

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Budget Item: 41-104-1
Expires August 31, 1985

LEASE DESIGNATION AND SERIAL NO.
USA NM 05551
IF INDIAN, ALLOTTEE OR TRIBE NAME

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.)

<p>1. <input type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER</p> <p>2. NAME OF OPERATOR <u>Marathon Oil Company</u></p> <p>3. ADDRESS OF OPERATOR <u>P. O. Box 552, Midland, TX 79702</u></p> <p>4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface <u>1650' FWL & 330' FSL</u></p> <p>14. PERMIT NO. <u>API #30-015-26324</u></p>	<p align="center">RECEIVED</p> <p align="center">APR 30 '90</p> <p>O. C. D. ARTESIA, OFFICE</p> <p>7. UNIT AGREEMENT NAME</p> <p>8. FARM OR LEASE NAME <u>North Indian Basin Unit</u></p> <p>9. WELL NO. <u>8</u></p> <p>10. FIELD AND POOL, OR WILDCAT <u>Indian Basin</u></p> <p>11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA <u>Sec. 9, T-21-S, R-23-E</u></p> <p>12. COUNTY OR PARISH <u>Eddy</u></p> <p>13. STATE <u>NM</u></p>
<p>15. ELEVATIONS (Show whether DF, RT, GR, etc.) <u>3973' GL</u></p>	

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) <u>Casing & cementing OPS</u> <input checked="" type="checkbox"/>	
(Other) <input type="checkbox"/>		(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.)*

Drilled 11" hole to 2000'. TOH & change rams to 8-5/8", tested door seals to 1500 psi. Ran 46 jts, 8-5/8", 24#, K-55, STC csg to 2000' w/ FC @ 1952'. R.O. B.J. & tested lines to 3000 psi. Cmt'd w/ 535 sx "C" + 4% gel, 2% CaCl₂, 5 #/sk salt, 5 #/sk gilsonite, 1/4 #/sk celloflake. Tailed in w/ 200 sx "C" + 2% CaCl₂. Cement in place @ 1300 hrs 4-9-90. Did not circulate cement to surface. WOC 4 hours. Ran temperature survey, found TOC @ 280'. Performed top job w/ 100 sx "C" + 3% CaCl₂, circulated 20 sx to pit. Set slips. N.U. 13-5/8" x 11" 3M spool, tested seals to 1000 psi. N.U. 13-5/8" 3M dual ram BOP & annular preventer. Tested rams, choke manifold to 3000 psi, tested annular to 1500 psi. Tested csg to 1500 psi. Ran accumulator performance test, IP-2600#, FP 1750#, 1:15 minutes to recharge. Trip in hole, found TOC @ 1939'. Drilled cement to 1980', tested shoe joint to 1350 psi. Resumed drilling formation @ 0915 hrs 4-10-90 with 7-7/8" bit.

RECEIVED
APR 26 11 03 AM '90

ACCEPTED FOR RECORD
Ar
APR 26 1990

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

CARLSBAD, NEW MEXICO

SIGNED *[Signature]* TITLE Drilling Superintendent DATE 4/29/90

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPPLICATE
(Other instructions on reverse side)

Budget Display N 104-
Expires August 1, 1985

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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.)

RECEIVED

APR 30 '90

Q. C. D.
MEXICAN OFFICE

LEASE DESIGNATION AND SERIAL
USA NM 05551
IF INDIAN ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME
8. FARM OR LEASE NAME
North Indian Basin Unit
9. WELL NO.
8
10. FIELD AND POOL, OR WILDCAT
Indian Basin
11. SEC., T., B., M., OR BLK. AND SUBSTY OR ARMA
Sec. 9, T-21-S, R-23-E
12. COUNTY OR PARISH
Eddy
13. STATE
NM

1. OIL WELL GAS WELL OTHER
2. NAME OF OPERATOR
Marathon Oil Company
3. ADDRESS OF OPERATOR
P. O. Box 552, Midland, TX 79702
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
1650' FWL & 330' FSL
14. PERMIT NO.
API# 30-015-26324
15. ELEVATIONS (Show whether DF, RT, GR, etc.)
3973' GL

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) <u>Spud & cementing OPS</u>	

(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.)

Set 40' of 20" conductor and cement w/ redimix. Rig up 20" annular preventer. Spud 17-1/2" hole at 1030 hrs 4-04-90. Drilled to 190' and lost total returns. Conductor pipe and cellar washed out. Contacted Adam Salameh w/ BLM in Carlsbad to set casing at 190'. Ran 5 jts., 13-3/8", 48#, K-55, STC casing to 190'. R.U. BJ and tested lines to 3000 psi and cemented with 280 sx Class "C" + 2% CaCl₂ + 1/4 #/sk floeal. Cement in place at 1505 hrs 4-05-90. Circulated 140 sx to pit. Cut 20" and 13-3/8" casing and installed 13-3/8" SOW x 13-5/8" 3M wellhead and tested to 600 psi. Nippled up 13-5/8" 3M dual BOP and 3M annular. Tested choke manifold, safety valves, rams, annular to 3000 psi. Ran accumulator performance test: Initial pressure - 2500#, final pressure - 1700#, recharge time 80 seconds. Total WOC time 21.5 hrs. TIH w/ 12-1/4" bit and tag insert float collar at 147', drilled FC and 20' of cement to 167'. Tested casing to 1150 psi. Resumed drilling formation at 1830 hrs 4-06-90.

ACCEPTED FOR RECORD
Aez

APR 26 1990

CARLSBAD, NEW MEXICO

RECEIVED
APR 12 11 09 AM '90
CARLSBAD, NM

18. I hereby certify that the foregoing is true and correct
SIGNED *[Signature]* TITLE Drilling Superintendent DATE 4/10/90
(This space for Federal or State office use)

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

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instructions on the
reverse side)

Butter Bar No. 1-14-
Expires August 1, 1993

54

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.)

RECEIVED

1. OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
Marathon Oil Company

3. ADDRESS OF OPERATOR
P. O. Box 552, Midland, TX 79702

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
1650' FWL & 330' FSL

14. PERMIT NO.
API# 30-015-26324

15. ELEVATIONS (Show whether DP, RT, GR, etc.)
3973' GL

5. LEASE DESIGNATION AND SERIAL
USA NM 05551

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
North Indian Basin Unit

9. WELL NO.
8

10. FIELD AND POOL, OR WILDCAT
Indian Basin

11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA
Sec. 9, T-21-S, R-23-E

12. COUNTY OR PARISH
Eddy

13. STATE
NM

APR 9 03
APR 30 '90
O. C. D.
OFFICE

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

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(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.)

Propose to set 13-3/8", 48#, K-55 casing at 190'.
Please refer to approved APD dated 10-31-89, which proposes a 13-3/8" casing setting depth of 250'.

RECEIVED
APR 12 11 40 AM '90

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

SIGNED [Signature] TITLE Drilling Superintendent DATE 4/9/90

(This space for Federal or State office use)

APPROVED BY [Signature] TITLE [Signature] DATE 4-26-90

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
 (Other instructions on reverse side)

Budget Bureau No. 1001-
 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 GAS WELL OTHER

2. NAME OF OPERATOR
 Marathon Oil Company

3. ADDRESS OF OPERATOR
 P. O. Box 552, Midland, TX 79702

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
 At surface
 1650' FWL & 330' FSL

14. PERMIT NO. 15. ELEVATIONS (Show whether DP, RT, GR, etc.)
 3973' GL

RECEIVED

MAR 28 '90

D. C. D.
 ARTESIA, OFFICE

5. LEASE DESIGNATION AND SERIAL NO. USA NM 05551

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
 North Indian Basin Unit

9. WELL NO.
 8

10. FIELD AND POOL, OR WILDCAT
 Indian Basin (Morrow)

11. SEC., T., S., M., OR BLK. AND SURVEY OR AREA
 Sec. 9,
 T-21-S, R-23-E

12. COUNTY OR PARISH 13. STATE
 Eddy NM

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

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF
 FRACTURE TREAT
 SHOOT OR ACIDIZE
 REPAIR WELL
 (Other)

PULL OR ALTER CASING
 MULTIPLE COMPLETE
 ABANDON*
 CHANGE PLANS

WATER SHUT-OFF
 FRACTURE TREATMENT
 SHOOTING OR ACIDIZING
 (Other)

REPAIRING WELL
 ALTERING CASING
 ABANDONMENT*

(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.)

This notice is to amend the original APD which was approved 10-31-89. Current plans are to drill to the Morrow at an expected total depth of 9300'. Due to a change in depth to 9300' from the original permitted depth of 7700', the following casing and cementing program will apply.

Hole Size	Casing Size	Weight per Foot	Setting Depth	Quantity of Cement
7-7/8"	5-1/2"	15.5#, 17#	9300'	900 sx - TOC @ ± 1500'

RECEIVED
 MAR 21 11 07 AM '90
 OFFICE OF ARTESIA

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

SIGNED [Signature]

TITLE Drilling Superintendent

DATE 3/19/90

(This space for Federal or State office use)

APPROVED BY _____

TITLE _____

DATE 3-27-90

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Artesia, NM 88210

30-015-26324

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
 DRILL DEEPEN PLUG BACK

b. TYPE OF WELL
 OIL WELL GAS WELL OTHER
 SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
 Marathon Oil Company ✓

3. ADDRESS OF OPERATOR
 P. O. Box 552, Midland, TX 79702
 NOV 1 - '89

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
 At surface
 1650' FWL & 330' FSL
 At proposed prod. zone
 1650' FWL & 330' FSL
 O. C. D.
 ARTESIA, OFFICE

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 25 miles W N W of Carlsbad, NM

16. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drilg. unit line, if any) 330'

18. NO. OF ACRES IN LEASE 640

17. NO. OF ACRES ASSIGNED TO THIS WELL 640

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2394'

19. PROPOSED DEPTH 7700

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 3973' GL

22. APPROX. DATE WORK WILL START*
 11-15-89

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48#	250'	300 Sx - Circulate
11"	8 5/8"	24#	2000'	700 Sx - Circulate
7 7/8"	5 1/2"	15.5#	7700'	700 Sx - Circulate

Propose to drill no deeper than 7700'.
 Casing and cementing designs are in accordance with regulations & by approved methods.
 Blowout Preventer and related equipment shall be installed, maintained and tested in a manner consistent with Oil and Gas Order No. 2. (See Exhibits)

APPROVAL SUBJECT TO
 GENERAL REQUIREMENTS AND
 SPECIAL STIPULATIONS
 ATTACHED

RECEIVED
 OCT 17 11 54 AM '89

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED [Signature] TITLE Drilling Superintendent DATE 10/2/89

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY Orig. Signed by Richard L. Manus TITLE CARLSBAD DATE 10 31 89

CONDITIONS OF APPROVAL, IF ANY:

NSL + MSP
 R-9050 (PENN)

*See Instructions On Reverse Side

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

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

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

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

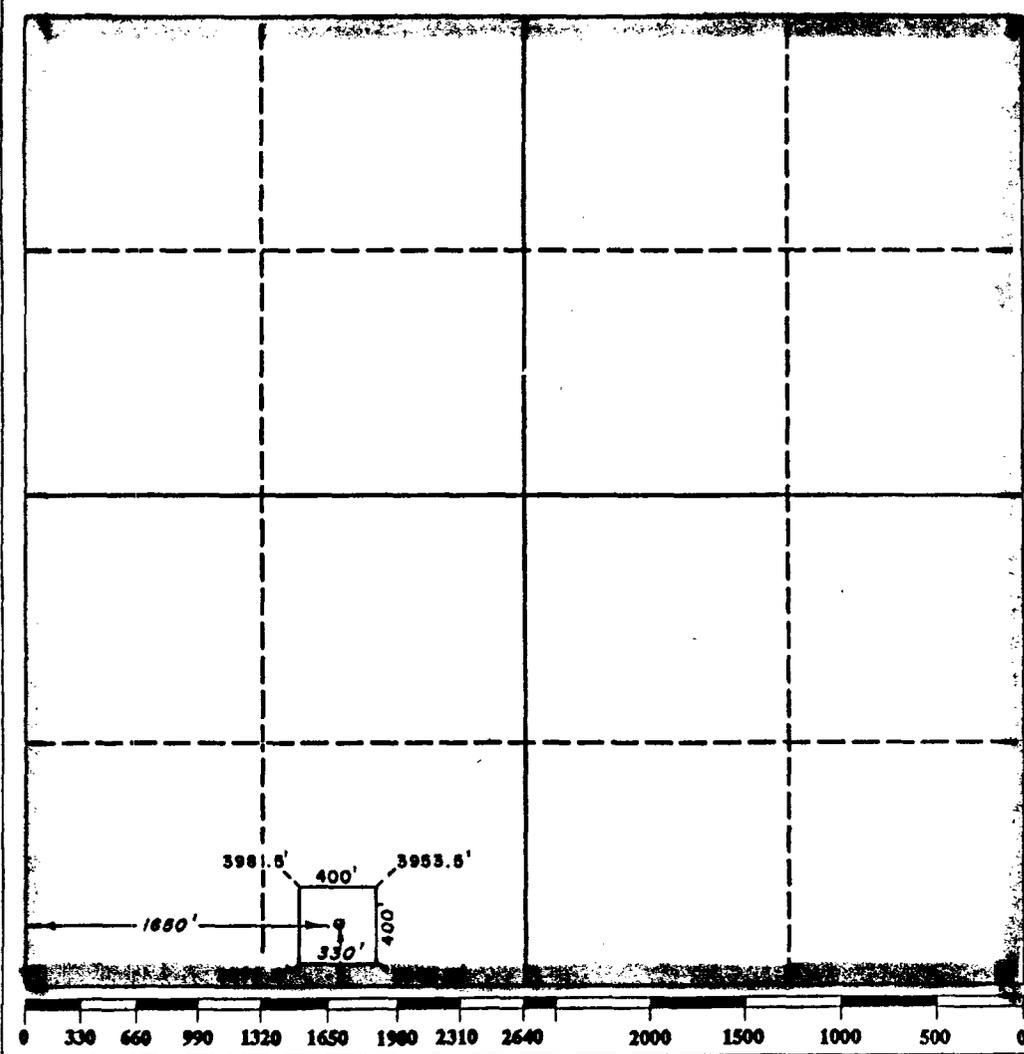
DISTRICT III
1000 Rio Brizos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT
All Distances must be from the outer boundaries of the section

Operator MARATHON OIL COMPANY		Lease NORTH INDIAN BASIN UNIT		Well No. 8
Unk Letter N	Section 9	Township 21-SOUTH	Range 23-EAST	County NMPM EDDY
Actual Footage Location of Well: 330 feet from the SOUTH line and 1650 feet from the WEST line				
Ground level Elev. 3973.0'	Producing Formation Upper Penn	Pool Indian Basin	Dedicated Acreage: 640 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hachure 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 Unitization **(SOS)**

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: *[Signature]*
 Printed Name: **Stanley L. Atnipp**
 Position: **Drilling Superintendent**
 Company: **Marathon Oil Company**
 Date: **10/2/89**

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: **SEPTEMBER**
 Signature & Seal: *[Signature]*
 Professional Surveyor
 No. **3239**
 Certificate No. **3239**
 RONALD DE PAISANO

125630

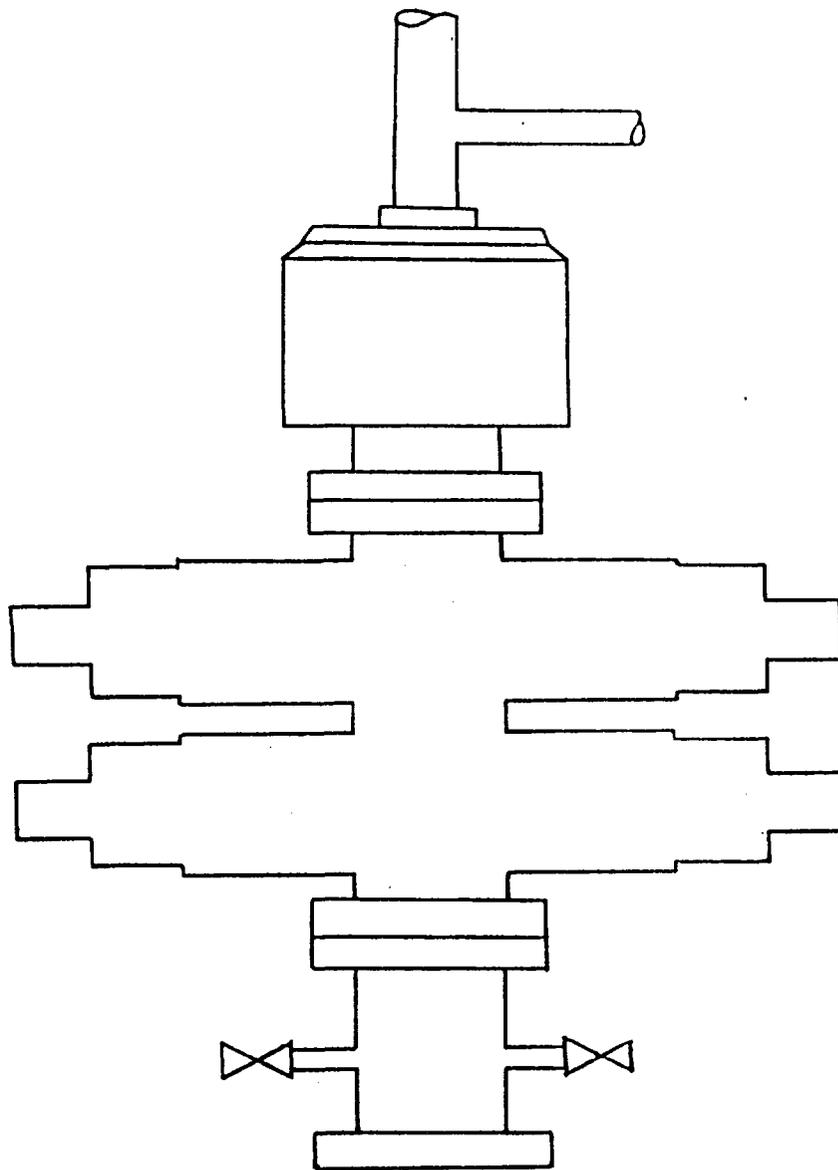


EXHIBIT "A"
N. INDIAN BASIN U #8
BOP STACK ARRANGEMENT
13 3/8" SURFACE CASING

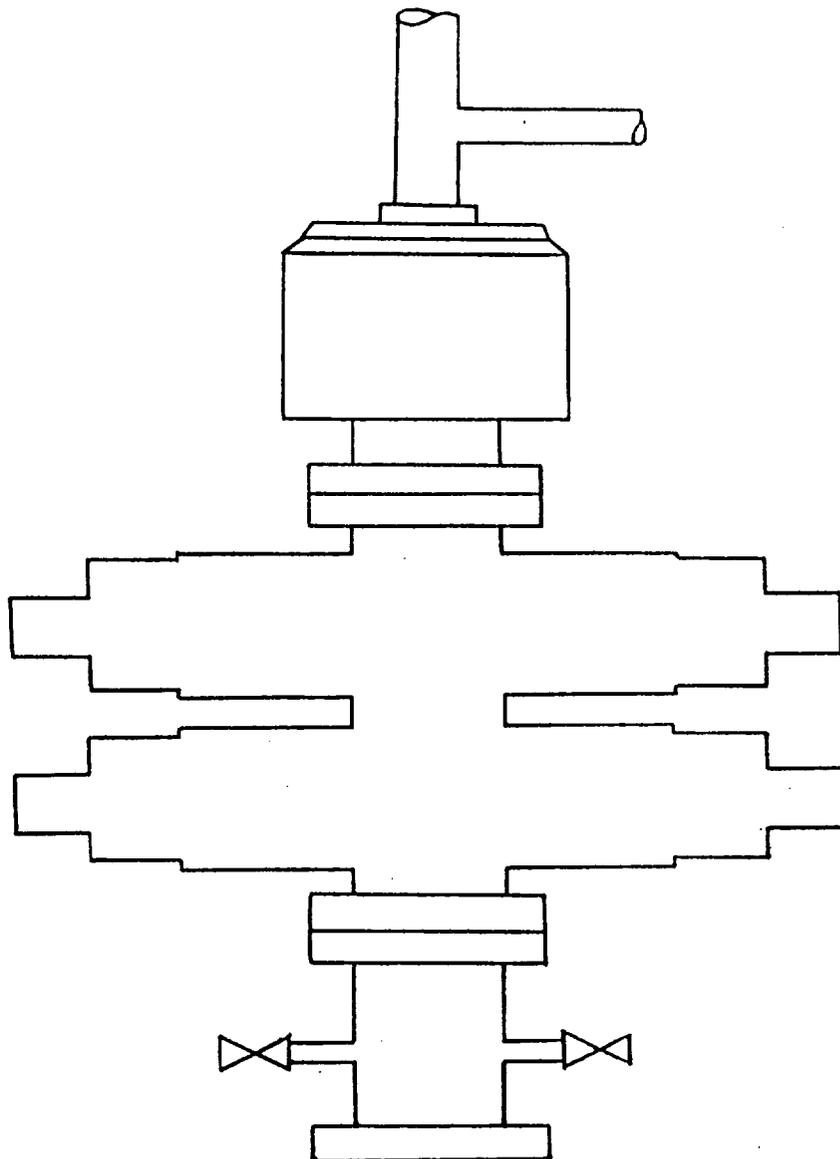


EXHIBIT "B"
N. INDIAN BASIN U #8
BOP STACK ARRANGEMENT
8 5/8" INTERMEDIATE CASING

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 9802
ORDER NO. R-9050

APPLICATION OF MARATHON OIL COMPANY
FOR AN UNORTHODOX GAS WELL LOCATION
AND SIMULTANEOUS DEDICATION, EDDY
COUNTY, NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on November 1, 1989, at Santa Fe, New Mexico, before Examiner Victor T. Lyon.

NOW, on this 21st day of November, 1989, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) The applicant, Marathon Oil Company, seeks approval of an unorthodox gas well location 330 feet from the South line and 1650 feet from the West line (Unit N) of Section 9, Township 21 South, Range 23 East, NMPM, to produce from the Indian Basin-Upper Pennsylvanian Gas Pool, Eddy County, New Mexico.
- (3) All of said Section 9 is proposed to be dedicated to said well replacing the existing North Indian Basin Unit Well No. 5 located at a standard gas well location 1815 feet from the South line and 1752.3 feet from the East line (Unit J) of said Section 9 forming a 640-acre gas spacing and proration unit for said pool.
- (4) The case was advertised for simultaneous dedication of the spacing and proration unit as well as an unorthodox location, but applicant indicated its intent to plug the existing well upon completion of the replacement well and therefore does not seek simultaneous dedication.

Case No. 9802
Order No. R-9050
Page No. 2

(5) Oryx Energy Company (Oryx) appeared in protest of the application and presented evidence designed to show the unorthodox location was contrary to the rules and would adversely affect Oryx's correlative rights.

(6) Applicant's testimony showed that its North Indian Basin Well No. 5 ceased to flow because of mechanical conditions in the well and needed to be replaced to permit the owners under the gas proration unit (GPU) to recover their just and equitable share of gas from the reservoir.

(7) The testimony showed that the Indian Basin-Upper Pennsylvanian Gas Pool is a water drive reservoir and it is logical and prudent in such a reservoir to locate wells as high as possible on the structure to maximize recovery of gas from the GPU.

(8) The Indian Basin-Upper Pennsylvanian Gas Pool is prorated under the provisions of Order No. R-8170, and its special pool rules are designed to place wells reasonably in the center of the dedicated acreage or GPU.

(9) Both applicant and Oryx presented geologic testimony which, though differing in some details, generally agreed the proposed location for the replacement well was up-dip from the present well and closer to Oryx's GPU located in Section 17 than a standard location. The expert witnesses did not agree on whether a well at the proposed location would more adversely affect Oryx's gas recovery from their GPU than a well at a standard location.

(10) Testimony and geologic exhibits from both parties demonstrated that a standard location could be drilled that would adequately replace the damaged well on this GPU.

(11) The Division has found it necessary and advisable in some instances to approve unorthodox locations in exception to the pool rules in order for a GPU operator to have a reasonable chance to recover the gas underlying his acreage because of close proximity to the gas-water contact or some other limitation to the productivity of his GPU. In such cases, it is customary for the Division to penalize the well's allowable.

(12) Applicant has failed to show necessity for an unorthodox location because of structural or other problems.

(13) If the well is drilled at the proposed location a sizable penalty should be applied to the well's allowable based on the distance the well is moved from a standard location toward the GPU boundary.

Case No. 9802
Order No. R-9050
Page No. 3

(14) Approval of the subject application will afford the applicant the opportunity to produce its just and equitable share of the gas in the affected pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The application of Marathon Oil Company for an unorthodox gas well location is hereby approved for a well to be located at a point 330 feet from the South line and 1650 feet from the West line of Section 9, Township 21 South, Range 23 East, NMPM, Indian Basin-Upper Pennsylvanian Gas Pool, Eddy County, New Mexico.

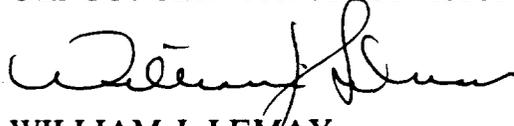
(2) All of said Section 9 shall be simultaneously dedicated to the above-described well and the existing North Indian Basin Unit Well No. 5 located at a standard gas well location 1815 feet from the South line and 1752.3 feet from the East line (Unit J) forming a 640-acre gas spacing and proration unit for said pool.

(3) In order to protect correlative rights and promote orderly development and well spacing, the allowable assigned the above-described gas proration unit shall be penalized in the proportion of distance the well is moved from a standard location toward the unit boundary, 1320/1650 or 80%, and the allowable should therefore be 20% of the normal allowable for a standard unit.

(4) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY
Director

SEAL

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 9802 DE NOVO
Order No. R-9050-A

APPLICATION OF MARATHON OIL COMPANY
FOR AN UNORTHODOX GAS WELL LOCATION
AND SIMULTANEOUS DEDICATION, EDDY
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on January 18, 1990, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 22nd day of March, 1990, the Commission, a quorum being present, having considered the testimony presented and exhibits received at said hearing, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Marathon Oil Company, seeks approval of an unorthodox gas well location 330 feet from the South line and 1650 feet from the West line (Unit N) of Section 9, Township 21 South, Range 23 East, NMPM, to produce from the Indian Basin-Upper Pennsylvanian Gas Pool, Eddy County, New Mexico.

**CASE NO. 9802 DE NOVO
Order No. R-9050-A
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(3) This matter came on for hearing at 8:15 a.m. on November 1, 1989, at Santa Fe, New Mexico before Examiner Victor T. Lyon and pursuant to this hearing, Order No. R-9050 was issued on November 21, 1989 which granted Marathon's application but imposed an eighty percent (80%) penalty factor to offset the advantage gained over the diagonal offset operator as a result of the unorthodox location.

(4) All of said Section 9 is proposed to be dedicated to said well replacing the existing North Indian Basin Unit Well No. 5 located at a standard gas well location 1815 feet from the South line and 1752.3 feet from the East line (Unit J) of said Section 9 forming a 640-acre gas spacing and proration unit for said pool.

(5) Oryx Energy Company (Oryx), owner of 54.1% working interest and operator of Section 17, Township 21 South, Range 23 East, NMPM, appeared in protest of the application and presented evidence designed to show the unorthodox location was contrary to the field rules and would adversely affect Oryx's correlative rights.

(6) Applicant's testimony showed that its North Indian Basin Well No. 5 ceased to flow because of mechanical conditions in the wellbore and needed to be replaced to permit the owners under the gas proration unit (GPU) to recover their just and equitable share of gas from the reservoir.

(7) The testimony showed that the Indian Basin-Upper Pennsylvanian Gas Pool is a water drive reservoir and it is logical and prudent in such a reservoir to locate wells as high as possible on the structure to maximize recovery of gas from the GPU.

(8) Testimony also showed a dolomite/limestone reservoir facies change striking northeast-southwest through the W/2 of Section 9 which is a major factor in governing the quality of gas production encountered, the better quality wells being located in the dolomite reservoir facies and the poor quality wells and dry holes being located in the limestone facies.

(9) The Indian Basin-Upper Pennsylvanian Gas Pool is prorated under the provisions of Order No. R-8170, and its special pool rules are designed to place wells a minimum of 1650 feet from the outer boundary of the gas proration unit.

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(10) Marathon's proposed location in Section 9 is located within the North Indian Basin Unit which also includes Section 16 to the South, so crowding Section 16 with a 330 foot offset location does not violate the correlative rights of working interest and royalty interest owners in Section 16.

(11) Both applicant and Oryx presented geologic testimony which, though differing in some details, generally agreed that the proposed location for the replacement well was up-dip from the present well and closer to Oryx's GPU located in Section 17 than a standard location. The expert witnesses did not agree on the extent to which Oryx's correlative rights would be impaired by production from the proposed location.

(12) The diagonal offset interest owner is the only party affected so a penalty should be assessed which reflects the encroachment toward the diagonal interest owners' acreage.

(13) The Oryx expert witness testified that Oryx would not object to any unorthodox location in Section 9 which would be no closer to the corner point of Sections 8, 9, 16 and 17 than a standard location 1650 feet from the South and West lines of Section 9.

(14) The calculated distance from the aforementioned corner point to the aforementioned standard location is 2,333 feet.

(15) The distance from the aforementioned corner point to the proposed location is calculated to be 1,683 feet.

(16) In order to protect correlative rights a penalty should be assigned to the applicant's GPU which will reflect the proportionate distance the proposed location is moved toward the aforementioned corner point.

(17) Ratio penalties have historically been assigned to wells which crowd objecting parties whose acreage directly offsets the crowding well.

(18) When ratio penalties are applied because of objections from parties owning diagonal offsetting acreage, penalty adjustments must be made to account for lesser acreage being effected by drainage from the crowding well.

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(19) Mathematical computations show that approximately two times as much direct offset acreage is effected by drainage as diagonal offset acreage assuming theoretical circular drainage and equal radii.

(20) Correlative rights will be protected by assigning a penalty to the allowable of the proposed location based upon the formula: $(0.5) (1-1683/2333)$ or 14% penalty.

(21) Approval of the subject application with a 14% penalty will afford the applicant the opportunity to produce its just and equitable share of the gas in the affected pool, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The application of Marathon Oil Company for an unorthodox gas well location is hereby approved for a well to be located at a point 330 feet from the South line and 1650 feet from the West line of Section 9, Township 21 South, Range 23 East, NMPM, Indian Basin-Upper Pennsylvanian Gas Pool, Eddy County, New Mexico.

(2) All of said Section 9 shall be simultaneously dedicated to the above-described well and the existing North Indian Basin Unit Well No. 5 located at a standard gas well location 1815 feet from the South line and 1752.3 feet from the East line (Unit J) forming a 640-acre gas spacing and proration unit for said pool.

(3) The above described proposed location and gas proration unit shall be assigned a 14% penalty, or an allowable equal to 86% (.86) of the normal monthly allowable assigned to a standard gas proration unit in the Indian Basin-Upper Pennsylvanian Gas Pool.

(4) Jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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DONE at Santa Fe, New Mexico, on the day and year
hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

WILLIAM R. HUMPHRIES, Member

William W. Weiss

WILLIAM W. WEISS, Member

William J. Lemay

WILLIAM J. LEMAY, Chairman
and Secretary

S E A L

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 9802 DE NOVO
Order No. R-9050-A

APPLICATION OF MARATHON OIL COMPANY
FOR AN UNORTHODOX GAS WELL LOCATION
AND SIMULTANEOUS DEDICATION, EDDY
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on January 18, 1990, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 22nd day of March, 1990, the Commission, a quorum being present, having considered the testimony presented and exhibits received at said hearing, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Marathon Oil Company, seeks approval of an unorthodox gas well location 330 feet from the South line and 1650 feet from the West line (Unit N) of Section 9, Township 21 South, Range 23 East, NMPM, to produce from the Indian Basin-Upper Pennsylvanian Gas Pool, Eddy County, New Mexico.

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(3) This matter came on for hearing at 8:15 a.m. on November 1, 1989, at Santa Fe, New Mexico before Examiner Victor T. Lyon and pursuant to this hearing, Order No. R-9050 was issued on November 21, 1989 which granted Marathon's application but imposed an eighty percent (80%) penalty factor to offset the advantage gained over the diagonal offset operator as a result of the unorthodox location.

(4) All of said Section 9 is proposed to be dedicated to said well replacing the existing North Indian Basin Unit Well No. 5 located at a standard gas well location 1815 feet from the South line and 1752.3 feet from the East line (Unit J) of said Section 9 forming a 640-acre gas spacing and proration unit for said pool.

(5) Oryx Energy Company (Oryx), owner of 54.1% working interest and operator of Section 17, Township 21 South, Range 23 East, NMPM, appeared in protest of the application and presented evidence designed to show the unorthodox location was contrary to the field rules and would adversely affect Oryx's correlative rights.

(6) Applicant's testimony showed that its North Indian Basin Well No. 5 ceased to flow because of mechanical conditions in the wellbore and needed to be replaced to permit the owners under the gas proration unit (GPU) to recover their just and equitable share of gas from the reservoir.

(7) The testimony showed that the Indian Basin-Upper Pennsylvanian Gas Pool is a water drive reservoir and it is logical and prudent in such a reservoir to locate wells as high as possible on the structure to maximize recovery of gas from the GPU.

(8) Testimony also showed a dolomite/limestone reservoir facies change striking northeast-southwest through the W/2 of Section 9 which is a major factor in governing the quality of gas production encountered, the better quality wells being located in the dolomite reservoir facies and the poor quality wells and dry holes being located in the limestone facies.

(9) The Indian Basin-Upper Pennsylvanian Gas Pool is prorated under the provisions of Order No. R-8170, and its special pool rules are designed to place wells a minimum of 1650 feet from the outer boundary of the gas proration unit.

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(11) Both applicant and Oryx presented geologic testimony which, though differing in some details, generally agreed that the proposed location for the replacement well was up-dip from the present well and closer to Oryx's GPU located in Section 17 than a standard location. The expert witnesses did not agree on the extent to which Oryx's correlative rights would be impaired by production from the proposed location.

(12) The diagonal offset interest owner is the only party affected so a penalty should be assessed which reflects the encroachment toward the diagonal interest owners' acreage.

(13) The Oryx expert witness testified that Oryx would not object to any unorthodox location in Section 9 which would be no closer to the corner point of Sections 8, 9, 16 and 17 than a standard location 1650 feet from the South and West lines of Section 9.

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IT IS THEREFORE ORDERED THAT:

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DONE at Santa Fe, New Mexico, on the day and year
hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

WILLIAM R. HUMPHRIES, Member

William W. Weiss

WILLIAM W. WEISS, Member

William J. Lemay

WILLIAM J. LEMAY, Chairman
and Secretary

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