

DISTRICT I

P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II

811 South First St., Artesia, NM 88210-2835

DISTRICT III

1100 Rio Grande 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 87505-8429Form C-107-A
New 3 12-96

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Union Oil Company of California

P.O. Box 3100

Midland, Texas 79702

Operator

Address

Rincon Unit

181

G Sec. 22, 27N-6W

Rio Arriba

Lease

Well No.

Unit Loc. - Sec. - Twp. - Rge.

County

OGRID NO. 023708

Property Code 011510

API NO. 30-039-06990

Spacing Unit Lease Types: (check 1 or more)

Federal ☒ State ☐ Indian 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)	4933 - 5056 Proposed		7460 - 7649
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure	a. (Current) 552	a.	b. 379
Oil Zones - Artificial Lift: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	b. (Original)		b.
6. Oil Gravity (° API) or Gas BTU Content	1200 BTU		1153 BTU
7. Producing or Shut-In?			Producing
Production Marginal? (yes or no)	Yes		Yes
* If Shut-In, give date and oil/gas/water rates of last production	Date: Rates:	Date: Rates:	Date: Rates:
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: September 1997 Rates: .3 BOPD 119 MCFD 0 BWPD
8. Fixed Percentage Allocation Formula - % for each zone	Oil: % Gas: %	Oil: % Gas: %	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?

If not, have all working, overriding, and royalty interests been notified by certified mail?

Have all offset operators been given written notice of the proposed downhole commingling?

☒ Yes ☐ No
☒ Yes ☐ No
☒ 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 Engineering Tech DATE 11/25/97

TYPE OR PRINT NAME Heather Dahlgren

TELEPHONE NO. (915) 685-7665

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

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311 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

1 API Number 30-039-06990	2 Pool Code 71599	3 Pool Name Basin Dakota
4 Property Code 011510	5 Property Name Rincon Unit	6 Well Number 181
7 OGRID No. 023708	8 Operator Name Spirit Energy 76/A Business Unit of UNOCAL	9 Elevation 6570

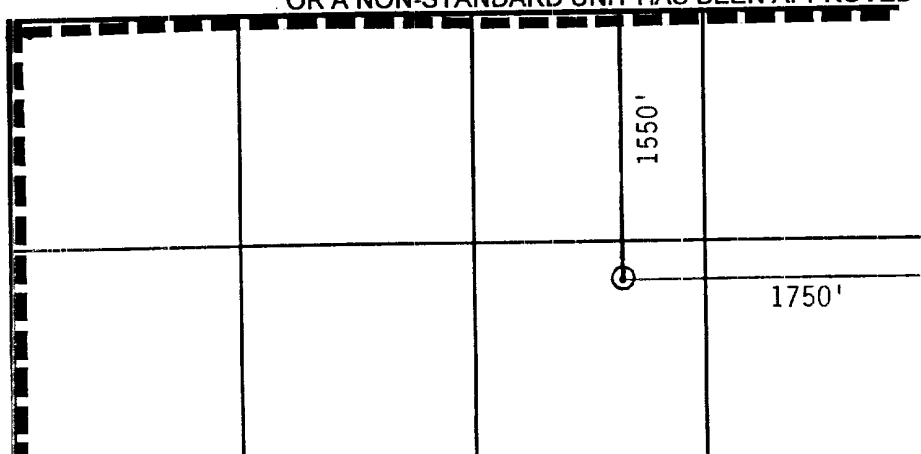
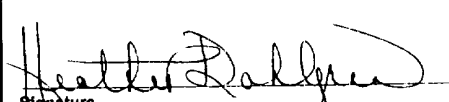
10 Surface Location

UL or lot no. G	Section 22	Township 27-N	Range 6-W	Lot Idn	Feet from the 1550'	North/South line North	Feet from the 1750	East/West Line East	County Rio Arriba
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11 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. 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

				17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief  Signature Heather Dahlquist Printed Name Engineering Technician Title November 28, 1997 Date
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 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				

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WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-06990	² Pool Code 72319	³ Pool Name Blanco Mesaverde
⁴ Property Code 011510	⁵ Property Name Rincon Unit	⁶ Well Number 181
⁷ OGRID No. 023708	⁸ Operator Name Spirit Energy 76/A Business Unit of UNOCAL	⁹ Elevation 6570

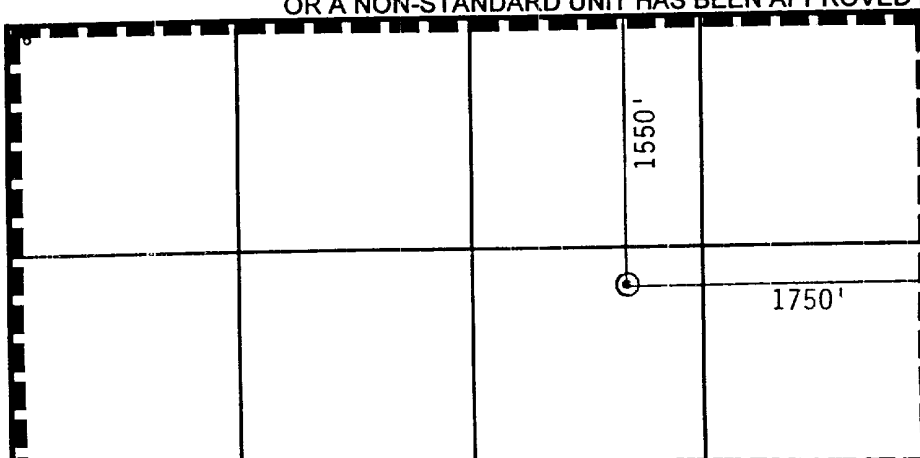
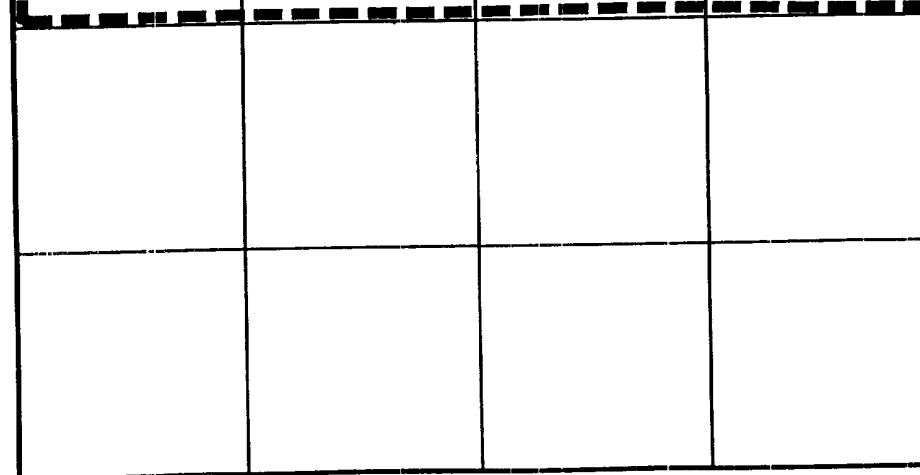
¹⁰Surface Location

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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
¹² Dedicated Acres 320.00	¹³ Joint or Infill Y	¹⁴ Consolidation Code U	¹⁵ Order No. 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>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</i> Signature <u>Heather Dublgen</u> Printed Name Heather Dublgen Title Engineering Technician Date November 28, 1997
	¹⁸SURVEYOR CERTIFICATION <i>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.</i> 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

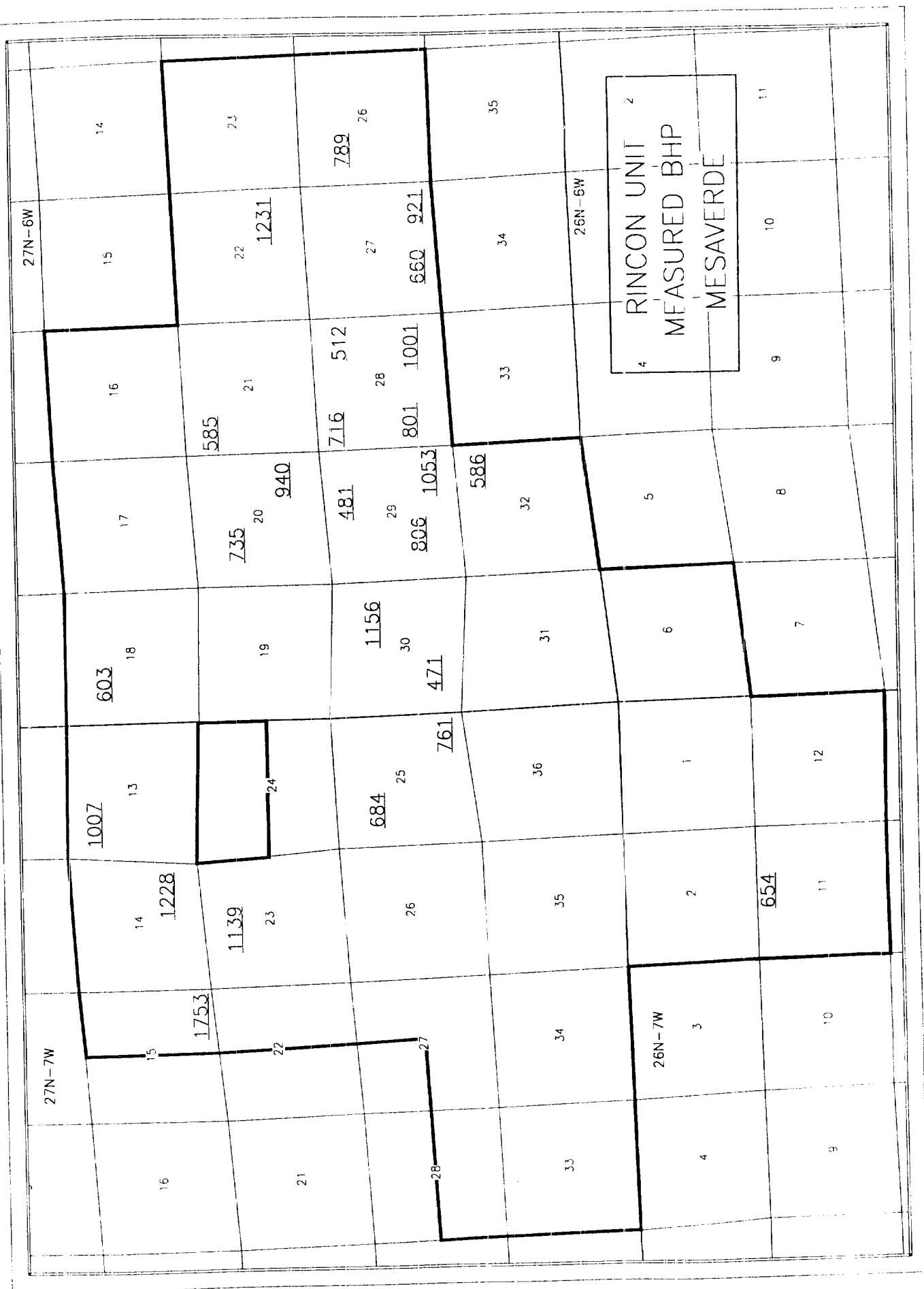
Rincon Unit Well	Legal Description	NMOCD Order No.	Issue Date
302	C S 11 T 26 N R 7 W	DHC-1050	11/3/94
134	B S 12 T 26 N R 7 W	DHC-1190	3/7/96
159M	F S 18 T 27 N R 6 W	DHC-904	6/18/93
174M	F S 19 T 27 N R 6 W	DHC-966	1/31/94
170	M S 20 T 27 N R 6 W	DHC-1192	3/7/96
170M	I S 20 T 27 N R 6 W	DHC-920	9/17/93
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	9/17/93
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

RINCON UNIT DK/MV COMMINGLE BOTTOMHOLE PRESSURE DATA
(Measured - 7 day SI)

<u>WELL</u>	<u>MV BHP (PSI)</u>	<u>DK BHP ADJ TO MV DATUM (PSI)</u>	<u>% DIFF</u>
* 1E	1156	1690	32
* 125M	789	1548	49
* 126	660	850	22
* 126M	921	1607	43
* 127	512	580	12
* 127M	716	1280	44
* 128	801	781	2
** 128M	1001	1000	0
* 129	806	836	4
* 129M	1053	935	11
* 130	586	622	6
* 135	481	736	35
* 136E	1139	2199	48
* 137	400	686	42
** 138E	684	1100	38
** 139E	761	1300	41
* 149	471	521	10
* 151M	1228	1862	34
* 158M	1231	766	38
* 159M	603	583	3
* 167M	1007	1909	47
* 170M	940	1752	46
* 175M	735	1108	34
* 180M	585	788	26
* 184M	1753	1708	3
** 302	654	1225	47

DK ZONE TAKEN AS DATUM

- * 1993 TEST DATA
- ** 1994 TEST DATA



GAS ANALYSIS

WELL NAME	ZONE	TEST DATE	NITROGEN	CO2	METHANE	ETHANE	PROPANE	I-BUTANE	N-BUTANE	I-PENTANE	N-PENTANE	HEXANE+	BTU'S	GPM	SPEC GRAV
RINCON #1E	DK	11/23/94	0.310	1.150	88.570	6.980	2.780	0.500	0.730	0.270	0.20	0.530	1159.0	3.424	0.670
	MV	11/23/94	0.310	1.150	88.570	6.980	2.760	0.800	0.730	0.270	0.20	0.530	1159.0	3.424	0.670
	DK	08/10/94	0.260	1.160	85.010	7.670	3.250	0.630	0.650	0.350	0.23	0.590	1184.0	3.690	0.665
RINCON #125M	MV	08/10/94	0.260	1.160	85.010	7.670	3.250	0.630	0.650	0.350	0.23	0.590	1184.0	3.690	0.666
	DK	11/17/94	0.210	1.320	87.950	6.430	2.000	0.610	0.520	0.280	0.16	0.620	1141.0	3.034	0.660
	MV	11/18/94	0.460	1.070	83.060	6.230	4.220	0.790	1.090	0.370	0.24	0.480	1207.0	4.390	0.701
RINCON #126	DK	12/07/93	0.290	1.050	87.510	6.460	2.770	0.540	0.680	0.270	0.17	0.230	1140.4	3.139	0.658
	MV	12/07/93	0.260	1.050	87.640	6.480	2.770	0.540	0.680	0.270	0.17	0.230	1140.4	3.139	0.658
	DK	09/15/93	0.260	1.160	84.870	5.010	2.840	0.680	0.800	0.430	0.25	0.660	1182.1	3.927	0.689
RINCON #127	MV	05/13/92	0.390	1.020	81.760	10.620	4.220	0.800	0.840	0.280	0.19	0.160	1198.0	4.679	0.694
	DK	11/17/94	0.300	1.240	84.850	6.010	3.060	0.800	0.800	0.340	0.23	0.580	1180.0	3.892	0.684
	MV	11/17/94	0.300	1.240	84.850	6.010	3.050	0.800	0.800	0.340	0.23	0.580	1180.0	3.892	0.684
RINCON #127M	DK	11/19/94	0.830	1.260	84.060	8.430	3.860	0.840	0.890	0.370	0.28	0.800	1192.0	4.126	0.692
	DK	11/19/94	0.460	0.760	79.710	10.320	5.030	0.880	1.380	0.470	0.35	0.820	1200.0	5.443	0.730
	MV	11/19/94	0.260	1.000	86.630	7.120	2.350	0.620	0.650	0.280	0.19	0.460	1151.0	3.317	0.659
RINCON #128	DK	04/15/94	0.550	0.590	79.100	11.220	5.600	0.640	1.060	0.430	0.35	0.660	1259.0	5.558	0.727
	MV	03/29/94	0.270	1.160	81.230	9.850	4.130	0.780	1.120	0.480	0.31	0.660	1232.0	4.949	0.717
	DK	10/23/94	0.270	1.160	81.230	9.850	4.130	0.780	1.120	0.480	0.31	0.660	1232.0	4.940	0.717
RINCON #128M	MV	10/23/94	0.200	1.160	81.380	10.020	4.020	0.740	1.190	0.470	0.33	0.470	1226.0	4.902	0.712
	DK	04/15/94	0.580	0.730	78.650	10.230	5.830	1.020	1.470	0.490	0.34	0.740	1281.0	5.763	0.744
	MV	04/13/94	0.430	1.240	84.220	6.530	2.970	0.630	0.760	0.340	0.22	0.640	1184.0	4.036	0.686
RINCON #130	DK	04/13/94	0.330	1.210	84.030	8.890	3.110	0.640	0.920	0.350	0.22	0.600	1188.0	4.120	0.680
	MV	04/13/94	0.220	1.080	83.600	9.320	3.440	0.560	0.880	0.330	0.22	0.340	1188.0	4.254	0.687
	DK	08/15/93	0.210	1.072	84.804	6.487	3.185	0.484	0.824	0.307	0.24	0.376	1171.1	3.830	0.676
RINCON #136E	MV	12/12/92	0.210	1.120	84.930	8.400	3.100	0.520	0.850	0.280	0.18	0.410	1176.0	3.868	0.678
	DK	11/11/94	0.440	0.600	77.270	12.180	5.690	0.940	1.600	0.480	0.32	0.490	1289.0	6.136	0.744
	MV	11/11/94	0.360	1.200	88.310	6.080	1.000	0.660	0.690	0.250	0.19	0.450	1194.0	2.905	0.655
RINCON #137	DK	11/18/94	0.360	1.180	84.630	7.900	3.110	0.810	0.850	0.390	0.27	0.680	1184.0	3.904	0.688
	MV	11/20/94	0.360	1.180	84.630	7.900	3.110	0.810	0.850	0.390	0.27	0.680	1184.0	3.904	0.688
	DK	10/07/94	0.830	1.010	82.800	9.810	3.920	0.860	1.020	0.370	0.28	0.410	1210.0	4.600	0.699
RINCON #161M	MV	10/07/94	0.230	1.010	83.800	9.810	2.930	0.680	1.020	0.370	0.28	0.330	1152.0	3.371	0.663
	DK	12/08/93	0.280	1.040	85.780	7.010	2.800	0.650	0.710	0.300	0.19	0.330	1152.0	3.371	0.663
	MV	12/08/93	0.280	1.040	85.780	7.010	2.800	0.650	0.710	0.300	0.19	0.330	1152.0	3.371	0.663
RINCON #168M	DK	11/10/94	0.240	1.090	83.010	6.160	3.660	0.710	0.930	0.380	0.24	0.650	1207.0	4.458	0.699
	MV	11/10/94	0.240	1.090	83.010	6.160	3.660	0.710	0.930	0.380	0.24	0.650	1207.0	4.458	0.699
	DK	11/10/94	0.240	1.090	83.010	6.160	3.660	0.710	0.930	0.380	0.24	0.650	1207.0	4.458	0.699
RINCON #169M	MV	11/10/94	0.230	1.010	88.060	7.820	2.890	0.640	0.770	0.280	0.19	0.410	1185.0	3.805	0.671
	DK	10/14/94	0.230	1.010	88.060	7.820	2.890	0.640	0.770	0.280	0.19	0.410	1185.0	3.805	0.671
	MV	10/14/94	0.230	1.010	88.060	7.820	2.890	0.640	0.770	0.280	0.19	0.410	1185.0	3.805	0.671
RINCON #167M	DK	10/31/94	0.330	1.120	83.840	8.800	3.840	0.670	0.890	0.340	0.21	0.360	1190.0	4.214	0.689
	MV	10/31/94	0.330	1.120	83.840	8.800	3.840	0.670	0.890	0.340	0.21	0.360	1190.0	4.214	0.689
	DK	10/31/94	0.330	1.120	83.840	8.800	3.840	0.670	0.890	0.340	0.21	0.360	1190.0	4.214	0.689
RINCON #170M	MV	10/31/94	0.360	1.140	82.250	8.290	3.880	0.710	1.040	0.410	0.28	0.640	1217.0	4.844	0.707
	DK	11/26/94	0.360	1.140	82.250	8.290	3.880	0.710	1.040	0.410	0.28	0.640	1217.0	4.844	0.707
	MV	11/26/94	0.360	1.140	82.250	8.290	3.880	0.710	1.040	0.410	0.28	0.640	1217.0	4.844	0.707
RINCON #175M	DK	09/26/94	0.270	1.170	85.810	7.490	2.830	0.600	0.740	0.310	0.19	0.590	1171.0	3.852	0.677
	MV	09/26/94	0.270	1.170	85.810	7.490	2.830	0.600	0.740	0.310	0.19	0.590	1171.0	3.852	0.677
	DK	08/26/94	0.260	1.010	81.930	9.680	4.090	0.660	1.060	0.400	0.29	0.710	1226.0	4.607	0.711
RINCON #160M	MV	12/30/93	0.260	1.010	81.930	9.680	4.090	0.660	1.060	0.400	0.29	0.710	1226.0	4.607	0.711
	DK	12/30/93	0.260	1.010	81.930	9.680	4.090	0.660	1.060	0.400	0.29	0.710	1226.0	4.607	0.711
	MV	12/30/93	0.260	1.010	81.930	9.680	4.090	0.660	1.060	0.400	0.29	0.710	1226.0	4.607	0.711
RINCON #164M	MV	12/30/93	0.280	1.010	81.930	9.680	4.090	0.660	1.060	0.400	0.29	0.710	1226.0	4.607	0.711

EXHIBIT 'A'

To allow for flush production for a period of less than 24 months:

$$Q1n = qi(e^{-D(t-0.5)})(365/12) \text{ and } Q2n = Qn - Q1n;$$

When: $Qn < Q1n$;

Then: $Q1n = Qn(Q1(n-1)/(Q1(n-1) + Q2(n-1)))$ and $Q2n = Qn(Q2(n-1)/(Q1(n-1) + Q2(n-1)))$;

And to allow for flush production for a period of more than 24 months:

$$Q1n = Qn(Q1(24)/(Q1(24) + Q2(24))) \text{ and } Q2n = Qn(Q2(24)/(Q1(24) + Q2(24)));$$

Where:

qi	Average three month production rate of the existing completion prior to downhole commingling in Mcfd
D	Effective monthly decline rate of the existing completion (1/months)
Qn	Total commingled production, for the n th month, after n months of commingled production in Mcfd.
Q1n	Total production for the existing completion, for the n th month, after n months of commingled production in Mcfd.
Q2n	Total production for the new completion, for the n th month, after n months of commingled production in Mcfd.
t	Time from beginning of commingled production (months)

RINCON MESAVERDE RECOMPLETIONS
MONTHLY GAS PRODUCTION DATA - SEPARATELY METERED VOLUMES

WELL:	11E	150E	187E	186	231	180M
ZONE:	MV	MV	MV	MV	MV	MV
COMPL:	DUAL	DUAL	DUAL	SINGLE	SINGLE	DHC*
1st Deliv:	04/01/97	12/18/95	01/31/98	12/27/98	01/10/97	10/29/92
IP (MCFD):	253	150	490	350	165	450

AVG IP	310	MIN IP	150	MAX IP	490
--------	-----	--------	-----	--------	-----

MONTH	IP	GAS VOLUME	PDGAS RATE	GAS VOLUME	PDGAS RATE	GAS VOLUME	PDGAS RATE	GAS VOLUME	PDGAS RATE	GAS VOLUME	PDGAS RATE	WELLS ON	AVG VOL	AVG RATE	MIN RATE	MAX RATE	MON VOL**
1	9151	253	150	486	486	980	192	350	165	7207	267	6	310	310			
2	4288	305	390	8238	284	6283	203	192	386	1114	386	6	338	338	192	486	5065
3	3678	143	258	4544	171	4850	173	203	291	1140	291	6	257	257	143	365	7205
4	2631	123	171	2922	104	4769	154	173	232	7652	247	6	182	182	123	247	5647
5	3161	138	155	3296	132	3922	131	154	184	4694	168	6	152	152	104	194	4565
6	2488	132	155	2969	99	4332	144	131	172	5852	189	6	145	145			4707
7		104	129	2882	93	3593	120	144	244	4541	151	6	115	115			4355
8			116	2807	91	3134	157	120	141	3329	107	5	152	152			3577
9			96	2293	92	3620	117	157	332	2576	86	5	97	97			3286
10			93	2184	70					2608	84	4	87	87			2895
11			107	2059	69					1951	85	3	72	72			2707
12			86	2259	73					1863	82	3	72	72			2170
			80							1936	82	3	72	72			2222

* 180M MV produced for 12 months prior to DHC with DK

** Monthly volumes used to forecast first 12 months of Mesa Verde production

1996 MV RECOMPLETION - EXAMPLE CASE FOR OIL FORECAST

WELL:	183
ZONE:	DK/MV
COMPL:	DHC
MV 1st Deliv:	12/20/96
MV IP (BOPD):	0.5

MONTH	OIL VOLUME	PDOIL RATE	WATER VOLUME	PDWAT RATE	AVG PDOIL	AVG PDWAT
1	16	0.5	17	0.5		
2	32	1.1	17	0.6		
3	26	0.8	23	0.7		
4	10	0.3	7	0.2		
5	25	0.8	17	0.5		
6	27	0.9	3	0.1		
7	22	0.7	2	0.1		
8	20	0.6	9	0.3		
9	8	0.3	3	0.1		
10	9	0.3	8	0.3		
11	4	0.7	3	0.5	0.6	0.4
12	0	0	0	0.0		
13	137	4.4	25	0.8		
14	43	1.5	33	1.2		
15	50	1.6	17	0.5		
16	44	1.5	20	0.7		
17	26	0.9	20	0.7		
18	0	0	20	0.7		
19	31	1	20	0.6		
20	24	0.8	20	0.6		
21	27	0.9	20	0.6	1.4	0.7

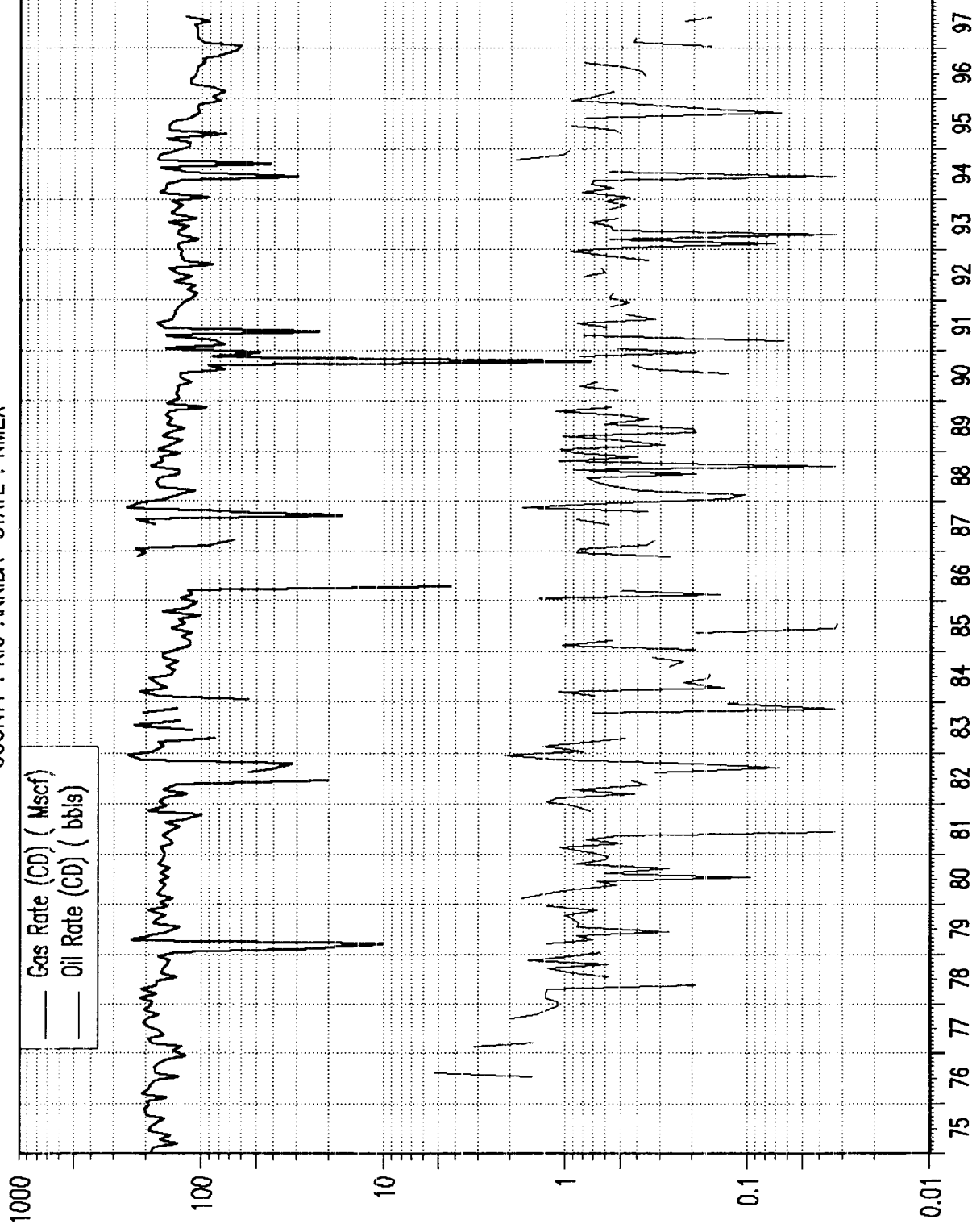
Dakota volumes prior to commingling

DK/MV commingle oil / water volumes

WELL: RINCON UNIT 181:DK

LOCATION : N027 W006 22 SWNE

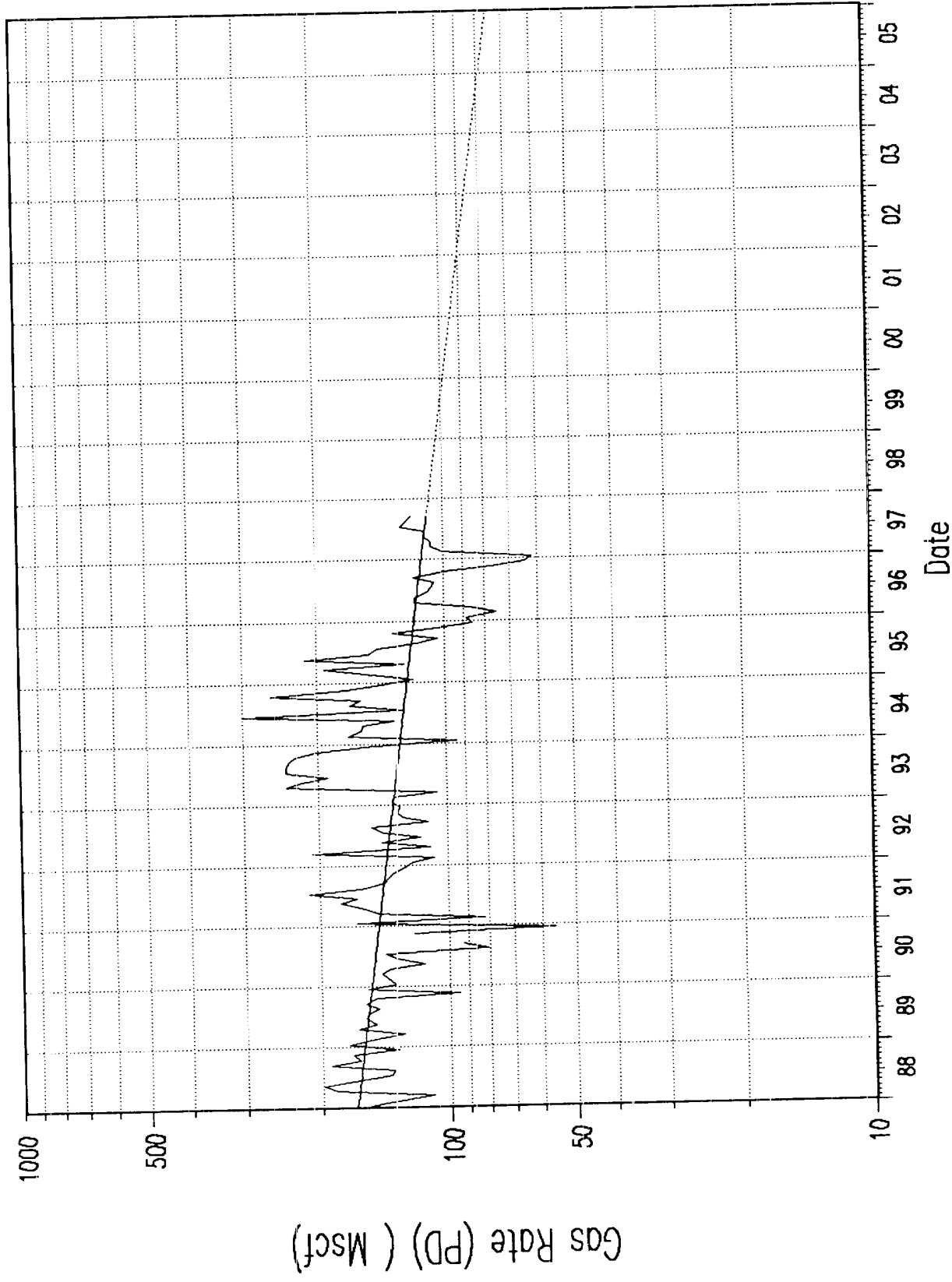
COUNTY : RIO ARriba STATE : NMEX



WELL: RINCON UNIT 181:DK
LOCATION : N027 W006 22 SWNE
COUNTY : RIO ARriba STATE : NMEX

DATE	DAYS ON PROD Days	OIL VOL PROD bbls	GAS VOL PROD Mscf	WATER VOL PROD bbls	OIL RATE (PD) bbls	GAS RATE (PD) Mscf	WATER RATE (PD) bbls	CUM OIL PROD bbls	CUM GAS PROD Mscf
9601	31	22	2741	12	0.7	88	0	9733	2073080
9602	29	16	2186	8	0.6	75	0	9749	2075266
9603	31	0	2682	11	0.0	87	0	9749	2077948
9604	30	25	3497	13	0.8	117	0	9774	2081445
9605	31	0	3628	11	0.0	117	0	9774	2085073
9606	30	11	3267	11	0.4	109	0	9785	2088340
9607	31	12	3318	11	0.4	107	0	9797	2091658
9608	31	15	3264	14	0.5	105	0	9812	2094922
9609	25	24	2931	14	1.0	117	1	9836	2097853
9610	31	0	3096	8	0.0	100	0	9836	2100949
9611	30	19	2319	9	0.6	77	0	9855	2103268
9612	31	0	1994	12	0.0	64	0	9855	2105262
9701	31	5	1923	3	0.2	62	0	9860	2107185
9702	28	12	2812	5	0.4	100	0	9872	2109997
9703	31	13	3316	7	0.4	107	0	9885	2113313
9704	30	0	3203	1	0.0	107	0	9885	2116516
9705	30	11	3309	1	0.4	110	0	9896	2119825
9706	30	0	3304	1	0.0	110	0	9896	2123129
9707	23	7	2885	1	0.3	125	0	9903	2126014
9708	31	5	3788	1	0.2	122	0	9908	2129802
9709	31	9	3681	1	0.3	119	0	9917	2133483

WELL: RINCON UNIT 181:DK
LOCATION : N027 W006 22 SWNE
COUNTY : RIO ARriba STATE : NMEX



WELL: RINCON UNIT 181:DK

	Case Name :	New	
	Case Analyst :		
	Case Comment :		
	Cum. Gas Production:	2129802.00	Mscf
Remaining Recoverable	Gas Reserves:	664858.78	Mscf
Ultimate Recoverable	Gas Reserves:	2794660.78	Mscf

Decline Equation: $Q = Q_i * \exp(-D_i * t)$ $t = \text{Elapsed Months from 7501}$

Qi:	292.89	Mscf
Di:	0.003647	
Hyperbolic B:	0.0000	
Start Date:	1997/09	
Monthly Effective Decline (De):	0.003641	
Yearly Effective Decline (De):	0.042825	
Initial Forecast Rate:	109.00	Mscf
Economic Limit:	15.00	Mscf
Capacity Limit:	0.00	Mscf
Cumulative Produced:	2129802.00	Mscf
Schedule Forecasted Reserves:	664858.78	Mscf
Total Forecasted Reserves:	664858.78	Mscf
Total Recovered Reserves:	2794660.78	Mscf

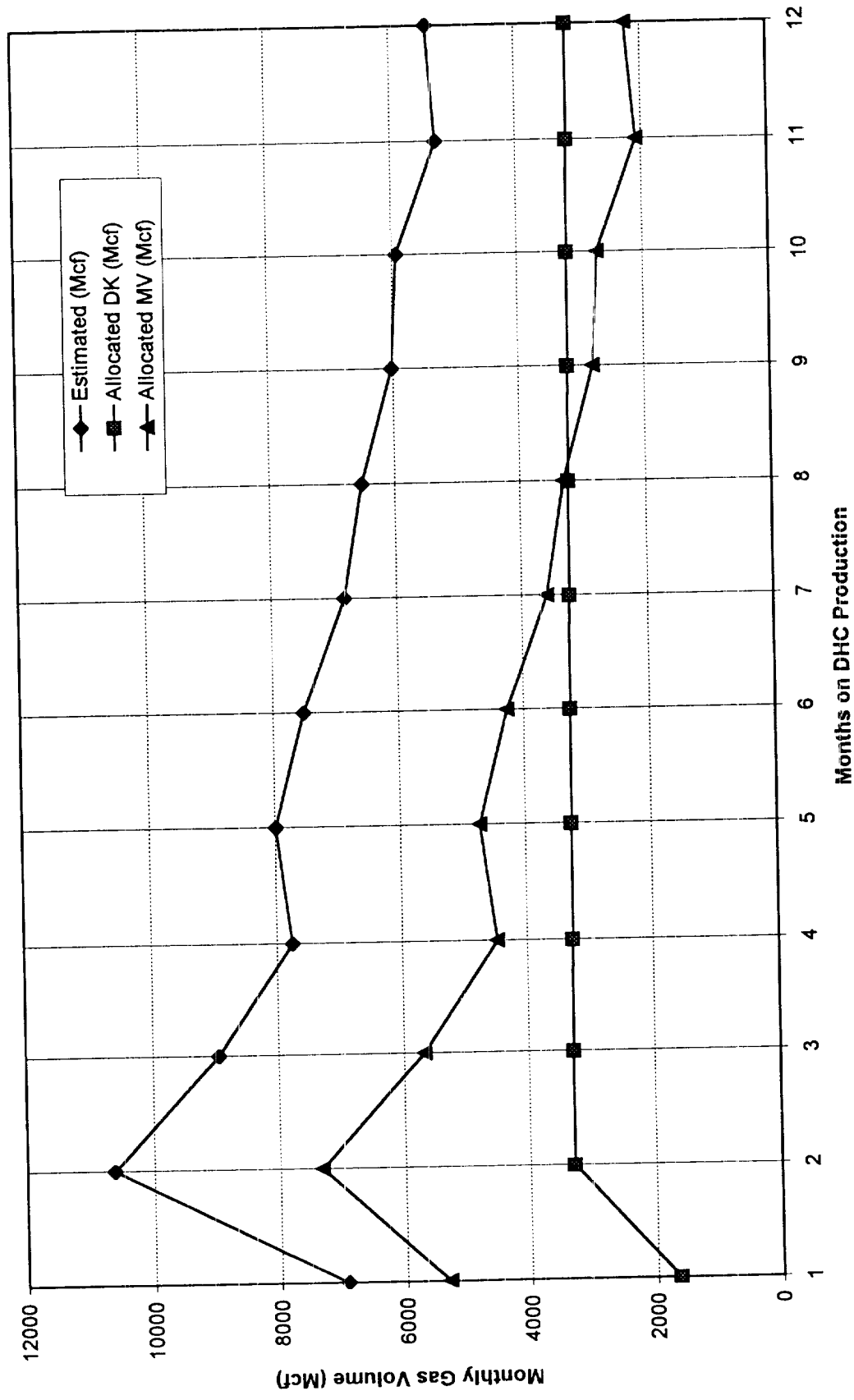
DATE	INSTANT. DAILY RATE Mscf	AVERAGE DAILY RATE Mscf	MONTHLY FORECAST PROD. Mscf	CUM. PROD. Mscf	REMAINING RECOV. RESERVES Mscf
1997/09	108.60	108.80	3264.06	2133066.00	661594.69
1997/10	108.21	108.40	3360.54	2136426.50	658234.13
1997/11	107.81	108.01	3240.34	2139667.00	654993.81
1997/12	107.42	107.62	3336.10	2143003.00	651657.69
1998/01	107.03	107.23	3324.03	2146327.00	648333.69
1998/02	106.64	106.84	2991.40	2149318.50	645342.25
1998/03	106.25	106.44	3299.78	2152618.25	642042.50
1998/04	105.87	106.06	3181.79	2155800.00	638860.69
1998/05	105.48	105.67	3275.86	2159076.00	635584.88
1998/06	105.10	105.29	3158.64	2162234.50	632426.19
1998/07	104.71	104.90	3252.00	2165486.50	629174.19
1998/08	104.33	104.52	3240.19	2168726.75	625934.00
1998/09	103.95	104.14	3124.31	2171851.00	622809.69
1998/10	103.57	103.76	3216.59	2175067.75	619593.13
1998/11	103.20	103.39	3101.60	2178169.25	616491.50
1998/12	102.82	103.01	3193.25	2181362.50	613298.25
1999/01	102.45	102.63	3181.64	2184544.00	610116.63
1999/02	102.07	102.26	2863.26	2187407.50	607253.38
1999/03	101.70	101.89	3158.55	2190566.00	604094.81
1999/04	101.33	101.52	3045.50	2193611.50	601049.31
1999/05	100.96	101.15	3135.54	2196747.00	597913.81
1999/06	100.60	100.78	3023.35	2199770.25	594890.44
1999/07	100.23	100.41	3112.77	2202883.00	591777.69
1999/08	99.86	100.05	3101.43	2205984.50	588676.25
1999/09	99.50	99.68	2990.47	2208975.00	585685.75
1999/10	99.14	99.32	3078.93	2212054.00	582606.81

Gas Forecast

Well	RU 181	Comments
First Delivery Date (As DHC)	16-Jan-98	
Days on First Month	15	
Existing Completion Prior to DHC	DK	
Effective Monthly Decline	0.0036	4.3% Annual Decline
Average 3 month rate (Mcf) prior to DHC	109	Apr-June Average per Day (full months)
New Completion	MV	
Initial Test (Mcf)	310	Avg. IP (New MV metered separately - 6)

Month	Estimated (Mcf)	DK Forecast (Mcf)	MV Forecast (Mcf)	Allocated DK (Mcf)	Allocated MV (Mcf)	Allocated MV (%)	
1	6940	1875	5065	1632	5308	76	Est. flush DK rate 125 mcfd
2	10621	3416	7205	3297	7324	69	Est. flush DK rate 122 mcfd
3	8946	3299	5647	3285	5661	63	
4	7746	3181	4565	3273	4473	58	
5	7982	3275	4707	3262	4720	59	
6	7513	3158	4355	3250	4263	57	
7	6829	3252	3577	3238	3591	53	
8	6526	3240	3286	3226	3300	51	
9	6019	3124	2895	3214	2805	47	
10	5923	3216	2707	3203	2720	46	
11	5271	3101	2170	3191	2080	39	
12	5415	3193	2222	3179	2236	41	

RU 181



Oil Forecast

Well

First Delivery Date (As DHC)

Days on First Month

Existing Completion Prior to DHC

Yield (bbls/mcf)

Average 1997 rate (BOPD) prior to DHC

New Completion

Initial Test (BOPD)

RU 181
16-Jan-98
15
DK
0.002
0.2
MV
5

Estimated

Estimated

Estimated

Allocated MV

Month	Estimated (Bbl)	DK Forecast (Bbl)	MV Forecast (Bbl)	Est. MV (BOPD)	(%)	DK .003 (bbl/mcf) DK .003 (bbl/mcf)
1	81	6	75	5.0	93%	
2	72	10	62	2.2	86%	
3	38	7	31	1.0	82%	
4	19	4	15	0.5	77%	
5	12	4	8	0.3	64%	
6	10	4	6	0.2	58%	
7	11	4	6	0.2	59%	
8	9	4	5	0.2	52%	
9	9	4	5	0.2	51%	
10	7	4	3	0.1	41%	
11	7	4	3	0.1	41%	
12	7	4	3	0.1	40%	

RINCON UNIT NO. 181

After a 7 day SI period:

Mesaverde BHP =	552 psi	4995' (Mid perf)	Calc. BHP from offset MV #29 - Apr. 1995
Dakota BHP =	379 psi	7554' (Mid perf)	Calc. BHP from 7 day SITP - Sept. 1996

$$\text{Gas Gradient} = \frac{(.0135)(.65)(2559)}{(.97)(655)} = 0.035 \text{ psi/ft}$$

Adjusting to a common datum of 4995':

$$\begin{aligned} \text{Mesaverde BHP} &= 552 \text{ psi} \\ \text{Dakota BHP} &= 379 - [(0.035)(7554-4995)] = 289 \text{ psi} \end{aligned}$$

Therefore the reservoir pressures fall within the 50% requirement.

---BHPCALC---

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

11/23/97

WELL NAME : RINCON UNIT #181

GAS GRAVITY: 0.65

% N2 0.81

CONDENSATE (YES=1): 1

% CO2 1.33 %

RESERVOIR TEMP:

195 F

% H2S 0.00 %

SURFACE TEMP:

60 F

Pc = 672.72 %

DEPTH OF ZONE:

7554 Foot

Tc = 368.63

SURFACE PRES

psia

322

BHP

psia

379

Z

0.9696

BHP/Z

psia

391

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 78 of 203 Northwest New Mexico - March 1997

P/Z Test Report - USGS(PI)

=====

Entity : RINCON UNIT (011510) Product: GAS
 Field : BASIN (4100) Start : 196209
 Reservoir: DAKOTA (604) Stop : 199703
 Operator : UNION OIL COMPANY OF CALIFORNIA (34551) Status : ACTIVE
 Location : S22 T27N R6W G RIO ARBA Well # : 181
 Basin : SAN JUAN (580) Upper : 7460
 Zone : DAKOTA (602DKOT) Lower : 7649
 District : AZTEC Lat : 36.56287
 API : 30039069900000 Lng : 107.45118

Test Information

=====

Date	Gas MCFD	Liq Bbls	** SITP	Pressures FTP	CLP	P/Z	Z Factor	Cond Cum at Test	Gas Cum at Test
19620927	4681	0.0	2528	370	989	3780	0.832	6912	1297494
19790726	146	0.0	732	325		1001	0.897	7414	1413170
19810706	128	0.0	756	291		1039	0.894	7858	1519838
19831102	238	0.0	845	426		1178	0.882	8022	1605145
19850710	133	0.0	749	320		1028	0.895	8423	1729216
19880831	154	0.0	617	357		830	0.913	8829	1835554
19901007	105	0.0	592	387		793	0.916	9110	1918714
19920921	150	0.0	562	328		750	0.920	9427	2001458
19940617	126	0.0	572	158		764	0.919	9826	2091729
19960913	106	0.0	322	126		419	0.953		

---BHPCALC---

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

11/23/97

WELL NAME : RINCON UNIT #29

GAS GRAVITY: 0.65 % N2 0.30

CONDENSATE (YES=1): 1 % CO2 1.10 %

RESERVOIR TEMP: 150 F % H2S 0.00 %

SURFACE TEMP: 60 F Pc = 672.44 %

DEPTH OF ZONE: 4929 Foot Tc = 369.82

SURFACE PRES	BHP	Z	BHP/Z
psia	psia		psia
492	552	0.9432	585

Nov-11-1997

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76 of 203

Northwest New Mexico - March 1997

P/Z Test Report - USGS(PI)

=====

Entity : RINCON UNIT (011510)
 Field : BLANCO (5900)
 Reservoir: MESAVERDE (625)
 Operator : UNION OIL COMPANY OF CALIFORNIA (34551)
 Location : S22 T27N R6W A RIO ARBA
 Basin : SAN JUAN (580)
 Zone : MESAVERDE (604MVRD)
 District : AZTEC
 API : 30039070010000

Product: GAS
 Start : 195411
 Stop : 199703
 Status : ACTIVE
 Well # : 29
 Upper : 4810
 Lower : 5350
 Lat : 36.56441
 Lng : 107.44871

Test Information

=====

Date	Gas MCFD	Liq Bbls	** SITP	Pressures FTP	CLP	P/Z Factor	Cond Cum at Test	Gas Cum at Test
19541116	2827	0.0	1110	547	355	1545 0.831	4644	1539947
19800616	23	0.0	551	317	365	692 0.914	4644	1565387
19820518	35	0.0	567	325	304	697 0.914	4644	1579250
19840726	31	0.0	557	325	416	712 0.920	4644	1590479
19860918	41	0.0	522	304	174	705 0.913	4750	1620050
19890929	42	0.0	577	416	98	658 0.918	4815	1626646
19910801	22	0.0	532	174		732 0.910	4908	1638569
19930801	23	0.0	492	98		672 0.916	4973	1650824
19950427	24	0.0				617 0.923		

SPIRIT ENERGY 76

New Name. Same Spirit.
A Business Unit of Unocal

November 28, 1997

United States Department of the Interior
Bureau of Land Management
1235 La Plata Highway
Farmington, NM 87401

Gentlemen:

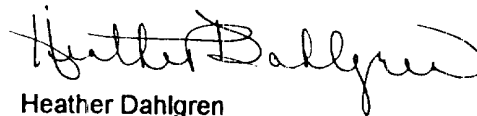
Union Oil Company of California (UNOCAL) has requested from the State of New Mexico Oil Conservation Division, approval to down hole commingle production from the Blanco Mesa Verde and Basin Dakota formations in the following Rincon Unit well, Rio Arriba County, New Mexico.

Well	Legal Location
139	1650' FSL, 1650' FWL, SW Sec 25, T27N, R7W
168	1190' FNL, 1190' FEL, NE Sec 36, T27N, R7W
181	1550' FNL, 1750' FEL, NE Sec 22, T27N, R6W

Attached for Bureau of Land Management review is this proposal. If there are any objections to the proposed action, please notify NMOCD within twenty days. If you have any questions regarding this application, please contact Tom Baiar at 915/685-6836.

Sincerely,

Spirit Energy 76
A Business Unit of UNOCAL



Heather Dahlgren
Engineering Technician

TEB:had:ss
Att.

SPIRIT ENERGY 76

New Name. Same Spirit.
A Business Unit of Unocal

November 11, 1997

Burlington Resources Oil & Gas Co.
P.O. Box 4289
Farmington, NM 87499-4289

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 Mesa Verde and Basin Dakota formations in the following Rincon Unit well, Rio Arriba County, New Mexico.

Well	Legal Location
181	1550' FNL, 1750' FEL, NE Sec 22, T27N, R6W

If Burlington, 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 me at 915/685-6836.

Sincerely,

Spirit Energy 76
A Business Unit of UNOCAL



Thomas E. Baiar
Petroleum Engineer

TEB had:ss