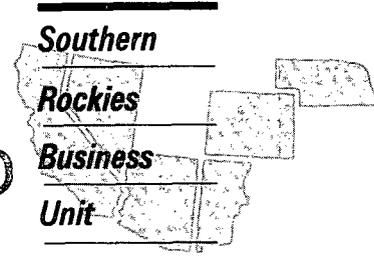




DMC 10-2-95
1158



RECEIVED

SEP 11 1995

OIL CONSERVATION DIV.
SANTA FE

September 3, 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-C
Downhole Commingling
Jicarilla Apache 102 Well #6
1450' FSL & 1450' FWL, Unit K Section 3-T26N-R4W
Blanco Mesaverde and Tapacito Pictured Cliffs Pools
Rio Arriba County, New Mexico**

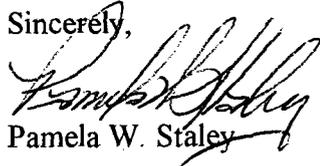
Amoco Production Company hereby requests administrative approval to downhole commingle production from the Blanco Mesaverde and Tapacito Pictured Cliffs Pools in the Jicarilla Apache 102 Well #6 referenced above. The Jicarilla Apache 102 Well #6 was originally a dual completion in the Mesaverde and Pictured Cliffs formations. This well has a marginal Pictured Cliffs formation which is being produced dually with a marginal Mesaverde formation which if left as a dual completion, the zones would likely be shut-in in the near future. We plan to complete the well with both the Mesaverde and Pictured Cliffs formations being downhole commingled in the wellbore. The two zones are expected to produce at a total commingled rate of about 135 MCFD with 4 BCPD. 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 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 60% from the Mesaverde formation and 40% from the Pictured Cliffs formation. The Pictured Cliffs has not historically produced liquids in this well. Based on that fact, we propose to allocate 100% of the liquid production to the Mesaverde formation. 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 and a C-102 for each formation. This spacing unit is on a federal lease 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

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 Apache 102

Well Number: 6
Well Location: 1450' FSL & 1450' FWL
Unit K Section 3-T26N-R4W
Rio Arriba County, New Mexico

Pools Commingled: Tapacito Pictured Cliffs
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 33 MCFD and 0 BCPD. The Pictured Cliffs zone produced at an average rate of about 22 MCFD and 0 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.

Tapacito Pictured Cliffs 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 Pictured Cliffs formation is calculated to be 795 PSIG while estimated bottomhole pressure in the Mesaverde formation is 1017 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 Pictured Cliffs 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:

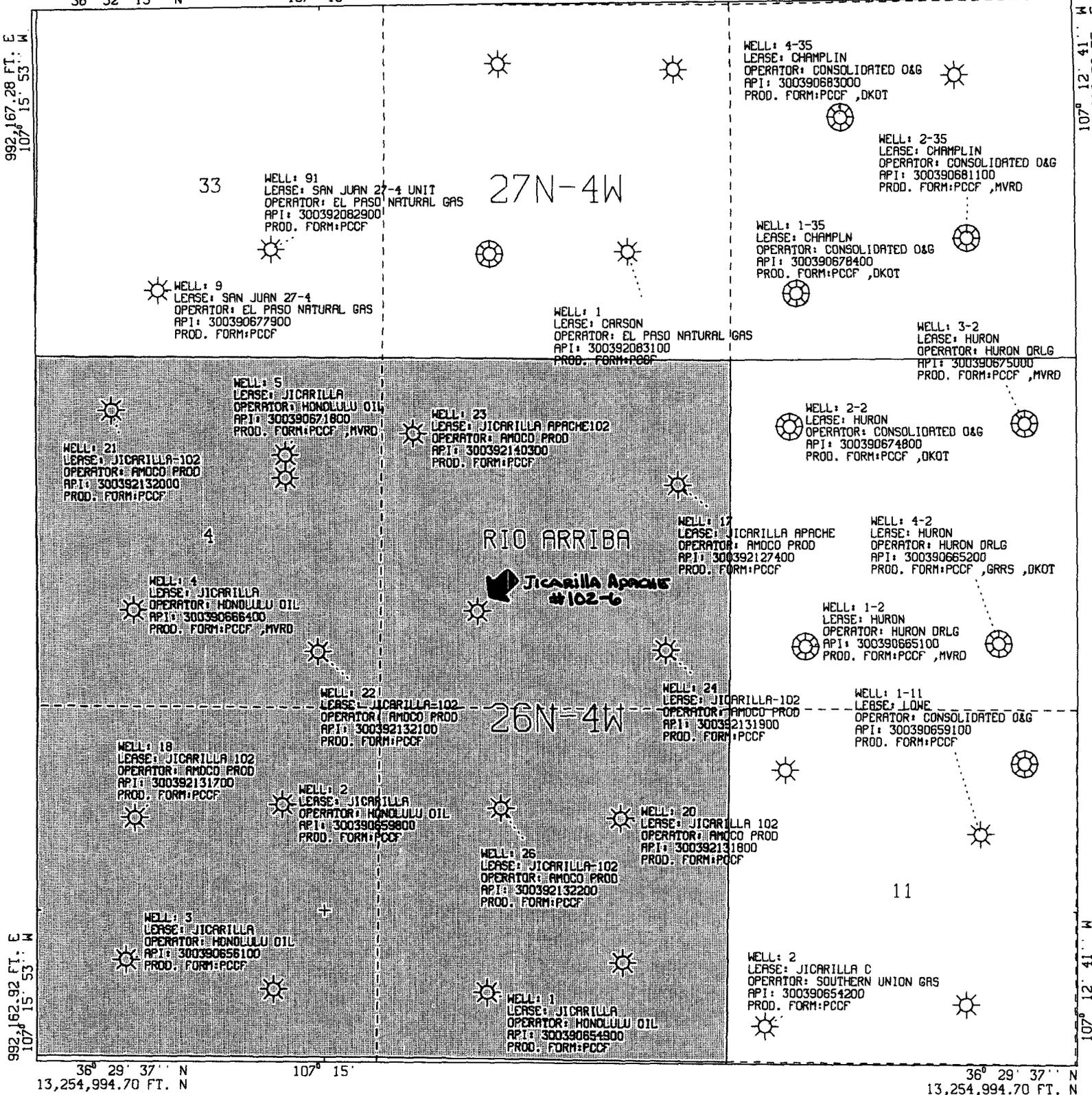
The BTU content of the produced streams are very similar and as such, we would expect the commingled production to have the same value as the sum of the individual streams.

- (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:

Based on historical production we recommend that the allocation for gas production be 60% from the Mesaverde formation and 40% from the Pictured Cliffs formation. The Pictured Cliffs has not historically produced liquids in this well. Based on that fact, we propose to allocate 100% of the liquid production to the Mesaverde formation. 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.



992,167.28 FT. E
107° 15' 53" W

992,162.92 FT. E
107° 15' 53" W

36° 29' 37" N
13,254,994.70 FT. N

36° 29' 37" N
13,254,994.70 FT. N

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 Apache 102-6 Sec. 3-T26N-R04W
Rio Arriba New Mexico FM: PCCF
SCALE 1 IN. = 2,000 FT. JUL 15, 1995

992,167.28 FT. E
107° 15' 53" W

107° 12' 41" W

WELL: 102
LEASE: SAN JUAN 27 4 102
OPERATOR: EL PASO NATURAL GAS
API: 300392083300
PROD. FORM:MVRD ,GRRS

WELL: 137
LEASE: SAN JUAN 27 4 137
OPERATOR: EL PASO NATURAL GAS
API: 300392237600
PROD. FORM:MVRD

WELL: 3-35
LEASE: CHAMPLIN
OPERATOR: CONSOLIDATED O&G
API: 300390684900
PROD. FORM:PCCF ,MVRD

33

27N-4W

WELL: 27
LEASE: SAN JUAN 27-4 UNIT
OPERATOR: MRON OIL P
API: 300390679200
PROD. FORM:MVRD

WELL: 120
LEASE: SAN JUAN 27 4 120
OPERATOR: EL PASO NATURAL GAS
API: 300392212200
PROD. FORM:PCCF ,MVRD

WELL: 2-35
LEASE: CHAMPLIN
OPERATOR: CONSOLIDATED O&G
API: 300390681100
PROD. FORM:PCCF ,MVRD

WELL: 4-A
LEASE: JICAR APACHE TR18102A
OPERATOR: AMOCO PRODUCTION CO
API: 300392321600
PROD. FORM:MVRD

WELL: 5
LEASE: JICARILLA
OPERATOR: HONOLULU OIL
API: 300390671800
PROD. FORM:PCCF ,MVRD

WELL: 8-A
LEASE: JICARILLA-APACHE
OPERATOR: AMOCO PROD
API: 300392319500
PROD. FORM:MVRD

WELL: 2-A
LEASE: CHAMPLIN 2A
OPERATOR: CONSOLIDATED O AND G
API: 300392152200
PROD. FORM:MVRD

WELL: 3-2
LEASE: HURON
OPERATOR: HURON DRLG
API: 300390675000
PROD. FORM:PCCF ,MVRD

RIO ARRIBA

Jicarilla Apache
#102-6

WELL: 4
LEASE: JICARILLA
OPERATOR: HONOLULU OIL
API: 300390666400
PROD. FORM:PCCF ,MVRD

WELL: 1-A
LEASE: HURON
OPERATOR: CONSOLIDATED O&G
API: 300392151100
PROD. FORM:MVRD

WELL: 1-2
LEASE: HURON
OPERATOR: HURON DRLG
API: 300390665100
PROD. FORM:PCCF ,MVRD

WELL: 29-A
LEASE: JICARILLA APACHE
OPERATOR: AMOCO PROD
API: 300392283100
PROD. FORM:MVRD

26N-4W

WELL: 30
LEASE: JICARILLA APACHE102
OPERATOR: AMOCO PROD
API: 300392198200
PROD. FORM:MVRD

WELL: 29
LEASE: JICARILLA APACHE102
OPERATOR: AMOCO PROD
API: 300392158700
PROD. FORM:MVRD

WELL: 1
LEASE: MCINTYRE
OPERATOR: CONSOLIDATED O&G
API: 300390659200
PROD. FORM:MVRD ,OKOT

9

WELL: 15
LEASE: JICARILLA-APACHE102
OPERATOR: PAN AMERICAN
API: 300392018800
PROD. FORM:MVRD

WELL: 31
LEASE: JICARILLA-APACHE
OPERATOR: AMOCO PROD
API: 300392185200
PROD. FORM:MVRD

WELL: 18
LEASE: JICARILLA-APACHE102
OPERATOR: PAN AMERICAN
API: 300392019000
PROD. FORM:MVRD

WELL: 1-11
LEASE: JICARILLA-C
OPERATOR: CONSOLIDATED O&G
API: 300390654600
PROD. FORM:MVRD ,DKOT

WELL: 15-A
LEASE: JICARILLA-APACHE
OPERATOR: AMOCO PROD
API: 300392319800
PROD. FORM:MVRD

36° 29' 37" N
13,254,994.70 FT. N

107° 15'

36° 29' 37" N
13,254,994.70 FT. N

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AMOCO PRODUCTION COMPANY
PLAT MAP
Jicarilla Apache 102-6 Sec. 3-T26N-R04W
Rio Arriba New Mexico FM: MVRD
SCALE 1 IN. = 2,000 FT. JUL 15, 1995

992,162.92 FT. E
107° 15' 53" W

107° 12' 41" W
107° 12' 41" W

NEW MEXICO OIL CONSERVATION COMMISSION
Well Location and Acreage Dedication Plat

Section A.

Date JUNE 18, 1958

Operator HONOLULU OIL CORPORATION Lease JICARILLA APACHE
Well No. 6 Unit Letter K Section 3 Township 26N Range 4W NMPM
Located 1450 Feet From South Line, 1450 Feet From East Line
County Rio Arriba G. L. Elevation 6904 Dedicated Acreage 160 Acres
Name of Producing Formation Pictured Cliff Pool Tapacito

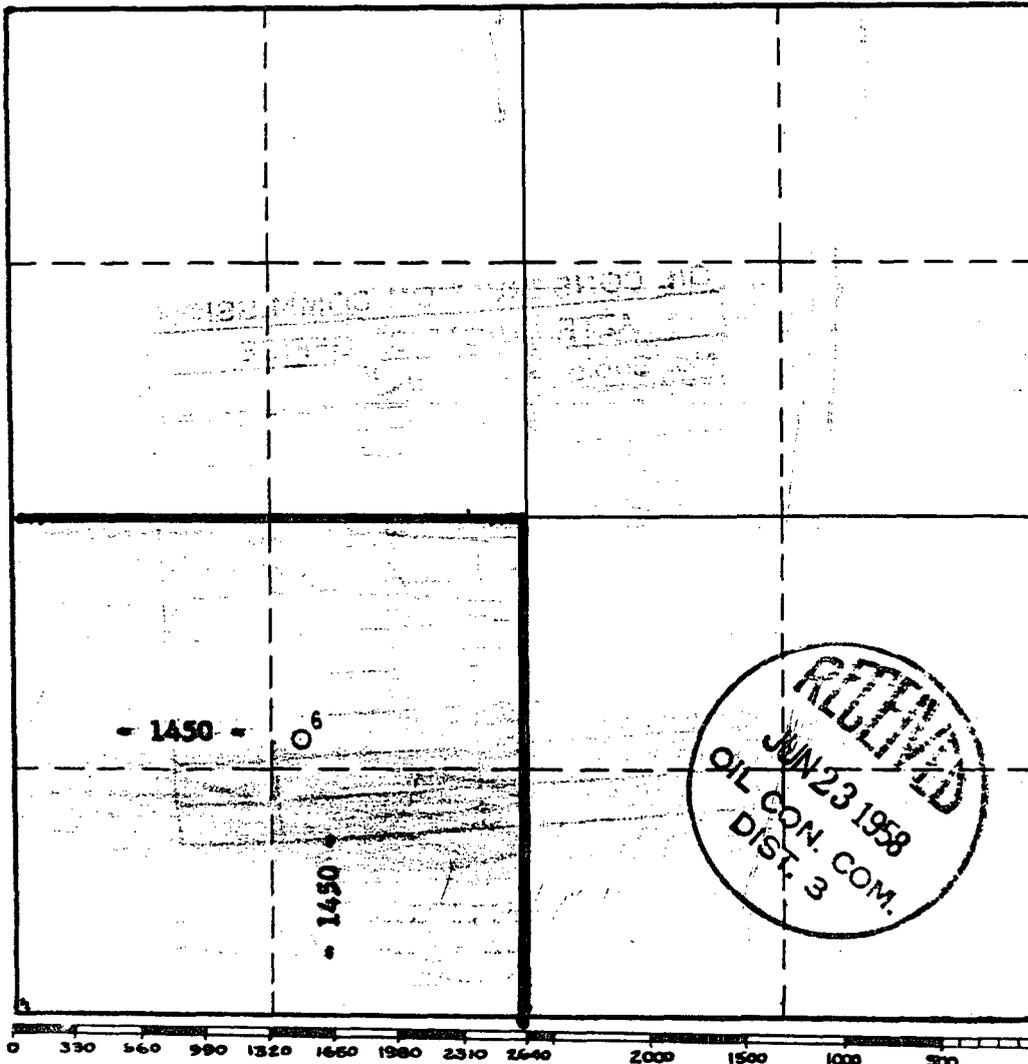
1. Is the Operator the only owner* in the dedicated acreage outlined on the plat below?
Yes No
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? Yes No . If answer is "yes," Type of Consolidation _____
3. If the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

Owner

Land Description

<u>Owner</u>	<u>Land Description</u>

Section B



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

HONOLULU OIL CORPORATION
(Operator)

George R. Hoy
(Representative)

P.O. DR. 1391, MIDLAND, TEXAS
Address

This is to 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 _____

Registered Professional Engineer and/or Land Surveyor.

Certificate No. _____
the reverse side)

(See instructions for completing this form on

NEW MEXICO OIL CONSERVATION COMMISSION
Well Location and Acreage Dedication Plat

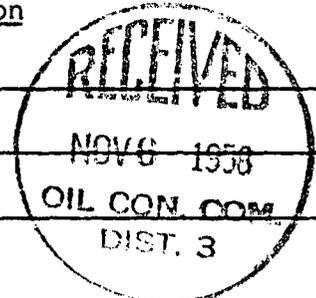
Section A.

Date November 4, 1958

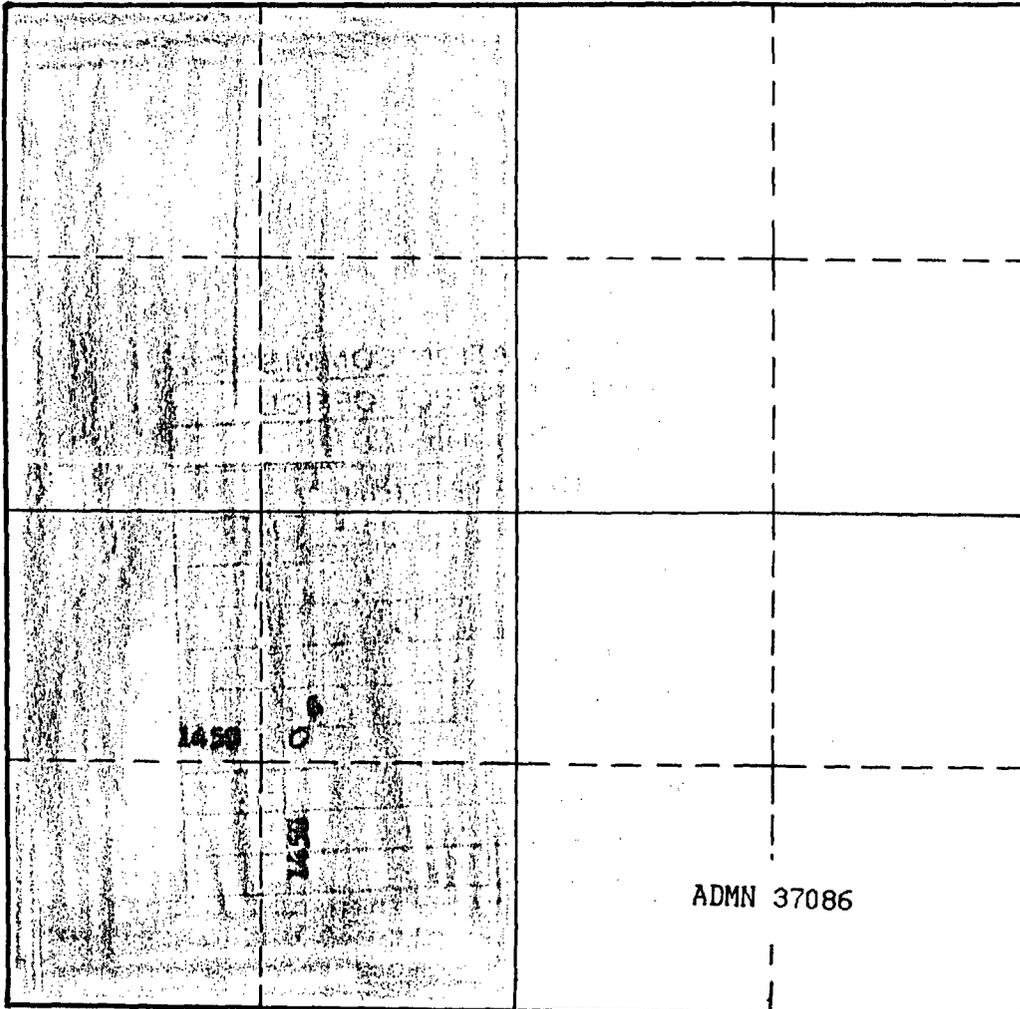
Operator Honolulu Oil Corporation Lease Jicarilla Apache
Well No. 6 M Unit Letter K Section 3 Township 26 N Range 4 W NMPM
Located 1450 Feet From South Line, 1450 Feet From East Line
County Rio Arriba G. L. Elevation 6904 Dedicated Acreage 320 321.68 Acres
Name of Producing Formation Mesa Verde Pool _____

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:

<u>Owner</u>	<u>Land Description</u>
_____	_____
_____	_____
_____	_____



Section B



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

Honolulu Oil Corporation
(Operator)

George R. Hoy
(Representative)

Drawer 1391, Midland, Texas
Address

This is to 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.

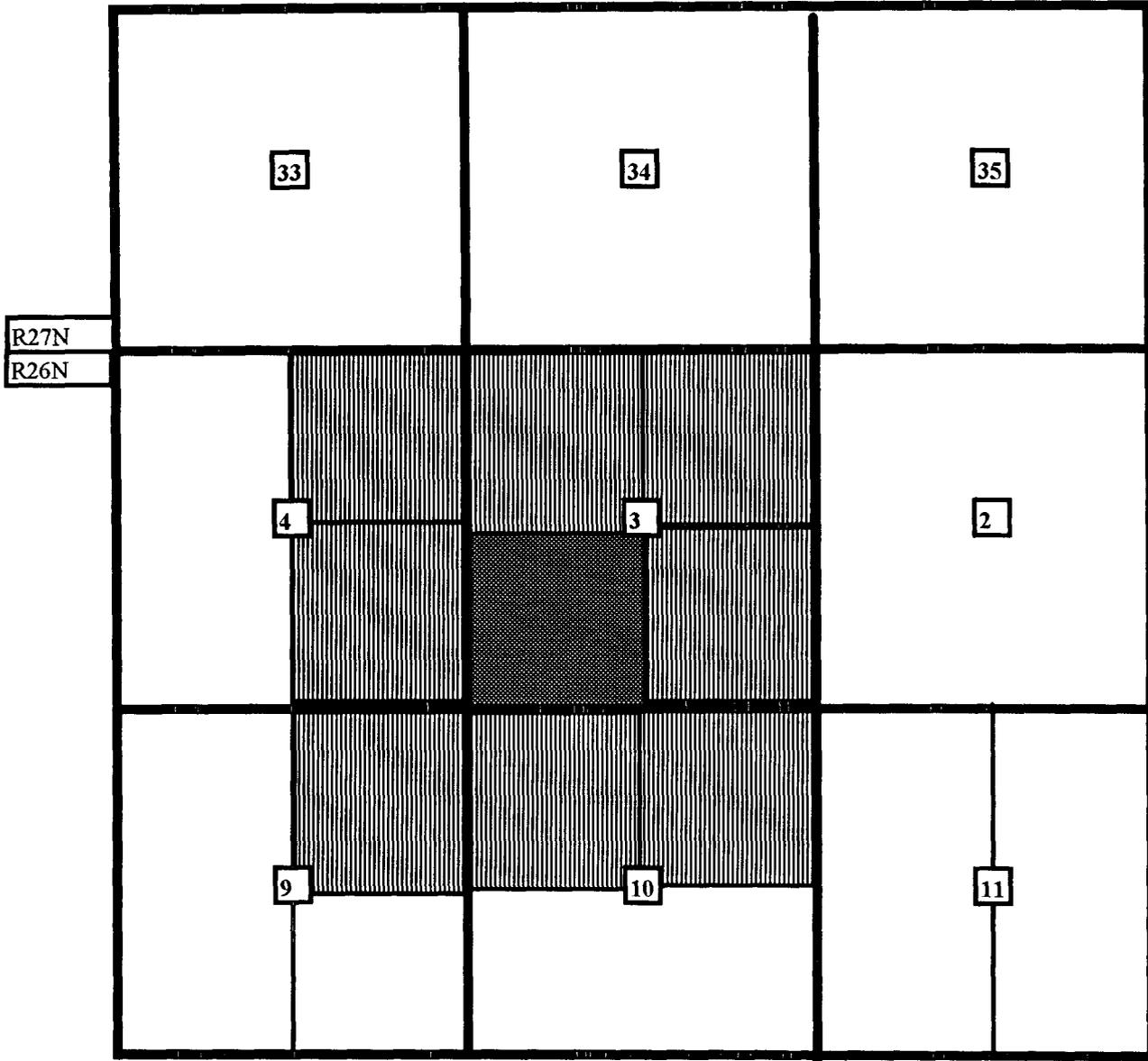
Date Surveyed _____

Registered Professional
Engineer and/or Land Surveyor.

Certificate No. _____

AMOCO PRODUCTION COMPANY OFFSET OPERATOR PLAT

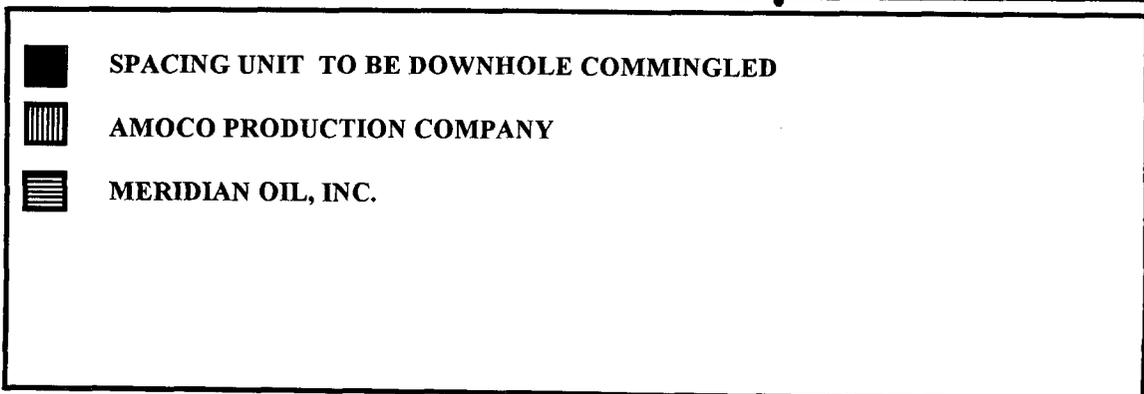
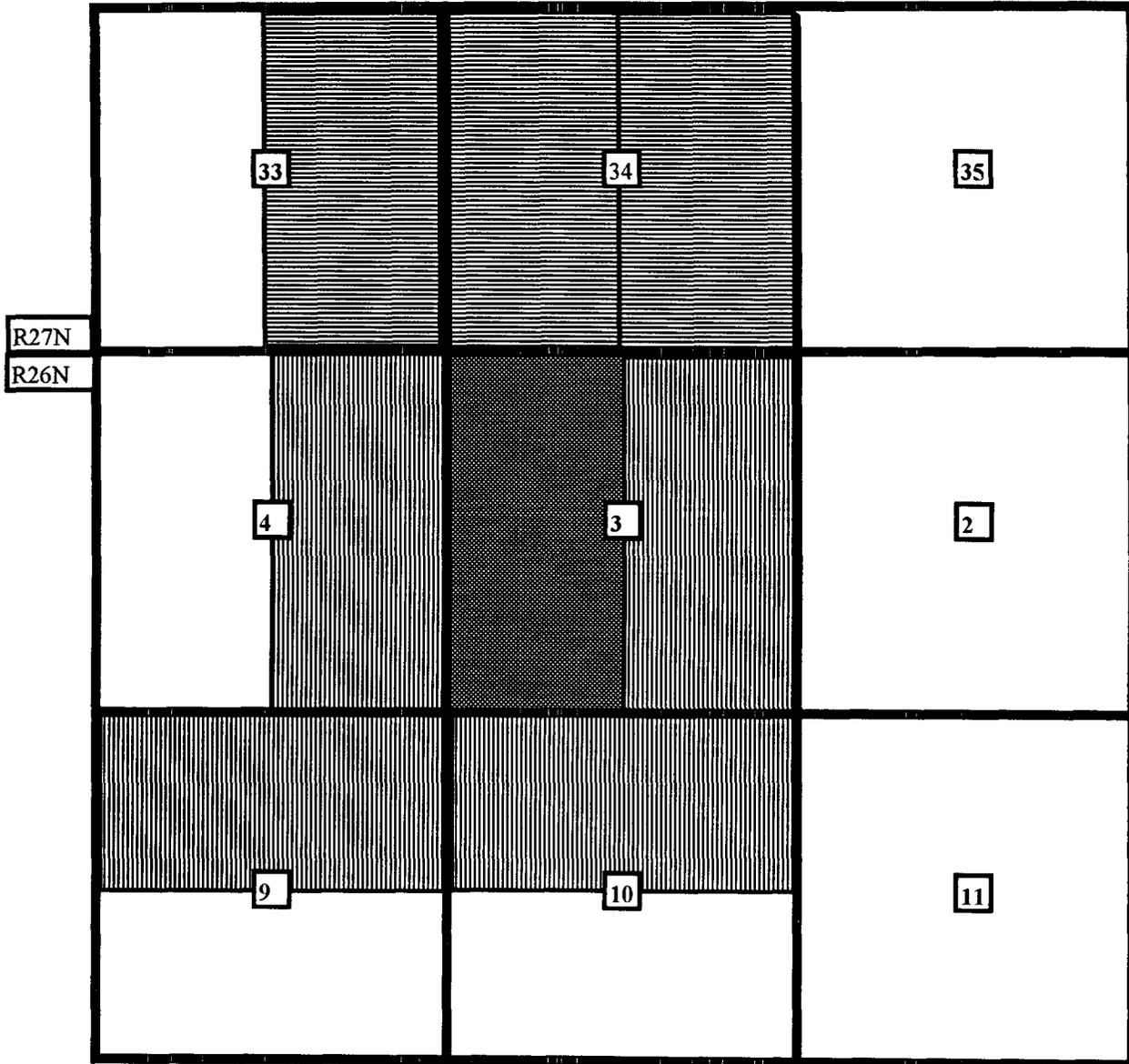
**Jicarilla Apache 102 Well #6
1450' FSL & 1450' FWL
Unit K Section 3-T26N-R4W
Tapacito Pictured Cliffs Pool**



-  **SPACING UNIT TO BE DOWNHOLE COMMINGLED**
-  **AMOCO PRODUCTION COMPANY**

AMOCO PRODUCTION COMPANY OFFSET OPERATOR PLAT

**Jicarilla Apache 102 Well #6
1450' FSL & 1450' FWL
Unit K Section 3-T26N-R4W
Blanco Mesaverde Pool**



LIST OF ADDRESSES FOR OFFSET OPERATORS
Jicarilla Apache 102 Well #6

1 Meridian Oil, Inc.
P.O. Box 4289
Farmington, NM 87499

Engr: zhab0b

JICARILLA APACHE 102 6
Operator- AMOCO PRODUCTION CO
30039066600PC K032604-006 PC APC_WI ~ 1.0000000

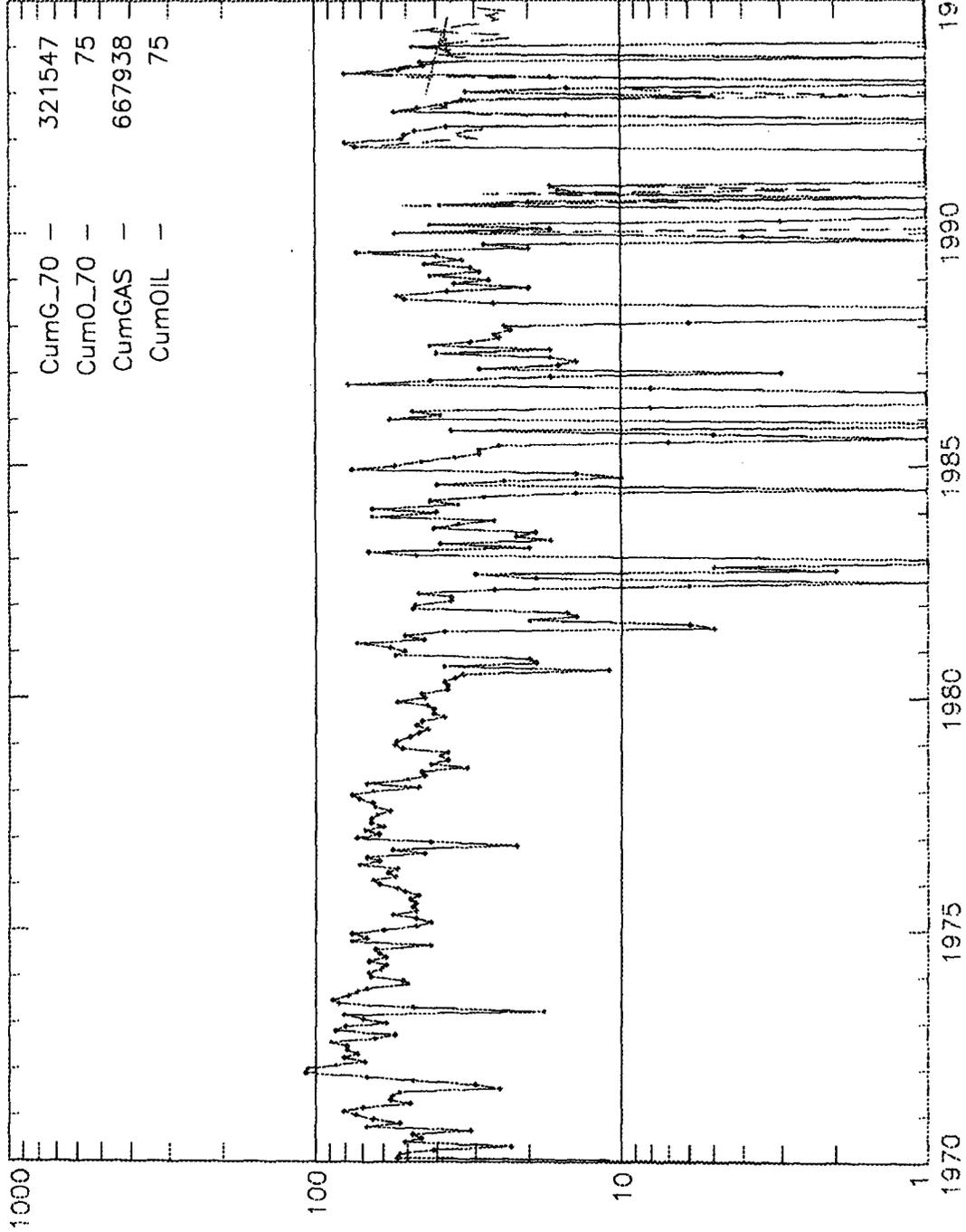
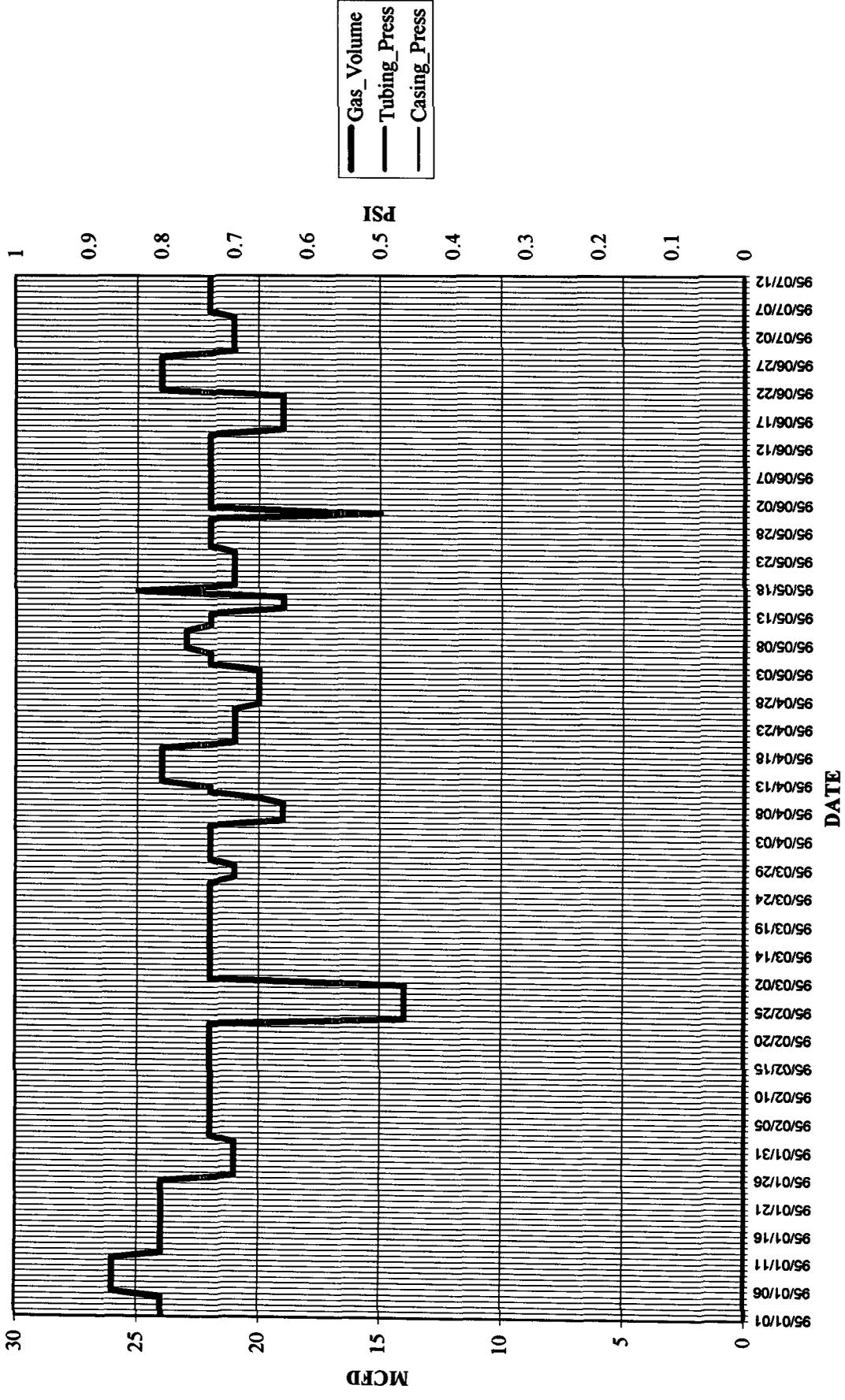


Chart1

Well: JIC APACHE 102 006-PC (92417602)



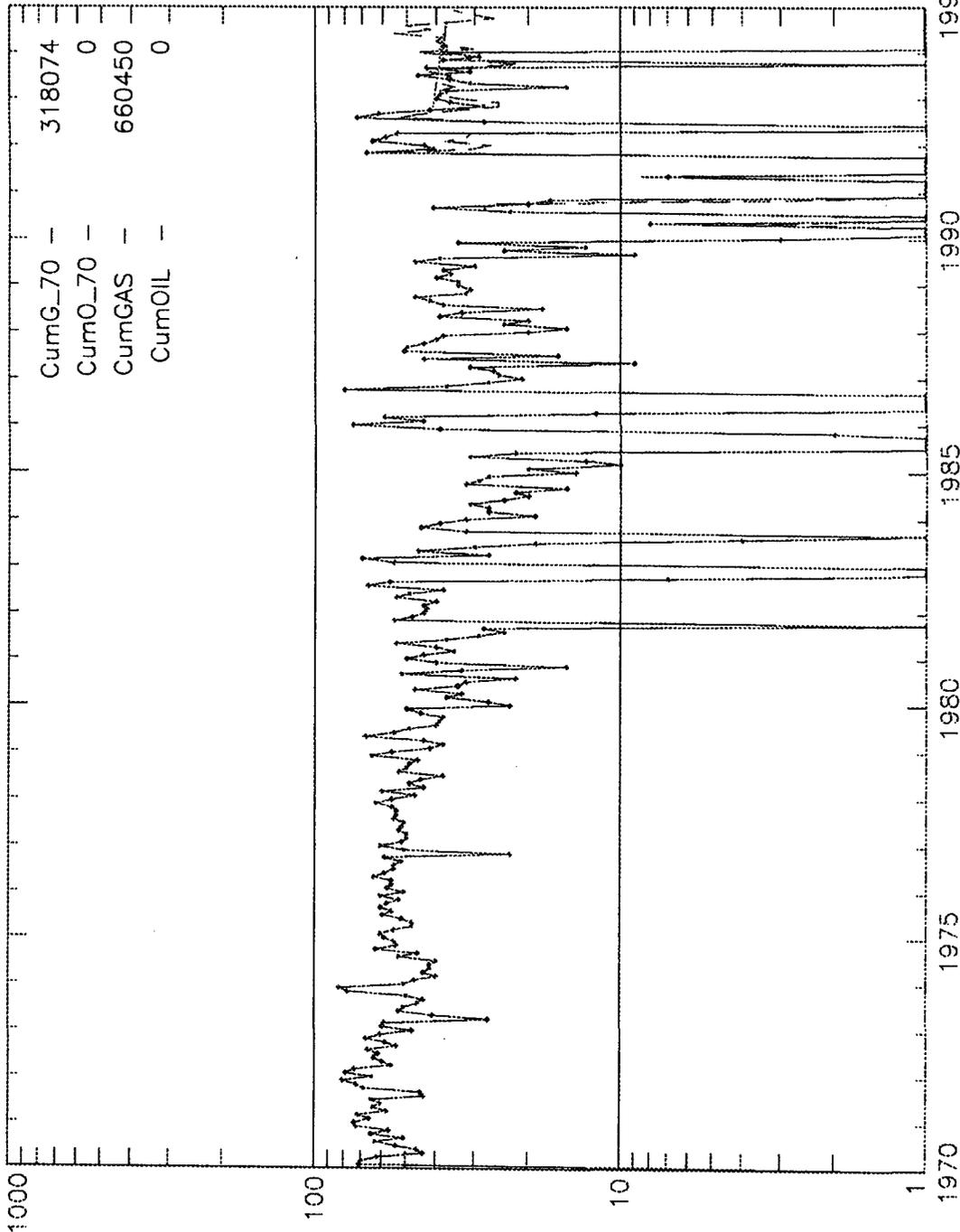
Engr: zhab0b

JICARILLA APACHE 102 6

Operator- AMOCO PRODUCTION CO

300390666600MV K032604-006 MV

APC_WI - 1.0000000

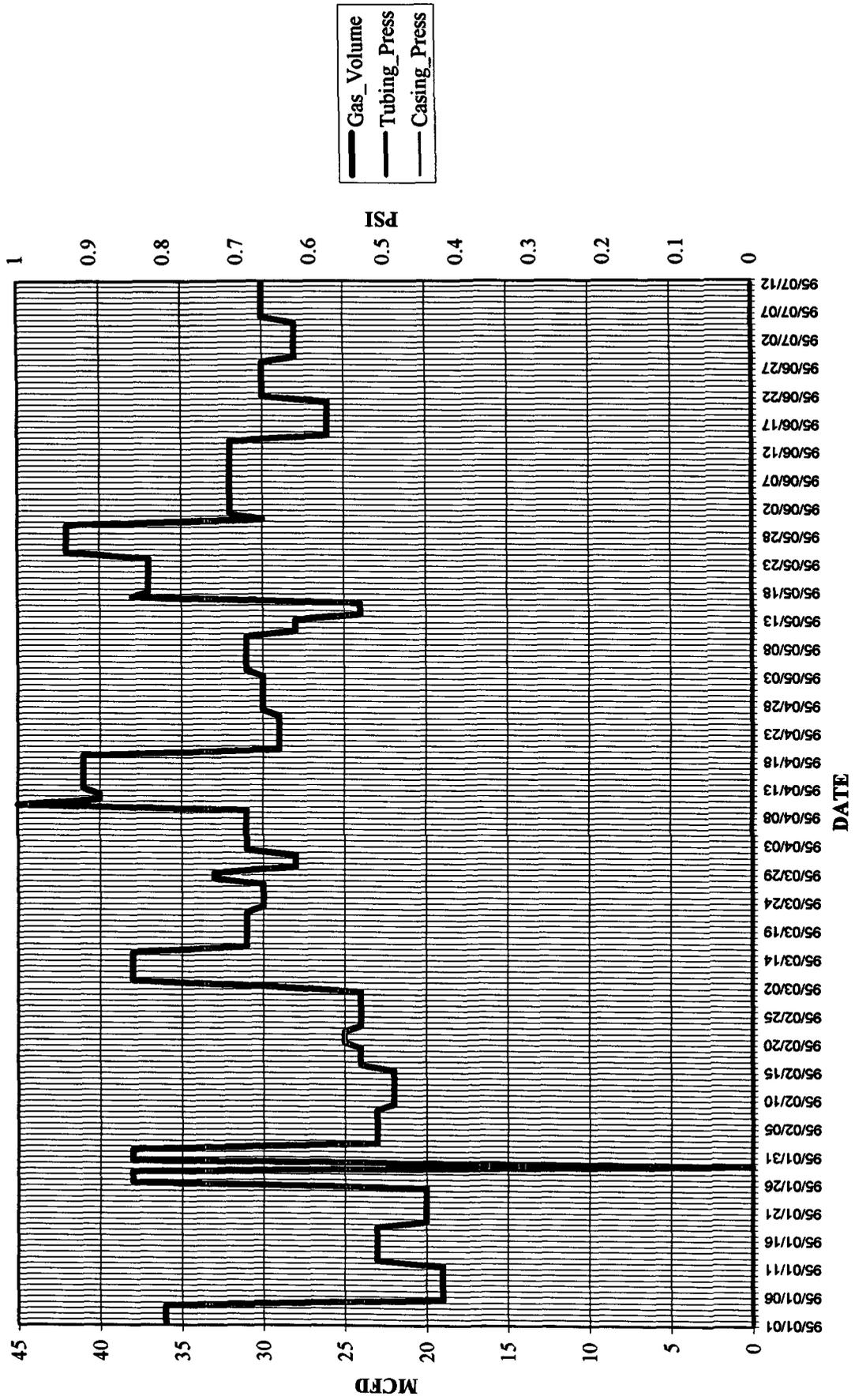


Curr_Fit

New_fit

Chart1

Well: JIC APACHE 102 006-MV (92417601)



ESTIMATED BOTTOMHOLE PRESSURES BY FORMATION
JICARILLA APACHE #102-6

PC Perforations at 3686-3710' midperf at 3698'
MV Perforations at 5540-5906' midperf at 5723'

9/90 shut in pressures --- PC = 499 PSIG
MV = 559 PSIG

GRADIENT = 0.08 PSI/FT

PC BHP = 499 PSIG + 3698' X 0.08 PSIG
= 795 PSIG

MV BHP = 559 PSIG + 5723' X 0.08 PSIG
= 1017 PSIG

795 PSIG / 1017 PSIG = 78% WHICH MEETS THE >50% RULE

STATE OF NEW MEXICO
OIL and MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

Page 1
OCT 1 1990

Operator: AMOCO PRODUCTION COMPANY Lease/Well #: JIC-AP-102-6

OIL CON. DIV.
DIST. 3

Location of Well: K032604 Meter #: 228621 RTU: 1-028-02 County: RIO ARRIB

NAME RESERVOIR OR POOL	TYPE PROD	METHOD PROD	MEDIUM PROD
TAPACITO PICTURED CLIFF 233704	GAS	FLOW	CSG
BLANCO MESAVERDE 228621	GAS	FLOW	TBG

PRE-FLOW SHUT-IN PRESSURE DATA

Hour/Date Shut-In	Length of Time Shut-In	SI Press. PSIG	Stabilized
09/17/90	72 Hours	499	yes
09/17/90	72 Hours	559	yes

FLOW TEST DATE NO. 1

Shut-in commenced at (hour, date) *				Zone Producing (Upr/Lwr)	
TIME (hour, date)	LAPSED TIME SINCE*	PRESSURE		Prod Temp.	REMARKS
		Upper	Lower		
09/17/90	Day 1	494	552		Both Zones SI
09/18/90	Day 2	503	552		Both Zones SI
09/19/90	Day 3	497	554		Both Zones SI
09/20/90	Day 4	499	559		flowed lower zone
09/21/90	Day 5	496	253		
09/22/90	Day 6	497	254		

Production rate during test

BOPD based on _____ BBLs in _____ Hrs _____ Grav _____ GOR _____

MFCPD: Tested thru (Orifice, or Meter): METER

MID-TEST SHUT-IN PRESSURE DATA

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



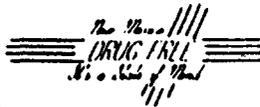
STATE OF NEW MEXICO

ENERGY, MINERALS and NATURAL RESOURCES DIVISION

OIL CONSERVATION DIVISION

AZTEC DISTRICT OFFICE

DHC-1158



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

OIL CONSERVATION DIVISION
RECEIVED
'95 SEP 22 AM 8 52

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

Date: 9/27/95

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

RE: Proposed MC _____
Proposed NSL _____
Proposed WFX _____
Proposed NSP _____

Proposed DHC _____
Proposed SWD _____
Proposed PMX _____
Proposed DD _____

Gentlemen:

I have examined the application received on 9/11/95

for the Amoco Jimilla Apache 102 #6
OPERATOR LEASE & WELL NO.

K-3-26N-4W and my recommendations are as follows:
UL-S-T-R

Approve.
The pressures were calculated in error but the well
still qualifies.

Yours truly,
[Signature]