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

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

HOBBS OCD
OCT 07 2019
RECEIVED

5. Lease Serial No.
NMNM98826

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.
ALLEY CAT 17-20 FED COM 525H

2. Name of Operator
DEVON ENERGY PRODUCTION COMPAN
Contact: JENNIFER HARMS
Email: jennifer.harms@dvn.com

9. API Well No.
30-025-46251-00-X1

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

3b. Phone No. (include area code)
Ph: 405-552-6560

10. Field and Pool or Exploratory Area
SAND DUNES

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 8 T23S R32E SESE 302FSL 1236FEL
32.312653 N Lat, 103.692169 W Lon

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			
☒ 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 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 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 Production Co., L.P. (Devon) respectfully requests to deepen the intermediate casing point to 8820 due to depletion from 7200-8100' and the change from class C/H to class A cement. Please see attached revised drill plan and class A spec sheet.

OCD Hobbs

OCD Hobbs

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

Electronic Submission #482375 verified by the BLM Well Information System
For DEVON ENERGY PRODUCTION COMPAN, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 09/09/2019 (19PP3084SE)

Name *(Printed/Typed)* JENNIFER HARMS — Title REGULATORY COMPLIANCE ANALYST

Signature (Electronic Submission) — Date 09/09/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By LONG VO — Title PETROLEUM ENGINEER — Date 10/03/2019

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 Hobbs

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 ****

Devon Energy – Alley Cat 17-20 Fed Com 525H

1. Geologic Formations

TVD of target	9455	Pilot hole depth	N/A
MD at TD:	20004	Deepest expected fresh water:	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	1048		
Salado	1423		
Base of Salt	4643		
Delaware	4673		
L Brushy Canyon	8293		
Bone Spring	8648		
Leonard 'A'	8748		
Leonard 'B'	9283		
Landing Point	9455		

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

Fluid Filled required

Hole Size	Casing Interval		Csg. Size	Weight (PPF)	Grade	Conn.
	From	To				
17.5"	0	1073	13.375"	48	H-40	STC
12.25"	0	8820	9.625"	40	J-55	BTC
8.75"	0	TD	5.5"	20	P-110	BTC
BLM Minimum Safety Factor				Collapse: 1.125	Burst: 1.00	Tension: 1.6 Dry 1.8 Wet

ok

- All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h Must have table for contingency casing
- Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.
- Variance is requested for collapse rating on intermediate casing. Operator will keep pipe full while running casing. No losses are expected in subsequent hole section.
- Int casing shoe will be selected based on drilling data, gamma, and flows experienced while drilling. Setting depth with be revised accordingly if needed.
- A variance is requested to wave the centralizer requirement for the intermediate and production casing strings if drilling conditions dictate

Devon Energy – Alley Cat 17-20 Fed Com 525H

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program (3-String Primary Design)

Casing	# Sks	TOC	Wt. (lb/gal)	H_20 (gal/sk)	Yld (ft3/sack)	Slurry Description
Surface	1022	Surf	13.2	6.33	1.33	Lead: Class A Cement + additives
Int	760	Surf	10.5	29.6	4.66	Lead: Class A Cement + additives
	240	500' above shoe	13.8	6.57	1.39	Tail: Class A + additives
Production	580	500' tieback	10.2	20.6	3.27	Lead: Class H / A + additives
	2323	KOP	13.2	5.31	1.33	Tail: Class H / A + additives

ok

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

Casing String	% Excess
Surface	100%
Intermediate	50%
Production	10%

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular(5M)	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other *		
			Annular		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other *		

5. Mud Program

6. Depth		Type	Weight (ppg)	Vis	Water Loss
From	To				
0	1073	FW	8.5 – 9.0	28-34	N/C
1073	4773	Brine	10 – 10.5	28-34	N/C
4773	TD	WBM	8.5 – 9.0	28-34	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned		Interval
	Resistivity	
	Density	
X	CBL	Production casing
X	Mud log	KOP to TD

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4425 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions. Describe. Lost circulation material/sweeps/mud scavengers.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

8. Other facets of operation

Is this a walking operation? Potentially

1. If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
2. The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
3. The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

1. Spudder rig will move in and drill surface hole.
    a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
2. After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
3. The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
4. A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
5. Spudder rig operations is expected to take 4-5 days per well on a multi well pad.
6. The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
7. Drilling operations will be performed with the drilling rig. At that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
    a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

_x_ Directional Plan

___ Other, describe

Project # **072919-1** 3:50 PM 8/13/2019

JOB INFORMATION

Company:	**Devon**	Job Type:	**Surface**	Results By:	
Well:		Test Type:	**PILOT**	Engineer:	
Well #:		Slurry Type:	**PRIMARY**	Other Contact:	

WELL INFORMATION

Schedule:	**Casing/Liner**	BHST:	**94**	Initial Pressure:	**500**
MD:		BHCT:	**84**	Final Pressure:	**1000**
TVD:		Time to BHCT:	**30**		

SLURRY INFORMATION

Sack Weight:	94.00
Density:	14.80
Yield:	1.33
Water:	6.33

Gram Basis:	681.39
Yield:	629
Water:	**382.53**

Notes:

Composition:			Grams
94.00	#/sk	Class A Standard Cement	**681.39**

Water **382.53** Bulk Total: 681.39

TEST PARAMETERS AND RESULTS

Thickening Time

Parameters:
Machine: CE # 7322
Initial Bc: 25 @ 75 °F
50 Bc: 2:26
70 Bc: 2:59
100 Bc:

UCA Compressive Strengths

Parameters:

50 psi	2:40hrs
500 psi	5:56hrs
24 hr	2171psi
48 hr	2890psi
72 hr	3158psi

Free Water:

Parameters:
Angle: 45
Water %: 0.5%
Streaking:
Settling %:

Rheologies

Parameters: ***HD***

Temp (degF)	RPM	300	200	100	60	30	20	10	6	3
80		127	88	65	45	30	22	12	8	7

Fluid Loss:

Parameters:
Filtrate:
Time:
ml/30min:

SPINNAKER

3:50 PM 8/13/2019

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CHART