

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

FORM APPROVED
OMB NO. 1004-0137
Expires March 31, 2007

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 3487 Houston, TX 77253-3487

3b. Phone No. (include area code)

713-296-2096

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

SHL 1511' FNL & 839' FEL, UL"H", Sec 11, T-22-S, R-23-E

Proposed New BHL 2618' FNL & 1860' FEL, UL"G", Sec 11, T-22-S, R-23-E

Existing BHL 2053' FSL & 701' FEL, UL"I", Sec 11, T-22-S, R-23-E

5. Lease Serial No.

NMM 0251099 A

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.

Smith Federal No. 4

9. API Well No.

30-015-32957

10. Field and Pool, or Exploratory Area

Indian Basin Morrow

11. County or Parish, State

Eddy NM

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

TYPE OF SUBMISSION

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

☐ 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

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 Smith Federal No. 4 to the Morrow formation. Please see attached drilling plans, and proposed directional plan.

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

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

Charles E. Kendrick

Title

Reg Compliance Rep

Date **03/05/2007**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

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.

APPROVED
MAR 19 2007
FREDERICK WRIGHT
PETROLEUM ENGINEER

SMITH FEDERAL No. 4

Morrow Deepening Procedure

Surface Hole Location: 1511' FNL & 839' FEL, Section 11, Township 22 South, Range 23 East
Bottom Hole Terminus: ~2050' FSL & 660' FEL, Section 11, Township 22 South, Range 23 East
Indian Basin Field, Eddy Co, NM

Purpose: Deepen well to Morrow and complete

Current Status: Plugged back in Upper Penn perforations

Elevation/Depths: GL: 3933' KB: 3950' TD: 8570' PBTD: 8520' (float collar)

Surface Casing: 9-5/8" 36# & 40# K55 set @ 1519'. Cemented w/ 745 sacks of foamed cement followed by a 150-sack tail of neat cement. Did not circulate. Pumped 275 sacks down annulus and capped w/ 75 sacks of neat cement.

Production Casing: 7", 23 & 26# K-55 set @ 8569'. Cemented w/ 100 sacks of foamed acid soluble cement followed by 1100 sacks of nitrified cement and tailed with 120 sacks of neat cement. Circulated 180 sacks. Capped w/ 75 sacks of neat cement.

Sqzd Perforations: 7576' - 7686', 7693' - 7714', 7728' - 7740', 7774' - 7788', 7808' - 7837', 7852' - 7866', 7912' - 7934', 7998' - 8016'
Total feet of perfs = 240' net over 440' gross interval

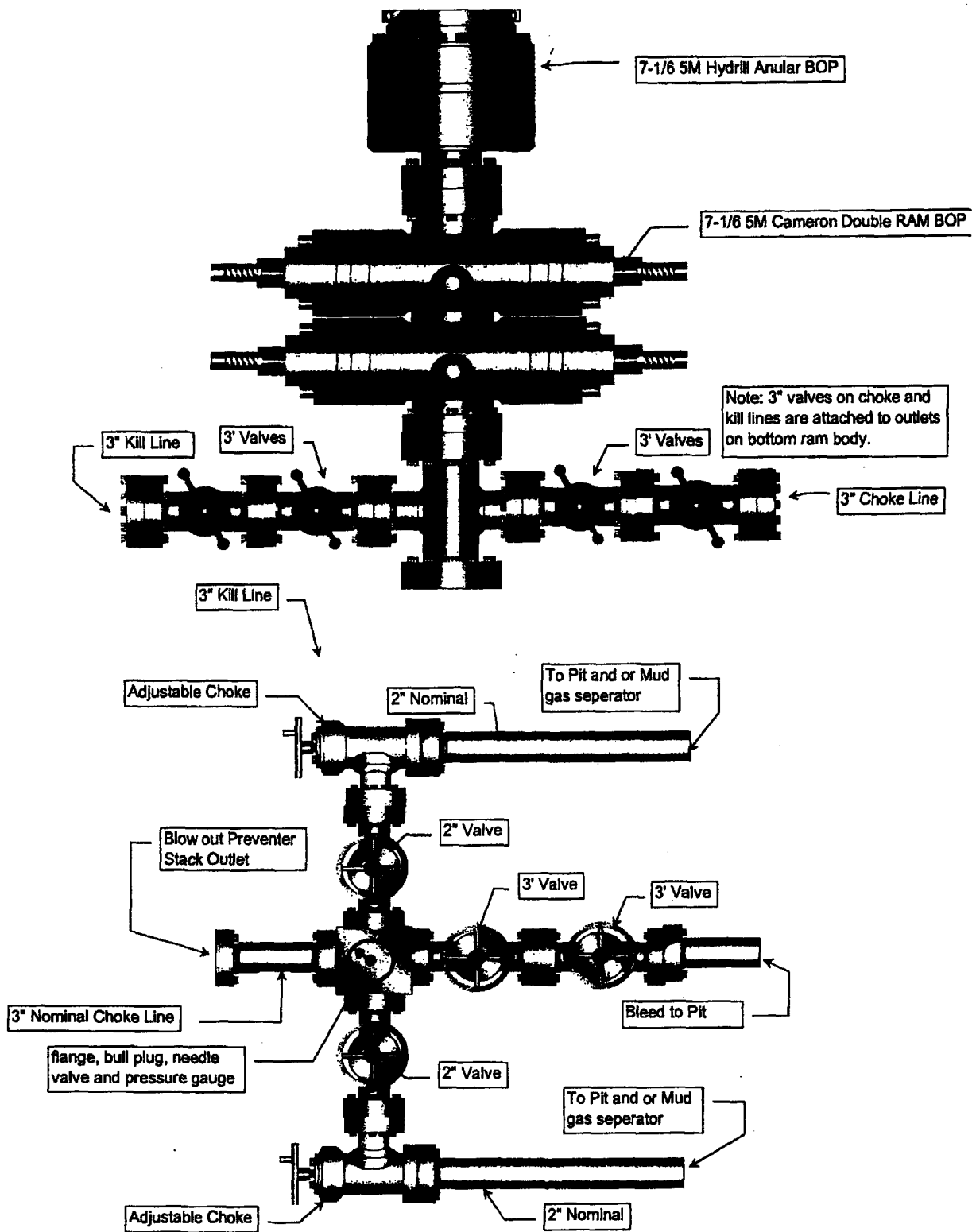
Safety:

- Hold daily safety meeting explaining the proposed procedure.
- H2S concentration - 6,500 ppm
- Keep TIW valve on rig floor at all times.
- Keep kill-string in well at night if tbg is pulled.
- Follow MOC SOP's throughout job.

Procedure:

1. Hold safety meeting. Make sure all associated personnel have proper PPE for the job.
2. MIRU Key Energy Rig # 482.
3. Make sure Geronimo line is staked securely, H₂S monitors are in place, guardrails are in place and the unit is properly grounded. RU Hydraulic BOPE Stack.
4. Deepening to Morrow to be done w/ enclosed drilling system w/ steel tanks for mud. Cuttings will be hauled to land farm for disposal.
5. RIH with whipstock and mills. Orient and set whipstock @ ~ 8285'. Mill window and 10 ft of open hole. POOH w/ mill bit. RIH w/ 6 1/8" bit, directional BHA and DP. Drill directional open hole w/ 8.8-9.3 ppg cut brine mud f/ 8285' MD to TD @ ~10,400 MD, 9600' TVD, while mudlogging w/ samples every 10', and MWD reading every 100'.
6. Circ high viscosity pill. Spot high viscosity pill at TD. POOH w/ BHA and pipe. RU open hole loggers. Log well f/ ~8525 to ~10400' TD.

7. RIH w/ 4 ½", L-80, 11.6 # casing liner and hanger. Set hanger at ~ 7276' w/ bottom of liner @ TD ~ 10,400'.
8. RU Halliburton cementers. Cement liner with 310 sks 50/50 Poz/Premium cement. Set ZXP liner top packer. Pull 100 ft above liner and circulate excess cement. POOH. RD cement equipment.
9. Change out 11 3M" X 7 1/16" 3M tubing head w/ 11" 3M X 7 1/16" 5M tubing head. SI well. Release drilling rig.



MARATHON OIL COMPANY

H2S DRILLING OPERATIONS PLAN

• HYDROGEN SULFIDE TRAINING

All contractors and subcontractors employed by Marathon Oil Company will receive or have received training from a qualified instructor within the last twelve months in the following areas prior to commencing drilling operations on this well.

- 1. The hazards and characteristics of hydrogen sulfide (H2S)**
- 2. Safety precautions**
- 3. Operations of safety equipment and life support systems**

In addition, contractor supervisory personnel will be trained or prepared in the following areas:

- 1. The effect of H2S on metal components in the system. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.**
- 2. Corrective action and shut-down procedures when drilling or reworking a well, blowout prevention and well control procedures, if the nature of work performed involves these items.**
- 3. The contents and requirements of the contingency plan when such plan is required.**

All personnel will be required to carry documentation of the above training on their person.

II. H2S EQUIPMENT AND SYSTEMS

1. Safety Equipment

The following safety equipment will be on location.

A. Wind direction indicators.

B. Automatic H2S detection alarm equipment (both audio and visual).

C. Clearly visible warning signs. Signs will use the words "POISON GAS" and "CAUTION" with a strong color contrast.

D. Protective breathing equipment will be located in the dog house and at briefing areas.

2. WELL CONTROL SYSTEMS

A. Blowout Prevention Equipment

Equipment includes but is not limited to:

- a. pipe rams to accommodate all pipe sizes**
- b. blind rams**
- c. choke manifold**
- d. closing unit**

Auxiliary equipment added as appropriate includes:

- a. annular preventor**
- b. rotating head**
- c. mud- gas separator**
- d. flare line and means of ignition _____**
- e. remote operated choke**

B. Communication

The rig contractor will be required to have two-way communication capability. Marathon Oil Company will have either land-line or mobile telephone capabilities.

C. Mud Program

The mud program has been designed to minimize the volume of H₂S circulated to surface. Proper mud weight, safe drilling practices, and the use of H₂S scavengers when appropriate will minimize hazards when penetrating H₂S bearing zones.

Exhibit "I"**Marathon Oil Company****SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN
(SPCC PLAN)**

Marathon Oil Company has pollution prevention, good housekeeping, safety and fire prevention policies that are to be followed at all times. All company employees, contractors and subcontract personnel are to observe safe working practices and prevent pollution to the maximum extent possible.

In the event of an emergency, spill, fire, explosion or blowout, personal injuries, property or equipment damage, call **MARATHON OIL COMPANY @ 1-800-351-1417**

Prior to drilling, certain measures should be taken:

1. Use impervious materials to build the location and the reserve pit.
2. Ditch the outline of the rig toward the reserve pit.
3. Place sumps on each end of the rig to catch any free oil or debris from entering the reserve pit.
4. Keep materials on location to contain or clean up spills (absorbent pads, shovels, etc).
5. Make known to Drilling Supervisors a list of spill response contractors available.
6. BOP testing shall be performed each time a casing string is set.
7. The Drilling contractor is required to have a certified SPCC plan for the Drilling rig.
8. Routine inspections of the operations shall be performed to ensure SPCC guidelines are followed.
9. Ensure all Marathon personnel are HAZWOPER trained in methods for stopping, controlling, and cleaning up any spills.

Spill control measures to be taken:

1. Shut down activities underway, as deemed necessary by the person in charge.
2. Determine the source of pollution and stop the discharge, if possible.
3. Isolate and contain the discharged materials, if possible.
4. Seek guidance from the Southern Region Emergency Action Plan.



Southern Business Unit
Business Development
P.O. Box 3487
Houston, Texas 77253-3487
Telefax Number: (713) 499-6750

DATE: March 19, 2007

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME:	Mr. Fred Wright
COMPANY:	Bureau of Land Management
CITY & STATE:	Artesia, New Mexico
FAX NUMBER:	1-505-885-9264
OFFICE NUMBER:	

FROM:

NAME: CHARLES KENDRIX

TRANSMITTING
7
PAGES
(INCLUDING THIS COVER PAGE)

IF TRANSMISSION IS NOT
COMPLETE, PLEASE CALL
(713) 296-2096

MESSAGE:

Mr. Wright,

I have included copies of the items that you had requested (BOP & choke manifold, and H2S plan) for the Smith Federal No. 4 well for Marathon. We have changed the work procedure to indicate the Marathon will be running a heavier liner in the well. Although we will not be drilling through H2S concentrated formation, we left the H2S concentration at 6500 ppm on the work procedure in case we encounter problems with the squeezed Upper Penn perforations not holding. Thank you for pointing out the collapse rating on the liner.

**Charles Kendrix
Marathon Oil Company**

The information contained in this facsimile is intended for the use by the individual or entity named above.

If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited.

If you have received this communication in error please immediately notify us by telephone, collect, and return the message to Marathon Oil Company, PO Box 3128, Houston, Texas 77253-3128 via US Postal Service, at our expense.

SMITH FEDERAL No. 4
Morrow Deepening Procedure

Surface Hole Location: 1511' FNL & 839' FEL, Section 11, Township 22 South, Range 23 East
Bottom Hole Terminus: ~2050' FSL & 660' FEL, Section 11, Township 22 South, Range 23 East
Indian Basin Field, Eddy Co, NM

Purpose: Deepen well to Morrow and complete

Current Status: Plugged back in Upper Penn perforations

Elevation/Depths: GL: 3933' KB: 3950' TD: 8570' PBTD: 8520' (float collar)

Surface Casing: 9-5/8" 36# & 40# K55 set @ 1519'. Cemented w/ 745 sacks of foamed cement followed by a 150-sack tail of neat cement. Did not circulate. Pumped 275 sacks down annulus and capped w/ 75 sacks of neat cement.

Production Casing: 7", 23 & 26# K-55 set @ 8569'. Cemented w/ 100 sacks of foamed acid soluble cement followed by 1100 sacks of nitrified cement and tailed with 120 sacks of neat cement. Circulated 180 sacks. Capped w/ 75 sacks of neat cement.

Sqzd Perforations: 7576' - 7686', 7693' - 7714', 7728' - 7740', 7774' - 7788', 7808' - 7837', 7852' - 7866', 7912' - 7934', 7998' - 8016'
Total feet of perfs = 240' net over 440' gross interval

Safety:

- Hold daily safety meeting explaining the proposed procedure.
- H2S concentration - 6,500 ppm
- Keep TIW valve on rig floor at all times.
- Keep kill-string in well at night if tbg is pulled.
- Follow MOC SOP's throughout job.

Procedure:

1. Hold safety meeting. Make sure all associated personnel have proper PPE for the job.
2. MIRU Key Energy Rig # 482.
3. Make sure Geronimo line is staked securely, H₂S monitors are in place, guardrails are in place and the unit is properly grounded. RU Hydraulic BOPE Stack.
4. Deepening to Morrow to be done w/ enclosed drilling system w/ steel tanks for mud. Cuttings will be hauled to land farm for disposal.
5. RIH with whipstock and mills. Orient and set whipstock @ ~ 8285'. Mill window and 10 ft of open hole. POOH w/ mill bit. RIH w/ 6 1/8" bit, directional BHA and DP. Drill directional open hole w/ 8.8-8.9 ppg cut brine mud f/ 8285' MD to TD @ ~10,400 MD, 9600' TVD, while mudlogging w/ samples every 10', and MWD reading every 100'.
6. Circ high viscosity pill. Spot high viscosity pill at TD. POOH w/ BHA and pipe. RU open hole loggers. Log well f/ ~8525 to ~10400' TD.

WITHDRAWN

7. RIH w/ 4 1/2", J-55, 10.5# casing liner and hanger. Set hanger at ~ 7276' w/ bottom of liner @ TD ~ 10,400'.
8. RU Halliburton cementers. Cement liner with 310 sks 50/50 Poz/Premium cement. Set ZXP liner top packer. Pull 100 ft above liner and circulate excess cement. POOH. RD cement equipment.
9. Change out 11 3M" X 7 1/16" 3M tubing head w/ 11" 3M X 7 1/16" 5M tubing head. SI well. Release drilling rig.

WITHDRAWN



Planned Wellpath Report

Plan #1
Page 1 of 6



INTEQ

WELLPATH IDENTIFICATION

Operator	Marathon Oil Company	Slot	#4_SHL
Area	Eddy County, NM	Well	Smith Federal #4
Field	Indian Basin Field	Wellbore	#4_PWB
Facility	Indian Basin		

SETUP INFORMATION

Projection System	NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect™ 1.2
North Reference	Grid	User	GomeOscR
Scale	0.999915	Report Generated	02/07/07 at 10:29:38
Wellbore last revised	02/06/07	Database/Source file	WA_Midland/#4_PWB

LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	East [feet]	Easting [US feet]	Northing [US feet]	Latitude [°]	Longitude [°]
Slot Location	-42515.74	-5270.96	428597.00	512345.50	32 24 30.022N	104 33 52.922W
Facility Reference Pt			433867.50	554857.50	32 31 30.826N	104 32 52.438W
Field Reference Pt			0.00	0.00	30 59 24.512N	105 55 44.137W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on #4_SHL (RT) to Facility Vertical Datum	0.00 feet
Horizontal Reference Pt	Slot	Rig on #4_SHL (RT) to Mean Sea Level	0.00 feet
Vertical Reference Pt	Rig on #4_SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00 feet
MD Reference Pt	Rig on #4_SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	219.77°



Planned Wellpath Report

Plan #1
Page 2 of 6



WELLPATH IDENTIFICATION

Operator	Marathon Oil Company	Slot	#4 SHL
Area	Eddy County, NM	Well	Smith Federal #4
Field	Indian Basin Field	Wellbore	#4 PWB
Facility	Indian Basin		

WELLPATH DATA (150 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Design Comments	Path Comment
0.00	0.000	0.000	0.00	0.00	0.00	0.00	0.00		
113.00	0.250	96.000	113.00	-0.14	-0.03	0.25	0.22		
329.00	0.750	200.000	328.99	0.93	-1.40	0.23	0.39		
574.00	0.250	197.000	573.98	2.93	-3.42	-0.47	0.20		
884.00	0.250	199.000	883.98	4.19	-4.71	-0.89	0.00		
1006.00	0.500	194.000	1005.98	4.92	-5.48	-1.11	0.21		
1095.00	0.200	194.000	1094.98	5.41	-6.00	-1.24	0.34		
1278.00	0.300	194.000	1277.97	6.13	-6.78	-1.43	0.05		
1541.00	0.200	310.700	1540.97	6.74	-7.15	-1.95	0.16		
1573.00	0.300	306.900	1572.97	6.74	-7.06	-2.06	0.32		
1605.00	0.900	136.300	1604.97	6.77	-7.19	-1.95	3.74		
1637.00	1.200	114.900	1636.97	6.72	-7.51	-1.47	1.53		
1669.00	2.200	117.700	1668.95	6.50	-7.94	-0.62	3.13		
1733.00	3.800	127.900	1732.86	6.18	-9.81	2.14	2.63		
1797.00	5.700	139.500	1796.64	6.65	-13.53	5.87	3.31		
1859.00	6.900	152.200	1858.27	8.59	-19.17	9.61	2.96		
1922.00	7.600	159.600	1920.77	12.10	-26.42	12.83	1.85		
1986.00	9.800	166.900	1984.03	17.50	-35.70	15.54	3.84		
2048.00	11.500	173.600	2044.96	24.96	-46.98	17.42	3.39		
2111.00	13.400	174.300	2106.43	34.43	-60.49	18.85	3.03		
2174.00	15.200	171.200	2167.52	45.02	-75.91	20.84	3.10		
2238.00	16.600	172.200	2229.07	56.74	-93.26	23.36	2.23		
2301.00	17.500	174.000	2289.30	69.42	-111.60	25.57	1.66		
2364.00	18.500	174.300	2349.22	83.04	-130.97	27.56	1.59		
2428.00	17.500	175.400	2410.09	97.04	-150.66	29.34	1.65		
2491.00	16.300	177.800	2470.36	110.38	-168.94	30.44	2.20		
2555.00	15.100	178.500	2531.98	123.32	-186.25	31.00	1.90		
2617.00	14.900	175.700	2591.86	135.12	-202.27	31.81	1.21		
2681.00	14.300	169.400	2653.80	146.08	-218.24	33.88	2.65		
2744.00	14.500	167.900	2714.82	155.91	-233.60	36.96	0.67		
2807.00	14.700	169.400	2775.79	165.88	-249.17	40.09	0.68		
2870.00	15.000	170.800	2836.68	176.33	-265.08	42.86	0.74		
2933.00	15.000	172.600	2897.54	187.22	-281.21	45.21	0.74		
2996.00	15.200	172.200	2958.36	198.34	-297.48	47.39	0.36		
3060.00	15.500	173.300	3020.08	209.89	-314.28	49.52	0.65		
3122.00	15.500	174.300	3079.82	221.40	-330.75	51.31	0.43		
3185.00	15.500	173.000	3140.53	233.07	-347.49	53.17	0.55		
3248.00	15.500	170.800	3201.24	244.37	-364.15	55.55	0.93		
3312.00	15.400	174.000	3262.93	255.91	-381.04	57.80	1.34		
3375.00	15.000	177.100	3323.73	267.74	-397.51	59.09	1.44		



Planned Wellpath Report

Plan #1
Page 3 of 6



WELLPATH IDENTIFICATION

Operator **Marathon Oil Company**
Area **Eddy County, NM**
Field **Indian Basin Field**
Facility **Indian Basin**

Slot **#4_SHL**
Well **Smith Federal #4**
Wellbore **#4_PWB**

WELLPATH DATA (150 stations)

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Design Comments	Path Comment
3439.00	15.000	176.100	3385.55	279.82	-414.04	60.07	0.40		
3502.00	14.800	175.400	3446.43	291.47	-430.20	61.27	0.43		
3566.00	14.800	174.000	3508.31	303.01	-446.47	62.78	0.56		
3636.00	15.300	176.100	3575.90	315.93	-464.58	64.34	1.06		
3699.00	15.600	176.400	3636.63	328.10	-481.33	65.44	0.49		
3762.00	15.400	175.100	3697.34	340.21	-498.11	66.69	0.64		
3825.00	14.000	176.800	3758.27	351.73	-514.06	67.83	2.33		
3888.00	13.500	175.400	3819.47	362.57	-529.00	68.84	0.95		
3952.00	13.400	176.400	3881.71	373.30	-543.84	69.91	0.40		
4014.00	13.700	179.200	3941.99	384.10	-558.36	70.46	1.16		
4077.00	13.700	180.700	4003.20	395.56	-573.28	70.47	0.56		
4141.00	13.500	179.600	4065.40	407.15	-588.32	70.43	0.51		
4205.00	13.700	180.300	4127.61	418.71	-603.37	70.44	0.40		
4268.00	13.900	178.900	4188.79	430.19	-618.40	70.55	0.62		
4332.00	13.500	180.100	4250.97	441.75	-633.56	70.69	0.77		
4395.00	13.700	182.000	4312.20	453.31	-648.37	70.41	0.78		
4459.00	14.500	180.600	4374.27	465.51	-663.95	70.06	1.36		
4523.00	14.900	179.200	4436.18	477.98	-680.19	70.10	0.84		
4586.00	14.900	176.800	4497.06	490.06	-696.38	70.66	0.98		
4650.00	14.200	178.200	4559.01	501.95	-712.44	71.37	1.22		
4713.00	14.000	176.800	4620.11	513.31	-727.77	72.03	0.63		
4776.00	15.100	175.000	4681.09	524.71	-743.55	73.17	1.89		
4840.00	15.200	175.100	4742.86	536.59	-760.22	74.62	0.16		
4903.00	15.000	175.700	4803.69	548.33	-776.58	75.93	0.40		
4967.00	15.100	177.100	4865.49	560.41	-793.16	76.98	0.59		
5030.00	15.300	177.500	4926.29	572.59	-809.66	77.76	0.36		
5093.00	15.500	176.000	4987.03	584.82	-826.36	78.71	0.71		
5156.00	16.500	176.400	5047.59	597.40	-843.69	79.85	1.60		
5219.00	16.300	176.100	5108.02	610.30	-861.44	81.02	0.34		
5282.00	15.100	176.800	5168.67	622.70	-878.45	82.08	1.93		
5345.00	14.200	176.100	5229.62	634.30	-894.36	83.06	1.46		
5407.00	14.000	176.800	5289.76	645.28	-909.43	84.00	0.42		
5470.00	13.500	177.500	5350.95	656.30	-924.39	84.74	0.84		
5534.00	14.500	175.700	5413.05	667.59	-939.84	85.67	1.70		
5597.00	15.600	173.600	5473.89	679.12	-956.12	87.20	1.95		
5660.00	15.700	172.500	5534.55	690.77	-972.99	89.26	0.50		
5724.00	15.800	173.600	5596.15	702.68	-990.24	91.36	0.49		
5787.00	15.200	174.300	5656.86	714.41	-1006.98	93.14	1.00		
5850.00	14.400	174.300	5717.77	725.70	-1022.99	94.74	1.27		
5913.00	15.100	175.400	5778.69	737.06	-1038.97	96.17	1.20		



Planned Wellpath Report

Plan #1
Page 4 of 6



INTEQ

WELLPATH IDENTIFICATION

Operator	Marathon Oil Company	Slot	#4_SHL
Area	Eddy County, NM	Well	Smith Federal #4
Field	Indian Basin Field	Wellbore	#4 PWB
Facility	Indian Basin		

WELLPATH DATA (150 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Design Comments	Path Comment
5976.00	15.800	176.800	5839.41	749.20	-1055.71	97.31	1.26		
6039.00	15.600	177.800	5900.06	761.78	-1072.74	98.11	0.53		
6102.00	16.100	178.500	5960.67	774.64	-1089.93	98.67	0.85		
6164.00	16.400	179.200	6020.19	787.75	-1107.28	99.02	0.58		
6227.00	16.800	177.800	6080.57	801.28	-1125.27	99.49	0.90		
6291.00	16.900	176.800	6141.82	814.96	-1143.80	100.36	0.48		
6356.00	16.900	176.400	6204.01	828.74	-1162.66	101.48	0.18		
6418.00	16.900	176.800	6263.33	841.89	-1180.65	102.55	0.19		
6482.00	17.100	176.800	6324.54	855.58	-1199.34	103.60	0.31		
6545.00	16.500	176.400	6384.85	868.86	-1217.51	104.68	0.97		
6609.00	16.900	177.500	6446.15	882.35	-1235.88	105.65	0.80		
6673.00	15.400	175.000	6507.62	895.27	-1253.64	106.80	2.58		
6737.00	15.700	175.400	6569.28	907.49	-1270.74	108.23	0.50		
6801.00	15.700	175.400	6630.89	919.87	-1288.00	109.62	0.00		
6864.00	15.300	173.900	6691.60	931.75	-1304.76	111.19	0.90		
6927.00	15.400	172.200	6752.35	943.18	-1321.31	113.21	0.73		
6991.00	15.000	173.600	6814.11	954.65	-1337.96	115.29	0.85		
7054.00	14.900	174.000	6874.98	965.95	-1354.12	117.04	0.23		
7117.00	14.800	172.900	6935.88	977.10	-1370.16	118.88	0.47		
7180.00	15.000	173.600	6996.76	988.25	-1386.25	120.79	0.43		
7243.00	14.800	174.000	7057.64	999.51	-1402.35	122.54	0.36		
7307.00	14.600	175.700	7119.55	1011.00	-1418.52	123.99	0.74		
7370.00	14.100	177.100	7180.58	1022.35	-1434.11	124.98	0.97		
7433.00	14.300	178.200	7241.66	1033.81	-1449.55	125.61	0.53		
7496.00	13.900	177.100	7302.76	1045.20	-1464.88	126.24	0.76		
7531.25†	13.624	176.721	7337.00	1051.35	-1473.26	126.69	0.82		Upper Penn
7560.00	13.400	176.400	7364.95	1056.24	-1479.96	127.09	0.82		
7624.00	14.000	176.100	7427.13	1067.23	-1495.08	128.08	0.94		
7686.00	14.900	177.500	7487.17	1078.56	-1510.53	128.94	1.56		
7750.00	14.600	175.700	7549.06	1090.44	-1526.79	129.91	0.86		
7813.00	13.500	175.400	7610.17	1101.40	-1542.04	131.09	1.75	Tie On	
7913.00†	13.456	175.903	7707.42	1118.14	-1565.28	132.86	0.13		
7961.92†	13.434	176.150	7755.00	1126.35	-1576.63	133.65	0.13		Canyon
8013.00†	13.412	176.408	7804.68	1134.96	-1588.46	134.42	0.13		
8113.00†	13.370	176.917	7901.96	1151.87	-1611.58	135.77	0.13		
8150.04†	13.355	177.107	7938.00	1158.15	-1620.13	136.21	0.13		Strawn
8213.00†	13.329	177.429	7999.26	1168.86	-1634.64	136.90	0.13		
8265.14†	13.308	177.698	8050.00	1177.76	-1646.65	137.41	0.13		Oil Water Contact
8285.00	13.300	177.800	8069.33	1181.15	-1651.21	137.59	0.13	KOP	
8313.00†	11.736	180.625	8096.66	1185.76	-1657.28	137.69	6.00		

SUNDRY NOTICE SPECIAL STIPULATIONS

1. Approval is granted to deepen this well to 9600' TVD based on the information provide by Charles Kendrix in his 3/19/07 fax:
2. The well will be completed with 4½ inch 11.6# L-80 liner and cemented to the top of the liner.

Engineering
can be reached at 505-706-2779 for any variances that might be necessary.

F Wright 3/19/07