

DISTRICT I

P.O. Box 1080, Hobbs, NM 88241-1080

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 87505-8429Form C-107-A
New 3 12-96

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Operator Union Oil Company of California Address P.O. Box 3100 Midland, Texas 79702Lease Rincon Unit Well No. 139 Unit (Tr. - Sec. - Twp. - Rgs) K-25-27N-7W County Rio ArribaOGRID NO. 023708 Property Code 011510 API NO. 30-039-06890 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)	Proposed 5308-5407		7352-7537
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) 761 b. (Original)	a. b.	a. 612 b.
6. Oil Gravity (* API) or Gas BTU Content	1200 BTU	DEC - 1 1997 OIL CON. DIV. DEPT. 3	1193 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 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 180 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? ☒ 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? ☒ 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 ☐ No15. 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 11/25/97TYPE OR PRINT NAME Heather Dahlgren TELEPHONE NO. (915) 685-7665

District I
PO Box 1960, Hobbs, NM 88241-1960

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 30-039-06890	2Pool Code 71599	3Pool Name Basin Dakota
4Property Code 011510	5Property Name Rincon Unit	6Well Number 139
7OGRID No. 023708	8Operator Name Spirit Energy 76/A Business Unit of UNOCAL	9Elevation 6647

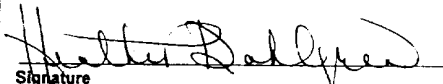
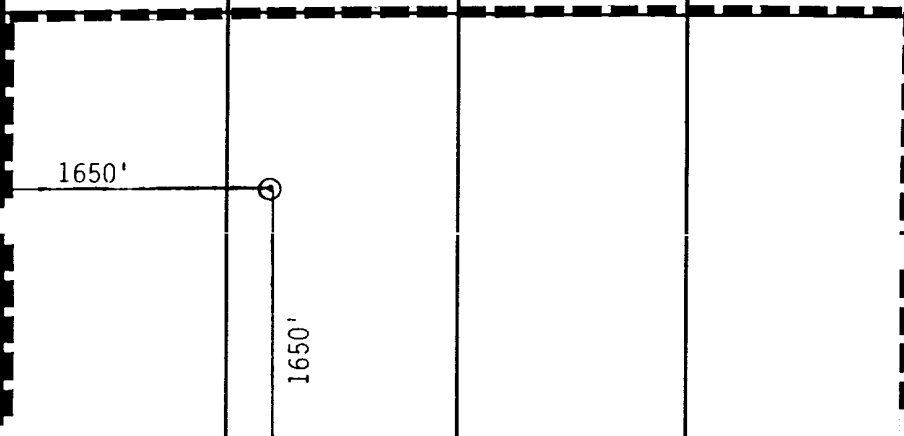
10Surface Location

UL or lot no. K	Section 25	Township 27-N	Range 7-W	Lot Idn	Feet from the 1650	North/South line South	Feet from the 1650	East/West Line West	County Rio Arriba
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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
12Dedicated Acres 328.45	13Joint or Infill Y	14Consolidation Code U	15Order 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

16					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 Heather Dahlgren Printed Name Engineering Technician Title November 28, 1997 Date
					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

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

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Santa Fe, NM 87505

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4 Property Code 011510	5 Property Name Rincon Unit	6 Well Number 139
7 OGRID No. 023708	8 Operator Name Spirit Energy 76/A Business Unit of UNOCAL	9 Elevation 6647

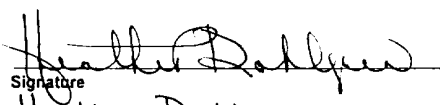
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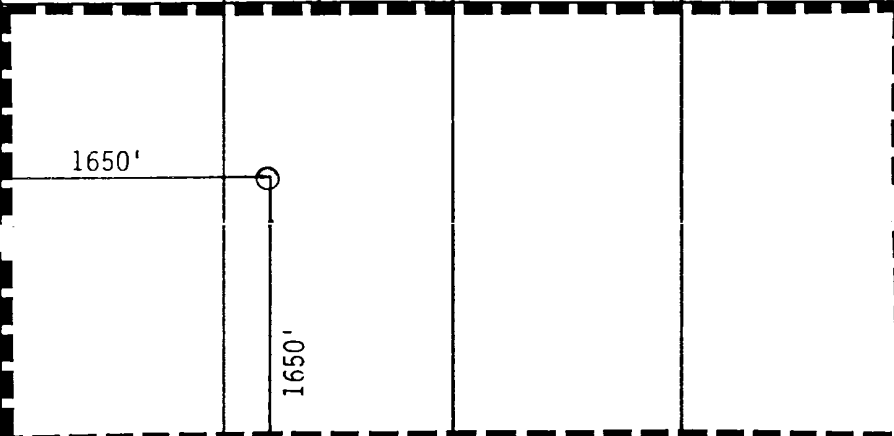
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11 Bottom Hole Location If Different From Surface

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 328.45	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

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					18 SURVEYOR 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

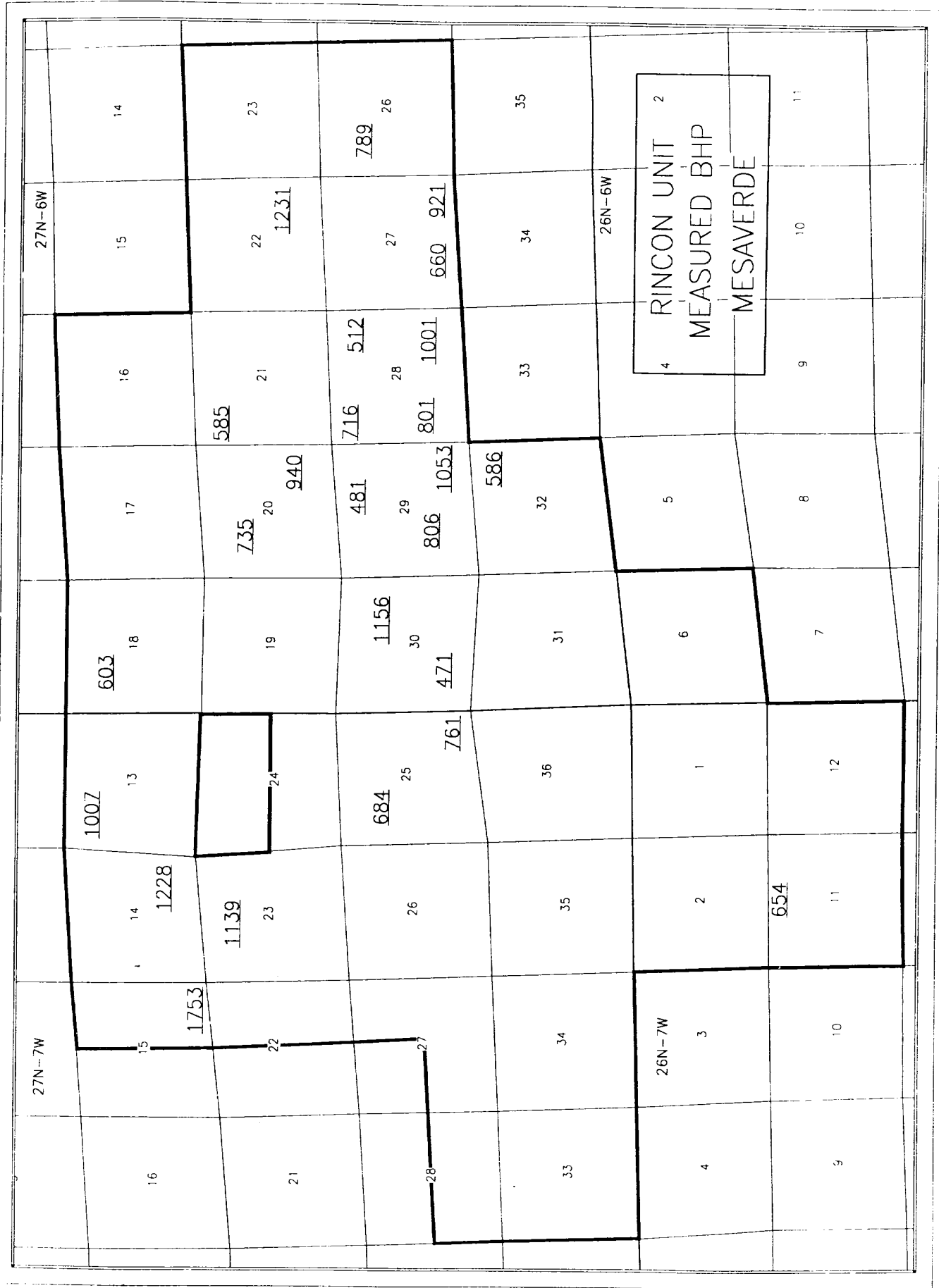
Rincon Unit Well	Legal Description	NMOCD Order No.	Issue Date
302	C S 11 T 26 N R 7 W	DHC-1050	11/3/94
134	B S 12 T 26 N R 7 W	DHC-1190	3/7/96
159M	F S 18 T 27 N R 6 W	DHC-904	6/18/93
174M	F S 19 T 27 N R 6 W	DHC-966	1/31/94
170	M S 20 T 27 N R 6 W	DHC-1192	3/7/96
170M	I S 20 T 27 N R 6 W	DHC-920	9/17/93
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	9/1793
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

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 GRAY
RINCON #125M	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	0.870
RINCON #125M	MV	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	0.870
RINCON #125M	DK	08/10/94	0.260	1.160	85.010	7.670	3.850	0.830	0.850	0.350	0.23	0.590	1184.0	3.690	0.895
RINCON #125M	MV	08/10/94	0.260	1.160	85.010	7.670	3.850	0.830	0.850	0.350	0.23	0.590	1184.0	3.690	0.895
RINCON #125M	DK	11/17/94	0.210	1.320	87.850	6.430	2.000	0.610	0.820	0.280	0.16	0.820	1141.0	3.034	0.860
RINCON #125M	MV	11/17/94	0.210	1.320	87.850	6.430	2.000	0.610	0.820	0.280	0.16	0.820	1141.0	3.034	0.860
RINCON #125M	DK	12/07/93	0.290	1.050	87.640	6.480	2.770	0.540	0.860	0.270	0.17	0.230	1140.4	3.139	0.858
RINCON #125M	MV	12/07/93	0.290	1.050	87.640	6.480	2.770	0.540	0.860	0.270	0.17	0.230	1140.4	3.139	0.858
RINCON #127	DK	09/15/93	0.280	1.160	84.870	6.010	2.940	0.560	0.800	0.400	0.25	0.580	1182.1	3.927	0.868
RINCON #127	MV	09/15/93	0.280	1.160	84.870	6.010	2.940	0.560	0.800	0.400	0.25	0.580	1182.1	3.927	0.868
RINCON #127	DK	11/17/94	0.300	1.240	84.650	6.010	3.050	0.600	0.800	0.340	0.23	0.560	1180.0	3.892	0.864
RINCON #127M	MV	11/17/94	0.300	1.240	84.650	6.010	3.050	0.600	0.800	0.340	0.23	0.560	1180.0	3.892	0.864
RINCON #128	DK	11/18/94	0.830	1.840	84.080	8.480	3.860	0.640	0.890	0.370	0.26	0.800	1192.0	4.128	0.892
RINCON #128	MV	11/18/94	0.830	1.840	84.080	8.480	3.860	0.640	0.890	0.370	0.26	0.800	1192.0	4.128	0.892
RINCON #128	DK	04/15/94	0.260	1.000	88.830	7.120	2.350	0.520	0.650	0.280	0.19	0.480	1151.0	3.317	0.858
RINCON #128	MV	04/15/94	0.260	1.000	88.830	7.120	2.350	0.520	0.650	0.280	0.19	0.480	1151.0	3.317	0.858
RINCON #129	DK	10/23/94	0.550	0.590	79.100	11.220	5.800	0.640	1.060	0.430	0.35	0.860	1259.0	6.558	0.727
RINCON #129	MV	10/23/94	0.550	0.590	79.100	11.220	5.800	0.640	1.060	0.430	0.35	0.860	1259.0	6.558	0.727
RINCON #129M	DK	10/23/94	0.270	1.180	81.230	9.850	4.130	0.780	1.120	0.480	0.31	0.860	1232.0	4.949	0.717
RINCON #129M	MV	10/23/94	0.270	1.180	81.230	9.850	4.130	0.780	1.120	0.480	0.31	0.860	1232.0	4.949	0.717
RINCON #130	DK	04/15/94	0.200	1.160	81.360	10.020	4.070	0.740	1.190	0.470	0.33	0.470	1228.0	4.902	0.712
RINCON #130	MV	04/15/94	0.200	1.160	81.360	10.020	4.070	0.740	1.190	0.470	0.33	0.470	1228.0	4.902	0.712
RINCON #136	DK	04/13/94	0.430	1.240	84.220	8.530	2.970	0.630	0.780	0.340	0.22	0.840	1184.0	4.036	0.898
RINCON #136	MV	04/13/94	0.430	1.240	84.220	8.530	2.970	0.630	0.780	0.340	0.22	0.840	1184.0	4.036	0.898
RINCON #138E	DK	08/15/93	0.220	1.080	83.800	9.320	3.440	0.560	0.980	0.330	0.22	0.340	1189.0	4.254	0.887
RINCON #138E	MV	12/12/92	0.219	1.072	84.804	8.487	3.185	0.484	0.924	0.307	0.24	0.378	1177.1	3.930	0.878
RINCON #137	DK	11/11/94	0.210	1.120	84.930	8.400	3.100	0.520	0.950	0.280	0.18	0.410	1176.0	3.868	0.878
RINCON #137	MV	11/11/94	0.210	1.120	84.930	8.400	3.100	0.520	0.950	0.280	0.18	0.410	1176.0	3.868	0.878
RINCON #149	DK	11/18/94	0.360	1.200	86.310	6.080	1.600	0.560	0.680	0.250	0.19	0.450	1134.0	2.905	0.855
RINCON #149	MV	11/18/94	0.360	1.200	86.310	6.080	1.600	0.560	0.680	0.250	0.19	0.450	1134.0	2.905	0.855
RINCON #181M	DK	10/07/94	0.830	1.910	82.800	9.810	3.920	0.860	1.020	0.370	0.28	0.410	1210.0	4.600	0.899
RINCON #181M	MV	10/07/94	0.830	1.910	82.800	9.810	3.920	0.860	1.020	0.370	0.28	0.410	1210.0	4.600	0.899
RINCON #189M	DK	12/08/93	0.290	1.040	88.780	7.010	2.800	0.550	0.710	0.300	0.19	0.330	1152.0	3.371	0.863
RINCON #189M	MV	12/08/93	0.290	1.040	88.780	7.010	2.800	0.550	0.710	0.300	0.19	0.330	1152.0	3.371	0.863
RINCON #189M	DK	11/10/94	0.240	1.090	83.010	9.160	3.690	0.710	0.830	0.380	0.24	0.550	1207.0	4.458	0.898
RINCON #189M	MV	11/10/94	0.240	1.090	83.010	9.160	3.690	0.710	0.830	0.380	0.24	0.550	1207.0	4.458	0.898
RINCON #187M	DK	10/14/94	0.230	1.010	88.060	7.820	2.880	0.540	0.770	0.280	0.19	0.410	1185.0	3.605	0.871
RINCON #187M	MV	10/14/94	0.230	1.010	88.060	7.820	2.880	0.540	0.770	0.280	0.19	0.410	1185.0	3.605	0.871
RINCON #170M	DK	10/31/94	0.330	1.120	83.840	8.800	3.640	0.670	0.690	0.340	0.21	0.380	1190.0	4.214	0.869
RINCON #170M	MV	10/31/94	0.330	1.120	83.840	8.800	3.640	0.670	0.690	0.340	0.21	0.380	1190.0	4.214	0.869
RINCON #175M	DK	11/28/94	0.360	1.140	82.250	9.290	3.680	0.710	1.040	0.410	0.28	0.640	1217.0	4.844	0.707
RINCON #175M	MV	11/28/94	0.360	1.140	82.250	9.290	3.680	0.710	1.040	0.410	0.28	0.640	1217.0	4.844	0.707
RINCON #180M	DK	09/28/94	0.270	1.170	85.810	7.490	2.830	0.600	0.740	0.310	0.19	0.590	1171.0	3.652	0.877
RINCON #180M	MV	09/28/94	0.270	1.170	85.810	7.490	2.830	0.600	0.740	0.310	0.19	0.590	1171.0	3.652	0.877
RINCON #184M	DK	12/30/93	0.260	1.010	81.930	9.860	4.090	0.680	1.000	0.400	0.29	0.710	1228.0	4.807	0.711
RINCON #184M	MV	12/30/93	0.260	1.010	81.930	9.860	4.090	0.680	1.000	0.400	0.29	0.710	1228.0	4.807	0.711

EXHIBIT 'A'

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

$$Q_{1n} = q_i(e^{-D(t-0.5)})(365/12) \text{ and } Q_{2n} = Q_n - Q_{1n};$$

When: $Q_n < Q_{1n}$;

$$\text{Then: } Q_{1n} = Q_n(Q_1(n-1)/(Q_1(n-1) + Q_2(n-1))) \text{ and } Q_{2n} = Q_n(Q_2(n-1)/(Q_1(n-1) + Q_2(n-1)));$$

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

$$Q_{1n} = Q_n(Q_1(24)/(Q_1(24) + Q_2(24))) \text{ and } Q_{2n} = Q_n(Q_2(24)/(Q_1(24) + Q_2(24)));$$

Where:

q_i	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)
Q_n	Total commingled production, for the n th month, after n months of commingled production in Mcfd.
Q_{1n}	Total production for the existing completion, for the n th month, after n months of commingled production in Mcfd.
Q_{2n}	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	01/31/96	12/27/96	01/10/97	10/29/92
IP (MCFD):	253	150	490	350	165	450

AVG IP	310	MIN IP	150	MAX IP	490
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MONTH	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	4291	150	486	486	960	350	185	450	6	5035	310			
2	4288	143	7988	390	8238	284	6283	192	386	267	6	7099	338	192	486	5065
3	3678	123	4969	258	4544	147	4850	203	291	365	6	5482	257	143	365	7205
4	2631	138	4809	171	2922	104	4789	173	232	247	6	4276	182	123	247	5647
5	3161	132	3883	155	3286	132	3922	154	194	188	6	4212	152	104	194	4565
6	2488	104	4003	129	2969	99	4332	144	172	189	6	3666	145			4707
7			3493	116	2882	93	3593	120	244	151	6	3534	116			4355
8			2989	96	2807	91	3134	157	141	107	5	3032	152			3577
9			2885	93	2293	92	3620	117	332	86	5	2852	97			3286
10			2672	107	2184	70				84	4	2289	87			2895
11			2652	86	2059	69				85	3	2191	72			2707
12			2396	80	2259	73				62	3	2197	72			2170
										62	3					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

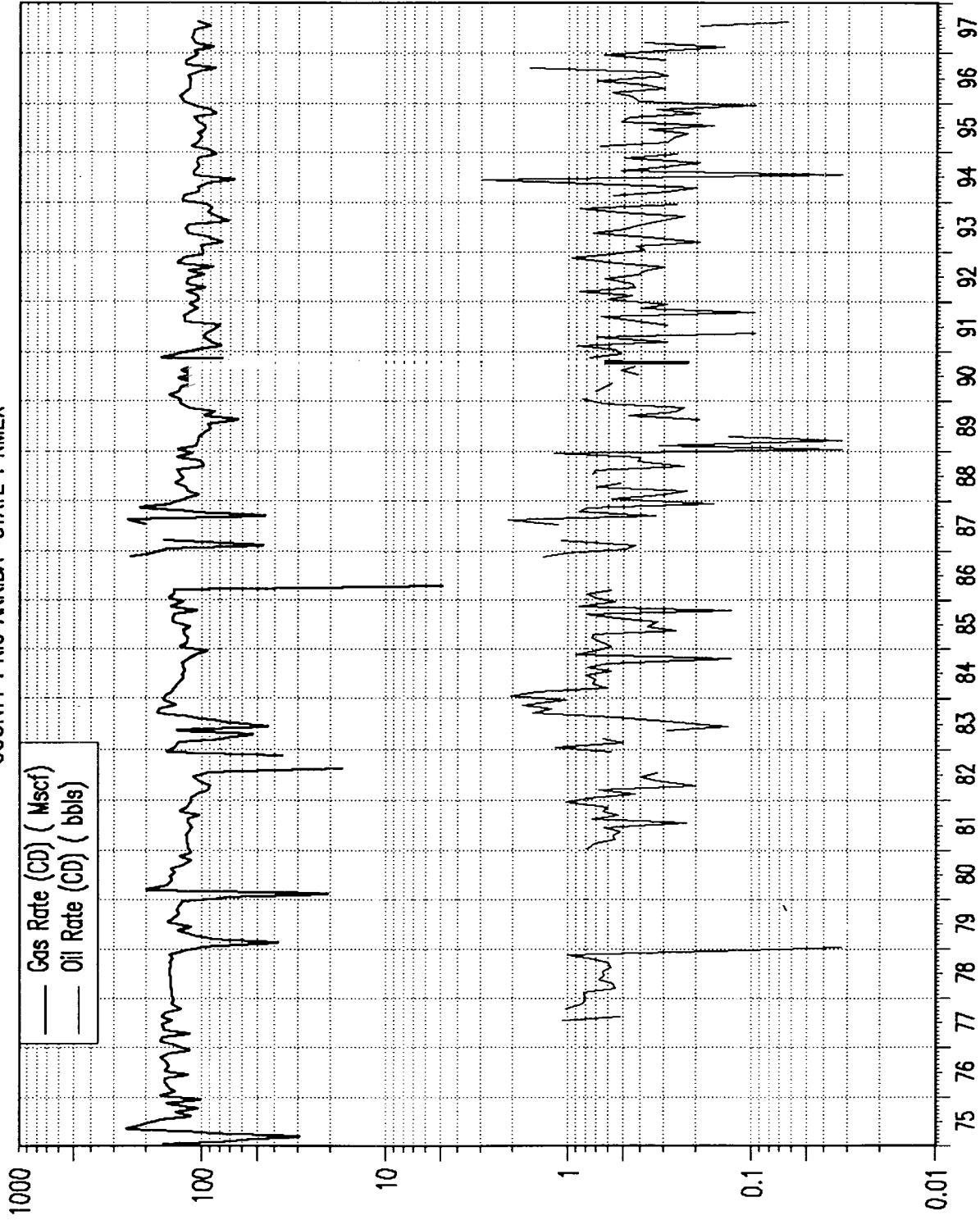
Dakota volumes prior to commingling

DK/MV commingle oil / water volumes

WELL: RINCON UNIT 139:DK

LOCATION : N027 W007 25 NESW

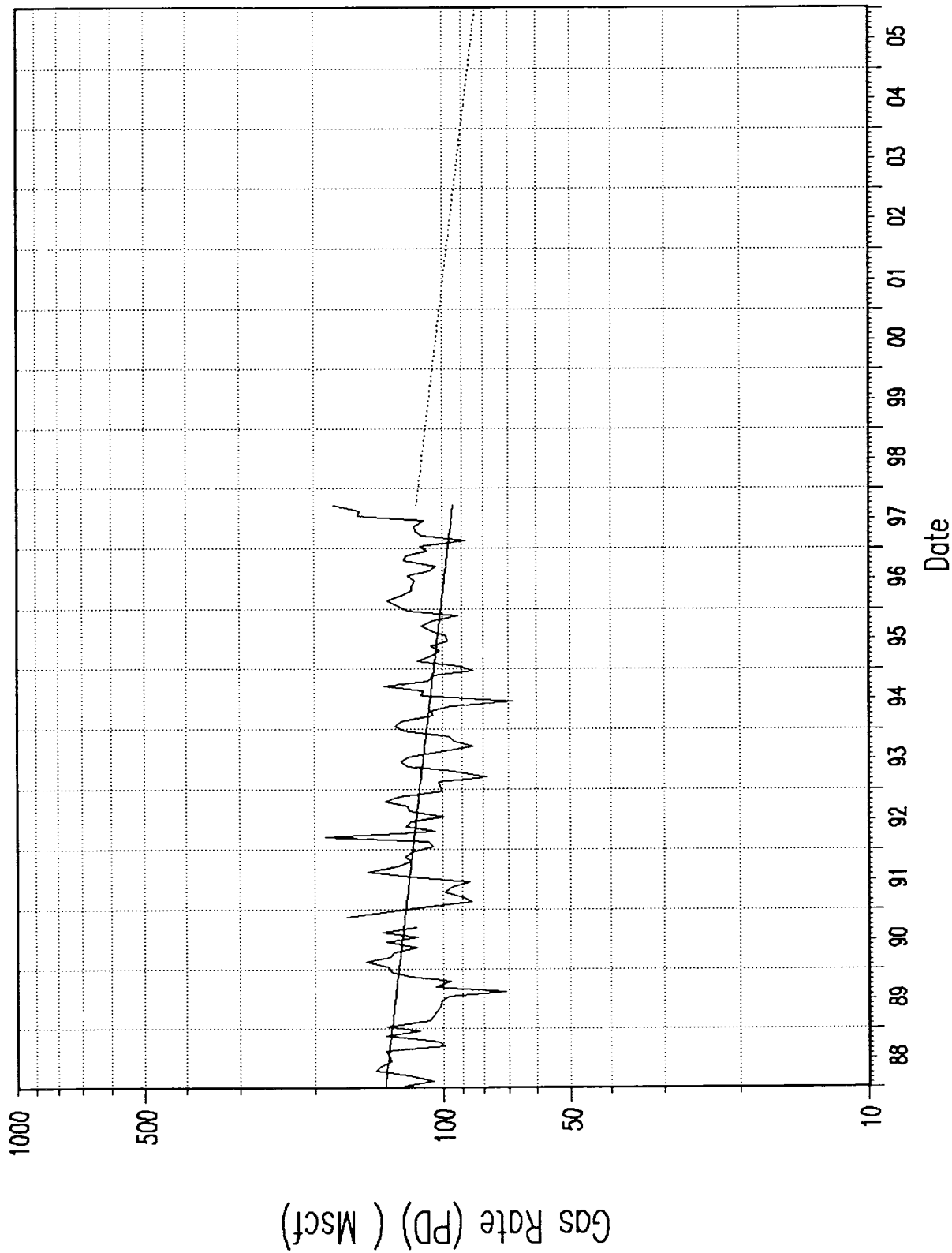
COUNTY : RIO ARriba STATE : NMEX



WELL: RINCON UNIT 139:DK
LOCATION : N027 W007 25 NESW
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	13	3929	12	0.4	127	0	12161	1761615
9602	29	13	3902	8	0.4	135	0	12174	1765517
9603	31	18	3878	5	0.6	125	0	12192	1769395
9604	30	9	3542	6	0.3	118	0	12201	1772937
9605	31	12	3663	8	0.4	118	0	12213	1776600
9606	30	21	3481	6	0.7	116	0	12234	1780081
9607	31	9	3730	4	0.3	120	0	12243	1783811
9608	31	11	3306	6	0.4	107	0	12254	1787117
9609	25	49	2588	3	2.0	104	0	12303	1789705
9610	31	0	3822	5	0.0	123	0	12303	1793527
9611	30	9	3658	5	0.3	122	0	12312	1797185
9612	31	20	3357	8	0.6	108	0	12332	1800542
9701	31	10	3494	7	0.3	113	0	12342	1804036
9702	28	4	2468	4	0.1	88	0	12346	1806504
9703	31	12	3451	8	0.4	111	0	12358	1809955
9704	30	0	3464	5	0.0	115	0	12358	1813419
9705	30	0	3476	5	0.0	116	0	12358	1816895
9706	30	0	3311	5	0.0	110	0	12358	1820206
9707	18	6	2850	5	0.3	158	0	12364	1823056
9708	21	2	3294	5	0.1	157	0	12366	1826350
9709	20	7	3604	5	0.3	180	0	12373	1829954

WELL: RINCON UNIT 139:DK
LOCATION : N027 W007 25 NESW
COUNTY : RIO ARriba STATE : NMEX



WELL: RINCON UNIT 139:DK
LOCATION : N027 W007 25 NESW
COUNTY : RIO ARRIBA STATE : NMEX

Case Name : New
Case Analyst :
Case Comment :
Cum. Gas Production: 1826350.00 Mscf
Remaining Recoverable Gas Reserves: 744611.59 Mscf
Ultimate Recoverable Gas Reserves: 2570961.59 Mscf

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

Qi: 276.13 Mscf
Di: 0.003232
Hyperbolic B: 0.0000
Start Date: 1997/09
Monthly Effective Decline (De): 0.003227
Yearly Effective Decline (De): 0.038044
Initial Forecast Rate: 115.00 Mscf
Economic Limit: 15.00 Mscf
Capacity Limit: 0.00 Mscf
Cumulative Produced: 1826350.00 Mscf
Schedule Forecasted Reserves: 744611.59 Mscf
Total Forecasted Reserves: 744611.59 Mscf
Total Recovered Reserves: 2570961.59 Mscf

DATE	INSTANT. DAILY RATE Mscf	AVERAGE DAILY RATE Mscf	MONTHLY FORECAST PROD. Mscf	CUM. PROD. Mscf	REMAINING RECOV. RESERVES Mscf
1997/09	114.63	114.82	3444.46	1829794.50	741167.13
1997/10	114.26	114.44	3547.72	1833342.13	737619.38
1997/11	113.89	114.07	3422.23	1836764.38	734197.13
1997/12	113.52	113.71	3524.89	1840289.25	730672.25
1998/01	113.16	113.34	3513.55	1843802.88	727158.69
1998/02	112.79	112.97	3163.28	1846966.13	723995.44
1998/03	112.43	112.61	3490.86	1850457.00	720504.56
1998/04	112.06	112.24	3367.35	1853824.38	717137.25
1998/05	111.70	111.88	3468.40	1857292.75	713668.81
1998/06	111.34	111.52	3345.68	1860638.38	710323.13
1998/07	110.98	111.16	3446.08	1864084.50	706877.06
1998/08	110.62	110.80	3434.89	1867519.38	703442.19
1998/09	110.27	110.45	3313.39	1870832.75	700128.81
1998/10	109.91	110.09	3412.79	1874245.50	696716.00
1998/11	109.56	109.74	3292.08	1877537.63	693423.94
1998/12	109.20	109.38	3390.76	1880928.38	690033.19
1999/01	108.85	109.03	3379.86	1884308.25	686653.31
1999/02	108.50	108.68	3042.93	1887351.13	683610.38
1999/03	108.15	108.32	3358.05	1890709.25	680252.31
1999/04	107.80	107.98	3239.32	1893948.50	677013.00
1999/05	107.45	107.63	3336.39	1897285.00	673676.63
1999/06	107.11	107.28	3218.43	1900503.38	670458.19
1999/07	106.76	106.93	3314.88	1903818.25	667143.31
1999/08	106.42	106.59	3304.27	1907122.50	663839.00
1999/09	106.07	106.24	3187.34	1910309.88	660651.69
1999/10	105.73	105.90	3282.98	1913592.88	657368.69
1999/11	105.39	105.56	3166.73	1916759.63	654202.00

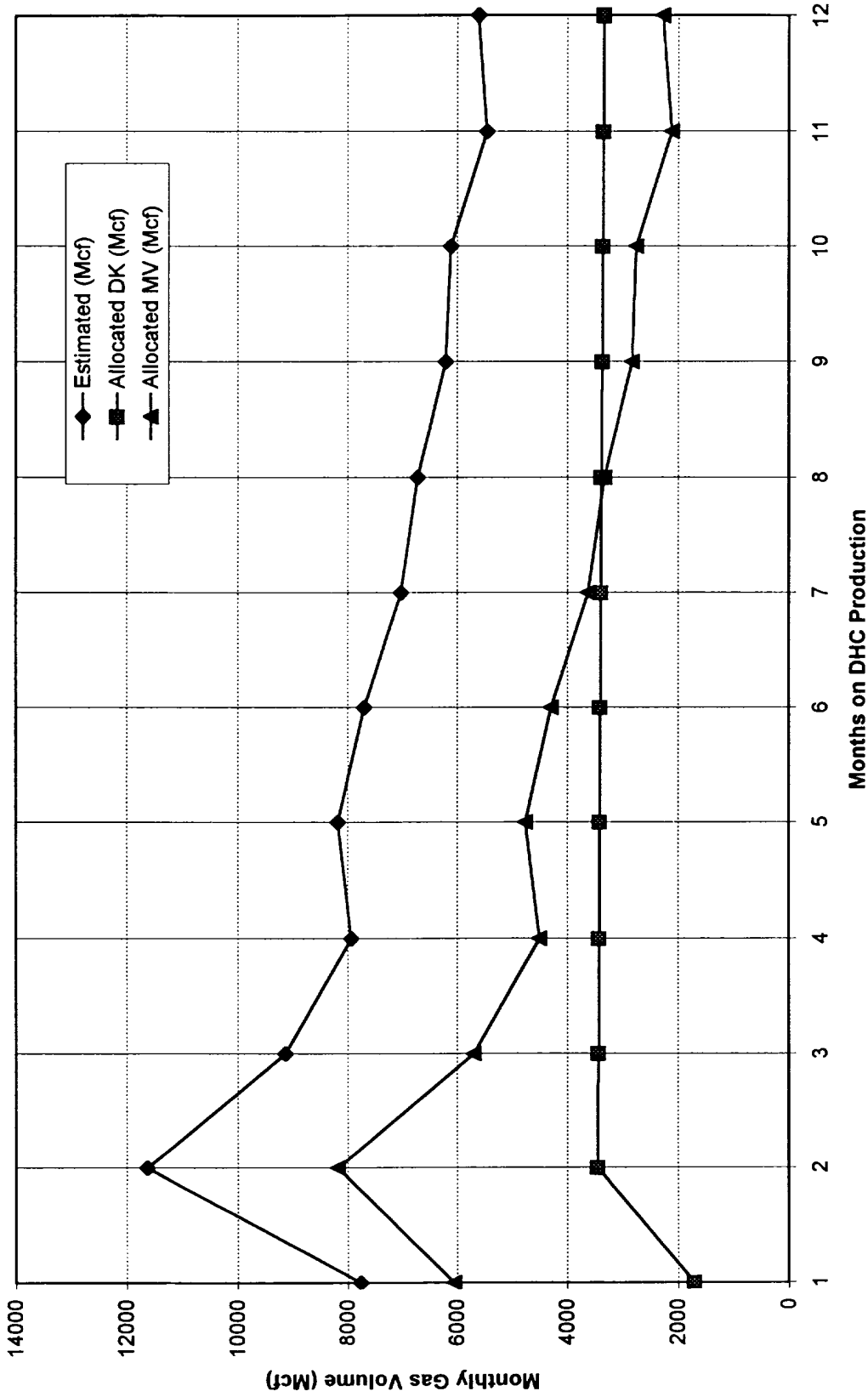
Gas Forecast

Well	Estimated	RU 139	Comments
First Delivery Date (As DHC)	Estimated	16-Jan-98	
Days on First Month		15	
Existing Completion Prior to DHC		DK	
Effective Monthly Decline		0.0032	3.8% Annual Decline
Average 3 month rate (Mcf) prior to DHC		114	Apr-June Average per Day (full months)
New Completion		MV	
Initial Test (Mcf)	Estimated	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	7765	2700	5065	1707	6058	78	Est. flush DK rate 180 mcfd
2	11629	4424	7205	3451	8178	70	Est. flush DK rate 158 mcfd
3	9137	3490	5647	3440	5697	62	
4	7932	3367	4565	3429	4503	57	
5	8175	3468	4707	3418	4757	58	
6	7700	3345	4355	3407	4293	56	
7	7023	3446	3577	3396	3627	52	
8	6720	3434	3286	3385	3335	50	
9	6208	3313	2895	3374	2834	46	
10	6119	3412	2707	3364	2755	45	
11	5462	3292	2170	3353	2109	39	
12	5612	3390	2222	3342	2270	40	

Chart2

RU 139



Oil Forecast

Well

First Delivery Date (As DHC)

Days on First Month

RU 139
16-Jan-98
15
DK
0.0028
0.2
MV
5

Estimated

Estimated

Estimated

Existing Completion Prior to DHC

Yield (bbls/mcf)

Average 1997 rate (BOPD) prior to DHC

New Completion

Initial Test (BOPD)

Month	Estimated (Bbl)	DK Forecast (Bbl)	MV Forecast (Bbl)	Est. MV (BOPD)	Allocated MV (%)
1	86	11	75	5.0	87%
2	79	18	62	2.2	78%
3	41	10	31	1.0	76%
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%

DK .004 (bbl/mcf)
DK .004 (bbl/mcf)

RINCON UNIT NO. 139

After a 7 day SI period:

Mesaverde BHP =	761 psi	5358' (Mid perf)	Measured MV BHP from offset well #139E
Dakota BHP =	612 psi	7445' (Mid perf)	Calc BHP from 7 day SITP - Sept. 1996

$$\text{Gas Gradient} = \frac{(.01327)(.69)(2087)}{(.95)(655)} = 0.03 \text{ psi/ft}$$

Adjusting to a common datum of 5358':

Mesaverde BHP =	761 psi	
Dakota BHP =	612 - [(0.03)(7445-5358)]	= 549 psi

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 #139
GAS GRAVITY: 0.69 % N2 0.20
CONDENSATE (YES=1): 1 % CO2 1.17 %
RESERVOIR TEMP: 195 F % H2S 0.00 %
SURFACE TEMP: 60 F PC = 670.13 %
DEPTH OF ZONE: 7445 Foot TC = 379.92

SURFACE PRES	BHP	Z	BHP/Z
psia	psia		psia
512	612	0.9467	646

Nov-11-1997

Copyright 1997 Petroleum Information\Dwights

2795

9:55 Petroleum Information\Dwights Production Data on CD-ROM

172 of 203

Northwest New Mexico - March 1997

P/Z Test Report - USGS(PI)

=====

Entity : RINCON UNIT (011510) Product: GAS
 Field : BASIN (4100) Start : 196212
 Reservoir: DAKOTA (604) Stop : 199703
 Operator : UNION OIL COMPANY OF CALIFORNIA (34551) Status : ACTIVE
 Location : S25 T27N R7W K RIO ARBA Well # : 139
 Basin : SAN JUAN (580) Upper : 7462
 Zone : DAKOTA (602DKOT) Lower : 7537
 District : AZTEC Lat : 36.54210
 API : 30039068900000 Lng : 107.52982

Test Information

=====

Date	Gas MCFD	Liq Bbls	** SITP	Pressures FTP	*** CLP	P/Z Factor	Z	Cond Cum at Test	Gas Cum at Test
19621228	2370	0.0	1698	190	774	2604	0.814	9415	1092540
19790628	138	0.0	782	275		1067	0.900	9536	1187804
19810713	135	0.0	781	212		1066	0.900	9997	1273326
19831121	155	0.0	794	575		1096	0.889		
19850605	134	0.0	711	476		970	0.900	10443	1345885
19881130	163	0.0	672	148		912	0.905	11061	1482692
19901007	125	0.0	662	198		896	0.907	11299	1558722
19920921	168	0.0	632	303		843	0.920	11615	1634702
19940912	140	0.0	622	103		837	0.912	12006	1709559
19960913	109	0.0	512	118		679	0.927	12270	1785203

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:

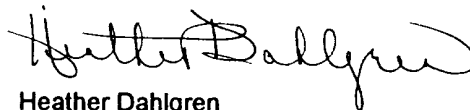
Union Oil Company of California (UNOCAL) has requested from the State of New Mexico Oil Conservation Division, approval to down hole commingle production from the Blanco Mesa Verde and Basin Dakota formations in the following Rincon Unit well, Rio Arriba County, New Mexico.

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.

1004 North Big Spring • Post Office Box 3100 • Midland, Texas 79702