

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NM-07260
2. Name of Operator Marathon Oil Company		6. If Indian, Allottee or Tribe Name N/A
3a. Address P.O. Box 552 Midland, TX 79702	3b. Phone No. (include area code) 1-800-351-1417	7. If Unit or CA/Agreement, Name and/or N Indian Basin Unit
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec. 20, T-21-S, R-24-E 1069' FNL & 685' FEL Eddy Co. N.M.		8. Well Name and No. Indian Hills Unit 26
		9. API Well No. 30-015-31274
		10. Field and Pool, or Exploratory Area Indian Basin Morrow
		11. County or Parish, State Eddy N.M.

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 type="checkbox"/> Other _____
	<input checked="" 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 recompleat 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 recompleat 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 is proposing to deepen The Indian Hills Unit # 26

To approx. 10,500'. The Original APD was permitted for 8200' which was making the Upper Penn. Assoc. the primary target.

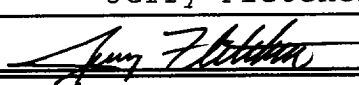
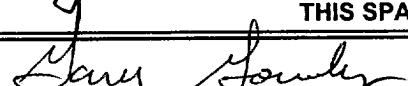
The Morrow Pool will now be our primary target.

The casing and cement programs have been changed to accomodate the extra depth required to reach the Morrow Target Area.

Please see attachments explaining our casing and cement program changes as well as a directional survey identifying targets.

A new C-102 acreage dedication plat is attached.

(ORIG. SGD.) GARY GOURLEY

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) Jerry Fletcher		Title Engineer Tech.
		Date 8-3-00
THIS SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by 	Title GE	Date 8/16/00
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.		

RECEIVED
AUG 07 2000
BLM
ROSWELL, NM

District I
PO Box 1980, Hobbs, NM 88241-1980

District II
811 S. 1st Street, Artesia, NM 88210-2834

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

District IV
2040 South Pacheco, Santa Fe, NM 87505

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

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

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-31274	² Pool Code	³ Pool Name Indian Basin Morrow
⁴ Property Code	⁵ Property Name Indian Hills Unit	⁶ Well Number #26
⁷ OGRID No. 14021	⁸ Operator Name Marathon Oil Company	⁹ Elevation G.L. 4149

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
"A"	20	21-S	24-E		1069'	North	685'	East	Eddy

11 Bottom Hole Location If Different From Surface

[illegible]

12 Dedicated Acres 640	13 Joint or Infill	14 Consolidation Code	15 Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON--STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

			<div style="text-align: center;">1069'</div> <div style="text-align: center;">SHL 685'</div>

17 OPERATOR CERTIFICATION

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

Signature
Jerry Fletcher

Printed Name
Jerry Fletcher

Title
Engineer Tech.

Date
8-3-00

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plan 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.

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number

* * * N A U T I C A L (V e r s i o n 4 . 0) * * *

Well: Indian Hills Unit #26

Target Azimuth: 81

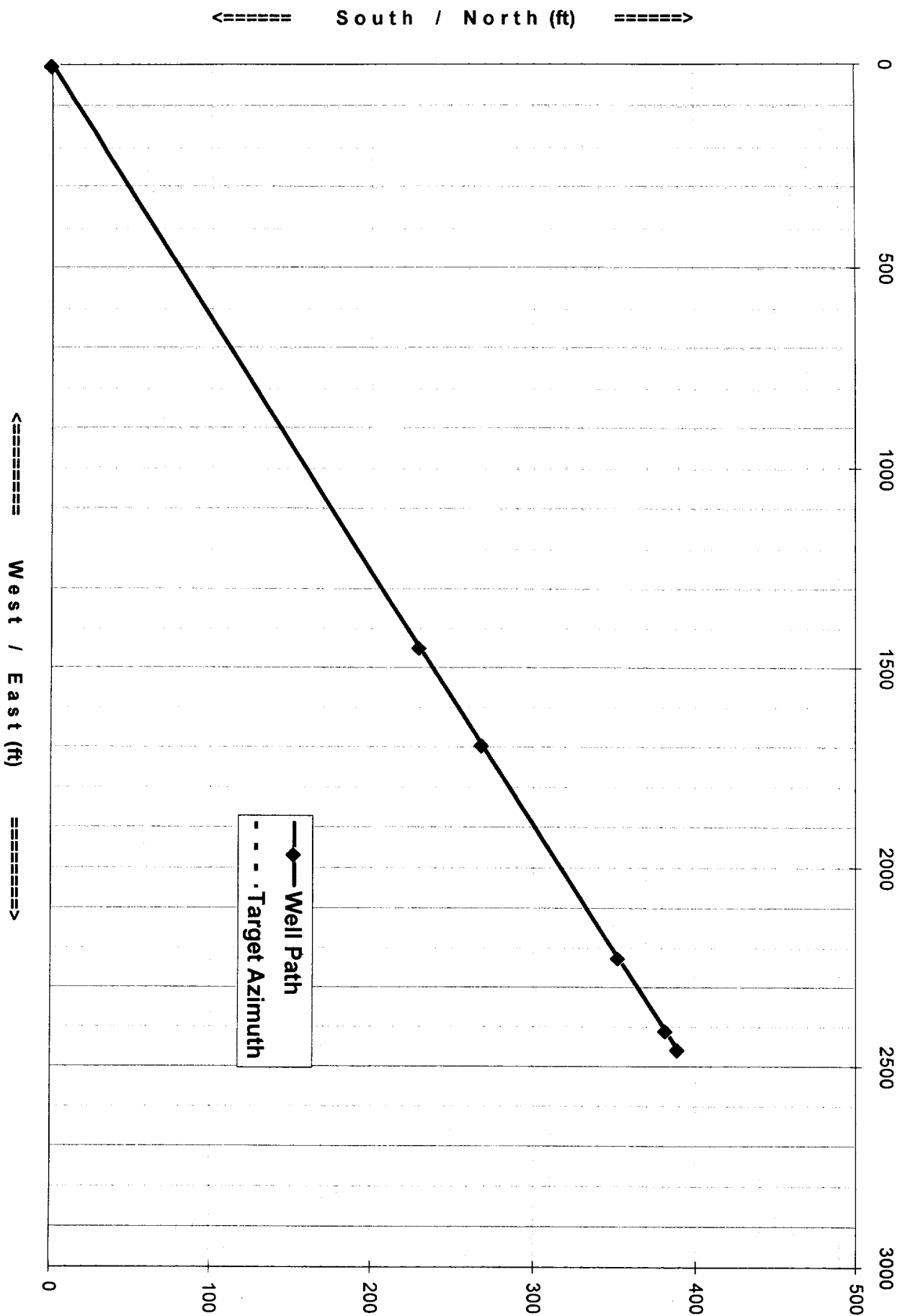
Closure Direction: 80

Target TVD: 10250

Calculation Method - Minimum Curvature

Measured Depth (ft)	Inclination (deg.)	Azimuth (deg.)	True Vertical Depth (ft)	Vertical Section (ft)	North/ South (ft)	East/ West (ft)	Closure (ft)	Build Rate (deg/ft)	Walk Rate (deg/ft)	Dogleg Severity (d/100')	Tool Face (deg)
3500.00	0.00	81.00	3,500.00	0.00	0.00	0.00	<==== Tie-in Data				
3600.00	0.00	81.00	3,600.00	0.00	0.00	0.00	0.00	0.000	0.000	0.00	
3700.00	2.50	81.00	3,699.97	2.18	0.34	2.15	2.18	0.025	0.000	2.50	
3800.00	5.00	81.00	3,799.75	8.72	1.36	8.61	8.72	0.025	0.000	2.50	
3900.00	7.50	81.00	3,899.14	19.61	3.07	19.37	19.61	0.025	0.000	2.50	
4000.00	10.00	81.00	3,997.97	34.82	5.45	34.39	34.82	0.025	0.000	2.50	
4100.00	12.50	81.00	4,096.04	54.33	8.50	53.66	54.33	0.025	0.000	2.50	
4200.00	15.00	81.00	4,193.17	78.09	12.22	77.13	78.09	0.025	0.000	2.50	
4300.00	17.50	81.00	4,289.17	106.07	16.59	104.77	106.07	0.025	0.000	2.50	
4400.00	20.00	81.00	4,383.85	138.21	21.62	136.51	138.21	0.025	0.000	2.50	
4500.00	22.50	81.00	4,477.05	174.46	27.29	172.31	174.46	0.025	0.000	2.50	
4600.00	22.50	81.00	4,569.43	212.72	33.28	210.10	212.72	0.000	0.000	0.00	
4800.00	22.50	81.00	4,754.21	289.26	45.25	285.70	289.26	0.000	0.000	0.00	
5000.00	22.50	81.00	4,938.99	365.80	57.22	361.29	365.80	0.000	0.000	0.00	
7880.00	22.50	81.00	7,599.76	1,467.93	229.63	1,449.85	1,467.93	0.000	0.000	0.00	Top of Upper Penn
8530.00	22.50	81.00	8,200.28	1,716.67	268.55	1,695.53	1,716.67	0.000	0.000	0.00	Base of Upper Penn
9000.00	22.50	81.00	8,634.50	1,896.53	296.68	1,873.18	1,896.53	0.000	0.000	0.00	
9937.00	22.50	81.00	9,500.18	2,255.11	352.78	2,227.34	2,255.11	0.000	0.000	0.00	Morrow Top
10424.00	22.50	81.00	9,950.11	2,441.47	381.93	2,411.41	2,441.47	0.000	0.000	0.00	Top of Morrow
10550.00	22.50	81.00	10,066.52	2,489.69	389.47	2,459.04	2,489.69	0.000	0.000	0.00	

Indian Hills Unit #26

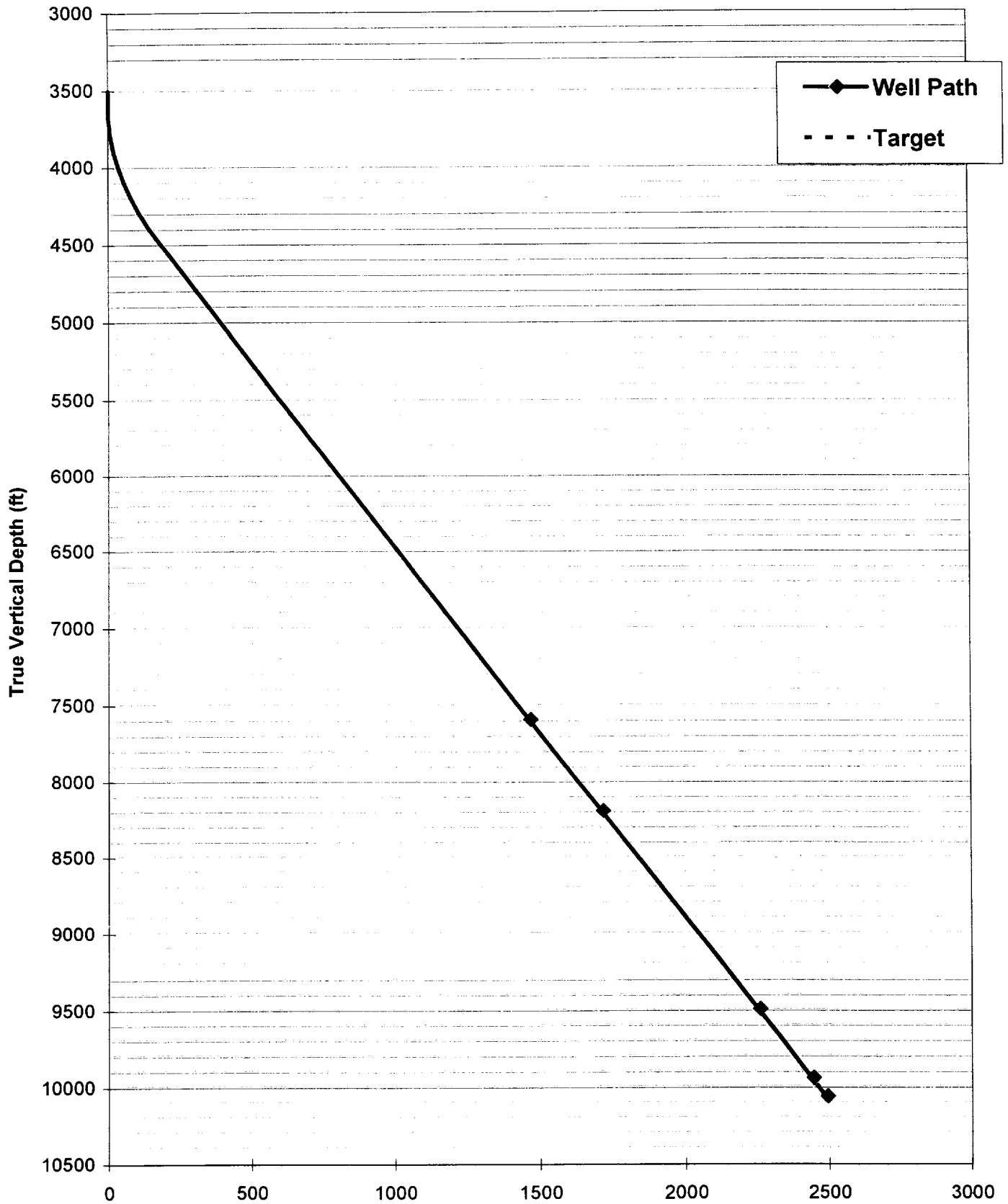


South / North (ft)

West / East (ft)

Well Path
Target Azimuth

Indian Hills Unit #26
Vertical Section (ft)



A. P. D. (cont.)
Thirteen Point Surface Use
Indian Hills Unit #26

Test Frequency

1. When installed.
2. Anytime a pressure seal is broken (test confined only to affected equipment).
3. At least every 20 days.
4. Blind and pipe rams shall be activated each trip but not more than once/day.

4. Casing and Cement Program:

---DEPTH---		SECTION	HOLE	CSG	WT.		THREADS	NEW
FROM	TO	LENGTH	SIZE	SIZE	PPF	GRADE	COUPLINGS	USED
0	1800'	1800'	14.75"	9-5/8"	36.00#	K-55	8rd, STC	New
0	4800'	4800'	8-3/4"	7.0"	23#	K-55	8rd, LT&C	New
4800'	10,500'	5700'	8-3/4"	7.0"	26#	K-55	8rd, LT&C	New

Casing String	DV Depth	Stg.	Lead Tail	Amt SXS	Type Cement	Yield CF/SX	Wt. PPG.	TOC	Additives
9-5/8"		1	L	100	Prem. P.	7.15	9.5	surf.	Dia Seal
9-5/8"		2	L	100	Thixset	1.52	14.0		Thixset
9-5/8"		3	L	750	Lite	2.02	10.5	surface	2% cacl2
9-5/8"			T	200	PremPlus	1.34	14.8	1550'	2% cacl2
7-0"		2	L	730	Class "H" foam	2.47	11.9	0'	350scf n2
7-0"		2	T	100	" " "	1.32	14.8	5950'	150scf n2
7-0"		1	L	170	Interfill "C"	2.18	9.2	6400'	3.0 PPS Gilsonite
7-0"		1	T	650	Prem. Plus	1.44	13.0	7200'	2% cacl2

"

Each stage will be preceded by an appropriate mud flush. Actual production hole volumes will be based on the caliper volume plus 20% excess.

DRILLING PROGRAM
MARATHON OIL COMPANY
INDIAN HILLS UNIT #26

1. Estimated KB Elevation: 4174' KB

<u>FORMATION</u>	<u>-----TOP-----</u>		<u>-----BASE-----</u>		<u>FLUID CONTENT</u>
	<u>MEASURED</u>	<u>SUBSEA</u>	<u>MEASURED</u>	<u>SUBSEA</u>	
Queen	Surface	+4174'	650'	+3524'	water
San Andres	650'	+3524'	2250'	+1924'	water
Glorietta	2250'	+1924'	2355'	+1819'	
Delaware	3300'	+874'	4300'	+ 126'	
Bone Spring	4300'	-126'	5950'	-1716'	oil gas
Wolfcamp	5950'	-1776'	7520'	-3346'	oil gas
B/Permian Shale	7520'	-3346'	7530'	-3356'	
U. Penn	7530'	-3356'	8200'	-4026'	gas, oil, water
Morrow	9508	-5334	9938'	-5764	gas, oil, water

<u>FORMATION</u>	<u>---EST</u> <u>PSIG</u>	<u>SBHP---</u> <u>PPG EMW</u>	<u>EST</u> <u>DEG f</u>	<u>SBHT</u> <u>PPM</u>	<u>H2S</u>	<u>---SIGNIFICANCE---</u> <u>(obj. marker, etc.)</u>
Bone Springs	1210	8.5			500	marker
Wolfcamp	1680	9.0				marker
B/Permian Shale	1810	9.0				objective pay
U. Penn	2050	9.0			5000	objective pay
Morrow	2200	9.3			0	objective pay

2. See (1) above.
If any unexpected water or mineral bearing zones are encountered, they will be reported, evaluated, and protected as circumstances and regulations require.

3. **Pressure Control Equipment:**

4. 9-5/8" Surface: 11" 3M annular tested to 200#/2000#, 11" 3M dual rams, choke manifold and mud cross, tested to 200#/2000#.

Auxiliary Equipment:

Surface Hole: Annular or rotating head w/air rig.

Intermediate Hole: N/A

Production Hole: Flow indicator, PVT, H₂S Sensors, air packs, stroke counter, rotating head.

BOP systems will be consistent with API RP 53. Blowout preventers will be installed and tested prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers and casing will be pressure tested before drilling casing cement plugs.

Upper and lower kelly cocks with valve handle and safety valve and subs to fit all drillstring connections in use will be available on rig floor.

A.P. D. (cont.)
Thirteen Point Surface Use Pla.
Indian Hills Unit #26

Centralizer Program:

9 5/8" Conventional centralizers. Bottom 3 joints and every fourth joint to surface.

7-0" Conventional centralizers middle of first jt. Then every jt. to 7500', and 1 cent. every fourth jt. Thereafter to 10,500'.

5. Mud Program

<u>---DEPTH---</u>		<u>MUD TYPE</u>	<u>WEIGHT</u>		<u>WL</u>		<u>ADDITIVES</u>	<u>VISUAL MONTR.</u>
<u>FROM</u>	<u>TO</u>		<u>(PPG)</u>	<u>VIS</u>	<u>CC</u>	<u>CC</u>		
0	1200'	fresh water	8.3	28	N/A		Gel, Lime	Reserve
1200'	5000'	fresh	8.5	28-32	N/C		Gel, caustic, H ₂ S Scavenger	Reserve
5000'	7000'	fresh	8.9	32-36	N/C		Gel, caustic, H ₂ S Scavenger	Reserve
7000'	8200'	fresh	8.9	32-36	<20		Gel, caustic, H ₂ S Scavenger	Steel Pits
8200'	10,500'	fresh	9.0	33-37	<20	" " " "		Steel Pits

Sufficient quantities of additives will be on location to maintain above mud properties for any anticipated well conditions.

6. Logging, Testing & Coring Programs:

<u>LOG/TEST/CORE/MUDLOG/OTHER</u>	<u>--INTERVAL--</u>		<u>REMARKS</u>
	<u>FROM</u>	<u>TO</u>	
DLL/MSFL/GR/CNL/LDT/CAL	TD	5000'	
LDT/CNL/GR/CAL	TD	surf casing	
MUD LOGGER	6000'	TD	ROP, Lithology, Gas Analysis, Chromatograph
NO CORES OR DST'S			

7. Abnormal Pressures, Temperatures or Potential Hazards:

None anticipated. Possible H₂S in Cisco & Upper Penn. See H₂S Drilling Operations Plan.

8. Other Information:

Anticipated Starting Date: As soon as possible.

Duration of Well: drilling - 18 days, completion - 10 days.

This well shall be directionally drilled to a standard BHL.