



March 13, 1996

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-C**  
**Downhole Commingling**  
**Romero Com #1 Well**  
**1120' FSL & 790' FEL, Unit P Section 25-T26N-R6W**  
**Blanco Mesaverde (Pool IDN 72319) and Otero Chacra (Pool IDN 82329) Pools**  
**Rio Arriba County, New Mexico**

Amoco Production Company hereby requests administrative approval to downhole commingle production from the Blanco Mesaverde and Otero Chacra Pools in the Romero Com #1 well referenced above. The Romero Com #1 well was originally a dual completion in the Mesaverde and Chacra formations. This well has a marginal Chacra formation which is being produced dually with a marginal Mesaverde. If this well is left as a dual completion, the marginal zones will not be economic much longer. We plan to complete the well with both the Mesaverde and Chacra formations being downhole commingled in the wellbore. The two zones are expected to produce at a total commingled rate of about 289 MCFD with 5.46 BCPD due to the increased efficiencies of lifting liquids. Current production is 120 MCFD and 4.95 BCPD from the Mesaverde and 19 MCFD and 0.01 BCPD from the Chacra formation. The ownership (WI, RI, ORI) of these pools is not 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. Amoco is the only offset operator in both formations. All interest owners will also receive a copy of this application as their notice.

The allocation method that we plan to use for this commingled well is as follows. Since these formations have been producing 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 86% from the Mesaverde formation and 14% from the Chacra formation. The Chacra has historically produced only a very small amount of liquids in this well (0.01 BCPD). The Mesaverde produces 5.45 BCPD. Based on that fact, we propose to allocate 99% of the liquid production to the Mesaverde formation and 1% to the Chacra. 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.

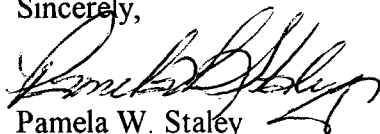
Attached to aid in your review are plats showing the location of the well and offset wells in the same

DHC 4-8-96  
RCV'D 3-18-96 1222  
Southern  
Rockies  
Business  
Unit

formations, a historical production plot, recent production information and a C-102 for each formation. This spacing unit is on a federal lease (SF-080658) and a copy of the application will be sent to the BLM as required.

Should you have questions concerning this matter, please contact me at (303) 830-5344.

Sincerely,

  
Pamela W. Staley

Enclosures

cc: Steve Smethie  
Patty Haeefe  
Wellfile  
Proration Files

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

Robert Kent  
Bureau of Land Management  
435 Montano NE  
Albuquerque, NM 87107

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: Romero Com  
Well Number: #1  
Well Location: 1120' FSL & 790' FEL  
Unit P Section 25-T26N-R6W  
Rio Arriba County, New Mexico

Pools Commingled: Otero Chacra  
Blanco Mesaverde

- (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 Mesaverde produced an average stabilized rate of 120 MCFD and 4.95 BCPD. The Chacra zone produced at an average rate of about 19 MCFD and 0.01 BCPD.

- (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.
Blanco Mesaverde 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 OCD Packer Leakage Tests. Shut-in bottomhole pressure in the Chacra formation is calculated to be 694 PSIG while estimated bottomhole pressure in the Mesaverde formation is 1095 PSIG. Therefore these pressures meet the pressure differential rule under article 303-C (b)(vi). See attached calculation and packer leakage test results.

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

The fluids in the Mesaverde have no abnormal components that would prohibit commingling, or promote the creation of emulsions or scale when commingled with the Chacra formation.

- (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:

The BTU content of the produced streams are very similar and as such, 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:

The allocation method that we plan to use for this commingled well is as follows. Since these formations have been producing 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 86% from the Mesaverde formation and 14% from the Chacra formation. The Chacra has historically produced only a very small amount of liquids in this well (0.01 BCPD). The Mesaverde produces 5.45 BCPD. Based on that fact, we propose to allocate 99% of the liquid production to the Mesaverde formation and 1% to the Chacra. 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.

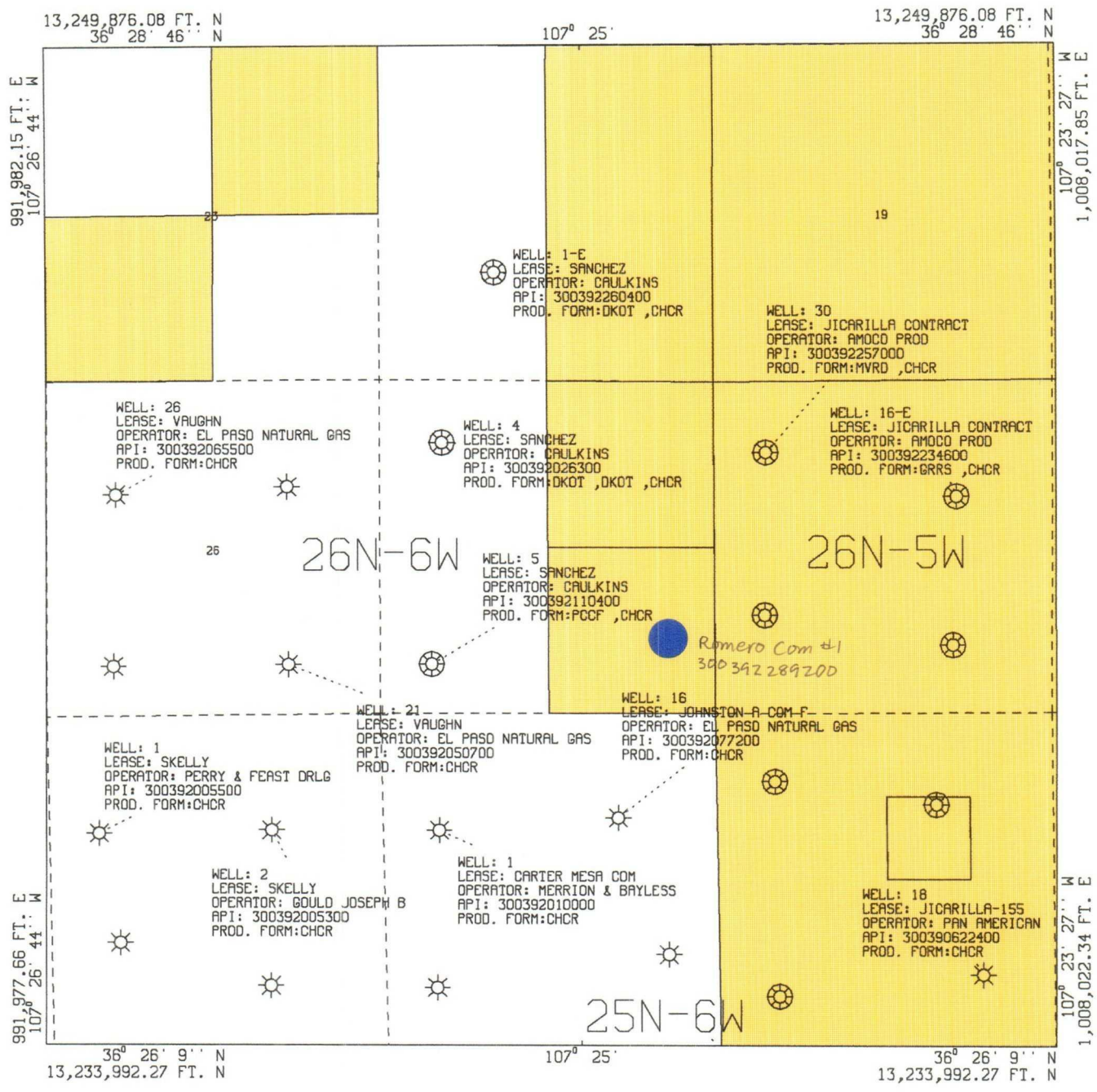
- (10) A statement that all offset operators and, in the case of a well on federal land, the United States Bureau of Land Management, have been notified in writing of the proposed commingling.

BLM will receive a copy of this application by certified mail. Amoco is the only offset operator in both formations.

- (11) Referencing NMOCD Order No. 10470 Rule 303 (D) (11): In a case where there is diversity of ownership between the zones to be commingled (including working royalty, or overriding royalty interest), the applicant shall submit a statement that all such interest owners have been notified in writing of the proposed commingling.

All interest owners in the two formations will receive a copy of this application by certified mail.

PLOT 1 06.38.07 SAT 4 NOV, 1995 JOB-P1000402, ISSCO DISSPLA 10.0



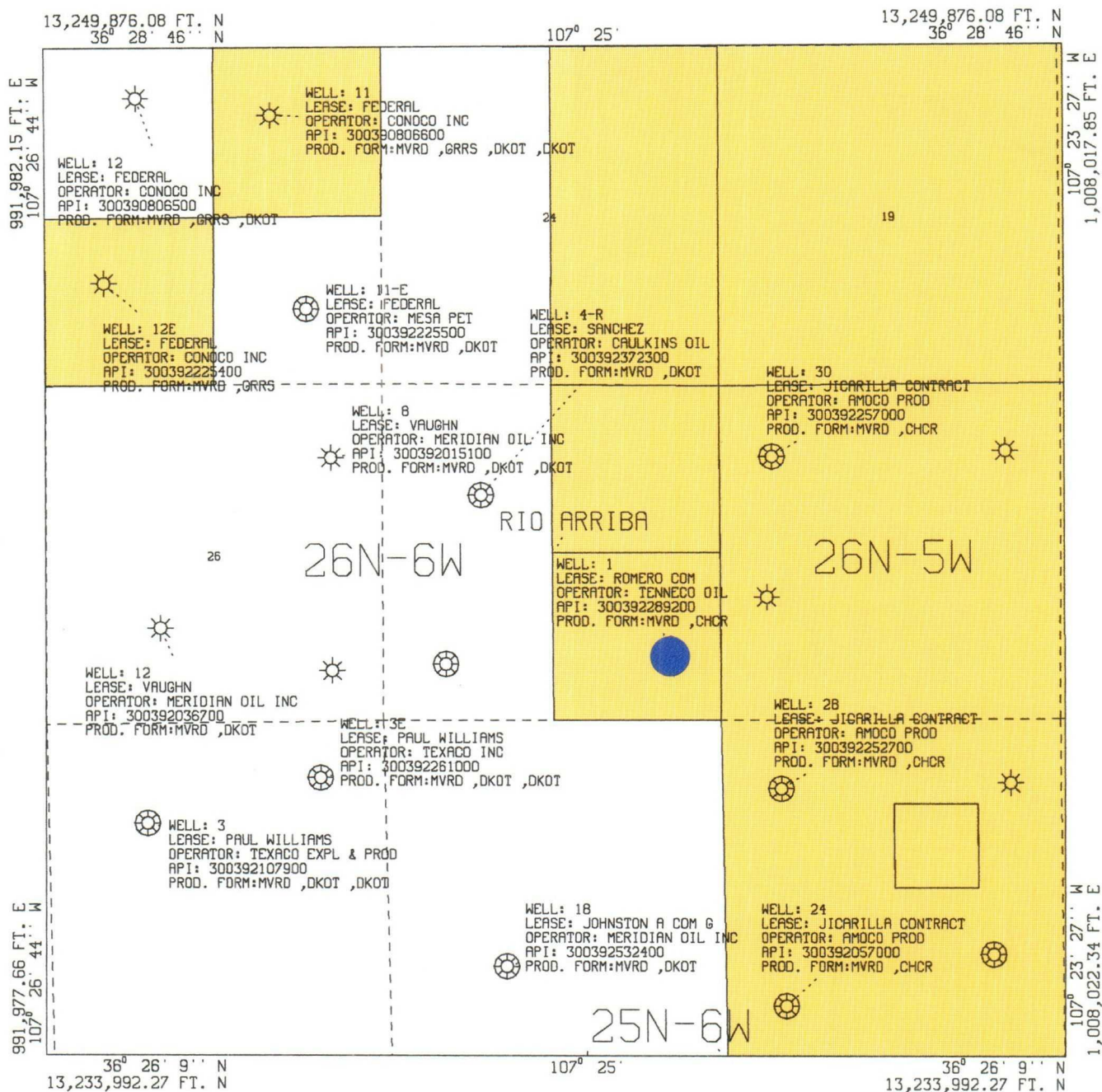
All geological and geophysical data, including the interpretation thereof, appearing on this map is the private and confidential property of Amoco Production Company. The publication or reproduction thereof without the written permission of said Company is strictly prohibited.

AMOCO PRODUCTION COMPANY  
PLAT MAP  
Romero Com #1 Sec 25-T26N-R06W CK  
Rio Arriba New Mexico  
SCALE 1 IN. = 2,500 FT. NOV 4, 1995

HORIZONTAL DATUM NAD27

HAB10004--RUN#95308061635





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AMOCO PRODUCTION COMPANY  
PLAT MAP  
Romero Com #1 Sec 25-T26N-R06W MV  
Rio Arriba New Mexico  
SCALE 1 IN. = 2,500 FT. NOV 4, 1995

HORIZONTAL DATUM NAD27

## OIL CONSERVATION DIVISION

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENTP. O. BOX 2088  
SANTA FE, NEW MEXICO 87501Form C-107  
Revised 10-1-78

All distances must be from the outer boundaries of the Section.

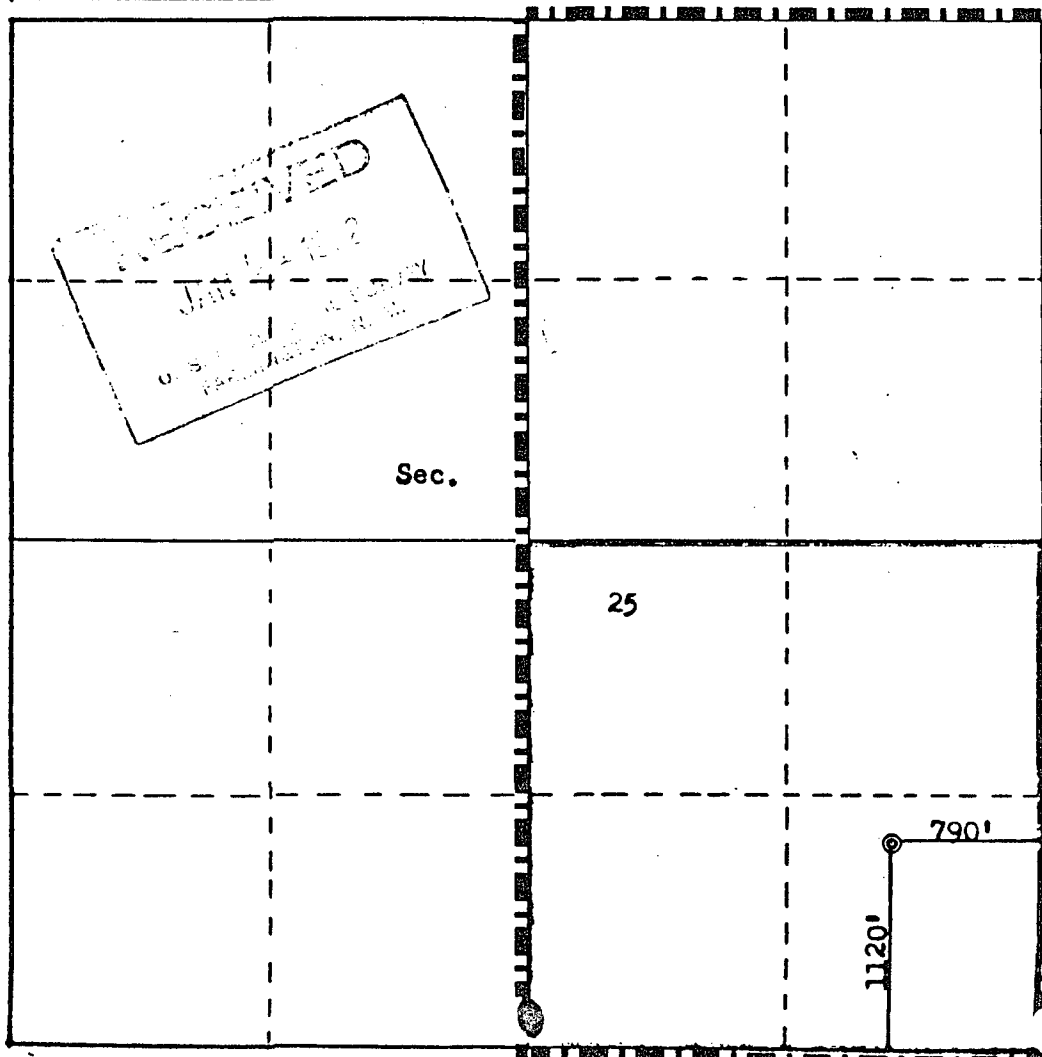
Operator <b>TENNECO OIL COMPANY</b>		Lease <b>ROMERO COM</b>		Well No. <b>1</b>
Unit Letter <b>P</b>	Section <b>25</b>	Township <b>26N</b>	Range <b>6W</b>	County <b>Rio Arriba</b>
Actual Footage Location of Wells <b>1120</b> feet from the <b>South</b> line and <b>790</b> feet from the <b>East</b> line				
Ground Level Elev. <b>6568</b>	Producing Formation <b>Mesaverde/Chacra</b>		Pool <b>Und. Mesaverde/Chacra</b>	Dedicated Acreage <b>320/160</b> Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

		Sec.
		25

## CERTIFICATION

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

*Don H. Harrison*  
Name

Production Analyst

Position

Tenneco Oil Company

Company

10-13-81

Date

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 knowledge and belief.

Date Surveyed

October 1, 1981

Registered Professional Engineer  
and, Land Surveyor*Fred B. Kern*  
Fred B. Kern

Certificate No.

Engr: zhab0b

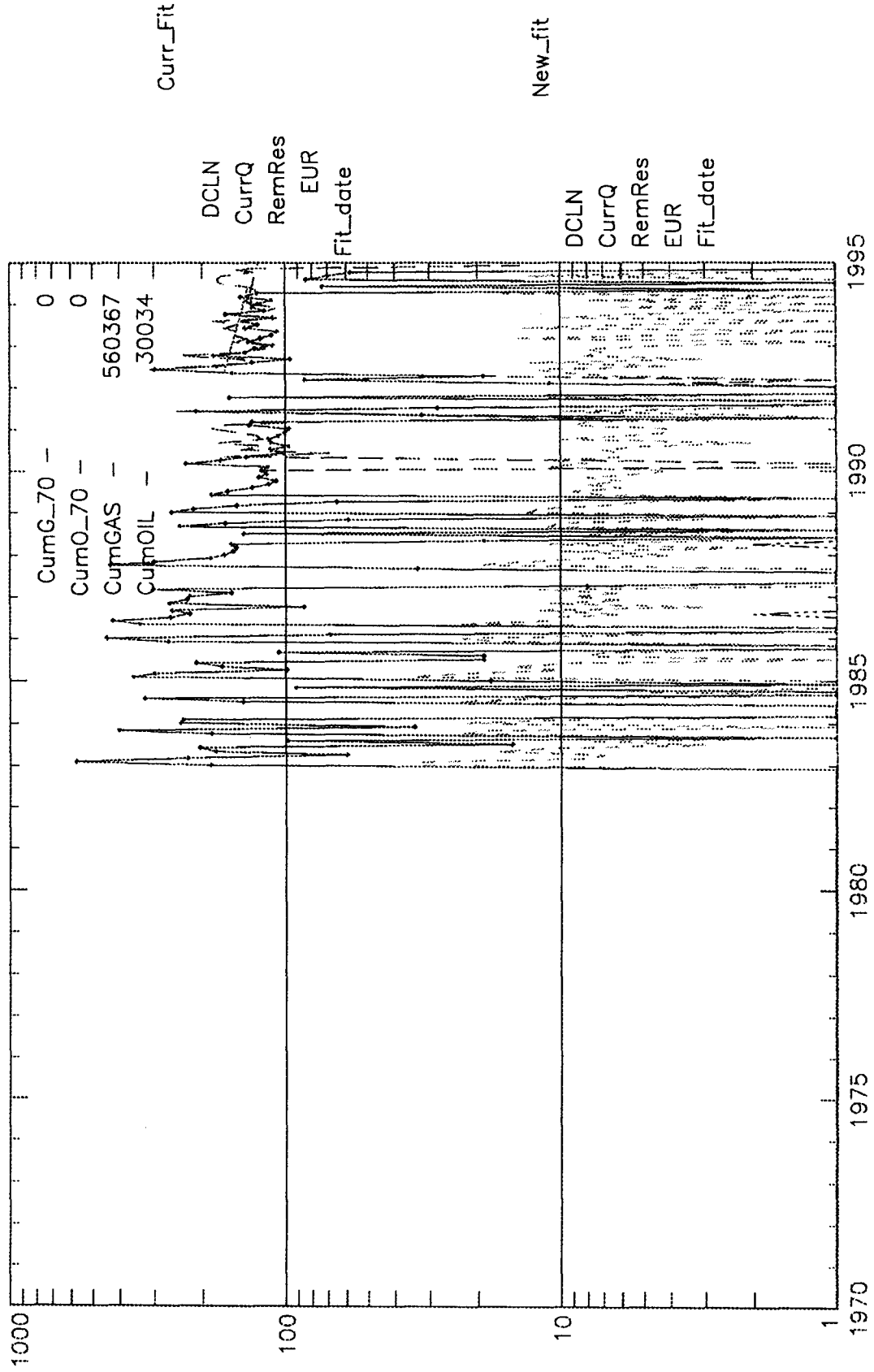
ROMERO COM 1

Operator- AMOCO PRODUCTION CO

300392289200MV

P252606-001 MV

APC\_WI - 0.41667000



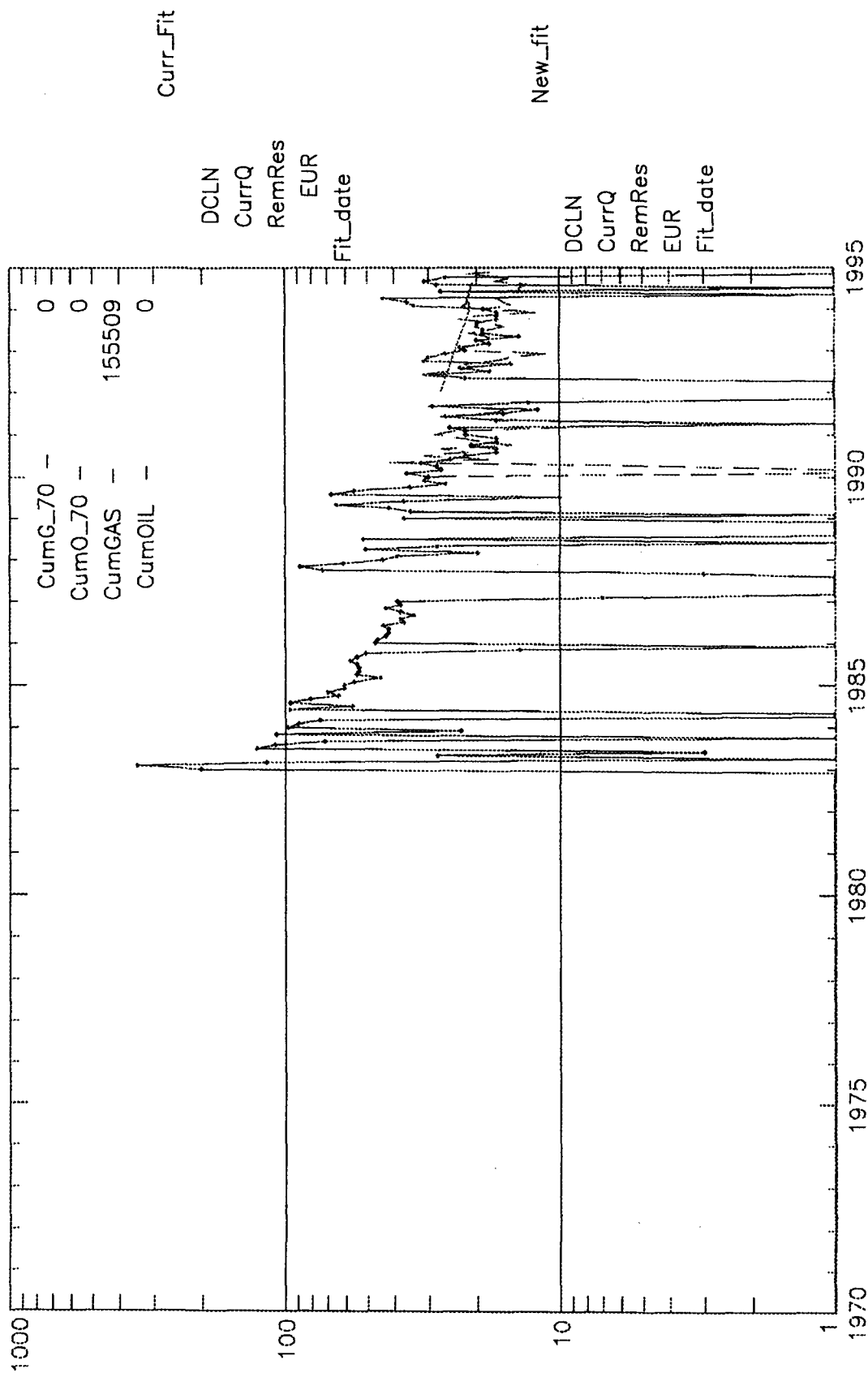


Engr: zhab0b

ROMERO COM 1

Operator-- AMOCO PRODUCTION CO

300392289200CK P252606-001 CK APC\_WI - 0.38889000



ESTIMATED BOTTOMHOLE PRESSURES								
Romero Com #1								
CK	PERFORATIONS	TOP	3700	BOTTOM	3854	MIDPERF	3777	
MV	PERFORATIONS	TOP	5094	BOTTOM	5218	MIDPERF	5156	
	Jan-92	SHUT-IN PRESSURES						
		CK	=	392	PSIG			
		MV	=	683	PSIG			
	GRADIENT	= 0.8 PSI/FT						
		CK BHP =	392	PSIG +	3777	X 0.08 PSIG		
			=	694	PSI			
		MV BHP =	683	PSIG +	5156	X 0.08 PSIG		
			=	1095	PSI			

## Romero Com #1

[illegible]

91 Test

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STATE OF NEW MEXICO  
ENERGY and MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

Page 1  
Revised 10/01/78

This form is not to  
be used for reporting  
packer leakage tests  
in Southeast New Mexico

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

Operator Amoco Production Co. Lease Romero Com Well No. 001  
Location of Well: Unit P Sec. 25 Twp. 26 Rge. 06 County Rio Arriba

	NAME OF RESERVOIR OR POOL	TYPE OF PROD. (Oil or Gas)	METHOD OF PROD. (Flow or Art. Lift)	PROD. MEDIUM (Tbg. or Csg.)
Upper Completion	<u>Chacra</u>			
Lower Completion	<u>Mesa Verde</u>			

PRE-FLOW SHUT-IN PRESSURE DATA

Upper Completion	Hour, date shut-in	Length of time shut-in	SI press. psig <u>392</u>	Stabilized? (Yes or No) <u>Yes</u>
Lower Completion	Hour, date shut-in	Length of time shut-in	SI press. psig <u>683</u>	Stabilized? (Yes or No) <u>Yes</u>

FLOW TEST NO. 1

Commenced at (hour, date)*				Zone producing (Upper or Lower):	
TIME (hour, date)	LAPSED TIME SINCE*	PRESSURE		PROD. ZONE TEMP.	REMARKS
		Upper Completion	Lower Completion		
<u>1/20/92</u>		<u>391</u>	<u>682</u>		<u>SI Both Zones</u>
<u>1/21/92</u>		<u>391</u>	<u>682</u>		
<u>1/22/92</u>		<u>392</u>	<u>683</u>		
<u>1/23/92</u>		<u>389</u>	<u>684</u>		<u>Flow Lower Zone</u>
<u>1/24/92</u>		<u>391</u>	<u>686</u>		<u>Purchaser Down St. Barn</u>
<u>1/25/92</u>		<u>390</u>	<u>674</u>		<u>Line Freeze</u>

Production rate during test

Oil: \_\_\_\_\_ BOPD based on \_\_\_\_\_ Bbls. in \_\_\_\_\_ Hours. \_\_\_\_\_ Grav. \_\_\_\_\_ GOR \_\_\_\_\_

Gas: \_\_\_\_\_ MCFPD; Tested thru (Orifice or Meter): \_\_\_\_\_

MID-TEST SHUT-IN PRESSURE DATA

Upper Completion	Hour, date shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)
Lower Completion	Hour, date shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)

RECEIVED

FEB 25 1992

(Continue on reverse side)

OIL CON. DIV.  
DIST. 3,

**LIST OF OFFSET OPERATORS**  
**ROMERO COM #1**

**CHACRA OFFSET OPERATORS**

NE/4 SEC 25-T26N-R6W - NO CHACRA WELL  
NW/4 SEC 25-T26N-R6W -CAULKINS OIL COMPANY  
SW/4 SEC 25-T26N-R6W -CAULKINS OIL COMPANY  
NW/4 SEC 30-T26N-R5W - AMOCO PRODUCTION COMPANY  
SW/4 SEC 30-T26N-R5W - AMOCO PRODUCTION COMPANY  
NE/4 SEC 36-T26N-R6W - MERIDIAN OIL INC  
NW/4 SEC 36-T26N-R6W - MERIDIAN OIL INC  
NW/4 SEC 31-T26N-R5W - AMOCO PRODUCTION COMPANY

**MESAVERDE OFFSET OPERATORS**

NE/4 SEC 25-T26N-R6W - NO MESAVERDE WELL  
NW/4 SEC 25-T26N-R6W -CAULKINS OIL COMPANY  
SW/4 SEC 25-T26N-R6W -CAULKINS OIL COMPANY  
NW/4 SEC 30-T26N-R5W - AMOCO PRODUCTION COMPANY  
SW/4 SEC 30-T26N-R5W - AMOCO PRODUCTION COMPANY  
NE/4 SEC 36-T26N-R6W - NO MESAVERDE WELL  
NW/4 SEC 36-T26N-R6W - NO MESAVERDE WELL  
NW/4 SEC 31-T26N-R5W - AMOCO PRODUCTION COMPANY

**OFFSET OPERATOR ADDRESSES**

- 1   Caulkins Oil Co.  
     1600 Broadway, Suite 2100  
     Denver, Co 80202
  
- 2   Meridian Oil, Inc.  
     P.O. Box 4289  
     Farmington, NM 87499

69874600 00001  
617000 00  
AMOCO PRODUCTION COMPANY  
P O BOX 591  
TULSA

ZJAM63 69874600 00001  
128111 00  
MCHUGH COMPANIES  
550 S CHERRY ST STE 1225  
OK 74102-0591 DENVER

ZJAM63  
CO 80222-1894

69874600 00001  
122708 00  
JOE DAN BEACH  
P O BOX 11863  
ALBUQUERQUE

ZJAM63 69874600 00001  
137226 00  
MARIE MCKINNON  
10502 MORNING STAR  
NM 87192-0863 ALBUQUERQUE

ZJAM63  
NM 87111-7540

69874600 00001  
137225 00  
HOWARD C BEACH  
P O BOX 2198  
COTTONWOOD

ZJAM63 69874600 00001  
273665 00  
PROFESSIONAL TITLE AGENCY INC  
319 SEVENTH STREET NW SUITE B  
AZ 86326-2198 ALBUQUERQUE

ZJAM63  
NM 87102-2009

69874600 00001  
900903 00  
LINDA MURIEL ADKINS  
2916 SO MORAIN PL  
KENNEWICK

ZJAM63 69874600 00001  
710000 01  
MINERALS MANAGEMENT SERVICE  
ROYALTY MANAGEMENT PROGRAM  
PO BOX 5810 TA  
WA 99337-2505 DENVER

ZJAM63  
CO 80217-5810

69874600 00001  
213549 00  
EDGAR ALFRED AND EVELYN BORING SR  
TRUSTEES UNDER TRUST AGREEMENT DATED  
MARCH 20 1985  
P O BOX 829  
BAYFIELD

ZJAM63 69874600 00001  
497361 46  
MERIDIAN OIL PRODUCTION INC  
P O BOX 840656  
CO 81122-0829 DALLAS

ZJAM63  
TX 75284-0656

69874600 00001  
603416 25  
CONOCO INC  
P O BOX 951063  
DALLAS

ZJAM63 69874600 00001  
900905 00  
JANICE EUGENIA ROBERTSON  
P O BOX 497  
TX 75395-1063 PERALTA

ZJAM63  
NM 87042-0497

69874600 00001  
926370 00  
EL PASO PRODUCTION COMPANY  
P O BOX 840656  
DALLAS

ZJAM63 69874600 00001  
149889 00  
ROMERO FAMILY LIMITED PARTNERSHIP  
P O BOX 5155  
TX 75284-0656 SANTA FE

ZJAM63  
NM 87502-5155

69874600 00001  
900904 00  
MYRA LOUDENE JONES  
3915 S ALDON  
TUCSON

ZJAM63 69874600 00001  
137224 00  
BILLIE LEE SCHRODER  
P O BOX 11863  
AZ 85746-9796 ALBUQUERQUE

ZJAM63  
NM 87192-0863



MYRA LOUDENE JONES  
3915 S ALDON  
TUCSON, AZ 85706

ALICIA V ROMERO  
GENERAL PARTNER  
ROMERO FAMILY LTD PARTNERSHIP  
P O BOX 5155  
SANTA FE, NM 87502