Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

Carlsbad Field Office
OCD Artesia

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

5. Lease Serial No.
NMNM22080

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.
TOMB RAIDER 1-12 FED 61H

2. Name of Operator
DEVON ENERGY PRODUCTION COM LP
Contact: CHANCE BLAND
E-Mail: chance.bland@dvn.com

9. API Well No.
30-015-43592-00-X1

3a. Address
6488 SEVEN RIVERS HIGHWAY
ARTESIA, NM 88211

3b. Phone No. (include area code)
Ph: 405-228-8593

10. Field and Pool or Exploratory Area
LIVINGSTON RIDGE

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 1 T23S R31E Lot 4 200FNL 1310FWL

11. County or Parish, State
EDDY 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 Drilling Operations
	☐ 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.

Devon Energy respectfully requests to change the intermediate cement job from a single stage to a 2-stage cement job. Please see the attached document.

NM OIL CONSERVATION
ARTESIA DISTRICT
JUN 16 2017
RECEIVED

Accepted for record - NMOCD 6-16-17

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

Electronic Submission #377418 verified by the BLM Well Information System
For DEVON ENERGY PRODUCTION COM LP, sent to the Carlsbad
Committed to AFMSS for processing by DEBORAH MCKINNEY on 06/01/2017 (17DLM1876SE)

Name *(Printed/Typed)* CHANCE BLAND — Title REG PROF

Signature (Electronic Submission) — Date 05/30/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By MUSTAFA HAQUE — Title PETROLEUM ENGINEER — Date 06/08/2017

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 ****

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company, L.P.
LEASE NO.:	NMNM-22080
WELL NAME & NO.:	Tomb Raider 1-12 Fed 61 H
SURFACE HOLE FOOTAGE:	0200' FNL & 1310' FWL
BOTTOM HOLE FOOTAGE	0330' FSL & 0660' FWL
LOCATION:	Section 01, T. 23 S., R 31 E., NMPM
COUNTY:	Eddy County, New Mexico

A. CASING

All previous COAs still apply except the following:

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Potash Areas:
After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Secretary's Potash
Possible water flows in the Salado and Castile.
Possible lost circulation in the Red Beds, Rustler, and Delaware.

1. The minimum required fill of cement behind the 9 5/8 inch intermediate is:

Operator has proposed DV tool at depth of 3300', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement

across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation or approved top of cement on the next stage.

b. Second stage above DV tool:

☒ Cement to surface. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.** If cement does not circulate to the surface:

i. The appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

ii. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

iii. If cement falls back, remedial cementing will be done prior to drilling out that string.

MHH 06082017

233101 Sundry-377418 Tomb Raider 1-12 Fed 61H 30015-43592 NMNM22080 Devon MHH06082017 v12.1

Secretary Potash Section: 3 csgs, 2 circ cement, production cement overlap intermediate 500'. In a Lesser Prairie-Chicken section.

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	8.49	2.13	0.54	790	37,920
"B"								**0**	**0**
w/8.4#/g mud, 30min Sfc Csg Test psig:	866			Tail Cmt	does	circ to sfc.	Totals:	790	37,920

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	**550**	732	**603**	21	**8.80**	1859	**2M**	1.56

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

9 5/8	casing inside the		13 3/8			Design Factors		INTERMEDIATE	
Segment	**#/ft**	**Grade**		**Coupling**	**Body**	**Collapse**	**Burst**	**Length**	**Weight**
"A"	40.00	J	55	BUTT	2.62	1.62	0.8	4,500	180,000
"B"	**40.00**	**HCK**	**55**	**BUTT**	10.50	**1.33**	**0.8**	**1,500**	**60,000**
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	6,000	240,000

The cement volume(s) are intended to achieve a top of 0 ft from surface or a 790 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	**look ↘**	0	**1948**		**10.20**	2674	**3M**	0.81
D V Tool(s):			**3300**				sum of sx	Σ CuFt	Σ%excess
t by stage % :		**49**	36				1585	2764	42

Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.88, 0.66, c, d
<0.70 a Problem!!

Mitigate collapse, need 1/3 full. Alt Burst = 1.48 = ok

5 1/2	casing inside the		9 5/8			Design Factors		PRODUCTION	
Segment	**#/ft**	**Grade**		**Coupling**	**Body**	**Collapse**	**Burst**	**Length**	**Weight**
"A"	17.00	P	110	BUTT	3.16	1.61	2.17	9,597	163,149
"B"	**17.00**	**P**	**110**	**BUTT**	7.97	**1.39**	**2.17**	**10,359**	**176,103**
w/8.4#/g mud, 30min Sfc Csg Test psig:	2,111						Totals:	19,956	339,252
B would be:					56.84	1.52	if it were a vertical wellbore.		

No Pilot Hole Planned	MTD	Max VTD	Csg VD	Curve KOP	Dogleg°	Severity°	MEOC
	19956	10162	10162	9597	90	10	10495.91

The cement volume(s) are intended to achieve a top of 3900 ft from surface or a 2100 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	**2830**	4493	**4079**	10	**9.30**			1.35
Setting Depths for D V Tool(s):			**5000**				sum of sx	Σ CuFt	Σ%excess
% excess cmt by stage:		-1	-6				2880	4081	0