

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carlsbad Field Office

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.*5. Lease Serial No.
NMNM114992

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.
FIGHTING OKRA 18 19 FED 31H9. API Well No.
30-025-43267-00-X110. Field and Pool or Exploratory Area
GWC-025 G06 S263407P11. County or Parish, State
LEA 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: REBECCA DEAL

E-Mail: Rebecca.Deal@dvn.com

3a. Address

6488 SEVEN RIVERS HIGHWAY
ARTESIA, NM 88211

3b. Phone No. (include area code)

Ph: 405-228-8429

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

Sec 18 T26S R34E Lot 2 2310FNL 330FWL

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input checked="" type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> 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 recompleate 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 recompleation 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 casing grade of the intermediate cement for well. It is currently approved to run 9-5/8" J-55 40# BTC to 4,000' MD and crossover to 9-5/8" HCK-55 40# BTC to intermediate casing point of 5,250' MD. The request is to change the intermediate casing grade only to J-55 for the entirety of the string while keeping the same size, weight, and connections.

Please see attached Drilling Plan.

Operator shall filled 1/3" casing with fluid while running intermediate casing

All previous COAs still apply. No new COA required.

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

Electronic Submission #404704 verified by the BLM Well Information System
For DEVON ENERGY PRODUCTION COMPANY, sent to the Hobbs
Committed to AFMSS for processing by ZOTA STEVENS on 02/20/2018 (18ZS0045SE)

Name (Printed/Typed) REBECCA DEAL

Title REGULATORY COMPLIANCE PROFESSI

Signature (Electronic Submission)

Date 02/16/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ZOTA STEVENS

Title PETROLEUM ENGINEER

Date 02/20/2018

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 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, Fighting Okra 18-19 Fed 31H

1. Geologic Formations

TVD of target	10,083'	Pilot hole depth	n/a
MD at TD:	18,123'	Deepest expected fresh water:	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	897	Barren	
Salado	1244	Barren	
Bell Canyon	5295	Barren	
Cherry Canyon	6346	Oil	
Brushy Canyon	8361	Oil	
Bone Spring	9514	Oil	
Leonard Shale (UPR)	9539	Oil	
1st BSPG Sand	10454	Oil	

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

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2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn .	SF Collapse	SF Burst	SF Tension
	From	To							
17.5"	0	930'	13.375"	48	H-40	STC	1.125	1.0	1.8
12.25"	0	5,250'	9.625"	40	J-55	BTC	1.125	1.0	1.8
8.75"	0	18,123'	5.5"	17	P-110	BTC	1.125	1.0	1.8
BLM Minimum Safety Factor							1.125	1.00	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

	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 rd 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 nd 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?	

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3. Cementing Program

Casing	# Sk	Wt. lb/ gal	H ₂ O gal/sk	Yld ft ³ / sack	500# Comp. Strength (hours)	Slurry Description
13-3/8" Surface	1000	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9-5/8" Inter.	1200	12.9	9.81	1.85	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	430	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
5-1/2" Prod.	412	11.9	12.89	2.31	n/a	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
	330	12.5	10.86	1.96	30	1 st Stage Lead: (65:35) Class H Cement: Poz (Fly Ash) + 6% BWOC Bentonite + 0.25% BWOC HR-601 + 0.125 lbs/sack Poly-E-Flake
	2130	14.5	5.31	1.2	25	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" Prod Two Stage	652	11.9	12.89	2.31	n/a	1 st Stage 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
	2130	14.5	5.31	1.2	25	1 st Stage 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
	DV Tool = 5445ft					
	20	11	14.81	2.55	22	2 nd Stage Lead: Tuned Light® Cement + 0.125 lb/sk Pol-E-Flake
	30	14.8	6.32	1.33	6	2 nd Stage Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake

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
13-3/8" Surface	0'	100%
9-5/8" Intermediate	0'	75%
5-1/2" Production Casing	5050'	25%
5-1/2" Production Casing – Two Stage	1 st Stage = 5445ft / 2 nd Stage = 5050ft	25%

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4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12-1/4"	13-5/8"	3M	Annular	x	50% of working pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		
8-3/4"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.

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	Y	Are anchors required by manufacturer?
Y		<p>A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.</p> <p>Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.</p> <ul style="list-style-type: none"> Wellhead will be installed by vendor representatives. If the welding is performed by a third party, the vendor representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal. Vendor representative will install the test plug for the initial BOP test. Vendor will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted. Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating. Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2. <p>After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.</p> <p>After running the 9-5/8' intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead.</p> <p>The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.</p> <p>Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.</p>

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	See attached schematic.
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5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	930'	FW Gel	8.6-8.8	28-34	N/C
930'	5,250'	Saturated Brine	10.0-10.2	28-34	N/C
5,250'	18,123'	Cut Brine	8.5-9.3	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
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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
X	Mud log
	PEX

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7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4921 psi
Abnormal Temperature	No

Mitigation measure for abnormal conditions: 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? No.

Will be pre-setting casing? No.

Attachments

☒ Directional Plan

☐ Other, describe

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	7.21	1.81	0.62	930	44,640	
"B"							0	0	
w/8.4#/g mud, 30min Sfc Csg Test psig: 805			Tail Cmt	does	circ to sfc.	Totals:	930	44,640	
Comparison of Proposed to Minimum Required Cement Volumes									
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	1010	1343	701	92	8.80	1627	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	3.00	0.92	0.82	5,250	210,000
"B"								0	0
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	5,250	210,000
The cement volume(s) are intended to achieve a top of					0	ft from surface or a		930	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
12 1/4	0.3132	1630	2792	1722	62	10.20	2634	3M	0.81

Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.75, b, c, d
All > 0.70, OK.

ALT COLLAPSE SF: 0.92*1.5 =1.38

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	3.21	1.64	2.2	9,445	160,565	
"B"	17.00	P 110	BUTT	7.97	1.41	2.2	8,552	145,384	
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,078						Totals:	17,997	305,949	
B would be:				56.83	1.55	if it were a vertical wellbore.			
No Pilot Hole Planned			MTD	Max VTD	Csg VD	Curve KOP	Dogleg°	Severity°	MEOC
			17997	10010	10010	9445	90	10	10345
The cement volume(s) are intended to achieve a top of				5050	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	0.2526	2750	3873	3278	18	9.30			1.35
Setting Depths for D V Tool(s):			5445				sum of sx	Σ CuFt	Σ%excess
% excess cmt by stage:			19	16			2730	3898	19