

## 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

187E

P - 35 - 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. 30-039-25361 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)	4692 - 5471		7202 - 7399
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) 396 psia		a. 384 psia b. 981 psig by Buildup Measurement
6. Oil Gravity (EAPI) or Gas BTU Content	1333 BTU		1214 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 * If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: Rates:	Date: Rates:	Date: Rates:
	Date: 2-99 Rates: 42 MCFD, 0 BOPD, 0 BWPD	Date: Rates:	Date: 2-99 Rates: 234 MCFD, 3.8 BOPD, .5 BWPD
8. Fixed Percentage Allocation Formula - % for each zone (total of %'s to equal 100%)	Oil: 0 % Gas: 14 %	Oil: % Gas: %	Oil: 100 % Gas: 86 %

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). 187E COMMINGLE APPROVED DHC-1176 12-21-95

## 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.

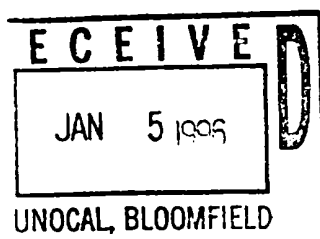
SIGNATURE  TITLE: Senior Engineering Tech DATE: 5/20/99

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

**Supplemental Data for C-107-A, Rincon Unit Well No. 187E**

**Well History:** The Rincon Unit Well No. 187E was originally permitted as a Dakota / Gallup dual. Due to poor reservoir quality the completion was changed to a Dakota / Mesaverde commingle. The Dakota first delivered in December 1994. Downhole commingling was approved on December 21, 1995 by **Administrative Order DHC-1176**. The Mesaverde was added in November of 1995 but was completed as a dual well. The Mesaverde first delivered in January 1996. Unocal plans to downhole commingle this well as it will allow liquids to be removed with greater efficiency. The well work is planned for July, 1999.

**Allocation of Production:** Unocal proposes to use a fixed allocation based on the last 26 months of production history. Over this period of time the Mesaverde has consistently averaged 14% of the total gas volume produced from this well. The Dakota completion has had an additional year to produce and is now beginning to exhibit a flattening trend in the annual decline that is compatible with the Mesaverde. Unocal feels this percentage accurately represents the production capabilities of these two horizons.



**OIL CONSERVATION DIVISION**

**ADMINISTRATIVE ORDER DHC-1176**

Unocal Oil & Gas Division  
P.O. Box 850  
Bloomfield, New Mexico 87413-0850

Attention: Brett H. Liggett

**WELL FILE**

*Rincon Unit Well No. 186M  
Unit L, Section 33,*

and;

*Rincon Unit Well No. 186M  
Unit P, Section 35;*

*both in Township 27 North, Range 7 West, NMPM, Rio Arriba County, New Mexico.*

*Commingling of Basin Dakota (Prorated Gas 71559) and  
Blanco Mesaverde (Gas 72319) Pools.*

Dear Mr. Liggett:

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 40 barrels per day, and total water production shall not exceed 80 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.

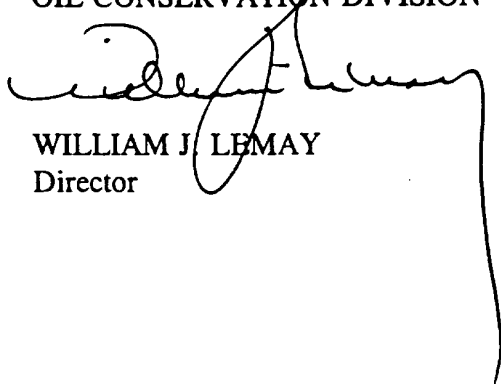
In accordance with the provisions of Rule 303-C, the supervisor of the Aztec District Office of the Oil Conservation division shall determine the proper allocation of production from the subject well following its completion.

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 21st day of December, 1995.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

A handwritten signature in black ink, appearing to read 'William J. Lemay', is written over the printed name and title. A long, thin vertical line extends from the bottom of the signature down towards the bottom of the page.

WILLIAM J. LEMAY  
Director

S E A L

WJL/BES

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

Alamogordo, NM 88211-0719

Las Alamos, NM 87410

Alamogordo, NM 87504-2088

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

95 SEP -8 PM 1:55

☒ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-039-25361	<sup>2</sup> Pool Code 71599/73219	<sup>3</sup> Pool Name Basin Dakota/Blanco Mesaverde
<sup>4</sup> Property Code 011510	<sup>5</sup> Property Name RINCON UNIT	<sup>6</sup> Well Number 187-E
<sup>7</sup> OGRID No. 023708	<sup>8</sup> Operator Name UNOCAL	<sup>9</sup> Elevation 6594

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	35	27N	7W		790	SOUTH	990	EAST	RIO ARRIBA

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres 320	<sup>13</sup> Joint or Infill Y	<sup>14</sup> Consolidation Code U	<sup>15</sup> Order No. Unitization
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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	2637.69	S 89° 43' W	2637.69						
168.71	AC ±		170.46	AC ±					
2772.00			2772.00						
E	S 89° 38' 45" E								
2643.49			2642.82						
N 0° 19'									
169.20	AC ±		170.85	AC ±					
2772.00			2772.00						
N 0° 13' 21" E									
2648.25	N 89° 03' W	2648.25							

<sup>17</sup> OPERATOR CERTIFICATION

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

Signature: Jim Benson

Printed Name: Jim Benson

Title: Drilling Superintendent

Date: September 5, 1995

<sup>18</sup> 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 supervision, and that the same is true and correct to the best of my belief.

Date of Survey: September 21, 1993

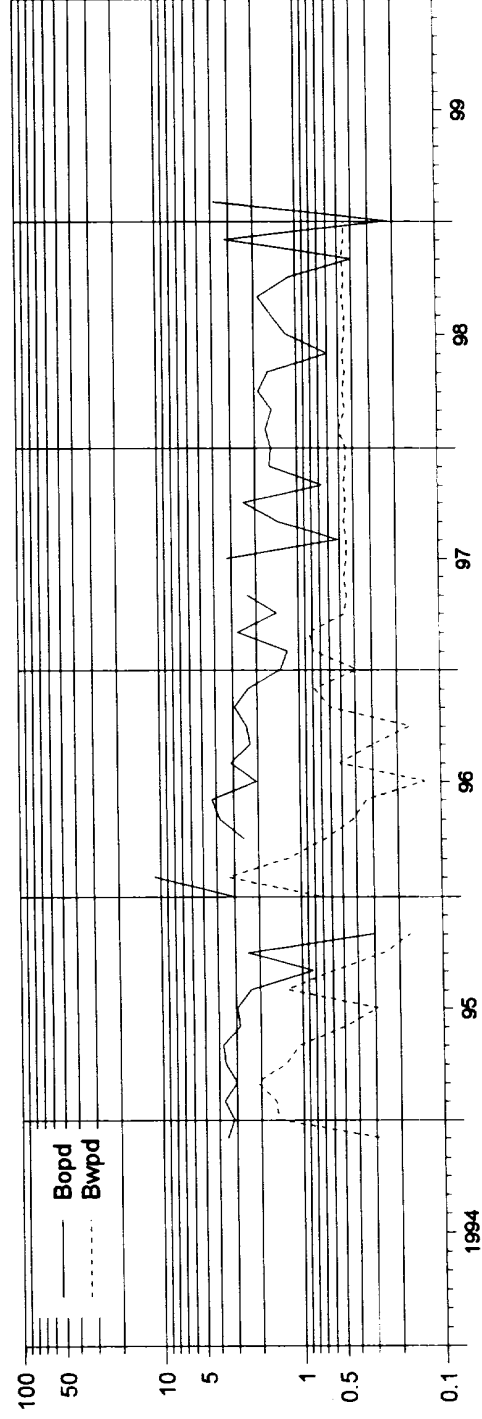
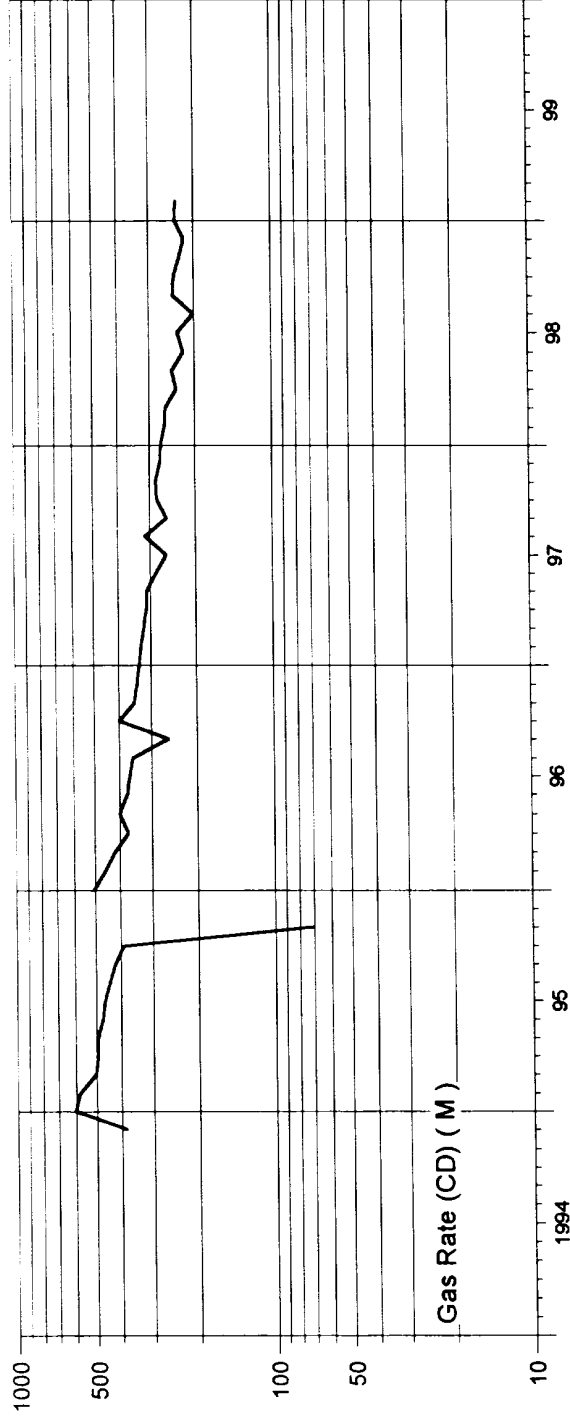
Signature and Seal of Professional Surveyor: [Signature]

Certificate Number: 9672

# UNION OIL COMPANY OF CALIFORNIA

## RINCON UNIT 187E:DK

RIO ARRIBA CO., NEW MEXICO



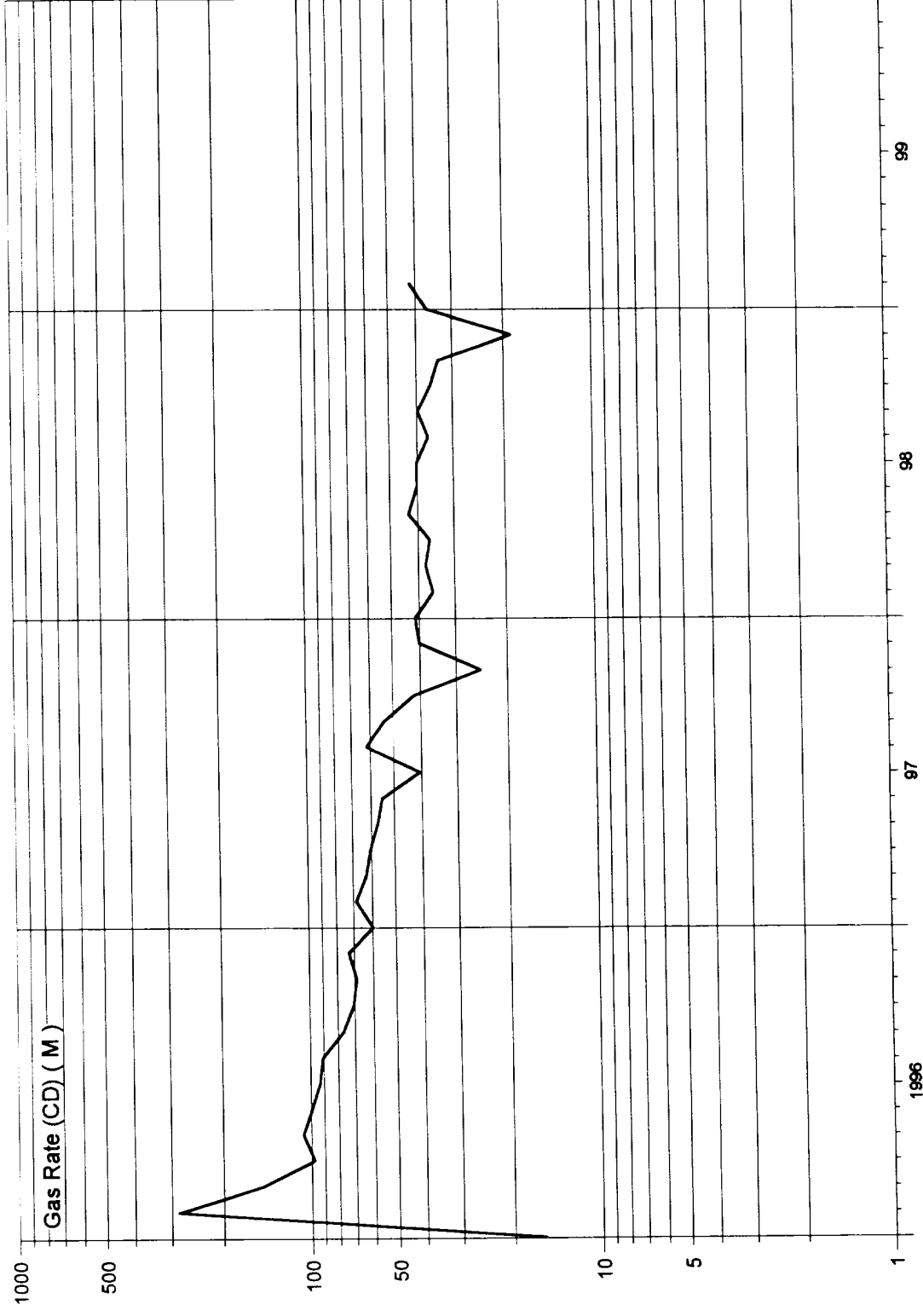
# RINCON\_UNIT\_187E:DK

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	10316	42	12	333	1.4	0.4	311397	2221
19970201	9139	34	22	326	1.2	0.8	320536	2255
19970301	9891	85	26	319	2.7	0.8	330427	2340
19970401	9339	43	14	311	1.4	0.5	339766	2383
19970501	9607	72	14	310	2.3	0.5	349373	2455
19970601	8508	0	14	284	0.0	0.5	357881	2455
19970701	8020	99	14	259	3.2	0.5	365901	2554
19970801	9712	16	14	313	0.5	0.5	375613	2570
19970901	7744	42	14	258	1.4	0.5	383357	2612
19971001	8724	75	14	281	2.4	0.5	392081	2687
19971101	8529	20	14	284	0.7	0.5	400610	2707
19971201	8503	49	14	274	1.6	0.5	409113	2756
19980101	8379	48	14	270	1.5	0.5	417492	2804
19980201	7328	47	14	262	1.7	0.5	424820	2851
19980301	8043	47	14	259	1.5	0.5	432863	2898
19980401	7049	56	14	235	1.9	0.5	439912	2954
19980501	7560	50	14	244	1.6	0.5	447472	3004
19980601	6624	18	14	221	0.6	0.5	454096	3022
19980701	7191	37	14	232	1.2	0.5	461287	3059
19980801	6232	47	14	201	1.5	0.5	467519	3106
19980901	7244	56	14	241	1.9	0.5	474763	3162
19981001	7390	35	14	238	1.1	0.5	482153	3197
19981101	6840	12	14	228	0.4	0.5	488993	3209
19981201	6750	98	14	218	3.2	0.5	495743	3307
19990101	7320	7	14	236	0.2	0.5	503063	3314
19990201	6540	107	0	234	3.8	0.0	509603	3421

# UNION OIL COMPANY OF CALIFORNIA

## RINCON UNIT 187E:MV

RIO ARRIBA CO., NEW MEXICO





# RINCON\_UNIT\_187E: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
19970101	1852	0	0	60	0.0	0.0	38791	0
19970201	1911	0	0	68	0.0	0.0	40702	0
19970301	1949	0	0	63	0.0	0.0	42651	0
19970401	1816	0	0	61	0.0	0.0	44467	0
19970501	1762	0	0	57	0.0	0.0	46229	0
19970601	1646	0	0	55	0.0	0.0	47875	0
19970701	1255	0	0	40	0.0	0.0	49130	0
19970801	1919	0	0	62	0.0	0.0	51049	0
19970901	1616	0	0	54	0.0	0.0	52665	0
19971001	1302	0	0	42	0.0	0.0	53967	0
19971101	740	0	0	25	0.0	0.0	54707	0
19971201	1246	0	0	40	0.0	0.0	55953	0
19980101	1281	0	0	41	0.0	0.0	57234	0
19980201	998	0	0	36	0.0	0.0	58232	0
19980301	1171	0	0	38	0.0	0.0	59403	0
19980401	1092	0	0	36	0.0	0.0	60495	0
19980501	1335	0	0	43	0.0	0.0	61830	0
19980601	1210	0	0	40	0.0	0.0	63040	0
19980701	1246	0	0	40	0.0	0.0	64286	0
19980801	1131	0	0	36	0.0	0.0	65417	0
19980901	1189	0	0	40	0.0	0.0	66606	0
19981001	1109	0	0	36	0.0	0.0	67715	0
19981101	1006	0	0	34	0.0	0.0	68721	0
19981201	583	0	0	19	0.0	0.0	69304	0
19990101	1131	0	0	36	0.0	0.0	70435	0
19990201	1174	0	0	42	0.0	0.0	71609	0

**WELL NAME :****RINCON UNIT 187E MESAVERDE**

Test Date:

GAS GRAVITY:

CONDENSATE (YES=1):

RESERVOIR TEMP:

SURFACE TEMP:

DEPTH OF ZONE:

% N2

% CO2

% H2S

Pc =

Tc =

**ORIGINAL**

Nov-95

0.685
1
145 F
60 F
5082 ft
0.38
1.16
0.00
670.15
378.37

Test Date:

GAS GRAVITY:

CONDENSATE (YES=1):

RESERVOIR TEMP:

SURFACE TEMP:

DEPTH OF ZONE:

% N2

% CO2

% H2S

Pc =

Tc =

**CURRENT**

Jun-98

0.685
1
145 F
60 F
5082 ft
0.38
1.16
0.00
670.15
378.37

SURFACE PRESS

BHP

Z

BHP/Z

350	psia
396	psia
0.9537	
415	psia

SURFACE PRESS

BHP

Z

BHP/Z

300	psia
339	psia
0.9602	
353	psia

**WELL NAME :****RINCON UNIT 187E DAKOTA**

Test Date:

GAS GRAVITY:

CONDENSATE (YES=1):

RESERVOIR TEMP:

SURFACE TEMP:

DEPTH OF ZONE:

% N2

% CO2

% H2S

Pc =

Tc =

**ORIGINAL**

Nov-95

0.62
1
190 F
60 F
7300 ft
0.17
1.20
0.00
674.94
363.33

Test Date:

GAS GRAVITY:

CONDENSATE (YES=1):

RESERVOIR TEMP:

SURFACE TEMP:

DEPTH OF ZONE:

% N2

% CO2

% H2S

Pc =

Tc =

**CURRENT**

Jun-98

0.62
1
190 F
60 F
7300 ft
0.17
1.20
0.00
674.94
363.33

SURFACE PRESS

BHP by Buildup Measurement

Z

BHP/Z

	psia
981	psig
	psia

SURFACE SITP

BHP

Z

BHP/Z

330	psia
384	psia
0.9700	
396	psia