Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carlsbad Field Office
OCD Hobbs

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

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 page 2

HOBBS OCD

AUG 21 2019

RECEIVED

5. Lease Serial No.
NMNM27805

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
FRIZZLE FRY 15 WA FED COM 2H

2. Name of Operator
MARATHON OIL PERMIAN LLC
Contact: JENNIFER VAN CUREN
E-Mail: jvancuren@marathonoil.com

9. API Well No.
30-025-45890-00-X1

3a. Address
5555 SAN FELIPE STREET
HOUSTON, TX 77056

3b. Phone No. (include area code)
Ph: 713.296.2500

10. Field and Pool or Exploratory Area
RED TANK-BONE SPRING

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 15 T22S R32E NWNW 273FNL 792FWL
32.398205 N Lat, 103.668564 W Lon

11. County or Parish, State
LEA COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ 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 must 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 must be filed once testing has been completed. Final Abandonment Notices must 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 requests to make changes to the approved APD as follows:

Deepen 9-5/8" casing.
Update contingency plan for 7" casing to set at the base of the curve

Please see attachment.

All previous Conditions of Approval still apply. DR

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

Electronic Submission #475731 verified by the BLM Well Information System
For MARATHON OIL PERMIAN LLC, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 07/31/2019 (19PP2677SE)

Name *(Printed/Typed)* JENNIFER VAN CUREN — Title SR. REGULATORY COMPLIANCE REP

Signature (Electronic Submission) — Date 07/30/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By DYLAN ROSSMANGO — Title PETROLEUM ENGINEER — Date 08/09/2019

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 Hobbs

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.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

KB

MARATHON OIL PERMIAN LLC
DRILLING AND OPERATIONS PLAN
WELL NAME / NUMBER: Frizzle Fry Federal WA 2H
STATE: NEW MEXICO **COUNTY:** EDDY

Application Data Report

Drilling Plan Data Report

1. GEOLOGIC FORMATIONS

Formation	True Vertical Depth (ft)	Measured Depth (ft)	Lithologies	Mineral Resources
Rustler	890.0	890.0	Salt/Anhydrite	BRINE
Salado	1190.0	1190.0	Salt/Anhydrite	BRINE
Base of Salt	2540.0	2540.8	Limy Sands	BRINE
Base of Salt/Lamar	4840.0	4875.6	Sand/Shales	NONE
Delaware	4910.0	4946.5	Sands/Shale	OIL
Bone Spring	8760.0	8798.1	Sands/Carbonates	OIL
Wolfcamp	11920.0	11975.4	Carbonates/Shales/Sands	OIL

2. BLOWOUT PREVENTION

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12 ¼"	13 5/8	5000	Annular	x	100% of working pressure
		10000	BOP Stack	x	10000
8 ¾"	13 5/8	5000	Annular	x	100% of working pressure
		10000	BOP Stack	x	10000
6 1/8"	13 5/8	5000	Annular	x	100% of working pressure
		10000	BOP Stack	x	10000

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock, full opening safety valve / inside BOP and choke lines and choke manifold. See attached schematics.

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.

Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.	
	N	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. See attached schematic.	

3. CASING PROGRAM

Plan:

String Type	Hole Size	Csg Size	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Weight (lbs/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
Surface	17 1/2	13 3/8	0	1050	0	1050	3790	2740	54.5	J55	STC	3.37	1.71	2.93
Intermediate I	12 1/4	9 5/8	0		0		3790	-5072	40	L80HC	BTC	1.39	1.42	1.8
Production							3790	-8124	20	P110	BTC	1.65	1.29	2.08

• Rustler top will be validated via drilling parameters (l e reduction in ROP) and surface casing setting depth revised accordingly if needed
• Int casing shoe will be selected based on drilling data / gamma, setting depth with be revised accordingly if needed

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Contingency 1:

String Type	Hole Size	Csg Size	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Weight (lbs/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
Surface	17 1/2	13 3/8	0	1050	0	1050	3790	2740	54.5	J55	STC	5.52	2.5	2.5
Intermediate I	12 1/4	9 5/8	0				3790	-5072	40	L80HC	BTC	1.39	1.42	1.8
Production	8 3/4	7					3790	-8394	29		BTC	2.21	1.18	1.9
Production Liner	6 1/8	4 1/2					-7522	-8360	13.5	P110	BTC	1.33	1.56	1.88

• Rustler top will be validated via drilling parameters (i e reduction in ROP) and surface casing setting depth revised accordingly if needed
• Int 1 / Int 2 casing shoe will be selected based on drilling data / gamma, setting depth will be revised accordingly if needed
* 6" hole will be drilled if we use 32#, 7", P110 casing

All casing.strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

4. CEMENT

Plan

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity (sks)	Yield (ft3/sks)	Density (ppg)	Slurry Volume (ft3)	Excess (%)	Cement Type	Additives
Surface	Lead	--	0	840	675	1.73	13.5	1167		Class C	LCM
Surface	Tail	--	840	1050	219	1.33	14.8	292	100	Class C	Accelerator
Intermediate I	Lead	--								Class C	Extender, Accelerator
Intermediate I	Tail	--									Retarder
Production	Lead	--							70	Class H	Viscosifier, Retarder
Production	Tail	--							30	Class H	Extender, Fluid Loss, Dispersant

If Stage tool is ran:

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity (sks)	Yield (ft3/sks)	Density (ppg)	Slurry Volume (ft3)	Excess (%)	Cement Type	Additives
Intermediate	Stage 2 Lead	4700	0	4400	301	3.21	11	965	70	Class C	Extender, Accelerator
Intermediate	Stage 2 Tail	4700	4400	4700	25	1.15	13.8	28	30	Class H	Retarder
Intermediate	Stage 1 Lead	4700	4700	7900	219	3.21	11.0	702	70	Class C	Extender, Accelerator
Intermediate	Stage 1 Tail	4700	7900	8900	82	1.15	13.8	94	30	Class H	Retarder

Stage tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Stage tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Contingency 1:

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity (sks)	Yield (ft3/sks)	Density (ppg)	Slurry Volume (ft3)	Excess (%)	Cement Type	Additives
Surface	Lead	--	0	840	675	1.73	13.5	1167	100	Class C	LCM
Surface	Tail	--	840	1050	219	1.33	14.8	292	100	Class C	N/A
Intermediate I	Lead	--	[redacted]						75	Class C	Extender, Accelerator
Intermediate I	Tail	--							50	Class C	Retarder
Production	Lead	--							70	Class C	Viscosifier, Retarder
Production	Tail	--							30	Class H	Extender, Fluid Loss, Dispersant
Production Liner	Tail	--							30	Class H	Retarder, Extender, Fluid Loss, Dispersant

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity (sks)	Yield (ft3/sks)	Density (ppg)	Slurry Volume (ft3)	Excess (%)	Cement Type	Additives
Intermediate	Stage 2 Lead	4700	0	4400	301	3.21	11	965	70	Class C	Extender, Accelerator
Intermediate	Stage 2 Tail	4700	4400	4700	25	1.15	13.8	28	30	Class H	Retarder
Intermediate	Stage 1 Lead	4700	4700	7900	219	3.21	11.0	702	70	Class C	Extender, Accelerator
Intermediate	Stage 1 Tail	4700	7900	8900	82	1.15	13.8	94	30	Class H	Retarder

Pilot hole depth: N/A TVD/MD
KOP: N/A TVD/MD

Plug top	Plug Bottom	Excess (%)	Quantity (sx)	Density (ppg)	Yield (ft3/sx)	Water gal/sk	Slurry Description and Cement Type

Attach plugging procedure for pilot hole: N/A

5. CIRCULATING MEDIUM

Plan:

Top Depth	Bottom Depth	Mud Type	Min. Weight (ppg)	Max. Weight (ppg)
0	1050	Water Based Mud	8.4	8.8

Losses or gains in the mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times.

Contingency 1:

Top Depth	Bottom Depth	Mud Type	Min. Weight (ppg)	Max. Weight (ppg)
0	1050	Water Based Mud	8.4	8.8

Losses or gains in the mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times.

6. **TEST, LOGGING, CORING**

7. **PRESSURE**

ANTICIPATED BOTTOM HOLE PRESSURE: 8,213 psi

ANTICIPATED BOTTOM HOLE TEMPERATURE: 195°F

ANTICIPATED ABNORMAL PRESSURE: N

ANTICIPATED ABNORMAL TEMPERATURE: N

POTENTIAL HAZARDS:

A. H2S detection equipment will be in operation after drilling out the surface casing shoe until the production casing has been cemented. Breathing equipment will be on location from drilling out the surface shoe until production casing is cemented. If H2S is encountered the operator will comply with Onshore Order #6.

B. No abnormal temperatures or pressures are anticipated. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

C. No losses are anticipated at this time.

D. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well.

E. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely.

8. **OTHER**

Other Well Information

1. **AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT**

   a. A Kelly cock will be in the drill string at all times.

   b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor unobstructed and readily accessible at all times.

   c. Hydrogen Sulfide detection equipment will be in operation after drilling out the surface casing shoe until the production casing is cemented. Breathing equipment will be on location upon drilling the surface casing shoe until total depth is reached. **If Hydrogen Sulfide is encountered , measured amounts and formations will be reported to the BLM**

2. **ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS**

Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as possible after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 30 days.