

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

MAY 31 2018

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 ~~disrupt an~~
abandoned well. Use form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NMNM16348

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NMNM1376938. Well Name and No.
LUSITANO 27-34 FED COM 235H9. API Well No.
30-015-44424-00-X110. Field and Pool or Exploratory Area
JENNINGS-BONE SPRING, WEST11. County or Parish, State
EDDY COUNTY, NM

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

DEVON ENERGY PRODUCTION COMPANY

Contact: LINDA GOOD
Email: linda.good@dvn.com

3a. Address

6488 SEVEN RIVERS HIGHWAY
ARTESIA, NM 88211

3b. Phone No. (include area code)

Ph: 405.552.6558

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

Sec 27 T25S R31E NENE 435FNL 295FEL
32.107365 N Lat, 103.758301 W Lon

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

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent☐ Subsequent Report☐ Final Abandonment Notice☐ Acidize☐ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☐ Deepen☐ Hydraulic Fracturing☐ New Construction☐ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☒ Other
Change to Original A
PD

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.

Devon Energy respectfully requests permission to run a contingency string of 7-5/8" 29.7# P110EC FJM casing to isolate flows. Devon also respectfully requests to drill the remaining 2,777' of lateral with a 6-3/4" bit and then run 5.5" casing.

GC 6-4-18
Accepted for record - NMOCDArtesia Field Office
OCD ArtesiaSEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

Electronic Submission #421151 verified by the BLM Well Information System

For DEVON ENERGY PRODUCTION COMPANY, sent to the Carlsbad

Committed to AFMSS for processing by ZOTA STEVENS on 05/23/2018 (18ZS0120SE)

Name (Printed/Typed) LINDA GOOD

Title REGULATORY SPECIALIST

Signature (Electronic Submission)

Date 05/23/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ZOTA STEVENS

Title PETROLEUM ENGINEER

Date 05/23/2018

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 Carlsbad

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 **

Lusitano 27-34 Fed 235H Sundry

Devon Energy respectfully requests permission to run a contingency string of 7-5/8" 29.7# P110EC FJM casing to isolate flows. Devon also respectfully requests to drill the remaining ~2,777' of lateral with a 6-3/4" bit and then run 5.5" casing.

Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
8.75"	0	10,850'	7.625"	29.7	P110	FJM	1.125	1.25	1.6
8.5"	0	17,614'	5.5"	17	P110	SF/Flush	1.125	1.25	1.6
6.75"	17,614'	20,391'	5.5"	17	P110	SF/Flush	1.125	1.25	1.6

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h
A variance is requested to wave the centralizer requirement for the 7-5/8" flush casing in the 8-3/4" hole and the 5-1/2" SF/Flush casing in the 6-3/4" hole.

Cementing Program

Casing	# Sks	Wt. lb/gal	H ₂ O gal/sk	Yld ft ³ /sack	Slurry Description
7-5/8" Int	307	9.5	13.5	3.27	Lead: Tuned Light® Cement
	206	15.6	5.31	1.6	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite
7-5/8" Intermediate Squeeze	768	14.8	6.32	1.33	Class C Cement + 0.125 lbs/sack Poly-E-Flake
	307	9.5	13.5	3.27	Tuned Light® Cement
	206	15.6	5.31	1.6	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite
5-1/2" Production	1869	15.6	6.32	1.33	Class H Cement + 0.125 lbs/sack Poly-E-Flake

Casing String	TOC	% Excess
7-5/8" Intermediate	0'	30%
5-1/2" Production Casing	10,650	25%

**PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Devon Energy Prod Co
LEASE NO.:	NM16348
WELL NAME & NO.:	Lusitano 27 34 Fed Com – 235H
SURFACE HOLE FOOTAGE:	435'/N & 295'/E, sec 27
BOTTOM HOLE FOOTAGE:	330'/N & 330'/E, sec. 34
LOCATION:	Sec. 27, T. 25 S, R. 31 E
COUNTY:	Eddy County

All previous COA still apply

CONTINGENNCY

A. The minimum required fill of cement behind the 7 5/8 inch 2nd intermediate casing is:

- ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.**

OPERATOR IS APPROVED FOR A SQUEEZE JOB IF CAN NOT CIRCULATE CEMENT TO SURFACE.

B. The minimum required fill of cement behind the 5-1/2 inch production casing is:

- ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Excess calculates to 13% Additional cement may be required.**

KFC

13 3/8	surface csg in a	17 1/2	inch hole.	Design Factors			SURFACE		
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight	
"A"	48.00	H 40	ST&C	7.29	1.79	0.71	920	44,160	
"B"							0	0	
w/8.4#/g mud, 30min Sfc Csg Test psig: 810			Tail Cmt	does	circ to sfc.	Totals:	920	44,160	
<u>Comparison of Proposed to Minimum Required Cement Volumes</u>									
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd	Min Dist
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE	Hole-Cplg
17 1/2	0.6946	690	925	694	33	9.00	1494	2M	1.56

Burst Frac Gradient(s) for Segment(s) A, B = 1.88, b All > 0.70, OK.

9 5/8 Segment	casing inside the #/ft	13 3/8 Grade	Coupling	Joint	Design Factors		INTERMEDIATE		
"A"	40.00	J 55	LT&C	3.06	Collapse	Burst	Length	Weight	
"B"					1.59	0.79	4,250	170,000	
							0	0	
w/8.4#/g mud, 30min Sfc Csg Test psig:						Totals:		4,250	170,000
The cement volume(s) are intended to achieve a top of					0	ft from surface or a		920	overlap.
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
12 1/4	0.3132	1043	1770	1408	26	11.00	2732	3M	0.81

Assumed 1/3 Fluid Filled for Collapse Calculation

Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.93, b, c, d All > 0.70, OK.

Tail cmt									
7 5/8	casing inside the	9 5/8	A Buoyant		Design Factors		INTERMEDIATE		
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight	
"A"	29.70	P 110	FJM	1.91	2.55	2.86	9,821	291,684	
"B"	29.70	P 110	FJM	3.20	2.22	2.86	1,029	30,561	
"C"							0	0	
"D"							0	0	
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,161						Totals:	10,850	322,245	
B	would be:			30.45	2.41	if it were a vertical wellbore.			
No Pilot Hole Planned		MTD	Max VTD	Csg VD	Curve KOP	Dogleg°	Severity°	MEOC	
		10850	10385	10385	9821	90	10	10721	
The cement volume(s) are intended to achieve a top of				4050	ft from surface or a		200	overlap.	
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd	Min Dist
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE	Hole-Cplg
8 3/4	0.1005	3058	4965	696	613	9.30	2732	3M	1.63
Setting Depths for D V Tool(s):				4300			sum of sx	Σ CuFt	Σ%excess
% excess cmt by stage:		634	297				3084	5017	621

Tail cmt					Design Factors		PRODUCTION		
5 1/2 Segment	casing inside the #/ft	7 5/8 Grade	Coupling	Joint	Collapse	Burst	Length	Weight	
"A"	20.00	P 110	VAM SG	3.05	2.55	2.86	9,821	196,420	
"B"	20.00	P 110	VAM SG	4.66	2.14	2.85	7,793	155,860	
"C"	20.00	P 110	VAM SG	∞	2.41	2.86	2,777	55,540	
"D"							0	0	
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,161							Totals:	20,391	407,820
B Segment Design Factors would be:				56.21	2.41	if it were a vertical wellbore.			
No Pilot Hole Planned		MTD	Max VTD	Csg VD	Curve KOP	Dogleg°	Severity°	MEOC	
		20391	10385	10385	9821	90	10	10721	
The cement volume(s) are intended to achieve a top of				10650	ft from surface or a		200	overlap.	
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
8 1/2	0.2291	1869	2486	2209	13	9.30			1.40

Class 'H' tail cmt yld > 1.20

Capitan Reef est top XXXX.