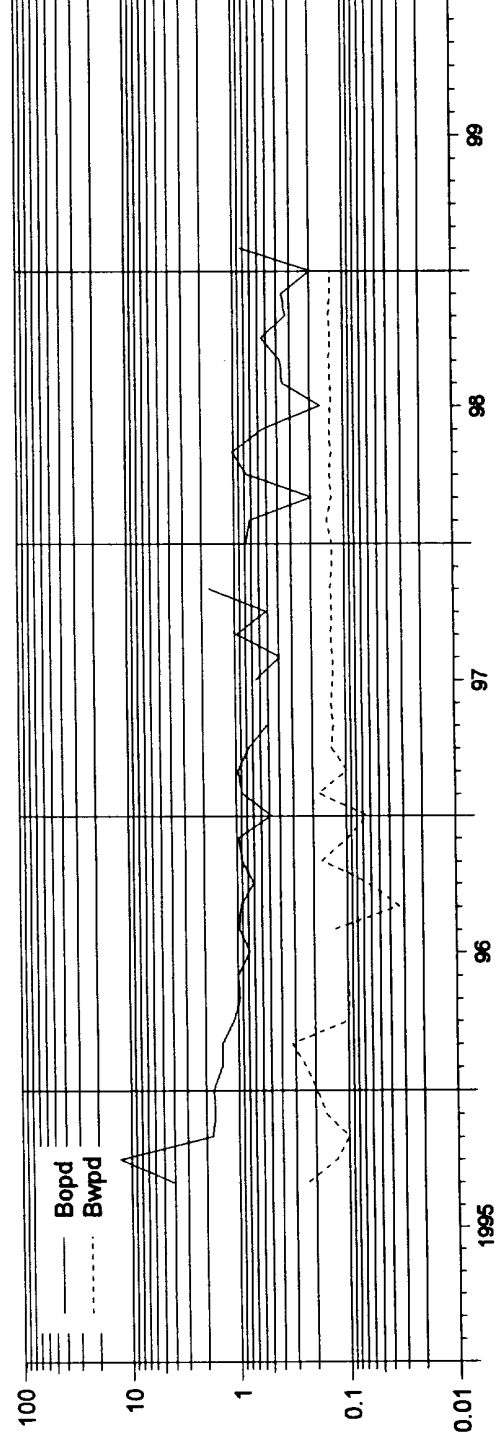
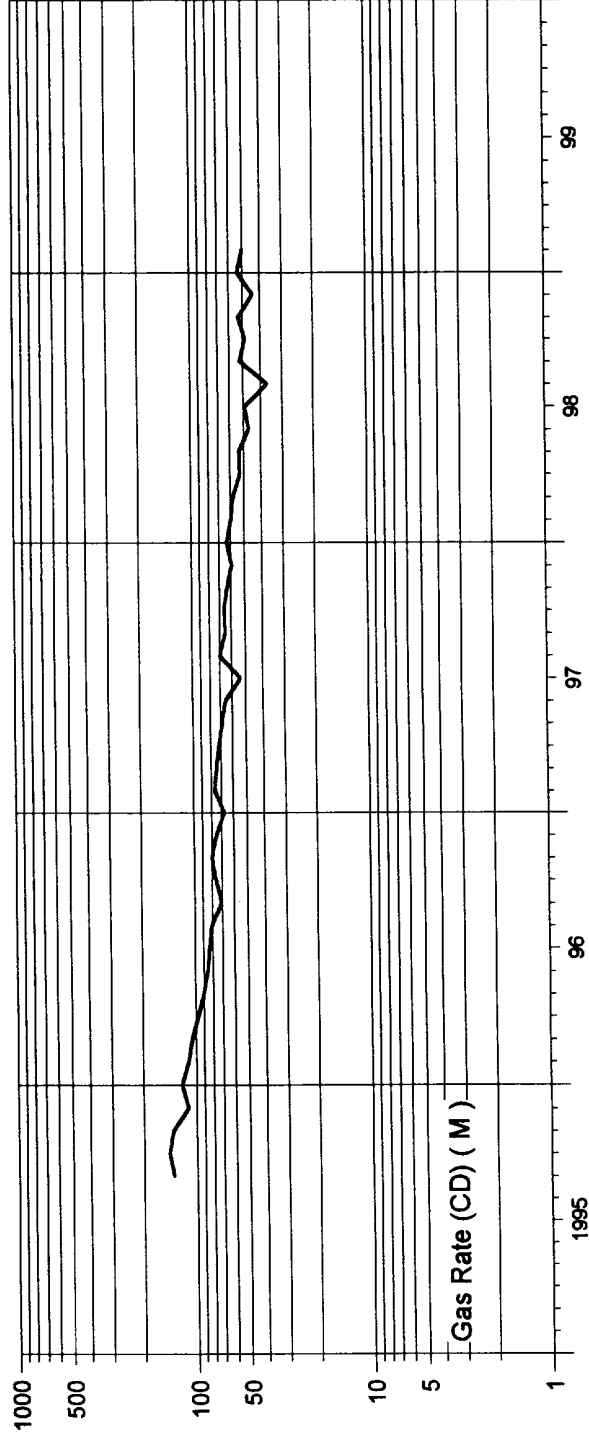


Cecil B. Jullie
 Certificate Number _____
9672

UNION OIL COMPANY OF CALIFORNIA

RINCON UNIT 231E:DK

RIO ARriba CO., NEW MEXICO



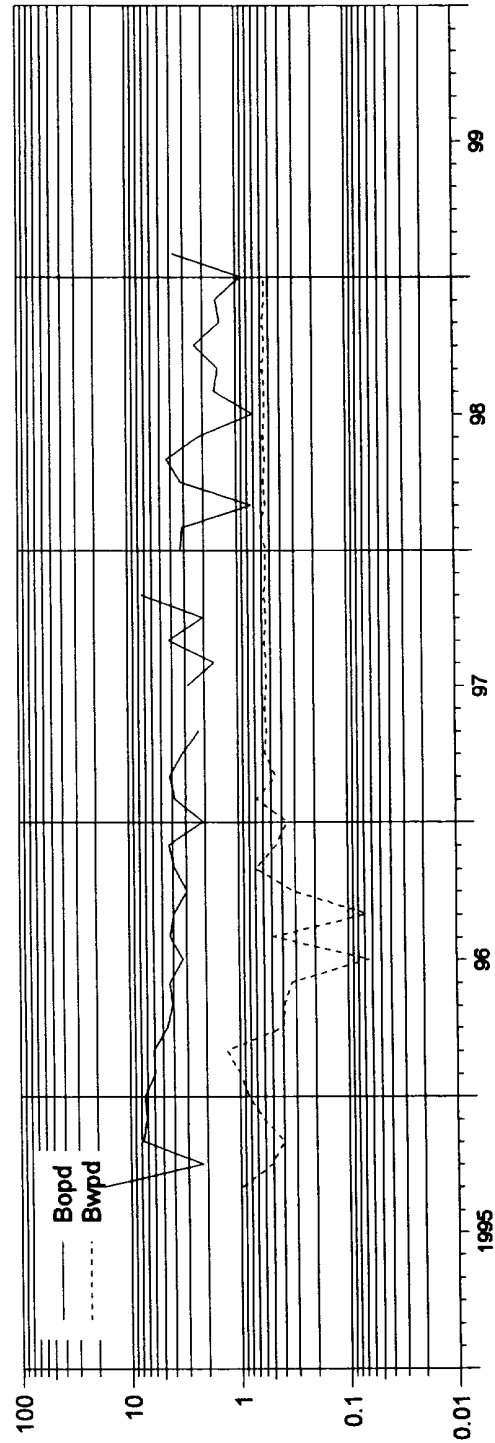
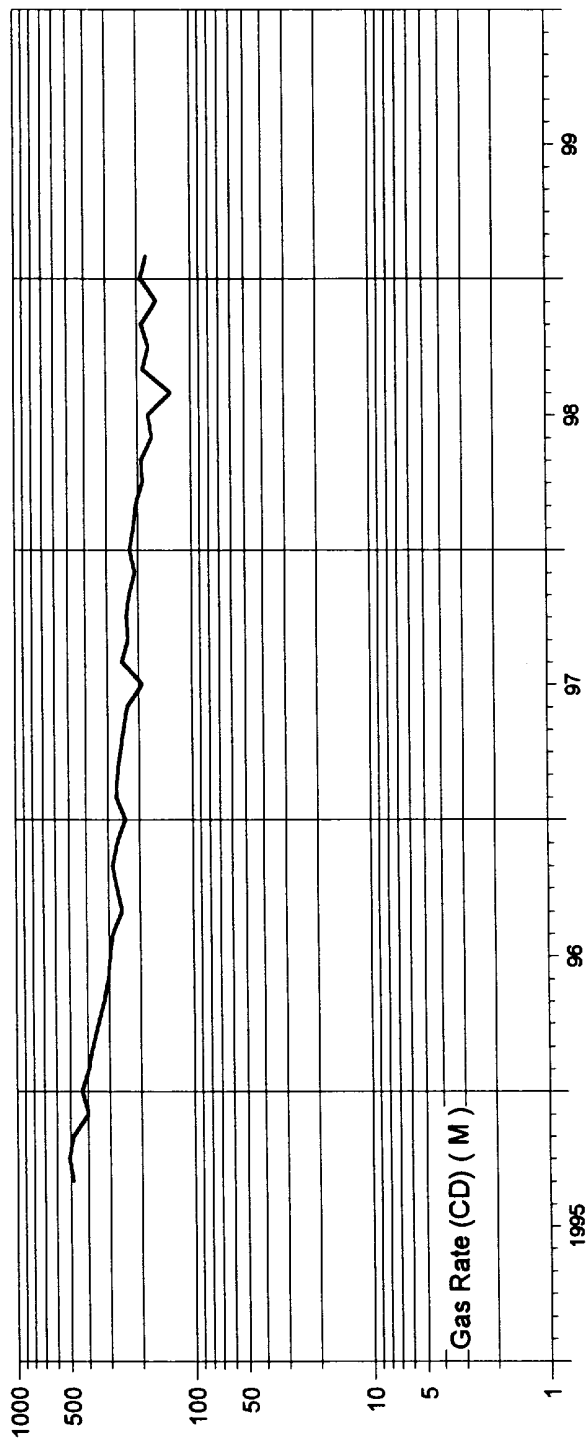
RINCON_UNIT_231E:DK

DATE	GAS VOL PROD Mcf	OIL VOL PROD bbl	WATER VOL PROD bbl	Gas Rate (CD) Mcf/d	Oil Rate (CD) bbl/d	Water Rate (CD) bbl/d	Cum Gas Prod Mcf	Cum Oil Prod bbl
19950901	4071	124	7	136	4.1	0.2	4071	124
19951001	4435	396	4	143	12.8	0.1	8506	520
19951101	4080	53	3	136	1.8	0.1	12586	573
19951201	3440	52	5	111	1.7	0.2	16026	625
19960101	3741	53	6	121	1.7	0.2	19767	678
19960201	3197	41	7	110	1.4	0.2	22964	719
19960301	3248	44	10	105	1.4	0.3	26212	763
19960401	2910	33	3	97	1.1	0.1	29122	796
19960501	2791	30	3	90	1.0	0.1	31913	826
19960601	2557	30	3	85	1.0	0.1	34470	856
19960701	2570	24	0	83	0.8	0.0	37040	880
19960801	2481	30	4	80	1.0	0.1	39521	910
19960901	2117	28	1	71	0.9	0.0	41638	938
19961001	2347	22	2	76	0.7	0.1	43985	960
19961101	2398	27	5	80	0.9	0.2	46383	987
19961201	2316	30	3	75	1.0	0.1	48699	1017
19970101	2088	15	2	67	0.5	0.1	50787	1032
19970201	2122	25	5	76	0.9	0.2	52909	1057
19970301	2303	30	3	74	1.0	0.1	55212	1087
19970401	2145	23	4	72	0.8	0.1	57357	1110
19970501	2125	16	4	69	0.5	0.1	59482	1126
19970601	1957	0	4	65	0.0	0.1	61439	1126
19970701	1664	20	4	54	0.6	0.1	63103	1146
19970801	2164	12	4	70	0.4	0.1	65267	1158
19970901	1929	29	4	64	1.0	0.1	67196	1187
19971001	2039	16	4	66	0.5	0.1	69235	1203
19971101	1886	52	4	63	1.7	0.1	71121	1255
19971201	1822	0	4	59	0.0	0.1	72943	1255
19980101	1946	24	4	63	0.8	0.1	74889	1279
19980201	1667	20	4	60	0.7	0.1	76556	1299
19980301	1783	6	4	58	0.2	0.1	78339	1305
19980401	1579	23	4	53	0.8	0.1	79918	1328
19980501	1659	32	4	54	1.0	0.1	81577	1360
19980601	1402	16	4	47	0.5	0.1	82979	1376
19980701	1520	5	4	49	0.2	0.1	84499	1381
19980801	1136	11	4	37	0.4	0.1	85635	1392
19980901	1568	11	4	52	0.4	0.1	87203	1403
19981001	1505	17	4	49	0.5	0.1	88708	1420
19981101	1592	10	4	53	0.3	0.1	90300	1430
19981201	1355	11	4	44	0.4	0.1	91655	1441
19990101	1662	6	4	54	0.2	0.1	93317	1447
19990201	1401	24	0	50	0.9	0.0	94718	1471

UNION OIL COMPANY OF CALIFORNIA

RINCON UNIT 231E:MV

RIO ARriba CO., NEW MEXICO



RINCON_UNIT_231E:MV

DATE	GAS VOL PROD Mcf	OIL VOL PROD bbl	WATER VOL PROD bbl	Gas Rate (CD) Mcf/d	Oil Rate (CD) bbl/d	Water Rate (CD) bbl/d	Cum Gas Prod Mcf	Cum Oil Prod bbl
19950901	14437	529	29	481	17.6	1.0	14437	529
19951001	15721	68	16	507	2.2	0.5	30158	597
19951101	14464	228	12	482	7.6	0.4	44622	825
19951201	12216	223	19	394	7.2	0.6	56838	1048
19960101	13267	229	26	428	7.4	0.8	70105	1277
19960201	11338	171	29	391	5.9	1.0	81443	1448
19960301	11517	189	41	372	6.1	1.3	92960	1637
19960401	10317	137	12	344	4.6	0.4	103277	1774
19960501	9899	126	12	319	4.1	0.4	113176	1900
19960601	9066	130	10	302	4.3	0.3	122242	2030
19960701	9113	101	2	294	3.3	0.1	131355	2131
19960801	8799	131	15	284	4.2	0.5	140154	2262
19960901	7503	117	2	250	3.9	0.1	147657	2379
19961001	8322	92	10	268	3.0	0.3	155979	2471
19961101	8501	115	21	283	3.8	0.7	164480	2586
19961201	8213	134	14	265	4.3	0.5	172693	2720
19970101	7403	65	11	239	2.1	0.4	180096	2785
19970201	7522	105	19	269	3.8	0.7	187618	2890
19970301	8164	130	14	263	4.2	0.5	195782	3020
19970401	7605	96	17	254	3.2	0.6	203387	3116
19970501	7534	70	17	243	2.3	0.5	210921	3186
19970601	6936	0	17	231	0.0	0.6	217857	3186
19970701	5897	88	17	190	2.8	0.5	223754	3274
19970801	7670	51	17	247	1.6	0.5	231424	3325
19970901	6836	125	17	228	4.2	0.6	238260	3450
19971001	7227	64	17	233	2.1	0.5	245487	3514
19971101	6686	223	17	223	7.4	0.6	252173	3737
19971201	6459	0	17	208	0.0	0.5	258632	3737
19980101	6899	101	17	223	3.3	0.5	265531	3838
19980201	5908	87	17	211	3.1	0.6	271439	3925
19980301	6318	23	17	204	0.7	0.5	277757	3948
19980401	5595	96	17	187	3.2	0.6	283352	4044
19980501	5880	134	17	190	4.3	0.5	289232	4178
19980601	4970	66	17	166	2.2	0.6	294202	4244
19980701	5386	22	17	174	0.7	0.5	299588	4266
19980801	4024	49	17	130	1.6	0.5	303612	4315
19980901	5557	44	17	185	1.5	0.6	309169	4359
19981001	5336	74	17	172	2.4	0.5	314505	4433
19981101	5644	42	17	188	1.4	0.6	320149	4475
19981201	4803	47	17	155	1.5	0.5	324952	4522
19990101	5892	28	17	190	0.9	0.5	330844	4550
19990201	4967	104	0	177	3.7	0.0	335811	4654

WELL NAME :**RINCON UNIT 231E MESAVERDE**

Test Date:

GAS GRAVITY:

CONDENSATE (YES=1):

RESERVOIR TEMP:

SURFACE TEMP:

DEPTH OF ZONE:

% N2

% CO2

% H2S

Pc =

Tc =

ORIGINAL

Aug-95

0.7
1
145 F
60 F
5023 ft
0.47
0.91
0.00
667.86
381.72

Test Date:

GAS GRAVITY:

CONDENSATE (YES=1):

RESERVOIR TEMP:

SURFACE TEMP:

DEPTH OF ZONE:

% N2

% CO2

% H2S

Pc =

Tc =

CURRENT

Jun-98

0.7
1
145 F
60 F
5023 ft
0.47
0.912
0.00
667.86
381.72

SURFACE PRESS

BHP

Z

BHP/Z

1,000 psia
1,151 psia
0.8727
1,319 psia

SURFACE SITP

BHP

Z

BHP/Z

300 psia
339 psia
0.9587
354 psia

WELL NAME :**RINCON UNIT 231E DAKOTA**

Test Date:

GAS GRAVITY:

CONDENSATE (YES=1):

RESERVOIR TEMP:

SURFACE TEMP:

DEPTH OF ZONE:

% N2

% CO2

% H2S

Pc =

Tc =

ORIGINAL

Aug-95

0.65
1
187 F
60 F
7115 ft
0.21
1.20
0.00
672.91
370.46

Test Date:

GAS GRAVITY:

CONDENSATE (YES=1):

RESERVOIR TEMP:

SURFACE TEMP:

DEPTH OF ZONE:

% N2

% CO2

% H2S

Pc =

Tc =

CURRENT

Jun-98

0.65
1
187 F
60 F
7115 ft
0.21
1.20
0.00
672.91
370.46

SURFACE PRESS

BHP by Buildup Measurement

Z

BHP/Z

1,150 psia
1,370 psig
0.9029
1,517 psia

SURFACE SITP

BHP

Z

BHP/Z

295 psia
345 psia
0.9704
355 psia



May 21, 1999

Caulkins Oil Co.
P.O. Box 340
Bloomfield, NM 87413

Gentlemen:

Union Oil Company of California (UNOCAL) has requested from the State of New Mexico Oil Conservation Division, approval to down hole commingle production from the Blanco Mesaverde and Basin Dakota formations in the following Rincon Unit well, Rio Arriba County, New Mexico.

Well	Lease	Legal Location
231E	Federal	1145' FNL, 790' FWL, Nw Sec 12, T26N, R7W

If Caulkins Oil Co., as an offset operator, has an objection to this proposal, please notify NMOCD within twenty days. If you have any questions regarding this application, please contact Heather Dahlgren at 915/685-7665.

Sincerely,

Spirit Energy 76
A Business Unit of UNOCAL

Heather Dahlgren
Senior Engineering Technician