

RELEASE 6-20-93

OIL CONSERVATION DIVISION RECEIVED
Mid-Continent Region
Production United States

1993 MAY 1 AM 9 37



**Marathon
Oil Company**

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

May 25, 1993

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

Re: Request for Exception to Rule 303-A
Downhole Commingling
Marathon Oil Company
Warn State A/C 2 Well No. 8
330' FSL & 233' FWL
Section 6, T-18-S, R-35-E
Abo & Drinkard Pools
Vacuum Field
Lea County, NM

Dear Mr. Catanach:

Marathon Oil Company requests administrative approval for an exception to Rule 303-A to permit the downhole commingling of production in the above subject well from the Vacuum (Drinkard) and Vacuum (Abo) Pools in Lea County, New Mexico.

The Abo Pool was recently abandoned when the subject well was recompleted to the Drinkard. This recompletion resulted in marginal Drinkard production. By allowing the commingling of the two zones, it would economically justify keeping the well on production for an extended period and minimize any associated waste. The Commissioner of Public Lands (Mr. Pete Martinez) gave verbal approval of this request on May 26, 1993. A letter of approval will be forthcoming from his office.

Enclosed is pertinent data supporting this application as outlined in rule 303-A. If additional information is necessary, please contact me at (915)682-1626.

Sincerely,

A handwritten signature in cursive script that reads 'Tom Price'.

T. M. Price
Northwest Operations

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

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.
30-025-03082

5. Indicate Type of Lease
STATE ☒ FEE ☐

6. State Oil & Gas Lease No.
874850

7. Lease Name or Unit Agreement Name

WARN ST A/C 2

8. Well No.
8

9. Pool name or Wildcat
VACUUM (ABO & DRINKARD)

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 ☒ GAS WELL ☐ OTHER ☐

2. Name of Operator
Marathon Oil Company

3. Address of Operator
P.O. Box 552 Midland, Tx. 79702

4. Well Location
Unit Letter N : 330 Feet From The SOUTH Line and 2233 Feet From The WEST Line

Section 6

Township 18-S

Range 35-E

NMPM

LEA

County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)
GL: 3976' KB: 3989'

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐
OTHER: Downhole Commingle ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐
CASING TEST AND CEMENT JOB ☐
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 REQUESTS PERMISSION TO DOWNHOLE COMMINGLE PRODUCTION FROM THE
VACUUM (ABO) & VACUUM (DRINKARD) POOLS IN THE WARN STATE A/C 2 WELL NO. 8.

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

SIGNATURE Brent D Lockhart TITLE ADVANCED ENGINEERING TECH DATE 02/05/93

TYPE OR PRINT NAME BRENT D. LOCKHART

TELEPHONE NO. 915/682-1626

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

REQUEST FOR EXCEPTION TO RULE 303-A
WARN STATE A/C 2 WELL NO. 8
VACUUM FIELD

- (a) Marathon Oil Company
P.O. Box 552
Midland, TX 79702
- (b) Warn State A/C 2 Well No. 8
Unit N, 330' FSL & 2233' FWL
Section 6, T-18-S, R-35-E
Lea County, New Mexico
Vacuum (ABO) & Vacuum (Drinkard) Pools
- (c) Plats (2) of area attached.
- (d) Form C-116 for the Vacuum (Abo) & Vacuum (Drinkard) Pools are attached.
- (e) Production decline curve for the Vacuum (Abo) Pool is attached.
- (f) Estimated bottom hole pressure for each zone:
Vacuum (Abo) - 300 psi
Vacuum (Drinkard) - 450 psi
- (g) Marathon has commingled these fluids at the surface and has encountered no incompatibility problems.
- (h) If the downhole commingling is approved, the artificial lift system will extend the economic life of the well and thus avoid waste. The value of the produced hydrocarbons will not be altered by commingling the production.
- (i) Production from the latest GOR test shows as follows:

<u>Pool</u>	<u>Oil (BOPD)</u>	<u>Gas (MCFPD)</u>	<u>Water (BWPD)</u>
Vacuum (Abo)	14	60	10
Vacuum (Drinkard)	<u>9</u>	<u>29</u>	<u>17</u>
Total	23	89	27

Allocated percentages should be:

<u>Pool</u>	<u>Oil (%)</u>	<u>Gas (%)</u>	<u>Water (%)</u>
Vacuum (Abo)	61	67	37
Vacuum (Drinkard)	<u>39</u>	<u>33</u>	<u>63</u>
	100	100	100

- (j) Ownership of the two pools to be commingled 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 by certified mail.

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

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

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

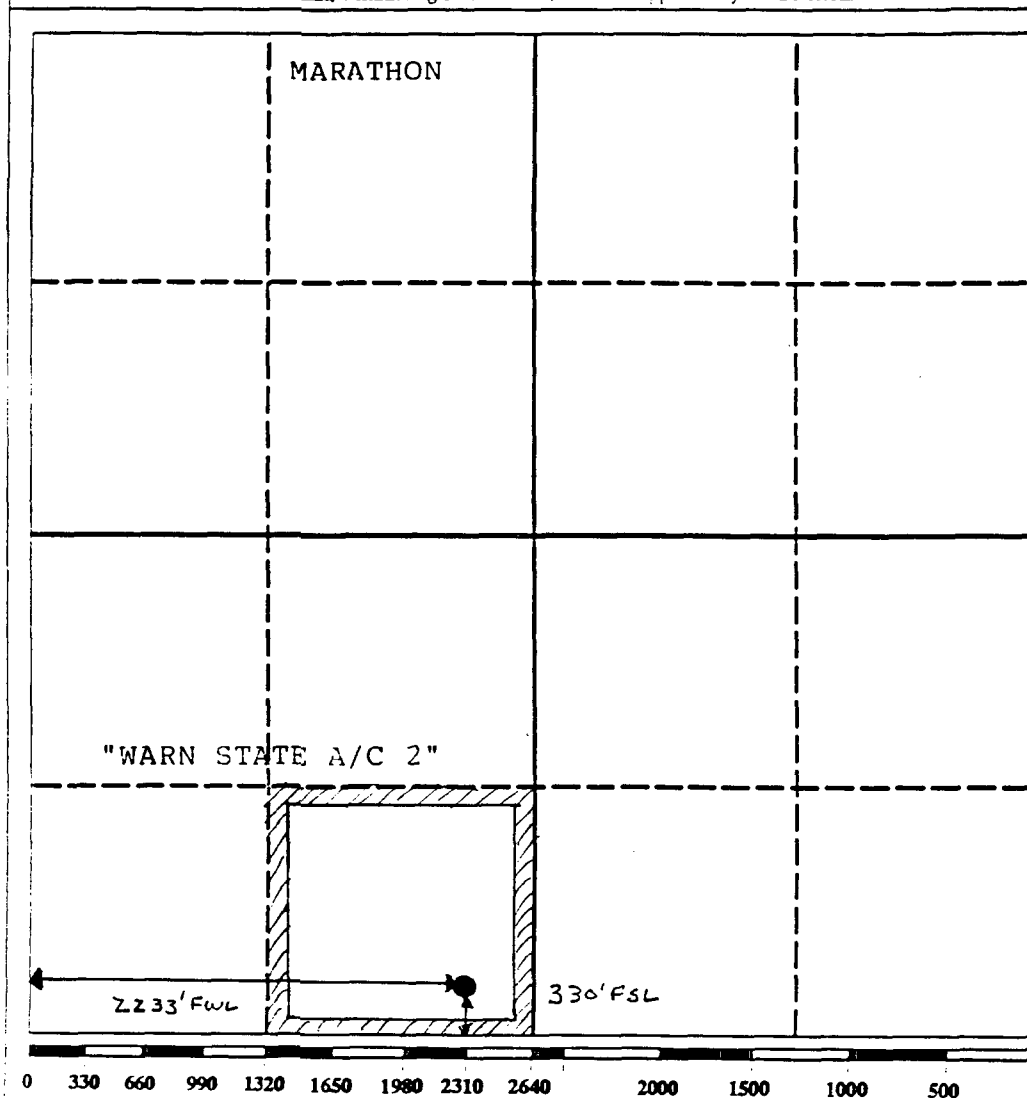
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator MARATHON OIL COMPANY		Lease WARN STATE A/c 2		Well No. 8
Unit Letter N	Section 6	Township 18-S	Range 35-E	County lea
Actual Footage Location of Well: 330 feet from the South line and 2233 feet from the West line				
Ground level Elev. 3976'	Producing Formation Abo	Pool Vacumm	Dedicated Acreage: 40 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest 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 interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature
Brent D. Lockhart
Printed Name
Brent D. Lockhart
Position
Advanced Eng. Tech
Company
Marathon Oil Company
Date
February 5, 1993

SURVEYOR CERTIFICATION

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
Signature & Seal of
Professional Surveyor

Certificate No.

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

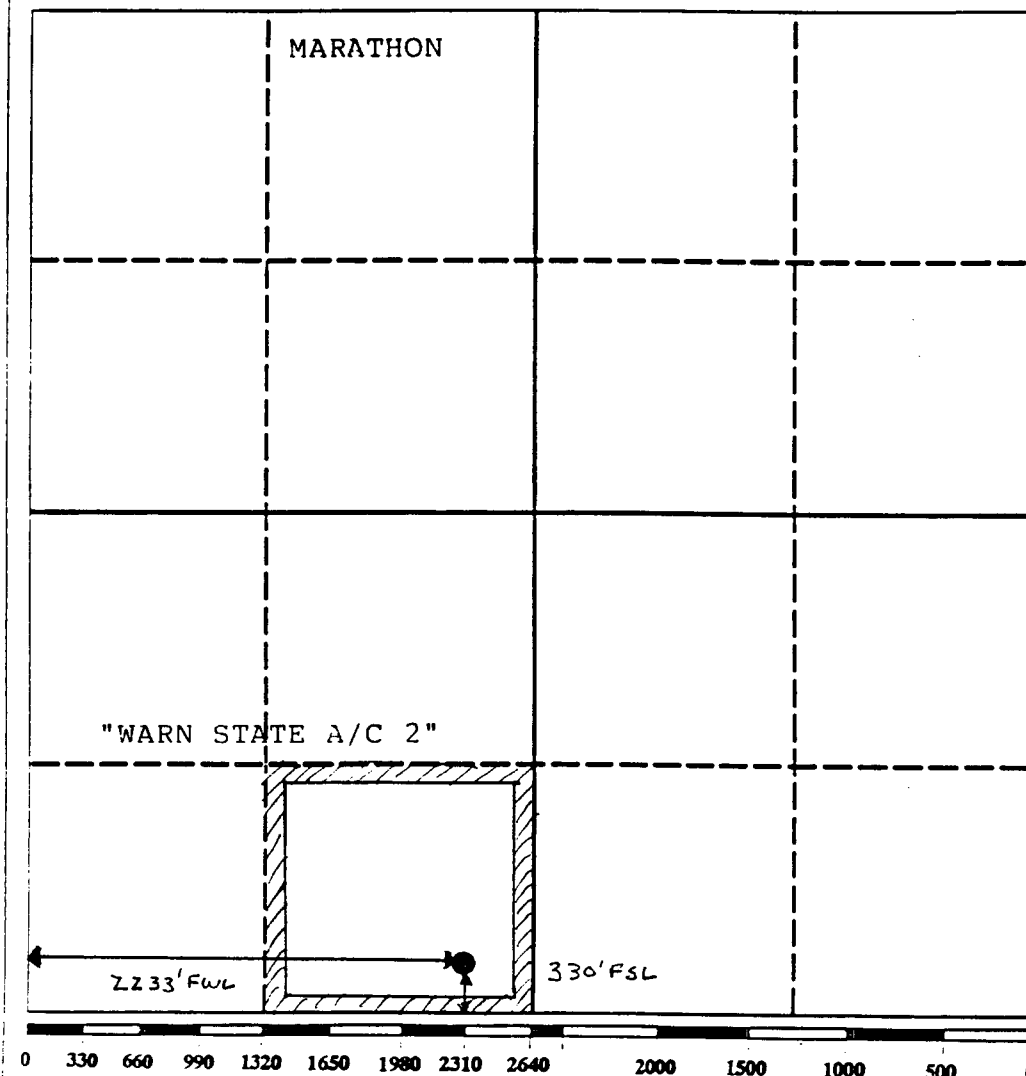
All Distances must be from the outer boundaries of the section

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Unit Letter N	Section 6	Township 18-S	Range 35-E	County lea
Actual Footage Location of Well: 330 feet from the South line and 2233 feet from the West line				
Ground level Elev. 3976'	Producing Formation Drinkard	Pool Vacumm	Dedicated Acreage: 40 Acres	

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Signature
Brent D. Lockhart
Printed Name
Brent D. Lockhart
Position
Advanced Eng. Tech
Company
Marathon Oil Company
Date
February 5, 1993

SURVEYOR CERTIFICATION

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
Signature & Seal of Professional Surveyor
Certificate No.

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		Pool		County												
Marathon Oil Company		VACUUM (ABO)		LEA												
Address		TYPE OF TEST - (X)		Completion		Special										
P.O. Box 552, Midland, Texas, 79702																
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	STATUS	CHOKE SIZE	TBQ. 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.	GAS M.C.F.
WARN STATE A/C 2	8	N	6	18S	35E	12-06-92	P				24	10		14	60	4286

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

Signature

THOMAS M. PRICE ADVANCED ENGINEERING TECH.

Printed name and title

05-26-93

915-682-1626

21

Telephone No.

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

**State of New Mexico
Energy, Minerals and Natural Resources Department**

Form C-116
Revised 1/1/89

P.O. Box 1980, Hobbs, NM 88240

DISTRICT

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**

OIL CONSERVATION DIVISION

GAS-OIL RATIO TEST

Operator		Pool		County										
Marathon Oil Company		VACUUM (DRINKARD)		LEA										
Address		TYPE OF TEST - (X)		Completion		Special								
P.O. Box 552, Midland, Texas, 79702				☐		☒								
LEASE NAME	WELL NO.	LOCATION		DATE OF TEST	STATUS	CHOKE SIZE	TBQ. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST		GAS - OIL RATIO CU./T/BBL.		
		U	S	T	R					WATER BBL.S.	GRAV. OIL	OIL BBL.S.	GAS . MCF.	
WARN STATE A/C 2	8	N	6	18S	36E	05/01/93	P		24	17	385	9	29	3222

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 15.02 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

THOMAS M. PRICE ADVANCED ENGINEERING TECH.

Printed name and title

05-26-93

915-682-1626

Date _____

Telephone No.

SITE SECURITY PLAN

LEASE : Warn State A/C 2 (Abo)

FIELD : Vacuum

OPERATOR : Marathon Oil Company

VERIFICATION OF PRODUCTION

Oil: Well tests (1) and tank gauges (2)(4)
Gas: Metered by Phillips Petroleum Co. (meter testing) (3)
Witnessed by a Marathon representative.

SITE SECURITY

Daily gauging of tanks.
Locking and sealing from point of water or gas separation through sales point.
All openings in piping system locked, sealed, or bullplugged.
Three strand barbwire fencing around battery.

HYDROCARBON PURCHASER/TRANSPORTER

Oil : Texas-New Mexico Pipeline
Gas : Phillips Petroleum Co.
Water: Rice Engineering

COMMINGLING

None

METHOD OF GAUGING SALES

Oil: Tank gauges (2)(4)
Gas: Orifice meter (3)

WITNESS TO SALES OR TRANSFER

Marathon Pumper

METHOD OF DELIVERY

Oil: Pipeline (4)
Gas: Pipeline (3)(5)

RUN TICKET DISPOSITION

Witnessed by Marathon Pumper (4) and mailed to company office.

GAS SALES

Gas Volumes supplied to company office by purchaser. (5)

SITE MONITORING

Site monitored periodically by company representative to check for compliance.

TRAINING PROGRAM

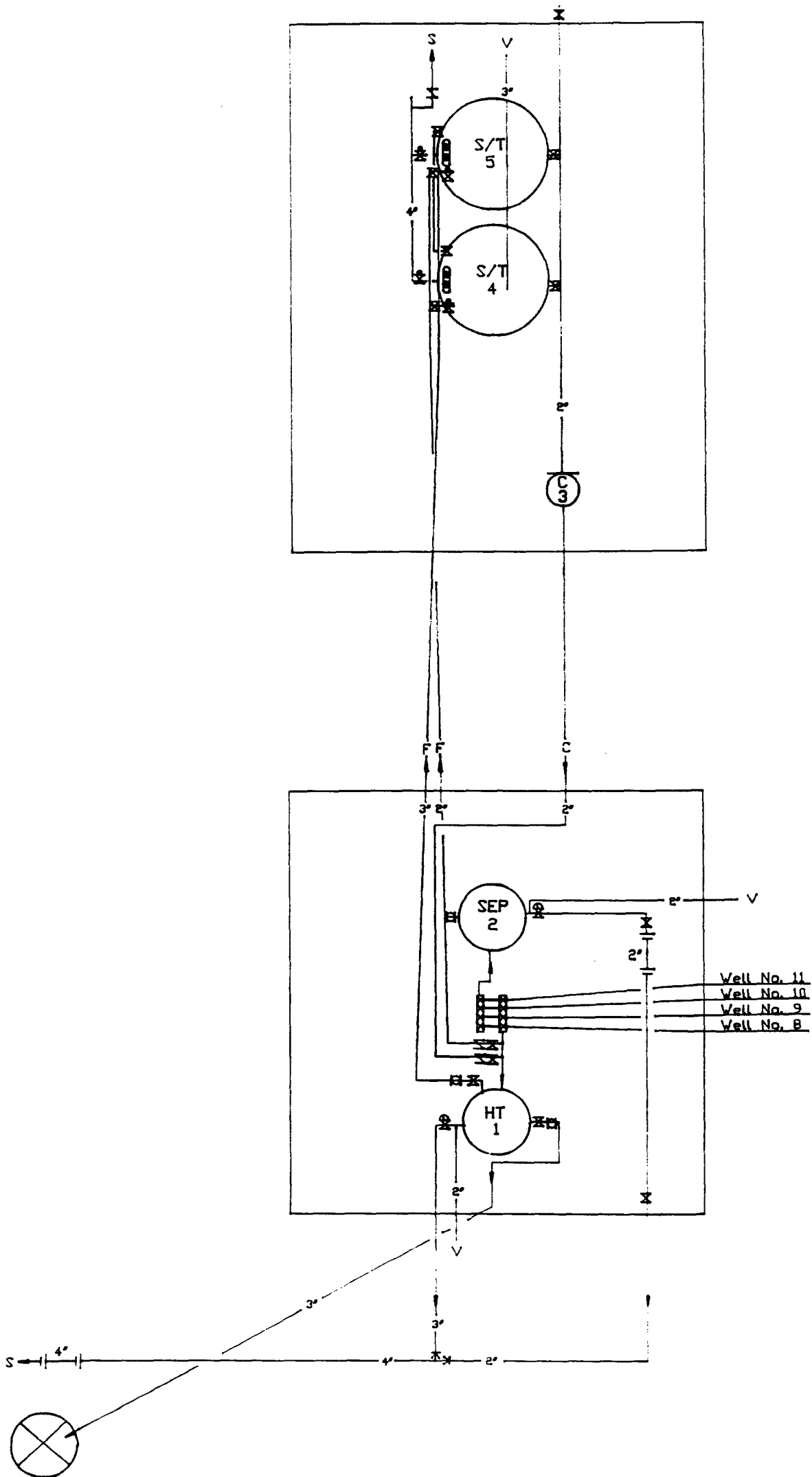
All field personnel have been given instructions on site security.

SITE SECURITY SPECS

- (1) Representative Monthly Well Tests conducted by Marathon Pumper.
- (2) Weekly Tank Gauge, Run Report and End of Month Report prepared by Marathon Pumper.
- (3) Orifice Meter Station Report - Phillips Petroleum Co.
(Includes Gas Settlement and Meter Calibration Report)
- (4) Run Tickets witnessed by Marathon Pumper.
- (5) Gas Volume Statement from Phillips Petroleum Co.

Production Facility Drawing
 Warn State A/C 2 (Abo) Battery
 Vacuum Field, NM
 August 14, 1990

— N —→



Drawn By: R.J. PROSCEND

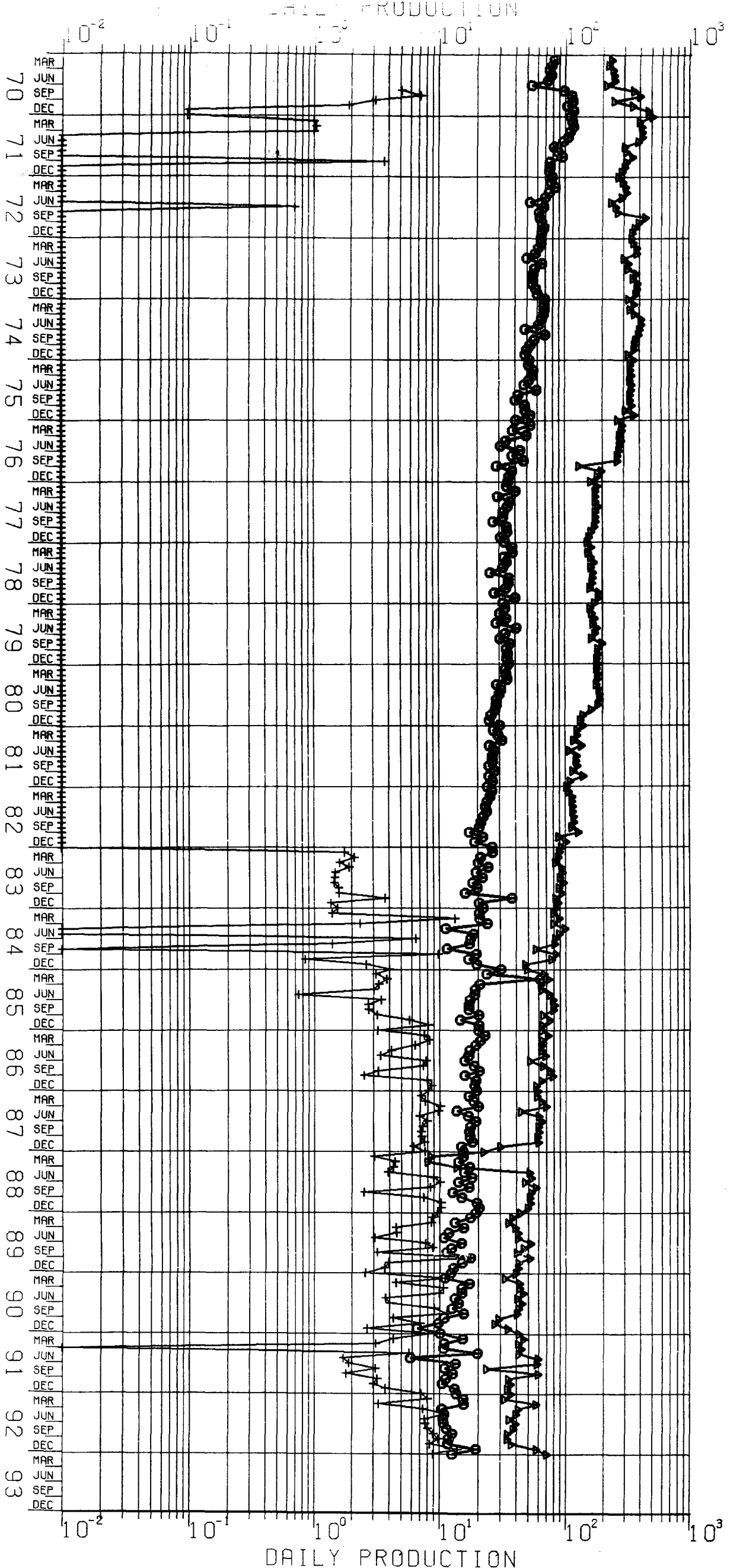
- GAS
- WATER
- OIL
- EMULSION
- ⊗ PLUG VALVE
- ⊕ CONTROL VALVE
- ⊞ DUMP VALVE
- Σ CHECK VALVE
- SEALED
- ⊞ LOCKED
- ⊞ HATCH
- ⊞ FLOW METER

PRODUCTION FACILITY EQUIPMENT SPECIFICATIONS
WARN STATE A/C 2 (ABO) BATTERY
VACUUM FIELD, NM
AUGUST 14, 1990

Item No.

- 1 Type: Heater Treater
Size: 6' x 20'
Serial: 66841
Manufacturing Date: 1957
Max WP: 50 psi
Valves: 2-2", 5-3"
- 2 Type: 2-Phase Vertical Separator
Size: 30" x 125"
Serial: P-7480
Manufacturing Date: n/a
Max WP: 125 psi
Valves: 3-2"
- 3 Type: Circulating Pump
Size: 1.5" x 1.5"
Serial: 3094404
- 4 Type: 500 bbl Oil Steel Tank
Size: 15.5' x 16'
Serial: 12.884
Manufacturing Date: 1961
Max WP: 4 oz
Valves: 1-2", 2-3", 2-4"
- 5 Type: 500 bbl Oil Steel Tank
Size: 15.5' x 16'
Serial: 12.883
Manufacturing Date: 1961
Max WP: 4 oz
Valves: 1-2", 2-3", 2-4"

FIELD - VACUUM
RESERVOIR - ABO REEF
LEASE - MARN STATE A/C 2
WELL - MARN STATE A/C 2-NO. 8



O+C CALENDAR DLY AVG
GAS CALENDAR DLY AVG
WTR CALENDAR DLY AVG

000000

02/04/93

10:29:49



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

RECEIVED

OIL CONSERVATION DIVISION

HOBBS DISTRICT OFFICE

'93 JUN 18 AM 9 03

6-16-93

BRUCE KING
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 X
NSL
NSP
SWD
WFX
PMX

Gentlemen:

I have examined the application for the:

Marathon Oil Co Warp State A/c-2 #8-N 6-18-35
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
Supervisor, District 1

/ed