

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 87505-6429

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

202

A - 27 - 27N - 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. 30-039-20737

Federal ☒ , State ☐ , (and/or) Fee ☐

The following facts are submitted in support of downhole commingling: 1. Pool Name and Pool Code	Upper Zone BLANCO MESAVERDE - 72319	Intermediate Zone	Lower Zone BASIN DAKOTA - 71599
	2. Top and Bottom of Pay Section (Perforations)	TO BE DETERMINED	
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) 316 psia	RECEIVED MAY 25 1999 OIL CON. DIV. DIST. 3	a. 434 psia
	b. (Original) 353 psia		b. 3470 psia
6. Oil Gravity (EAPI) or Gas BTU Content	1184 BTU		1193 BTU
7. Producing or Shut-In?	Not completed Shut-in		Producing
Production Marginal? (yes or no) * 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 * If Producing, give date and oil/gas/ water rates of recent test (within 60 days)	YES		YES
	Date: Rates:	Date: Rates:	Date: Rates:
	Date: Rates:	Date: Rates:	Date: 2-99 Rates: 130 MCFD, .8 BOPD, .0 BWPD
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	SEE ATTACHED Oil: % Gas: %	Oil: % Gas: %	SEE ATTACHED Oil: % Gas: %

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 ☐ No11. 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 ☐ No13. 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). SEE ATTACHED

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: 5/20/99

TYPE OR PRINT NAME HEATHER DAHLGREN TELEPHONE NO. (915) 685-7665

NMOCD Reference Cases for Rule 303(D) Exceptions

Unocal, Rincon Unit, Rio Arriba County, New Mexico

Rincon Unit Well	Legal Description UL S TWN RNG.	NMOCD Order No.	Issue Date
167M	C 13 27 N 7 W	DHC-863	11/5/1992
175M	F 20 27 N 6 W	DHC-864	11/24/1992
158M	J 22 27 N 6 W	DHC-909	4/27/1993
159M	F 18 27 N 6 W	DHC-904	6/18/1993
129M	P 29 27 N 6 W	DHC-903	6/18/1993
1E	G 30 27 N 6 W	DHC-902	6/18/1993
127M	D 28 27 N 6 W	DHC-916	8/17/1993
184M	P 15 27 N 7 W	DHC-911	8/25/1993
170M	I 20 27 N 6 W	DHC-920	9/17/1993
126M	P 27 27 N 6 W	DHC-914	9/17/1993
151M	O 14 27 N 7 W	DHC-918	9/17/1993
136E	D 23 27 N 7 W	DHC-912	9/17/1993
125M	F 26 27 N 6 W	DHC-95	9/17/1993
137E	J 24 27 N 7 W	DHC-913	9/17/1993
180M	D 21 27 N 6 W	DHC-940	10/25/1993
174M	F 19 27 N 6 W	DHC-966	1/31/1994
128M	O 28 27 N 6 W	DHC-1042	8/31/1994
133E	D 14 27 N 7 W	DHC-1043	8/31/1994
185E	J 22 27 N 7 W	DHC-1038	8/31/1994
178E	I 23 27 N 7 W	DHC-1040	8/31/1994
138E	P 25 27 N 7 W	DHC-1044	8/31/1994
139E	F 25 27 N 7 W	DHC-1041	8/31/1994
149M	F 30 27 N 7 W	DHC-1037	8/31/1994
131E	C 36 27 N 7 W	DHC-1039	8/31/1994
302	C 11 26 N 7 W	DHC-1050	11/3/1994
303	E 33 27 N 6 W	DHC-1086	2/3/1995
171M	J 21 27 N 6 W	DHC-1101	3/7/1995
229E	M 34 27 N 7 W	DHC-1124	5/16/1995
186M	L 33 27 N 6 W	DHC-1176	12/21/1995
187E	P 35 27 N 7 W	DHC-1176	12/21/1995
134	B 12 26 N 7 W	DHC-1190	3/7/1996
170	M 20 27 N 6 W	DHC-1192	3/7/1996
168E	I 36 27 N 7 W	DHC-1191	3/7/1996
203	M 27 27 N 7 W	DHC-1261	5/23/1996
183	K 31 27 N 6 W	DHC-1376	10/16/1996
168	A 36 27 N 7 W	DHC-1778	2/4/1998
139	K 25 27 N 6 W	DHC-1777	2/4/1998
181	G 22 27 N 6 W	DHC-1779	2/4/1998
166E	F 32 27 N 6 W	DHC-1784	2/24/1998
201E	J 2 26 N 7 W	DHC-1841	3/6/1998
57E	O 1 26 N 7 W	DHC-1865	4/1/1998
57	A 1 26 N 7 W	DHC-1892	4/9/1998
131	K 36 27 N 7 W	DHC-1906	4/14/1998
137	K 24 27 N 7 W	DHC-1907	4/14/1998
137E	J 24 27 N 7 W	DHC-913	4/14/1998
169	K 26 27 N 7 W	DHC-1917	4/27/1998
192	K 1 26 N 7 W	DHC-1918	4/27/1998
192E	D 1 26 N 7 W	DHC-2097	9/15/1998

Supplemental Data for C-107-A, Rincon Unit Well No. 202

Well History: The Rincon Unit Well No. 202 was drilled and completed as a Dakota gas producer in February, 1974. Mesaverde reserves would be developed most economically at this time with a downhole commingled completion. An estimated completion date for the Mesaverde is August 1999.

Production History: The average 1998 gas rate was 125 Mcfd from the Dakota with trace oil and water production. An estimated initial rate for the first 30 days of Mesaverde production is 300 Mcfd and 4 Bopd. This estimate is an average based on actual IP's and production from six recent Mesaverde completions on the Rincon Unit.

Pressure Data: Original and current bottom hole pressures were calculated from surface shut-in casing pressures. Pressure data from the offset Mesaverde well Rincon Unit #185E was used for the #202 Mesaverde completion. Current pressures are based on a three day shut-in in June of 1998. Please see attachments for the bottom hole pressure data.

Allocation of Production: Unocal proposes to use an allocation based on an established Dakota annual decline rate of 4.8%. Dakota production will be extrapolated monthly using Bureau of Land Management recommended allocation methods with the remainder of the commingled production being allocated to the Mesaverde formation. Please see attachments for the Dakota forecast. Initial flush production volumes have been added to the Dakota due to the anticipated extended shut-in during the workover. While tabular data has been provided for the first five years of the Dakota forecast, we anticipate being able to convert to a fixed allocation factor within 12 to 24 months. Unocal proposes using a yield factor for allocating liquid production. This factor is based on the average oil and water yield for 1998.

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Supersedes O.C.C. Form 1760 (1961)

All distances must be from the corner bound largest of the Section.

EL PASO NATURAL GAS COMPANY		RINCON UNIT		(SF-080385)	202
A	27	27-N	7-W	RIO ARriba	
800	NORTH		800	EAST	
6695	DAKOTA		BASIN DAKOTA		320.00

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

CERTIFICATION

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

Name _____
Address _____
City _____
State _____

I hereby certify that the well location shown on this plat 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 knowledge and belief.

FEBRUARY 27, 1973

[Signature]
1760

District II
811 South First, Artesia, NM 88210

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised October 18, 1994
Instructions on back
Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ **AMENDED REPORT**

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ APT Number 30-039-20737		² Pool Code 72319	³ Pool Name BLANCO MESAVERDE
⁴ Property Code 011510	⁴ Property Name RINCON UNIT		⁴ Well Number 202
⁷ OGRID No. 023708	⁸ Operator Name UNION OIL COMPANY OF CALIFORNIA (UNOCAL)		⁹ Elevation 6695'

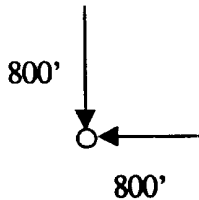
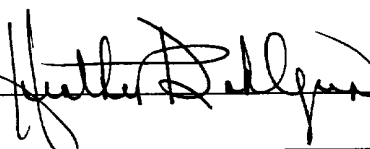
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	27	27N	7W		800	N	800	E	Rio Arriba

¹¹ Bottom Hole Location If Different From Surface

Bottom Hole Location if Different From Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 320.00	¹³ Joint or Infill Y	¹⁴ Consolidation Code U		¹⁵ Order No. Unitization					

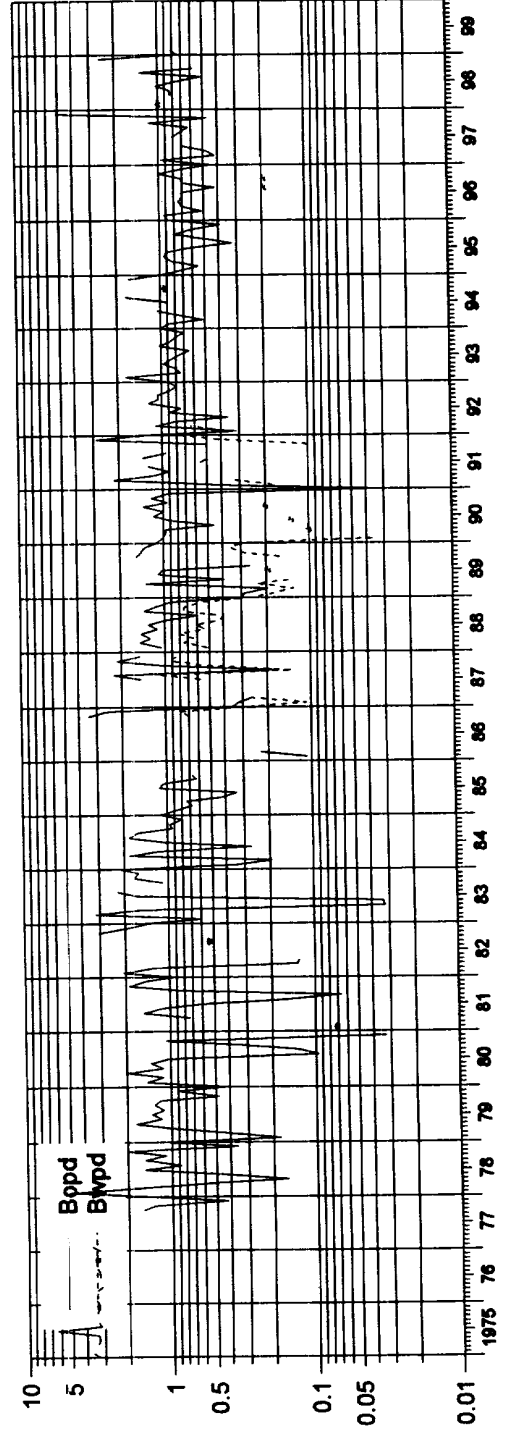
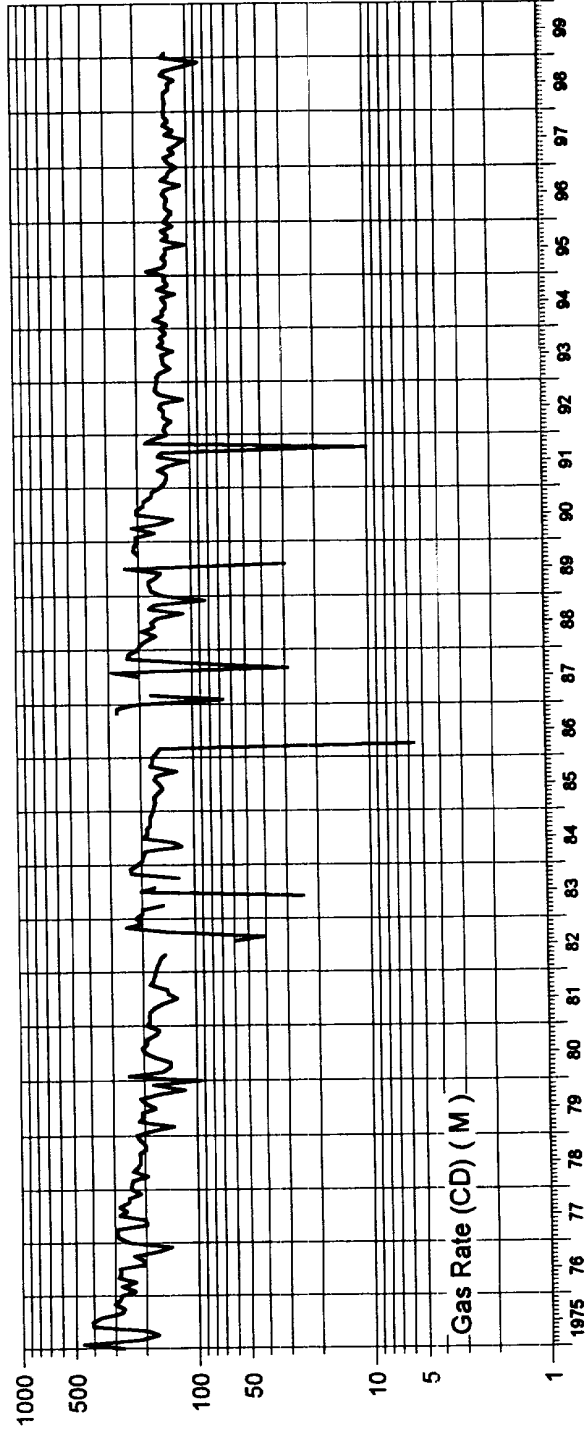
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16			17
			OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief  Printed Name HEATHER DAHLGREN Title _____ ENGINEERING TECHNICIAN Date _____
	Sec. 27 SF 080385		5-19-99 18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my Date of _____ Survey _____ Signature and Seal of Professional Surveyor: _____ Certificate Number _____

UNION OIL COMPANY OF CALIFORNIA

RINCON UNIT 202:DK

RIO ARRIBA CO., NEW MEXICO



RINCON_UNIT_202: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
19970101	3522	14	0	114	0.5	0.0	1448477	10587
19970201	3585	27	0	128	1.0	0.0	1452062	10614
19970301	4145	13	0	134	0.4	0.0	1456207	10627
19970401	3497	14	0	117	0.5	0.0	1459704	10641
19970501	3905	22	0	126	0.7	0.0	1463609	10663
19970601	3328	0	0	111	0.0	0.0	1466937	10663
19970701	3199	25	0	103	0.8	0.0	1470136	10688
19970801	4073	22	0	131	0.7	0.0	1474209	10710
19970901	3560	19	0	119	0.6	0.0	1477769	10729
19971001	4182	36	0	135	1.2	0.0	1481951	10765
19971101	3810	14	0	127	0.5	0.0	1485761	10779
19971201	4162	160	0	134	5.2	0.0	1489923	10939
19980101	4152	0	0	134	0.0	0.0	1494075	10939
19980201	3727	28	0	133	1.0	0.0	1497802	10967
19980301	4064	0	0	131	0.0	0.0	1501866	10967
19980401	4016	25	0	134	0.8	0.0	1505882	10992
19980501	4168	26	0	134	0.8	0.0	1510050	11018
19980601	3727	31	0	124	1.0	0.0	1513777	11049
19980701	3953	24	0	128	0.8	0.0	1517730	11073
19980801	3597	16	0	116	0.5	0.0	1521327	11089
19980901	4148	40	0	138	1.3	0.0	1525475	11129
19981001	4136	18	0	133	0.6	0.0	1529611	11147
19981101	3168	0	0	106	0.0	0.0	1532779	11147
19981201	2645	78	0	85	2.5	0.0	1535424	11225
19990101	4261	23	0	137	0.7	0.0	1539685	11248
19990201	3653	23	0	130	0.8	0.0	1543338	11271

WELL NAME :**RINCON UNIT 185E MESAVERDE OFFSET**

	ORIGINAL
Test Date:	Aug-95
GAS GRAVITY:	0.685
CONDENSATE (YES=1):	1
RESERVOIR TEMP:	150 F
SURFACE TEMP:	60 F
DEPTH OF ZONE:	5136 ft
% N2	0.38
% CO2	1.16
% H2S	0.00
Pc =	669.95
Tc =	379.07

SURFACE PRESS	300	psia
BHP	339	psia
Z	0.9613	
BHP/Z	353	psia

	CURRENT
Test Date:	Jun-98
GAS GRAVITY:	0.685
CONDENSATE (YES=1):	1
RESERVOIR TEMP:	150 F
SURFACE TEMP:	60 F
DEPTH OF ZONE:	5136 ft
% N2	0.38
% CO2	1.16
% H2S	0.00
Pc =	669.95
Tc =	379.07

SURFACE PRESS	280	psia
BHP	316	psia
Z	0.9638	
BHP/Z	328	psia

WELL NAME :**RINCON UNIT 202 DAKOTA**

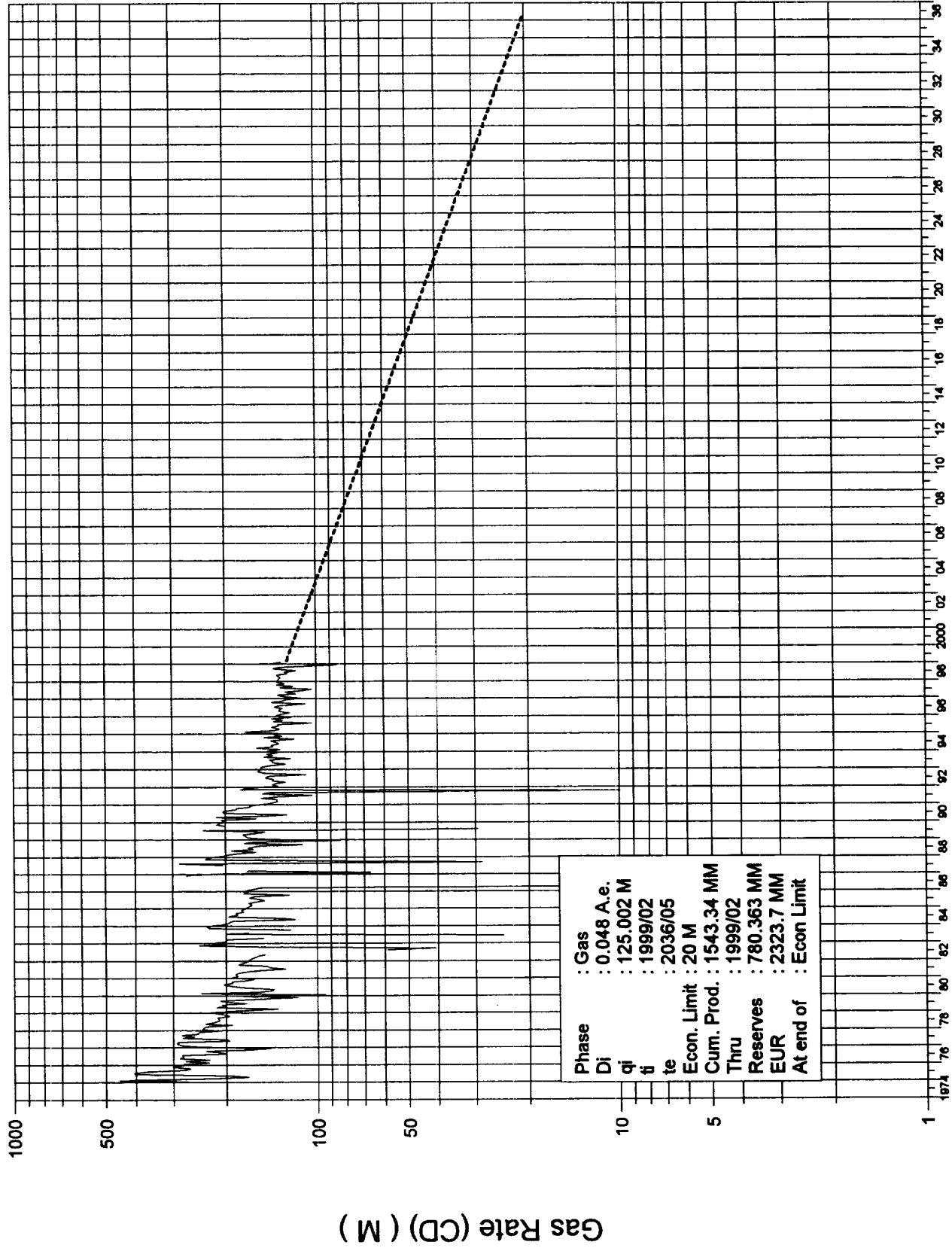
	ORIGINAL
Test Date:	Feb-74
GAS GRAVITY:	0.69
CONDENSATE (YES=1):	1
RESERVOIR TEMP:	190 F
SURFACE TEMP:	60 F
DEPTH OF ZONE:	7488 ft
% N2	0.21
% CO2	1.20
% H2S	0.00
Pc =	670.19
Tc =	380.13

SURFACE PRESS	2,482	psia
BHP	3,063	psia
Z	0.8828	
BHP/Z	3,470	psia

	CURRENT
Test Date:	Jun-98
GAS GRAVITY:	0.69
CONDENSATE (YES=1):	1
RESERVOIR TEMP:	190 F
SURFACE TEMP:	60 F
DEPTH OF ZONE:	7488 ft
% N2	0.21
% CO2	1.20
% H2S	0.00
Pc =	670.19
Tc =	380.13

SURFACE PRESS	350	psia
BHP	417	psia
Z	0.9616	
BHP/Z	434	psia

RINCON UNIT 202:DK



RU 202DK Forecast

Well

Existing Completion Prior to DHC

Annual Decline

Monthly Decline Factor (Annual / 12)

Average Monthly volume (Mcf) prior to DHC

Average Yield (bbls/mcf) Oil

Average Yield (bbls/mcf) Water

Est. Volume Prior to DHC (Mcf) - Aug. 1999

RU 202
DK
4.80%
0.4000
3792
0.006
0.000
3789

1998 Annual Average
1998 Annual Average
1998 Annual Average

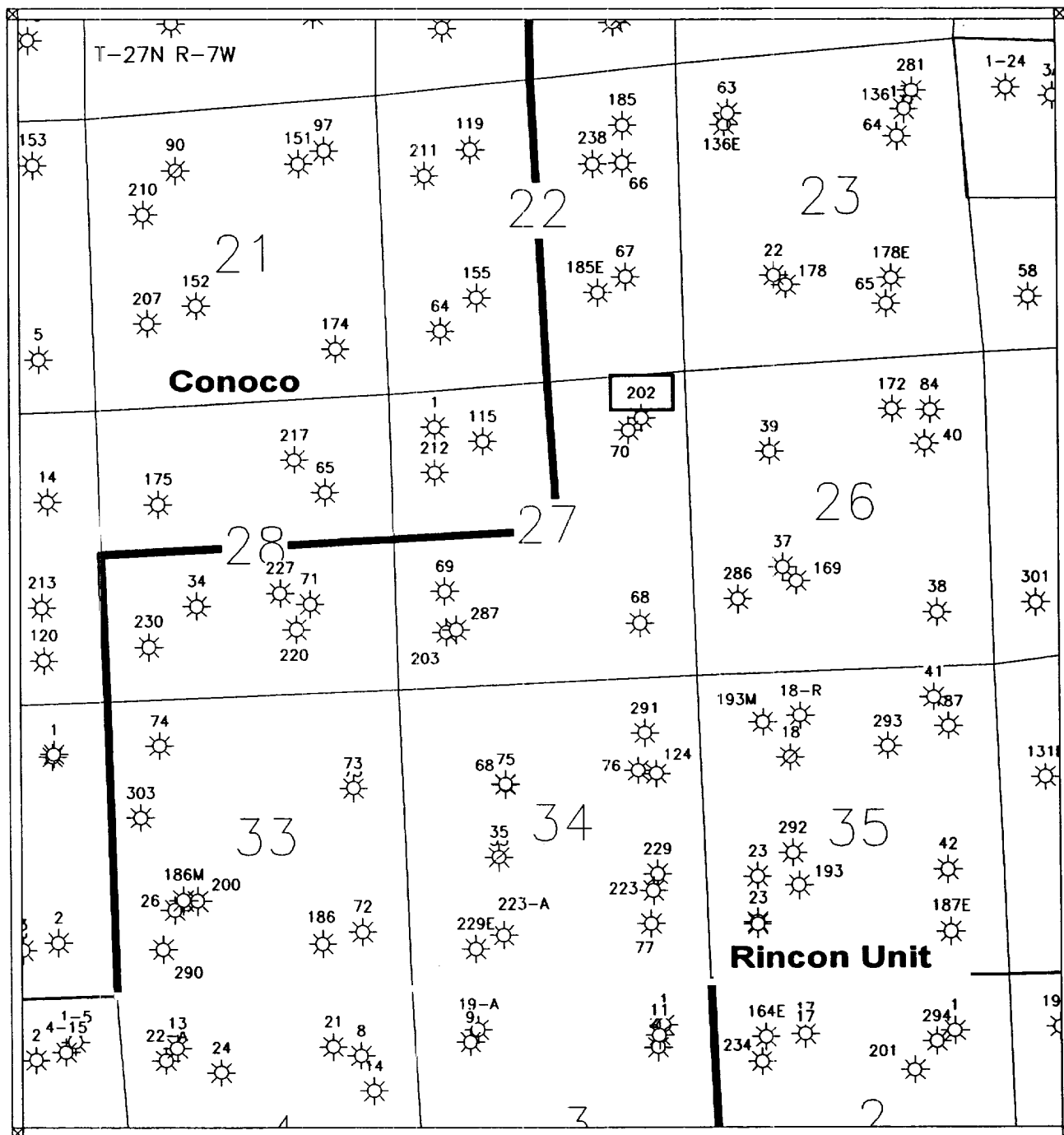
* Forecasted volumes to be adjusted for actual days on production & actual volume prior to commingling

Month	DK Forecast (Mcf/d)	DK Forecast (Mcf)	DK Forecast (Bbls-Oil)	DK Forecast (Bbls-Water)
1	143	4357	26.1	0.0
2	136	4151	24.9	0.0
3	125	3789	22.7	0.0
4	124	3774	22.6	0.0
5	124	3759	22.6	0.0
6	123	3744	22.5	0.0
7	123	3729	22.4	0.0
8	122	3714	22.3	0.0
9	122	3699	22.2	0.0
10	121	3684	22.1	0.0
11	121	3669	22.0	0.0
12	120	3655	21.9	0.0
13	120	3640	21.8	0.0
14	119	3626	21.8	0.0
15	119	3611	21.7	0.0
16	118	3597	21.6	0.0
17	118	3582	21.5	0.0
18	117	3568	21.4	0.0
19	117	3554	21.3	0.0
20	116	3539	21.2	0.0
21	116	3525	21.2	0.0
22	115	3511	21.1	0.0
23	115	3497	21.0	0.0
24	115	3483	20.9	0.0

+ DK flush volume @ 15%
+ DK flush volume @ 10%

RINCON UNIT 202:DK - Gas Forecast @ 4.8% A.E.

DATE	Average Rate Mscf/d	Monthly Volume MMscf	Cumulative Volume MMscf	Remaining Reserves MMscf
1999/ 3	125	3.87	1547.2	776.5
1999/ 4	124	3.73	1550.9	772.8
1999/ 5	124	3.83	1554.8	768.9
1999/ 6	123	3.70	1558.5	765.2
1999/ 7	123	3.80	1562.3	761.4
1999/ 8	122	3.79	1566.1	757.6
1999/ 9	122	3.66	1569.7	754.0
1999/10	121	3.75	1573.5	750.2
1999/11	121	3.63	1577.1	746.6
1999/12	120	3.72	1580.8	742.9
2000/ 1	120	3.71	1584.5	739.2
2000/ 2	120	3.47	1588.0	735.7
2000/ 3	118	3.67	1591.7	732.0
2000/ 4	118	3.55	1595.2	728.5
2000/ 5	118	3.65	1598.9	724.8
2000/ 6	117	3.52	1602.4	721.3
2000/ 7	117	3.62	1606.0	717.7
2000/ 8	116	3.61	1609.6	714.1
2000/ 9	116	3.48	1613.1	710.6
2000/10	115	3.57	1616.7	707.0
2000/11	115	3.45	1620.1	703.6
2000/12	114	3.54	1623.7	700.0
2001/ 1	114	3.53	1627.2	696.5
2001/ 2	114	3.19	1630.4	693.3
2001/ 3	113	3.49	1633.9	689.8
2001/ 4	113	3.38	1637.3	686.4
2001/ 5	112	3.47	1640.7	683.0
2001/ 6	112	3.35	1644.1	679.6
2001/ 7	111	3.44	1647.5	676.2
2001/ 8	111	3.43	1651.0	672.7
2001/ 9	110	3.31	1654.3	669.4
2001/10	110	3.40	1657.7	666.0
2001/11	110	3.29	1661.0	662.7
2001/12	109	3.37	1664.3	659.4
2002/ 1	109	3.36	1667.7	656.0
2002/ 2	108	3.04	1670.7	653.0
2002/ 3	107	3.33	1674.1	649.6
2002/ 4	107	3.22	1677.3	646.4
2002/ 5	107	3.31	1680.6	643.1
2002/ 6	106	3.19	1683.8	639.9
2002/ 7	106	3.28	1687.1	636.6
2002/ 8	105	3.27	1690.3	633.4
2002/ 9	105	3.15	1693.5	630.2
2002/10	104	3.24	1696.7	627.0
2002/11	104	3.13	1699.8	623.9
2002/12	104	3.21	1703.1	620.6
2003/ 1	103	3.20	1706.3	617.4
2003/ 2	103	2.89	1709.2	614.5
2003/ 3	102	3.17	1712.3	611.4
2003/ 4	102	3.06	1715.4	608.3
2003/ 5	102	3.15	1718.5	605.2
2003/ 6	101	3.04	1721.6	602.1
2003/ 7	101	3.12	1724.7	599.0
2003/ 8	100	3.11	1727.8	595.9
2003/ 9	100	3.00	1730.8	592.9
2003/10	99	3.08	1733.9	589.8
2003/11	99	2.98	1736.9	586.8
2003/12	99	3.06	1739.9	583.8
2004/ 1	98	3.05	1743.0	580.7
2004/ 2	98	2.85	1745.8	577.9



Scale 1:33250.74

1000. 0. 1000. 2000. 3000. 4000. 5000. feet



0.1 0. 0.1 0.2 0.3 0.4 0.5 miles



LEASE MAP		
RINCON UNIT NO. 202		
OPERATOR: UNION OIL CO. OF CALIFORNIA		
	Scale 1:33250.74	
HADWALGREN	5/19/1999	202.d.GPJ

SPIRIT ENERGY 76

New Name. Same Spirit.

A Business Unit of Unocal

May 20, 1999

Conoco
10 Desta Dr. W, Suite 100W
Midland, TX 79705

Gentlemen:

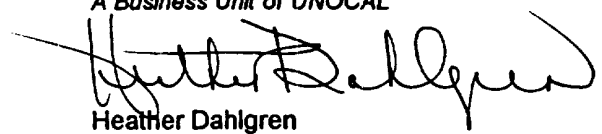
Union Oil Company of California (UNOCAL) has requested from the State of New Mexico Oil Conservation Division, approval to down hole commingle production from the Blanco Mesaverde and Basin Dakota formations in the following Rincon Unit well, Rio Arriba County, New Mexico.

Well	Lease	Legal Location
202	Federal	800' FNL, 800' FEL, NE Sec 27, T27N, R7W

If Conoco, 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