

Well Name: STRANGER 34 FED COM	Well Location: T25S / R34E / SEC 34 / SESW / 32.0803034 / -103.4598775	County or Parish/State: LEA / NM
Well Number: 2H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM113898	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002546085	Well Status: Approved Application for Permit to Drill	Operator: DEVON ENERGY PRODUCTION COMPANY LP

Notice of Intent

Sundry ID: 2667755

Type of Submission: Notice of Intent	Type of Action: Casing
Date Sundry Submitted: 04/20/2022	Time Sundry Submitted: 09:12
Date proposed operation will begin: 04/20/2022	

**Procedure Description:** Devon Energy Production Company, L.P. respectfully requests approval for casing/drilling plan changes for surface and intermediate strings. Devon Energy Production Company, L.P. will circulate class C cement to surface behind the 10-3/4” casing. Please see the attached updated drill plan and directional.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

- 10.750\_40.5lb\_H40\_20220420091204.pdf
- Stranger\_34\_Fed\_Com\_2H\_20220420085047.pdf
- Stranger\_34\_Fed\_Com\_2H\_Directional\_Plan\_04\_19\_22\_20220420085047.pdf

<b>Well Name:</b> STRANGER 34 FED COM	<b>Well Location:</b> T25S / R34E / SEC 34 / SESW / 32.0803034 / -103.4598775	<b>County or Parish/State:</b> LEA / NM
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<b>US Well Number:</b> 3002546085	<b>Well Status:</b> Approved Application for Permit to Drill	<b>Operator:</b> DEVON ENERGY PRODUCTION COMPANY LP

Conditions of Approval

Specialist Review

Stranger\_34\_Fed\_Com\_2H\_Dr\_COA\_Sundry\_ID\_2667755\_20220422123915.pdf

34\_25\_34\_N\_Sundry\_ID\_2667755\_Stranger\_34\_Fed\_Com\_2H\_Lea\_NM113898\_Devon\_Energy\_Production\_Company\_LP\_13\_22c\_6\_16\_2021\_LV\_20220422123915.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

<b>Operator Electronic Signature:</b> CHELSEY GREEN	<b>Signed on:</b> APR 20, 2022 08:53 AM
<b>Name:</b> DEVON ENERGY PRODUCTION COMPANY LP	
<b>Title:</b> Regulatory Compliance Professional	
<b>Street Address:</b> 333 West Sheridan Avenue	
<b>City:</b> Oklahoma City	<b>State:</b> OK
<b>Phone:</b> (405) 228-8595	
<b>Email address:</b> Chelsey.Green@dvn.com	

Field

<b>Representative Name:</b>		
<b>Street Address:</b>		
<b>City:</b>	<b>State:</b>	<b>Zip:</b>
<b>Phone:</b>		
<b>Email address:</b>		

BLM Point of Contact

<b>BLM POC Name:</b> CHRISTOPHER WALLS	<b>BLM POC Title:</b> Petroleum Engineer
<b>BLM POC Phone:</b> 5752342234	<b>BLM POC Email Address:</b> cwalls@blm.gov
<b>Disposition:</b> Approved	<b>Disposition Date:</b> 05/20/2022
<b>Signature:</b> Chris Walls	



# U. S. Steel Tubular Products

## 10.750" 40.50lb/ft (0.350" Wall) H40

11/4/2021 10:14:32 AM

MECHANICAL PROPERTIES	Pipe	BTC	LTC	STC		--
Minimum Yield Strength	40,000	--	--	--	psi	--
Maximum Yield Strength	80,000	--	--	--	psi	--
Minimum Tensile Strength	60,000	--	--	--	psi	--
DIMENSIONS	Pipe	BTC	LTC	STC		--
Outside Diameter	10.750	0.000	0.000	11.750	in.	--
Wall Thickness	0.350	--	--	--	in.	--
Inside Diameter	10.050	--	--	10.050	in.	--
Standard Drift	9.894	9.894	9.894	9.894	in.	--
Alternate Drift	--	--	--	--	in.	--
Nominal Linear Weight, T&C	40.50	--	--	--	lb/ft	--
Plain End Weight	38.91	--	--	--	lb/ft	--
PERFORMANCE	Pipe	BTC	LTC	STC		--
Minimum Collapse Pressure	1,390	1,390	1,390	1,390	psi	--
Minimum Internal Yield Pressure	2,280	2,280	2,280	2,280	psi	--
Minimum Pipe Body Yield Strength	457	--	--	--	1,000 lbs	--
Joint Strength	--	--	--	314	1,000 lbs	--
Reference Length	--	--	--	5,164	ft	--
MAKE-UP DATA	Pipe	BTC	LTC	STC		--
Make-Up Loss	--	--	--	3.50	in.	--
Minimum Make-Up Torque	--	--	--	2,360	ft-lb	--
Maximum Make-Up Torque	--	--	--	3,930	ft-lb	--

UNCONTROLLED

## Notes

### Legal Notice

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www.usstubular.com

34-25-34-N Sundry ID 2667755 Stranger 34 Fed Com 2H Lea NM113898 Devon Energy Production Company LP 13-22c 6-16-2021  
LV.xlsm

## Stranger 34 Fed Com 2H

10 3/4		surface csg in a		13 1/2		inch hole.		Design Factors				Surface		
Segment	#/ft	Grade		Coupling		Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight	
"A"	40.50	h 40		btc		12.20	3.21	0.35	925	6	0.58	6.07	37,463	
"B"				btc					0				0	
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,192								Tail Cmt	does not	circ to sfc.		Totals:	925	37,463
Comparison of Proposed to Minimum Required Cement Volumes														
Hole	Annular	1 Stage		1 Stage		Min	1 Stage	Drilling	Calc	Req'd			Min Dist	
Size	Volume	Cmt Sx		CuFt Cmt		Cu Ft	% Excess	Mud Wt	MASP	BOPE			Hole-Cplg	
13 1/2	0.3637	340		490		336	46	9.00	3912	5M			1.38	
Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.														
Site plot (page tabs E or F) as per D.D. 1310-3-1 not found.														

8 5/8		casing inside the		10 3/4		Design Factors					Int 1	
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	32.00		p 110	tlw	2.80	0.65	1.28	12,020	1	2.15	1.08	384,640
"B"								0				0
w/8.4#/g mud, 30min Sfc Csg Test psig:								Totals:	12,020			384,640
The cement volume(s) are intended to achieve a top of						0	ft from surface or a		925			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
9 7/8	0.1261	862	1968	1534	28	10.50	4159	5M				0.44
Class 'H' tail cmt yld > 1.20												

Tail cmt												
5 1/2		casing inside the		8 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	2.51	1.07	1.53	17,767	2	2.56	1.80	302,039
"B"								0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,812								Totals:	17,767			302,039
The cement volume(s) are intended to achieve a top of 11820 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
7 7/8	0.1733	850	1438	1031	39	10.50						0.91
Class 'C' tail cmt yld > 1.35												

0	#N/A	5 1/2		Design Factors					<Choose 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 psig: 2,812											
Cmt vol calc below includes this csg, TOC intended #N/A ft from surface 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.											

## Stranger 34 Fed Com 2H

**1. Geologic Formations**

TVD of target	12780	Pilot hole depth	N/A
MD at TD:	17767	Deepest expected fresh water	

**Basin**

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	810		
Salt	1200		
Base of Salt	5325		
Cherry Canyon	6325		
Brushy Canyon	8050		
1st Bone Spring Lime	9350		
Bone Spring 1st	10450		
Bone Spring 2nd	11025		
3rd Bone Spring Lime	11450		
Bone Spring 3rd	12020		
Wolfcamp	12480		

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

## Stranger 34 Fed Com 2H

**2. Casing Program (Primary Design)**

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Casing Interval		Casing Interval	
					From (MD)	To (MD)	From (TVD)	To (TVD)
13 1/2	10 3/4	40 1/2	H40	BTC	0	835	0	835
9 7/8	8 5/8	32	P110	TLW	0	12020	0	12020
7 7/8	5 1/2	17	P110	BTC	0	17767	0	12780

• 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)**

Casing	# Sks	TOC	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	340	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	397	Surf	9	3.27	Lead: Class C Cement + additives
	465	4000' above	13.2	1.44	Tail: Class H / C + additives
Int 1 Intermediate Squeeze	As Needed	Surf	13.2	1.44	Squeeze Lead: Class C Cement + additives
	397	Surf	9	3.27	Lead: Class C Cement + additives
	465	4000' above	13.2	1.44	Tail: Class H / C + additives
Production	117	10227	9	3.27	Lead: Class H / C + additives
	733	12227	13.2	1.44	Tail: Class H / C + additives

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

## Stranger 34 Fed Com 2H

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

BOP installed and tested before drilling which hole?		Size?	Min. Required WP	Type	✓	Tested to:
Int 1	13-5/8"	5M	Annular		X	50% of rated working pressure
			Blind Ram		X	5M
			Pipe Ram			
			Double Ram		X	
			Other*			
Production	13-5/8"	10M	Annular (5M)		X	100% of rated working pressure
			Blind Ram		X	10M
			Pipe Ram			
			Double Ram		X	
			Other*			
			Annular (5M)			
			Blind Ram			
			Pipe Ram			
			Double Ram			
			Other*			
N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.					
Y	A variance is requested to run a 5 M annular on a 10M system					

## Stranger 34 Fed Com 2H

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

Section	Type	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, 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	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	Specify what type and where?
BH pressure at deepest TVD	6978
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.

**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



## Stranger 34 Fed Com 2H

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 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

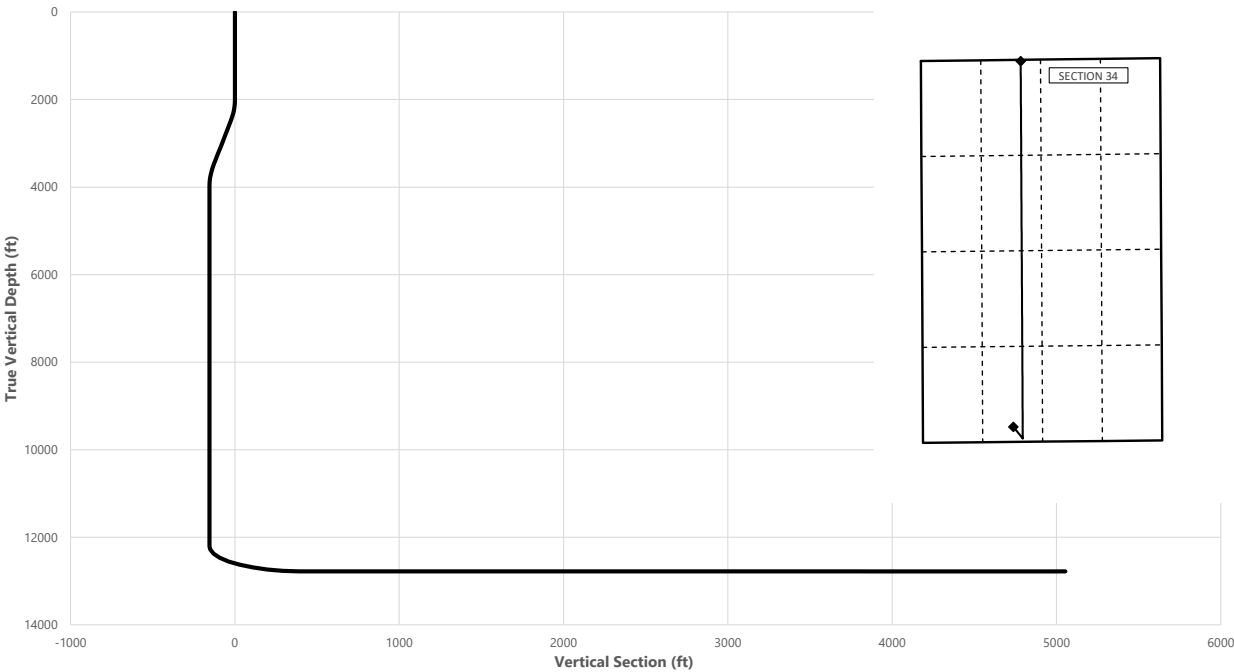
X Directional Plan  
           Other, describe



Well: Stranger 34 Fed Com 2H  
County: Lea  
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	128.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	10.00	128.00	2497.47	-26.80	34.30	-25.70	2.00	Hold Tangent
3506.84	10.00	128.00	3489.01	-134.44	172.07	-128.92	0.00	Drop to Vertical
4006.84	0.00	128.00	3986.48	-161.23	206.37	-154.62	2.00	Hold Vertical
12227.41	0.00	359.49	12207.04	-161.23	206.37	-154.62	0.00	KOP
13127.41	90.00	359.49	12780.00	411.70	201.27	417.87	10.00	Landing Point
17766.91	90.00	359.49	12780.00	5051.02	159.97	5053.55	0.00	BHL



Key Depths	MD	TVD
	(ft)	(ft)
Rustler	810.00	810.00
Salt	1200.00	1200.00
Base of Salt	5345.37	5325.00
Cherry Canyon	6345.37	6325.00
Brushy Canyon	8070.37	8050.00
1st Bone Spring Lime	9370.37	9350.00
Bone Spring 1st	10470.37	10450.00
Bone Spring 2nd	11045.37	11025.00
3rd Bone Spring Lime	11470.37	11450.00
Bone Spring 3rd	12040.37	12020.00
Wolfcamp / Point of Penetration	12511.91	12480.00
EXIT	17686.91	12780.01

SHL  
KOP  
Point of Penetration  
Exit  
BHL

MD	TVD	Lat	Long	Section Footages
(ft)	(ft)	(°)	(°)	
0.00	0.00	32.0802	-103.4600	205' FSL, 2000' FWL of Sec 34 in T25S, R34E
12227.41	12207.04	32.0798	-103.4593	45' FSL, 2205' FWL of Sec 34 in T25S, R34E
12511.91	12480.00	32.0800	-103.4592	100' FSL, 2205' FWL of Sec 34 in T25S, R34E
17686.91	12780.01	32.0940	-103.4592	100' FNL, 2205' FWL of Sec 34 in T25S, R34E
17766.91	12780.00	32.0941	-103.4593	20' FNL, 2205' FWL of Sec 34 in T25S, R34E

Stranger 34 Fed Com 2H



Well: Stranger 34 Fed Com 2H  
 County: Lea  
 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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
100.00	0.00	128.00	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	128.00	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	128.00	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	128.00	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	128.00	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	128.00	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	128.00	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	128.00	800.00	0.00	0.00	0.00	0.00	
810.00	0.00	128.00	810.00	0.00	0.00	0.00	0.00	Rustler
900.00	0.00	128.00	900.00	0.00	0.00	0.00	0.00	
1000.00	0.00	128.00	1000.00	0.00	0.00	0.00	0.00	
1100.00	0.00	128.00	1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	128.00	1200.00	0.00	0.00	0.00	0.00	Salt,
1300.00	0.00	128.00	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	128.00	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	128.00	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	128.00	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	128.00	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	128.00	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	128.00	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	128.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	128.00	2099.98	-1.07	1.38	-1.03	2.00	
2200.00	4.00	128.00	2199.84	-4.30	5.50	-4.12	2.00	
2300.00	6.00	128.00	2299.45	-9.66	12.37	-9.27	2.00	
2400.00	8.00	128.00	2398.70	-17.16	21.97	-16.46	2.00	
2500.00	10.00	128.00	2497.47	-26.80	34.30	-25.70	2.00	Hold Tangent
2600.00	10.00	128.00	2595.95	-37.49	47.98	-35.95	0.00	
2700.00	10.00	128.00	2694.43	-48.18	61.66	-46.20	0.00	
2800.00	10.00	128.00	2792.91	-58.87	75.35	-56.45	0.00	
2900.00	10.00	128.00	2891.39	-69.56	89.03	-66.71	0.00	
3000.00	10.00	128.00	2989.87	-80.25	102.71	-76.96	0.00	
3100.00	10.00	128.00	3088.35	-90.94	116.40	-87.21	0.00	
3200.00	10.00	128.00	3186.83	-101.63	130.08	-97.46	0.00	
3300.00	10.00	128.00	3285.31	-112.32	143.77	-107.71	0.00	
3400.00	10.00	128.00	3383.79	-123.01	157.45	-117.97	0.00	
3500.00	10.00	128.00	3482.27	-133.70	171.13	-128.22	0.00	
3506.84	10.00	128.00	3489.01	-134.44	172.07	-128.92	0.00	Drop to Vertical
3600.00	8.14	128.00	3581.00	-143.47	183.64	-137.59	2.00	
3700.00	6.14	128.00	3680.22	-151.12	193.43	-144.92	2.00	
3800.00	4.14	128.00	3779.81	-156.64	200.48	-150.21	2.00	
3900.00	2.14	128.00	3879.66	-160.00	204.80	-153.44	2.00	
4000.00	0.14	128.00	3979.63	-161.23	206.36	-154.61	2.00	
4006.84	0.00	128.00	3986.48	-161.23	206.37	-154.62	2.00	Hold Vertical
4100.00	0.00	359.49	4079.63	-161.23	206.37	-154.62	0.00	
4200.00	0.00	359.49	4179.63	-161.23	206.37	-154.62	0.00	
4300.00	0.00	359.49	4279.63	-161.23	206.37	-154.62	0.00	
4400.00	0.00	359.49	4379.63	-161.23	206.37	-154.62	0.00	
4500.00	0.00	359.49	4479.63	-161.23	206.37	-154.62	0.00	
4600.00	0.00	359.49	4579.63	-161.23	206.37	-154.62	0.00	
4700.00	0.00	359.49	4679.63	-161.23	206.37	-154.62	0.00	
4800.00	0.00	359.49	4779.63	-161.23	206.37	-154.62	0.00	
4900.00	0.00	359.49	4879.63	-161.23	206.37	-154.62	0.00	
5000.00	0.00	359.49	4979.63	-161.23	206.37	-154.62	0.00	
5100.00	0.00	359.49	5079.63	-161.23	206.37	-154.62	0.00	
5200.00	0.00	359.49	5179.63	-161.23	206.37	-154.62	0.00	
5300.00	0.00	359.49	5279.63	-161.23	206.37	-154.62	0.00	
5345.37	0.00	359.49	5325.00	-161.23	206.37	-154.62	0.00	Base of Salt
5400.00	0.00	359.49	5379.63	-161.23	206.37	-154.62	0.00	
5500.00	0.00	359.49	5479.63	-161.23	206.37	-154.62	0.00	
5600.00	0.00	359.49	5579.63	-161.23	206.37	-154.62	0.00	
5700.00	0.00	359.49	5679.63	-161.23	206.37	-154.62	0.00	
5800.00	0.00	359.49	5779.63	-161.23	206.37	-154.62	0.00	
5900.00	0.00	359.49	5879.63	-161.23	206.37	-154.62	0.00	
6000.00	0.00	359.49	5979.63	-161.23	206.37	-154.62	0.00	
6100.00	0.00	359.49	6079.63	-161.23	206.37	-154.62	0.00	
6200.00	0.00	359.49	6179.63	-161.23	206.37	-154.62	0.00	
6300.00	0.00	359.49	6279.63	-161.23	206.37	-154.62	0.00	
6345.37	0.00	359.49	6325.00	-161.23	206.37	-154.62	0.00	Cherry Canyon
6400.00	0.00	359.49	6379.63	-161.23	206.37	-154.62	0.00	

Stranger 34 Fed Com 2H



**Well:** Stranger 34 Fed Com 2H  
**County:** Lea  
**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
6500.00	0.00	359.49	6479.63	-161.23	206.37	-154.62	0.00	
6600.00	0.00	359.49	6579.63	-161.23	206.37	-154.62	0.00	
6700.00	0.00	359.49	6679.63	-161.23	206.37	-154.62	0.00	
6800.00	0.00	359.49	6779.63	-161.23	206.37	-154.62	0.00	
6900.00	0.00	359.49	6879.63	-161.23	206.37	-154.62	0.00	
7000.00	0.00	359.49	6979.63	-161.23	206.37	-154.62	0.00	
7100.00	0.00	359.49	7079.63	-161.23	206.37	-154.62	0.00	
7200.00	0.00	359.49	7179.63	-161.23	206.37	-154.62	0.00	
7300.00	0.00	359.49	7279.63	-161.23	206.37	-154.62	0.00	
7400.00	0.00	359.49	7379.63	-161.23	206.37	-154.62	0.00	
7500.00	0.00	359.49	7479.63	-161.23	206.37	-154.62	0.00	
7600.00	0.00	359.49	7579.63	-161.23	206.37	-154.62	0.00	
7700.00	0.00	359.49	7679.63	-161.23	206.37	-154.62	0.00	
7800.00	0.00	359.49	7779.63	-161.23	206.37	-154.62	0.00	
7900.00	0.00	359.49	7879.63	-161.23	206.37	-154.62	0.00	
8000.00	0.00	359.49	7979.63	-161.23	206.37	-154.62	0.00	
8070.37	0.00	359.49	8050.00	-161.23	206.37	-154.62	0.00	Brushy Canyon
8100.00	0.00	359.49	8079.63	-161.23	206.37	-154.62	0.00	
8200.00	0.00	359.49	8179.63	-161.23	206.37	-154.62	0.00	
8300.00	0.00	359.49	8279.63	-161.23	206.37	-154.62	0.00	
8400.00	0.00	359.49	8379.63	-161.23	206.37	-154.62	0.00	
8500.00	0.00	359.49	8479.63	-161.23	206.37	-154.62	0.00	
8600.00	0.00	359.49	8579.63	-161.23	206.37	-154.62	0.00	
8700.00	0.00	359.49	8679.63	-161.23	206.37	-154.62	0.00	
8800.00	0.00	359.49	8779.63	-161.23	206.37	-154.62	0.00	
8900.00	0.00	359.49	8879.63	-161.23	206.37	-154.62	0.00	
9000.00	0.00	359.49	8979.63	-161.23	206.37	-154.62	0.00	
9100.00	0.00	359.49	9079.63	-161.23	206.37	-154.62	0.00	
9200.00	0.00	359.49	9179.63	-161.23	206.37	-154.62	0.00	
9300.00	0.00	359.49	9279.63	-161.23	206.37	-154.62	0.00	
9370.37	0.00	359.49	9350.00	-161.23	206.37	-154.62	0.00	1st Bone Spring Lime
9400.00	0.00	359.49	9379.63	-161.23	206.37	-154.62	0.00	
9500.00	0.00	359.49	9479.63	-161.23	206.37	-154.62	0.00	
9600.00	0.00	359.49	9579.63	-161.23	206.37	-154.62	0.00	
9700.00	0.00	359.49	9679.63	-161.23	206.37	-154.62	0.00	
9800.00	0.00	359.49	9779.63	-161.23	206.37	-154.62	0.00	
9900.00	0.00	359.49	9879.63	-161.23	206.37	-154.62	0.00	
10000.00	0.00	359.49	9979.63	-161.23	206.37	-154.62	0.00	
10100.00	0.00	359.49	10079.63	-161.23	206.37	-154.62	0.00	
10200.00	0.00	359.49	10179.63	-161.23	206.37	-154.62	0.00	
10300.00	0.00	359.49	10279.63	-161.23	206.37	-154.62	0.00	
10400.00	0.00	359.49	10379.63	-161.23	206.37	-154.62	0.00	
10470.37	0.00	359.49	10450.00	-161.23	206.37	-154.62	0.00	Bone Spring 1st
10500.00	0.00	359.49	10479.63	-161.23	206.37	-154.62	0.00	
10600.00	0.00	359.49	10579.63	-161.23	206.37	-154.62	0.00	
10700.00	0.00	359.49	10679.63	-161.23	206.37	-154.62	0.00	
10800.00	0.00	359.49	10779.63	-161.23	206.37	-154.62	0.00	
10900.00	0.00	359.49	10879.63	-161.23	206.37	-154.62	0.00	
11000.00	0.00	359.49	10979.63	-161.23	206.37	-154.62	0.00	
11045.37	0.00	359.49	11025.00	-161.23	206.37	-154.62	0.00	Bone Spring 2nd
11100.00	0.00	359.49	11079.63	-161.23	206.37	-154.62	0.00	
11200.00	0.00	359.49	11179.63	-161.23	206.37	-154.62	0.00	
11300.00	0.00	359.49	11279.63	-161.23	206.37	-154.62	0.00	
11400.00	0.00	359.49	11379.63	-161.23	206.37	-154.62	0.00	
11470.37	0.00	359.49	11450.00	-161.23	206.37	-154.62	0.00	3rd Bone Spring Lime
11500.00	0.00	359.49	11479.63	-161.23	206.37	-154.62	0.00	
11600.00	0.00	359.49	11579.63	-161.23	206.37	-154.62	0.00	
11700.00	0.00	359.49	11679.63	-161.23	206.37	-154.62	0.00	
11800.00	0.00	359.49	11779.63	-161.23	206.37	-154.62	0.00	
11900.00	0.00	359.49	11879.63	-161.23	206.37	-154.62	0.00	
12000.00	0.00	359.49	11979.63	-161.23	206.37	-154.62	0.00	
12040.37	0.00	359.49	12020.00	-161.23	206.37	-154.62	0.00	Bone Spring 3rd
12100.00	0.00	359.49	12079.63	-161.23	206.37	-154.62	0.00	
12200.00	0.00	359.49	12179.63	-161.23	206.37	-154.62	0.00	
12227.41	0.00	359.49	12207.04	-161.23	206.37	-154.62	0.00	KOP
12300.00	7.26	359.49	12279.44	-156.64	206.32	-150.03	10.00	
12400.00	17.26	359.49	12377.04	-135.43	206.14	-128.84	10.00	
12500.00	27.26	359.49	12469.47	-97.60	205.80	-91.04	10.00	
12511.91	28.45	359.49	12480.00	-92.04	205.75	-85.48	10.00	Wolfcamp / Point of Penetration
12600.00	37.26	359.49	12553.92	-44.30	205.32	-37.77	10.00	

Stranger 34 Fed Com 2H



**Well:** Stranger 34 Fed Com 2H  
**County:** Lea  
**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
12700.00	47.26	359.49	12627.84	22.86	204.73	29.33	10.00	
12800.00	57.26	359.49	12688.97	101.84	204.02	108.25	10.00	
12900.00	67.26	359.49	12735.46	190.23	203.24	196.57	10.00	
13000.00	77.26	359.49	12765.89	285.35	202.39	291.61	10.00	
13100.00	87.26	359.49	12779.35	384.31	201.51	390.49	10.00	
13127.41	90.00	359.49	12780.00	411.70	201.27	417.87	10.00	Landing Point
13200.00	90.00	359.49	12780.00	484.29	200.62	490.40	0.00	
13300.00	90.00	359.49	12780.00	584.29	199.73	590.32	0.00	
13400.00	90.00	359.49	12780.00	684.29	198.84	690.24	0.00	
13500.00	90.00	359.49	12780.00	784.28	197.95	790.16	0.00	
13600.00	90.00	359.49	12780.00	884.28	197.06	890.07	0.00	
13700.00	90.00	359.49	12780.00	984.27	196.17	989.99	0.00	
13800.00	90.00	359.49	12780.00	1084.27	195.28	1089.91	0.00	
13900.00	90.00	359.49	12780.00	1184.27	194.38	1189.83	0.00	
14000.00	90.00	359.49	12780.00	1284.26	193.49	1289.74	0.00	
14100.00	90.00	359.49	12780.00	1384.26	192.60	1389.66	0.00	
14200.00	90.00	359.49	12780.00	1484.25	191.71	1489.58	0.00	
14300.00	90.00	359.49	12780.00	1584.25	190.82	1589.50	0.00	
14400.00	90.00	359.49	12780.00	1684.25	189.93	1689.42	0.00	
14500.00	90.00	359.49	12780.00	1784.24	189.04	1789.33	0.00	
14600.00	90.00	359.49	12780.00	1884.24	188.15	1889.25	0.00	
14700.00	90.00	359.49	12780.00	1984.24	187.26	1989.17	0.00	
14800.00	90.00	359.49	12780.00	2084.23	186.37	2089.09	0.00	
14900.00	90.00	359.49	12780.00	2184.23	185.48	2189.00	0.00	
15000.00	90.00	359.49	12780.00	2284.22	184.59	2288.92	0.00	
15100.00	90.00	359.49	12780.00	2384.22	183.70	2388.84	0.00	
15200.00	90.00	359.49	12780.00	2484.22	182.81	2488.76	0.00	
15300.00	90.00	359.49	12780.00	2584.21	181.92	2588.67	0.00	
15400.00	90.00	359.49	12780.00	2684.21	181.03	2688.59	0.00	
15500.00	90.00	359.49	12780.00	2784.20	180.13	2788.51	0.00	
15600.00	90.00	359.49	12780.00	2884.20	179.24	2888.43	0.00	
15700.00	90.00	359.49	12780.00	2984.20	178.35	2988.35	0.00	
15800.00	90.00	359.49	12780.00	3084.19	177.46	3088.26	0.00	
15900.00	90.00	359.49	12780.00	3184.19	176.57	3188.18	0.00	
16000.00	90.00	359.49	12780.00	3284.18	175.68	3288.10	0.00	
16100.00	90.00	359.49	12780.00	3384.18	174.79	3388.02	0.00	
16200.00	90.00	359.49	12780.00	3484.18	173.90	3487.93	0.00	
16300.00	90.00	359.49	12780.00	3584.17	173.01	3587.85	0.00	
16400.00	90.00	359.49	12780.00	3684.17	172.12	3687.77	0.00	
16500.00	90.00	359.49	12780.00	3784.16	171.23	3787.69	0.00	
16600.00	90.00	359.49	12780.00	3884.16	170.34	3887.61	0.00	
16700.00	90.00	359.49	12780.00	3984.16	169.45	3987.52	0.00	
16800.00	90.00	359.49	12780.00	4084.15	168.56	4087.44	0.00	
16900.00	90.00	359.49	12780.00	4184.15	167.67	4187.36	0.00	
17000.00	90.00	359.49	12780.01	4284.14	166.77	4287.28	0.00	
17100.00	90.00	359.49	12780.01	4384.14	165.88	4387.19	0.00	
17200.00	90.00	359.49	12780.01	4484.14	164.99	4487.11	0.00	
17300.00	90.00	359.49	12780.01	4584.13	164.10	4587.03	0.00	
17400.00	90.00	359.49	12780.01	4684.13	163.21	4686.95	0.00	
17500.00	90.00	359.49	12780.01	4784.12	162.32	4786.86	0.00	
17600.00	90.00	359.49	12780.01	4884.12	161.43	4886.78	0.00	
17686.91	90.00	359.49	12780.01	4971.02	160.66	4973.62	0.00	EXIT
17700.00	90.00	359.49	12780.01	4984.12	160.54	4986.70	0.00	
17766.91	90.00	359.49	12780.00	5051.02	159.97	5053.55	0.00	BHL

Stranger 34 Fed Com 2H



**Well:** Stranger 34 Fed Com 2H  
**County:** Lea  
**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)	

Stranger 34 Fed Com 2H

**Well:** Stranger 34 Fed Com 2H  
**County:** Lea  
**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)	

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>Devon Energy Production Company LP</b>
<b>LEASE NO.:</b>	<b>NMNM113898</b>
<b>WELL NAME &amp; NO.:</b>	Stranger 34 Fed Com 2H
<b>SURFACE HOLE FOOTAGE:</b>	205'/S & 2000'/W
<b>BOTTOM HOLE FOOTAGE:</b>	20'/N & 2205'/W
<b>LOCATION:</b>	Section 34, T.25 S., R.34 E., NMPM
<b>COUNTY:</b>	Lea County, New Mexico
<b>Sundry ID:</b>	2667755

COA

H2S	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Potash	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Secretary	<input type="checkbox"/> R-111-P
Cave/Karst Potential	<input checked="" type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High
Cave/Karst Potential	<input type="checkbox"/> Critical		
Variance	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Flex Hose	<input type="checkbox"/> Other
Wellhead	<input type="checkbox"/> Conventional	<input type="checkbox"/> Multibowl	<input checked="" type="checkbox"/> Both
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" type="checkbox"/> Fluid Filled	<input checked="" type="checkbox"/> Cement Squeeze	<input type="checkbox"/> Pilot Hole
Special Requirements	<input type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit

### 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 **925 feet** (a minimum of **25 feet (Lea County)**) into the Rustler Anhydrite and above the salt) 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:

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

**Operator has proposed to pump down 10-3/4" X 8-5/8" annulus. Operator must run a CBL from TD of the 8-5/8" casing to surface. Submit results to BLM.**

**Production casing must be kept fluid filled to meet BLM minimum collapse requirement.**

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.

## **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**.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **10,000 (10M) psi**. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

**Option 2:**

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 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.

## 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)  
393-3612

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 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.

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

CONDITIONS  
  
Action 109671

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 109671
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	previous COA's apply	6/1/2022