Well Name: COTTON DRAW UNIT

Well Location: T25S / R31E / SEC 1 / LOT 4 / 32.165317 / -103.736103

County or Parish/State: EDDY / NM

Well Number: 634H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM0503

Unit or CA Name: COTTON DRAW UNIT

Unit or CA Number: NMNM70928X

US Well Number: 3001555297

Operator: DEVON ENERGY PRODUCTION COMPANY LP

Notice of Intent

Sundry ID: 2816660

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 11/05/2024

Time Sundry Submitted: 02:47

Date proposed operation will begin: 10/11/2024

Procedure Description: Devon Energy Production Co., L.P. (Devon) respectfully requests to change the casing design, SHL, BHL, name, TVD, pool code and spacing on the subject well. Devon also requests a break test and offline cementing variance. New leases have been added since approved APD and notification has been given. Please see attached revised C102, Drill plan, directional plan, spec sheets, break test and offline cementing variance. Permitted SHL: LOT 4, 482 FNL, 1233 FWL, 1-25S-31E Proposed SHL: LOT 4, 332 FNL, 1073 FWL, 1-25S-31E Permitted BHL: SWSW, 20 FSL, 990 FWL, 12-25S-31E Proposed BHL: NENW, 20 FNL, 1900 FWL, 25-24S-31E Permitted Well name: COTTON DRAW UNIT 634H Proposed Well name: COTTON DRAW 25-36 FED STATE COM 232H Permitted TVD/MD: 12314/22452 - Purple Sage/Wolfcamp Proposed TVD/MD: 10406/20697 - Paduca/Bone Spring

NOI Attachments

Procedure Description

COTTON_DRAW_25_36_FED_STATE_COM_232H_R111Q_20241111154957.pdf

Offline_Cementing___Variance_Request_20241105144523.pdf

SITE_MAP_20241105144524.pdf

WA018390666_COTTON_DRAW_25_36_FED_STATE_COM_232H_WL_R1_SIGNED_20241105144525.pdf

10.75_45.5lb_J55_BTC_20241105144511.pdf

COTTON_DRAW_25_36_FED_STATE_COM_232H_Directional_Plan_09_18_24_20241105144512.pdf

break_test_variance_BOP_1_15_24_20241105144513.pdf

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Released to Imaging: 11/22/2024 11:09:26 AM

Well Name: COTTON DRAW UNIT

Well Location: T25S / R31E / SEC 1 / LOT 4 / 32.165317 / -103.736103

County or Parish/State: EDDY / NM

Well Number: 634H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM0503

Unit or CA Name: COTTON DRAW UNIT

Unit or CA Number: NMNM70928X

US Well Number: 3001555297

Operator: DEVON ENERGY PRODUCTION COMPANY LP

5.5_20lb_P110HP_CDC_HTQ_20241105144512.pdf

13.375_54.5lb_J55_20241105144512.pdf

8.625_32lb_P110_HSCY_MO_FXL_20241105144512.pdf

Conditions of Approval

Additional

1_25_31_4_Sundry_ID_2816660_Alt_20241113131033.pdf

1_25_31_4_Sundry_ID_2816660_20241113131033.pdf

Sundry_ID_2816660_Dr_COA_20241113131033.pdf

Operator

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

Operator Electronic Signature: CHELSEY GREEN

Signed on: NOV 11, 2024 03:50 PM

Name: DEVON ENERGY PRODUCTION COMPANY LP

Title: Regulatory Compliance Professional

Street Address: 333 WEST SHERIDAN AVENUE

City: OKLAHOMA CITY **State:** OK

Phone: (405) 228-8595

Email address: CHELSEY.GREEN@DVN.COM

Field

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 11/21/2024

Signature: Chris Walls

Released to Imaging: 11/22/2024 11:09:26 AM

Form 3160-5
(June 2019)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2021

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.

SUBMIT IN TRIPLICATE *- Other instructions on page 2*

5. Lease Serial No.

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

2. Name of Operator

9. API Well No.

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool or Exploratory Area

4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*

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			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ 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 perfonned 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 detennined 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 OFICE 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 ofthis form to U.S. Department ofthe Interior, Bureau ofLand 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: LOT 4 / 482 FNL / 1233 FWL / TWSP: 25S / RANGE: 31E / SECTION: 1 / LAT: 32.165317 / LONG: -103.736103 (TVD: 8346 feet, MD: 8412 feet)

PPP: LOT 4 / 100 FNL / 990 FWL / TWSP: 25S / RANGE: 31E / SECTION: 1 / LAT: 32.16637 / LONG: -103.736886 (TVD: 11650 feet, MD: 11691 feet)

BHL: SWSW / 20 FSL / 990 FWL / TWSP: 25S / RANGE: 31E / SECTION: 12 / LAT: 32.137618 / LONG: -103.736908 (TVD: 12314 feet, MD: 22452 feet)

CONFIDENTIAL

Cotton Draw 25-36 Fed State Com 232H

13 3/8	surface csg in a	17 1/2	inch hole.		Design Factors				Surface			
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	54.50	j 55	btc	21.59	3.33	1.13	725	9	1.90	6.30	39,513
"B"			btc				0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500		Tail Cmt	does not	circ to sfc.	Totals:	725				39,513

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 Hole-Cplg
17 1/2	0.6946	534	769	504	53	9.00	1435	2M	1.56

Site plat (pipe racks S or E) as per O.O.1.III.D.4.i. not found.

9 5/8	casing inside the	13 3/8			Design Factors				Int 1			
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	40.00	j 55	btc	3.57	1.07	0.86	4,410	2	1.63	1.79	176,400
"B"							0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig: 841					Totals:	4,410				176,400
	The cement volume(s) are intended to achieve a top of		0	ft from surface or a			725				overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
12 1/4	0.3132	634	1791	1417	26	10.50	2430	3M	0.81
D V Tool(s):							sum of sx	Σ CuFt	Σ%excess
t by stage % :		#VALUE!	#VALUE!				634	1791	26

Class 'C' tail cmt yld > 1.35

Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.9, b, c, d All > 0.70, OK.

7 5/8	casing inside the	9 5/8			Design Factors				Int 2			
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	29.70	p 110	talon sfc	3.14	1.58	1.89	9,817	2	3.17	2.99	291,565
"B"							0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig: 2,160					Totals:	9,817				291,565
	The cement volume(s) are intended to achieve a top of		3910	ft from surface or a			500				overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
8 3/4	0.1005	101	145	598	-76	9.00	3387	5M	0.43
	Setting Depths for D V Tool(s):		8360				sum of sx	Σ CuFt	Σ%excess
	% excess cmt by stage:		-1				411	592	-1

Class 'C' tail cmt yld > 1.35

Tail cmt

5 1/2	casing inside the	7 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	talon rd	3.50	2.32	2.53	20,697	3	4.24	3.88	413,940
"B"							0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig: 2,289					Totals:	20,697				413,940
	The cement volume(s) are intended to achieve a top of		9317	ft from surface or a			500				overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
6 3/4	0.0835	750	1193	953	25	10.50			0.43

Class 'H' tail cmt yld > 1.20 Capitan Reef est top XXXX.

Cotton Draw 25-36 Fed State Com 232H

13 3/8	surface csg in a	17 1/2	inch hole.		Design Factors				Surface			
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	54.50	j 55	btc	21.59	3.33	1.13	725	9	1.90	6.30	39,513
"B"			btc				0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig:	1,500	Tail Cmt	does not	circ to sfc.	Totals:	725				39,513

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 Hole-Cplg
17 1/2	0.6946	534	769	504	53	9.00	1435	2M	1.56

Site plat (pipe racks S or E) as per O.O.1.III.D.4.i. not found.

10 3/4	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"	45.50	j 55	btc scc	2.52	0.87	0.78	4,410	1	1.47	1.46	200,655
"B"							0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig:	582				Totals:	4,410				200,655
	The cement volume(s) are intended to achieve a top of		0	ft from	surface or a		725				overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
12 1/4	0.1882	395	1107	866	28	10.50	2430	3M	0.50
D V Tool(s):							sum of sx	Σ CuFt	Σ%excess
t by stage % :		#VALUE!	#VALUE!				395	1107	28

Class 'C' tail cmt yld > 1.35

Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.81, b, c, d All > 0.70, OK.

8 5/8	casing inside the	10 3/4			Design Factors				Int 2			
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	32.00	p 110	mo-fxl	2.51	0.94	1.1	9,817	1	1.85	1.77	314,144
"B"							0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig:	91				Totals:	9,817				314,144
	The cement volume(s) are intended to achieve a top of		3910	ft from	surface or a		500				overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
9 7/8	0.1261	126	181	749	-76	9.00	3387	5M	0.63
	Setting Depths for D V Tool(s):		8360				sum of sx	Σ CuFt	Σ%excess
	% excess cmt by stage:		0				519	747	0

Class 'C' tail cmt yld > 1.35

Tail cmt

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	cdc-htq	3.08	2.15	2.23	20,697	2	3.73	3.60	413,940
"B"							0				0
	w/8.4#/g mud, 30min Sfc Csg Test psig:	2,289				Totals:	20,697				413,940
	The cement volume(s) are intended to achieve a top of		9317	ft from	surface or a		500				overlap.

Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE	Min Dist Hole-Cplg
7 7/8	0.1733	1544	2437	1974	24	10.50			0.79

Class 'H' tail cmt yld > 1.20 Capitan Reef est top XXXX.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Devon Energy Production Company LP**
LOCATION:	Section 1, T.25 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico

WELL NAME & NO.:	**Cotton Draw 25-36 Fed State Com 232H**
ATS/API ID:	**3001555297**
APD ID:	**10400081458**
Sundry ID:	**2816660**

COA

Primary Design:

H2S	Yes		
Potash	R-111-Q	Figure D	
Cave/Karst Potential	Low		
Cave/Karst Potential	☐ Critical		
Variance	☐ None	☑ Flex Hose	☐ Other
Wellhead	Conventional and Multibowl		
Other	☑ 4 String ☐ 5 String	Capitan Reef: None	☐ WIPP
Other	Pilot Hole: None	☑ Open Annulus	
Cementing	Contingency Squeeze: None	Echo-Meter: Int 2	Primary Cement Squeeze: None
Special Requirements	☐ Water Disposal/Injection	☐ COM	☑ Unit
Special Requirements	☐ Batch Sundry	Waste Prevention: None	
Special Requirements Variance	☑ Break Testing	☑ Offline Cementing	☐ Casing Clearance

Alternate Design:

Potash	R-111-Q	Figure D	
Cave/Karst Potential	Low		
Cave/Karst Potential	☐ Critical		
Other	☑ 4 String ☐ 5 String	Capitan Reef None	☐ WIPP
Other	Pilot Hole None	☑ Open Annulus	
Cementing	Contingency Squeeze None	Echo-Meter Int 2	Primary Cement Squeeze None

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) 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.

PRIMARY DESIGN

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **725 feet** (a minimum of **70 feet (Eddy 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 **17 1/2** inch in diameter.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

2. The minimum required fill of cement behind the **10-3/4** inch intermediate casing shall be set at approximately **4410 feet** is:

    - 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.**

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

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

    - The top of cement in the annulus between the 1st intermediate and the 2nd intermediate casing strings shall stand un-cemented at least **500 feet** below the 1st intermediate shoe. Zero percent excess shall be pumped on the cement slurry to ensure no tie-back into the previous shoe.

    - After hydraulic fracturing operations have been concluded and no longer than 180 days after the well is brought online, the operator shall bradenhead cement at least **500 feet** tie-back into the previous casing but not higher than USGS Marker Bed No. 126. **(Squeeze 393 sxs Class C and 93.5 bbls Displacement Fluid)**
      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 **10-3/4"** X **8-5/8"** annulus post completion. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore. Report the amount of fluid utilized to pump the cement slurry and the calculated top of cement slurry to the BLM. Operator may conduct a negative and positive pressure test during completion to remediate sustained casing pressure and ensure cement tie-back requirement.

    Operator has proposed an open annulus completion in R-111-Q. Submit results to the BLM. Pressure monitoring device and Pressure Safety Valves must be installed at surface on the **10-3/4"** x **8-5/8"** annulus for the life of the well.

    In the event of a casing failure during completion, the operator must contact the BLM at (575-706-2779) and **(575-361-2822 Eddy County).**

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:

    - Cement should tie-back **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126. Operator must run a CBL from TD of the production casing to surface to verify top of cement. Submit results to the BLM.
      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.

ALTERNATE DESIGN

C. CASING

5. The **13-3/8** inch surface casing shall be set at approximately **725 feet** (a minimum of **70 feet (Eddy 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 **17 1/2** inch in diameter.

    e. 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.
    f. 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)
    g. 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.
    h. 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.

6. The minimum required fill of cement behind the **9-5/8** inch intermediate casing shall be set at approximately **4410 feet** is:

    - 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.**

7. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

    - The top of cement in the annulus between the 1st intermediate and the 2nd intermediate casing strings shall stand un-cemented at least **500 feet** below the 1st intermediate shoe. Zero percent excess shall be pumped on the cement slurry to ensure no tie-back into the previous shoe.

    - After hydraulic fracturing operations have been concluded and no longer than 180 days after the well is brought online, the operator shall bradenhead cement at least **500 feet** tie-back into the previous casing but not higher than USGS Marker Bed No. 126. **(Squeeze 393 sxs Class C and 72.5 bbls Displacement Fluid)**

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 **9-5/8"** X **7-5/8"** annulus post completion. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore. Report the amount of fluid utilized to pump the cement slurry and the calculated top of cement slurry to the BLM. Operator may conduct a negative and positive pressure test during completion to remediate sustained casing pressure and ensure cement tie-back requirement.

Operator has proposed an open annulus completion in R-111-Q. Submit results to the BLM. Pressure monitoring device and Pressure Safety Valves must be installed at surface on the **9-5/8"** x **7-5/8"** annulus for the life of the well.

In the event of a casing failure during completion, the operator must contact the BLM at (575-706-2779) and **(575-361-2822 Eddy County)**.

8. The minimum required fill of cement behind the **5-1/2** inch production casing is:

- Cement should tie-back **500 feet** into the previous casing but not higher than USGS Marker Bed No. 126. Operator must run a CBL from TD of the production casing to surface to verify top of cement. Submit results to the BLM.
  Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

D. 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 **3000 (3M)** psi. **Annular which shall be tested to 2100 (70% Working Pressure) psi.**

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **5000 (5M)** psi. **Annular which shall be tested to 3500 (70% Working Pressure) psi.**

c. 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 **5000 (5M)** psi.

Option 2:

a. 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.

E. SPECIAL REQUIREMENT (S)

Unit Wells

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

Commercial Well Determination

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

BOPE Break Testing Variance (Approved)

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)**
- BOPE Break Testing is NOT permitted to drilling the production hole section.
- Variance only pertains to the intermediate hole-sections and no deeper than the Bone

Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer **(575-706-2779)** prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted **(575-361-2822 Eddy County)** 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at **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.

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 **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
(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 2nd 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. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **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) 11/13/2024

1. Geologic Formations

TVD of target	10406	Pilot hole depth	N/A
MD at TD:	20697	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	660		
Salt	1105		
Base of Salt	4310		
Delaware	4385		
Cherry Canyon	5440		
Brushy Canyon	6790		
Bone Spring 1st lime	8360		
Bone Spring 1st	9420		
Bone Spring 2nd	9975		
Salado, #126	1803		

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

2. Casing Program (Primary Design)

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Top (MD)	Bottom (MD)	Top (TVD)	Bottom (TVD)
17 1/2	13 3/8	54.5	J-55	BTC	0.0	685 MD	0	685 TVD
12 1/4	10 3/4	45.5	J-55	BTC SCC	0.0	4410 MD	0	4410 TVD
9 7/8	8 5/8	32.0	P110	MOFXL	0	9817	0	9817
7 7/8	5 1/2	20.0	P110HP	CDC-HTQ	0	20697 MD	0	10406 TVD

•All casing strings will be tested in accordance with 43 CFR 3172. Must have table for contingency casing.
• The Rustler top will be validated via drilling parameters (i.e. reduction in ROP), and the surface casing setting depth will be revised accordingly. In addition, surface casing will be set a minimum of 25' above the top of the salt.

3. Cementing Program (Primary Design)

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft3/sack)	Slurry Description
Surface	534	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	294	Surf	9	3.27	Lead: Class C Cement + additives
	101	3910	13.2	1.44	Tail: Class H / C + additives
Int 2					
	126	8360	13.2	1.44	Tail: Class H / C + additives
Int 2 Intermediate Squeeze, Post completions	393	3910	9	1.44	Post Squeeze Lead: Class C Cement + additives
Production	117	7917	9	3.27	Lead: Class H /C + additives
	1427	9917	13.2	1.44	Tail: Class H / C + additives

•Devon will design around R111-Q: 4 String, Open 1st Int and 2nd Int Annulus, Figure D
•Int 2 TOC will be, prior to completion, brought up to the 1st Bone Lime, leaving an open annulus for pressure monitoring
•Following completion, a cement top out will be performed to bring TOC 500ft into Int 1, but below the POTASH interval
•The final cement top will be verified by Echo-meter. Devon will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program

.Int 2 cement will adhere to R111-Q requirements

Casing String	% Excess
Surface	50%
Intermediate 1	30%
Intermediate 2	0%
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 used for offline cementing will have a minimum 5M rating to match intermediate sections' 5M BOPE requirements.

2. Casing Program (Secondary Design)

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Top (MD)	Bottom (MD)	Top (TVD)	Bottom (TVD)
17 1/2	13 3/8	54.5	J-55	BTC	0.0	685 MD	0	685 TVD
12 1/4	9 5/8	40.0	J-55	BTC	0.0	4410 MD	0	4410 TVD
8 3/4	7 5/8	29.7	P110HP	Talon SFC	0	9817	0	9817
6 3/4	5 1/2	20.0	P110HP	Talon RD	0	20697 MD	0	10406 TVD

•All casing strings will be tested in accordance with 43 CFR 3172. Must have table for contingency casing.
• The Rustler top will be validated via drilling parameters (i.e. reduction in ROP), and the surface casing setting depth will be revised accordingly. In addition, surface casing will be set a minimum of 25' above the top of the salt.

3. Cementing Program (Secondary Design)

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft3/sack)	Slurry Description
Surface	534	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	480	Surf	9	3.27	Lead: Class C Cement + additives
	154	3910	13.2	1.44	Tail: Class H / C + additives
Int 2					
	101	8360	13.2	1.44	Tail: Class H / C + additives
Int 2 Intermediate Squeeze, Post completions	310	3910	9	1.44	Post Squeeze Lead: Class C Cement + additives
Production	62	7917	9	3.27	Lead: Class H /C + additives
	688	9917	13.2	1.44	Tail: Class H / C + additives

•Devon will design around R111-Q: 4 String, Open 1st Int and 2nd Int Annulus, Figure D
•Int 2 TOC will be, prior to completion, brought up to the 1st Bone Lime, leaving an open annulus for pressure monitoring
•Following completion, a cement top out will be performed to bring TOC 500ft into Int 1, but below the POTASH interval
•The final cement top will be verified by Echo-meter. Devon will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program
Int 2 cement will adhere to R111-Q requirements

Casing String	% Excess
Surface	50%
Intermediate 1	30%
Intermediate 2	0%
Prod	10%

4. Pressure Control Equipment (Four 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*		
Int 2	13-5/8"	5M	Annular (5M)	X	100% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
Production	13-5/8"	5M	Annular (5M)	X	100% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
N	A variance is requested to run a 5 M annular on a 10M system

5. Mud Program (Four String Design)

Section	Type	Weight (ppg)
Surface	WBM	8.5-9
Intermediate	DBE / Cut Brine	10-10.5
Intermediate 2	WBM	8.5-9
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 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.

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

7. Drilling Conditions

Condition	Specfiy what type and where?
BH pressure at deepest TVD	5682
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 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 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

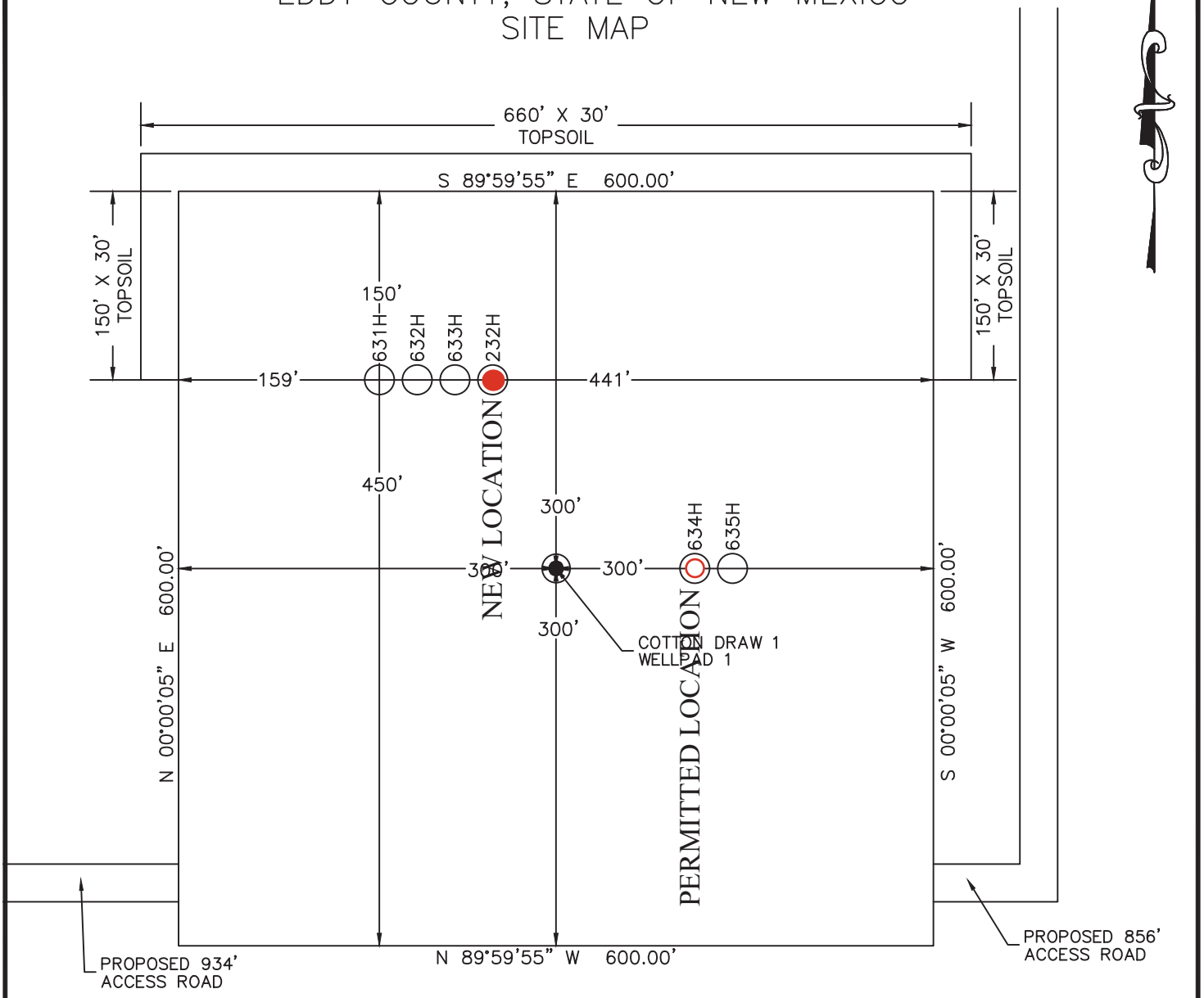
X Directional Plan
_____ Other, describe

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.

SECTION 1, TOWNSHIP 25 SOUTH, RANGE 31 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP



COTTON DRAW UNIT 631H
332' FNL 983' FWL SEC. 1
EL: 3474.8'
N: 424539.99
E: 725889.68

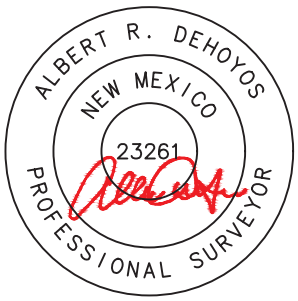
COTTON DRAW UNIT 632H
332' FNL 1013' FWL SEC. 1
EL: 3473.9'
N: 424539.99
E: 725919.68

COTTON DRAW UNIT 633H
332' FNL 1043' FWL SEC. 1
EL: 3473.4'
N: 424539.99
E: 725949.68

COTTON DRAW UNIT 635H
482' FNL 1263' FWL SEC. 1
EL: 3472.8'
N: 424389.99
E: 726170.29

COTTON DRAW 25-36 FED STATE COM 232H
332' FNL 1073' FWL SEC. 1
EL: 3472.4'
N: 424539.99
E: 725979.68

COTTON DRAW UNIT 634H
482' FNL 1233' FWL SEC. 1
EL: 3472.9'
N: 424389.99
E: 726140.29



0 125 250

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF NM 128 AND BUCK JACKSON ROAD, HEAD SOUTHWEST ON BUCK JACKSON ROAD FOR 4.7 MILES. TURN LEFT AND HEAD SOUTHEAST ON BUCKTHORN ROAD FOR 3.2 MILES. TURN LEFT HEADING EAST ON AN ACCESS ROAD FOR 1.9 MILES. TURN LEFT AND HEAD NORTH 0.7 MILES. TURN LEFT AND HEAD WEST FOR 0.3 OF A MILE AND THEN TURN RIGHT AND HEAD NORTH FOR 0.4 OF A MILE. TURN RIGHT AND HEAD EAST FOR 0.6 MILES TO THE BEGINNING OF THE PROPOSED COTTON DRAW 1 WELLPAD 1 ACCESS ROAD. TURN RIGHT AND HEAD SOUTH 856' TO THE SOUTHEAST CORNER OF THE COTTON DRAW 1 WELLPAD 1.

HORIZON ROW LLC		Drawn for: devon
DEVON ENERGY PRODUCTION CO., L.P.		
Drawn by: JEANNIE WALKER	Date: 07/20/2024	

C-102	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July, 2024
Submit Electronically Via OCD Permitting		Submittal Type: ☒ Initial Submittal ☐ Amended Report ☐ As Drilled

WELL LOCATION INFORMATION

API Number	Pool Code	Pool Name	
30-015-55297	96641	PADUCA; BONE SPRING	
Property Code	Property Name		Well Number
	COTTON DRAW 25-36 FED STATE COM		232H
OGRID No.	Operator Name		Ground Level Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.		3472.4'
Surface Owner: ☐State ☐Fee ☐Tribal ☒Federal		Mineral Owner: ☐State ☐Fee ☐Tribal ☒Federal	

Surface Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
	1	25-S	31-E	4	332' N	1073' W	32.165731	103.736619	EDDY

Bottom Hole Location

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
C	25	24-S	31-E		20' N	1900' W	32.195548	103.733904	EDDY

Dedicated Acres	Infill or Defining Well	Defining Well API	Overlapping Spacing Unit (Y/N)	Consolidation Code
319.36				
Order Numbers			Well setbacks are under Common Ownership: ☐Yes ☐No	

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
	36	24S	31E	2	66 S	1900 W	32.1667	103.7340	EDDY

First Take Point (FTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
	36	24-S	31-E	2	100' S	1900' W	32.166906	103.733944	EDDY

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Ft. from N/S	Ft. from E/W	Latitude	Longitude	County
C	25	24-S	31-E		100' N	1900' W	32.195328	103.733904	EDDY

	Spacing Unit Type ☒Horizontal ☐Vertical	Ground Floor Elevation:

OPERATOR CERTIFICATIONS

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.

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.

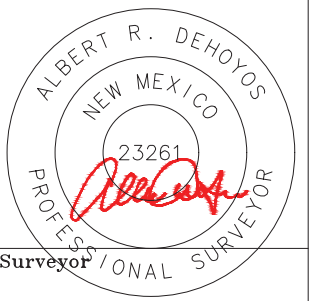
Signature: Chelsey Green Date: 10/01/2024

Printed Name: Chelsey Green

Email Address: chelsey.green@dvn.com

SURVEYOR CERTIFICATIONS

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.



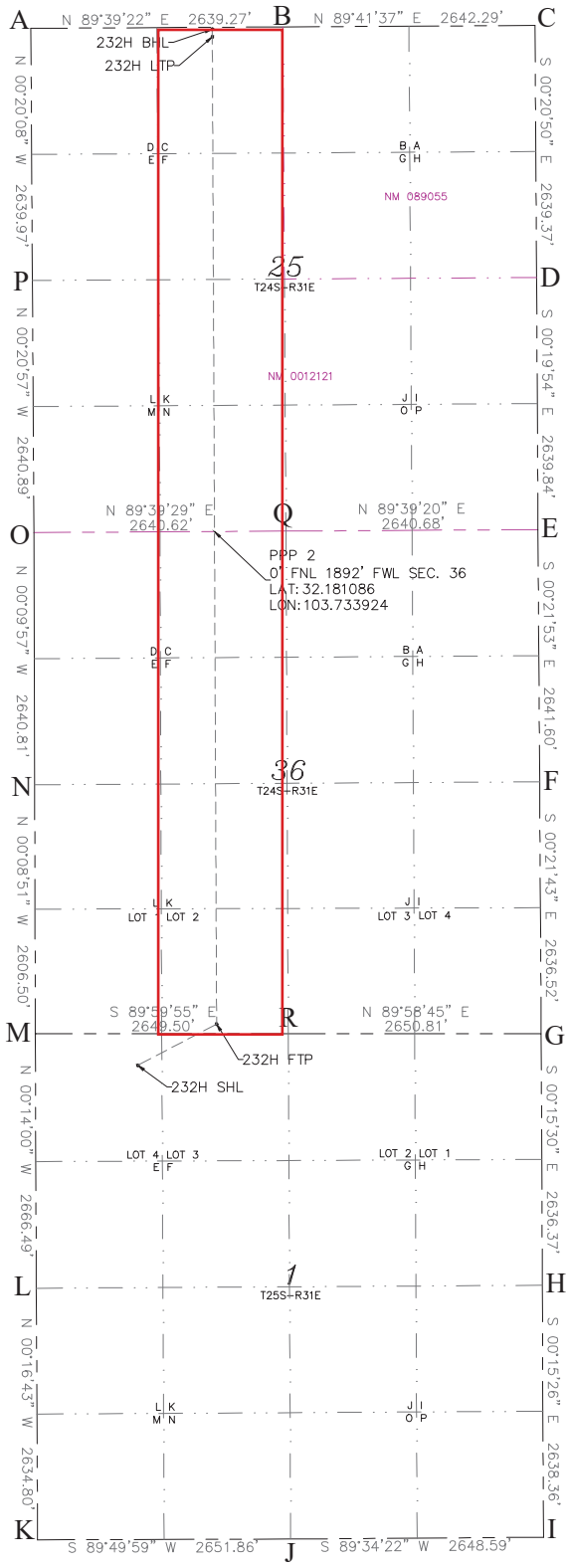
Signature and Seal of Professional Surveyor

Certificate Number	Date of Survey
23261	07/2024

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.



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:422236.58 E:730217.51
I= N:419598.25 E:730229.36
J= N:419578.50 E:727580.84
K= N:419570.77 E:724929.00
L= N:422205.54 E:724916.18
M= N:424872.01 E:724905.32
N= N:427478.51 E:724898.61
O= N:430119.30 E:724890.97
P= N:432760.15 E:724874.87
Q= N:430135.06 E:727531.54
R= N:424871.96 E:727554.82

SeAH

10-3/4" 45.50# 0.400" J-55

Dimensions (Nominal)

Outside Diameter	**10.750**	**in.**
Wall	**0.400**	**in.**
Inside Diameter	**9.950**	**in.**
Drift	**9.875**	**in.**
Weight, T&C	**45.500**	**lbs/ft**
Weight, PE	**44.260**	**lbs/ft**

Performance Properties

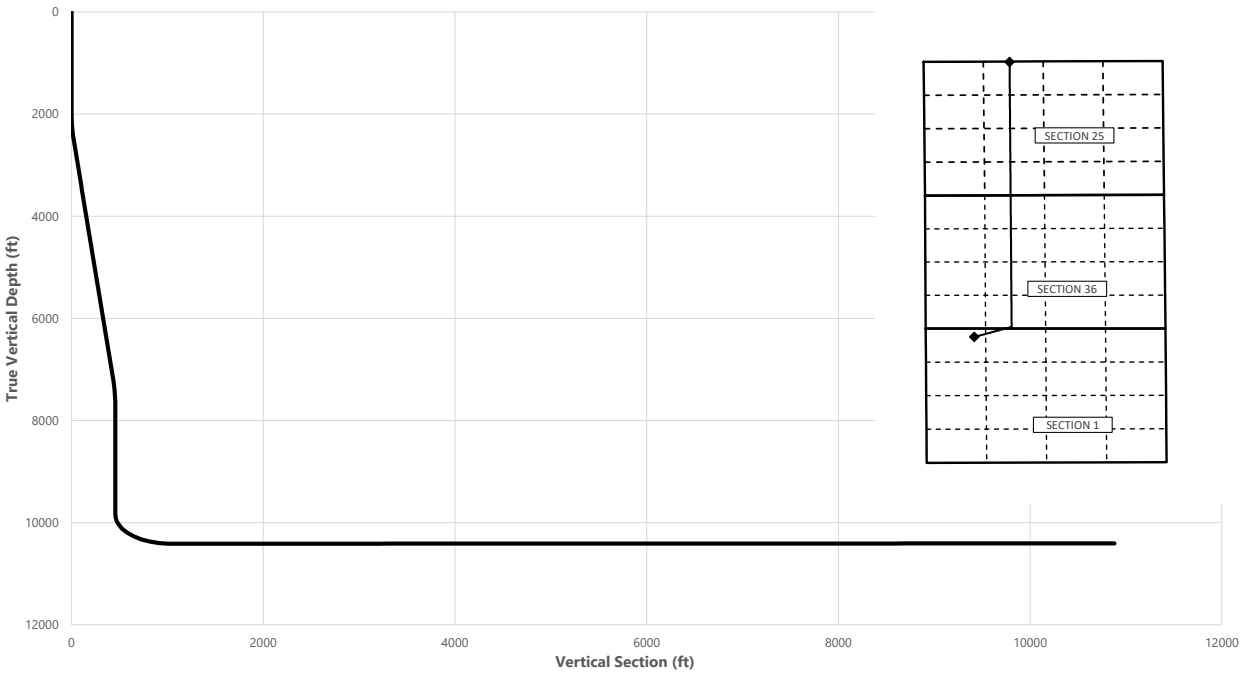
Collapse		**2090**	**psi**
Internal Yield Pressure at Minimum Yield			
	PE	**3580**	**psi**
	STC	**3580**	**psi**
	BTC	**3580**	**psi**
Yield Strength, Pipe Body		**715**	**1000 lbs**
Joint Strength			
	STC	**493**	**1000 lbs**
	BTC	**796**	**1000 lbs**
	BTC Special Clearance (11.25" OD Cplg)	**506**	**1000 lbs**

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

Well: COTTON DRAW 25-36 FED STATE COM 232H
County: Eddy
Wellbore: Permit Plan
Design: Permit Plan #1

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

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
2000.00	0.00	64.25	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	10.00	64.25	2497.47	18.91	39.20	21.67	2.00	Hold Tangent
7276.02	10.00	64.25	7200.93	379.21	786.19	434.59	0.00	Drop to Vertical
7776.02	0.00	64.25	7698.39	398.12	825.39	456.26	2.00	Hold Vertical
9916.67	0.00	359.75	9839.04	398.12	825.39	456.26	0.00	KOP
10817.02	90.03	359.75	10412.00	971.42	822.89	1027.90	10.00	Landing Point
20697.36	90.03	359.75	10406.00	10851.67	779.78	10879.65	0.00	BHL



Key Depths	MD (ft)	TVD (ft)
Rustler	660.00	660.00
Salt	1105.00	1105.00
Base of Salt	4340.50	4310.00
Delaware	4416.65	4385.00
Cherry Canyon	5487.93	5440.00
Brushy Canyon	6858.75	6790.00
Bone Spring 1st lime	8437.63	8360.00
Bone Spring 1st	8437.63	8360.00
Bone Spring 2nd / Point of Penetrati	10053.94	9975.00
exit	20617.36	10406.06

	MD (ft)	TVD (ft)	Lat (°)	Long (°)	Section Footages
SHL	0.00	0.00	32.1656	-103.7367	332' FNL, 1073' FWL of Sec 1 in T25S, R31E
KOP	9916.67	9839.04	32.1667	-103.7340	66' FSL, 1900' FWL of Sec 36 in T24S, R31E
Point of Penetration	10053.94	9975.00	32.1669	-103.7339	100' FSL, 1900' FWL of Sec 36 in T24S, R31E
Exit	20617.36	10406.06	32.1953	-103.7339	100' FNL , 1900' FWL of Sec 25 in T24S, R31E
BHL	20697.36	10406.00	32.1955	-103.7340	20' FNL, 1900' FWL of Sec 25 in T24S, R31E

	Y	X	MD
KOP	424938	726805	9916.67

devon

Well: COTTON DRAW 25-36 FED STATE COM 232H
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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	64.25	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	64.25	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	64.25	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	64.25	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	64.25	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	64.25	600.00	0.00	0.00	0.00	0.00	
660.00	0.00	64.25	660.00	0.00	0.00	0.00	0.00	Rustler
700.00	0.00	64.25	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	64.25	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	64.25	900.00	0.00	0.00	0.00	0.00	
1000.00	0.00	64.25	1000.00	0.00	0.00	0.00	0.00	
1100.00	0.00	64.25	1100.00	0.00	0.00	0.00	0.00	
1105.00	0.00	64.25	1105.00	0.00	0.00	0.00	0.00	Salt
1200.00	0.00	64.25	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	64.25	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	64.25	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	64.25	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	64.25	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	64.25	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	64.25	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	64.25	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	64.25	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	64.25	2099.98	0.76	1.57	0.87	2.00	
2200.00	4.00	64.25	2199.84	3.03	6.29	3.47	2.00	
2300.00	6.00	64.25	2299.45	6.82	14.14	7.81	2.00	
2400.00	8.00	64.25	2398.70	12.11	25.11	13.88	2.00	
2500.00	10.00	64.25	2497.47	18.91	39.20	21.67	2.00	Hold Tangent
2600.00	10.00	64.25	2595.95	26.45	54.84	30.31	0.00	
2700.00	10.00	64.25	2694.43	34.00	70.48	38.96	0.00	
2800.00	10.00	64.25	2792.91	41.54	86.12	47.61	0.00	
2900.00	10.00	64.25	2891.39	49.08	101.76	56.25	0.00	
3000.00	10.00	64.25	2989.87	56.63	117.40	64.90	0.00	
3100.00	10.00	64.25	3088.35	64.17	133.04	73.54	0.00	
3200.00	10.00	64.25	3186.83	71.72	148.68	82.19	0.00	
3300.00	10.00	64.25	3285.31	79.26	164.32	90.83	0.00	
3400.00	10.00	64.25	3383.79	86.80	179.96	99.48	0.00	
3500.00	10.00	64.25	3482.27	94.35	195.61	108.13	0.00	
3600.00	10.00	64.25	3580.75	101.89	211.25	116.77	0.00	
3700.00	10.00	64.25	3679.23	109.44	226.89	125.42	0.00	
3800.00	10.00	64.25	3777.72	116.98	242.53	134.06	0.00	
3900.00	10.00	64.25	3876.20	124.53	258.17	142.71	0.00	
4000.00	10.00	64.25	3974.68	132.07	273.81	151.35	0.00	
4100.00	10.00	64.25	4073.16	139.61	289.45	160.00	0.00	
4200.00	10.00	64.25	4171.64	147.16	305.09	168.65	0.00	
4300.00	10.00	64.25	4270.12	154.70	320.73	177.29	0.00	
4340.50	10.00	64.25	4310.00	157.76	327.06	180.79	0.00	Base of Salt
4400.00	10.00	64.25	4368.60	162.25	336.37	185.94	0.00	
4416.65	10.00	64.25	4385.00	163.50	338.97	187.38	0.00	Delaware
4500.00	10.00	64.25	4467.08	169.79	352.01	194.58	0.00	
4600.00	10.00	64.25	4565.56	177.33	367.65	203.23	0.00	
4700.00	10.00	64.25	4664.04	184.88	383.29	211.87	0.00	
4800.00	10.00	64.25	4762.52	192.42	398.93	220.52	0.00	
4900.00	10.00	64.25	4861.00	199.97	414.57	229.17	0.00	
5000.00	10.00	64.25	4959.48	207.51	430.21	237.81	0.00	
5100.00	10.00	64.25	5057.97	215.05	445.85	246.46	0.00	
5200.00	10.00	64.25	5156.45	222.60	461.49	255.10	0.00	
5300.00	10.00	64.25	5254.93	230.14	477.13	263.75	0.00	
5400.00	10.00	64.25	5353.41	237.69	492.77	272.39	0.00	
5487.93	10.00	64.25	5440.00	244.32	506.53	280.00	0.00	Cherry Canyon
5500.00	10.00	64.25	5451.89	245.23	508.41	281.04	0.00	
5600.00	10.00	64.25	5550.37	252.77	524.05	289.69	0.00	
5700.00	10.00	64.25	5648.85	260.32	539.69	298.33	0.00	
5800.00	10.00	64.25	5747.33	267.86	555.34	306.98	0.00	
5900.00	10.00	64.25	5845.81	275.41	570.98	315.62	0.00	
6000.00	10.00	64.25	5944.29	282.95	586.62	324.27	0.00	
6100.00	10.00	64.25	6042.77	290.49	602.26	332.91	0.00	
6200.00	10.00	64.25	6141.25	298.04	617.90	341.56	0.00	
6300.00	10.00	64.25	6239.73	305.58	633.54	350.21	0.00	
6400.00	10.00	64.25	6338.22	313.13	649.18	358.85	0.00	

devon

Well: COTTON DRAW 25-36 FED STATE COM 232H
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Wellbore: Permit Plan
Design: Permit Plan #1

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

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
6500.00	10.00	64.25	6436.70	320.67	664.82	367.50	0.00	
6600.00	10.00	64.25	6535.18	328.22	680.46	376.14	0.00	
6700.00	10.00	64.25	6633.66	335.76	696.10	384.79	0.00	
6800.00	10.00	64.25	6732.14	343.30	711.74	393.43	0.00	
6858.75	10.00	64.25	6790.00	347.74	720.93	398.51	0.00	Brushy Canyon
6900.00	10.00	64.25	6830.62	350.85	727.38	402.08	0.00	
7000.00	10.00	64.25	6929.10	358.39	743.02	410.73	0.00	
7100.00	10.00	64.25	7027.58	365.94	758.66	419.37	0.00	
7200.00	10.00	64.25	7126.06	373.48	774.30	428.02	0.00	
7276.02	10.00	64.25	7200.93	379.21	786.19	434.59	0.00	Drop to Vertical
7300.00	9.52	64.25	7224.56	380.98	789.85	436.61	2.00	
7400.00	7.52	64.25	7323.45	387.42	803.20	443.99	2.00	
7500.00	5.52	64.25	7422.80	392.35	813.43	449.64	2.00	
7600.00	3.52	64.25	7522.48	395.77	820.52	453.57	2.00	
7700.00	1.52	64.25	7622.38	397.68	824.48	455.76	2.00	
7776.02	0.00	64.25	7698.39	398.12	825.39	456.26	2.00	Hold Vertical
7800.00	0.00	359.75	7722.37	398.12	825.39	456.26	0.00	
7900.00	0.00	359.75	7822.37	398.12	825.39	456.26	0.00	
8000.00	0.00	359.75	7922.37	398.12	825.39	456.26	0.00	
8100.00	0.00	359.75	8022.37	398.12	825.39	456.26	0.00	
8200.00	0.00	359.75	8122.37	398.12	825.39	456.26	0.00	
8300.00	0.00	359.75	8222.37	398.12	825.39	456.26	0.00	
8400.00	0.00	359.75	8322.37	398.12	825.39	456.26	0.00	
8437.63	0.00	359.75	8360.00	398.12	825.39	456.26	0.00	Bone Spring 1st lime
8500.00	0.00	359.75	8422.37	398.12	825.39	456.26	0.00	
8600.00	0.00	359.75	8522.37	398.12	825.39	456.26	0.00	
8700.00	0.00	359.75	8622.37	398.12	825.39	456.26	0.00	
8800.00	0.00	359.75	8722.37	398.12	825.39	456.26	0.00	
8900.00	0.00	359.75	8822.37	398.12	825.39	456.26	0.00	
9000.00	0.00	359.75	8922.37	398.12	825.39	456.26	0.00	
9100.00	0.00	359.75	9022.37	398.12	825.39	456.26	0.00	
9200.00	0.00	359.75	9122.37	398.12	825.39	456.26	0.00	
9300.00	0.00	359.75	9222.37	398.12	825.39	456.26	0.00	
9400.00	0.00	359.75	9322.37	398.12	825.39	456.26	0.00	
9497.63	0.00	359.75	9420.00	398.12	825.39	456.26	0.00	Bone Spring 1st
9500.00	0.00	359.75	9422.37	398.12	825.39	456.26	0.00	
9600.00	0.00	359.75	9522.37	398.12	825.39	456.26	0.00	
9700.00	0.00	359.75	9622.37	398.12	825.39	456.26	0.00	
9800.00	0.00	359.75	9722.37	398.12	825.39	456.26	0.00	
9900.00	0.00	359.75	9822.37	398.12	825.39	456.26	0.00	
9916.67	0.00	359.75	9839.04	398.12	825.39	456.26	0.00	KOP
10000.00	8.33	359.75	9922.08	404.17	825.37	462.29	10.00	
10053.94	13.73	359.75	9975.00	414.49	825.32	472.57	10.00	Bone Spring 2nd / Point of Penetration
10100.00	18.33	359.75	10019.26	427.20	825.27	485.25	10.00	
10200.00	28.33	359.75	10110.97	466.76	825.09	524.70	10.00	
10300.00	38.33	359.75	10194.41	521.64	824.85	579.42	10.00	
10400.00	48.33	359.75	10267.05	590.18	824.55	647.76	10.00	
10500.00	58.33	359.75	10326.69	670.29	824.20	727.64	10.00	
10600.00	68.33	359.75	10371.52	759.53	823.81	816.63	10.00	
10700.00	78.33	359.75	10400.16	855.21	823.40	912.03	10.00	
10800.00	88.33	359.75	10411.76	954.41	822.96	1010.94	10.00	
10817.02	90.03	359.75	10412.00	971.42	822.89	1027.90	10.00	Landing Point
10900.00	90.03	359.75	10411.95	1054.40	822.53	1110.65	0.00	
11000.00	90.03	359.75	10411.89	1154.40	822.09	1210.36	0.00	
11100.00	90.03	359.75	10411.83	1254.40	821.65	1310.07	0.00	
11200.00	90.03	359.75	10411.77	1354.40	821.22	1409.78	0.00	
11300.00	90.03	359.75	10411.71	1454.40	820.78	1509.49	0.00	
11400.00	90.03	359.75	10411.65	1554.40	820.34	1609.20	0.00	
11500.00	90.03	359.75	10411.59	1654.40	819.91	1708.91	0.00	
11600.00	90.03	359.75	10411.53	1754.40	819.47	1808.62	0.00	
11700.00	90.03	359.75	10411.46	1854.40	819.03	1908.33	0.00	
11800.00	90.03	359.75	10411.40	1954.40	818.60	2008.04	0.00	
11900.00	90.03	359.75	10411.34	2054.39	818.16	2107.75	0.00	
12000.00	90.03	359.75	10411.28	2154.39	817.72	2207.46	0.00	
12100.00	90.03	359.75	10411.22	2254.39	817.29	2307.17	0.00	
12200.00	90.03	359.75	10411.16	2354.39	816.85	2406.88	0.00	
12300.00	90.03	359.75	10411.10	2454.39	816.41	2506.59	0.00	
12400.00	90.03	359.75	10411.04	2554.39	815.98	2606.30	0.00	
12500.00	90.03	359.75	10410.98	2654.39	815.54	2706.02	0.00	
12600.00	90.03	359.75	10410.92	2754.39	815.10	2805.73	0.00	

devon

Well: COTTON DRAW 25-36 FED STATE COM 232H
County: Eddy
Wellbore: Permit Plan
Design: Permit Plan #1

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

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12700.00	90.03	359.75	10410.86	2854.39	814.67	2905.44	0.00	
12800.00	90.03	359.75	10410.80	2954.39	814.23	3005.15	0.00	
12900.00	90.03	359.75	10410.74	3054.38	813.79	3104.86	0.00	
13000.00	90.03	359.75	10410.68	3154.38	813.35	3204.57	0.00	
13100.00	90.03	359.75	10410.62	3254.38	812.92	3304.28	0.00	
13200.00	90.03	359.75	10410.56	3354.38	812.48	3403.99	0.00	
13300.00	90.03	359.75	10410.50	3454.38	812.04	3503.70	0.00	
13400.00	90.03	359.75	10410.43	3554.38	811.61	3603.41	0.00	
13500.00	90.03	359.75	10410.37	3654.38	811.17	3703.12	0.00	
13600.00	90.03	359.75	10410.31	3754.38	810.73	3802.83	0.00	
13700.00	90.03	359.75	10410.25	3854.38	810.30	3902.54	0.00	
13800.00	90.03	359.75	10410.19	3954.38	809.86	4002.25	0.00	
13900.00	90.03	359.75	10410.13	4054.37	809.42	4101.96	0.00	
14000.00	90.03	359.75	10410.07	4154.37	808.99	4201.67	0.00	
14100.00	90.03	359.75	10410.01	4254.37	808.55	4301.38	0.00	
14200.00	90.03	359.75	10409.95	4354.37	808.11	4401.09	0.00	
14300.00	90.03	359.75	10409.89	4454.37	807.68	4500.80	0.00	
14400.00	90.03	359.75	10409.83	4554.37	807.24	4600.52	0.00	
14500.00	90.03	359.75	10409.77	4654.37	806.80	4700.23	0.00	
14600.00	90.03	359.75	10409.71	4754.37	806.36	4799.94	0.00	
14700.00	90.03	359.75	10409.65	4854.37	805.93	4899.65	0.00	
14800.00	90.03	359.75	10409.59	4954.37	805.49	4999.36	0.00	
14900.00	90.03	359.75	10409.53	5054.37	805.05	5099.07	0.00	
15000.00	90.03	359.75	10409.47	5154.36	804.62	5198.78	0.00	
15100.00	90.03	359.75	10409.40	5254.36	804.18	5298.49	0.00	
15200.00	90.03	359.75	10409.34	5354.36	803.74	5398.20	0.00	
15300.00	90.03	359.75	10409.28	5454.36	803.31	5497.91	0.00	
15400.00	90.03	359.75	10409.22	5554.36	802.87	5597.62	0.00	
15500.00	90.03	359.75	10409.16	5654.36	802.43	5697.33	0.00	
15600.00	90.03	359.75	10409.10	5754.36	802.00	5797.04	0.00	
15700.00	90.03	359.75	10409.04	5854.36	801.56	5896.75	0.00	
15800.00	90.03	359.75	10408.98	5954.36	801.12	5996.46	0.00	
15900.00	90.03	359.75	10408.92	6054.36	800.69	6096.17	0.00	
16000.00	90.03	359.75	10408.86	6154.35	800.25	6195.88	0.00	
16100.00	90.03	359.75	10408.80	6254.35	799.81	6295.59	0.00	
16200.00	90.03	359.75	10408.74	6354.35	799.38	6395.30	0.00	
16300.00	90.03	359.75	10408.68	6454.35	798.94	6495.02	0.00	
16400.00	90.03	359.75	10408.62	6554.35	798.50	6594.73	0.00	
16500.00	90.03	359.75	10408.56	6654.35	798.06	6694.44	0.00	
16600.00	90.03	359.75	10408.50	6754.35	797.63	6794.15	0.00	
16700.00	90.03	359.75	10408.44	6854.35	797.19	6893.86	0.00	
16800.00	90.03	359.75	10408.37	6954.35	796.75	6993.57	0.00	
16900.00	90.03	359.75	10408.31	7054.35	796.32	7093.28	0.00	
17000.00	90.03	359.75	10408.25	7154.34	795.88	7192.99	0.00	
17100.00	90.03	359.75	10408.19	7254.34	795.44	7292.70	0.00	
17200.00	90.03	359.75	10408.13	7354.34	795.01	7392.41	0.00	
17300.00	90.03	359.75	10408.07	7454.34	794.57	7492.12	0.00	
17400.00	90.03	359.75	10408.01	7554.34	794.13	7591.83	0.00	
17500.00	90.03	359.75	10407.95	7654.34	793.70	7691.54	0.00	
17600.00	90.03	359.75	10407.89	7754.34	793.26	7791.25	0.00	
17700.00	90.03	359.75	10407.83	7854.34	792.82	7890.96	0.00	
17800.00	90.03	359.75	10407.77	7954.34	792.39	7990.67	0.00	
17900.00	90.03	359.75	10407.71	8054.34	791.95	8090.38	0.00	
18000.00	90.03	359.75	10407.65	8154.34	791.51	8190.09	0.00	
18100.00	90.03	359.75	10407.59	8254.33	791.07	8289.80	0.00	
18200.00	90.03	359.75	10407.53	8354.33	790.64	8389.52	0.00	
18300.00	90.03	359.75	10407.47	8454.33	790.20	8489.23	0.00	
18400.00	90.03	359.75	10407.41	8554.33	789.76	8588.94	0.00	
18500.00	90.03	359.75	10407.34	8654.33	789.33	8688.65	0.00	
18600.00	90.03	359.75	10407.28	8754.33	788.89	8788.36	0.00	
18700.00	90.03	359.75	10407.22	8854.33	788.45	8888.07	0.00	
18800.00	90.03	359.75	10407.16	8954.33	788.02	8987.78	0.00	
18900.00	90.03	359.75	10407.10	9054.33	787.58	9087.49	0.00	
19000.00	90.03	359.75	10407.04	9154.33	787.14	9187.20	0.00	
19100.00	90.03	359.75	10406.98	9254.32	786.71	9286.91	0.00	
19200.00	90.03	359.75	10406.92	9354.32	786.27	9386.62	0.00	
19300.00	90.03	359.75	10406.86	9454.32	785.83	9486.33	0.00	
19400.00	90.03	359.75	10406.80	9554.32	785.40	9586.04	0.00	
19500.00	90.03	359.75	10406.74	9654.32	784.96	9685.75	0.00	
19600.00	90.03	359.75	10406.68	9754.32	784.52	9785.46	0.00	

devon

Well: COTTON DRAW 25-36 FED STATE COM 232H
County: Eddy
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Geodetic System: US State Plane 1983
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Ellipsoid: Clarke 1866
Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
19700.00	90.03	359.75	10406.62	9854.32	784.08	9885.17	0.00	
19800.00	90.03	359.75	10406.56	9954.32	783.65	9984.88	0.00	
19900.00	90.03	359.75	10406.50	10054.32	783.21	10084.59	0.00	
20000.00	90.03	359.75	10406.44	10154.32	782.77	10184.30	0.00	
20100.00	90.03	359.75	10406.38	10254.31	782.34	10284.02	0.00	
20200.00	90.03	359.75	10406.31	10354.31	781.90	10383.73	0.00	
20300.00	90.03	359.75	10406.25	10454.31	781.46	10483.44	0.00	
20400.00	90.03	359.75	10406.19	10554.31	781.03	10583.15	0.00	
20500.00	90.03	359.75	10406.13	10654.31	780.59	10682.86	0.00	
20600.00	90.03	359.75	10406.07	10754.31	780.15	10782.57	0.00	
20617.36	90.03	359.75	10406.06	10771.67	780.08	10799.88	0.00	exit
20697.36	90.03	359.75	10406.00	10851.67	779.78	10879.65	0.00	BHL

Section 2 - Blowout Preventer Testing Procedure

Variance Request

Devon Energy requests to only test BOP connection breaks after drilling out of surface casing and while skidding between wells which conforms to API Standard 53 and industry standards. This test will include the Top Pipe Rams, HCR, Kill Line Check Valve, QDC (quick disconnect to wellhead) and Shell of the 10M BOPE to 5M for 10 minutes. If a break to the flex hose that runs to the choke manifold is required due to repositioning from a skid, the HCR will remain open during the shell test to include that additional break. The variance only pertains to intermediate hole-sections and no deeper than the Bone Springs Formation where 5M BOP tests are required. The initial BOP test will follow 43 CFR 3172, and subsequent tests following a skid will only test connections that are broken. The annular preventer will be tested to 100% working pressure. This variance will meet or exceed 43 CFR 3172 per the following: Devon Energy will perform a full BOP test per 43 CFR 3172 before drilling out of the intermediate casing string(s) and starting the production hole, before starting any hole section that requires a 10M test, before the expiration of the allotted 14-days for 5M intermediate batch drilling or when the drilling rig is fully mobilized to a new well pad, whichever is sooner. We will utilize a 200' TVD tolerance between intermediate shoes as the cutoff for a full BOP test. The BLM will be contacted 4hrs prior to a BOPE test. The BLM will be notified if and when a well control event is encountered. Break test will be a 14 day interval and not a 30 day full BOPE test interval. If in the event break testing is not utilized, then a full BOPE test would be conducted.

1. Well Control Response:

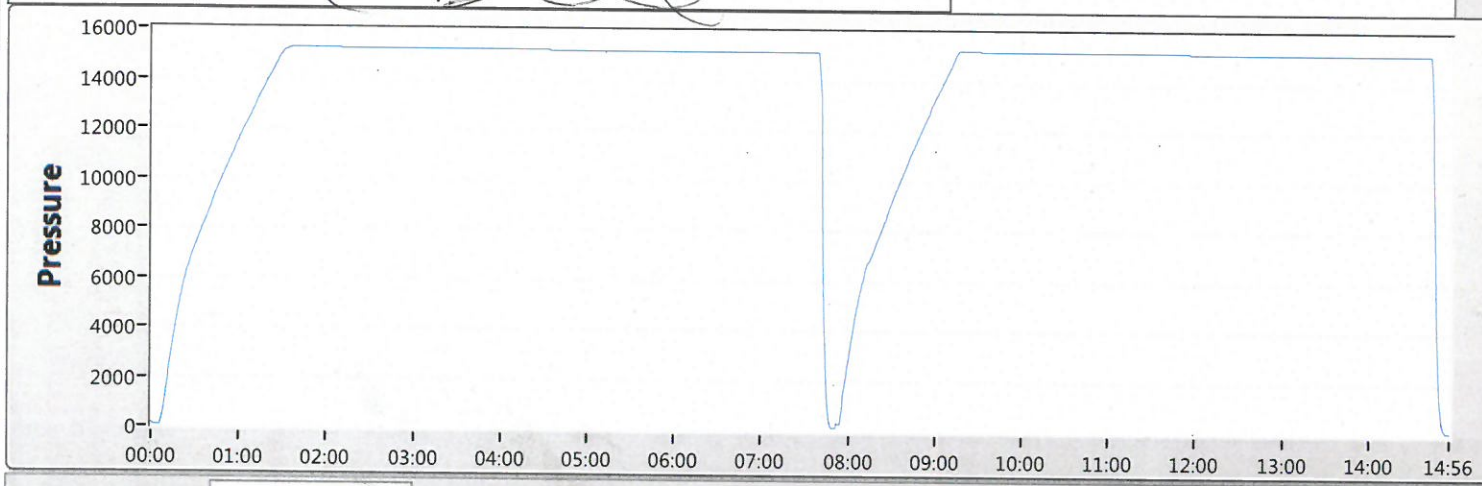
1. Primary barrier remains fluid
2. In the event of an influx due to being underbalanced and after a realized gain or flow, the order of closing BOPE is as follows:
   a) Annular first
   b) If annular were to not hold, Upper pipe rams second (which were tested on the skid BOP test)
   c) If the Upper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

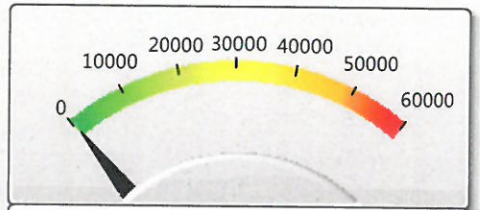
Cactus Wellhead

2-9-17 EBell

80.7 °F

15:49





50

Date 02-09-17

Tested By E.BELL

Transducer bay2

Transducer Serial 181504

Calibration Date 9/6/15

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

Start | Stop | Zero | Config | Save | Print | EXIT

U. S. Steel Tubular Products

2/21/2024 7:47:29 AM

5.500" 20.00lb/ft (0.361" Wall) P110 HP USS-CDC HTQ®

MECHANICAL PROPERTIES	Pipe	USS-CDC HTQ®		--
Minimum Yield Strength	125,000	--	psi	--
Maximum Yield Strength	140,000	--	psi	--
Minimum Tensile Strength	130,000	--	psi	--
DIMENSIONS	**Pipe**	**USS-CDC HTQ®**		**--**
Outside Diameter	5.500	6.300	in.	--
Wall Thickness	0.361	--	in.	--
Inside Diameter	4.778	4.778	in.	--
Standard Drift	4.653	4.653	in.	--
Alternate Drift	--	--	in.	--
Nominal Linear Weight, T&C	20.00	--	lb/ft	--
Plain End Weight	19.83	--	lb/ft	--
SECTION AREA	**Pipe**	**USS-CDC HTQ®**		**--**
Critical Area	5.828	5.828	sq. in.	--
Joint Efficiency	--	97.0	%	--
PERFORMANCE	**Pipe**	**USS-CDC HTQ®**		**--**
Minimum Collapse Pressure	13,150	13,150	psi	--
External Pressure Leak Resistance	--	10,520	psi	--
Minimum Internal Yield Pressure	14,360	14,360	psi	--
Minimum Pipe Body Yield Strength	729,000	--	lb	--
Joint Strength	--	707,000	lb	--
Compression Rating	--	424,000	lb	--
Reference Length	--	23,567	ft	--
Maximum Uniaxial Bend Rating	--	60.6	deg/100 ft	--
MAKE-UP DATA	**Pipe**	**USS-CDC HTQ®**		**--**
Make-Up Loss	--	4.63	in.	--
Minimum Make-Up Torque	--	14,500	ft-lb	--
Maximum Make-Up Torque	--	20,500	ft-lb	--
Connection Yield Torque	--	25,300	ft-lb	--

UNCONTROLLED

Notes

1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness and Specified Minimum Yield Strength (SMYS).
2. Uniaxial bending rating shown is structural only, and equal to compression efficiency.
3. Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
4. Reference length is calculated by joint strength divided by nominal threaded and coupled weight with 1.5 safety factor.
5. Connection external pressure leak resistance has been verified to 80% API pipe body collapse pressure following the guidelines of API 5C5 Cal II.

Legal Notice

USS - CDC HTQ® (High Torque Casing Drilling Connection) is a trademark of U. S. Steel Corporation. This product is a modified API Buttress threaded and coupled connection designed for drilling with casing applications. 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

SeAH

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

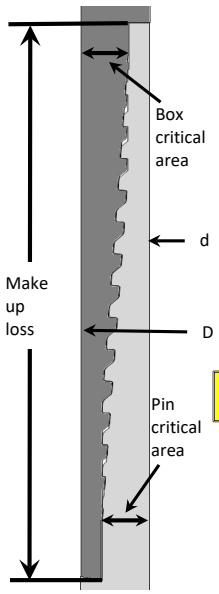
Collapse, PE	**1130**	**psi**
Internal Yields Pressure		
PE	**2730**	**psi**
STC	**2730**	**PSI**
BTC	**2730**	**psi**
Yield Strength, Pipe Body	**853**	**1000 lbs**
Joint Strength, STC	**514**	**1000 lbs**
Joint Strength, BTC	**909**	**1000 lbs**

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.

Metal One Corp.	MO-FXL	CDS#	MO-FXL 8-5/8 32.0
Metal One	*1 Pipe Body: Borusan P110HSCY MinYS125ksi 95%RBW Special Drift 7.875"		P110HSCY
			MinYS125ksi
			95%RBW SD7.875
	Connection Data Sheet	Date	16-Jan-24

Geometry

MO-FXL



Pipe Body

	Imperial		S.I.	
Grade *1	P110HSCY		P110HSCY	
MinYS *1	125	ksi	125	ksi
Pipe OD (D)	8 5/8	in	219.08	mm
Weight	32.00	lb/ft	47.68	kg/m
Actual weight	31.10		46.34	kg/m
Wall Thickness (t)	0.352	in	8.94	mm
Pipe ID (d)	7.921	in	201.19	mm
Pipe body cross section	9.149	in^2	5,902	mm^2
Special Drift Dia. *1	7.875	in	200.03	mm
-	-	-	-	-

Connection

Box OD (W)	8.625	in	219.08	mm
PIN ID	7.921	in	201.19	mm
Make up Loss	3.847	in	97.71	mm
Box Critical Area	5.853	in^2	3686	mm^2
Joint load efficiency	69	%	69	%
Thread Taper	1 / 10 (1.2" per ft)			
Number of Threads	5 TPI			

Performance

Performance Properties for Pipe Body

S.M.Y.S. *1	1,144	kips	5,087	kN
M.I.Y.P. *1	9,690	psi	66.83	MPa
Collapse Strength *1	4,300	psi	29.66	MPa

Note S.M.Y.S.= Specified Minimum YIELD Strength of Pipe body
M.I.Y.P. = Minimum Internal Yield Pressure of Pipe body

*1: Borusan: SOP-12-F05 Rev.2, 10/17/2023

P110HSCY: MinYS125ksi, 95%RBW, SD7.875, Collapse Strength 4,300psi

Performance Properties for Connection

Tensile Yield load	789 kips (69% of S.M.Y.S.)
Min. Compression Yield	789 kips (69% of S.M.Y.S.)
Internal Pressure	6,780 psi (70% of M.I.Y.P.)
External Pressure	100% of Collapse Strength
Max. DLS (deg. /100ft)	29

Recommended Torque

Min.	13,600	ft-lb	18,400	N-m
Opti.	14,900	ft-lb	20,200	N-m
Max.	16,200	ft-lb	21,900	N-m
Operational Max.	28,400	ft-lb	38,500	N-m

Note : Operational Max. torque can be applied for high torque application

Legal Notice
The use of this information is at the reader/user's risk and no warranty is implied or expressed by Metal One Corporation or its parents, subsidiaries or affiliates (herein collectively referred to as "Metal One") with respect to the use of information contained herein. The information provided on this 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 *http://www.mtlo.co.jp/mo-con/_images/top/WebsiteTerms_Active_20333287_1.pdf* the contents of which are incorporated by reference into this Connection Data Sheet.

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 405689

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 405689
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	Cement is required to circulate on both surface and intermediate1 strings of casing.	11/22/2024
ward.rikala	If cement is not circulated to surface during cementing operations, a Cement Bond Log (CBL) is required.	11/22/2024
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	11/22/2024