

Well Name: COTTON DRAW UNIT	Well Location: T24S / R31E / SEC 26 / NENE /	County or Parish/State:
Well Number: 527H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM012121	Unit or CA Name: COTTON DRAW UNIT	Unit or CA Number: NMNM70928X
US Well Number: 3001548564	Well Status: Approved Application for Permit to Drill	Operator: DEVON ENERGY PRODUCTION COMPANY LP

Notice of Intent

Sundry ID: 2720840

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 03/14/2023

Time Sundry Submitted: 03:20

Date proposed operation will begin: 03/14/2023

**Procedure Description:** Devon Energy Production Co., L.P. (Devon) respectfully requests to move the SHL and BHL on the subject well. Devon Energy Production Co., L.P. requests to change the intermediate casing set depth and a break test variance. Please see attached C102, Drill plan, directional plan, and break test request. No new leases were added. SHL From currently permitted: 280 FNL & 1320 FEL, 26-24S-31E, NENE To proposed: 305 FNL & 1325 FEL, 26-24S-31E, NWNE BHL From currently permitted: 20 FSL & 400 FEL, 2-25S-31E, SESE To proposed: 20 FSL & 750 FEL, 2-25S-31E, SESE

NOI Attachments

Procedure Description

- SITE\_MAP\_20230406070356.pdf
- COTTON\_DRAW\_UNIT\_527H\_R1\_20230406065615.pdf
- COTTON\_DRAW\_UNIT\_527H\_Directional\_Plan\_03\_07\_23\_20230314150559.pdf
- WA017979214\_COTTON\_DRAW\_UNIT\_527H\_WL\_R1\_SIGNED\_20230314150538.pdf
- break\_test\_variance\_BOP\_20230314150257.pdf

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Conditions of Approval

Additional

26\_24\_31\_B\_Sundry\_ID\_2720840\_Cotton\_Draw\_Unit\_527H\_Eddy\_NM0012121\_Devon\_Energy\_Production\_Company\_LP\_13\_22f\_3\_15\_2023\_LV\_20230424121727.pdf

Cotton\_Draw\_Unit\_527H\_Sundry\_ID\_2720840\_Dr\_COA\_20230424121727.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: CHELSEY GREEN	Signed on: APR 20, 2023 08:03 AM
Name: DEVON ENERGY PRODUCTION COMPANY LP	
Title: Regulatory Compliance Professional	
Street Address: 333 West Sheridan Avenue	
City: Oklahoma City	State: OK
Phone: (405) 228-8595	
Email address: Chelsey.Green@dvn.com	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: Bobby Ballard	BLM POC Title: Natural Resource Specialist
BLM POC Phone: 5752342235	BLM POC Email Address: bballard@blm.gov
Disposition: Approved	Disposition Date: 04/25/2023
Signature: Chris Walls	

Accepted for record – NMOCD

JRH — 04/27/2023 —

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 Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
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  
☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-015-48564	<sup>2</sup> Pool Code 96641	<sup>3</sup> Pool Name PADUCA; BONE SPRING
<sup>4</sup> Property Code 300635	<sup>5</sup> Property Name COTTON DRAW UNIT	<sup>6</sup> Well Number 527H
<sup>7</sup> OGRID No. 6137	<sup>8</sup> Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.	<sup>9</sup> Elevation 3543.0

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	26	24 S	31 E		305	NORTH	1325	EAST	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
P	2	25 S	31 E		20	SOUTH	750	EAST	EDDY

<sup>12</sup> Dedicated Acres 957.75	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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.

	<p><b><sup>17</sup> OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Chelsey Green</i> 3/14/23 Signature Date</p> <p>Chelsey Green Printed Name</p> <p>chelsey.green@dvn.com E-mail Address</p>
	<p><b><sup>18</sup> SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>FEBRUARY 13, 2023 Date of Survey</p> <p><i>[Signature]</i> Signature and Seal of Professional Surveyor</p> <p>Certificate Number: F. J. MONTE JARAMILLO, P.S. 12797 SURVEY NO. 8014A</p>

Intent ☒ As Drilled ☐

API # 30-015-48564		
Operator Name: DEVON ENERGY PRODUCTION COMPANY, L.P.	Property Name: COTTON DRAW UNIT	Well Number 527H

## Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	26	24S	31E		53	NORTH	750	EAST	EDDY
Latitude 32.1954					Longitude -103.7426				NAD 83

## First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	26	24S	31E		100	NORTH	750	EAST	EDDY
Latitude 32.1953249					Longitude 103.7424699				NAD 83

## Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	2	25S	31E		100	SOUTH	750	EAST	EDDY
Latitude 32.1523803					Longitude 103.7425255				NAD 83

Is this well the defining well for the Horizontal Spacing Unit? ☐ NIs this well an infill well? ☐ Y

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

## COTTON DRAW UNIT 527H

## 1. Geologic Formations

TVD of target	8994	Pilot hole depth	N/A
MD at TD:	24553	Deepest expected fresh water	

## Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	660		
Salt	1010		
Base of Salt	4400		
Cherry Canyon	5360		
Brushy Canyon	6680		
1st Bone Spring Lime	8290		
Leonard	8535		

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

## COTTON DRAW UNIT 527H

**2. Casing Program**

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Casing Interval		Casing Interval	
					From (MD)	To (MD)	From (TVD)	To (TVD)
17 1/2	13 3/8	48	H40	BTC	0	685	0	685
12 1/4	9 5/8	40	J-55	BTC	0	8490	0	8490
8 3/4	5 1/2	17	P110	BTC	0	24553	0	8994

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

## COTTON DRAW UNIT 527H

**3. Cementing Program (3-String Primary Design)**

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft <sup>3</sup> /sack)	Slurry Description
Surface	534	Surf	13.2	1.4	Lead: Class C Cement + additives
Int 1	988	Surf	9.0	3.3	Lead: Class C Cement + additives
	215	6680	13.2	1.4	Tail: Class H / C + additives
Production	43	7990	9.0	3.3	Lead: Class H / C + additives
	3102	8475	13.2	1.4	Tail: Class H / C + additives

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 and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. 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.

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

## COTTON DRAW UNIT 527H

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

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-58"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
			Annular (5M)		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		



## COTTON DRAW UNIT 527H

**5. Mud Program (Three String Design)**

Section	Type	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	Brine	10-10.5
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
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**6. Logging and Testing Procedures**

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

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

**7. Drilling Conditions**

Condition	Specify what type and where?
BH pressure at deepest TVD	4209
Abnormal temperature	No

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

Hydrogen Sulfide (H<sub>2</sub>S) monitors will be installed prior to drilling out the surface shoe. If H<sub>2</sub>S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered measured values and formations will be provided to the BLM.

N	H <sub>2</sub> S is present
Y	H <sub>2</sub> S plan attached.

## COTTON DRAW UNIT 527H

**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 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 nipped 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

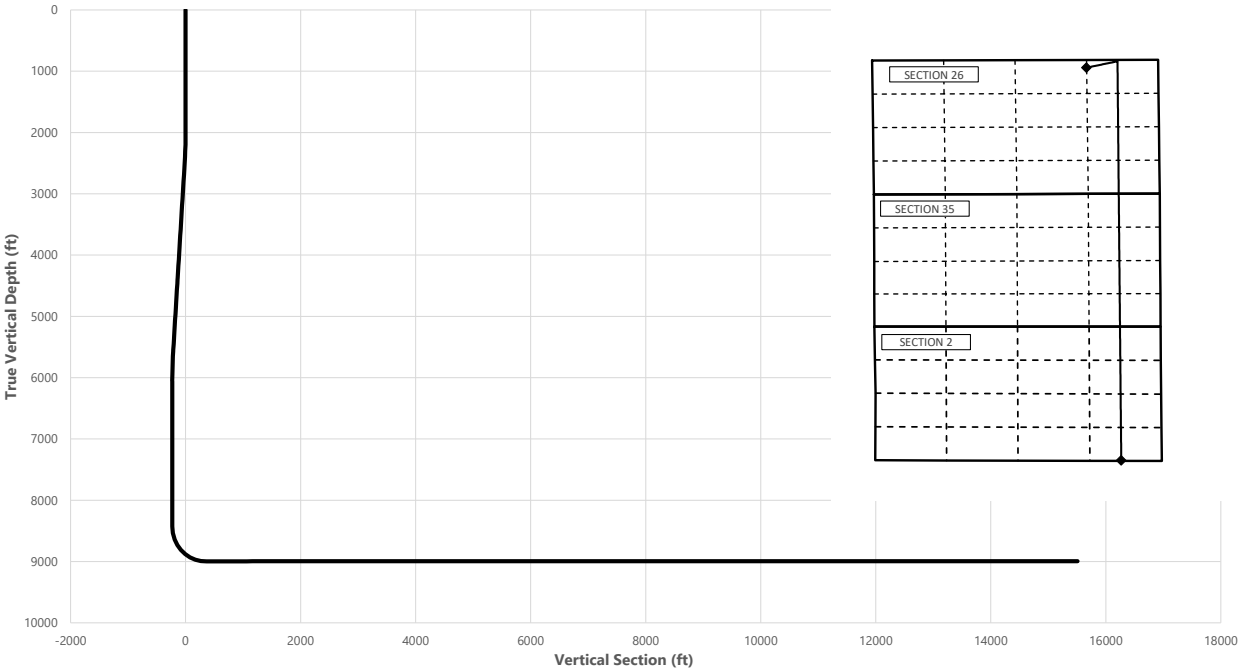
COTTON DRAW UNIT 527H



Well: COTTON DRAW UNIT 527H  
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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
2000.00	0.00	66.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	10.00	66.00	2497.47	17.70	39.76	-16.04	1.00	Hold Tangent
5615.36	10.00	66.00	5565.49	237.74	533.97	-215.39	0.00	Drop to Vertical
6115.36	0.00	66.00	6062.96	255.44	573.73	-231.43	2.00	Hold Vertical
8475.44	0.00	179.75	8423.04	255.44	573.73	-231.43	0.00	KOP
9375.52	90.01	179.75	8996.00	-317.59	576.25	341.20	10.00	Landing Point
24553.07	90.01	179.75	8994.00	-15495.00	643.00	15508.34	0.00	BHL



Key Depths	MD	TVD
	(ft)	(ft)
Rustler	0.00	0.00
Salt	1010.00	1010.00
Base of Salt	4431.88	4400.00
Cherry Canyon	5406.69	5360.00
Brushy Canyon	6732.40	6680.00
1st Bone Spring Lime	8342.40	8290.00
Leonard / Point of Penetration	8588.12	8535.00
EXIT	24473.07	8994.03

SHL  
KOP  
Point of Penetration  
Exit  
BHL

MD	TVD	Lat	Long	Section Footages
(ft)	(ft)	(°)	(°)	
0.00	0.00	32.1947	-103.7444	305' FNL, 1325' FEL of Sec 26 in T24S, R31E
8475.44	8423.04	32.1954	-103.7426	53' FNL, 750' FEL of Sec 26 in T24S, R31E
8588.12	8535.00	32.1953	-103.7425	100' FNL, 750' FEL of Sec 26 in T24S, R31E
24473.07	8994.03	32.1524	-103.7425	100' FSL, 750' FEL of Sec 2 in T25S, R31E
24553.07	8994.00	32.1521	-103.7426	20' FSL, 750' FSL of Sec 2 in T25S, R31E

COTTON DRAW UNIT 527H



Well: COTTON DRAW UNIT 527H  
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 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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
100.00	0.00	66.00	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	66.00	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	66.00	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	66.00	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	66.00	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	66.00	600.00	0.00	0.00	0.00	0.00	
660.00	0.00	66.00	660.00	0.00	0.00	0.00	0.00	Rustler
700.00	0.00	66.00	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	66.00	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	66.00	900.00	0.00	0.00	0.00	0.00	
1000.00	0.00	66.00	1000.00	0.00	0.00	0.00	0.00	
1010.00	0.00	66.00	1010.00	0.00	0.00	0.00	0.00	Salt
1100.00	0.00	66.00	1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	66.00	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	66.00	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	66.00	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	66.00	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	66.00	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	66.00	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	66.00	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	66.00	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	66.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	66.00	2099.98	0.71	1.59	-0.64	2.00	
2200.00	4.00	66.00	2199.84	2.84	6.38	-2.57	2.00	
2300.00	6.00	66.00	2299.45	6.38	14.34	-5.78	2.00	
2400.00	8.00	66.00	2398.70	11.34	25.47	-10.27	2.00	
2500.00	10.00	66.00	2497.47	17.70	39.76	-16.04	1.00	Hold Tangent
2600.00	10.00	66.00	2595.95	24.77	55.62	-22.44	0.00	
2700.00	10.00	66.00	2694.43	31.83	71.49	-28.84	0.00	
2800.00	10.00	66.00	2792.91	38.89	87.35	-35.24	0.00	
2900.00	10.00	66.00	2891.39	45.95	103.21	-41.63	0.00	
3000.00	10.00	66.00	2989.87	53.02	119.08	-48.03	0.00	
3100.00	10.00	66.00	3088.35	60.08	134.94	-54.43	0.00	
3200.00	10.00	66.00	3186.83	67.14	150.80	-60.83	0.00	
3300.00	10.00	66.00	3285.31	74.21	166.67	-67.23	0.00	
3400.00	10.00	66.00	3383.79	81.27	182.53	-73.63	0.00	
3500.00	10.00	66.00	3482.27	88.33	198.40	-80.03	0.00	
3600.00	10.00	66.00	3580.75	95.39	214.26	-86.43	0.00	
3700.00	10.00	66.00	3679.23	102.46	230.12	-92.83	0.00	
3800.00	10.00	66.00	3777.72	109.52	245.99	-99.23	0.00	
3900.00	10.00	66.00	3876.20	116.58	261.85	-105.63	0.00	
4000.00	10.00	66.00	3974.68	123.65	277.71	-112.02	0.00	
4100.00	10.00	66.00	4073.16	130.71	293.58	-118.42	0.00	
4200.00	10.00	66.00	4171.64	137.77	309.44	-124.82	0.00	
4300.00	10.00	66.00	4270.12	144.83	325.30	-131.22	0.00	
4400.00	10.00	66.00	4368.60	151.90	341.17	-137.62	0.00	
4431.88	10.00	66.00	4400.00	154.15	346.22	-139.66	0.00	Base of Salt
4500.00	10.00	66.00	4467.08	158.96	357.03	-144.02	0.00	
4600.00	10.00	66.00	4565.56	166.02	372.89	-150.42	0.00	
4700.00	10.00	66.00	4664.04	173.09	388.76	-156.82	0.00	
4800.00	10.00	66.00	4762.52	180.15	404.62	-163.22	0.00	
4900.00	10.00	66.00	4861.00	187.21	420.48	-169.62	0.00	
5000.00	10.00	66.00	4959.48	194.28	436.35	-176.02	0.00	
5100.00	10.00	66.00	5057.97	201.34	452.21	-182.41	0.00	
5200.00	10.00	66.00	5156.45	208.40	468.08	-188.81	0.00	
5300.00	10.00	66.00	5254.93	215.46	483.94	-195.21	0.00	
5400.00	10.00	66.00	5353.41	222.53	499.80	-201.61	0.00	
5406.69	10.00	66.00	5360.00	223.00	500.86	-202.04	0.00	Cherry Canyon
5500.00	10.00	66.00	5451.89	229.59	515.67	-208.01	0.00	
5600.00	10.00	66.00	5550.37	236.65	531.53	-214.41	0.00	
5615.36	10.00	66.00	5565.49	237.74	533.97	-215.39	0.00	Drop to Vertical
5700.00	8.31	66.00	5649.06	243.21	546.27	-220.35	2.00	
5800.00	6.31	66.00	5748.24	248.39	557.89	-225.04	2.00	
5900.00	4.31	66.00	5847.80	252.15	566.33	-228.45	2.00	
6000.00	2.31	66.00	5947.63	254.49	571.60	-230.58	2.00	
6100.00	0.31	66.00	6047.60	255.42	573.69	-231.42	2.00	
6115.36	0.00	66.00	6062.96	255.44	573.73	-231.43	2.00	Hold Vertical
6200.00	0.00	179.75	6147.60	255.44	573.73	-231.43	0.00	
6300.00	0.00	179.75	6247.60	255.44	573.73	-231.43	0.00	

COTTON DRAW UNIT 527H



**Well:** COTTON DRAW UNIT 527H  
**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 (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
6400.00	0.00	179.75	6347.60	255.44	573.73	-231.43	0.00	
6500.00	0.00	179.75	6447.60	255.44	573.73	-231.43	0.00	
6600.00	0.00	179.75	6547.60	255.44	573.73	-231.43	0.00	
6700.00	0.00	179.75	6647.60	255.44	573.73	-231.43	0.00	
6732.40	0.00	179.75	6680.00	255.44	573.73	-231.43	0.00	Brushy Canyon
6800.00	0.00	179.75	6747.60	255.44	573.73	-231.43	0.00	
6900.00	0.00	179.75	6847.60	255.44	573.73	-231.43	0.00	
7000.00	0.00	179.75	6947.60	255.44	573.73	-231.43	0.00	
7100.00	0.00	179.75	7047.60	255.44	573.73	-231.43	0.00	
7200.00	0.00	179.75	7147.60	255.44	573.73	-231.43	0.00	
7300.00	0.00	179.75	7247.60	255.44	573.73	-231.43	0.00	
7400.00	0.00	179.75	7347.60	255.44	573.73	-231.43	0.00	
7500.00	0.00	179.75	7447.60	255.44	573.73	-231.43	0.00	
7600.00	0.00	179.75	7547.60	255.44	573.73	-231.43	0.00	
7700.00	0.00	179.75	7647.60	255.44	573.73	-231.43	0.00	
7800.00	0.00	179.75	7747.60	255.44	573.73	-231.43	0.00	
7900.00	0.00	179.75	7847.60	255.44	573.73	-231.43	0.00	
8000.00	0.00	179.75	7947.60	255.44	573.73	-231.43	0.00	
8100.00	0.00	179.75	8047.60	255.44	573.73	-231.43	0.00	
8200.00	0.00	179.75	8147.60	255.44	573.73	-231.43	0.00	
8300.00	0.00	179.75	8247.60	255.44	573.73	-231.43	0.00	
8342.40	0.00	179.75	8290.00	255.44	573.73	-231.43	0.00	1st Bone Spring Lime
8400.00	0.00	179.75	8347.60	255.44	573.73	-231.43	0.00	
8475.44	0.00	179.75	8423.04	255.44	573.73	-231.43	0.00	KOP
8500.00	2.46	179.75	8447.59	254.91	573.73	-230.91	10.00	
8588.12	11.27	179.75	8535.00	244.39	573.77	-220.39	10.00	Leonard / Point of Penetration
8600.00	12.46	179.75	8546.62	241.95	573.79	-217.95	10.00	
8700.00	22.46	179.75	8641.90	211.99	573.92	-188.02	10.00	
8800.00	32.46	179.75	8730.52	165.95	574.12	-142.00	10.00	
8900.00	42.46	179.75	8809.80	105.21	574.39	-81.30	10.00	
9000.00	52.46	179.75	8877.33	31.63	574.71	-7.77	10.00	
9100.00	62.46	179.75	8931.06	-52.56	575.08	76.36	10.00	
9200.00	72.46	179.75	8969.35	-144.80	575.49	168.54	10.00	
9300.00	82.46	179.75	8991.04	-242.29	575.92	265.96	10.00	
9375.52	90.01	179.75	8996.00	-317.59	576.25	341.20	10.00	Landing Point
9400.00	90.01	179.75	8996.00	-342.07	576.35	365.68	0.00	
9500.00	90.01	179.75	8995.98	-442.07	576.79	465.61	0.00	
9600.00	90.01	179.75	8995.97	-542.07	577.23	565.54	0.00	
9700.00	90.01	179.75	8995.96	-642.07	577.67	665.47	0.00	
9800.00	90.01	179.75	8995.94	-742.07	578.11	765.40	0.00	
9900.00	90.01	179.75	8995.93	-842.07	578.55	865.33	0.00	
10000.00	90.01	179.75	8995.92	-942.07	578.99	965.26	0.00	
10100.00	90.01	179.75	8995.91	-1042.07	579.43	1065.19	0.00	
10200.00	90.01	179.75	8995.89	-1142.06	579.87	1165.13	0.00	
10300.00	90.01	179.75	8995.88	-1242.06	580.32	1265.06	0.00	
10400.00	90.01	179.75	8995.87	-1342.06	580.76	1364.99	0.00	
10500.00	90.01	179.75	8995.85	-1442.06	581.20	1464.92	0.00	
10600.00	90.01	179.75	8995.84	-1542.06	581.64	1564.85	0.00	
10700.00	90.01	179.75	8995.83	-1642.06	582.08	1664.78	0.00	
10800.00	90.01	179.75	8995.81	-1742.06	582.52	1764.71	0.00	
10900.00	90.01	179.75	8995.80	-1842.06	582.96	1864.64	0.00	
11000.00	90.01	179.75	8995.79	-1942.06	583.40	1964.58	0.00	
11100.00	90.01	179.75	8995.78	-2042.06	583.84	2064.51	0.00	
11200.00	90.01	179.75	8995.76	-2142.05	584.28	2164.44	0.00	
11300.00	90.01	179.75	8995.75	-2242.05	584.72	2264.37	0.00	
11400.00	90.01	179.75	8995.74	-2342.05	585.16	2364.30	0.00	
11500.00	90.01	179.75	8995.72	-2442.05	585.60	2464.23	0.00	
11600.00	90.01	179.75	8995.71	-2542.05	586.04	2564.16	0.00	
11700.00	90.01	179.75	8995.70	-2642.05	586.48	2664.10	0.00	
11800.00	90.01	179.75	8995.68	-2742.05	586.92	2764.03	0.00	
11900.00	90.01	179.75	8995.67	-2842.05	587.36	2863.96	0.00	
12000.00	90.01	179.75	8995.66	-2942.05	587.80	2963.89	0.00	
12100.00	90.01	179.75	8995.64	-3042.05	588.24	3063.82	0.00	
12200.00	90.01	179.75	8995.63	-3142.05	588.68	3163.75	0.00	
12300.00	90.01	179.75	8995.62	-3242.04	589.12	3263.68	0.00	
12400.00	90.01	179.75	8995.61	-3342.04	589.56	3363.61	0.00	
12500.00	90.01	179.75	8995.59	-3442.04	590.00	3463.55	0.00	
12600.00	90.01	179.75	8995.58	-3542.04	590.44	3563.48	0.00	
12700.00	90.01	179.75	8995.57	-3642.04	590.88	3663.41	0.00	
12800.00	90.01	179.75	8995.55	-3742.04	591.32	3763.34	0.00	

COTTON DRAW UNIT 527H



Well: COTTON DRAW UNIT 527H  
 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 (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12900.00	90.01	179.75	8995.54	-3842.04	591.76	3863.27	0.00	
13000.00	90.01	179.75	8995.53	-3942.04	592.20	3963.20	0.00	
13100.00	90.01	179.75	8995.51	-4042.04	592.64	4063.13	0.00	
13200.00	90.01	179.75	8995.50	-4142.04	593.08	4163.06	0.00	
13300.00	90.01	179.75	8995.49	-4242.03	593.52	4263.00	0.00	
13400.00	90.01	179.75	8995.48	-4342.03	593.96	4362.93	0.00	
13500.00	90.01	179.75	8995.46	-4442.03	594.40	4462.86	0.00	
13600.00	90.01	179.75	8995.45	-4542.03	594.84	4562.79	0.00	
13700.00	90.01	179.75	8995.44	-4642.03	595.28	4662.72	0.00	
13800.00	90.01	179.75	8995.42	-4742.03	595.72	4762.65	0.00	
13900.00	90.01	179.75	8995.41	-4842.03	596.16	4862.58	0.00	
14000.00	90.01	179.75	8995.40	-4942.03	596.60	4962.51	0.00	
14100.00	90.01	179.75	8995.38	-5042.03	597.04	5062.45	0.00	
14200.00	90.01	179.75	8995.37	-5142.03	597.48	5162.38	0.00	
14300.00	90.01	179.75	8995.36	-5242.02	597.92	5262.31	0.00	
14400.00	90.01	179.75	8995.34	-5342.02	598.36	5362.24	0.00	
14500.00	90.01	179.75	8995.33	-5442.02	598.80	5462.17	0.00	
14600.00	90.01	179.75	8995.32	-5542.02	599.24	5562.10	0.00	
14700.00	90.01	179.75	8995.31	-5642.02	599.68	5662.03	0.00	
14800.00	90.01	179.75	8995.29	-5742.02	600.12	5761.96	0.00	
14900.00	90.01	179.75	8995.28	-5842.02	600.56	5861.90	0.00	
15000.00	90.01	179.75	8995.27	-5942.02	601.00	5961.83	0.00	
15100.00	90.01	179.75	8995.25	-6042.02	601.44	6061.76	0.00	
15200.00	90.01	179.75	8995.24	-6142.02	601.88	6161.69	0.00	
15300.00	90.01	179.75	8995.23	-6242.02	602.32	6261.62	0.00	
15400.00	90.01	179.75	8995.21	-6342.01	602.76	6361.55	0.00	
15500.00	90.01	179.75	8995.20	-6442.01	603.20	6461.48	0.00	
15600.00	90.01	179.75	8995.19	-6542.01	603.64	6561.42	0.00	
15700.00	90.01	179.75	8995.17	-6642.01	604.08	6661.35	0.00	
15800.00	90.01	179.75	8995.16	-6742.01	604.52	6761.28	0.00	
15900.00	90.01	179.75	8995.15	-6842.01	604.96	6861.21	0.00	
16000.00	90.01	179.75	8995.14	-6942.01	605.40	6961.14	0.00	
16100.00	90.01	179.75	8995.12	-7042.01	605.84	7061.07	0.00	
16200.00	90.01	179.75	8995.11	-7142.01	606.28	7161.00	0.00	
16300.00	90.01	179.75	8995.10	-7242.01	606.72	7260.93	0.00	
16400.00	90.01	179.75	8995.08	-7342.00	607.16	7360.87	0.00	
16500.00	90.01	179.75	8995.07	-7442.00	607.60	7460.80	0.00	
16600.00	90.01	179.75	8995.06	-7542.00	608.04	7560.73	0.00	
16700.00	90.01	179.75	8995.04	-7642.00	608.48	7660.66	0.00	
16800.00	90.01	179.75	8995.03	-7742.00	608.92	7760.59	0.00	
16900.00	90.01	179.75	8995.02	-7842.00	609.36	7860.52	0.00	
17000.00	90.01	179.75	8995.01	-7942.00	609.80	7960.45	0.00	
17100.00	90.01	179.75	8994.99	-8042.00	610.24	8060.38	0.00	
17200.00	90.01	179.75	8994.98	-8142.00	610.68	8160.32	0.00	
17300.00	90.01	179.75	8994.97	-8242.00	611.12	8260.25	0.00	
17400.00	90.01	179.75	8994.95	-8341.99	611.56	8360.18	0.00	
17500.00	90.01	179.75	8994.94	-8441.99	612.00	8460.11	0.00	
17600.00	90.01	179.75	8994.93	-8541.99	612.44	8560.04	0.00	
17700.00	90.01	179.75	8994.91	-8641.99	612.88	8659.97	0.00	
17800.00	90.01	179.75	8994.90	-8741.99	613.32	8759.90	0.00	
17900.00	90.01	179.75	8994.89	-8841.99	613.76	8859.83	0.00	
18000.00	90.01	179.75	8994.87	-8941.99	614.20	8959.77	0.00	
18100.00	90.01	179.75	8994.86	-9041.99	614.64	9059.70	0.00	
18200.00	90.01	179.75	8994.85	-9141.99	615.08	9159.63	0.00	
18300.00	90.01	179.75	8994.84	-9241.99	615.52	9259.56	0.00	
18400.00	90.01	179.75	8994.82	-9341.99	615.96	9359.49	0.00	
18500.00	90.01	179.75	8994.81	-9441.98	616.40	9459.42	0.00	
18600.00	90.01	179.75	8994.80	-9541.98	616.84	9559.35	0.00	
18700.00	90.01	179.75	8994.78	-9641.98	617.28	9659.28	0.00	
18800.00	90.01	179.75	8994.77	-9741.98	617.72	9759.22	0.00	
18900.00	90.01	179.75	8994.76	-9841.98	618.16	9859.15	0.00	
19000.00	90.01	179.75	8994.74	-9941.98	618.60	9959.08	0.00	
19100.00	90.01	179.75	8994.73	-10041.98	619.04	10059.01	0.00	
19200.00	90.01	179.75	8994.72	-10141.98	619.48	10158.94	0.00	
19300.00	90.01	179.75	8994.71	-10241.98	619.92	10258.87	0.00	
19400.00	90.01	179.75	8994.69	-10341.98	620.36	10358.80	0.00	
19500.00	90.01	179.75	8994.68	-10441.97	620.80	10458.74	0.00	
19600.00	90.01	179.75	8994.67	-10541.97	621.24	10558.67	0.00	
19700.00	90.01	179.75	8994.65	-10641.97	621.68	10658.60	0.00	
19800.00	90.01	179.75	8994.64	-10741.97	622.12	10758.53	0.00	

COTTON DRAW UNIT 527H



Well: COTTON DRAW UNIT 527H  
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 Wellbore: Permit Plan  
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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)	
19900.00	90.01	179.75	8994.63	-10841.97	622.56	10858.46	0.00	
20000.00	90.01	179.75	8994.61	-10941.97	623.00	10958.39	0.00	
20100.00	90.01	179.75	8994.60	-11041.97	623.44	11058.32	0.00	
20200.00	90.01	179.75	8994.59	-11141.97	623.88	11158.25	0.00	
20300.00	90.01	179.75	8994.57	-11241.97	624.32	11258.19	0.00	
20400.00	90.01	179.75	8994.56	-11341.97	624.76	11358.12	0.00	
20500.00	90.01	179.75	8994.55	-11441.96	625.20	11458.05	0.00	
20600.00	90.01	179.75	8994.54	-11541.96	625.64	11557.98	0.00	
20700.00	90.01	179.75	8994.52	-11641.96	626.08	11657.91	0.00	
20800.00	90.01	179.75	8994.51	-11741.96	626.52	11757.84	0.00	
20900.00	90.01	179.75	8994.50	-11841.96	626.96	11857.77	0.00	
21000.00	90.01	179.75	8994.48	-11941.96	627.40	11957.70	0.00	
21100.00	90.01	179.75	8994.47	-12041.96	627.84	12057.64	0.00	
21200.00	90.01	179.75	8994.46	-12141.96	628.28	12157.57	0.00	
21300.00	90.01	179.75	8994.44	-12241.96	628.72	12257.50	0.00	
21400.00	90.01	179.75	8994.43	-12341.96	629.16	12357.43	0.00	
21500.00	90.01	179.75	8994.42	-12441.96	629.60	12457.36	0.00	
21600.00	90.01	179.75	8994.41	-12541.95	630.04	12557.29	0.00	
21700.00	90.01	179.75	8994.39	-12641.95	630.48	12657.22	0.00	
21800.00	90.01	179.75	8994.38	-12741.95	630.92	12757.15	0.00	
21900.00	90.01	179.75	8994.37	-12841.95	631.37	12857.09	0.00	
22000.00	90.01	179.75	8994.35	-12941.95	631.81	12957.02	0.00	
22100.00	90.01	179.75	8994.34	-13041.95	632.25	13056.95	0.00	
22200.00	90.01	179.75	8994.33	-13141.95	632.69	13156.88	0.00	
22300.00	90.01	179.75	8994.31	-13241.95	633.13	13256.81	0.00	
22400.00	90.01	179.75	8994.30	-13341.95	633.57	13356.74	0.00	
22500.00	90.01	179.75	8994.29	-13441.95	634.01	13456.67	0.00	
22600.00	90.01	179.75	8994.27	-13541.94	634.45	13556.60	0.00	
22700.00	90.01	179.75	8994.26	-13641.94	634.89	13656.54	0.00	
22800.00	90.01	179.75	8994.25	-13741.94	635.33	13756.47	0.00	
22900.00	90.01	179.75	8994.24	-13841.94	635.77	13856.40	0.00	
23000.00	90.01	179.75	8994.22	-13941.94	636.21	13956.33	0.00	
23100.00	90.01	179.75	8994.21	-14041.94	636.65	14056.26	0.00	
23200.00	90.01	179.75	8994.20	-14141.94	637.09	14156.19	0.00	
23300.00	90.01	179.75	8994.18	-14241.94	637.53	14256.12	0.00	
23400.00	90.01	179.75	8994.17	-14341.94	637.97	14356.06	0.00	
23500.00	90.01	179.75	8994.16	-14441.94	638.41	14455.99	0.00	
23600.00	90.01	179.75	8994.14	-14541.93	638.85	14555.92	0.00	
23700.00	90.01	179.75	8994.13	-14641.93	639.29	14655.85	0.00	
23800.00	90.01	179.75	8994.12	-14741.93	639.73	14755.78	0.00	
23900.00	90.01	179.75	8994.11	-14841.93	640.17	14855.71	0.00	
24000.00	90.01	179.75	8994.09	-14941.93	640.61	14955.64	0.00	
24100.00	90.01	179.75	8994.08	-15041.93	641.05	15055.57	0.00	
24200.00	90.01	179.75	8994.07	-15141.93	641.49	15155.51	0.00	
24300.00	90.01	179.75	8994.05	-15241.93	641.93	15255.44	0.00	
24400.00	90.01	179.75	8994.04	-15341.93	642.37	15355.37	0.00	
24473.07	90.01	179.75	8994.03	-15415.00	642.69	15428.39	0.00	EXIT
24500.00	90.01	179.75	8994.03	-15441.93	642.81	15455.30	0.00	
24553.07	90.01	179.75	8994.00	-15495.00	643.00	15508.34	0.00	BHL

## 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



**Cactus**  
Wellhead

2-9-17  
E Bell

80.7 °F

15:49



50

Date 02-09-17

Tested By E.BELL

Transducer bay2

Transducer Serial 181504

Calibration Date 9/6/15

Job#	Part#	Serial#	Description	Test Pressure
1	TRJ0006341-0007	116966	TRJ6341-7-1 ADPT,DRLG,CW,MBU-3T,13-5/8 10M	15000
2				
3				
4				
5			TRANSDUCER CALIBRATION DUE 03/13/2017	
6				
7				
8				



Start



Stop



Zero



Config



Save



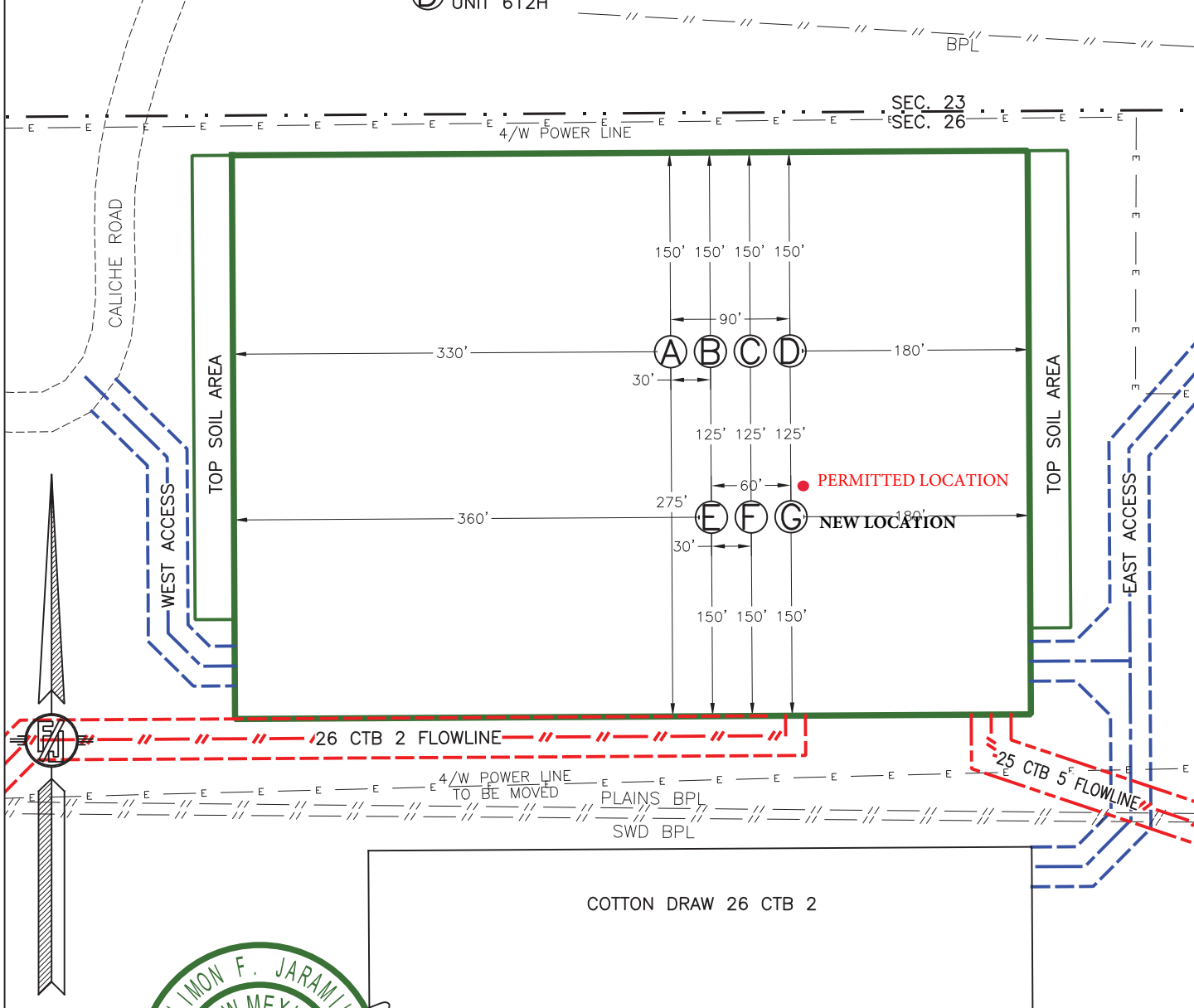
Print

EXIT

**COTTON DRAW 26 WELLPAD 3 (AA000341626)**  
**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
 IN THE NE/4 NW/4 NE/4 & NW/4 NE/4 NE/4 OF  
 SECTION 26, TOWNSHIP 24 SOUTH, RANGE 31 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 FEBRUARY 17, 2023

**SITE MAP**

- |                              |                              |
|------------------------------|------------------------------|
| (A) COTTON DRAW<br>UNIT 609H | (E) COTTON DRAW<br>UNIT 525H |
| (B) COTTON DRAW<br>UNIT 610H | (F) COTTON DRAW<br>UNIT 526H |
| (C) COTTON DRAW<br>UNIT 611H | (G) COTTON DRAW<br>UNIT 527H |
| (D) COTTON DRAW<br>UNIT 612H |                              |



012 60 120 240  
 SCALE 1" = 120'

I, FILIMON F. JARAMILLO, NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO, P.S. 15790

SHEET: 3

MADRON SURVEYING, INC.

301 SOUTH CANAL  
 (575) 234-3327

SURVEY NO. 7187A  
 CARLSBAD, NEW MEXICO

26-24-31-B Sundry ID 2720840 Cotton Draw Unit 527H Eddy NM0012121 Devon Energy Production Company LP 13-22f 3-15-2023  
LV.xlsm

## Cotton Draw Unit 527H

13 3/8		surface csg in a		17 1/2		inch hole.		Design Factors				Surface		
Segment	#/ft	Grade		Coupling		Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight	
"A"	48.00			h 40		btc	14.54	2.13	0.37	775	5	0.63	4.01	37,200
"B"						btc				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 873														
Comparison of Proposed to Minimum Required Cement Volumes				Tail Cmt	does not	circ to sfc.	Totals:		775	37,200				
Hole	Annular	1 Stage		1 Stage	Min	1 Stage	Drilling	Calc	Req'd	Min Dist				
Size	Volume	Cmt Sx		CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE	Hole-Cplg				
17 1/2	0.6946	534		748	538	39	9.00	3527	5M	1.56				
Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.														
Site plot (pipe racks S or E) as per O.G. L.H.D.A. not found.														

9 5/8		casing inside the		13 3/8		Design Factors					Int 1		
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight	
"A"	40.00		j 55	btc	1.85	0.55	0.94	8,490	1	1.77	0.93	339,600	
"B"								0				0	
w/8.4#/g mud, 30min Sfc Csg Test psig: -940								Totals:		8,490		339,600	
The cement volume(s) are intended to achieve a top of						0	ft from surface or a		775			overlap.	
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE				Min Dist Hole-Cplg	
12 1/4	0.3132	510	714	2708	-74	10.50	3036	5M				0.81	
D V Tool(s):			6680				sum of sx	Σ CuFt				Σ%excess	
t by stage % :			26	52			1498	3974				47	
Class 'C' tail cmt yld > 1.35													
Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.47, b, c, d <0.70 a Problem!!													

Tail cmt 5 1/2		casing inside the		9 5/8		Design Factors					Prod 1		
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight	
"A"	17.00		p 110	btc	3.57	1.78	2.53	24,553	3	4.78	3.36	417,401	
"B"								0				0	
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,979								Totals:	24,553			417,401	
The cement volume(s) are intended to achieve a top of								8290	ft from surface or a		200	overlap.	
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd				Min Dist	
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cplg	
8 3/4	0.2526	3145	4485	4110	9	9.00						1.35	
Class 'C' tail cmt yld > 1.35													

#N/A												
0	5 1/2			Design Factors				<Choose Casing>				
Segment	#/ft	Grade	Coupling	#N/A	Collapse	Burst	Length	B@	a-B	a-C	Weight	
"A"			0.00				0				0	
"B"			0.00				0				0	
w/8.4#/g mud, 30min Sfc Csg Test psig:							Totals:	0	0			
Cmt vol calc below includes this csg, TOC intended				#N/A	ft from surface or a		#N/A				overlap.	
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE				Min Dist Hole-Cplg
0		#N/A	#N/A	0	#N/A							
#N/A Capitan Reef est top XXXX.												

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>Devon Energy Production Company LP</b>
<b>LEASE NO.:</b>	<b>NMNM012121</b>
<b>LOCATION:</b>	Section 26, T.24 S., R.31 E., NMPM
<b>COUNTY:</b>	Eddy County, New Mexico

<b>WELL NAME &amp; NO.:</b>	<b>Cotton Draw Unit 527H</b>
<b>SURFACE HOLE FOOTAGE:</b>	305'N & 1325'E
<b>BOTTOM HOLE FOOTAGE:</b>	20'S & 750'E
<b>ATS/API ID:</b>	<b>3001548564</b>
<b>APD ID:</b>	
<b>Sundry ID:</b>	<b>2720840</b>

COA

H2S	No <input type="button" value="v"/>		
Potash	None <input type="button" value="v"/>		
Cave/Karst Potential	Low <input type="button" value="v"/>		
Cave/Karst Potential	<input type="checkbox"/> Critical		
Variance	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> Flex Hose	<input checked="" type="checkbox"/> Other
Wellhead	Conventional and Multibowl <input type="button" value="v"/>		
Other	<input type="checkbox"/> 4 String	Capitan Reef <div style="border: 1px solid black; padding: 2px;">None <input type="button" value="v"/></div>	<input type="checkbox"/> WIPP
Other	Pilot Hole <div style="border: 1px solid black; padding: 2px;">None <input type="button" value="v"/></div>	<input type="checkbox"/> Open Annulus	
Cementing	Contingency Squeeze <div style="border: 1px solid black; padding: 2px;">None <input type="button" value="v"/></div>	Echo-Meter <div style="border: 1px solid black; padding: 2px;">Int 1 <input type="button" value="v"/></div>	Primary Cement Squeeze <div style="border: 1px solid black; padding: 2px;">None <input type="button" value="v"/></div>
Special Requirements	<input type="checkbox"/> Water Disposal/Injection	<input type="checkbox"/> COM	<input checked="" type="checkbox"/> Unit
Special Requirements	<input type="checkbox"/> Batch Sundry		
Special Requirements Variance	<input checked="" type="checkbox"/> Break Testing	<input type="checkbox"/> Offline Cementing	<input type="checkbox"/> Casing Clearance

## A. HYDROGEN SULFIDE

Hydrogen Sulfide (H<sub>2</sub>S) monitors shall be installed prior to drilling out the surface shoe. If H<sub>2</sub>S 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 **13-3/8 inch** surface casing shall be set at approximately **775 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. 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 **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 **9-5/8 inch** intermediate casing is:

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

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

### **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 6680' (510 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 988 sxs Class C)**

**Operator has proposed to pump down 13-3/8" X 9-5/8" 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 9-5/8" 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.  
**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 **5000 (5M) psi. Annular which shall be tested to 5000 (5M) psi.**

- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** 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 **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 OOGO2.III.A.2.i must be followed.

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

### **Unit Wells**

The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

### **Commercial Well Determination**

A commercial well determination shall be submitted after production has been established for at least six months.

### **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 County

Call 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 integrity 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 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

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 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 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 4/24/2023

**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  
**District IV**  
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 173788

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 173788
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
john.harrison	Please abide by any other previously approved BLM & NMOCD COAs	4/27/2023