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**Unit**

DHC 8-8-95  
1144

July 17, 1995

Mr. William J. LeMay, Director  
New Mexico Oil Conservation Division  
2040 S. Pacheco Street  
P. O. Box 6429  
Santa Fe, NM 87505

**Application for Exception to Rule 303-A**  
**Downhole Commingling**  
**Jicarilla Gas Com B#1 Well**  
**1450' FNL, 1850' FEL, Unit G Section 31-T26N-R5W**  
**Basin Dakota and Otero Chacra Pools**  
**Rio Arriba County, New Mexico**

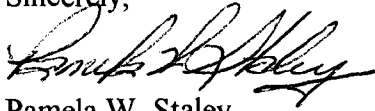
Amoco Production Company hereby requests administrative approval to downhole commingle production from the Basin Dakota and Otero Chacra Pools in the Jicarilla Gas Com B#1 well referenced above. The Jicarilla Gas Com B#1 well was originally a dual completion in the Dakota and Chacra formations. This wellbore is currently producing from the Dakota only as the liquid loading and resulting pressure in the wellbore have caused the Dakota to be restricted and the Chacra to quit producing. Downhole commingling of these two formations and subsequent lift improvements using a plunger system are expected to result in greater than 40% improvement in gas production. The two zones are expected to produce at a total commingled rate of about 193 MCFD with 4 BOPD. The ownership (WI, RI, ORI) of these pools is identical in this wellbore. Downhole commingling will offer an economical method of production while protecting against reservoir damage, waste of reserves and violation of correlative rights. Offset operators to this well will receive a copy of this application by certified mail.

The allocation method that we plan to use for this commingled well is as follows. Since these formations have been producing as a dual completion in this wellbore for some time, we have a good historical representation of the production by formation. Based on historical production we recommend that the allocation for gas production be 85% of the gas production to the Dakota formation and 15% of the gas production to the Chacra formation. We recommend that 100% of the liquid production be attributed to the Dakota formation as the Chacra formation has not historically produced liquids in this well. The actual commercial value of the commingled production will not be less than the sum of the values of the production from each of the common sources of supply.

Attached to aid in your review are plats showing the location of the well and offset wells in the same formation, a historical and recent production plot and a C-102 for each formation. This spacing unit

is located on a federal lease (Jicarilla Apache Tribal #155) and we will send a copy of the application to the BLM requesting their consent. Should you have questions concerning this matter, please contact me at (303) 830-5344.

Sincerely,



Pamela W. Staley

Enclosures

cc: Steve Smethie  
Patty Haefele

Frank Chavez, Supervisor  
NMOCD District III  
1000 Rio Brazos Road  
Aztec, NM 87410

Duane Spencer  
Bureau of Land Management  
1235 La Plata Hwy  
Farmington, NM 87401

**Application for Exception to Rule 303: SEGREGATION OF PRODUCTION FROM POOLS**

**Requirements**

- (1) Name and address of the operator:

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

- (2) Lease name, well number, well location, name of the pools to be commingled:

Lease Name: Jicarilla Gas Com B  
Well Number: 1  
Well Location: 1450' FNL, 1850' FEL  
Unit G Section 31-T26N-R5W  
Rio Arriba County, New Mexico

Pools Commingled: Basin Dakota and Otero Chacra Pools

- (3) A plat of the area showing the acreage dedicated to the well and the ownership of all offsetting leases.

Attached

- (4) A current (within 30 days) 24-hour productivity test on Division Form C-116 showing the amount of oil, gas and water produced from each zone.

The Basin Dakota once produced an average stabilized rate of 163 MCFD and 4 BCPD. The Otero Chacra zone once produced at an average rate of about 30 MCFD and 0 BCPD. Recent production from the two zones has been 113 MCFD and 0 BCPD from the Dakota and 0 MCFD and 0 BCPD from the Chacra. It is our opinion that with downhole commingling and plunger lift equipment that these rates can again be attained.

- (5) A production decline curve for both zones showing that for a period of at least one year a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes.

Otero Chacra Completion: Historical production curve attached.  
Basin Dakota Completion: Historical production curve attached.

- (6) Estimated bottomhole pressure for each zone. A current (within 30 days) measured bottom hole pressure for each zone capable of flowing.

Bottomhole pressures were estimated from 24 hour bottomhole shut-in pressures taken from a seven day shut-in . Surface tubing pressure in the Dakota was 500 PSI while the Chacra was 410 PSI.

- (7) A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the wellbore.

The fluids have no abnormal components that would prohibit commingling, or promote the creation of emulsions or scale. API gravity for the Chacra formation is approximately 49 degrees API while the Dakota gravity is 60 degrees API .

- (8) A computation showing that the value of the commingled production will not be less than the sum of the values of the individual streams:

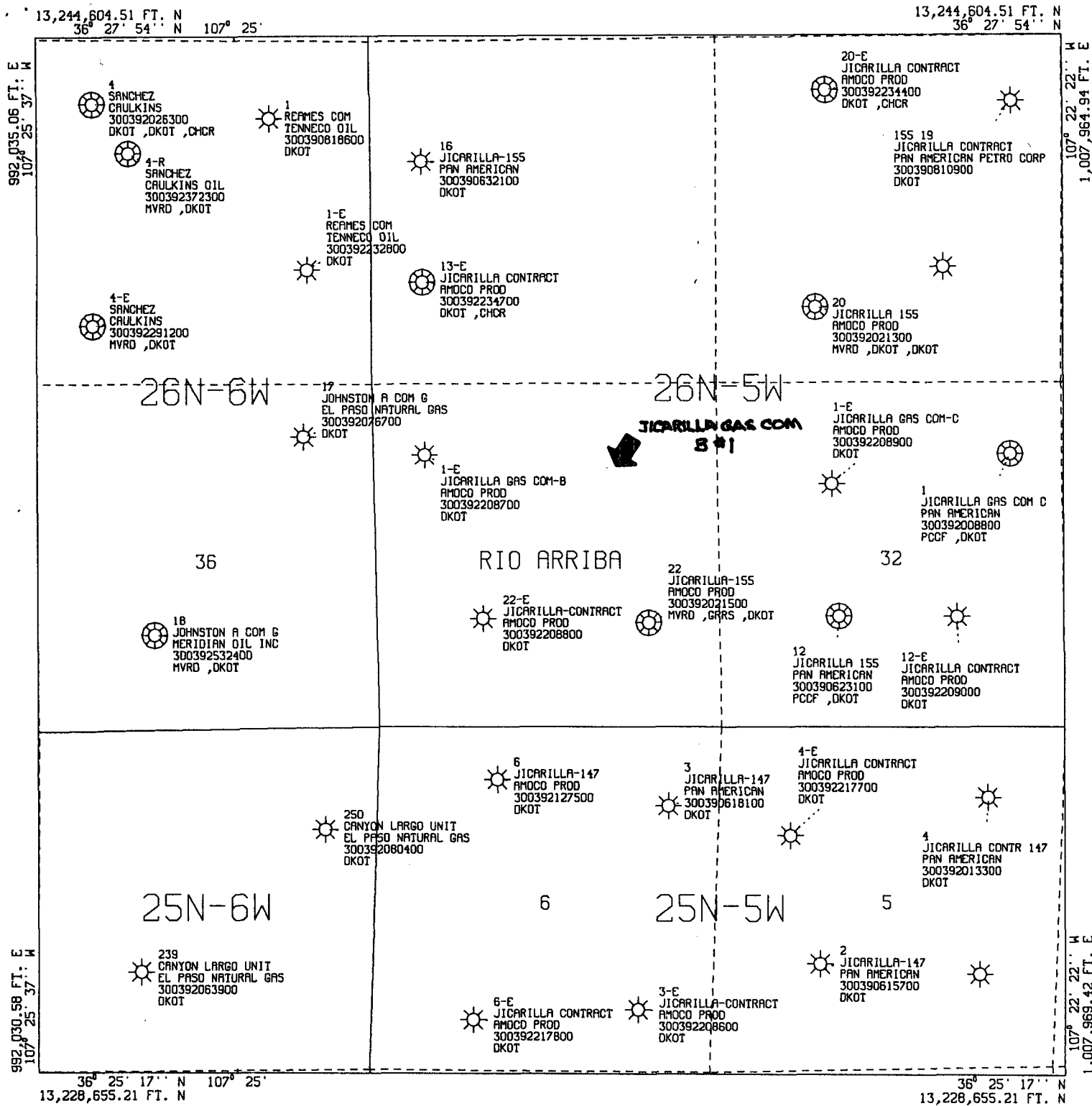
Since the produced fluids are very similar, we would expect the commingled production to have the same value as the sum of the individual streams.

- (9) A formula for the allocation of production to each of the commingled zones and a description of the factors or data used in determining such formula:

Since these formations have been producing as a dual completion in this wellbore for some time, we have a good historical representation of the production by formation. Based on historical production we recommend that the allocation for gas production be 85% of the gas production to the Dakota formation and 15% of the gas production to the Chacra formation. We recommend that 100% of the liquid production be attributed to the Dakota formation as the Chacra formation has not historically produced liquids in this well. The actual commercial value of the commingled production will not be less than the sum of the values of the production from each of the common sources of supply.

- (10) A statement that all offset operators and, in the case of a well on federal land, the United States Bureau of Land Management, have been notified in writing of the proposed commingling.

BLM will receive a copy of this application by certified mail. The offsetting operators listed on the attached sheet will receive a copy of this application by certified mail.

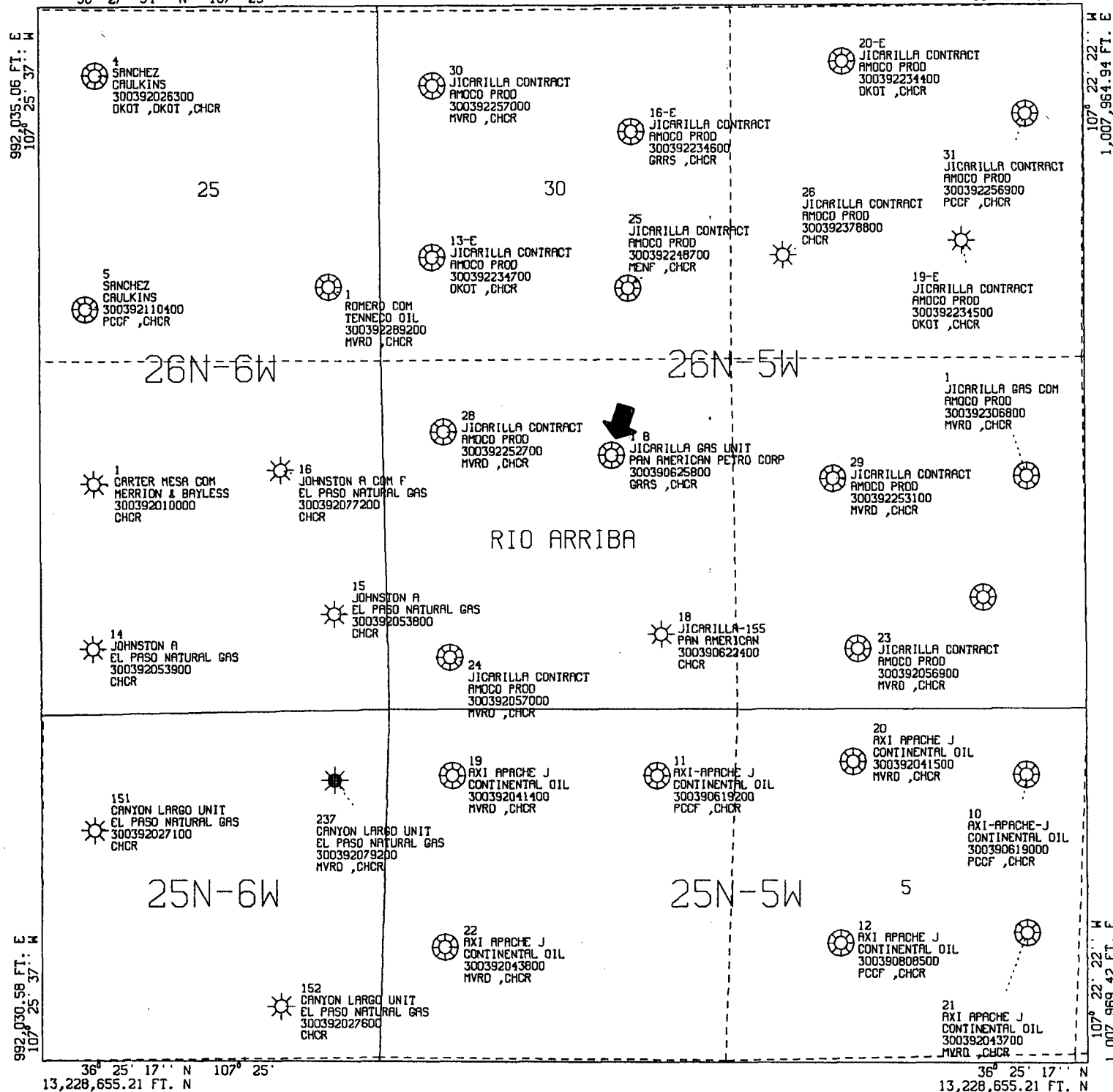


All geological and geophysical data, including the interpretation thereof, appearing on this map is the private and confidential property of Amoco Production Company. The publication or reproduction thereof without the written permission of said Company is strictly prohibited.

AMOCO PRODUCTION COMPANY  
PLAT MAP  
Jicarilla Gas Com B 1  
Dakota

SCALE 1 IN. = 2,000 FT. JUN 9, 1995

13,244,604.51 FT. N  
36° 27' 54" N



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POLYCONIC CENTRAL MERIDIAN - 107° 24' 0'' W LON  
SPHEROID - 6

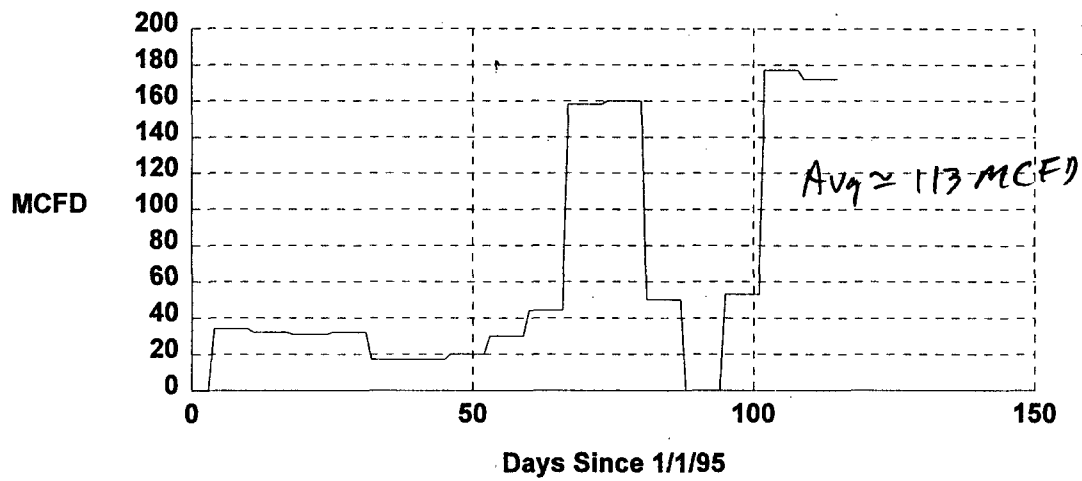
AMOCO PRODUCTION COMPANY  
PLAT MAP  
Jicarilla Gas Com B 1  
Chagra

SCALE 1 IN. = 2,000 FT. JUN 9, 1995

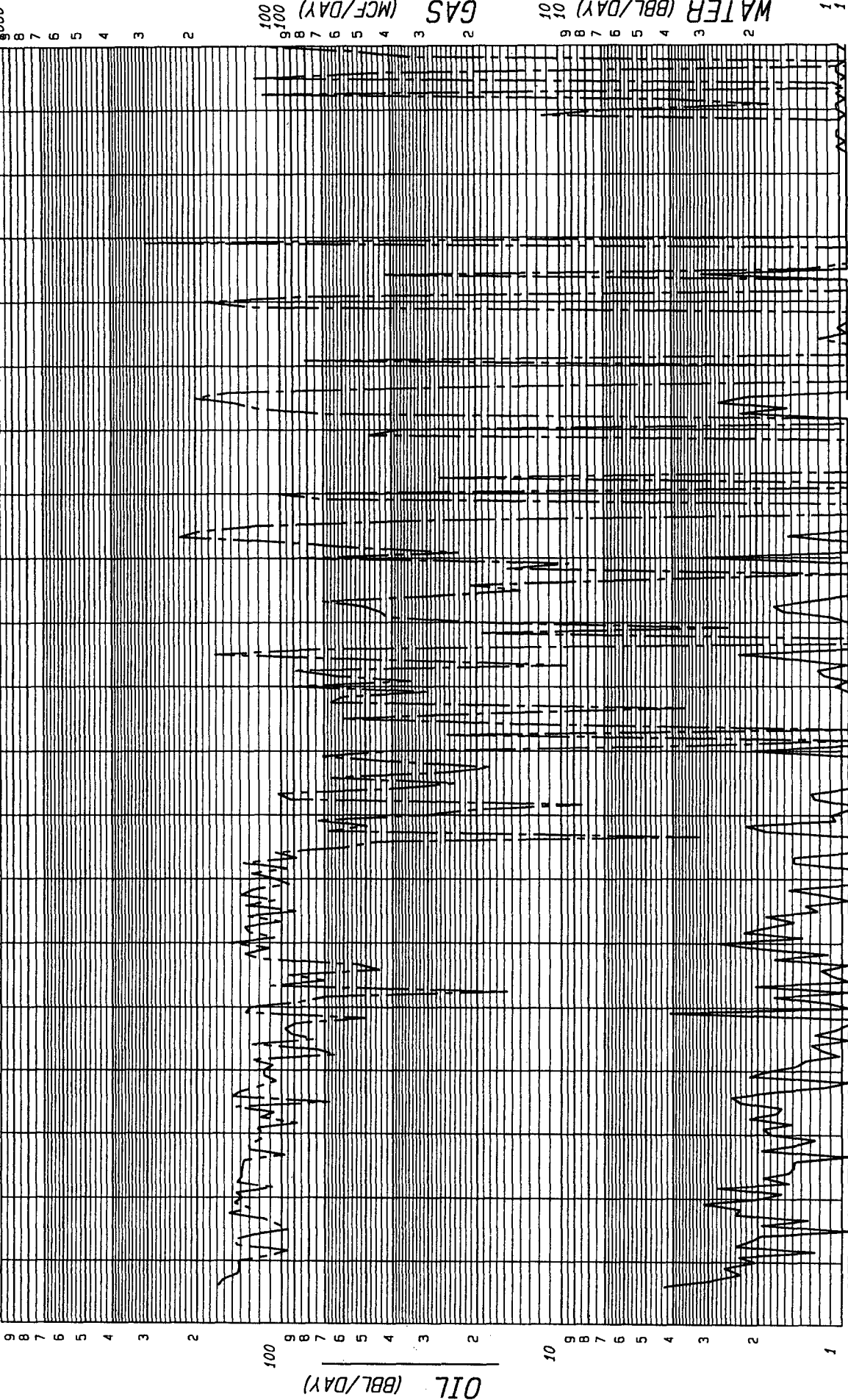
HORIZONTAL. NATIUM NANO27

121--RUN#95160102048

San Juan O.C.  
WELL: JICARILLA GAS COM B 1 DK (92418601)  
(Downtime excluded)



1000 Lease: JICARILLA GAS COM B      000001      Dwrights      Retrieval Code: 251, 039, 26N05W31G00DK      1000



55-  
Annual  
Data

County: RIO ARriba  
Field: BASIN (DAKOTA) DK  
Reservoir: DAKOTA  
Operator: AMOCO PRODUCTION CO  
Oil Cum: 22026      Gas Cum: 1152128  
Location: 31G 26N 5W

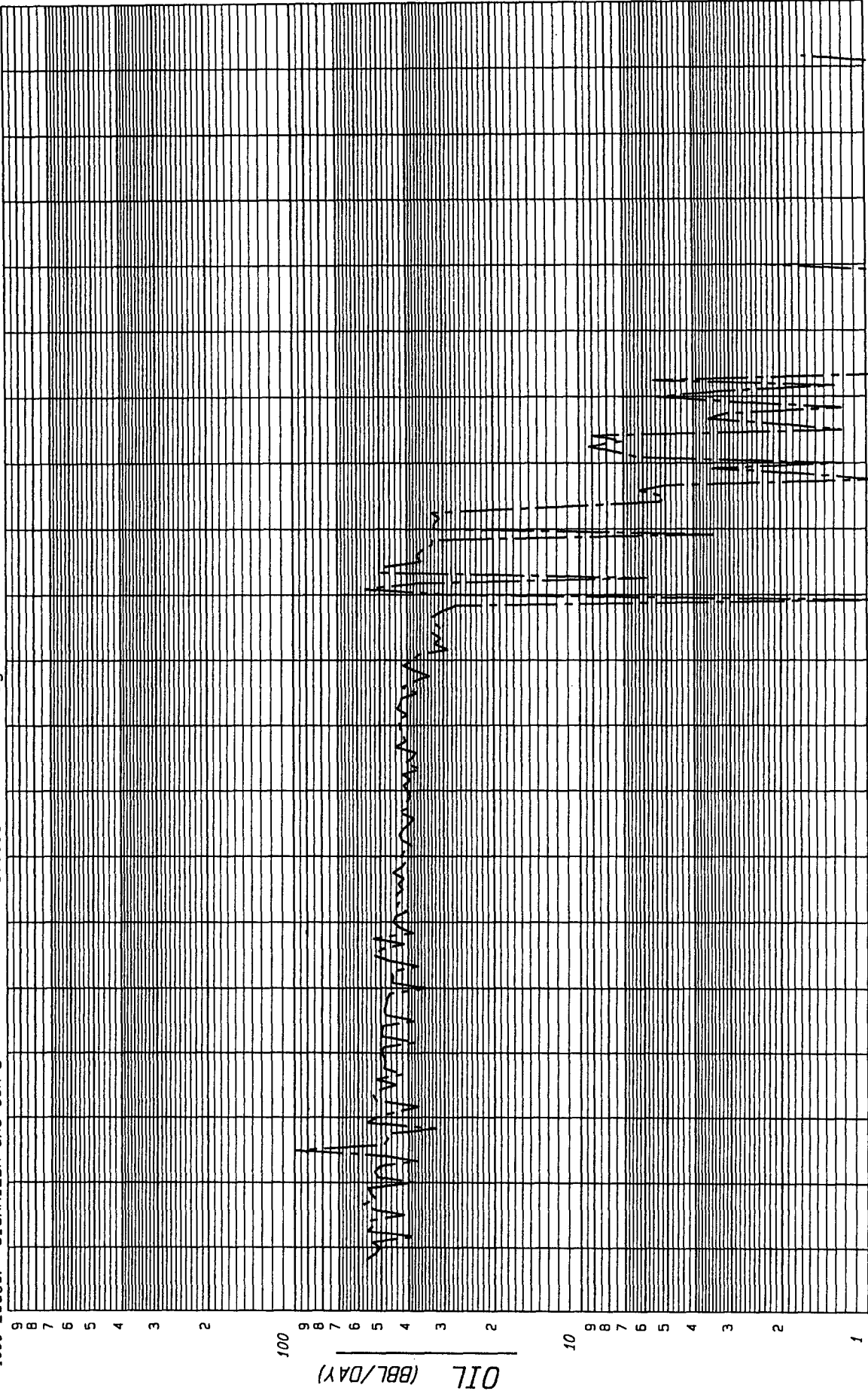
State: NM

F.P. Date 04-62

Date: 05-02-95



1000 Lease: JICARILLA GAS COM B      000001      Dwigts      Retrieval Code: 251, 039, 26N05W31G00CK      1000



63- Annual Date      73      74      75      76      77      78      79      80      81      82      83      84      85      86      87      88      89      90      91

County: RIO ARriba  
Field: OTERO (CHACRA) CK  
Reservoir: CHACRA  
Operator: AMOCO PRODUCTION CO  
Oil Cum: 1579  
Gas Cum: 479679  
Location: 31G 26N 5W  
State: NM

F.P. Date 07-62

Date: 05-02-95

## Well Location and Acreage Dedication Plat

Section A.

Date March 27, 1961

Operator PAN AMERICAN PETROLEUM CORPORATION Lease JICARILLA GAS UNIT "B"  
 Well No. 1 Unit Letter G Section 31 Township 26 NORTH Range 5 WEST, NMPM  
 Located 1450 Feet From the NORTH Line, 1850 Feet From the EAST Line  
 County RIO ARriba G. L. Elevation To report later Dedicated Acreage 319.40 Acres  
 Name of Producing Formation Dakota Pool Basin Dakota

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below?  
 Yes X No \_\_\_\_\_
2. If the answer to question one is "no", have the interests of all the owners been consolidated by communitization agreement or otherwise? Yes \_\_\_\_\_ No \_\_\_\_\_. If answer is "yes", Type of Consolidation.
3. If the answer to question two is "no", list all the owners and their respective interests below:

Owner

Land Description

APR 10 1961  
 OIL CON. COM.  
 DIST. 3

## Section B.

Note: All distances must be from outer boundaries of section.

This is to certify that the information  
 in Section A above is true and complete  
 to the best of my knowledge and belief.

Pan American Petroleum Corporation

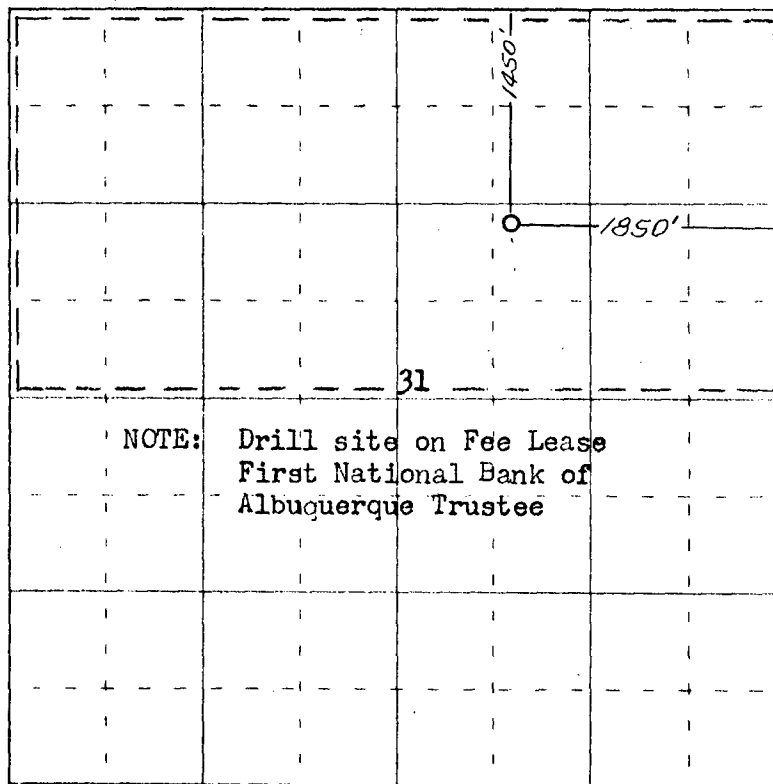
(Operator)

R. M. Bauer, Jr. *RMB*

(Representative)

Box 480, Farmington, New Mexico

(Address)



0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

Scale 4 inches equal 1 mile

Ref: GLO plat dated 4 November 1882



I hereby certify that the above plat was prepared from field notes of actual surveys  
 made by me or under my supervision and that the same are true and correct to the best  
 of my knowledge and belief.

(Seal)

Date Surveyed 24 March 1961

Farmington, New Mexico

*James P. Leese*  
 Registered Professional Engineer and/or Land Surveyor  
 James P. Leese N. Mex. Reg. No. 1463

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TRANSPORTER	OIL
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PRODUCTION OFFICE	
OPERATOR	

# NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-128  
Revised 5/1/57

## WELL LOCATION AND ACREAGE DEDICATION PLAT

SEE INSTRUCTIONS FOR COMPLETING THIS FORM ON THE REVERSE SIDE

### SECTION A

Operator <b>Pan American Petroleum Corporation</b>		Lease <b>Jicarilla Gas Unit "B"</b>		Well No. <b>1</b>
Unit Letter <b>0</b>	Section <b>31</b>	Township <b>26 North</b>	Range <b>5 West</b>	County <b>Rio Arriba</b>
Actual Footage Location of Well: <b>1450</b> feet from the <b>North</b> line and <b>1850</b> feet from the <b>East</b> line				
Ground Level Elev. <b>6405</b>	Producing Formation <b>Chacra</b>	Pool <b>Otero Chacra</b>	Dedicated Acreage: <b>160</b> Acres	

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES ☒ NO ☐ ("Owner" means the person who has the right to drill into and to produce from any pool and to appropriate the production either for himself or for himself and another. (65-3-29(e) NMSA 1935 Comp.)
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES ☐ NO ☐ If answer is "yes," Type of Consolidation \_\_\_\_\_
3. If the answer to question two is "no," list all the owners and their respective interests below:

Owner	Land Description

### SECTION B

<div style="text-align: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">1450</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">1850</div> </div>		<div style="text-align: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">1450</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">1850</div> </div>	
<p><b>NOTE:</b> Form C-128 filed to show acreage dedication for the Chacra gas zone on well to be dually completed in the Dakota and Chacra formations.</p>			

### CERTIFICATION

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

*R. M. Bauer, Jr.*

Name	<b>R. M. Bauer, Jr.</b>
Position	<b>Senior Petroleum Engineer</b>
Company	<b>Pan American Petroleum Corp.</b>
Date	<b>May 18, 1961</b>

I hereby certify that the well location shown on the plat in SECTION B 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 knowledge and belief.

Date Surveyed	<b>March 24, 1961</b>
Registered Professional Engineer and/or Land Surveyor	<b>Original /s/ James P. Loebe</b>

Certificate No. **1163**

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

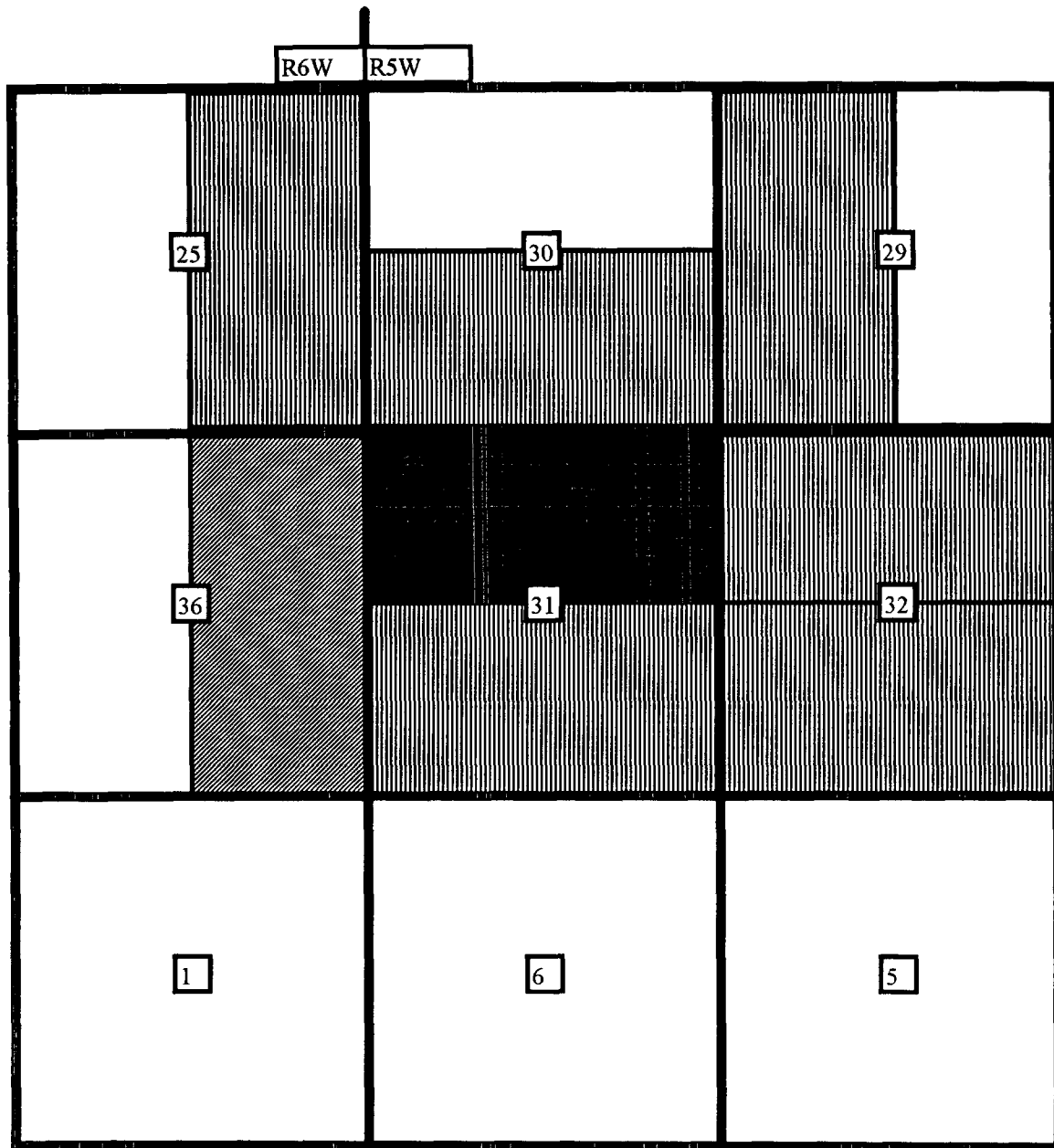
**AMOCO PRODUCTION COMPANY OFFSET OPERATOR PLAT**

**JICARILLA GAS COM B#1**

**1450' FNL, 1850' FEL**

**Unit G Section 31-T26N-R5W**

**Basin Dakota Pool**



**SPACING UNIT TO BE DOWNHOLE COMMINGLED**



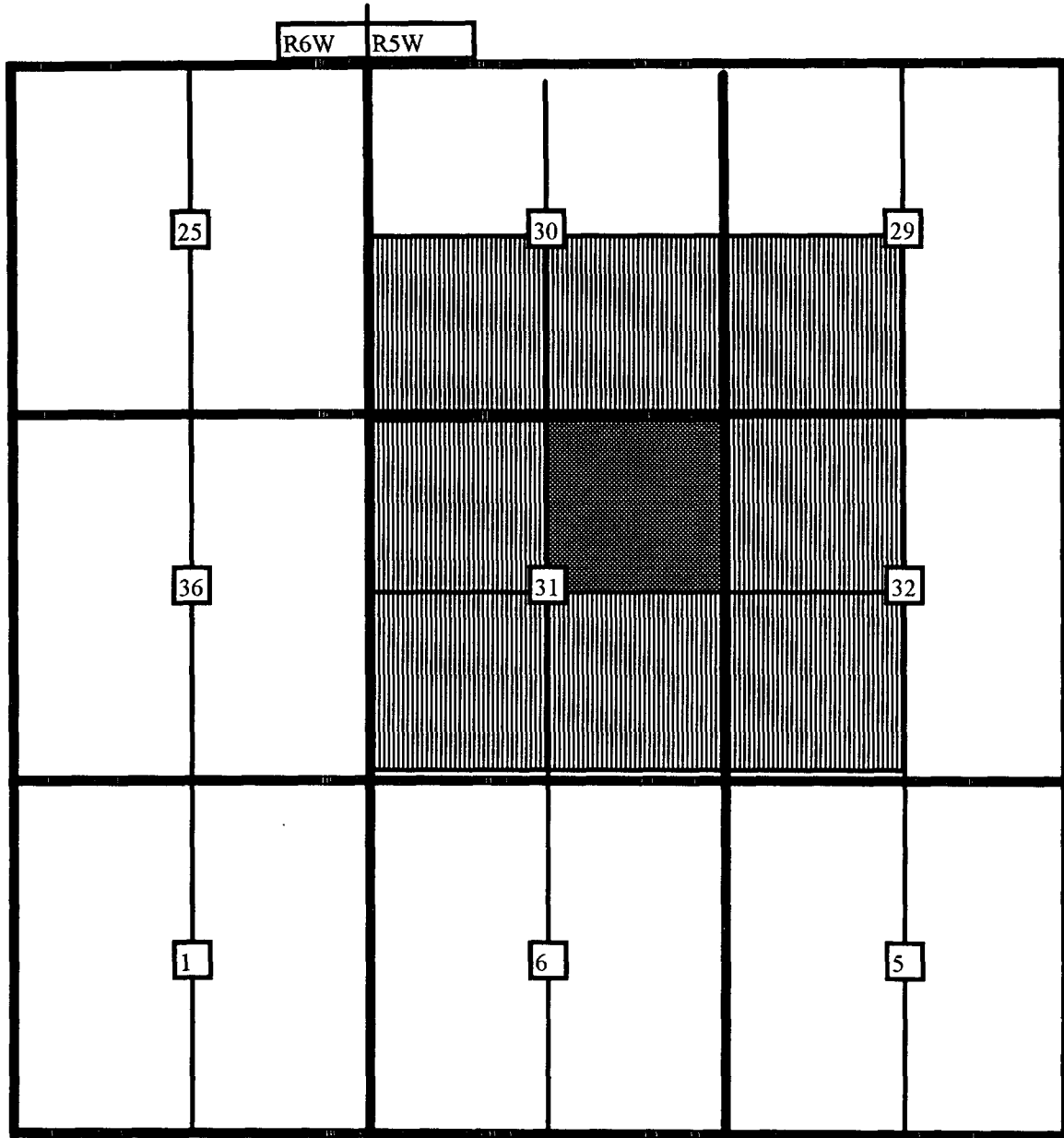
**AMOCO PRODUCTION COMPANY**



**MERIDIAN OIL COMPANY**

**AMOCO PRODUCTION COMPANY OFFSET OPERATOR PLAT**

**JICARILLA GAS COM B#1  
1450' FNL, 1850' FEL  
Unit G Section 31-T26N-R5W  
Otero Chacra Pool**



**SPACING UNIT TO BE DOWNHOLE COMMINGLED**



**AMOCO PRODUCTION COMPANY**

LIST OF ADDRESSES FOR OFFSET OPERATORS  
Jicarilla Gas Com B #1

*I* Meridian Oil, Inc.  
P.O. Box 4289  
Farmington, NM 87401