Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NM OIL CONSERVATION
ARTESIA DISTRICT
NOV 16 2015
RECEIVED

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

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.

5. Lease Serial No.
NMNM16131

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.
SHIRE 22 FED 1H

2. Name of Operator
DEVON ENERGY PROD CO., L.P.
Contact: LINDA GOOD
E-Mail: linda.good@dvn.com

9. API Well No.
30-015-43222

3a. Address
333 WEST SHERIDAN AVE.
OKLAHOMA CITY, OK 73102

3b. Phone No. (include area code)
Ph: 405-552-6558

10. Field and Pool, or Exploratory
PADUCA; BONE SPRING

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 15 T25S R31E Mer NMP SWSE 14FSL 1670FEL

11. County or Parish, and State
EDDY COUNTY, NM

12. CHECK 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	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original A PD
	☐ 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 shall 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 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 site is ready for final inspection.)

Devon Energy respectfully requests to change the lead cement slurry for the Shire 22 Fed 1H. We're keeping the tail slurry the same, and will run a lead slurry that will allow us to not need a DV tool and 2-stage cement job (the APD has options for both single and 2 stage). We will have 500' of tie-back into previous casing shoe. And use 10% excess over the fluid caliper when its pumped at TD of the well.

The new table is attached.

11/20/15
Accepted for record
NMOCD

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #322380 verified by the BLM Well Information System
For DEVON ENERGY PROD CO., L.P., sent to the Carlsbad
Committed to AFMSS for processing by KENNETH RENNICK on 11/09/2015 ()

Name *(Printed/Typed)* LINDA GOOD — Title REGULATORY SPECIALIST

Signature (Electronic Submission) — Date 11/03/2015

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

APPROVED
NOV 9 2015
/s/ Chris Walls
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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, 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.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Casing	# Sks	Wt. lb/ gal	H_2O gal/sk	Yld ft3/ sack	500# Comp. Strength (hours)	Slurry Description
5-1/2" Prod Casing	330	9	15.64	3.56	25	1st Lead: Tuned Light® Cement
	255	11.9	12.89	2.31	n/a	2nd Lead: (50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000
	1080	14.5	5.31	1.22	25	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.1% BWOC HR-601 + 2% bwoc Bentonite

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV 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.

Casing String	TOC	% Excess
5-1/2" Production Casing	3804'	10%

Additional excess may be needed.

Conditions of Approval
Devon Energy
Shire 22 Fed 1H

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

   ☒ Cement should tie-back at least 500 feet into previous casing string. Operator shall provide method of verification. **Additional cement may be needed, as excess calculates to 8%.**

In a Lesser Prairie-Chicken section.

13 3/8 urface csg in a 17 1/2 inch hole. sign Factors SURFACE

Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight
"A"	48.00	H 40	ST&C	7.80	1.96	0.76	860	41,280
"B"							0	0
w/8.4#/g mud, 30min Sfc Csg Test psig: 836			Tail Cmt	does	circ to sfc.	Totals:	860	41,280

Comparison of Proposed to Minimum Required Cement Volumes

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
17 1/2	0.6946	820	1091	652	67	8.80	1336	2M	1.56

Burst Frac
Condition

9 5/8 sing inside the 13 3/8 Design Factors INTERMEDIATE

Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	Weight
"A"	36.00	J 55	LT&C	2.85	1.12	0.7	3,400	122,400
"B"	40.00	J 55	LT&C	14.29	1.13	0.79	1910	36,400
w/8.4#/g mud, 30min Sfc Csg Test psig: 884						Totals:	4,310	158,800

The cement volume(s) are intended to achieve a top of 0 ft from surface or a 860 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	1280	2144	1423	51	10.20	2734	3M	0.81

Burst Frac
Condition

5 1/2 sing inside the 9 5/8 Design Factors PRODUCTION

Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	Weight
"A"	17.00	P 110	BUTT	3.09	1.58	2.12	9,771	166,108
"B"	17.00	P 110	BUTT	7.86	1.36	2.12	5,313	90,323
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,150						Totals:	15,084	256,431

B would be: 51.71 1.49 if it were a vertical wellbore.

#REF!

MTD	Max VTD	Csg VD	Curve KOP	Dogleg°	Severity°	MEOC
15084	10392	10392	9771	89	10	10664.86

The cement volume(s) are intended to achieve a top of 3810 ft from surface or a 500 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 3/4	0.2526	1665	3081	2861	8	9.30			1.35

Setting Depths for D V Tool(s):

% excess cmt by stage: #DIV/0!

Class H tail
cmt slurry