



**Marathon
Oil Company**

RECEIVED
OIL CONSERVATION DIVISION

RECEIVED

P.O. Box 2409
Hobbs, NM 88241-2409
Telephone 505/393-7106

September 16, 1994

State of New Mexico
Oil Conservation Division
Energy and Mineral Department
Mr. David Catanach
PO Box 2088
Santa Fe, NM 87501

RE: **REQUEST FOR EXCEPTION TO RULE 303-A
DOWNHOLE COMMINGLING
W.S. MARSHALL "B" WELL NO. 1
UNIT N, 589' FSL & 2051' FWL
SECTION 27, T-21-S, R-37-E
BLINEBRY AND DRINKARD FORMATIONS
DRINKARD FIELD
LEA COUNTY, NEW MEXICO**

Dear Mr. Catanach:

Marathon Oil Company respectfully requests administrative approval for an exception to Rule 303-A to permit the downhole commingling of the Blinebry and Drinkard formations in the above mentioned well.

Currently, the well is produced by plunger lift but is loaded up due to the high fluid volumes. The Blinebry has the capacity to produce 4 BOPD and 162 MCFD when the plunger lift is operating efficiently. The Drinkard consists of two zones, a perforated interval and an open hole interval. To downhole commingle the two formations, a CIBP will be drilled out and if possible a retrievable bridge plug removed from the wellbore. Production from the Drinkard is expected to be 3 BOPD and 100 MCFD.

The proposed downhole commingling will allow the Drinkard to be reactivated and economically justify the installation of rod pumping equipment. The rod pumping will allow for a lower abandonment pressure for both zones thus lengthening the life of the well and minimizing waste.

Enclosed is the pertinent data supporting this application as outlined in Rule 303-A. If additional information is necessary, please contact Rick Gaddis at (505) 393-7106 ext 201.

Sincerely,

A handwritten signature in cursive script that reads 'T.A. Deines'.

T.A. Deines
Northwest Operations
Production Superintendent

RDG:TAD/94114/kc
Attachments

REQUEST FOR EXCEPTION TO RULE 303-A

W.S. MARSHALL "B" WELL NO. 1 DRINKARD FIELD

- (A) Marathon Oil Company
PO Box 2409
Hobbs, NM 88240
- (B) W.S. Marshall "B" Well No. 1
Unit N, 589' FSL & 2051' FWL
Section 27, T-21-S, R-37-E
Lea County, New Mexico
Commingle Zones: Blinebry
Drinkard
- (C) A plat of the area is attached showing the lease and offset operations. Also attached is a C-102 for each formation.
- (D) The Form C-116 for each of the formations is attached. The allocated production for the Blinebry will be based upon the current rate and the rate for the Drinkard will be based upon the rates prior to abandonment along with the historical production declines.
- (E) Production curves for both the Blinebry and Drinkard are attached.
- (F) Estimated bottomhole pressure for each zone:
- | | |
|----------|----------|
| Blinebry | 450 psia |
| Drinkard | 500 psia |
- (G) Marathon is commingling the fluids at the surface and has not encountered incompatibility problems.
- (H) If the downhole commingling is approved, the lost production and reserves of the Drinkard will be recovered while maximizing recoveries from the Blinebry, thus preventing waste.

(I) Production from the latest GOR test as follows:

<u>FORMATION</u>	<u>OIL (bpd)</u>	<u>GAS (mcf/d)</u>	<u>WATER (bpd)</u>
Blinebry	4.0	162	2.0
Drinkard*	<u>2.0</u>	<u>76</u>	<u>1.0</u>
TOTAL	<u>6.0</u>	<u>238</u>	<u>3.0</u>

* Zone is currently TA. Rates are based upon production prior to abandonment.

Expected production from each formation:

<u>FORMATION</u>	<u>OIL (bpd)</u>	<u>GAS (mcf/d)</u>	<u>WATER (bpd)</u>
Blinebry	5	180	3
Drinkard	<u>3</u>	<u>100</u>	<u>2</u>
TOTAL	<u>8</u>	<u>280</u>	<u>5</u>

Allocated percentages should be:

<u>FORMATION</u>	<u>OIL (%)</u>	<u>GAS (%)</u>	<u>WATER (%)</u>
Blinebry	62.5	64.3	60.0
Drinkard	<u>37.5</u>	<u>35.7</u>	<u>40.0</u>
TOTAL	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

(J) Ownership of the two pools to be commingled are in common and correlative rights will not be violated.

(K) By copy of this letter, we are notifying all offset operators of the proposed commingling.

Map of Offset Operators Lea County, New Mexico





**Marathon
Oil Company**

P.O. Box 2409
Hobbs, NM 88241-2409
Telephone 505/393-7106

September 16, 1994

Offset Operators
W.S. Marshall "B" Well No. 1
(mailing list attached)

RE: **REQUEST FOR EXCEPTION TO RULE 303-A
DOWNHOLE COMMINGLING
MARATHON OIL COMPANY
W.S. MARSHALL "B" WELL NO. 1
UNIT N, 589' FSL & 2051' FWL
SECTION 27, T-21-S, R-37-E
BLINEBRY AND DRINKARD FORMATIONS
DRINKARD FIELD
LEA COUNTY, NEW MEXICO**

Gentlemen:

Marathon Oil Company has filed an application with the New Mexico Oil Conservation Division to downhole commingle the above captioned well. Enclosed, please find a copy of the application as outlined in Rule 303-A.

If you are in agreement and waive all objections to the downhole commingling, please sign below and return one copy to Marathon at the above address.

Sincerely,

A handwritten signature in cursive script that reads 'T.A. Deines'.

T.A. Deines
Northwest Operations
Production Superintendent

RDG:TAD/94117/kc
Attachments

Agreed and accepted this _____ day of _____,
1994 by _____, as representative of

OFFSET OPERATORS

W.S. MARSHALL "B" LEASE SW/4, SECTION 27, T-21-S, R-37-E, NMPM LEA COUNTY, NEW MEXICO

<u>LOCATION</u>	<u>OPERATOR</u>
Section 27, N/2	Conoco, Inc. PO Box 1959 Midland, TX 79702-1959
Section 27, SE/4	Exxon Company USA PO Box 1600 Midland, TX 79702-1600
Section 28, E/2	Chevron USA, Inc. PO Box 1150 Midland, TX 79702-1150
Section 33, NE/4	Mobil E & P US, Inc. PO Box 633 Midland, TX 79702-0633 Chevron USA, Inc.
Section 34, NE/4	Exxon Company USA
Section 34, NW/4	Mobil E & P US, Inc.

District I
 PO Box 1980, Hobbs, NM 88241-1980
 District II
 PO Drawer DD, Artesia, NM 88211-0719
 District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV
 PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
 Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
 PO Box 2088
 Santa Fe, NM 87504-2088

Form C-102
 Revised February 10, 1994
 Instructions on back
 Submit to Appropriate District Office
 State Lease - 4 Copies
 Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-025-09934		2 Pool Code		3 Pool Name Blinebry	
4 Property Code		5 Property Name W.S. Marshall "B"			6 Well Number 1
7 OGRID No. 14021		8 Operator Name Marathon Oil Company			9 Elevation GR: 3405'

10 Surface Location

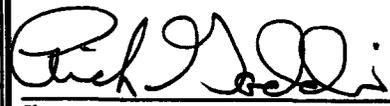
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	27	21S	37E	--	589	South	2051	West	Lea

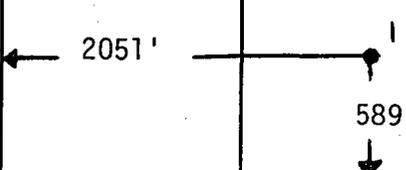
11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

12 Dedicated Acres 40	13 Joint or Infill N	14 Consolidation Code	15 Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16				27	17 OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</i>  Signature Rick Gaddis Printed Name Production Engineer Title September 16, 1994 Date
					18 SURVEYOR CERTIFICATION <i>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 belief.</i> Date of Survey Signature and Seal of Professional Surveyor: (See original C-102)
					Certificate Number



District I
 PO Box 1980, Hobbs, NM 88241-1980
 District II
 PO Drawer DD, Artesia, NM 88211-0719
 District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV
 PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
 Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
 PO Box 2088
 Santa Fe, NM 87504-2088

Form C-102
 Revised February 10, 1994
 Instructions on back
 Submit to Appropriate District Office
 State Lease - 4 Copies
 Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-09934		Pool Code	Pool Name Drinkard	
Property Code	W.S. Marshall "B"		Property Name	Well Number 1
OGRID No. 14021	Operator Name Marathon Oil Company			Elevation GR: 3405;

¹⁰ Surface Location

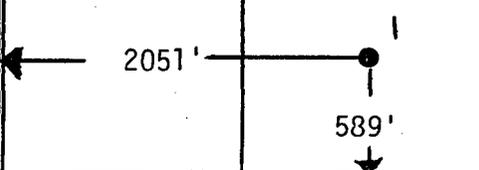
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	27	21S	37E	--	589	South	2051	West	Lea

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres 40	¹³ Joint or Infill N	¹⁴ Consolidation Code	¹⁵ Order No.
-------------------------------------	------------------------------------	----------------------------------	-------------------------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

¹⁶ 	¹⁷ OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</i>  Signature Rick Gaddis Printed Name Production Engineer Title September 16, 1994 Date	
		¹⁸ SURVEYOR CERTIFICATION <i>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 belief.</i> Date of Survey Signature and Seal of Professional Surveyer: (See original C-102)
		Certificate Number

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

OIL CONSERVATION DIVISION

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

GAS - OIL RATIO TEST

Operator Marathon Oil Company		Pool Blinebry		County Lea											
Address PO Box 2409 Hobbs, NM 88240		TYPE OF TEST - (X)		Completion <input type="checkbox"/> Scheduled <input type="checkbox"/> Special <input checked="" type="checkbox"/>											
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	SR PLATE #	CHOKESIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT/BBL.	
		U	S	T							R	WATER BBL.	GRAV. OIL		OIL BBL.
W.S. Marshall "B"	1	N	27	21S	37E	7/15/94	P --	150	--	24	2	40	4	162	40,500

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.

Rick Gaddis
 Signature

Rick Gaddis, Production Engineer

Printed name and title

September 16, 1994
 Date

(505)

393-7106
 Telephone No.

OIL CONSERVATION DIVISION

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

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

GAS - OIL RATIO TEST

Operator Marathon Oil Company		Pool Drinkard		County Lea								
Address PO Box 2409 Hobbs, NM 88240		TYPE OF TEST - (X)										
LEASE NAME W.S. Marshall "B"	WELL NO. 1	LOCATION			SCHEDULED	DAILY ALLOWABLE	LENGTH OF TEST HOURS	Completion			Special <input checked="" type="checkbox"/>	
		U	S	T				R	WATER BBL.S.	PROD. DURING TEST GRAV. OIL		OIL BBL.S.
		N	27	21S	37E	--	24	1	40	2	76	38,000

NOTE: Drinkard is currently TA'd. Data is for information only.

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.

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

Rick Gaddis
Signature

Rick Gaddis, Production Engineer
Printed name and title

September 16, 1994
Date

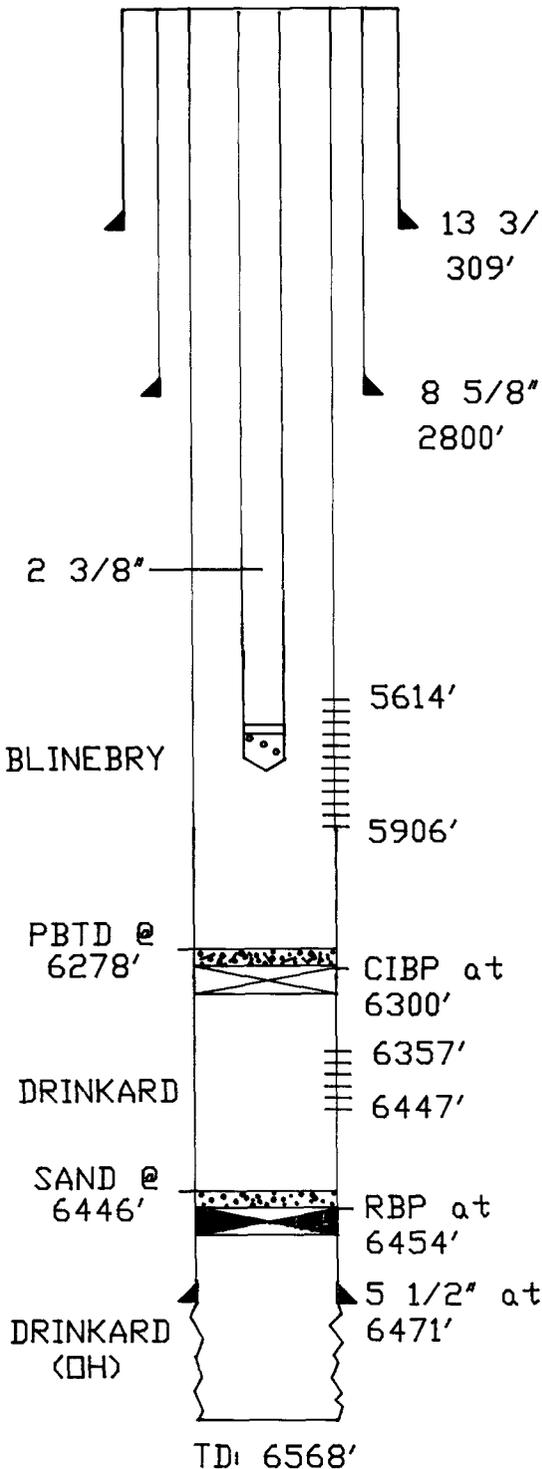
(See Rule 301, Rule 1116 & appropriate pool rules.)

393-7106
Telephone No.

W. S. MARSHALL "B" WELL NO. 1
DRINKARD FIELD

Unit N, 589' FSL & 2051' FWL
SECTION 27, T-21S, R-37E
LEA COUNTY, NEW MEXICO

TD: 6568' PBD: 6278'
KB: 3420' GL: 3405'



SURFACE: 13 3/8", 48#/ft, H-40 set
at 309' with 250 sxs.

INTERMEDIATE: 8 5/8", 32#/ft, J-55
set at 2800' with 1500 sxs.

PRODUCTION: 5 1/2", 15.5 & 17#/ft,
J-55 set at 6471' with 600 sxs.

TUBING: 2 3/8", 4.7#, J-55, 8rd, EUE.
with seating nipple at 5700'.

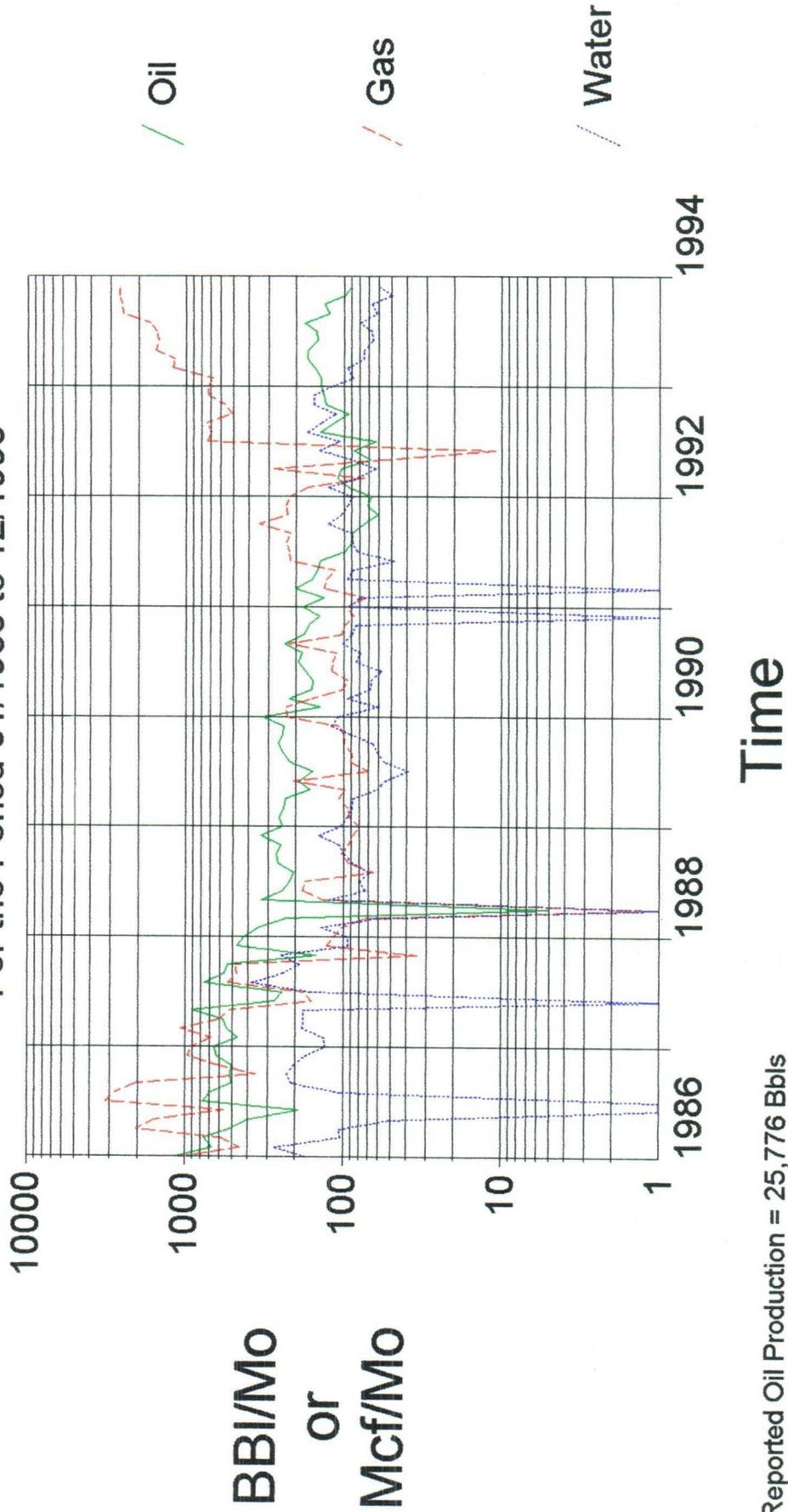
PRESENT COMPLETION:

Blinebry: 5614', 19', 22', 74', 86',
92', 5703', 10', 85, 5809', 31',
38', 79', 90', 97' & 5906'- 1
SPF for a total of 16 holes.

HISTORY: Completed in December, 1946 for 568 BOPD from the Drinkard openhole. In July, 1975 the Drinkard perfs 6357-6447' were perforated and flowed 117 BOPD and 657 MCFD. An attempt to recover the HOWCO RBP was unsuccessful (one attempt). Recompleted to Blinebry in December, 1985 to flow 67 BOPD, 30 BWPD and 174 MCFD. Well is currently on plunger lift.

**BLINEBRY OIL AND GAS
W S MARSHALL B11
MARATHON OIL COMPANY**

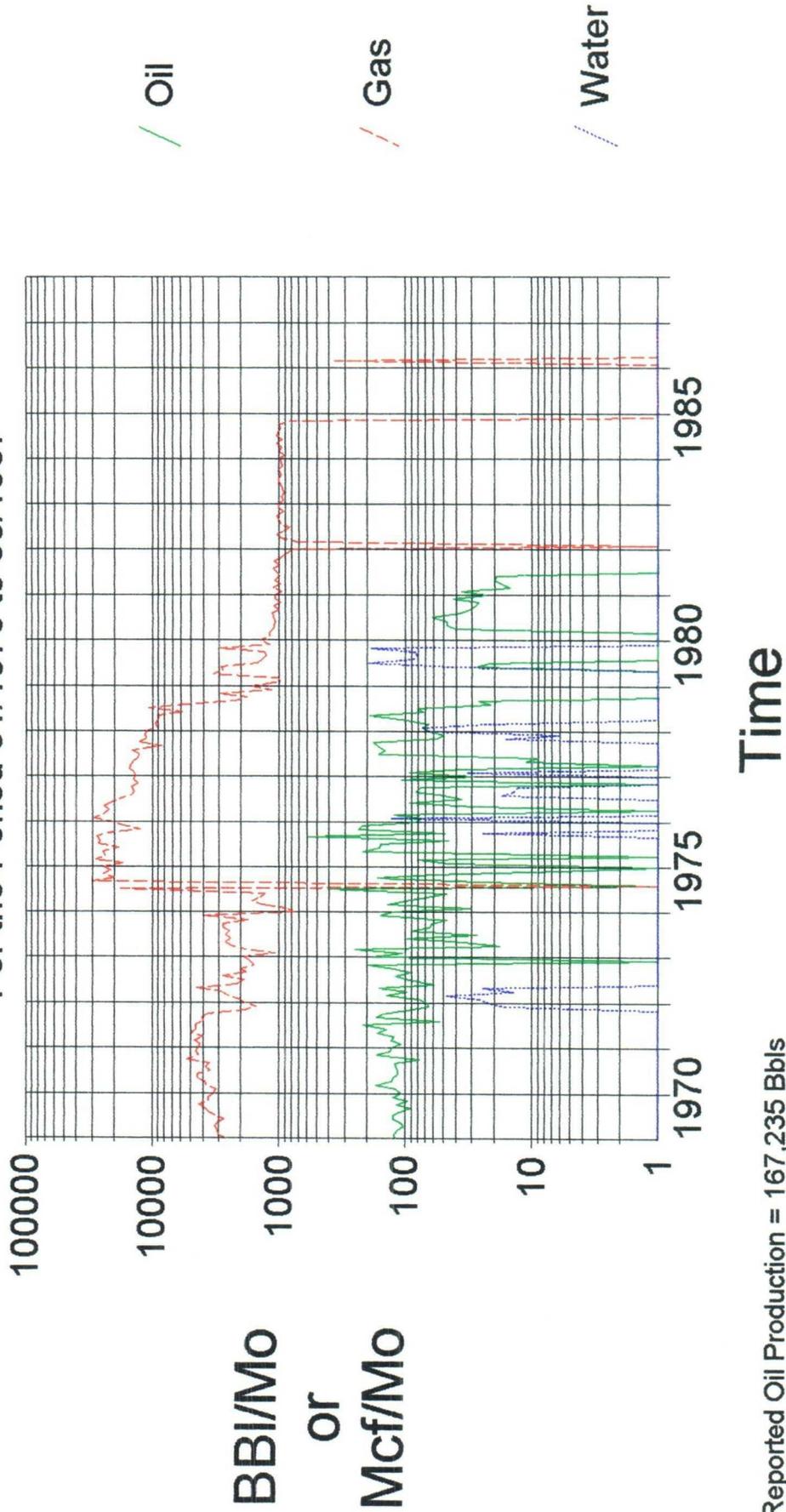
Production Rate vs Time
For the Period 01/1986 to 12/1993



Reported Oil Production = 25,776 Bbls
Reported Gas Production = 60,244 Mcf
Reported Water Production = 9,919 Bbls

**DRINKARD
W S MARSHALL B|1
MARATHON OIL COMPANY**

Production Rate vs Time
For the Period 01/1970 to 03/1987



BBI/Mo
or
Mcf/Mo

Reported Oil Production = 167,235 Bbls
Reported Gas Production = 1,551,522 Mcf
Reported Water Production = 1,233 Bbls

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

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

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL API NO.
30-025-09934

5. Indicate Type of Lease
STATE FEE

6. State Oil & Gas Lease No. _____

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"
(FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name

W.S. Marshall "B"

1. Type of Well:
OIL WELL GAS WELL OTHER

8. Well No.

2. Name of Operator
Marathon Oil Company

9. Pool name or Wildcat
Drinkard/Blinebry

3. Address of Operator
PO Box 2409 Hobbs, NM 88240

4. Well Location
Unit Letter N : 589 Feet From The South Line and 2051 Feet From The West Line
Section 27 Township 21-S Range 37-E NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)
GR - 3405'

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK PLUG AND ABANDON REMEDIAL WORK ALTERING CASING
TEMPORARILY ABANDON CHANGE PLANS COMMENCE DRILLING OPNS. PLUG AND ABANDONMENT
PULL OR ALTER CASING CASING TEST AND CEMENT JOB
OTHER: Drill out CIBP and downhole commingling OTHER:

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Marathon Oil Company respectfully proposes the removal of a CIBP and RBP isolating the Drinkard formation and the downhole commingling of the Blinebry and Drinkard formations within the W.S. Marshall "B" Well No. 1. The Blinebry currently produces 4 BOPD, 162 MCFD and 2 BWPD by plunger lift. The Blinebry's liquid volume tends to load-up the plunger lift requiring the well to be swabbed. By removing the CIBP and RBP, an installation of rod pumping equipment can be justified with the increase production from the Drinkard. Combined production is expected to be 8 BOPD, 280 MCFD and 5 BWPD. The project will commence upon the NMOC approval of a downhole commingling permit.

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

SIGNATURE Rick Gaddis TITLE Production Engineer DATE 9/16/94
TYPE OR PRINT NAME Rick Gaddis TELEPHONE NO. (505) 393-7106

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

RECEIVED

'94 SEP 26 AM 8 52

BRUCE KING
GOVERNOR

9-23-94

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC	_____
DHC	_____ X _____
NSL	_____
NSP	_____
SWD	_____
WFX	_____
PMX	_____

Gentlemen:

I have examined the application for the:

<i>Marathon Oil Co</i>	<i>WS Marshall B</i>	<i>#1-N</i>	<i>27-21s-37e</i>
Operator	Lease & Well No.	Unit	S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
 Jerry Sexton
 Supervisor, District 1

/ed