Form 3160-3 (June 2015)		FORM APPROVED OMB No. 1004-0137
UNITED STATE	ES	Expires: January 31, 2018
DEPARTMENT OF THE	5. Lease Serial No.	
BUREAU OF LAND MAN		
APPLICATION FOR PERMIT TO	DRILL OR REENTER	6. If Indian, Allotee or Tribe Name
1a. Type of work:   DRILL	REENTER	7. If Unit or CA Agreement, Name and No.
1b. Type of Well: Oil Well Gas Well	Other	
1c. Type of Completion: Hydraulic Fracturing	Single Zone Multiple Zone	8. Lease Name and Well No.
2. Name of Operator		9. API Well No. 30-015-56976
3a. Address	3b. Phone No. (include area code)	10, Field and Pool, or Exploratory
4. Location of Well (Report location clearly and in accordance	e with any State requirements.*)	11. Sec., T. R. M. or Blk. and Survey or Area
At surface		
At proposed prod. zone		
14. Distance in miles and direction from nearest town or post of	ffice*	12. County or Parish 13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease 17. Spac	ing Unit dedicated to this well
<ol> <li>Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.</li> </ol>	19. Proposed Depth 20, BLM	/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
	24. Attachments	
The following, completed in accordance with the requirements (as applicable)	of Onshore Oil and Gas Order No. 1, and the	Hydraulic Fracturing rule per 43 CFR 3162.3-3
<ol> <li>Well plat certified by a registered surveyor.</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan (if the location is on National Forest Syst SUPO must be filed with the appropriate Forest Service Office</li> </ol>	Item 20 above). 5. Operator certification.	ns unless covered by an existing bond on file (see rmation and/or plans as may be requested by the
25. Signature	Name (Printed/Typed)	Date
Title		!
Approved by (Signature)	Name (Printed/Typed)	Date
Title	Office	1
Application approval does not warrant or certify that the applicat applicant to conduct operations thereon. Conditions of approval, if any, are attached.	ant holds legal or equitable title to those rights	in the subject lease which would entitle the
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, of the United States any false, fictitious or fraudulent statements		



(Continued on page 2)

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<u>C-10</u>	2		En			ral Resources Department			I	Revised July 9, 2024
Submit Electronically OIL CONSERVA					CONSERVA	TION DIVISION			🗹 Initial Su	Ibmittal
Via OCD Permitting						Submittal	Amende			
							Type:	As Drille		
					WELL LOCATI	ON INFORMATION				
API Nu	mber <u>30-01</u>	5-56976	Pool Code	39350	)	Pool Name LIVIN	IGSTON	RIDGE; B	SONE SPR	ING
Propert	y Code	322487	Property N	ame	BELL 00 11	2 FED STATE COM			Well Numb	er 536H
OGRID	No. 6137		Operator N			ODUCTION COMPA				vel Elevation 3,494'
		wner: 🗌 Stat							I ∃ Tribal 🗹 Fe	
	Surface C				reuerai	Winteral Own				euerai
					Surfa	ce Location				
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Lo	ongitude	County
Ρ	11	23S	31E		356' FSL	931' FEL	32.312	689° -10	03.743041°	EDDY
	1	I			Bottom	Hole Location	I	I		
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Lo	ongitude	County
OT 1	2	23S	31E		20' FNL	1,210' FEL	32.340	672° -10	03.743969°	EDDY
Dedicat	ted Acres	Infill or Defir	-	Defining	Well API	Overlapping Spacing	Unit (Y/N)	Consolidat		
319	.93	INFILL		30-015	-45278	N CF				CF
Order N	lumbers.	R-21158				Well setbacks are u	nder Comm	on Ownersh	iip: □Yes ⊠I	No
					Kick Of	ff Point (KOP)				
UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude		ongitude	County
	Occion		-	LOI	-	-			•	•
Ρ	11	23S	31E		50' FSL	1,209' FEL	32.311754	-1	03.74402457	EDDY
UL	Section	Township	Range	Lot	First Ta	ke Point (FTP) Ft. from E/W	Latitude		ongitude	County
0∟ ₽	11	23S	31E	LOI	100' FSL	1,210' FEL	32.311		03.743944°	EDDY
Г		233	SIE			-	32.311	-10	03.743344	EDDT
UL	Section	Township	Range	Lot	Last Ta	Ke Point (LTP)	Latitude		ongitude	County
	2 Section	· ·	-	LOI		1,210' FEL			03.743968°	
.OT 1	2	23S	31E		100' FNL	1,21011	32.340	452 -10	03.743900	EDDY
Unitized	d Area or A	rea of Uniform	Interest	Spacing	Unit Type 🗵 Ho	orizontal  Vertical Ground Floor Elevation:				
OPERA	ATOR CER	TIFICATIONS				SURVEYOR CERTIFI	CATIONS			
					l complete to the	I hereby certify that the w	ell location sh	own on this pl	lat was plotted	from field notes of
					directional well, d mineral interest	actual surveys made by n correct to the best of my l	nellor under m	y supervision	, and that the s	ame is true and
					a right to drill this orking interest or	JA EW	MEXICO	$\sim$		
unlease	d mineral int	erest, or to a vo	luntary pooling		or a compulsory					
		ore entered by t					177	r		
the cons	ent of at leas	st one lessee or	owner of a wo	rking interes		R. A.	HIMAN L.S.	E S		
mineral i	interest in ea		arget pool or fo	ormation) in	which any part of		55	/		
	om the divisio			a comp			ESSIONA			
Signatur			<u>,                                    </u>	ate		Signature and Seal of Pro		vevor		
Signatur	Thand	u Thanks			2/25/25		Jossional Sul	vGyOr		
Dripted	1.	r		_		Certificate Number	Date of Sur			
Printed I		HANDEE THO	MAS				Date of Sul		104 1000 -	
	_					12177		2	/21/2025	
Email Ac	ddress	SHANDEE.	THOMAS@D	VN.COM						

Note: No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division. Released to Imaging: 7/16/2025 11:09:24 AM

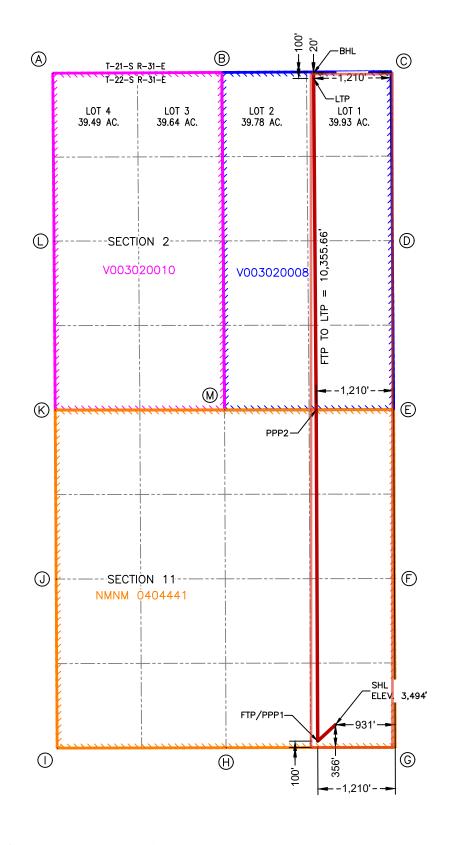
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ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.

#### BELLOQ 11 2 FED STATE COM 536H



KICK-OFF POINT 50' FN/SL & 1,209' FEL NAD 83 X = 723422 NAD 83 Y = 477683 NAD 83 LAT = 32.31175469 NAD 83 LONG = -103.74402457 FIRST TAKE POINT & PENETRATION POINT 1 100' FSL & 1,210' FEL NAD 83 X = 723,421.12' NAD 83 Y = 477,733.78' NAD 83 LAT = 32.311987 NAD 83 LONG = -103.743944° PENETRATION POINT 2 0' FNL & 1,210' FEL NAD 83 X = 723,397.28' NAD 83 Y = 482,912.01' NAD 83 LAT = 32.326221° NAD 83 LONG = -103.743929° LAST TAKE POINT 100' FNL & 1,210' FEL NAD 83 X = 723,356.76' NAD 83 Y = 488.089.22' NAD 83 LAT = 32.340452° NAD 83 LONG = -103.743968° BOTTOM HOLE LOCATION 20' FNL & 1,210' FEL NAD 83 X = 723,356.13' NAD 83 Y = 488,169.22' NAD 83 LAT = 32.340672° NAD 83 LONG = -103.743969°

SURFACE HOLE LOCATION 356' FSL & 931' FEL ELEV. = 3,494'

NAD 83 X = 723,698.68'

NAD 83 Y = 477,990.68' NAD 83 LAT = 32.312689

NAD 83 LONG = -103.743041°

-	CORNER COORDINATES NEW MEXICO EAST - NAD 83						
POINT	NORTHING/EASTING						
А	IRON PIPE W/ BRASS CAP N:488,170.14' E:719,281.91'						
В	CALCULATED CORNER N:488,182.51' E:721,923.94'						
с	IRON PIPE W/ BRASS CAP N:488,194.88' E:724,565.97'						
D	IRON PIPE W/ BRASS CAP N:485,553.70' E:724,586.82'						
E	IRON PIPE W/ BRASS CAP N:482,913.36' E:724,607.28'						
F	IRON PIPE W/ BRASS CAP N:480,274.46' E:724,619.43'						
G	IRON PIPE W/ BRASS CAP N:477,636.02' E:724,631.58'						
н	IRON PIPE W/ BRASS CAP N:477,631.12' E:721,989.07'						
I	IRON PIPE W/ BRASS CAP N:477,624.81' E:719,350.58'						
J	IRON PIPE W/ BRASS CAP N:480,266.04' E:719,334.92'						
к	IRON PIPE W/ BRASS CAP N:482,906.14' E:719,319.63'						
L	IRON PIPE W/ BRASS CAP N:485,547.22' E:719,301.45'						
м	IRON PIPE W/ BRASS CAP N:482,910.41' E:721,965.14'						

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eived by OCD: 7/7/2025	4:07:48 PM							Page 4				
State of New MexicoSubmit Electronically Via E-permittingEnergy, Minerals and Natural Resources DepartmentVia E-permittingOil Conservation Division 1220 South St. Francis Dr.Inclusion Division												
	Santa Fe, NM 87505											
	N	ATURAL GA	AS MANA	GEMENT PI	LAN							
This Natural Gas Manag	gement Plan mi	ust be submitted wi	th each Applica	tion for Permit to D	Drill (A	PD) for a ne	ew or	recompleted well.				
<u>Section 1 – Plan Description</u> <u>Effective May 25, 2021</u>												
I. Operator: Devon En	ergy Productio	n Company, L.P.	OGRID:	6137		Date:	5 /	<u>12 / 2024</u>				
II. Type: 🖾 Original 🛛	] Amendment	due to □ 19.15.27.	9.D(6)(a) NMA	C □ 19.15.27.9.D(	6)(b) N	MAC 🗆 Ot	ther.					
If Other, please describe	:											
<b>III. Well(s):</b> Provide the be recompleted from a s					vells pr	oposed to b	e dri	lled or proposed to				
Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D		cipated MCF/D	Pı	Anticipated oduced Water BBL/D				
See Attached												
IV. Central Delivery P		SEE ATTACI						7.9(D)(1) NMAC]				
V. Anticipated Schedu proposed to be recomple					ell or s	et of wells p	oropo	sed to be drilled or				
Well Name	API	Spud Date	TD Reached Date	ned Completion Initial Flow First Produ Commencement Date Back Date Date				First Production Date				
See Attached												
<ul> <li>VI. Separation Equipment: I Attach a complete description of how Operator will size separation equipment to optimize gas capture.</li> <li>VII. Operational Practices: I Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.</li> </ul>												
Subsection A through F of 19.15.27.8 NMAC. VIII. Best Management Practices: 🖾 Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.												

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# Section 2 – Enhanced Plan EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

### IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

### X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in		

**XI. Map.**  $\Box$  Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

**XII. Line Capacity.** The natural gas gathering system  $\Box$  will  $\Box$  will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

**XIII.** Line Pressure. Operator  $\Box$  does  $\Box$  does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

□ Attach Operator's plan to manage production in response to the increased line pressure.

**XIV. Confidentiality:**  $\Box$  Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

# <u>Section 3 - Certifications</u> <u>Effective May 25, 2021</u>

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

 $\square$  Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

 $\Box$  Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. *If Operator checks this box, Operator will select one of the following:* 

Well Shut-In. 
Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

**Venting and Flaring Plan.**  $\Box$  Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

# Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:							
Printed Name: Jeff Walla							
Title: Surface Land and Regulatory Manager							
E-mail Address:							
Date:							
Phone:							
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)							
Approved By:							
Title:							
Approval Date:							
Conditions of Approval:							

#### NATURAL GAS MANAGEMENT PLAN Section 1 - Plan Description

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

									Anticipated	Anticipated
								Anticipated	Gas	Produced Water
Well Name	API	ULS	TR		FOOTA	GES		Oil BBL/D	MCF/D	BBL/D
Belloq 11-2 Fed State Com 124H			11-23S-31E	961	FEL	356	FSL	(+/-)1997b	opd/(+/-)2796r	ncfd/(+/-)5763bwpd
Belloq 11-2 Fed State Com 304H			11-23S-31E	2202	FEL	206	FSL	(+/-)1130b	opd/(+/-)2839r	ncfd/(+/-)6074bwpd
Belloq 11-2 Fed State Com 305H			11-23S-31E	992	FEL	206	FSL	(+/-)1130b	opd/(+/-)2839r	ncfd/(+/-)6074bwpd
Belloq 11-2 Fed State Com 306H			11-23S-31E	932	FEL	206	FSL	(+/-)1130b	opd/(+/-)2839r	ncfd/(+/-)6074bwpd
Belloq 11-2 Fed State Com 535H			11-23S-31E	991	FEL	356	FSL	(+/-)1344b	opd/(+/-)3270r	ncfd/(+/-)2353bwpd
Belloq 11-2 Fed State Com 536H			11-23S-31E	931	FEL	356	FSL	(+/-)1344b	opd/(+/-)3270r	ncfd/(+/-)2353bwpd
Belloq 11-2 Fed State Com 537H			11-23S-31E	901	FEL	356	FSL	(+/-)1344b	opd/(+/-)3270r	ncfd/(+/-)2353bwpd
Belloq 11-2 Fed State Com 538H			11-23S-31E	871	FEL	356	FSL	(+/-)1344b	opd/(+/-)3270r	ncfd/(+/-)2353bwpd
Belloq 11-2 Fed State Com 813H			11-23S-31E	2232	FEL	206	FSL	(+/-)913bo	opd/(+/-)4641m	cfd/(+/-)3197bwpd
Belloq 11-2 Fed State Com 825H			11-23S-31E	2172	FEL	206	FSL	(+/-)695bo	opd/(+/-)7600m	cfd/(+/-)4370bwpd
Belloq 11-2 Fed State Com 826H			11-23S-31E	2142	FEL	206	FSL	(+/-)913bo	opd/(+/-)4641m	cfd/(+/-)3197bwpd
Belloq 11-2 Fed State Com 827H			11-23S-31E	962	FEL	206	FSL	(+/-)695bo	opd/(+/-)7600m	cfd/(+/-)4370bwpd
Belloq 11-2 Fed State Com 828H			11-23S-31E	902	FEL	206	FSL	(+/-)913bo	opd/(+/-)4641m	cfd/(+/-)3197bwpd

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

			Completion		First
		TD Reached	Commencem	Initial Flow	Production
API	Spud Date	Date	ent Date	back Date	Date
	4/1/2025	5/1/2025	8/29/2025	8/29/2025	8/29/2025
	4/1/2025	5/1/2025	8/29/2025	8/29/2025	8/29/2025
	4/1/2025	5/1/2025	8/29/2025	8/29/2025	8/29/2025
	4/1/2025	5/1/2025	8/29/2025	8/29/2025	8/29/2025
	4/1/2025	5/1/2025	8/29/2025	8/29/2025	8/29/2025
	4/1/2025	5/1/2025	8/29/2025	8/29/2025	8/29/2025
	4/1/2025	5/1/2025	8/29/2025	8/29/2025	8/29/2025
	4/1/2025	5/1/2025	8/29/2025	8/29/2025	8/29/2025
	4/1/2025	5/1/2025	8/29/2025	8/29/2025	8/29/2025
	4/1/2025	5/1/2025	8/29/2025	8/29/2025	8/29/2025
	4/1/2025	5/1/2025	8/29/2025	8/29/2025	8/29/2025
	4/1/2025	5/1/2025	8/29/2025	8/29/2025	8/29/2025
	4/1/2025	5/1/2025	8/29/2025	8/29/2025	8/29/2025
	API	API         Spud Date           4/1/2025         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025           -         4/1/2025	API         Spud Date         Date           4/1/2025         5/1/2025	API         TD Reached Spud Date         Commencem ent Date           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025           4/1/2025         5/1/2025	API         TD Reached Spud Date         Commencem ent Date         Initial Flow ent Date           4PI         4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025           4/1/2025         5/1/2025         8/29/2025         8/29/2025     <



#### VI. Separation Equipment

Devon Energy Production Company, L.P. utilizes a "stage separation" process in which oil and gas separation is carried out through a series of separators operating at successively reduced pressures. Hydrocarbon liquids are produced into a high-pressure inlet separator, then carried through one or more lower pressure separation vessels before entering the storage tanks. The purpose of this separation process is to attain maximum recovery of liquid hydrocarbons from the fluids and allow maximum capture of produced gas into the sales pipeline. Devon utilizes a series of Low-Pressure Compression units to capture gas off the staged separation and send it to the sales pipeline. This process minimizes the amount of flash gas that enters the end-stage storage tanks that is subsequently vented or flared.



#### **VII.** Operational Practices

Devon Energy Production Company, L. P. will employ best management practices and control technologies to maximize the recovery and minimize waste of natural gas through venting and flaring.

- During drilling operations, Devon will utilize flares and/or combustors to capture and control natural gas, where technically feasible. If flaring is deemed technically in-feasible, Devon will employ best management practices to minimize or reduce venting to the extent possible.
- During completions operations, Devon will utilize Green Completion methods to capture gas produced during well completions that is otherwise vented or flared. If capture is technically in-feasible, flares and/or combustors will be used to capture and control flow back fluids entering into frac tanks during initial flowback. Upon indication of first measurable hydrocarbon volumes, Devon will turn operations to onsite separation vessels and flow to the gathering pipeline.
- During production operations, Devon will take every practical effort to minimize waste of natural gas through venting and flaring by:
  - Designing and constructing facilities in a manner consistent to achieve maximum capture and control of hydrocarbon liquids & produced gas
  - Utilizing a closed-loop capture system to collect and route produced gas to sales line via low pressure compression, or to a flare/combustor
  - Flaring in lieu of venting, where technically feasible
  - Utilizing auto-ignitors or continuous pilots, with thermocouples connected to Scada, to quickly detect and resolve issues related to malfunctioning flares/combustors
  - Employ the use of automatic tank gauging to minimize storage tank venting during loading events
  - Installing air-driven or electric-driven pneumatics & combustion engines, where technically feasible to minimize venting to the atmosphere
  - Confirm equipment is properly maintained and repaired through a preventative maintenance and repair program to ensure equipment meets all manufacturer specifications
  - Conduct and document AVO inspections on the frequency set forth in Part 27 to detect and repair any onsite leaks as quickly and efficiently as is feasible



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Devon Energy Production Company, L.P. will utilize best management practices to minimize venting during active and planned maintenance activities. Devon is operating under guidance that production facilities permitted under NOI permits have no provisions to allow high pressure flaring and high pressure flaring is only allowed in disruption scenarios so long as the duration is less than eight hours. When technically feasible, flaring during maintenance activities will be utilized in lieu of venting to the atmosphere. Devon will work with third-party operators during scheduled maintenance of downstream pipeline or processing plants to address those events ahead of time to minimize venting. Actions considered include identifying alternative capture approaches or planning to temporarily reduce production or shut in the well to address these circumstances.



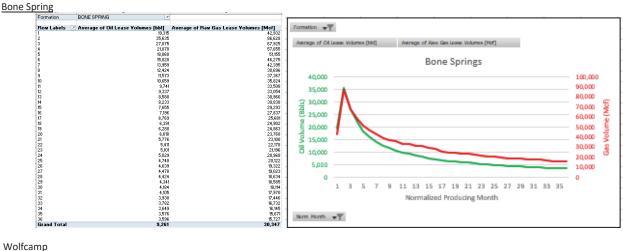
Devon Energy Production Company, L.P. 333 W. Sheridan Avenue Oklahoma City, Oklahoma 73102 Phone: (405) 228-4800

# WASTE MINIMIZATION PLAN

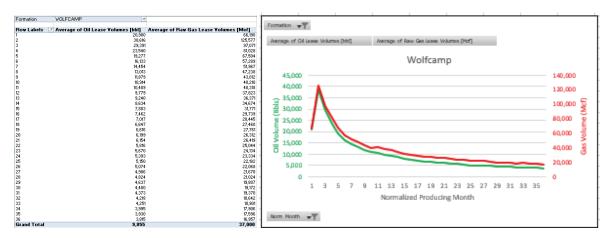
Per 89 FR 25378 - Waste Prevention, Production Subject to Royalties, and Resource Conservation, requirements:

- (1) initial oil production estimates and decline,
- (2) initial gas production estimates and decline,
- (3) certification that the operator has an executed gas sales contract to sell 100 percent of the produced oil-well gas, and
- (4)any other information demonstrating the operator's plans to avoid the waste of gas.

(1), (2) 3 year Oil and Gas decline curves: Bone Spring and Wolfcamp formation decline curves below supply Year 1, 2, 3 cumulative values for oil and gas, in range format; based on peak IP rates for oil and gas based on Devon Energy Production Company, L.P. operated wells ID post 1/2019, 10K LL norm, P90-10 ranges, annualized rates. Please refer to NGMP for table of initial oil and gas volumes.







(3) Certification (NGMP Section 3 – Certification): Operator (Devon Energy Production Company, L.P.) will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system;

(4) Addl waste avoidance information: Refer to NGMP Sec. VII. Operational Practices & VIII. Best Management Practices during Maintenance

#### 1. Geologic Formations

TVD of target	8950	Pilot hole depth	N/A
MD at TD:	19224	Deepest expected fresh water	

Basin

	Depth	Water/Mineral	
Formation	(TVD)	Bearing/Target	Hazards*
	from KB	Zone?	
Rustler	700		
Salt	1075		
Base of Salt	4200		
Delaware	4200		
Cherry Canyon	5350		
Brushy Canyon	6600		
1st Bone Spring Lime	8275		
Avalon	8472		
Salado, #126	1968		

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

2. Casing P	rogram							
Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Top (MD)	Bottom (MD)	Top (TVD)	Bottom (TVD)
17 1/2	13 3/8	54.5	J-55	BTC	0	725 MD	0	725 TVD
12 1/4	10 3/4	45.5	J-55	BTC SCC	0	4300 MD	0	4300 TVD
9 7/8	8 5/8	32.0	P110	MOFXL	0	8311	0	8311
7 7/8	5 1/2	20.0	P110HP	CDC-HTQ	0	19224 MD	0	8950 TVD

•All casing strings will be tested in accordance with 43 CFR 3172. Must have table for contingency casing.

• The Rustler top will be validated via drilling parameters (i.e. reduction in ROP), and the surface casing setting depth will be revised accordingly. In addition, surface casing will be set a minimum of 25' above the top of the salt.

3.	Cementing	Program	(Primary	Design)
5.	Cementing	rugram	(I I IIIIai y	Design

Casing	# Sks	тос	Wt. (lb/gal)	Yld (ft3/sack)	Slurry Description
Surface	563	Surf	13.2	1.4	Lead: Class C Cement + additives
Int	280	Surf	9.0	3.3	Lead: Class C Cement + additives
III	114	3720	13.2	1.4	Tail: Class H / C + additives
Int 2					
Int 2	48	7700	13.2	1.4	Tail: Class H / C + additives
Int 2	419	3000	9.0	1.4	Squeeze Lead: Class C Cement + additives
Intermediate Squeeze, post					
completion					
Production	117	6411	9.0	3.3	Lead: Class H /C + additives
FIGUUCIIOII	1431	8411	13.2	1.4	Tail: Class H / C + additives

• Devon will design around R111-Q: 4 String, Open 1st Int and 2nd Int Annulus, Figure D

• Int 2 TOC will be, prior to completion, brought up 500ft above 1st Bone Lime, leaving an open annulus for pressure monitoring

• Following completion, a cement top out will be performed to bring TOC 500ft into Int 1, but below the POTASH interval

• Int 2 cement will adhere to R111-Q requirements

Casing String	% Excess
Surface	50%
Intermediate	30%
Intermediate 2	0%
Production	10%

.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Туре		~	Tested to:	
			An	nular	Х	50% of rated working pressure	
Int	13-5/8"	5M	Bline	d Ram	Х		
liit	15-5/8	21/1	Pipe	e Ram		5M	
			Doub	le Ram	Х	SIM	
			Other*				
			An	nular	Х	50% of rated working pressure	
Int 2	13-5/8"	5M	Blind Ram		Х	- 5M	
lift 2	13-5/8	JIVI	Pipe Ram				
			Double Ram		Х	5101	
			Other*				
			Annul	ar (5M)	Х	50% of rated working pressure	
Production	13-5/8"	5M	Blind Ram		Х		
rioduction	15-5/0	31/1	Pipe Ram			5M	
			Doub	le Ram	Х	5111	
			Other*				

#### 4. Pressure Control Equipment (Four String Design)

#### 5. Mud Program (Four String Design)

Section	Туре	Weight (ppg)
Surface	WBM	8.5-9
Intermediate	DBE / Cut Brine	10-10.5
Intermediate 2	WBM	8.5-9
Production	WBM	8.5-9

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, C	Coring and Testing
	Will run GR/CNL from TD to surface (horizontal well - vertical portion of hole). Stated logs run will be in the
Х	Completion Report and sbumitted 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.

Additiona	al logs planned	Interval
	Resistivity	
	Density	
Х	CBL	Production casing
Х	Mud log	KOP to TD
	PEX	

#### 7. Drilling Conditions

Condition	Specfiy what type and where?				
BH pressure at deepest TVD	4189				
Abnormal temperature	No				

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

 Hydrogren 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 43 CFR 3176. 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 batch 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 (43 CFR 3172, 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 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

Х	Directional Plan
	Other, describe

# **Devon Energy** APD VARIANCE DATA

## **OPERATOR NAME:** Devon Energy

### 1. SUMMARY OF Variance:

Devon Energy respectfully requests approval for the following additions to the drilling plan:

1. Potential utilization of a spudder rig to pre-set surface casing.

### 2. Description of Operations

- **1.** A spudder rig contractor may move in their rig to drill the surface hole section and pre-set surface casing on this well.
  - **a.** After drilling the surface hole section, the rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
  - **b.** Rig will utilize fresh water based mud to drill surface hole to TD.
- 2. The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- **3.** A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wingvalves.
  - **a.** A means for intervention will be maintained while the drilling rig is not over the well.
- 4. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 5. Drilling operation will be performed with the big 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 BLM will be contacted / notified 24 hours before the big rig moves back on to the pad with the pre-set surface casing.
- **6.** Devon Energy will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
- 7. Once the rig is removed, Devon Energy will secure the wellhead area by placing a guard rail around the cellar area.



# **Section 1 - Geologic Formations**

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producino Formatio
15931254	UNKNOWN	3494	0	Ó	ALLUVIUM	NONE	N
15931260	RUSTLER	2794	700	700	SANDSTONE	NONE	N
15931255	TOP SALT	2419	1075	1075	SALT	NONE	N
15931256	BASE OF SALT	-706	4200	4200	SALT	NONE	N
15931273	BELL CANYON	-956	4450	4450	SANDSTONE	NATURAL GAS, OIL	N
15931274	CHERRY CANYON	-1856	5350	5350	SANDSTONE	NATURAL GAS, OIL	N
15931275	BRUSHY CANYON	-3106	6600	6600	SANDSTONE	NATURAL GAS, OIL	N
15931277	BONE SPRING 1ST	-5856	9350	9350	SANDSTONE	NATURAL GAS, OIL	N
15931278	BONE SPRING 2ND	-6406	9900	9900	SANDSTONE	NATURAL GAS, OIL	N
15931287	BONE SPRING 3RD	-6956	10450	10450	LIMESTONE	NATURAL GAS, OIL	N
15931284	BONE SPRING 3RD	-7656	11150	11150	SANDSTONE	NATURAL GAS, OIL	N
15931285	WOLFCAMP	-8106	11600	11600	SHALE	NATURAL GAS, OIL	N
15931286	STRAWN	-9806	13300	13300	LIMESTONE	NATURAL GAS, OIL	N

# **Section 2 - Blowout Prevention**





Commitment Runs Deep



Design Plan Operation and Maintenance Plan Closure Plan

SENM - Closed Loop Systems June 2010

# I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

## II. Operations and Maintenance Plan

*Primary Shakers*: The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

*Mud Cleaner*: The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



*Centrifuges*: The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependent on well factors.

*Dewatering System:* The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

*Cuttings Boxes:* Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

*Process Tank:* (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

Sump and Sump Pump: The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

*Reserve Fluids (Tank Farm):* A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

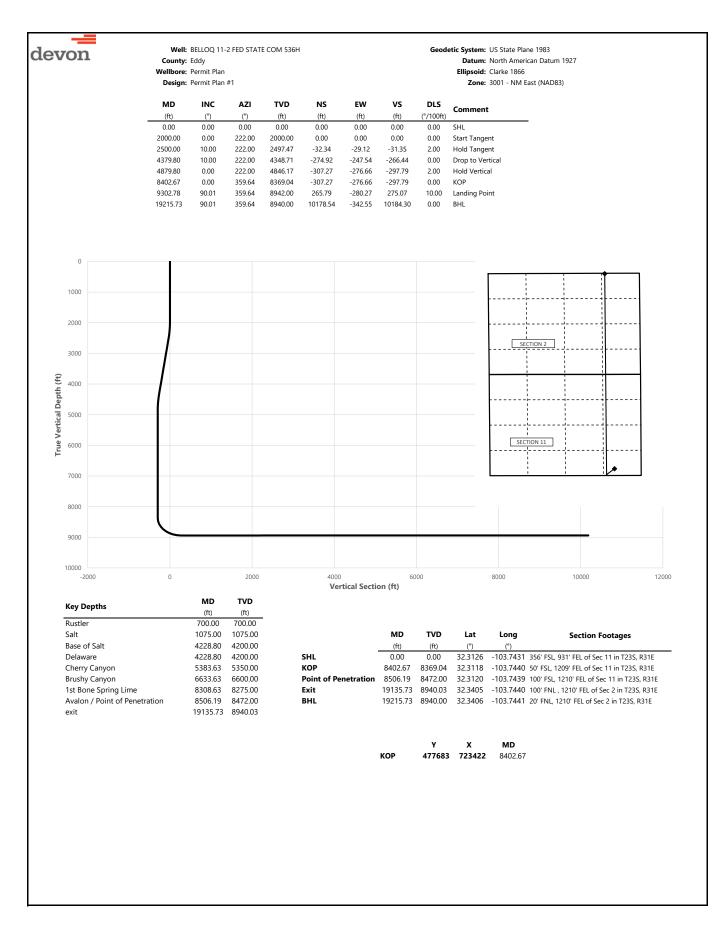
All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

## III. Closure Plan

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.



evon		County: Wellbore:			COM 536H				Geodetic System: US State Plane 1983 Datum: North American Datum 1927 Ellipsoid: Clarke 1866 Zone: 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
	100.00	0.00	222.00	100.00	0.00	0.00	0.00	0.00	
	200.00	0.00	222.00	200.00	0.00	0.00	0.00	0.00	
	300.00	0.00	222.00	300.00	0.00	0.00	0.00	0.00	
	400.00	0.00	222.00	400.00	0.00	0.00	0.00	0.00	
	500.00	0.00	222.00	500.00	0.00	0.00	0.00	0.00	
	600.00	0.00	222.00	600.00	0.00	0.00	0.00	0.00	
	700.00	0.00	222.00	700.00	0.00	0.00	0.00	0.00	Rustler,
	800.00	0.00	222.00	800.00	0.00	0.00	0.00	0.00	
	900.00	0.00	222.00	900.00	0.00	0.00	0.00	0.00	
	1000.00	0.00	222.00	1000.00	0.00	0.00	0.00	0.00	
	1075.00	0.00	222.00	1075.00	0.00	0.00	0.00	0.00	Salt
	1100.00	0.00	222.00	1100.00	0.00	0.00	0.00	0.00	
	1200.00	0.00	222.00	1200.00	0.00	0.00	0.00	0.00	
	1300.00	0.00	222.00	1300.00	0.00	0.00	0.00	0.00	
	1400.00	0.00	222.00	1400.00	0.00	0.00	0.00	0.00	
	1500.00	0.00	222.00	1500.00	0.00	0.00	0.00	0.00	
	1600.00	0.00	222.00	1600.00	0.00	0.00	0.00	0.00	
	1700.00	0.00	222.00	1700.00	0.00	0.00	0.00	0.00	
	1800.00	0.00	222.00	1800.00	0.00	0.00	0.00	0.00	
	1900.00	0.00	222.00	1900.00	0.00	0.00	0.00	0.00	Chart Tax sout
	2000.00	0.00	222.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
	2100.00 2200.00	2.00 4.00	222.00 222.00	2099.98	-1.30	-1.17	-1.26 -5.03	2.00 2.00	
	2200.00	4.00 6.00	222.00	2199.84 2299.45	-5.19 -11.66	-4.67 -10.50	-5.03	2.00	
	2300.00	8.00	222.00	2299.45	-20.72	-18.66	-20.08	2.00	
	2500.00	10.00	222.00	2398.70	-32.34	-29.12	-31.35	2.00	Hold Tangent
	2600.00	10.00	222.00	2595.95	-45.25	-40.74	-43.85	0.00	noid rangent
	2700.00	10.00	222.00	2694.43	-58.15	-52.36	-56.36	0.00	
	2800.00	10.00	222.00	2792.91	-71.06	-63.98	-68.87	0.00	
	2900.00	10.00	222.00	2891.39	-83.96	-75.60	-81.37	0.00	
	3000.00	10.00	222.00	2989.87	-96.87	-87.22	-93.88	0.00	
	3100.00	10.00	222.00	3088.35	-109.77	-98.84	-106.38	0.00	
	3200.00	10.00	222.00	3186.83	-122.68	-110.46	-118.89	0.00	
	3300.00	10.00	222.00	3285.31	-135.58	-122.08	-131.40	0.00	
	3400.00	10.00	222.00	3383.79	-148.48	-133.70	-143.90	0.00	
	3500.00	10.00	222.00	3482.27	-161.39	-145.32	-156.41	0.00	
	3600.00	10.00	222.00	3580.75	-174.29	-156.93	-168.92	0.00	
	3700.00	10.00	222.00	3679.23	-187.20	-168.55	-181.42	0.00	
	3800.00	10.00	222.00	3777.72	-200.10	-180.17	-193.93	0.00	
	3900.00	10.00	222.00	3876.20	-213.01	-191.79	-206.44	0.00	
	4000.00	10.00	222.00	3974.68	-225.91	-203.41	-218.94	0.00	
	4100.00	10.00	222.00	4073.16	-238.82	-215.03	-231.45	0.00	
	4200.00	10.00	222.00	4171.64	-251.72	-226.65	-243.96	0.00	
	4228.80	10.00	222.00	4200.00	-255.44	-230.00	-247.56	0.00	Base of Salt, Delaware
	4300.00	10.00	222.00	4270.12	-264.63	-238.27	-256.46	0.00	
	4379.80	10.00	222.00	4348.71	-274.92	-247.54	-266.44	0.00	Drop to Vertical
	4400.00	9.60	222.00	4368.61	-277.48	-249.84	-268.92	2.00	
	4500.00	7.60	222.00	4467.48	-288.59	-259.84	-279.68	2.00	
	4600.00	5.60	222.00	4566.82	-297.12	-267.53	-287.95	2.00	
	4700.00	3.60	222.00	4666.49	-303.08	-272.89	-293.73	2.00	
	4800.00	1.60	222.00	4766.38	-306.44	-275.92	-296.99	2.00	
	4879.80	0.00	222.00	4846.17	-307.27	-276.66	-297.79	2.00	Hold Vertical
	4900.00	0.00	359.64	4866.37	-307.27	-276.66	-297.79	0.00	
	5000.00	0.00	359.64	4966.37	-307.27	-276.66	-297.79	0.00	
	5100.00	0.00	359.64	5066.37	-307.27	-276.66	-297.79	0.00	
	5200.00	0.00	359.64	5166.37	-307.27	-276.66	-297.79	0.00	
	5300.00	0.00	359.64	5266.37	-307.27	-276.66	-297.79	0.00	
	5383.63	0.00	359.64	5350.00	-307.27	-276.66	-297.79	0.00	Cherry Canyon
	5400.00	0.00	359.64	5366.37	-307.27	-276.66	-297.79	0.00	
	5500.00	0.00	359.64	5466.37	-307.27	-276.66	-297.79	0.00	
	5600.00	0.00	359.64	5566.37	-307.27	-276.66	-297.79	0.00	
	5700.00	0.00	359.64	5666.37	-307.27	-276.66	-297.79	0.00	
	5800.00	0.00	359.64	5766.37	-307.27	-276.66	-297.79	0.00	
	5900.00	0.00	359.64	5866.37	-307.27	-276.66	-297.79	0.00	
	6000.00	0.00	359.64	5966.37	-307.27	-276.66	-297.79	0.00	
	6100.00	0.00	359.64	6066.37	-307.27	-276.66	-297.79	0.00	
	6200.00	0.00	359.64	6166.37	-307.27	-276.66	-297.79	0.00	
	6300.00	0.00	359.64	6266.37	-307.27	-276.66	-297.79	0.00	
	6400.00	0.00	359.64	6366.37	-307.27	-276.66	-297.79	0.00	

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		Design.	rennitria	1 7 1					
	MD	INC	AZI	TVD	NS	EW	vs	DLS	
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
-	6500.00	0.00	359.64	6466.37	-307.27	-276.66	-297.79	0.00	
	6600.00	0.00	359.64	6566.37	-307.27	-276.66	-297.79	0.00	
	6633.63	0.00	359.64	6600.00	-307.27	-276.66	-297.79	0.00	Brushy Canyon
	6700.00	0.00	359.64	6666.37	-307.27	-276.66	-297.79	0.00	
	6800.00	0.00	359.64	6766.37	-307.27	-276.66	-297.79	0.00	
	6900.00 7000.00	0.00 0.00	359.64 359.64	6866.37 6966.37	-307.27 -307.27	-276.66 -276.66	-297.79 -297.79	0.00 0.00	
	7100.00	0.00	359.64	7066.37	-307.27	-276.66	-297.79	0.00	
	7200.00	0.00	359.64	7166.37	-307.27	-276.66	-297.79	0.00	
	7300.00	0.00	359.64	7266.37	-307.27	-276.66	-297.79	0.00	
	7400.00	0.00	359.64	7366.37	-307.27	-276.66	-297.79	0.00	
	7500.00	0.00	359.64	7466.37	-307.27	-276.66	-297.79	0.00	
	7600.00	0.00	359.64	7566.37	-307.27	-276.66	-297.79	0.00	
	7700.00	0.00	359.64	7666.37	-307.27	-276.66	-297.79	0.00	
	7800.00	0.00	359.64	7766.37	-307.27	-276.66	-297.79	0.00	
	7900.00	0.00	359.64	7866.37	-307.27	-276.66	-297.79	0.00	
	8000.00 8100.00	0.00 0.00	359.64 359.64	7966.37 8066.37	-307.27 -307.27	-276.66 -276.66	-297.79 -297.79	0.00 0.00	
	8200.00	0.00	359.64	8166.37	-307.27	-276.66	-297.79	0.00	
	8300.00	0.00	359.64	8266.37	-307.27	-276.66	-297.79	0.00	
	8308.63	0.00	359.64	8275.00	-307.27	-276.66	-297.79	0.00	1st Bone Spring Lime
	8400.00	0.00	359.64	8366.37	-307.27	-276.66	-297.79	0.00	
	8402.67	0.00	359.64	8369.04	-307.27	-276.66	-297.79	0.00	КОР
	8500.00	9.73	359.64	8465.90	-299.02	-276.72	-289.54	10.00	
	8506.19	10.35	359.64	8472.00	-297.94	-276.72	-288.46	10.00	Avalon / Point of Penetration
	8600.00	19.73	359.64	8562.49	-273.62	-276.88	-264.15	10.00	
	8700.00	29.73	359.64	8653.21	-231.84	-277.14	-222.38	10.00	
	8800.00 8900.00	39.73 49.73	359.64 359.64	8735.28 8806.23	-174.93 -104.64	-277.50 -277.94	-165.50 -95.24	10.00 10.00	
	9000.00	59.73	359.64	8863.90	-23.10	-278.45	-13.72	10.00	
	9100.00	69.73	359.64	8906.53	67.21	-279.02	76.56	10.00	
	9200.00	79.73	359.64	8932.83	163.56	-279.63	172.87	10.00	
	9300.00	89.73	359.64	8941.99	263.01	-280.25	272.29	10.00	
	9302.78	90.01	359.64	8942.00	265.79	-280.27	275.07	10.00	Landing Point
	9400.00	90.01	359.64	8941.98	363.01	-280.88	372.25	0.00	
	9500.00	90.01	359.64	8941.96	463.01	-281.51	472.21	0.00	
	9600.00	90.01	359.64	8941.94	563.00	-282.13	572.18	0.00	
	9700.00	90.01	359.64	8941.92	663.00	-282.76	672.14	0.00	
	9800.00 9900.00	90.01 90.01	359.64 359.64	8941.90 8941.88	763.00 863.00	-283.39 -284.02	772.10 872.06	0.00 0.00	
	10000.00	90.01	359.64	8941.86	963.00	-284.65	972.03	0.00	
	10100.00	90.01	359.64	8941.84	1062.99	-285.28	1071.99	0.00	
	10200.00	90.01	359.64	8941.82	1162.99	-285.91	1171.95	0.00	
	10300.00	90.01	359.64	8941.80	1262.99	-286.54	1271.91	0.00	
	10400.00	90.01	359.64	8941.78	1362.99	-287.17	1371.88	0.00	
	10500.00	90.01	359.64	8941.76	1462.99	-287.79	1471.84	0.00	
	10600.00	90.01	359.64	8941.74	1562.98	-288.42	1571.80	0.00	
	10700.00	90.01	359.64	8941.72	1662.98	-289.05	1671.76	0.00	
	10800.00	90.01	359.64	8941.70	1762.98	-289.68	1771.73	0.00	
	10900.00 11000.00	90.01 90.01	359.64 359.64	8941.68 8941.66	1862.98 1962.98	-290.31 -290.94	1871.69 1971.65	0.00 0.00	
	111000.00	90.01 90.01	359.64 359.64	8941.66 8941.64	2062.98	-290.94 -291.57	2071.65	0.00	
	11200.00	90.01	359.64	8941.62	2162.97	-291.37	2171.58	0.00	
	11300.00	90.01	359.64	8941.60	2262.97	-292.82	2271.54	0.00	
	11400.00	90.01	359.64	8941.58	2362.97	-293.45	2371.50	0.00	
	11500.00	90.01	359.64	8941.56	2462.97	-294.08	2471.46	0.00	
	11600.00	90.01	359.64	8941.54	2562.96	-294.71	2571.43	0.00	
	11700.00	90.01	359.64	8941.52	2662.96	-295.34	2671.39	0.00	
	11800.00	90.01	359.64	8941.50	2762.96	-295.97	2771.35	0.00	
	11900.00	90.01	359.64	8941.48	2862.96	-296.60	2871.31	0.00	
	12000.00	90.01	359.64	8941.46	2962.96	-297.23	2971.28	0.00	
	12100.00	90.01	359.64	8941.44	3062.95	-297.86	3071.24	0.00	
	12200.00 12300.00	90.01 90.01	359.64 359.64	8941.42 8941.40	3162.95 3262.95	-298.48 -299.11	3171.20 3271.17	0.00 0.00	
	12300.00	90.01	359.64	8941.40 8941.38	3362.95	-299.11	3371.17	0.00	
	12500.00	90.01	359.64	8941.36	3462.95	-300.37	3471.09	0.00	
	12600.00	90.01	359.64	8941.34	3562.94	-301.00	3571.05	0.00	
	12700.00	90.01	359.64	8941.32	3662.94	-301.63	3671.02	0.00	
	12800.00	90.01	359.64	8941.30	3762.94	-302.26	3770.98	0.00	
	12900.00	90.01	359.64	8941.28	3862.94	-302.89	3870.94	0.00	

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			Permit Plan						Zone: 3001 - NM East (NAD	083)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	Comment	
	(ft) 13000.00	(°) 90.01	(°) 359.64	(ft) 8941.26	(ft) 3962.94	(ft) -303.52	(ft) 3970.90	(°/100ft) 0.00		
	13100.00	90.01	359.64	8941.24	4062.93	-304.14	4070.87	0.00		
	13200.00	90.01	359.64	8941.22	4162.93	-304.77	4170.83	0.00		
	13300.00	90.01	359.64	8941.20	4262.93	-305.40	4270.79	0.00		
	13400.00	90.01	359.64	8941.18	4362.93	-306.03	4370.75	0.00		
	13500.00	90.01	359.64	8941.16	4462.93	-306.66	4470.72	0.00		
	13600.00 13700.00	90.01 90.01	359.64 359.64	8941.14 8941.12	4562.92 4662.92	-307.29 -307.92	4570.68 4670.64	0.00 0.00		
	13800.00	90.01	359.64	8941.10	4762.92	-308.55	4770.60	0.00		
	13900.00	90.01	359.64	8941.08	4862.92	-309.17	4870.57	0.00		
	14000.00	90.01	359.64	8941.06	4962.92	-309.80	4970.53	0.00		
	14100.00	90.01	359.64	8941.04	5062.91	-310.43	5070.49	0.00		
	14200.00	90.01	359.64	8941.02	5162.91	-311.06	5170.45	0.00		
	14300.00 14400.00	90.01 90.01	359.64 359.64	8941.00 8940.98	5262.91 5362.91	-311.69 -312.32	5270.42 5370.38	0.00 0.00		
	14500.00	90.01	359.64	8940.96	5462.91	-312.95	5470.34	0.00		
	14600.00	90.01	359.64	8940.94	5562.91	-313.58	5570.30	0.00		
	14700.00	90.01	359.64	8940.92	5662.90	-314.21	5670.27	0.00		
	14800.00	90.01	359.64	8940.90	5762.90	-314.83	5770.23	0.00		
	14900.00	90.01	359.64	8940.88	5862.90	-315.46	5870.19	0.00		
	15000.00 15100.00	90.01 90.01	359.64 359.64	8940.86 8940.84	5962.90 6062.90	-316.09 -316.72	5970.16 6070.12	0.00 0.00		
	15200.00	90.01	359.64	8940.82	6162.89	-317.35	6170.08	0.00		
	15300.00	90.01	359.64	8940.80	6262.89	-317.98	6270.04	0.00		
	15400.00	90.01	359.64	8940.78	6362.89	-318.61	6370.01	0.00		
	15500.00	90.01	359.64	8940.76	6462.89	-319.24	6469.97	0.00		
	15600.00	90.01	359.64	8940.74	6562.89	-319.87	6569.93	0.00		
	15700.00 15800.00	90.01 90.01	359.64 359.64	8940.72 8940.70	6662.88 6762.88	-320.49 -321.12	6669.89 6769.86	0.00 0.00		
	15900.00	90.01	359.64	8940.68	6862.88	-321.12	6869.82	0.00		
	16000.00	90.01	359.64	8940.66	6962.88	-322.38	6969.78	0.00		
	16100.00	90.01	359.64	8940.64	7062.88	-323.01	7069.74	0.00		
	16200.00	90.01	359.64	8940.62	7162.87	-323.64	7169.71	0.00		
	16300.00	90.01	359.64	8940.60	7262.87	-324.27	7269.67	0.00		
	16400.00 16500.00	90.01 90.01	359.64 359.64	8940.58 8940.56	7362.87 7462.87	-324.90 -325.52	7369.63 7469.59	0.00 0.00		
	16600.00	90.01	359.64	8940.54	7562.87	-326.15	7569.56	0.00		
	16700.00	90.01	359.64	8940.52	7662.86	-326.78	7669.52	0.00		
	16800.00	90.01	359.64	8940.50	7762.86	-327.41	7769.48	0.00		
	16900.00	90.01	359.64	8940.48	7862.86	-328.04	7869.44	0.00		
	17000.00 17100.00	90.01 90.01	359.64 359.64	8940.46 8940.44	7962.86 8062.86	-328.67 -329.30	7969.41 8069.37	0.00 0.00		
	17100.00	90.01 90.01	359.64 359.64	8940.44 8940.42	8062.86 8162.85	-329.30 -329.93	8069.37 8169.33	0.00		
	17300.00	90.01	359.64	8940.40	8262.85	-330.56	8269.29	0.00		
	17400.00	90.01	359.64	8940.38	8362.85	-331.18	8369.26	0.00		
	17500.00	90.01	359.64	8940.36	8462.85	-331.81	8469.22	0.00		
	17600.00	90.01	359.64	8940.34	8562.85	-332.44	8569.18	0.00		
	17700.00 17800.00	90.01 90.01	359.64 359.64	8940.32 8940.30	8662.84 8762.84	-333.07 -333.70	8669.15 8769.11	0.00 0.00		
	17900.00	90.01	359.64	8940.30 8940.28	8862.84	-334.33	8869.07	0.00		
	18000.00	90.01	359.64	8940.26	8962.84	-334.96	8969.03	0.00		
	18100.00	90.01	359.64	8940.24	9062.84	-335.59	9069.00	0.00		
	18200.00	90.01	359.64	8940.22	9162.83	-336.22	9168.96	0.00		
	18300.00	90.01	359.64	8940.20 8940.18	9262.83	-336.84	9268.92	0.00		
	18400.00 18500.00	90.01 90.01	359.64 359.64	8940.18 8940.16	9362.83 9462.83	-337.47 -338.10	9368.88 9468.85	0.00 0.00		
	18600.00	90.01	359.64	8940.10 8940.14	9562.83	-338.73	9568.81	0.00		
	18700.00	90.01	359.64	8940.12	9662.82	-339.36	9668.77	0.00		
	18800.00	90.01	359.64	8940.10	9762.82	-339.99	9768.73	0.00		
	18900.00	90.01	359.64	8940.08	9862.82	-340.62	9868.70	0.00		
	19000.00	90.01	359.64	8940.06	9962.82	-341.25	9968.66	0.00		
	19100.00 19135.73	90.01 90.01	359.64 359.64	8940.04 8940.03	10062.82 10098.54	-341.87 -342.10	10068.62 10104.33	0.00 0.00	exit	
	19135.73	90.01 90.01	359.64 359.64	8940.03 8940.02	10098.54	-342.10 -342.50	10104.33	0.00	CAIL	
	19215.73	90.01	359.64	8940.00	10178.54	-342.55	10184.30	0.00	BHL	

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### **Devon Energy Annular Preventer Summary**

### 1. Component and Preventer Compatibility Table

The table below, which covers the drilling and casing of the 10M MASP portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

Component	OD	Preventer	RWP
Drillpipe	4.5"	Fixed lower 4.5"	10M
		Upper 4.5-7" VBR	
HWDP	4.5"	Fixed lower 4.5"	10M
		Upper 4.5-7" VBR	
Drill collars and MWD tools	4.75"	Upper 4.5-7" VBR	10M
Mud Motor	4.75"	Upper 4.5-7" VBR	10M
Production casing	5.5"	Upper 4.5-7" VBR	10M
ALL	0-13-5/8"	Annular	5M
Open-hole	-	Blind Rams	10M

6-3/4" Production hole section, 10M requirement

VBR = Variable Bore Ram. Compatible range listed in chart.

### 2. Well Control Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. The pressure at which control is swapped from the annular to another compatible ram is variable, but the operator will document in the submission their operating pressure limit. The operator may chose an operating pressure less than or equal to RWP, but in no case will it exceed the RWP of the annular preventer.

### General Procedure While Drilling

- 1. Sound alarm (alert crew)
- 2. Space out drill string
- 3. Shut down pumps (stop pumps and rotary)
- 4. Shut-in Well (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
  - a. SIDPP and SICP
  - b. Pit gain
  - c. Time
- 8. Regroup and identify forward plan
- 9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram.

# **Devon Energy Annular Preventer Summary**

# General Procedure While Tripping

- 1. Sound alarm (alert crew)
- 2. Stab full opening safety valve and close
- 3. Space out drill string
- 4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
  - a. SIDPP and SICP
    - b. Pit gain
    - c. Time
- 8. Regroup and identify forward plan
- 9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram.

# General Procedure While Running Casing

- 1. Sound alarm (alert crew)
- 2. Stab crossover and full opening safety valve and close
- 3. Space out string
- 4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
- 5. Confirm shut-in
- 6. Notify toolpusher/company representative
- 7. Read and record the following:
  - a. SIDPP and SICP
  - b. Pit gain
  - c. Time
- 8. Regroup and identify forward plan
- 9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to compatible pipe ram.

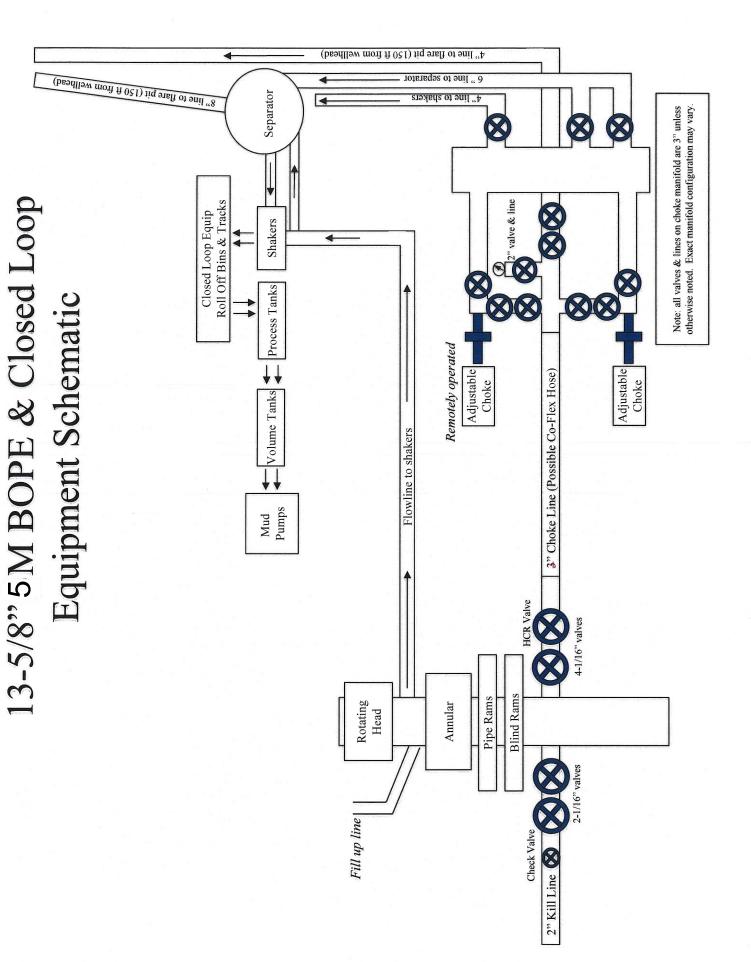
# General Procedure With No Pipe In Hole (Open Hole)

- 1. Sound alarm (alert crew)
- 2. Shut-in with blind rams or BSR. (HCR and choke will already be in the closed position.)
- 3. Confirm shut-in
- 4. Notify toolpusher/company representative
- 5. Read and record the following:
  - a. SICP
  - b. Pit gain
  - c. Time
- 6. Regroup and identify forward plan

## **Devon Energy Annular Preventer Summary**

### General Procedures While Pulling BHA thru Stack

- 1. PRIOR to pulling last joint of drillpipe thru the stack.
  - a. Perform flowcheck, if flowing:
  - b. Sound alarm (alert crew)
  - c. Stab full opening safety valve and close
  - d. Space out drill string with tool joint just beneath the upper pipe ram.
  - e. Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
  - f. Confirm shut-in
  - g. Notify toolpusher/company representative
  - h. Read and record the following:
    - i. SIDPP and SICP
    - ii. Pit gain
    - iii. Time
  - i. Regroup and identify forward plan
- 2. With BHA in the stack and compatible ram preventer and pipe combo immediately available.
  - a. Sound alarm (alert crew)
  - b. Stab crossover and full opening safety valve and close
  - c. Space out drill string with upset just beneath the compatible pipe ram.
  - d. Shut-in using compatible pipe ram. (HCR and choke will already be in the closed position.)
  - e. Confirm shut-in
  - f. Notify toolpusher/company representative
  - g. Read and record the following:
    - i. SIDPP and SICP
    - ii. Pit gain
    - iii. Time
  - h. Regroup and identify forward plan
- 3. With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.
  - a. Sound alarm (alert crew)
  - b. If possible to pick up high enough, pull string clear of the stack and follow "Open Hole" scenario.
  - c. If impossible to pick up high enough to pull the string clear of the stack:
  - d. Stab crossover, make up one joint/stand of drillpipe, and full opening safety valve and close
  - e. Space out drill string with tooljoint just beneath the upper pipe ram.
  - f. Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
  - g. Confirm shut-in
  - h. Notify toolpusher/company representative
  - i. Read and record the following:
    - i. SIDPP and SICP
    - ii. Pit gain
    - iii. Time
  - j. Regroup and identify forward plan



A multibowl wellhead may be used. The BOP will be tested per 43 CFR 3172 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.

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 5000 (5M) psi.

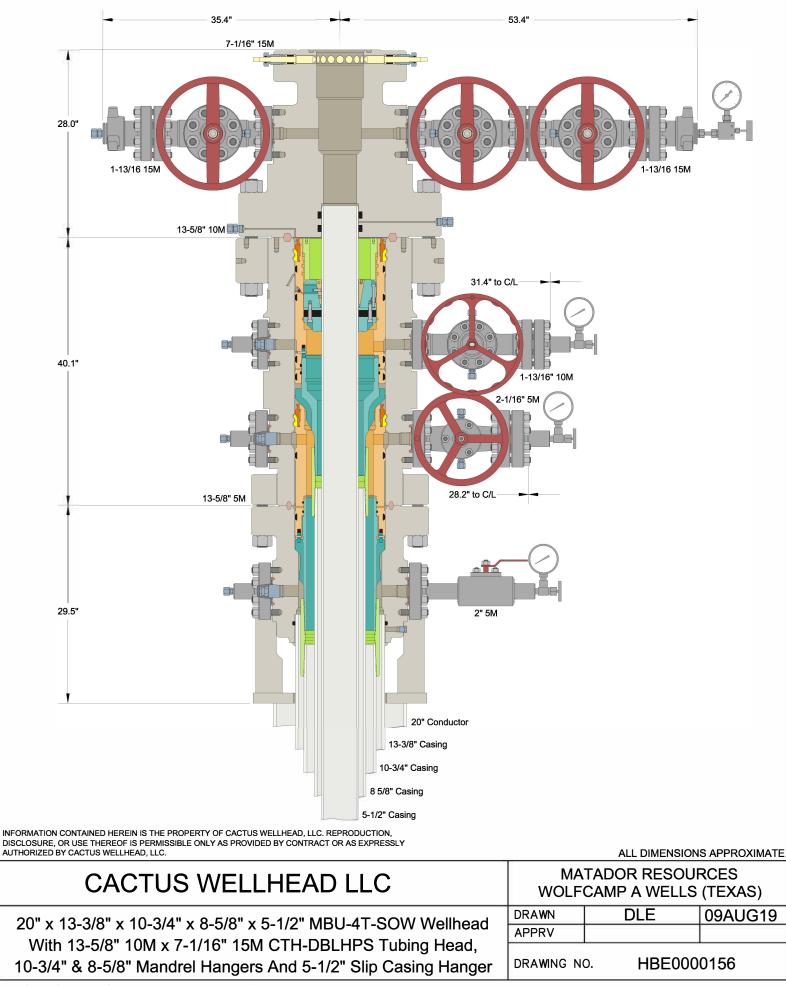
- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company 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 5M, 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 43 CFR 3172.

After running the surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 5,000 psi high pressure test. The 5,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per 43 CFR 3172. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per 43 CFR 3172.

After running the intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 5M will already be installed on the wellhead.

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 5,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.



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#### Section 2 - Blowout Preventer Testing Procedure

#### Variance Request

Devon Energy requests to only test BOP connection breaks after drilling out of surface casing and while skidding between wells which conforms to API Standard 53 and industry standards. The initial BOP test will follow 43 CFR 3172, and subsequent tests following a skid will only test connections that are broken. This test will at minimum include the Top Pipe Ram, HCR, Kill Line Check Valve, QDC (quick disconnect to wellhead) and BOP shell of the 10M BOPE to 5M for 10 minutes. Additional pressure testing is required for pressure-containing and pressure-controlling connections when the integrity of a pressure seal is broken. If a break to the flex hose that runs to the choke manifold is required due to repositioning from a skid, the HCR will remain open during the shell test to include that additional break. The variance only pertains to intermediate hole-sections. This variance will meet or exceed 43 CFR 3172 per the following: Devon Energy will perform a full BOP test per 43 CFR 3172 before drilling out of the intermediate casing string(s) and starting the production hole, testing the Annular during initial BOP testing to a minimum of 70% RWP and higher than MASP, and pressure testing at a 21-day interval frequency. The BLM will be contacted 4hrs prior to a BOPE test. The BLM will be notified if and when a well control event is encountered. In the event break testing is not utilized, then a full BOPE test would be conducted.

Devon Energy requests to perform offline BOP stump testing and offline BOPE testing. All pressurecontaining and pressure-controlling seals will be tested either online or offline as denoted in the table below and per BLM approval during initial BOP test following test pressure requirements set forth in 43 CFR 3172. Remaining components not tested offline or on the stump will be tested within 72-hours when the BOP is connected to the wellhead. If stump testing exceeds 72-hour window prior to connecting to the wellhead, the BLM will be notified and either stump testing restarted, or the BOP being tested online. The BLM will be contacted 4hrs prior to a BOPE test. The BLM will be notified if and when a well control event is encountered. In the event stump testing is not utilized, then a full BOPE test would be conducted.

Components	Offline	Offline, BOPE	Break	Online
Upper Rams		Х	Х	Х
Blind Rams		X		Х
Lower Rams				Х
Outside Kill Valve		Х	Х	Х
Inside Kill Valve		Х	Х	Х
Kill Line Check Valve		Х	Х	Х
Inside Choke Valve		Х	Х	X
HCR		Х	Х	Х
Kill Line	х			Х
Annular		Х		Х
Choke Manifold Valves and Hose	Х			X
Mudline (Mud Pumps, Rig Floor Valves, Kelly Hose, Mud Line)	Х			Х
Standpipe Valve	Х			Х
IBOP (Upper and Lower)	Х			X

Devon requests offline BOPE testing for the following components: Upper Rams, Blind Rams, Kill Valves, Choke Valves, and Annular Remaining well control equipment components will either be tested offline or online, per BLM approval

- Remaining BOPE will be tested online within 72-hours form completing the offline BOPE component testing
- Notify the BLM if the online BOPE testing exceeds 72-hours

All Full Tests not completed "Offline" or "Offline, BOPE" are required to be complete Online

Devon requests Break testing as stated above for 5K tests, not including production hole

Annular Preventer will be tested to minimum of 70% RWP and higher than MASP during initial BOP test

Pressure testing is required for pressure-containing connections if the integrity of a pressure seal is broken during a break test Full Tests required when entering production hole

Casing Assumptions and Load Cases

Surface

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Surface Casing Burst Design						
Load Case	External Pressure	Internal Pressure				
Pressure Test	Formation Pore Pressure	Max mud weight of next hole-				
		section plus Test psi				
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole				
		section				
Displace to Gas	Formation Pore Pressure	Dry gas from next casing point				

Surface Casing Collapse Design						
Load Case	External Pressure	Internal Pressure				
Full Evacuation	Water gradient in cement, mud above TOC	None				
Cementing	Wet cement weight	Water (8.33ppg)				

Surface Casing Tension Design						
Load Case	Assumptions					
Overpull	100kips					
Runing in hole	3 ft/s					
Service Loads	N/A					

Casing Assumptions and Load Cases

Intermediate

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Intermediate Casing Burst Design				
Load Case External Pressure Internal Pressure				
Pressure Test	Formation Pore Pressure	Max mud weight of next hole-		
		section plus Test psi		
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole		
		section		
Fracture @ Shoe	Formation Pore Pressure	Dry gas		

Intermediate Casing Collapse Design				
Load Case External Pressure Internal Pressure				
Full Evacuation	Water gradient in cement, mud above TOC	None		
Cementing	Wet cement weight	Water (8.33ppg)		

Intermediate Casing Tension Design		
Load Case	Assumptions	
Overpull	100kips	
Runing in hole	2 ft/s	
Service Loads	N/A	

Casing Assumptions and Load Cases

Production

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Production Casing Burst Design				
Load Case External Pressure Internal Pressure				
Pressure Test	Formation Pore Pressure	Fluid in hole (water or produced		
		water) + test psi		
Tubing Leak	Formation Pore Pressure	Packer @ KOP, leak below		
		surface 8.6 ppg packer fluid		
Stimulation	Formation Pore Pressure	Max frac pressure with heaviest		
		frac fluid		

Production Casing Collapse Design				
Load Case External Pressure Internal Pressure				
Full Evacuation	Water gradient in cement, mud above TOC.	None		
Cementing	Wet cement weight	Water (8.33ppg)		

Production Casing Tension Design		
Load Case	Assumptions	
Overpull	100kips	
Runing in hole	2 ft/s	
Service Loads N/A		

				MO-FXL 8-	-5/8 32.0
	MO-FXL	MO-FXL		P110H	SCY
Metal One	*1 Pipe Body: BMP P110HSCY MinYS125ksi		CDS#	MinYS1	25ksi
	Special Drift 7.87	Special Drift 7.875"		SD7.8	375
	Connection Data	Sheet	Date	27-No	
	O				
	Geometry	<u>Imperial</u>		<u>S.I.</u>	
	Pipe Body				
	Grade *1	P110HSCY		P110HSCY	
	MinYS *1	125	ksi	125	ksi
	Pipe OD ( D )	8 5/8	in	219.08	mm
MO-FXL	Weight	32.00	lb/ft	47.68	kg/m
	Actual weight	31.10		46.34	kg/m
	Wall Thickness ( t )	0.352	in	8.94	mm
	Pipe ID ( d )	7.921	in	201.19	mm
	Pipe body cross section	9.149	in <sup>2</sup>	5,902	mm <sup>2</sup>
	Special Drift Dia. *1	7.875	in	200.03	mm
	-	-	-	-	-
	Connection				
	Box OD ( W )	8.625	in	219.08	mm
T 🔶	PIN ID	7.921	in	201.19	mm
	Make up Loss	3.847	-	97.71	
Box	Box Critical Area		in		2 mm
critical	2011 011100	5.853	in <sup>2</sup>	3686	mm <sup>2</sup>
area	Joint load efficiency	69	%	69	%
5	Thread Taper           Number of Threads	Thread Taper1 / 10 ( 1.2" per ft )Number of Threads5 TPI			
p pss	Performance Properties	for Pipe Body			
	S.M.Y.S. *1	1,144	kips	5,087	kN
Pin	M.I.Y.P. *1	8,930	psi	61.59	MPa
critical	Collapse Strength *1	4,300	psi	29.66	MPa
area	Note S.M.Y.S.= Specif M.I.Y.P. = Minim *1: BMP P110HSCY: MinYS1 Performance Properties	um Internal Yield 25ksi, SD7.875, for Connectio	d Pressu , <mark>Collaps</mark> <b>n</b>	re of Pipe body e Strength 4,300	
	Tensile Yield load	789 kips		of S.M.Y.S.)	
¥		700 1			
¥	Min. Compression Yield	789 kips		of S.M.Y.S.)	
¥	Internal Pressure	789 kips 6,250 psi	( 70%	of M.I.Y.P.)	
¥	Internal Pressure External Pressure		( <mark>70%)</mark> 100% (	of M.I.Y.P. ) of Collapse St	rength
¥ _	Internal Pressure		( 70%	of M.I.Y.P. ) of Collapse St	rength
¥	Internal Pressure External Pressure Max. DLS ( deg. /100ft)		( <mark>70%)</mark> 100% (	of M.I.Y.P. ) of Collapse St	rength
¥ <u> </u>	Internal Pressure External Pressure	6,250 psi	( 70% 100% c 2	of M.I.Y.P.) of Collapse St 9	
¥	Internal Pressure External Pressure Max. DLS ( deg. /100ft) Recommended Torque Min.	6,250 psi 13,600	( <u>70%</u> 100% c 2 ft-lb	of M.I.Y.P.) of Collapse St 9 18,400	N-m
¥	Internal Pressure External Pressure Max. DLS ( deg. /100ft) Recommended Torque Min. Opti.	6,250 psi 13,600 14,900	( 70% 100% c 2 ft-lb ft-lb	of M.I.Y.P.) of Collapse St 9 18,400 20,200	N-m N-m
¥	Internal Pressure External Pressure Max. DLS ( deg. /100ft) Recommended Torque Min. Opti. Max.	6,250 psi 13,600 14,900 16,200	(70% 100% c 2 ft-lb ft-lb ft-lb	of M.I.Y.P.) of Collapse St 9 18,400 20,200 21,900	N-m N-m N-m
¥	Internal Pressure External Pressure Max. DLS ( deg. /100ft) Recommended Torque Min. Opti. Max. Operational Max.	6,250 psi 13,600 14,900 16,200 28,400	( 70% 100% c 2 ft-lb ft-lb ft-lb	of M.I.Y.P.) of Collapse St 9 18,400 20,200 21,900 38,500	N-m N-m N-m N-m
<b>₩</b>	Internal Pressure External Pressure Max. DLS ( deg. /100ft) Recommended Torque Min. Opti. Max.	6,250 psi 13,600 14,900 16,200 28,400	( 70% 100% c 2 ft-lb ft-lb ft-lb	of M.I.Y.P.) of Collapse St 9 18,400 20,200 21,900 38,500	N-m N-m N-m N-m

Statements regarding the suitability of products for certain types of applications are based on Metal One's knowledge of typical requirements that are often placed on Metal One products in standard well configurations. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application

The products described in this Connection Data Sheet are not recommended for use in deep water offshore applications. For more information, please refer to <u>http://www.mtlo.co.jp/mo-con/\_images/top/WebsiteTerms\_Active\_20333287\_1.pdf</u> the contents of which are incorporated by reference into this Connection Data Sheet.

Casing Assumptions and Load Cases

Intermediate

All casing design assumptions were ran in Stress Check to determine safety factor which meet or exceed both Devon Energy and BLM minimum requirements. All casing strings will be filled while running in hole in order to not exceed collapse rating of the pipe.

Intermediate Casing Burst Design				
Load Case External Pressure Internal Pressure				
Pressure Test	Formation Pore Pressure	Max mud weight of next hole-		
		section plus Test psi		
Drill Ahead	Formation Pore Pressure	Max mud weight of next hole		
		section		
Fracture @ Shoe	Formation Pore Pressure	Dry gas		

Intermediate Casing Collapse Design				
Load Case External Pressure Internal Pressure				
Full Evacuation	Water gradient in cement, mud	None		
above TOC				
Cementing	Wet cement weight	Water (8.33ppg)		

Intermediate Casing Tension Design		
Load Case	Assumptions	
Overpull	100kips	
Runing in hole	2 ft/s	
Service Loads	N/A	

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Devon Energy Production Company LP -
LOCATION:	Section 11, T.23 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
WELL NAME & NO.:	Belloq 11 2 Fed State Com 535H
ATS/API ID:	ATS-24-2106
APD ID:	10400099466
Sundry ID:	N/a
WELL NAME & NO.:	Belloq 11 2 Fed State Com 536H
ATS/API ID:	ATS-24-2107
APD ID:	10400099473
Sundry ID:	N/a
WELL NAME & NO.:	Belloq 11 2 Fed State Com 537H
ATS/API ID:	ATS-24-2108
APD ID:	10400099475
Sundry ID:	N/a
WELL NAME & NO.:	Belloq 11 2 Fed State Com 538H
ATS/API ID:	ATS-24-2109
APD ID:	10400099476
Sundry ID:	N/a

COA

•

H2S	No 🔻		
Potash	R-111-Q •	Figure D 💌	
Cave/Karst Potential	Low		
Cave/Karst Potential	Critical		
Variance	🖸 None	🖸 Flex Hose	C Other
Wellhead	Conventional and Multibowl	•	
Other	⊈ 4 String □ 5 String	Capitan Reef None	WIPP
Other	Pilot Hole None	Open Annulus	
Cementing	Contingency Squeeze None	Echo-Meter Int 2	Primary Cement Squeeze None
Special Requirements	U Water Disposal/Injection	COM	🗖 Unit
Special Requirements	□ Batch Sundry	Waste Prevention Waste MP	
Special Requirements Variance	<ul><li>BOPE Break Testing</li><li>Offline BOPE Testing</li></ul>	✓ Offline Cementing	Casing Clearance

#### A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet **43 CFR part 3170 Subpart 3176**, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

#### **B.** CASING

- 1. The **13-3/8** inch surface casing shall be set at approximately **840 feet** (a minimum of 70 feet into the Rustler Anhydrite and above the salt when present, and below usable fresh water) and cemented to the surface. The surface hole shall be **17 1/2** inch in diameter.
  - a. If cement does not circulate to the surface, 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.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of <u>8</u> <u>hours</u> or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. 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.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

## Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

- 2. The minimum required fill of cement behind the **10-3/4** inch intermediate casing shall be set at approximately **4475 feet** is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash. Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

## Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

- 3. The minimum required fill of cement behind the 8-5/8 inch intermediate casing is:
  - The top of cement in the annulus between the 1<sup>st</sup> intermediate and the 2<sup>nd</sup> intermediate casing strings shall stand un-cemented at least **500 feet** below the 1<sup>st</sup> intermediate shoe. Zero percent excess shall be pumped on the cement slurry to ensure no tie-back into the previous shoe.
  - After hydraulic fracturing operations have been concluded and no longer than 180 days after the well is brought online, the operator shall bradenhead cement at least 500 feet tie-back into the previous casing but not higher than USGS Marker Bed No. 126. (Squeeze 419 sxs Class C and 95 bbls Displacement Fluid)
     Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

Operator has proposed to pump down **10-3/4**" X **8-5/8**" annulus post completion. <u>Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus.</u> Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore. Report the amount of fluid utilized to pump the cement slurry and the calculated top of cement slurry to the BLM. Operator may conduct a negative and positive pressure test during completion to remediate sustained casing pressure and ensure cement tie-back requirement.

Operator has proposed an open annulus completion in R-111-Q. <u>Submit results to the BLM</u>. Pressure monitoring device and Pressure Safety Valves must be installed at surface on the 10-3/4" x 8 5/8" annulus.

In the event of a casing failure during completion, the operator must contact the BLM at (575-706-2779) and (575-361-2822 Eddy County).

- 4. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - Cement should tie-back **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126. Operator must run a CBL from TD of the production casing to surface to verify top of cement. Submit results to the BLM.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

#### C. PRESSURE CONTROL

- 1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2.

#### **Option 1:**

- a. 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. Annular which shall be tested to 2100 (70% Working Pressure) psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 10-3/4 intermediate casing shoe shall be 3000 (3M) psi. Annular which shall be tested to 2100 (70% Working Pressure) psi.
- c. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **5-1/2** inch intermediate casing shoe shall be **5000 (5M)** psi.

#### **Option 2:**

- a. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 13-3/8 inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.

#### **D. SPECIAL REQUIREMENT (S)**

#### **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR part 3170 Subpart 3171
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. <u>When the Communitization Agreement number is known, it shall also be on the sign.</u>

#### **BOPE Break Testing Variance (Approved)**

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. (Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (575-706-2779) prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-361-2822 Eddy County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at **21**-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 43 CFR part 3170 Subpart 3172.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.
- The BOPE testing shall be conducted while the rig is stationary.

#### **Offline BOPE Testing**

Operator has been (Approved) to test the BOPE offline.

The BOPE offline testing shall be stationary during pressure testing.

Online BOPE testing should commence within 72 hours of offline BOPE testing completion. Notify the BLM if interval exceeds 72 hours.

Notify the BLM 4hrs prior to offline BOPE testing at **Eddy County: 575-361-2822**. **Offline Cementing** 

Operator has been (**Approved**) to pump the proposed cement program offline in the **Intermediate(s) interval**.

Offline cementing should commence within 24 hours of landing the casing for the interval.

Notify the BLM 4hrs prior to cementing offline at Eddy County: 575-361-2822.

## **GENERAL REQUIREMENTS**

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Eddy County
 EMAIL or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
 BLM NM CEO DrillingNotifications@BLM COV

BLM\_NM\_CFO\_DrillingNotifications@BLM.GOV (575) 361-2822

- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per **43** CFR part **3170** Subpart **3172** as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

#### A. CASING

1. 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.). The initial wellhead installed on the well will remain on the well with spools used as needed.

- <u>Wait on cement (WOC) for Potash Areas:</u> 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 of both lead and tail cement, 2) until cement has been in place at least <u>8 hours</u>. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. <u>Wait on cement (WOC) for Water Basin:</u> 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 at the shoe, 2) until cement has been in place at least <u>8 hours</u>. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. 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. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.
- B. PRESSURE CONTROL
- All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3.

- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
- 3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been

done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to 43 CFR part 3170 Subpart 3172 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per 43 CFR part 3170 Subpart 3172.

#### C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

#### D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

Long Vo (LVO) 6/23/2025



Devon Energy Center 333 West Sheridan Avenue Oklahoma City, Oklahoma 73102-5015

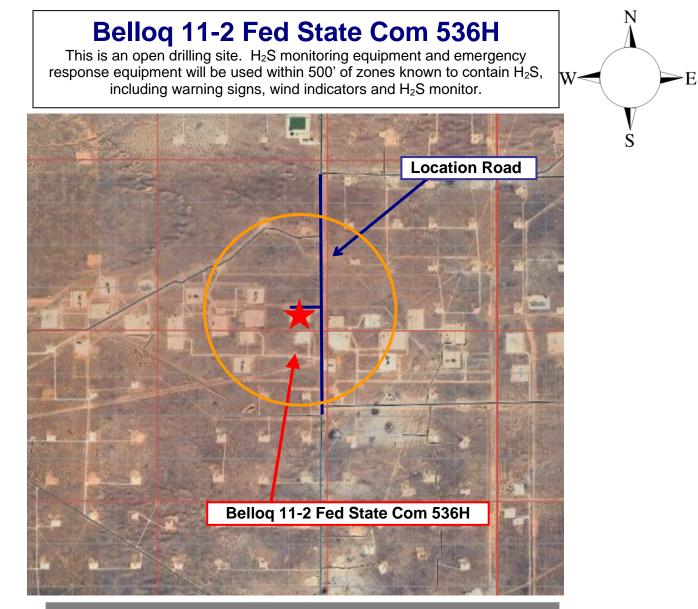
# Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan

For

## Belloq 11-2 Fed State Com 536H

Sec-11 T-23S R-31E 356' FSL & 931' FEL LAT. = 32.312689° N (NAD83) LONG = 103.743041° W

**Eddy County NM** 



Assumed 100 ppm ROE = 3000' (Radius of Exposure) 100 ppm H2S concentration shall trigger activation of this plan.

#### Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. <u>There are no homes or buildings in or near the ROE</u>.

## Assumed 100 ppm ROE = 3000'

**100** ppm H<sub>2</sub>S concentration shall trigger activation of this plan.

#### Emergency Procedures

In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
  - $\circ$  Detection of H<sub>2</sub>S, and
  - Measures for protection against the gas,
  - Equipment used for protection and emergency response.

#### Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Common	Chemical	Specific	Threshold	Hazardous Limit	Lethal
Name	Formula	Gravity	Limit		Concentration
Hydrogen Sulfide	H₂S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO2	2.21 Air = 1	2 ppm	N/A	1000 ppm

#### Characteristics of H<sub>2</sub>S and SO<sub>2</sub>

## **Contacting Authorities**

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

## Hydrogen Sulfide Drilling Operation Plan

### I. HYDROGEN SULFIDE (H<sub>2</sub>S) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- 1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S)
- 2. The proper use and maintenance of personal protective equipment and life support systems.
- 3. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- 4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- 1. The effects of H<sub>2</sub>S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- 2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- 3. The contents and requirements of the H<sub>2</sub>S Drilling Operations Plan.

There will be weekly H<sub>2</sub>S and well control drills for all personnel in each crew.

### II. HYDROGEN SULFIDE TRAINING

Note: All  $H_2S$  safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain  $H_2S$ .

#### 1. Well Control Equipment

- A. Flare line
- B. Choke manifold Remotely Operated
- C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- D. Auxiliary equipment may include if applicable: annular preventer and rotating head.
- E. Mud/Gas Separator

#### 2. Protective equipment for essential personnel:

30-minute SCBA units located at briefing areas, as indicated on well site diagram, with escape units available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

#### 3. H<sub>2</sub>S detection and monitoring equipment:

Portable H<sub>2</sub>S monitors positioned on location for best coverage and response. These units have warning lights which activate when H<sub>2</sub>S levels reach 10 ppm and audible sirens which activate at 10 ppm. Sensor locations:

- Bell nipple
- Possum Belly/Shale shaker
- Rig floor
- Choke manifold
- Cellar

### Visual warning systems:

- A. Wind direction indicators as shown on well site diagram
- B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

#### 4. Mud program:

The mud program has been designed to minimize the volume of  $H_2S$  circulated to surface. Proper mud weight, safe drilling practices and the use of  $H_2S$  scavengers will minimize hazards when penetrating  $H_2S$  bearing zones.

#### 5. Metallurgy:

- A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H<sub>2</sub>S trim.
- B. All elastomers used for packing and seals shall be H<sub>2</sub>S trim.

## 6. Communication:

- A. Company personnel have/use cellular telephones in the field.
- B. Land line (telephone) communications at Office

## 7. Well testing:

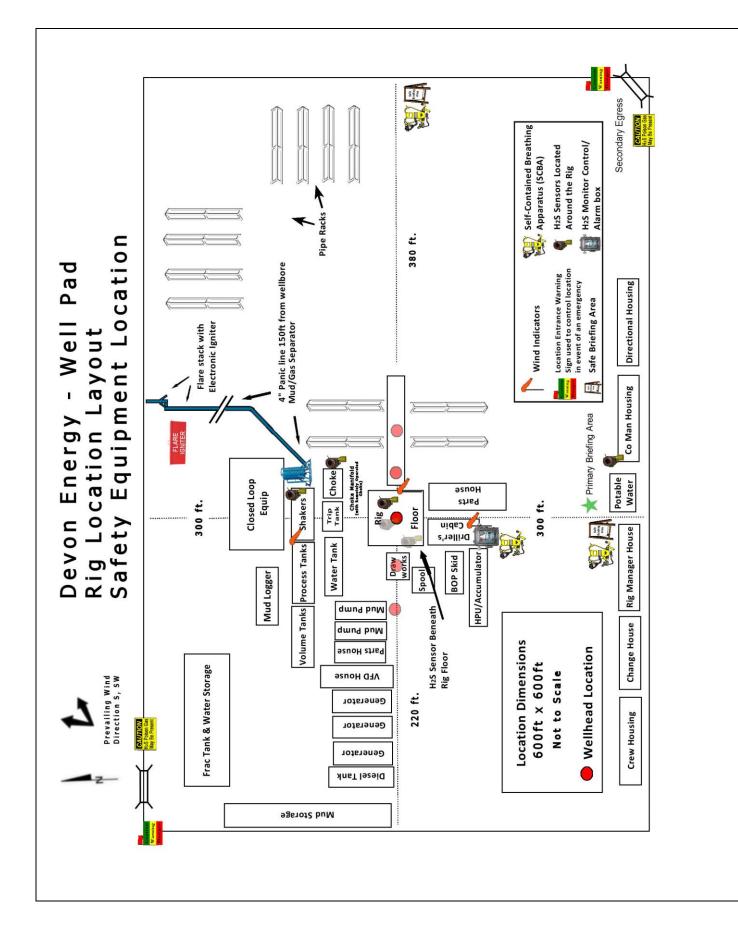
- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H<sub>2</sub>S environment will use the closed chamber method of testing.
- B. There will be no drill stem testing.

Devon Energy Corp. Company Call List						
Employee/Company Contact Representative	Position	Phone Number	After Hours Number			
Jonathan Fisher (North)	Drilling Manager	832-967-7912				
Jason Hildebrand (South)	Drilling Manager	405-552-6514				
Rich Downey	Drilling VP	405-228-2415				
Josh Harvey	EHS Manager	405-228-2440	918-500-5536			
Laura Wright	EHS Supervisor	405-552-5334	832-969-8145			
Robert Glover	EHS Professional	575-703-5712	575-703-5712			
Lane Frank	Lead EHS	580-579-7052	580-579-7052			
Rickey Porter	Lead EHS	903-720-8315	903-720-8315			
Ronnie Handy	Lead EHS	918-839-2046	918-839-2046			
Brock Vise	Lead EHS	918-413-3291	918-413-3291			

Agency	<u>Call List</u>	
-		
Lea	Hobbs	
County	Lea County Communication Authority	397-9265
<u>(575)</u>	State Police	885-3138
	City Police	397-9265
	Sheriff's Office	396-3611
	Ambulance	911
	Fire Department	397-9308
	LEPC (Local Emergency Planning Committee)	393-2870
	NMOCD	393-616´
	US Bureau of Land Management (Closed)	393-0002
Eddy	Carlsbad	
County	State Police	885-3137
<u>(575)</u>	City Police	885-211 <sup>2</sup>
	Sheriff's Office	887-755 <sup>-</sup>
	Ambulance	91 <i>°</i>
	Fire Department	885-312
	LEPC (Local Emergency Planning Committee)	887-3798
	US Bureau of Land Management	234-5972
	NM Emergency Response Commission (Santa Fe)	(505) 476-9600
	24 HR	(505) 827-9126
	National Emergency Response Center	(800) 424-8802
	National Pollution Control Center: Direct	(703) 872-6000
	For Oil Spills	(800) 280-7118
	Emergency Services	(/
	Wild Well Control	(281) 784-4700
	Cudd Pressure Control (915) 699-0139	(915) 563-3356
	Halliburton	(575) 746-2757
	B. J. Services	(575) 746-3569
Give	Native Air – Emergency Helicopter – Hobbs	(575) 347-9836
GPS	For Air Ambulance - Eddy County Dispatch	(575)-616-715
position:	For Air Ambulance - Lea County (LCCA)	(575)-397-926
<b>P</b> • • • • • • • • • • • • • • • • • • •	Poison Control (24/7)	(800) 222-1222
	Oil & Gas Pipeline 24 Hour Service	(800) 364-4366
	NOAA – Website - www.nhc.noaa.gov	
	National Pollution Control Center	202-795-6958
	NPCC – Oil Spills	800-280-7118

Prepared in conjunction with Dave Small

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Sante Fe Main Office Phone: (505) 476-3441

General Information Phone: (505) 629-6116

Online Phone Directory https://www.emnrd.nm.gov/ocd/contact-us

## State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

CONDITIONS

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Action 482336

CONDITIONS

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP	6137
333 West Sheridan Ave.	Action Number:
Oklahoma City, OK 73102	482336
	Action Type:
	[C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

#### CONDITIONS

Created By	Condition	Condition
		Date
wsalter	Cement is required to circulate on both surface and intermediate1 strings of casing.	7/7/2025
wsalter	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing.	7/7/2025
ward.rikala	Notify the OCD 24 hours prior to casing & cement.	7/16/2025
ward.rikala	File As Drilled C-102 and a directional Survey with C-104 completion packet.	7/16/2025
ward.rikala	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.	7/16/2025
ward.rikala	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.	7/16/2025
ward.rikala	Operator must comply with all of the R-111-Q requirements.	7/16/2025