

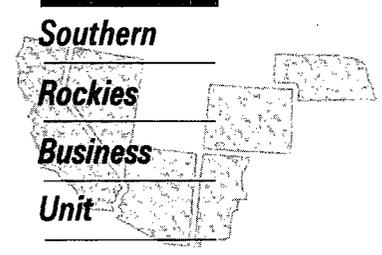
DHC 3-25-96



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MAR 6 1996

OIL CONSERVATION DIV.
SANTA FE



March 1, 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
Jicarilla 155 #30 Well
820' FWL & 1120' FNL, Unit D Section 30-T26N-R5W
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 Jicarilla 155 #30 well referenced above. The Jicarilla 155 #30 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 242 MCFD with 3.15 BCPD due to the increased efficiencies of lifting liquids. Current production is 75 MCFD and 2.65 BCPD from the Mesaverde and 17 MCFD and no condensate from the Chacra formation. 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 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 82% from the Mesaverde formation and 18% from the Chacra formation. The Chacra has historically produced no liquids in this well. Based on that fact, we propose to allocate 100% of the liquid production to the Mesaverde formation and none 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: 30
Well Location: 820' FWL & 1120' FNL
Unit D Section 30-T26N-R5W
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 75 MCFD and 2.65 BCPD. The Chacra zone produced at an average rate of about 17 MCFD and no condensate.

- (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 616 PSIG while estimated bottomhole pressure in the Mesaverde formation is 880 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 82% from the Mesaverde formation and 18% from the Chacra formation. The Chacra has historically produced no liquids in this well. Based on that fact, we propose to allocate 100% of the liquid production to the Mesaverde formation and none 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.

13,249,876.09 FT. N
36° 28' 46" N

13,249,876.09 FT. N
36° 28' 46" N

991,965.98 FT. E
107° 25' 39" W

107° 22' 22" W
1,008,034.02 FT. E

WELL: 1-E
LEASE: SANCHEZ
OPERATOR: CAULKINS
API: 300392260400
PROD. FORM:DKOT ,CHCR

WELL: 9
LEASE: JICARILLA-A
OPERATOR: TENNECO OIL
API: 300392164300
PROD. FORM:MVRD ,CHCR

WELL: 30
LEASE: JICARILLA CONTRACT
OPERATOR: AMOCO PROD
API: 300392257000
PROD. FORM:MVRD ,CHCR

WELL: 20-E
LEASE: JICARILLA CONTRACT
OPERATOR: AMOCO PROD
API: 300392234400
PROD. FORM:DKOT ,CHCR

WELL: 4
LEASE: SANCHEZ
OPERATOR: CAULKINS
API: 300392026300
PROD. FORM:DKOT ,DKOT ,CHCR

WELL: 16-E
LEASE: JICARILLA CONTRACT
OPERATOR: AMOCO PROD
API: 300392234600
PROD. FORM:GRRS ,CHCR

26N-6W

WELL: 13-E
LEASE: JICARILLA CONTRACT
OPERATOR: AMOCO PROD
API: 300392234700
PROD. FORM:DKOT ,CHCR

26N-5W

WELL: 19-E
LEASE: JICARILLA CONTRACT
OPERATOR: AMOCO PROD
API: 300392234500
PROD. FORM:DKOT ,CHCR

WELL: 5
LEASE: SANCHEZ
OPERATOR: CAULKINS
API: 300392110400
PROD. FORM:PCCF ,CHCR

WELL: 16
LEASE: JOHNSTON-A COM-F
OPERATOR: EL PASO NATURAL GAS
API: 300392077200
PROD. FORM:CHCR

RIO ARRIBA

WELL: 1 B
LEASE: JICARILLA GAS UNIT
OPERATOR: PAN AMERICAN PETRO CORP
API: 300390625800
PROD. FORM:GRRS ,CHCR

WELL: 1
LEASE: CARTER MESA COM
OPERATOR: MERRION & BAYLESS
API: 300392010000
PROD. FORM:CHCR

WELL: 18
LEASE: JICARILLA-155
OPERATOR: PAN AMERICAN
API: 300390622400
PROD. FORM:CHCR

25N-6W

25N-5W

36° 26' 9" N
13,233,988.64 FT. N

36° 26' 9" N
13,233,988.64 FT. N

991,961.48 FT. E
107° 25' 39" W

107° 22' 22" W
1,008,038.52 FT. E

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 Contract 155-30 Sec 30-T26N-R05W CK
Rio Arriba New Mexico
SCALE 1 IN. = 2,500 FT. NOV 4, 1995

HORIZONTAL DATUM NAD27

PLOT 1 06.49.28 SAT 4 NOV, 1995 JOB-P0954502, ISSCO DISSPLA 10.0

HAB09545--RUN#95308062014

PLOT 1 06.49.10 SAT 4 NOV, 1995 JOB-P0955302, ISSCO DISSPLA 10.0

13,249,876.09 FT. N
36° 28' 46" N

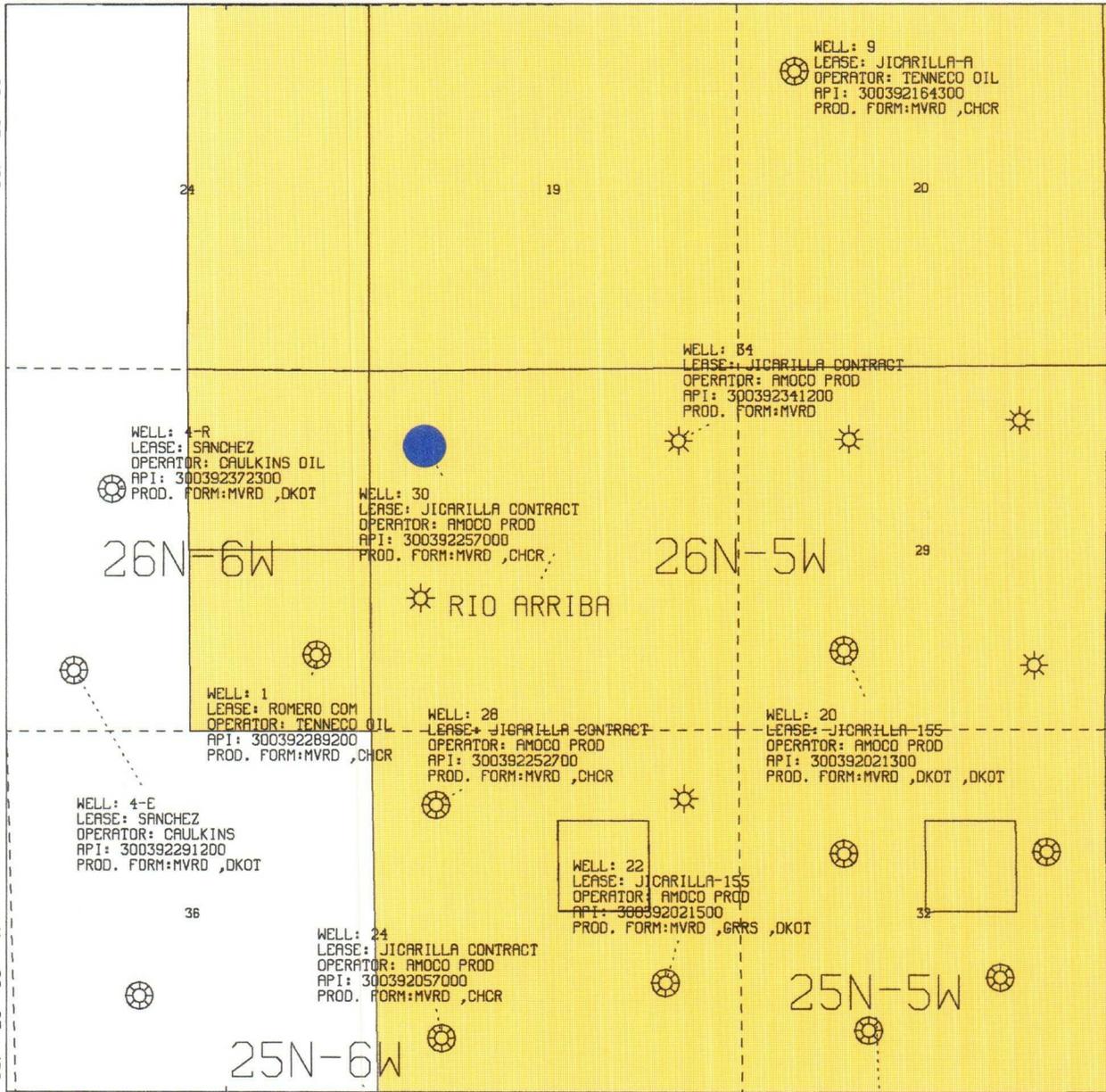
13,249,876.09 FT. N
36° 28' 46" N

991,965.98 FT. E
107° 25' 39" W

1,008,034.02 FT. E
107° 22' 22" W

991,961.48 FT. E
107° 25' 39" W

1,008,038.52 FT. E
107° 22' 22" W



13,233,988.64 FT. N
36° 26' 9" N

13,233,988.64 FT. N
36° 26' 9" N

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

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

HORIZONTAL DATUM NAD27

HAB09553--RUN#95308062330

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

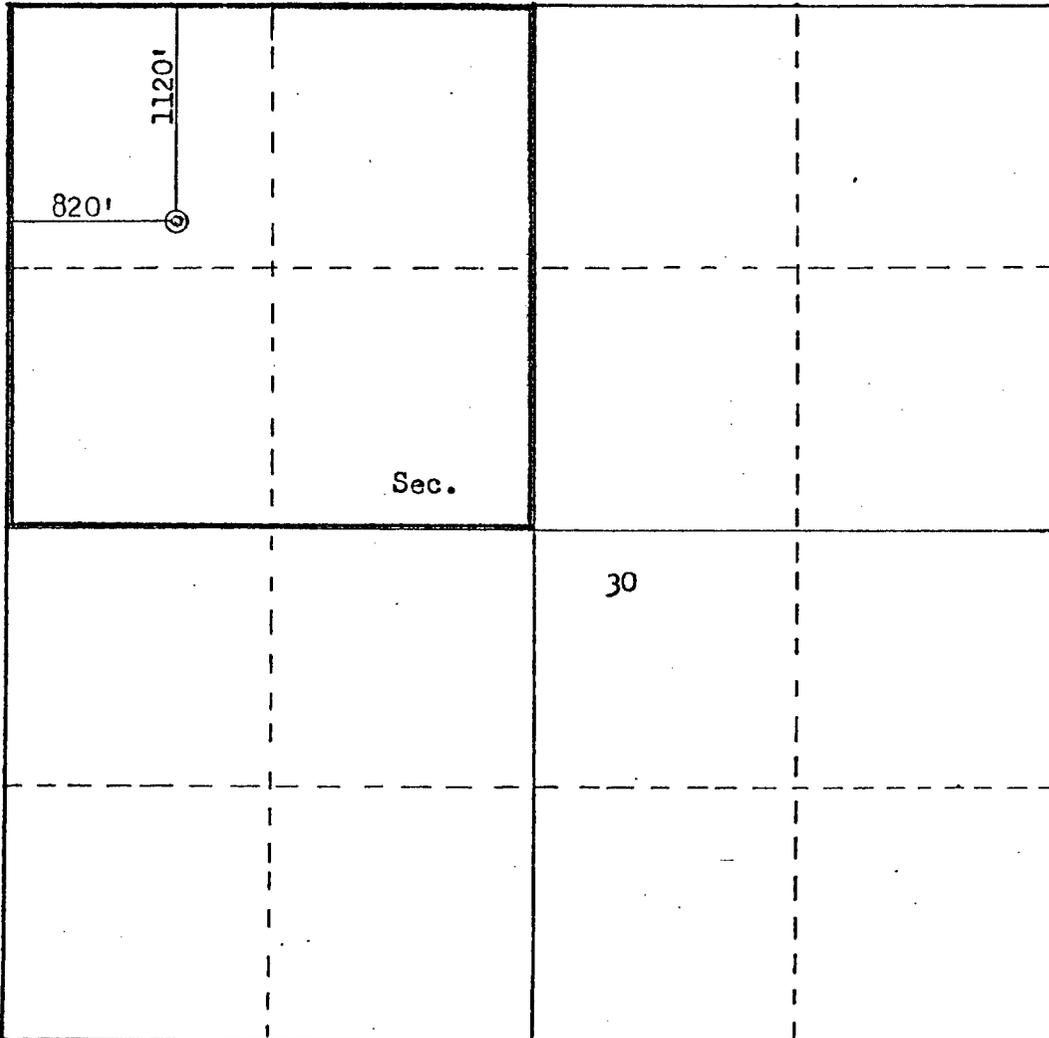
Operator AMOCO PRODUCTION COMPANY		Lease JICARILLA CONTRACT 155			Well No. 30
Unit Letter D	Section 30	Township 26N	Range 5W	County Rio Arriba	
Actual Footage Location of Well: 1120 feet from the North line and 820 feet from the West line					
Ground Level Elev: 6693	Producing Formation Chacra / Mesaverde		Pool Otero Chacra Gonzales MV		Dedicated Acreage: 160 / 160 Acres

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- 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.



Scale: 1"=1000'

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
SEPTEMBER 11, 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

July 29, 1980

Registered Professional Engineer and Land Surveyor

Fred B. Kelt Jr.
Fred B. Kelt Jr.

Certificate No. MEXICO

3950

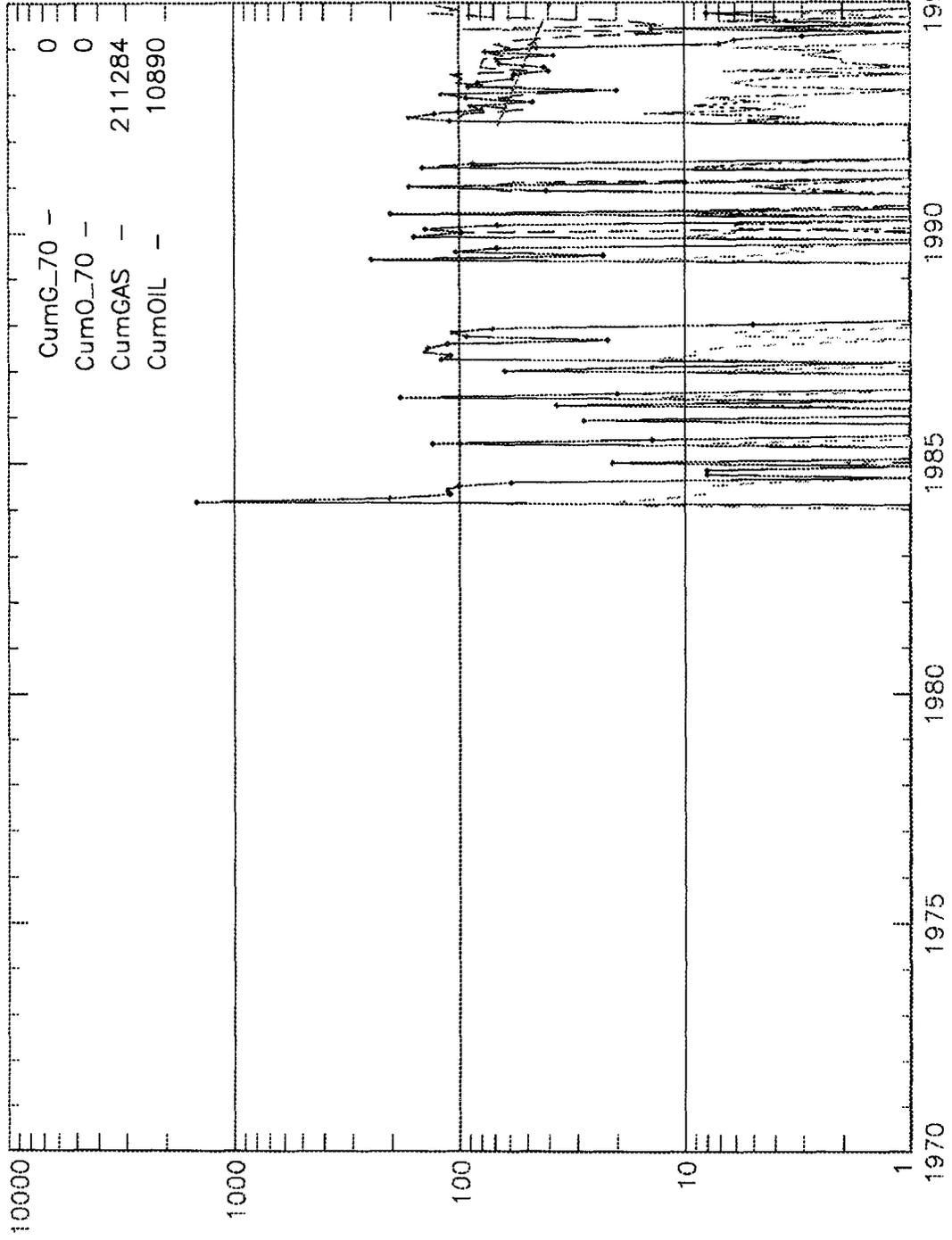
Engr: zhab0b

JICARILLA CONTRACT 155 30

Operator- AMOCO PRODUCTION CO

300392257000MV D302605-030 MV

APC_WI - 1.00000000



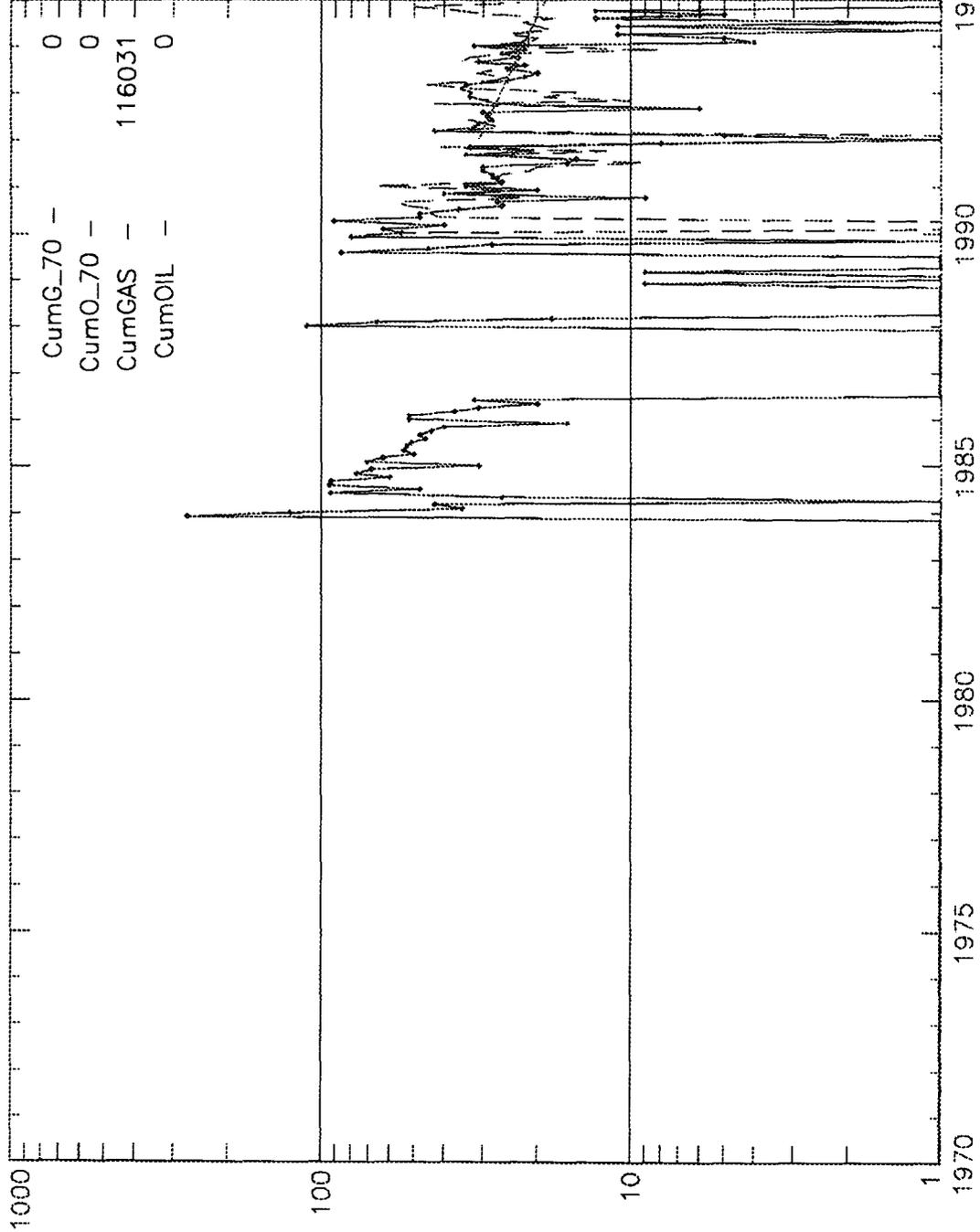
Engr: zhab0b

JICARILLA CONTRACT 155 30

Operator-- AMOCO PRODUCTION CO

300392257000CK D302605-030 CK

APC_WI -- 1.00000000



Curr_Fit

DCLN
CurrQ
RemRes
EUR
Fit_date

New_fit

DCLN
CurrQ
RemRes
EUR
Fit_date

CumG_70 -- 0
CumO_70 -- 0
CumGAS -- 116031
CumOIL -- 0

ESTIMATED BOTTOMHOLE PRESSURES							
Jicarilla Contract #155-30							
CK	PERFORATIONS	TOP	3962	BOTTOM	4071	MIDPERF	4017
MV	PERFORATIONS	TOP	5286	BOTTOM	5476	MIDPERF	5381
	Sep-93	SHUT-IN PRESSURES					
	CK	=	295	PSIG			
	MV	=	450	PSIG			
	GRADIENT	=	0.8	PSI/FT			
	CK BHP =		295	PSIG +	4017	X 0.08	PSIG
		=	616	PSI			
	MV BHP =		450	PSIG +	5381	X 0.08	PSIG
		=	880	PSI			

OIL CONSERVATION DIVISION
NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

JIC Cont 155-30

Operator: AMOCO PRODUCTION COMPANY Lease/Well
Meter 85771 RTU:1-175-01

County: RIO ARRIBA

	NAME RESERVOIR OR POOL	TYPE PROD	METHOD PROD	MEDIUM PROD
UPR COMP	JIC CONTRACT 155 30 OCH 94668 1-176-1 ✓	GAS	FLOW	TBG
LWR COMP	JIC CONTRACT 155 30 MMV 85771 1-175-1	GAS	FLOW	TBG

PRE-FLOW SHUT-IN PRESSURE DATA

	Hour/Date Shut-In	Length of Time Shut-In	SI Press. PSIG	Stabilized
UPR COMP	09/01/93			
LWR COMP	09/01/93			

FLOW TEST DATE NO.1

Commenced at (hour, date) *

Zone Producing (Upr/Lwr)

TIME (hour, date)	LAPSED TIME SINCE*	PRESSURE		Prod Temp.	REMARKS
		Upper	Lower		
09/01/93	Day 1	140 T. 251 C.	250 C. 400 T.		Both Zones SI
09/02/93	Day 2	200 T. 275 C.	420 T. 270 C.		Both Zones SI
09/03/93	Day 3	245 T. 285 C.	440 T. 285 C.		Both Zones SI
09/04/93	Day 4	450 T260 295 C.	440 T450 295 C.		TURN ON LOWER ZONE
09/05/93	Day 5	225 T.	440 T. 270 C.		
09/06/93	Day 6	170 T.	365 T. 255 C.		

Production rate during test

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

Gas: _____ 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)
UPR COMP				
LWR COMP				

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OIL CON. DIV.

(Continue on reverse side)

DHC-1204



NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178 Fax (505)334-6170

GARY E. JOHNSON
GOVERNOR

JENNIFER A. SALISBURY
CABINET SECRETARY

DIL REC
1996 MAR 14 AM 8 52

ADMINISTRATIVE ORDER RECOMMENDATION

Date: _____

New Mexico Oil Conservation Division
PO Box 2088
Santa Fe NM 87504-2088

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

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

Gentlemen:

I have examined the application received on 3/8/96
for the Almoco Jicarilla 155 #30
OPERATOR LEASE & WELL NUMBER
W-30-26N-SW and my recommendations are as follows:
UL-S-T-R

Yours truly,

J. J.