DHC 3-25-96

Southern Rockies Business Unit

February 26, 1996

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

RECEIVED
MAR 4 1996
OIL CONSERVATION DIVISION

Application for Exception to Rule 303-C
Downhole Commingling
Jicarilla 155 #25 Well
1080' FSL & 1570' FEL, Unit O Section 30-T26N-R5W
Blanco Mesaverde (Pool IDN 72319) and Otero Chacra Ext. (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 Extension Pools in the Jicarilla 155 #25 Well referenced above. The Jicarilla 155 #25 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 220 MCFD with 1.33 BCPD due to the increased efficiencies of lifting liquids. 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. Amoco is the only offset operator in both of these formations.

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 79% from the Mesaverde formation and 21% from the Chacra formation. The Chacra has historically produced a very small amount of liquids in this well. Based on that fact, we propose to allocate 99% of the liquid production to the Mesaverde formation and 1% of liquid production 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

formations, a historical production plot, recent production information and a C-102 for each formation. This spacing unit is on a federal lease (Jicarilla Contract 155) 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 Haefele
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:	Jicarilla 155
Well Number:	25
Well Location:	1080' FSL & 1570' FEL Unit O Section 30-T26N-R5W Rio Arriba County, New Mexico
Pools Commingled:	Otero Chacra Extension 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 55 MCFD and 0.82 BCPD. The Chacra zone produced at an average rate of about 15 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 Extension 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 521 PSIG while estimated bottomhole pressure in the Mesaverde formation is 678 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:

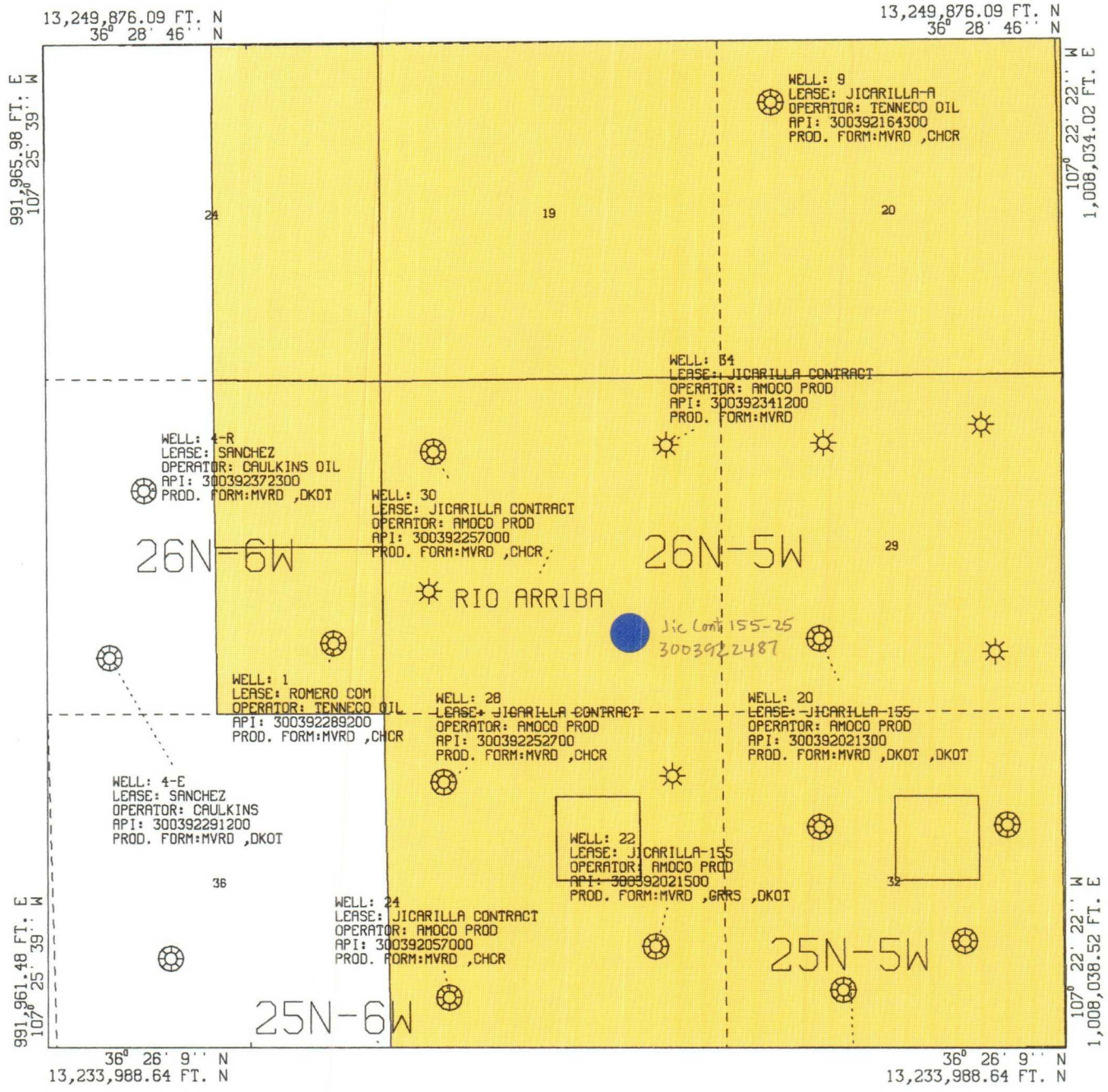
The BTU content of the produced streams are very similar and as such, we would expect the commingled production to have the same value as the sum of the individual streams.

(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 79% from the Mesaverde formation and 21% from the Chacra formation. The Chacra has historically produced a very small amount of liquids in this well. Based on that fact, we propose to allocate 99% of the liquid production to the Mesaverde formation and 1% of liquid production 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 to this well in both formations.



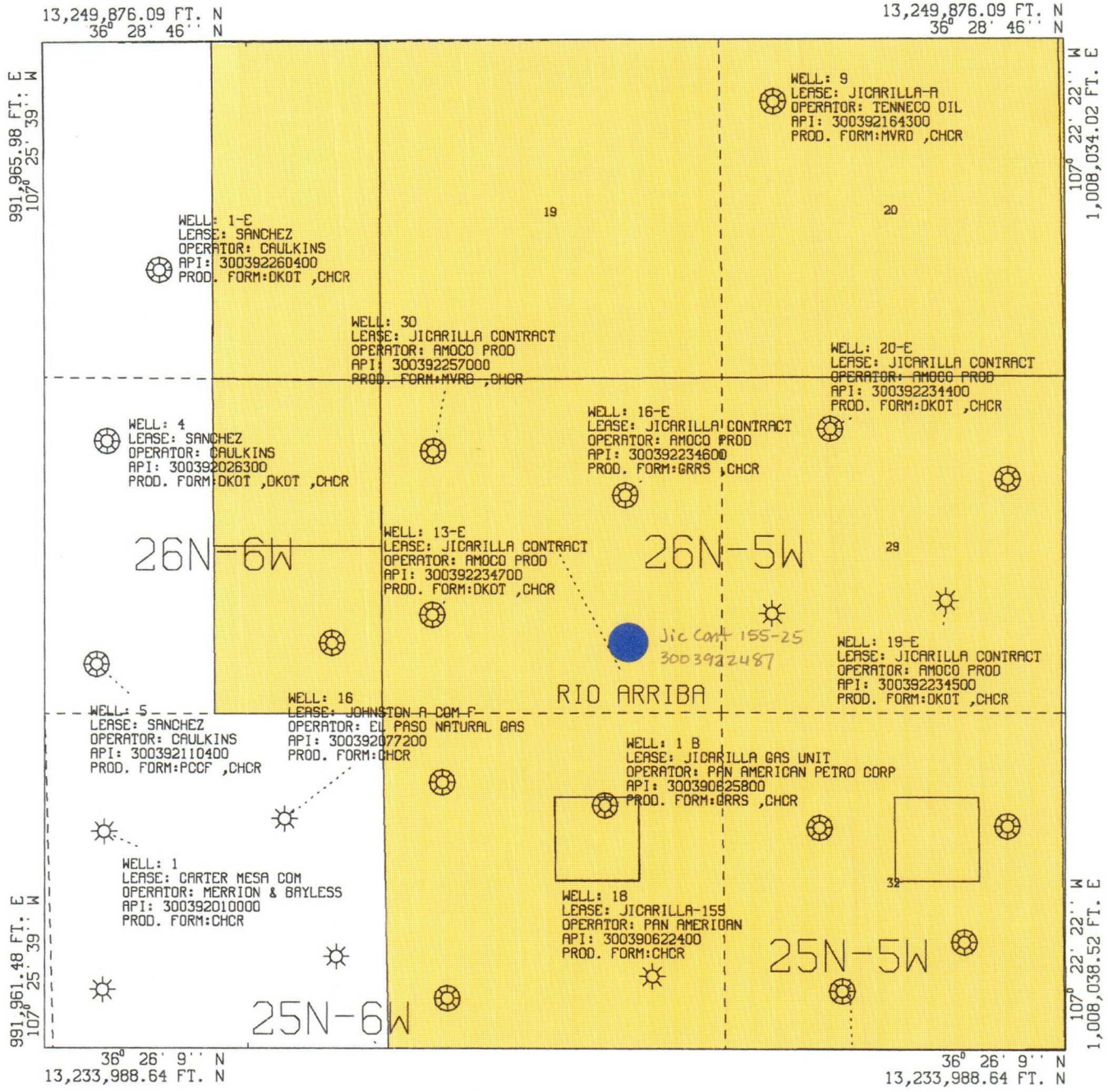
AMOCO PRODUCTION COMPANY
PLAT MAP
Jicarilla Contract 155-25 Sec 30-T26N-R05W MV
Rio Arriba New Mexico

SCALE 1 IN. = 2,500 FT. NOV 4, 1995

HORIZONTAL DATUM NAD27

PLOT 1 07.06.20 SAT 4 NOV, 1995 JOB-P1013402, ISSCO DISSPLA 10.0

HAB10134--RUN#9530806422 6



AMOCO PRODUCTION COMPANY
PLAT MAP
Jicarilla Contract 155-25 Sec 30-T26N-R05W CK
Rio Arriba New Mexico

SCALE 1 IN. = 2,500 FT. NOV 4, 1995

HORIZONTAL DATUM NAD27

PLOT 1 06.49.06 SAT 4 NOV, 1995 JOB-P10131D2, ISSCO DISSPLA 10.0

HAB10131--RUN#95308061954

REVISED PLAT

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-107
Revised 10-1-78

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

Operator	Lease	Well No.
AMOCO PRODUCTION COMPANY	JICARILLA CONTRACT 155	25

Unit Letter	Section	Township	Range	County
O	30	26N	5W	Rio Arriba

Actual Footage Location of Well:
1080 feet from the South line and 1570 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6572	Chacra / Mesaverde	Otero Chacra/Gonzales Mesaverde	160/ 160 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

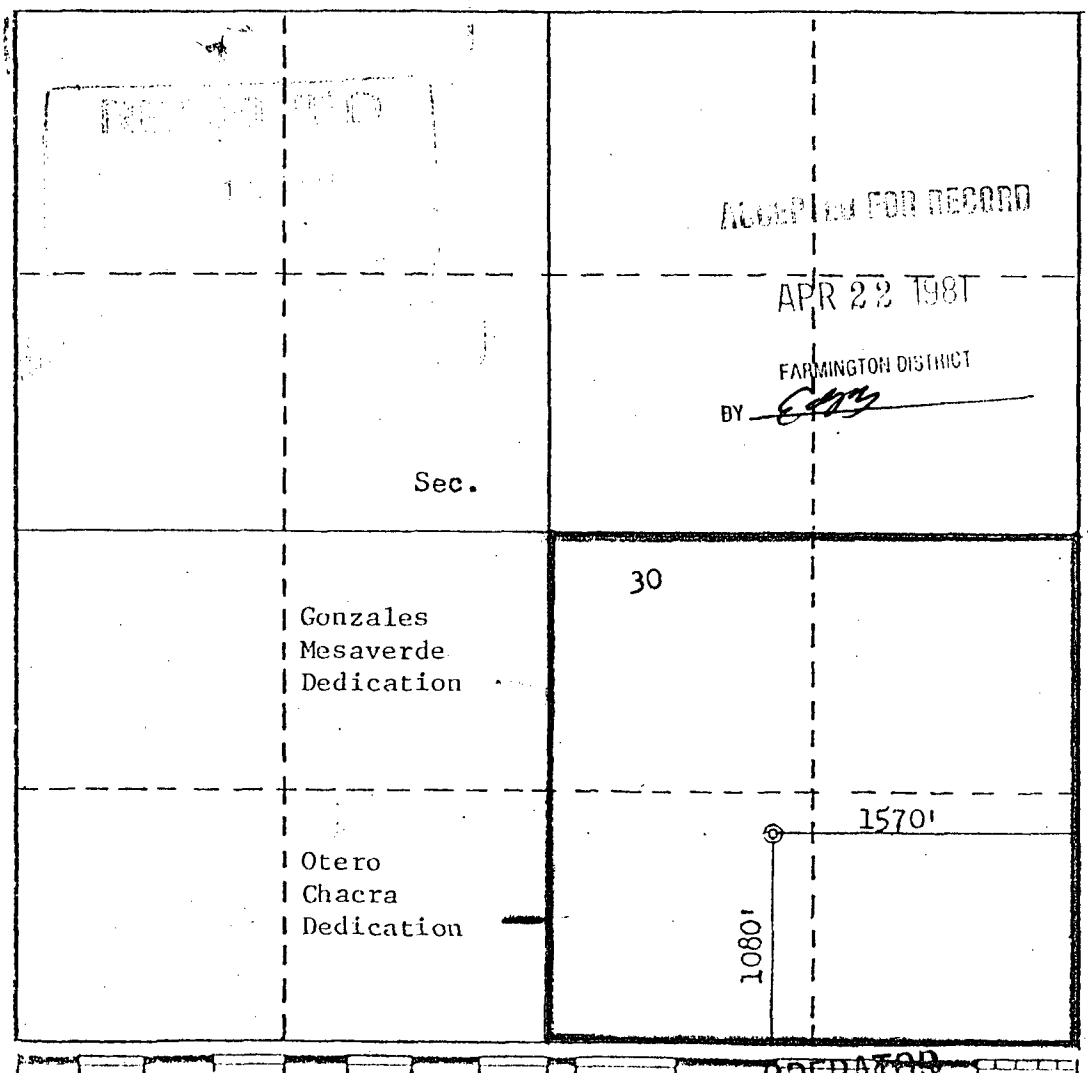
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.



CERTIFICATION

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

R. A. Downey

Name: R.A. DOWNEY

Position: DISTRICT ENGINEER

Company: AMOCO PRODUCTION COMPANY

Date: MAY 28, 1980

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: May 22, 1980

Registered Professional Engineer and/or Land Surveyor

Fred B. Kerr Jr.

Certificate No. FRED B. KERR, JR. 3950

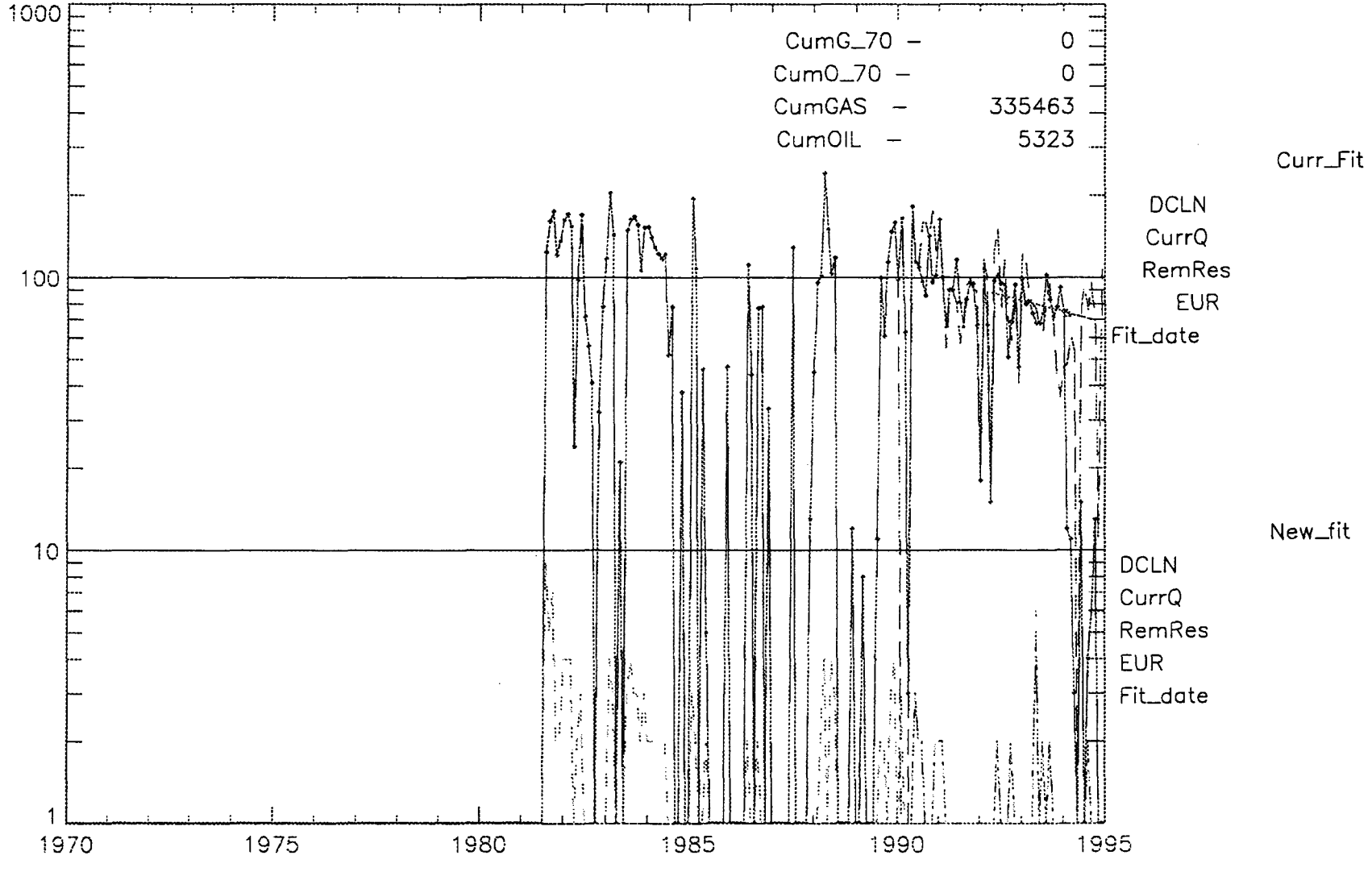
Engr: zhab0b

JICARILLA CONTRACT 155 25

Operator– AMOCO PRODUCTION CO

300392248700MV 0302605–025 MV

APC_WI – 1.0000000

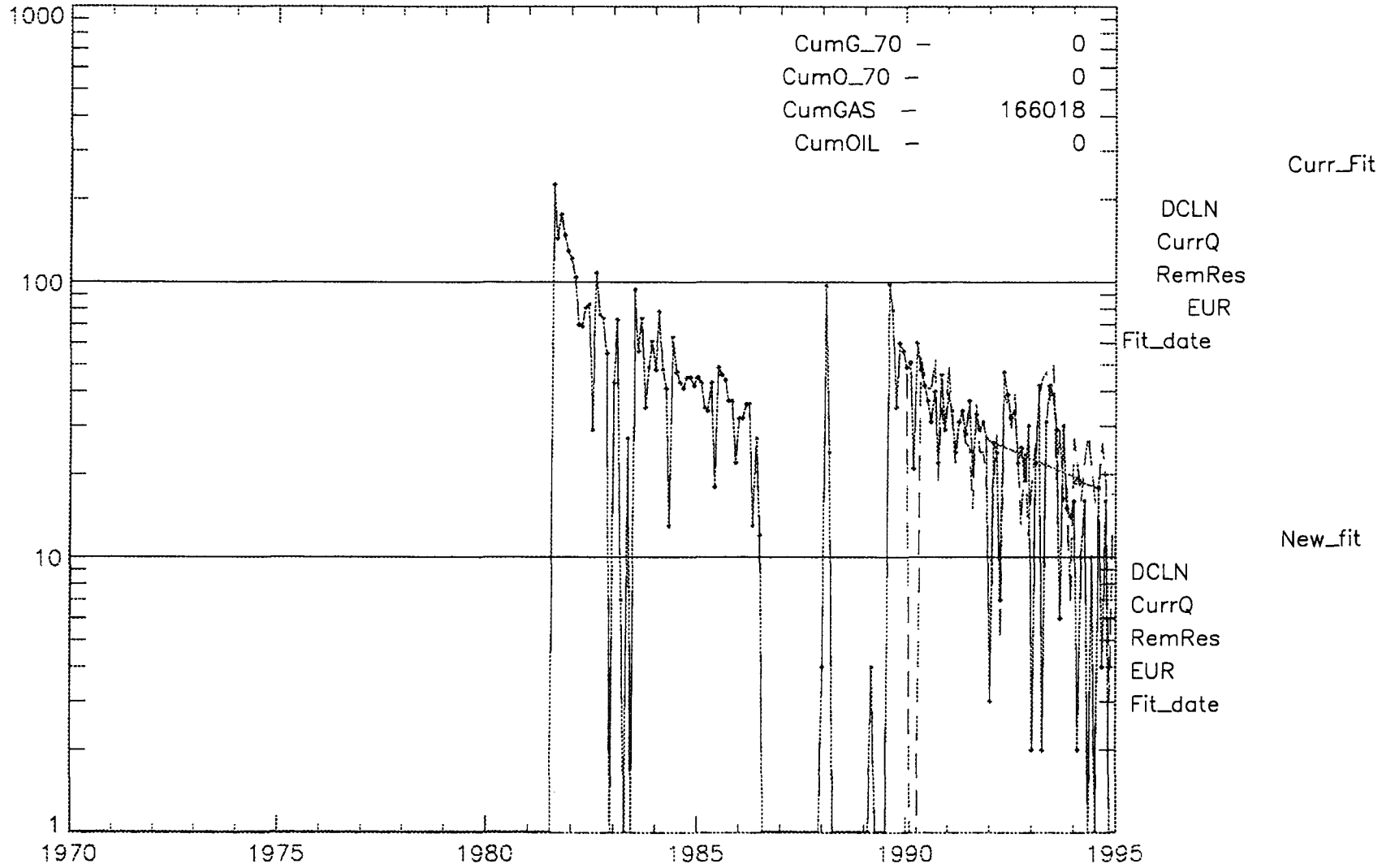


Engr: zhab0b

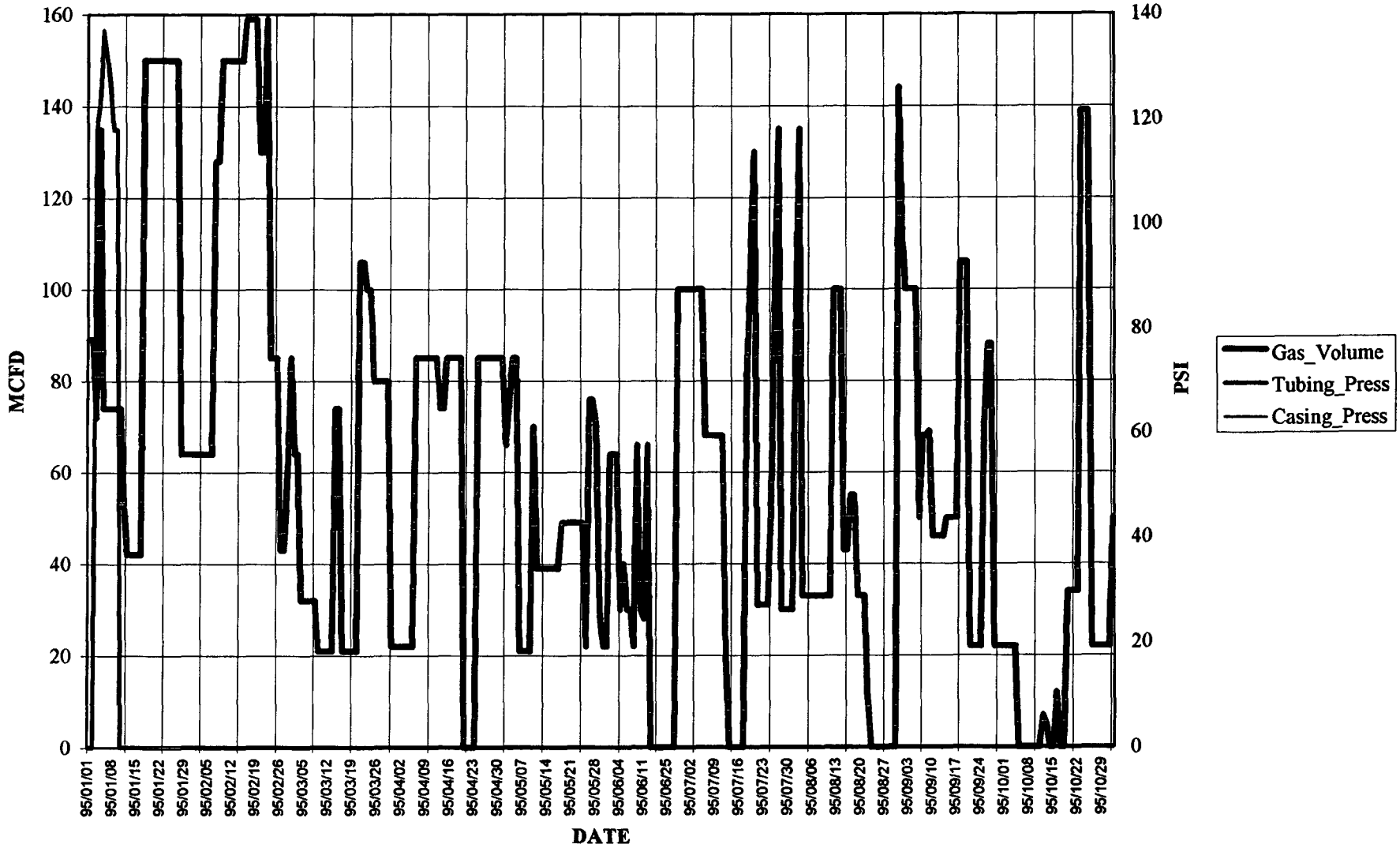
JICARILLA CONTRACT 155 25

Operator— AMOCO PRODUCTION CO

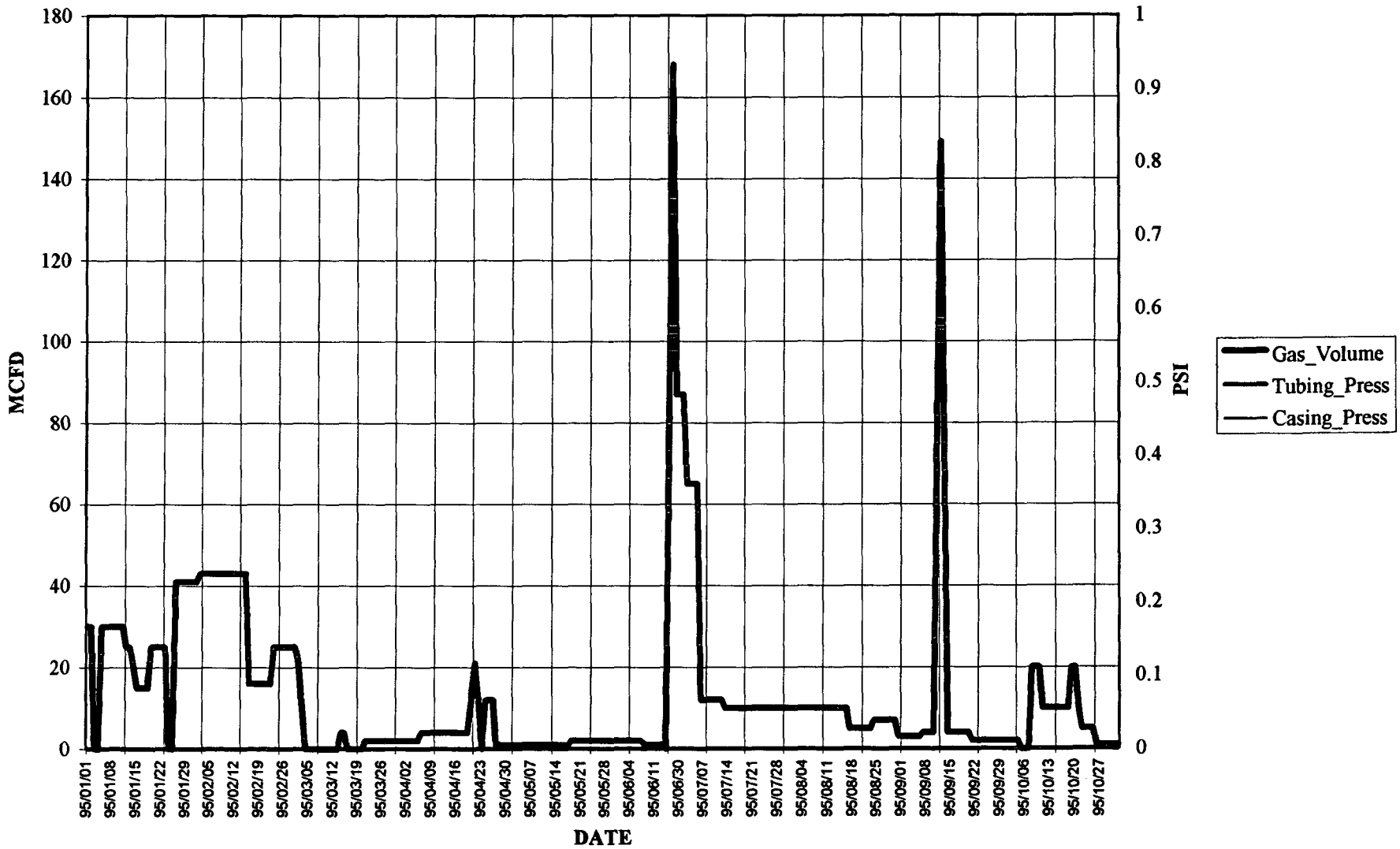
300392248700CK 0302605—025 CK APC_WI — 1.0000000



Well: JICARILLA CONT 155 025-MV (84234202)



Well: JICARILLA CONT 155 025-CK (84234201)



ESTIMATED BOTTOMHOLE PRESSURES

Jicarilla Contract #155-25

CK	PERFORATIONS		TOP	3781	BOTTOM	3888	MIDPERF	3835	
MV	PERFORATIONS		TOP	4974	BOTTOM	5270	MIDPERF	5122	
	Sep-90	SHUT-IN PRESSURES							
		CK	=	214	PSIG				
		MV	=	268	PSIG				
	GRADIENT	= 0.8 PSI/FT							
	CK	**BHP =**		214	PSIG +	3835	X 0.08 PSIG		
		=		521	PSI				
	MV	**BHP =**		268	PSIG +	5122	X 0.08 PSIG		
		=		678	PSI				

STATE OF NEW MEXICO
ENERGY and MINERALS DEPARTMENT

RECEIVED
OCT 16 1990
OIL CON. DIV.
DIST. 3

OIL CONSERVATION DIVISION

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

Operator: AMOCO PRODUCTION COMPANY Lease/Well #:JIC CONTRACT 155 25

Location of Well: 03026 05 Meter #: 93716 RTU: 1-167-01 County: RIO ARRIB

	NAME RESERVOIR OR POOL		TYPE PROD	METHOD PROD	MEDIUM PROD
UPR COMP	OTERO CHACRA	93715	GAS	FLOW	TBG
LWR COMP	BLANCO MESAVERDE	93716	GAS	FLOW	TBG

PRE-FLOW SHUT-IN PRESSURE DATA

	Hour/Date Shut-In	Length of Time Shut-In	SI Press. PSIG	Stabilzed
UPR COMP	09/17/90	72 Hours	214	Y
LWR COMP	09/17/90	72 Hours	268	Y

FLOW TEST DATE NO.1

Commenced at (hour,date)* Zone Producing (Upr/Lwr)

TIME (hour, date)	LAPSED TIME SINCE*	PRESSURE Upper	PRESSURE Lower	Prod Temp.	REMARKS
09/17/90	Day 1	201	252		Both Zones SI
09/18/90	Day 2	211	263		Both Zones SI
09/19/90	Day 3	214	268		Both Zones SI
09/20/90	Day 4	214	268		Lower Zone on
09/21/90	Day 5	219	229		"
09/22/90	Day 6	219	230		"

Production rate during test

Oil:_____ BOPD based on _____ BBLs in _____ Hrs _____ Grav___ GOR ___

Gas: _____ MFCPD:Tested theu (Orifice or Meter):METER

MID-TEST SHUT-IN PRESSURE DATA

	Hour,Date SI	Length of Time SI	SI Press. PSIG	Stabilized (yes/no)
UPR COMP				