R	ecerved by OCD: S0/6/2023 12:40:40 PM		Sundry Print Repo		
	U.S. Department of the Interior BUREAU OF LAND MANAGEMENT		2012-10 200		
	Well Name: COTTON DRAW UNIT	Well Location: T24S / R31E / SEC 26 / NWNE /	County or Parish/State:		
	Well Number: 610H	Type of Well: OIL WELL	Allottee or Tribe Name:		
	Lease Number: NMNM012121	Unit or CA Name: COTTON DRAW UNIT	Unit or CA Number: NMNM70928X		
	US Well Number: 3001554069	Well Status: Approved Application for Permit to Drill	Operator: DEVON ENERGY PRODUCTION COMPANY LP		

Notice of Intent

Sundry ID: 2752610

Type of Submission: Notice of Intent

Date Sundry Submitted: 09/21/2023

Date proposed operation will begin: 09/21/2023

Type of Action: APD Change Time Sundry Submitted: 11:35

Procedure Description: Devon Energy Production Company L.P. respectfully requests the following changes to the approved APD: BHL change from 2620 FNL & 990 FEL, 35-24S-31E to 20 FSL & 1770 FEL, 2-25S-31E. Dedicated acreage revision. New leases have been added since approved APD and notification has been given. TVD/MD change from 12,165'/19,840' to 12,165'/27,719' Casing program change: Surface, Intermediate, & Production casing changes. Cement volume changes to accommodate casing change. Please see attached revised C-102, spec sheets, and drilling & directional plans.

NOI Attachments

Procedure Description

MB_Wellhd_10M_13.375_8.625_5.5_20230921113407.PDF

COTTON_DRAW_UNIT_610H_C_102_BHL_NOI_20230921113404.pdf

8.625in_32lb_P110EC_SPRINT_FJ_20230921113403.pdf

5.5in_17lb_P110EC_DWC_C_IS_PLUS_20230921113403.pdf

COTTON_DRAW_UNIT_610H_Directional_Plan_09_15_23_20230921113402.pdf

10.750_45.5_J55_20230921113402.pdf

COTTON_DRAW_UNIT_610H_20230921113401.pdf

Received by OCD: 10/6/2023 12:40:40 PM Well Name: COTTON DRAW UNIT	Well Location: T24S / R31E / SEC 26 / NWNE /	County or Parish/State: Page 2 of 58
Well Number: 610H	Type of Well: OIL WELL	Allottee or Tribe Name:
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US Well Number: 3001554069	Well Status: Approved Application for Permit to Drill	Operator: DEVON ENERGY PRODUCTION COMPANY LP

Conditions of Approval

Specialist Review

Cotton_Draw_Unit_610H_Sundry_ID_2752610_20230929091622.pdf

State:

Operator

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

Operator Electronic Signature: REBECCA DEAL
Name: DEVON ENERGY PRODUCTION COMPANY LP
Title: Regulatory Analyst
Street Address: 333 W SHERIDAN AVE
City: OKLAHOMA CITY
State: OK

Phone: (303) 299-1406

Email address: REBECCA.DEAL@DVN.COM

Field

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

BLM Point of Contact

BLM POC Name: LONG VO BLM POC Phone: 5752345972 Disposition: Approved Signature: Long Vo BLM POC Title: Petroleum Engineer BLM POC Email Address: LVO@BLM.GOV Disposition Date: 09/29/2023

Zip:

Signed on: SEP 21, 2023 11:34 AM

Received by OCD: 10/6/2023 12:40:40 PM

eceivea by OCD. 10/0/202	5 12.40.40 I M			Tuge 5 0j	
	UNITED STAT DEPARTMENT OF THE BUREAU OF LAND MAN	INTERIOR	0	ORM APPROVED MB No. 1004-0137 ires: October 31, 2021	
Do not use t		ORTS ON WELLS to drill or to re-enter an APD) for such proposals.	6. If Indian, Allottee o	r Tribe Name	
SUBMI	T IN TRIPLICATE - Other inst	ructions on page 2	7. If Unit of CA/Agree	ement, Name and/or No.	
1. Type of Well	Gas Well Other		8. Well Name and No.		
2. Name of Operator			9. API Well No.		
3a. Address		3b. Phone No. <i>(include area code)</i>	10. Field and Pool or I	10. Field and Pool or Exploratory Area	
4. Location of Well (Footage, Sec	., T.,R.,M., or Survey Description	ı)	11. Country or Parish,	State	
12.	CHECK THE APPROPRIATE I	BOX(ES) TO INDICATE NATURE	OF NOTICE, REPORT OR OTH	IER DATA	
TYPE OF SUBMISSION		ТҮР	E OF ACTION		
Notice of Intent	Acidize	Deepen Hydraulic Fracturing	Production (Start/Resume) Reclamation	Water Shut-Off Well Integrity	
Subsequent Report	Casing Repair Change Plans	New Construction Plug and Abandon	Recomplete Temporarily Abandon	Other	
Final Abandonment Notice		=	Water Disposal		
the proposal is to deepen dire- the Bond under which the wo completion of the involved op	ctionally or recomplete horizonta rk will be perfonned or provide the perations. If the operation results	Ily, give subsurface locations and me he Bond No. on file with BLM/BIA. in a multiple completion or recomple	easured and true vertical depths of Required subsequent reports mu etion in a new interval, a Form 3	rk and approximate duration thereof. If of all pertinent markers and zones. Attach st be filed within 30 days following 160-4 must be filed once testing has been he operator has detennined that the site	

14. I hereby certify that the foregoing is true and correct. Name (<i>Printed/Typed</i>)				
	Title			
Signature	Date			
THE SPACE FOR FEDE	RAL OR STATE	OFICE USE		
Approved by				
	Title	Date	5	
Conditions of approval, if any, are attached. Approval of this notice does not warrant of certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.				
Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any any false, fictitious or fraudulent statements or representations as to any matter within		l willfully to make to any depar	tment or agency of the United States	

(Instructions on page 2)

.

Page 4 of 58

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.

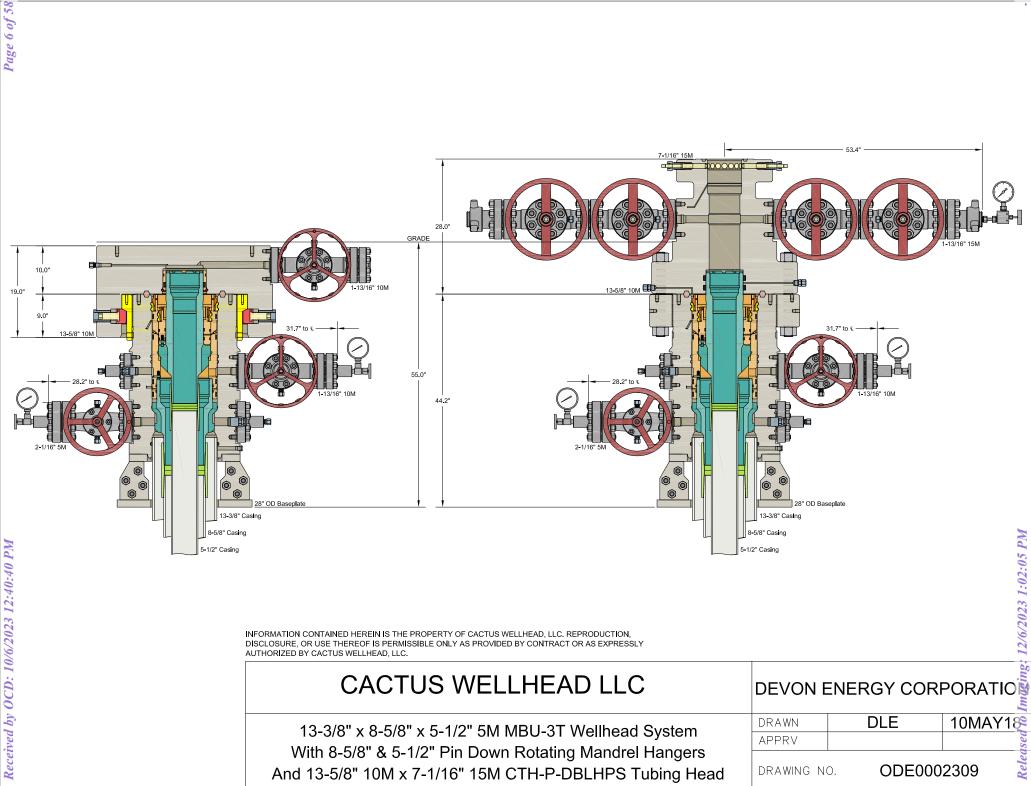
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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 / 180 FNL / 1385 FEL / TWSP: 24S / RANGE: 31E / SECTION: 26 / LAT: 32.1951045 / LONG: -103.7445221 (TVD: 0 feet, MD: 0 feet) PPP: NENE / 100 FNL / 990 FEL / TWSP: 24S / RANGE: 31E / SECTION: 26 / LAT: 32.1953247 / LONG: -103.7432455 (TVD: 11700 feet, MD: 11734 feet) BHL: SENE / 2620 FNL / 990 FEL / TWSP: 24S / RANGE: 31E / SECTION: 35 / LAT: 32.1738812 / LONG: -103.7432593 (TVD: 12165 feet, MD: 19840 feet)



Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

AMENDED REPORT

Page 7 of 58

WELL LOCATION AND ACREAGE DEDICATION PLAT ¹API Number 30-015-54069 ² Pool Code ³ Pool Name 98220 PURPLE SAGE; WOLFCAMP ⁴ Property Code ⁵ Property Name ⁶ Well Number 300635 **COTTON DRAW UNIT** 610H ⁷OGRID No. 8 Operator Name ⁹ Elevation 6137 **DEVON ENERGY PRODUCTION COMPANY, L.P.** 3541.2 Surface Location UL or lot no. Lot Idn Feet from the North/South line East/West line Section Township Range Feet from the County B 26 24 S 31 E 180 NORTH 1385 WEST EDDY "Bottom Hole Location If Different From Surface UL or lot no. Lot Idn Feet from the North/South line Feet from the East/West line Section Township Range County 0 2 25 S 31 E 20 SOUTH 1770 EAST EDDY ¹⁵ Order No. 12 Dedicated Acres ¹³ Joint or Infill 14 Consolidation Code 1,913.48

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

N89'40'18'E 2842.54 FT BN89'40'12'E 2643.19 FT € FTP - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385' - 1385'	COTTON DRAW UNIT 610H EL. = 3541.2 GEODETIC COORDINATES NAD 83 NMSP EAST SURFACE LOCATION N.= 435212.07 E.= 723475.78 LAT. = 32.1951045'N LONG. = 103.7445221'W KICK OFF POINT FIRST TAKE POINT (PPP 1)	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order
мву 39'50'E C	$\begin{array}{c} \text{CALLS 53' FNL, 1769' FEL} \\ \text{N.= 435337} \\ \text{E.=} & 723091 \\ \text{LAT. = } & 32.1954 \\ \text{LONG. = } & -103.7458 \\ \text{LONG. = } & -103.7458 \\ \text{LAST TAKE POINT} \\ \text{LONG. = } & -103.7458 \\ \text{LAST TAKE POINT} \\ \text{LONG. = } & 103.7457665'W \\ \begin{array}{c} \text{LAST TAKE POINT} \\ \text{N.= 419675.70} \\ \text{N.= 419675.70} \\ \text{LAT. = } & 32.1524031'N \\ \text{LONG. = } & 103.7458206'W \\ \end{array} \\ \begin{array}{c} \text{LAT. = } & 32.1524031'N \\ \text{LONG. = } & 103.7458206'W \\ \text{LAT. = } & 32.1524031'N \\ \text{LONG. = } & 103.7458206'W \\ \end{array} \\ \begin{array}{c} \text{LAT. = } & 32.1524031'N \\ \text{LONG. = } & 103.7458206'W \\ \end{array} \\ \begin{array}{c} \text{PPP 2 } & \text{PPP 3} \\ \text{CALLY FNL, 1374' FEL} \\ \text{N.= } & 427466.55 \\ \text{LAT. = } & 32.1736.15 \\ \end{array} \\ \begin{array}{c} \text{LAT. = } & 32.1736.15 \\ \end{array} \\ \begin{array}{c} \text{LAT. = } & 32.1736.15 \\ \text{LAT. = } & 32.1736.15 \\ \text{LAT. = } & 32.1736.15 \\ \end{array} \\ \begin{array}{c} \text{LAT. = } & 32.1736.15 \\ \text{LAT. = } & 32.1736.15 \\ \text{LAT. = } & 32.1736.15 \\ \end{array} \\ \begin{array}{c} \text{LAT. = } & 32.1736.15 \\ \text{LAT. = } & 32.17668892'N \\ \end{array} \end{array}$	heretofore entered by the division. <u>Rebecca Deal, Regulatory Analyst</u> Printed Name <u>rebecca.deal@dvn.com</u> E-mail Address ¹⁸ SURVEYOR CERTIFICATION
S89'55'14'E S89'55'14'E 2646.Bi FT 2646.Bi FT 2646.Bi FT PPP3 L 264.Bi FT PPP3 PPP3 L 264.Bi FT PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3 PPP3	CORNER COORDINATES TABLE NAD 83 NMSP EAST A - N.= 435400.01 E.= 724859.42 B - N.= 435384.79 E.= 722216.85 C - N.= 430102.29 E.= 722249.33 D - N.= 424873.17 E.= 722262.79 E - N.= 419578.11 E.= 7222671.47	I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. AUGUST 3, 2023 Date of Survey

Received by OCD: 10/6/2023 12:40:40 PM

l	r	l	t	e	r	l	t

API #

Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION COMPANY, L.P.	COTTON DRAW UNIT	610H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	26	24S	31E		53	FNL	1769	FEL	LEA
Latitude					Longitude		NAD		
32.1954						-103.745	83		

First Take Point (FTP)

UL B	Section 26	Township 24S	Range 31E	Lot	Feet 100	From N/S NORTH	Feet 1770	From E/W EAST	County EDDY
Latitude 32.1953241				Longitude 103.7457	665			NAD 83	

Last Take Point (LTP)

UL O	Section 2	Township 25S	Range 31E	Lot	Feet 20	From N/S SOUTH	Feet 1770	From E/W EAST	County EDDY
Latitude					Longitud	le		NAD	
32.1524031					103.7	103.7458205			83

Is this well the defining well for the Horizontal Spacing Unit? N

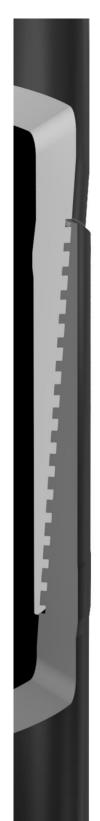
Is this well an infill well?

	_
Y	

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

API #		
Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION COMPANY, L.P.	COTTON DRAW UNIT	607H

KZ 06/29/2018



Issued on: 16 Sep. 2022 by Logan Van Gorp



HIGHER TORQUE VERSION

Nominal Cross Section Area

Nominal ID

			Connection Data Sheet
I	Grade	Alt Drift:	Connection

OD	Weight (lb/ft)	wall In.		Grade	Alt. Drift:	Connection
8 5/8 in.	Nominal: 32.00	0.352 in.		P110EC	7.875 in.	VAM [®] SPRINT-FJ
	Plain End: 31.13					
	PIPE PROPERTIES				CONNECTIO	N PROPERTIES
Nominal OD		8.625	in.	Connection Type		Semi-Premium Integral Flush

7.921

9.149

in.

sqin.

Grade Type	High	i Yield
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Ultimate Tensile Strength	135	ksi

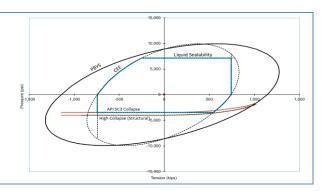
CONNECTION P	ROPERTIES	
Connection Type	Semi-Premium Inte	egral Flush
Connection OD (nom):	8.665	in.
Connection ID (nom):	7.954	in.
Make-Up Loss	2.614	in.
Critical Cross Section	5.978	sqin.
Tension Efficiency	65.0	% of pipe
Compression Efficiency	65.0	% of pipe
Internal Pressure Efficiency	80.0	% of pipe
External Pressure Efficiency	100	% of pipe

CONNECTION PERFORMANCES		
Tensile Yield Strength	744	klb
Compression Resistance	744	klb
Max. Internal Pressure	7,150	psi
Structural Collapse Resistance	4,000	psi
Max. Structural Bending	41	°/100ft
Max. Bending with Sealability	10	°/100ft

TORQUE VALUE	S	
Min. Make-up torque	23,000	ft.lb
Opt. Make-up torque	25,500	ft.lb
Max. Make-up torque	28,000	ft.lb
Max. Torque with Sealability (MTS)	48,000	ft.lb

* 87.5% RBW

VAM® SPRINT-FJ is a semi-premium flush connection designed for shale applications, where maximum clearance and high tension capacity are required for intermediate casing strings.



Do you need help on this product? - Remember no one knows VAM[®] like VAM[®]

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china@vamfieldservice.com baku@vamfieldservice.com singapore@vamfieldservice.com australia@vamfieldservice.com

Over 140 VAM® Specialists available worldwide 24/7 for Rig Site Assistance





Connection Data Sheet

OD (in.)	WEIGHT (Ibs./ft.)	WALL (in.)	GRADE	DRIFT (in.)	RBW%	CONNECTION
5.500	Nominal: 17.00 Plain End: 16.89	0.304	VST P110 EC	4.767	87.5	DWC/C-IS PLUS

PIPE PROPERTIES

Nominal OD	5.500	in.
Nominal ID	4.892	in.
Nominal Area	4.962	sq.in.
Grade Type	API 5CT	
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Tensile Strength 135		ksi
Yield Strength	620	klb
Ultimate Strength	670	klb
Min. Internal Yield	12,090	psi
High Collapse	8,840	psi

CONNECTION PROPERTIES

in.
in.
in.
in.
sq.in.
of pipe
of pipe
of pipe
of pipe
)))

CONNECTION PERFORMANCES

Yield Strength	620	klb
Parting Load	670	klb
Compression Rating	620	klb
Min. Internal Yield	12,090	psi
High Collapse	8,840	psi
Maximum Uniaxial Bend Rating	104.2	°/100 ft
Ref String Length w 1.4 Design Factor	26,050	ft

FIELD TORQUE VALUES

Min. Make-up Torque	13,400	ft.lbs
Opti. Make-up Torque	14,350	ft.lbs
Max. Make-up Torque	15,300	ft.lbs
Min. Shoulder Torque	1,340	ft.lbs
Max. Shoulder Torque	10,720	ft.lbs
Max. Delta Turn	0.200	Turns
Max Operational Torque	17,200	ft.lbs
Maximum Torsional Value (MTV)	18,920	ft.lbs

For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

All information is provided by VAM USA or its affiliates at user's sole risk, without liability for loss, damage or injury resulting from the use thereof; and on an "AS IS" basis without warranty or representation of any kind, whether express or implied, including without limitation any warranty of merchantability, fitness for purpose or completeness. This document and its contents are subject to change without notice. In no event shall VAM USA or its affiliates be responsible for any indirect, special, incidental, punitive, exemplary or consequential loss or damage (including without limitation, loss of use, loss of bargain, loss of revenue, profit or anticipated profit) however caused or arising, and whether such losses or damages were foreseeable or VAM USA or its affiliates was advised of the possibility of such damages.

05/23/2023 4:15 PM



VAM USA 2107 CityWest Boulevard Suite 1300 Houston, TX 77042 Phone: 713-479-3200 Fax: 713-479-3234 VAM USA Sales E-mail: <u>VAMUSAsales@vam-usa.com</u> Tech Support E-mail: <u>tech.support@vam-usa.com</u>

DWC Connection Data Notes:

- 1. DWC connections are available with a seal ring (SR) option.
- 2. All standard DWC/C connections are interchangeable for a given pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
- 3. Connection performance properties are based on nominal pipe body and connection dimensions.
- 4. DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
- 5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
- 6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
- 7. Bending efficiency is equal to the compression efficiency.
- 8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
- 9. Connection yield torque is not to be exceeded.
- Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
- 11. DWC connections will accommodate API standard drift diameters.
- 12. DWC/C family of connections are compatible with API Buttress BTC connections. Please contact tech.support@vam-usa.com for details on connection ratings and make-up.

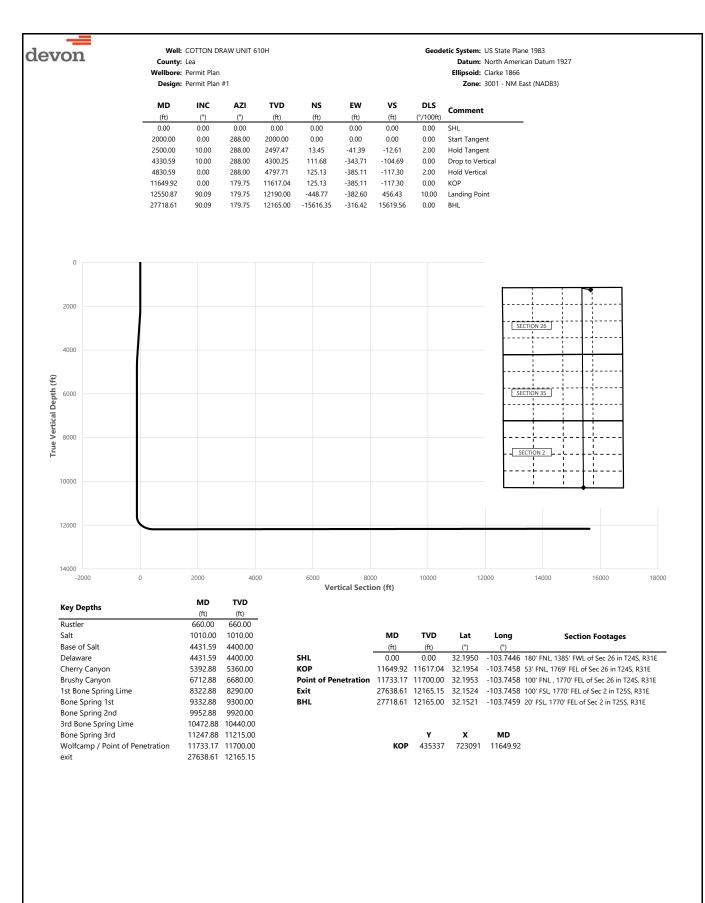
Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

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devon				RAW UNIT 61	OH				Geodetic System: US State Plane 1983
		County: Wellbore:	Lea Permit Plan						Datum: North American Datum 1927 Ellipsoid: Clarke 1866
			Permit Plan						Zone: 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	Comment
_	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	
	0.00 100.00	0.00 0.00	0.00 288.00	0.00 100.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	SHL
	200.00	0.00	288.00	200.00	0.00	0.00	0.00	0.00	
	300.00	0.00	288.00	300.00	0.00	0.00	0.00	0.00	
	400.00	0.00	288.00	400.00	0.00	0.00	0.00	0.00	
	500.00	0.00	288.00	500.00	0.00 0.00	0.00	0.00	0.00 0.00	
	600.00 660.00	0.00 0.00	288.00 288.00	600.00 660.00	0.00	0.00 0.00	0.00 0.00	0.00	Rustler
	700.00	0.00	288.00	700.00	0.00	0.00	0.00	0.00	
	800.00	0.00	288.00	800.00	0.00	0.00	0.00	0.00	
	900.00	0.00	288.00	900.00	0.00	0.00	0.00	0.00	
	1000.00	0.00	288.00	1000.00	0.00	0.00	0.00	0.00	C-H
	1010.00 1100.00	0.00 0.00	288.00 288.00	1010.00 1100.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	Salt
	1200.00	0.00	288.00	1200.00	0.00	0.00	0.00	0.00	
	1300.00	0.00	288.00	1300.00	0.00	0.00	0.00	0.00	
	1400.00	0.00	288.00	1400.00	0.00	0.00	0.00	0.00	
	1500.00	0.00	288.00	1500.00	0.00	0.00	0.00	0.00	
	1600.00 1700.00	0.00 0.00	288.00 288.00	1600.00 1700.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	
	1800.00	0.00	288.00	1800.00	0.00	0.00	0.00	0.00	
	1900.00	0.00	288.00	1900.00	0.00	0.00	0.00	0.00	
	2000.00	0.00	288.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
	2100.00	2.00	288.00	2099.98	0.54	-1.66	-0.51	2.00	
	2200.00 2300.00	4.00 6.00	288.00 288.00	2199.84 2299.45	2.16 4.85	-6.64 -14.93	-2.02 -4.55	2.00 2.00	
	2400.00	8.00	288.00	2398.70	8.62	-26.52	-8.08	2.00	
	2500.00	10.00	288.00	2497.47	13.45	-41.39	-12.61	2.00	Hold Tangent
	2600.00	10.00	288.00	2595.95	18.82	-57.91	-17.64	0.00	
	2700.00	10.00	288.00	2694.43	24.18	-74.42	-22.67	0.00	
	2800.00 2900.00	10.00 10.00	288.00 288.00	2792.91 2891.39	29.55 34.91	-90.94 -107.45	-27.70 -32.73	0.00 0.00	
	3000.00	10.00	288.00	2989.87	40.28	-123.97	-37.76	0.00	
	3100.00	10.00	288.00	3088.35	45.64	-140.48	-42.79	0.00	
	3200.00	10.00	288.00	3186.83	51.01	-157.00	-47.82	0.00	
	3300.00	10.00	288.00	3285.31	56.38	-173.51	-52.85	0.00	
	3400.00 3500.00	10.00 10.00	288.00 288.00	3383.79 3482.27	61.74 67.11	-190.03 -206.54	-57.88 -62.91	0.00 0.00	
	3600.00	10.00	288.00	3482.27	72.47	-223.06	-67.94	0.00	
	3700.00	10.00	288.00	3679.23	77.84	-239.57	-72.97	0.00	
	3800.00	10.00	288.00	3777.72	83.21	-256.09	-78.00	0.00	
	3900.00	10.00	288.00	3876.20	88.57	-272.60	-83.03	0.00	
	4000.00 4100.00	10.00 10.00	288.00 288.00	3974.68 4073.16	93.94 99.30	-289.12 -305.63	-88.06 -93.09	0.00 0.00	
	4200.00	10.00	288.00	4073.10	104.67	-322.15	-98.12	0.00	
	4300.00	10.00	288.00	4270.12	110.04	-338.66	-103.15	0.00	
	4330.59	10.00	288.00	4300.25	111.68	-343.71	-104.69	0.00	Drop to Vertical
	4400.00	8.61	288.00	4368.74	115.15	-354.39	-107.94	2.00	
	4431.59 4500.00	7.98 6.61	288.00 288.00	4400.00 4467.85	116.56 119.24	-358.72 -366.98	-109.26 -111.78	2.00 2.00	Base of Salt, Delaware
	4600.00	4.61	288.00	4567.37	122.26	-376.28	-114.61	2.00	
	4700.00	2.61	288.00	4667.17	124.21	-382.28	-116.44	2.00	
	4800.00	0.61	288.00	4767.12	125.08	-384.95	-117.25	2.00	
	4830.59	0.00	288.00	4797.71	125.13	-385.11	-117.30	2.00	Hold Vertical
	4900.00 5000.00	0.00 0.00	179.75 179.75	4867.12 4967.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	
	5100.00	0.00	179.75	5067.12	125.13	-385.11	-117.30	0.00	
	5200.00	0.00	179.75	5167.12	125.13	-385.11	-117.30	0.00	
	5300.00	0.00	179.75	5267.12	125.13	-385.11	-117.30	0.00	
	5392.88	0.00	179.75	5360.00	125.13	-385.11	-117.30	0.00	Cherry Canyon
	5400.00	0.00	179.75	5367.12	125.13	-385.11	-117.30	0.00	
	5500.00 5600.00	0.00 0.00	179.75 179.75	5467.12 5567.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	
	5700.00	0.00	179.75	5667.12	125.13	-385.11	-117.30	0.00	
	5800.00	0.00	179.75	5767.12	125.13	-385.11	-117.30	0.00	
	5900.00	0.00	179.75	5867.12	125.13	-385.11	-117.30	0.00	
	6000.00	0.00	179.75	5967.12	125.13	-385.11	-117.30	0.00	
	6100.00 6200.00	0.00 0.00	179.75 179.75	6067.12 6167.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	
	6300.00	0.00	179.75	6267.12	125.13	-385.11	-117.30	0.00	
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Control Data Data Set of the set of			Well		RAW UNIT 61	0H				Geodetic System: US State Plane 1983
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m r r r r r r r r r r r r 6000 00 17.5 687.2 15.1 45.1 17.0 0.0 6000 00 17.5 687.2 25.1 45.1 17.0 0.0 6000 00 17.5 687.2 25.1 45.1 17.0 0.0 6000 00 17.5 687.2 25.1 45.1 17.0 0.0 7000 00 17.5 67.7 25.1 45.1 17.0 0.0 7000 00 17.5 78.7 25.1 35.1 17.0 0.0 7000 00 17.5 78.7 25.1 35.1 17.0 0.0 7000 00 17.5 78.7 25.1 35.1 17.0 0.0 7000 00 17.5 78.7 25.1 35.1 17.0 0.0 17.0 0.0 1			Design:	Permit Plar	n #1					Zone: 3001 - NM East (NAD83)
m r r r r r r r r r r r r 6000 00 17.5 687.2 15.1 45.1 17.0 0.0 6000 00 17.5 687.2 25.1 45.1 17.0 0.0 6000 00 17.5 687.2 25.1 45.1 17.0 0.0 6000 00 17.5 687.2 25.1 45.1 17.0 0.0 7000 00 17.5 67.7 25.1 45.1 17.0 0.0 7000 00 17.5 78.7 25.1 35.1 17.0 0.0 7000 00 17.5 78.7 25.1 35.1 17.0 0.0 7000 00 17.5 78.7 25.1 35.1 17.0 0.0 7000 00 17.5 78.7 25.1 35.1 17.0 0.0 17.0 0.0 1		MD	INC	AZI	TVD	NS	EW	vs	DLS	Comment
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60000 000 1737 667.2 25.13 45.11 17.30 000 67128 00 17.37 667.2 25.13 45.11 17.30 000 60100 00 17.37 667.2 25.13 45.11 17.30 000 60100 00 17.37 667.2 25.13 45.11 17.30 000 70000 00 17.37 767.72 25.13 45.11 17.30 000 70000 00 17.37 767.72 25.13 45.11 17.30 000 70000 00 17.37 767.72 25.13 45.11 17.30 000 70000 00 17.37 767.72 25.13 45.11 17.30 000 70000 00 17.37 767.72 25.13 45.11 17.30 00 70000 00 17.37 867.72 25.13 45.11 17.30 00 70000 00										
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125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 147 148 149 150 151 152 153 154 155 156 157 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173	2550.87 2600.00 2700.00 2800.00 2900.00 3000.00 3100.00 3200.00 3200.00 3500.00 3600.00 3600.00 3700.00 3800.00 3800.00 4000.00 4000.00 4000.00 4000.00 4000.00 4000.00 5000.00 5000.00 5000.00 5500.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12190.00 12189.92 12189.75 12189.75 12189.43 12189.26 12189.10 12188.93 12188.77 12188.67 12188.44 12188.27 12188.11 12187.94 12187.78 12187.61 12187.45 12187.61 12187.59 12186.63 12186.63 12186.46 12186.30 12186.13 12185.97 12185.80	-448.77 -497.90 -597.90 -697.90 -797.90 -1097.89 -1197.89 -1297.89 -1397.89 -1397.89 -1597.89 -1597.89 -1697.89 -1997.88 -2097.88 -2197.88 -2297.88 -2297.88 -2297.88 -2597.88 -2597.88	-382.60 -382.39 -381.95 -381.51 -381.64 -380.64 -380.20 -379.77 -379.33 -378.89 -378.46 -378.02 -377.58 -377.58 -377.55 -376.71 -375.84 -375.84 -374.96 -374.95 -374.96 -374.96 -374.96 -374.96 -374.96 -374.96 -374.96 -374.96 -374.96 -374.96 -374.96 -374.96 -374.92	456.43 505.55 605.52 705.48 805.45 905.42 1005.39 1105.36 1205.33 1305.30 1405.27 1505.24 1605.21 1705.18 1805.15 1905.12 2005.09 2105.06 2205.03 2305.00 2404.97 2504.94 2604.91	10.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	
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127 128 129 130 131 132 133 134 135 136 136 137 138 139 140 141 142 143 144 145 146 147 148 146 147 148 149 150 151 152 153 154 155 156 157 157 158 159 160 161 162 163 164 165 166 167 177 178	2700.00 2800.00 2900.00 3000.00 3100.00 3100.00 3200.00 3300.00 3400.00 3500.00 3600.00 3600.00 3700.00 3800.00 3900.00 4000.00 4100.00 4200.00 4200.00 4400.00 4500.00 5500.00 5500.00 5500.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12189.75 12189.59 12189.43 12189.26 12189.10 12188.93 12188.77 12188.60 12188.44 12188.27 12188.11 12187.94 12187.78 12187.61 12187.45 12187.45 12187.45 12186.55 12186.79 12186.63 12186.13 12185.97 12185.80	-597.90 -697.90 -897.90 -997.90 -1097.89 -1197.89 -1297.89 -1397.89 -1597.89 -1697.89 -1697.89 -1997.88 -2097.88 -297.88 -2397.88 -2497.88 -2497.88 -2597.88 -2597.88	-381.95 -381.51 -381.08 -380.64 -379.77 -379.33 -378.89 -378.46 -378.02 -377.58 -377.51 -376.71 -376.27 -375.84 -374.96 -374.96 -374.96 -374.96 -374.96 -373.22	605.52 705.48 805.45 905.42 1005.39 1105.36 1205.33 1305.30 1405.27 1505.24 1605.21 1705.18 1805.15 1905.12 2005.09 2105.06 2205.03 2305.00 2305.00 2404.97 2504.94	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
128 129 130 131 132 133 134 135 136 137 139 140 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 177 178	2800.00 2900.00 3000.00 3100.00 3200.00 3300.00 3300.00 3300.00 3600.00 3700.00 3600.00 3700.00 4000.00 4100.00 4200.00 4300.00 4500.00 4500.00 4500.00 500.00 5500.00 5500.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12189.59 12189.43 12189.26 12189.10 12188.93 12188.77 12188.60 12188.44 12188.27 12188.11 12187.94 12187.78 12187.45 12187.45 12187.45 12187.28 12186.59 12186.63 12186.63 12186.13 12185.97 12185.80	-697.90 -797.90 -897.90 -1097.89 -1197.89 -1297.89 -1397.89 -1597.89 -1697.89 -1697.89 -1697.89 -1897.89 -1997.88 -2097.88 -2397.88 -2397.88 -2497.88 -2597.88 -2597.88	-381.51 -381.08 -380.64 -380.20 -379.77 -379.33 -378.89 -378.46 -378.02 -377.58 -376.71 -376.71 -376.71 -376.27 -375.84 -374.96 -374.96 -374.96 -373.26 -373.22	705.48 805.45 905.42 1005.39 1105.36 1205.33 1305.30 1405.27 1505.24 1605.21 1705.18 1805.15 1905.12 2005.09 2105.06 2205.03 2305.00 2305.00 2404.97 2504.94	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
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131 132 133 134 135 136 136 137 138 139 140 141 142 143 144 145 146 147 147 148 149 150 151 152 153 154 155 156 157 159 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174	3100.00 3200.00 3200.00 3400.00 3500.00 3600.00 3700.00 3800.00 300.00 4000.00 4100.00 4200.00 4200.00 4200.00 4400.00 4500.00 4600.00 4600.00 500.00 500.00 5500.00 5500.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12189.10 12188.93 12188.77 12188.60 12188.44 12188.27 12188.11 12187.94 12187.78 12187.61 12187.45 12187.61 12187.45 12186.95 12186.63 12186.63 12186.30 12186.13 12185.97 12185.80	-997.90 -1097.89 -1197.89 -1297.89 -1397.89 -1497.89 -1497.89 -1697.89 -1997.88 -2097.88 -2397.88 -2497.88 -2497.88 -2497.88 -2497.88 -2597.88 -2597.88	-380.20 -379.77 -379.33 -378.89 -378.89 -377.82 -377.58 -377.55 -376.71 -376.27 -375.84 -375.84 -375.40 -374.96 -374.03 -374.03 -374.06 -373.22	1005.39 1105.36 1205.33 1305.30 140527 1505.24 1605.21 1705.18 1805.15 1905.12 2005.09 2105.06 2205.03 2305.00 2305.00 2305.00 2404.97 2504.94	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 170 171 172 173	3200.00 3300.00 3400.00 3500.00 3500.00 3700.00 3800.00 4000.00 4100.00 4100.00 4200.00 4400.00 4400.00 4400.00 4500.00 5500.00 5500.00 5500.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12188.93 12188.77 12188.60 12188.44 12188.27 12188.11 12187.94 12187.78 12187.61 12187.45 12187.45 12187.45 12187.45 12186.95 12186.63 12186.46 12186.30 12186.13 12185.97 12185.80	-1097.89 -1197.89 -1297.89 -1397.89 -1497.89 -1597.89 -1697.89 -1997.88 -2097.88 -2097.88 -2297.88 -2397.88 -2497.88 -2497.88 -2597.88 -2597.88	-379.77 -379.33 -378.89 -378.46 -378.02 -377.58 -377.58 -377.51 -376.71 -376.27 -375.84 -374.96 -374.96 -374.03 -374.09 -374.03 -374.09 -373.66 -373.22	1105.36 1205.33 1305.30 1405.27 1505.24 1605.21 1705.18 1805.15 1905.12 2005.09 2105.06 2205.03 2305.00 2305.00 2404.97 2504.94 2604.91	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173	3300.00 3400.00 3400.00 3500.00 3600.00 3700.00 3800.00 3900.00 400.00 4100.00 4200.00 4300.00 4400.00 4400.00 4500.00 4500.00 500.00 5100.00 5200.00 5300.00 5500.00 5500.00 5600.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12188.77 12188.60 12188.44 12188.27 12188.11 12187.94 12187.78 12187.61 12187.45 12187.45 12187.45 12187.45 12186.45 12186.46 12186.43 12186.13 12185.97 12185.80	-1197.89 -1297.89 -1397.89 -1497.89 -1597.89 -1697.89 -1797.89 -1997.88 -2097.88 -2097.88 -2397.88 -2497.88 -2497.88 -2597.88 -2597.88 -2597.88	-379.33 -378.89 -378.46 -378.02 -377.58 -377.51 -376.71 -376.27 -375.84 -374.96 -374.96 -374.93 -374.09 -374.03 -374.03 -374.03 -373.66 -373.22	1205.33 1305.30 1405.27 1505.24 1605.21 1705.18 1805.15 1905.12 2005.09 2105.06 2205.03 2305.00 2404.97 2504.94 2604.91	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173	3400.00 3500.00 3600.00 3700.00 3800.00 3800.00 4000.00 4100.00 4200.00 4200.00 4300.00 4500.00 4500.00 4500.00 5100.00 5200.00 5300.00 5300.00 5500.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12188.60 12188.44 12188.27 12188.11 12187.94 12187.78 12187.61 12187.45 12187.28 12187.28 12186.95 12186.63 12186.63 12186.30 12186.13 12185.97 12185.80	-1297.89 -1397.89 -1497.89 -1597.89 -1697.89 -1997.88 -2097.88 -297.88 -2397.88 -2397.88 -2497.88 -2497.88 -2597.88 -2597.88	-378.89 -378.46 -378.02 -377.58 -377.15 -376.71 -376.27 -375.84 -375.84 -374.96 -374.96 -374.53 -374.09 -373.66 -373.22	1305.30 1405.27 1505.24 1605.21 1705.18 1805.15 1905.12 2005.09 2105.06 2205.03 2305.00 2404.97 2504.94 2604.91	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172	3600.00 3700.00 3800.00 3900.00 4000.00 4100.00 4200.00 4200.00 4300.00 4500.00 4600.00 4600.00 4600.00 500.00 5100.00 5200.00 5300.00 5500.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12188.27 12188.11 12187.94 12187.78 12187.45 12187.45 12187.28 12187.12 12186.95 12186.63 12186.63 12186.13 12185.97 12185.80	- 1497.89 - 1597.89 - 1697.89 - 1897.89 - 1997.88 - 2097.88 - 2297.88 - 2297.88 - 2397.88 - 2397.88 - 2597.88 - 2597.88 - 2597.88 - 2597.88	-378.02 -377.58 -377.15 -376.71 -376.27 -375.84 -375.40 -374.96 -374.53 -374.09 -373.66 -373.22	1505.24 1605.21 1705.18 1805.15 1905.12 2005.09 2105.06 2205.03 2305.00 2404.97 2504.94 2604.91	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174	3700.00 3800.00 3900.00 4000.00 4100.00 4200.00 4200.00 4300.00 4400.00 4500.00 4600.00 4600.00 500.00 500.00 5300.00 5500.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12188.11 12187.94 12187.78 12187.61 12187.45 12187.28 12187.28 12187.95 12186.95 12186.63 12186.46 12186.30 12186.13 12185.97 12185.80	-1597.89 -1697.89 -1797.89 -1997.88 -2097.88 -2297.88 -2297.88 -2397.88 -2497.88 -2597.88 -2697.88 -2697.88	-377.58 -377.15 -376.71 -376.27 -375.84 -375.40 -374.96 -374.53 -374.09 -373.66 -373.22	1605.21 1705.18 1805.15 1905.12 2005.09 2105.06 2205.03 2305.00 2404.97 2504.94 2604.91	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 170 171 172 173	3800.00 3900.00 4000.00 4100.00 4200.00 4200.00 4200.00 4400.00 4500.00 4500.00 5000.00 5000.00 5000.00 5300.00 5500.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12187.94 12187.78 12187.61 12187.45 12187.45 12187.28 12186.95 12186.95 12186.63 12186.63 12186.46 12186.30 12186.13 12185.97 12185.80	-1697.89 -1797.89 -1897.89 -1997.88 -2097.88 -2197.88 -2297.88 -2397.88 -2497.88 -2497.88 -2597.88 -2697.88 -2797.88	-377.15 -376.27 -375.84 -375.40 -374.96 -374.53 -374.09 -373.66 -373.22	1705.18 1805.15 1905.12 2005.09 2105.06 2205.03 2305.00 2404.97 2504.94 2604.91	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173	3900.00 4000.00 4100.00 4200.00 4200.00 4400.00 4500.00 4500.00 4500.00 5100.00 5200.00 5300.00 5300.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12187.78 12187.61 12187.45 12187.28 12187.12 12186.95 12186.63 12186.63 12186.46 12186.30 12186.13 12185.97 12185.80	-1797.89 -1897.89 -1997.88 -2097.88 -2197.88 -2297.88 -2397.88 -2497.88 -2597.88 -2697.88 -2797.88	-376.71 -376.27 -375.84 -375.40 -374.96 -374.53 -374.09 -373.66 -373.22	1805.15 1905.12 2005.09 2105.06 2205.03 2305.00 2404.97 2504.94 2604.91	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	
140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173	4000.00 4100.00 4200.00 4300.00 4400.00 4500.00 4500.00 4600.00 4800.00 5000.00 5100.00 5200.00 5300.00 5500.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12187.61 12187.45 12187.28 12187.12 12186.95 12186.79 12186.63 12186.46 12186.30 12186.13 12185.97 12185.80	-1897.89 -1997.88 -2097.88 -2197.88 -2297.88 -2297.88 -2497.88 -2497.88 -2597.88 -2697.88 -2797.88	-376.27 -375.84 -375.40 -374.96 -374.53 -374.09 -373.66 -373.22	1905.12 2005.09 2105.06 2205.03 2305.00 2404.97 2504.94 2604.91	0.00 0.00 0.00 0.00 0.00 0.00 0.00	
141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174	4100.00 4200.00 4300.00 4400.00 4500.00 4600.00 4600.00 4800.00 5000.00 5100.00 5200.00 5300.00 5500.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12187.45 12187.28 12187.12 12186.95 12186.63 12186.63 12186.46 12186.30 12186.13 12185.97 12185.80	-1997.88 -2097.88 -2197.88 -2297.88 -2397.88 -2497.88 -2597.88 -2697.88 -2797.88	-375.84 -375.40 -374.96 -374.53 -374.09 -373.66 -373.22	2005.09 2105.06 2205.03 2305.00 2404.97 2504.94 2604.91	0.00 0.00 0.00 0.00 0.00 0.00	
142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174	4200.00 4300.00 4400.00 4500.00 4600.00 4600.00 4700.00 5000.00 5100.00 5200.00 5300.00 5400.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12187.28 12187.12 12186.95 12186.79 12186.63 12186.46 12186.30 12186.13 12185.97 12185.80	-2097.88 -2197.88 -2297.88 -2397.88 -2497.88 -2597.88 -2697.88 -2697.88	-375.40 -374.96 -374.53 -374.09 -373.66 -373.22	2105.06 2205.03 2305.00 2404.97 2504.94 2604.91	0.00 0.00 0.00 0.00 0.00	
144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174	4400.00 4500.00 4600.00 4700.00 4800.00 5000.00 5100.00 5200.00 5300.00 5400.00 5500.00 5600.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12186.95 12186.79 12186.63 12186.46 12186.30 12186.13 12185.97 12185.80	-2297.88 -2397.88 -2497.88 -2597.88 -2697.88 -2797.88	-374.53 -374.09 -373.66 -373.22	2305.00 2404.97 2504.94 2604.91	0.00 0.00 0.00	
145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 161 162 163 164 165 166 167 168 169 170 171 172 173	4500.00 4600.00 4700.00 4800.00 5000.00 5100.00 5200.00 5300.00 55400.00 5500.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12186.79 12186.63 12186.46 12186.30 12186.13 12185.97 12185.80	-2397.88 -2497.88 -2597.88 -2697.88 -2797.88	-374.09 -373.66 -373.22	2404.97 2504.94 2604.91	0.00 0.00	
146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174	4600.00 4700.00 4800.00 4900.00 5000.00 5100.00 5200.00 5300.00 5400.00 5500.00 5600.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12186.63 12186.46 12186.30 12186.13 12185.97 12185.80	-2497.88 -2597.88 -2697.88 -2797.88	-373.66 -373.22	2504.94 2604.91	0.00	
147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174	4700.00 4800.00 4900.00 5000.00 5100.00 5200.00 5300.00 5400.00 5500.00 5600.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75 179.75	12186.46 12186.30 12186.13 12185.97 12185.80	-2597.88 -2697.88 -2797.88	-373.22	2604.91		
148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176	4800.00 4900.00 5000.00 5100.00 5200.00 5300.00 5400.00 5500.00 5600.00	90.09 90.09 90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75 179.75 179.75 179.75	12186.30 12186.13 12185.97 12185.80	-2697.88 -2797.88				
150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 167 168 169 170 171 172 173 174 175 176	5000.00 5100.00 5200.00 5300.00 5400.00 5500.00 5600.00	90.09 90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75 179.75	12185.97 12185.80			2704.88	0.00	
151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177	5100.00 5200.00 5300.00 5400.00 5500.00 5600.00	90.09 90.09 90.09 90.09 90.09	179.75 179.75 179.75	12185.80	2007.07	-372.35	2804.84	0.00	
152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177	5200.00 5300.00 5400.00 5500.00 5600.00	90.09 90.09 90.09 90.09	179.75 179.75		-2897.87	-371.91	2904.81	0.00	
153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177	5300.00 5400.00 5500.00 5600.00	90.09 90.09 90.09	179.75	17105 64	-2997.87	-371.47	3004.78	0.00	
154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 777	5400.00 5500.00 5600.00	90.09 90.09		12185.64 12185.47	-3097.87 -3197.87	-371.04 -370.60	3104.75 3204.72	0.00 0.00	
156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177	5600.00		179.75	12185.31	-3297.87	-370.16	3304.69	0.00	
157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178			179.75	12185.14	-3397.87	-369.73	3404.66	0.00	
158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178		90.09	179.75	12184.98	-3497.87	-369.29	3504.63	0.00	
159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178	5700.00	90.09	179.75	12184.81	-3597.87	-368.85	3604.60	0.00	
160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178	5800.00 5900.00	90.09 90.09	179.75 179.75	12184.65 12184.48	-3697.87 -3797.86	-368.42 -367.98	3704.57 3804.54	0.00 0.00	
161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178	5000.00	90.09	179.75	12184.32	-3897.86	-367.54	3904.51	0.00	
163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178	5100.00	90.09	179.75	12184.15	-3997.86	-367.11	4004.48	0.00	
164 165 166 167 168 169 170 171 172 173 174 175 176 177 178	5200.00	90.09	179.75	12183.99	-4097.86	-366.67	4104.45	0.00	
165 166 167 168 169 170 171 172 173 174 175 176 177 178	5300.00	90.09	179.75	12183.83	-4197.86	-366.23	4204.42	0.00	
166 167 168 169 170 171 172 173 174 175 176 177 178	5400.00	90.09	179.75	12183.66	-4297.86	-365.80	4304.39	0.00	
167 168 169 170 171 172 173 174 175 176 177 178	5500.00 5600.00	90.09 90.09	179.75 179.75	12183.50 12183.33	-4397.86 -4497.86	-365.36 -364.92	4404.36 4504.33	0.00 0.00	
169 170 171 172 173 174 175 176 177 177	5700.00	90.09	179.75	12183.17		-364.49	4604.30	0.00	
170 171 172 173 174 175 176 177 177	5800.00	90.09	179.75	12183.00	-4697.86	-364.05	4704.27	0.00	
171 172 173 174 175 176 177 177 178	5900.00	90.09	179.75	12182.84	-4797.85	-363.61	4804.24	0.00	
172 173 174 175 176 177 178	7000.00	90.09	179.75	12182.67	-4897.85	-363.18	4904.21	0.00	
173 174 175 176 177 178	7100.00 7200.00	90.09 90.09	179.75 179.75	12182.51 12182.34	-4997.85 -5097.85	-362.74 -362.30	5004.17 5104.14	0.00 0.00	
174 175 176 177 178	7300.00	90.09 90.09	179.75		-5197.85	-362.50	5104.14 5204.11	0.00	
176 177 178	7400.00	90.09	179.75	12182.01	-5297.85	-361.43	5304.08	0.00	
177 178	7500.00	90.09	179.75	12181.85	-5397.85	-360.99	5404.05	0.00	
178	7600.00	90.09	179.75	12181.68	-5497.85	-360.56	5504.02	0.00	
	7700.00	90.09	179.75	12181.52	-5597.85 -5697.84	-360.12	5603.99 5703.96	0.00	
	7800.00 7900.00	90.09 90.09	179.75 179.75	12181.36 12181.19	-5697.84 -5797.84	-359.68 -359.25	5703.96 5803.93	0.00 0.00	
	3000.00	90.09	179.75	12181.03	-5897.84	-358.81	5903.90	0.00	
	3100.00	90.09	179.75	12180.86	-5997.84	-358.37	6003.87	0.00	
	3200.00	90.09	179.75	12180.70	-6097.84	-357.94	6103.84	0.00	
	8300.00	90.09	179.75	12180.53	-6197.84	-357.50	6203.81	0.00	
	3400.00	90.09	179.75	12180.37	-6297.84	-357.06	6303.78	0.00	
	8500.00	90.09 90.09	179.75 179.75	12180.20 12180.04	-6397.84 -6497.84	-356.63 -356.19	6403.75 6503.72	0.00 0.00	
	20000100	90.09	179.75	12179.87	-6597.83	-355.75	6603.69	0.00	
	3600.00 3700.00	90.09	179.75	12179.71	-6697.83	-355.32	6703.66	0.00	
		90.09	179.75	12179.54	-6797.83	-354.88	6803.63	0.00	
	8700.00 8800.00 8900.00	90.09	179.75	12179.38	-6897.83	-354.44	6903.60	0.00	
	8700.00 8800.00 8900.00 9000.00		179.75	12179.21	-6997.83	-354.01	7003.57	0.00	
	8700.00 8800.00 8900.00 9000.00 9100.00	90.09	179.75	12179.05 12178.88	-7097.83 -7197.83	-353.57 -353.14	7103.54 7203.50	0.00 0.00	
195	8700.00 8800.00 8900.00 9000.00	90.09 90.09 90.09	179.75		-7297.83	-353.14	7203.30	0.00	

P											
devon				RAW UNIT 6	10H				•	US State Plane 1983	
010 1 011		County: Wellbore:	Lea Permit Plar	,						North American Datum 1927 Clarke 1866	
			Permit Plar						•	3001 - NM East (NAD83)	
	MD	INC	AZI	TVD	NS	EW	VS	DLS	Comment		
-	(ft) 19500.00	(°) 90.09	(°) 179.75	(ft) 12178.56	(ft) -7397.83	(ft) -352.26	(ft) 7403.44	(°/100ft) 0.00			
	19600.00	90.09	179.75	12178.30	-7497.82	-352.20	7503.41	0.00			
	19700.00	90.09	179.75	12178.23	-7597.82	-351.39	7603.38	0.00			
	19800.00	90.09	179.75	12178.06	-7697.82	-350.95	7703.35	0.00			
	19900.00	90.09	179.75	12177.90	-7797.82	-350.52	7803.32	0.00			
	20000.00 20100.00	90.09 90.09	179.75 179.75	12177.73 12177.57	-7897.82 -7997.82	-350.08 -349.64	7903.29 8003.26	0.00 0.00			
	20200.00	90.09	179.75	12177.40	-8097.82	-349.21	8103.23	0.00			
	20300.00	90.09	179.75	12177.24	-8197.82	-348.77	8203.20	0.00			
	20400.00	90.09	179.75	12177.07	-8297.82	-348.33	8303.17	0.00			
	20500.00	90.09	179.75	12176.91	-8397.81	-347.90	8403.14	0.00			
	20600.00 20700.00	90.09 90.09	179.75 179.75	12176.74 12176.58	-8497.81 -8597.81	-347.46 -347.02	8503.11 8603.08	0.00 0.00			
	20800.00	90.09	179.75	12176.41	-8697.81	-346.59	8703.05	0.00			
	20900.00	90.09	179.75	12176.25	-8797.81	-346.15	8803.02	0.00			
	21000.00	90.09	179.75	12176.09	-8897.81	-345.71	8902.99	0.00			
	21100.00	90.09	179.75	12175.92	-8997.81	-345.28	9002.96	0.00			
	21200.00 21300.00	90.09 90.09	179.75 179.75	12175.76 12175.59	-9097.81 -9197.81	-344.84 -344.40	9102.93 9202.90	0.00 0.00			
	21400.00	90.09	179.75	12175.43	-9297.81	-343.97	9302.87	0.00			
	21500.00	90.09	179.75	12175.26	-9397.80	-343.53	9402.83	0.00			
	21600.00	90.09	179.75	12175.10	-9497.80	-343.09	9502.80	0.00			
	21700.00	90.09	179.75	12174.93	-9597.80	-342.66	9602.77	0.00			
	21800.00 21900.00	90.09 90.09	179.75 179.75	12174.77 12174.60	-9697.80 -9797.80	-342.22 -341.78	9702.74 9802.71	0.00 0.00			
	22000.00	90.09	179.75	12174.00	-9897.80	-341.35	9902.68	0.00			
	22100.00	90.09	179.75	12174.27	-9997.80	-340.91	10002.65	0.00			
	22200.00	90.09	179.75		-10097.80	-340.47	10102.62	0.00			
	22300.00	90.09	179.75		-10197.80	-340.04	10202.59	0.00			
	22400.00 22500.00	90.09 90.09	179.75 179.75		-10297.79 -10397.79	-339.60 -339.16	10302.56 10402.53	0.00 0.00			
	22600.00	90.09	179.75		-10497.79	-338.73	10502.50	0.00			
	22700.00	90.09	179.75	12173.29	-10597.79	-338.29	10602.47	0.00			
	22800.00	90.09	179.75		-10697.79	-337.85	10702.44	0.00			
	22900.00 23000.00	90.09 90.09	179.75 179.75		-10797.79	-337.42 -336.98	10802.41 10902.38	0.00 0.00			
	23000.00	90.09	179.75		-10897.79 -10997.79	-336.54	110902.38	0.00			
	23200.00	90.09	179.75		-11097.79	-336.11	11102.32	0.00			
	23300.00	90.09	179.75	12172.30	-11197.78	-335.67	11202.29	0.00			
	23400.00	90.09	179.75		-11297.78	-335.23	11302.26	0.00			
	23500.00 23600.00	90.09 90.09	179.75 179.75		-11397.78 -11497.78	-334.80 -334.36	11402.23 11502.20	0.00 0.00			
	23700.00	90.09	179.75		-11597.78	-333.92	11602.16	0.00			
	23800.00	90.09	179.75		-11697.78	-333.49	11702.13	0.00			
	23900.00	90.09	179.75		-11797.78	-333.05	11802.10	0.00			
	24000.00	90.09	179.75		-11897.78	-332.62	11902.07	0.00			
	24100.00 24200.00	90.09 90.09	179.75 179.75		-11997.78 -12097.77	-332.18 -331.74	12002.04 12102.01	0.00 0.00			
	24300.00	90.09	179.75		-12197.77	-331.31	12201.98	0.00			
	24400.00	90.09	179.75		-12297.77	-330.87	12301.95	0.00			
	24500.00	90.09	179.75		-12397.77	-330.43	12401.92	0.00			
	24600.00 24700.00	90.09 90.09	179.75 179.75		-12497.77 -12597.77	-330.00 -329.56	12501.89 12601.86	0.00 0.00			
	24700.00	90.09	179.75		-12597.77	-329.30	12701.83	0.00			
	24900.00	90.09	179.75		-12797.77	-328.69	12801.80	0.00			
	25000.00	90.09	179.75		-12897.77	-328.25	12901.77	0.00			
	25100.00	90.09	179.75		-12997.76	-327.81	13001.74	0.00			
	25200.00 25300.00	90.09 90.09	179.75 179.75		-13097.76 -13197.76	-327.38 -326.94	13101.71 13201.68	0.00 0.00			
	25400.00	90.09	179.75		-13297.76	-326.50	13201.00	0.00			
	25500.00	90.09	179.75		-13397.76	-326.07	13401.62	0.00			
	25600.00	90.09	179.75		-13497.76	-325.63	13501.59	0.00			
	25700.00	90.09	179.75		-13597.76	-325.19	13601.56	0.00			
	25800.00 25900.00	90.09 90.09	179.75 179.75		-13697.76 -13797.76	-324.76 -324.32	13701.53 13801.49	0.00 0.00			
	26000.00	90.09 90.09	179.75		-13797.76	-324.32 -323.88	13801.49	0.00			
	26100.00	90.09	179.75		-13997.75	-323.45	14001.43	0.00			
	26200.00	90.09	179.75		-14097.75	-323.01	14101.40	0.00			
	26300.00	90.09	179.75		-14197.75	-322.57	14201.37	0.00			
	26400.00	90.09	179.75	12107.19	-14297.75	-322.14	14301.34	0.00			

	County:		RAW UNIT 6					Geodetic System: US State Plane 1983 Datum: North American Datum 1927			
	Wellbore:	Permit Plar	n				Ellipsoid: Clarke 1866				
	Design:	Permit Plar	ו #1			Zone: 3001 - NM East (NAD83)					
MD	INC	AZI	TVD	NS	EW	vs	DLS	Comment			
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment			
6500.00	90.09	179.75	12167.03	-14397.75	-321.70	14401.31	0.00				
6600.00	90.09	179.75	12166.86	-14497.75	-321.26	14501.28	0.00				
6700.00	90.09	179.75	12166.70	-14597.75	-320.83	14601.25	0.00				
6800.00	90.09	179.75	12166.53	-14697.75	-320.39	14701.22	0.00				
6900.00	90.09	179.75	12166.37	-14797.75	-319.95	14801.19	0.00				
7000.00	90.09	179.75	12166.20	-14897.74	-319.52	14901.16	0.00				
7100.00	90.09	179.75	12166.04	-14997.74	-319.08	15001.13	0.00				
7200.00	90.09	179.75	12165.87	-15097.74	-318.64	15101.10	0.00				
7300.00	90.09	179.75	12165.71	-15197.74	-318.21	15201.07	0.00				
7400.00	90.09	179.75	12165.54	-15297.74	-317.77	15301.04	0.00				
7500.00	90.09	179.75	12165.38	-15397.74	-317.33	15401.01	0.00				
7600.00	90.09	179.75	12165.22	-15497.74	-316.90	15500.98	0.00				
7638.61	90.09	179.75	12165.15	-15536.35	-316.73	15539.58	0.00	exit			
7700.00	90.09	179.75	12165.05	-15597.74	-316.46	15600.95	0.00				
7718.61	90.09	179.75	12165.00	-15616.35	-316.42	15619.56	0.00	BHL			



<u>10-3/4"</u> <u>45.50#</u> <u>0.400"</u> <u>J-55</u>

Dimensions (Nominal)

Outside Diameter Wall Inside Diameter Drift	10.750 0.400 9.950 9.875	in. in. in. in.
Weight, T&C Weight, PE	45.500 44.260	lbs/ft lbs/ft
Internal Yield Pressure at Minimum Yield		
Collapse	2090	psi
Internal Yields Pressure		
PE	3580	psi
STC	3580	psi
BTC	3580	psi
Yield Strength, Pipe Body	715	1000 lbs
Joint Strength, STC		
STC	493	1000 lbs
BTC	796	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.

1. Geologic Formations

TVD of target	12165	Pilot hole depth	N/A
MD at TD:	27719	Deepest expected fresh water	

Basin

Dusin			
	Depth	Water/Mineral	
Formation	(TVD)	Bearing/Target	Hazards*
	from KB	Zone?	
Rustler	660		
Salt	1010		
Base of Salt	4400		
Delaware	4400		
Cherry Canyon	5360		
Brushy Canyon	6680		
1st Bone Spring Lime	8290		
Bone Spring 1st	9300		
Bone Spring 2nd	9920		
3rd Bone Spring Lime	10440		
Bone Spring 3rd	11215		
Wolfcamp	11700		

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

		Wt			Casing	Interval	Casing Interval		
Hole Size	Csg. Size	(PPF)	Grade	Conn	From (MD)	To (MD)	From (TVD)	To (TVD)	
14 3/4	10 3/4	45 1/2	J-55	BTC	0	685	0	685	
9 7/8	8 5/8	32	P110EC	Sprint FJ	0	11549	0	11549	
7 7/8	5 1/2	20	P110EC	DWC / C-IS+	0	27719	0	12165	

2. Casing Program (Primary Design)

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

3. Cementing Program (Primary Design)

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 the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program. Devon will report to the BLM the volume of fluid (limited to 1 bbls) used to flush intermediate casing valves following backside cementing procedures. Operator will run one CBL per well pad.

Casing	# Sks	тос	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	421	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	473	Surf	13.0	2.3	2nd State: Bradenhead Squeeze - Lead: Class C Cement + additives
Int I	561	6712	13.2	1.44	Tail: Class H / C + additives
Production	117	9650	9	3.27	Lead: Class H /C + additives
Production	2127	11650	13.2	1.44	Tail: Class H / C + additives

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

.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Туј	pe	~	Tested to:	
			Annular		X	50% of rated working pressure	
Int 1	13-5/8"	5M	Blind		Х		
	15 5/0		Pipe I			- 5M	
			Double Ram		X	5111	
			Other*				
			Annular	r (5M)	X	100% of rated working pressure	
Production	13-5/8"	10M	Blind	Ram	X		
Tioduction	15-5/0	10101	Pipe Ram			10M	
			Double Ram		Х	1011	
			Other*				
			Annular (5M)				
			Blind Ram				
			Pipe Ram]	
			Double	e Ram]	
			Other*				
N A variance is requested for	the use of a	a diverter or	the surface c	casing. See a	attached for s	chematic.	
Y A variance is requested to a	run a 5 M ai	nnular on a	10M system				

4. Pressure Control Equipment (Three String Design)

5. Mud Program (Three String Design)

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

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

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

6. Logging and Testing Procedures

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

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

7. Drilling Conditions

Condition	Specfiy what type and where?
BH pressure at deepest TVD	6642
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	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.			
Ν	H2S is present		

Y H2S plan attached.

COTTON DRAW UNIT 610H

Page 23 of 58

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

Received by UCD: S0/6/2023 12:40:40 PM U.S. Department of the Interior BUREAU OF LAND MANAGEMENT		Sundry Print Report 09/29/2023	
	BUREAU OF LAND MANAGEMENT		200
	Well Name: COTTON DRAW UNIT	Well Location: T24S / R31E / SEC 26 / NWNE /	County or Parish/State:
	Well Number: 610H	Type of Well: OIL WELL	Allottee or Tribe Name:
	Lease Number: NMNM012121	Unit or CA Name: COTTON DRAW UNIT	Unit or CA Number: NMNM70928X
	US Well Number: 3001554069	Well Status: Approved Application for Permit to Drill	Operator: DEVON ENERGY PRODUCTION COMPANY LP

Notice of Intent

Sundry ID: 2752610

Type of Submission: Notice of Intent

Date Sundry Submitted: 09/21/2023

Date proposed operation will begin: 09/21/2023

Type of Action: APD Change Time Sundry Submitted: 11:35

Procedure Description: Devon Energy Production Company L.P. respectfully requests the following changes to the approved APD: BHL change from 2620 FNL & 990 FEL, 35-24S-31E to 20 FSL & 1770 FEL, 2-25S-31E. Dedicated acreage revision. New leases have been added since approved APD and notification has been given. TVD/MD change from 12,165'/19,840' to 12,165'/27,719' Casing program change: Surface, Intermediate, & Production casing changes. Cement volume changes to accommodate casing change. Please see attached revised C-102, spec sheets, and drilling & directional plans.

NOI Attachments

Procedure Description

MB_Wellhd_10M_13.375_8.625_5.5_20230921113407.PDF

COTTON_DRAW_UNIT_610H_C_102_BHL_NOI_20230921113404.pdf

8.625in_32lb_P110EC_SPRINT_FJ_20230921113403.pdf

5.5in_17lb_P110EC_DWC_C_IS_PLUS_20230921113403.pdf

COTTON_DRAW_UNIT_610H_Directional_Plan_09_15_23_20230921113402.pdf

10.750_45.5_J55_20230921113402.pdf

COTTON_DRAW_UNIT_610H_20230921113401.pdf

Received by OCD: 10/6/2023 12:40:40 PM Well Name: COTTON DRAW UNIT	Well Location: T24S / R31E / SEC 26 / NWNE /	County or Parish/State: Page 25 of 58
Well Number: 610H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM012121	Unit or CA Name: COTTON DRAW UNIT	Unit or CA Number: NMNM70928X
US Well Number: 3001554069	Well Status: Approved Application for Permit to Drill	Operator: DEVON ENERGY PRODUCTION COMPANY LP

Operator

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

Operator Electronic Signature: REBECCA DEAL

Signed on: SEP 21, 2023 11:34 AM

Name: DEVON ENERGY PRODUCTION COMPANY LP

State: OK

State:

Title: Regulatory Analyst

Street Address: 333 W SHERIDAN AVE

City: OKLAHOMA CITY

Phone: (303) 299-1406

Email address: REBECCA.DEAL@DVN.COM

Field

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

Zip:

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

	Devon Energy Production Company LP NMNM012121
LOCATION:	Section 26, T.24 S., R.31 E., NMPM
COUNTY:	Eddy County, New Mexico
COUNTY:	Eddy County, New Mexico

WELL NAME & NO.:	Cotton Draw Unit 610H
SURFACE HOLE FOOTAGE:	180'/N & 1385'/W
BOTTOM HOLE FOOTAGE	20'/S & 1770'/E
ATS/API ID:	3001554069
APD ID:	10400065482
Sundry ID:	2752610

COA

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

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Cotton Draw** pool. 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 10-3/4 inch surface casing shall be set at approximately 775 feet (a minimum of 70 feet (Eddy County) into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. The surface hole shall be 14 3/4 inch in diameter.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of <u>8</u> <u>hours</u> or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

2. The minimum required fill of cement behind the 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.

Option 2:

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

- a. First stage: Operator will cement with intent to reach the top of the **Brushy** Canyon at 6680' (561 sxs Class H/C+ additives).
- b. Second stage:
 - Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified. (Squeeze 473 sxs Class C)

Operator has proposed to pump down 10-3/4" X 8-5/8" annulus after primary cementing stage. <u>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.</u>

Submit results to the BLM. No displacement fluid/wash out shall be utilized at the top of the cement slurry between second stage BH and top out. Operator must run one CBL per Well Pad.

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

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

- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.
 Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

C. PRESSURE CONTROL

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

Option 1:

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

Option 2:

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the **10-3/4** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000** (**10M**) psi. Variance is approved to use a **5000** (**5M**) Annular which shall be tested to **5000** (**5M**) psi.

- a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

<u>Unit Wells</u>

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.

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)

\boxtimes 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

Lea CountyCall the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 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.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a

digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

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

- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.
- B. PRESSURE CONTROL
- All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3.
- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
- 3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after

installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to 43 CFR part 3170 Subpart 3172 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR**

part 3170 Subpart 3172.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

LVO 9/29/2023

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Received by OCD: 10/6/2023 1	2:40:40 PM	Page 35 of 58
Form 3160-5 UNITED STATES (June 2019) DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT		FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021 5. Lease Serial No. NMNM012121
Do not use this	NOTICES AND REPORTS ON WELLS form for proposals to drill or to re-enter an Use Form 3160-3 (APD) for such proposals.	6. If Indian, Allottee or Tribe Name
SUBMIT IN	TRIPLICATE - Other instructions on page 2	7. If Unit of CA/Agreement, Name and/or No.
1. Type of Well		COTTON DRAW UNIT/NMNM70928X
✓ Oil Well Gas		8. Well Name and No. COTTON DRAW UNIT/610H
2. Name of Operator DEVON ENER	GY PRODUCTION COMPANY LP	9. API Well No. 3001554069
	AVE, OKLAHOMA CITY, 3b. Phone No. (include area code)	10. Field and Pool or Exploratory Area
	(405) 235-3611	Purple Sage/BONE SPRING
4. Location of Well (Footage, Sec., T.,	R.,M., or Survey Description)	11. Country or Parish, State
SEC 26/T24S/R31E/NMP		EDDY/NM
12. CHI	ECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF	F NOTICE, REPORT OR OTHER DATA
TYPE OF SUBMISSION	ТҮРЕ (OF ACTION
Votice of Intent	Acidize Deepen Alter Casing Hydraulic Fracturing	Production (Start/Resume) Water Shut-Off Reclamation Well Integrity
Subsequent Report	Casing Repair New Construction Change Plans Plug and Abandon	Recomplete Other Temporarily Abandon
Final Abandonment Notice	Convert to Injection Plug Back	Water Disposal
the proposal is to deepen direction the Bond under which the work w completion of the involved operati	ally or recomplete horizontally, give subsurface locations and meas ill be perfonned or provide the Bond No. on file with BLM/BIA. Re ions. If the operation results in a multiple completion or recompletio	urting date of any proposed work and approximate duration thereof. If sured and true vertical depths of all pertinent markers and zones. Attach equired subsequent reports must be filed within 30 days following on in a new interval, a Form 3160-4 must be filed once testing has been on, have been completed and the operator has detennined that the site
	mpany L.P. respectfully requests the following changes to the	e approved APD:
-	& 990 FEL, 35-24S-31E to 20 FSL & 1770 FEL, 2-25S-31E.	
Dedicated acreage revision.	d since approved APD and notification has been given.	
TVD/MD change from 12,165		
-	face, Intermediate, & Production casing changes. Cement vol	lume changes to accommodate casing change.
	C-102, spec sheets, and drilling & directional plans.	
14. I hereby certify that the foregoing i	s true and correct. Name (Printed/Typed) 1406 Regulatory An	nalyst

	litle		
SignatureI	Date	e 09/21/2023	
THE SPACE FOR FEDERAL OR STATE OFICE USE			
Approved by			
	Title	Date	e
Conditions of approval, if any, are attached. Approval of this notice does not warrant of certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.			
Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.			

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(Instructions on page 2)

Released to Imaging: 12/6/2023 1:02:05 PM

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.

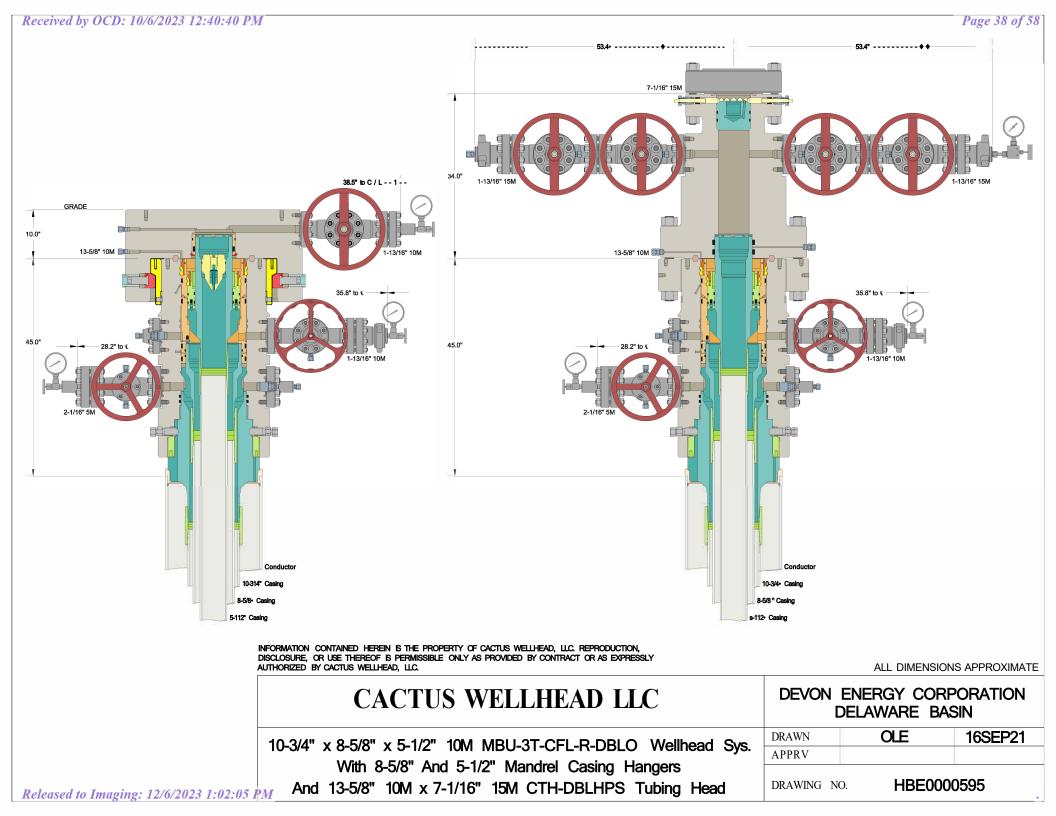
The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

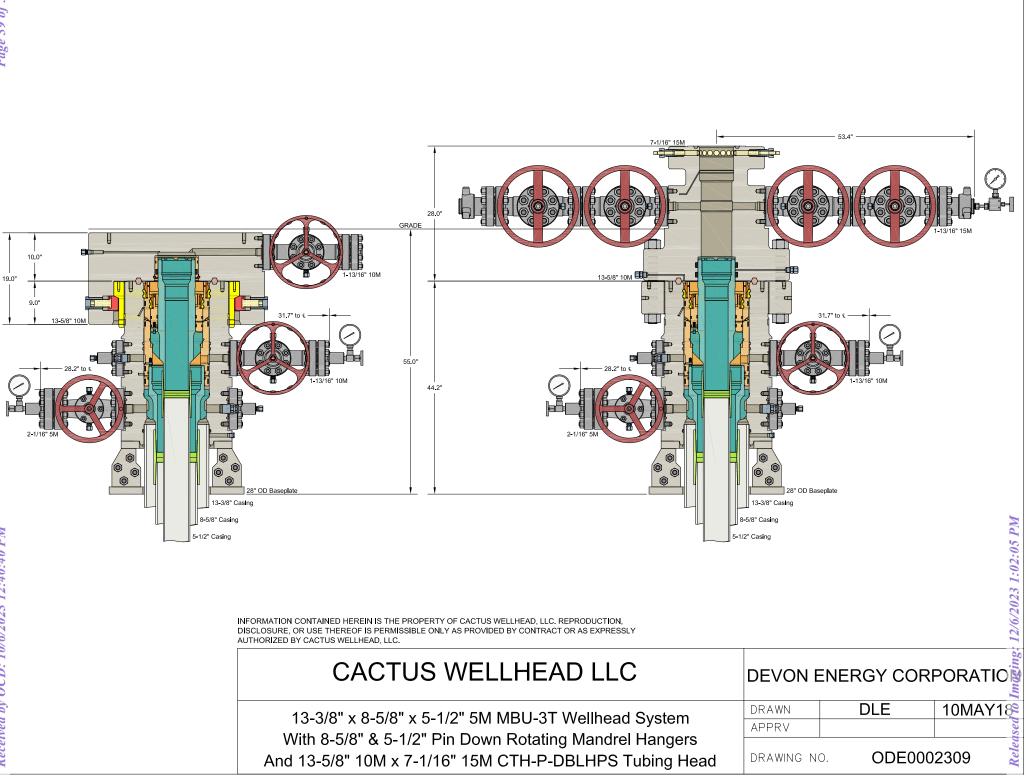
BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form 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 / 180 FNL / 1385 FEL / TWSP: 24S / RANGE: 31E / SECTION: 26 / LAT: 32.1951045 / LONG: -103.7445221 (TVD: 0 feet, MD: 0 feet) PPP: NENE / 100 FNL / 990 FEL / TWSP: 24S / RANGE: 31E / SECTION: 26 / LAT: 32.1953247 / LONG: -103.7432455 (TVD: 11700 feet, MD: 11734 feet) BHL: SENE / 2620 FNL / 990 FEL / TWSP: 24S / RANGE: 31E / SECTION: 35 / LAT: 32.1738812 / LONG: -103.7432593 (TVD: 12165 feet, MD: 19840 feet)





Page 39 of 58

Received by OCD: 10/6/2023 12:40:40 PM

Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT ¹API Number 30-015-54069 ² Pool Code ³ Pool Name 98220 PURPLE SAGE; WOLFCAMP ⁴ Property Code ⁵ Property Name ⁶ Well Number 300635 **COTTON DRAW UNIT** 610H ⁷OGRID No. ⁹ Elevation 8 Operator Name 6137 **DEVON ENERGY PRODUCTION COMPANY, L.P.** 3541.2 Surface Location UL or lot no. Lot Idn Feet from the North/South line East/West line Section Township Range Feet from the County B 26 24 S 31 E 180 NORTH 1385 WEST EDDY "Bottom Hole Location If Different From Surface UL or lot no. Lot Idn Feet from the North/South line Feet from the East/West line Section Township Range County 0 2 25 S 31 E 20 SOUTH 1770 EAST EDDY ¹⁵ Order No. 12 Dedicated Acres ¹³ Joint or Infill 14 Consolidation Code 1,913.48

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

N89'40'18"E 2642.54 FT BN89'40'12" 2643.19 FT A	COTTON DRAW UNIT 610H	17 OPERATOR CERTIFICATION
FTP	EL. = 3541.2	I hereby certify that the information contained herein is true and complete
	GEODETIC COORDINATES NAD 83 NMSP EAST	to the best of my knowledge and belief, and that this organization either
	SURFACE LOCATION N.= 435212.07	owns a working interest or unleased mineral interest in the land including
721'57 0'19'5	E.= 723475.78 LAT. = 32.1951045'N	the proposed bottom hole location or has a right to drill this well at this
² <i>SEC.</i> _ 26	LONG. = 103.7445221'W	location pursuant to a contract with an owner of such a mineral or working
L NMNM 0012121	KICK OFF POINT FIRST TAKE POINT (PPP 1)	interest, or to a voluntary pooling agreement or a compulsory pooling order
641.5	CALLS 53' FNL, 1769' FEL 100' FNL, 1770' FEL N.= 435337 N.= 435289.84	heretofore entered by the division.
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Reputer Deal 9/19/2023 Signature Date
2 <u>N89/36'6'E © . N89/37'57'E</u>	LAST TAKE POINT BOTTOM OF HOLE 100' FSL, 1770' FEL 20' FSL, 1770' FEL N.= 419675.70 N.= 419595.72 E.= 723158.97 E.= 723159.36 LAT. = 32.1524031'N LAT. = 32.1521833'N LAT. = 32.1524051'N LAT. = 32.1521833'N	Rebecca Deal, Regulatory Analyst Printed Name rebecca.deal@dvn.com
α α σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ σ	LONG. = 103.7458205'W LONG. = 103.7458206'W	E-mail Address
₹ 	9 PPP 2 PPP 3 D 2642' FNL, 1374' FEL 0' FSL, 1770' FEL N = 40746755 N = 407473 P0	
с NMNM 0036379 СРРР2 с	N.= 427466.55 N.= 424872.80 E.= 723136.15 LAT. = 32.1738190'N LAT. = 32.1666892'N	¹⁸SURVEYOR CERTIFICATION
	LONG. = 103.7457936'W LONG. = 103.7458026'W	I hereby certify that the well location shown on this plat
		was plotted from field notes of actual surveys made by
2 589'57'44"E D 589'58'33"E C 589'58'33"E C 58'58'33"E C 58'58'3	5 D	me or under my supervision, and that the same is true
	CORNER COORDINATES TABLE	and correct to the best of my belief.
	NAD 83 NMSP EAST A - N.= 435400.01 E.= 724859.42	AUGUST 3, 2023
SB9734/51'E 2656.23 FT (E)	$\begin{array}{c} B &= N = 435384.79 \\ E = 722216.85 \\ C &= N = 430102.29 \\ E = 722249.33 \\ D &= N = 424873.17 \\ E = 722262.79 \\ E &= N = 419578.11 \\ E = 722270.97 \\ E = 724929.11 \\ G &= N = 422205.54 \\ E = 724929.11 \\ G &= N = 422207.66 \\ E = 72495.29 \\ I &= N = 427478.46 \\ E = 72495.29 \\ I &= N = 427478.46 \\ E = 724898.60 \\ J &= N = 432760.11 \\ E = 724890.89 \\ K &= N = 432760.11 \\ E = 724874.69 \\ \hline \\ $	Date of Survey

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I	r	۱t	e	n	t

API	#	

Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION COMPANY, L.P.	COTTON DRAW UNIT	610H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	26	24S	31E		53	FNL	1769	FEL	LEA
Latitu	Latitude						NAD		
	3	2.1954				-103.745	8		83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
B	26	24S	31E		100	NORTH	1770	EAST	EDDY
	Latitude 32.1953241				Longitude 103.7457	7665			NAD 83

Last Take Point (LTP)

UL O	Section 2	Township 25S	Range 31E	Lot	Feet 20	From N/S SOUTH	Feet 1770	From E/W EAST	County EDDY
Latitude					Longitud	Longitude			NAD
32.1524031					103.7	103.7458205			83

Is this well the defining well for the Horizontal Spacing Unit? N

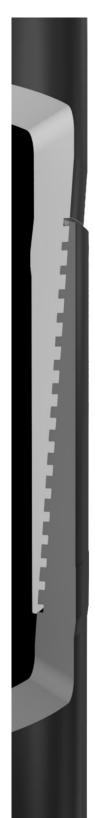
Is this well an infill well?

Y	

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

API #		
Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION COMPANY, L.P.	COTTON DRAW UNIT	607H

KZ 06/29/2018



Issued on: 16 Sep. 2022 by Logan Van Gorp



et

Connection

VAM[®] SPRINT-FJ

HI	GH	ER	TOF	QU	IE V	ERS	ON	

OD

8 5/8 in.

	Connection Data Sheet

	Plain End: 31.13			
	PIPE PROPERTIES			
Nominal OD		8.625	in.	Connecti
Nominal ID		7.921	in.	Connecti
Nominal Cross Section A	rea	9.149	sqin.	Connect
Grade Type		Hig	h Yield	Make-Up
Min. Yield Strength		125	ksi	Critical C
Max. Yield Strength		140	ksi	Tension
Min. Ultimate Tensile Str	ength	135	ksi	Compres

Weight (lb/ft)

Nominal: 32.00

Wall Th.

0.352 in.

CONNECTION PR	ROPERTIES	
Connection Type	Semi-Premium Inte	egral Flush
Connection OD (nom):	8.665	in.
Connection ID (nom):	7.954	in.
Make-Up Loss	2.614	in.
Critical Cross Section	5.978	sqin.
Tension Efficiency	65.0	% of pipe
Compression Efficiency	65.0	% of pipe
Internal Pressure Efficiency	80.0	% of pipe
External Pressure Efficiency	100	% of pipe

Alt. Drift:

7.875 in.

Grade

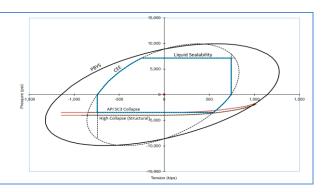
P110EC

CONNECTION PERFORMANCES								
Tensile Yield Strength	744	klb						
Compression Resistance	744	klb						
Max. Internal Pressure	7,150	psi						
Structural Collapse Resistance	4,000	psi						
Max. Structural Bending	41	°/100ft						
Max. Bending with Sealability	10	°/100ft						

TORQUE VALUE	ES	
Min. Make-up torque	23,000	ft.lb
Opt. Make-up torque	25,500	ft.lb
Max. Make-up torque	28,000	ft.lb
Max. Torque with Sealability (MTS)	48,000	ft.lb

* 87.5% RBW

VAM® SPRINT-FJ is a semi-premium flush connection designed for shale applications, where maximum clearance and high tension capacity are required for intermediate casing strings.



Do you need help on this product? - Remember no one knows VAM[®] like VAM[®]

canada@vamfieldservice.com usa@vamfieldservice.com mexico@vamfieldservice.com brazil@vamfieldservice.com

uk@vamfieldservice.com dubai@vamfieldservice.com nigeria@vamfieldservice.com angola@vamfieldservice.com

Over 140 VAM® Specialists available worldwide 24/7 for Rig Site Assistance

china@vamfieldservice.com baku@vamfieldservice.com singapore@vamfieldservice.com australia@vamfieldservice.com





Connection Data Sheet

OD (in.)	WEIGHT (Ibs./ft.)	WALL (in.)	GRADE	DRIFT (in.)	RBW%	CONNECTION
5.500	Nominal: 17.00 Plain End: 16.89	0.304	VST P110 EC	4.767	87.5	DWC/C-IS PLUS

PIPE PROPERTIES

Nominal OD	5.500	in.
Nominal ID	4.892	in.
Nominal Area	4.962	sq.in.
Grade Type	API 5CT	
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Tensile Strength	135	ksi
Yield Strength	620	klb
Ultimate Strength	670	klb
Min. Internal Yield	12,090	psi
High Collapse	8,840	psi

CONNECTION PROPERTIES

in.
in.
in.
in.
sq.in.
of pipe
of pipe
of pipe
of pipe
)))

CONNECTION PERFORMANCES

Yield Strength	620	klb
Parting Load	670	klb
Compression Rating	620	klb
Min. Internal Yield	12,090	psi
High Collapse	8,840	psi
Maximum Uniaxial Bend Rating	104.2	°/100 ft
Ref String Length w 1.4 Design Factor	26,050	ft

FIELD TORQUE VALUES

Min. Make-up Torque	13,400	ft.lbs
Opti. Make-up Torque	14,350	ft.lbs
Max. Make-up Torque	15,300	ft.lbs
Min. Shoulder Torque	1,340	ft.lbs
Max. Shoulder Torque	10,720	ft.lbs
Max. Delta Turn	0.200	Turns
Max Operational Torque	17,200	ft.lbs
Maximum Torsional Value (MTV)	18,920	ft.lbs

For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

All information is provided by VAM USA or its affiliates at user's sole risk, without liability for loss, damage or injury resulting from the use thereof; and on an "AS IS" basis without warranty or representation of any kind, whether express or implied, including without limitation any warranty of merchantability, fitness for purpose or completeness. This document and its contents are subject to change without notice. In no event shall VAM USA or its affiliates be responsible for any indirect, special, incidental, punitive, exemplary or consequential loss or damage (including without limitation, loss of use, loss of bargain, loss of revenue, profit or anticipated profit) however caused or arising, and whether such losses or damages were foreseeable or VAM USA or its affiliates was advised of the possibility of such damages.

05/23/2023 4:15 PM



VAM USA 2107 CityWest Boulevard Suite 1300 Houston, TX 77042 Phone: 713-479-3200 Fax: 713-479-3234 VAM USA Sales E-mail: <u>VAMUSAsales@vam-usa.com</u> Tech Support E-mail: <u>tech.support@vam-usa.com</u>

DWC Connection Data Notes:

- 1. DWC connections are available with a seal ring (SR) option.
- 2. All standard DWC/C connections are interchangeable for a given pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
- 3. Connection performance properties are based on nominal pipe body and connection dimensions.
- 4. DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
- 5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
- 6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
- 7. Bending efficiency is equal to the compression efficiency.
- 8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
- 9. Connection yield torque is not to be exceeded.
- Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
- 11. DWC connections will accommodate API standard drift diameters.
- 12. DWC/C family of connections are compatible with API Buttress BTC connections. Please contact tech.support@vam-usa.com for details on connection ratings and make-up.

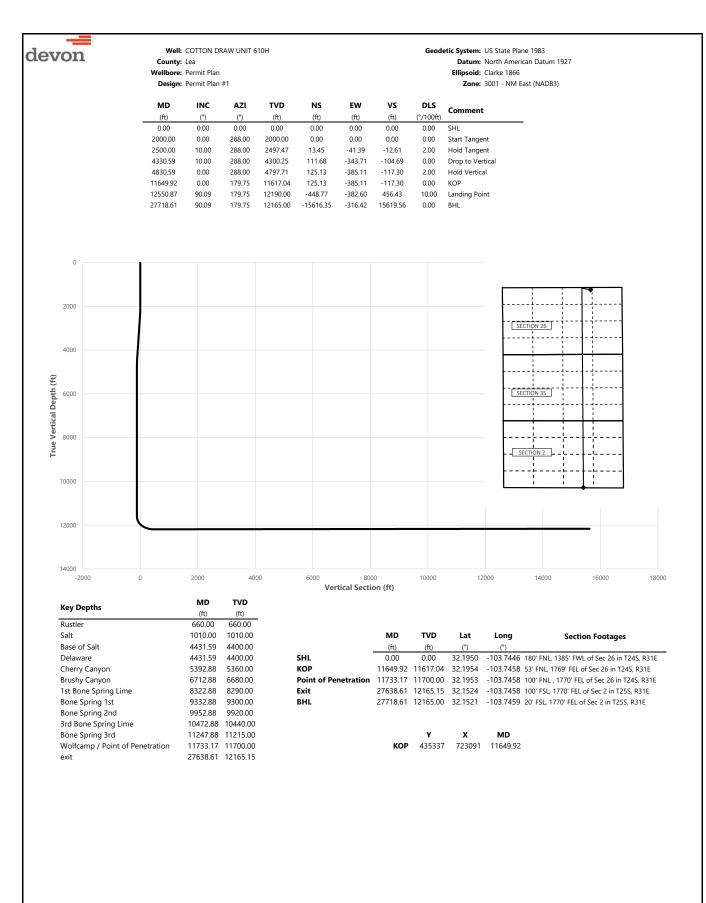
Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

All information is provided by VAM USA or its affiliates at user's sole risk, without liability for loss, damage or injury resulting from the use thereof; and on an "AS IS" basis without warranty or representation of any kind, whether express or implied, including without limitation any warranty of merchantability, fitness for purpose or completeness. This document and its contents are subject to change without notice. In no event shall VAM USA or its affiliates be responsible for any indirect, special, incidental, punitive, exemplary or consequential loss or damage (including without limitation, loss of use, loss of bargain, loss of revenue, profit or anticipated profit) however caused or arising, and whether such losses or damages were foreseeable or VAM USA or its affiliates was advised of the possibility of such damages.

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devon		Well:	COTTON D	RAW UNIT 6	10H				Geodetic System: US State Plane 1983
acvon		County:							Datum: North American Datum 1927
			Permit Plan Permit Plan						Ellipsoid: Clarke 1866 Zone: 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	
_	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
	100.00 200.00	0.00 0.00	288.00 288.00	100.00 200.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	
	300.00	0.00	288.00	300.00	0.00	0.00	0.00	0.00	
	400.00	0.00	288.00	400.00	0.00	0.00	0.00	0.00	
	500.00	0.00	288.00	500.00	0.00	0.00	0.00	0.00	
	600.00	0.00	288.00	600.00	0.00	0.00	0.00	0.00	Ducklar
	660.00 700.00	0.00 0.00	288.00 288.00	660.00 700.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	Rustler
	800.00	0.00	288.00	800.00	0.00	0.00	0.00	0.00	
	900.00	0.00	288.00	900.00	0.00	0.00	0.00	0.00	
	1000.00	0.00	288.00	1000.00	0.00	0.00	0.00	0.00	
	1010.00 1100.00	0.00 0.00	288.00 288.00	1010.00 1100.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	Salt
	1200.00	0.00	288.00	1200.00	0.00	0.00	0.00	0.00	
	1300.00	0.00	288.00	1300.00	0.00	0.00	0.00	0.00	
	1400.00	0.00	288.00	1400.00	0.00	0.00	0.00	0.00	
	1500.00	0.00	288.00	1500.00	0.00	0.00	0.00	0.00	
	1600.00 1700.00	0.00 0.00	288.00 288.00	1600.00 1700.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	
	1800.00	0.00	288.00	1800.00	0.00	0.00	0.00	0.00	
	1900.00	0.00	288.00	1900.00	0.00	0.00	0.00	0.00	
	2000.00	0.00	288.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
	2100.00	2.00	288.00	2099.98	0.54	-1.66	-0.51	2.00	
	2200.00 2300.00	4.00 6.00	288.00 288.00	2199.84 2299.45	2.16 4.85	-6.64 -14.93	-2.02 -4.55	2.00 2.00	
	2400.00	8.00	288.00	2398.70	8.62	-26.52	-8.08	2.00	
	2500.00	10.00	288.00	2497.47	13.45	-41.39	-12.61	2.00	Hold Tangent
	2600.00	10.00	288.00	2595.95	18.82	-57.91	-17.64	0.00	
	2700.00 2800.00	10.00 10.00	288.00 288.00	2694.43 2792.91	24.18 29.55	-74.42 -90.94	-22.67 -27.70	0.00 0.00	
	2900.00	10.00	288.00	2891.39	34.91	-107.45	-32.73	0.00	
	3000.00	10.00	288.00	2989.87	40.28	-123.97	-37.76	0.00	
	3100.00	10.00	288.00	3088.35	45.64	-140.48	-42.79	0.00	
	3200.00	10.00	288.00	3186.83	51.01	-157.00	-47.82	0.00	
	3300.00 3400.00	10.00 10.00	288.00 288.00	3285.31 3383.79	56.38 61.74	-173.51 -190.03	-52.85 -57.88	0.00 0.00	
	3500.00	10.00	288.00	3482.27	67.11	-206.54	-62.91	0.00	
	3600.00	10.00	288.00	3580.75	72.47	-223.06	-67.94	0.00	
	3700.00	10.00	288.00	3679.23	77.84	-239.57	-72.97	0.00	
	3800.00 3900.00	10.00 10.00	288.00 288.00	3777.72 3876.20	83.21 88.57	-256.09 -272.60	-78.00 -83.03	0.00 0.00	
	4000.00	10.00	288.00	3974.68	93.94	-289.12	-88.06	0.00	
	4100.00	10.00	288.00	4073.16	99.30	-305.63	-93.09	0.00	
	4200.00	10.00	288.00	4171.64	104.67	-322.15	-98.12	0.00	
	4300.00	10.00	288.00	4270.12	110.04	-338.66 -343.71	-103.15	0.00	Duran to Martinel
	4330.59 4400.00	10.00 8.61	288.00 288.00	4300.25 4368.74	111.68 115.15	-354.39	-104.69 -107.94	0.00 2.00	Drop to Vertical
	4431.59	7.98	288.00	4400.00	116.56	-358.72	-109.26	2.00	Base of Salt, Delaware
	4500.00	6.61	288.00	4467.85	119.24	-366.98	-111.78	2.00	
	4600.00	4.61	288.00	4567.37	122.26	-376.28	-114.61	2.00	
	4700.00 4800.00	2.61 0.61	288.00 288.00	4667.17 4767.12	124.21 125.08	-382.28 -384.95	-116.44 -117.25	2.00 2.00	
	4830.59	0.00	288.00	4797.71	125.13	-385.11	-117.30	2.00	Hold Vertical
	4900.00	0.00	179.75	4867.12	125.13	-385.11	-117.30	0.00	
	5000.00	0.00	179.75	4967.12	125.13	-385.11	-117.30	0.00	
	5100.00	0.00	179.75	5067.12	125.13	-385.11	-117.30	0.00	
	5200.00 5300.00	0.00 0.00	179.75 179.75	5167.12 5267.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	
	5392.88	0.00	179.75	5360.00	125.13	-385.11	-117.30	0.00	Cherry Canyon
	5400.00	0.00	179.75	5367.12	125.13	-385.11	-117.30	0.00	
	5500.00	0.00	179.75	5467.12	125.13	-385.11	-117.30	0.00	
	5600.00	0.00	179.75	5567.12	125.13	-385.11	-117.30	0.00	
	5700.00 5800.00	0.00 0.00	179.75 179.75	5667.12 5767.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	
	5900.00	0.00	179.75	5867.12	125.13	-385.11	-117.30	0.00	
	6000.00	0.00	179.75	5967.12	125.13	-385.11	-117.30	0.00	
	6100.00	0.00	179.75	6067.12	125.13	-385.11	-117.30	0.00	
	6200.00 6300.00	0.00 0.00	179.75 179.75	6167.12 6267.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	
	0000.00	5.00	., 5.15	5201.12	.23.15	565.11	. 17.50	5.00	
B									

			COTTON		011				Condition Suptament LLC Caste Diano 1002
devon		Well: County:		RAW UNIT 61	UH				Geodetic System: US State Plane 1983 Datum: North American Datum 1927
			Permit Plar	ı					Ellipsoid: Clarke 1866
			Permit Plar						Zone: 3001 - NM East (NAD83)
				T1/F					
	MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
	6400.00	0.00	179.75	6367.12	125.13	-385.11	-117.30	0.00	
	6500.00	0.00	179.75	6467.12	125.13	-385.11	-117.30	0.00	
	6600.00	0.00	179.75	6567.12	125.13	-385.11	-117.30	0.00	
	6700.00	0.00	179.75	6667.12	125.13	-385.11	-117.30	0.00	Prushu Convon
	6712.88 6800.00	0.00 0.00	179.75 179.75	6680.00 6767.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	Brushy Canyon
	6900.00	0.00	179.75	6867.12	125.13	-385.11	-117.30	0.00	
	7000.00	0.00	179.75	6967.12	125.13	-385.11	-117.30	0.00	
	7100.00	0.00	179.75	7067.12	125.13	-385.11	-117.30	0.00	
	7200.00	0.00	179.75	7167.12	125.13	-385.11	-117.30	0.00	
	7300.00 7400.00	0.00 0.00	179.75 179.75	7267.12 7367.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	
	7500.00	0.00	179.75	7467.12	125.13	-385.11	-117.30	0.00	
	7600.00	0.00	179.75	7567.12	125.13	-385.11	-117.30	0.00	
	7700.00	0.00	179.75	7667.12	125.13	-385.11	-117.30	0.00	
	7800.00 7900.00	0.00 0.00	179.75 179.75	7767.12 7867.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	
	7900.00 8000.00	0.00	179.75	7967.12	125.13	-385.11	-117.30	0.00	
	8100.00	0.00	179.75	8067.12	125.13	-385.11	-117.30	0.00	
	8200.00	0.00	179.75	8167.12	125.13	-385.11	-117.30	0.00	
	8300.00	0.00	179.75	8267.12	125.13	-385.11	-117.30	0.00	And Deven Conferent Street
	8322.88 8400.00	0.00 0.00	179.75 179.75	8290.00 8367.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	1st Bone Spring Lime
	8400.00 8500.00	0.00	179.75	8467.12	125.13	-385.11	-117.30	0.00	
	8600.00	0.00	179.75	8567.12	125.13	-385.11	-117.30	0.00	
	8700.00	0.00	179.75	8667.12	125.13	-385.11	-117.30	0.00	
	8800.00	0.00	179.75	8767.12	125.13	-385.11	-117.30	0.00	
	8900.00 9000.00	0.00 0.00	179.75 179.75	8867.12 8967.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	
	9100.00	0.00	179.75	9067.12	125.13	-385.11	-117.30	0.00	
	9200.00	0.00	179.75	9167.12	125.13	-385.11	-117.30	0.00	
	9300.00	0.00	179.75	9267.12	125.13	-385.11	-117.30	0.00	Dana Carrier 1-t
	9332.88 9400.00	0.00 0.00	179.75 179.75	9300.00 9367.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	Bone Spring 1st
	9500.00	0.00	179.75	9467.12	125.13	-385.11	-117.30	0.00	
	9600.00	0.00	179.75	9567.12	125.13	-385.11	-117.30	0.00	
	9700.00	0.00	179.75	9667.12	125.13	-385.11	-117.30	0.00	
	9800.00 9900.00	0.00 0.00	179.75 179.75	9767.12 9867.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	
	9900.00 9952.88	0.00	179.75	9867.12 9920.00	125.13	-385.11	-117.30	0.00	Bone Spring 2nd
	10000.00	0.00	179.75	9967.12	125.13	-385.11	-117.30	0.00	
	10100.00	0.00	179.75	10067.12	125.13	-385.11	-117.30	0.00	
	10200.00	0.00	179.75	10167.12	125.13	-385.11	-117.30	0.00	
	10300.00 10400.00	0.00 0.00	179.75 179.75	10267.12 10367.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	
	10472.88	0.00	179.75	10307.12	125.13	-385.11	-117.30	0.00	3rd Bone Spring Lime
	10500.00	0.00	179.75	10467.12	125.13	-385.11	-117.30	0.00	
	10600.00	0.00	179.75	10567.12	125.13	-385.11	-117.30	0.00	
	10700.00 10800.00	0.00 0.00	179.75 179.75	10667.12 10767.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00	
	10800.00	0.00	179.75	10767.12	125.13	-385.11	-117.30	0.00 0.00	
	11000.00	0.00	179.75	10967.12	125.13	-385.11	-117.30	0.00	
	11100.00	0.00	179.75	11067.12	125.13	-385.11	-117.30	0.00	
	11200.00	0.00	179.75	11167.12	125.13	-385.11	-117.30	0.00	Pope Caring 2rd
	11247.88 11300.00	0.00 0.00	179.75 179.75	11215.00 11267.12	125.13 125.13	-385.11 -385.11	-117.30 -117.30	0.00 0.00	Bone Spring 3rd
	11400.00	0.00	179.75	11367.12	125.13	-385.11	-117.30	0.00	
	11500.00	0.00	179.75	11467.12	125.13	-385.11	-117.30	0.00	
	11600.00	0.00	179.75	11567.12	125.13	-385.11	-117.30	0.00	
	11649.92	0.00	179.75	11617.04	125.13	-385.11	-117.30	0.00	КОР
	11700.00 11733.17	5.01 8.32	179.75 179.75	11667.06 11700.00	122.94 119.09	-385.10 -385.08	-115.11 -111.27	10.00 10.00	Wolfcamp / Point of Penetration
	11800.00	15.01	179.75	11765.41	105.59	-385.02	-97.76	10.00	
	11900.00	25.01	179.75	11859.26	71.41	-384.87	-63.60	10.00	
	12000.00	35.01	179.75	11945.74	21.47	-384.65	-13.67	10.00	
	12100.00 12200.00	45.01 55.01	179.75 179.75	12022.24	-42.74	-384.37 -384.04	50.52 127.01	10.00	
	12200.00	55.01 65.01	179.75	12086.43 12136.35	-119.26 -205.75	-384.04 -383.66	127.01 213.48	10.00 10.00	
	12400.00	75.01	179.75	12170.50	-299.61	-383.25	307.31	10.00	
	12500.00	85.01	179.75	12187.83	-397.96	-382.82	405.64	10.00	

devon		Well: County:		RAW UNIT 61	OH				Geodetic System: US State Plane 1983 Datum: North American Datum 1927
			Permit Plar	1					Ellipsoid: Clarke 1866
		Design:	Permit Plar	n #1					Zone: 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	Comment
	(ft) 12550.87	(°) 90.09	(°) 179.75	(ft) 12190.00	(ft) -448.77	(ft) -382.60	(ft) 456.43	(°/100ft) 10.00	Landing Point
	12600.00	90.09	179.75	12189.92	-497.90	-382.39	505.55	0.00	
	12700.00	90.09	179.75	12189.75	-597.90	-381.95	605.52	0.00	
	12800.00 12900.00	90.09 90.09	179.75 179.75	12189.59 12189.43	-697.90 -797.90	-381.51 -381.08	705.48 805.45	0.00 0.00	
	13000.00	90.09	179.75	12189.26	-897.90	-380.64	905.42	0.00	
	13100.00	90.09	179.75	12189.10	-997.90	-380.20	1005.39	0.00	
	13200.00 13300.00	90.09 90.09	179.75 179.75	12188.93 12188.77	-1097.89 -1197.89	-379.77 -379.33	1105.36 1205.33	0.00 0.00	
	13400.00	90.09	179.75	12188.60	-1297.89	-378.89	1305.30	0.00	
	13500.00	90.09	179.75	12188.44	-1397.89	-378.46	1405.27	0.00	
	13600.00 13700.00	90.09 90.09	179.75 179.75		-1497.89 -1597.89	-378.02 -377.58	1505.24 1605.21	0.00 0.00	
	13800.00	90.09	179.75	12187.94	-1697.89	-377.15	1705.18	0.00	
	13900.00	90.09	179.75	12187.78 12187.61	-1797.89	-376.71	1805.15	0.00	
	14000.00 14100.00	90.09 90.09	179.75 179.75	12187.61	-1897.89 -1997.88	-376.27 -375.84	1905.12 2005.09	0.00 0.00	
	14200.00	90.09	179.75	12187.28	-2097.88	-375.40	2105.06	0.00	
	14300.00	90.09	179.75		-2197.88	-374.96	2205.03	0.00	
	14400.00 14500.00	90.09 90.09	179.75 179.75	12186.95 12186.79	-2297.88 -2397.88	-374.53 -374.09	2305.00 2404.97	0.00 0.00	
	14600.00	90.09	179.75	12186.63	-2497.88	-373.66	2504.94	0.00	
	14700.00	90.09	179.75	12186.46 12186.30	-2597.88	-373.22	2604.91	0.00	
	14800.00 14900.00	90.09 90.09	179.75 179.75	12186.30	-2697.88 -2797.88	-372.78 -372.35	2704.88 2804.84	0.00 0.00	
	15000.00	90.09	179.75	12185.97	-2897.87	-371.91	2904.81	0.00	
	15100.00	90.09	179.75 179.75	12185.80	-2997.87	-371.47	3004.78	0.00	
	15200.00 15300.00	90.09 90.09	179.75	12185.64 12185.47	-3097.87 -3197.87	-371.04 -370.60	3104.75 3204.72	0.00 0.00	
	15400.00	90.09	179.75	12185.31	-3297.87	-370.16	3304.69	0.00	
	15500.00 15600.00	90.09 90.09	179.75 179.75	12185.14 12184.98	-3397.87 -3497.87	-369.73 -369.29	3404.66 3504.63	0.00 0.00	
	15700.00	90.09	179.75	12184.81	-3597.87	-368.85	3604.60	0.00	
	15800.00	90.09	179.75	12184.65	-3697.87	-368.42	3704.57	0.00	
	15900.00 16000.00	90.09 90.09	179.75 179.75	12184.48 12184.32	-3797.86 -3897.86	-367.98 -367.54	3804.54 3904.51	0.00 0.00	
	16100.00	90.09	179.75	12184.15	-3997.86	-367.11	4004.48	0.00	
	16200.00	90.09	179.75	12183.99	-4097.86	-366.67	4104.45	0.00	
	16300.00 16400.00	90.09 90.09	179.75 179.75	12183.83 12183.66	-4197.86 -4297.86	-366.23 -365.80	4204.42 4304.39	0.00 0.00	
	16500.00	90.09	179.75	12183.50	-4397.86	-365.36	4404.36	0.00	
	16600.00	90.09	179.75	12183.33	-4497.86	-364.92	4504.33	0.00	
	16700.00 16800.00	90.09 90.09	179.75 179.75	12183.17 12183.00	-4597.86 -4697.86	-364.49 -364.05	4604.30 4704.27	0.00 0.00	
	16900.00	90.09	179.75	12182.84	-4797.85	-363.61	4804.24	0.00	
	17000.00	90.09	179.75	12182.67	-4897.85	-363.18	4904.21	0.00	
	17100.00 17200.00	90.09 90.09	179.75 179.75	12182.51 12182.34	-4997.85 -5097.85	-362.74 -362.30	5004.17 5104.14	0.00 0.00	
	17300.00	90.09	179.75	12182.18	-5197.85	-361.87	5204.11	0.00	
	17400.00 17500.00	90.09 90.09	179.75 179.75	12182.01 12181.85	-5297.85 -5397.85	-361.43 -360.99	5304.08 5404.05	0.00 0.00	
	17600.00	90.09	179.75	12181.68	-5497.85	-360.56	5504.02	0.00	
	17700.00	90.09	179.75		-5597.85	-360.12	5603.99	0.00	
	17800.00 17900.00	90.09 90.09	179.75 179.75	12181.36 12181.19	-5697.84 -5797.84	-359.68 -359.25	5703.96 5803.93	0.00 0.00	
	18000.00	90.09	179.75	12181.03	-5897.84	-358.81	5903.90	0.00	
	18100.00	90.09	179.75	12180.86	-5997.84	-358.37	6003.87	0.00	
	18200.00 18300.00	90.09 90.09	179.75 179.75	12180.70 12180.53	-6097.84 -6197.84	-357.94 -357.50	6103.84 6203.81	0.00 0.00	
	18400.00	90.09	179.75	12180.33	-6297.84	-357.06	6303.78	0.00	
	18500.00	90.09	179.75	12180.20	-6397.84	-356.63	6403.75	0.00	
	18600.00 18700.00	90.09 90.09	179.75 179.75	12180.04 12179.87	-6497.84 -6597.83	-356.19 -355.75	6503.72 6603.69	0.00 0.00	
	18800.00	90.09	179.75	12179.71	-6697.83	-355.32	6703.66	0.00	
	18900.00	90.09	179.75	12179.54	-6797.83	-354.88	6803.63	0.00	
	19000.00 19100.00	90.09 90.09	179.75 179.75	12179.38 12179.21	-6897.83 -6997.83	-354.44 -354.01	6903.60 7003.57	0.00 0.00	
	19200.00	90.09	179.75	12179.05	-7097.83	-353.57	7103.54	0.00	
	19300.00	90.09	179.75	12178.88		-353.14	7203.50	0.00	
	19400.00	90.09	179.75	12178.72	-7297.83	-352.70	7303.47	0.00	
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. —		Well		RAW UNIT 6	10H				Geodetic System: US State Plane 1983
devon		County:							Datum: North American Datum 1927
			Permit Plar	ı					Ellipsoid: Clarke 1866
		Design:	Permit Plar	1 #1					Zone: 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
	19500.00	90.09	179.75	12178.56	-7397.83	-352.26	7403.44	0.00	
	19600.00	90.09	179.75	12178.39	-7497.82	-351.83	7503.41	0.00	
	19700.00 19800.00	90.09 90.09	179.75 179.75	12178.23 12178.06	-7597.82 -7697.82	-351.39 -350.95	7603.38 7703.35	0.00 0.00	
	19800.00	90.09	179.75	12178.00	-7797.82	-350.95	7803.32	0.00	
	20000.00	90.09	179.75	12177.73	-7897.82	-350.08	7903.29	0.00	
	20100.00	90.09	179.75	12177.57	-7997.82	-349.64	8003.26	0.00	
	20200.00	90.09	179.75	12177.40	-8097.82	-349.21	8103.23	0.00	
	20300.00 20400.00	90.09 90.09	179.75 179.75	12177.24 12177.07	-8197.82 -8297.82	-348.77 -348.33	8203.20 8303.17	0.00 0.00	
	20500.00	90.09	179.75	12176.91	-8397.81	-347.90	8403.14	0.00	
	20600.00	90.09	179.75	12176.74	-8497.81	-347.46	8503.11	0.00	
	20700.00	90.09	179.75	12176.58	-8597.81	-347.02	8603.08	0.00	
	20800.00 20900.00	90.09 90.09	179.75 179.75	12176.41 12176.25	-8697.81 -8797.81	-346.59 -346.15	8703.05 8803.02	0.00 0.00	
	21000.00	90.09	179.75	12176.09	-8897.81	-345.71	8902.99	0.00	
	21100.00	90.09	179.75	12175.92	-8997.81	-345.28	9002.96	0.00	
	21200.00	90.09	179.75	12175.76	-9097.81	-344.84	9102.93	0.00	
	21300.00	90.09	179.75	12175.59	-9197.81	-344.40	9202.90	0.00	
	21400.00 21500.00	90.09 90.09	179.75 179.75	12175.43 12175.26	-9297.81 -9397.80	-343.97 -343.53	9302.87 9402.83	0.00 0.00	
	21600.00	90.09	179.75	12175.10	-9497.80	-343.09	9502.80	0.00	
	21700.00	90.09	179.75	12174.93	-9597.80	-342.66	9602.77	0.00	
	21800.00	90.09	179.75	12174.77	-9697.80	-342.22	9702.74	0.00	
	21900.00	90.09	179.75 179.75	12174.60 12174.44	-9797.80 -9897.80	-341.78 -341.35	9802.71	0.00	
	22000.00 22100.00	90.09 90.09	179.75	12174.44	-9897.80	-341.55	9902.68 10002.65	0.00 0.00	
	22200.00	90.09	179.75		-10097.80	-340.47	10102.62	0.00	
	22300.00	90.09	179.75	12173.94	-10197.80	-340.04	10202.59	0.00	
	22400.00	90.09	179.75		-10297.79	-339.60	10302.56	0.00	
	22500.00 22600.00	90.09 90.09	179.75 179.75		-10397.79 -10497.79	-339.16 -338.73	10402.53 10502.50	0.00 0.00	
	22700.00	90.09	179.75		-10597.79	-338.29	10602.47	0.00	
	22800.00	90.09	179.75	12173.12	-10697.79	-337.85	10702.44	0.00	
	22900.00	90.09	179.75		-10797.79	-337.42	10802.41	0.00	
	23000.00 23100.00	90.09 90.09	179.75 179.75		-10897.79 -10997.79	-336.98 -336.54	10902.38 11002.35	0.00 0.00	
	23200.00	90.09	179.75		-11097.79	-336.11	11102.32	0.00	
	23300.00	90.09	179.75		-11197.78	-335.67	11202.29	0.00	
	23400.00	90.09	179.75		-11297.78	-335.23	11302.26	0.00	
	23500.00	90.09	179.75		-11397.78	-334.80	11402.23	0.00	
	23600.00 23700.00	90.09 90.09	179.75 179.75		-11497.78 -11597.78	-334.36 -333.92	11502.20 11602.16	0.00 0.00	
	23800.00	90.09	179.75		-11697.78	-333.49	11702.13	0.00	
	23900.00	90.09	179.75	12171.31	-11797.78	-333.05	11802.10	0.00	
	24000.00	90.09	179.75		-11897.78	-332.62	11902.07	0.00	
	24100.00 24200.00	90.09 90.09	179.75 179.75		-11997.78 -12097.77	-332.18 -331.74	12002.04 12102.01	0.00 0.00	
	24300.00	90.09	179.75		-12197.77	-331.31	12201.98	0.00	
	24400.00	90.09	179.75	12170.49	-12297.77	-330.87	12301.95	0.00	
	24500.00	90.09	179.75		-12397.77	-330.43	12401.92	0.00	
	24600.00 24700.00	90.09 90.09	179.75 179.75		-12497.77 -12597.77	-330.00 -329.56	12501.89 12601.86	0.00 0.00	
	24700.00	90.09	179.75		-12597.77	-329.50	12701.83	0.00	
	24900.00	90.09	179.75		-12797.77	-328.69	12801.80	0.00	
	25000.00	90.09	179.75		-12897.77	-328.25	12901.77	0.00	
	25100.00	90.09	179.75		-12997.76	-327.81	13001.74	0.00	
	25200.00 25300.00	90.09 90.09	179.75 179.75		-13097.76 -13197.76	-327.38 -326.94	13101.71 13201.68	0.00 0.00	
	25400.00	90.09	179.75		-13297.76	-326.50	13301.65	0.00	
	25500.00	90.09	179.75		-13397.76	-326.07	13401.62	0.00	
	25600.00	90.09	179.75		-13497.76	-325.63	13501.59	0.00	
	25700.00	90.09	179.75		-13597.76	-325.19	13601.56	0.00	
	25800.00 25900.00	90.09 90.09	179.75 179.75		-13697.76 -13797.76	-324.76 -324.32	13701.53 13801.49	0.00 0.00	
	26000.00	90.09	179.75		-13897.75	-323.88	13901.46	0.00	
	26100.00	90.09	179.75	12167.69	-13997.75	-323.45	14001.43	0.00	
	26200.00	90.09	179.75		-14097.75	-323.01	14101.40	0.00	
	26300.00 26400.00	90.09 90.09	179.75 179.75		-14197.75 -14297.75	-322.57 -322.14	14201.37 14301.34	0.00 0.00	
	20400.00	50.09	119.10	12107.13	17631.13	JCC. 14	1-501.54	0.00	

			RAW UNIT 6	10H				Geodetic System: US State Plane 1983
	County:							Datum: North American Datum 1927
		Permit Plar						Ellipsoid: Clarke 1866
	Design:	Permit Plar	า #1					Zone: 3001 - NM East (NAD83)
MD	INC	AZI	TVD	NS	EW	vs	DLS	Comment
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
26500.00	90.09	179.75	12167.03	-14397.75	-321.70	14401.31	0.00	
26600.00	90.09	179.75	12166.86	-14497.75	-321.26	14501.28	0.00	
26700.00	90.09	179.75	12166.70	-14597.75	-320.83	14601.25	0.00	
26800.00	90.09	179.75	12166.53	-14697.75	-320.39	14701.22	0.00	
26900.00	90.09	179.75	12166.37	-14797.75	-319.95	14801.19	0.00	
27000.00	90.09	179.75	12166.20	-14897.74	-319.52	14901.16	0.00	
27100.00	90.09	179.75	12166.04	-14997.74	-319.08	15001.13	0.00	
27200.00	90.09	179.75	12165.87	-15097.74	-318.64	15101.10	0.00	
27300.00	90.09	179.75	12165.71	-15197.74	-318.21	15201.07	0.00	
27400.00	90.09	179.75	12165.54	-15297.74	-317.77	15301.04	0.00	
27500.00	90.09	179.75	12165.38	-15397.74	-317.33	15401.01	0.00	
27600.00	90.09	179.75	12165.22	-15497.74	-316.90	15500.98	0.00	
27638.61	90.09	179.75	12165.15	-15536.35	-316.73	15539.58	0.00	exit
27700.00	90.09	179.75	12165.05	-15597.74	-316.46	15600.95	0.00	
27718.61	90.09	179.75	12165.00	-15616.35	-316.42	15619.56	0.00	BHL



<u>10-3/4"</u> <u>45.50#</u> <u>0.400"</u> <u>J-55</u>

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
Internal Yield Pressure at Minimum Yield		
Collapse	2090	psi
Internal Yields Pressure		
PE	3580	psi
STC	3580	psi
BTC	3580	psi
Yield Strength, Pipe Body	715	1000 lbs
Joint Strength, STC		
STC	493	1000 lbs
BTC	796	1000 lbs
	750	T000 ID2

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.

1. Geologic Formations

TVD of target	12165	Pilot hole depth	N/A
MD at TD:	27719	Deepest expected fresh water	

Basin

Formation	Depth (TVD)	Water/Mineral Bearing/Target	Hazards*
I of matrion	from KB	Zone?	
Rustler	660		
Salt	1010		
Base of Salt	4400		
Delaware	4400		
Cherry Canyon	5360		
Brushy Canyon	6680		
1st Bone Spring Lime	8290		
Bone Spring 1st	9300		
Bone Spring 2nd	9920		
3rd Bone Spring Lime	10440		
Bone Spring 3rd	11215		
Wolfcamp	11700		

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

		Wt			Casing	Interval	Casing	Interval
Hole Size	Csg. Size	(PPF)	Grade	Conn	From (MD)	To (MD)	From (TVD)	To (TVD)
14 3/4	10 3/4	45 1/2	J-55	BTC	0	685	0	685
9 7/8	8 5/8	32	P110EC	Sprint FJ	0	11549	0	11549
7 7/8	5 1/2	20	P110EC	DWC / C-IS+	0	27719	0	12165

2. Casing Program (Primary Design)

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

3. Cementing Program (Primary Design)

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 the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program. Devon will report to the BLM the volume of fluid (limited to 1 bbls) used to flush intermediate casing valves following backside cementing procedures. Operator will run one CBL per well pad.

Casing	# Sks	тос	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	421	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	473	Surf	13.0	2.3	2nd State: Bradenhead Squeeze - Lead: Class C Cement + additives
Int I	561	6712	13.2	1.44	Tail: Class H / C + additives
Production	117	9650	9	3.27	Lead: Class H /C + additives
Production	2127	11650	13.2	1.44	Tail: Class H / C + additives

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

.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Туре		~	Tested to:	
			Annular		X	50% of rated working pressure	
Int 1	13-5/8"	5M		l Ram	Х		
	15 5/0	5111	1	Ram		5M	
			Doub	le Ram	X	5101	
			Other*				
	13-5/8"	10M	Annular (5M)		X	100% of rated working pressure	
Production			Blind Ram		Х		
Troduction		1011	Pipe Ram				
			Double Ram		Х	10101	
			Other*				
			Annul	ar (5M)			
			Blind Ram Pipe Ram				
]	
			Doub	le Ram]	
			Other*]	
N A variance is requested for	the use of a	a diverter or	the surface	casing. See	attached for	schematic.	
Y A variance is requested to r	un a 5 M a	nnular on a	10M system				

4. Pressure Control Equipment (Three String Design)

5. Mud Program (Three String Design)

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

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

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

6. Logging and Testing Procedures

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

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

7. Drilling Conditions

Condition	Specfiy what type and where?			
BH pressure at deepest TVD	6642			
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	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.						
Ν	H2S is present					

Y H2S plan attached.

COTTON DRAW UNIT 610H

Page 56 of 58

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

Cotton Draw Unit 610H

Comment		surface csg in a	14 3/4	inch hole.		Design	Factors			Surface		
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	45.50		j 55	btc	20.29	5.77	0.57	775	10	0.95	10.89	35,263
"B"			,	btc				0				0
	w/s	8.4#/g mud, 30min Sfc Csg Test	psig: 1.500	Tail Cmt	does not	circ to sfc.	Totals:	775				35,263
omparison o		o Minimum Required Ceme										
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Reg'd				Min Dis
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cpl
14 3/4	0.5563	421	606	431	41	9.00	3759	5M				1.50
Surst Frac Grac	lient(s) for Seg	gment(s) A, B = , b All > 0.	70, OK.									
			· — · — · — · — · .									
8 5/8		asing inside the	103/4			<u>Design</u>				Int 1	-	
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	32.00		p 110	vam sprint fj	2.01	0.63	1.08	11,549	1	1.81	1.06	,
"B"								0				0
	w/8	8.4#/g mud, 30min Sfc Csg Test			-		Totals:	11,549				369,568
				ded to achieve a top of	0	ft from su		775				overlap.
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd				Min Dist
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cpl
9 7/8	0.1261	561	808	1463	-45	10.50	3959	5M				0.61
D V Tool(s):			6680				sum of sx	<u>Σ CuFt</u>				Σ%exces
by stage % : Class 'C' tail cm		32	28				1034	1896				30
Tail cmt												
5 1/2	C	asing inside the	8 5/8			<u>Design Fa</u>	<u>ctors</u>			Prod 1		
Segment	#/ft	asing inside the Grade	8 5/8	Coupling	Joint	<u>Design Fa</u> Collapse	<u>ctors</u> Burst	Length	B@s	a-B	a-C	
Segment "A"		0	8 5/8 p 110	Coupling dwc/c is+	Joint 3.00			27,719	B@s 2		a-C 3.05	554,380
Segment "A" "B"	#/ft	0		• •		Collapse	Burst	27,719 0	-	a-B		554,38 0
Segment "A" "B" "C"	#/ft	0		dwc/c is+		Collapse	Burst	27,719 0 0	-	a-B		554,380 0 0
Segment "A" "B"	#/ft 20.00	Grade	p 110	• •		Collapse	Burst 2.16	27,719 0 0 0	-	a-B		554,380 0 0
Segment "A" "B" "C"	#/ft 20.00	Grade 3.4#/g mud, 30min Sfc Csg Test	p 110 psig: 2,676	dwc/c is+	3.00	Collapse 1.82	Burst 2.16 Totals:	27,719 0 0 27,719	-	a-B	3.05	554,380 0 0 554,380
Segment "A" "B" "C" "D"	#/ft 20.00 w/s	Grade 3.4#/g mud, 30min Sfc Csg Test The cement v	p 110 psig: 2,676 rolume(s) are inten	dwc/c is+ 0 ded to achieve a top of	3.00	Collapse 1.82 ft from su	Burst 2.16 Totals: Irface or a	27,719 0 0 27,719 200	-	a-B	3.05	554,380 0 0 554,380 overlap.
Segment "A" "B" "C" "D" Hole	#/ft 20.00 w/a Annular	Grade 8.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage	p 110 psig: 2,676 rolume(s) are inten 1 Stage	dwc/c is+ 0 ded to achieve a top of Min	3.00 11349 1 Stage	Collapse 1.82 ft from su Drilling	Burst 2.16 Totals: Irface or a Calc	27,719 0 0 27,719 200 Req'd	-	a-B	3.05	554,380 0 0 554,380 overlap. Min Dist
Segment "A" "B" "C" "D" Hole Size	#/ft 20.00 w/s Annular Volume	Grade 8.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx	p 110 psig: 2,676 rolume(s) are inten 1 Stage CuFt Cmt	dwc/c is+ 0 ded to achieve a top of Min Cu Ft	3.00 11349 1 Stage % Excess	Collapse 1.82 ft from su Drilling Mud Wt	Burst 2.16 Totals: Irface or a	27,719 0 0 27,719 200	-	a-B	3.05	0 0 554,380 overlap. Min Dist Hole-Cplg
Segment "A" "B" "C" "D" Hole Size 7 7/8	#/ft 20.00 w/s Annular Volume 0.1733	Grade 8.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage	p 110 psig: 2,676 rolume(s) are inten 1 Stage	dwc/c is+ 0 ded to achieve a top of Min	3.00 11349 1 Stage	Collapse 1.82 ft from su Drilling	Burst 2.16 Totals: Irface or a Calc	27,719 0 0 27,719 200 Req'd	-	a-B	3.05	554,380 0 0 554,380 overlap. Min Dist
Segment "A" "C" "D" Hole Size 7 7/8	#/ft 20.00 w/s Annular Volume 0.1733	Grade 8.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx	p 110 psig: 2,676 rolume(s) are inten 1 Stage CuFt Cmt	dwc/c is+ 0 ded to achieve a top of Min Cu Ft	3.00 11349 1 Stage % Excess	Collapse 1.82 ft from su Drilling Mud Wt	Burst 2.16 Totals: Irface or a Calc	27,719 0 0 27,719 200 Req'd	-	a-B	3.05	554,380 0 0 554,380 overlap. Min Dist Hole-Cpl
Segment "A" "B" "C" "D" Hole Size	#/ft 20.00 w/s Annular Volume 0.1733	Grade 8.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx	p 110 psig: 2,676 rolume(s) are inten 1 Stage CuFt Cmt	dwc/c is+ 0 ded to achieve a top of Min Cu Ft	3.00 11349 1 Stage % Excess	Collapse 1.82 ft from su Drilling Mud Wt	Burst 2.16 Totals: Irface or a Calc	27,719 0 0 27,719 200 Req'd	-	a-B	3.05	554,380 0 0 554,380 overlap. Min Dist Hole-Cpl
Segment "A" "B" "C" "D" Hole Size 7 7/8 Class 'C' tail cm	#/ft 20.00 w/s Annular Volume 0.1733	Grade 8.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx	p 110 psig: 2,676 rolume(s) are inten 1 Stage CuFt Cmt	dwc/c is+ 0 ded to achieve a top of Min Cu Ft	3.00 11349 1 Stage % Excess	Collapse 1.82 ft from su Drilling Mud Wt	Burst 2.16 Totals: Irface or a Calc MASP	27,719 0 0 27,719 200 Req'd	2	a-B	3.05	554,380 0 0 554,380 overlap. Min Dist Hole-Cpl
Segment "A" "B" "C" "D" Hole Size 7 7/8 Class 'C' tail cm	#/ft 20.00 w/s Annular Volume 0.1733	Grade 8.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx	p 110 psig: 2,676 rolume(s) are inten 1 Stage CuFt Cmt 3445	dwc/c is+ 0 ded to achieve a top of Min Cu Ft	3.00 11349 1 Stage % Excess	Collapse 1.82 ft from su Drilling Mud Wt 10.50	Burst 2.16 Totals: Irface or a Calc MASP	27,719 0 0 27,719 200 Req'd	2	a-B 3.63	3.05	554,380 0 0 554,380 overlap. Min Dist Hole-Cpl
Segment "A" "B" "C" "D" Hole Size 7 7/8 Class 'C' tail cm #N/A 0	#/ft 20.00 w/3 Annular Volume 0.1733 t yld > 1.35	Grade 8.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 2244	p 110 psig: 2,676 rolume(s) are inten 1 Stage CuFt Cmt 3445	dwc/c is+ 0 ded to achieve a top of Min Cu Ft 2837	3.00 11349 1 Stage % Excess 21	Collapse 1.82 ft from su Drilling Mud Wt 10.50 Design	Burst 2.16 Totals: urface or a Calc MASP Factors	27,719 0 0 27,719 200 Req'd BOPE	2	a-B 3.63	3.05 ing>	554,38(0 0 554,38(overlap. Min Dist Hole-Cpl 1.19
Segment "A" "B" "C" "D" Hole Size 7 7/8 class 'C' tail cm #N/A 0 Segment	#/ft 20.00 w/3 Annular Volume 0.1733 t yld > 1.35	Grade 8.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 2244	p 110 psig: 2,676 rolume(s) are inten 1 Stage CuFt Cmt 3445	dwc/c is+ 0 ded to achieve a top of Min Cu Ft 2837 Coupling	3.00 11349 1 Stage % Excess 21	Collapse 1.82 ft from su Drilling Mud Wt 10.50 Design	Burst 2.16 Totals: urface or a Calc MASP Factors	27,719 0 0 27,719 200 Req'd BOPE	2	a-B 3.63	3.05 ing>	554,38(0 0 554,38(overlap. Min Dist Hole-Cpl 1.19 Weight
Segment "A" "B" "C" "D" Hole Size 7 7/8 Idass 'C' tail cm <i>#N/A</i> 0 Segment "A"	#/ft 20.00 w/: Annular Volume 0.1733 tyld > 1.35 #/ft	Grade 8.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 2244	p 110 psig: 2,676 rolume(s) are inten 1 Stage CuFt Cmt 3445 5 1/2	dwc/c is+ 0 ded to achieve a top of Min Cu Ft 2837 Coupling 0.00	3.00 11349 1 Stage % Excess 21	Collapse 1.82 ft from su Drilling Mud Wt 10.50 Design	Burst 2.16 Totals: urface or a Calc MASP Factors	27,719 0 0 27,719 200 Req'd BOPE	2	a-B 3.63	3.05 ing>	554,380 0 0 554,380 overlap. Min Dis Hole-Cpl 1.19 Weigh 0
Segment "A" "B" "C" "D" Hole Size 7 7/8 class 'C' tail cm (lass 'C' tail cm)(lass 'C	#/ft 20.00 w/: Annular Volume 0.1733 tyld > 1.35 #/ft	Grade 3.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 2244 Grade 3.4#/g mud, 30min Sfc Csg Test	p 110 psig: 2,676 rolume(s) are inten 1 Stage CuFt Cmt 3445 5 1/2	dwc/c is+ 0 ded to achieve a top of Min Cu Ft 2837 Coupling 0.00	3.00 11349 1 Stage % Excess 21	Collapse 1.82 ft from su Drilling Mud Wt 10.50 Design	Burst 2.16 Totals: urface or a Calc MASP Factors Burst Totals:	27,719 0 0 27,719 200 Req'd BOPE	2	a-B 3.63	3.05 ing> a-C	554,38 0 0 554,38 0 overlap. Min Dis Hole-Cpl 1.19 Weigh 0 0
Segment "A" "B" "C" "D" Hole Size 7 7/8 Class 'C' tail cm (Lass 'C' tail cm)(Lass 'C	#/ft 20.00 w/: Annular Volume 0.1733 tyld > 1.35 #/ft	Grade 3.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 2244 Grade 3.4#/g mud, 30min Sfc Csg Test	p 110 psig: 2,676 rolume(s) are inten 1 Stage CuFt Cmt 3445 5 1/2	dwc/c is+ 0 ded to achieve a top of Min Cu Ft 2837 Coupling 0.00 0.00	3.00 11349 1 Stage % Excess 21 #N/A	Collapse 1.82 ft from su Drilling Mud Wt 10.50 <u>Design</u> Collapse	Burst 2.16 Totals: urface or a Calc MASP Factors Burst Totals:	27,719 0 0 27,719 200 Req'd BOPE	2	a-B 3.63	3.05 ing> a-C	554,38/ 0 0 554,38/ overlap. Min Dis Hole-Cpl 1.19 Weigh 0 0 0 0 overlap.
Segment "A" "B" "C" "D" Hole Size 7 7/8 Class 'C' tail cm Segment "A" "B"	#/ft 20.00 w/a Annular Volume 0.1733 t yld > 1.35 #/ft w/a	Grade 3.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 2244 Grade 3.4#/g mud, 30min Sfc Csg Test Cmt vol ca	p 110 psig: 2,676 rolume(s) are inten 1 Stage CuFt Cmt 3445 5 1/2 psig: lc below includes	dwc/c is+ 0 ded to achieve a top of Min Cu Ft 2837 Coupling 0.00 0.00 this csg, TOC intended	3.00 11349 1 Stage % Excess 21 #N/A #N/A	Collapse 1.82 ft from su Drilling Mud Wt 10.50 <u>Design</u> Collapse	Burst 2.16 Totals: urface or a Calc MASP Factors Burst Totals: urface or a	27,719 0 0 27,719 200 Req'd BOPE Length 0 0 0 #N/A	2	a-B 3.63	3.05 ing> a-C	554,38(0 0 554,38(overlap. Min Dist Hole-Cpl 1.19 Weight 0 0
Segment "A" "B" "C" "D" Hole Size 7 7/8 Cass 'C' tail cm #N/A 0 Segment "A" "B" Hole	#/ft 20.00 w/3 Annular Volume 0.1733 t yld > 1.35 #/ft #/ft Annular	Grade 3.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 2244 Grade 3.4#/g mud, 30min Sfc Csg Test Cmt vol ca 1 Stage	p 110 psig: 2,676 rolume(s) are inten 1 Stage CuFt Cmt 3445 5 1/2 psig: lc below includes 1 Stage	dwc/c is+ 0 ded to achieve a top of Min Cu Ft 2837 Coupling 0.00 0.00 this csg, TOC intended Min	3.00 11349 1 Stage % Excess 21 #N/A 1 Stage	Collapse 1.82 ft from su Drilling Mud Wt 10.50 <u>Design</u> Collapse ft from su Drilling	Burst 2.16 Totals: urface or a Calc MASP Factors Burst Totals: urface or a Calc	27,719 0 0 27,719 200 Req'd BOPE Length 0 0 0 #N/A Req'd	2	a-B 3.63	3.05 ing> a-C	554,380 0 0 554,380 overlap. Min Dist Hole-Cpl 1.19 Weight 0 0 0 overlap. Min Dist
Segment "A" "B" "C" "D" Hole Size 7 7/8 lass 'C' tail cm #N/A 0 Segment "A" "B" Hole Size	#/ft 20.00 w/3 Annular Volume 0.1733 t yld > 1.35 #/ft #/ft Annular	Grade 3.4#/g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 2244 Grade 3.4#/g mud, 30min Sfc Csg Test Cmt vol ca 1 Stage Cmt Sx	p 110 psig: 2,676 rolume(s) are inten 1 Stage CuFt Cmt 3445 5 1/2 psig: lc below includes 1 Stage CuFt Cmt	dwc/c is+ 0 ded to achieve a top of Min Cu Ft 2837 Coupling 0.00 0.00 0.00 this csg, TOC intended Min Cu Ft 0	3.00 11349 1 Stage % Excess 21 #N/A 1 Stage % Excess	Collapse 1.82 ft from su Drilling Mud Wt 10.50 <u>Design</u> Collapse ft from su Drilling	Burst 2.16 Totals: urface or a Calc MASP Factors Burst Totals: urface or a Calc	27,719 0 0 27,719 200 Req'd BOPE Length 0 0 0 #N/A Req'd	2	a-B 3.63	3.05 ing> a-C	554,38 0 0 554,38 overlap. Min Dis Hole-Cp 1.19 Weigh 0 0 0 overlap. Min Dis

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District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

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

CONDITIONS

Operator:	OGRID:
DEVON ENERGY PRODUCTION COMPANY, LP	6137
333 West Sheridan Ave.	Action Number:
Oklahoma City, OK 73102	273288
	Action Type:
	[C-103] NOI Change of Plans (C-103A)

CONDITIONS					
	Created By		Condition Date		
	ward.rikala	All original COA's still apply. Additionally, if cement does not circulate during cementing, then a CBL is required for that string.	12/6/2023		

CONDITIONS

Page 58 of 58

Action 273288