



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Jennifer A. Salisbury
Cabinet Secretary

October 3, 2001

Lori Wrotenbery
Director
Oil Conservation Division

Marathon Oil Company
P. O. Box 552
Midland, Texas 79702-0552
Attention: Ginny Larke

Telefax No. (915) 687-8305

Administrative Order NSL-4649(BHL)

Dear Ms. Larke:

Reference is made to the following: (i) your initial application that was submitted to the New Mexico Oil Conservation Division ("Division") in Santa Fe on August 15, 2001 (*application reference No. pKRV0-123433433*); (ii) your supplemental correspondence with Mr. Michael E. Stogner, Engineer in Santa Fe with the Division, by letters and telefax dated June 21, July 19, August 22, August 27, August 29, August 30, and September 4, 2001; (iii) the Division's records in Santa Fe and Artesia: all concerning Marathon Oil Company's ("Marathon") request for an exception to Rule 2 (b) of the "*Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool*", as promulgated by Division Order Nos. R-9922, R-9922-A, R-9922-B, R-9922-C, and R-9922-D and the "*General Rules and Regulations for the Associated Oil and Gas Pools of Northwest New Mexico and Southeast New Mexico*", as promulgated by Division Order No. R-5353, as amended, for the existing Indian Hills Unit Well No. 1 (API No. 30-015-10066) in the SW/4 SW/4 (Unit M) of Section 21, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico.

The W/2 of Section 21, being a standard 320-acre stand-up gas spacing and proration unit for the Indian Basin-Upper Pennsylvanian Associated Pool (33685), is the assigned acreage for the subject well.

It is our understanding this well was initially drilled in 1963 by Ralph Lowe as a Morrow gas well. Its location being 660 feet from the South and West lines (Unit M) of Section 21 was considered to be standard at that time (see Division Order No. R-2441 dated February 28, 1963). In 1992 this Morrow producing gas well was plugged and abandoned. In February 1998 Marathon decided to re-enter this well and complete it as a gas well in the Indian Basin-Upper Pennsylvanian interval. A re-survey of the surface location at that time showed the actual location of this well to be 416 feet from the South line and 176 feet from the West line of Section 21. Further, Marathon performed a blind kick on the well during its re-entry/recompletion operations in 1998, the directional survey of the wellbore shows the actual bottomhole location of this well to be 427 feet from the South line and 30 feet from the West line of Section 21.

This application has been duly filed under the provisions of Division Rule 104.F and

Administrative Order NSL-4649(BHL)
Marathon Oil Company
October 3, 2001
Page 2

Rule 2 (c) of the Division's associated pool rules.

By the authority granted me under the provisions of Division Rule 104.F (2) and the applicable provisions of the special rules governing the Indian Basin-Upper Pennsylvanian Associated Pool, the above-described unorthodox surface gas location for the Indian Hills Unit well No. 1 within the W/2 of Section 21 is hereby approved.

Further, the aforementioned well and spacing unit will be subject to all existing rules, regulations, policies, and procedures applicable to the Indian Basin-Upper Pennsylvanian Associated Pool.

Sincerely,



Lori Wrotenbery
Director

LW/MES/kv

cc: New Mexico Oil Conservation Division - Artesia
U. S. Bureau of Land Management - Carlsbad
W. Thomas Kellahin, Legal Counsel for Marathon Oil Company - Santa Fe



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Marathon Oil Company

P. O. Box 3487

Houston, Texas 77253-3487

April 23, 2004

Joanna Prukop

Cabinet Secretary

Acting Director

Oil Conservation Division

Attention: **Mark Mick**
Operations Engineer
msmick@marathonoil.com

Administrative Order NSL-4649-A (BHL) (SD)

Dear Mr. Mick:

Reference is made to the following: (i) your application filed with the New Mexico Oil Conservation Division ("Division") on March 31, 2004 (*administrative application reference No. pMES0-409157253*); (ii) my e-mail late Thursday afternoon, April 22, 2004 requesting additional information to support your application; (iii) your e-mail response Friday morning, April 23, 2004 with the requested information; and (iv) the Division's records in Santa Fe, including the file on Division Administrative Orders NSL-4649 (BHL): all concerning Marathon Oil Company's ("Marathon") request for an exception to Rule 2 (b) of the "*Special Rules and Regulations for the Indian Basin-Upper Pennsylvanian Associated Pool*", as promulgated by New Mexico Oil Conservation Division ("Division") Order Nos. R-9922, R-9922-A, R-9922-B, R-9922-C, R-9922-D, and R-9922-E and the "*General Rules and Regulations for the Associated Oil and Gas Pools of Northwest New Mexico and Southeast New Mexico*," as promulgated by Division Order No. R-5353, as amended, for Marathon's existing Indian Hills Unit Well No. 31 (API No. 30-015-31534) to be recompleted as an upper Pennsylvanian infill well to an unorthodox subsurface location within an existing standard 320-acre spacing and proration unit for the Indian Basin-Upper Pennsylvanian Associated Pool (33685) comprising the W/2 of Section 21, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico.

This unit is currently simultaneously dedicated to Marathon's:

- (i) Indian Hills Unit Well No. 1 (API No. 30-015-10066), located on the surface 416 feet from the South line and 176 feet from the West line (Unit M) of Section 21 and completed within the Indian Basin-Upper Pennsylvanian Associated Pool at an unorthodox bottom-hole location that is 427 feet from the South line and 30 feet from the West line (Unit M) of Section 21, see Division Administrative Order NSL-4649 (BHL), dated October 3, 2001;
- (ii) Indian Hills Unit Well No. 36 (API No. 30-015-32140), located on the surface 429 feet from the South line and 506 feet from the West line (Unit M) of Section 21, and completed within the Indian Basin-Upper Pennsylvanian Associated Pool at a bottom-hole infill location within Unit "K" of Section 21 that is 1708 feet from the South line and 1608 feet from the West line of Section 21; and
- (iii) aforementioned Indian Hills Well No. 31, which well was initially drilled in early 2001 from a surface location 1093 feet from the North line and 663 feet from the East line (Unit A) of Section 20, Township 21 South, Range 24 East, NMPM, Eddy County, New Mexico, directionally drilled to the east to a total depth of 8,955 feet (MD), or 8,600 (TVD), at a bottom-hole location 1327 feet from the North line and 1510 feet from the West line (Unit F) of Section 21.

It is the Division's understanding that Marathon now intends to abandon the current Upper Pennsylvanian completion, plug back to a depth of 2,000 feet (MD), kick-off in a southeasterly direction, and continue drilling directionally to a targeted-bottomhole location at an approximate depth 8,570 feet (TVD) 2467 feet from the North line and 496 feet from the West line (Unit E) of Section 21. This new directional wellbore is expected to intersect the top of the Upper-Pennsylvanian interval at an approximate depth of 8,013 feet (MD), or 7,780 feet (TVD) 2286 feet from the North line and 340 feet from the West line (Unit E) of Section 21. The proposed well will be unorthodox in that the entire producing interval will be closer than the standard setback distance of 660 from the South line of Section 21. Further, this new bottom-hole location has been chosen by Marathon to optimize reservoir drainage and minimize geological risk.

This application has been duly filed under the provisions of Division Rule 104.F and Rule 2 (c) of the Division's associated pool rules.

By the authority granted me under the provisions of Division Rule 104.F (2) and the applicable provisions of the special rules governing the Indian Basin-Upper Pennsylvanian Associated Pool, Marathon is hereby authorized to recomplete its Indian Hills Unit Well No. 31 as close as is reasonably possible to the proposed targeted unorthodox penetration point for the Upper-Pennsylvanian interval and bottom-hole well location.

Further, the aforementioned well and 320-acre spacing and proration unit will be subject to all existing rules, regulations, policies, and procedures applicable to the Indian Basin-Upper Pennsylvanian Associated Pool.

Marathon is hereby authorized to simultaneously dedicate production attributed to the Indian Basin-Upper Pennsylvanian Associated Pool from the aforementioned Indian Hills Unit Wells No. 1, 31, and 36. Furthermore, Marathon is permitted to continue producing the allowable assigned the subject 320-acre spacing and proration unit from all three wells in any proportion.

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

Sincerely,



Michael E. Stogner
Engineer/Hearing Officer

MES/ms

cc: New Mexico Oil Conservation Division - Artesia
U. S. Bureau of Land Management - Carlsbad
File: NSL-4649 (BHL)



NSL-4649-A (BHL) (SD)

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor

April 23, 2004

Joanna Prukop
Cabinet Secretary
Acting Director
Oil Conservation Division

Marathon Oil Company
P. O. Box 3487
Houston, Texas 77253-3487

Attention: Mark Mick
Operations Engineer
msmick@marathonoil.com

CORRECTED Administrative Order NSL-4649-A (BHL) (SD)

Dear Mr. Mick:

Due to inadvertence Division Administrative Order NSL-4649-A (BHL) (SD), dated April 23, 2004 (*administrative application reference No. pMES0-409157253*), does not correctly state the intended order of the Division and should therefore be corrected at this time.

The first paragraph on page 2 of Administrative Order NSL-4649-A (BHL) (SD) is hereby amended to read in its entirety as follows:

"It is the Division's understanding that Marathon now intends to abandon the current Upper Pennsylvanian completion, plug back to a depth of 2,000 feet (MD), kick-off in a southeasterly direction, and continue drilling directionally to a targeted-bottomhole location at an approximate depth 8,570 feet (TVD) 2467 feet from the North line and 496 feet from the West line (Unit E) of Section 21. This new directional wellbore is expected to intersect the top of the Upper-Pennsylvanian interval at an approximate depth of 8,013 feet (MD), or 7,780 feet (TVD) 2286 feet from the North line and 340 feet from the West line (Unit E) of Section 21. The proposed well will be unorthodox in that the entire producing interval will be closer then the standard setback distance of 660 from the West line of Section 21. Further, this new bottom-hole location has been chosen by Marathon to optimize reservoir drainage and minimize geological risk".

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

Sincerely,

Michael E. Stogner
Engineer/Hearing Officer

MES/ms

cc: New Mexico Oil Conservation Division - Artesia
U. S. Bureau of Land Management - Carlsbad
File: NSL-4649 (BHL)
~~NSL-4649-A (BHL) (SD)~~

pMES0-409157253

Sec : 20 Twp : 21S Rng : 24E Section Type : NORMAL

4 38.99 Federal owned U	3 40.55 Federal owned U	2 38.93 Federal owned U A A A A	1 37.88 Federal owned U A A
5 37.95 Federal owned U	6 39.51 Federal owned U	7 39.39 Federal owned U	8 38.34 Federal owned U
L 40.00 Federal owned U A	K 40.00 Federal owned U A	J 40.00 Federal owned U	I 40.00 Federal owned U
M 40.00 Federal owned U A A	N 40.00 Federal owned U A	O 40.00 Federal owned U A A	P 40.00 Federal owned U

Sec : 21 Twp : 21S Rng : 24E Section Type : NORMAL

D 40.00 Federal owned U	C 40.00 Federal owned U	2 38.26 Federal owned U	1 38.29 Federal owned U
E 40.00 Federal owned U	F 40.00 Federal owned U	3 36.69 Federal owned U	4 36.72 Federal owned U
I 40.00 Federal owned U	K 40.00 Federal owned U	6 36.35 Federal owned U	5 36.29 Federal owned U
M 40.00 Federal owned U A A A A	N 40.00 Federal owned U	7 37.74 Federal owned U	8 37.68 Federal owned U

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

SUBMIT IN TRIPLICATE

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

CHF

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK
 DRILL DEEPEN

b. TYPE OF WELL
 OIL WELL GAS WELL OTHER

2. NAME OF OPERATOR
Marathon Oil Company *14021*

3. ADDRESS AND TELEPHONE NO.
P.O. Box 552 Midland, TX 79702 *1-800-351-1417*

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
 At surface: 1093' FNL & 663' FEL Sec. 20, T-21-S, R-24-E *W. A. Lot 1*
 At proposed prod. zone: 1356' FNL & 1633' FWL Sec. 21, T-21-S, R-24-E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
15 Miles N.W. of Carlsbad

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drip unit line, if any) ** Reference Note
* 33'

16. NO. OF ACRES IN LEASE
640

17. NO. OF ACRES ASSIGNED TO THIS WELL
320 W/2 of Sec. 21

18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
* 33'

19. PROPOSED DEPTH
8800'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
4149' G.L.

22. APPROX. DATE WORK WILL START*
ASAP

8. FARM OR LEASE NAME, WELL NO.
Indian Hills Unit # 31

7. UNIT AGREEMENT NAME
Indian Basin Unit *6409*

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

5. LEASE DESIGNATION AND SERIAL NO.
NM 07260

9. API WELL NO.
30-015-31534

10. FIELD AND POOL, OR WILDCAT
Indian Basin U. Penn. Assoc.

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 20 T-21-S, R-24-E

12. COUNTY OR PARISH
Eddy

13. STATE
N.M.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8" K-55	54.50#	1800'	1046 sks.
12.25"	9-5/8" K-55	40# & 53.50#	8800'	2610 sks.

Propose to drill a directional Upper Penn. Assoc. Gas well on the Same location as the Indian Hills Unit # 26

Located @ 1069' FNL, 685' FEL Sec. 20, T-21-S, R-24-E.

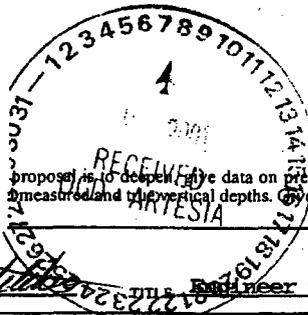
Note**

BHL located @ 1356' FNL & 1633' FWL of Sec. 21, T-21-S, R-24-E

Distance From Indian Hills Unit # 26 SHL located @ 1069' FNL & 685' FEL to Indian Hills Unit # 31 SHL is 33'

13 3/8"

Notify OCD spud & time to witness cementing of 13 3/8" CASING



APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS

proposal is to deepen the data on present productive zone and proposed new productive zone. If proposal is to drill or measure and the vertical depths. Give blowout preventer program, if any.

24. Jerry Fletcher *Jerry Fletcher* Engineer Tech. DATE 11-08-00

(This space for Federal or State office use)

PERMIT NO _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

*Artesia Field Manager,
Bureau of Land Management*

APPROVED BY _____ TITLE _____ DATE _____

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

APPROVED FOR YEAR

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer 123, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Ed., Artesia, NM 87410

DISTRICT IV
P.O. Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

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

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
		Indian Basin Upper Penn. Assoc.
Property Code	Property Name	Well Number
	INDIAN HILLS UNIT	31
OGRID No.	Operator Name	Elevation
14021	MARATHON OIL COMPANY	4149

Surface Location

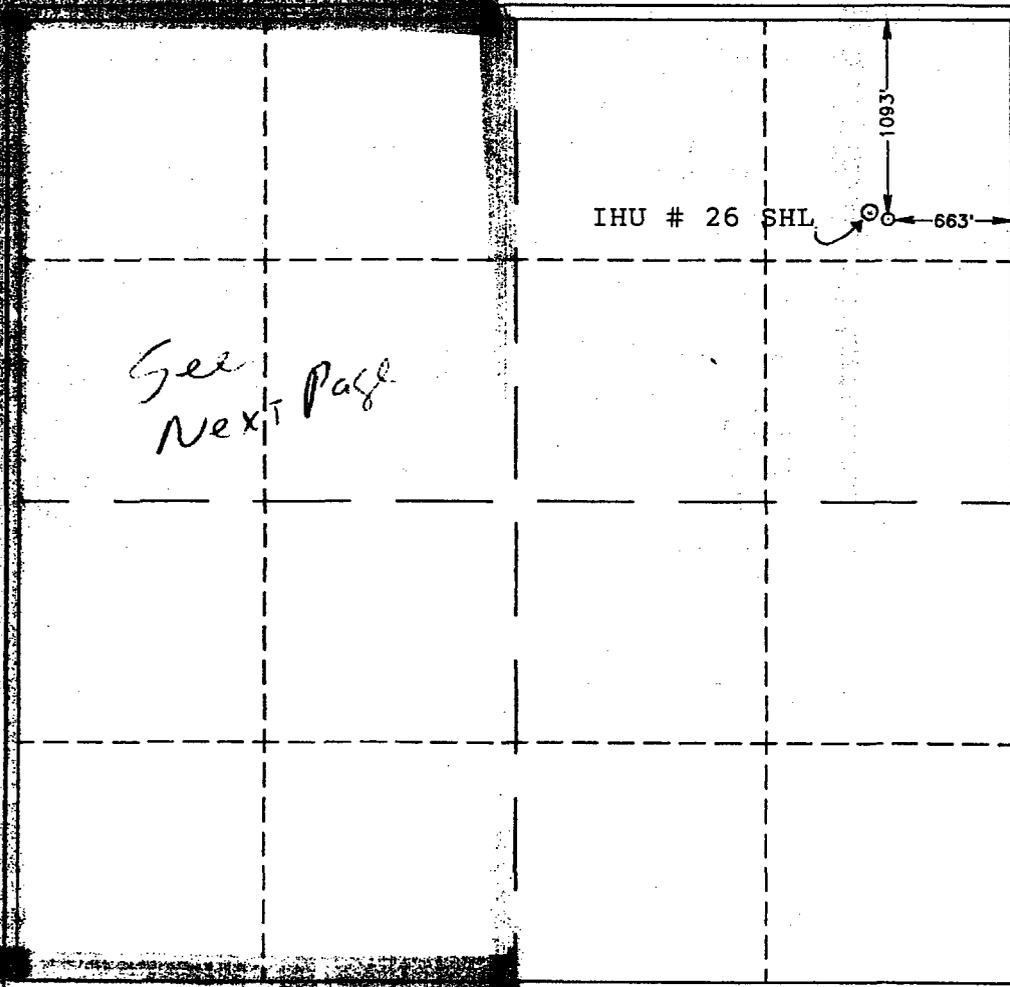
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	20	21 S	24 E		1093	NORTH	663	EAST	EDDY

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
F	21	21 S	24 E		1356	NORTH	1633	WEST	Eddy

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320 W/2			

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



OPERATOR CERTIFICATION

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

Jerry Fletcher
Signature

Jerry Fletcher
Printed Name

Engineer Tech.
Title

11-08-00
Date

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 belief.

OCTOBER 18, 2000
Date Surveyed

J. EDISON JLP
Signature & Seal of Professional Surveyor

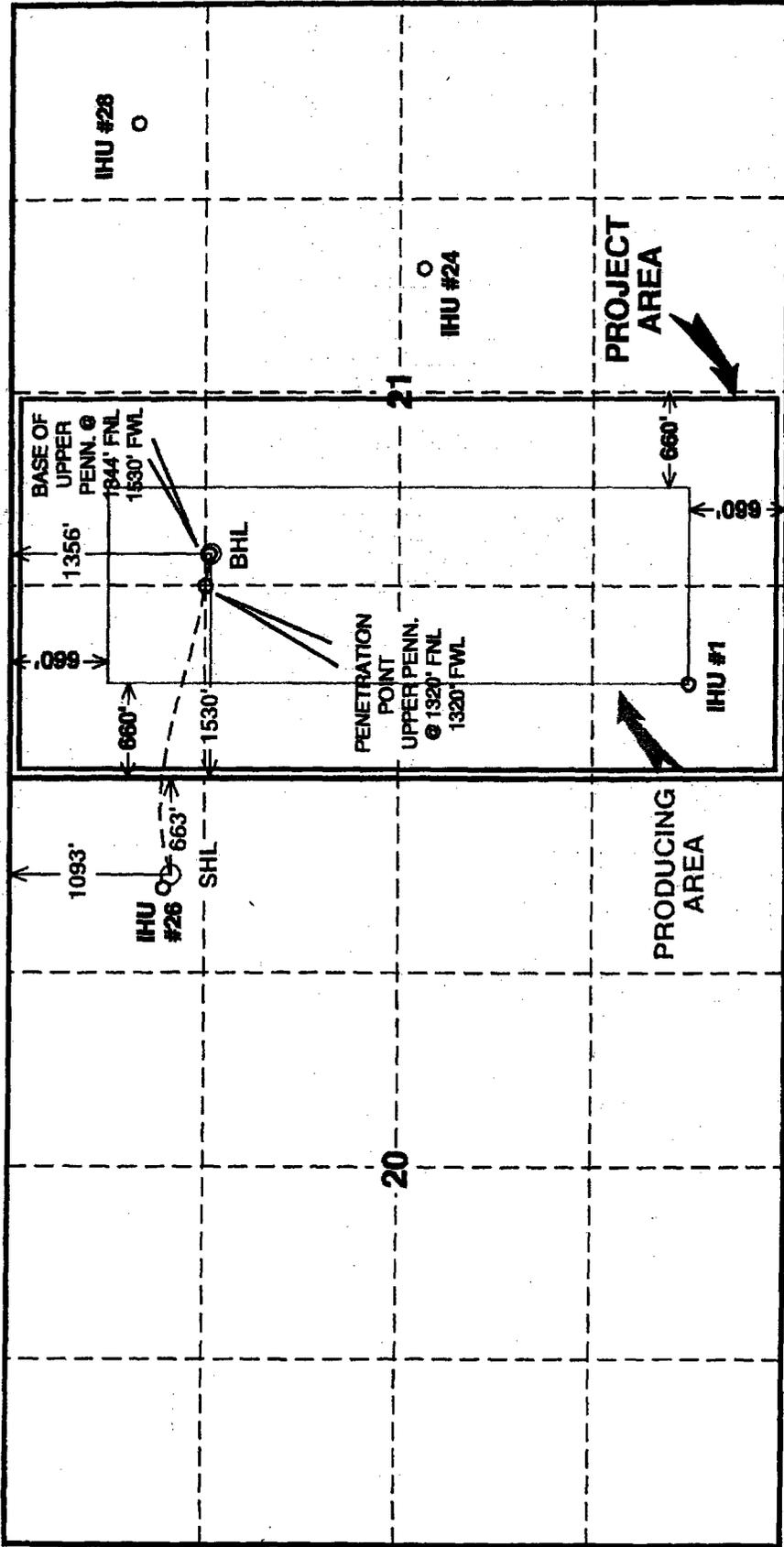
Ronald J. Edison
Professional Surveyor

W.O. Num. 00-11-321

Certificate No. RONALD J. EDISON, 3239
GARY E. EDISON, 12841

R 24 E

T 21 S



MARATHON OIL COMPANY
SOUTHERN BUSINESS UNIT

INDIAN HILLS UNIT #31

EDDY COUNTY, NEW MEXICO



MARATHON OIL COMPANY

Structure : Indian Hills Unit No. 1

Slot : slot #1

Field : Indian Basin

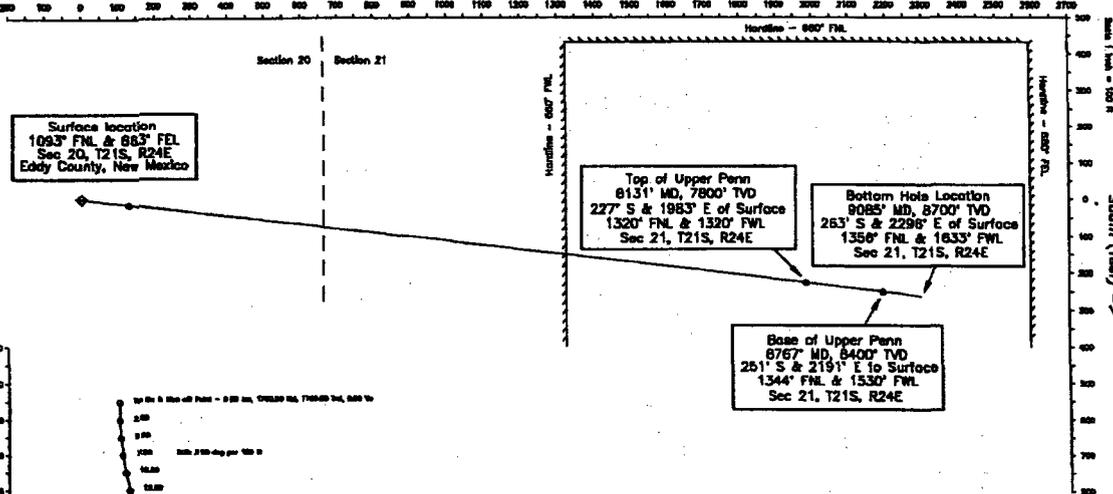
Location : EDDY COUNTY, NM.

Not Reference to 2-D log that
Coordinates are to last reference slot #1.
True Vertical Depths are reference—slotted table.
— Baker Hughes I

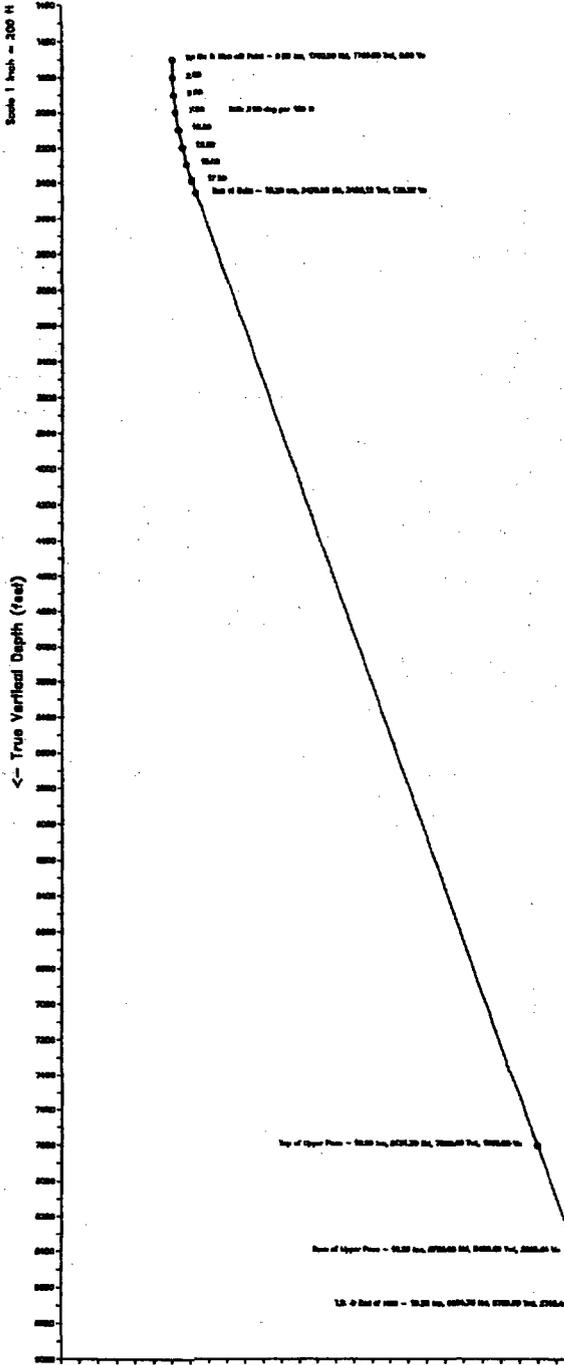
5

Scale 1 inch = 100 ft

East (feet) -->



Scale 1 inch = 200 ft



--- -- WELL PROFILE DATA --- --

Point	MD	Sur	Dir	TVD	North	East	V. Dist	Dep./100
RDP	1700.00	0.00	94.53	1700.00	0.00	0.00	0.00	0.00
End of Hole	2470.26	16.26	94.53	2446.12	-14.59	127.49	128.32	2.90
Target	8131.29	16.26	94.53	7800.00	-227.00	1983.00	1995.85	0.00
End of Hole	8766.86	16.26	94.53	8450.00	-250.80	2191.33	2205.84	0.00
T.D. @ End of Hole	8084.78	16.26	94.53	8700.00	-262.77	2280.50	2310.49	0.00



Magentic North to 8.57 degrees East of True North
No correction shown. True magnetic to 1955 and 1957



INTEQ

Approved By: _____
Title: _____
Date: _____

Scale 1 inch = 200 ft

Vertical Section (feet) -->

Azimuth 94.53 with reference 0.00 N, 0.00 E from slot #1

MARATHON OIL COMPANY
 Indian Hills Unit No. 31, slot #1
 Indian Basin, EDDY COUNTY, NM.

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Depth	VERTICAL CORRECTION	RECORDING	GLASS	DOGLEG	VERTICAL SECTION
							Deg/100ft	
1700.00	0.00	96.53	1700.00	0.00 N	0.00 E	0.00 E	0.00	0.00
1800.00	2.50	96.53	1799.97	0.25 S	2.17 E	2.50 E	2.50	2.18
1900.00	5.00	96.53	1899.75	0.99 S	8.66 E	2.50 E	2.50	8.72
2000.00	7.50	96.53	1999.14	2.23 S	19.48 E	2.50 E	2.50	19.61
2100.00	10.00	96.53	2097.97	3.96 S	34.59 E	2.50 E	2.50	34.82
2200.00	12.50	96.53	2196.04	6.18 S	53.97 E	2.50 E	2.50	54.33
2300.00	15.00	96.53	2293.17	8.88 S	77.59 E	2.50 E	2.50	78.09
2400.00	17.50	96.53	2389.17	12.06 S	105.38 E	2.50 E	2.50	106.07
2470.56	19.26	96.53	2456.12	14.59 S	127.49 E	2.50 E	2.50	128.32
2500.00	19.26	96.53	2483.92	15.70 S	137.14 E	0.00 E	0.00	138.04
3000.00	19.26	96.53	2955.92	34.46 S	301.03 E	0.00 E	0.00	303.00
3500.00	19.26	96.53	3427.92	53.22 S	464.92 E	0.00 E	0.00	467.96
4000.00	19.26	96.53	3899.93	71.98 S	628.81 E	0.00 E	0.00	632.92
4500.00	19.26	96.53	4371.93	90.74 S	792.70 E	0.00 E	0.00	797.88
5000.00	19.26	96.53	4843.94	109.50 S	956.59 E	0.00 E	0.00	962.84
5500.00	19.26	96.53	5315.94	128.26 S	1120.48 E	0.00 E	0.00	1127.80
6000.00	19.26	96.53	5787.95	147.03 S	1284.37 E	0.00 E	0.00	1292.76
6500.00	19.26	96.53	6259.95	165.79 S	1448.26 E	0.00 E	0.00	1457.72
7000.00	19.26	96.53	6731.95	184.55 S	1612.15 E	0.00 E	0.00	1622.68
7500.00	19.26	96.53	7203.96	203.31 S	1776.04 E	0.00 E	0.00	1787.64
8000.00	19.26	96.53	7675.96	222.07 S	1939.93 E	0.00 E	0.00	1952.60
8131.39	19.26	96.53	7800.00	227.00 S	1983.00 E	0.00 E	0.00	1995.95
8500.00	19.26	96.53	8147.97	240.83 S	2103.82 E	0.00 E	0.00	2117.56
8766.98	19.26	96.53	8400.00	250.85 S	2191.33 E	0.00 E	0.00	2205.64
9000.00	19.26	96.53	8619.97	259.59 S	2267.71 E	0.00 E	0.00	2282.52

Top of Upper Penn
 Base of Upper Penn

All data is in feet unless otherwise stated.
 Coordinates from slot #1 and TVD from rotary table.
 Bottom hole distance is 2310.49 on azimuth 96.53 degrees from wellhead.
 vertical section is from wellhead on azimuth 96.53 degrees.
 Calculation uses the minimum curvature method.
 Presented by Baker Hughes INTEQ

MARATHON OIL COMPANY

Indian Hills Unit No. 31, slot #1
 Indian Basin, EDDY COUNTY, NM.

PROPOSAL LISTING Page 2
 Your ref : 2.5 Deg BUR
 Last revised : 7-Nov-2000

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Depth	R E C T A N G U L A R C O O R D I N A T E S	Dogleg Deg/100ft	Vert Sect
9084.78	19.26	96.53	8700.00	262.77 S 2295.50 E	0.00	2310.49

All data is in feet unless otherwise stated.
 Coordinates from slot #1 and TVD from rotary table.
 Bottom hole distance is 2310.49 on azimuth 96.53 degrees from wellhead.
 Vertical section is from wellhead on azimuth 96.53 degrees.
 Calculation uses the minimum curvature method.
 Presented by Baker Hughes INTEQ

MARATHON OIL COMPANY
 Indian Hills Unit No. 31, slot #1
 Indian Basin, EDDY COUNTY, NM.

PROPOSAL LISTING Page 3
 Your ref : 2.5 Deg BUR
 Last revised : 7-Nov-2000

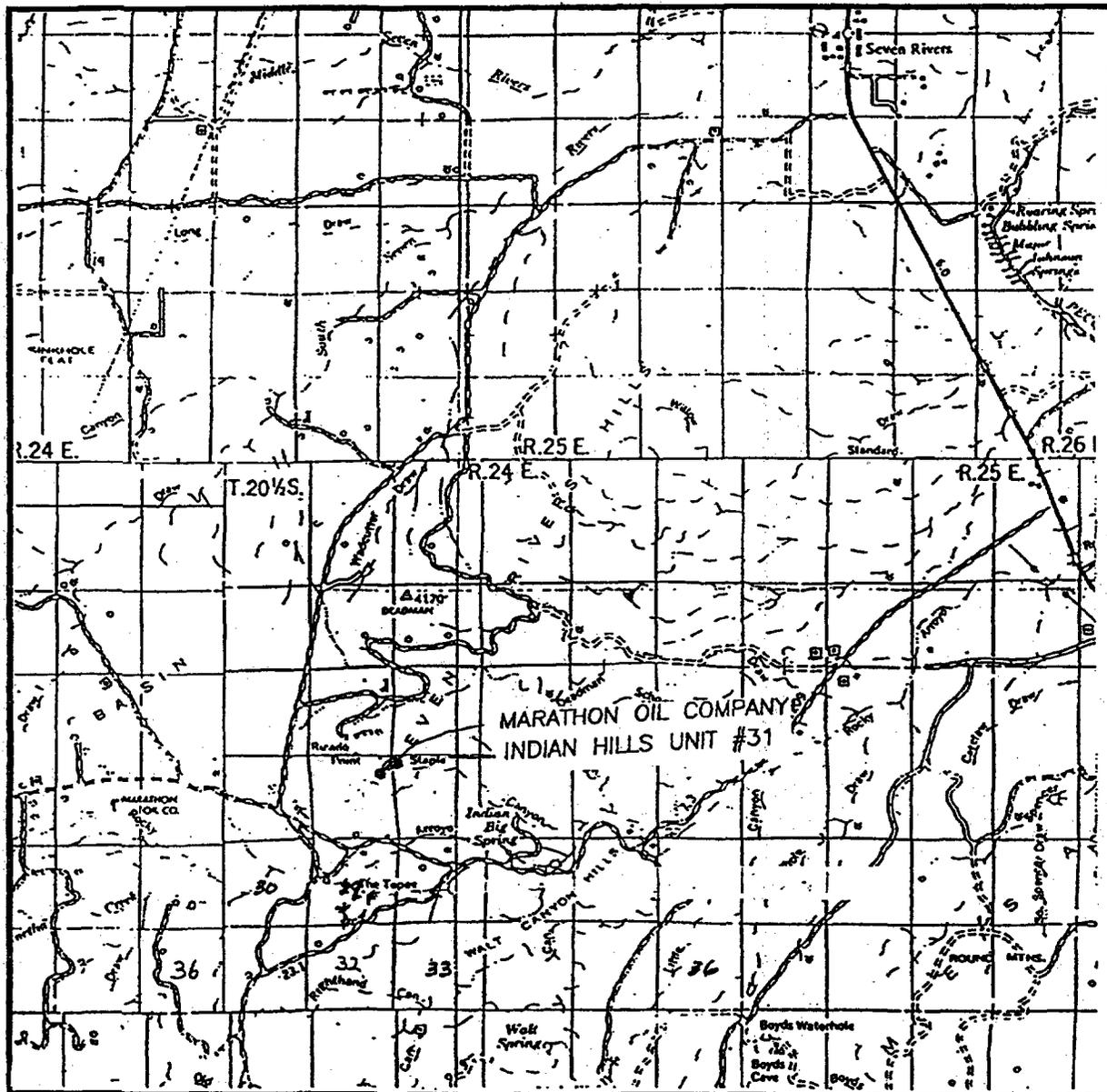
=====
 Comments in wellpath
 =====

MD	TVD	Rectangular Coords.	Comment
8131.39	7800.00	227.00 S 1983.00 E	Top of Upper Penn
8766.98	8400.00	250.85 S 2191.33 E	Base of Upper Penn

=====
 Targets associated with this wellpath
 =====

Target name	Geographic Location	T.V.D.	Rectangular Coordinates	Revised
		7800.00	227.00S	1983.00E
				7-Nov-2000

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 20 TWP. 21-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1093' FNL & 663' FEL

ELEVATION 4149

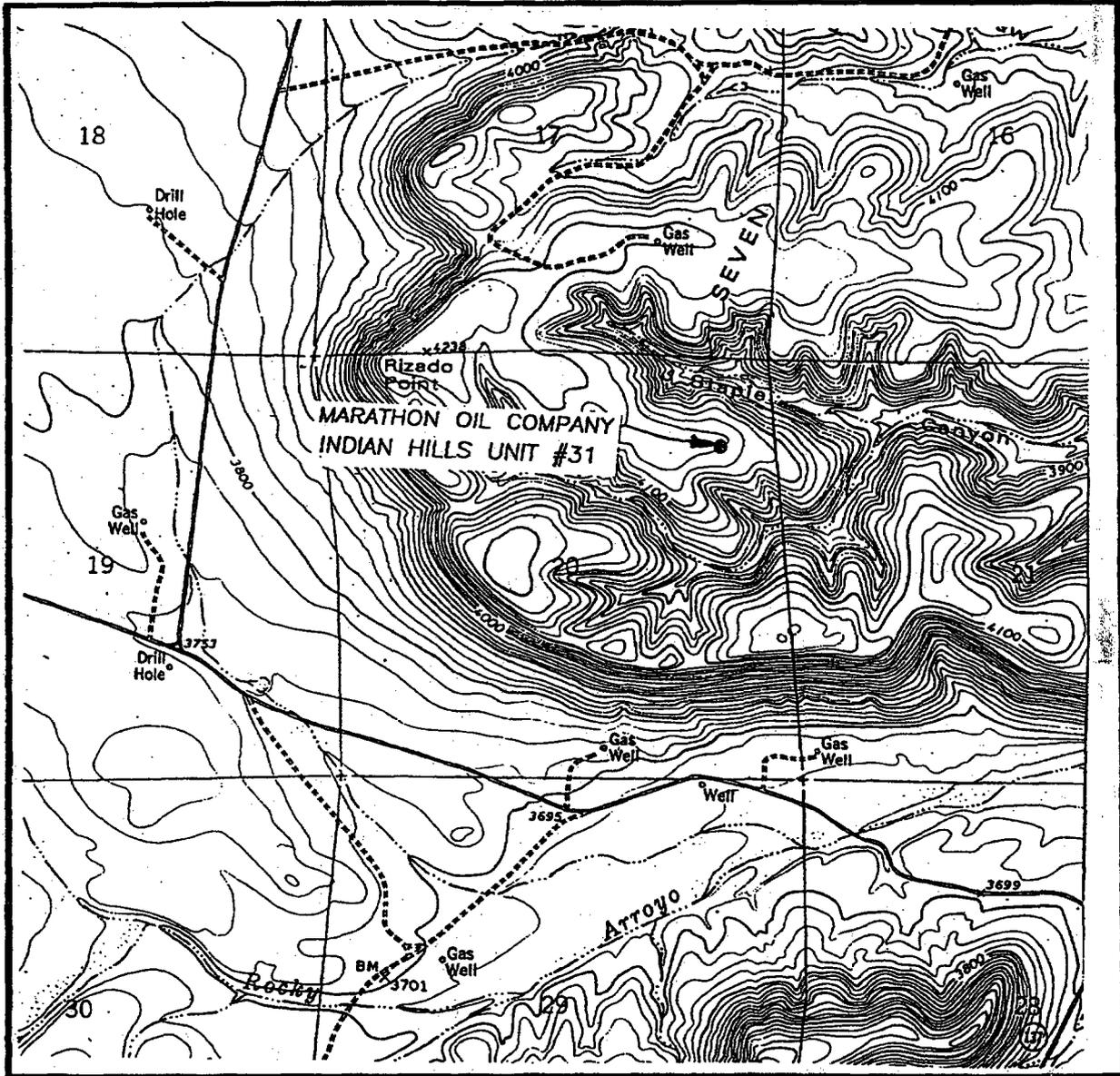
OPERATOR MARATHON OIL COMPANY

LEASE INDIAN HILLS UNIT

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117

LOCATION VERIFICATION MAP

10



SCALE: 1" = 2000'

CONTOUR INTERVAL - 20'

SEC. 20 TWP. 21-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1093' FNL & 663' FEL

ELEVATION 4149

OPERATOR MARATHON OIL COMPANY

LEASE INDIAN HILLS UNIT

U.S.G.S. TOPOGRAPHIC MAP

MARTHA CREEK, N.M.

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Co.'s Division
811 S. 1st Street
Artesia, NM 88210-2884

FORM APPROVED
OMB NO. 1004-0135
Expires: November 30, 2000

(25)
45F

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No. **10-2884**

6. If Indian, Allottee or Tribe Name
N/A

7. If Unit or CA/Agreement, Name and/or
Indian Basin Unit

8. Well Name and No.
Indian Hills Unit #31

9. API Well No.
30-015-31534

10. Field and Pool, or Exploratory Area
Indian Basin Upper Perm. Assoc.

11. County or Parish, State
Eddy N.M.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well
 Oil Well Gas Well Other

2. Name of Operator
Marathon Oil Company

3a. Address
P.O. Box 552 Midland, TX 79702

3b. Phone No. (include area code)
915-687-8357

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SHL @ 1093' FNL & 663' FEL Sec. 20, T-21-S, R-24-E
BHL @ 1356' FNL & 1633' FWL Sec. 21, T-21-S, R-24-E

RECEIVED
OCD - ARTESIA

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off	
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____	
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon		
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal		

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

Please see attached subsequent report to form 3160-5.

ACCEPTED FOR RECORD
(ORIG. SGD) DAVID R. GLASS
MAR 5 2001

14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed) **Jerry Fletcher** Title **Engineer Tech.**

Date **2/27/01**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____ Title _____ Date _____

Office _____

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
811 S. 1st Street
Artesia, NM 88210-2834

FORM APPROVED
NO. 1004-0135
Expires: November 30, 2000

CISF

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

Oil Well Gas Well Other

2. Name of Operator

Marathon Oil Company

3a. Address

P.O. Box 552 Midland, TX 79702

3b. Phone No. (include area code)

800-351-1417

4. Location of Well (State, Sec., T., R., M., or Survey Description)

SURFACE: UL "A", 1089' FNL & 665' FEL, SECTION 20, T-21-S, R-24-E

BOTTOM HOLE: UL "A", 1327' FNL & 1550' FEL, SECTION 21, T-21-S, R-24-E

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No

INDIAN HILLS UNIT

NM 70964X

8. Well Name and No.

INDIAN HILLS UNIT #31

9. API Well No.

30-015-31534

10. Field and Pool, or Exploratory Area

INDIAN BASIN UPPER PENN ASSOCIATED GAS POOL

11. County or Parish, State

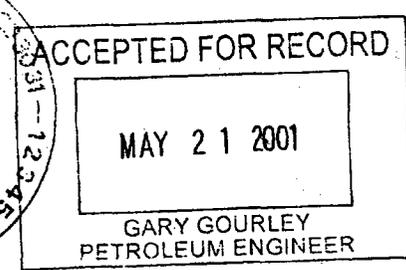
EDDY COUNTY NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
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<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input checked="" type="checkbox"/> Water Disposal	

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As required by Onshore Order No. 7, Marathon Oil Company is notifying you of the methods of water disposal from this well. Produced water from this well will be sent, via pipeline, to one of the wells listed under PRIMARY DISPOSAL on the attached list. If additional capacity is required, water may be sent, via pipeline (if available) or truck hauled to any of the wells listed under SECONDARY DISPOSAL on the attached list.



14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Ginny Larke

Ginny Larke

Title

Engineer Technician

Date 5/15/01

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

May 18, 2001

ATTACHMENT I

Marathon Oil Company Indian Basin

Primary Disposal: MOC Battery Disposal System

Operated By: Marathon Oil Company
Well Name: MOC SWD # 1
Location: UL "M", Section 7, T-20-S, R-25-E
Permit#: SWD 448

Operated By: Marathon Oil Company
Well Name: Indian Hills State Com # 7
Location: UL "F", Section 36, T-20-S, R-24-E
Permit #: SWD 570

Primary Disposal: IBGP Disposal System

Operated By: Marathon Oil Company
Well Name: AGI # 1 SWD
Location: UL "E", Section 23, T-21-S, R-23-E
Permit #: SWD 784

Operated By: Marathon Oil Company
Well Name: Marathon Federal # 1
Location: UL "K", Section 24, T-21-S, R-23-E
Permit #: SWD 55

Primary Disposal: Indian Hills Unit Disposal System

Operated By: Marathon Oil Company
Well Name: Rocky Hills #1 SWD
Location: UL "O", Section 19, T-21-S, R-24-E
Permit #: SWD 691

Operated By: Marathon Oil Company
Well Name: Rocky Hills #2 SWD
Location: UL "I" Section 20, T-21-S, R-24-E
Permit #: SWD 738

Secondary Disposal

Well Name: Springs SWD
Operator: Rowland
Location: Sec 27, T-20-S, R-26-E
Permit#: SWD 86

Well Name: BKE
Operator: Rowland
Location: Sec 13, T-23-S, R-27-E
Permit#: SWD 495

Well Name: Salty Bill SWD
Operator: Grace Oil
Location: Sec 36, T-22-S, R-26-E
Permit#: SWD R-118 Fed ID # 850303046

Well Name: Big Eddy Federal 100 SWD (Whistle Stop)
Operator: Dakota Resources
Location: Unit "L", Sec 8, T-21-S, R-28-E
Permit#: SWD 461

May 18, 2001

Well Name: Dorstate SWD
Operator: Mesquite Services
Location: Sec 27, T25S, R26E
Permit#: SWD 247

Well Name: Aikman SWD State # 1
Location: Section 27, T-19-S, R-25-E
Permit#: SWD 417

Well Name: Holstun # 1 SWD
Operated By: Nearburg Producing Company
Location: Section 4, T-20-S, R-25-E
Permit#: R 9269

Well Name: Charlotte McKay Federal # 1 SWD
Operated By: Yates Petroleum
Location: Section 25, T-20-S, R-25-E
Permit#: SWD 460

Well Name: Walter Solt State No. 1
Location: Unit "L", Sec 5, T-18-S, R-28-E
Permit#: SWD 318

Well Name: Dagger Draw Salt Water Disposal
Location: Sec 22, T-19-S, R-25-E
Permit#: R7637

Well Name: Corrine Grace Salt Water Disposal Well
Location: Sec 36, T-22-S, R-26-E
Permit#: K6290

Well Name: Myrtle-Myra WIW # 1
Location: Sec 21, T-21-S, R-27-E
Permit#: NMOCD-FWD-391

Solids that can't be hauled into one of these disposal sites will be sent to:

Well Name: CRI SWD
Location: Sec 27, T20S, R32E
Permit #: SWD R91166

UNITED STATES
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N.M. Oil Conservation Division
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NM 07260

6. If Indian, Allottee or Tribe Name.
INDIAN HILLS UNIT

7. If Unit or CA/Agreement, Name and/or No.
INDIAN HILLS UNIT
NM 70964X

8. Well Name and No.
INDIAN HILLS UNIT #31

9. API Well No.
30-015-31534

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INDIAN BASIN UPPER PENN
ASSOCIATED GAS POOL

11. County or Parish, State
EDDY COUNTY NM

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 Oil Well Gas Well Other /

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Marathon Oil Company

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4. Location of Well (Footage, ~~Footage~~ R., M., or Type Description)
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	<input type="checkbox"/> Water Disposal
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	<u>COMPLETION</u>

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4/21/01 Installed tbg hanger inside tbg head & set lock-in screws. NU BOP & test rams. RU PU & RIH w/3-1/2" tbg to 8618'. Pickled tbg w/1000 gals 15% OCA sour acid, POOH w/tbg & perf csg w/4-1/2" TAG-5000-382 guns, 5 spf w/60 degree phasing from 8464'-90', 8502'-24', 8542'-64'. RIH w/PPI tool on 3-1/2" tbg. Acidized perfs w/7,000 gals 15% OCA sour acid w/100 gpf & 4' spacing. Fish valves & RU swab unit. Recovered 332 bbls water. POOH w/PPI tools & RIH w/RBP to 2500'. Test RBP, PU submersible pump & RIH on 3-1/2" L-80 tbg. RBP set @ 8789'. ND BOP, NU wellhead and turn well over to production on 5/2/01.

ACCEPTED FOR RECORD
MAY 21 2001
GARY GOURLEY
PETROLEUM ENGINEER

RECEIVED
OCD - ARTESIA

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

Name (Printed/Typed) Ginny Larke Title Engineer Technician

Date 5/15/01

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____ Title _____ Date _____

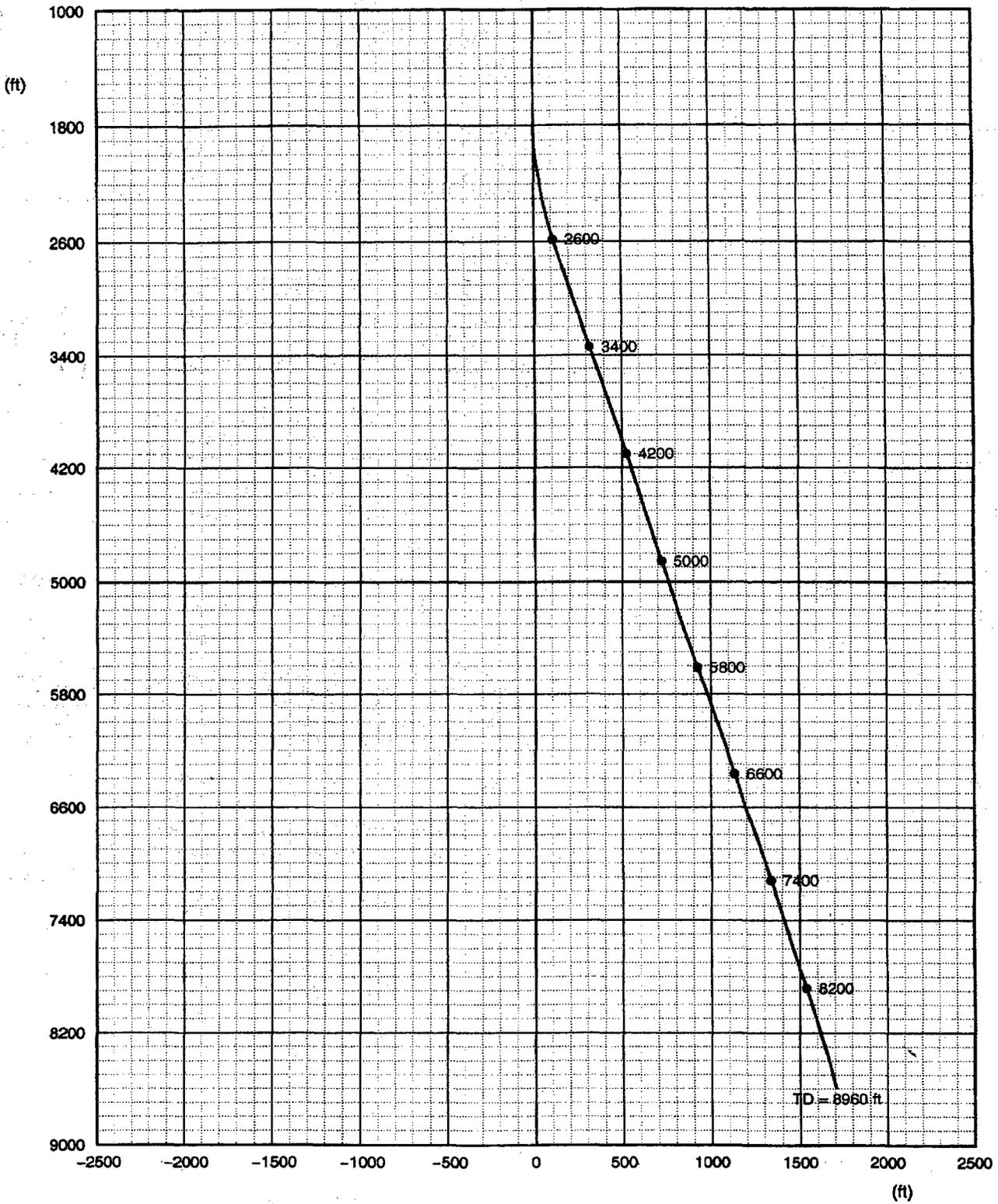
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Indian Hills Unit # 31

NW

SE



Projection on Vertical Plane

Vertical scale 1 in : 1000 , Horizontal scale 1 in : 833 ft

Tie Point Parameters for Directional Survey

Measured Depth	True Vertical Depth	+East -West Well Departure	+North -South Well Departure	Deviation	Azimuth
1800.0	1800.0	0.0	0.0	0.000	0.0

Coordinates

Measured Depth (ft)	True Vertical Depth (ft)	+North -South (ft)	+East -West (ft)	Course Length (ft)	Wellbore Deviation (deg)	Wellbore Azimuth (deg)
1800.0	1800.0	0.0	0.0	0.0	1.5	0.0
1900.0	1899.9	-2.3	2.0	3.0	2.1	140.0
2000.0	1999.7	-6.9	6.6	9.6	5.6	125.4
2100.0	2098.9	-13.0	17.2	21.5	8.4	117.7
2200.0	2197.7	-19.7	31.2	36.9	9.9	111.8
2300.0	2296.1	-24.9	48.4	54.4	10.7	102.7
2400.0	2393.9	-28.4	69.0	74.6	13.6	98.7
2500.0	2490.4	-31.5	94.7	99.8	16.4	95.8
2600.0	2585.8	-34.1	124.7	129.3	18.6	94.5
2700.0	2680.2	-36.9	157.6	161.9	19.6	95.3
2800.0	2774.3	-40.2	191.2	195.4	19.7	95.8
2900.0	2868.5	-43.6	224.6	228.8	19.5	96.0
3000.0	2962.8	-47.1	257.7	262.0	19.4	96.0
3100.0	3057.2	-50.5	290.6	294.9	19.2	95.9
3200.0	3151.6	-53.9	323.4	327.8	19.4	95.5
3300.0	3245.6	-57.0	357.3	361.8	20.0	95.2
3400.0	3339.6	-60.2	391.3	395.9	19.9	95.7
3500.0	3433.7	-63.7	425.1	429.8	19.8	95.9
3600.0	3527.8	-67.3	458.8	463.7	19.8	96.3
3700.0	3621.9	-71.1	492.3	497.4	19.6	96.6
3800.0	3716.2	-74.8	525.4	530.7	19.3	96.2
3900.0	3810.4	-77.9	558.7	564.1	19.6	95.1
4000.0	3904.6	-80.9	592.1	597.6	19.5	94.8
4100.0	3998.9	-83.4	625.3	630.8	19.3	93.8
4200.0	4093.2	-85.3	658.6	664.1	19.4	92.9

Coordinates

Measured Depth (ft)	True Vertical Depth (ft)	+North -South (ft)	+East -West (ft)	Course Length (ft)	Wellbore Deviation (deg)	Wellbore Azimuth (deg)
4300.0	4187.7	-87.1	691.4	696.8	18.9	94.4
4400.0	4282.3	-90.0	723.4	729.0	18.6	95.4
4500.0	4377.1	-93.2	755.3	761.0	18.5	95.8
4600.0	4472.0	-96.3	786.4	792.3	18.1	95.6
4700.0	4567.2	-99.4	817.1	823.2	18.2	97.2
4800.0	4662.1	-103.4	848.3	854.6	18.4	97.0
4900.0	4757.0	-107.0	879.5	886.0	18.3	96.4
5000.0	4851.9	-110.7	911.0	917.7	18.4	96.4
5100.0	4946.8	-114.1	942.4	949.3	18.4	96.1
5200.0	5041.7	-117.4	973.6	980.6	18.1	96.2
5300.0	5136.7	-120.9	1004.7	1011.9	18.2	96.2
5400.0	5231.6	-124.3	1035.9	1043.3	18.5	96.3
5500.0	5326.2	-128.0	1068.3	1075.9	19.5	97.2
5600.0	5420.4	-132.6	1101.5	1109.4	19.4	99.0
5700.0	5515.1	-137.7	1133.2	1141.6	18.6	99.3
5800.0	5609.6	-142.8	1165.6	1174.3	19.7	98.8
5900.0	5703.8	-147.9	1198.6	1207.7	19.5	99.1
6000.0	5797.9	-153.4	1232.1	1241.6	20.1	99.3
6100.0	5891.9	-157.9	1265.8	1275.6	19.4	96.6
6200.0	5986.6	-161.5	1297.8	1307.8	18.2	96.3
6300.0	6081.2	-165.2	1330.1	1340.3	19.5	96.4
6400.0	6175.5	-168.9	1363.1	1373.6	19.1	96.3
6500.0	6270.0	-172.4	1395.5	1406.1	19.1	96.0
6600.0	6364.5	-175.8	1428.1	1438.9	19.0	95.8
6700.0	6459.2	-178.8	1460.1	1471.1	18.4	94.7
6800.0	6554.0	-181.1	1491.7	1502.7	18.8	94.5
6900.0	6648.3	-184.2	1524.9	1535.9	20.2	96.6
7000.0	6742.0	-188.1	1559.5	1570.8	20.5	95.9
7100.0	6836.1	-191.6	1593.3	1604.8	19.1	95.7
7200.0	6930.7	-194.6	1625.6	1637.2	19.1	95.3
7300.0	7025.1	-197.8	1658.3	1670.1	19.1	95.7
7400.0	7119.7	-201.2	1690.6	1702.5	18.9	97.2
7500.0	7214.5	-206.1	1722.2	1734.5	18.4	99.8

Coordinates

Measured Depth (ft)	True Vertical Depth (ft)	+North -South (ft)	+East -West (ft)	Course Length (ft)	Wellbore Deviation (deg)	Wellbore Azimuth (deg)
7600.0	7309.6	-211.1	1752.7	1765.4	17.6	98.3
7700.0	7404.8	-214.7	1783.1	1796.0	18.0	94.8
7800.0	7499.6	-216.5	1814.7	1827.6	18.9	92.1
7900.0	7594.0	-217.9	1847.7	1860.5	19.5	92.7
8000.0	7688.1	-219.8	1881.4	1894.2	19.7	93.7
8100.0	7782.5	-222.9	1914.4	1927.4	18.6	96.3
8200.0	7877.2	-225.9	1946.2	1959.3	18.9	94.0
8300.0	7971.9	-227.9	1978.3	1991.4	18.6	93.2
8400.0	8066.8	-229.4	2010.0	2023.0	18.3	92.6
8500.0	8161.6	-231.3	2041.6	2054.6	18.5	93.5
8600.0	8256.5	-233.3	2073.2	2086.3	18.2	94.3
8700.0	8351.6	-235.4	2103.8	2116.9	17.5	93.6
8800.0	8447.4	-237.5	2132.4	2145.6	16.0	94.6
8900.0	8544.0	-239.9	2158.4	2171.7	14.5	95.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
811 S. 1st Street
Artesia, NM 88210

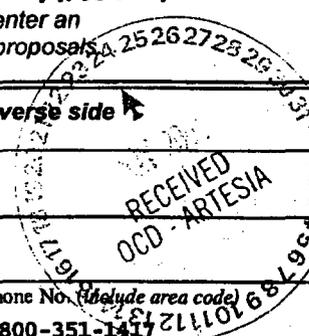
FORM APPROVED
OMB NO. 1004-0135
Expires: November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

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SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. 72834
2. Name of Operator Marathon Oil Company		6. If Indian, Allottee or Tribe Name INDIAN HILLS UNIT
3a. Address P.O. Box 552 Midland, TX 79702	3b. Phone No. (include area code) 800-351-1417	7. If Unit or CA/Agreement, Name and/or No. INDIAN HILLS UNIT NM 70964X
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SURFACE: UL "A", 1089' FNL & 665' FEL, SECTION 20, T-21-S, R-24-E		8. Well Name and No. INDIAN HILLS UNIT #31
BOTTOM HOLE: UL "J", 1327' FSL & 1550 FEL, SECTION 21, T-21-S, R-24-E		9. API Well No. 30-015-31534
12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		10. Field and Pool, or Exploratory Area INDIAN BASIN UPPER PENN ASSOCIATED GAS POOL
		11. County or Parish, State ROOY COUNTY NM



TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Deepen
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	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Change Plans
	<input type="checkbox"/> Plug and Abandon
	<input type="checkbox"/> Convert to Injection
	<input type="checkbox"/> Plug Back
	<input type="checkbox"/> Production (Start/Resume)
	<input type="checkbox"/> Reclamation
	<input type="checkbox"/> Recomplete
	<input type="checkbox"/> Temporarily Abandon
	<input type="checkbox"/> Water Disposal
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Well Integrity
	<input checked="" type="checkbox"/> Other <u>Commingling</u>
	<u>Off Lease Stg/Sale</u>
	<u>& Alt Measurement</u>

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

Marathon Oil Company, in accordance with 43 CFR 3162.7-5 and Onshore Oil and Gas Order No. 5, is requesting approval of off-lease measurement, storage and sales, and surface commingling of gas production from this well. Also, in accordance with 43 CFR 3162.7-2 and Onshore Oil and Gas Order No. 4, we are requesting off-lease measurement, storage and sales, alternate measurement method, and surface commingling of liquid hydrocarbon production from this well. The production from this well is sent from the wellhead to a 3-phase separator located at the satellite facility at UL "M", Section 17, T-21-S, R-24-E. After being measured, the gas production is transported via pipeline to the East Indian Basin Central Facility, Section 19, T-21-S, R-24-E, for compression, and then on to the Indian Basin Gas Plant for processing and sales. The liquid hydrocarbon and water production from this well is measured through the separator using turbine meters as the alternate measurement method, per prior approvals, then recombined and transported via pipeline to the East Indian Basin Central Facility where it will again be separated. The liquid hydrocarbon production will be sent to the liquid hydrocarbon storage tanks, and then be metered and sold at the truck loading rack. The water production will be sent to the gun barrel for further separation, piped to the water storage tanks, and then be disposed into the various Indian Basin Field SWD system wells. The attachments explain this process and all equipment to be used in detail.

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Ginny Larke	Title Engineer Technician	ACCEPTED FOR RECORD MAY 21 2001
<i>Ginny Larke</i>	Date 5/15/01	

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title GARY COURLEY PETROLEUM ENGINEER
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

40

APPLICATION FOR SURFACE COMMINGLING
OFF-LEASE MEASUREMENT, STORAGE AND ALTERNATE MEASUREMENT APPROVAL

To: **Bureau of Land Management**
P.O. Box 1778
Carlsbad, New Mexico 88220-1778

Marathon Oil Company is requesting approval for Surface Commingling, Off-Lease Storage, Measurement and Sales, and Alternate Measurement of hydrocarbon production from the following formation(s) and well(s) on:

Lease Name: **Indian Hills Unit**

<u>Well No.</u>	<u>UL</u>	<u>Sec</u>	<u>TWP</u>	<u>RNG</u>	<u>Formation</u>	<u>Lease #</u>
31-Surface	A	20	21-S	24-E	Upper Penn	State Lease
31-Bottom Hole	B	21	21-S	24-E	Upper Penn	NM-07260

Marathon would like to commingle the production from this well with the production of the following wells, which is commingled at the East Indian Basin Central Facility, (Order R-11186)

<u>WELL NO.</u>	<u>BOPD</u>	<u>API °</u>	<u>MCFD</u>
1	29	48.2	6227
8	51	35.7	862
9	161	40.7	2075
10	335	46.3	5676
11	122	42.2	2303
12	118	40.6	1903
17	395	41.3	4419
18	264	44.7	3628
19	145	46.3	5763
20	184	46.1	2707
21	364	41.5	7499
22	685	46.0	10868
24	53	48.0	4220
28	354	42.8	3206
Gas Com 27	46	42.6	14528
Gas Com 14	9	41.2	7244
Gas Com 13	10	44.8	6821
Gas Com 3	4	61.6	3014
IB "32" State 1-Y	2	41.2	5732
IB "32" State #2	3	56.0	10616
IB "32" State #3	93	38.6	301
IB "32" State #4	0	N/A	2855

Liquid hydrocarbon production is measured using turbine meters, per prior approval. These meters are proved on a regular schedule. A map is enclosed showing the lease numbers and location of all leases and wells that will contribute production to the commingled/common storage facility. A schematic diagram of the satellite facility is attached and clearly identifies all equipment that will be utilized.

The Storage and Measurement facility is located at UL "P", Sec. 19, T-21-S, R-24-E, Eddy County, New Mexico. The satellite facility is located in UL "N", Section 17, T-21-S, R-24-E, Eddy County, NM. The BLM was notified of this satellite facility in a prior application.

The gas, liquid hydrocarbons and water from this well will be sent from the wellhead to the satellite facility where a 3-phase separator will separate the production. After separation, the gas is metered at the satellite facility before being delivered to the compressors at the Storage and Measurement facility in Section 19. After compression, the gas is processed through a dehydrator, metered and delivered to the Indian Basin Gas Plant for further processing. After processing, the gas and NGLs will be metered and sold at the tailgate of the plant.

The liquid hydrocarbons and water, after being metered through the separator at the satellite facility, will be recombined and then flow to a 3-phase separator at the Storage and Measurement facility in Section 19, via liquid pipeline. After separation, the liquid hydrocarbon production will be processed and stored in tanks at the Storage and Measurement facility. Processing may include the use of heat treating or other liquid hydrocarbon processing equipment. The liquid hydrocarbons will then be metered through a LACT unit, per prior approval, and sold at the truck loading rack.

The water production, after being processed through the 3-phase separator at the Storage and Measurement facility, will be sent to the gun barrel tank for further separation. It will then be sent to the water storage tanks prior to being metered and pumped to various wells in the produced water disposal system.

The working interest owners were notified of the original commingling proposal. The proposed commingling of production is in the interest of conservation and will not result in reduced royalty or improper measurement of production. The proposed commingling is necessary for the continued operation of the above referenced Federal Leases.

We understand that the requested approval will not constitute the granting of any right-of-way or construction rights not granted by lease instrument and we will submit, within 30 days, an application for right-of-way to the BLM's Realty Section in your office, if we have not already done so. Additional wells will require additional commingling approvals.

Signature:



Name: Ginny Larke

Title: Engineer Technician

May 18, 2001

vll/m:\winword\ihu31com.doc

Attachments



MARATHON (OPER)
INDIAN HILLS UNIT
1287
1829

137
4773
CA1952

1287

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Lucky Shuff-Fed
U.S.

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MCKITTRICK HILLS

SEP-7 1949
136

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
811 S. 1st Street
Artesia, NM 88210-2834

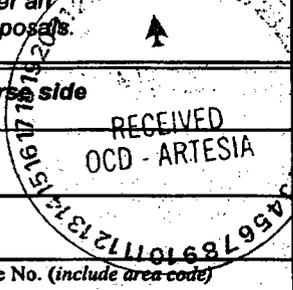
FORM APPROVED
DMB NO. 1004-0135
Expires: November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. 10-2834	
2. Name of Operator Marathon Oil Company		6. If Indian, Allottee or Tribe Name INDIAN HILLS UNIT	
3a. Address P.O. Box 552 Midland, TX 79702	3b. Phone No. (include area code) 800-351-1417	7. If Unit or CA/Agreement, Name and/or No. INDIAN HILLS UNIT #31	
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SURFACE: UL "A", 1089' FNL & 665' FEL, SECTION 20, T-21-S, R-24-E BOTTOM HOLE: UL "J", 1327' FSL & 1550 FEL, SECTION 21, T-21-S, R-24-E		8. Well Name and No. INDIAN HILLS UNIT #31	
		9. API Well No. 30-015-31534	
		10. Field and Pool, or Exploratory Area INDIAN BASIN UPPER PENN ASSOCIATED GAS POOL	
		11. County or Parish, State EDDY COUNTY NM	



12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>Commingling</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporary Abandon	<u>Off Lease Stg/Sale</u>
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	<u>& Alt Measurement</u>

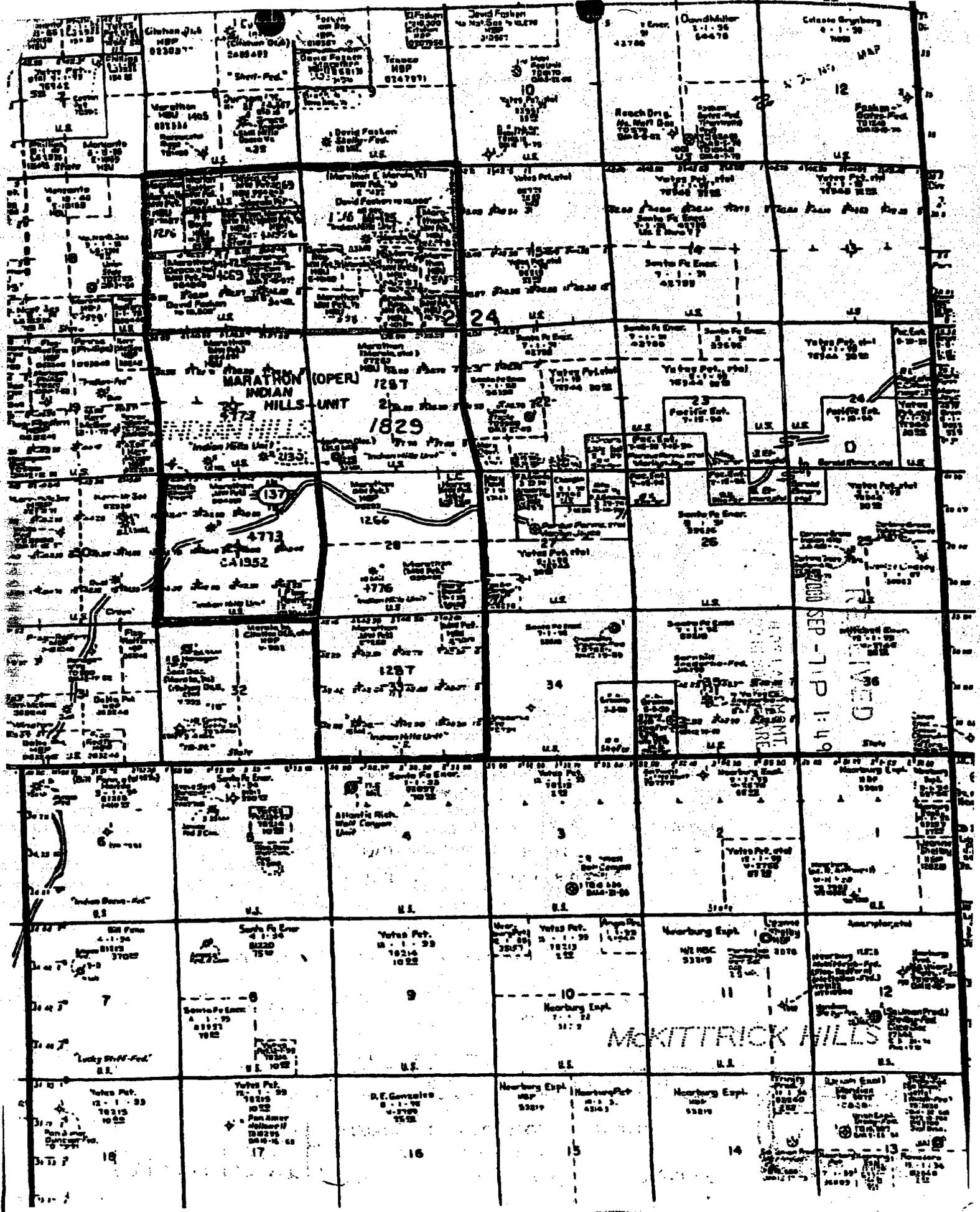
13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomplate in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

Marathon Oil Company, in accordance with 43 CFR 3162.7-5 and Onshore Oil and Gas Order No. 5, is requesting approval of off-lease measurement, storage and sales, and surface commingling of gas production from this well. Also, in accordance with 43 CFR 3162.7-2 and Onshore Oil and Gas Order No. 4, we are requesting off-lease measurement, storage and sales, alternate measurement method, and surface commingling of liquid hydrocarbon production from this well. The production from this well is sent from the wellhead to a 3-phase separator located at the satellite facility at UL "N", Section 17, T-21-S, R-24-E. After being measured, the gas production is transported via pipeline to the East Indian Basin Central Facility, Section 19, T-21-S, R-24-E, for compression, and then on to the Indian Basin Gas Plant for processing and sales. The liquid hydrocarbon and water production from this well is measured through the separator using turbine meters as the alternate measurement method, per prior approvals, then recombined and transported via pipeline to the East Indian Basin Central Facility where it will again be separated. The liquid hydrocarbon production will be sent to the liquid hydrocarbon storage tanks, and then be metered and sold at the truck loading rack. The water production will be sent to the gun barrel for further separation, piped to the water storage tanks, and then be disposed into the various Indian Basin Field SWD system wells. The attachments explain this process and all equipment to be used in detail.

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Ginny Larke	Title Engineer Technician	ACCEPTED FOR RECORD
<i>Ginny Larke</i>	Date 5/15/01	MAY 21 2001

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title GARY GURLEY PETROLEUM ENGINEER
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office



MARATHON INDIAN HILLS UNIT

1287
1829

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CA1952

McKITTRICK HILLS

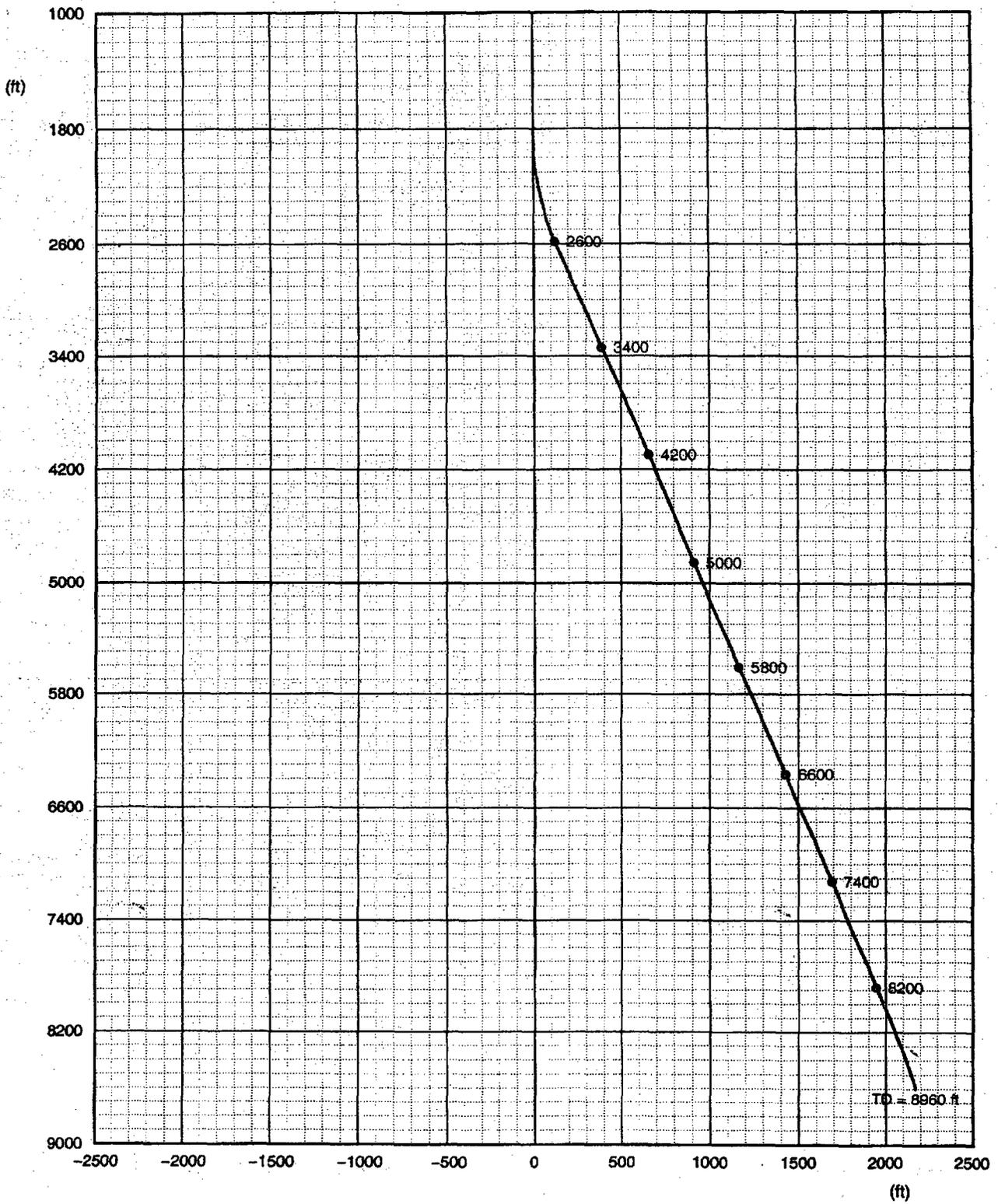
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Indian Hills Unit # 31

West

East



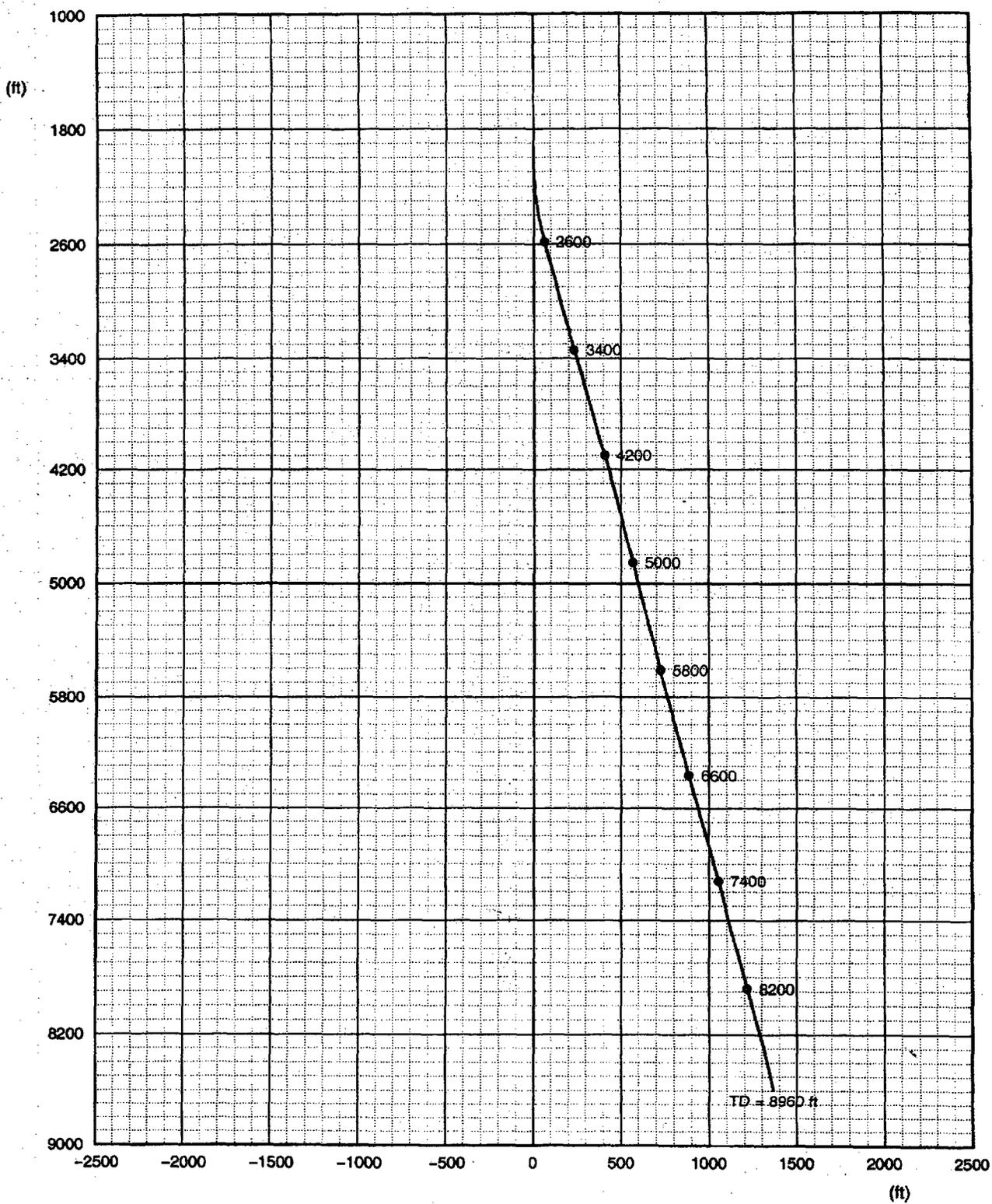
Projection on Vertical Plane

Vertical scale 1 in : 1000 , Horizontal scale 1 in : 833 ft

Indian Hills Unit # 31

SW

NE



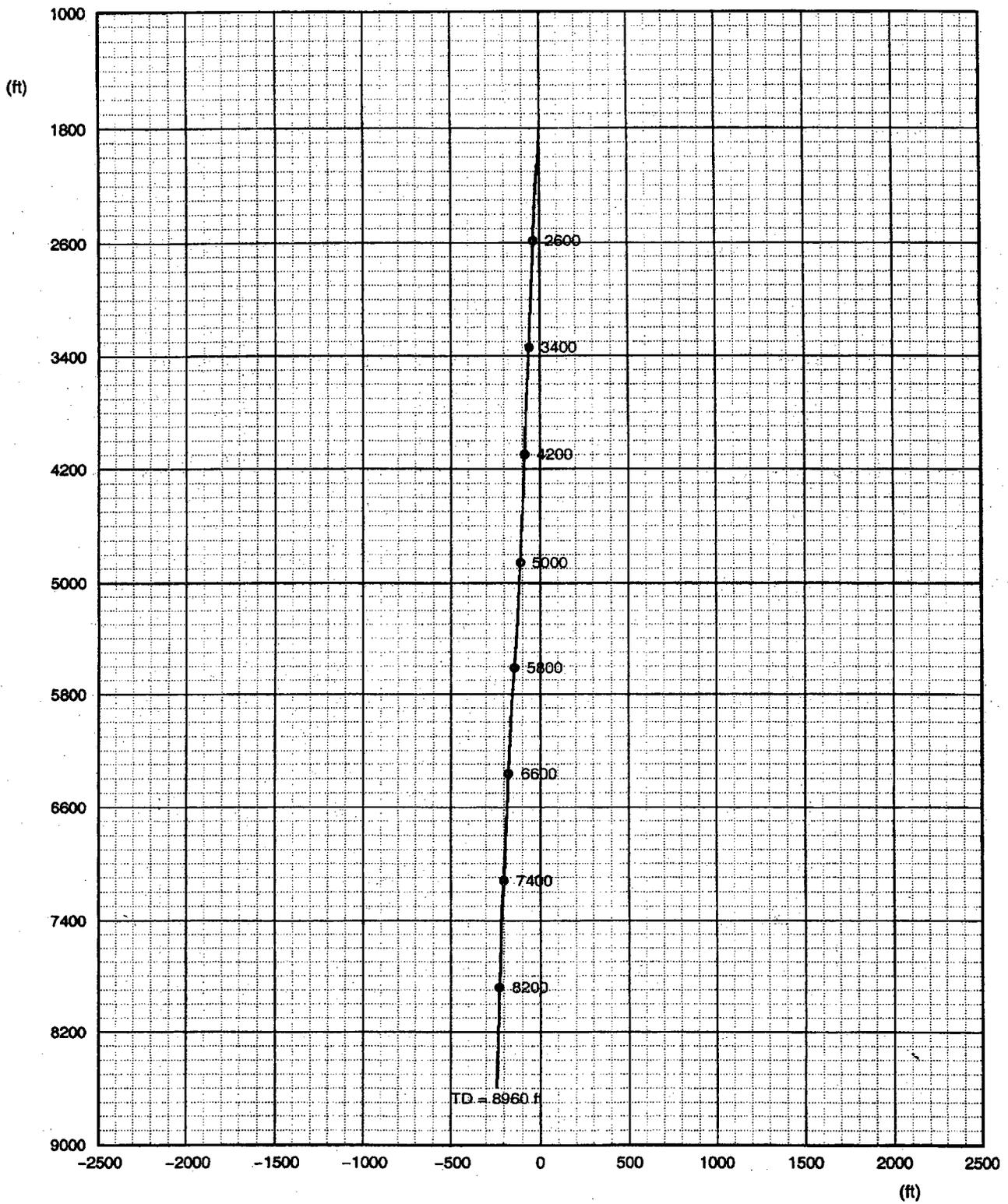
Projection on Vertical Plane

Vertical scale 1 in : 1000 , Horizontal scale 1 in : 833 ft

Indian Hills Unit # 31

South

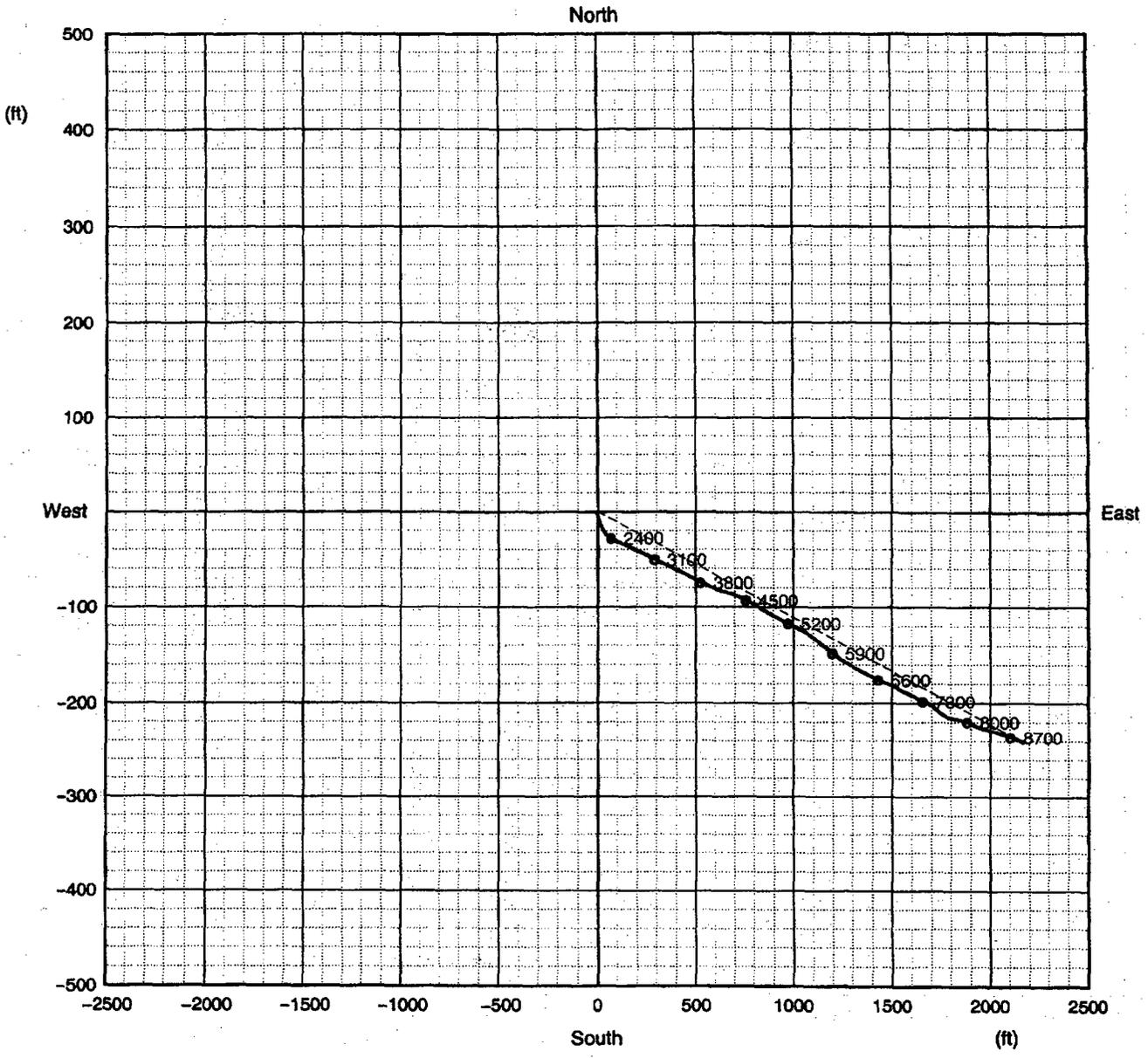
North



Projection on Vertical Plane

Vertical scale 1 in : 1000 , Horizontal scale 1 in : 833 ft

Indian Hills Unit # 31



~~8700~~
~~2173~~
~~1512~~
 663

Projection on Horizontal Plane

Horizontal scale 1 in : 833 ft

Minimum Curvature Method Method

Tie In Location		Bottom Hole Location			
Measured Depth	1800.00	ft	Measured Depth	8960.00	ft
True Vertical Depth	1800.00	ft	True Vertical Depth	8602.09	ft
Distance North	0.00	ft	Distance North	-241.33	ft
Distance East	0.00	ft	Distance East	2173.19	ft
			Course Length	2186.54	ft
			Course Azimuth	96.34	deg

~~8700~~
~~2173~~
~~1512~~
 1093
 241
 1334
 FAV

DIRECTIONAL SURVEY**Indian Hills Unit # 31****General Information:**

Company Name: Marathon Oil Company
Field: Indian Basin-Upper Penn
Well: Indian Hills Unit # 31
County: Eddy
State: New Mexico
Field Location: 1093 FNL & 663 FEL
API Number: 30-015-31534
Logging Engineer: W.H. Morris / H.A. Olarte
Processed By: Sara Draper
Service Order Number: 6539390
Job Number: 558688
Date Logged: 23-FEB-2001
Date Processed: 28-FEB-2001

Bottom Hole Location:

Measured Depth ft	True Vertical Depth ft	+North -South Drift ft	+East -West Drift ft	Course Length ft	Course Azimuth Degrees
8960.0	8602.1	-241.3	2173.2	2186.5	276.3

TVD Parameters

Method of Computation:	Minimum Curvature Method
Type of Input Data:	Log Inputs Only
Stations Input File:	./tvdcomp.dat
Station Data Output Sample Type?:	Continuous
Magnetic Decl. Corr.?:	No

Tie Point Parameters

Measured Depth:	1800.0 ft
True Vertical Depth:	1800.0 ft
Azimuth:	0.0 deg
Deviation:	0.000 deg
North/South Drift:	0.0 ft
East/West Drift:	0.0 ft

Input Parameters:

General Parameters

Top Depth:	1800.000 ft
Bottom Depth:	8960.000 ft
Sample Rate:	-0.500 ft

Tie Point information supplied by client .

Well trajectory assumed to be vertical to casing shoe at 1800 feet.

WELL COMPLETION OR RECOMPLETION REPORT

5. Lease Serial No.
0-28840

1a. Type of Well Oil Well Gas Well Dry Other
b. Type of Completion: New Well Work Over Deepen Plug Back Diff. Resvr.
Other _____

6. If Indian, Allottee or Tribe Name

2. Name of Operator
Marathon Oil Company

7. Unit or CA Agreement Name and No.
INDIAN HILLS UNIT NM 70964X

3. Address
P.O. Box 552 Midland, TX 79702

3a. Phone No. (include area code)
800-351-1417

8. Lease Name and Well No.
INDIAN HILLS UNIT #31

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
At surface UL A, 2889' ENL & 685' FEL, SECTION 20, T-21-S, R-24-E
1093 663

9. API Well No.
30-015-31534

10. Field and Pool, or Exploratory
INDIAN BASIN UPPER PENN ASSOC.

11. Sec., T., R., M., or Block and Survey or Area
SECTION 21, T-21-S, R-24-E

12. County or Parish
RODNEY COUNTY

13. State
NM

At top prod. interval reported below
F N 1510/W

17. Elevations (DF, RKB, RT, GL)*
KB-4177', GL-4149'

14. Date Spudded 1/26/01
15. Date T.D. Reached 2/22/01
16. Date Completed 5/2/01
 D & A Ready to Prod.

18. Total Depth: MD 8955'
TVD 8600'

19. Plug Back T.D.: MD 8908'
TVD 8552'

20. Depth Bridge Plug Set: MD
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)

22. Was well cored? No Yes (Submit analysis)
Was DST run No Yes (Submit report)
Directional Survey? No Yes (Submit copy)

LATEROLOG ARRAY/NGT, LITHODENSITY CN/NGT

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt.(#ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol (BBL)	Cement Top*	Amount Pulled
17.5	13.4, J55	54	SURFACE	1800		1675		SURFACE	
12.25	9.6, K55	40	SURFACE	5228		774		Circ 50 ex	
	9.6, L80	43.5	5228	8955	7605'	1500		Circ 100ex	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
3.5"	8789'	RBP-8797'						

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) UPPER PENN			8464'-8564'		5 spf	OPEN
B)						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
8464'-8564'	7000' GALS. 15% CCA SOUR ACID

ACCEPTED FOR RECORD
RECEIVED
OCD - ARTESIA
MAY 21 2001
GARY GOURLEY
PETROLEUM ENGINEER

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity	Gas Gravity	Production Method
5/2/01	5/12/01	24	→	867	5136	1985			Pumping
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr.	Oil BBL	Gas MCF	Water BBL	Gas: Oil Ratio	Well Status	
	250	200	→				5924 cf/b	Producing	

28a. Production-Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr.	Oil BBL	Gas MCF	Water BBL	Gas: Oil Ratio	Well Status	
			→						

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr.	Oil BBL	Gas MCF	Water BBL	Gas: Oil Ratio	Well Status	

28c. Production-Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr.	Oil BBL	Gas MCF	Water BBL	Gas: Oil Ratio	Well Status	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
Upper Perm	8114	8680	Dolomite, Shale, Limestone and contains gas, oil & water	Queen	476
				San Andres	1182
				Glorietta	2875
				Yeso	2998
				Bone Springs Lime	5425
				3rd Bone Springs Sand	7235
				Wolfcamp	7363
				Cisco	8114
				Canyon	8312
				Strawn	8843

32. Additional remarks (include plugging procedure):

33. Circle enclosed attachments:

- 1. Electrical/Mechanical Logs (1 full set req'd)
- 2. Geologic Report
- 3. DST Report
- 4. Directional Survey
- 5. Sundry Notice for plugging and cement verification
- 6. Core Analysis
- 7. Other

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) Ginny Larke Title Engineer Technician

Signature *Ginny Larke* Date 5/15/01

RECEIVED
POSTAL OFFICE
BUREAU OF LAND MANAGEMENT

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Oil Cons.
N.M. Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

FORM APPROVED
OMB NO. 1004-0135
Expires: November 30, 2000

C/S/F

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name NM 07260
2. Name of Operator Marathon Oil Company		7. If Unit or CA/Agreement, Name and/or No. INDIAN HILLS UNIT NM 70964X
3a. Address P.O. Box 552 Midland, TX 79702	3b. Phone No. (include area code) 800-351-1417	8. Well Name and No. INDIAN HILLS UNIT #31
4. Location of Well (Footage, 1003 R., M., or 603 Description) SURFACE: UL "A", 1809' FNL & 668' FWL, SECTION 20, T-21-S, R-24-E BOTTOM HOLE: UL "F", 1327' FNL & 1510' FWL, SECTION 21, T-21-S, R-24-E		9. API Well No. 30-015-31534
		10. Field and Pool, or Exploratory Area INDIAN BASIN UPPER PENN ASSOCIATED GAS POOL
		11. County or Parish, State EDDY NM

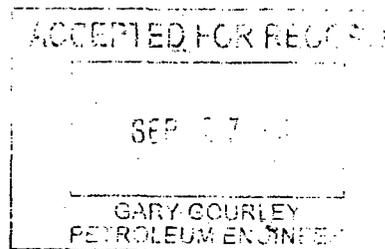
12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize <input type="checkbox"/> Deepen <input type="checkbox"/> Production (Start/Resume) <input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing <input type="checkbox"/> Fracture Treat <input type="checkbox"/> Reclamation <input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair <input type="checkbox"/> New Construction <input type="checkbox"/> Recomplete <input checked="" type="checkbox"/> Other <u>CORRECT</u>
	<input type="checkbox"/> Change Plans <input type="checkbox"/> Plug and Abandon <input type="checkbox"/> Temporarily Abandon <u>RECORD OF BOTTOM</u>
	<input type="checkbox"/> Convert to Injection <input type="checkbox"/> Plug Back <input type="checkbox"/> Water Disposal <u>HOLE LOCATION</u>

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomplate in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

I recently discovered an error on all forms that have been sent in on this well. The bottom hole location of UL "J", 1327' FSL & 1550' FWL, Section 21, T-21-S, R-23-E is INCORRECT.

The correct bottom hole location is the one shown in Section 4 above.



14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Ginny Larke	<i>Ginny Larke</i>	Title Engineer Technician
		Date 9/6/01

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources
OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-104
Revised March 25, 1999

Submit to Appropriate District Office
5 Copies

AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

1 Operator name and Address MARATHON OIL COMPANY P. O. BOX 552 MIDLAND, TX 79702		2 OGRID Number 014021	
4 API Number 30-0 30-015-31534		3 Reason for Filing Code NEW WELL	
5 Pool Name INDIAN BASIN UPPER PENN ASSOCIATED GAS POOL		6 Pool Code 33685	
7 Property Code 6409		8 Property Name INDIAN HILLS UNIT	
		9 Well Number 31	

II. Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
A	20	21-S	24-E		1093	NORTH	663	EAST	EDDY

Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
A F	21	21-S	24-E		1327	NORTH	1510	WEST	EDDY

12 Lsc Code F	13 Producing Method Code PUMP	14 Gas Connection Date 5/2/01	15 C-129 Permit Number	16 C-129 Effective Date	17 C-129 Expiration Date
------------------	----------------------------------	----------------------------------	------------------------	-------------------------	--------------------------

III. Oil and Gas Transporters

18 Transporter OGRID	19 Transporter Name and Address	20 POD	21 O/G	22 POD ULSTR Location and Description
138648	AMOCO PIPELINE TRUCKS 302 N. WEST AVENUE LIVELAND, TX 79336	2829025	OIL	UL "N", SECTION 17, T-21-S, R-24-E
14035	MARATHON OIL COMPANY P. O. BOX 1324 ARTESIA, NM 88211-1324	2829026	GAS	UL "N", SECTION 17, T-21-S, R-24-E



IV. Produced Water

23 POD 2829027	24 POD ULSTR Location and Description UL "N", SECTION 17, T-21-S, R-24-E
-------------------	-----------------------------------------------------------------------------

V. Well Completion Data

25 Spud Date 1/26/01	26 Ready Date 5/2/01	27 TD 8955'	28 PBD 8908'	29 Perforations 8464' - 8564'	30 DHC, MC
31 Hole Size 17.5"	32 Casing & Tubing Size 13-3/8"	33 Depth Set 1800'	34 Sacks Cement 1675		
12.25"	9-5/8"	8955'	2274		

VI. Well Test Data

35 Date New Oil 5/2/01	36 Gas Delivery Date 5/2/01	37 Test Date 5/12/01	38 Test Length 24 hrs	39 Tbg. Pressure 250	40 Csg. Pressure 200
41 Choke Size	42 Oil 867	43 Water 5136	44 Gas 1985	45 AOF	46 Test Method Pumping

47 I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>Ginny Larke</i>		OIL CONSERVATION DIVISION Approved by: <i>[Signature]</i> ORIGINAL SIGNED BY TIM W. GUM DISTRICT II SUPERVISOR	
Printed name: <u>Ginny Larke</u>		Title:	
Title: <u>Engineer Technician</u>		Approval Date: <u>JUN 20 2001</u>	
Date: <u>5/18/01</u>	Phone: <u>800-351-1417</u>		
48 If this is a change of operator fill in the OGRID number and name of the previous operator			
Previous Operator Signature	Printed Name	Title	Date

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Oil Cons. FORM APPROVED
N.M. Div-Dist. OMB NO. 1004-0135
1301 W. Grand Avenue Expires: November 30, 2000
Artesia, NM 88210

CLSF

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
2. Name of Operator Marathon Oil Company		7. If Unit or CA/Agreement, Name and/or No. INDIAN HILLS UNIT NM 70964A
3a. Address P.O. Box 552 Midland, TX 79702	3b. Phone No. (include area code) 800-351-1417	8. Well Name and No. INDIAN HILLS UNIT #31
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SURFACE: UL "A", 1089' FNL & 665' FNL, SECTION 20, T-21-S, R-24-E BOTTOM HOLE: UL "F", 1327' FNL & 1550' FNL, SECTION 21, T-21-S, R-24-E		9. API Well No. 30-015-31534
		10. Field and Pool, or Exploratory Area INDIAN BASIN UPPER PENN ASSOCIATED GAS POOL
		11. County or Parish, State EDDY COUNTY NM

RECEIVED
OCD - ARTESIA
2002

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> Notice of Intent	<input checked="" type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input checked="" type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal
			<input type="checkbox"/> Water Shut-Off
			<input type="checkbox"/> Well Integrity
			<input type="checkbox"/> Other _____

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

11/27/01 MIRU FU, ND wellhead and NU BOPs. POOH w/tbg & RBP. RIH w/new RBP to 8345'. POOH & FU 9-5/8" RITS packer & RIH to 4382'. Acid frac well in 12 stages w/11,900 gals. 15% Ferchek acid and 17,500 gals 30# gel. Avg pressure - 3637 psi, Avg rate - 28.37 bpm. Release RBP and move it downhole to 8759'. RIH w/tbg and pump. Made final splice, landed hanger in wellhead, ND BOPs and NU wellhead. Turned well over to production department 12/2/01.

ACCEPTED FOR RECORD
FEB 5 2002
ALEXIS C. SWOBODA
PETROLEUM ENGINEER

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Ginny Larke	<i>Ginny Larke</i>	Title Engineer Technician
		Date 1/30/02

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Appro' Accepted for record	Title	Date
Conditionally certify that which w Title 18 States a only	Office	
FEB 7 2002		
does not warrant or in the subject lease		
is it a crime for any person knowingly and willfully to make to any department or agency of the United States to any matter within its jurisdiction.		

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

C. Cons.
N.M. Div-Dist. 2
1901 W. Grand Avenue
Artesia, NM 88210
FORM APPROVED
OMB NO. 1004-0135
Expires: November 30, 2000
Serial No. 88210
NM 07260

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

Oil Well Gas Well Other

2. Name of Operator

Marathon Oil Company

3a. Address

P.O. Box 552 Midland, TX 79702

3b. Phone No. (include area code)

800-351-1417

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

SURFACE: UL "A", 1089' FNL & 665' FEL, SECTION 20, T-21-S, R-24-E

BOTTOM HOLE: UL "F", 1327' FNL & 1550' FWL, SECTION 21, T-21-S, R-24-E

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

INDIAN HILLS UNIT

NM 70964A

8. Well Name and No.

INDIAN HILLS UNIT #31

9. API Well No.

30-015-31534

10. Field and Pool, or Exploratory Area

INDIAN BASIN UPPER PENN ASSOCIATED GAS POOL

11. County or Parish, State

EDDY COUNTY NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

Notice of Intent

Subsequent Report

Final Abandonment Notice

Acidize

Alter Casing

Casing Repair

Change Plans

Convert to Injection

Deepen

Fracture Treat

New Construction

Plug and Abandon

Plug Back

Production (Start/Resume)

Reclamation

Recomplete

Temporarily Abandon

Water Disposal

Water Shut-Off

Well Integrity

Other Add Pay

and Stimulate

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

12/11/01 MIRU PU, ND wellhead and NU BOPs. POOH w/tbg & RBP. RIH and perf 8297'-8304', 8312'-8332', 8355'-8362', 8368'-8438' w/4 jspf. RIH w/PPI packers and set @ 8456'. PUH acidizing new perfs w/100 gpf 15% Ferchek acid for a total of 11,000 gals in 3' increments. Avg treating pressure - 1225 psi, Avg breakdown pressure 1350 psi, avg rate 2 bpm. POOH w/PPI packers & RIH w/RBP, sub pump and tbg. Made final splice, landed hanger in wellhead, ND BOPs and NU wellhead. Turned well over to production department 12/16/01

ACCEPTED FOR RECORD
FEB 5 2002
ALEXIS C. SWOBODA
PETROLEUM ENGINEER

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

Name (Printed/Typed)

Ginny Larke

Ginny Larke

Title

Engineer Technician

Date 1/30/02

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

App

Accepted for record

Cond certif which

only

FEB 7 2002

does not warrant or ts in the subject lease

Title

Office

Date

ikes it a crime for any person knowingly and willfully to make to any department or agency of the United s as to any matter within its jurisdiction.

EC

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
OCD-ARTESIA

FORM APPROVED
OMB NO. 1004-0135
Expires: November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

RECEIVED

MAY 13 2004

OCD-ARTESIA

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMNM07260
2. Name of Operator MARATHON OIL COMPANY		6. If Indian, Allottee or Tribe Name
3a. Address P O BOX 3487 HOUSTON, TX 77253-3487		7. If Unit or CA/Agreement, Name and/or No. NMNM70964A
3b. Phone No. (include area code) Ph: 800.351.1417 Ext: 8104 Fx: 915.687.8196		8. Well Name and No. INDIAN HILLS UNIT 31
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 20 T21S R24E NENE 1089FNL 665FEL		9. API Well No. 30-015-31534-00-S1
		10. Field and Pool, or Exploratory INDIAN BASIN
		11. County or Parish, and State EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Surface Disturbance
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Marathon Oil Co. intends to plug off existing permitted Indian Basin U. Penn Assoc. completion interval (W/2 of SEC. 21, 21-S, 24-E) and re-drill to a different bottom-hole location in the same permitted producing interval, Indian Basin U. Penn Assoc. (W/2 of SEC. 21, 21-S, 24-E). Marathon requests approval of constructing a reserve pit 100' x 100' at the site of the original reserve pit which was 120' x 120'. Cuttings removed from original pit will be stockpiled on a liner to prevent surface contamination. Pit will be padded to accept a 12 Mil liner. At the end of drilling operations pit area will be reclaimed as per BLM's requirements.

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

Electronic Submission #29094 verified by the BLM Well Information System
For MARATHON OIL COMPANY, sent to the Carlsbad
Committed to AFMSS for processing by ARMANDO LOPEZ on 04/01/2004 (04AL0165SE)

Name (Printed/Typed) MIKE MICK	Title SR. ADV. ENG. TECH
Signature (Electronic Submission)	Date 03/31/2004

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By /s/ Joe G. Lara	Title Pet. Eng.	Date 5/10/04
Office CARLSBAD FIELD OFFICE		

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

** BLM REVISED **