Form	3160-5
(June	2015)

#### **UNITED STATES** DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

Hon	OM Expire
COBBS 2	5. Lease Serial No.

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

	Expires. January	
5.	Lease Serial No.	
	NIMANIMA QQAQ	

٥.	Lease Senal No.	
	NMNM18848	

SUNDRY	NOTICES AND REPO	RTS ON WELLS	OCD	NMNM18848	
abandoned we	is form for proposals to ii. Use form 3160-3 (API	drill or to re-enter an D) for such proposals 2	00D	6. If Indian, Allottee o	or Tribe Name
SUBMIT IN	TRIPLICATE - Other ins	tructions on proposals 2 3 2	- C	7. If Unit or CA/Agree	ement, Name and/or No.
1. Type of Well  Oil Well Gas Well Oth			Ö	8. Well Name and No. PURRITO 18 FEI	
Name of Operator     DEVON ENERGY PRODUCT	Contact: ION CONTPAN: jennifer.ha	JENNIFER HARMS rms@dvn.∞m		9. API Well No. 30-025-46249-0	)0-X1
3a. Address 333 WEST SHERIDAN AVEN OKLAHOMA CITY, OK 7310			Exploratory Area		
4. Location of Well (Footage, Sec., 7	., R., M., or Survey Description	)		11. County or Parish,	State
Sec 18 T23S R32E NENE 71 32.311562 N Lat, 103.709091				LEA COUNTY,	NM
12. CHECK THE AI	PPROPRIATE BOX(ES)	TO INDICATE NATURE O	F NOTICE,	REPORT, OR OTH	HER DATA
TYPE OF SUBMISSION		ТҮРЕ О	ACTION		
Notice of Intent	☐ Acidize	□ Deepen	☐ Product	ion (Start/Resume)	☐ Water Shut-Off
Nonce of finem	☐ Alter Casing	☐ Hydraulic Fracturing	□ Reclam	ation	■ Well Integrity
☐ Subsequent Report	□ Casing Repair	■ New Construction	☐ Recomp	olete	Other
☐ Final Abandonment Notice	☐ Change Plans	☐ Plug and Abandon	☐ Tempor	rarily Abandon	Change to Original A PD
	Convert to Injection	☐ Plug Back	☐ Water I	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.

☐ Plug Back

Devon Energy Production Co., L.P. (Devon) respectfully requests to have the option to move intermediate casing down to 8900' due to the close proximity of depletion from multiple active Delaware producers. The offset wells have perforations varying from 6,500' to 8,800'. Setting our intermediate string deeper will allow for us to case off potential loss zones. This will allow us to increase mud weight as necessary for well conditions in the production hole, allowing us to better handle any well control issues that may arise while drilling the lateral. This is a contingency plan based on final drilling results. Please see attachments.

**Carlsbad Field Office OCD Hobbs** 

14. I hereby certify that the	e foregoing is true and correct. Electronic Submission #492040 verifie For DEVON ENERGY PRODUCTI Committed to AFMSS for processing by PRI	DN COI	MPAN, sent to the Hobbs	
Name (Printed/Typed)	JENNIFER HARMS	Title	REGULATORY COMPLIANCE ANALYST	
Signature	(Electronic Submission)	Date	11/12/2019	
	THIS SPACE FOR FEDERA	L OR	STATE OFFICE USE	
Approved By LQNG V	P	TitleF	ETROLEUM ENGINEER	Date 12/04/2019
certify that the applicant hol	y, are attached. Approval of this notice does not warrant or is legal or equitable title to those rights in the subject lease icant to conduct operations thereon.	Office	Hobbs	
Title 18 II S.C. Section 1001	and Title 43 II S.C. Section 1212, make it a crime for any ne	ercen kno	wingly and willfully to make to any department or agenc	v 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 \*\*



## 1. Geologic Formations

TVD of target	10720	Pilot hole depth	N/A
MD at TD:	15735	Deepest expected fresh water:	

#### Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	954		
Salado	1309		-
Base of Salt	4589		
Delaware	4619		
L Brushy Canyon	8214		
Bone Spring	8574		
Leonard 'A'	8664		
Leonard 'B'	9174		-
Leonard 'C'	9384		<del>-</del>
1st BSPG Sand	9624		
2nd BSPG Sand	10254		
L 2nd BSPG Sand	10699		
Landing Point	10720		
EOL	10694		

<sup>\*</sup>H2S, water flows, loss of circulation, abnormal pressures, etc.

#### 2. Casing Program

Hole Size	Casing	Interval	Csg. Size	Weight	Grade	Conn.
Hole Size	From	To	Csg. Size	(PPF)	Grade	Coan.
17.5"	0	979 اوجور	13.375"	48	H-40	STC
12.25"	0	8900	9.625"	40	J-55	BTC
8.75"	0	TD	5.5"	17	P-110	BTC
8.75" 0 TD 5.5"  BLM Minimum Safety Factor		or	Collapse: 1.125	Burst: 1.00	Tension: 1.6 Dry 1.8 Wet	

- 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

	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 3 <sup>rd</sup> 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 2 <sup>nd</sup> 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	тос	Wt. (lb/gal)	H <sub>2</sub> 0 (gal/sk)	Yld (ft3/sack)	Slurry Description
Surface	1022	Surf	13.2	6.33	1.33	Lead: Class C Cement + additives
•	2034	Surf	9	20.6	1.94	Lead: Class C Cement + additives
Int	196	500' above shoe	13.2	6.42	1.33	Tail: Class H / C + additives
Dunduntion	260	500' tieback	9	20.6	1.94	Lead: Class H / C + additives
Production	972	КОР	13.2	5.31	1.6	Tail: Class H / C + additives

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	1	уре	1	Tested to:
			An	nular	x	50% of rated working pressure
Int 1	13-5/8"	3M	Blin	d Ram		
IIIL I	13-3/6		Pip	e Ram		3M
			Dout	ole Ram	X	2141
			Other*			
	13-5/8"	5M	An	nular	x	50% of rated working pressure
			Blin	d Ram		
Production			Pip	e Ram		
			Dout	ole Ram	X	5M
			Other *			
			An	nular		
			Blin	d Ram		
			Pip	e Ram		
			Doul	ole Ram		
			Other			
			*		1	

5. Mud Program

6.	Depth	Т	Weight	<b>1</b> 72_	Water I am
From	To	Туре	(ppg)	Vis	Water Loss
0	979 1005	FW	8.5 - 9.0	28-34	N/C
979	8900	Brine	10 – 10.5	28-34	N/C
8900	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.

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I What will be used to monitor the loss or gain at third?	L PV/ I /Pacon/V/icital Monitoring
What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

#### 6. Logging and Testing Procedures

Logg	ing, Coring and Testing.
X	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run
Ĺ	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

Addi	tional 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	5017 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.

PIOV	AGG TO THE DEAT.	 	
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		
<u>x</u>	Directional Plan	
	Other, describe	