

OIL CONSERVATION DIVISION

RECEIVED



**Marathon
Oil Company**

'89 NOV 27 AM 9 59

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

November 16, 1989

Mr. David Catanach
Energy & Mineral Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Request for Exception to Rule 303-A
Downhole Commingling
McCallister State Well No. 9
Section 25, T-17-S, R-34-E
Vacuum (Glorieta), Vacuum (Blinebry)
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 production from the Vacuum Glorieta and Vacuum Blinebry Oil Pools in the subject well.

Well No. 9 was originally completed in 1963 as a Glorieta/Blinebry dual oil well. As you are aware, the Glorieta was and continues to be the more prolific reservoir in terms of production. Consequently, when the Glorieta ceased to flow, the Blinebry was temporarily abandoned in 1967 to allow for the Glorieta to be lifted by artificial means.

In October of this year, a workover on Well No. 9 to reactivate the Blinebry was initiated. A permanent packer was drilled up, therefore allowing the Blinebry to be rod-pump tested from below a treating packer. A static bottomhole pressure of 669 psi was obtained in the Blinebry using a pressure bomb. Prior to this, a pressure bomb showed the Glorieta to have a static bottomhole pressure of 124 psi.

Although the pressure in the Glorieta is not within 50% of that in the Blinebry, Marathon believes that the two zones can be downhole commingled and produced without crossflow or a loss of reserves in either zone. Prior to the above-mentioned workover, the subject well had been producing from the Glorieta at a rate of 10 BOPD, 57 MCFPD and 10 BWPD in a pumped-off condition. As mentioned previously, the Blinebry was tested while isolated from the Glorieta and produced at a rate of 14 BOPD, 42 MCFPD and 8 BWPD when downhole commingled, both zones would produce at a combined rate of 24 BOPD, 99 MCFPD

Mr. David Catanach

-2-

November 16, 1989

and 18 BWPD. The rod pumping equipment currently in place has the capacity to produce 85 BFPD. Therefore, the well should remain in a pumped-off condition (ie producing pressure less than 100 psi) while being artificially lifted.

All ownership (WI, Royalty and ORRI) in the wellbore is the same. Furthermore, commingling will not jeopardize future secondary recovery operations. As required, additional information is attached and all offset operators are being notified by copy of this application.

In summary, Marathon feels that as a prudent operator, we can effectively downhole commingle the Glorieta and Blinebry and maximize production by doing so. We look forward to your approval of this application.

Sincerely yours,

MARATHON OIL COMPANY



William D. Holmes
Midland Operations Superintendent

Attachments

WDH/TWW/042.274/cb

Blinebry
6405-6726

Glu.
6003-6004

ATTACHMENT NO. 1
Request for Exception to Rule 303-A
McCallister State Well No. 9
Vacuum (Glorieta), Vacuum (Blinebry) Oil Pools
Lea County, New Mexico

Reference: Section 2, Rule 303

- a) Marathon Oil Company
P. O. Box 552
Midland, Texas 79702
- b) McCallister State Well No. 9
1650' FWL & 1650' FSL, 25K, T-17-S, R-34-E
Lea County, New Mexico (see Attachment No. 2 for Form C103)
- c) Plat of acreage dedicated and offsetting operators (see Attachment Nos. 3, 4, 5).
- d) Form C-116 for the Vacuum (Glorieta) completion (see Attachment No. 6).
Form C-116 for the Vacuum (Blinebry) completion (see Attachment No. 7).
- e) Production curve for the Vacuum (Glorieta) completion (see Attachment No. 8). Also, production tests of the Vacuum (Blinebry) completion during its recent reactivation has been included (see Attachment No. 9).
- f) Measured bottomhole pressure for both of the zones in question (24 hour static pressure)

Vacuum (Glorieta) - 124 psi
Vacuum (Blinebry) - 669 psi

g&h) The oil produced from the Glorieta and Blinebry have gravities of 36.6° and 35.3 API, respectively. Because the two gravities are so similar, the value of the commingled stream should not be less than the value of the two separate streams. In addition, downhole commingling of the two zones to be produced simultaneously, whereas, previously, the Blinebry was temporarily abandoned. Water analysis of both zones show little difference between the produced waters (see Attachment Nos 10 & 11).

i) Method of Allocation:

<u>Zone</u>	<u>Oil (BBLS)</u>	<u>Oil%</u>	<u>Gas (MCF)</u>	<u>Gas %</u>
Glorieta	10	42	57	58
Blinebry	14	58	42	42
-----	-----	-----	-----	-----
Total	24	100	99	100

j) Offset Operators

Conoco
P. O. Box 460
Hobbs, New Mexico 88240

Texaco
P. O. Box 3109
Midland, Texas 79702

Mobil Oil
P. O. Box 633
Midland, Texas 79702

TWW/042.274/cb

Submit 3 Copies
to Appropriate
District Office

Attachment No. 2
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

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

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

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

WELL API NO. 30-025-29143
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name McCallister State
8. Well No. 9
9. Pool name or Wildcat Vacuum (Glorieta/Blinebry)

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.)	
1. Type of Well: OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER	
2. Name of Operator Marathon Oil Company	
3. Address of Operator P. O. Box 552, Midland, Texas 79702	
4. Well Location Unit Letter <u>K</u> : <u>1650</u> Feet From The <u>West</u> Line and <u>1650</u> Feet From The <u>South</u> Line Section <u>25</u> Township <u>17-S</u> Range <u>34-E</u> NMPM <u>Lea</u> County	
10. Elevation (Show whether DF, RKB, RT, GR, etc.) GL:4003' ; KDB 4014'	

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data	
NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
OTHER: <u>Downhole Commingle</u> <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
	CASING TEST AND CEMENT JOB <input type="checkbox"/>
	OTHER: <input type="checkbox"/>

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.

Request authorization to downhole commingle the Vacuum (Glorieta) and Vacuum (BLinebry).

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

SIGNATURE William D. Holmes TITLE Operations Superintendent DATE 11-6-89

TYPE OR PRINT NAME William D. Holmes TELEPHONE NO. (915) 682-1626

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

FORM C-128
Revised 5/1/57

SEE INSTRUCTIONS FOR COMPLETING THIS FORM ON THE REVERSE SIDE

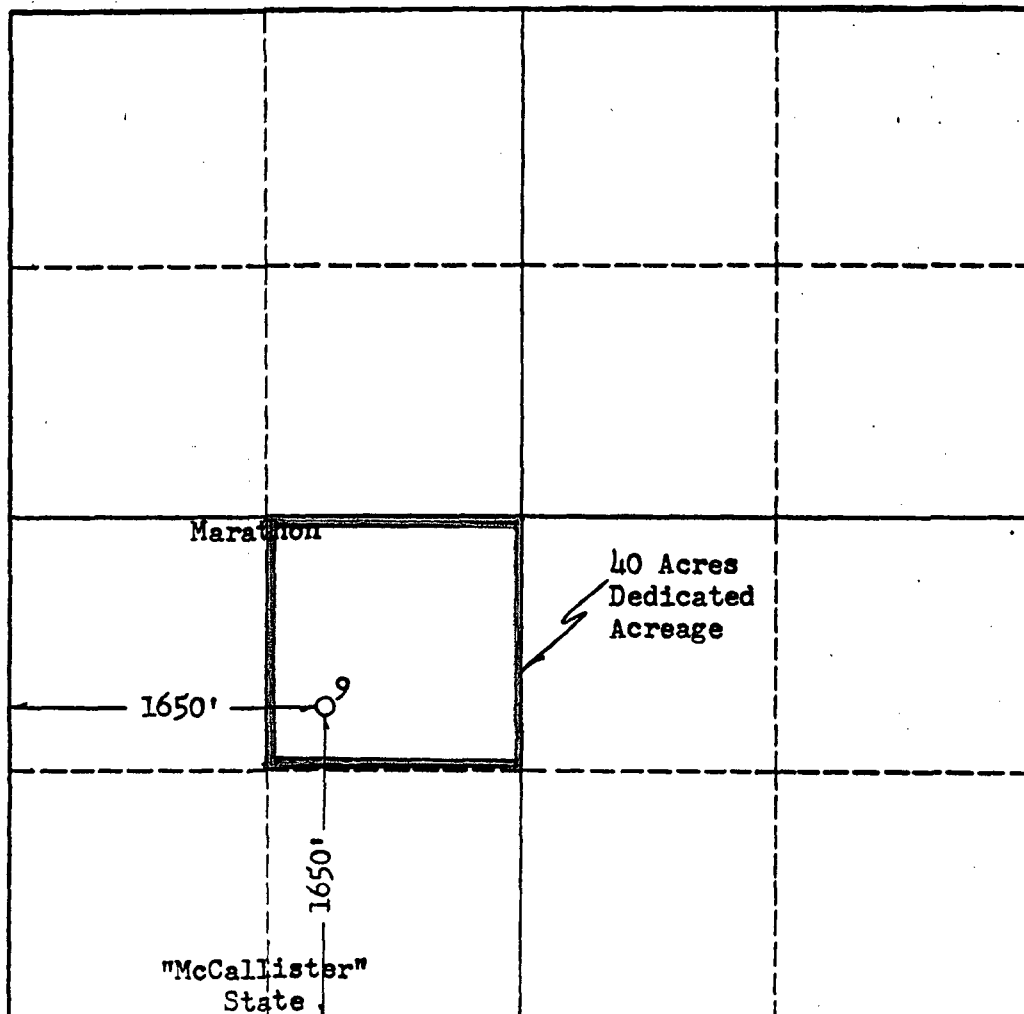
SECTION A

Operator MARATHON OIL COMPANY			Lease STATE McCALLISTER		Well No. 9
Unit Letter K	Section 25	Township 17 SOUTH	Range 34 EAST	County LEA	
Actual Footage Location of Well: 1650 feet from the SOUTH line and 1650 feet from the WEST line					
Ground Level Elev. 4003	Producing Formation GLORIETA		Pool VACUUM-GLORIETA		Dedicated Acreage: 40 Acres

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below? YES ☒ NO ☐ . ("Owner" means the person who has the right to drill into and to produce from any pool and to appropriate the production either for himself or for himself and another. (65-3-29 (e) NMSA 1935 Comp.)
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communitization agreement or otherwise? YES ☐ NO ☐ . If answer is "yes," Type of Consolidation _____
3. If the answer to question two is "no," list all the owners and their respective interests below:

Owner	Land Description

SECTION B



CERTIFICATION

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

John L. Barber
 Name
J. R. Barber
 Position
Area Petroleum Engineer
 Company
Marathon Oil Company
 Date
7-17-63

I hereby certify that the well location shown on the plat in SECTION B 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
5-7-63
 Registered Professional Engineer
 and/or Land Surveyor
/s/ John W. West
 Certificate No. **676**

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

MOBIL
Attachment No. 4

MOBIL

A.R.Co.

SHELL

EXXON

A.R.Co.

"J"

"J"

VACUUM (ABO) UNIT
PHILLIPS (OPER.)

A.R.Co.

"STATE"

"BRIDGES"

"BRIDGES"

"STATE"

"STATE"

MOBIL

26

MOBIL

MOBIL

25

TEXACO

A.R.Co.

"N"

NO. VACUUM (ABO) UNIT
MOBIL (OPER.)

T

17

S

MOBIL

TEXACO

"BRIDGES-ST."

MARATHON

TEXACO

"MOBIL"

SHELL

MARATHON

BUCKEYE

"STATE"

CONOCO

35

GETTY

36

MOBIL

SKELLY

CENTRAL VACUUM UNIT
TEXACO (OPER.)

TEXACO

PHILLIPS MARATHON

MOBIL

AMERADA

"STATE"

"STATE"

R 34 E

Vacuum (Glorieta)

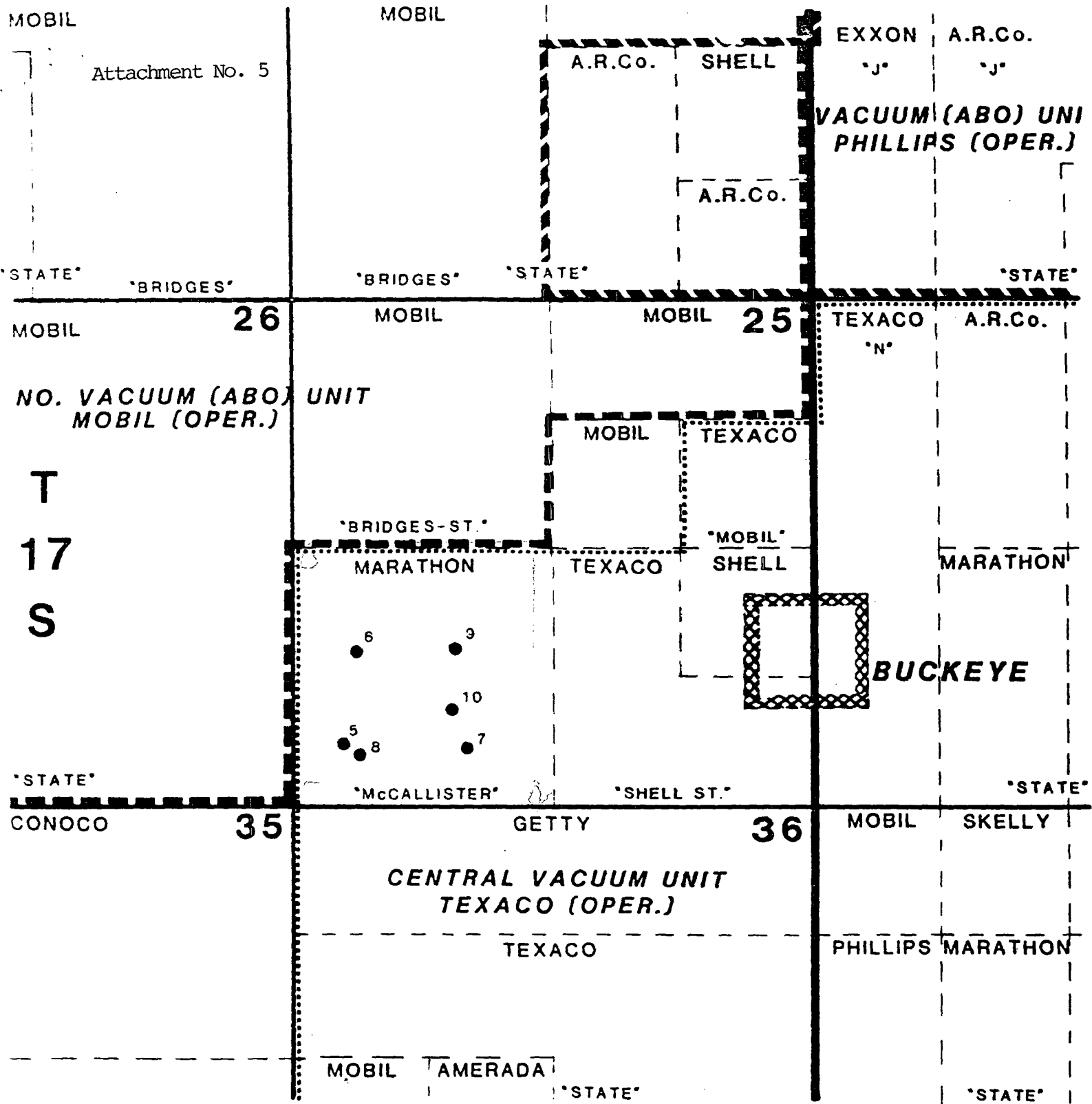
MARATHON OIL COMPANY
VACUUM FIELD
McCALLISTER STATE LEASE
LEA COUNTY, NEW MEXICO

0

2640

5280

FEET



R 34 E

Vacuum(Blinebry)

**MARATHON OIL COMPANY
VACUUM FIELD
McCALLISTER STATE LEASE
LEA COUNTY, NEW MEXICO**



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

Attachment No. 6

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		Vacuum Glorieta		County		Lea				
Address		P. O. Box 552, Midland, Texas 79702		TYPE OF TEST - (X)		Completion		Special						
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	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.
McCallister St.	8	M	25	17	34	08-15-89	--	36	24	136	37	36	46	1,278
	9	K	25	17	34	08-16-89	--	8	24	10	37	10	52	5,200
	10	N	25	17	34	08-17-89	--	20	24	50	37	19	90	4,737
Staplin St. A/C 1	3	N	30	17	35	08-18-89	--	2	24	5	37	2	41	20,500
	4	K	30	17	35	S.I.	--							
Warn St. A/C 1	4	K	31	17	35	08-14-89	--	3	24	3	37	3	11	3,667
	5	F	31	17	35	S.I.	--							
Warn St. A/C 2	12	D	6	18	35	08-14-89	--	50	24	16	37	60	70	1,167
	13	C	6	18	35	08-15-89	--	20	24	16	37	25	39	1,560
	14	E	6	18	35	08-16-89	--	4	24	170	37	2	15	7,500
	15	F	6	18	35	S.I.	--							
Warn St. A/C 3	6	G	33	17	35	08-13-89	--	107	24	4	37	125	150	1,200
	7	F	33	17	35	08-14-89	--	108	24	5	37	107	144	1,346
	9	H	33	17	35	S.I.	--							

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

J. R. Jenkins, Hobbs Production Supt.

Printed name and title

10-08-89

Date

(915) 682-1626

Telephone No.

OIL CONSERVATION DIVISION

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

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District Office.
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DISTRICT II
P.O. Drawer DD, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

GAS - OIL RATIO TEST

Operator Marathon Oil Company		Pool Vacuum (Blinbry)		County Lea											
Address P.O. Box 552, Midland, Texas 79702		TYPE OF TEST - (X)		Scheduled <input type="checkbox"/> Completion <input type="checkbox"/> Special <input checked="" type="checkbox"/>											
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	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.	GRAV. OIL		OIL BBL.	GAS MCF.
McCallister State	9	K	25	17	34	10-24-89	P	---	*	24	8	36	14	42	3000

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

J. R. Jenkins - Hobbs Production Supt.

Printed name and title

11-6-89

Date

(915) 682-1626

Telephone No.

Attachment No. 9
Well Tests
McCallister State No. 9
Vacuum (Blinebry)

<u>DATE</u>	<u>BOPD</u>	<u>BWPD</u>
10-21-89	5	47
10-22-89	8	14
10-24-89	14	8
10-25-89	10	8
10-27-89	8	8
10-28-89	6	8
10-29-89	3	8
10-30-89	11	5

TWW/050.274/cb

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

HOBBS, NEW MEXICO 88240

Attachment No. 10

LABORATORY WATER ANALYSIS

No. W84-522

To Marathon Oil CompanyDate 7-14-84Box 2409Hobbs, New Mexico

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____ Date Rec. 7-13-84Well No. McAllister St. #6 Depth _____ Formation Glorietta

County _____ Field _____ Source _____

Resistivity _____ 0.058 @ 75°F.Specific Gravity _____ 1.134pH _____ 6.6Calcium (Ca) _____ 2,400 *MPLMagnesium (Mg) _____ 780Chlorides (Cl) _____ 122,000Sulfates (SO₄) _____ 3,140Bicarbonates (HCO₃) _____ 440Soluble Iron (Fe) _____ Nil

Remarks: _____ *Milligrams per liter

Respectfully submitted,

Analyst: Brewer

cc:

HALLIBURTON COMPANY

By W. L. Brewer

CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

HOBBS, NEW MEXICO 88240

Attachment No. 11

LABORATORY WATER ANALYSIS

No. W84-523To Marathon Oil CorporationDate 7-14-84Box 2409Hobbs, New Mexico 88240

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____ Date Rec. 7-13-84Well No. McAllister State #6 Depth _____ Formation Blinebry

County _____ Field _____ Source _____

Resistivity _____ 0.052 @ 74°F.Specific Gravity _____ 1.174pH _____ 6.1Calcium (Ca) _____ 23,200

*MPL

Magnesium (Mg) _____ 7,260Chlorides (Cl) _____ 161,000Sulfates (SO₄) _____ 990Bicarbonates (HCO₃) _____ 60Soluble Iron (Fe) _____ Nil

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

cc:

HALLIBURTON COMPANY

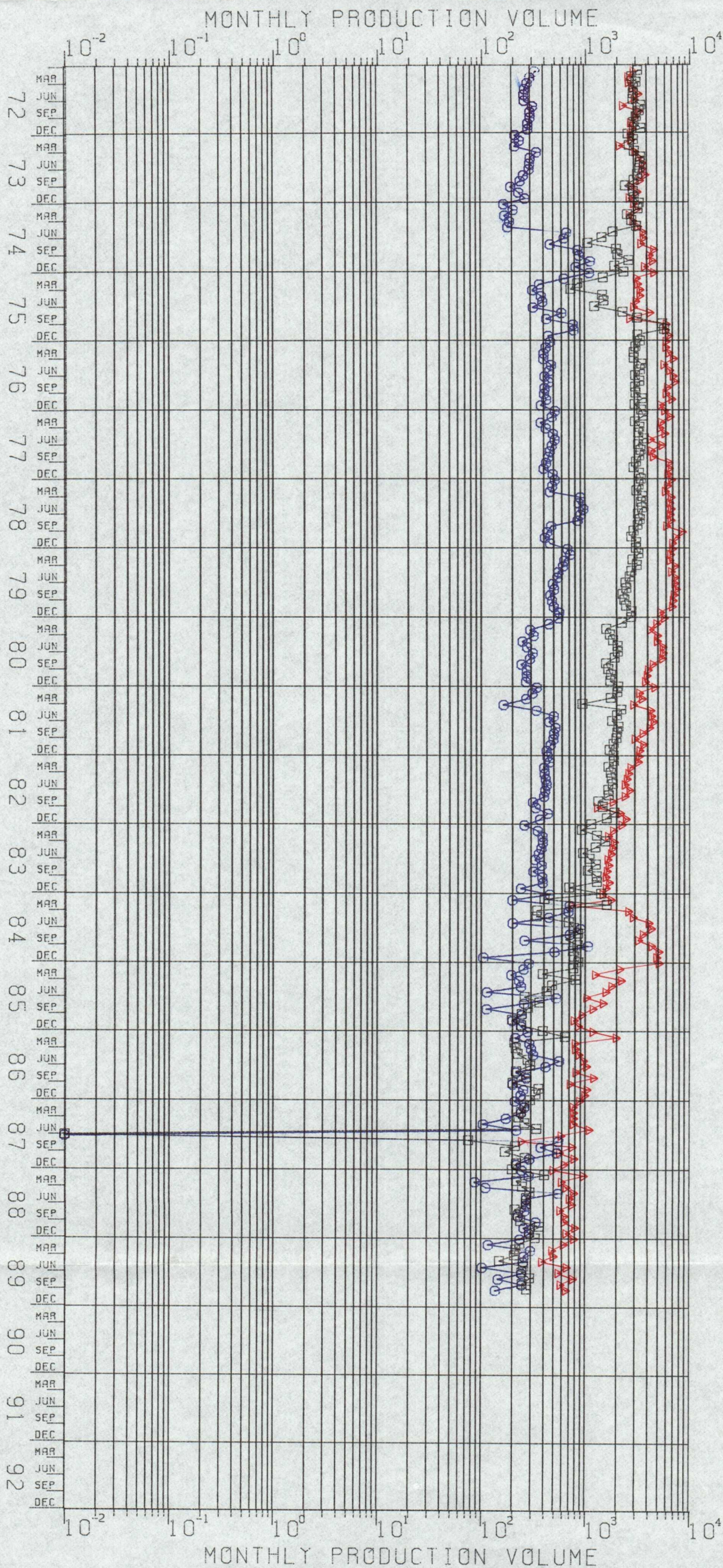
By W. L. Brewer

CHEMIST

NOTICE

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FIELD - VACUUM
RESERVOIR - GLORIELTA
LEASE - MCCALLISTER STATE - GLORIELTA
WELL - MCCALLISTER STATE-NO. 9





OIL CONSERVATION DIVISION
STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE
1-17-90

GARREY CARRUTHERS
GOVERNOR

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 ☒ _____
NSL _____
NSP _____
SWD _____
WFX _____
PMX _____

DHC-751

Gentlemen:

I have examined the application for the:

Marathon Oil Co. McCallister State #9-K 25-17-34
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
Supervisor, District 1

/ed