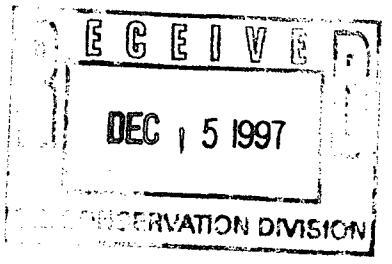
SPIRIT ENERGY 76

New Name. Same Spirit.

A Business Unit of Unocal

DHC 1/5/98

Certified Receipt No. Z740626057



December 10, 1997

1784

New Mexico Oil Conservation Division
Attn.: Mr. William J. LeMay
2040 S. Pacheco Street
Santa Fe, NM 87505

Dear Mr. LeMay:

Union Oil Company of California d.b.a. UNOCAL requests approval to down-hole commingle hydrocarbon production from the Blanco Mesa Verde and Basin Dakota formations in the following Rincon Unit well, Rio Arriba County, New Mexico.

Well	Legal Location
166E	1815' FNL, 1840' FWL, NW Sec 32, T27N, R6W

A UNOCAL operated well located on State acreage.

This well was drilled and completed with 7" casing November 1995, in the Dakota and Mesaverde formations. Unocal proposes to add a completion in the Pictured Cliffs formation and downhole commingle the Dakota and Mesaverde. The Dakota and Mesaverde were approved for surface commingling March 27th, 1995 - **Commingling Order PC-906**. Current commingled production is 276 Mcfd with trace oil and water. UNOCAL conducted a 48-hr. flow test in November 1997 from which the fixed allocation for this well was derived.

UNOCAL is confident that production will not be wasted and the proposed method of completion will efficiently drain Dakota and Mesa Verde acreage around this wellbore.

Form C-107-A with supporting data is attached.

If you have any questions regarding this proposal please contact me at 915/685-7665.

Sincerely,

Spirit Energy 76
A Business Unit of UNOCAL

Heather Dahlgren
Engineering Technician

TEB:had:ss
Att.
cc: New Mexico Oil Conservation Division/District III Aztec, NM
Attn.: Mr. Frank Chavez

SPIRIT ENERGY 76

New Name. Same Spirit.

A Business Unit of Unocal

Certified Receipt No. *Z740626056*

December 10, 1997

New Mexico Oil Conservation Division
Attn.: Mr. Frank Chavez
1000 Rio Brazos Road
Aztec, NM 87410

Dear Mr. Chavez:

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Heather Dahlgren
Engineering Technician

TEB:had:ss
Att.
cc: New Mexico Oil Conservation Division/Santa Fe, NM
Attn.: Mr. William J. LeMay

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980
DISTRICT II
811 South First St., Artesia, NM 88210-2835
DISTRICT III
1000 Rio Brazos Rd. Aztec, NM 87410-1693

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
New 3-12-96

APPROVAL PROCESS:
X Administrative ___Hearing

EXISTING WELLBORE
X YES ___ NO

Union Oil Company of California (Operator) | 1004 N. Big Spring, Midland, TX 79702 (Address)

Rincon Unit (Lease) | 166E (Well No.) | F 32-T27N-R6W (Unit Ltr. - Sec - Twp - Rge) | Rio Arriba (County)

OGRID NO. 023798 Property Code 011510 API NO. 30-039-25483 Spacing Unit Lease Types: (check 1 or more) Federal ___, State X, (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)	4876-5485		7356-7570
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: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated Or Measured Original	a. (Current) 283	a.	a. 428
	b. (Original) 1254	b.	b. 1667
6. Oil Gravity (°API) or Gas BTU Content	1192		1192
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 andoil/gas/ water rates of recent test (within 60 days)	Date: 11/21/97 Rates: BOPD .3 MCFD 100 BWPD .1	Date: Rates:	Date: 11/21/97 Rates: BOPD .3 MCFD 182 BWPD .1
8. Fixed Percentage Allocation Formula -% for each zone	Oil: 53 % Gas: 35 %	Oil: % Gas: %	Oil: 47 % Gas: 65 %

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? X Yes ___ No
If not, have all working, overriding, and royalty interests been notified by certified mail? ___ Yes ___ No
Have all offset operators been given written notice of the proposed downhole commingling? X Yes ___ No

11. Will cross-flow occur? ___ Yes X 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? X Yes ___ No

13. Will the value of production be decreased by commingling? ___ Yes X 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. X 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 Eng. Tech. DATE 12/10/97

TYPE OR PRINT NAME Heather Dahlgren TELEPHONE NO. (915) 685-7665

District I
PO Box 1980, Hobbs, NM 88241-1980

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
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1API Number	2Pool Code	3Pool Name
30-039-25483	73219	Blanco Mesaverde

4Property Code	5Property Name	6Well Number
011510	Rincon Unit	166-E

7OGRID No.	8Operator Name	9Elevation
023708	Union Oil Company of California	6650

10Surface Location

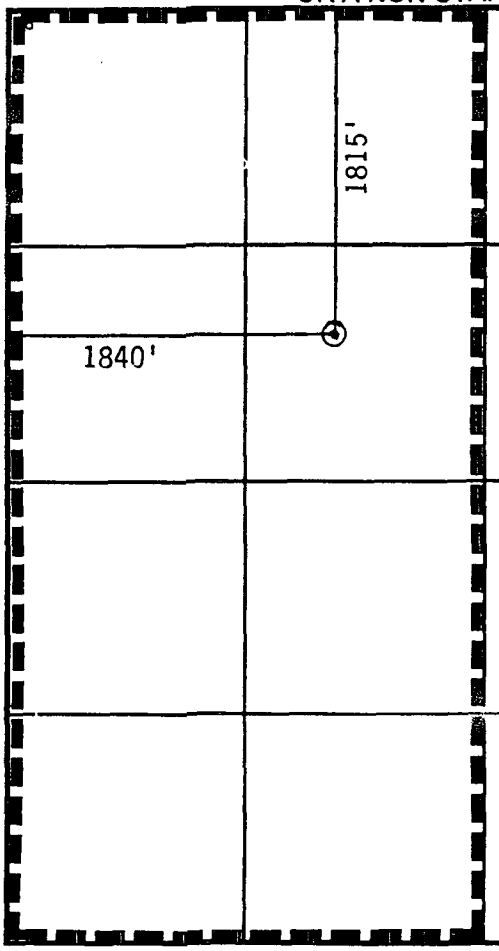
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West Line	County
F	32	27-N	6-W		1815	North	1840	West	Rio Arriba

11Bottom 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

12Dedicated Acres	13Joint or Infill	14Consolidation Code	15Order No.
160.00	Y	U	Unitized

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



17OPERATOR CERTIFICATION

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

Signature

Thomas E. Baiar
Printed Name

Petroleum Engineer
Title

12/10/97
Date

18SURVEYOR 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

Signature and Seal of Professional Surveyer:

Certificate Number

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
811 South First, Artesia, NM 88210

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

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1API Number	2Pool Code	3Pool Name
30-039-25483	71599	Basin Dakota

4Property Code	5Property Name	6Well Number
011510	Rincon Unit	166-E

7OGRID No.	8Operator Name	9Elevation
023708	Union Oil Company of California	6650

10Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West Line	County
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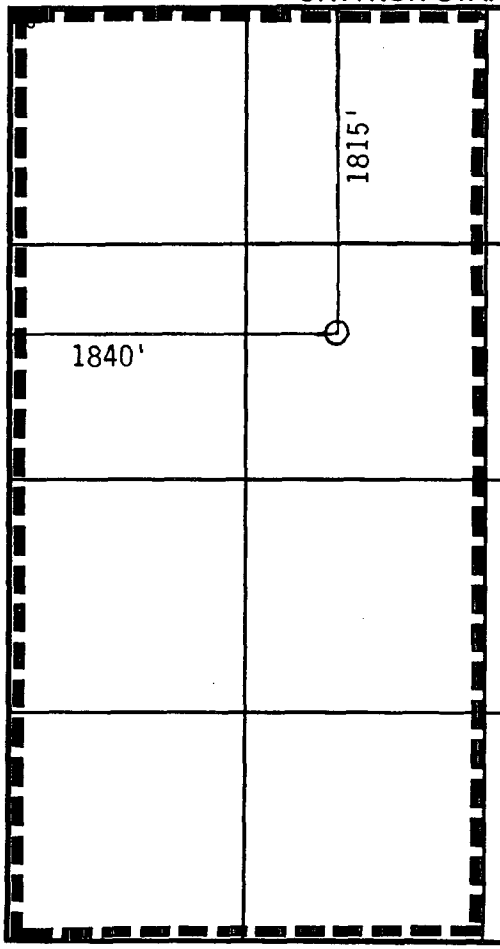

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Date of Survey

Signature and Seal of Professional Surveyer:

Certificate Number

NMOCD Reference Cases for Rule 303(D) Exceptions

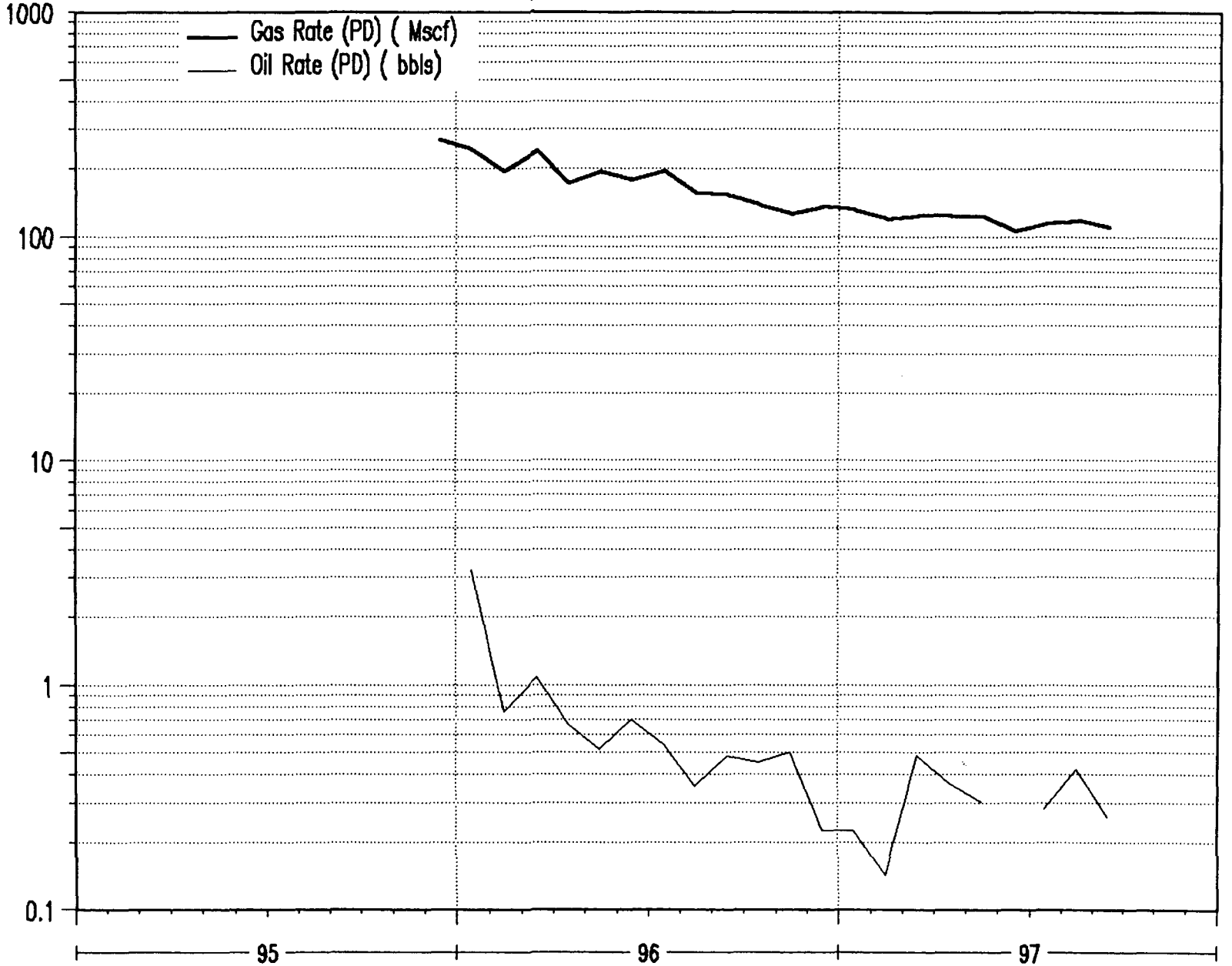
Unocal, Rincon Unit, Rio Arriba County, New Mexico

Rincon Unit Well	Legal Description	NMOCD Order No.	Issue Date
302	C S 11 T 26 N R 7 W	DHC-1050	11/3/94
134	B S 12 T 26 N R 7 W	DHC-1190	3/7/96
159M	F S 18 T 27 N R 6 W	DHC-904	6/18/93
174M	F S 19 T 27 N R 6 W	DHC-966	1/31/94
170	M S 20 T 27 N R 6 W	DHC-1192	3/7/96
170M	I S 20 T 27 N R 6 W	DHC-920	9/17/93
175M	F S 20 T 27 N R 6 W	DHC-864	11/24/92
171M	J S 21 T 27 N R 6 W	DHC-1101	3/7/95
180M	D S 21 T 27 N R 6 W	DHC-940	10/25/93
158M	J S 22 T 27 N R 6 W	DHC-909	4/27/93
125M	F S 26 T 27 N R 6 W	DHC-95	9/1793
126M	P S 27 T 27 N R 6 W	DHC-914	9/17/93
127M	D S 28 T 27 N R 6 W	DHC-916	8/17/93
128M	O S 28 T 27 N R 6 W	DHC-1042	8/31/94
129M	P S 29 T 27 N R 6 W	DHC-903	6/18/93
1E	G S 30 T 27 N R 6 W	DHC-902	6/18/93
303	E S 33 T 27 N R 6 W	DHC-1086	2/3/95
186M	L S 33 T 27 N R 6 W	DHC-1176	12/21/95
167M	C S 13 T 27 N R 7 W	DHC-863	11/5/92
151M	O S 14 T 27 N R 7 W	DHC-918	9/17/93
133E	D S 14 T 27 N R 7 W	DHC-1043	8/31/94
184M	P S 15 T 27 N R 7 W	DHC-911	8/25/93
185E	J S 22 T 27 N R 7 W	DHC-1038	8/31/94
136E	D S 23 T 27 N R 7 W	DHC-912	9/17/93
178E	I S 23 T 27 N R 7 W	DHC-1040	8/31/94
138E	P S 25 T 27 N R 7 W	DHC-1044	8/31/94
139E	F S 25 T 27 N R 7 W	DHC-1041	8/31/94
203	M S 27 T 27 N R 7 W	DHC-1261	5/23/96
149M	F S 30 T 27 N R 7 W	DHC-1037	8/31/94
229E	M S 34 T 27 N R 7 W	DHC-1124	5/16/95
187E	P S 35 T 27 N R 7 W	DHC-1176	12/21/95
131E	C S 36 T 27 N R 7 W	DHC-1039	8/31/94
168E	I S 36 T 27 N R 7 W	DHC-1191	3/7/96
183	K S 31 T 27 N R 6 W	DHC-1376	10/16/96

WELL: RINCON UNIT 166E:DK

LOCATION : N027 W006 32 SENW

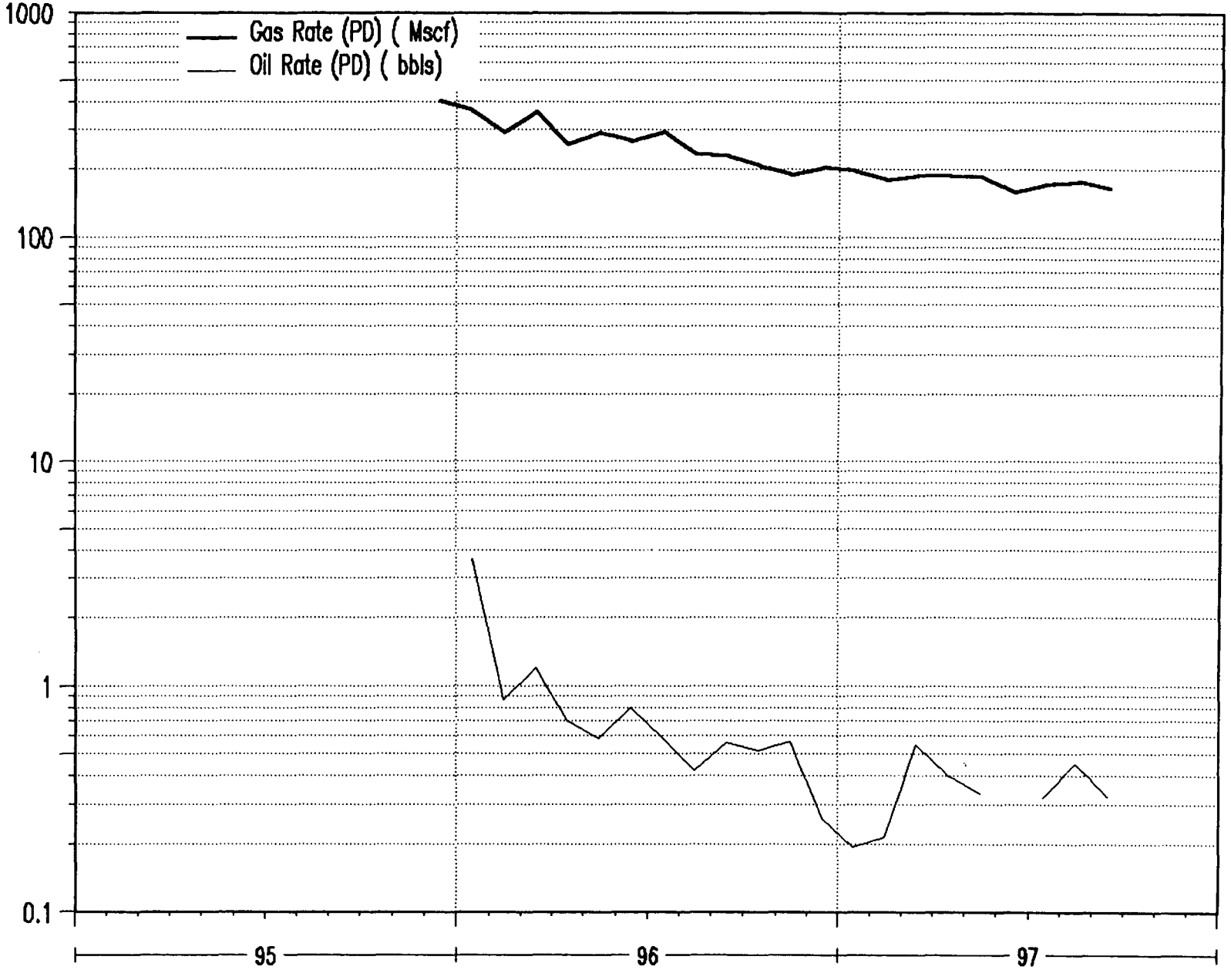
COUNTY : RIO ARRIBA STATE : NMEX



WELL: RINCON UNIT 166E:MV

LOCATION : N027 W006 32 SENW

COUNTY : RIO ARRIBA STATE : NMEX



RINCON UNIT NO. 166E

After a 5 day SI period:

Mesaverde BHP =	283 psi	5181' (Mid perf)	Calc BHP from 5 day SITP - July 1997
Dakota BHP =	428 psi	7463' (Mid perf)	Calc BHP from 5 day SITP - July 1997

$$\text{Gas Gradient} = \frac{(.0133)(.69)(2282)}{(.96)(655)} = 0.03 \text{ psi/ft}$$

Adjusting to a common datum of 5181':

Mesaverde BHP =	283 psi	
Dakota BHP =	428 - [(0.03)(7463-5181)]	= 360 psi

Therefore the reservoir pressures fall within the 50% requirement.

--BHPCALC--

Calculate BHP and Z-factor from surface shut-in pressure

12/09/97

WELL NAME :	RINCON UNIT #166E DAKOTA				
GAS GRAVITY:	0.69		% N2	0.43	
CONDENSATE (YES=1):	1		% CO2	1.02	%
RESERVOIR TEMP:	195	F	% H2S	0.00	%
SURFACE TEMP:	60	F	Pc =	669.09	%
DEPTH OF ZONE:	7463	Foot	Tc =	379.46	

SURFACE PRES	BHP	Z	BHP/Z
Psia	psia		psia
360	428	0.9618	445

--BHPCALC--

Calculate BHP and Z-factor from surface shut-in pressure

12/09/97

WELL NAME :	RINCON UNIT #166E MESAVERDE				
GAS GRAVITY:	0.69		% N2	0.43	
CONDENSATE (YES=1):	1		% CO2	1.02	%
RESERVOIR TEMP:	150	F	% H2S	0.00	%
SURFACE TEMP:	60	F	Pc =	669.09	%
DEPTH OF ZONE:	5181	Foot	Tc =	379.46	

SURFACE PRES	BHP	Z	BHP/Z
Psia	psia		psia
250	283	0.9671	293

RINCON UNIT NO. 166E

After a 1 month SI period:

Mesaverde BHP = 1254 psi 5181' (Mid perf) Calc BHP from 1 month SITP prior to 1st Delivery
Dakota BHP = 1667 psi 7463' (Mid perf) Calc BHP from 1 month SITP prior to 1st Delivery

$$\text{Gas Gradient} = \frac{(.0133)(.69)(2282)}{(.89)(655)} = 0.03 \text{ psi/ft}$$

Adjusting to a common datum of 5181':

Mesaverde BHP = 1254 psi
Dakota BHP = 1667 - [(0.03)(7463-5181)] = 1585 psi

Therefore the reservoir pressures fall within the 50% requirement.

--BHPCALC--

Calculate BHP and Z-factor from surface shut-in pressure

12/09/97

WELL NAME :	RINCON UNIT #166E DAKOTA				
GAS GRAVITY:	0.69		% N2	0.43	
CONDENSATE (YES=1):	1		% CO2	1.02	%
RESERVOIR TEMP:	195	F	% H2S	0.00	%
SURFACE TEMP:	60	F	Pc =	669.09	%
DEPTH OF ZONE:	7463	Foot	Tc =	379.46	

SURFACE PRES	BHP	Z	BHP/Z
Psia	psia		psia
1362	1,667	0.8851	1,883

--BHPCALC--

Calculate BHP and Z-factor from surface shut-in pressure

12/09/97

WELL NAME :	RINCON UNIT #166E MESAVERDE				
GAS GRAVITY:	0.69		% N2	0.43	
CONDENSATE (YES=1):	1		% CO2	1.02	%
RESERVOIR TEMP:	150	F	% H2S	0.00	%
SURFACE TEMP:	60	F	Pc =	669.09	%
DEPTH OF ZONE:	5181	Foot	Tc =	379.46	

SURFACE PRES	BHP	Z	BHP/Z
Psia	psia		psia
1087	1,254	0.8716	1,439