



**Marathon  
Oil Company**

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

May 19, 1989

**RECEIVED**

**JUN 14 1989**

**OIL CONSERVATION DIV.  
SANTA FE**

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

Attention: Division Director

*Case 9722*

Re: Rule 303 C - Downhole Commingling

Marathon Oil Company requests permission to downhole commingle production in its Jicarilla Apache Well No. 14E. The legal description for this well is 1850' FNL and 1685' FWL, Section 34, T26N, R5W, Rio Arriba County, New Mexico. This well is a dual completion under Division Order No. MC-2973. This well produces from the Basin Dakota from perforations at 7100'-7332' and from the Blanco Mesaverde from perforations at 4952'-5243'.

An attached C-116 shows the most recent production from the Basin Dakota formation. The Blanco Mesaverde formation has not produced separately. However, during a 30 day commingled test of these formations the well produced at a stabilized rate of 549 MCFPD, 10.2 BCPD and 2.6 BWPD. 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 5000' for purposes of comparison is 1287 psia for the Blanco Mesaverde and 1191 psia for the Basin Dakota.

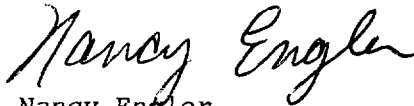
Letters have been sent to all offset operators and the BLM notifying them of the proposed commingling. A copy of one of these letters is attached. Also attached is a production decline curve for the past 5 years for the Basin Dakota formation. A map showing the location of the well is also attached. Production should be assigned to the Basin Dakota based on extrapolation of the decline curve. The difference between total production and extrapolated Dakota production should be assigned to the Blanco Mesaverde.

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". The signature is written in dark ink and is positioned above the printed name and title.

Nancy Engler  
Production Engineer

NCE/akp  
002-89



**Marathon  
Oil Company**

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

May 16, 1989

Union Texas Petroleum  
4001 Bloomfield Highway  
Farmington, New Mexico 87410

*Case 9722*

Attention: Operations Manager

Re: Marathon Oil Company - Jicarilla Apache Well No. 14E  
1850' FNL, 1685' FWL, Sec. 34, T26N, R5W, Unit F  
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. 14E is presently dually completed in the Blanco Mesaverde and the Basin Dakota. Combined production from this well will average approximately 600 MCFGPD, 10 BCPD, and 2.5 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

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

Nancy Engler  
Production Engineer

NCE/akp  
003-89

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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 79703		TYPE OF TEST - (X)		Scheduled <input type="checkbox"/>		Completion <input type="checkbox"/>		Special <input checked="" type="checkbox"/>							
LEASE NAME	WELL NO.	U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	WATER BRLS.	PROD. DURING TEST GRAV. OIL BRLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT./BRL.
Jicarilla Apache															
Blanco Mesaverde	14E	F	34	26N	5W	11-2-88	*P	1.000	299		24	2.9	10	560	56000
Basin Dakota	14E	F	34	26N	5W		P								

\*Commingled Test includes production from from both formations.

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 Nancy Engler

Printed name and title  
Nancy Engler Production Engineer

Date 5/19/89 (915) 682-1626 Telephone No.

Jicarilla Apache Well No. 14E

Allocation formula for production from  
Blanco Mesaverde and Basin Dakota

Exponential decline factors: Mesaverde (MV) = unk.  
Dakota (DK) = .0334/month

Where  $DK_1 \Rightarrow$  current production  
 $MV_2, DK_2 \Rightarrow$  estimated production for following month

$$\ln (DK_1) - .0334 = \ln (DK_2)$$

After estimating the production for the Basin Dakota formation,  
production can be allocated to the Mesaverde based on the  
difference between actual production (T) and estimated Dakota  
production ( $DK_2$ ),

$$[T - DK_2 = MV_2]$$

or production can be allocated based on a straight percentage:

50% Blanco Mesaverde  
50% Basin Dakota

NE:akp

File No. 006-89

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

Budget Bureau No. 1004-0135  
Expires August 31, 1985

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 <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/> #344320520	5. LEASE DESIGNATION AND SERIAL NO. Federal Tribal #154
2. NAME OF OPERATOR Marathon Oil Company	6. IF INDIAN, ALLOTTEE OR TRIBE NAME Jicarilla Apache
3. ADDRESS OF OPERATOR P.O. Box 552, Midland, Texas 79702	7. UNIT AGREEMENT NAME 14E
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 F 1850' FNL & 1685' FWL	8. FARM OR LEASE NAME Jicarilla Apache
14. PERMIT NO. 30-039-22591	9. WELL NO. 14E
15. ELEVATIONS (Show whether DF, RT, GR, etc.) 6566' GL, 6579' KB	10. FIELD AND POOL, OR WILDCAT Blanco Mesaverde/Basin Dakota
	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 34, T26N, R5W
	12. COUNTY OR PARISH Rio Arriba
	13. STATE N. Mexico

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETE <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)
(Other) <input checked="" type="checkbox"/> Commingling Zones			

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.

These two formations were commingled for a 30 day test period from Oct. 2, 1988 to Nov. 2, 1988.

The well will begin commingled production upon receiving approval from the NMOCD, estimated to be received by July 1, 1989.

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

SIGNED m. c. Jellin TITLE Production Superintendent DATE 6-12-89  
(This space for Federal or State office use)

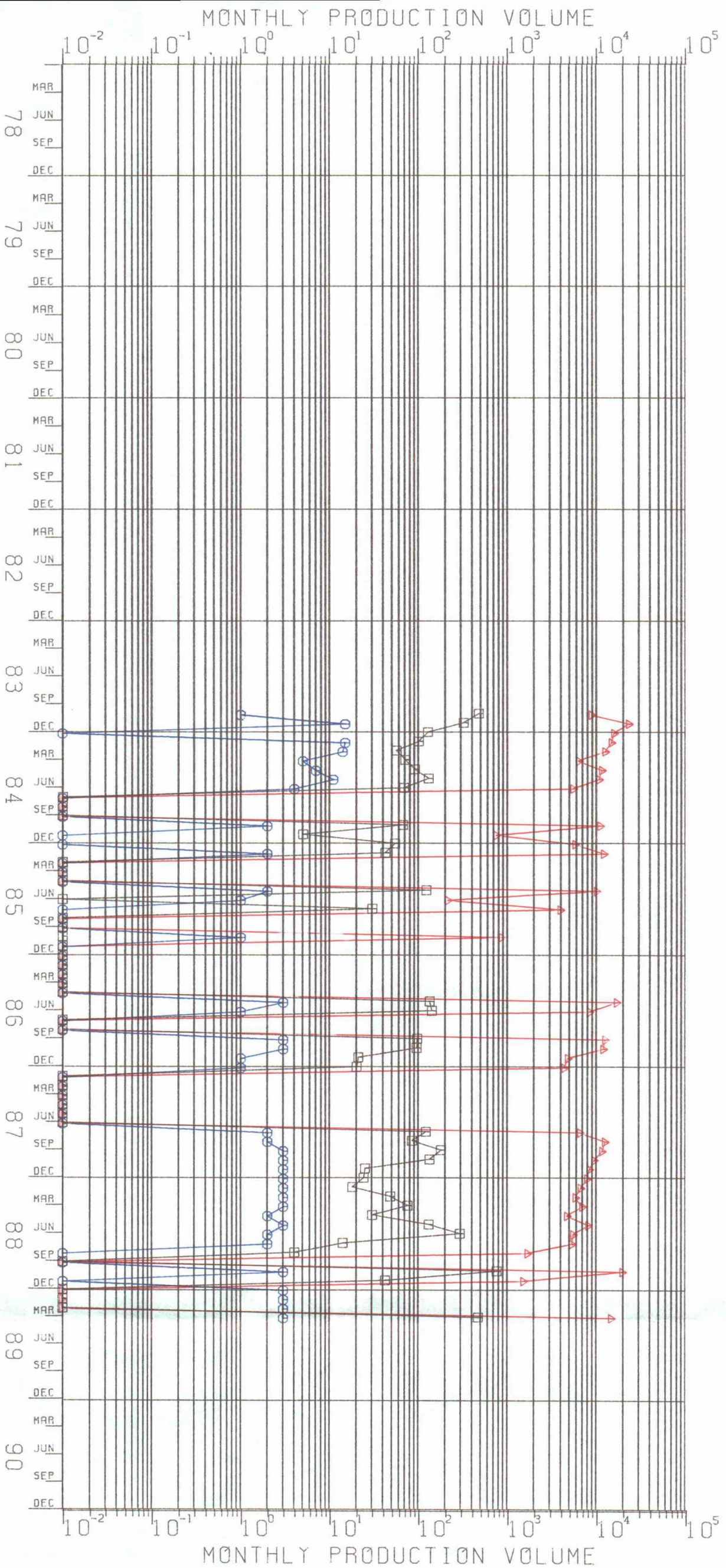
APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions on Reverse Side





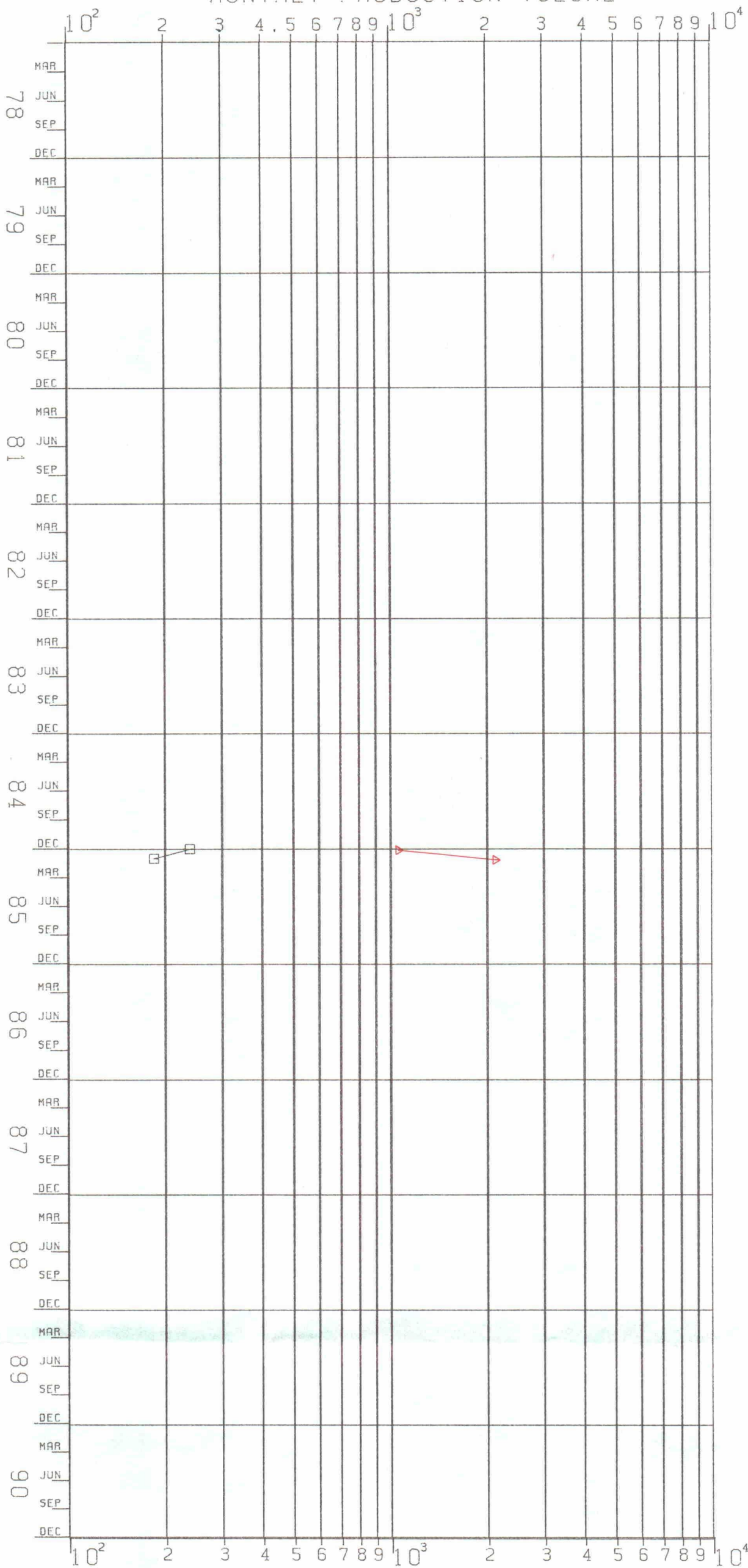
FIELD - JICARILLA  
RESERVOIR - BASIN DAKOTA  
LEASE - JICARILLA APACHE  
WELL - JICARILLA BD 14E





FIELD - JICARILLA  
RESERVOIR - BLANCO MESAVERTDE  
LEASE - JICARILLA APACHE  
WELL - JICARILLA PL 14E  
BLANCO PICTURE CLIFFS CONT-90154

MONTHLY PRODUCTION VOLUME



OIL+COND MONTHLY VOL   
GAS MONTHLY VOLUME 