

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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.

5. Lease Serial No.
NMNM13647

6. If Indian, Allottee or Tribe Name

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

SUBMIT IN TRIPLICATE - Other instructions on page 2 **DEC 26 2017**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No. CAVE LION 5 FEDERAL 26 5 TB 1H	
2. Name of Operator MARATHON OIL PERMIAN LLC		Contact: JENNIFER VAN CUREN E-Mail: jvancuren@marathonoil.com	9. API Well No. 30-025-44087-00-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 JABALINA
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 5 T26S R35E SWSW 185FSL 330FWL 32.065605 N Lat, 103.396957 W Lon			11. County or Parish, State LEA COUNTY, NM

RECEIVED

12. CHECK THE 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"/> 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 Change to Original A PD
	<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 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 PERMIAN LLC requests approval to make changes to the 7" casing string as described in the attachment.

OCD Hobbs

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

**Electronic Submission #398308 verified by the BLM Well Information System
For MARATHON OIL PERMIAN LLC, sent to the Hobbs
Committed to AFMSS for processing by ZOTA STEVENS on 12/18/2017 (18ZS0030SE)**

Name (Printed/Typed) JENNIFER VAN CUREN	Title SR. REGULATORY COMPLIANCE REP
Signature (Electronic Submission)	Date 12/18/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>ZOTA STEVENS</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>12/18/2017</u>
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 <u>Hobbs</u>

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 ****

KZ

Marathon Oil Permian, LLC

CAVE LION 5 FEDERAL BC 1H

API 30-025-44087

Lea County, New Mexico

Drilling Program Changes

1. Casing Program:

Changes:

- I. Use 7" 29 lbs/ft P110CY with Tenaris Blue Connection (Premium connection) instead of 7" 29 lbs/ft P110IC with Tenaris Blue Connection. Below you can find safety factors for this casing, they exceed minimum safety factors.

Hole size	Casing Interval		Csg. Size	Weight (lbs/ft)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
8 3/4"	0	11845	7"	29	P110CY	Tenaris Blue	2.25	1.17	2.47

Minimum safety factors: Burst 1.125 Collapse 1.125 Tension 1.8 Wet/1.6 Dry

Attached pipe and connection specifications

TenarisHydril Blue[®] SD (6.125") - 7" 29.00 ppf P110-CY⁽¹⁾
(USC Units)


PIPE BODY DATA					
GEOMETRY					
Nominal OD	7.000 in.	Nominal Weight	29.00 lbs/ft	Standard Drift Diameter	6.059 in.
Nominal ID	6.184 in.	Wall Thickness	0.408 in.	Special Drift Diameter	6.125 in.
Plain End Weight	28.75 lbs/ft				
PERFORMANCE					
Body Yield Strength	972 x 1000 lbs	Internal Yield	12070 psi	Collapse	8740 psi
CONNECTION DATA					
GEOMETRY					
Coupling OD	7.677 in.	Coupling Option	Regular	Connection ID ⁽²⁾	6.189 in.
Critical Section Area	8.449 sq. in.	Coupling Length	10.551 in.	Make-Up Loss	4.480 in.
Threads per Inch	4				
PERFORMANCE					
Tension Efficiency	100.0%	Joint Yield Strength	972 x 1000 lbs	Internal Pressure Rating	12070 psi
Compression Efficiency ⁽²⁾	89.3%	Compression Rating	878 x 1000 lbs	External Pressure Rating	8740 psi
Bending ⁽²⁾	64°/100 ft				
MAKE-UP TORQUES ⁽²⁾					
Minimum	10480 ft-lbs	Target	11640 ft-lbs	Maximum	12800 ft-lbs
Operating Torque	23650 ft-lbs	Yield Torque	36380 ft-lbs		

(1) P110-CY Restricted Yield range: 115 ksi - 130 ksi

(2) Connection ID modified from the standard product in order to allow the passage of the special drift of 6.125". Compression and Bending are reduced due to this modification.

(3) Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread compounds please contact us at licenses@oilfield.tenaris.com