

Unocal Oil & Gas Division

Unocal Corporation

913 West Broadway, P.O. Box 850

Bloomfield, New Mexico 87413

Telephone (505) 632-1811

UNOCAL OIL & GAS DIVISION
NEW MEX

SEP 28 1994



September 26, 1994

New Mexico Oil Conservation Division

Attn: Mr. William J. LeMay

P. O. Box 2088

Santa Fe, NM 87504-2088

New Mexico Oil Conservation Division

Attn: Mr. Frank Chavez

1000 Rio Brazos Road

Aztec, NM 87410

Dear Sirs:

Union Oil Company of California (UNOCAL) requests permission to downhole commingle production from the Blanco Mesaverde and Basin Dakota formations in the following well in Rio Arriba County, New Mexico:

<u>WELL</u>	<u>LOCATION</u>
Rincon Unit No. 302	150' FNL, 2455' FWL Sec. 11, T26N, R7W

As Provided by Order No. R-9893, administrative approval may be granted without notice and hearing.

In 1993, UNOCAL tested 22 Blanco Mesaverde/Basin Dakota wells for downhole commingling in the Rincon Unit. Every well subsequently qualified. UNOCAL proposes to allocate production from each horizon based on individual productivity tests.

As required for an exception to rule 303-A, the following information is attached:

1. An acreage dedication plat showing offset lease ownership.
2. A wellbore diagram with completion detail.
3. A measured bottomhole pressure from each zone and a calculated adjustment to a common datum.
4. Gas analyses from each zone.
5. A copy of the notification letter sent to all offset operators and the Bureau of Land Management.

The Blanco Mesaverde formation is uneconomic to drill as a stand alone well. To develop these reserves, a dual or commingled completion is required. We estimate an ultimate recovery of 530 MMCF from the Mesaverde horizon, which would otherwise remain undeveloped. Also, commingling will allow for better lift of liquids production and benefits from compression.

Both zones produce essentially dry gas. Therefore, the respective formation fluids are compatible. Also, no crossflow will occur between the commingled zones.

If you have any questions, please contact Dana Delventhal at (505) 632-1811. Thank you for your consideration in this matter.

Sincerely,

Union Oil Company of California
dba UNOCAL

A handwritten signature in black ink that reads "B. L. Caine" with a stylized flourish at the end.

Bob Caine
Field Foreman

Attachments
DLD

OFFSET LEASE OWNERSHIP

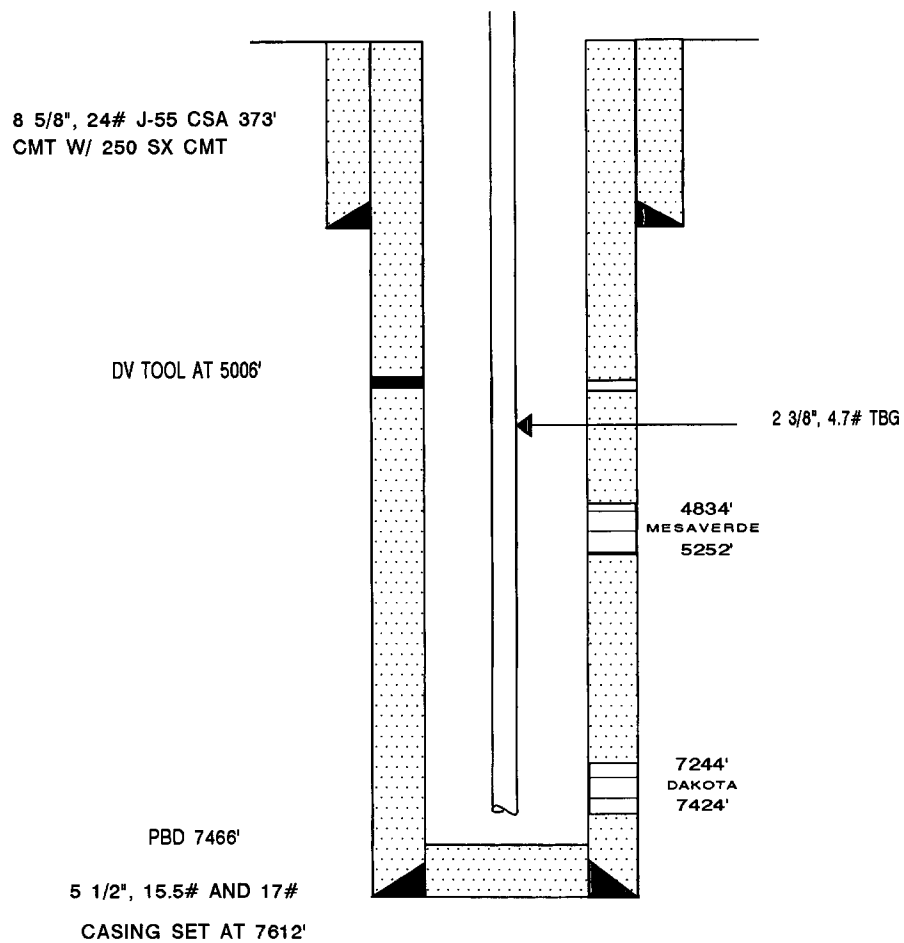
R 7 W

79161 Central Resources, Inc. 3 Amax Oil and Gas, Inc.	2	1
RINCON UNIT #302 10 79160A 79160B	11	12
Louis Dreyfus Natural Gas FEE 15 Snyder Oil Corp	3381 Caulkins Oil Co. 14 79083	3733 Caulkins Oil Co. 13

T 26 N

RINCON UNIT #302: EXISTING

150' FNL, 2455' FWL
Sec. 11, T26N, R7W



BOTTOMHOLE PRESSURE DATA

WELL	MESAVERDE BHP	DAKOTA BHP
Rincon Unit No. 1E	1156 psi	1690 psi
Rincon Unit No. 125M	789 psi	1548 psi
Rincon Unit No. 126	660 psi	850 psi
Rincon Unit No. 126M	921 psi	1607 psi
Rincon Unit No. 127	512 psi	580 psi
Rincon Unit No. 127M	716 psi	1280 psi
Rincon Unit No. 128	801 psi	781 psi
Rincon Unit No. 129	806 psi	836 psi
Rincon Unit No. 129M	1053 psi	935 psi
Rincon Unit No. 130	586 psi	622 psi
Rincon Unit No. 135	481 psi	736 psi
Rincon Unit No. 136E	1139 psi	2199 psi
Rincon Unit No. 137	400 psi	686 psi
Rincon Unit No. 149	471 psi	521 psi
Rincon Unit No. 151M	1228 psi	1862 psi
Rincon Unit No. 158M	1231 psi	766 psi
Rincon Unit No. 159M	603 psi	583 psi
Rincon Unit No. 167M	1007 psi	1909 psi
Rincon Unit No. 170M	940 psi	1752 psi
Rincon Unit No. 175M	735 psi	1108 psi
Rincon Unit No. 180M	585 psi	788 psi
Rincon Unit No. 184M	<u>1753 psi</u>	<u>1708 psi</u>
AVERAGE	<u>844 psi</u>	<u>1152 psi</u>



WELL ANALYSIS COMPARISON

LEASE: RINCCN #1E

SEPTEMBER 30, 199

DATE: 9/18/92 9/25/92
NO.: 20022 20023
DAKOTA MESAVERDE

	MOLE %	MOLE %
NITROGEN	0.206	0.413
CO2	1.186	1.104
METHANE	90.732	87.977
ETHANE	5.709	6.411
PROPANE	1.283	2.466
I-BUTANE	0.209	0.439
N-BUTANE	0.323	0.602
I-PENTANE	0.124	0.210
N-PENTANE	0.093	0.156
HEXANE+	0.135	0.222
BTU'S	1087.8	1129.7
GPM	2.1889	2.9582
SPEC GRAV	0.6231	0.6509



WELL ANALYSIS COMPARISON

LEASE: RINCON 125M

DECEMBER 21, 1992

DATE: 12/10/92 12/17/92

NO.: 20041 20045
MESAVERDE DAKOTA

	MOLE %	MOLE %
	-----	-----
NITROGEN	0.436	0.241
CO2	1.044	1.235
METHANE	82.256	87.142
ETHANE	9.097	6.414
PROPANE	4.333	2.354
I-BUTANE	0.768	0.588
N-BUTANE	1.073	0.757
I-PENTANE	0.381	0.442
N-PENTANE	0.265	0.275
HEXANE+	0.347	0.552
BTU'S	1211.2	1159.8
-----	-----	-----
GPM	4.6039	3.2976
-----	-----	-----
SPEC GRAV	0.7023	0.6706
-----	-----	-----

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5267

DATE 1/08/93

CHROMATOGRAPHIC GAS ANALYSIS REPORT

MAILEE

94100 UNION OIL CO. OF CALIFORNIA
ATTN: SHARON L. MILLER
P.O. BOX 671
MIDLAND, TEXAS 79702

METER NUMBER 74981 - RINCON UNIT #126 DK
OPERATOR 9165 - UNION OIL CO OF CALIF

ANALYSIS DATE 12/04/92 TYPE CODE 2 - ACTUAL
SAMPLE DATE 12/03/92 H2S GRAINS 0
EFFECTIVE DATE 1/01/93 LOCATION F - FARMINGTON
EFFECTIVE FOR 6 MONTHS

COMPONENTS	NORMALIZED MOL %	GPM
CO2	1.39	.000
H2S	.00	.000
N2	.24	.000
METHANE	89.18	.000
ETHANE	5.84	1.562
PROPANE	1.78	.491
ISO-BUTANE	.43	.141
NORM-BUTANE	.46	.145
ISO-PENTANE	.24	.088
NORM-PENTANE	.13	.047
HEXANE PLUS	.31	.135
	100.00	2.609

SPECIFIC GRAVITY .644

MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1114

RATIO OF SPECIFIC HEATS .000

NO TEST SECURED FOR H2S CONTENT

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5267

DATE 6/08/93 CHROMATOGRAPHIC GAS ANALYSIS REPORT

MAILEE

94100 UNION OIL COMPANY OF CALIFORNIA
ATTN: SHARON L. MILLER
P.O. BOX 671
MIDLAND, TX 79702-0671

METER NUMBER 72580 - RINCON UNIT NP #126 MV
OPERATOR 9165 - UNION OIL CO OF CALIF

ANALYSIS DATE 4/29/93 TYPE CODE 2 - ACTUAL
SAMPLE DATE 4/20/93 H2S GRAINS 0
EFFECTIVE DATE 5/01/93 LOCATION D - DANIELS FM
EFFECTIVE FOR 6 MONTHS

COMPONENTS	NORMALIZED MOL %	GPM
CO2	1.34	.000
H2S	.00	.000
N2	.22	.000
METHANE	89.78	.000
ETHANE	5.41	1.447
PROPANE	1.59	.438
ISO-BUTANE	.43	.141
NORM-BUTANE	.45	.142
ISO-PENTANE	.26	.095
NORM-PENTANE	.15	.054
HEXANE PLUS	.37	.161
	100.00	2.478

SPECIFIC GRAVITY .542

MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1112

RATIO OF SPECIFIC HEATS 1.298

NO TEST SECURED FOR H2S CONTENT



WELL ANALYSIS COMPARISON

LEASE: RINCON 126M

NOVEMBER 22, 1992

DATE: 11/10/92 11/18/92

NO.: 20034 20035
MESAVERDE DAKOTA

	MOLE %	MOLE %
	-----	-----
NITROGEN	0.360	0.222
CO2	0.932	1.205
METHANE	84.567	91.573
ETHANE	8.160	4.621
PROPANE	3.830	1.222
I-BUTANE	0.633	0.287
N-BUTANE	0.897	0.306
I-PENTANE	0.260	0.166
N-PENTANE	0.170	0.100
HEXANE+	0.191	0.298
BTU'S	1178.1	1087.8
-----	-----	-----
GPM	3.9682	1.9902
-----	-----	-----
SPEC GRAV	0.6785	0.6237
-----	-----	-----

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE:(915) 541-5267

DATE 12/08/92

CHROMATOGRAPHIC GAS ANALYSIS REPORT

MAILEE

94100 UNION OIL CO. OF CALIFORNIA
ATTN: SHARON L. MILLER
P.O. BOX 671
MIDLAND, TEXAS 79702

METER NUMBER 72596 - RINCON UNIT #127 DK
OPERATOR 9165 - UNION OIL CO OF CALIF

ANALYSIS DATE 10/15/92 TYPE CODE 2 - ACTUAL
SAMPLE DATE 10/13/92 H2S GRAINS 0
EFFECTIVE DATE 11/01/92 LOCATION F - FARMINGTON
EFFECTIVE FOR 6 MONTHS

COMPONENTS	NORMALIZED MOL %	GPM
CO2	1.35	.300
H2S	.00	.000
N2	.27	.000
METHANE	85.97	.000
ETHANE	7.76	2.076
PROPANE	2.71	.747
ISO-BUTANE	.59	.193
NORM-BUTANE	.68	.214
ISO-PENTANE	.30	.110
NORM-PENTANE	.16	.058
HEXANE PLUS	.21	.092
	100.00	3.490

SPECIFIC GRAVITY .867

MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1150

RATIO OF SPECIFIC HEATS .000

NO TEST SECURED FOR H2S CONTENT

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5287
CHROMATOGRAPHIC GAS ANALYSIS REPORT

DATE 6/08/92

MAILEE
94100

UNION OIL CO. OF CALIFORNIA
ATTN: MIDLAND PRODUCTION DEPT.
P.O. BOX 871
MIDLAND, TEXAS 79702

METER NUMBER 72595 - RINCON UNIT #127 MV
OPERATOR 9165 - UNION OIL CO OF CALIF

ANALYSIS DATE	5/13/92	TYPE CODE	2 - ACTUAL
SAMPLE DATE	5/12/92	H2S GRAINS	0
EFFECTIVE DATE	6/01/92	LOCATION	F - FARMINGTON
EFFECTIVE FOR	3 MONTHS		

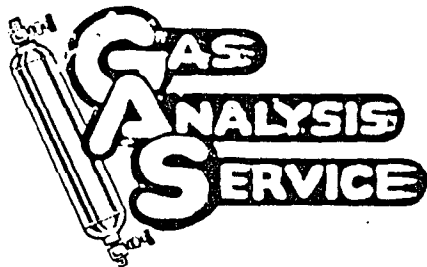
COMPONENTS	NORMALIZED MOL %	GPM
CO2	1.02	.000
H2S	.00	.000
N2	.39	.000
METHANE	81.78	.000
ETHANE	10.52	2.814
PROPANE	4.22	1.163
ISO-BUTANE	.60	.196
NORM-BUTANE	.84	.265
ISO-PENTANE	.28	.102
NORM-PENTANE	.19	.069
HEXANE PLUS	.16	.070
	100.00	4.679

SPECIFIC GRAVITY .694

MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1199

RATIO OF SPECIFIC HEATS .000

NO TEST SECURED FOR H2S CONTENT



FARMINGTON AVENUE - FA

TOWN, NM 87401

(505) 325-6622

ANALYSIS NO. UN020036

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON #127M

LINE PRESSURE: 110 PSIG

LOCATION:

SAMPLE TEMP.: 60 DEG.F

COUNTY: RIO ARriba, NM

WELL FLOWING: YES

FORMATION: MESAVERDE

DATE SAMPLED: 11/25/92

SMPL SRC:

SAMPLED BY: KIVA

REMARKS: TAKEN AT TEST UNIT

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.364	0.0000
CO2	1.044	0.0000
METHANE	89.523	0.0000
ETHANE	6.141	1.6427
PROPANE	1.790	0.4933
I-BUTANE	0.312	0.1021
N-BUTANE	0.377	0.1189
I-PENTANE	0.133	0.0487
N-PENTANE	0.084	0.0304
HEXANE+	0.232	0.1012
TOTAL	100.000	2.5373
COMPRESSIBILITY FACTOR	(1/Z)	1.0026
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1106.3
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1087.1
REAL SPECIFIC GRAVITY		0.6343

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 96 PSIG

DATE RUN: 11/30/92

ANALYSIS RUN BY: CHELLE DURBIN



(505) 325-6622

ANALYSIS NO. UN020038

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON #127M

LINE PRESSURE: 249 PSIG

LOCATION:

SAMPLE TEMP.: 64 DEG.

COUNTY: RIO ARRIBA, NM

WELL FLOWING: YES

FORMATION: DAKOTA

DATE SAMPLED: 12/3/92

SMPL SRC:

SAMPLED BY: KIVA

REMARKS: TAKEN AT TEST UNIT

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.200	0.0000
CO2	1.256	0.0000
METHANE	87.116	0.0000
ETHANE	7.436	1.9891
PROPANE	2.165	0.5967
I-BUTANE	0.411	0.1344
N-BUTANE	0.559	0.1763
I-PENTANE	0.256	0.0937
N-PENTANE	0.173	0.0627
HEXANE+	0.428	0.1867
TOTAL	100.000	3.2395
COMPRESSIBILITY FACTOR	(1/Z)	1.0029
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1142.6
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1122.7
REAL SPECIFIC GRAVITY		0.6593

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 254 PSIG

DATE RUN: 12/4/92

ANALYSIS RUN BY: CHELLE DUBBIN

EL PASO NATURAL GAS COMPANY
 VOLUME ACCOUNTING DEPARTMENT
 MEASUREMENT DIVISION
 POST OFFICE BOX 1492
 EL PASO, TEXAS 79978
 PHONE: (915) 541-5287

CHROMATOGRAPHIC GAS ANALYSIS REPORT

DATE 7/08/92

HAILEE
 84100

UNION OIL CO. OF CALIFORNIA
 ATTN: MIDLAND PRODUCTION DEPT.
 P.O. BOX 671
 MIDLAND, TEXAS 79702

METER NUMBER 72613 - RINCON UNIT #128 DK
 OPERATOR 9185 - UNION OIL CO OF CALIF

ANALYSIS DATE 5/27/92 TYPE CODE 2 - ACTUAL
 SAMPLE DATE 5/26/92 H2S GRAINS 0
 EFFECTIVE DATE 7/01/92 LOCATION F - FARMINGTON
 EFFECTIVE FOR 3 MONTHS

COMPONENTS	NORMALIZED MOL %	GPM
CO2	1.24	.000
H2S	.00	.000
N2	.53	.000
METHANE	85.02	.000
ETHANE	7.73	2.068
PROPANE	3.05	.841
ISO-BUTANE	.69	.226
NORM-BUTANE	.86	.271
~ISO-PENTANE	.34	.124
NORM-PENTANE	.25	.031
HEXANE PLUS	.29	.127
	100.00	3.748

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5267

DATE 6/08/92

CHROMATOGRAPHIC GAS ANALYSIS REPORT

MAILEE
94100

UNION OIL CO. OF CALIFORNIA
ATTN: MIDLAND PRODUCTION DEPT.
P.O. BOX 671
MIDLAND, TEXAS 79702

METER NUMBER 72612 - RINCON UNIT NP #128 MV
OPERATOR 9165 - UNION OIL CO OF CALIF

ANALYSIS DATE	5/28/92	TYPE CODE	2 - ACTUAL
SAMPLE DATE	5/28/92	H2S GRAINS	0
EFFECTIVE DATE	8/01/92	LOCATION	F - FARMINGTON
EFFECTIVE FOR	6 MONTHS		

COMPONENTS	NORMALIZED MOL %	GPM
CO2	.98	.000
H2S	.00	.000
N2	.51	.000
METHANE	84.81	.000
ETHANE	8.39	2.244
PROPANE	3.00	.827
ISO-BUTANE	.54	.177
NORM-BUTANE	.83	.262
ISO-PENTANE	.37	.135
NORM-PENTANE	.24	.087
HEXANE PLUS	<u>.33</u>	<u>.144</u>
	100.00	3.876

SPECIFIC GRAVITY .678
MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1173
RATIO OF SPECIFIC HEATS 1.291
NO TEST SECURED FOR H2S CONTENT

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5267

DATE 10/08/92

CHROMATOGRAPHIC GAS ANALYSIS REPORT

MAILEE

94100 UNION OIL CO. OF CALIFORNIA
ATTN: MIDLAND PRODUCTION DEPT.
P.O. BOX 671
MIDLAND, TEXAS 79702

METER NUMBER 72592 - RINCON UNIT #129 DK
OPERATOR 9165 - UNION OIL CO OF CALIF

ANALYSIS DATE 5/03/92 TYPE CODE 2 - ACTUAL
SAMPLE DATE 4/30/92 H2S GRAINS 0
EFFECTIVE DATE 9/01/92 LOCATION F - FARMINGTON
EFFECTIVE FOR 6 MONTHS

COMPONENTS	NORMALIZED MOL %	GPM
CO2	.62	.000
H2S	.00	.000
N2	1.85	.000
METHANE	85.92	.000
ETHANE	6.49	1.736
PROPANE	3.09	.852
ISO-BUTANE	.47	.154
NORM-BUTANE	.78	.246
ISO-PENTANE	.22	.080
NORM-PENTANE	.17	.062
HEXANE PLUS	.39	.170
	100.00	3.300

SPECIFIC GRAVITY .667

MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1143

RATIO OF SPECIFIC HEATS 1.295

NO TEST SECURED FOR H2S CONTENT

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5267

DATE 4/08/93

CHROMATOGRAPHIC GAS ANALYSIS REPORT

MAILEE
94100

UNION OIL CO. OF CALIFORNIA
ATTN: SHARON L. MILLER
P.O. BOX 671
MIDLAND, TX 79702-0671

METER NUMBER 72591 - RINCON UNIT #129 MV
OPERATOR 9165 - UNION OIL CO OF CALIF

ANALYSIS DATE	3/12/93	TYPE CODE	2 - ACTUAL
SAMPLE DATE	3/10/93	H2S GRAINS	0
EFFECTIVE DATE	4/01/93	LOCATION	F - FARM BECK
EFFECTIVE FOR	6 MONTHS		

COMPONENTS	NORMALIZED MOL %	GPM
CO2	.96	.000
H2S	.00	.000
N2	.59	.000
METHANE	82.80	.000
ETHANE	7.89	2.111
PROPANE	4.31	1.188
ISO-BUTANE	.87	.285
NORM-BUTANE	1.25	.394
ISO-PENTANE	.47	.172
NORM-PENTANE	.34	.123
HEXANE PLUS	<u>.52</u>	<u>.227</u>
	100.00	4.500

SPECIFIC GRAVITY .708
MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1219
RATIO OF SPECIFIC HEATS .000
NO TEST SECURED FOR H2S CONTENT



(505) 325-6622

ANALYSIS NO. UN020024

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 129M

LINE PRESSURE: 249 PSIG

LOCATION:

SAMPLE TEMP.: 68 DEG.F

COUNTY: RINCON/RIO ARRIBA, NM

WELL FLOWING: YES

FORMATION: DAKOTA

DATE SAMPLED: 10/10/92

SMPL SRC:

SAMPLED BY: KIVA

REMARKS:

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.211	0.0000
CO2	1.310	0.0000
METHANE	88.063	0.0000
ETHANE	7.576	2.0266
PROPANE	1.721	0.4743
I-BUTANE	0.328	0.1073
N-BUTANE	0.366	0.1154
I-PENTANE	0.166	0.0607
N-PENTANE	0.103	0.0373
HEXANE+	0.156	0.0680
TOTAL	100.000	2.8897
COMPRESSIBILITY FACTOR	(1/Z)	1.0027
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1113.7
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1094.3
REAL SPECIFIC GRAVITY		0.6417

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 232 PSIG

DATE RUN: 10/12/92

ANALYSIS RUN BY: CHELLE DURBIN



(505) 325-6622

ANALYSIS NO. UN020025

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 129M

LINE PRESSURE: 50 PSIG

LOCATION:

SAMPLE TEMP.: 72 DEG.F

COUNTY: RIO ARRIBA, NM

WELL FLOWING: YES

FORMATION: MESAVERDE

DATE SAMPLED: 10/16/92

SMPL SRC:

SAMPLED BY: KIVA

REMARKS: TAKEN AT TEST UNIT.

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.520	0.0000
CO2	0.588	0.0000
METHANE	78.797	0.0000
ETHANE	11.284	3.0185
PROPANE	5.585	1.5392
I-BUTANE	0.938	0.2741
N-BUTANE	1.364	0.4301
I-PENTANE	0.423	0.1548
N-PENTANE	0.295	0.1068
HEXANE+	0.306	0.1335
TOTAL	100.000	5.6570

COMPRESSIBILITY FACTOR (1/Z) 1.0036

BTU/CU.FT. (DRY) CORRECTED FOR (1/Z) 1259.6

BTU/CU.FT. (WET) CORRECTED FOR (1/Z) 1237.7

REAL SPECIFIC GRAVITY 0.7268

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 48 PSIG

DATE RUN: 10/19/92

ANALYSIS RUN BY: CHELLE DURBIN

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5287

CHROMATOGRAPHIC GAS ANALYSIS REPORT

DATE 7/08/92

MAILEE
94100

UNION OIL CO. OF CALIFORNIA
ATTN: MIDLAND PRODUCTION DEPT.
P.O. BOX 671
MIDLAND, TEXAS 79702

METER NUMBER 72574 - RINCON UNIT #130 DK
OPERATOR 8165 - UNION OIL CO OF CALIF

ANALYSIS DATE 6/14/92 TYPE CODE 2 - ACTUAL
SAMPLE DATE 6/12/92 H2S GRAINS 0
EFFECTIVE DATE 7/01/92 LOCATION F - FARMINGTON
EFFECTIVE FOR 3 MONTHS

COMPONENTS	NORMALIZED MOL. %	GPM
CO2	1.31	.000
H2S	.00	.000
N2	.45	.000
METHANE	85.88	.000
ETHANE	7.42	1.885
PROPANE	2.95	.813
ISO-BUTANE	.54	.177
NORM-BUTANE	.77	.243
ISO-PENTANE	.30	.110
NORM-PENTANE	.18	.069
HEXANE PLUS	<u>.19</u>	<u>.083</u>
	100.00	3.480

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE (915) 541-5267

DATE 6/08/93

CHROMATOGRAPHIC GAS ANALYSIS REPORT

MAILEE

94100 UNION OIL COMPANY OF CALIFORNIA
ATTN: SHARON L. MILLER
P.O. BOX 671
MIDLAND, TX 79702-0671

METER NUMBER 72573 - RINCON UNIT NP #130 MV
OPERATOR 9165 - UNION OIL CO OF CALIF

ANALYSIS DATE 4/07/93 TYPE CODE 2 - ACTUAL
SAMPLE DATE 4/01/93 H2S GRAINS 0
EFFECTIVE DATE 5/01/93 LOCATION D - DANIELS FM
EFFECTIVE FOR 6 MONTHS

COMPONENTS	NORMALIZED MOL %	GPM
CO2	1.32	.000
H2S	.00	.000
N2	.42	.000
METHANE	84.28	.000
ETHANE	8.54	2.284
PROPANE	3.02	.832
ISO-BUTANE	.67	.219
NORM-BUTANE	.78	.246
ISO-PENTANE	.35	.128
NORM-PENTANE	.20	.072
HEXANE PLUS	.42	.183
	100.00	3.964

SPECIFIC GRAVITY .684

MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1175

RATIO OF SPECIFIC HEATS .000

NO TEST SECURED FOR H2S CONTENT

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5267

DATE 6/08/92

CHROMATOGRAPHIC GAS ANALYSIS REPORT

MAILEE
94100

UNION OIL CO. OF CALIFORNIA
ATTN: MIDLAND PRODUCTION DEPT.
P.O. BOX 671
MIDLAND, TEXAS 79702

METER NUMBER 72594 - RINCON UNIT #135 DK
OPERATOR 9165 - UNION OIL CO OF CALIF

ANALYSIS DATE	5/02/92	TYPE CODE	2 - ACTUAL
SAMPLE DATE	4/30/92	H2S GRAINS	0
EFFECTIVE DATE	6/01/92	LOCATION	-
EFFECTIVE FOR	6 MONTHS		

COMPONENTS	NORMALIZED MOL %	GPM
CO2	1.34	.000
H2S	.00	.000
N2	.29	.000
METHANE	87.71	.000
ETHANE	6.83	1.827
PROPANE	2.01	.554
ISO-BUTANE	.49	.160
NORM-BUTANE	.57	.180
ISO-PENTANE	.28	.102
NORM-PENTANE	.17	.062
HEXANE PLUS	.31	.135
	100.00	3.020

SPECIFIC GRAVITY .655
MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1132
RATIO OF SPECIFIC HEATS .000
NO TEST SECURED FOR H2S CONTENT

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5267

DATE 6/08/93

CHROMATOGRAPHIC GAS ANALYSIS REPORT

MAILEE

34100 UNION OIL COMPANY OF CALIFORNIA
ATTN: SHARON L. MILLER
P.O. BOX 671
MIDLAND, TX 79702-0671

METER NUMBER 72593 - RINCON UNIT #135 MV
OPERATOR 9165 - UNION OIL CO OF CALIF

ANALYSIS DATE 4/26/93 TYPE CODE 2 - ACTUAL
SAMPLE DATE 4/22/93 H2S GRAINS 0
EFFECTIVE DATE 5/01/93 LOCATION D - DANIELS FM
EFFECTIVE FOR 6 MONTHS

COMPONENTS	NORMALIZED MOL %	GPM
CO2	1.10	.000
H2S	.00	.000
N2	.43	.000
METHANE	86.61	.000
ETHANE	6.61	1.768
PROPANE	3.04	838
ISO-BUTANE	.51	.200
NORM-BUTANE	.72	.227
ISO-PENTANE	.30	.110
NORM-PENTANE	.19	.063
HEXANE PLUS	.39	.170
	100.00	3.352

SPECIFIC GRAVITY .569

MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1157

RATIO OF SPECIFIC HEATS .000

NO TEST SECURED FOR H2S CONTENT



115 FARMINGTON AVENUE -

INGTON, NM 87401

(505) 325-6622

ANALYSIS NO. UN020042

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON #136E

LINE PRESSURE: PSIG

LOCATION:

SAMPLE TEMP.: 70 DEG.F

COUNTY: RIO ARriba, NM

WELL FLOWING: YES

FORMATION: MESAVERDE

DATE SAMPLED: 12/11/92

SMPL SRC:

SAMPLED BY: KIVA

REMARKS:

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.219	0.0000
CO2	1.072	0.0000
METHANE	84.804	0.0000
ETHANE	8.487	2.2703
PROPANE	3.185	0.8778
I-BUTANE	0.484	0.1583
N-BUTANE	0.824	0.2598
I-PENTANE	0.307	0.1123
N-PENTANE	0.240	0.0869
HEXANE+	0.378	0.1649
TOTAL	100.000	3.9303
COMPRESSIBILITY FACTOR	(1/Z)	1.0031
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1177.1
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1156.6
REAL SPECIFIC GRAVITY		0.6786

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 236 PSIG

DATE RUN: 12/12/92

ANALYSIS RUN BY: CHELLE DORBIN



5 WARMINGTON AVENUE - ALBANY, NM 87401

(505) 325-6622

ANALYSIS NO. UNO20047

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 136E

LINE PRESSURE: 250 PSIG

LOCATION:

SAMPLE TEMP.: 60 DEG.

COUNTY: RIO ARRIBA, NM

WELL FLOWING: YES

FORMATION: DAKOTA

DATE SAMPLED: 12/18/92

SMPL SRC:

SAMPLED BY: KIVA

REMARKS: TAKEN AT TEST UNIT

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.183	0.0000
CO2	1.127	0.0000
METHANE	86.791	0.0000
ETHANE	7.415	1.9835
PROPANE	2.564	0.7066
I-BUTANE	0.413	0.1351
N-BUTANE	0.382	0.2150
I-PENTANE	0.264	0.0966
N-PENTANE	0.205	0.0743
HEXANE+	0.356	0.1553
TOTAL	100.000	3.3664
COMPRESSIBILITY FACTOR	(1/Z)	1.0029
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1151.0
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1131.0
REAL SPECIFIC GRAVITY		0.6624

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 238 PSIG

DATE RUN: 12/21/92

ANALYSIS RUN BY: CHELLE DUREIN

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5287

CHROMATOGRAPHIC GAS ANALYSIS REPORT

DATE 7/08/92

MAILEE
94100

UNION OIL CO. OF CALIFORNIA
ATTN: MIDLAND PRODUCTION DEPT.
P.O. BOX 671
MIDLAND, TEXAS 79702

METER NUMBER 72588 - RINCON UNIT #137 DK
OPERATOR 9185 - UNION OIL CO OF CALIF

ANALYSIS DATE 6/02/92 TYPE CODE 2 - ACTUAL
SAMPLE DATE 5/27/92 H2S GRAINS 0
EFFECTIVE DATE 7/01/92 LOCATION F - FARMINGTON
EFFECTIVE FOR 3 MONTHS

COMPONENTS	NORMALIZED MOL %	GPM
CO2	.22	.000
H2S	.00	.000
N2	.68	.000
METHANE	85.31	.000
ETHANE	6.77	1.811
PROPANE	4.24	1.169
ISO-BUTANE	.88	.288
NORM-BUTANE	1.08	.341
ISO-PENTANE	.35	.128
NORM-PENTANE	.24	.087
HEXANE PLUS	.23	.100
	100.00	3.824

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5287

CHROMATOGRAPHIC GAS ANALYSIS REPORT

DATE 7/08/92

MAILEE
94100

UNION OIL CO. OF CALIFORNIA
ATTN: MIDLAND PRODUCTION DEPT.
P.O. BOX 671
MIDLAND, TEXAS 79702

METER NUMBER 72585 - RINCUN UNIT NP #137 MV
OPERATOR 9165 - UNION OIL CO OF CALIF

ANALYSIS DATE 6/02/92
SAMPLE DATE 5/29/92
EFFECTIVE DATE 7/01/92
EFFECTIVE FOR 3 MONTHS
TYPE CODE 2 - ACTUAL
H2S GRAINS 0
LOCATION F - FARMINGTON

COMPONENTS	NORMALIZED MOL %	GPM
CO2	.78	.000
H2S	.00	.000
N2	.38	.000
METHANE	81.34	.000
ETHANE	9.99	2.672
PROPANE	4.41	1.215
ISO-BUTANE	.89	.228
NORM-BUTANE	1.25	.394
ISO-PENTANE	.49	.179
NORM-PENTANE	.40	.145
HEXANE PLUS	.27	.118
	100.00	4.949

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5287
CHROMATOGRAPHIC GAS ANALYSIS REPORT

DATE 6/08/92

MAILEE
94100

UNION OIL CO. OF CALIFORNIA
ATTN: MIDLAND PRODUCTION DEPT.
P.O. BOX 671
MIDLAND, TEXAS 79702

METER NUMBER 74937 - RINCON UNIT #149 DK
OPERATOR 9165 - UNION OIL CO OF CALIF

ANALYSIS DATE	99/99/99	TYPE CODE	2 - ACTUAL
SAMPLE DATE	5/05/92	H2S GRAINS	0
EFFECTIVE DATE	6/01/92	LOCATION	F - FARMINGTON
EFFECTIVE FOR	6 MONTHS		

COMPONENTS	NORMALIZED MOL %	GPM
CO2	1.26	.000
H2S	.00	.000
N2	.59	.000
METHANE	86.86	.000
ETHANE	6.86	1.835
PROPANE	2.30	.634
ISO-BUTANE	.45	.147
NORM-BUTANE	.64	.202
ISO-PENTANE	.27	.099
NORM-PENTANE	.19	.069
HEXANE PLUS	.58	.253
	100.00	3.239

SPECIFIC GRAVITY .666

MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1146

RATIO OF SPECIFIC HEATS .000

NO TEST SECURED FOR H2S CONTENT

EL PASO NATURAL GAS COMPANY
VOLUME ACCOUNTING DEPARTMENT
MEASUREMENT DIVISION
POST OFFICE BOX 1492
EL PASO, TEXAS 79978
PHONE: (915) 541-5287

DATE 6/08/92

CHROMATOGRAPHIC GAS ANALYSIS REPORT

MAILEE
94100

UNION OIL CO. OF CALIFORNIA
ATTN: MIDLAND PRODUCTION DEPT.
P.O. BOX 671
MIDLAND, TEXAS 79702

METER NUMBER 72535 - RINCON UNIT #149 MV
OPERATOR 9165 - UNION OIL CO OF CALIF

ANALYSIS DATE	0/00/00	TYPE CODE	2 - ACTUAL
SAMPLE DATE	5/05/92	H2S GRAINS	0
EFFECTIVE DATE	6/01/92	LOCATION	F - FARMINGTON
EFFECTIVE FOR	6 MONTHS		

COMPONENTS	NORMALIZED MOL %	GPM
CO2	.84	.000
H2S	.00	.000
N2	.83	.000
METHANE	76.46	.000
ETHANE	12.27	3.282
PROPANE	5.81	1.601
ISO-BUTANE	.89	.291
NORM-BUTANE	1.37	.432
ISO-PENTANE	.46	.168
NORM-PENTANE	.35	.127
HEXANE PLUS	<u>.72</u>	<u>.314</u>
	100.00	6.215

SPECIFIC GRAVITY .752
MIXTURE HEATING VALUE
(BTU @ 14.73 DRY) 1286
RATIO OF SPECIFIC HEATS 1.280
NO TEST SECURED FOR H2S CONTENT



3 FARMINGTON AVENUE - FARINGTON, NM 87401

(505) 325-6622

ANALYSIS NO. UNO20028

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 151M

LOCATION:

COUNTY: RIO ARRIBA

FORMATION: MESA VERDE

SMPL SRC:

REMARKS:

LINE PRESSURE: 250 PSIG

SAMPLE TEMP.: 70 DEG.F

WELL FLOWING: YES

DATE SAMPLED: 10/92

SAMPLED BY: TSE-KIVA

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.290	0.0000
CO2	0.904	0.0000
METHANE	85.350	0.0000
ETHANE	8.071	2.1590
PROPANE	3.234	0.8913
I-BUTANE	0.542	0.1773
N-BUTANE	0.787	0.2481
I-PENTANE	0.297	0.1087
N-PENTANE	0.206	0.0746
HEXANE+	0.319	0.1391
TOTAL	100.000	3.7981
COMPRESSIBILITY FACTOR	(1/Z)	1.0030
BTU/CU.FT. (DRY) CORRECTED FOR	(1/Z)	1172.2
BTU/CU.FT. (WET) CORRECTED FOR	(1/Z)	1151.8
REAL SPECIFIC GRAVITY		0.6735

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 237 PSIG

DATE RUN: 10/26/92

ANALYSIS RUN BY: CHELLE DURBIN



(505) 325-6622

ANALYSIS NO. UNO20031

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON #151M

LINE PRESSURE: 255 PSIG

LOCATION:

SAMPLE TEMP.: 68 DEG.F

COUNTY: RIO ARRIBA, NM

WELL FLOWING: YES

FORMATION: DAKOTA

DATE SAMPLED: 11/01/92

SMPL SRC:

SAMPLED BY: KIVA

REMARKS: TAKEN @ TEST UNIT

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.160	0.0000
CO2	1.144	0.0000
METHANE	89.255	0.0000
ETHANE	5.918	1.5831
PROPANE	1.913	0.5272
I-BUTANE	0.335	0.1096
N-BUTANE	0.514	0.1621
I-PENTANE	0.212	0.0776
N-PENTANE	0.154	0.0558
HEXANE+	0.395	0.1723
TOTAL	100.000	2.6876
COMPRESSIBILITY FACTOR	(1/Z)	1.0027
BTU/CU.FT. (DRY) CORRECTED FOR	(1/Z)	1122.5
BTU/CU.FT. (WET) CORRECTED FOR	(1/Z)	1103.0
REAL SPECIFIC GRAVITY		0.6442

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 258 PSIG

DATE RUN: 11/02/92

ANALYSIS RUN BY: CHELLE DUREIN



(505) 325-662

ANALYSIS NO. UN02002

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 158M

LINE PRESSURE: 25

LOCATION:

SAMPLE TEMP.: 7

COUNTY:

WELL FLOWING: YES

FORMATION: MESA VERDE

DATE SAMPLED: 10/92

SMPL SRC:

SAMPLED BY: TSB-KIV

REMARKS:

ANALYSIS

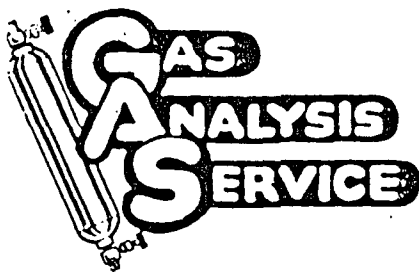
COMPONENT	MOLE%	GPM
NITROGEN	0.259	0.0000
CO2	0.976	0.0000
METHANE	86.093	0.0000
ETHANE	7.491	2.0038
PROPANE	2.954	0.8141
I-BUTANE	0.542	0.1773
N-BUTANE	0.745	0.2349
I-PENTANE	0.321	0.1175
N-PENTANE	0.204	0.0739
HEXANE+	0.415	0.1810
TOTAL	100.000	3.6025
COMPRESSIBILITY FACTOR (1/Z)		1.0030
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1166.8
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1146.5
REAL SPECIFIC GRAVITY		0.6709,

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 29 PSIG

DATE RUN: 10/26/92

ANALYSIS RUN BY: CHELLE DURBIN



WELL ANALYSIS COMPARISON

LEASE: RINCON 159M

SEPTEMBER 15, 1992

DATE: 9/5/92 9/13/92
NO.: 20018 20020
DAKOTA MESAVERDE

	MOLE %	MOLE %
	-----	-----
NITROGEN	0.269	0.306
CO2	1.051	1.055
METHANE	87.444	86.667
ETHANE	7.204	7.354
PROPANE	2.410	2.706
I-BUTANE	0.433	0.493
N-BUTANE	0.570	0.653
I-PENTANE	0.221	0.254
N-PENTANE	0.142	0.166
HEXANE+	0.256	0.346
BTU'S	1137.4	1151.4
-----	-----	-----
GPM	3.1566	3.3841
-----	-----	-----
SPEC GRAV	0.6534	0.6628
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FARMINGTON AVENUE - F TUCON, NM 87401

(505) 325-6622

ANALYSIS NO. UNO20016

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 167M

LINE PRESSURE: 60 PSIG

LOCATION:

SAMPLE TEMP.: 89 DEG.F

COUNTY: RIO ARRIBA, NM

WELL FLOWING: YES

FORMATION: MESAVERDE

DATE SAMPLED: 8/20/92

SMPL SRC:

SAMPLED BY: KIVA MEASURING

REMARKS: 7 DAY FLOW TEST

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.369	0.0000
CO2	0.578	0.0000
METHANE	79.732	0.0000
ETHANE	11.164	2.9864
PROPANE	4.953	1.3650
I-BUTANE	0.764	0.2499
N-BUTANE	1.203	0.3793
I-PENTANE	0.408	0.1493
N-PENTANE	0.292	0.1058
HEXANE+	0.537	0.2342
TOTAL	100.000	5.4699
COMPRESSIBILITY FACTOR	(1/Z)	1.0036
BTU/CU.FT. (DRY) CORRECTED FOR	(1/Z)	1254.5
BTU/CU.FT. (WET) CORRECTED FOR	(1/Z)	1232.7
REAL SPECIFIC GRAVITY		0.7218

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 49 PSIG

DATE RUN: 8/25/92

ANALYSIS RUN BY: CHELLE CURBIN



ANALYSIS NO. UN020012

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 167M

LINE PRESSURE: 280 PSIG

LOCATION:

SAMPLE TEMP.: 61 DEG.F

COUNTY: RIO ARRIBA, NM

WELL FLOWING:

FORMATION: DAKOTA

DATE SAMPLED: 8/11/92

SMPL SRC: TEST UNIT

SAMPLED BY: KIVA MEASURING

REMARKS:

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.141	0.0000
CO2	1.177	0.0000
METHANE	89.838	0.0000
ETHANE	5.722	1.5306
PROPANE	1.708	0.4707
I-BUTANE	0.319	0.1043
N-BUTANE	0.459	0.1447
I-PENTANE	0.196	0.0717
N-PENTANE	0.137	0.0496
HEXANE+	0.303	0.1322
TOTAL	100.000	2.5039
COMPRESSIBILITY FACTOR	(1/Z)	1.0027
BTU/CU.FT. (DRY) CORRECTED FOR	(1/Z)	1111.3
BTU/CU.FT. (WET) CORRECTED FOR	(1/Z)	1092.0
REAL SPECIFIC GRAVITY		0.6374

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 254 PSIG

DATE RUN: 8/17/92

ANALYSIS RUN BY: CHELLE DURBIN



FARMINGTON AVENUE - F TOWN, NM 87401

(505) 325-6622

ANALYSIS NO. UNO20016

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 167M

LINE PRESSURE: 60 PSIG

LOCATION:

SAMPLE TEMP.: 89 DEG.F

COUNTY: RIO ARRIBA, NM

WELL FLOWING: YES

FORMATION: MESAVERDE

DATE SAMPLED: 8/20/92

SMPL SRC:

SAMPLED BY: KIVA MEASURING

REMARKS: 7 DAY FLOW TEST

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.369	0.0000
CO2	0.578	0.0000
METHANE	79.732	0.0000
ETHANE	11.164	2.9864
PROPANE	4.953	1.3650
I-BUTANE	0.764	0.2499
N-BUTANE	1.203	0.3793
I-PENTANE	0.408	0.1493
N-PENTANE	0.292	0.1058
HEXANE+	0.537	0.2342
TOTAL	100.000	5.4699
COMPRESSIBILITY FACTOR	(1/Z)	1.0036
BTU/CU.FT. (DRY) CORRECTED FOR	(1/Z)	1254.5
BTU/CU.FT. (WET) CORRECTED FOR	(1/Z)	1232.7
REAL SPECIFIC GRAVITY		0.7218

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 49 PSIG

DATE RUN: 8/25/92

ANALYSIS RUN BY: CHELLE DURBIN



WELL ANALYSIS COMPARISON

LEASE: RINCON 170M

NOVEMBER 9, 1992

DATE: 10/31/92 11/7/92

NO.: 20032 20033
MESAVERDE DAKOTA

	MOLE %	MOLE %
NITROGEN	0.469	0.206
CO2	0.912	1.203
METHANE	82.696	88.424
ETHANE	8.389	6.798
PROPANE	4.689	1.638
I-BUTANE	0.782	0.389
N-BUTANE	1.087	0.489
I-PENTANE	0.361	0.358
N-PENTANE	0.247	0.240
HEXANE+	0.368	0.255
BTU'S	1212.5	1125.9
GPM	4.5169	2.8805
SPEC GRAV	0.7015	0.6478



(505) 325-6622

ANALYSIS NO. UN020019

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON #175M

LOCATION:

COUNTY: RIO ARRIBA, NM

FORMATION: DAKOTA

SMPL SRC:

REMARKS: TAKEN AT TEST UNIT

LINE PRESSURE: 249 PSIG

SAMPLE TEMP.: 66 DEG.F

WELL FLOWING: YES

DATE SAMPLED: 9/9/92

SAMPLED BY: KEVA MEASURING

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	0.225	0.0000
CO2	1.220	0.0000
METHANE	87.784	0.0000
ETHANE	7.548	2.0191
PROPANE	1.823	0.5024
I-BUTANE	0.339	0.1109
N-BUTANE	0.429	0.1353
I-PENTANE	0.191	0.0699
N-PENTANE	0.126	0.0456
HEXANE+	0.315	0.1374
TOTAL	100.000	3.0206

COMPRESSIBILITY FACTOR (1/Z) 1.0028

BTU/CU.FT. (DRY) CORRECTED FOR (1/Z) 1125.6

BTU/CU.FT. (WET) CORRECTED FOR (1/Z) 1106.0

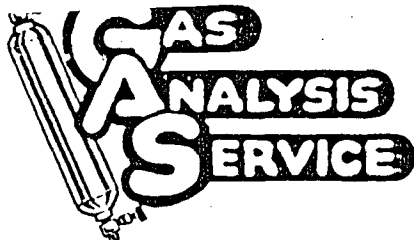
REAL SPECIFIC GRAVITY 0.6481

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 238 PSIG

DATE RUN: 9/10/92

ANALYSIS RUN BY: CHELLE DURBIN



(505) 325-6622

ANALYSIS NO. UN020021

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON #175M

LINE PRESSURE: 250 PSIG

LOCATION:

SAMPLE TEMP.: 80 DEG.F

COUNTY: RIO ARRIBA, NM

WELL FLOWING:

FORMATION: MESAVERDE

DATE SAMPLED: 9/16/92; 11:00 AM

SMPL SRC:

SAMPLED BY: KIVA MEASURING

REMARKS:

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	2.369	0.0000
CO2	0.948	0.0000
METHANE	81.749	0.0000
ETHANE	8.765	2.3446
PROPANE	3.718	1.0247
I-BUTANE	0.630	0.2061
N-BUTANE	0.893	0.2816
I-PENTANE	0.325	0.1189
N-PENTANE	0.218	0.0790
HEXANE+	0.385	0.1679
TOTAL	100.000	4.2228
COMPRESSIBILITY FACTOR	(1/Z)	1.0031
BTU/CU.FT. (DRY) CORRECTED FOR	(1/Z)	1171.7
BTU/CU.FT. (WET) CORRECTED FOR	(1/Z)	1151.3
REAL SPECIFIC GRAVITY		0.6961

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 212 PSIG

DATE RUN: 9/17/92

ANALYSIS RUN BY: CHELLE DURBIN



TERMINATION VENUE - 7/1/01 11:01 AM 17101

1995 105-0022

ANALYSIS NO. UN020017

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME RINCON 190M

LINE PRESSURE 109 PSIG

LOCATION:

SAMPLE TEMP. 56 DEG.F

COUNTY: RIO ARriba, NM

WELL FLOWING: YES

FORMATION: MESAVERDE

DATE SAMPLED: 9/3/92

SMPL SRC

SAMPLED BY: KIVA MEASURING

REMARKS: TAKEN FROM TEST UNIT AFTER 7 DAY FLOW TEST

ANALYSIS

COMPONENT	MOLE%	GPM
NITROGEN	1.623	0.0000
CO2	1.175	0.0000
METHANE	37.044	0.0000
ETHANE	6.604	1.7666
PROPANE	1.700	0.5245
I-BUTANE	0.426	0.1393
N-BUTANE	0.454	0.1431
I-PENTANE	0.238	0.0871
N-PENTANE	0.137	0.0496
HEXANE+	0.391	0.1706
TOTAL	100.000	2.8808
COMPRESSIBILITY FACTOR (1/Z)		1.0027
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1113.2
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1093.8
REAL SPECIFIC GRAVITY		0.6544

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE 211 PSIG

DATE RUN: 9/4/92

ANALYSIS RUN BY: CHELLE DUBIN



FARMINGTON AVENUE - FA WINGTON, NM 87401

(505) 325-6622

ANALYSIS NO. UN030006

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 180M

LINE PRESSURE: 240 PSIG

LOCATION:

SAMPLE TEMP.: 68 DEG.F

COUNTY:

WELL FLOWING: YES

FORMATION: DAKOTA

DATE SAMPLED: 3/30/93

SMPL SRC:

SAMPLED BY: KIVA

REMARKS: TAKEN FROM TEST UNIT.

ANALYSIS

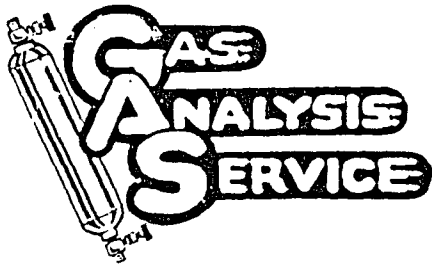
COMPONENT	MOLE%	GPM
NITROGEN	0.155	0.0000
CO2	1.156	0.0000
METHANE	87.518	0.0000
ETHANE	7.388	1.9763
PROPANE	2.136	0.5887
I-BUTANE	0.470	0.1537
N-BUTANE	0.509	0.1605
I-PENTANE	0.261	0.0955
N-PENTANE	0.143	0.0518
HEXANE+	0.264	0.1152
TOTAL	100.000	3.1416
COMPRESSIBILITY FACTOR	(1/Z)	1.0028
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z)		1135.8
BTU/CU.FT. (WET) CORRECTED FOR (1/Z)		1116.0
REAL SPECIFIC GRAVITY		0.6528

ANALYSIS RUN AT 14.73 PSIA & 60 DEGREES F

CYLINDER PRESSURE: 257 PSIG

DATE RUN: 4/4/93

ANALYSIS RUN BY: CHELLE DUBBIN



WELL ANALYSIS COMPARISON

LEASE: RINCON 184M

DECEMBER 21, 1992

DATE: 12/9/92 12/16/92

NO.: 20043 20046
MESAVERDE DAKOTA

	MOLE %	MOLE %
	-----	-----
NITROGEN	0.702	0.169
CO2	0.435	1.200
METHANE	86.677	91.707
ETHANE	6.988	4.909
PROPANE	3.594	1.145
I-BUTANE	0.498	0.198
N-BUTANE	0.663	0.283
I-PENTANE	0.171	0.114
N-PENTANE	0.129	0.086
HEXANE+	0.143	0.189
BTU'S	1152.7	1080.4
-----	-----	-----
GPM	3.4034	1.9380
-----	-----	-----
SPEC GRAV	0.6578	0.6182
-----	-----	-----

Unocal Oil & Gas Division
Unocal Corporation
913 West Broadway, P.O. Box 850
Bloomfield, New Mexico 87413
Telephone (505) 632-1811



September 26, 1994

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

Dear Sirs:

Union Oil Company of California (UNOCAL) has requested permission from the New Mexico Oil Conservation Division to downhole commingle production from the Blanco Mesaverde and Basin Dakota formations in the following well in Rio Arriba County, New Mexico:

<u>WELL</u>	<u>LOCATION</u>
Rincon Unit No. 302	150' FNL, 2455' FWL Sec. 11, T26N, R7W

If you have any objections to this proposal, please notify the NMOCD within twenty (20) days. If you have any questions about this application, please contact Dana Delventhal at (505) 632-1811.

Sincerely,

Union Oil Company of California
dba UNOCAL

Bob Caine
Field Foreman

Unocal Oil & Gas Division
Unocal Corporation
913 West Broadway, P.O. Box 850
Bloomfield, New Mexico 87413
Telephone (505) 632-1811



September 26, 1994

Amax Oil and Gas, Inc.
181 South Browning Parkway
Farmington, NM 87401

Dear Sirs:

Union Oil Company of California (UNOCAL) has requested permission from the New Mexico Oil Conservation Division to downhole commingle production from the Blanco Mesaverde and Basin Dakota formations in the following well in Rio Arriba County, New Mexico:

<u>WELL</u>	<u>LOCATION</u>
Rincon Unit No. 302	150' FNL, 2455' FWL Sec. 11, T26N, R7W

If you have any objections to this proposal, please notify the NMOCD within twenty (20) days. If you have any questions about this application, please contact Dana Delventhal at (505) 632-1811.

Sincerely,

Union Oil Company of California
dba UNOCAL

A handwritten signature in cursive script that reads "Bob Caine".

Bob Caine
Field Foreman

Unocal Oil & Gas Division
Unocal Corporation
913 West Broadway, P.O. Box 850
Bloomfield, New Mexico 87413
Telephone (505) 632-1811



September 26, 1994

Caulkins Oil Co.
1997 East Blanco Blvd.
Bloomfield, NM 87413

Dear Sirs:

Union Oil Company of California (UNOCAL) has requested permission from the New Mexico Oil Conservation Division to downhole commingle production from the Blanco Mesaverde and Basin Dakota formations in the following well in Rio Arriba County, New Mexico:

<u>WELL</u>	<u>LOCATION</u>
Rincon Unit No. 302	150' FNL, 2455' FWL Sec. 11, T26N, R7W

If you have any objections to this proposal, please notify the NMOCD within twenty (20) days. If you have any questions about this application, please contact Dana Delventhal at (505) 632-1811.

Sincerely,

Union Oil Company of California
dba UNOCAL

A handwritten signature in dark ink, appearing to read "Bob Caine".

Bob Caine
Field Foreman



September 26, 1994

Central Resources, Inc.
1776 Lincoln, Suite 1010
Denver, CO 80203

Dear Sirs:

Union Oil Company of California (UNOCAL) has requested permission from the New Mexico Oil Conservation Division to downhole commingle production from the Blanco Mesaverde and Basin Dakota formations in the following well in Rio Arriba County, New Mexico:

<u>WELL</u>	<u>LOCATION</u>
Rincon Unit No. 302	150' FNL, 2455' FWL Sec. 11, T26N, R7W

If you have any objections to this proposal, please notify the NMOCD within twenty (20) days. If you have any questions about this application, please contact Dana Delventhal at (505) 632-1811.

Sincerely,

Union Oil Company of California
dba UNOCAL

A handwritten signature in cursive script that reads "Bob Caine".

Bob Caine
Field Foreman



September 26, 1994

Louis Dreyfuss Natural Gas Corporation
2901 East 20th Street
Farmington, NM 87401

Dear Sirs:

Union Oil Company of California (UNOCAL) has requested permission from the New Mexico Oil Conservation Division to downhole commingle production from the Blanco Mesaverde and Basin Dakota formations in the following well in Rio Arriba County, New Mexico:

<u>WELL</u>	<u>LOCATION</u>
Rincon Unit No. 302	150' FNL, 2455' FWL Sec. 11, T26N, R7W

If you have any objections to this proposal, please notify the NMOCD within twenty (20) days. If you have any questions about this application, please contact Dana Delventhal at (505) 632-1811.

Sincerely,

Union Oil Company of California
dba UNOCAL

R L Caine
DUS

Bob Caine
Field Foreman

Unocal Oil & Gas Division
Unocal Corporation
913 West Broadway, P.O. Box 850
Bloomfield, New Mexico 87413
Telephone (505) 632-1811

UNOCAL 76

September 26, 1994

Snyder Oil Company
5802 US Highway 64
Bloomfield, NM 87413

Dear Sirs:

Union Oil Company of California (UNOCAL) has requested permission from the New Mexico Oil Conservation Division to downhole commingle production from the Blanco Mesaverde and Basin Dakota formations in the following well in Rio Arriba County, New Mexico:

<u>WELL</u>	<u>LOCATION</u>
Rincon Unit No. 302	150' FNL, 2455' FWL Sec. 11, T26N, R7W

If you have any objections to this proposal, please notify the NMOCD within twenty (20) days. If you have any questions about this application, please contact Dana Delventhal at (505) 632-1811.

Sincerely,

Union Oil Company of California
dba UNOCAL

Bob Caine
DWS

Bob Caine
Field Foreman

Microsoft Mail v3.0 IPM.Microsoft Mail.Note
From: Ernie Busch
To: David Catanach
Subject: UNOCAL (DHC)
Date: 1994-11-03 08:16
Priority: R
Message ID: CB287F7F
Conversation ID: CB287F7F

RINCON UNIT #302
C-11-26N-07W
RECOMMEND: APPROVAL
=====

DHC-1050