

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

UNOCAL 76

92 JUN 11 4 09 03

June 8, 1992

Farmington District

New Mexico Oil Conservation Division
310 Old Santa Fe Trail, Box 2088
Santa Fe, NM 87504-2088
Attn: David Catanach

*Zone is community owned
as per past discussion
6/10/92*

SUBJECT:
Requesting Approval for
Exception to Rule 303-A
for Gas and Oil Production
Rincon Unit, Well No. 167-M
Sec 13 T27N - R7W
Rio Arriba County, New Mexico

Union Oil Company of California, dba Unocal, requests permission to surface commingle gas and oil from its Rincon Unit, Well No. 167-M, Rio Arriba County, New Mexico. The following describes and demonstrates how Unocal proposes to allocate gas production under the context of BLM Onshore Oil and Gas Order No. 5, Measurement of Gas for commingling, and allocate oil under the New Mexico Oil Conservation Commission Manual for the Installation and Operation of Commingling Facilities.

The Rincon Unit, No. 167-M well is a development gas well scheduled to be drilled by Unocal. The well is to be completed as a dual Dakota/Mesa Verde producer; and it is anticipated that it will be ready for pipeline deliveries August 1, 1992. The local gas gathering company, El Paso Natural Gas (EPNG), has requested that Unocal deliver this gas to a pre-determined tie-in point on their gathering system. EPNG wishes only to set one sales meter, at this tie-in point, in order to minimize chart handling.

Unocal is proposing to set two allocation meters at the well site and measure gas from each stream separately. Downstream of the allocation meters the gas will be surface commingled in the flow line and measured again at the EPNG sales meter downstream (Exhibit No. 1). Royalties will be paid based on the gas volume measured at EPNG's sales meter.

Unocal is also proposing to surface commingle produced fluids from the individual separators into a common stock

tank. Royalties will be paid on the liquid volumes sold from the tank (Exhibit No. 2).

The proposed location is within existing Dakota and Mesa Verde participating areas within the Rincon Unit (Exhibit No. 3). The lease is a federal lease and it is described in Exhibit No. 4. The royalty in the two formations is the same.

Unocal is requesting from the New Mexico Oil Conservation Division, approval for surface commingling of the produced gas and approval for the following method of allocating production from the central meter to the individual meters. Unocal will calculate a monthly allocation factor, as shown in Exhibit No. 5, part 1. The allocation factor will then be used as illustrated in Exhibit No. 5, part 2, to determine individual meter volumes. To ensure the accuracy of the individual meters, Unocal will continue to calibrate, perform orifice plate inspections, and settlement tests as described in BLM Onshore Oil and Gas order No. 5, Measurement of Gas.

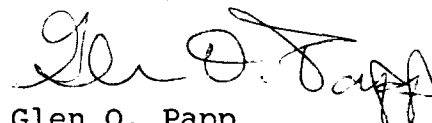
Unocal is also requesting approval for surface commingling of the produced oil and approval of the following method for allocating production. Unocal will conduct initial oil production tests of equivalent time frames for each of the two zones. The oil produced during the test period from each pool will be used to calculate an average daily rate (Exhibit No. 6, Part 1). Each month this rate will be multiplied by the days on production, to yield a volume produced for the month (Exhibit No. 6, Part 3). The corrected volumes will be allocated as per Exhibit 6, Part 5. Should we suspect, that the proportionality of the daily volumes has changed substantially, Unocal will retest the zones.

Should you have any questions or need any additional information to process this request, please feel free to contact me at the above letterhead address or phone.

2-3 BOD
Estimate

Very truly yours,

Union Oil Company of California
dba Unocal



Glen O. Papp
District Production Engineer

pmh

cc:NMOCD Aztec Office--Frank Chavez
BLM--Ken Townsend

EXHIBIT No. 1

UNOCAL

GAS ACCOUNTING SCHEMATIC

RINCON UNIT # 167-M

RIO ARriba COUNTY, NEW MEXICO

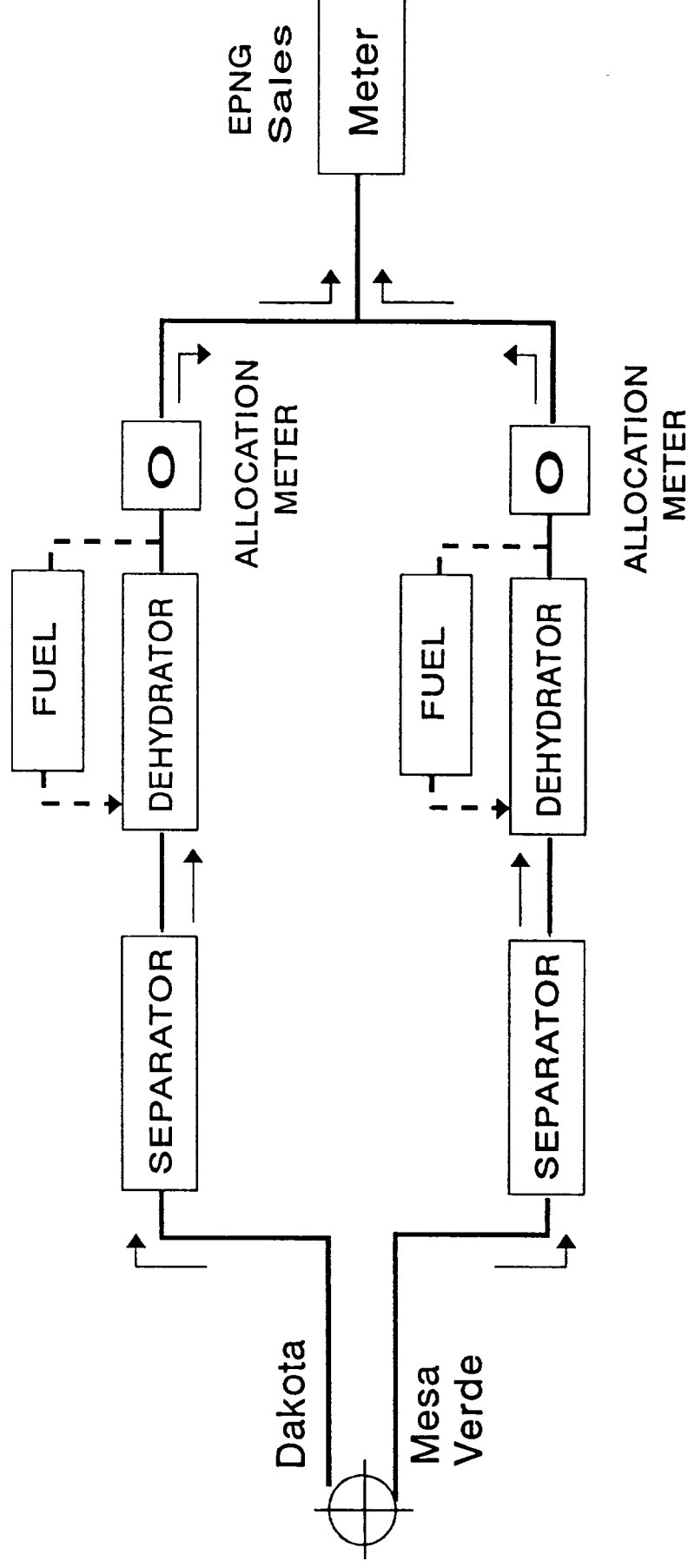


EXHIBIT No. 2

UNOCAL ⁷⁰

OIL ACCOUNTING SCHEMATIC

RINCON UNIT # 167-M

RIO ARRIBA COUNTY, NEW MEXICO

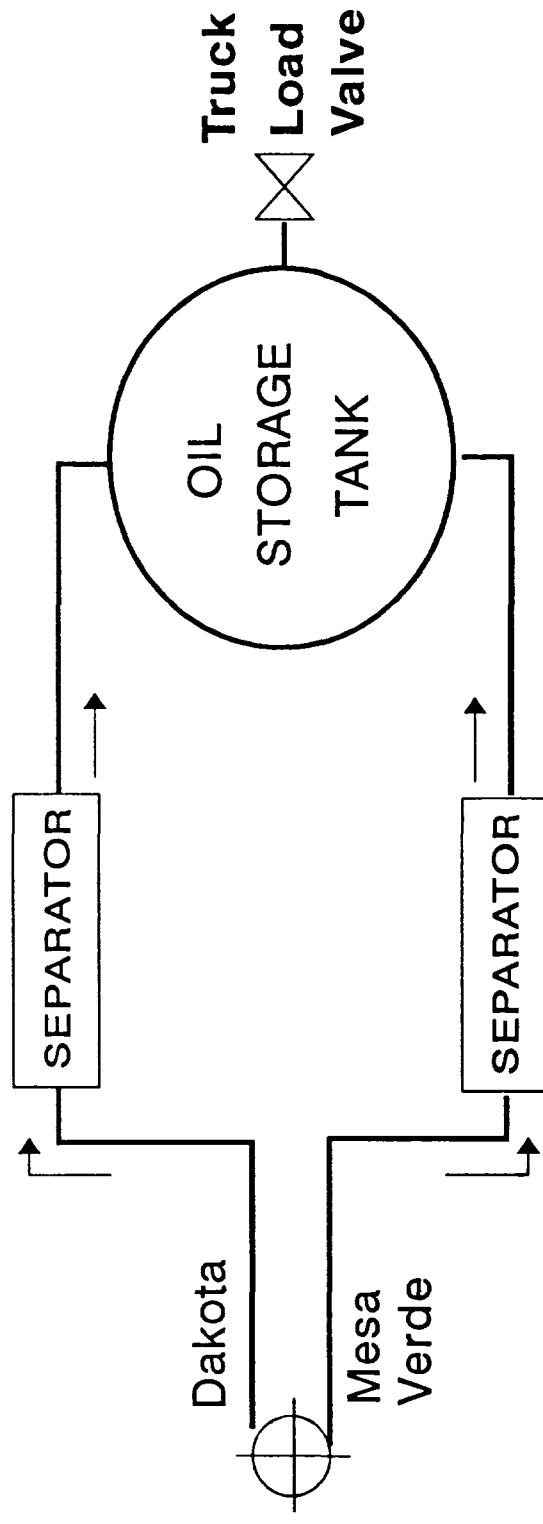
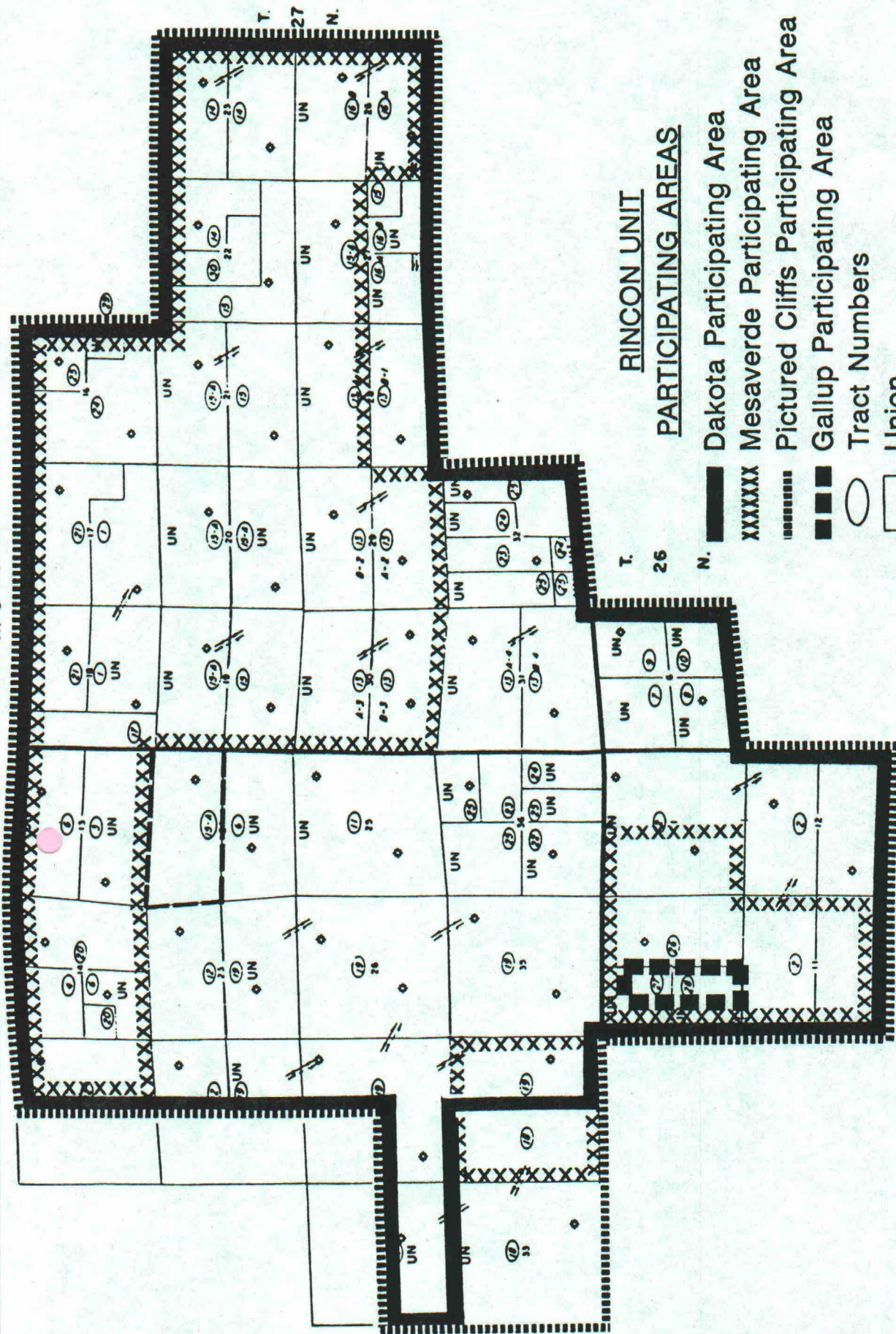


EXHIBIT No. 3

R. 7 W. R. 6 W.



Rio Arriba County, New Mexico

EXHIBIT #4

FEDERAL LEASE #	# ACRES	LOCATION
SF-079298 - D	768.76	T27N - R7W Sec 13 N/2 Sec 14: NE/4SW/4, S/2SW/4 Sec 24: S/2

OTHER WELLS ON LEASE

WELL #	PRODUCING ZONE	LOCATION (T27N - R7W)
36	PICTURED CLIFFS	975' FSL, 1450' FWL, Sec 14
58	PICTURED CLIFFS	990' FSL, 980' FWL, Sec 24
59	PICTURED CLIFFS	1650' FSL, 1645' FEL, Sec 24
88	PICTURED CLIFFS /MESAVERDE	1800' FSL, 1750' FEL, Sec 13
87	PICTURED CLIFFS	1800' FSL, 1700' FWL, Sec 13
133	DAKOTA	1600' FSL, 1650' FWL, Sec 14
137	MESAVERDE /DAKOTA	1500' FNL, 1800' FWL, Sec 24
276	FRUITLAND	1080' FNL, 1240' FEL, Sec 13
279	FRUITLAND	1735' FSL, 1456'FWL, Sec 14
* 167 - M	MESAVERDE /DAKOTA	1154'FNL, 1850' FWL, Sec 13

* Proposed Well

EXHIBIT #5

GAS

ALLOCATION CALCULATIONS

1) Allocation Factor (AF):

$$AF = \frac{\text{Integrated Central Meter Volume (MCF/MO)}}{\sum_{1}^2 \text{Integrated Individual Meter Volumes (MCF/MO)}}$$

2) Allocation to Individual Zones:

Zone	Integrated Individual Meter Volume	Monthly AF	Allotted Volume (MCF/MO)
Mesa Verde	Vol ₁	AF	Vol ₁ x AF
Dakota	Vol ₂	AF	Vol ₂ x AF

EXHIBIT #6
OIL
ALLOCATION CALCULATIONS

1) Production Test completed on both zones, yields:

$$\text{Mesa Verde Test Rate} = R_1 \text{ (BPD)}$$

$$\text{Dakota Test Rate} = R_2 \text{ (BPD)}$$

2) Days On / Month

$$\text{Mesa Verde Days On} = A$$

$$\text{Dakota Days On} = B$$

3) i) Actual Total Monthly Gauge Volume: G (BPM)

ii) Calculated Individual Volumes:

$$\text{Mesa Verde} = R_1 \times A$$

$$\text{Dakota} = R_2 \times B$$

$$\text{Total Volume} = R_1(A) + R_2(B)$$

4) Allocation Factor (AF):

$$AF = \frac{G}{R_1(A) + R_2(B)}$$

5) Corrected Allocation Volumes:

$$\text{Mesa Verde} = AF \times R_1(A)$$

$$\text{Dakota} = AF \times R_2(B)$$

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June 8, 1992

Farmington District

Bureau of Land Management
1235 LaPlata Highway
Farmington, NM 87401
ATTN: Mr. Ken Townsend

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The proposed location is within existing Dakota and Mesa Verde participating areas within the Rincon Unit (Exhibit No. 3). The lease is a federal lease and is described in Exhibit No. 4. The royalty in the two formations is the same.

Unocal is requesting from the Bureau of Land Management, approval for surface commingling of the produced gas and approval for the following method of allocating production from the central meter to the individual meters. Unocal will calculate a monthly allocation factor, as shown in Exhibit No. 5, part 1. The allocation factor will then be used as illustrated in Exhibit No. 5, part 2, to determine individual meter volumes. To ensure the accuracy of the individual meters, Unocal will continue to calibrate, perform orifice plate inspections, and settlement tests as described in BLM Onshore Oil and Gas order No. 5, Measurement of Gas.

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Very truly yours,

Union Oil Company of California
dba Unocal

A handwritten signature in dark ink, appearing to read "Glen O. Papp", is written over the typed name.

Glen O. Papp
District Production Engineer

pmh

cc:NMOCD Aztec Office--Frank Chavez
NMOCD Santa Fe Office--David Catanach