



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

GARREY CARRUTHERS
GOVERNOR

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

Date: 6-16-89

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 _____

Gentlemen:

I have examined the application dated 6-14-89
for the Mantle Juanilla Apache #13E
Operator Lease & Well No.

E33-262-52 and my recommendations are as follows:
Unit, S-T-R

Drill for Leasing

Yours truly,

Jan. 48



**Marathon
Oil Company**

P.O. Box 552
Midland, Texas 79702
Telephone 915/682-1626

May 19, 1989

State of New Mexico
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

RECEIVED
JUN 14 1989
OIL CON. DIV
DIST. 3

Attention: Division Director

Re: Rule 303 C - Downhole Commingling

Marathon Oil Company requests permission to downhole commingle production in its Jicarilla Apache Well No. 13E. The legal description for this well is 1850' FNL and 930' FWL, Section 33, T26N, R5W, Rio Arriba County, New Mexico. This well is a dual completion under Division Order No. MC-2919. This well produces from the Basin Dakota from perforations at 7107'-7295' and from the Blanco Mesaverde from perforations at 5126'-5150'.

An attached C-116 shows the most recent production from the Basin Dakota formation and the Blanco Mesaverde formation. Previous commingling of these two zones by other operators in this area have shown that the gas, condensate and waters produced by these two formations are compatible and will not result in formation damage if commingled. The value of the commingled gas and condensate will not be reduced by commingling. Ownership of the two zones is also the same. The bottomhole pressures of the two zones corrected to a depth of 5126' for purposes of comparison is 1054 psia for the Blanco Mesaverde and 1001 psia for the Basin Dakota.

Letters have been sent to all offset operators and the BLM notifying them of the proposed commingling. A copy of one of these letters is attached. Also attached is a production decline curve for the past 5 years for the Basin Dakota formation. A map showing the location of the well is also attached. Production should be assigned to each of the zones using the allocation formula attached or using a straight percentage split: Mesaverde - 31%, Dakota - 69%.

Marathon Oil Company

May 19, 1989

Page 2

If any further questions or comments should arise, please contact Mr.
M. A. Zoller, Production Superintendent at (915) 682-1626. Thank you.

Sincerely,

MARATHON OIL COMPANY

A handwritten signature in cursive script that reads "Nancy Engler".

Nancy Engler
Production Engineer

NCE/akp

005-89



**Marathon
Oil Company**

P.O. Box 552
Midland, Texas 79702
Telephone 915/682-1626

May 15, 1989

Union Texas Petroleum
4001 Bloomfield Highway
Farmington, New Mexico 87410

Attention: Operations Manager

Re: Marathon Oil Company - Jicarilla Apache Well No. 13E
1850' FNL, 930' FWL, Sec. 33, T26N, R5W, Unit E
Rio Arriba County, New Mexico

Dear Sir:

Marathon Oil Company is requesting permission from the Oil Conservation Division to downhole commingle production in the above referenced well. The Jicarilla Apache Well No. 13E is presently dually completed in the Blanco Mesaverde and the Basin Dakota. Combined production from this well will average approximately 200 MCFGPD, 1 BCPD, and 0.5 BWPD.

If you have no objection to this request, please sign the waiver at the bottom of this letter and return it to my attention. If you have any questions, please contact this office. Thank you.

Sincerely,

MARATHON OIL COMPANY

Nancy Engler
Production Engineer

NCE/akp
003-89

This is to acknowledge that the undersigned waives objection to the downhole commingling, as proposed by Marathon Oil Company in this letter.

Company

Date

Company Representative

Title

Submit 2 copies to Appropriate District Office.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
P.O. Drawer DD, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-116
Revised 1/1/89

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

GAS - OIL RATIO TEST

Operator Marathon Oil Company		Pool Blanco Mesaverde/Basin Dakota		County Rio Arriba											
Address P.O. Box 552, Midland, Texas 79702		TYPE OF TEST - (X)		Completion ☐ Special ☒											
LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT/BBL.
		U	S	T	R							WATER BBL.S.	GRAV. OIL	OIL BBL.S.	
Jicarilla Apache Blanco Mesaverde	13E	J	33	26N	5W	5-31-89	P	0.625	296		24	0.0	3.4	73	21,471
Basin Dakota	13F	J	33	26N	5W	5-31-89	P	0.875	304		24	0.6	2.5	138	55,200

Instructions:

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

(See Rule 301, Rule 1116 & appropriate pool rules.)

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

Signature

Kent M. Weisling, Production Engineer

Printed name and title

Date 6/5/89 (915) 682-1626 Telephone No.

Jicarilla Apache Well No. 13E

Allocation formula for production from
Blanco Mesaverde and Basin Dakota

Exponential decline factors: Mesaverde (MV) = 0.0128/month
Dakota (DK) = 0.0167/month

Where $DK_1, MV_1 \Rightarrow$ current production
 $DK_2, MV_2 \Rightarrow$ estimated production for following month
 $DK_3, MV_3 \Rightarrow$ allocated production for following month

$$\ln (MV_1) - 0.0128 = \ln (MV_2)$$

$$\ln (DK_1) - 0.0167 = \ln (DK_2)$$

Where for any given month:

$$DK + MV = \text{Total Production (T)}$$

Allocate using $(MV_2/DK_2 + 1) DK_3 = \text{Known Total Production (T}_3)$

Example: $MV_1 = 1600$ $\ln MV_1 = 7.3778$
 $DK_1 = 3500$ $\ln DK_1 = 8.1605$

$$7.3778 - 0.0128 = 7.3650 = \ln MV_2; MV_2 = 1580$$

$$8.1605 - 0.0167 = 8.1438 = \ln DK_2; DK_2 = 3442$$

$$MV_2/DK_2 = 0.459$$

If Total Volume to be allocated (T_3) is 6000 MCF

$$\text{then } (0.459 + 1) DK_3 = 6000$$

$$DK_3 = 4112 \text{ MCF}$$

$$MV_3 = 6000 - 4112 = 1888 \text{ MCF}$$

For a more simplistic, less accurate allocation use: MV = 31%
DK = 69%

NE:akp

File No. 004-89

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(*Other instructions on re-
verse side)

Form approved.
Budget Bureau No. 1004-0115
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

Tract 251, Cont. 000154
6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Jicarilla Apache

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Jicarilla Apache

9. WELL NO.

13E

10. FIELD AND POOL, OR WILDCAT

Blanco Mesaverde/Basin Dakot

11. SEC., T., R., M., OR BLE. AND
SURVEY OR AREA

Sec. 33, T26N, R5W

12. COUNTY OR PARISH

13. STATE

Rio Arriba

N. Mexico

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☒ OTHER

2. NAME OF OPERATOR

Marathon Oil Company

3. ADDRESS OF OPERATOR

P.O. Box 552, Midland, Texas 79702

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

SE NW Unit Letter E 1850' FNL & 930' FWL

14. PERMIT NO.

30-039-22446

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

6598' GL, 6610 KB

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

FRACTURE TREAT

MULTIPLE COMPLETE

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANE

(Other) Please see below

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREATMENT

ALTERING CASING

SHOOTING OR ACIDIZING

ABANDONMENT*

(Other)

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Marathon is applying for permission from the Oil Conservation Division to downhole commingle production from the Blanco Mesaverde and Basin Dakota formations. Upon receiving approval from the NMOCD, the sliding sleeve will be opened and production from the two zones will be commingled. Estimated start date of this work is July 1, 1989.

18. I hereby certify that the foregoing is true and correct

SIGNED

m. c. j. feller

TITLE

Production Superintendent

DATE

6-12-89

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approval of the abandonment.

PRIVACY ACT

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et. seq., 351 et. seq., 25 U.S.C. et. seq.; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is to be used to evaluate, when appropriate, approve applications, and report completion of secondary well operations, on a Federal or Indian lease.

ROUTINE USES: (1) Evaluate the equipment and procedures used during the proposed or completed subsequent well operations. (2) Request and grant approval to perform those actions covered by 43 CFR 3162.3-2(2). (3) Analyze future applications to drill or modify operations in light of data obtained and methods used. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions.

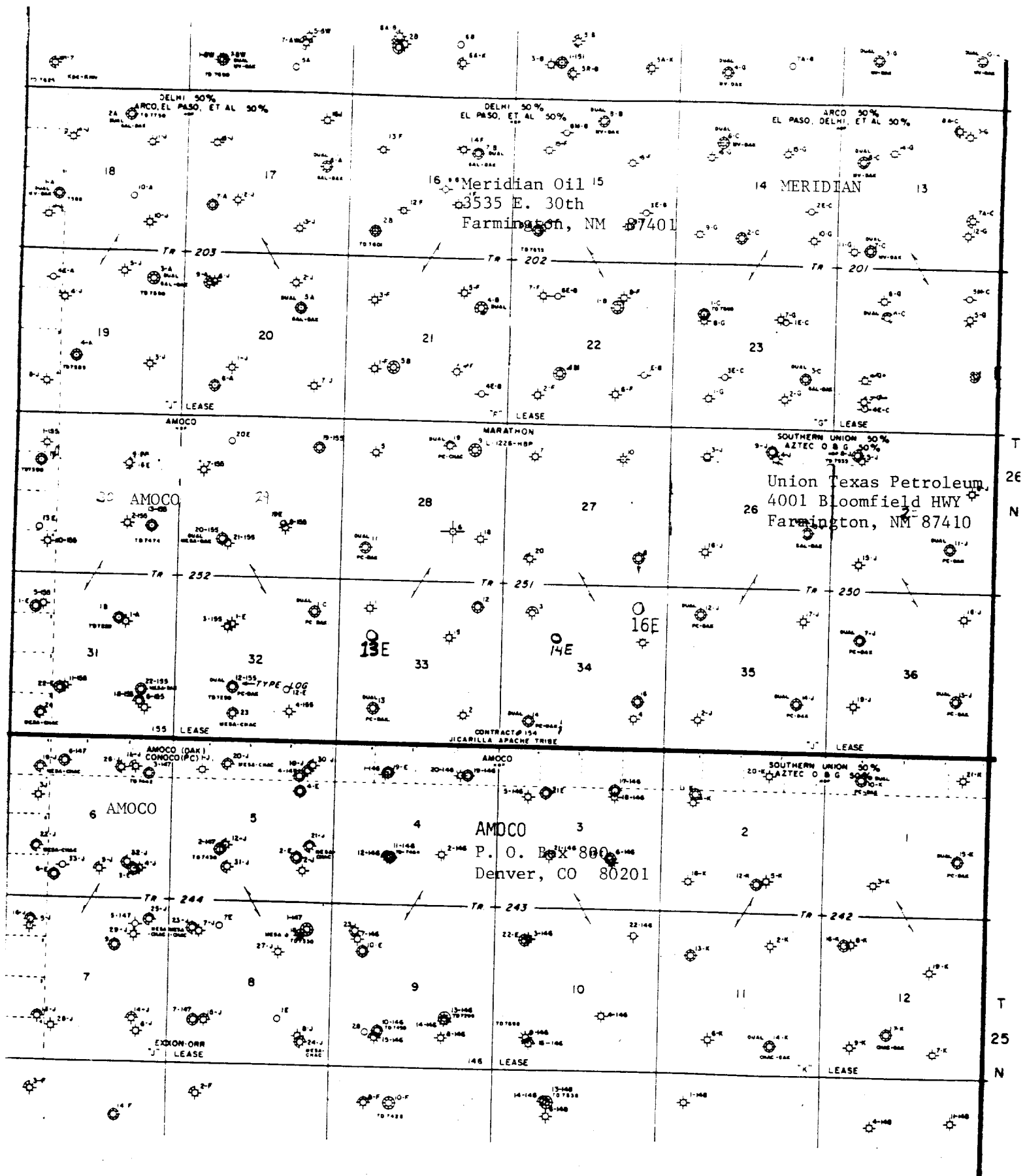
EFFECT OF NOT PROVIDING INFORMATION: Filing of this notice and report and disclosure of the information is mandatory once an oil or gas well is drilled.

The Paperwork Reduction Act of 1980 (44 U.S.C. 3501, et. seq.) requires us to inform you that:

This information is being collected in order to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

This information will be used to report subsequent operations once work is completed and when requested, to obtain approval for subsequent operations not previously authorized.

Response to this request is mandatory for the specific types of activities specified in 43 CFR Part 3160.



R 5 W

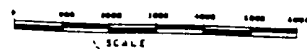


MARATHON OIL COMPANY

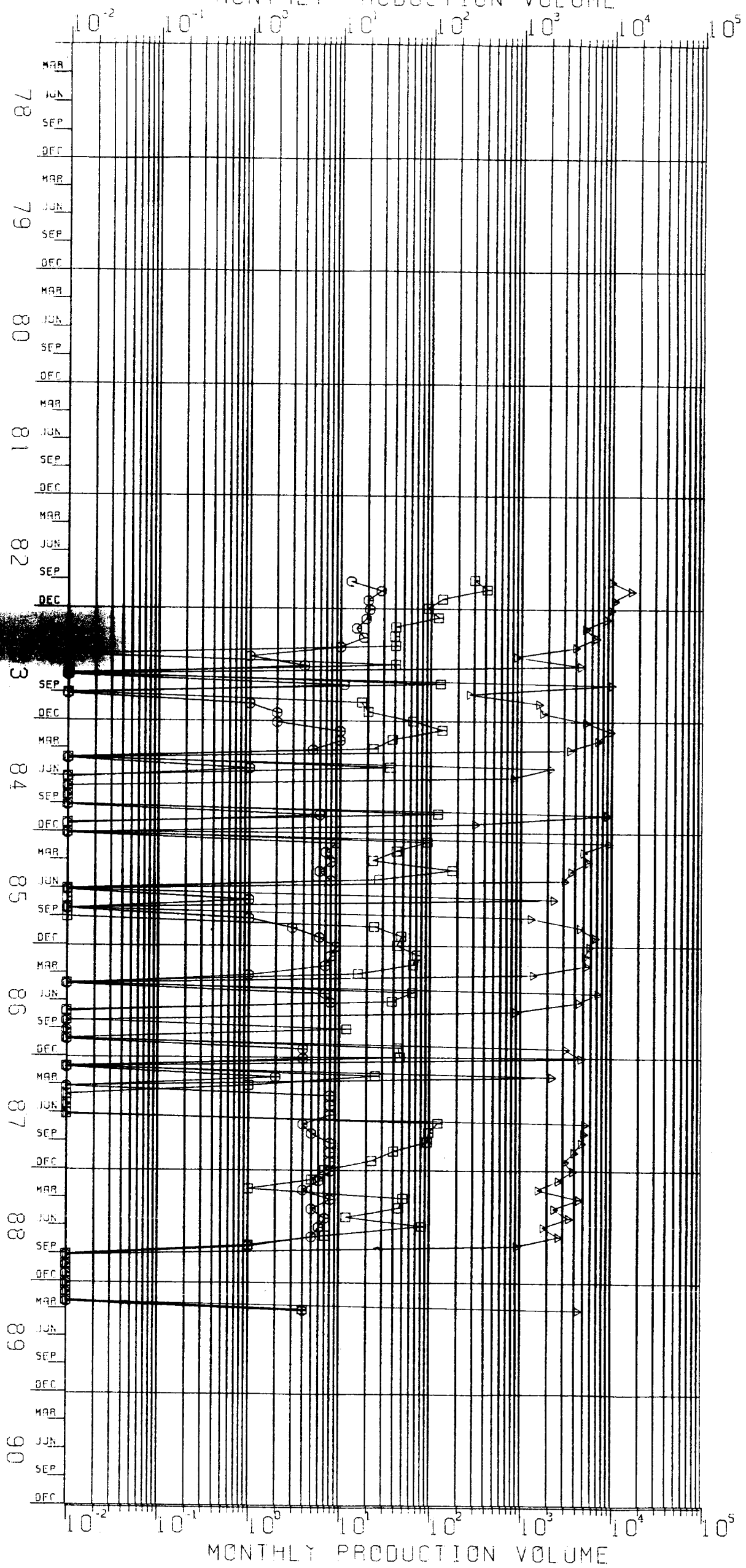
- LEGEND -

- ⊙ PICTURED CLIFFS GAS WELL
- ⊙ MESAVARDE GAS WELL
- ⊙ DAKOTA OIL WELL
- ⊙ DAKOTA GAS WELL
- ⊙ PICTURE CLIFFS & CHACRA GAS WELL
- ⊙ PICTURE CLIFFS DEEPEMED TO DAKOTA
- ⊙ CHACRA GAS WELL

JICARILLA AREA
RIO ARRIBA COUNTY, NEW MEXICO



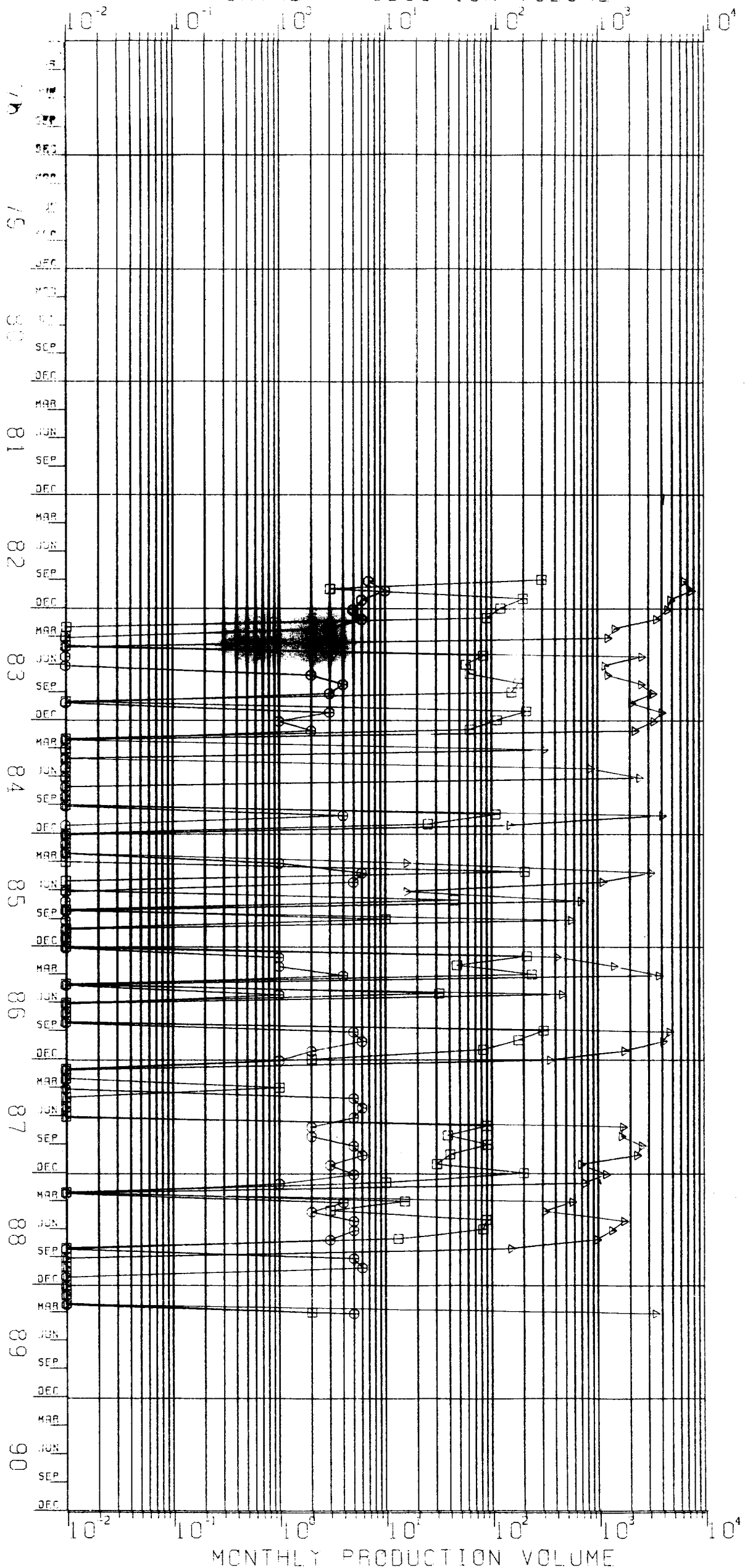
FIELD - JICARILLA
 RESERVOIR - BASIN DAKOTA
 LEASE - JICARILLA APACHE BLANCO PICTURE CLIFFS CONT-90154
 WELL - JICARILLA BD 13E



GIL+COND MONTHLY VOL □
 GRS MONTHLY VOL △
 WATER MONTHLY VOL ○

MONTHLY PRODUCTION VOLUME

FIELD - JICARILLA
 RESERVOIR - BLANCO MESAVARDE
 LEASE - JICARILLA APACHE
 WELL - JICARILLA PL 13E
 BLANCO PICTURE CLIFFS CONT-90154



MONTHLY PRODUCTION VOLUME

OIL+COND MONTHLY VOL _____
 GAS MONTHLY VOLUME _____
 WATER MONTHLY VOLUME _____