

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

Sundry Print Reports
11/14/2022

Well Name: MR POTATO HEAD 11-14 Well Location: T24S / R29E / SEC 11 / County or Parish/State:

FED COM NENW /

Well Number: 834H Type of Well: OIL WELL Allottee or Tribe Name:

Lease Number: NMNM88134 Unit or CA Name: Unit or CA Number:

**US Well Number:** 3001549979 **Well Status:** Approved Application for **Operator:** DEVON ENERGY

Permit to Drill PRODUCTION COMPANY LP

# **Notice of Intent**

**Sundry ID: 2695834** 

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 09/30/2022 Time Sundry Submitted: 01:40

Date proposed operation will begin: 09/30/2022

**Procedure Description:** Devon Energy Production Co., L.P. (Devon) respectfully requests to move the BHL and have a name change on the subject well. Please see attached revised C102, drill plan (break test variance included), directional plan. Permitted BHL: SESW, 20 FSL, 2530 FWL, 14-24S-29E Proposed BHL: SWSE, 20 FSL, 2430 FEL, 14-24S-29E Permitted Well name: MR POTATO HEAD 11-14 FED COM 734H Proposed Well name: MR POTATO HEAD 11-14 FED COM 834H

# **NOI Attachments**

# **Procedure Description**

 $WA018408043\_MR\_POTATO\_HEAD\_11\_14\_FED\_COM\_834H\_WL\_R2\_20220930133932.pdf$ 

 $MR\_POTATO\_HEAD\_11\_14\_FED\_COM\_834H\_Directional\_Plan\_08\_31\_22\_20220930133925.pdf$ 

MR\_POTATO\_HEAD\_11\_14\_FED\_COM\_834H\_20220930133924.pdf

8.625\_32lb\_P110EC\_SPRINT\_FJ\_VST\_20220930133924.pdf

break\_test\_variance\_BOP\_20220930133924.pdf

5.50\_20\_\_P110EC\_DWC\_C\_IS\_PLUS\_VST\_\_2\_\_20220930133922.pdf

10.75\_45.50\_J55\_BTC\_SC\_BLP\_Devon\_20220930133922.pdf

eceived by OCD: 11/14/2022 11:34:42 AM Well Name: MR POTATO HEAD 11-14

FED COM

Well Location: T24S / R29E / SEC 11 /

NENW /

Well Number: 834H

Type of Well: OIL WELL

Allottee or Tribe Name:

County or Parish/State:

Lease Number: NMNM88134

Unit or CA Name:

**Unit or CA Number:** 

**US Well Number: 3001549979** 

Well Status: Approved Application for

or

Operator: DEVON ENERGY

Page 2 of

Permit to Drill

PRODUCTION COMPANY LP

# **Conditions of Approval**

# Additional

11\_24\_29\_C\_Sundry\_ID\_2695834\_Mr\_Potato\_Head\_11\_14\_Fed\_Com\_834H\_Eddy\_NM88134\_10\_28\_2022\_LV\_2022 1101072924.pdf

Mr\_Potato\_Head\_11\_14\_Fed\_Com\_834H\_Sundry\_ID\_2695834\_20221101072924.pdf

# **Operator**

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: SHAYDA OMOUMI Signed on: SEP 30, 2022 01:40 PM

Name: DEVON ENERGY PRODUCTION COMPANY LP

**Title:** Regulatory Compliance Associate 3 **Street Address:** 333 W SHERIDAN AVE

City: OKLAHOMA CITY State: OK

Phone: (405) 235-3611

Email address: SHAYDA.OMOUMI@DVN.COM

# **Field**

**Representative Name:** 

**Street Address:** 

City:

State:

Zip:

Phone:

**Email address:** 

# **BLM Point of Contact**

BLM POC Name: CHRISTOPHER WALLS

**BLM POC Phone**: 5752342234

**Disposition:** Approved

Signature: Chris Walls

**BLM POC Title:** Petroleum Engineer

BLM POC Email Address: cwalls@blm.gov

**Disposition Date: 11/14/2022** 

Page 2 of 2

District I

District IV

1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720

<u>District III</u> 1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170

1220 S. St. Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462 State of New Mexico

Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

X AMENDED REPORT

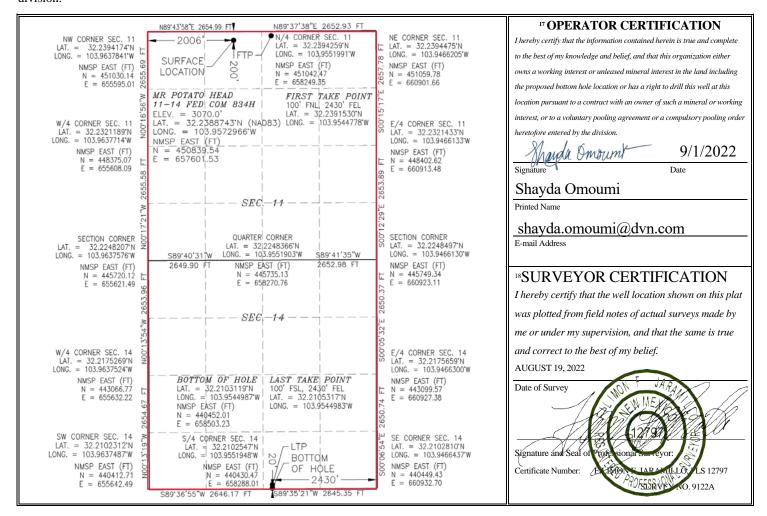
### WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015-49979		<sup>2</sup> Pool Code 98220	<sup>3</sup> Pool Name PURPLE SAGE; WOLFO	CAMP
<sup>4</sup> Property Code 326251	<sup>5</sup> Property Name MR POTATO HEAD 11-14 FED COM			<sup>6</sup> Well Number <b>834H</b>
<sup>7</sup> OGRID No.		8 Operator Name		
6137		3070.0		

#### <sup>10</sup> Surface Location

					" Surraci	e Location			
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	11	24 S	29 E		200	NORTH	2006	WEST	EDDY
	<sup>11</sup> Bottom Hole Location If Different From Surface								
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	14	24 S	29 E		20	SOUTH	2430	EAST	EDDY
12 Dedicated Acre	s 13 Joint	or Infill	Consolidation	n Code			15 Order No.		
1280									

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.



Inten	t X	As Dril	led											
API#														
Operator Name: DEVON ENERGY PRODUCTION COMPANY, L.P.  Property Name: MR POTATO HEAD 11-14 FED COM						СОМ	Well Number 834H							
Kick (	Off Point	(KOP)												
UL B	Section 11	Township 24S	Range 29E	Lot	Feet 53		From N		Feet			n E/W FEL	County	
Latitu		243	296		Longitu	ıde	FIN	<u> </u>	2425	<b>7</b>		FEL	Eddy NAD	
32.2	391942	0			-103.9		154							83
First 7	Γake Poir	nt (FTP)												
UL B	Section 11	Township 24S	Range 29E	Lot	Feet 100		From N		Feet 243		From	n E/W ST	County EDDY	
Latitu			1-0-	<u> </u>	Longitu								NAD	
32.2	239153	0			103.9	9544	778						83	
Last T	Section	t (LTP)  Township 24S	Range 29E	Lot	Feet 100		n N/S JTH	Fee <sup>-</sup> 243		From EAS		Count	•	
Latitu		7			Longitu		റരാ					NAD		
32.2	210531	/			103.9	9544	983					83		
	Is this well the defining well for the Horizontal Spacing Unit?  Is this well an infill well?													
Is this well an infill well?  If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.														
API#		2	]											
Ope	rator Nai	me:	•			Prop	erty N	ame	:					Well Number
DEV L.P.	ON ENEF	RGY PRODU	JCTION C	OMPAI	NY,	MF	R POTA	TO F	HEAD	11-14	FED (	СОМ		623H

KZ 06/29/2018



<u>10-3/4"</u>	<u>45.50#</u>	<u>0.400"</u>	<u>J-55</u>					
<u>Dimensions</u>	<u>Dimensions (Nominal)</u>							
Outside Diameter			10.750	in.				
Wall			0.400	in.				
<b>Inside Diameter</b>			9.950	in.				
Drift			9.875	in.				
Weight, T&C			45.500	lbs/ft				
Weight, PE			44.260	lbs/ft				
Performance	Performance Properties							
Collapse			2090	psi				
Internal Yield Pres	sure at Minimum Yield							
	PE		3580	psi				
	STC		3580	psi				
	ВТС		3580	psi				
Yield Strength, Pip	e Body		715	1000 lbs				
Joint Strength								
	STC		493	1000 lbs				
	BTC		796	1000 lbs				
	<b>BTC Special Clearance</b>	(11.25" OD Cplg)	506	1000 lbs				

Note: SeAH Steel has produced this specification sheet for general information only. SeAH does not assume liability or responsibility for any loss or injury resulting from the use of information or data contained herein. All applications for the material described are at the customer's own risk and responsibility.



# **Connection Data Sheet**

 OD (in.)
 WEIGHT (lbs./ft.)
 WALL (in.)
 GRADE
 API DRIFT (in.)
 RBW%
 CONNECTION

 5.500
 Nominal: 20.00
 0.361
 VST P110EC
 4.653
 87.5
 DWC/C-IS PLUS

 Plain End: 19.83

PIPE PROPI	ERTIES	
Nominal OD	5,500	in.
Nominal ID	4.778	in.
Nominal Area	5.828	sq.in.
Grade Type	API 5CT; Vallourec Sourced Mat	erial Only
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Tensile Strength	135	ksi
Yield Strength	729	klb
Ultimate Strength	787	klb
Min. Internal Yield Pressure	14,360	psi
Collapse Pressure	12,090	psi

CONNECTION PRO	OPERTIES	
Connection Type	Semi-Prem	ium T&C
Connection OD (nom)	6.300	in
Connection ID (nom)	4.778	in
Make-Up Loss	4.125	in
Coupling Length	9.250	in
Critical Cross Section	5.828	sq.in
Tension Efficiency	100.0%	of pipe
Compression Efficiency	100.0%	of pipe
Internal Pressure Efficiency	100.0%	of pipe
External Pressure Efficiency	100.0%	of pipe

CONNECTION PERFORMANCES					
Yield Strength	729	klb			
Parting Load	787	klb			
Compression Rating	729	klb			
Min. Internal Yield	14,360	psi			
External Pressure	12,090	psi			
Maximum Uniaxial Bend Rating	104.2	°/100 ft			
Reference String Length w 1.4 Design Factor	26,040	ft.			

FIELD END TORQUE VAL	UES	
Min. Make-up torque	16,600	ft.lb
Opti. Make-up torque	17,850	ft.lb
Max. Make-up torque	19,100	ft.lb
Min. Shoulder Torque	1,660	ft.lb
Max. Shoulder Torque	13,280	ft.lb
Min. Delta Turn	-	Turns
Max. Delta Turn	0.200	Turns
†Maximum Operational Torque	24,300	ft.lb
†Maximum Torsional Value (MTV)	26,730	ft.lb

Need Help? Contact: <u>tech.support@vam-usa.com</u>
Reference Drawing: 8074PP Rev.06 & 8074BP Rev.05

Date: 08/04/2020 Time: 04:27:16 PM

† Maximum Operational Torque and Maximum Torsional Value Only Valid with Vallourec P110EC Material

For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

All information is provided by VAM USA or its affiliates at user's sole risk, without liability for loss, damage or injury resulting from the use thereof; and on an "AS IS" basis without warranty or representation of any kind, whether express or implied, including without limitation any warranty of merchantability, fitness for purpose or completeness. This document and its contents are subject to change without notice. In no event shall VAM USA or its affiliates be responsible for any indirect, special, incidental, punitive, exemplary or consequential loss or damage (including without limitation, loss of use, loss of bargain, loss of revenue, profit or anticipated profit) however caused or arising, and whether such losses or damages were foreseeable or VAM USA or its affiliates was advised of the possibility of such damages.



VAM USA

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VAM® USA Sales E-mail: <u>VAMUSAsales@vam-usa.com</u> Tech Support Email: <u>tech.support@vam-usa.com</u>

### **DWC Connection Data Sheet Notes:**

- 1. DWC connections are available with a seal ring (SR) option.
- 2. All standard DWC/C connections are interchangeable for a given pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
- 3. Connection performance properties are based on nominal pipe body and connection dimensions.
- 4. DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
- 5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
- 6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
- 7. Bending efficiency is equal to the compression efficiency.
- 8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
- 9. Connection yield torque is not to be exceeded.
- 10. Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
- 11. DWC connections will accommodate API standard drift diameters.
- 12. DWC/C family of connections are compatible with API Buttress BTC connections. Please contact tech.support@vam-usa.com for details on connection ratings and make-up.

Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

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Received by OCD: 11/14/2022 11:34:42 AM

Issued on: 16 Dec. 2020 by Logan Van Gorp



# **Connection Data Sheet**

OD	Weight (lb/ft)	Wall Th.	Grade	Alt. Drift:	Connection
8 5/8 in.	Nominal: 32.00	0.352 in.	P110EC	7.875 in.	VAM® SPRINT-FJ
	Plain End: 31.13				

PIPE PROPERTIES		
Nominal OD	8.625	in.
Nominal ID	7.921	in.
Nominal Cross Section Area	9.149	sqin.
Grade Type	Hig	h Yield
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Ultimate Tensile Strength	135	ksi

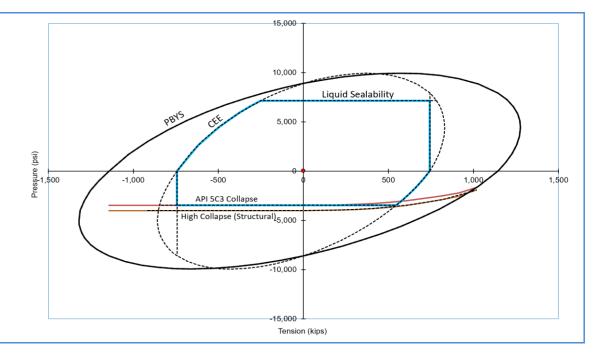
CONNECTION PROP	ERTIES	
Connection Type	Semi-Premium Into	egral Flush
Connection OD (nom):	8.665	in.
Connection ID (nom):	7.954	in.
Make-Up Loss	2.614	in.
Critical Cross Section	6.038	sqin.
Tension Efficiency	65.0	% of pipe
Compression Efficiency	65.0	% of pipe
Internal Pressure Efficiency	80.0	% of pipe
External Pressure Efficiency	100	% of pipe

CONNECTION PERFORMANC	CES	
Tensile Yield Strength	744	klb
Compression Resistance	744	klb
Max. Internal Pressure	7,150	psi
Structural Collapse Resistance	4,000	psi
Max. Bending with Sealability	41	°/100ft
Max. Bending with Sealability	10	°/100ft

TORQUE VALUES		
Min. Make-up torque	15,000	ft.lb
Opt. Make-up torque	16,500	ft.lb
Max. Make-up torque	18,000	ft.lb
Max. Torque with Sealability (MTS)	TBD	ft.lb

\* 87.5% RBW

**VAM® SPRINT-FJ** is a semi-premium flush connection designed for shale applications, where maximum clearance and high tension capacity are required for intermediate casing strings.



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mexico@vamfieldservice.com

brazil@vamfieldservice.com

Do you need help on this product? - Remember no one knows  $VAM^{\otimes}$  like  $VAM^{\otimes}$ 

uk@vamfieldservice.com dubai@vamfieldservice.com nigeria@vamfieldservice.com angola@vamfieldservice.com china@vamfieldservice.com baku@vamfieldservice.com singapore@vamfieldservice.com australia@vamfieldservice.com

Over 140 VAM® Specialists available worldwide 24/7 for Rig Site Assistance

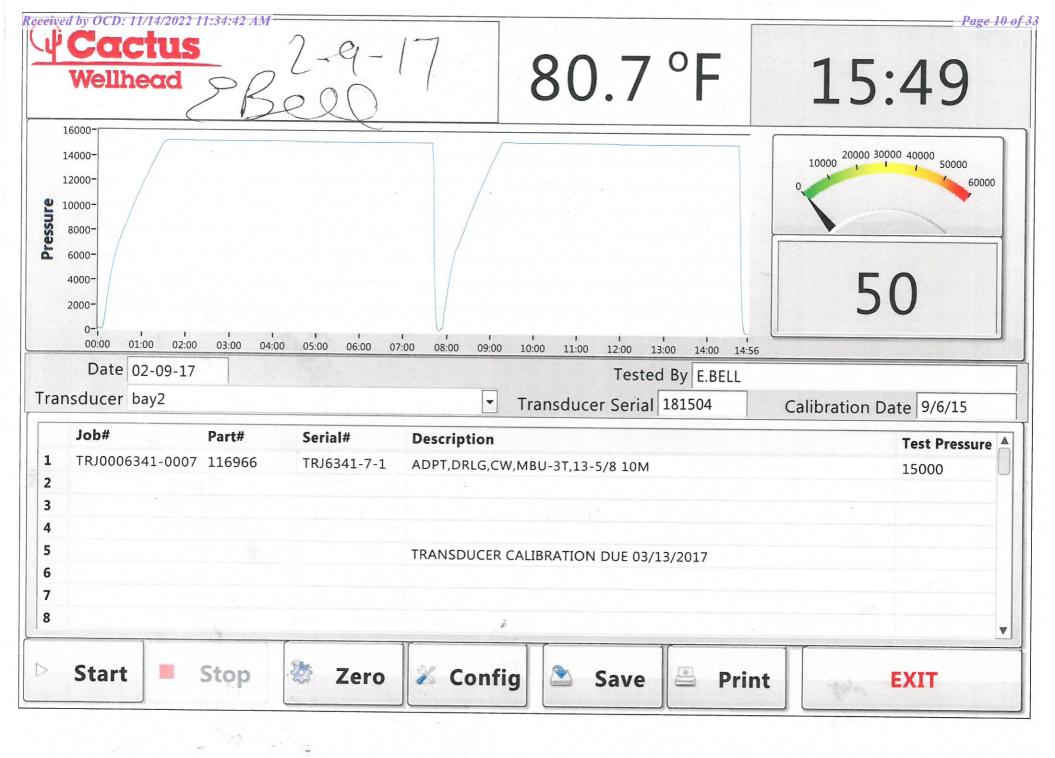


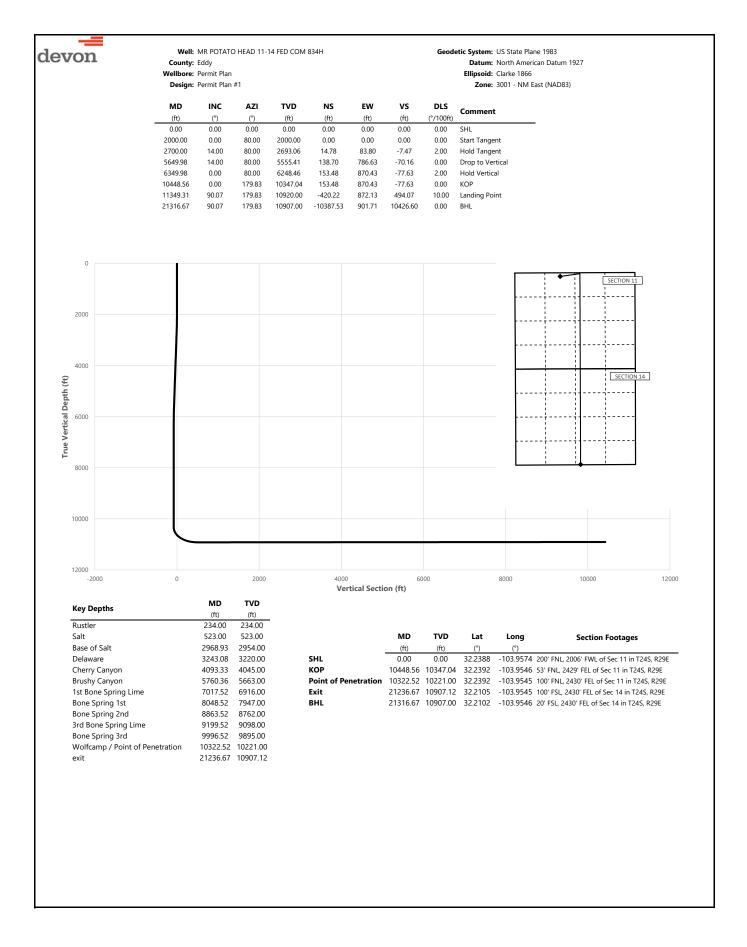
### **Section 2 - Blowout Preventer Testing Procedure**

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. This test will include the Top Pipe Rams, HCR, Kill Line Check Valve, QDC (quick disconnect to wellhead) and Shell of the 10M BOPE to 5M for 10 minutes. 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 and no deeper than the Bone Springs Formation where 5M BOP tests are required. The initial BOP test will follow OOGO2.III.A.2.i, and subsequent tests following a skid will only test connections that are broken. The annular preventer will be tested to 100% working pressure. This variance will meet or exceed OOGO2.III.A.2.i per the following: Devon Energy will perform a full BOP test per OOGO2.III.A.2.i before drilling out of the intermediate casing string(s) and starting the production hole, before starting any hole section that requires a 10M test, before the expiration of the allotted 14-days for 5M intermediate batch drilling or when the drilling rig is fully mobilized to a new well pad, whichever is sooner. We will utilize a 200' TVD tolerance between intermediate shoes as the cutoff for a full BOP test. 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. Break test will be a 14 day interval and not a 30 day full BOPE test interval. If in the event break testing is not utilized, then a full BOPE test would be conducted.

- 1. Well Control Response:
- 1. Primary barrier remains fluid
- 2. In the event of an influx due to being underbalanced and after a realized gain or flow, the order of closing BOPE is as follows:
  - a) Annular first
  - b) If annular were to not hold, Upper pipe rams second (which were tested on the skid BOP test)
  - c) If the Upper Pipe Rams were to not hold, Lower Pipe Rams would be third







County: Eddy
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983

**Datum:** North American Datum 1927 **Ellipsoid:** Clarke 1866

Zone: 3001 - NM East (NAD83)

	Design:	Permit Plan	n #1					<b>Zone:</b> 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	80.00	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	80.00	200.00	0.00	0.00	0.00	0.00	0. 11
234.00	0.00	80.00	234.00	0.00	0.00	0.00	0.00	Rustler
300.00 400.00	0.00	80.00 80.00	300.00 400.00	0.00	0.00	0.00	0.00	
500.00	0.00	80.00	500.00	0.00	0.00	0.00	0.00	
523.00	0.00	80.00	523.00	0.00	0.00	0.00	0.00	Salt
600.00	0.00	80.00	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	80.00	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	80.00	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	80.00	900.00	0.00	0.00	0.00	0.00	
1000.00 1100.00	0.00	80.00 80.00	1000.00 1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	80.00	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	80.00	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	80.00	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	80.00	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	80.00	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	80.00	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	80.00	1800.00	0.00	0.00	0.00	0.00	
1900.00 2000.00	0.00	80.00	1900.00 2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	80.00 80.00	2000.00	0.00 0.30	1.72	-0.15	2.00	Start Tangent
2200.00	4.00	80.00	2199.84	1.21	6.87	-0.61	2.00	
2300.00	6.00	80.00	2299.45	2.73	15.46	-1.38	2.00	
2400.00	8.00	80.00	2398.70	4.84	27.46	-2.45	2.00	
2500.00	10.00	80.00	2497.47	7.56	42.86	-3.82	2.00	
2600.00	12.00	80.00	2595.62	10.87	61.65	-5.50	2.00	
2700.00	14.00	80.00	2693.06	14.78	83.80	-7.47	2.00	Hold Tangent
2800.00 2900.00	14.00 14.00	80.00 80.00	2790.08 2887.11	18.98 23.18	107.63 131.45	-9.60 -11.72	0.00	
2968.93	14.00	80.00	2954.00	26.07	147.88	-11.72	0.00	Base of Salt
3000.00	14.00	80.00	2984.14	27.38	155.28	-13.85	0.00	5450 0. 5410
3100.00	14.00	80.00	3081.17	31.58	179.10	-15.97	0.00	
3200.00	14.00	80.00	3178.20	35.78	202.93	-18.10	0.00	
3243.08	14.00	80.00	3220.00	37.59	213.19	-19.01	0.00	Delaware
3300.00	14.00	80.00	3275.23	39.98	226.75	-20.22	0.00	
3400.00	14.00	80.00	3372.26	44.18	250.58	-22.35	0.00	
3500.00 3600.00	14.00 14.00	80.00 80.00	3469.29 3566.32	48.38 52.59	274.40 298.23	-24.47 -26.60	0.00	
3700.00	14.00	80.00	3663.35	56.79	322.05	-28.72	0.00	
3800.00	14.00	80.00	3760.38	60.99	345.87	-30.85	0.00	
3900.00	14.00	80.00	3857.41	65.19	369.70	-32.97	0.00	
4000.00	14.00	80.00	3954.44	69.39	393.52	-35.10	0.00	
4093.33	14.00	80.00	4045.00	73.31	415.76	-37.08	0.00	Cherry Canyon
4100.00	14.00	80.00	4051.47	73.59	417.35	-37.22	0.00	
4200.00 4300.00	14.00 14.00	80.00 80.00	4148.50 4245.53	77.79 81.99	441.17 465.00	-39.35 -41.47	0.00	
4400.00	14.00	80.00	4342.56	86.19	488.82	-43.60	0.00	
4500.00	14.00	80.00	4439.59	90.39	512.65	-45.72	0.00	
4600.00	14.00	80.00	4536.62	94.59	536.47	-47.85	0.00	
4700.00	14.00	80.00	4633.65	98.80	560.30	-49.97	0.00	
4800.00	14.00	80.00	4730.68	103.00	584.12	-52.09	0.00	
4900.00	14.00	80.00	4827.71	107.20	607.95	-54.22 56.24	0.00	
5000.00 5100.00	14.00 14.00	80.00 80.00	4924.74 5021.77	111.40 115.60	631.77 655.59	-56.34 -58.47	0.00	
5200.00	14.00	80.00	5118.79	119.80	679.42	-60.59	0.00	
5300.00	14.00	80.00	5215.82	124.00	703.24	-62.72	0.00	
5400.00	14.00	80.00	5312.85	128.20	727.07	-64.84	0.00	
5500.00	14.00	80.00	5409.88	132.40	750.89	-66.97	0.00	
5600.00	14.00	80.00	5506.91	136.60	774.72	-69.09	0.00	
5649.98	14.00	80.00	5555.41	138.70	786.63	-70.16	0.00	Drop to Vertical
5700.00 5760.36	13.00 11.79	80.00 80.00	5604.05 5663.00	140.73 142.98	798.13 810.89	-71.18 -72.32	2.00 2.00	Brushy Canyon
5800.00	11.79	80.00	5701.86	144.34	818.60	-72.32 -73.01	2.00	brashy carryon
5900.00	9.00	80.00	5800.33	147.36	835.70	-74.53	2.00	
6000.00	7.00	80.00	5899.35	149.77	849.40	-75.75	2.00	
6100.00	5.00	80.00	5998.80	151.59	859.70	-76.67	2.00	
6200.00	3.00	80.00	6098.55	152.80	866.56	-77.28	2.00	



County: Eddy
Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983

**Datum:** North American Datum 1927 **Ellipsoid:** Clarke 1866

Zone: 3001 - NM East (NAD83)

	Design:							<b>Zone:</b> 3001 - NM East (NAD83)
MD	INC	AZI	TVD	NS	EW	vs	DLS	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
6300.00	1.00	80.00	6198.49	153.40	870.00	-77.59	2.00	
6349.98	0.00	80.00	6248.46	153.48	870.43	-77.63	2.00	Hold Vertical
6400.00	0.00	179.83	6298.48	153.48	870.43	-77.63	0.00	
6500.00	0.00	179.83	6398.48	153.48	870.43	-77.63	0.00	
6600.00	0.00	179.83	6498.48	153.48	870.43	-77.63	0.00	
6700.00	0.00	179.83	6598.48	153.48	870.43	-77.63	0.00	
6800.00	0.00	179.83	6698.48	153.48	870.43	-77.63	0.00	
6900.00	0.00	179.83	6798.48	153.48	870.43	-77.63	0.00	
7000.00	0.00	179.83	6898.48	153.48	870.43		0.00	
						-77.63		1st Bone Spring Lime
7017.52 7100.00	0.00	179.83	6916.00	153.48	870.43	-77.63	0.00	ist bone spring time
	0.00	179.83	6998.48	153.48	870.43	-77.63	0.00	
7200.00	0.00	179.83	7098.48	153.48	870.43	-77.63	0.00	
7300.00	0.00	179.83	7198.48	153.48	870.43	-77.63	0.00	
7400.00	0.00	179.83	7298.48	153.48	870.43	-77.63	0.00	
7500.00	0.00	179.83	7398.48	153.48	870.43	-77.63	0.00	
7600.00	0.00	179.83	7498.48	153.48	870.43	-77.63	0.00	
7700.00	0.00	179.83	7598.48	153.48	870.43	-77.63	0.00	
7800.00	0.00	179.83	7698.48	153.48	870.43	-77.63	0.00	
7900.00	0.00	179.83	7798.48	153.48	870.43	-77.63	0.00	
8000.00	0.00	179.83	7898.48	153.48	870.43	-77.63	0.00	
8048.52	0.00	179.83	7947.00	153.48	870.43	-77.63	0.00	Bone Spring 1st
8100.00	0.00	179.83	7998.48	153.48	870.43	-77.63	0.00	
8200.00	0.00	179.83	8098.48	153.48	870.43	-77.63	0.00	
8300.00	0.00	179.83	8198.48	153.48	870.43	-77.63	0.00	
8400.00	0.00	179.83	8298.48	153.48	870.43	-77.63	0.00	
8500.00	0.00	179.83	8398.48	153.48	870.43	-77.63	0.00	
8600.00	0.00	179.83	8498.48	153.48	870.43	-77.63	0.00	
8700.00	0.00	179.83	8598.48	153.48	870.43	-77.63	0.00	
8800.00	0.00	179.83	8698.48	153.48	870.43	-77.63	0.00	
8863.52	0.00	179.83	8762.00	153.48	870.43	-77.63	0.00	Bone Spring 2nd
		179.83	8798.48		870.43	-77.63	0.00	Bone Spring Zna
8900.00	0.00			153.48				
9000.00	0.00	179.83	8898.48	153.48	870.43	-77.63	0.00	
9100.00	0.00	179.83	8998.48	153.48	870.43	-77.63	0.00	2.12
9199.52	0.00	179.83	9098.00	153.48	870.43	-77.63	0.00	3rd Bone Spring Lime
9200.00	0.00	179.83	9098.48	153.48	870.43	-77.63	0.00	
9300.00	0.00	179.83	9198.48	153.48	870.43	-77.63	0.00	
9400.00	0.00	179.83	9298.48	153.48	870.43	-77.63	0.00	
9500.00	0.00	179.83	9398.48	153.48	870.43	-77.63	0.00	
9600.00	0.00	179.83	9498.48	153.48	870.43	-77.63	0.00	
9700.00	0.00	179.83	9598.48	153.48	870.43	-77.63	0.00	
9800.00	0.00	179.83	9698.48	153.48	870.43	-77.63	0.00	
9900.00	0.00	179.83	9798.48	153.48	870.43	-77.63	0.00	
9996.52	0.00	179.83	9895.00	153.48	870.43	-77.63	0.00	Bone Spring 3rd
10000.00	0.00	179.83	9898.48	153.48	870.43	-77.63	0.00	
10100.00	0.00	179.83	9998.48	153.48	870.43	-77.63	0.00	
10200.00	0.00	179.83	10098.48	153.48	870.43	-77.63	0.00	
10300.00	0.00	179.83	10198.48	153.48	870.43	-77.63	0.00	
10322.52	0.00	179.83	10221.00	153.48	870.43	-77.63	0.00	Wolfcamp / Point of Penetration
10400.00	0.00	179.83	10298.48	153.48	870.43	-77.63	0.00	• • • • • • • • • • • • • • • • • • • •
10448.56	0.00	179.83	10347.04	153.48	870.43	-77.63	0.00	KOP
10500.00	5.14	179.83	10398.41	151.17	870.44	-75.33	10.00	•
10600.00	15.14	179.83	10496.73	133.58	870.49	-57.80	10.00	
10700.00	25.14	179.83	10590.49	99.19	870.59	-23.53	10.00	
10700.00	35.14	179.83	10590.49	49.03	870.74	26.45	10.00	
10900.00		179.83		-15.35	870.74	90.62	10.00	
	45.14 55.14		10753.20					
11000.00	55.14 65.14	179.83	10817.21	-92.02	871.16	167.02	10.00	
11100.00	65.14	179.83	10866.93	-178.64	871.42	253.33	10.00	
11200.00	75.14	179.83	10900.85	-272.58	871.69	346.94	10.00	
11300.00	85.14	179.83	10917.94	-370.97	871.99	445.00	10.00	
11349.31	90.07	179.83	10920.00	-420.22	872.13	494.07	10.00	Landing Point
11400.00	90.07	179.83	10919.93	-470.92	872.28	544.59	0.00	
11500.00	90.07	179.83	10919.80	-570.92	872.58	644.24	0.00	
11600.00	90.07	179.83	10919.67	-670.91	872.88	743.89	0.00	
11700.00	90.07	179.83	10919.54	-770.91	873.17	843.54	0.00	
11800.00	90.07	179.83	10919.41	-870.91	873.47	943.19	0.00	
11900.00	90.07	179.83	10919.28	-970.91	873.77	1042.84	0.00	
12000.00	90.07	179.83	10919.15	-1070.91	874.06	1142.49	0.00	
12100.00	90.07	179.83		-1170.91	874.36	1242.14	0.00	
12200.00	90.07	179.83		-1270.91	874.66	1341.79	0.00	
12300.00	90.07	179.83	10918.76	-1370 91	874.95	1441.44	0.00	



County: Eddy
Wellbore: Permit Plan
Design: Permit Plan #1

**Geodetic System:** US State Plane 1983 **Datum:** North American Datum 1927

Ellipsoid: Clarke 1866

Zone: 3001 - NM East (NAD83)

MD vs INC AZI TVD NS EW DLS Comment (°/100ft (ft) (°) (°) (ft) (ft) (ft) (ft) 12400.00 90.07 179.83 10918.63 -1470.91875.25 1541.09 0.00 12500.00 90.07 179.83 10918.50 -1570.91 875.55 1640.74 0.00 12600.00 90.07 179.83 10918.37 -1670.91 875.85 1740.39 0.00 12700.00 179.83 1840.05 0.00 90.07 10918.24 -1770.91 876.14 12800.00 90.07 179.83 10918.11 -1870.91 876.44 1939.70 0.00 0.00 12900.00 90.07 179.83 10917.98 -1970.91 876.74 2039.35 13000.00 90.07 179.83 10917.85 -2070.91 877.03 2139.00 0.00 13100.00 90.07 179.83 10917.72 -2170.91 877.33 2238.65 0.00 13200.00 90.07 179.83 10917.59 -2270.91 877.63 2338.30 0.00 13300.00 179.83 10917.46 877.92 2437.95 0.00 90.07 -2370.91 13400.00 10917.33 -2470.91 2537.60 90.07 179.83 878.22 0.00 13500.00 90.07 179.83 10917.20 -2570.90 878.52 2637.25 0.00 13600.00 90.07 179.83 10917.07 -2670.90 878.82 2736.90 0.00 13700.00 90.07 179.83 10916.94 -2770.90 879.11 2836.55 0.00 2936.20 13800.00 90.07 179.83 10916.81 879.41 0.00 -2870.90 13900.00 90.07 179.83 10916.68 -2970.90 879.71 3035.85 0.00 14000.00 -3070.90 3135.50 90.07 179.83 10916.55 880.00 0.00 14100.00 880.30 3235.15 90.07 179.83 10916.42 -3170.90 0.00 14200.00 90.07 179.83 10916.29 -3270.90 880.60 3334.80 0.00 14300.00 90.07 179.83 10916.16 -3370.90 880.89 3434.45 0.00 14400.00 90.07 179.83 10916.03 -3470.90 881.19 3534.10 0.00 14500.00 90.07 179.83 10915.89 -3570.90 881.49 3633.75 0.00 14600.00 90.07 179 83 10915.76 -3670 90 881 79 3733 40 0.00 14700.00 90.07 179.83 10915.63 -3770.90 882.08 3833.06 0.00 14800.00 90.07 179.83 10915.50 -3870.90 882.38 3932.71 0.00 14900.00 90.07 179.83 10915.37 -3970.90 882.68 4032.36 0.00 15000.00 90.07 179.83 10915.24 -4070.90 882 97 4132.01 0.00 15100.00 -4170.90 883.27 4231.66 90.07 179.83 10915.11 0.00 15200.00 90.07 179.83 10914.98 -4270.90 883.57 4331.31 0.00 10914.85 -4370.90 883.86 4430.96 15300.00 90.07 179.83 0.00 15400.00 90.07 179.83 10914.72 -4470.89 884.16 4530.61 0.00 884.46 4630.26 15500.00 90.07 179.83 10914.59 -4570.89 0.00 15600.00 10914.46 -4670.89 884.75 4729.91 90.07 179.83 0.00 15700.00 90.07 179.83 10914.33 -4770.89 885.05 4829.56 0.00 15800.00 90.07 179.83 10914.20 -4870.89 885 35 4929 21 0.00 15900.00 90.07 179.83 10914.07 -4970.89 885.65 5028.86 0.00 179.83 10913.94 -5070.89 885.94 5128.51 0.00 16000.00 90.07 16100.00 90.07 179.83 10913.81 -5170.89 886.24 5228.16 0.00 16200.00 90.07 179.83 10913.68 -5270.89 886.54 5327.81 16300.00 179.83 -5370.89 886.83 5427.46 0.00 90.07 10913.55 16400.00 90.07 179.83 10913.42 -5470.89 887.13 5527.11 0.00 16500.00 90.07 179.83 10913.29 -5570.89 887.43 5626.76 0.00 16600.00 90.07 179.83 10913.16 -5670.89 887.72 5726.41 0.00 16700.00 179.83 10913.03 -5770.89 888.02 5826.07 0.00 90.07 16800.00 90.07 179.83 10912.90 -5870.89 888.32 5925.72 0.00 16900.00 90.07 179.83 10912.77 -5970.89 888.62 6025.37 0.00 17000.00 90.07 179.83 10912.64 -6070.89 888.91 6125.02 0.00 179.83 889.21 17100.00 90.07 10912.51 -6170.89 6224.67 0.00 17200.00 90.07 179.83 10912.38 -6270.89 889.51 6324.32 0.00 17300.00 10912.25 -6370.88 889.80 6423.97 90.07 179.83 0.00 17400.00 179.83 10912.12 -6470.88 890.10 6523.62 0.00 90.07 17500.00 179.83 -6570.88 6623.27 90.07 10911.99 890.40 0.00 17600.00 90.07 179.83 10911.86 -6670.88 890.69 6722.92 0.00 6822.57 17700.00 90.07 179.83 10911.73 -6770.88 890.99 0.00 10911.60 17800.00 90.07 179.83 -6870.88 891.29 6922.22 0.00 -6970.88 17900 00 90.07 179 83 1091146 891 59 702187 0.00 18000.00 90.07 179.83 10911.33 -7070.88 891.88 7121.52 0.00 18100.00 90.07 179.83 10911.20 -7170.88 892.18 7221.17 179.83 7320.82 18200.00 90.07 10911.07 -7270.88 892.48 0.00 18300.00 90.07 179.83 10910.94 -7370.88 892.77 7420.47 0.00 18400.00 7520.12 90.07 179.83 10910.81 -7470.88 893.07 0.00 18500.00 90.07 179.83 10910.68 -7570.88 893.37 7619.77 0.00 18600 00 90.07 179.83 10910 55 -7670 88 893 66 771942 0.00 18700.00 90.07 179.83 10910.42 -7770.88 893.96 7819.07 0.00 18800.00 90.07 179.83 10910.29 -7870.88 894.26 7918.73 0.00 18900.00 90.07 179.83 10910.16 -7970.88 894.55 8018.38 0.00 19000.00 90.07 179.83 10910 03 -8070 88 894 85 8118 03 0.00 19100.00 90.07 179.83 10909.90 -8170.88 895.15 8217.68 0.00 19200.00 90.07 179.83 10909.77 -8270.87 895.45 8317.33 0.00 19300.00 90.07 179.83 10909.64 -8370.87 895.74 8416.98 0.00



County: Eddy
Wellbore: Permit Plan
Design: Permit Plan #1

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	Comment
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
19400.00	90.07	179.83	10909.51	-8470.87	896.04	8516.63	0.00	_
19500.00	90.07	179.83	10909.38	-8570.87	896.34	8616.28	0.00	
19600.00	90.07	179.83	10909.25	-8670.87	896.63	8715.93	0.00	
19700.00	90.07	179.83	10909.12	-8770.87	896.93	8815.58	0.00	
19800.00	90.07	179.83	10908.99	-8870.87	897.23	8915.23	0.00	
19900.00	90.07	179.83	10908.86	-8970.87	897.52	9014.88	0.00	
20000.00	90.07	179.83	10908.73	-9070.87	897.82	9114.53	0.00	
20100.00	90.07	179.83	10908.60	-9170.87	898.12	9214.18	0.00	
20200.00	90.07	179.83	10908.47	-9270.87	898.42	9313.83	0.00	
20300.00	90.07	179.83	10908.34	-9370.87	898.71	9413.48	0.00	
20400.00	90.07	179.83	10908.21	-9470.87	899.01	9513.13	0.00	
20500.00	90.07	179.83	10908.08	-9570.87	899.31	9612.78	0.00	
20600.00	90.07	179.83	10907.95	-9670.87	899.60	9712.43	0.00	
20700.00	90.07	179.83	10907.82	-9770.87	899.90	9812.08	0.00	
20800.00	90.07	179.83	10907.69	-9870.87	900.20	9911.74	0.00	
20900.00	90.07	179.83	10907.56	-9970.87	900.49	10011.39	0.00	
21000.00	90.07	179.83	10907.43	-10070.87	900.79	10111.04	0.00	
21100.00	90.07	179.83	10907.30	-10170.86	901.09	10210.69	0.00	
21200.00	90.07	179.83	10907.17	-10270.86	901.39	10310.34	0.00	
21236.67	90.07	179.83	10907.12	-10307.53	901.49	10346.88	0.00	exit
21300.00	90.07	179.83	10907.03	-10370.86	901.68	10409.99	0.00	
21316.67	90.07	179.83	10907.00	-10387.53	901.71	10426.60	0.00	BHL

 Well:
 MR POTATO HEAD 11-14 FED COM 834H
 Geodetic System:
 US State Plane 1983

 County:
 Eddy
 Datum:
 North American Datum 1927

 Wellbore:
 Permit Plan
 Ellipsoid:
 Clarke 1866

 Design:
 Permit Plan #1
 Zone:
 3001 - NM East (NAD83)

INC TVD MD AZI NS EW ٧S DLS Comment (ft) (°) (°) (ft) (ft) (ft) (ft) (°/100ft)

# 1. Geologic Formations

TVD of target	10907	Pilot hole depth	N/A
MD at TD:	21317	Deepest expected fresh water	

### **Basin**

	D 41	XX7-4/N/I*1	
	Depth	Water/Mineral	
Formation	(TVD)	Bearing/Target	Hazards*
	from KB	Zone?	
Rustler	234		
Salt	523		
Base of Salt	2954		
Delaware	3220		
Cherry Canyon	4045		
Brushy Canyon	5663		
1st Bone Spring Lime	6916		
Bone Spring 1st	7947		
Bone Spring 2nd	8762		
3rd Bone Spring Lime	9098		
Bone Spring 3rd	9895		
Wolfcamp	10221		

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

2. Casing Program (Primary Design)

	g ·· (	Wt			Casing	Interval	Casing	Interval
Hole Size	Csg. Size	(PPF)	Grade	Conn	From (MD)	To (MD)	From (TVD)	To (TVD)
13 1/2	10 3/4	45 1/2	J-55	ВТС	0	259	0	259
9 7/8	8 5/8	32	P110	Spring FJ	0	10221	0	10221
7 7/8	5 1/2	20	P110	DWC	0	21317	0	10907

<sup>•</sup> All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for contingency casing.

### 3. Cementing Program (Primary Design)

Assuming no returns are established while drilling, Devon requests to pump a two stage cement job on the 8-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (5663') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. The final cement top will be verified by Echo-meter. Devon will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

Devon will report to the BLM the volume of fluid (limited to 1 bbls) used to flush intermediate casing valves following backside cementing procedures.

3. Cementing Program (Primary Design)

Casing	# Sks	TOC	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	122	Surf	13.2	1.44	Lead: Class C Cement + additives
I 1	Int 1 310 465		9	3.27	Lead: Class C Cement + additives
Int I			13.2	1.44	Tail: Class H / C + additives
Int 1	640	Surf	13.2	1.44	Squeeze Lead: Class C Cement + additives
Intermediate	310	Surf	9	3.27	Lead: Class C Cement + additives
Squeeze	465	4000' above	13.2	1.44	Tail: Class H / C + additives
Production	117	8449	9	3.27	Lead: Class H /C + additives
Froduction	1438	10449	13.2	1.44	Tail: Class H / C + additives

Casing String	% Excess
Surface	50%
Intermediate 1	30%
Intermediate 1 (Two Stage)	25%
Prod	10%

4. Pressure Control Equipment (Three String Design)

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Туре		✓	Tested to:	
				nular	X	50% of rated working pressure	
Int 1	13-58"	5M	Blind	d Ram	X		
IIIt I	13-36	JIVI	Pipe	Ram		5M	
			Doub	le Ram	X	31V1	
			Other*				
			Annular (5M)		X	50% of rated working pressure	
D. L. C	12.5/01	53.6	Blind Ram		X	_	
Production	13-5/8"	5M	Pipe	Ram		1 514	
			Doub	le Ram	X	5M	
			Other*				
			Annular (5M)				
			Blind Ram				
			Pipe Ram			]	
			Double Ram			]	
			Other*				
N A variance is requested for	the use of a	a diverter or	the surface	casing. See a	attached for s	chematic.	
Y A variance is requested to a	run a 5 M a	nnular on a	10M system				

5. Mud Program (Three String Design)

Section	Туре	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	DBE / Cut Brine	10-10.5
Production	OBM	10-10.5

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

Additional	logs planned	Interval
	Resistivity	Int. shoe to KOP
	Density	Int. shoe to KOP
X	CBL	Production casing
X	Mud log	Intermediate shoe to TD
	PEX	

7. Drilling Conditions

Condition	Specfiy what type and where?
BH pressure at deepest TVD	5955
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 Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered measured values and formations will be provided to the BLM

cheountered	differed measured variets and formations will be provided to the BLW.			
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 (OnShore Order 2, all COAs and NMOCD regulations).
- $^{3}$  The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pa.
- 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. A that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
  - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments	
X	Directional Plan
	Other, describe

### Mr Potato Head 11-14 Fed Com 834H

103/4	su	rface csg in a	13 1/2	inch hole.		Design I	-actors			Surfac	e	
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weigh
"A"	45.50		j 55	btc	34.94	9.93	0.64	450	18	1.08	18.76	20,475
"B"				btc				0				0
	w/8.4#	g mud, 30min Sfc Csg Test p	osig: 1,500	Tail Cmt	does not	circ to sfc.	Totals:	450				20,47
comparison of	f Proposed to N	Minimum Required Ceme	ent Volumes									
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Reg'd				Min Dis
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cp
13 1/2	0.3637	122	176	164	7	9.00	3326	5M				0.88
		nent(s) A, B = , b All > 0			Site plat (pip	Posign I		III.D.4.i. not	found.	Int 1		
8 5/8 Segment		ing inside the	.70, OK.	Coupling	Joint	Design I				Int 1 a-B		
8 5/8	casi	ing inside the		Coupling vam sprint fj		<u>Design l</u>	-actors	Length 10,221	B@s			Weigh
8 5/8 Segment	casi #/ft	ing inside the	10 3/4		Joint	<u>Design l</u> Collapse	Factors Burst	Length		а-В	a-C	Weigh
8 5/8 Segment "A"	casi #/ft 32.00	ing inside the	<b>10 3/4</b> p 110		Joint	<u>Design l</u> Collapse	Factors Burst	Length 10,221		а-В	a-C	Weigh 327,07
8 5/8 Segment "A"	casi #/ft 32.00	ing inside the Grade	10 3/4 p 110		Joint	<u>Design l</u> Collapse	Factors Burst 1.2 Totals:	Length 10,221		а-В	<b>a-C</b> 1.20	Weigh 327,07
8 5/8 Segment "A"	casi #/ft 32.00	ing inside the Grade	10 3/4 p 110	vam sprint fj	Joint 2.27	Design I Collapse 0.72	Factors Burst 1.2 Totals:	Length 10,221 0 10,221		а-В	<b>a-C</b> 1.20	Weigh 327,07 0 327,07 overlap.
8 5/8 Segment "A" "B"	casi #/ft 32.00 w/8.4#	ing inside the Grade /g mud, 30min Sfc Csg Test p The cement v	10 3/4 p 110 psig: 545 rolume(s) are inte	vam sprint fj	Joint 2.27	Design I Collapse 0.72	Factors Burst 1.2 Totals:	Length 10,221 0 10,221 450		а-В	<b>a-C</b> 1.20	Weigh 327,07 0 327,07 overlap. Min Dis
8 5/8 Segment "A" "B"	casi #/ft 32.00 w/8.4#	ing inside the Grade //g mud, 30min Sfc Csg Test p The cement v 1 Stage	p 110 p 110 p 1545 rolume(s) are inte	vam sprint fj nded to achieve a top of	Joint 2.27	Design I Collapse 0.72  ft from su Drilling	Factors Burst 1.2 Totals: rface or a Calc	Length 10,221 0 10,221 450 Req'd		а-В	<b>a-C</b> 1.20	Weigh 327,07 0 327,07 overlap. Min Dis
8 5/8 Segment "A" "B"	casi #/ft 32.00 w/8.4# Annular Volume	ing inside the Grade V/g mud, 30min Sfc Csg Test p The cement v 1 Stage Cmt Sx	p 110 p 110 p 110 psig: 545 rolume(s) are inte 1 Stage CuFt Cmt	vam sprint fj nded to achieve a top ol Min Cu Ft	Joint 2.27 0 1 Stage % Excess	Design I Collapse 0.72  ft from su Drilling Mud Wt	Factors Burst 1.2 Totals: rface or a Calc MASP	Length 10,221 0 10,221 450 Req'd BOPE		а-В	<b>a-C</b> 1.20	Weigh 327,07 0 327,07 overlap. Min Dis Hole-Cp

Tail cmt												
5 1/2	cas	ing inside the	8 5/8	<u>-</u>		Design Fa	ctors		-	Prod 1		
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	20.00	ŗ	110	dwc/c	3.34	2.03	2.41	21,317	2	4.05	3.41	426,340
"B"								0				0
	w/8.4#	t/g mud, 30min Sfc Csg Test psig	2,400				Totals:	21,317				426,340
!		The cement volu	ıme(s) are intei	nded to achieve a top of	10021	ft from su	rface or a	200				overlap.
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Reg'd				Min Dist
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cplg
7 7/8	0.1733	1555	2453	1958	25	10.50						0.88
Class 'C' tail cn	nt yld > 1.35											

0			5 1/2	_		<u>Design I</u>	-actors		<c< th=""><th>Choose C</th><th>Casing&gt;</th><th></th></c<>	Choose C	Casing>	
Segment	#/ft	Grade		Coupling	#N/A	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"				0.00				0				0
"B"				0.00				0				0
	w/8.4#/g	mud, 30min Sfc Csg Test	osig:				Totals:	0				0
		Cmt vol ca	alc below includes th	is csg, TOC intended	#N/A	ft from su	rface or a	#N/A				overlap.
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd				Min Dist
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cplg
0		#N/A	#N/A	0	#N/A							
#N/A			Capitan Reef est	top XXXX.								

Carlsbad Field Office 11/1/2022

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: Devon Energy Production Company LP

LEASE NO.: NMNM88134

**LOCATION:** | Section 11, T.24 S., R.29 E., NMPM

**COUNTY:** Eddy County, New Mexico

WELL NAME & NO.: Mr Potato Head 11-14 Fed Com 834H

**SURFACE HOLE FOOTAGE:** 200'/N & 2006'/W **BOTTOM HOLE FOOTAGE** 20'/S & 2430'/E

ATS/API ID: 3001549979 Sundry ID: 2695834

COA

H2S	Yes	<b>©</b> No	
Potash	None	☐ Secretary	□ R-111-P
Cave/Karst Potential	Low	Medium	☐ High
Cave/Karst Potential	Critical		
Variance	None		Other
Wellhead	Conventional	☐ Multibowl	Both
Wellhead Variance	Diverter		
Other	□4 String	□Capitan Reef	□WIPP
Other	Fluid Filled	☐ Pilot Hole	☐ Open Annulus
Cementing	Cement Squeeze	✓ EchoMeter	
Special Requirements	☐ Water Disposal	<b>☑</b> COM	☐ Unit
Special Requirements	☑ Break Testing	☐ Offline	
Variance		Cementing	

### 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 Onshore Order 6 requirements, 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 10-3/4 inch surface casing shall be set at approximately 450 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.

- 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 **8 hours** 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 8-5/8 inch intermediate casing is:

## **Option 1 (Single Stage):**

• 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.

# **Option 2:**

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage, contingent upon no returns to surface.

- a. First stage: Operator will cement with intent to reach the top of the Brushy Canyon at 5663' (465+310 sxs Class H/C+ additives).
- b. Second stage:
  - Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified. (Squeeze 640 sxs Class C)
     Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
- ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

Operator has proposed to pump down 10-3/4" X 8-5/8" annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus Or operator shall run a CBL from TD of the 8-5/8" casing to surface after the second stage BH to verify TOC.

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad.

If cement does not reach surface, the next casing string must come to surface.

Operator must use a limited flush fluid volume of 1 bbl following backside cementing procedures.

- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - Cement should tie-back at least 200 feet into previous casing string.
     Operator shall provide method of verification.
     Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

### 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 5000 (5M) psi. Annular which shall be tested to 3500 (70% Working Pressure) psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 8-5/8 inch intermediate casing shoe shall be 5000 (5M) psi.

### Option 2:

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 10-3/4 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 OOGO2.III.A.2.i 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.
- 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. When the Communitization Agreement number is known, it shall also be on the sign.

### **BOPE Break Testing Variance**

- 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 14-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per Onshore Oil and Gas Order No. 2.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

# **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
     Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822
  - ✓ Lea CountyCall the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)689-5981
- 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 Onshore Oil and Gas Order No. 2 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.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

### 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.
- 2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. Wait on cement (WOC) for Water Basin: 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 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity 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

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 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 OOGO2.III.A.2.i 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 when specified), 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 plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 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 water basin (8 hours) or potash (24 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 Onshore Order No. 2.

### 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.

LVO 11/1/2022

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720 District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 158526

### **CONDITIONS**

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP	6137
333 West Sheridan Ave.	Action Number:
Oklahoma City, OK 73102	158526
	Action Type:
	[C-103] NOI Change of Plans (C-103A)

### CONDITIONS

Created By	Condition	Condition Date
kpickford	Adhere to previous NMOCD Conditions of Approval	11/29/2022