

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

<b>Well Name:</b> COTTON DRAW 25-36 FED COM	<b>Well Location:</b> T24S / R31E / SEC 25 / NWNE / 32.194641 / -103.7280949	<b>County or Parish/State:</b> EDDY / NM
<b>Well Number:</b> 124H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM89055	<b>Unit or CA Name:</b> COTTON DRAW 514H	<b>Unit or CA Number:</b> NMNM138575
<b>US Well Number:</b>	<b>Operator:</b> DEVON ENERGY PRODUCTION COMPANY LP	

**Notice of Intent**

**Sundry ID:** 2892941

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 01/27/2026

**Time Sundry Submitted:** 10:28

**Date proposed operation will begin:** 01/28/2026

**Procedure Description:** Devon Energy Production Co., LP respectfully requests a NAME, BHL, FORMATION / DEPTH, ACREAGE, and CASING PLAN CHANGE for the subject well (APD ID 10400096727). Devon also requests offline cementing. Please see all required attachments. Permitted Name: COTTON DRAW 25-36 FED COM 124H Proposed Name: COTTON DRAW 25-36 FED COM 715H Permitted BHL: 20 FSL, 660 FEL, Section 36, Township 24-S, Range 31-E, UL P Proposed BHL: 20 FSL, 1650 FEL, Section 36, Township 24-S, Range 31-E, LOT 3 Permitted Formation: BONE SPRING (POOL CODE: 96641, POOL NAME: PADUCA; BONE SPRING) Proposed Formation: WOLFCAMP (POOL CODE: 98220, POOL NAME: PURPLE SAGE; WOLFCAMP) Permitted Acreage: 958.85 Proposed Acreage: 639.49 Permitted TVD/MD: 9980 / 20301 Proposed TVD/MD: 12023 / 22337

**NOI Attachments**

**Procedure Description**

- Offline\_Production\_Cement\_\_\_WFMP\_\_\_Shallower\_\_\_BLM\_v5\_20260127102648.pdf
- WA022088485\_COTTON\_DRAW\_25\_36\_FED\_COM\_715H\_WL\_R1\_SIGNED\_20260127102648.pdf
- COTTON\_DRAW\_25\_36\_FED\_COM\_715H\_Directional\_Plan\_01\_22\_26\_20260127102647.pdf
- COTTON\_DRAW\_25\_36\_FED\_COM\_715H\_1\_26\_2026\_20260127102647.pdf
- 13.375\_54.5lb\_J55\_20260127102647.pdf
- 8.625\_32lb\_P110\_ICY\_20260127102647.pdf
- 5.5\_20lb\_P110\_ICY\_Wedge\_461\_20260127102647.pdf

Well Name: COTTON DRAW 25-36  
FED COM

Well Location: T24S / R31E / SEC 25 /  
NWNE / 32.194641 / -103.7280949

County or Parish/State: EDDY /  
NM

Well Number: 124H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM89055

Unit or CA Name: COTTON DRAW  
514H

Unit or CA Number:  
NMNM138575

US Well Number:

Operator: DEVON ENERGY  
PRODUCTION COMPANY LP

### Conditions of Approval

#### Specialist Review

Cal\_20260205090731.pdf

COA\_20260205090731.pdf

### Operator

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

Operator Electronic Signature: AMY BROWN

Signed on: JAN 27, 2026 10:26 AM

Name: DEVON ENERGY PRODUCTION COMPANY LP

Title: Regulatory Professional

Street Address: 333 WEST SHERIDAN AVENUE

City: OKLAHOMA CITY State: OK

Phone: (405) 552-6137

Email address: AMY.BROWN@DVN.COM

### Field

Representative Name:

Street Address:

City: State: Zip:

Phone:

Email address:

### BLM Point of Contact

BLM POC Name: LONG VO

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5759885402

BLM POC Email Address: LVO@BLM.GOV

Disposition: Approved

Disposition Date: 02/05/2026

Signature: Long Vo

Form 3160-5  
(October 2024)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0220  
Expires: October 31, 2027

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.**

<b>SUBMIT IN TRIPLICATE - Other instructions on page 2</b>		5. Lease Serial No.
1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
2. Name of Operator		7. If Unit of CA/Agreement, Name and/or No.
3a. Address	3b. Phone No. (include area code)	8. Well Name and No.
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		9. API Well No.
		10. Field and Pool or Exploratory Area
		11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)	
	Title
Signature	Date

**THE SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by		
	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

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: NWNE / 350 FNL / 1585 FEL / TWSP: 24S / RANGE: 31E / SECTION: 25 / LAT: 32.194641 / LONG: -103.7280949 ( TVD: 0 feet, MD: 0 feet )  
PPP: NENE / 100 FNL / 660 FEL / TWSP: 24S / RANGE: 31E / SECTION: 25 / LAT: 32.1953272 / LONG: -103.7251057 ( TVD: 9975 feet, MD: 10287 feet )  
PPP: NENE / 153 FNL / 659 FEL / TWSP: 24S / RANGE: 31E / SECTION: 36 / LAT: 32.1806666 / LONG: -103.725097 ( TVD: 9982 feet, MD: 15200 feet )  
PPP: NESE / 2447 FSL / 659 FEL / TWSP: 24S / RANGE: 31E / SECTION: 25 / LAT: 32.1878136 / LONG: -103.7251009 ( TVD: 9983 feet, MD: 12600 feet )  
BHL: LOT 4 / 20 FSL / 660 FEL / TWSP: 24S / RANGE: 31E / SECTION: 36 / LAT: 32.1666457 / LONG: -103.7250896 ( TVD: 9980 feet, MD: 20301 feet )

CONFIDENTIAL

# Devon Energy Offline Production Cementing

10/2025

REV5



NYSE: DVN  
devonenergy.com



# Offline Production Cementing Variance

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**Devon is respectfully pursuing a variance to the minimum standards to allow for the cementing of the Production Casing offline in the Wolfcamp and shallower producing horizons.**

**To ensure personnel safety and well integrity, strict eligibility requirements will be enforced, and a detailed procedure will be followed.**

**The following slides outline the eligibility requirements, offline procedure, schematics and pressure ratings.**

# Offline Production Eligibility

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## Offline Punch List:

**The well must meet all criteria to qualify for offline cementing.**

- A) Well is in the Wolfcamp or shallower bench.
- B) No unusual events were observed during drilling, tripping or casing operations.
- C) Casing successfully landed out on casing hanger (fluted or solid).
- D) Devon Company Men with Well Control certifications will monitor returns (bbl in / bbl out) to ensure well control is maintained.
- E) Rig Manager will oversee the walking of the rig to the next well.
- F) All barriers MUST test and at no point will there be less than 2 barriers in place.
- G) No offset frac operations occurring within 1.0 mile in the same bench.
- H) Once all criteria are met and BLM is notified, Devon may proceed with ND BOP and continue offline operations.

**Note: Devon will NOT drill out the next deep intermediate until cementing on the offline well is complete.**

# Offline Procedure

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- **Devon's Proposed Production Offline Procedure:**
- Run casing and perform negative pressure test during casing run to verify integrity of float equipment's 10M backpressure valves.
- Review Devon's "Punch List" to determine if well is a viable candidate.
- Continue running casing and land casing out on Cactus mandrel hanger.
- Fill casing with KWM and perform flow check ensuring well is static.
  - If well is not static, build pressure or acting abnormal in any way - abort offline operations.
- Install 10M packoff and test same. After successful test, engage locking ring and L/D running tool.
- Install 10M backpressure valve in WH from rig floor.
  - Note: 3 Casing barriers and 2 Annular barriers currently in place.
- Once well is secured and BLM notified, ND BOP and walk rig to next well on pad.
  - If ANY barrier fails to test – the well will be cemented online.
  - Devon Company Man and Devon Cementer will oversee Cementing Operations
  - Rig Manager will walk the rig to the next well.
  - Drill out operations on next deep intermediate will not begin until cementing operations have concluded on the offline well.
- Install 10M Gate Valve and Cactus WH adapter.
- Test connection between WH adapter seals, hanger neck, and ring gasket to 10,000psi.
- Open Frac Valve and remove BPV.
- RU cement head, cement iron, return lines and test same.
- Once all equipment is rigged up, barriers tested and ready to cement, notify BLM of intent to Cement Offline.

# Offline Procedure

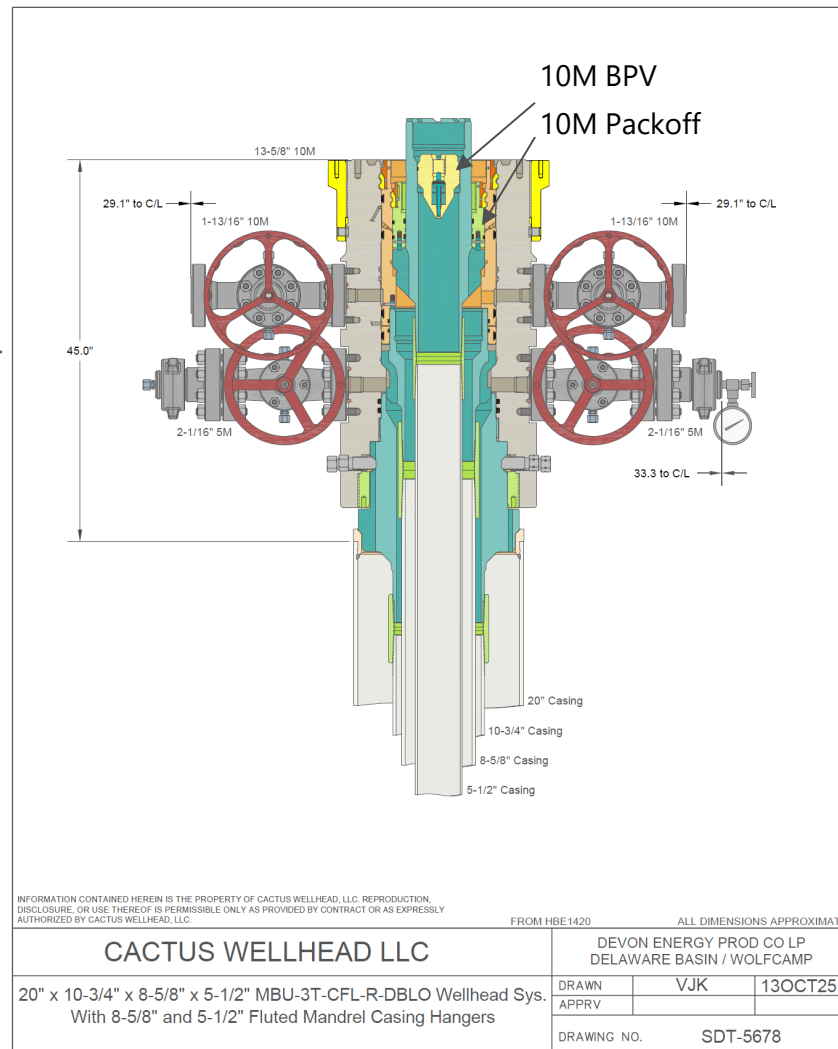
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- **Devon's Proposed Production Offline Procedure (continued):**
- Perform offline cement job.
- If an influx is observed during the cement job:
  - The Day and Night Company Men will redirect returns from Cementing Manifold to the Rig's choke manifold and hold appropriate backpressure to circulate out influx.
  - If annular surface pressure approaches 25% of the tested pressure of the surface return equipment, or if circulating the influx out with the cementing pumps is not feasible, the well can be secured by closing the 10M casing valves.\*
- Bump plug and ensure floats are holding.
  - If plug does not bump or floats do not hold, either the Gate Valve or Cement Head may be closed while we WOC.
- RD cement head and install BPV.
- Remove Gate Valve and WH adapter.
- Install TA Cap with pressure gauge and test same.
- **\*Note\*** - If the well is within the KPLA, and an uncemented annulus between the Production and Intermediate casing has been utilized; then cement shall be squeezed down both casing valves within 180 days of the well's completion and displaced with a treated fresh water to a TOC below the potash interval and marker bed number 126, with a minimum of 500' tie-back inside the Intermediate Casing as per R111Q.

\*Note – This hasn't been observed

# Offline Procedure – Detailed

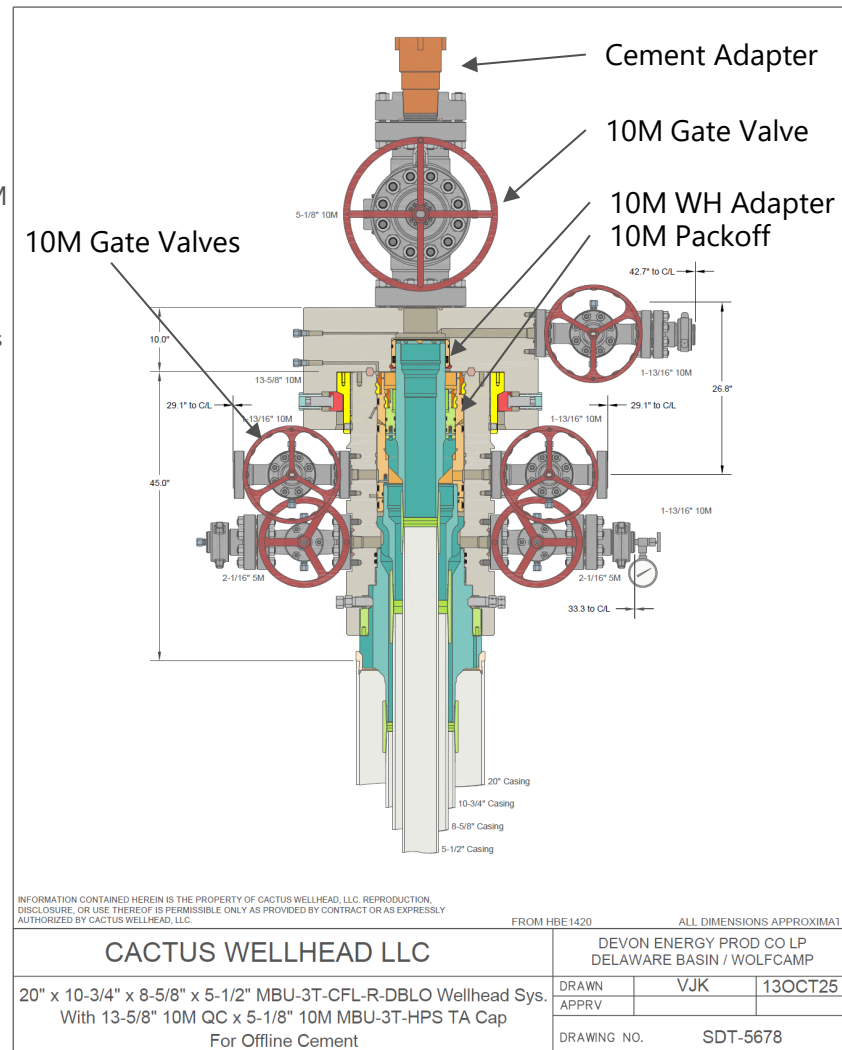
- Run casing and perform negative pressure test during casing run to verify integrity of float equipment’s 10,000psi backpressure valves.
  - Review Devon’s “Punch List” to determine if well is a viable candidate.
- Continue running casing and land casing out on Cactus mandrel hanger.
- Fill casing with KWM and perform flow check ensuring well is static.
- Install packoff rated to 10,000psi and test same. After successful test, engage locking ring and L/D running tool.
- Install backpressure valve in WH from rig floor.
  - Note: 3 Casing barriers and 2 Annular barriers currently in place.
- Once well is secured and BLM notified, ND BOP and walk rig to next well on pad.
  - If ANY barrier fails to test – the well will be cemented online.
  - Devon PIC and Devon Cementer will oversee Cementing Operations
  - Rig Manager will walk the rig to the next well.
  - Drill out operations on next deep intermediate will not begin until cementing operations have concluded on the offline well.



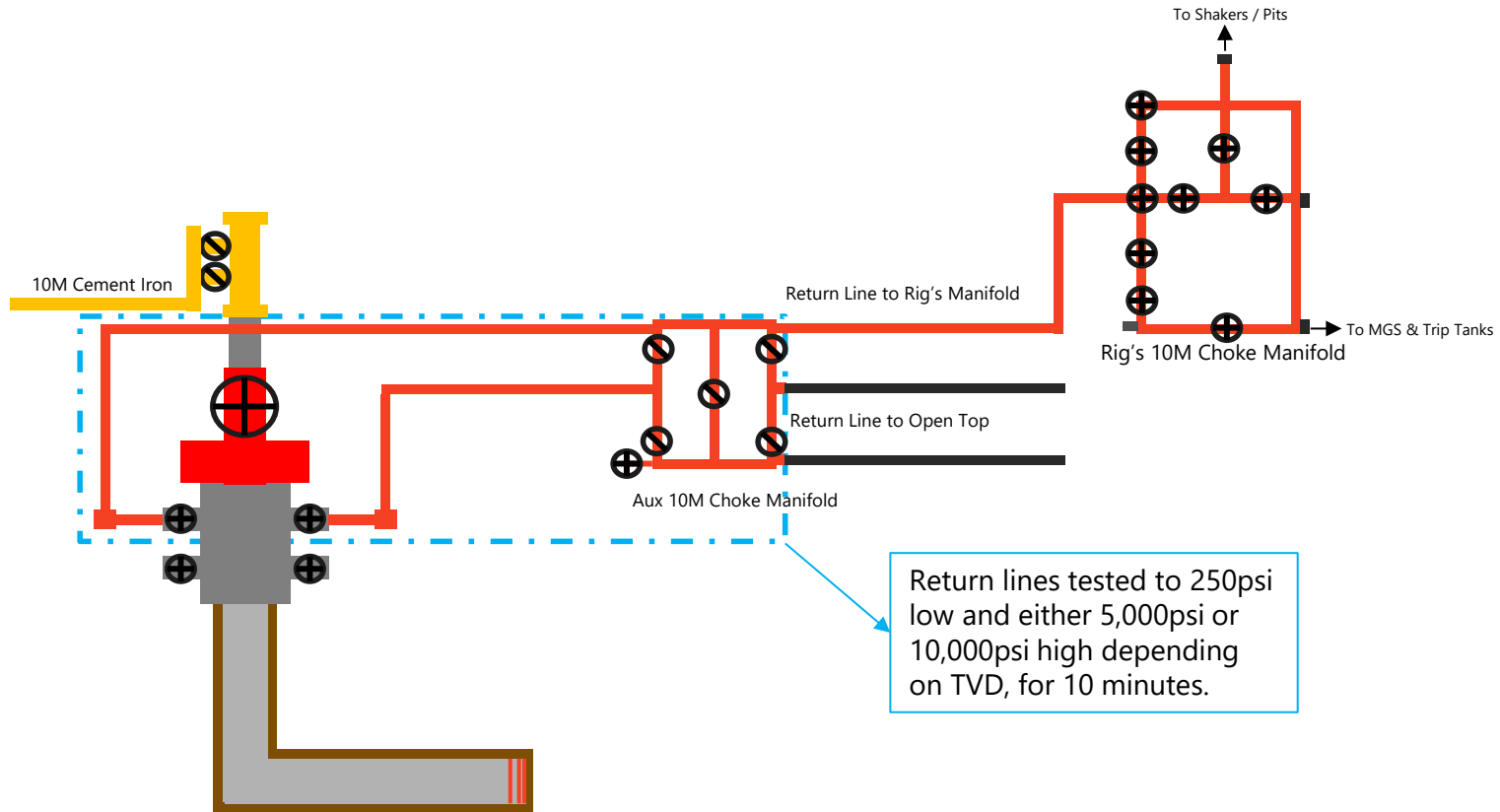
Casing Barrier	Rating	Backside Barrier	Rating
BPV	10,000psi	KWM	> BHP
KWM	> BHP	Packoff	10,000psi
Float Valves (x3)	10,000psi		

# Offline Procedure – Detailed

- Install 10M Frac Valve and Cactus WH adapter.
- Test connection between WH adapter seals, hanger neck, and ring gasket to 10,000psi.
- Open Frac Valve and remove BPV.
- RU cement head, cement iron, return lines and test same.
- Once all equipment is rigged up, barriers tested and ready to cement, notify BLM of intent to Cement Offline.
- Perform offline cement job.
- If an influx is observed during the cement job:
  - The Day and Night Company Men will redirect returns from Cementing Manifold to the Rig's choke manifold and hold appropriate backpressure to circulate out influx.
  - If annular surface pressure approaches 25% of the tested pressure of the surface return equipment, or if circulating the influx out with the cementing pumps is not feasible, the well can be secured by closing the 10M casing valves.
- Bump plug and ensure floats are holding.
  - If plug does not bump or floats do not hold, either the Gate Valve or Cement Head may be closed while we WOC.
- RD cement head and install BPV.
- Remove Gate Valve and WH adapter.
- Install TA Cap with pressure gauge and test same.



# Offline Flow Path



Return lines tested to 250psi low and either 5,000psi or 10,000psi high depending on TVD, for 10 minutes.

- ⊕ 10M Valve / Choke
- ⊘ 10M Low Torq

- Note:
- All lines are 10M rated and tested to **5,000psi for wells less than 12,000' TVD**
  - All lines are 10M rated and tested to **10,000psi for wells greater than 12,000' TVD**
  - Minimum of 2 barriers in place at ALL times
  - Never had to circulate out an influx during an Offline job

Thank you.



<b>C-102</b>  Submit Electronically Via OCD Permitting	State of New Mexico <b>Energy, Minerals &amp; Natural Resources Department</b> <b>OIL CONSERVATION DIVISION</b>	Revised July, 2024  Submittal Type: <input checked="" type="checkbox"/> Initial Submittal <input type="checkbox"/> Amended Report <input type="checkbox"/> As Drilled
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**WELL LOCATION INFORMATION**

API Number 30-015-56730	Pool Code 98220	Pool Name PURPLE SAGE; WOLFCAMP
Property Code 331844	Property Name COTTON DRAW 25-36 FED COM	Well Number 715H
OGRID No. 6137	Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.	Ground Level Elevation 3539.6'
Surface Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal		Mineral Owner: <input type="checkbox"/> State <input type="checkbox"/> Fee <input type="checkbox"/> Tribal <input checked="" type="checkbox"/> Federal

**Surface Location**

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
B	25	24-S	31-E		350' N	1585' E	32.194641	103.728096	EDDY

**Bottom Hole Location**

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
	36	24-S	31-E	3	20' S	1650' E	32.166660	103.728289	EDDY

Dedicated Acres 639.49	Infill or Defining Well INFILL	Defining Well API 30-015-56733	Overlapping Spacing Unit (Y/N) N	Consolidation Code C
Order Numbers PENDING NSL			Well setbacks are under Common Ownership: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

**Kick Off Point (KOP)**

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
B	25	24-S	31-E		50' N	1650' E	32.195465	103.728306	EDDY


**First Take Point (FTP)**

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
B	25	24-S	31-E		100' N	1650' E	32.195328	103.728306	EDDY

**Last Take Point (LTP)**

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
	36	24-S	31-E	3	100' S	1650' E	32.166880	103.728289	EDDY

Unitized Area or Area of Uniform Interest N	Spacing Unit Type Horizontal X Vertical	Ground Floor Elevation: N/A
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<p><b>OPERATOR CERTIFICATIONS</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.</p> <p><i>Amy A. Brown</i> 01/24/2026</p>	<p><b>SURVEYOR CERTIFICATIONS</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under supervision, and that the same is true and correct to the best of my belief.</p> <div style="text-align: center;">  </div> <p><i>B.S. Sec</i></p>	
Signature Amy A. Brown	Date 01/24/2026	Signature and Seal of Professional Surveyor
Printed Name amy.brown@dvn.com	Email Address	Certificate Number 22404
		Date of Survey 12/22/2025

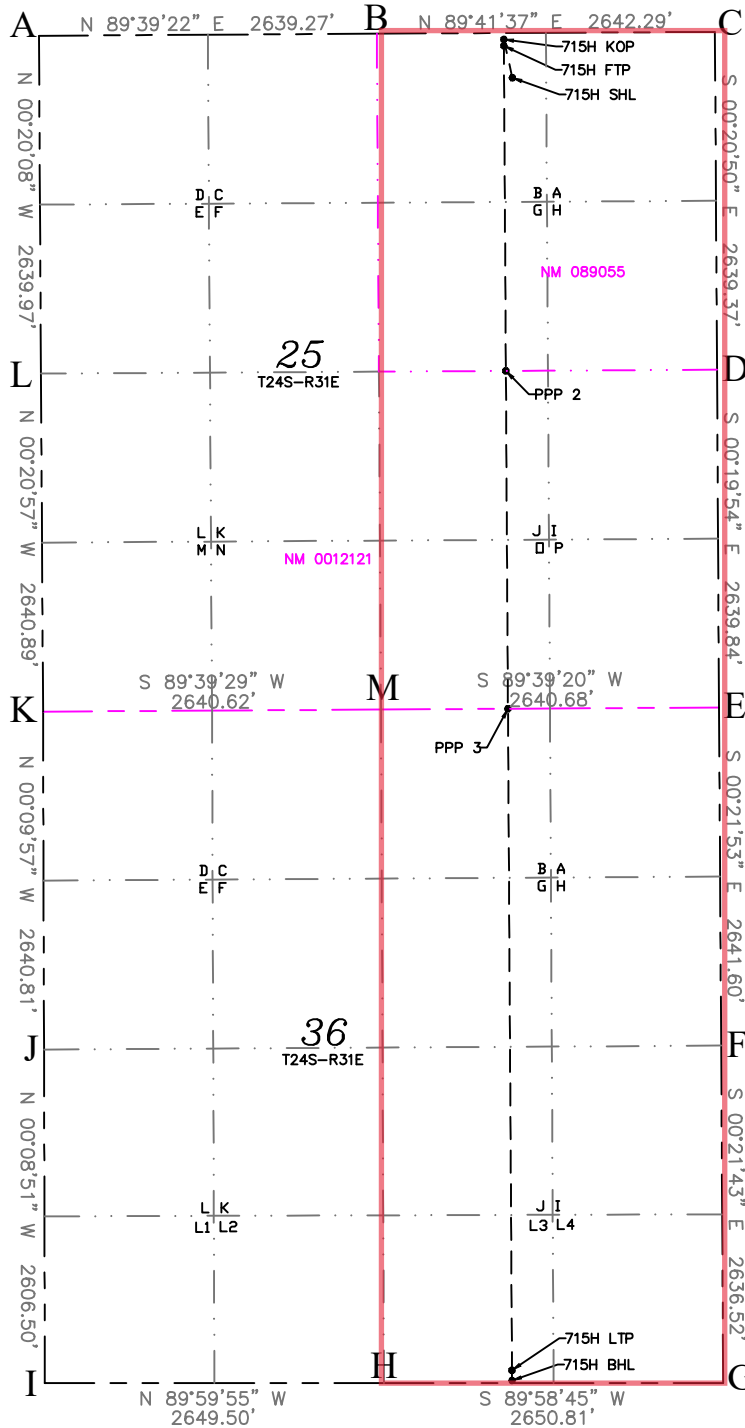
ACREAGE DEDICATION PLATS

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

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

<p><b>SURFACE HOLE LOCATION</b>                  GEODETIC COORDINATES NAD 83                  NMSP EAST SURFACE LOCATION                  350' FNL 1585' FEL SECTION 25                  EL:3539.6'                  N:435071.57/E:728558.02                  LAT:32.194641/LDN:103.728096</p>
<p><b>KICK OFF POINT</b>                  50' FNL 1650' FEL SECTION 25                  N:435371.22/E:728491.21                  LAT:32.195465/LDN:103.728306</p>
<p><b>FIRST TAKE POINT</b>                  100' FNL 1650' FEL SECTION 25                  N:435321.22/E:728491.51                  LAT:32.195328/LDN:103.728306</p>
<p><b>LAST TAKE POINT</b>                  100' FSL 1650' FEL SECTION 36                  N:424972.32/E:728554.97                  LAT:32.166880/LDN:103.728289</p>
<p><b>BOTTOM HOLE LOCATION</b>                  20' FSL 1650' FEL SECTION 36                  N:424892.32/E:728555.48                  LAT:32.166660/LDN:103.728289</p>
<p><b>PPP 2</b>                  2640' FNL 1650' FEL SECTION 25                  N:432781.17/E:728507.09                  LAT:32.188346/LDN:103.728302</p>
<p><b>PPP 3</b>                  0' FSL 1649' FEL SECTION 25                  N:430141.02/E:728523.28                  LAT:32.181088/LDN:103.728298</p>

A=N:435400.07	E:724859.41
B=N:435415.91	E:727498.63
C=N:435430.04	E:730140.88
D=N:432790.73	E:730156.88
E=N:430150.93	E:730172.17
F=N:427509.39	E:730188.98
G=N:424872.92	E:730205.63
H=N:424871.96	E:727554.82
I=N:424872.01	E:724905.32
J=N:427478.51	E:724898.61
K=N:430119.30	E:724890.97
L=N:432760.15	E:724874.87
M=N:430135.06	E:727531.54

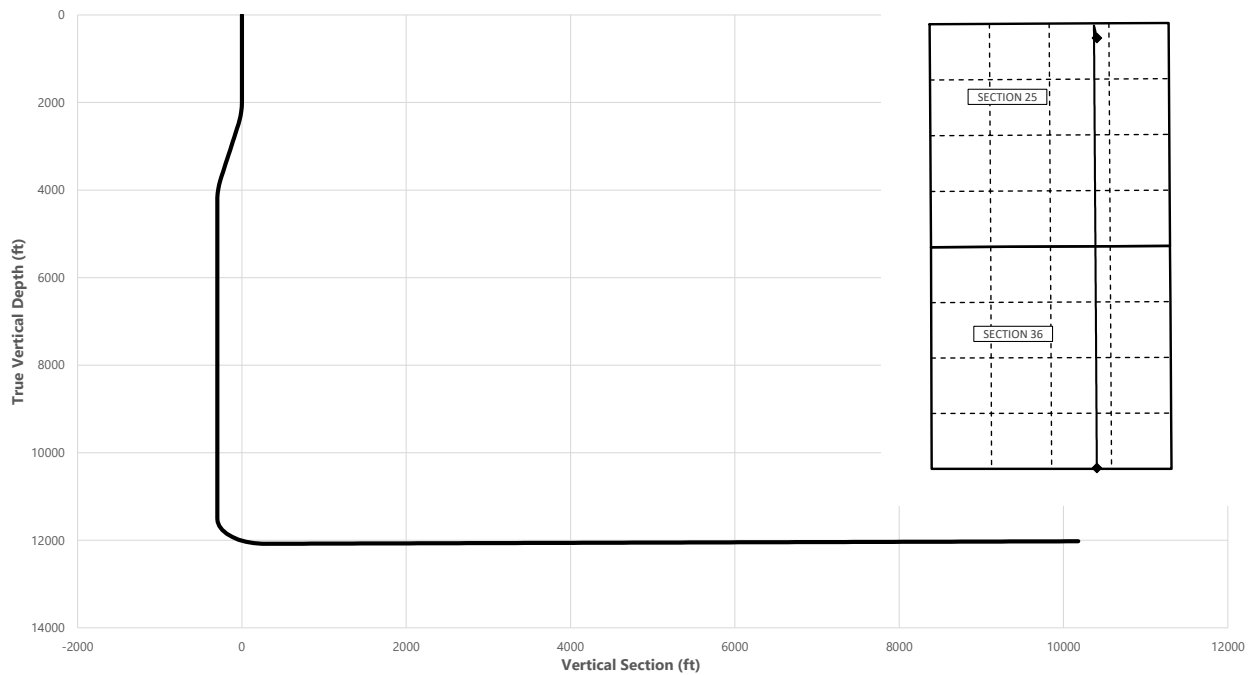




Well: COTTON DRAW 25-36 FED COM 715H  
 County: Lea  
 Wellbore: Permit Plan  
 Design: Permit Plan #1

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1927  
 Ellipsoid: Clarke 1866  
 Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
2000.00	0.00	347.45	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	10.00	347.45	2497.47	42.48	-9.46	-42.48	2.00	Hold Tangent
3762.43	10.00	347.45	3740.72	256.46	-57.09	-256.45	0.00	Drop to Vertical
4262.43	0.00	347.45	4238.18	298.95	-66.55	-298.93	2.00	Hold Vertical
11531.30	0.00	179.65	11507.05	298.95	-66.55	-298.93	0.00	KOP
12434.60	90.33	179.65	12080.00	-277.30	-63.03	277.31	10.00	Landing Point
22336.90	90.33	179.65	12023.00	-10179.25	-2.54	10179.25	0.00	BHL



Key Depths	MD (ft)	TVD (ft)
Rustler	660.00	660.00
Salt	1105.00	1105.00
Base of Salt	4334.25	4310.00
Delaware	4584.25	4560.00
Cherry Canyon	5464.25	5440.00
Brushy Canyon	6814.25	6790.00
1st Bone Spring Lime	8384.25	8360.00
Bone Spring 1st	9444.25	9420.00
Bone Spring 2nd	9999.25	9975.00
3rd Bone Spring Lime	10514.25	10490.00
Bone Spring 3rd	11274.25	11250.00
Wolfcamp / Point of Penetration	11793.28	11760.00
exit	22256.90	12023.47

	MD (ft)	TVD (ft)	Lat (°)	Long (°)	Section Footages
SHL	0.00	0.00	32.1945	-103.7282	350' FNL, 1585' FEL of Sec 25 in T24S, R31E
KOP	11531.30	11507.05	32.1954	-103.7283	50' FNL, 1650' FEL of Sec 25 in T24S, R31E
Point of Penetration	11793.28	11760.00	32.1953	-103.7283	100' FNL, 1650' FEL of Sec 25 in T24S, R31E
Exit	22256.90	12023.47	32.1669	-103.7829	100' FSL, 1650' FEL of Sec 36 in T24S, R31E
BHL	22336.90	12023.00	32.1666	-103.7284	20' FSL, 1650' FEL of Sec 36 in T24S, R31E

	Y	X	MD
KOP	435371	728491	11531.30



**Well:** COTTON DRAW 25-36 FED COM 715H  
**County:** Lea  
**Wellbore:** Permit Plan  
**Design:** Permit Plan #1

**Geodetic System:** US State Plane 1983  
**Datum:** North American Datum 1927  
**Ellipsoid:** Clarke 1866  
**Zone:** 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
100.00	0.00	347.45	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	347.45	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	347.45	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	347.45	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	347.45	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	347.45	600.00	0.00	0.00	0.00	0.00	
660.00	0.00	347.45	660.00	0.00	0.00	0.00	0.00	Rustler
700.00	0.00	347.45	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	347.45	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	347.45	900.00	0.00	0.00	0.00	0.00	
1000.00	0.00	347.45	1000.00	0.00	0.00	0.00	0.00	
1100.00	0.00	347.45	1100.00	0.00	0.00	0.00	0.00	
1105.00	0.00	347.45	1105.00	0.00	0.00	0.00	0.00	Salt
1200.00	0.00	347.45	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	347.45	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	347.45	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	347.45	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	347.45	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	347.45	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	347.45	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	347.45	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	347.45	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	347.45	2099.98	1.70	-0.38	-1.70	2.00	
2200.00	4.00	347.45	2199.84	6.81	-1.52	-6.81	2.00	
2300.00	6.00	347.45	2299.45	15.32	-3.41	-15.32	2.00	
2400.00	8.00	347.45	2398.70	27.21	-6.06	-27.21	2.00	
2500.00	10.00	347.45	2497.47	42.48	-9.46	-42.48	2.00	Hold Tangent
2600.00	10.00	347.45	2595.95	59.43	-13.23	-59.43	0.00	
2700.00	10.00	347.45	2694.43	76.38	-17.00	-76.38	0.00	
2800.00	10.00	347.45	2792.91	93.33	-20.78	-93.33	0.00	
2900.00	10.00	347.45	2891.39	110.28	-24.55	-110.28	0.00	
3000.00	10.00	347.45	2989.87	127.23	-28.32	-127.22	0.00	
3100.00	10.00	347.45	3088.35	144.18	-32.10	-144.17	0.00	
3200.00	10.00	347.45	3186.83	161.13	-35.87	-161.12	0.00	
3300.00	10.00	347.45	3285.31	178.08	-39.64	-178.07	0.00	
3400.00	10.00	347.45	3383.79	195.03	-43.42	-195.02	0.00	
3500.00	10.00	347.45	3482.27	211.98	-47.19	-211.97	0.00	
3600.00	10.00	347.45	3580.75	228.93	-50.96	-228.92	0.00	
3700.00	10.00	347.45	3679.23	245.88	-54.74	-245.87	0.00	
3762.43	10.00	347.45	3740.72	256.46	-57.09	-256.45	0.00	Drop to Vertical
3800.00	9.25	347.45	3777.76	262.59	-58.46	-262.58	2.00	
3900.00	7.25	347.45	3876.72	276.60	-61.57	-276.58	2.00	
4000.00	5.25	347.45	3976.12	287.22	-63.94	-287.21	2.00	
4100.00	3.25	347.45	4075.84	294.45	-65.55	-294.44	2.00	
4200.00	1.25	347.45	4175.76	298.28	-66.40	-298.27	2.00	
4262.43	0.00	347.45	4238.18	298.95	-66.55	-298.93	2.00	Hold Vertical
4300.00	0.00	179.65	4275.75	298.95	-66.55	-298.93	0.00	
4334.25	0.00	179.65	4310.00	298.95	-66.55	-298.93	0.00	Base of Salt
4400.00	0.00	179.65	4375.75	298.95	-66.55	-298.93	0.00	
4500.00	0.00	179.65	4475.75	298.95	-66.55	-298.93	0.00	
4584.25	0.00	179.65	4560.00	298.95	-66.55	-298.93	0.00	Delaware
4600.00	0.00	179.65	4575.75	298.95	-66.55	-298.93	0.00	
4700.00	0.00	179.65	4675.75	298.95	-66.55	-298.93	0.00	
4800.00	0.00	179.65	4775.75	298.95	-66.55	-298.93	0.00	
4900.00	0.00	179.65	4875.75	298.95	-66.55	-298.93	0.00	
5000.00	0.00	179.65	4975.75	298.95	-66.55	-298.93	0.00	
5100.00	0.00	179.65	5075.75	298.95	-66.55	-298.93	0.00	
5200.00	0.00	179.65	5175.75	298.95	-66.55	-298.93	0.00	
5300.00	0.00	179.65	5275.75	298.95	-66.55	-298.93	0.00	
5400.00	0.00	179.65	5375.75	298.95	-66.55	-298.93	0.00	
5464.25	0.00	179.65	5440.00	298.95	-66.55	-298.93	0.00	Cherry Canyon
5500.00	0.00	179.65	5475.75	298.95	-66.55	-298.93	0.00	
5600.00	0.00	179.65	5575.75	298.95	-66.55	-298.93	0.00	
5700.00	0.00	179.65	5675.75	298.95	-66.55	-298.93	0.00	
5800.00	0.00	179.65	5775.75	298.95	-66.55	-298.93	0.00	
5900.00	0.00	179.65	5875.75	298.95	-66.55	-298.93	0.00	
6000.00	0.00	179.65	5975.75	298.95	-66.55	-298.93	0.00	
6100.00	0.00	179.65	6075.75	298.95	-66.55	-298.93	0.00	
6200.00	0.00	179.65	6175.75	298.95	-66.55	-298.93	0.00	



**Well:** COTTON DRAW 25-36 FED COM 715H  
**County:** Lea  
**Wellbore:** Permit Plan  
**Design:** Permit Plan #1

**Geodetic System:** US State Plane 1983  
**Datum:** North American Datum 1927  
**Ellipsoid:** Clarke 1866  
**Zone:** 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
6300.00	0.00	179.65	6275.75	298.95	-66.55	-298.93	0.00	
6400.00	0.00	179.65	6375.75	298.95	-66.55	-298.93	0.00	
6500.00	0.00	179.65	6475.75	298.95	-66.55	-298.93	0.00	
6600.00	0.00	179.65	6575.75	298.95	-66.55	-298.93	0.00	
6700.00	0.00	179.65	6675.75	298.95	-66.55	-298.93	0.00	
6800.00	0.00	179.65	6775.75	298.95	-66.55	-298.93	0.00	
6814.25	0.00	179.65	6790.00	298.95	-66.55	-298.93	0.00	Brushy Canyon
6900.00	0.00	179.65	6875.75	298.95	-66.55	-298.93	0.00	
7000.00	0.00	179.65	6975.75	298.95	-66.55	-298.93	0.00	
7100.00	0.00	179.65	7075.75	298.95	-66.55	-298.93	0.00	
7200.00	0.00	179.65	7175.75	298.95	-66.55	-298.93	0.00	
7300.00	0.00	179.65	7275.75	298.95	-66.55	-298.93	0.00	
7400.00	0.00	179.65	7375.75	298.95	-66.55	-298.93	0.00	
7500.00	0.00	179.65	7475.75	298.95	-66.55	-298.93	0.00	
7600.00	0.00	179.65	7575.75	298.95	-66.55	-298.93	0.00	
7700.00	0.00	179.65	7675.75	298.95	-66.55	-298.93	0.00	
7800.00	0.00	179.65	7775.75	298.95	-66.55	-298.93	0.00	
7900.00	0.00	179.65	7875.75	298.95	-66.55	-298.93	0.00	
8000.00	0.00	179.65	7975.75	298.95	-66.55	-298.93	0.00	
8100.00	0.00	179.65	8075.75	298.95	-66.55	-298.93	0.00	
8200.00	0.00	179.65	8175.75	298.95	-66.55	-298.93	0.00	
8300.00	0.00	179.65	8275.75	298.95	-66.55	-298.93	0.00	
8384.25	0.00	179.65	8360.00	298.95	-66.55	-298.93	0.00	1st Bone Spring Lime
8400.00	0.00	179.65	8375.75	298.95	-66.55	-298.93	0.00	
8500.00	0.00	179.65	8475.75	298.95	-66.55	-298.93	0.00	
8600.00	0.00	179.65	8575.75	298.95	-66.55	-298.93	0.00	
8700.00	0.00	179.65	8675.75	298.95	-66.55	-298.93	0.00	
8800.00	0.00	179.65	8775.75	298.95	-66.55	-298.93	0.00	
8900.00	0.00	179.65	8875.75	298.95	-66.55	-298.93	0.00	
9000.00	0.00	179.65	8975.75	298.95	-66.55	-298.93	0.00	
9100.00	0.00	179.65	9075.75	298.95	-66.55	-298.93	0.00	
9200.00	0.00	179.65	9175.75	298.95	-66.55	-298.93	0.00	
9300.00	0.00	179.65	9275.75	298.95	-66.55	-298.93	0.00	
9400.00	0.00	179.65	9375.75	298.95	-66.55	-298.93	0.00	
9444.25	0.00	179.65	9420.00	298.95	-66.55	-298.93	0.00	Bone Spring 1st
9500.00	0.00	179.65	9475.75	298.95	-66.55	-298.93	0.00	
9600.00	0.00	179.65	9575.75	298.95	-66.55	-298.93	0.00	
9700.00	0.00	179.65	9675.75	298.95	-66.55	-298.93	0.00	
9800.00	0.00	179.65	9775.75	298.95	-66.55	-298.93	0.00	
9900.00	0.00	179.65	9875.75	298.95	-66.55	-298.93	0.00	
9999.25	0.00	179.65	9975.00	298.95	-66.55	-298.93	0.00	Bone Spring 2nd
10000.00	0.00	179.65	9975.75	298.95	-66.55	-298.93	0.00	
10100.00	0.00	179.65	10075.75	298.95	-66.55	-298.93	0.00	
10200.00	0.00	179.65	10175.75	298.95	-66.55	-298.93	0.00	
10300.00	0.00	179.65	10275.75	298.95	-66.55	-298.93	0.00	
10400.00	0.00	179.65	10375.75	298.95	-66.55	-298.93	0.00	
10500.00	0.00	179.65	10475.75	298.95	-66.55	-298.93	0.00	
10514.25	0.00	179.65	10490.00	298.95	-66.55	-298.93	0.00	3rd Bone Spring Lime
10600.00	0.00	179.65	10575.75	298.95	-66.55	-298.93	0.00	
10700.00	0.00	179.65	10675.75	298.95	-66.55	-298.93	0.00	
10800.00	0.00	179.65	10775.75	298.95	-66.55	-298.93	0.00	
10900.00	0.00	179.65	10875.75	298.95	-66.55	-298.93	0.00	
11000.00	0.00	179.65	10975.75	298.95	-66.55	-298.93	0.00	
11100.00	0.00	179.65	11075.75	298.95	-66.55	-298.93	0.00	
11200.00	0.00	179.65	11175.75	298.95	-66.55	-298.93	0.00	
11274.25	0.00	179.65	11250.00	298.95	-66.55	-298.93	0.00	Bone Spring 3rd
11300.00	0.00	179.65	11275.75	298.95	-66.55	-298.93	0.00	
11400.00	0.00	179.65	11375.75	298.95	-66.55	-298.93	0.00	
11500.00	0.00	179.65	11475.75	298.95	-66.55	-298.93	0.00	
11531.30	0.00	179.65	11507.05	298.95	-66.55	-298.93	0.00	KOP
11600.00	6.87	179.65	11575.59	294.83	-66.52	-294.82	10.00	
11700.00	16.87	179.65	11673.32	274.29	-66.40	-274.27	10.00	
11793.28	26.20	179.65	11760.00	240.09	-66.19	-240.07	10.00	Wolfcamp / Point of Penetration
11800.00	26.87	179.65	11766.01	237.09	-66.17	-237.07	10.00	
11900.00	36.87	179.65	11850.83	184.36	-65.85	-184.34	10.00	
12000.00	46.87	179.65	11925.20	117.70	-65.44	-117.68	10.00	
12100.00	56.87	179.65	11986.87	39.14	-64.96	-39.12	10.00	
12200.00	66.87	179.65	12033.95	-48.94	-64.42	48.95	10.00	
12300.00	76.87	179.65	12065.03	-143.85	-63.84	143.87	10.00	
12400.00	86.87	179.65	12079.16	-242.72	-63.24	242.73	10.00	



Well: COTTON DRAW 25-36 FED COM 715H  
 County: Lea  
 Wellbore: Permit Plan  
 Design: Permit Plan #1

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1927  
 Ellipsoid: Clarke 1866  
 Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12434.60	90.33	179.65	12080.00	-277.30	-63.03	277.31	10.00	Landing Point
12500.00	90.33	179.65	12079.62	-342.70	-62.63	342.71	0.00	
12600.00	90.33	179.65	12079.05	-442.70	-62.02	442.71	0.00	
12700.00	90.33	179.65	12078.47	-542.69	-61.41	542.71	0.00	
12800.00	90.33	179.65	12077.90	-642.69	-60.80	642.70	0.00	
12900.00	90.33	179.65	12077.32	-742.68	-60.18	742.70	0.00	
13000.00	90.33	179.65	12076.75	-842.68	-59.57	842.70	0.00	
13100.00	90.33	179.65	12076.17	-942.68	-58.96	942.69	0.00	
13200.00	90.33	179.65	12075.60	-1042.67	-58.35	1042.69	0.00	
13300.00	90.33	179.65	12075.02	-1142.67	-57.74	1142.68	0.00	
13400.00	90.33	179.65	12074.44	-1242.67	-57.13	1242.68	0.00	
13500.00	90.33	179.65	12073.87	-1342.66	-56.52	1342.68	0.00	
13600.00	90.33	179.65	12073.29	-1442.66	-55.91	1442.67	0.00	
13700.00	90.33	179.65	12072.72	-1542.66	-55.30	1542.67	0.00	
13800.00	90.33	179.65	12072.14	-1642.65	-54.68	1642.67	0.00	
13900.00	90.33	179.65	12071.57	-1742.65	-54.07	1742.66	0.00	
14000.00	90.33	179.65	12070.99	-1842.65	-53.46	1842.66	0.00	
14100.00	90.33	179.65	12070.42	-1942.64	-52.85	1942.66	0.00	
14200.00	90.33	179.65	12069.84	-2042.64	-52.24	2042.65	0.00	
14300.00	90.33	179.65	12069.26	-2142.64	-51.63	2142.65	0.00	
14400.00	90.33	179.65	12068.69	-2242.63	-51.02	2242.64	0.00	
14500.00	90.33	179.65	12068.11	-2342.63	-50.41	2342.64	0.00	
14600.00	90.33	179.65	12067.54	-2442.62	-49.80	2442.64	0.00	
14700.00	90.33	179.65	12066.96	-2542.62	-49.18	2542.63	0.00	
14800.00	90.33	179.65	12066.39	-2642.62	-48.57	2642.63	0.00	
14900.00	90.33	179.65	12065.81	-2742.61	-47.96	2742.63	0.00	
15000.00	90.33	179.65	12065.24	-2842.61	-47.35	2842.62	0.00	
15100.00	90.33	179.65	12064.66	-2942.61	-46.74	2942.62	0.00	
15200.00	90.33	179.65	12064.09	-3042.60	-46.13	3042.62	0.00	
15300.00	90.33	179.65	12063.51	-3142.60	-45.52	3142.61	0.00	
15400.00	90.33	179.65	12062.93	-3242.60	-44.91	3242.61	0.00	
15500.00	90.33	179.65	12062.36	-3342.59	-44.30	3342.60	0.00	
15600.00	90.33	179.65	12061.78	-3442.59	-43.68	3442.60	0.00	
15700.00	90.33	179.65	12061.21	-3542.59	-43.07	3542.60	0.00	
15800.00	90.33	179.65	12060.63	-3642.58	-42.46	3642.59	0.00	
15900.00	90.33	179.65	12060.06	-3742.58	-41.85	3742.59	0.00	
16000.00	90.33	179.65	12059.48	-3842.58	-41.24	3842.59	0.00	
16100.00	90.33	179.65	12058.91	-3942.57	-40.63	3942.58	0.00	
16200.00	90.33	179.65	12058.33	-4042.57	-40.02	4042.58	0.00	
16300.00	90.33	179.65	12057.76	-4142.56	-39.41	4142.57	0.00	
16400.00	90.33	179.65	12057.18	-4242.56	-38.80	4242.57	0.00	
16500.00	90.33	179.65	12056.60	-4342.56	-38.18	4342.57	0.00	
16600.00	90.33	179.65	12056.03	-4442.55	-37.57	4442.56	0.00	
16700.00	90.33	179.65	12055.45	-4542.55	-36.96	4542.56	0.00	
16800.00	90.33	179.65	12054.88	-4642.55	-36.35	4642.56	0.00	
16900.00	90.33	179.65	12054.30	-4742.54	-35.74	4742.55	0.00	
17000.00	90.33	179.65	12053.73	-4842.54	-35.13	4842.55	0.00	
17100.00	90.33	179.65	12053.15	-4942.54	-34.52	4942.55	0.00	
17200.00	90.33	179.65	12052.58	-5042.53	-33.91	5042.54	0.00	
17300.00	90.33	179.65	12052.00	-5142.53	-33.30	5142.54	0.00	
17400.00	90.33	179.65	12051.42	-5242.53	-32.68	5242.53	0.00	
17500.00	90.33	179.65	12050.85	-5342.52	-32.07	5342.53	0.00	
17600.00	90.33	179.65	12050.27	-5442.52	-31.46	5442.53	0.00	
17700.00	90.33	179.65	12049.70	-5542.52	-30.85	5542.52	0.00	
17800.00	90.33	179.65	12049.12	-5642.51	-30.24	5642.52	0.00	
17900.00	90.33	179.65	12048.55	-5742.51	-29.63	5742.52	0.00	
18000.00	90.33	179.65	12047.97	-5842.50	-29.02	5842.51	0.00	
18100.00	90.33	179.65	12047.40	-5942.50	-28.41	5942.51	0.00	
18200.00	90.33	179.65	12046.82	-6042.50	-27.80	6042.50	0.00	
18300.00	90.33	179.65	12046.25	-6142.49	-27.18	6142.50	0.00	
18400.00	90.33	179.65	12045.67	-6242.49	-26.57	6242.50	0.00	
18500.00	90.33	179.65	12045.09	-6342.49	-25.96	6342.49	0.00	
18600.00	90.33	179.65	12044.52	-6442.48	-25.35	6442.49	0.00	
18700.00	90.33	179.65	12043.94	-6542.48	-24.74	6542.49	0.00	
18800.00	90.33	179.65	12043.37	-6642.48	-24.13	6642.48	0.00	
18900.00	90.33	179.65	12042.79	-6742.47	-23.52	6742.48	0.00	
19000.00	90.33	179.65	12042.22	-6842.47	-22.91	6842.48	0.00	
19100.00	90.33	179.65	12041.64	-6942.47	-22.30	6942.47	0.00	
19200.00	90.33	179.65	12041.07	-7042.46	-21.68	7042.47	0.00	
19300.00	90.33	179.65	12040.49	-7142.46	-21.07	7142.46	0.00	



Well: COTTON DRAW 25-36 FED COM 715H  
 County: Lea  
 Wellbore: Permit Plan  
 Design: Permit Plan #1

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1927  
 Ellipsoid: Clarke 1866  
 Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
19400.00	90.33	179.65	12039.91	-7242.46	-20.46	7242.46	0.00	
19500.00	90.33	179.65	12039.34	-7342.45	-19.85	7342.46	0.00	
19600.00	90.33	179.65	12038.76	-7442.45	-19.24	7442.45	0.00	
19700.00	90.33	179.65	12038.19	-7542.44	-18.63	7542.45	0.00	
19800.00	90.33	179.65	12037.61	-7642.44	-18.02	7642.45	0.00	
19900.00	90.33	179.65	12037.04	-7742.44	-17.41	7742.44	0.00	
20000.00	90.33	179.65	12036.46	-7842.43	-16.80	7842.44	0.00	
20100.00	90.33	179.65	12035.89	-7942.43	-16.18	7942.43	0.00	
20200.00	90.33	179.65	12035.31	-8042.43	-15.57	8042.43	0.00	
20300.00	90.33	179.65	12034.74	-8142.42	-14.96	8142.43	0.00	
20400.00	90.33	179.65	12034.16	-8242.42	-14.35	8242.42	0.00	
20500.00	90.33	179.65	12033.58	-8342.42	-13.74	8342.42	0.00	
20600.00	90.33	179.65	12033.01	-8442.41	-13.13	8442.42	0.00	
20700.00	90.33	179.65	12032.43	-8542.41	-12.52	8542.41	0.00	
20800.00	90.33	179.65	12031.86	-8642.41	-11.91	8642.41	0.00	
20900.00	90.33	179.65	12031.28	-8742.40	-11.30	8742.41	0.00	
21000.00	90.33	179.65	12030.71	-8842.40	-10.68	8842.40	0.00	
21100.00	90.33	179.65	12030.13	-8942.40	-10.07	8942.40	0.00	
21200.00	90.33	179.65	12029.56	-9042.39	-9.46	9042.39	0.00	
21300.00	90.33	179.65	12028.98	-9142.39	-8.85	9142.39	0.00	
21400.00	90.33	179.65	12028.41	-9242.39	-8.24	9242.39	0.00	
21500.00	90.33	179.65	12027.83	-9342.38	-7.63	9342.38	0.00	
21600.00	90.33	179.65	12027.25	-9442.38	-7.02	9442.38	0.00	
21700.00	90.33	179.65	12026.68	-9542.37	-6.41	9542.38	0.00	
21800.00	90.33	179.65	12026.10	-9642.37	-5.79	9642.37	0.00	
21900.00	90.33	179.65	12025.53	-9742.37	-5.18	9742.37	0.00	
22000.00	90.33	179.65	12024.95	-9842.36	-4.57	9842.36	0.00	
22100.00	90.33	179.65	12024.38	-9942.36	-3.96	9942.36	0.00	
22200.00	90.33	179.65	12023.80	-10042.36	-3.35	10042.36	0.00	
22256.90	90.33	179.65	12023.47	-10099.25	-3.00	10099.25	0.00	exit
22300.00	90.33	179.65	12023.23	-10142.35	-2.74	10142.35	0.00	
22336.90	90.33	179.65	12023.00	-10179.25	-2.54	10179.25	0.00	BHL



## COTTON DRAW 25-36 FED COM 715H

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

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Casing Interval		Casing Interval	
					From (MD)	To (MD)	From (TVD)	To (TVD)
16	13 3/8	54 1/2	J-55	BTC	0	730	0	730
9 7/8	8 5/8	32	P110ICY	Wedge 441	0	11431	0	11431
7 7/8	5 1/2	20	P110ICY	Wedge 461	0	22337	0	12023

- All casing strings will be tested in accordance with 43 CFR 3172. Must have table for contingency casing.
- Devon respectfully requests a hole size change from 17-1/2" to 16". Casing size will not change. If cement does not circulate to surface, remediation will be done with an appropriately sized tubing to meet radial clearance requirements

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

Casing	# Sks	TOC	Wt. ppg	Yld (ft <sup>3</sup> /sack)	Slurry Description
Surface	357	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	575	Surf	13.0	2.3	2nd State: Bradenhead Squeeze - Lead: Class C Cement + additives
	536	6814	13.2	1.44	Tail: Class H / C + additives
Production	117	9531	9	3.27	Lead: Class H / C + additives
	1430	11531	13.2	1.44	Tail: Class H / C + additives

Assuming no returns are established while drilling, Devon requests to pump a two stage cement job on the intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. The final cement top will be verified by Echo-meter. Devon will include the Echo-meter verified fluid top and the volume of displacement fluid above

Casing String	% Excess
Surface	50%
Intermediate 1	30%
Prod	10%

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

COTTON DRAW 25-36 FED COM 715H

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

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

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

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

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

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

**6. Logging and Testing Procedures**

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

Additional logs planned	Interval
	Resistivity
	Density
X	CBL
	Mud log
	PEX

**7. Drilling Conditions**

Condition	Specify what type and where?
BH pressure at deepest TVD	6565
Abnormal temperature	No

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

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of 43 CFR 3176. If Hydrogen Sulfide is encountered measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S plan attached.

**8. Other facets of operation**

Is this a walking operation? Potentially

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

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

Will be pre-setting casing? Potentially

- 1 Spudder rig will move in and batch drill surface hole.
  - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.,
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (43 CFR 3172, all COAs and NMOCD regulations).
- 3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pa.
- 6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7 Drilling operations will be performed with drilling rig. A that time an approved BOP stack will be nipped up and tested on the wellhead before drilling operations commences on each well.
  - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

- Directional Plan
- Other, describe



**13-3/8" 54.50# .380 J-55**

### **Dimensions (Nominal)**

Outside Diameter	13.375	in.
Wall	0.380	in.
Inside Diameter	12.615	in.
Drift	12.459	in.
Weight, T&C	54.500	lbs/ft
Weight, PE	52.790	lbs/ft

### **Performance Ratings, Minimum**

Collapse, PE	1130	psi
Internal Yields Pressure		
PE	2730	psi
STC	2730	PSI
BTC	2730	psi
Yield Strength, Pipe Body	853	1000 lbs
Joint Strength, STC	514	1000 lbs
Joint Strength, BTC	909	1000 lbs

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



# TenarisHydril Wedge 441<sup>®</sup> - AD



Coupling	Pipe Body
Grade: P110-ICY	Grade: P110-ICY
Body: White	1st Band: White
1st Band: Pale Green	2nd Band: Pale Green
2nd Band: -	3rd Band: Pale Green
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	8.625 in.	Wall Thickness	0.352 in.	Grade	P110-ICY
Min. Wall Thickness	90.00 %	Pipe Body Drift	Alternative Drift	Type	Casing
Connection OD Option	REGULAR				

### Pipe Body Data

Geometry				Performance	
Nominal OD	8.625 in.	Wall Thickness	0.352 in.	Body Yield Strength	1144 x1000 lb
Nominal Weight	32.00 lb/ft	Plain End Weight	31.13 lb/ft	Min. Internal Yield Pressure	9180 psi
Drift	7.875 in.	OD Tolerance	API	SMYS	125,000 psi
Nominal ID	7.921 in.			Collapse Pressure	4000 psi

### Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	8.889 in.	Tension Efficiency	81.20 %	Minimum	23,000 ft-lb
Coupling Length	8.862 in.	Joint Yield Strength	929 x1000 lb	Optimum	24,000 ft-lb
Connection ID	7.921 in.	Internal Pressure Capacity	9180 psi	Maximum	27,000 ft-lb
Make-up Loss	3.744 in.	Compression Efficiency	81.20 %	<b>Operation Limit Torques</b>	
Threads per inch	3.43	Compression Strength	929 x1000 lb	Operating Torque	59,000 ft-lb
Connection OD Option	Regular	Max. Allowable Bending	53.59 °/100 ft	Yield Torque	70,000 ft-lb
		External Pressure Capacity	4000 psi	<b>Buck-On</b>	
				Minimum	27,000 ft-lb
				Maximum	29,000 ft-lb

### Notes

For the latest performance data, always visit our website: [www.tenaris.com](http://www.tenaris.com)  
 For further information on concepts indicated in this datasheet, download the Datasheet Manual from [www.tenaris.com](http://www.tenaris.com)

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# TenarisHydril Wedge 461<sup>®</sup>



Coupling	Pipe Body
Grade: P110-ICY	Grade: P110-ICY
Body: White	1st Band: White
1st Band: Pale Green	2nd Band: Pale Green
2nd Band: -	3rd Band: Pale Green
3rd Band: -	4th Band: -
	5th Band: -
	6th Band: -

Outside Diameter	5.500 in.	Wall Thickness	0.361 in.	Grade	P110-ICY
Min. Wall Thickness	87.50 %	Pipe Body Drift	API Standard	Type	Casing
Connection OD Option	REGULAR				

### Pipe Body Data

Geometry		Performance	
Nominal OD	5.500 in.	Wall Thickness	0.361 in.
Nominal Weight	20.00 lb/ft	Plain End Weight	19.83 lb/ft
Drift	4.653 in.	OD Tolerance	API
Nominal ID	4.778 in.		
		Body Yield Strength	729 x1000 lb
		Min. Internal Yield Pressure	14,360 psi
		SMYS	125,000 psi
		Collapse Pressure	12,300 psi

### Connection Data

Geometry		Performance		Make-Up Torques	
Connection OD	6.300 in.	Tension Efficiency	100 %	Minimum	17,000 ft-lb
Coupling Length	7.714 in.	Joint Yield Strength	729 x1000 lb	Optimum	18,000 ft-lb
Connection ID	4.778 in.	Internal Pressure Capacity	14,360 psi	Maximum	21,600 ft-lb
Make-up Loss	3.775 in.	Compression Efficiency	100 %		
Threads per inch	3.40	Compression Strength	729 x1000 lb	Operation Limit Torques	
Connection OD Option	Regular	Max. Allowable Bending	104 °/100 ft	Operating Torque	43,000 ft-lb
		External Pressure Capacity	12,300 psi	Yield Torque	51,000 ft-lb
		Coupling Face Load	329,000 lb	Buck-On	
				Minimum	21,600 ft-lb
				Maximum	23,100 ft-lb

### Notes

This connection is fully interchangeable with:  
 Wedge 441® - 5.5 in. - 0.304 (17.00) / 0.361 (20.00) in. (lb/ft)  
 Wedge 461® - 5.5 in. - 0.304 (17.00) / 0.415 (23.00) / 0.476 (26.00) in. (lb/ft)  
 Connections with Dopeless® Technology are fully compatible with the same connection in its doped version  
 In October 2019, TenarisHydril Wedge XP® 2.0 was renamed TenarisHydril Wedge 461™. Product dimensions and properties remain identical and both connections are fully interchangeable

For the latest performance data, always visit our website: [www.tenaris.com](http://www.tenaris.com)  
 For further information on concepts indicated in this datasheet, download the Datasheet Manual from [www.tenaris.com](http://www.tenaris.com)

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Cal.xlsm

Cotton Draw Unit 25-36 Fed Com 715H

13 3/8		surface csg in a		16		inch hole.		Design Factors				Surface	
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight		
"A"	54.50	j 55	btc	22.86	3.53	0.44	685	9	0.73	6.66	37,333		
"B"			btc				0				0		
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500							Totals:	685			37,333		
Comparison of Proposed to Minimum Required Cement Volumes													
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist		
16	0.4206	357	514	288	78	9.00	3720	5M			Hole-Cplg	0.81	
Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.													

8 5/8		casing inside the		13 3/8		Design Factors				Int 1			
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight		
"A"	32.00	p 110	wedge 441	2.54	0.64	1.4	11,431	1	2.35	1.08	365,792		
"B"							0				0		
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,438							Totals:	11,431			365,792		
The cement volume(s) are intended to achieve a top of 0 ft from surface or a 685 overlap.													
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist		
9 7/8	0.1261	536	772	1672	-54	10.50	3913	5M			Hole-Cplg	0.49	
D V Tool(s): 6790 sum of sx 1111 ∑ CuFt 2094 ∑ % excess 25													
t by stage % : 32 22													
Class 'C' tail cmt yld > 1.35													

5 1/2		casing inside the		8 5/8		Design Factors				Prod 1			
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight		
"A"	20.00	p 110	wedge 461	2.67	1.69	1.93	22,337	2	3.23	2.84	446,740		
"B"							0				0		
"C"							0				0		
"D"							0				0		
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,645							Totals:	22,337			446,740		
The cement volume(s) are intended to achieve a top of 11231 ft from surface or a 200 overlap.													
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist		
7 7/8	0.1733	1547	2442	1925	27	10.50					Hole-Cplg	0.91	
Class 'C' tail cmt yld > 1.35													

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

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Devon Energy Production Company LP
<b>LOCATION:</b>	Section 25, T.24 S., R.31 E., NMPM
<b>COUNTY:</b>	Eddy County, New Mexico

<b>WELL NAME &amp; NO.:</b>	Cotton Draw 25-36 Fed Com 331H
<b>ATS/API ID:</b>	3001557397
<b>APD ID:</b>	10400103569
<b>Sundry ID:</b>	2892953

<b>WELL NAME &amp; NO.:</b>	Cotton Draw 25-36 Fed Com 715H
<b>ATS/API ID:</b>	10400096727
<b>APD ID:</b>	10400096727
<b>Sundry ID:</b>	2892941

<b>WELL NAME &amp; NO.:</b>	Cotton Draw 25-36 Fed Com 625H
<b>ATS/API ID:</b>	ATS-24-707
<b>APD ID:</b>	10400096729
<b>Sundry ID:</b>	2892944

<b>WELL NAME &amp; NO.:</b>	Cotton Draw 25-36 Fed Com 717H
<b>ATS/API ID:</b>	3001557396
<b>APD ID:</b>	10400103490
<b>Sundry ID:</b>	2892948

<b>WELL NAME &amp; NO.:</b>	Cotton Draw 25-36 Fed Com 733H
<b>ATS/API ID:</b>	3001557403
<b>APD ID:</b>	10400103570
<b>Sundry ID:</b>	2892946

<b>WELL NAME &amp; NO.:</b>	Cotton Draw 25-36 Fed Com 626H
<b>ATS/API ID:</b>	3001557402
<b>APD ID:</b>	10400103485
<b>Sundry ID:</b>	2892963

<b>WELL NAME &amp; NO.:</b>	Cotton Draw 25-36 Fed Com 738H
<b>ATS/API ID:</b>	3001557494
<b>APD ID:</b>	10400103449
<b>Sundry ID:</b>	2892966

<b>WELL NAME &amp; NO.:</b>	<b>Cotton Draw 25-36 Fed Com 718H</b>
<b>ATS/API ID:</b>	<b>ATS-24-700</b>
<b>APD ID:</b>	<b>10400096739</b>
<b>Sundry ID:</b>	<b>2892970</b>

<b>WELL NAME &amp; NO.:</b>	<b>Cotton Draw 25-36 Fed Com 302H</b>
<b>ATS/API ID:</b>	<b>ATS-24-703</b>
<b>APD ID:</b>	<b>10400081483</b>
<b>Sundry ID:</b>	<b>2892957</b>

<b>WELL NAME &amp; NO.:</b>	<b>Cotton Draw 25-36 Fed Com 300H</b>
<b>ATS/API ID:</b>	<b>3001557399</b>
<b>APD ID:</b>	<b>10400103569</b>
<b>Sundry ID:</b>	<b>2892960</b>

COA

H2S	Yes		
Potash	None	None	
Cave/Karst Potential	Medium		
Cave/Karst Potential	<input type="checkbox"/> Critical		
Variance	<input checked="" type="checkbox"/> None	<input checked="" type="checkbox"/> Flex Hose	<input checked="" type="checkbox"/> Other
Wellhead	Conventional and Multibowl		
Other	<input type="checkbox"/> 4 String <input type="checkbox"/> 5 String	Capitan Reef None	<input type="checkbox"/> WIPP
Other	Pilot Hole None	<input type="checkbox"/> Open Annulus	
Cementing	Contingency Squeeze None	Echo-Meter Int 1	Primary Cement Squeeze None
Special Requirements	<input type="checkbox"/> Water Disposal/Injection	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit
Special Requirements	<input type="checkbox"/> Batch Sundry	Waste Prevention None	
Special Requirements Variance	<input checked="" type="checkbox"/> BOPE Break Testing <input checked="" type="checkbox"/> Offline BOPE Testing	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> Casing Clearance

## A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** 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

1. The **13-3/8** inch surface casing shall be set at approximately **685 feet** (a minimum of 70 feet into the Rustler Anhydrite and above the salt when present, and below usable fresh water) and cemented to the surface. The surface hole shall be **16** inch in diameter.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

2. The minimum required fill of cement behind the **8-5/8** inch intermediate casing is:

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

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

### **Option 2:**

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

- a. First stage: Operator will cement with intent to reach the top of the **Brushy Canyon at 6790'**.
- b. Second stage:
  - Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified. **(Squeeze 577 sxs Class C)**  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

Operator has proposed to pump down **13-3/8" X 8-5/8"** annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus Or operator shall run a CBL from TD of the 8-5/8" casing to surface after the second stage BH to verify TOC.

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad. Operator may conduct a negative and positive pressure test during completion to remediate sustained casing pressure.

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

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

- ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**  
**Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.**

### C. PRESSURE CONTROL

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

#### Option 1:

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **8-5/8** inch intermediate casing shoe shall be **5000 (5M)** psi.

#### Option 2:

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **13-3/8** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

- a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.

### D. SPECIAL REQUIREMENT (S)

#### Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record),

or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in **43 CFR part 3170 Subpart 3171**
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

**(Note: For a minimum 5M MASP or less (Utilizing a 10M BOPE system)**

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

- BOPE Break Testing is ONLY permitted for 5M psi MASP or less. **(Annular preventer must tested to 100% working pressure and BOPE shall be tested to full Rated Pressure)**
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- The BLM is to be contacted **(575-361-2822 Eddy County)** 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at **21-day** intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR part 3170 Subpart 3172**.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.
- The BOPE testing shall be conducted while the rig is stationary.

### **Intermediate Break Testing Section:**

- Variance only pertains to the intermediate hole-sections shallower than the deepest drilled intermediate on the well pad above 12,000 feet.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).

### **Production Break Testing Section: permitted**

- Variance only pertains to the production hole-section shallower than the deepest drilled production on the well pad above 12,000 feet.
- A full BOPE test is required prior to drilling the first deep production hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between production lateral is allowable).

**Offline BOPE Testing**

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

The BOPE offline testing shall be stationary during pressure testing.

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

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

**Offline Cementing**

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

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

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

## GENERAL REQUIREMENTS

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

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

Eddy County

**EMAIL** or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

[BLM\\_NM\\_CFO\\_DrillingNotifications@BLM.GOV](mailto:BLM_NM_CFO_DrillingNotifications@BLM.GOV)

(575) 361-2822

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

### A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or

if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Acceptable Method of Cement Verifications:
  - a. Observing cement circulated to surface.
  - b. Cement bond log (CBL).
  - c. Temperature log within 8-10 hours after completing the cement job.
  - d. Echometer (if a second-stage bradenhead squeeze is being used).
5. 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.
6. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
7. 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.
8. 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.
9. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

## B. PRESSURE CONTROL

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

after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

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

#### C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

Long Vo (LVO) 2/5/2026

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

General Information  
Phone: (505) 629-6116

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

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

CONDITIONS

Action 550861

**CONDITIONS**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 550861
	Action Type: [C-103] NOI Change of Plans (C-103A)

**CONDITIONS**

Created By	Condition	Condition Date
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	3/6/2026