Rece	wea by UCD:S/26/2024 8:20:23 AM		Sundry Print Report
	S. Department of the Interior JREAU OF LAND MANAGEMENT		03/26/2024
	<b>Well Name:</b> FIGHTING OKRA 18-19 FED	Well Location: T26S / R34E / SEC 18 / NENW / 32.0493765 / -103.5123721	County or Parish/State: LEA / NM
`	Well Number: 24H	Type of Well: OIL WELL	Allottee or Tribe Name:
1	Lease Number: NMNM114992	Unit or CA Name:	Unit or CA Number:
l	<b>JS Well Number:</b> 3002547579	Well Status: Approved Application for Permit to Drill	Operator: DEVON ENERGY PRODUCTION COMPANY LP

# **Notice of Intent**

Sundry ID: 2777484

Type of Submission: Notice of Intent

Date Sundry Submitted: 02/29/2024

Date proposed operation will begin: 02/29/2024

Type of Action: APD Change Time Sundry Submitted: 03:39

**Procedure Description:** Engineering Only - Devon Energy Production Company L.P. respectfully requests the following changes to the approved APD: Casing program change to slim hole design: Surface, Intermediate, and Production Casing size changes. Cement volume changes to accommodate casing change. Offline cement variance request. Please see attached revised drilling & directional plans, and supporting documentation.

**NOI Attachments** 

# **Procedure Description**

FIGHTING\_OKRA\_18\_19\_FED\_24H\_Slim\_Hole\_Rev1\_20240314112416.pdf

FIGHTING\_OKRA\_18\_19\_FED\_24H\_Directional\_Plan\_08\_30\_23\_20240229153602.pdf

5.5\_20\_\_VAEP\_P110\_VAroughneck\_SC\_\_6.051\_OD\_\_20240229153602.pdf

9.625\_40lb\_J\_55\_20240229153601.pdf

Offline\_Cementing\_\_\_Variance\_Request\_20240229153601.pdf

7\_625\_29\_7\_BMP\_P110HC\_CDS\_FXL\_\_slim\_hole\_alternate\_for\_timing\_\_\_20240229153601.pdf

County or Parish/State: eived by OCD: 3/26/2024 8:20:23 AM Well Name: FIGHTING OKRA 18-19 Well Location: T26S / R34E / SEC 18 / FED NENW / 32.0493765 / -103.5123721 NM Well Number: 24H Type of Well: OIL WELL Allottee or Tribe Name: Unit or CA Number: Lease Number: NMNM114992 Unit or CA Name: **US Well Number: 3002547579** Well Status: Approved Application for **Operator: DEVON ENERGY** Permit to Drill PRODUCTION COMPANY LP

# **Conditions of Approval**

## **Specialist Review**

Fighting\_Okra\_18\_19\_Fed\_24H\_Sundry\_ID\_2777484\_20240325150512.pdf

State:

# 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

Name: DEVON ENERGY PRODUCTION COMPANY LP Title: Regulatory Analyst Street Address: 333 W SHERIDAN AVE City: OKLAHOMA CITY State: OK Phone: (303) 299-1406

**Operator Electronic Signature: REBECCA DEAL** 

Email address: REBECCA.DEAL@DVN.COM

Field Representative Name: Street Address:

City: Phone:

Email address:

# **BLM Point of Contact**

BLM POC Name: LONG VO BLM POC Phone: 5759885402 Disposition: Approved Signature: Long Vo BLM POC Title: Petroleum Engineer BLM POC Email Address: LVO@BLM.GOV Disposition Date: 03/25/2024

Zip:

Signed on: MAR 14, 2024 11:24 AM

# OCD · 3/26/2024 8·20·23 AM

eceivea by OCD: 3/26/2024 8	:20:23 AM	Page 3 of
	UNITED STATES EPARTMENT OF THE INTERIOR REAU OF LAND MANAGEMENT	FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021 5. Lease Serial No. NMNM114992
Do not use this	NOTICES AND REPORTS ON WELLS form for proposals to drill or to re-enter an Use Form 3160-3 (APD) for such proposals.	6. If Indian, Allottee or Tribe Name
SUBMIT IN	NTRIPLICATE - Other instructions on page 2	7. If Unit of CA/Agreement, Name and/or No.
	Well Other	8. Well Name and No. FIGHTING OKRA 18-19 FED/24H
2. Name of Operator DEVON ENER	RGY PRODUCTION COMPANY LP	9. API Well No. 3002547579
	N AVE, OKLAHOMA CITY, 3b. Phone No. (include area code) (405) 235-3611	10. Field and Pool or Exploratory Area
4. Location of Well (Footage, Sec., T. SEC 18/T26S/R34E/NMP	,R.,M., or Survey Description)	11. Country or Parish, State LEA/NM
12. CH	ECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF	NOTICE, REPORT OR OTHER DATA
TYPE OF SUBMISSION	ТҮРЕ О	FACTION
✓ Notice of Intent	Acidize     Deepen       Alter Casing     Hydraulic Fracturing	Production (Start/Resume)       Water Shut-Off         Reclamation       Well Integrity
Subsequent Report	Casing Repair     New Construction       Change Plans     Plug and Abandon	Recomplete   Other     Temporarily Abandon
Final Abandonment Notice	Convert to Injection Plug Back	Water Disposal
the proposal is to deepen direction the Bond under which the work w completion of the involved operation	vill be perfonned or provide the Bond No. on file with BLM/BIA. Req	ared and true vertical depths of all pertinent markers and zones. Attach quired subsequent reports must be filed within 30 days following n in a new interval, a Form 3160-4 must be filed once testing has been

Engineering Only - Devon Energy Production Company L.P. respectfully requests the following changes to the approved APD:

Casing program change to slim hole design: Surface, Intermediate, and Production Casing size changes. Cement volume changes to accommodate casing change. Offline cement variance request.

Please see attached revised drilling & directional plans, and supporting documentation.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)         REBECCA DEAL / Ph: (303) 299-1406	Regulatory Analyst	
(Electronic Submission)	Date 03/14,	/2024
THE SPACE FOR FEDE	RAL OR STATE OFICE USE	
Approved by		
LONG VO / Ph: (575) 988-5402 / Approved	Petroleum Engineer Title	03/25/2024 Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant of certify that the applicant holds legal or equitable title to those rights in the subject leas which would entitle the applicant to conduct operations thereon.		

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

#### **GENERAL INSTRUCTIONS**

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

### SPECIFIC INSTRUCTIONS

*Item 4* - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

*Item 13:* Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

#### NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

# **Additional Information**

# Location of Well

0. SHL: NENW / 480 FNL / 1600 FWL / TWSP: 26S / RANGE: 34E / SECTION: 18 / LAT: 32.0493765 / LONG: -103.5123721 (TVD: 0 feet, MD: 0 feet) PPP: NWNE / 100 FNL / 2300 FEL / TWSP: 26S / RANGE: 34E / SECTION: 18 / LAT: 32.0504232 / LONG: -103.5078669 (TVD: 9257 feet, MD: 9406 feet) BHL: SWSE / 20 FSL / 2300 FEL / TWSP: 26S / RANGE: 34E / SECTION: 19 / LAT: 32.021721 / LONG: -103.5078341 (TVD: 9830 feet, MD: 20014 feet)

# 1. Geologic Formations

TVD of target	13325	Pilot hole depth	N/A
MD at TD:	23585	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	785		
Salt	1060		
Base of Salt	5250		
Delaware	5300		
Cherry Canyon	6353		
Brushy Canyon	7996		
1st Bone Spring Lime	9529		
Bone Spring 1st	10475		
Bone Spring 2nd	11421		
3rd Bone Spring Lime	11487		
Bone Spring 3rd	12100		
Wolfcamp	12560		

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

#### FIGHTING OKRA 18-19 FED 24H

		Wt			Casing Interval		Casing Interval	
Hole Size	Csg. Size	(PPF)	Grade Conn		From (MD)	To (MD)	From (TVD)	To (TVD)
13 1/2	9 5/8	40	J-55	BTC	0	810	0	810
8 3/4	7 5/8	29.7	P-110HSCY	MOFXL	0	12660	0	12660
6 3/4	5 1/2	20	P-110	VARN & Sprint SF	0	23585	0	13325

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

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

Variance Approval -

o 5-1/2" Production Casing will include Sprint SF connection from base of curve to 500ft inside 7 5/8" casing shoe o All other 5-1/2" Production Casing will run VARN (6.05") or equivalent

# 3. Cementing Program (Primary Design)

Casing	# Sks	тос	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	431	431 Surf		1.44	Lead: Class C Cement + additives
Int 1	340	Surf	9	3.27	Lead: Class C Cement + additives
Int I	370	8660	13.2	1.44	Tail: Class H / C + additives
Int 1	442	Surf	13.2	1.44	Squeeze Lead: Class C Cement + additives
Intermediate	340	Surf	9	3.27	Lead: Class C Cement + additives
Squeeze	370	8660	13.2	1.44	Tail: Class H / C + additives
Production	62	10769	9	3.27	Lead: Class H /C + additives
FIGUEUON	690	12769	13.2	1.44	Tail: Class H / C + additives

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

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Туре		~	Tested to:																																		
			Annular		X	50% of rated working pressure																																		
Int 1	13-5/8"	5M		l Ram	Х																																			
int i	15 5/0	5101	1	Ram		5M																																		
			Doub	le Ram	Х	5111																																		
			Other*																																					
	13-5/8"	10M	Annular (5M)		Х	100% of rated working pressure																																		
Production			Blind Ram		Х																																			
Troduction		15 5/6 1000	15 5/6 1000	15-5/6 10141	15 5/6 1000	10101	10101	10101	10141	5 1000	5/6 10101	15-5/6 1000	15 5/6 1000	5/6 100	10101	10101		10101	10101	10101	10101	10101	10101	10101	10101	10101	10101	10101	10101	10101	10101	10101	10101	10101	10101	10101	10101	Pipe	Ram	
			Double Ram		Х	10101																																		
			Other*																																					
			Annul	ar (5M)																																				
			Blind Ram																																					
			Pipe Ram																																					
			Double Ram																																					
			Other*																																					
N A variance is requested for	the use of a	a diverter or	n the surface casing. See attached for schematic.																																					
Y A variance is requested to r	un a 5 M a	nnular on a	on a 10M system																																					

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

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

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

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

#### 6. Logging and Testing Procedures

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

Addition	al logs planned	Interval
	Resistivity	Int. shoe to KOP
	Density	Int. shoe to KOP
Х	CBL	Production casing
Х	Mud log	Intermediate shoe to TD
	PEX	

#### 7. Drilling Conditions

Condition	Specfiy what type and where?
BH pressure at deepest TVD	7275
Abnormal temperature	No

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

Hydrogren Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrationsgreater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide isencountered measured values and formations will be provided to the BLM.NH2S is present

Y H2S plan attached.

#### FIGHTING OKRA 18-19 FED 24H

#### 8. Other facets of operation

Is this a walking operation? Potentially

- 1 If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
- 2 The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
- 3 The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

1 Spudder rig will move in and batch drill surface hole.

- a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.,
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
- $^{3}$  The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pa.
- 6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7 Drilling operations will be performed with drilling rig. A that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
  - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

X Directional Plan

Other, describe



devon				DKRA 18-19 F	ED 24H				Geodetic System: US State Plane 1983
devoit		County: Wellbore:	Lea Permit Plan						Datum: North American Datum 1927 Ellipsoid: Clarke 1866
			Permit Plan						Zone: 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	Comment
	(ft) 0.00	(°) 0.00	(°) 0.00	(ft) 0.00	(ft) 0.00	(ft) 0.00	(ft) 0.00	(°/100ft) 0.00	SHL
	100.00	0.00	323.00	100.00	0.00	0.00	0.00	0.00	512
	200.00	0.00	323.00	200.00	0.00	0.00	0.00	0.00	
	300.00	0.00	323.00	300.00	0.00	0.00	0.00	0.00	
	400.00 500.00	0.00 0.00	323.00 323.00	400.00 500.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	
	600.00	0.00	323.00	600.00	0.00	0.00	0.00	0.00	
	700.00	0.00	323.00	700.00	0.00	0.00	0.00	0.00	
	785.00	0.00	323.00	785.00	0.00	0.00	0.00	0.00	Rustler
	800.00	0.00	323.00	800.00	0.00	0.00	0.00	0.00	
	900.00 1000.00	0.00 0.00	323.00 323.00	900.00 1000.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	
	1060.00	0.00	323.00	1060.00	0.00	0.00	0.00	0.00	Salt
	1100.00	0.00	323.00	1100.00	0.00	0.00	0.00	0.00	
	1200.00	0.00	323.00	1200.00	0.00	0.00	0.00	0.00	
	1300.00	0.00	323.00	1300.00	0.00	0.00	0.00	0.00	
	1400.00 1500.00	0.00 0.00	323.00 323.00	1400.00 1500.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	
	1600.00	0.00	323.00	1600.00	0.00	0.00	0.00	0.00	
	1700.00	0.00	323.00	1700.00	0.00	0.00	0.00	0.00	
	1800.00	0.00	323.00	1800.00	0.00	0.00	0.00	0.00	
	1900.00	0.00	323.00	1900.00	0.00	0.00	0.00	0.00	
	2000.00 2100.00	0.00 2.00	323.00 323.00	2000.00 2099.98	0.00 1.39	0.00 -1.05	0.00 -1.39	0.00 2.00	Start Tangent
	2200.00	4.00	323.00	2199.84	5.57	-4.20	-5.55	2.00	
	2300.00	6.00	323.00	2299.45	12.53	-9.44	-12.48	2.00	
	2400.00	8.00	323.00	2398.70	22.27	-16.78	-22.18	2.00	
	2500.00 2600.00	10.00	323.00	2497.47	34.76	-26.19	-34.62 -48.44	2.00 0.00	Hold Tangent
	2700.00	10.00 10.00	323.00 323.00	2595.95 2694.43	48.63 62.49	-36.64 -47.09	-48.44 -62.25	0.00	
	2800.00	10.00	323.00	2792.91	76.36	-57.54	-76.07	0.00	
	2900.00	10.00	323.00	2891.39	90.23	-67.99	-89.88	0.00	
	3000.00	10.00	323.00	2989.87	104.10	-78.44	-103.69	0.00	
	3100.00 3200.00	10.00 10.00	323.00 323.00	3088.35 3186.83	117.97 131.84	-88.90 -99.35	-117.51 -131.32	0.00 0.00	
	3258.88	10.00	323.00	3244.82	140.00	-105.50	-131.32	0.00	Drop to Vertical
	3300.00	9.18	323.00	3285.36	145.47	-109.62	-144.91	2.00	. p
	3400.00	7.18	323.00	3384.34	156.83	-118.18	-156.22	2.00	
	3500.00	5.18	323.00	3483.75	165.42	-124.66	-164.78	2.00	
	3600.00 3700.00	3.18 1.18	323.00 323.00	3583.48 3683.41	171.24 174.28	-129.04 -131.33	-170.58 -173.60	2.00 2.00	
	3758.88	0.00	323.00	3742.28	174.76	-131.69	-174.08	2.00	Hold Vertical
	3800.00	0.00	179.57	3783.40	174.76	-131.69	-174.08	0.00	
	3900.00	0.00	179.57	3883.40	174.76	-131.69	-174.08	0.00	
	4000.00	0.00	179.57	3983.40	174.76	-131.69 -131.69	-174.08 -174.08	0.00	
	4100.00 4200.00	0.00 0.00	179.57 179.57	4083.40 4183.40	174.76 174.76	-131.69	-174.08	0.00 0.00	
	4300.00	0.00	179.57	4283.40	174.76	-131.69	-174.08	0.00	
	4400.00	0.00	179.57	4383.40	174.76	-131.69	-174.08	0.00	
	4500.00	0.00	179.57	4483.40	174.76	-131.69	-174.08	0.00	
	4600.00 4700.00	0.00 0.00	179.57 179.57	4583.40 4683.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	4800.00	0.00	179.57	4783.40	174.76	-131.69	-174.08	0.00	
	4900.00	0.00	179.57	4883.40	174.76	-131.69	-174.08	0.00	
	5000.00	0.00	179.57	4983.40	174.76	-131.69	-174.08	0.00	
	5100.00	0.00	179.57	5083.40	174.76	-131.69	-174.08	0.00	
	5200.00 5266.60	0.00 0.00	179.57 179.57	5183.40 5250.00	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	Base of Salt
	5300.00	0.00	179.57	5283.40	174.76	-131.69	-174.08	0.00	
	5316.60	0.00	179.57	5300.00	174.76	-131.69	-174.08	0.00	Delaware
	5400.00	0.00	179.57	5383.40	174.76	-131.69	-174.08	0.00	
	5500.00	0.00	179.57	5483.40	174.76	-131.69	-174.08	0.00	
	5600.00 5700.00	0.00 0.00	179.57 179.57	5583.40 5683.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	5800.00	0.00	179.57	5783.40 5783.40	174.76	-131.69	-174.08	0.00	
	5900.00	0.00	179.57	5883.40	174.76	-131.69	-174.08	0.00	
	6000.00	0.00	179.57	5983.40	174.76	-131.69	-174.08	0.00	
	6100.00	0.00	179.57	6083.40	174.76	-131.69	-174.08	0.00	
	6200.00 6300.00	0.00 0.00	179.57 179.57	6183.40 6283.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
		5.00						5.00	

devon				OKRA 18-19 F	ED 24H				Geodetic System: US State Plane 1983
0.0 0 011		County:							Datum: North American Datum 1927
			Permit Plar Permit Plar						Ellipsoid: Clarke 1866 Zone: 3001 - NM East (NAD83)
		Design.	remit ria	#					<b>2016.</b> 3001 - NW East (NAD65)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	• •
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
-	6369.60	0.00	179.57	6353.00	174.76	-131.69	-174.08	0.00	Cherry Canyon
	6400.00	0.00	179.57	6383.40	174.76	-131.69	-174.08	0.00	
	6500.00	0.00	179.57	6483.40	174.76	-131.69	-174.08	0.00	
	6600.00	0.00	179.57	6583.40	174.76	-131.69	-174.08	0.00	
	6700.00	0.00	179.57	6683.40	174.76	-131.69	-174.08	0.00	
	6800.00	0.00	179.57	6783.40	174.76	-131.69	-174.08	0.00	
	6900.00	0.00	179.57	6883.40	174.76	-131.69	-174.08	0.00	
	7000.00 7100.00	0.00 0.00	179.57 179.57	6983.40 7083.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	7200.00	0.00	179.57	7183.40	174.76	-131.69	-174.08	0.00	
	7300.00	0.00	179.57	7283.40	174.76	-131.69	-174.08	0.00	
	7400.00	0.00	179.57	7383.40	174.76	-131.69	-174.08	0.00	
	7500.00	0.00	179.57	7483.40	174.76	-131.69	-174.08	0.00	
	7600.00	0.00	179.57	7583.40	174.76	-131.69	-174.08	0.00	
	7700.00	0.00	179.57	7683.40	174.76	-131.69	-174.08	0.00	
	7800.00	0.00	179.57	7783.40	174.76	-131.69	-174.08	0.00	
	7900.00	0.00	179.57	7883.40	174.76	-131.69	-174.08	0.00	
	8000.00	0.00	179.57	7983.40	174.76	-131.69	-174.08	0.00	
	8012.60	0.00	179.57	7996.00	174.76	-131.69	-174.08	0.00	Brushy Canyon
	8100.00	0.00	179.57	8083.40	174.76	-131.69	-174.08	0.00	
	8200.00	0.00	179.57	8183.40	174.76	-131.69	-174.08	0.00	
	8300.00 8400.00	0.00 0.00	179.57 179.57	8283.40 8383.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	8500.00	0.00	179.57	8483.40	174.76	-131.69	-174.08	0.00	
	8600.00	0.00	179.57	8583.40	174.76	-131.69	-174.08	0.00	
	8700.00	0.00	179.57	8683.40	174.76	-131.69	-174.08	0.00	
	8800.00	0.00	179.57	8783.40	174.76	-131.69	-174.08	0.00	
	8900.00	0.00	179.57	8883.40	174.76	-131.69	-174.08	0.00	
	9000.00	0.00	179.57	8983.40	174.76	-131.69	-174.08	0.00	
	9100.00	0.00	179.57	9083.40	174.76	-131.69	-174.08	0.00	
	9200.00	0.00	179.57	9183.40	174.76	-131.69	-174.08	0.00	
	9300.00	0.00	179.57	9283.40	174.76	-131.69	-174.08	0.00	
	9400.00	0.00	179.57	9383.40	174.76	-131.69	-174.08	0.00	
	9500.00 9545.60	0.00 0.00	179.57 179.57	9483.40 9529.00	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	1st Bone Spring Lime
	9600.00	0.00	179.57	9583.40	174.76	-131.69	-174.08	0.00	ist bolle spring Line
	9700.00	0.00	179.57	9683.40	174.76	-131.69	-174.08	0.00	
	9800.00	0.00	179.57	9783.40	174.76	-131.69	-174.08	0.00	
	9900.00	0.00	179.57	9883.40	174.76	-131.69	-174.08	0.00	
	10000.00	0.00	179.57	9983.40	174.76	-131.69	-174.08	0.00	
	10100.00	0.00	179.57	10083.40	174.76	-131.69	-174.08	0.00	
	10200.00	0.00	179.57	10183.40	174.76	-131.69	-174.08	0.00	
	10300.00	0.00	179.57	10283.40	174.76	-131.69	-174.08	0.00	
	10400.00	0.00	179.57	10383.40	174.76	-131.69	-174.08	0.00	
	10491.60	0.00	179.57	10475.00	174.76	-131.69	-174.08	0.00	Bone Spring 1st
	10500.00 10600.00	0.00 0.00	179.57 179.57	10483.40 10583.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	10600.00	0.00	179.57	10583.40	174.76	-131.69	-174.08	0.00	
	10800.00	0.00	179.57	10783.40	174.76	-131.69	-174.08	0.00	
	10900.00	0.00	179.57	10883.40	174.76	-131.69	-174.08	0.00	
	11000.00	0.00	179.57	10983.40	174.76	-131.69	-174.08	0.00	
	11100.00	0.00	179.57	11083.40	174.76	-131.69	-174.08	0.00	
	11200.00	0.00	179.57	11183.40	174.76	-131.69	-174.08	0.00	
	11300.00	0.00	179.57	11283.40	174.76	-131.69	-174.08	0.00	
	11400.00	0.00	179.57	11383.40	174.76	-131.69	-174.08	0.00	
	11437.60	0.00	179.57	11421.00	174.76	-131.69	-174.08	0.00	Bone Spring 2nd
	11500.00	0.00	179.57	11483.40	174.76	-131.69	-174.08	0.00	Del Deve Coltra Have
	11503.60 11600.00	0.00 0.00	179.57 179.57	11487.00 11583.40	174.76 174.76	-131.69	-174.08 -174.08	0.00 0.00	3rd Bone Spring Lime
	11600.00 11700.00	0.00	179.57	11583.40 11683.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00	
	11800.00	0.00	179.57	11783.40	174.76	-131.69	-174.08	0.00	
	11900.00	0.00	179.57	11883.40	174.76	-131.69	-174.08	0.00	
	12000.00	0.00	179.57	11983.40	174.76	-131.69	-174.08	0.00	
	12100.00	0.00	179.57	12083.40	174.76	-131.69	-174.08	0.00	
	12116.60	0.00	179.57	12100.00	174.76	-131.69	-174.08	0.00	Bone Spring 3rd
	12200.00	0.00	179.57	12183.40	174.76	-131.69	-174.08	0.00	
	12300.00	0.00	179.57	12283.40	174.76	-131.69	-174.08	0.00	
	12400.00	0.00	179.57	12383.40	174.76	-131.69	-174.08	0.00	
	12500.00	0.00	179.57	12483.40	174.76	-131.69	-174.08	0.00	Walfarma / Drint of Danageria
	12576.60	0.00	179.57	12560.00	174.76	-131.69	-174.08	0.00	Wolfcamp / Point of Penetration
1									

<text><text></text></text>											
			Well-	FIGHTING	OKRA 18-19 F	ED 24H				Geodetic System	US State Plane 1983
Description         Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>	devon									•	
NO.         K2         T0         NS.         EV         YS.         PLS         Cummet           10         0.0         17.37         122804         10.24         1134         11.24         0.0           1278564         0.00         17.37         122704         17.47         1134         11.24         0.00           1208000         13.14         17.37         122704         17.47         11.34         11.35         12.00         10.00           1208000         13.14         17.37         12271         12.13         12.00         10.00           120000         13.14         17.37         12282         12.33         13.02         10.00           120000         13.14         17.37         123.01         12.22         12.33         13.02         10.00           120000         13.14         17.37         13.03.00         23.01         12.00         10.00         10.00           1300000         13.14         17.37         13.03.00         23.01         12.00         10.00         10.00         10.00           1300000         17.14         17.37         13.00         12.00         10.00         10.00         10.00         10.00			-		1						
mod         mod         mod         mod         mod         mod         mod           120000         000         1257         15540         174         1318         1748         100         No           120800         131         1272         12520         1137         1138         1208         100         No           120800         131         1272         12724         1137         1138         1208         100           130000         1314         1272         1237         1237         1313         1208         100           130000         131         1277         1221         1232         1232         1232         1232         1232           130000         141         1777         1221         1232         1232         1235         1232         1			Design:	Permit Plar	n #1					Zone:	3001 - NM East (NAD83)
mod         mod         mod         mod         mod         mod         mod           120000         000         1257         15540         174         1318         1748         100         No           120800         131         1272         12520         1137         1138         1208         100         No           120800         131         1272         12724         1137         1138         1208         100           130000         1314         1272         1237         1237         1313         1208         100           130000         131         1277         1221         1232         1232         1232         1232         1232           130000         141         1777         1221         1232         1232         1235         1232         1		MD	INC	A71	TVD	NS	FW	vs	DIS		
12700000017371282.001748174807480000001200001.1417371282.221738174817321000130001.1417371282.2211391200100130001.1417371282.2111391200100130001.1417371282.07123212331200100130001.1417371282.07123212331200100130001.1417371282.07123212331200100130001.0417371282.0042541200100130001.0017371282.00425412061001300010017371282.00425412061001300010017371282.00425412061001400090017371282.00425412061001400090017371282.00123512011001400090017371282.00123512011001400090017371282.00123512011001400090017371282.00123512011001400090017371282.00123511301001400090017371282.00123411001001400090017371282.00123411001001400										Comment	
1278640001787127821780	-		0.00	179.57	12583.40	174.76	-131.69	-174.08			
120000134175217321730173017321700170013000023417371284133912801001300002341737128413331280100130000234173712817129313941001300002341737128171293139410013000023417371281712931294100130000234175712817237312841206130000234175712817237312841206130000234175712817239412641001300002341757128104294126410013000010017571281042531216100140000900175712810425312161001400009001757128104254121610014000090017571281042541216100140000900175712810425412161001400009001757128104254121610014000090017571281042541216100140000900175712810425412161001400009001757128104254121610014000090017571281042541216100 </td <th></th> <td></td>											
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10000031.417.5710.52.410.3010.0013200031.417.5710.52.417.9310.31.410.013200031.417.5710.51.417.9310.21.417.9310.013000031.417.9510.21.417.93.217.93.217.93.217.93.217.93.217.93.213000031.417.9510.23.092.0117.93.217.93.217.93.217.93.217.93.217.93.213000030.017.9717.23.092.5417.6430.0110.013000030.017.9717.23.092.5417.6430.0110.013000030.017.9717.23.092.5417.5630.160.014000030.017.9717.32.017.93.217.9110.30.010.014000030.017.9717.32.017.93.217.9110.30.010.014000030.017.9717.32.017.92.217.91.010.010.014000030.017.9717.32.017.92.217.91.010.010.014000030.017.9717.32.017.92.217.91.010.010.014000030.017.9717.32.017.92.017.93.010.010.014000030.017.9717.32.017.92.017.93.010.010.014000030.017.9717.32.017.92.017.93.010.010.0 <t< td=""><th></th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>											
12000514178.7179.4189.4-120.3513.11001300051.4179.5120.4-123.3129.51001300051.4179.5120.8-123.3120.51001300051.4179.7130.8-21.7124.030.81001300050.4179.7130.8-21.7124.030.81001300000.1179.7132.00-22.512.6010.91300000.1179.7132.00-22.512.6010.914000000.0179.7132.00-22.512.6010.814000000.0179.7132.00-22.512.6010.810.014000000.0179.7132.00-12.5212.6110.810.014000000.0179.7132.00-12.5212.61130.110014000000.0179.7132.00-12.5212.61130.110014000000.0179.7132.00-12.5211.51130.000014000000.0179.7132.0012.5211.51130.000014000000.0179.7132.0012.5211.51130.000014000000.0179.7132.0012.5211.51130.000014000000.0179.7132.0012.5211.51130.000015000000.0179.7132.0012.52 <th></th> <td>13000.00</td> <td>23.14</td> <td>179.57</td> <td>12977.17</td> <td>128.68</td> <td>-131.35</td> <td>-128.00</td> <td>10.00</td> <td></td> <td></td>		13000.00	23.14	179.57	12977.17	128.68	-131.35	-128.00	10.00		
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13646400017951325.0-325.0-325.4-325.630100013800000017951325.0-529.5-125.613010014000000017951325.0-729.5-125.013010014000000017951325.0-729.5125.0100114000000017951325.0-129.5121.0100114000000017951325.0129.5121.0100114000000017951325.0129.5121.0100114000000017951325.0129.5121.0100114000000017951325.0129.5115.0100114000000017951325.0129.5115.0100115000000017951325.0129.5115.0100115000000017971325.0229.4115.4130.0015000000017971325.0229.4115.4230.00015000017971325.0229.4115.4230.00015000000017971325.0229.4115.4230.00015000017971325.0229.4115.4230.00015000000017971325.0229.4115.4230.0015000017971325.0229.4115.4											
13700.00     9000     7957     1325.00     -6295     -6264     3018     0.00         13900.00       9000       7957       1325.00       -6295       -1256       81017       0.00         14000.00       9000       7957       1325.00       -6295       -1245       81016       0.00         14000.00       9000       7957       1325.00       -6295       -1244       80115       0.00         14000.00       9000       7957       1325.00       -12952       -1245       18011       0.00         14000.00       9000       7957       1325.00       -12952       -1204       13011       0.00         14000.00       9000       7957       1325.00       -12952       -1205       13011       0.00         14000.00       9000       7957       1325.00       -12952       -1205       13011       0.00         14000.00       9000       7957       1325.00       -12952       -1305       13004       0.00         15000.00       9000       7957       1325.00       -12952       -1305       13004       0.00         15000.00       9000       7957       1325.00       -12954       -11305       13004 <t< td=""><th></th><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>											
13800090017371325.0-62.412.6.45.010.0014000090017371325.0-62.9.412.680.10.014000090017371325.0-22.9.5-12.4.680.10.014000090017371325.0-12.9.5-12.9.610.014000090017371325.0-12.9.5-12.9.610.014000090017371325.0-12.9.5-12.9.010.014000090017371325.0-12.9.5-12.1.010.014000090017371325.0-12.9.5-11.0.010.014000090017371325.0-12.9.5-11.0.010.014000090017371325.0-12.9.5-11.0.010.015000090017371325.0-12.9.5-11.0.010.015000090017371325.0-22.9.4-11.4.017.0.015000090017371325.0-22.9.4-11.4.010.015000090017371325.0-22.9.4-11.4.010.015000090017371325.0-22.9.4-11.4.010.015000090017371325.0-22.9.4-11.4.010.015000090017371325.0-22.9.4-11.4.020.015000090017371325.0-22.9.4-11.4.020.01500009001737 </td <th></th> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Landing Point</td> <td></td>										Landing Point	
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144000         900         1757         332500         -12155         2115         200           146000         900         1757         33250         -12352         -1715         2116         200           146000         900         1757         33250         -12435         1116         100           146000         900         1757         33250         -12351         1116         100           150000         900         1757         33250         -12350         11740         1700         00           150000         900         1757         33250         -12350         11740         1700         00           150000         900         1757         33250         -12350         11540         000           150000         900         1757         33250         -22344         -1134         3100         100           150000         900         1757         33250         -22344         -1134         3304         100           150000         900         1757         33250         -22344         -1134         3002         100           150000         900         1757         33250         -22344         -10434											
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146000         900         1757         332.50         -120.40         330.12         0.0           146000         900         1757         332.50         -120.51         1105         100           146000         900         1757         332.50         -120.51         1115         160.0         0.0           150000         900         1757         332.50         -122.50         117.63         180.0         0.0           150000         900         1757         332.50         -122.50         115.63         180.0         0.0           150000         900         1757         332.50         -122.64         113.64         20.0         0.0           150000         900         1757         332.50         -22.84         -11.43         330.0         0.0           150000         900         1757         332.50         -22.84         -11.43         350.0         20.0           150000         900         1757         332.50         -22.84         -11.43         530.0         0.0           150000         900         1757         332.50         -22.84         -10.43         530.0         0.0           150000         900         17											
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1600.00       90.00       179.57       13325.00       -229.48       -109.89       2730.00       0.00         1610.00       90.00       179.57       13325.00       -229.44       -108.14       2830.00       0.00         1620.00       90.00       179.57       13325.00       -229.44       -108.43       229.98       0.00         1630.00       90.00       179.57       13325.00       -322.44       -107.64       302.99       0.00         1660.00       90.00       179.57       13325.00       -322.44       -105.13       322.96       0.00         16600.00       90.00       179.57       13325.00       -322.44       -105.13       329.95       0.00         16600.00       90.00       179.57       13325.00       -322.44       -105.33       329.95       0.00         16600.01       90.00       179.57       13325.00       -322.44       -103.33       329.95       0.00         17000.00       90.00       179.57       13325.00       -322.44       -103.33       329.95       0.00         17000.00       90.00       179.57       13325.00       -322.44       -101.33       329.95       0.00         17000.00       90.00											
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16600.090.0179.5713325.00-3329.46-105.383329.960.0016700.090.00179.5713325.00-329.46-104.633429.960.0016800.0090.00179.5713325.00-329.45-103.183629.390.0017000.090.00179.5713325.00-329.45-103.183629.390.0017000.090.00179.5713325.00-3329.44-100.88329.990.0017000.090.00179.5713325.00-3329.44-100.18329.990.0017300.0090.00179.5713325.00-429.44-100.18329.990.0017400.0090.00179.5713325.00-429.44-90.38412.980.0017500.0090.00179.5713325.00-429.43-97.13429.480.0017600.0090.00179.5713325.00-429.43-97.13429.840.0017600.0090.00179.5713325.01-429.43-97.13429.480.0017600.0090.00179.5713325.01-429.42-95.62462.980.0017600.0090.00179.5713325.01-429.44-91.37429.380.0017600.0090.00179.5713325.01-429.42-94.12429.980.0017600.0090.00179.5713325.01-429.42-94.12429.980.0017600.0090.00179.5713325.01 <th></th> <td></td>											
16800.0090.00179.5713325.00-3529.45-103.883529.940.0016900.0090.00179.5713325.00-3729.45-102.383729.920.0017000.090.00179.5713325.00-3729.45-101.633829.920.0017200.090.00179.5713325.00-329.44-100.88392.910.0017300.0090.00179.5713325.00-4029.44-100.134029.900.0017400.0090.00179.5713325.00-422.94-93.84129.890.0017500.0090.00179.5713325.00-422.94-93.84129.890.0017500.0090.00179.5713325.00-422.943-97.88432.980.0017600.0090.00179.5713325.00-422.943-97.88432.980.0017700.0090.00179.571332.50-422.943-97.88432.980.0017800.0090.00179.571332.50-422.943-96.37452.9450.0017800.0090.00179.571332.50-422.943-95.62462.9450.0018000.0090.00179.571332.50-422.942-95.62462.9450.0018000.0090.00179.571332.50-52.941-93.37422.980.0018000.0090.00179.571332.50-52.941-93.37422.980.0018000.0090.00179.571332.											
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17000.0090.00179.5713325.00-372.945-102.38372.9920.0017100.0090.00179.5713325.00-382.945-101.63382.9920.0017200.0090.00179.5713325.00-402.944-100.13402.9900.0017400.0090.00179.5713325.00-422.943-99.63412.9890.0017600.0090.00179.5713325.00-422.943-99.63422.9880.0017600.0090.00179.5713325.00-422.943-97.88432.9860.0017600.0090.00179.5713325.00-422.943-97.13429.870.0017600.0090.00179.5713325.01-422.943-96.37452.9860.0017700.0090.00179.5713325.01-462.942-95.620.0017800.0090.00179.5713325.01-462.942-95.620.0018000.0090.00179.5713325.01-462.942-95.620.0018000.0090.00179.5713325.01-462.942-95.620.0018000.0090.00179.5713325.01-92.941-93.87429.840.0018000.0090.00179.5713325.01-52.941-91.2552.9810.0018000.0090.00179.5713325.01-52.941-91.2552.9810.0018000.0090.00179.5713325.01-52.941-91.2552.978 <th></th> <td></td>											
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0101011		County:		_					Datum: North American Datum 1927
			Permit Plan						Ellipsoid: Clarke 1866
		Design:	Permit Plar	1#1					Zone: 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	Comment
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
	19400.00	90.00	179.57	13325.01	-6129.38	-84.36	6129.73	0.00	
	19500.00	90.00	179.57	13325.01	-6229.38	-83.61	6229.73	0.00	
	19600.00	90.00	179.57	13325.01	-6329.37	-82.86	6329.72	0.00	
	19700.00	90.00	179.57	13325.01	-6429.37	-82.11	6429.71	0.00	
	19800.00	90.00	179.57	13325.01	-6529.37	-81.36	6529.70	0.00	
	19900.00	90.00	179.57	13325.01	-6629.37	-80.61	6629.69	0.00	
	20000.00	90.00	179.57	13325.01	-6729.36	-79.86	6729.69	0.00	
	20100.00	90.00	179.57	13325.01	-6829.36	-79.11	6829.68	0.00	
	20200.00	90.00	179.57	13325.01	-6929.36	-78.36	6929.67	0.00	
	20300.00	90.00	179.57	13325.01	-7029.36	-77.61	7029.66	0.00	
	20400.00	90.00	179.57	13325.01	-7129.35	-76.86	7129.65	0.00	
	20500.00	90.00	179.57	13325.01	-7229.35	-76.10	7229.65	0.00	
	20600.00	90.00	179.57	13325.01	-7329.35	-75.35	7329.64	0.00	
	20700.00	90.00	179.57	13325.01	-7429.34	-74.60	7429.63	0.00	
	20800.00	90.00	179.57	13325.01	-7529.34	-73.85	7529.62	0.00	
	20900.00	90.00	179.57	13325.01	-7629.34	-73.10	7629.61	0.00	
	21000.00	90.00	179.57	13325.01	-7729.34	-72.35	7729.61	0.00	
	21100.00	90.00	179.57	13325.01	-7829.33	-71.60	7829.60	0.00	
	21200.00	90.00	179.57	13325.01	-7929.33	-70.85	7929.59	0.00	
	21300.00	90.00	179.57	13325.01	-8029.33	-70.10	8029.58	0.00	
	21400.00	90.00	179.57	13325.01	-8129.32	-69.35	8129.57	0.00	
	21500.00	90.00	179.57	13325.01	-8229.32	-68.60	8229.57	0.00	
	21600.00	90.00	179.57	13325.01	-8329.32	-67.85	8329.56	0.00	
	21700.00	90.00	179.57	13325.01	-8429.32	-67.10	8429.55	0.00	
	21800.00	90.00	179.57	13325.01	-8529.31	-66.34	8529.54	0.00	
	21900.00	90.00	179.57	13325.01	-8629.31	-65.59	8629.53	0.00	
	22000.00	90.00	179.57	13325.01	-8729.31	-64.84	8729.53	0.00	
	22100.00	90.00	179.57	13325.01	-8829.30	-64.09	8829.52	0.00	
	22200.00	90.00	179.57	13325.01	-8929.30	-63.34	8929.51	0.00	
	22300.00	90.00	179.57	13325.01	-9029.30	-62.59	9029.50	0.00	
	22400.00	90.00	179.57	13325.01	-9129.30	-61.84	9129.49	0.00	
	22500.00	90.00	179.57	13325.01	-9229.29	-61.09	9229.49	0.00	
	22600.00	90.00	179.57	13325.01	-9329.29	-60.34	9329.48	0.00	
	22700.00	90.00	179.57	13325.01	-9429.29	-59.59	9429.47	0.00	
	22800.00	90.00	179.57	13325.01	-9529.28	-58.84	9529.46	0.00	
	22900.00	90.00	179.57	13325.01	-9629.28	-58.09	9629.45	0.00	
	23000.00	90.00	179.57	13325.01	-9729.28	-57.34	9729.45	0.00	
	23100.00	90.00	179.57	13325.01	-9829.28	-56.59	9829.44	0.00	
	23200.00	90.00	179.57	13325.01	-9929.27	-55.83	9929.43	0.00	
	23300.00	90.00	179.57		-10029.27	-55.08	10029.42	0.00	
	23400.00	90.00	179.57		-10129.27	-54.33	10129.41	0.00	
	23500.00	90.00	179.57		-10229.27	-53.58	10229.41	0.00	
	23505.05	90.00	179.57		-10234.31	-53.54	10234.45	0.00	exit
	23585.05	90.00	179.57		-10314.31	-52.97	10314.45	0.00	BHL

Min. Torque on Shoulder:

%

# **TECHNICAL DATA SHEET**

# **Released to Imaging: 6/15/2024 12:37:12 PM**

Connection: VAroughneck S	C (OD=6.051in)		Grade: VA-EP-P110		
Size: 5 1/2 in X 20.00 lb/ft			Material:	US Customary	Metric
Drift: standard			Yield Strength Min.	125,000 psi	862 Mpa
Bevel: standard			Yield Strength Max.	140,000 psi	965 Mpa
			Tensile Strength Min.	125,000 psi	862 Mpa
Pipe:					
	US Customary	Metric		US Customary	Metric
Nominal OD:	5.500 in	139.70 mm	Wall Thickness:	0.361 in	9.17 mm
Nominal ID:	4.778 in	121.36 mm	Standard Drift:	4.653 in	118.19 mm
Nominal Weight:	20.00 lb/ft	30.07 kg/m	Pipe Body Yield Strength:	729 klb	3,240 kN
Pipe Cross Section:	5.828 in <sup>2</sup>	3,759.99 mm <sup>2</sup>			
Connection:					
	US Customary	Metric			
OD:	6.051 in	153.70 mm	Threads per inch:	5 Threads	
ID:	4.764 in	121.00 mm			
Length:	8.976 in	228.00 mm			
Connection Performance	(Uniaxial Load):				
	US Customary	Metric		US Customary	Metric
Joint Strength:	729 klb	3,240 kN	Tension Efficiency:	> 100.0 %	
Collapse Resistance:.	13,300 psi	91.70 Mpa	Displacement:	1.240 gal/ft	15.40 l/m
Internal Yield Pressure:	14,360 psi	99.00 Mpa	Production:	0.932 gal/ft	11.57 l/m
Load on Coupling Face:	411 klb	1,830 kN			
Field Make Up (Friction Fa	actor = 1.0):				
	US Customary	Metric		US Customary	Metric
Minimum Torque:	15,820 ft.lb	21,450 Nm	Make-Up Loss:	4.370 in	111.00 mm
Optimum Torque:	17,580 ft.lb	23,835 Nm	Yield Torque:	22,000 ft.lb	29,800 Nm
Maximum Torque:	19,340 ft.lb	26,220 Nm			



#### LOAD ENVELOPE Tension [klb] Compression [klb] **Recommended Field of Application** 20 ksi 500 klb klb klb 00 0 Pipe Body Envelope [ksi] Pipe Body Collapse Internal Pressure 10 ksi Efficiency (% Pipe Body) under Uniaxial Loads *Released to Imaging: 6/15/202* 0 ksi 100.0 % Tension: Compression: 100.0 % [ksi] Internal Pressure: 100.0 % External Pressure: 100.0 % Pressure Sealability Rating (% Efficiency) -10 ksi under Combined Loads ------External 100.0 % Tension: -----Compression: 100.0 % Internal Pressure: 100.0 % **External Pressure:** 100.0 % **Test Conditions** -20 ksi Fluid Test Medium: Von Mises Envelope: 95.0 %

The graph is calculated under consideration of the requirements of EN ISO 13679 and API 5C3. The combined loads are calculated without the consideration of wall thickness tolerances and differ from the values in the data sheet, which are calculated with tolerances determined by API. Any printout is NOT SUBJECT TO REGULAR REVISION. The generated performance envelope shall solely be used as a tool to facilitate the comparison of performance properties under combined loads, of different grades, sizes and connections of voestalpine Tubulars products. Field-specific safety/design factors as well as other loads are not considered. Thus the results shall by no means be used to replace the own string design or to justify any warranty/guaranty cases.

20.00 °/100ft

Bending:



# **U. S. Steel Tubular Products** 9.625" 40.00lbs/ft (0.395" Wall) J55

1/24/2019 2:45:24 PM

MECHANICAL PROPERTIES	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000				psi
Maximum Yield Strength	80,000				psi
Minimum Tensile Strength	75,000				psi
DIMENSIONS	Pipe	BTC	LTC	STC	
Outside Diameter	9.625	10.625	10.625	10.625	in.
Wall Thickness	0.395				in.
Inside Diameter	8.835	8.835	8.835	8.835	in.
Standard Drift	8.679	8.679	8.679	8.679	in.
Alternate Drift	8.750	8.750	8.750	8.750	in.
Nominal Linear Weight, T&C	40.00				lbs/ft
Plain End Weight	38.97				lbs/ft
PERFORMANCE	Pipe	BTC	LTC	STC	
Minimum Collapse Pressure	2,570	2,570	2,570	2,570	psi
Minimum Internal Yield Pressure	3,950	3,950	3,950	3,950	psi
Minimum Pipe Body Yield Strength	630				1,000 lbs
Joint Strength		714	520	452	1,000 lbs
Reference Length		11,898	8,665	7,529	ft
MAKE-UP DATA	Pipe	BTC	LTC	STC	
Make-Up Loss		4.81	4.75	3.38	in.
Minimum Make-Up Torque			3,900	3,390	ft-lbs
Maximum Make-Up Torque			6,500	5,650	ft-lbs

#### Legal Notice

All material contained in this publication is for general information only. This material should not therefore be used or relied upon for any specific application without independent competent professional examination and verification of accuracy, suitability and applicability. Anyone making use of this material does so at their own risk and assumes any and all liability resulting from such use. U. S. Steel disclaims any and all expressed or implied warranties of fitness for any general or particular application.

> U. S. Steel Tubular Products 460 Wildwood Forest Drive, Suite 300S connections@uss.com Spring, Texas 77380

1-877-893-9461 www.usstubular.com

## **Offline Cementing**

#### Variance Request

Devon Energy requests to offline cement on intermediate strings that are set in formations shallower than the Wolfcamp. Prior to commencing offline cementing operations, the well will be monitored for any abnormal pressures and confirmed to be static. A dual manifold system (equipped with chokes) for the returns will also be utilized as a redundancy. All equipment used for offline cementing will have a minimum 5M rating to match intermediate sections' 5M BOPE requirements.

	MO-FXL			MO-FXL 7	
14.10			CDS#	P110	
Metal <mark>O</mark> ne	Pipe Body: BMP P110HC I			MinYS	
	Connection Data	Date	10-Ma	ar-21	
	Geometry	<u>Imperia</u>	<u>I</u>	<u>S.I.</u>	
	Pipe Body	-		-	
	Grade *	P110HC		P110HC	
	Pipe OD ( D )	7 5/8	in	193.68	mm
MO-FXL	Weight	29.70	lb/ft	44.25	kg/m
	Actual weight	29.04		43.26	kg/m
	Wall Thickness (t)	0.375	in	9.53	mm
	Pipe ID(d)	6.875	in	174.63	mm
	Pipe body cross section	8.537	in <sup>2</sup>	5,508	mm <sup>2</sup>
	Drift Dia.	6.750	in	171.45	mm
	Connection				
$\uparrow \leftrightarrow$	Box OD (W)	7.625	in	193.68	mm
X	PIN ID	6.875	in	174.63	mm
Box	Make up Loss	4.219	in	107.16	mm
critical	Box Critical Area	5.714	in <sup>2</sup>	3686	mm <sup>2</sup>
area	Joint load efficiency	70	%	70	%
5	Thread Taper			2" per ft )	70
	Number of Threads			TPI	
ISS 🗲 D	Performance				
	Performance Properties 1	for Pipe Body			
D Pin	Performance Properties f	or Pipe Body 939	kips	4,177	kN
Pin critical	Performance Properties 1 S.M.Y.S. * M.I.Y.P. *	939 9,470	kips psi	65.31	MPa
Pin	Performance Properties 1 S.M.Y.S. * M.I.Y.P. * Collapse Strength *	939 9,470 7,050	psi psi	65.31 48.62	MPa MPa
Pin critical	Performance Properties 1 S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif	939 9,470 7,050 ied Minimum YIE	psi <mark>psi</mark> LD Stre	65.31 48.62 ngth of Pipe bo	MPa MPa dy
Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim	939 9,470 7,050 ied Minimum YIE um Internal Yield	psi <mark>psi</mark> LD Stre	65.31 48.62 ngth of Pipe bo	MPa MPa dy
Pin critical	Performance Properties 1 S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C	939 9,470 7,050 ied Minimum YIE um Internal Yielc collapse 7,050psi	psi psi LD Stre I Pressu	65.31 48.62 ngth of Pipe bo re of Pipe body	MPa MPa dy
Pin critical	Performance Properties 1 S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP	939 9,470 7,050 ied Minimum YIE um Internal Yielc collapse 7,050psi -12-F05 Rev.1, da	psi psi LD Stre Pressu ted 9/6/20	65.31 48.62 ngth of Pipe bo re of Pipe body	MPa MPa dy
Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties	939 9,470 7,050 ied Minimum YIE um Internal Yielc Collapse 7,050psi -12-F05 Rev.1, da for Connectio	psi psi LD Stre I Pressu ted 9/6/20	65.31 48.62 ngth of Pipe bo re of Pipe body	MPa MPa dy
Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield load	939 9,470 7,050 ied Minimum YIE um Internal Yielc Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips	psi psi LD Stre Pressu ted 9/6/20 n 70%	65.31 48.62 ngth of Pipe bo re of Pipe body 018 of S.M.Y.S. )	MPa MPa dy
Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield load Min. Compression Yield	939 9,470 7,050 ied Minimum YIE um Internal Yielc Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips 657 kips	psi psi LD Stree Pressu ted 9/6/20 n 70%	65.31 48.62 ngth of Pipe bo re of Pipe body 018 of S.M.Y.S. )	MPa MPa dy
Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, O Performance Data Sheet: SOP Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure	939 9,470 7,050 ied Minimum YIE um Internal Yielc Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips	psi psi LD Stre Pressu ted 9/6/20 n 70% 70% 80%	65.31 48.62 ngth of Pipe bo re of Pipe body 018 of S.M.Y.S. ) of S.M.Y.S. )	MPa MPa dy
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Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, O Performance Data Sheet: SOP Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure	939 9,470 7,050 ied Minimum YIE um Internal Yielc Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips 657 kips	psi psi LD Stre Pressu ted 9/6/20 n 70% 70% 80%	65.31 48.62 ngth of Pipe bo re of Pipe body 018 of S.M.Y.S. ) of S.M.Y.S. ) of M.I.Y.P. ) of Collapse St	MPa MPa dy
Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure	939 9,470 7,050 ied Minimum YIE um Internal Yielc Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips 657 kips	psi psi LD Strei Pressu ted 9/6/20 n 70% 70% 80% 100% c	65.31 48.62 ngth of Pipe bo re of Pipe body 018 of S.M.Y.S. ) of S.M.Y.S. ) of M.I.Y.P. ) of Collapse St	MPa MPa dy
Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure Max. DLS ( deg. /100ft)	939 9,470 7,050 ied Minimum YIE um Internal Yielc Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips 657 kips	psi psi LD Strei Pressu ted 9/6/20 n 70% 70% 80% 100% c	65.31 48.62 ngth of Pipe bo re of Pipe body 018 of S.M.Y.S. ) of S.M.Y.S. ) of M.I.Y.P. ) of Collapse St	MPa MPa dy
Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure Max. DLS ( deg. /100ft) Recommended Torque	939 9,470 7,050 ied Minimum YIE um Internal Yield Collapse 7,050psi -12-F05 Rev.1, da <b>for Connectio</b> 657 kips ( 7,580 psi (	psi psi LD Strei Pressu ted 9/6/20 n 70% 70% 80% 100% c 2	65.31 48.62 ngth of Pipe body ore of Pipe body 018 of S.M.Y.S. ) of S.M.Y.S. ) of M.I.Y.P. ) of Collapse Si 7	MPa MPa dy trength
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Connection Data Sheet is for informational purposes only, and was prepared by reference to engineering information that is specific to the subject products, without regard to safety-related factors, all of which are the sole responsibility of the operators and users of the subject connectors. Metal One assumes no responsibility for any errors with respect to this information.

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

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

Received by OCD: 3/26/20/24 8.20:23 AM U.S. Department of the Interior

BUREAU OF LAND MANAGEMENT

Sundry Print Report

Page 21 of 51

Well Name: FIGHTING OKRA 18-19 FED	Well Location: T26S / R34E / SEC 18 / NENW / 32.0493765 / -103.5123721	County or Parish/State: LEA / NM
Well Number: 24H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM114992	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547579	Well Status: Approved Application for Permit to Drill	<b>Operator:</b> DEVON ENERGY PRODUCTION COMPANY LP

LONG VO Date: 2024.03.25 16:02:56 -05'00'

#### **Notice of Intent**

Sundry ID: 2777484

Type of Submission: Notice of Intent

Date Sundry Submitted: 02/29/2024

Date proposed operation will begin: 02/29/2024

Type of Action: APD Change Time Sundry Submitted: 03:39

**Procedure Description:** Engineering Only - Devon Energy Production Company L.P. respectfully requests the following changes to the approved APD: Casing program change to slim hole design: Surface, Intermediate, and Production Casing size changes. Cement volume changes to accommodate casing change. Offline cement variance request. Please see attached revised drilling & directional plans, and supporting documentation.

#### NOI Attachments

#### **Procedure Description**

FIGHTING\_OKRA\_18\_19\_FED\_24H\_Slim\_Hole\_Rev1\_20240314112416.pdf FIGHTING\_OKRA\_18\_19\_FED\_24H\_Directional\_Plan\_08\_30\_23\_20240229153602.pdf 5.5\_20\_\_VAEP\_P110\_VAroughneck\_SC\_\_6.051\_OD\_\_20240229153602.pdf 9.625\_40lb\_J\_55\_20240229153601.pdf Offline\_Cementing\_\_\_Variance\_Request\_20240229153601.pdf 7\_625\_29\_7\_BMP\_P110HC\_CDS\_FXL\_\_slim\_hole\_alternate\_for\_timing\_\_\_20240229153601.pdf

Received by OCD: WS662024. 81301783040KRA 18-19 FED	Well Location: T26S / R34E / SEC 18 / NENW / 32.0493765 / -103.5123721	County or Parish/State: LEA / NM
Well Number: 24H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM114992	Unit or CA Name:	Unit or CA Number:
<b>US Well Number:</b> 3002547579	Well Status: Approved Application for Permit to Drill	<b>Operator:</b> DEVON ENERGY PRODUCTION COMPANY LP

#### 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: REBECCA DEAL** 

Signed on: MAR 14, 2024 11:24 AM

Zip:

22 of 51

Name: DEVON ENERGY PRODUCTION COMPANY LP

Title: Regulatory Analyst

Street Address: 333 W SHERIDAN AVE

City: OKLAHOMA CITY State: OK

Phone: (303) 299-1406

Email address: REBECCA.DEAL@DVN.COM

#### Field

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

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

	Devon Energy Production Company LP NMNM114992
LOCATION:	Section 18, T.26 S., R.34 E., NMPM
COUNTY:	Lea County, New Mexico 🔽

WELL NAME & NO.:	Fighting Okra 18-19 Fed 24H
SURFACE HOLE FOOTAGE:	230'/N & 1630'/W
<b>BOTTOM HOLE FOOTAGE</b>	20'/S & 1501'/W
ATS/API ID:	3002547579
APD ID:	10400056516
Sundry ID:	2777484

# COA

H2S	Yes		
Potash	None		
Cave/Karst Potential	Low		
Cave/Karst Potential	Critical		
Variance	C None	🖸 Flex Hose	C Other
Wellhead	Conventional and Multibow	/I 👤	
Other	□4 String	Capitan Reef	WIPP
		None 🝷	
Other	Pilot Hole	Open Annulus	
	None 🔽		
Cementing	Contingency Squeeze	Echo-Meter	Primary Cement
	Int 1	None 🔻	Squeeze
			None 🚽
Special	□ Water	COM	Unit Unit
Requirements	Disposal/Injection		
Special	Batch Sundry		
Requirements			
Special	Break Testing	✓ Offline	Casing
Requirements		Cementing	Clearance
Variance			

# A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Wolfcamp** formation. As a result, the Hydrogen Sulfide area must meet **43 CFR part 3170 Subpart 3176** requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

# **B.** CASING

- The 9-5/8 inch surface casing shall be set at approximately 810 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt when present, and below usable fresh water) and cemented to the surface. The surface hole shall be 13 1/2 inch in diameter.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of <u>8</u> <u>hours</u> or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

- 2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing shall be set at approximately **12560 feet** is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above.

Operator has proposed to pump down 9-5/8" X 7-5/8" annulus after primary cementing stage. <u>Operator must run a CBL from TD of the 7-5/8" casing to surface.</u> <u>Submit results to the BLM.</u>

If cement does not tie-back into the previous casing shoe, a third stage remediation BH may be performed. The appropriate BLM office shall be notified.

- 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 7-5/8 inch 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:**

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **9-5/8** 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 **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 43 CFR 3172.6(b)(9) must be followed.

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

# **Offline Cementing**

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

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

Notify the BLM 4hrs prior to cementing offline at Lea County: 575-689-5981.

# **Casing Clearance**

Operator casing variance is approved for the utilization of 5-1/2 inch Sprint SF **from** base of curve and a minimum of 500 feet or the minimum tie-back requirement above, whichever is greater into the previous casing shoe. All other 5-1/2 inch casing will run Varn.

Operator shall clean up cycles until wellbore is clear of cuttings and any large debris, ensure cutting sizes are less than 0.5 micron before cementing.

# **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)
  - 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 **43** CFR part **3170** Subpart **3172** as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
- 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 when present.
- A. CASING

- 1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
- <u>Wait on cement (WOC) for Potash Areas:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least <u>24 hours</u>. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. <u>Wait on cement (WOC) for Water Basin:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least <u>8 hours</u>. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.
- B. PRESSURE CONTROL

- All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3.
- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
- 3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-

off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to 43 CFR part 3170
  Subpart 3172 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 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 43 CFR part 3170 Subpart 3172.
- C. DRILLING MUD

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

# D. WASTE MATERIAL AND FLUIDS

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

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

Long Vo (LVO) 3/25/2024

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	UNITED STATES EPARTMENT OF THE INTERIOR REAU OF LAND MANAGEMENT	FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021 5. Lease Serial No. NMNM114992	
Do not use this	NOTICES AND REPORTS ON WELLS form for proposals to drill or to re-enter an USE Form 3160-3 (APD) for such proposals.	6. If Indian, Allottee or Tribe Name	
SUBMIT II	NTRIPLICATE - Other instructions on page 2	7. If Unit of CA/Agreement, Name and/or No.	
	s Well Other	8. Well Name and No. FIGHTING OKRA 18-19 FED/24H	
2. Name of Operator DEVON ENER	RGY PRODUCTION COMPANY LP	9. API Well No. 3002547579	
	N AVE, OKLAHOMA CITY, 3b. Phone No. (include area code) (405) 235-3611	10. Field and Pool or Exploratory Area	
4. Location of Well (Footage, Sec., T SEC 18/T26S/R34E/NMP	,R.,M., or Survey Description)	11. Country or Parish, State LEA/NM	
12. CF	HECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF	F NOTICE, REPORT OR OTHER DATA	
TYPE OF SUBMISSION	ТУРЕ С	DF ACTION	
✓ Notice of Intent	Acidize Deepen Alter Casing Hydraulic Fracturing	Production (Start/Resume)       Water Shut-Off         Reclamation       Well Integrity	
Subsequent Report	Casing Repair New Construction	Recomplete   Other     Temporarily Abandon	
Final Abandonment Notice	Convert to Injection Plug Back	Water Disposal	
the proposal is to deepen directio the Bond under which the work w completion of the involved opera	nally or recomplete horizontally, give subsurface locations and measu will be perfonned or provide the Bond No. on file with BLM/BIA. Re	on in a new interval, a Form 3160-4 must be filed once testing has been	

Engineering Only - Devon Energy Production Company L.P. respectfully requests the following changes to the approved APD:

Casing program change to slim hole design: Surface, Intermediate, and Production Casing size changes. Cement volume changes to

accommodate casing change. Offline cement variance request.

Please see attached revised drilling & directional plans, and supporting documentation.

14. I hereby certify that the foregoing is true and correct. Name ( <i>Printed/Typed</i> ) REBECCA DEAL / Ph: (303) 299-1406	Regulatory Analy	lyst	
(Electronic Submission)	Date	03/14/2024	
THE SPACE FOR FEDE	ERAL OR STATE	OFICE USE	
Approved by			
	Title	Date	
Conditions of approval, if any, are attached. Approval of this notice does not warrant certify that the applicant holds legal or equitable title to those rights in the subject lead which would entitle the applicant to conduct operations thereon.			
Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for an any false, fictitious or fraudulent statements or representations as to any matter within		willfully to make to any department or agency of the United Stat	tes

(Instructions on page 2)

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

## SPECIFIC INSTRUCTIONS

*Item 4* - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

*Item 13:* Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

# NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

**BURDEN HOURS STATEMENT:** Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

# **Additional Information**

# **Location of Well**

0. SHL: NENW / 480 FNL / 1600 FWL / TWSP: 26S / RANGE: 34E / SECTION: 18 / LAT: 32.0493765 / LONG: -103.5123721 ( TVD: 0 feet, MD: 0 feet ) PPP: NWNE / 100 FNL / 2300 FEL / TWSP: 26S / RANGE: 34E / SECTION: 18 / LAT: 32.0504232 / LONG: -103.5078669 ( TVD: 9257 feet, MD: 9406 feet ) BHL: SWSE / 20 FSL / 2300 FEL / TWSP: 26S / RANGE: 34E / SECTION: 19 / LAT: 32.021721 / LONG: -103.5078341 ( TVD: 9830 feet, MD: 20014 feet )

# 1. Geologic Formations

TVD of target	13325	Pilot hole depth	N/A
MD at TD:	23585	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	785	Zone.	
Salt	1060		
Base of Salt	5250		
Delaware	5300		
Cherry Canyon	6353		
Brushy Canyon	7996		
1st Bone Spring Lime	9529		
Bone Spring 1st	10475		
Bone Spring 2nd	11421		
3rd Bone Spring Lime	11487		
Bone Spring 3rd	12100		
Wolfcamp	12560		

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

#### FIGHTING OKRA 18-19 FED 24H

		Wt			Casing Interval		Casing Interval	
Hole Size	Csg. Size	(PPF)	Grade	Conn	From (MD)	To (MD)	From (TVD)	To (TVD)
13 1/2	9 5/8	40	J-55	BTC	0	810	0	810
8 3/4	7 5/8	29.7	P-110HSCY	MOFXL	0	12560 1-2660	0	12560 12660
6 3/4	5 1/2	20	P-110	VARN & Sprint SF	0	23585	0	13325

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

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

Variance Approval -

o 5-1/2" Production Casing will include Sprint SF connection from base of curve to 500ft inside 7 5/8" casing shoe o All other 5-1/2" Production Casing will run VARN (6.05") or equivalent

# 3. Cementing Program (Primary Design)

Casing	# Sks	тос	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	431	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	340	Surf	9	3.27	Lead: Class C Cement + additives
IIIt I	370	8660	13.2	1.44	Tail: Class H / C + additives
Int 1	442	Surf	13.2	1.44	Squeeze Lead: Class C Cement + additives
Intermediate	340	Surf	9	3.27	Lead: Class C Cement + additives
Squeeze	370	8660	13.2	1.44	Tail: Class H / C + additives
Production	62	10769	9	3.27	Lead: Class H /C + additives
	690	12769	13.2	1.44	Tail: Class H / C + additives

Casing String	% Excess					
Surface	50%					
Intermediate 1	30%					
Intermediate 1 (Two Stage)	25%					
Prod	10%					
BOP installed and tested before drilling which hole?	Size?	Min. Required WP	T	уре	~	Tested to:
---	--------------	------------------------	---------------	---------------	--------------	--------------------------------
			Am	nular	X	50% of rated working pressure
Int 1	13-5/8"	5M		d Ram	Х	
	15-5/0	5101	<u>^</u>	e Ram		- 5M
			Doub	le Ram	Х	
			Other*			
			Annul	ar (5M)	Х	100% of rated working pressure
Production	13-5/8"	10M	Bline	d Ram	Х	
Troduction	15-5/8	10111	Pipe	e Ram		10M
				le Ram	Х	10101
			Other*			
			Annul	ar (5M)		
			Bline	d Ram		
			Pipe	e Ram		
			Doub	le Ram		
			Other*			
N A variance is requested for	the use of a	a diverter or	n the surface	e casing. See	attached for	schematic.
Y A variance is requested to a	un a 5 M a	nnular on a	10M system	1		

# 4. Pressure Control Equipment (Three String Design)

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

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

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

## 6. Logging and Testing Procedures

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

Addition	al logs planned	Interval
	Resistivity	Int. shoe to KOP
	Density	Int. shoe to KOP
Х	CBL	Production casing
Х	Mud log	Intermediate shoe to TD
	PEX	

#### 7. Drilling Conditions

Condition	Specfiy what type and where?
BH pressure at deepest TVD	7275
Abnormal temperature	No

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

Hydrogren	Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations
greater than	100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is
encountered	d measured values and formations will be provided to the BLM.
Ν	H2S is present
Y	H2S plan attached.

#### FIGHTING OKRA 18-19 FED 24H

#### 8. Other facets of operation

Is this a walking operation? Potentially

- 1 If operator elects, drilling rig will batch drill the surface holes and run/cement surface casing; walking the rig to next wells on the pad.
- 2 The drilling rig will then batch drill the intermediate sections and run/cement intermediate casing; the wellbore will be isolated with a blind flange and pressure gauge installed for monitoring the well before walking to the next well.
- 3 The drilling rig will then batch drill the production hole sections on the wells with OBM, run/cement production casing, and install TA caps or tubing heads for completions.

NOTE: During batch operations the drilling rig will be moved from well to well however, it will not be removed from the pad until all wells have production casing run/cemented.

Will be pre-setting casing? Potentially

1 Spudder rig will move in and batch drill surface hole.

- a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.,
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
- $^{3}$  The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pa.
- 6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7 Drilling operations will be performed with drilling rig. A that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
  - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

X Directional Plan

Other, describe



		Wall	FIGHTING	OKRA 18-19 F	FD 24H				Geodetic System: US State Plane 1983
devon		County:		JANA 10-191	LU 240				Datum: North American Datum 1927
		-	Permit Plan						Ellipsoid: Clarke 1866
		Design:	Permit Plan	#1					Zone: 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
_	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
	100.00	0.00	323.00	100.00	0.00	0.00	0.00	0.00	
	200.00 300.00	0.00 0.00	323.00 323.00	200.00 300.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	
	400.00	0.00	323.00	400.00	0.00	0.00	0.00	0.00	
	500.00	0.00	323.00	500.00	0.00	0.00	0.00	0.00	
	600.00	0.00	323.00	600.00	0.00	0.00	0.00	0.00	
	700.00 785.00	0.00	323.00	700.00	0.00	0.00	0.00 0.00	0.00 0.00	Duction
	800.00	0.00 0.00	323.00 323.00	785.00 800.00	0.00 0.00	0.00 0.00	0.00	0.00	Rustler
	900.00	0.00	323.00	900.00	0.00	0.00	0.00	0.00	
	1000.00	0.00	323.00	1000.00	0.00	0.00	0.00	0.00	
	1060.00	0.00	323.00	1060.00	0.00	0.00	0.00	0.00	Salt
	1100.00 1200.00	0.00 0.00	323.00 323.00	1100.00 1200.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	
	1300.00	0.00	323.00	1300.00	0.00	0.00	0.00	0.00	
	1400.00	0.00	323.00	1400.00	0.00	0.00	0.00	0.00	
	1500.00	0.00	323.00	1500.00	0.00	0.00	0.00	0.00	
	1600.00 1700.00	0.00	323.00	1600.00 1700.00	0.00	0.00	0.00 0.00	0.00 0.00	
	1800.00	0.00 0.00	323.00 323.00	1800.00	0.00 0.00	0.00 0.00	0.00	0.00	
	1900.00	0.00	323.00	1900.00	0.00	0.00	0.00	0.00	
	2000.00	0.00	323.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
	2100.00	2.00	323.00	2099.98	1.39	-1.05	-1.39	2.00	
	2200.00 2300.00	4.00 6.00	323.00 323.00	2199.84 2299.45	5.57 12.53	-4.20 -9.44	-5.55 -12.48	2.00 2.00	
	2400.00	8.00	323.00	2398.70	22.27	-16.78	-22.18	2.00	
	2500.00	10.00	323.00	2497.47	34.76	-26.19	-34.62	2.00	Hold Tangent
	2600.00	10.00	323.00	2595.95	48.63	-36.64	-48.44	0.00	
	2700.00 2800.00	10.00 10.00	323.00 323.00	2694.43 2792.91	62.49 76.36	-47.09 -57.54	-62.25 -76.07	0.00 0.00	
	2900.00	10.00	323.00	2891.39	90.23	-67.99	-89.88	0.00	
	3000.00	10.00	323.00	2989.87	104.10	-78.44	-103.69	0.00	
	3100.00	10.00	323.00	3088.35	117.97	-88.90	-117.51	0.00	
	3200.00 3258.88	10.00 10.00	323.00 323.00	3186.83 3244.82	131.84 140.00	-99.35 -105.50	-131.32 -139.46	0.00 0.00	Drop to Vertical
	3300.00	9.18	323.00	3285.36	145.47	-109.62	-144.91	2.00	
	3400.00	7.18	323.00	3384.34	156.83	-118.18	-156.22	2.00	
	3500.00	5.18	323.00	3483.75	165.42	-124.66	-164.78	2.00	
	3600.00 3700.00	3.18 1.18	323.00 323.00	3583.48 3683.41	171.24 174.28	-129.04 -131.33	-170.58 -173.60	2.00 2.00	
	3758.88	0.00	323.00	3742.28	174.20	-131.69	-174.08	2.00	Hold Vertical
	3800.00	0.00	179.57	3783.40	174.76	-131.69	-174.08	0.00	
	3900.00	0.00	179.57	3883.40	174.76	-131.69	-174.08	0.00	
	4000.00 4100.00	0.00 0.00	179.57 179.57	3983.40 4083.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	4200.00	0.00	179.57	4183.40	174.76	-131.69	-174.08	0.00	
	4300.00	0.00	179.57	4283.40	174.76	-131.69	-174.08	0.00	
	4400.00	0.00	179.57	4383.40	174.76	-131.69	-174.08	0.00	
	4500.00 4600.00	0.00 0.00	179.57 179.57	4483.40 4583.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	4000.00	0.00	179.57	4683.40	174.76	-131.69	-174.08	0.00	
	4800.00	0.00	179.57	4783.40	174.76	-131.69	-174.08	0.00	
	4900.00	0.00	179.57	4883.40	174.76	-131.69	-174.08	0.00	
	5000.00 5100.00	0.00 0.00	179.57 179.57	4983.40 5083.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	5200.00	0.00	179.57	5083.40 5183.40	174.76	-131.69	-174.08	0.00	
	5266.60	0.00	179.57	5250.00	174.76	-131.69	-174.08	0.00	Base of Salt
	5300.00	0.00	179.57	5283.40	174.76	-131.69	-174.08	0.00	
	5316.60	0.00	179.57	5300.00	174.76	-131.69	-174.08	0.00	Delaware
	5400.00 5500.00	0.00 0.00	179.57 179.57	5383.40 5483.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	5600.00	0.00	179.57	5483.40 5583.40	174.76	-131.69	-174.08	0.00	
	5700.00	0.00	179.57	5683.40	174.76	-131.69	-174.08	0.00	
	5800.00	0.00	179.57	5783.40	174.76	-131.69	-174.08	0.00	
	5900.00 6000.00	0.00 0.00	179.57 179.57	5883.40 5983.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	6100.00	0.00	179.57	5983.40 6083.40	174.76	-131.69	-174.08 -174.08	0.00	
	6200.00	0.00	179.57	6183.40	174.76	-131.69	-174.08	0.00	
	6300.00	0.00	179.57	6283.40	174.76	-131.69	-174.08	0.00	

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devon		Well: County:		OKRA 18-19 F	LU 24H				Geodetic System: US State Plane 1983 Datum: North American Datum 1927
			Permit Plar	ı					Ellipsoid: Clarke 1866
			Permit Plar						Zone: 3001 - NM East (NAD83)
	MD	IN C	A -71	T1/D	NC	<b>F</b> 147	VC	DIC	
	MD (ft)	INC (°)	<b>AZI</b> (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
-	6369.60	0.00	179.57	6353.00	174.76	-131.69	-174.08	0.00	Cherry Canyon
	6400.00	0.00	179.57	6383.40	174.76	-131.69	-174.08	0.00	
	6500.00	0.00	179.57	6483.40	174.76	-131.69	-174.08	0.00	
	6600.00	0.00	179.57	6583.40	174.76	-131.69	-174.08	0.00	
	6700.00 6800.00	0.00 0.00	179.57 179.57	6683.40 6783.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	6900.00	0.00	179.57	6883.40	174.76	-131.69	-174.08	0.00	
	7000.00	0.00	179.57	6983.40	174.76	-131.69	-174.08	0.00	
	7100.00	0.00	179.57	7083.40	174.76	-131.69	-174.08	0.00	
	7200.00	0.00	179.57	7183.40	174.76	-131.69	-174.08	0.00	
	7300.00 7400.00	0.00 0.00	179.57 179.57	7283.40 7383.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	7500.00	0.00	179.57	7483.40	174.76	-131.69	-174.08	0.00	
	7600.00	0.00	179.57	7583.40	174.76	-131.69	-174.08	0.00	
	7700.00	0.00	179.57	7683.40	174.76	-131.69	-174.08	0.00	
	7800.00	0.00	179.57	7783.40	174.76	-131.69	-174.08	0.00	
	7900.00 8000.00	0.00 0.00	179.57 179.57	7883.40 7983.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	8000.00 8012.60	0.00	179.57	7983.40 7996.00	174.76	-131.69	-174.08 -174.08	0.00	Brushy Canyon
	8100.00	0.00	179.57	8083.40	174.76	-131.69	-174.08	0.00	2 · ···
	8200.00	0.00	179.57	8183.40	174.76	-131.69	-174.08	0.00	
	8300.00	0.00	179.57	8283.40	174.76	-131.69	-174.08	0.00	
	8400.00	0.00	179.57	8383.40	174.76	-131.69	-174.08 -174.08	0.00	
	8500.00 8600.00	0.00 0.00	179.57 179.57	8483.40 8583.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	8700.00	0.00	179.57	8683.40	174.76	-131.69	-174.08	0.00	
	8800.00	0.00	179.57	8783.40	174.76	-131.69	-174.08	0.00	
	8900.00	0.00	179.57	8883.40	174.76	-131.69	-174.08	0.00	
	9000.00	0.00	179.57	8983.40	174.76	-131.69	-174.08	0.00	
	9100.00 9200.00	0.00 0.00	179.57 179.57	9083.40 9183.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	9300.00	0.00	179.57	9283.40	174.76	-131.69	-174.08	0.00	
	9400.00	0.00	179.57	9383.40	174.76	-131.69	-174.08	0.00	
	9500.00	0.00	179.57	9483.40	174.76	-131.69	-174.08	0.00	
	9545.60 9600.00	0.00 0.00	179.57 179.57	9529.00 9583.40	174.76 174.76	-131.69	-174.08 -174.08	0.00 0.00	1st Bone Spring Lime
	9700.00	0.00	179.57	9585.40 9683.40	174.76	-131.69 -131.69	-174.08 -174.08	0.00	
	9800.00	0.00	179.57	9783.40	174.76	-131.69	-174.08	0.00	
	9900.00	0.00	179.57	9883.40	174.76	-131.69	-174.08	0.00	
	10000.00	0.00	179.57	9983.40	174.76	-131.69	-174.08	0.00	
	10100.00 10200.00	0.00 0.00	179.57 179.57	10083.40 10183.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	10200.00	0.00	179.57	10183.40	174.76	-131.69	-174.08	0.00	
	10400.00	0.00	179.57	10383.40	174.76	-131.69	-174.08	0.00	
	10491.60	0.00	179.57	10475.00	174.76	-131.69	-174.08	0.00	Bone Spring 1st
	10500.00	0.00	179.57	10483.40	174.76	-131.69	-174.08	0.00	
	10600.00 10700.00	0.00 0.00	179.57 179.57	10583.40 10683.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	10700.00	0.00	179.57	10083.40	174.76	-131.69	-174.08	0.00	
	10900.00	0.00	179.57	10883.40	174.76	-131.69	-174.08	0.00	
	11000.00	0.00	179.57	10983.40	174.76	-131.69	-174.08	0.00	
	11100.00	0.00	179.57	11083.40	174.76	-131.69	-174.08	0.00	
	11200.00 11300.00	0.00 0.00	179.57 179.57	11183.40 11283.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	11400.00	0.00	179.57	11283.40	174.76	-131.69	-174.08	0.00	
	11437.60	0.00	179.57	11421.00	174.76	-131.69	-174.08	0.00	Bone Spring 2nd
	11500.00	0.00	179.57	11483.40	174.76	-131.69	-174.08	0.00	
	11503.60	0.00	179.57	11487.00	174.76	-131.69	-174.08	0.00	3rd Bone Spring Lime
	11600.00 11700.00	0.00 0.00	179.57 179.57	11583.40 11683.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	11800.00	0.00	179.57	11683.40 11783.40	174.76	-131.69	-174.08 -174.08	0.00	
	11900.00	0.00	179.57	11883.40	174.76	-131.69	-174.08	0.00	
	12000.00	0.00	179.57	11983.40	174.76	-131.69	-174.08	0.00	
	12100.00	0.00	179.57	12083.40	174.76	-131.69	-174.08	0.00	
	12116.60 12200.00	0.00	179.57	12100.00	174.76 174.76	-131.69	-174.08 -174.08	0.00	Bone Spring 3rd
	12200.00	0.00 0.00	179.57 179.57	12183.40 12283.40	174.76 174.76	-131.69 -131.69	-174.08 -174.08	0.00 0.00	
	12400.00	0.00	179.57	12383.40	174.76	-131.69	-174.08	0.00	
	12500.00	0.00	179.57	12483.40	174.76	-131.69	-174.08	0.00	
	12576.60	0.00	179.57	12560.00	174.76	-131.69	-174.08	0.00	Wolfcamp / Point of Penetration
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devon				OKRA 18-19 F	ED 24H				-	US State Plane 1983
		County:								North American Datum 1927
			Permit Plar						•	Clarke 1866
		Design:	Permit Plar	ו #1					Zone:	3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	vs	DLS		
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment	
-	12600.00	0.00	179.57	12583.40	174.76	-131.69	-174.08	0.00		
	12700.00	0.00	179.57	12683.40	174.76	-131.69	-174.08	0.00		
	12768.64	0.00	179.57	12752.04	174.76	-131.69	-174.08	0.00	KOP	
	12800.00	3.14	179.57	12783.39	173.90	-131.68	-173.22	10.00		
	12900.00	13.14	179.57	12882.25	159.77	-131.58	-159.09	10.00		
	13000.00	23.14	179.57	12977.17	128.68	-131.35	-128.00	10.00		
	13100.00	33.14	179.57	13065.24	81.59	-130.99	-80.91	10.00		
	13200.00	43.14	179.57	13143.79	19.91	-130.53	-19.24	10.00		
	13300.00	53.14	179.57	13210.44	-54.46	-129.97	55.13	10.00		
	13400.00	63.14	179.57	13263.17	-139.28	-129.33	139.95	10.00		
	13500.00	73.14	179.57	13300.36	-231.97	-128.64	232.63	10.00		
	13600.00	83.14	179.57	13320.89	-329.71	-127.90	330.36	10.00		
	13668.64	90.00	179.57	13325.00	-398.18	-127.39	398.83	10.00	Landing Point	
	13700.00	90.00	179.57	13325.00	-429.54	-127.16	430.19	0.00		
	13800.00	90.00	179.57	13325.00	-529.54	-126.40	530.18	0.00		
	13900.00	90.00	179.57	13325.00	-629.54	-125.65	630.17	0.00		
	14000.00	90.00	179.57	13325.00	-729.53	-124.90	730.16	0.00		
	14100.00	90.00	179.57	13325.00	-829.53	-124.15	830.16	0.00		
	14200.00	90.00	179.57	13325.00	-929.53	-123.40	930.15	0.00		
	14300.00	90.00	179.57	13325.00	-1029.52	-122.65	1030.14	0.00		
	14400.00	90.00	179.57	13325.00	-1129.52	-121.90	1130.13	0.00		
	14500.00	90.00	179.57	13325.00	-1229.52	-121.15	1230.12	0.00		
	14600.00	90.00	179.57	13325.00	-1329.52	-120.40	1330.12	0.00		
	14700.00	90.00	179.57	13325.00	-1429.51	-119.65	1430.11	0.00		
	14800.00	90.00	179.57	13325.00	-1529.51	-118.90	1530.10	0.00		
	14900.00	90.00	179.57	13325.00	-1629.51	-118.15	1630.09	0.00		
	15000.00	90.00	179.57	13325.00	-1729.50	-117.40	1730.08	0.00		
	15100.00	90.00	179.57	13325.00	-1829.50	-116.65	1830.08	0.00		
	15200.00	90.00	179.57	13325.00	-1929.50	-115.89	1930.07	0.00		
	15300.00 15400.00	90.00	179.57 179.57	13325.00 13325.00	-2029.50 -2129.49	-115.14	2030.06	0.00 0.00		
	15500.00	90.00 90.00	179.57	13325.00	-2129.49	-114.39 -113.64	2130.05 2230.04	0.00		
	15600.00	90.00 90.00	179.57	13325.00	-2229.49	-113.84	2230.04	0.00		
	15700.00	90.00	179.57	13325.00	-2429.49	-112.09	2430.04	0.00		
	15800.00	90.00	179.57	13325.00	-2529.48	-111.39	2530.02	0.00		
	15900.00	90.00	179.57	13325.00	-2629.48	-110.64	2630.02	0.00		
	16000.00	90.00	179.57	13325.00	-2729.48	-109.89	2730.00	0.00		
	16100.00	90.00	179.57	13325.00	-2829.47	-109.14	2830.00	0.00		
	16200.00	90.00	179.57	13325.00	-2929.47	-108.39	2929.99	0.00		
	16300.00	90.00	179.57	13325.00	-3029.47	-107.64	3029.98	0.00		
	16400.00	90.00	179.57	13325.00	-3129.47	-106.89	3129.97	0.00		
	16500.00	90.00	179.57	13325.00	-3229.46	-106.13	3229.96	0.00		
	16600.00	90.00	179.57	13325.00	-3329.46	-105.38	3329.96	0.00		
	16700.00	90.00	179.57	13325.00	-3429.46	-104.63	3429.95	0.00		
	16800.00	90.00	179.57	13325.00	-3529.45	-103.88	3529.94	0.00		
	16900.00	90.00	179.57	13325.00	-3629.45	-103.13	3629.93	0.00		
	17000.00	90.00	179.57	13325.00	-3729.45	-102.38	3729.92	0.00		
	17100.00	90.00	179.57	13325.00	-3829.45	-101.63	3829.92	0.00		
	17200.00	90.00	179.57	13325.00	-3929.44	-100.88	3929.91	0.00		
	17300.00	90.00	179.57	13325.00	-4029.44	-100.13	4029.90	0.00		
	17400.00	90.00	179.57	13325.00	-4129.44	-99.38	4129.89	0.00		
	17500.00	90.00	179.57	13325.00	-4229.43	-98.63	4229.88	0.00		
	17600.00	90.00	179.57	13325.00	-4329.43	-97.88	4329.88	0.00		
	17700.00	90.00	179.57	13325.00	-4429.43	-97.13	4429.87	0.00		
	17800.00	90.00	179.57	13325.01	-4529.43	-96.37	4529.86	0.00		
	17900.00	90.00	179.57	13325.01	-4629.42	-95.62	4629.85	0.00		
	18000.00	90.00	179.57	13325.01	-4729.42	-94.87	4729.84	0.00		
	18100.00	90.00	179.57	13325.01	-4829.42	-94.12	4829.84	0.00		
	18200.00	90.00	179.57	13325.01	-4929.41	-93.37	4929.83	0.00		
	18300.00	90.00	179.57	13325.01	-5029.41	-92.62	5029.82	0.00		
	18400.00	90.00	179.57	13325.01	-5129.41	-91.87	5129.81	0.00		
	18500.00	90.00	179.57	13325.01	-5229.41	-91.12	5229.81	0.00		
	18600.00	90.00	179.57	13325.01	-5329.40	-90.37	5329.80	0.00		
	18700.00	90.00	179.57	13325.01	-5429.40	-89.62 -88.87	5429.79 5529 78	0.00		
	18800.00	90.00	179.57	13325.01	-5529.40	-88.87 -88.12	5529.78 5629.77	0.00		
	18900.00 19000.00	90.00 90.00	179.57 179.57	13325.01 13325.01	-5629.39 -5729.39	-88.12 -87.37	5629.77 5729.77	0.00 0.00		
	19000.00	90.00 90.00	179.57	13325.01	-5729.39	-87.37 -86.62	5729.77 5829.76	0.00		
	19100.00	90.00 90.00	179.57	13325.01	-5829.39	-86.62 -85.86	5829.76 5929.75	0.00		
	19200.00	90.00 90.00	179.57	13325.01	-5929.39	-05.00 -85.11	5929.75 6029.74	0.00		
	15500.00	50.00	10.01	1002001	0020.00	55.11	0020.14	0.00		
L										

		Well:	FIGHTING	OKRA 18-19	FED 24H				Geodetic System: US State Plane 1983
on		County:	Lea						Datum: North American Datum 1927
		Wellbore:	Permit Plar	ı					Ellipsoid: Clarke 1866
		Design:	Permit Plar	ו#1					Zone: 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	6
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
	19400.00	90.00	179.57	13325.01	-6129.38	-84.36	6129.73	0.00	
	19500.00	90.00	179.57	13325.01	-6229.38	-83.61	6229.73	0.00	
	19600.00	90.00	179.57	13325.01	-6329.37	-82.86	6329.72	0.00	
	19700.00	90.00	179.57	13325.01	-6429.37	-82.11	6429.71	0.00	
	19800.00	90.00	179.57	13325.01	-6529.37	-81.36	6529.70	0.00	
	19900.00	90.00	179.57	13325.01	-6629.37	-80.61	6629.69	0.00	
	20000.00	90.00	179.57	13325.01	-6729.36	-79.86	6729.69	0.00	
	20100.00	90.00	179.57	13325.01	-6829.36	-79.11	6829.68	0.00	
	20200.00	90.00	179.57	13325.01	-6929.36	-78.36	6929.67	0.00	
	20300.00	90.00	179.57	13325.01	-7029.36	-77.61	7029.66	0.00	
	20400.00	90.00	179.57	13325.01	-7129.35	-76.86	7129.65	0.00	
	20500.00	90.00	179.57	13325.01	-7229.35	-76.10	7229.65	0.00	
	20600.00	90.00	179.57	13325.01	-7329.35	-75.35	7329.64	0.00	
	20700.00	90.00	179.57	13325.01	-7429.34	-74.60	7429.63	0.00	
	20800.00	90.00	179.57	13325.01	-7529.34	-73.85	7529.62	0.00	
	20900.00	90.00	179.57	13325.01	-7629.34	-73.10	7629.61	0.00	
	21000.00	90.00	179.57	13325.01	-7729.34	-72.35	7729.61	0.00	
	21100.00	90.00	179.57	13325.01	-7829.33	-71.60	7829.60	0.00	
	21200.00	90.00	179.57	13325.01	-7929.33	-70.85	7929.59	0.00	
	21300.00	90.00	179.57	13325.01	-8029.33	-70.10	8029.58	0.00	
	21400.00	90.00	179.57	13325.01	-8129.32	-69.35	8129.57	0.00	
	21500.00	90.00	179.57	13325.01	-8229.32	-68.60	8229.57	0.00	
	21600.00	90.00	179.57	13325.01	-8329.32	-67.85	8329.56	0.00	
	21700.00	90.00	179.57	13325.01	-8429.32	-67.10	8429.55	0.00	
	21800.00	90.00	179.57	13325.01	-8529.31	-66.34	8529.54	0.00	
	21900.00	90.00	179.57	13325.01	-8629.31	-65.59	8629.53	0.00	
	22000.00	90.00	179.57	13325.01	-8729.31	-64.84	8729.53	0.00	
	22100.00	90.00	179.57	13325.01	-8829.30	-64.09	8829.52	0.00	
	22200.00	90.00	179.57	13325.01	-8929.30	-63.34	8929.51	0.00	
	22300.00	90.00	179.57	13325.01	-9029.30	-62.59	9029.50	0.00	
	22400.00	90.00	179.57	13325.01	-9129.30	-61.84	9129.49	0.00	
	22500.00	90.00	179.57	13325.01	-9229.29	-61.09	9229.49	0.00	
	22600.00	90.00	179.57	13325.01	-9329.29	-60.34	9329.48	0.00	
	22700.00	90.00	179.57	13325.01	-9429.29	-59.59	9429.47	0.00	
	22800.00	90.00	179.57	13325.01	-9529.28	-58.84	9529.46	0.00	
	22900.00	90.00	179.57	13325.01	-9629.28	-58.09	9629.45	0.00	
	23000.00	90.00	179.57	13325.01	-9729.28	-57.34	9729.45	0.00	
	23100.00	90.00	179.57	13325.01	-9829.28	-56.59	9829.44	0.00	
	23200.00	90.00	179.57	13325.01	-9929.27	-55.83	9929.43	0.00	
	23300.00	90.00	179.57	13325.01	-10029.27	-55.08	10029.42	0.00	
	23400.00	90.00	179.57	13325.01	-10129.27	-54.33	10129.41	0.00	
	23500.00	90.00	179.57		-10229.27	-53.58	10229.41	0.00	
	23505.05	90.00	179.57	13325.01		-53.54	10234.45	0.00	exit
	23585.05	90.00	179.57		-10314.31	-52.97	10314.45	0.00	BHL

Created on 15.02.2024		Metric	862 Mpa	965 Mpa 862 Mpa		Metric	9.17 mm	118.19 mm	3,240 kN								Metric		15.40 l/m	11.57 l/m			Metric	111.00 mm	29,800 Nm	
		US Customary	125,000 psi	140,000 psi 125.000 psi		US Customary	0.361 in	4.653 in	729 klb				5 Threads				US Customary	> 100.0 %	1.240 gal/ft	0.932 gal/ft			US Customary	4.370 in	22,000 ft.lb	
A SHEET	<u>Grade:</u> VA-EP-P110		Yield Strength Min.	Yield Strength Max. Tensile Strength Min.			Wall Thickness:	Standard Drift:	Pipe Body Yield Strength:				Threads per inch:					Tension Efficiency:	Displacement:	Production:				Make-Up Loss:	Yield Torque:	
<b>TECHNICAL DATA SHEET</b>	Grade	<u>Material:</u>				Metric	139.70 mm	121.36 mm	30.07 kg/m	3,759.99 mm²		Metric	153.70 mm	121.00 mm	228.00 mm		Metric	3,240 kN	91.70 Mpa	99.00 Mpa	1,830 kN		Metric	21,450 Nm	23,835 Nm	26,220 Nm
o KG	; (OD=6.051in)					US Customary	5.500 in	4.778 in	20.00 lb/ft	5.828 in <sup>2</sup>		US Customary	6.051 in	4.764 in	8.976 in	(Uniaxial Load):	US Customary	729 klb	13,300 psi	14,360 psi	411 klb	ctor = 1.0):	US Customary	15,820 ft.lb	17,580 ft.lb	19,340 ft.lb %
voestalpine Tubulars GmbH & Co KG	Connection: VAroughneck SC (OD=6.051in)	Size: 5 1/2 in X 20.00 lb/ft	Drift: standard	Bevel: <b>standard</b>	Pipe:		Nominal OD:	Nominal ID:	Nominal Weight:	Pipe Cross Section:	Connection:		OD:	ä	Length:	Connection Performance (I		Joint Strength:	Collapse Resistance:.	Internal Yield Pressure:	Load on Coupling Face:	Field Make Up (Friction Factor = 1.0):		Minimum Torque:	Optimum Torque:	Maximum Torque: Min. Torque on Shoulder:

## Received by OCD: 3/26/2024 8:20:23 AM

Page 45 of 51

voestalpine



ONE STEP AHEAD.

voestalpine



# U. S. Steel Tubular Products 9.625" 40.00lbs/ft (0.395" Wall) J55

1/24/2019 2:45:24 PM

MECHANICAL PROPERTIES	Pipe	втс	LTC	STC	
Minimum Yield Strength	55,000				psi
Maximum Yield Strength	80,000				psi
Minimum Tensile Strength	75,000				psi
DIMENSIONS	Pipe	втс	LTC	STC	
Outside Diameter	9.625	10.625	10.625	10.625	in.
Wall Thickness	0.395				in.
Inside Diameter	8.835	8.835	8.835	8.835	in.
Standard Drift	8.679	8.679	8.679	8.679	in.
Alternate Drift	8.750	8.750	8.750	8.750	in.
Nominal Linear Weight, T&C	40.00				lbs/ft
Plain End Weight	38.97				lbs/ft
PERFORMANCE	Pipe	BTC	LTC	STC	
Minimum Collapse Pressure	2,570	2,570	2,570	2,570	psi
Minimum Internal Yield Pressure	3,950	3,950	3,950	3,950	psi
Minimum Pipe Body Yield Strength	630				1,000 lbs
Joint Strength		714	520	452	1,000 lbs
Reference Length		11,898	8,665	7,529	ft
MAKE-UP DATA	Pipe	втс	LTC	STC	
Make-Up Loss		4.81	4.75	3.38	in.
Minimum Make-Up Torque			3,900	3,390	ft-lbs
Maximum Make-Up Torque			6,500	5,650	ft-lbs

## Legal Notice

All material contained in this publication is for general information only. This material should not therefore be used or relied upon for any specific application without independent competent professional examination and verification of accuracy, suitability and applicability. Anyone making use of this material does so at their own risk and assumes any and all liability resulting from such use. U. S. Steel disclaims any and all expressed or implied warranties of fitness for any general or particular application.

U. S. Steel Tubular Products 460 Wildwood Forest Drive, Suite 300S Spring, Texas 77380 1-877-893-9461 connections@uss.com www.usstubular.com

## **Offline Cementing**

## Variance Request

Devon Energy requests to offline cement on intermediate strings that are set in formations shallower than the Wolfcamp. Prior to commencing offline cementing operations, the well will be monitored for any abnormal pressures and confirmed to be static. A dual manifold system (equipped with chokes) for the returns will also be utilized as a redundancy. All equipment used for offline cementing will have a minimum 5M rating to match intermediate sections' 5M BOPE requirements.

etal One Corp.	MO-FXL			MO-FXL 7	
		CDS#	MinYS110ksi		
Metal <mark>O</mark> ne	· · · · · ·	Pipe Body: BMP P110HC MinYS110ksi			
	Connection Data	a Sheet	Date	10-M	ar-21
	Geometry	<u>Imperia</u>	<u>1</u>	<u>S.I.</u>	
	Pipe Body				_
	Grade *	P110HC		P110HC	
	Pipe OD ( D )	7 5/8	in	193.68	mm
MO-FXL	Weight	29.70	lb/ft	44.25	kg/m
	Actual weight	29.04		43.26	kg/m
	Wall Thickness (t)	0.375	in	9.53	mm
	Pipe ID (d)	6.875	in	174.63	mm
	Pipe body cross section	8.537	in <sup>2</sup>	5,508	mm <sup>2</sup>
	Drift Dia.	6.750	in	171.45	mm
	Connection				
	Box OD (W)	7.625	in	193.68	mm
	PIN ID	6.875	in	174.63	mm
Box	Make up Loss	4.219	in	107.16	mm
critical	Box Critical Area	5.714	in <sup>2</sup>	3686	mm <sup>2</sup>
area	Joint load efficiency	70	%	70	%
ς -	Thread Taper			2" per ft )	/0
	Number of Threads	•		TPI	
ιp	Performance Performance Properties	for Pine Body			
	Performance Properties		kins	<u>4 177</u>	kN
ιp	Performance Properties 1	939	kips psi	<mark>4,177</mark> 65.31	kN MPa
poss D Pin	Performance Properties 1 S.M.Y.S. * M.I.Y.P. *	939 9,470	psi	65.31	MPa
poss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength *	939 9,470 7,050	psi psi	65.31 48.62	MPa MPa
p pss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength *	939 9,470 7,050 ïed Minimum YIE	psi psi ELD Strer	65.31 48.62 ngth of Pipe bo	MPa MPa ody
p pss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif	939 9,470 7,050 ied Minimum YIE ium Internal Yiel	psi psi ELD Strer	65.31 48.62 ngth of Pipe bo	MPa MPa ody
p pss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP	939 9,470 7,050 ied Minimum YIE um Internal Yiel Collapse 7,050psi -12-F05 Rev.1, da	psi psi ELD Strer d Pressur	65.31 48.62 ngth of Pipe bo re of Pipe body	MPa MPa ody
p pss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties	939 9,470 7,050 ied Minimum YIE um Internal Yiek Collapse 7,050psi -12-F05 Rev.1, da for Connectio	psi psi ELD Strer d Pressur ated 9/6/20	65.31 48.62 ngth of Pipe bo re of Pipe body	MPa MPa ody
p pss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield load	939 9,470 7,050 ied Minimum YIE um Internal Yiek Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips	psi psi ELD Strer d Pressur nted 9/6/20 n ( 70%	65.31 48.62 ngth of Pipe bo re of Pipe body	MPa MPa ody
p pss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield Ioad Min. Compression Yield	939 9,470 7,050 ied Minimum YIE um Internal Yiel Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips 657 kips	psi psi ELD Strer d Pressur ated 9/6/20 n ( 70% ( 70%	65.31 48.62 ngth of Pipe bo re of Pipe body 018 of S.M.Y.S. )	MPa MPa ody
poss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, O Performance Data Sheet: SOP Performance Properties Tensile Yield load Min. Compression Yield Internal Pressure	939 9,470 7,050 ied Minimum YIE um Internal Yiek Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips	psi psi ELD Strer d Pressur ( 70% ( 70% ( 80%	65.31 48.62 ngth of Pipe body of Pipe body 018 of S.M.Y.S. ) of S.M.Y.S. )	MPa MPa ody /
poss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure	939 9,470 7,050 ied Minimum YIE um Internal Yiel Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips 657 kips	psi psi ELD Strer d Pressur ( 70% ( 70% ( 80% 100% o	65.31 48.62 ogth of Pipe body of Pipe body 18 of S.M.Y.S. ) of S.M.Y.S. ) of M.I.Y.P. ) f Collapse S	MPa MPa ody /
p pss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, O Performance Data Sheet: SOP Performance Properties Tensile Yield load Min. Compression Yield Internal Pressure	939 9,470 7,050 ied Minimum YIE um Internal Yiel Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips 657 kips	psi psi ELD Strer d Pressur ( 70% ( 70% ( 80%	65.31 48.62 ogth of Pipe body of Pipe body 18 of S.M.Y.S. ) of S.M.Y.S. ) of M.I.Y.P. ) f Collapse S	MPa MPa ody /
p pss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure Max. DLS ( deg. /100ft) Recommended Torque	939 9,470 7,050 ied Minimum YIE um Internal Yielo Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips 657 kips 7,580 psi	psi psi ELD Strer d Pressur ( 70% ( 70% ( 80% 100% o 2	65.31 48.62 ngth of Pipe body of Pipe body 18 of S.M.Y.S. ) of S.M.Y.S. ) of M.I.Y.P. ) f Collapse S 7	MPa MPa ody /
p pss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure Max. DLS ( deg. /100ft) Recommended Torque Min.	939 9,470 7,050 ied Minimum YIE um Internal Yiel Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips 657 kips 7,580 psi	psi psi ELD Strer d Pressur ( 70% ( 70% ( 80% 100% o 2 ft-lb	65.31 48.62 ngth of Pipe body of Pipe body of S.M.Y.S. ) of S.M.Y.S. ) of M.I.Y.P. ) f Collapse S 7	MPa MPa ody / / / / / / /
poss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure Max. DLS ( deg. /100ft) Recommended Torque	939 9,470 7,050 ied Minimum YIE um Internal Yiek Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips 657 kips 7,580 psi 15,500 17,200	psi psi ELD Strer d Pressur ( 70% ( 70% ( 80% 100% o 2	65.31 48.62 ngth of Pipe body of Pipe body of S.M.Y.S. ) of S.M.Y.S. ) of M.I.Y.P. ) f Collapse S 7 21,000 23,300	MPa MPa ody /
poss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield load Min. Compression Yield Internal Pressure External Pressure Max. DLS ( deg. /100ft) Recommended Torque Min. Opti. Max.	939 9,470 7,050 ied Minimum YIE oum Internal Yiel Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips 657 kips 7,580 psi 7,580 psi 15,500 17,200 18,900	psi psi ELD Strer d Pressur ( 70% ( 70% ( 70% ( 80% 100% o 2 ft-lb ft-lb	65.31 48.62 ngth of Pipe body re of Pipe body 018 of S.M.Y.S. ) of S.M.Y.S. ) of M.I.Y.P. ) f Collapse S 7 21,000 23,300 25,600	MPa MPa ody / / / / / / / / / / / / / / / / / / /
poss D Pin critical	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield load Min. Compression Yield Internal Pressure External Pressure Max. DLS ( deg. /100ft) Recommended Torque Min. Opti.	939 9,470 7,050 ied Minimum YIE um Internal Yiel Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips 657 kips 7,580 psi 7,580 psi 15,500 17,200 18,900 23,600	psi   psi   LD Strer   d Pressur   ited 9/6/20   n   (70%)   (70%)   (80%)   100%)   0   2   ft-lb   ft-lb   ft-lb   ft-lb	65.31 48.62 ngth of Pipe body of Pipe body of S.M.Y.S. ) of S.M.Y.S. ) of M.I.Y.P. ) of M.I.Y.P. ) f Collapse S 7 21,000 23,300 25,600 32,000	MPa MPa MPa MPa MPa MPa MPa MPa MPa MPa
Pin critical area	Performance Properties f S.M.Y.S. * M.I.Y.P. * Collapse Strength * Note S.M.Y.S.= Specif M.I.Y.P. = Minim * BMP P110HC: MinYS110ksi, C Performance Data Sheet: SOP Performance Properties Tensile Yield load Min. Compression Yield Internal Pressure External Pressure External Pressure Max. DLS ( deg. /100ft) Recommended Torque Min. Opti. Max. Operational Max.	939 9,470 7,050 ied Minimum YIE oum Internal Yiel Collapse 7,050psi -12-F05 Rev.1, da for Connectio 657 kips 657 kips 7,580 psi 15,500 17,200 18,900 23,600 orque can be appl	psi   psi   LD Strer   d Pressur   ated 9/6/20   m   (70%   (71	65.31 48.62 ngth of Pipe body of Pipe body of S.M.Y.S. ) of S.M.Y.S. ) of M.I.Y.P. ) f Collapse S 7 21,000 23,300 25,600 32,000 h torque applica	MPa MPa MPa MPa MPa MPa MPa MPa MPa MPa

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

application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. The products described in this Connection Data Sheet are not recommended for use in deep water offshore applications. For more information, please refer to <u>http://www.mtlo.co.jp/mo-con/\_images/top/WebsiteTerms\_Active\_20333287\_1.pdf</u> the contents of which are incorporated by reference into this Connection Data Sheet. **Released to Imaging: 6/15/2024 12:37:12 PM**\_\_\_\_\_\_

#### Received by OCD: 3/26/2024 8:20:23 AM

Page 50 of 51 18-26-34-C Sundry ID 2777484 Fighting Okra 18-19 Fed 24H Lea NM114992 DEVON ENERGY PRODUCTION COMPANY LP 13-22g 2-27-2024 LV

#### Fighting Okra 18-19 Fed 24H

9 5/8		surface csg in a	13 1/2	inch hole.		Design	Factors			Surface		
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	40.00		j 55	btc	19.44	6.79	0.58	810	11	0.97	12.82	32,400
"B"			,	btc				0				0
	w	/8.4#/g mud, 30min Sfc Csg Test p	sig: 1.500	Tail Cmt	does not	circ to sfc.	Totals:	810				32,400
omparison o		to Minimum Required Cemer										. ,
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Reg'd				Min Dist
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cpl
13 1/2	0.4887	431	621	396	57	9.00	4088	5M				1.44
urst Frac Grad	lient(s) for Se	egment(s) A, B = , b All > 0.70	D, OK.									
7.5./0						Decim	<b></b>			1-4-1		
7 5/8		casing inside the	9 5/8	<u>A Buoyan</u>	-	Design		l a martit	Dec	Int 1	- 0	Malate
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	29.70		p 110	mo-fxl	2.07	1.03	1.04	12,560	1	1.75	1./2	373,032
"B"								0				0
	w,	/8.4#/g mud, 30min Sfc Csg Test p	-				Totals:	12,560				373,032
11.1.	A			ded to achieve a top of	0	ft from su		810				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-Cpl
8 3/4	0.1005	710	1645	1269	30	10.50	4337	5M				0.56
D V Tool(s):							sum of sx	<u>Σ CuFt</u>				Σ%exces
		#VALUE!	#VALUE!				710	1645				30
lass 'H' tail cm	ıt yld > 1.20											
		casing inside the	7 5/8			Design Fa	ctors			Prod 1		
Tail cmt 5 1/2 Segment		casing inside the Grade	7 5/8	Coupling	Joint	Collapse	<u>ctors</u> Burst	Length	B@s	Prod 1 a-B	a-C	Weight
Tail cmt 5 1/2 Segment "A"		casing inside the Grade		Coupling varn	Joint 2.73			Length 12,060	<b>B@s</b> 2			Weight
Tail cmt 5 1/2 Segment "A" "B"		casing inside the Grade	7 5/8	• •		Collapse	Burst	-	2 2 2	a-B		Weight 241,200
Tail cmt 5 1/2 Segment "A" "B" "C"	#/ft 20.00	casing inside the Grade VA-EP	<b>7 5/8</b> P-P 110	varn	2.73	Collapse 2.02	Burst 1.98	12,060	2	<b>a-B</b> 3.31	3.39	Weight 241,200 25,300
Tail cmt 5 1/2 Segment "A" "B"	#/ft 20.00 <b>20.00</b>	casing inside the Grade VA-EP	<b>7 5/8</b> -P 110 <b>p 110</b>	varn vam sprint sf	2.73 25.34	Collapse 2.02 1.66	Burst 1.98 <b>1.98</b>	12,060 <b>1,265</b>	2 2 2	<b>a-B</b> 3.31 <b>3.31</b>	3.39 2.79	Weight 241,200 25,300
Tail cmt 5 1/2 Segment "A" "B" "C"	#/ft 20.00 20.00 20.00	casing inside the Grade VA-EP	<b>7 5/8</b> P 110 <b>p 110</b> P 110	varn vam sprint sf	2.73 25.34	Collapse 2.02 1.66	Burst 1.98 <b>1.98</b>	12,060 <b>1,265</b> 10,260	2 2 2	<b>a-B</b> 3.31 <b>3.31</b>	3.39 2.79	Weight 241,200 25,300 205,200 0
Tail cmt 5 1/2 Segment "A" "B" "C" "D"	#/ft 20.00 20.00 20.00	casing inside the Grade VA-EP VA-EP VA-EP	<b>7 5/8</b> P-P 110 <b>p 110</b> P-P 110 sig: 2,653	varn vam sprint sf	2.73 25.34	Collapse 2.02 1.66	Burst 1.98 1.98 1.98 Totals:	12,060 <b>1,265</b> 10,260 <b>0</b>	2 2 2	<b>a-B</b> 3.31 <b>3.31</b>	3.39 2.79 3.07	Weight 241,200 25,300 205,200 0
Tail omt 5 1/2 Segment "A" "B" "C" "D" Hole	#/ft 20.00 20.00 20.00 w, Annular	casing inside the Grade VA-EP VA-EP /8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage	<b>7 5/8</b> <b>P</b> -P 110 <b>p 110</b> -P 110 sig: 2,653 slume(s) are inten 1 Stage	varn vam sprint sf varn ded to achieve a top of Min	2.73 25.34 ∞ 12360 1 Stage	Collapse 2.02 1.66 1.83 ft from su Drilling	Burst 1.98 1.98 1.98 Totals: Inface or a Calc	12,060 <b>1,265</b> 10,260 <b>0</b> 23,585 <b>200</b> <b>Req'd</b>	2 2 2	<b>a-B</b> 3.31 <b>3.31</b>	3.39 2.79 3.07	Weight 241,200 25,300 205,200 0 471,700 overlap. Min Dist
Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size	#/ft 20.00 20.00 20.00 20.00 w, Annular Volume	casing inside the Grade VA-EP VA-EP (8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage Cmt Sx	7 5/8 P-P 110 p 110 -P 110 sig: 2,653 olume(s) are inten 1 Stage CuFt Cmt	varn vam sprint sf varn ded to achieve a top of Min Cu Ft	2.73 25.34 ∞ 12360 1 Stage % Excess	Collapse 2.02 1.66 1.83 ft from su Drilling Mud Wt	Burst 1.98 1.98 1.98 Totals:	12,060 <b>1,265</b> 10,260 <b>0</b> 23,585 <b>200</b>	2 2 2	<b>a-B</b> 3.31 <b>3.31</b>	3.39 2.79 3.07	Weight 241,200 25,300 205,200 0 471,700 overlap. Min Dist Hole-Cple
Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole	#/ft 20.00 20.00 20.00 w, Annular	casing inside the Grade VA-EP VA-EP /8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage	<b>7 5/8</b> <b>P</b> -P 110 <b>p 110</b> -P 110 sig: 2,653 slume(s) are inten 1 Stage	varn vam sprint sf varn ded to achieve a top of Min	2.73 25.34 ∞ 12360 1 Stage	Collapse 2.02 1.66 1.83 ft from su Drilling	Burst 1.98 1.98 1.98 Totals: Inface or a Calc	12,060 <b>1,265</b> 10,260 <b>0</b> 23,585 <b>200</b> <b>Req'd</b>	2 2 2	<b>a-B</b> 3.31 <b>3.31</b>	3.39 2.79 3.07	Weight 241,200 25,300 205,200 0 471,700 overlap. Min Dist
5 1/2 Segment "A" "B" "C" "D" Hole Size	#/ft 20.00 20.00 20.00 20.00 w, Annular Volume 0.0835	casing inside the Grade VA-EP VA-EP (8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage Cmt Sx	7 5/8 P-P 110 p 110 -P 110 sig: 2,653 olume(s) are inten 1 Stage CuFt Cmt	varn vam sprint sf varn ded to achieve a top of Min Cu Ft	2.73 25.34 ∞ 12360 1 Stage % Excess	Collapse 2.02 1.66 1.83 ft from su Drilling Mud Wt	Burst 1.98 1.98 1.98 Totals: Inface or a Calc	12,060 <b>1,265</b> 10,260 <b>0</b> 23,585 <b>200</b> <b>Req'd</b>	2 2 2	<b>a-B</b> 3.31 <b>3.31</b>	3.39 2.79 3.07	Weight 241,200 25,300 205,200 0 471,700 overlap. Min Dist Hole-Cplg
Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 6 3/4 Class 'C' tail cm	#/ft 20.00 20.00 20.00 20.00 w, Annular Volume 0.0835	casing inside the Grade VA-EP VA-EP (8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage Cmt Sx	7 5/8 -P 110 p 110 -P 110 sig: 2,653 sig: 2,654 sig: 2,655 sig: 2,654 sig: 2,654	varn vam sprint sf varn ded to achieve a top of Min Cu Ft	2.73 25.34 ∞ 12360 1 Stage % Excess	Collapse 2.02 1.66 1.83 ft from su Drilling Mud Wt 10.50	Burst 1.98 1.98 1.98 Totals: Inface or a Calc MASP	12,060 <b>1,265</b> 10,260 <b>0</b> 23,585 <b>200</b> <b>Req'd</b>	2 2 2	<b>a-B</b> 3.31 <b>3.31</b> 3.31	3.39 2.79 3.07	Weight 241,200 25,300 205,200 0 471,700 overlap. Min Dist Hole-Cplg
Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 6 3/4 class 'C' tail cm #N/A 0	#/ft 20.00 20.00 20.00 w, Annular Volume 0.0835 tyld>1.35	casing inside the Grade VA-EP VA-EP /8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage Cmt Sx 752	7 5/8 P-P 110 p 110 -P 110 sig: 2,653 olume(s) are inten 1 Stage CuFt Cmt	varn vam sprint sf varn ded to achieve a top of Min Cu Ft 939	2.73 25.34 ∞ 12360 1 Stage % Excess 27	Collapse 2.02 1.66 1.83 ft from su Drilling Mud Wt 10.50	Burst 1.98 1.98 1.98 Totals: urface or a Calc MASP Factors	12,060 1,265 10,260 0 23,585 200 Req'd BOPE	2 2 2	a-B 3.31 3.31 3.31	3.39 2.79 3.07	Weight 241,200 25,300 205,200 0 471,700 overlap. Min Dist Hole-Cplg 0.35
Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 6 3/4 class 'C' tail cm #N/A 0 Segment	#/ft 20.00 20.00 20.00 20.00 w, Annular Volume 0.0835	casing inside the Grade VA-EP VA-EP (8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage Cmt Sx	7 5/8 -P 110 p 110 -P 110 sig: 2,653 sig: 2,654 sig: 2,655 sig: 2,654 sig: 2,654	varn vam sprint sf varn ded to achieve a top of Min Cu Ft 939 Coupling	2.73 25.34 ∞ 12360 1 Stage % Excess	Collapse 2.02 1.66 1.83 ft from su Drilling Mud Wt 10.50	Burst 1.98 1.98 1.98 Totals: Inface or a Calc MASP	12,060 1,265 10,260 0 23,585 200 Req'd BOPE	2 2 2	<b>a-B</b> 3.31 <b>3.31</b> 3.31	3.39 2.79 3.07	Weight 241,200 205,200 0 471,700 overlap. Min Dist Hole-Cply 0.35
Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 6 3/4 lass 'C' tail cm #N/A 0 Segment "A"	#/ft 20.00 20.00 20.00 w, Annular Volume 0.0835 tyld>1.35	casing inside the Grade VA-EP VA-EP /8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage Cmt Sx 752	7 5/8 -P 110 p 110 -P 110 sig: 2,653 sig: 2,654 sig: 2,655 sig: 2,654 sig: 2,654	varn vam sprint sf varn ded to achieve a top of Min Cu Ft 939 Coupling 0.00	2.73 25.34 ∞ 12360 1 Stage % Excess 27	Collapse 2.02 1.66 1.83 ft from su Drilling Mud Wt 10.50	Burst 1.98 1.98 1.98 Totals: urface or a Calc MASP Factors	12,060 <b>1,265</b> 10,260 <b>0</b> 23,585 <b>200</b> <b>Req'd</b> <b>BOPE</b> <b>Length</b> 0	2 2 2	a-B 3.31 3.31 3.31	3.39 2.79 3.07	Weight 241,200 205,200 0 471,700 overlap. Min Dist Hole-Cpl 0.35 Weight 0
Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 6 3/4 lass 'C' tail cm #N/A 0 Segment	#/ft 20.00 2	casing inside the Grade VA-EP VA-EP (8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage Cmt Sx 752 Grade	7 5/8 P-P 110 p 110 P-P 110 sig: 2,653 olume(s) are inten 1 Stage CuFt Cmt 1196 5 1/2	varn vam sprint sf varn ded to achieve a top of Min Cu Ft 939 Coupling	2.73 25.34 ∞ 12360 1 Stage % Excess 27	Collapse 2.02 1.66 1.83 ft from su Drilling Mud Wt 10.50	Burst 1.98 1.98 Totals: Inface or a Calc MASP Factors Burst	12,060 1,265 10,260 0 23,585 200 Req'd BOPE	2 2 2	a-B 3.31 3.31 3.31	3.39 2.79 3.07	Weight 241,200 205,200 0 471,700 overlap. Min Dist Hole-Cpl 0.35 Weight 0 0
Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 6 3/4 lass 'C' tail cm #N/A 0 Segment "A"	#/ft 20.00 2	casing inside the Grade VA-EP VA-EP /8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage Cmt Sx 752 Grade /8.4#/g mud, 30min Sfc Csg Test p	7 5/8 P-P 110 p 110 P-P 110 sig: 2,653 olume(s) are inten 1 Stage CuFt Cmt 1196 5 1/2 sig:	varn vam sprint sf varn ded to achieve a top of Min Cu Ft 939 Coupling 0.00 0.00	2.73 25.34 ∞ 12360 1 Stage % Excess 27 #N/A	Collapse 2.02 1.66 1.83 ft from su Drilling Mud Wt 10.50 <u>Design</u> Collapse	Burst 1.98 1.98 1.98 Totals: urface or a Calc MASP Factors Burst Totals:	12,060 1,265 10,260 0 23,585 200 Req'd BOPE	2 2 2	a-B 3.31 3.31 3.31	3.39 2.79 3.07 a.C	Weight 241,200 205,200 0 471,700 overlap. Min Dist Hole-Cpl 0.35 Weight 0 0 0
Tail omt 5 1/2 Segment "A" "B" "C" "D" Hole Size 6 3/4 Iass 'C' tail om #N/A 0 Segment "A" "B"	#/ft 20.00 20.00 20.00 20.00 20.00 w, Annular Volume 0.0835 tyld > 1.35 tyld > 1.35	casing inside the Grade VA-EP VA-EP /8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage Cmt Sx 752 Grade /8.4#/g mud, 30min Sfc Csg Test p Cmt vol calo	7 5/8 -P 110 p 110 -P 110 sig: 2,653 Jume(s) are inten 1 Stage CuFt Cmt 1196 5 1/2 sig: c below includes	vam vam sprint sf varn ded to achieve a top of Min Cu Ft 939 Coupling 0.00 0.00 0.00 this csg, TOC intended	2.73 25.34 ∞ 12360 1 Stage % Excess 27 #N/A	Collapse 2.02 1.66 1.83 ft from su Drilling Mud Wt 10.50 <u>Design</u> Collapse	Burst 1.98 1.98 1.98 Totals: urface or a Calc MASP Factors Burst Totals: urface or a	12,060 1,265 10,260 0 23,585 200 Req'd BOPE Length 0 0 0 4 N/A	2 2 2	a-B 3.31 3.31 3.31	3.39 2.79 3.07 a.C	Weight 241,20( 25,300 0 (205,200) 0 (205,2
Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 6 3/4 class 'C' tail cm #N/A 0 Segment "A" "B" Hole	#/ft 20.00 20.00 20.00 20.00 20.00 w, Annular Wolume 0.0835 tyld > 1.35 #/ft w, Annular	casing inside the Grade VA-EP VA-EP (8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage Cmt Sx 752 Grade (8.4#/g mud, 30min Sfc Csg Test p Cmt vol cali 1 Stage	7 5/8 P-P 110 p 110 -P 110 sig: 2,653 slume(s) are inten 1 Stage CuFt Cmt 1196 5 1/2 sig: c below includes 1 Stage	varn vam sprint sf varn ded to achieve a top of Min Cu Ft 939 Coupling 0.00 0.00 0.00 this csg, TOC intended Min	2.73 25.34 ~~ 12360 1 Stage % Excess 27 #N/A #N/A 1 Stage	Collapse 2.02 1.66 1.83 ft from su Drilling Mud Wt 10.50 <u>Design</u> Collapse ft from su Drilling	Burst 1.98 1.98 1.98 Totals: urface or a Calc MASP Factors Burst Totals: urface or a Calc	12,060 1,265 10,260 0 23,585 200 Req'd BOPE Length 0 0 0 #N/A Req'd	2 2 2	a-B 3.31 3.31 3.31	3.39 2.79 3.07 a.C	Weight 241,200 205,200 0 471,700 overlap. Min Dist Hole-Cpl 0.35 Weight 0 0 0 0 0 0 0 0 0 0 0
Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 6 3/4 Hole Size 6 3/4 "A" "B" Hole Size	#/ft 20.00 20.00 20.00 20.00 20.00 w, Annular Volume 0.0835 tyld > 1.35 tyld > 1.35	casing inside the Grade VA-EP VA-EP (8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage Cmt Sx 752 Grade (8.4#/g mud, 30min Sfc Csg Test p Cmt vol calo 1 Stage Cmt Sx	7 5/8 P-P 110 p 110 -P 110 sig: 2,653 olume(s) are inten 1 Stage CuFt Cmt 1196 5 1/2 sig: c below includes 1 Stage CuFt Cmt	varn vam sprint sf varn ded to achieve a top of Min Cu Ft 939 Coupling 0.00 0.00 0.00 this csg, TOC intended Min Cu Ft	2.73 25.34 ∞ 12360 1 Stage % Excess 27 #N/A #N/A 1 Stage % Excess	Collapse 2.02 1.66 1.83 ft from su Drilling Mud Wt 10.50 <u>Design</u> Collapse	Burst 1.98 1.98 1.98 Totals: urface or a Calc MASP Factors Burst Totals: urface or a	12,060 1,265 10,260 0 23,585 200 Req'd BOPE Length 0 0 0 4 N/A	2 2 2	a-B 3.31 3.31 3.31	3.39 2.79 3.07 a.C	Weight 241,200 205,200 0 471,700 overlap. Min Dist Hole-Cpl 0.35 Weight 0 0 0
Tail cmt 5 1/2 Segment "A" "B" "C" "D" Hole Size 6 3/4 class 'C' tail cm #N/A 0 Segment "A" "B" Hole	#/ft 20.00 20.00 20.00 20.00 20.00 w, Annular Wolume 0.0835 tyld > 1.35 #/ft w, Annular	casing inside the Grade VA-EP VA-EP (8.4#/g mud, 30min Sfc Csg Test p The cement vo 1 Stage Cmt Sx 752 Grade (8.4#/g mud, 30min Sfc Csg Test p Cmt vol cali 1 Stage	7 5/8 P-P 110 p 110 -P 110 sig: 2,653 slume(s) are inten 1 Stage CuFt Cmt 1196 5 1/2 sig: c below includes 1 Stage	varn vam sprint sf varn ded to achieve a top of Min Cu Ft 939 Coupling 0.00 0.00 0.00 this csg, TOC intended Min	2.73 25.34 ~~ 12360 1 Stage % Excess 27 #N/A #N/A 1 Stage	Collapse 2.02 1.66 1.83 ft from su Drilling Mud Wt 10.50 <u>Design</u> Collapse ft from su Drilling	Burst 1.98 1.98 1.98 Totals: urface or a Calc MASP Factors Burst Totals: urface or a Calc	12,060 1,265 10,260 0 23,585 200 Req'd BOPE Length 0 0 0 #N/A Req'd	2 2 2	a-B 3.31 3.31 3.31	3.39 2.79 3.07 a.C	Weight 241,200 205,200 0 471,700 overlap. Min Dist Hole-Cpl 0.35 Weight 0 0 0 0 0 0 0 0 0 0

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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

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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

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP	6137
333 West Sheridan Ave.	Action Number:
Oklahoma City, OK 73102	326688
	Action Type:
	[C-103] NOI Change of Plans (C-103A)

#### CONDITIONS

Created By		Condition Date
pkautz	ALL PREVIOUS COA'S APPLY.	6/15/2024

Page 51 of 51