STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

AZTEC DISTRICT OFFICE

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

Date: 10/22/92

Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

RE: Proposed MC _____ Proposed DHC X
Proposed NSL _____ Proposed SWD _____
Proposed WFX _____ Proposed PMX _____
Proposed NSP _____ Proposed DD _____

Gentlemen:

I have examined the application received on 10/5/92

for the Elwood Rincon Unit # 167M
OPERATOR LEASE & WELL NO.

C-13-27N-7W and my recommendations are as follows:
UL-S-T-R

Approve

Unocal North American
Oil & Gas Division
Unocal Corporation
3300 North Butler Avenue
Suite 200
Farmington, New Mexico 87401
Telephone (505) 326-7600
Fax: (505) 326-6145

UNOCAL 76

October 2, 1992

CERTIFIED RETURN RECEIPT REQUESTED

Farmington District

New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Attn: Mr. William J. LeMay

RECEIVED
OCT 0 5 1992
OIL CON. DIV.
DIST. 3

Dear Mr. LeMay:

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

Rincon Unit No. 167M
1154' FNL, 1850' FWL
Section 13, T27N, R7W
Rio Arriba County, New Mexico

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 Form C-116 showing current productivity from each zone.
3. A wellbore diagram with completion detail.
4. A measured bottomhole pressure from each zone and a calculated adjustment to a common datum.
5. Gas analyses from each zone.
6. An allocation formula for commingled production.
7. A copy of the notification letter sent to all offset operators.

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 approximately 750 MMCF from the Mesaverde horizon, which would otherwise remain undeveloped.

UNOCAL wishes to commingle the production from the Blanco Mesaverde and Basin Dakota formations in order to more effectively lift condensate production and justify installation of compression facilities. This will result in incremental reserves for both formations.

Both zones are of common ownership and 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)326-7600. Thank you for your consideration in this matter.

Sincerely,

Union Oil Company of California
dba UNOCAL

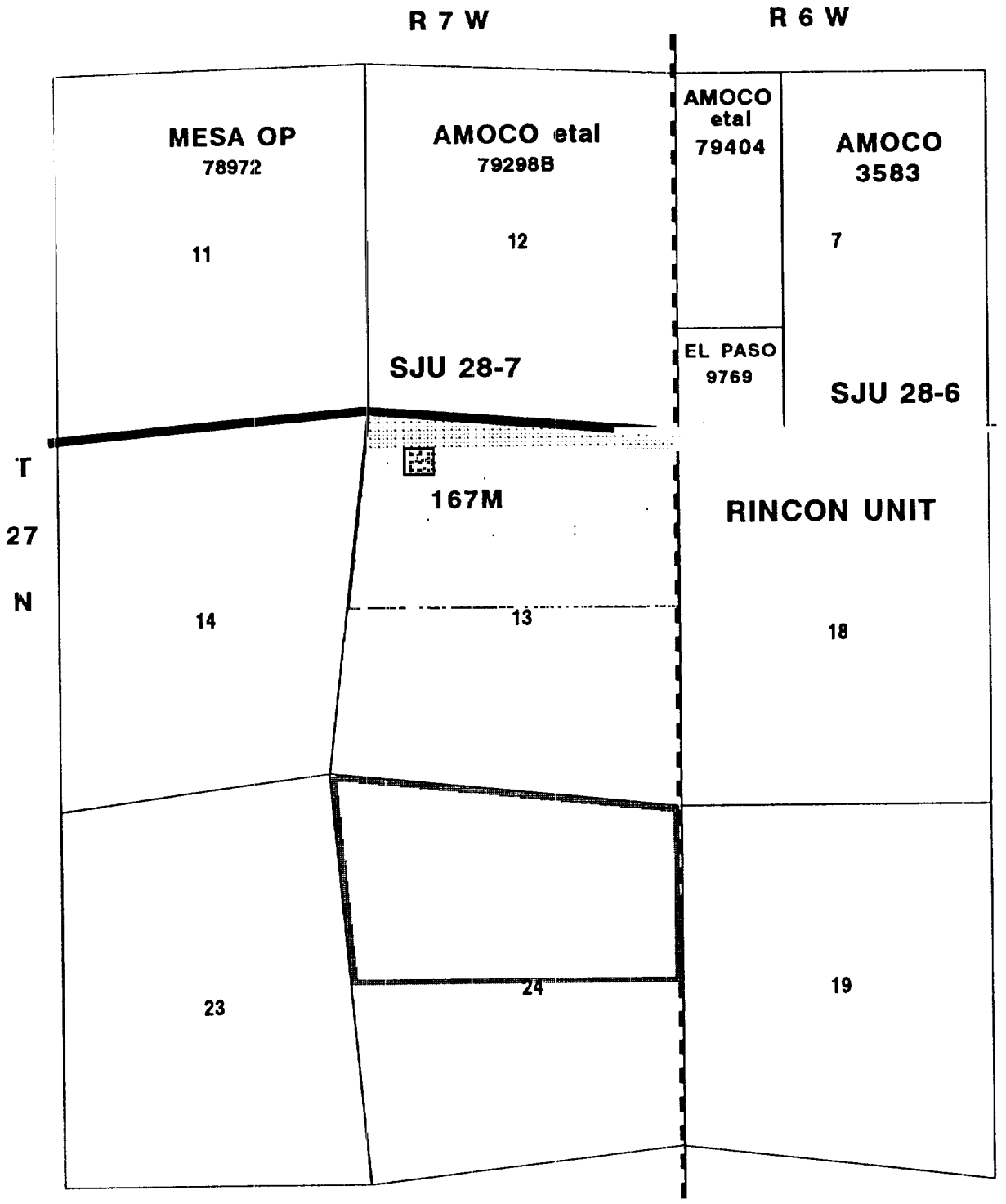
William L. Irwin
District Petroleum Engineer

Attachments

WLI/DLD/df

cc: New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

OFFSET LEASE OWNERSHIP



Submit 2 copies to Appropriate
District Office.
DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
P.O. Drawer DD, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-116
Revised 1/1/89

GAS - OIL RATIO TEST

Operator	Pool	County
UNION OIL COMPANY OF CALIFORNIA	BLANCO MESAVERDE/BASIN DAKOTA	RIO ARRIBA

Address	TYPE OF TEST - (X)	Scheduled	Completion	Special
3300 N. BUTLER, SUITE 200, FARMINGTON, NM 87401		[ ]	[X]	[ ]

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL.
RINCON UNIT	167M	C	13	27N	7W											
Blanco Mesaverde						8/21/92	F	18/64"	680		24	17	55	-0-	137	--
Basin Dakota						8/11/92	F	48/64"	1385		24	4	55	4	524	131,000

Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

(See Rule 301, Rule 1116 & appropriate pool rules.)

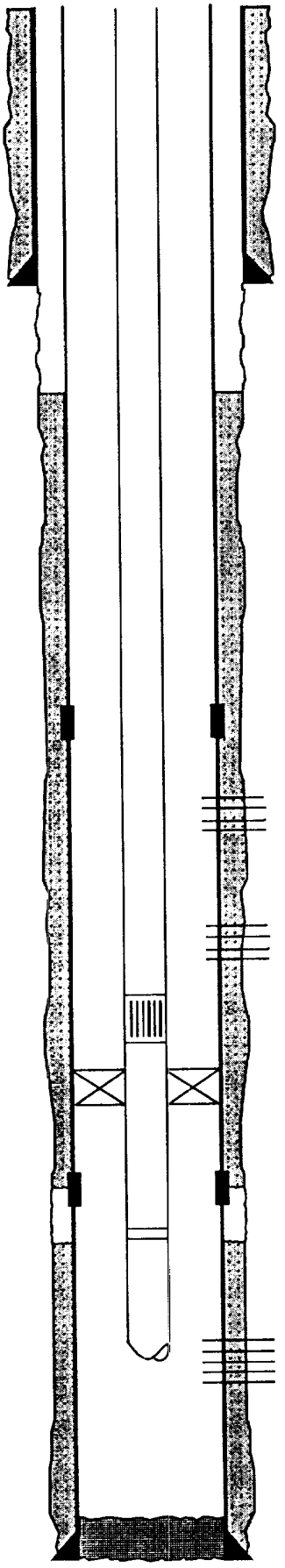
I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Signature

W.L. Irwin District Petroleum Engineer
Printed name and title

10/1/92 (505)326-7600
Date Telephone No.

RINCON UNIT NO. 167 M
1154' FNL,1850' FWL SEC 13 T27N R7W
RIO ARRIBA COUNTY, NM



8-5/8" 24# J-55 @ 364'
CMT W/ 240 SX - CIRC TO SURF

TOC @ 1500'
by CBL

TUBING DETAIL
2-3/8" 4.7# EUE, J-55
(FHD @ 7710')

DV TOOL @ 4692'

UPPER MESAVERDE
4970-82, 4987-5002, 5060-68,
5082-94, 5098-5110, & 5140-50 W/4 SPF
Stimulation: 53,400 gal 30# XL Gel/Wtr, 195,700# 20/40 sand

LOWER MESAVERDE
5366-84, 5470-82, 5492-5506,
5530-40, 5560-94, 5662-90,
5748-58 W/2 SPF
Stimulation: 48,900 gal 30# XL Gel/Wtr, 193,700# 20/40 sand

Sliding Sleeve
@ 5767'

Guiberson Uni VI
pkr @ 5782'

DV TOOL @ 6989'

TOC @ 7050'
by CBL

DAKOTA
7566-76, 7586-92, 7598-7610,
7692-7712, 7728-36, 7746-58,
7762-68, & 7774-82 W/4 SPF.
Stimulation: 67,400 gal 35# XL Gel/Wtr, #249,500 20/40 sand

5-1/2" 17# N-80 & K-55 @ 7869'
CMT'D IN THREE STAGES: 1st stg: 190 sx
2nd stg: 470 sx (circ to upper DV tool), 3rd stg: 870 sx

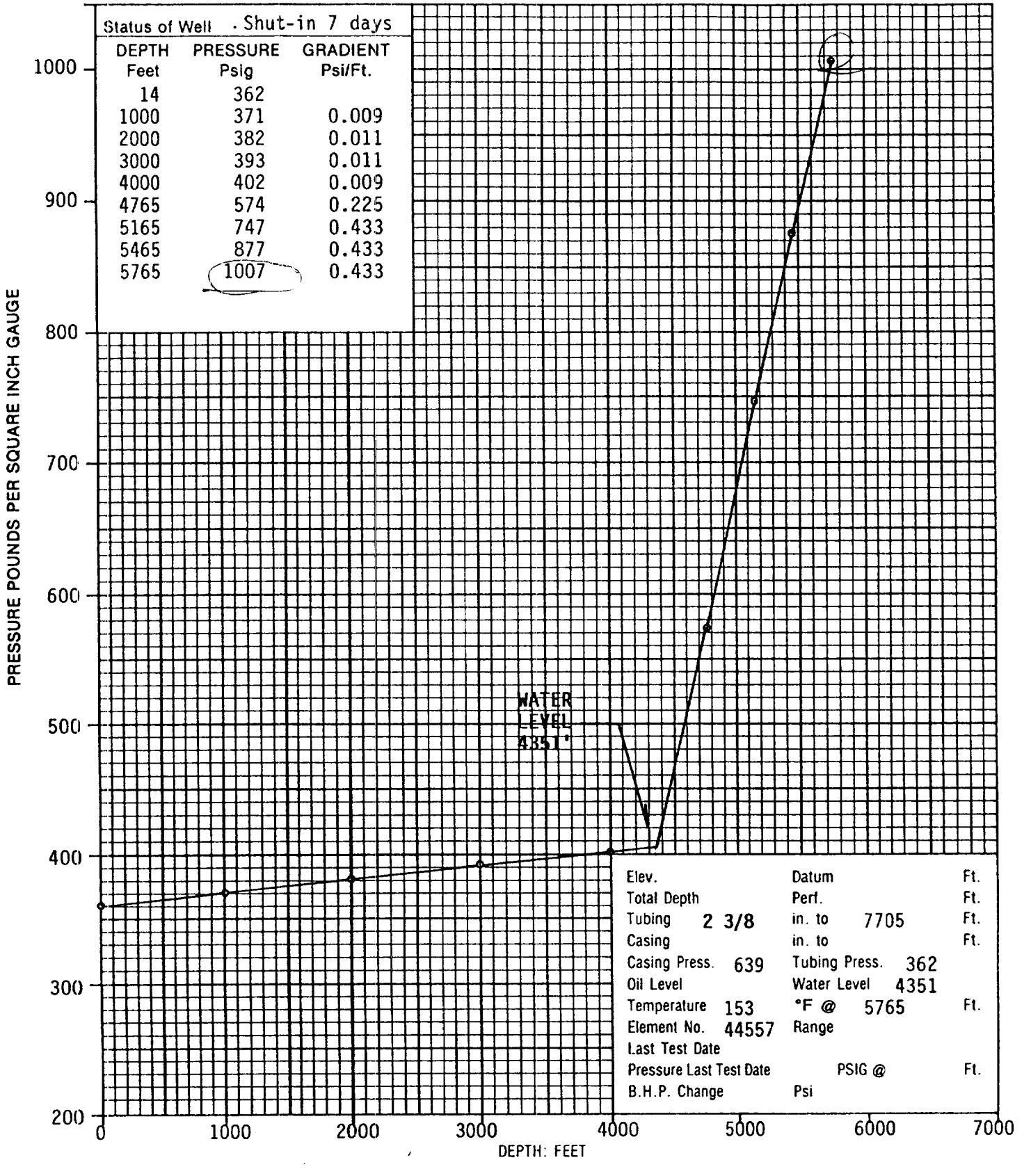
PBTD = 7824'
TD = 7870'

TEFTELLER, INC.
reservoir engineering data
MIDLAND, TEXAS

Company UNOCAL CORPORATION Lease RINCON UNIT Well No. 167M
Field _____ County RIO ARRIBA State NEW MEXICO
Formation MESA VERDE Test Date AUGUST 27, 1992

Status of Well . Shut-in 7 days

DEPTH Feet	PRESSURE Psig	GRADIENT Psi/Ft.
14	362	
1000	371	0.009
2000	382	0.011
3000	393	0.011
4000	402	0.009
4765	574	0.225
5165	747	0.433
5465	877	0.433
5765	1007	0.433



Elev.		Datum	Ft.
Total Depth		Perf.	Ft.
Tubing	2 3/8	in. to 7705	Ft.
Casing		in. to	Ft.
Casing Press.	639	Tubing Press.	362
Oil Level		Water Level	4351
Temperature	153	°F @ 5765	Ft.
Element No.	44557	Range	
Last Test Date			
Pressure Last Test Date		PSIG @	Ft.
B.H.P. Change		Psi	

EFTELLER, INC.
reservoir engineering data

FARMINGTON, NEW MEXICO / MIDLAND, TEXAS
GRAND JUNCTION, COLORADO

P. O. Box 1198
Farmington, New Mexico 87499
(505) 325-1731

Farmington Fax (505) 325-1148
Midland Fax (915) 682-5329
Grand Junction Fax (303) 241-7634

Unocal Corporation

Rincon No. 167-M

August 11 - 30, 1992

File Reference B128901.DAT

Customer ..... UNOCAL CORPORATION
Street ..... 3300 N. BUTLER, SUITE 200
City/State..... FARMINGTON, NEW MEXICO 87401
Country ..... U.S.A.
Service Company ... . TEFTELLER, INC.

Well Name ..... RINCON NO. 167-M
Well Location ..... RIO ARRIBA COUNTY, NM
Field / Pool ..... BASIN DAKOTA
Status (Oil, Gas, Other) ..... GAS

Test Type ..... BUILD UP MEASUREMENT
Date of Test 8-11-92
Producing Interval ..... 7566' - 7782'
Recorder Depth ..... 7705'
Recorder Position .....
Shut In Date ..... Start: 8-11-92
Stop: 8-30-92
Duration: 460 HOURS
Bottom Hole Temperature ..... 195 DEGREES

Gauge Identification

Gauge Manufacturer ..... MICRO-SMART SYSTEMS
Serial Number 128
Model Number 10K
Pressure Range .....
Battery Type .....
Calibration I.D. .....
Last Calibration 1/22/92

Gauge Setup Parameters

Probe Set Up Time 8/11/92 8:56: 0
Time Delay to First Reading ....
Test Type Selection ..... BUILD UP MEASUREMENTS
Test Duration Selection ..... 460 HOURS

Date MM/DD	Time hh:mm:ss	Test Time hhhh.hhhh	Pressure Psig	Temp Deg F	deltaP Psi	Comment Ga. Press Ref. to 14.7 Psi Atm.
08/17	13:02:00	148.1000	1987.85	192.98		
08/17	13:34:00	148.6333	1989.14	192.98		
08/17	14:06:00	149.1667	1990.18	192.99		
08/17	14:38:00	149.7000	1991.21	192.99		
08/17	15:10:00	150.2333	1992.24	192.99		
08/17	15:42:00	150.7667	1993.27	192.99		
08/17	16:14:00	151.3000	1994.29	192.99		
08/17	16:46:00	151.8333	1995.32	192.99		
08/17	17:18:00	152.3667	1996.35	192.99		
08/17	17:50:00	152.9000	1997.38	192.99		
08/17	18:22:00	153.4333	1998.42	193.00		
08/17	18:54:00	153.9667	1999.45	193.00		
08/17	19:26:00	154.5000	2000.47	192.99		
08/17	19:58:00	155.0333	2001.74	192.98		
08/17	20:30:00	155.5667	2002.52	192.98		
08/17	21:02:00	156.1000	2003.54	192.98		
08/17	21:34:00	156.6333	2004.58	192.99		
08/17	22:06:00	157.1667	2005.61	192.99		
08/17	22:38:00	157.7000	2006.64	192.99		
08/17	23:10:00	158.2333	2007.67	192.99		
08/17	23:42:00	158.7667	2008.70	192.99		
08/18	00:14:00	159.3000	2009.47	192.99		
08/18	00:46:00	159.8333	2010.52	193.01		
08/18	01:18:00	160.3667	2011.55	193.01		
08/18	01:50:00	160.9000	2012.33	193.02		
08/18	02:22:00	161.4333	2013.60	193.01		
08/18	02:54:00	161.9667	2014.38	193.02		
08/18	03:26:00	162.5000	2015.41	193.02		
08/18	03:58:00	163.0333	2016.44	193.02		
08/18	04:30:00	163.5667	2017.21	193.02		
08/18	05:02:00	164.1000	2018.24	193.02		
08/18	05:34:00	164.6333	2019.03	193.04		
08/18	06:06:00	165.1667	2020.33	193.05		
08/18	06:38:00	165.7000	2021.09	193.04		
08/18	07:10:00	166.2333	2021.87	193.05		
08/18	07:42:00	166.7667	2022.89	193.04		
08/18	08:14:00	167.3000	2023.92	193.04		
08/18	08:46:00	167.8333	2024.70	193.05		
08/18	09:18:00	168.3667	2025.47	193.05		
08/18	09:50:00	168.9000	2026.51	193.06		
08/18	10:22:00	169.4333	2027.54	193.06		
08/18	10:54:00	169.9667	2028.31	193.06		
08/18	11:26:00	170.5000	2028.87	193.10		
08/18	11:58:00	171.0333	2029.90	193.10		
08/18	12:30:00	171.5667	2030.67	193.10		
08/18	13:02:00	172.1000	2031.69	193.10		
08/18	13:34:00	172.6333	2032.46	193.10		
08/18	14:06:00	173.1667	2033.49	193.10		
08/18	14:38:00	173.7000	2034.26	193.10		
08/18	15:10:00	174.2333	2035.04	193.10		
08/18	15:42:00	174.7667	2036.33	193.10		
08/18	16:14:00	175.3000	2036.84	193.10		
08/18	16:46:00	175.8333	2037.87	193.11		
08/18	17:18:00	176.3667	2038.65	193.12		
08/18	17:50:00	176.9000	2039.68	193.12		
08/18	18:22:00	177.4333	2040.46	193.13		
08/18	18:54:00	177.9667	2041.48	193.12		
08/18	19:26:00	178.5000	2042.26	193.13		
08/18	19:58:00	179.0333	2043.03	193.12		
08/18	20:30:00	179.5667	2043.82	193.14		
08/18	21:02:00	180.1000	2044.58	193.13		
08/18	21:34:00	180.6333	2045.36	193.14		
08/18	22:06:00	181.1667	2046.40	193.15		
08/18	22:38:00	181.7000	2047.42	193.14		
08/18	23:10:00	182.2333	2047.94	193.15		

RINCON UNIT NO. 167 M

After a 7 day SI period:

Mesaverde BHP = 1007 psi @ 5765'

Dakota BHP = 2025 psi @ 7705'

$$\text{Gas Gradient} = \frac{(0.01875)(0.69)(2620)}{(0.869)(655)} = 0.06 \text{ psi/ft}$$

Adjusting to a common datum of 5765':

Mesaverde BHP = 1007 psi

Dakota BHP = 2025 - [(0.06)(7705 - 5765)] = 1909 psi

Therefore the reservoir pressures fall within the 50% requirement.

GAS ANALYSIS SERVICE

11[illegible] FARMINGTON AVENUE - FARMI[illegible]ON, NM 87401

(505) 325-6622

ANALYSIS NO. UNO20016

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 167M

LOCATION:

COUNTY: RIO ARRIBA, NM

FORMATION: MESAVERDE

SMPL SRC:

REMARKS: 7 DAY FLOW TEST

LINE PRESSURE: 60 PSIG

SAMPLE TEMP.: 89 DEG.F

WELL FLOWING: YES

DATE SAMPLED: 8/20/92

SAMPLED BY: KIVA MEASURING

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	5.469

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

GAS ANALYSIS SERVICE

1115 FARMINGTON AVENUE - FARMINGTON, NM 8/401

(505) 325-6622

ANALYSIS NO. UNO20012

WELL/LEASE INFORMATION

COMPANY: UNOCAL CORPORATION

WELL NAME: RINCON 167M

LOCATION:

COUNTY: RIO ARRIBA, NM

FORMATION: DAKOTA

SMPL SRC: TEST UNIT

REMARKS:

LINE PRESSURE: 280 PSIG

SAMPLE TEMP.: 61 DEG.F

WELL FLOWING:

DATE SAMPLED: 8/11/92

SAMPLED BY: KIVA MEASURING

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

ALLOCATION FORMULA

(BASED ON C-116)

GAS PRODUCTION:	Mesaverde Rate		137 MCFD
	Dakota Rate		524 MCFD
	Total Rate		661 MCFD
Therefore,	Mesaverde	21%	
	Dakota	79%	
OIL PRODUCTION:	Mesaverde Rate		0 BOPD
	Dakota Rate		4 BOPD
	Total Rate		4 BOPD
Therefore,	Mesaverde	0%	
	Dakota	100%	

Unocal North American
Oil & Gas Division
Unocal Corporation
3300 North Butler Avenue
Suite 200
Farmington, New Mexico 87401
Telephone (505) 326-7600
Fax: (505) 326-6145

UNOCAL

October 1, 1992

Farmington District

United States Department of the Interior
Bureau of Land Management
1235 La Plata Highway
Farmington, New Mexico 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:

Rincon Unit No. 167 M
1154' FNL, 1850' FWL
Section 13, T27N, R7W
Rio Arriba County, New Mexico

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)326-7600.

Sincerely,

Union Oil Company of California
dba UNOCAL

William L. Irwin
District Petroleum Engineer

WLI/DLD/df

Unocal North American
Oil & Gas Division
Unocal Corporation
3300 North Butler Avenue
Suite 200
Farmington, New Mexico 87401
Telephone (505) 326-7600
Fax: (505) 326-6145

UNOCAL

October 1, 1992

Farmington District

Amoco Production Company
P.O. Box 800
Denver, Colorado 80201

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:

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Rio Arriba County, New Mexico

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Sincerely,

Union Oil Company of California
dba UNOCAL

WLIrwin

William L. Irwin
District Petroleum Engineer

WLI/DLD/df

Unocal North American
Oil & Gas Division
Unocal Corporation
3300 North Butler Avenue
Suite 200
Farmington, New Mexico 87401
Telephone (505) 326-7600
Fax: (505) 326-6145

UNOCAL 76

October 1, 1992

Farmington District

Meridian Oil Production Inc.
P.O. Box 4289
Farmington, New Mexico 87499

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:

Rincon Unit No. 167 M
1154' FNL, 1850' FWL
Section 13, T27N, R7W
Rio Arriba County, New Mexico

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Sincerely,

Union Oil Company of California
dba UNOCAL

WLI

William L. Irwin
District Petroleum Engineer

WLI/DLD/df