

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**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMNM13647
2. Name of Operator MARATHON OIL PERMIAN LLC		6. If Indian, Allottee or Tribe Name
Contact: JENNIFER VAN CUREN E-Mail: jvancuren@marathonoil.com		7. If Unit or CA/Agreement, Name and/or No.
3a. Address 5555 SAN FELIPE STREET HOUSTON, TX 77056	3b. Phone No. (include area code) Ph: 713.296.2500	8. Well Name and No. CAVE LION 5 TB FEDERAL 8H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 5 T26S R35E SESW 287FSL 1871FWL 32.065876 N Lat, 103.391983 W Lon		9. API Well No. 30-025-45419-00-X1
		10. Field and Pool or Exploratory Area BONE SPRINGS
		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			
<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"/> Hydraulic Fracturing	<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	Drilling Operations
	<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 must 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 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.

3/3/2019 ? Notified BLM of intent to spud. 3/4 ? MIRU. Spud. Drill 12 ?? surface section from 147? to 1190?. Notified BLM of intent to run csg and cement job. Run 13 3/8? csg, 29 jts, 54.5#, STC to 1181?. 3/5 ? Cement csg by pumping 30 bbls of spacer, 725sx of lead cmt, 345sx of tail cmt, with 454sx of cmt returned to surface. RDMO. 3/17 ? MIRU. Perform BOPE test. 3/18 ? Pressure test csg to 1520 psi for 30 min, 20 psi drop, good test. Drill shoe track, and 10? new formation to 1200?. 3/19 ? Drill 12 ?? from 1200? to 5460? 3/20 ? Notified BLM of csg and cement job. 3/21 ? Run 9 5/8? csg, 121 jts, 40#, J55, LTC to 5403?. Cement csg by pumping 20 bbls spacer, 1305sx lead cmt, and 370sx tail cmt, with 456sx cmt to surface. Pressure test csg to 6327 psi for 30 min, 56 psi drop, good test. Drill shoe track and 10? new formation to 5470?. 3/22 ? Drill 8 ?? section from 5470? to 9904?. Perform flowcheck. TOH to BHA. TIH and re log gamma from 9808? to 9904?. 3/24 ? Continue drilling 8 ?? section from 9904? to 11796?. 3/25 ? Notified BLM of intent to run csg and cement. Flowcheck and TOOH to BHA. 3/26 ? Run 7? csg, 285 jts, 29#, VA Rougheck to 11785?. Cement casing by

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

Electronic Submission #468945 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 06/13/2019 (19PP2195SE)

Name (Printed/Typed) JENNIFER VAN CUREN	Title SR. REGULATORY COMPLIANCE REP
Signature (Electronic Submission)	Date 06/13/2019

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By _____	Title <b>Accepted for Record</b>	Date <b>JUL 24 2019</b>
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.	Jonathon Shepard Carlsbad Field Office	
	Office	

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 \*\***

**Additional data for EC transaction #468945 that would not fit on the form**

**32. Additional remarks, continued**

pumping 20 bbls spacer, 1125sx lead cement, and 190sx tail cement, with 307sx cement to surface. 5/21 ? Test ?? csg to 6327 psi for 30 min, 56 psi drop, good test. Drill shoe track and 10' of new formation to 11806'. 5/22 ? Drill 6 1/8" vertical from 11806' to 12049'. Flow check and circulate. Re log gamma from 11946' to 12049'. 5/23 ? Drill 6 1/8" curve from 12049' to 12679'. Flow check and circulate. TOH to BHA. TIH and re log gamma from 12575' to 12679'. 5/25 ? Drill 6 1/8" curve from 12679' to 12955'. Drill 6 1/8" lateral from 12955' to 17261'. 5/29 ? Circulate. TOH. Notified BLM of intent to run liner and cement job. 5/30 ? Run 4 ?? liner with 139 jts, 13.5#, Va Roughneck from 11459' to 17251'. 5/31 ? Cement liner by pumping 20 bbls spacer, 605sx lead cement, with no cement to surface. Pressure test liner to 3000 psi for 30 min, held good test. 6/3/2019 ? RDMO.

State/Province <b>NEW MEXICO</b>	Country <b>UNITED STATES</b>	Field Name <b>HARDIN TANK</b>	Latitude (°) <b>32.06575850</b>	Longitude (°) <b>-103.39151690</b>	North/South Distance (ft) <b>287.0</b>	North/South Reference <b>FSL</b>
APV/ IPO UWI <b>3002545419</b>	KB-Ground Distance (ft) <b>26.50</b>	KB-Mud Line Distance (ft)	Ground Elevation (ft) <b>3,262.00</b>	Drilling Rig Spud Date <b>3/4/2019</b>	Well Original Completion Date	Well First Production Date

### HORIZONTAL, CAVE LION 5 TB FEDERAL 008H, 6/13/2019 1:16:08 PM

MD (ftKB)	Incl (°)	TVD (ftKB)	Vertical schematic (actual)	
26.6	1.1	26.6	Des: Conductor Cement; Top MD: 26.5 ftKB; Btm MD: 146.5 ftKB; Date: 12/3/2018	No.: 1; Des: Conductor 1; OD: 20.000 in; ID: 19.000 in; Depth MD: 26.5-146.5 ftKB; Length: 120.00 ft
27.9	1.1	27.9		
146.7	1.1	146.6		
147.0	1.1	147.0	Des: Surface Casing Cement; Top MD: 26.5 ftKB; Btm MD: 1,180.7 ftKB; Date: 3/5/2019	No.: 2; Des: Surface; OD: 13.375 in; ID: 12.615 in; Depth MD: 26.5-1,180.7 ftKB; Length: 1,154.19 ft
149.9	1.1	149.9		
1,139.8	0.9	1,139.7		
1,141.7	0.9	1,141.6	Des: Surface Casing Cement (plug); Top MD: 1,180.0 ftKB; Btm MD: 1,180.7 ftKB; Date: 3/5/2019	No.: 3; Des: Intermediate 1; OD: 9.625 in; ID: 8.835 in; Depth MD: 26.5-5,402.6 ftKB; Length: 5,376.09 ft
1,179.5	0.9	1,179.3		
1,180.1	0.9	1,180.0		
1,180.8	0.9	1,180.7	Des: Intermediate Casing Cement; Top MD: 26.5 ftKB; Btm MD: 5,402.6 ftKB; Date: 3/21/2019	No.: 4; Des: Intermediate 2; OD: 7.000 in; ID: 6.184 in; Depth MD: 26.5-11,785.4 ftKB; Length: 11,758.90 ft
1,185.0	0.9	1,184.9		
5,335.6	3.0	5,337.2		
5,357.0	3.0	5,338.5	Des: Intermediate Casing Cement; Top MD: 26.5 ftKB; Btm MD: 11,785.4 ftKB; Date: 3/26/2019	No.: 5; Des: Production 1; OD: 4.500 in; ID: 3.920 in; Depth MD: 11,459.1-17,251.0 ftKB; Length: 5,791.95 ft
5,399.9	2.8	5,381.4		
5,400.9	2.8	5,382.4		
5,402.6	2.8	5,384.0	Des: Production Casing Cement; Top MD: 11,459.1 ftKB; Btm MD: 17,251.0 ftKB; Date: 5/31/2019	
5,404.9	2.8	5,386.3		
11,459.0	0.7	11,439.3		
11,485.6	0.8	11,465.9		
11,494.8	0.8	11,475.0		
11,498.1	0.9	11,476.4		
11,501.3	0.9	11,481.6		
11,563.0	1.3	11,543.3		
11,565.0	1.3	11,545.2		
11,741.1	2.2	11,721.3		
11,742.5	2.2	11,722.6		
11,783.8	2.4	11,764.0		
11,785.1	2.4	11,765.3		
11,785.4	2.4	11,765.6		
11,790.0	2.5	11,770.2		
17,203.4	91.1	12,405.4		
17,205.4	91.1	12,405.3		
17,207.3	91.1	12,405.3		
17,248.7	91.1	12,404.5		
17,251.0	91.1	12,404.5		

CAVE LION 5 TB FEDERAL 8H				
30-025-45419				
SPUD	TD Reached	Rig Release	Total Depth	Ground Elevation
3/4/2019	5/29/2019	6/3/2019	17261 / 12463	3262
Casing detail	Surface	Intermediate	Production	Liner
Date	3/5/2019	3/21/2019	3/26/2019	5/30/2019
Hole size	17 1/2	12 1/4	8 3/4	6 1/8
Casing size	13 3/8	9 5/8	7	4 1/2
Weight	54.5	40	29	13.5
Type	J55	J55	P110	P110
Thread	STC	LTC	VA Roughneck	Va Rouchneck
Top	0	0	0	11459
Depth (MD)	1181	5403	11785	17251
Amount jnts	29	121	285	139
Cement detail	Surface	Intermediate	Production	Liner
Date	3/5/2019	3/21/2019	3/26/2019	5/31/2019
Top depth KB	0	0	0	11459
Bottom depth KB	1181	5403	11785	17251
Lead sks	725	1305	1125	
Yield	1.73	2.32	2.6	
Tail sks	345	370	190	605
Yield	1.33	1.33	1.16	1.18
Spacer	30 bbls	20 bbls	20 bbls	20 bbls
Class	C	C	C	H
Circulate to surface (sks)	454	456	307	0
Top meas. method	Circulate	Circulate	Circulate	Calcuations
TOC	0	0	0	9800
Pressure testing	Surface	Intermediate	Production	Liner
Date	3/18/2019	3/21/2019	5/21/2019	5/31/2019
PSI	1520	3050	6327	3000
Time (min)	30	30	30	30
Bled off	20	70	56	0
Drop	1%	2%	1%	0%
Good test	Yes	Yes	Yes	Yes