STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL RESOURCES DIVISION
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

Date: 9/21/95

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

RE: Proposed MC_____ Proposed DHC X
Proposed NSL_____ Proposed SWD_____
Proposed WFX_____ Proposed PMX_____
Proposed NSP_____ Proposed DD_____

Gentlemen:

I have examined the application received on 9/5/95

for the Amoco Jicarilla A #1E
OPERATOR LEASE & WELL NO.

F-18-26N-5W and my recommendations are as follows:
UL-S-T-R

Approve

Pressures are calculated incorrectly

Yours truly,

D. S.

Southern Rockies Business Unit

August 30, 1995

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

RECEIVED
SEP - 5 1995
OIL CON. DIV.
DIST. 3

Application for Exception to Rule 303-A
Downhole Commingling
Jicarilla "A" #1E Well
1720' FNL & 1850' FWL, Unit F Section 18-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 "A" #1E Well referenced above. The Jicarilla "A" #1E well was originally a dual completion in the Dakota and Chacra formations. This well has a marginal Chacra formation which is being produced dually with the Dakota which if left as a dual completion, the marginal zone would be shut-in in the near future. We plan to complete the well with both the Dakota and Chacra formations being downhole commingled in the wellbore. The two zones are expected to produce at a total commingled rate of about 237 MCFD with 5 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 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 87% from the Dakota formation and 13% from the Chacra formation. The Chacra has not historically produced liquids in this well. Based on that fact, we propose to allocate 100% of the liquid production to the Dakota 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 "A"
Well Number:	1E
Well Location:	1720' FNL & 1850' FWL Unit F Section 18-T26N-R5W Rio Arriba County, New Mexico
Pools Commingled:	Otero Chacra Basin Dakota

(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 Dakota produced an average stabilized rate of 145 MCFD and 1.7 BCPD. The Chacra zone produced at an average rate of about 0 MCFD and 0 BCPD but has recently come back on at 30 MCFD.

(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 OCD Packer Leakage Tests. Shut-in bottomhole pressure in the Chacra formation is calculated to be 820 PSIG while estimated bottomhole pressure in the Dakota

formation is 1458 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 Dakota 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:

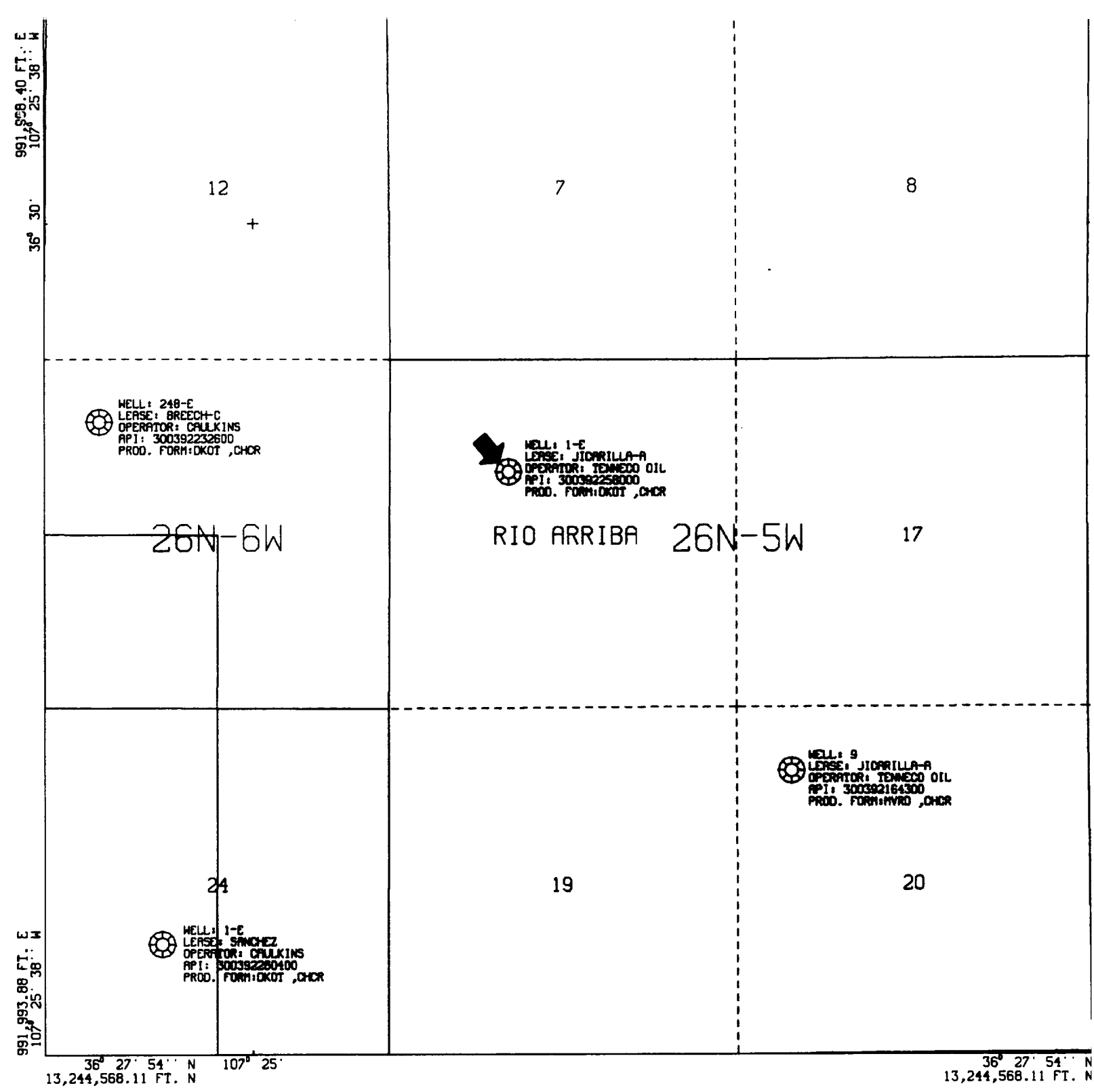
The BTU content of the produced streams are very similar and as such, we would expect the commingled production to have the same value as the sum of the individual streams.

(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:

Based on historical production we recommend that the allocation for gas production be 87% from the Dakota formation and 13% from the Chacra formation. The Chacra has not historically produced liquids in this well. Based on that fact, we propose to allocate 100% of the liquid production to the Dakota 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.

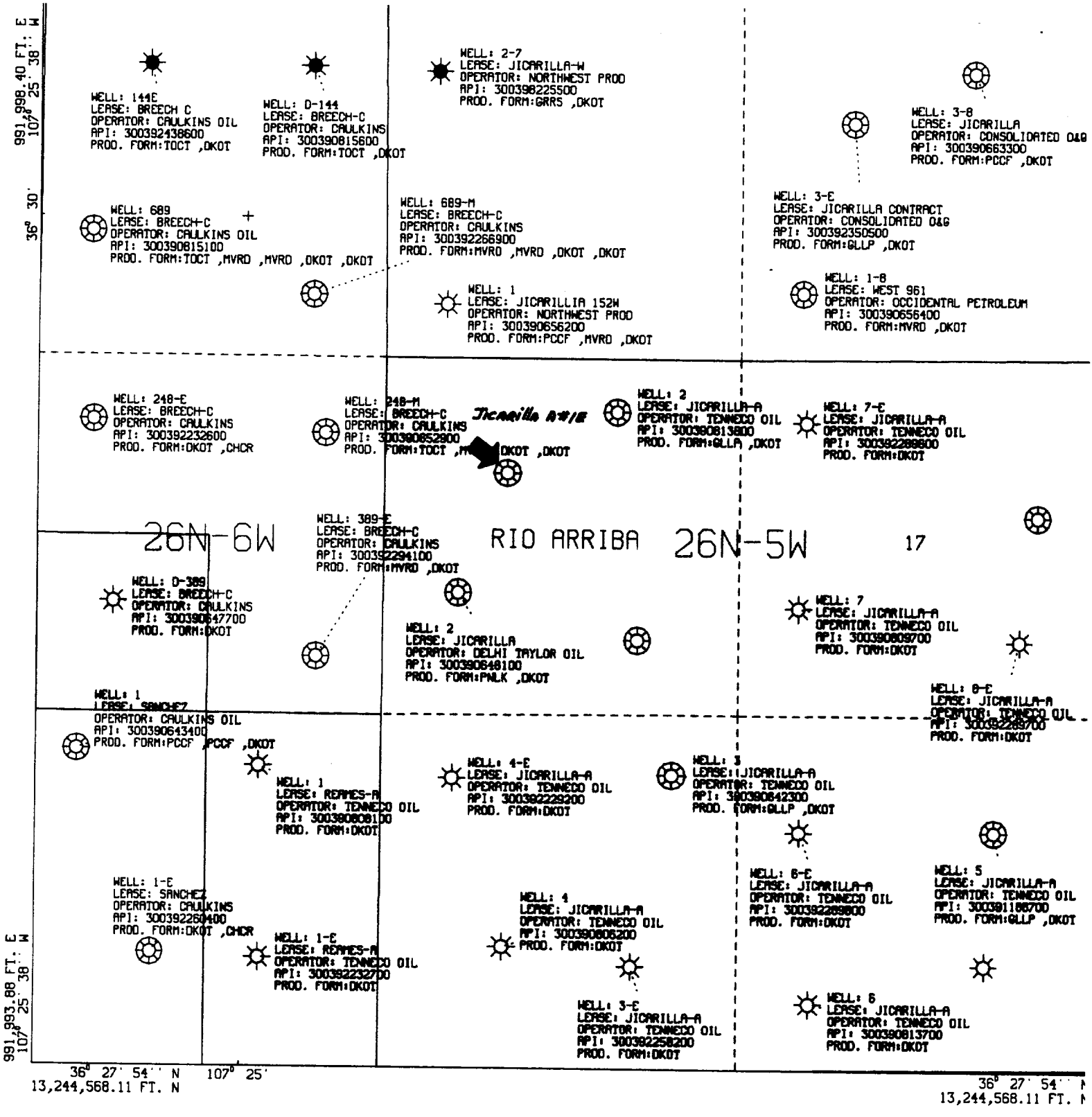
BLM will receive a copy of this application by certified mail. The offsetting operators listed on the attached sheet will receive a copy of this application by certified mail.



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

AMOCO PRODUCTION COMPANY
PLAT MAP
Jicarilla /A/ #1E Sec. 18-T26N-R05W
Rio Arriba New Mexico FM: CHCR

SCALE 1 IN. = 2,000 FT. JUL 14, 1995



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

AMOCO PRODUCTION COMPANY
PLAT MAP
Jicarilla /A/ #1E Sec. 18-T26N-R05W
Rio Arriba New Mexico FM: DKOT

SCALE 1 IN. = 2,000 FT. JUL 14, 1995

ADMN 016654

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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.
TENNECO OIL COMPANY	JICARILLA "A"	1M

Unit Letter	Section	Township	Range	County
F	18	26N	5W	Rio Arriba

Actual Footage Location of Well:
1720 feet from the North line and 1850 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6611	Chacra	Basin Dakota/Chacra	160 Acres

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

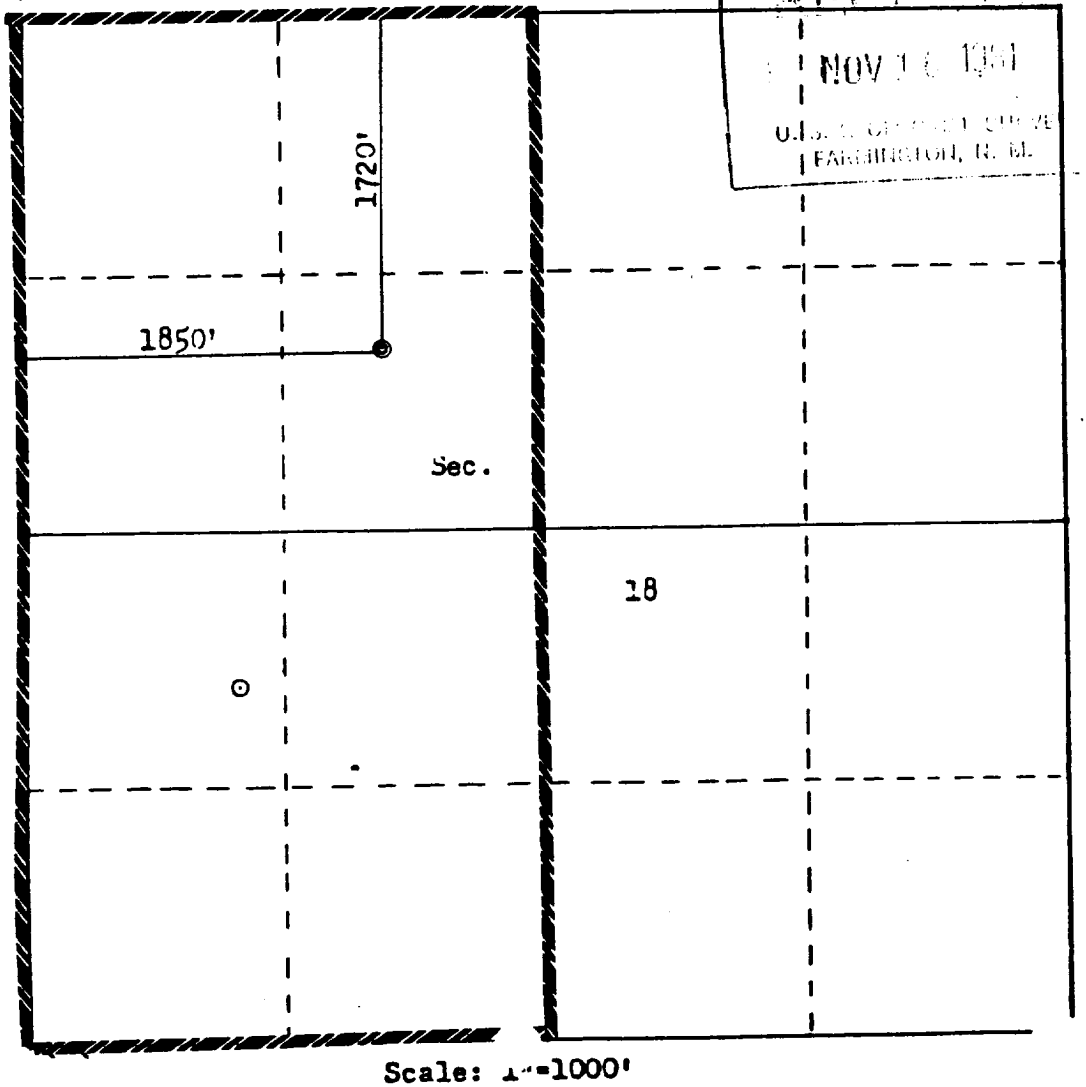
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.



Scale: 1"=1000'

NOV 16 1981
U.S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

CERTIFICATION

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

Saundra F. Peron

Name: Saundra F. Peron
Position: Production Analyst
Company: Tenneco Oil Company
Date: 11/12/81

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: April 23, 1981
Registered Professional Engineer and Land Surveyor
Fred B. Kerr, Jr.
Certificate No. 3950

FORM 24-11

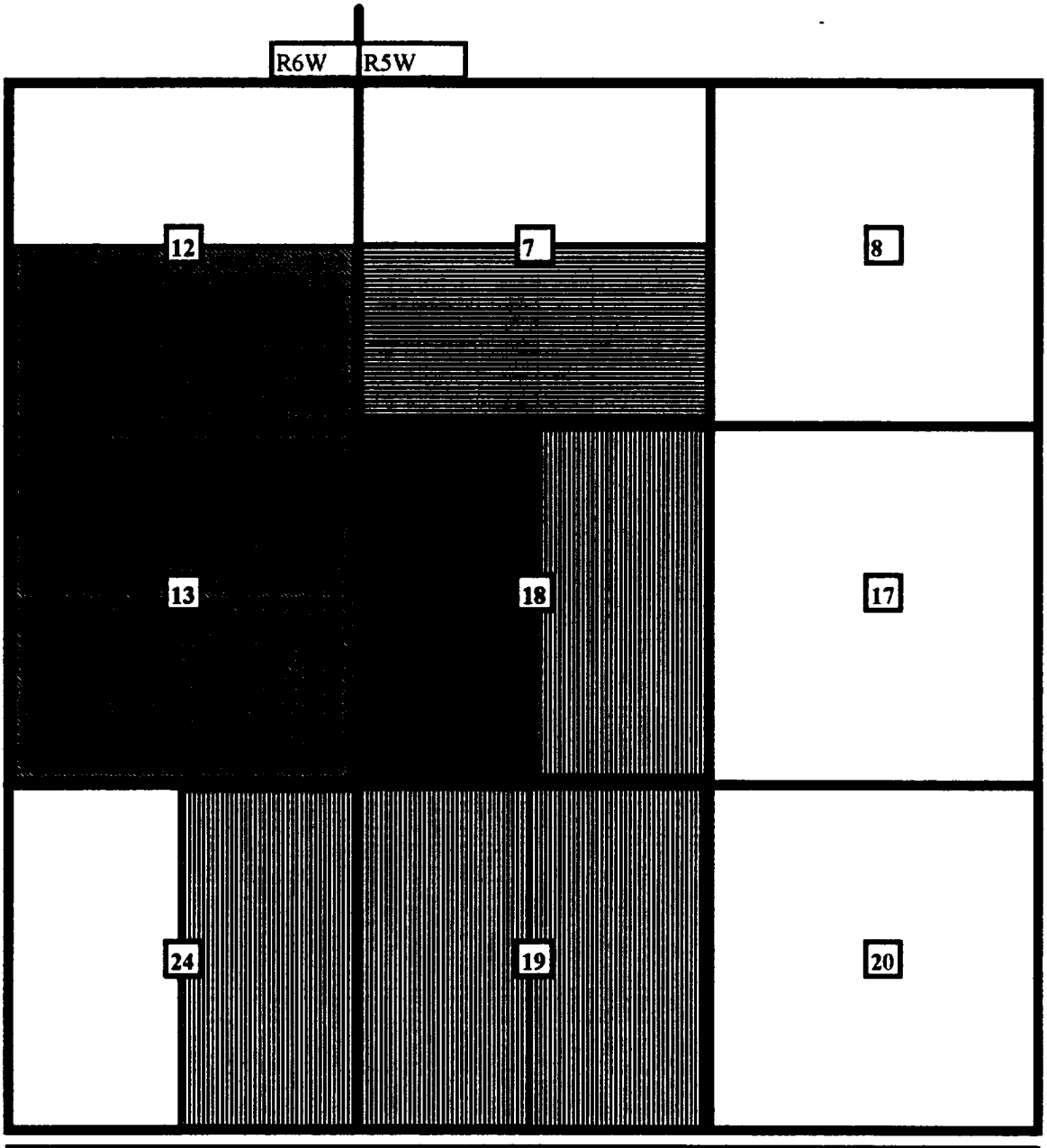
LIST OF ADDRESSES FOR OFFSET OPERATORS
Jicarilla "A" Well #1E

1 Caulkins Oil Co.
1600 Broadway, Suite 2100
Denver, CO 80202

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

AMOCO PRODUCTION COMPANY OFFSET OPERATOR PLAT

JICARILLA A #1E
1720' FNL, 1850' FWL
Unit F Section 18-T26N-R5W
Basin Dakota Pool



SPACING UNIT TO BE DOWNHOLE COMMINGLED

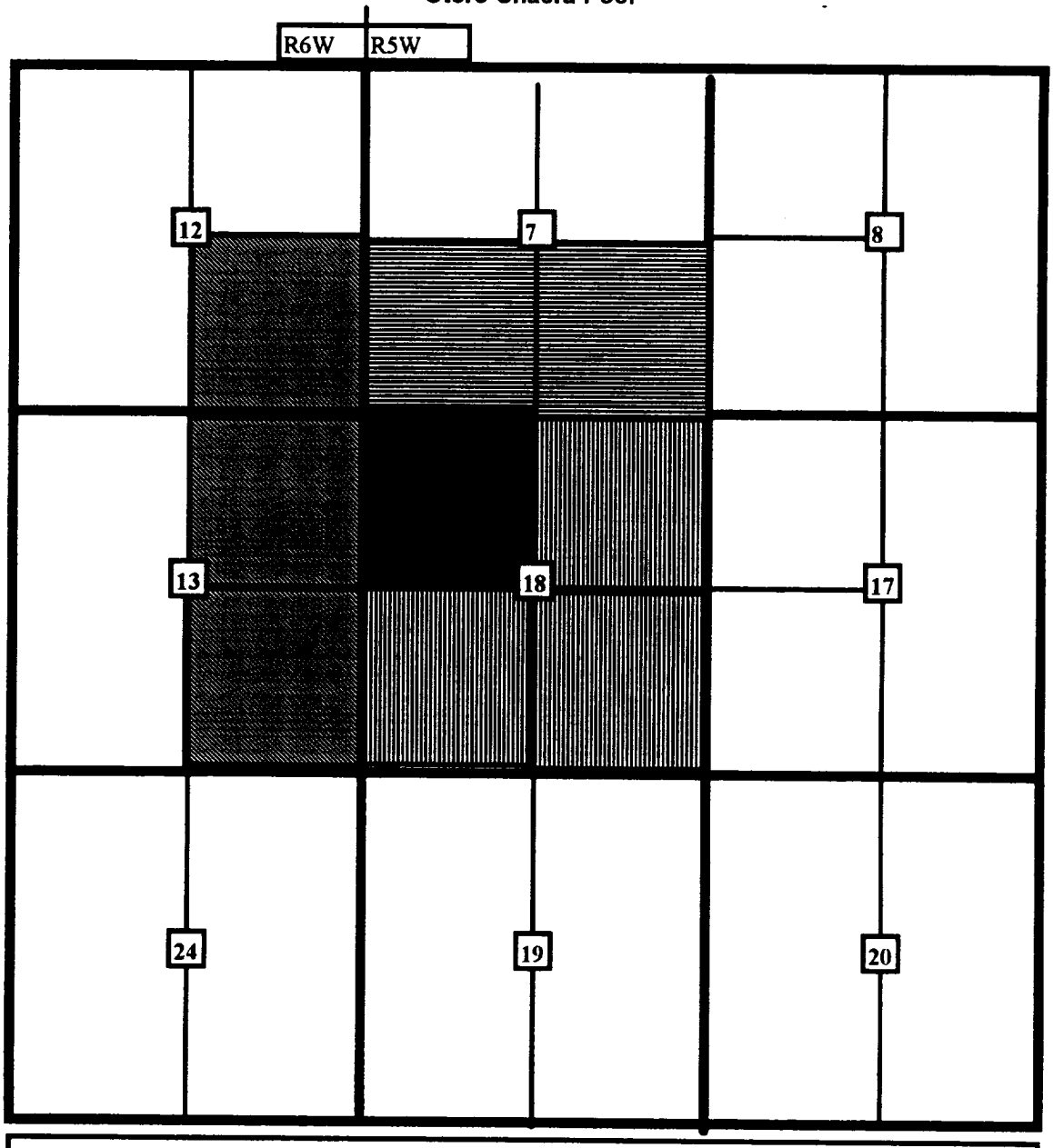
AMOCO PRODUCTION COMPANY

MERIDIAN OIL INC.

CAULKINS OIL COMPANY

AMOCO PRODUCTION COMPANY OFFSET OPERATOR PLAT

JICARILLA A #1E
1720' FNL, 1850' FWL
Unit F Section 18-T26N-R5W
Otero Chacra Pool



SPACING UNIT TO BE DOWNHOLE COMMINGLED

AMOCO PRODUCTION COMPANY

MERIDIAN OIL INC.

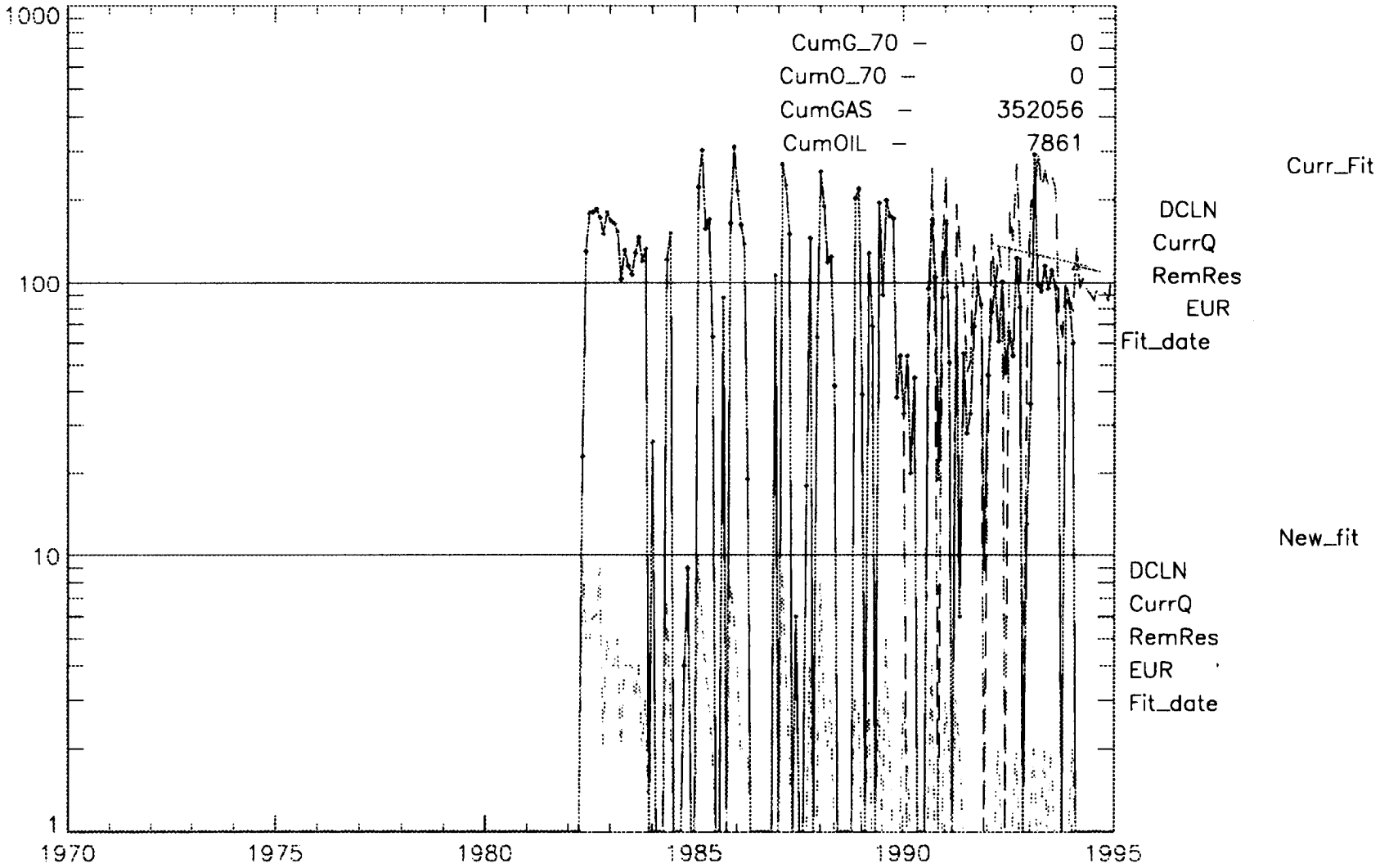
CAUKINS OIL COMPANY

Engr: zhab0b

JICARILLA A 1E

Operator- AMOCO PRODUCTION CO

300392258000DK F182605-001EDK APC_WI - 0.25000000

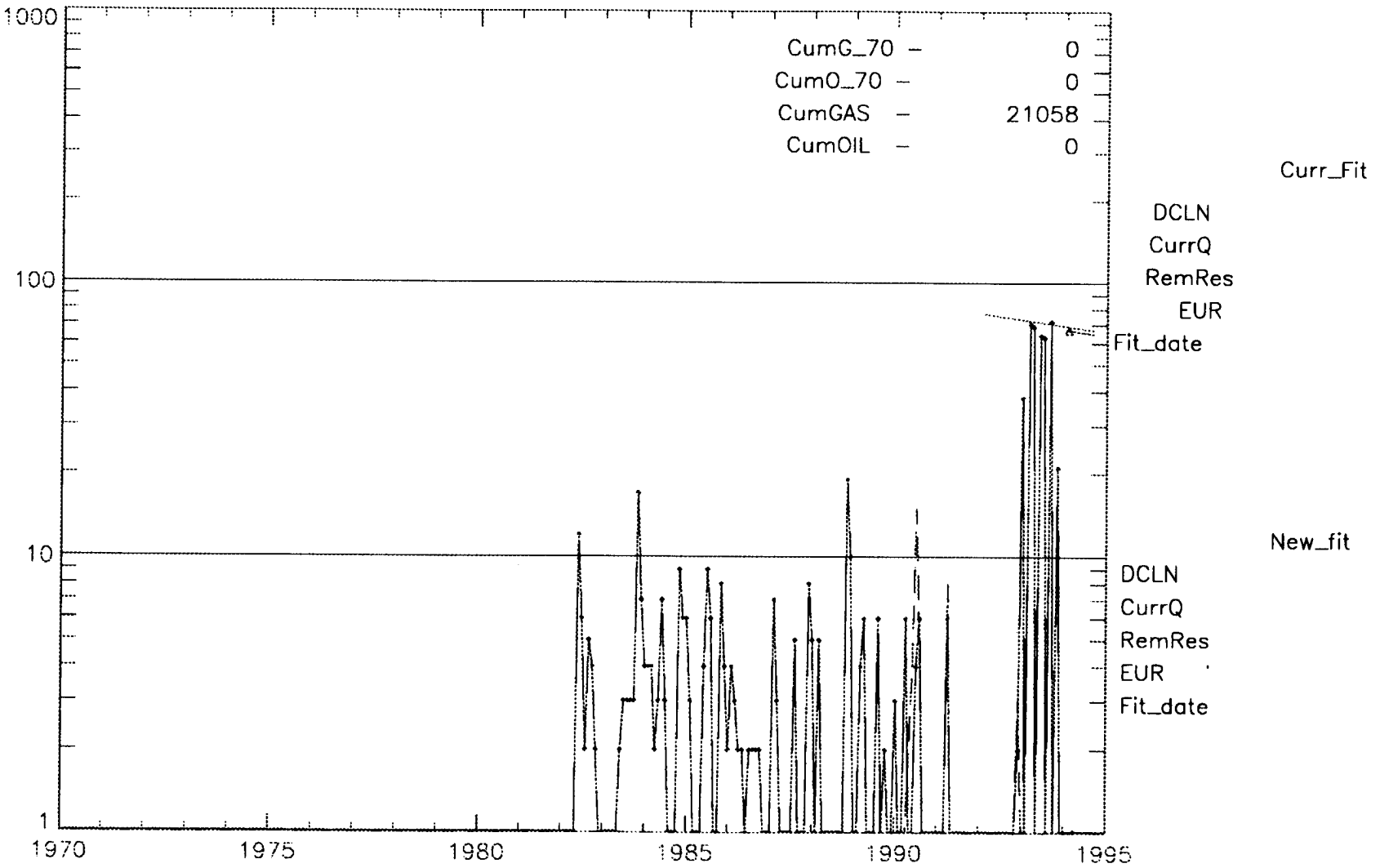


Engr: zhab0b

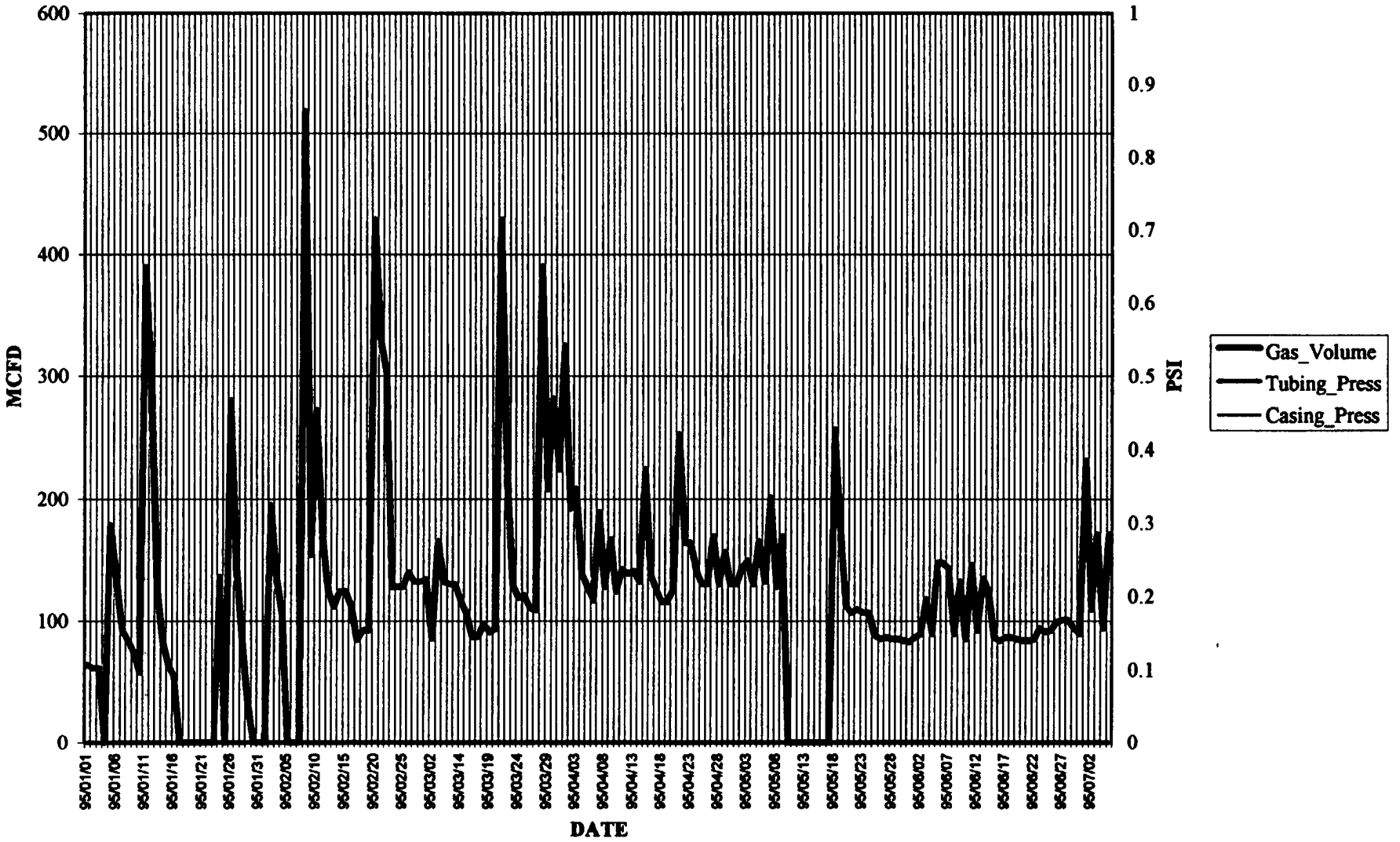
JICARILLA A 1E

Operator- AMOCO PRODUCTION CO

300392258000CK F182605-001ECK APC_WI - 0.25000000



Well: JICARILLA A 001E-DK (97836101)



ESTIMATED BOTTOMHOLE PRESSURES BY FORMATION
JICARILLA A # 1E

CK Perforations at 4024-4109' midperf at 4376'
DK Perforations at 7338-7560' midperf at 7449'

11/80 shut in pressures --- CK = 470 PSIG
DK = 890 PSIG

GRADIENT = 0.08 PSI/FT

CK BHP = 470 PSIG + 4376' X 0.08 PSIG
= 820 PSIG

DK BHP = 890 PSIG + 7449' X 0.08 PSIG
=1486 PSIG

820 PSIG / 1486 = 55% WHICH MEETS THE >50% RULE

STATE OF NEW MEXICO
ENERGY and MINERALS DEPARTMENT

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

OIL CONSERVATION DIVISION

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

Operator TENNECO OIL CO. Lease JICARILLA A Well No. 1E

Location of Well: Unit F Sec. 18 Twp. 26N Rge. 5W 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	OTERO ~~UNDESIGNATED~~ CHACRA	GAS	FLOW	TUBING
Lower Completion	BASIN DAKOTA	GAS	FLOW	TUBING

PRE-FLOW SHUT-IN PRESSURE DATA

	Hour, date shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)
Upper Completion	12:00 noon 11-7-88	72 hours	470	yes
Lower Completion	12:00 noon 11-7-88	72 hours	890	no

FLOW TEST NO. 1

Commenced at (hour, date)* 1:00 pm 11-10-88 Zone producing (Upper or Lower): lower

TIME (hour, date)	LAPSED TIME SINCE*	PRESSURE Upper Completion	PRESSURE Lower Completion	PROD. ZONE TEMP.	REMARKS
10:00 am 11-11-88	21 hours	470	310		
11:30 am 11-12-88	46½ hours	470	310		

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NOV 22 1988
OIL CON. DIV.
DIST. 3

Production rate during test

Oil: _____ BOPD based on _____ Bbls. in _____ Hours. _____ Grav. _____ GOR _____

Gas: 372 MCFPD; Tested thru (Orifice or Meter): meter

MID-TEST SHUT-IN PRESSURE DATA

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

ADMN 016746

(Continue on reverse side)