erved by UCD: 3/15/2024 9:47:10 AM J.S. Department of the Interior SUREAU OF LAND MANAGEMENT		Sundry Print Repo
Well Name: ALLEY CAT 17-20 FED COM	Well Location: T23S / R32E / SEC 17 / NWNE / 32.3112616 / -103.6963089	County or Parish/State: LEA / NM
Well Number: 614H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM62223	Unit or CA Name:	Unit or CA Number:
US Well Number:	Operator: DEVON ENERGY PRODUCTION COMPANY LP	

Notice of Intent

Sundry ID: 2788916

Type of Submission: Notice of Intent

Date Sundry Submitted: 05/08/2024

Date proposed operation will begin: 05/08/2024

Type of Action: APD Change Time Sundry Submitted: 07:09

Procedure Description: Devon Energy Production Co., L.P. (Devon) respectfully requests to change the BHL and update the casing/cement design on the subject well. Please see attached revised C102, drill plan (offline cement variance included), and directional plan. Permitted BHL: SWSE, 20 FSL, 2310 FEL, 20-23S-32E Proposed BHL: SWSE, 20 FSL, 1815 FEL, 20-23S-32E No new leases have been added since approved APD APD ID: 10400085541

NOI Attachments

Procedure Description

WA018443694_ALLEY_CAT_17_20_FED_COM_614H_WL_R2_20240508070706.pdf

8.625_32_P110HSCY_MO_FXL__with_95__RBW__20240508070705.pdf

5.5_20_P110HP_CDC_HTQ_20240508070705.pdf

Alley_Cat_17_20_Fed_Com_614H_Directional_Plan_05_02_24_20240508070705.pdf

Alley_Cat_17_20_Fed_Com_614H_20240508070705.pdf

10.750_45.5_J55_SEAH_20240508070705.pdf

Received by OCD: 5/15/2024 9:47:10 AM Well Name: ALLEY CAT 17-20 FED COM	Well Location: T23S / R32E / SEC 17 / NWNE / 32.3112616 / -103.6963089	County or Parish/State: LEC / 2 of 5			
Well Number: 614H	Type of Well: OIL WELL	Allottee or Tribe Name:			
Lease Number: NMNM62223	Unit or CA Name:	Unit or CA Number:			
US Well Number:	US Well Number: Operator: DEVON ENERGY PRODUCTION COMPANY LP				
Conditions of Approva	al				

Specialist Review

Alley_Cat_17_20_Fed_Com_614H_Sundry_ID_2788916_20240515091513.pdf

Operator

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

Operator Electronic Signature: SHAYDA OMOUMI Name: DEVON ENERGY PRODUCTION COMPANY LP

Title: Regulatory Compliance Associate 3

Street Address: 333 W SHERIDAN AVE

City: OKLAHOMA CITY State: OK

Phone: (405) 235-3611

Email address: SHAYDA.OMOUMI@DVN.COM

State:

Field

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

BLM Point of Contact

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

Zip:

Disposition Date: 05/15/2024

Signed on: MAY 08, 2024 07:08 AM

Received by OCD: 5/15/2024 9:47:10 AM

eceiveu by OCD. 5/15/2	024 7.47.10 /1/1					ruge 5 0j	
Form 3160-5 (June 2019)	UNITH DEPARTMENT BUREAU OF LA		NTERIOR		FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021 5. Lease Serial No.		
Do not use	this form for pr	oposals to	RTS ON WELLS o drill or to re-enter an PD) for such proposals		6. If Indian, Allottee or	Tribe Name	
	MIT IN TRIPLICATE	- Other instruc	ctions on page 2		7. If Unit of CA/Agree	ment, 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 Exploratory Area		
4. Location of Well (Footage,	Sec., T.,R.,M., or Survey	Description)			11. Country or Parish, S	State	
	2. CHECK THE APPF	ROPRIATE BO	X(ES) TO INDICATE NATURI	E OF NOT	ICE, REPORT OR OTH	ER DATA	
TYPE OF SUBMISSIO	Ň		TY	PE OF AC	TION		
Notice of Intent	Acidiz Alter (Deepen Hydraulic Fracturing		luction (Start/Resume) lamation	Water Shut-Off Well Integrity	
Subsequent Report Casing Repair Change Plans			New Construction		Recomplete Other Temporarily Abandon		
Final Abandonment Not		rt to Injection	Plug Back	_	er Disposal		
the proposal is to deepen d the Bond under which the completion of the involved	rectionally or recomple vork will be perfonned operations. If the opera nent Notices must be fi	ete horizontally or provide the ation results in	, give subsurface locations and r Bond No. on file with BLM/BIA a multiple completion or recomp	neasured a . Required	nd true vertical depths of l subsequent reports mus new interval, a Form 31	k and approximate duration thereof. If f all pertinent markers and zones. Attach t be filed within 30 days following 60-4 must be filed once testing has been the operator has detennined that the site	

14. I hereby certify that the foregoing is true and correct. Name (<i>Printed/Typed</i>)					
т	ĩtle				
Signatura	Date				
Signature					
THE SPACE FOR FEDER	RAL OR STATE OF	ICE USE			
Approved by					
	Title	Date			
Conditions of approval, if any, are attached. Approval of this notice does not warrant o 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		fully to make to any department or agency of the United	1 States		

(Instructions on page 2)

GENERAL INSTRUCTIONS

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

Additional Information

Location of Well

0. SHL: NWNE / 198 FNL / 2516 FEL / TWSP: 23S / RANGE: 32E / SECTION: 17 / LAT: 32.3112616 / LONG: -103.6963089 (TVD: 0 feet, MD: 0 feet) PPP: NWNE / 100 FNL / 2310 FEL / TWSP: 23S / RANGE: 32E / SECTION: 17 / LAT: 32.3115339 / LONG: -103.6956425 (TVD: 10070 feet, MD: 10359 feet) PPP: NWSE / 2506 FSL / 2309 FEL / TWSP: 23S / RANGE: 32E / SECTION: 17 / LAT: 32.3041849 / LONG: -103.6956396 (TVD: 10254 feet, MD: 13000 feet) PPP: NWNE / 194 FNL / 2308 FEL / TWSP: 23S / RANGE: 32E / SECTION: 20 / LAT: 32.2967634 / LONG: -103.6956337 (TVD: 12012 feet, MD: 17200 feet) BHL: SWSE / 20 FSL / 2310 FEL / TWSP: 23S / RANGE: 32E / SECTION: 20 / LAT: 32.2828356 / LONG: -103.6956282 (TVD: 10270 feet, MD: 20750 feet) State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

AMENDED REPORT

Page 6 of 52

			WELL LC	JCATIO	N AND ACK	EAGE DEDIC	ATION PLA				
1 A	API Number	•		² Pool Code	ode ³ Pool Name						
				98248		WC-02	25 G-08 S243	217P; UPR V	PR WC		
⁴ Property C	Code				⁵ Property	Name			⁶ Well Number		
				AL	LEY CAT 17	20 FED COM			614H		
⁷ OGRID N	lo.				⁸ Operator	Name			⁹ Elevation		
6137			DEV	ON ENEI	RGY PRODUC	CTION COMPA	NY, L.P.		3621.6		
¹⁰ Surface Location											
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County		
В	17	23 S	32 E		198	NORTH	2516	EAST	LEA		
			пE	Bottom H	Iole Location	If Different Fr	om Surface				
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County		
0	20	23 S	32 E		20	SOUTH	1815	EAST	LEA		
¹² Dedicated Acres	s ¹³ Joint	or Infill	14 Consolidation	n Code	¹⁵ Order No.						
640											

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.

	ALLEY CAT 17 20 FED COM $614H$ EL = 3621.6	¹⁷ OPERATOR CERTIFICATION
<u> </u>	GEODETIC COORDINATES	I hereby certify that the information contained herein is true and complete
SURFACE	NAD 83 NMSP EAST SURFACE LOCATION	to the best of my knowledge and belief, and that this organization either
	N = 477554.14 E. = 738139.22	owns a working interest or unleased mineral interest in the land including
86 86	LAT. = 32.3112616*N	the proposed bottom hole location or has a right to drill this well at this
NMNM 018848 NMNM 062223	ັ້ LONG. = 103.6963089'W ມ	location pursuant to a contract with an owner of such a mineral or working
	N KICK OFF POINT FIRST TAKE POINT (PPP 1) N CALLS 49' FNL, 1817' FEL 100' FNL, 1815' FEL N.= <u>477715</u> N.= 477659.94	interest, or to a voluntary pooling agreement or a compulsory pooling order
00.57	P = F = 73883938	heretofore entered by the division.
SEC 17	LAT. = 32:31159886 LAT. = 32:3115410'N LONG. = -103.69413210 LONG. = 103.6940406'W	Shanda Omorum 5/1/2024
E PPP 2-		Signature Date
38.21	C LAST TAKE POINT BOTTOM OF HOLE C 100' FSL, 1815' FEL 20' FSL, 1815' FEL N.= 467299.15 N.= 467219.17	Shayda Omoumi
[™] + ^{№№№} ⁰⁹⁷⁸⁹¹ - +		Printed Name
20'20''W	M LONG. = 103.6940269'W LONG. = 103.6940268'W	shayda.omoumi@dvn.com
PPP 3	8 2641'FNL, 1815'FEL 0'FSL, 1815'FEL 9 N.= 475119.42 N.= 472478.57	E-mail Address
N89'29'46"E N89!23'14"E 2633.B3 FT M	E E.= 738855.57 E.= 738872.40 LAT. = 32.3045575*N LAT. = 32.2972984*N	
E V	L LONG. = 103.6940372'W LONG. = 103.6940337'W	¹⁸ SURVEYOR CERTIFICATION
2640.50	1321' FSL, 1815' FEL 9. N.= 468519.71	I hereby certify that the well location shown on this plat
	E.= 738897.62 LAT. = 32.2864162'N	was plotted from field notes of actual surveys made by
10.	N LONG. = 103.6940285'W	me or under my supervision, and that the same is true
NMNM 0559539 NMNM 0559539 NMNM 0559539 NMNM 086153 NMNM 086153 SEC. 20	CORNER COORDINATES TABLE NAD 83 NMSP EAST A - N.= 477724.51 E.= 735384.50	and correct to the best of my belief.
	(F) B - N.= 477750.79 E.= 738021.18 C - N.= 477780.18 E.= 740653.25	APRIL 18, 2024
	E D – N.= 475137.91 E.= 740670.42 N E – N.= 472497.97 E.= 740686.53	Date of Survey
0/. 89: 90	G – N.= 469855.52 E.= 740704.48 G – N.= 467217.53 E.= 740720.53	MEXX
	H − N.= 467190.86 E.= 738084.99 I − N.= 467168.68 E.= 735450.43	A AN ANTH
È /LTP	J – N.= 469806.75 E.= 735434.10 K – N.= 472446.64 E.= 735419.26	177 SAVINE
BOTTOM	L – N.= 475084.23 E.= 735403.66 M – N.= 472469.80 E.= 738052.41	
2: 1815'	Contraction line	Signature and Seal of Protectional Surveyor.
☐ \$89'31'03"₩ 2635.23 FT) — — — — — SECTION LINE) — — — — — QUARTER LINE	Certificate Number: AXAMONE LARAMILLO, LS 12797
~	LEASE LINE	CHOREDE VEN NO. 9363B

Received by OCD: 5/15/2024 9:47:10 AM

l	r	J.	t	e	r	J	t

Х	As Drilled
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API #

Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION COMPANY, L.P.	ALLEY CAT 17 20 FED COM	614H

Kick Off Point (KOP)

B 17 23S 32E 49 NORTH 1817 E	ST LEA
Latitude Longitude	NAD
32.31159886 -103.69413210	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
B	17	23S	32E		100	NORTH	1815	EAST	LEA
	Latitude 32.3115410			Longitude 103.694 0	0406			NAD 83	

Last Take Point (LTP)

UL O	Section 20	Township 23S	Range 32E	Lot	Feet 100	From N/S SOUTH	^{Feet} 1815	From E/W EAST	County LEA
Latitude					Longitud			NAD	
32.2830611				103.6	940269		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.	ALLEY CAT 17-20 FED COM	714H

KZ 06/29/2018

				MO-FXL 8-	-5/8 32.0	
etal One Corp.	MO-FXL			P110H		
Metal <mark>O</mark> ne	*1 Pipe Body: Borusan P110H	SCV MinVS125kei	CDS#	MinYS1		
metal One	95%RBW Special Dri					
	Connection Data		Date	95%RBW SD7.875 16-Jan-24		
	Connection Data	Sheet	Date	10-Jai	1-24	
	Geometry	<u>Imperia</u>	<u>l</u>	<u>S.I.</u>		
	Pipe Body					
	Grade *1	P110HSCY		P110HSCY		
	MinYS *1	125	ksi	125	ksi	
	Pipe OD (D)	8 5/8	in	219.08	mm	
MO-FXL	Weight	32.00	lb/ft	47.68	kg/m	
	Actual weight	31.10		46.34	kg/m	
	Wall Thickness (t)	0.352	in	8.94	mm	
	Pipe ID(d)	7.921	in	201.19	mm	
	Pipe body cross section	9.149	in ²	5,902	mm ²	
	Special Drift Dia. *1	7.875	in	200.03	mm	
The second se	-	-	-	-	-	
Box		•			•	
critical	Connection					
area	Box OD (W)	8.625	in	219.08	mm	
5	PIN ID	7.921	in	201.19	mm	
5	Make up Loss	3.847	in	97.71	mm	
d	Box Critical Area	5.853	in ²	3686	mm ²	
Make	Joint load efficiency	69	%	69	%	
	Thread Taper	1.	/ 10 (1.	2" per ft)		
oss 🔶 D	Number of Threads		5	TPI		
critical area	Performance Properties				1	
	S.M.Y.S. *1	1,144	kips	5,087	kN	
K	M.I.Y.P. *1	9,690	psi	66.83		
	Collapso Strongth *1		nei		MPa	
\mathbf{V}	Note S.M.Y.S.= Specif		LD Strer	-	MPa	
¥	Note S.M.Y.S.= Specif M.I.Y.P. = Minim	fied Minimum YIE ium Internal Yield	LD Strer	ngth of Pipe bod	MPa	
¥	Note S.M.Y.S.= Specit M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re	ied Minimum YIE 1um Internal Yield 10/17/2023	LD Strer Pressur	ngth of Pipe bod re of Pipe body	<mark>MPa</mark> y	
¥	Note S.M.Y.S.= Specit M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 95	ied Minimum YIE um Internal Yield v.2, 10/17/2023 5%RBW, SD7.87	LD Strer Pressur 5, Collap	ngth of Pipe bod re of Pipe body	<mark>MPa</mark> y	
¥	Note S.M.Y.S.= Specif M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 98 Performance Properties	ied Minimum YIE uum Internal Yield v.2, 10/17/2023 5%RBW, SD7.87 for Connection	LD Strer Pressur 5, Collap	ngth of Pipe bod e of Pipe body se Strength 4,3	MPa ly 00psi	
¥	Note S.M.Y.S.= Specif M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 98 Performance Properties Tensile Yield load	ied Minimum YIE num Internal Yield v.2, 10/17/2023 5%RBW, SD7.879 for Connection 789 kips (LD Strer Pressur 5, Collap 1 69%	ngth of Pipe bod e of Pipe body se Strength 4,3 of S.M.Y.S.)	MPa ly 00psi	
	Note S.M.Y.S.= Specif M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 95 Performance Properties Tensile Yield load Min. Compression Yield	ied Minimum YIE um Internal Yield v.2, 10/17/2023 5%RBW, SD7.87 for Connection 789 kips (789 kips (LD Strer Pressur 5, Collap 1 69%	ngth of Pipe bod e of Pipe body se Strength 4,3 of S.M.Y.S.) of S.M.Y.S.)	MPa ly 00psi	
¥	Note S.M.Y.S.= Specif M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 99 Performance Properties Tensile Yield load Min. Compression Yield Internal Pressure	ied Minimum YIE num Internal Yield v.2, 10/17/2023 5%RBW, SD7.879 for Connection 789 kips (LD Strer Pressur 5, Collap 1 69% 69% 70%	ngth of Pipe bod e of Pipe body se Strength 4,3 of S.M.Y.S.) of S.M.Y.S.)	MPa ly 00psi	
¥	Note S.M.Y.S.= Specif M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 95 Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure	ied Minimum YIE um Internal Yield v.2, 10/17/2023 5%RBW, SD7.87 for Connection 789 kips (789 kips (LD Strer Pressur 5, Collap 1 69% 69% 70% 100% c	ngth of Pipe body e of Pipe body se Strength 4,3 of S.M.Y.S.) of S.M.Y.S.) of M.I.Y.P.) of Collapse St	MPa ly 00psi	
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¥	Note S.M.Y.S.= Specif M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 95 Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure	ied Minimum YIE um Internal Yield v.2, 10/17/2023 5%RBW, SD7.87 for Connection 789 kips (789 kips (LD Strer Pressur 5, Collap 1 69% 69% 70% 100% c	ngth of Pipe body e of Pipe body se Strength 4,3 of S.M.Y.S.) of S.M.Y.S.) of M.I.Y.P.) of Collapse St	MPa ly 00psi	
¥	Note S.M.Y.S.= Specif M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 99 Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure Max. DLS (deg. /100ft) Recommended Torque Min.	ied Minimum YIE um Internal Yield v.2, 10/17/2023 5%RBW, SD7.87 for Connection 789 kips (789 kips (LD Strer Pressur 5, Collap 1 69% 69% 70% 100% c	ngth of Pipe body e of Pipe body se Strength 4,3 of S.M.Y.S.) of S.M.Y.S.) of M.I.Y.P.) of Collapse St	MPa ly 00psi	
¥	Note S.M.Y.S.= Specif M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 99 Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure Max. DLS (deg. /100ft) Recommended Torque	ied Minimum YIE ium Internal Yield v.2, 10/17/2023 5%RBW, SD7.875 for Connection 789 kips 789 kips 6,780 psi (LD Strer Pressur 5, Collap 1 69% 70% 100% c 2	ngth of Pipe body e of Pipe body se Strength 4,3 of S.M.Y.S.) of S.M.Y.S.) of M.I.Y.P.) of Collapse St 9	MPa ly 00psi rength	
¥	Note S.M.Y.S.= Specif M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 99 Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure Max. DLS (deg. /100ft) Recommended Torque Min.	ied Minimum YIE ium Internal Yield v.2, 10/17/2023 5%RBW, SD7.875 for Connection 789 kips (789 kips (6,780 psi (13,600	LD Strer Pressur 5, Collap 1 69% 69% 70% 100% c 2 ft-lb	ngth of Pipe body e of Pipe body se Strength 4,3 of S.M.Y.S.) of S.M.Y.S.) of M.I.Y.P.) of Collapse St 9	MPa ly 00psi rength	
¥	Note S.M.Y.S.= Specif M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 99 Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure Max. DLS (deg. /100ft) Recommended Torque Min. Opti.	ied Minimum YIE ium Internal Yield v.2, 10/17/2023 5%RBW, SD7.875 for Connection 789 kips (6,780 psi (6,780 psi (13,600 14,900	LD Strer Pressur 5, Collap 1 69% 69% 70% 100% c 2 ft-lb ft-lb	ngth of Pipe body e of Pipe body se Strength 4,3 of S.M.Y.S.) of S.M.Y.S.) of M.I.Y.P.) of Collapse St 9 18,400 20,200	MPa ly 00psi rength N-m	
¥	Note S.M.Y.S.= Specif M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 99 Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure Max. DLS (deg. /100ft) Recommended Torque Min. Opti. Max.	ied Minimum YIE ium Internal Yield iv.2, 10/17/2023 5%RBW, SD7.875 for Connection 789 kips (6,780 psi (6,780 psi (13,600 14,900 16,200 28,400	LD Strer Pressur 5, Collap 1 69% 69% 70% 100% c 2 ft-lb ft-lb ft-lb ft-lb	ngth of Pipe bod e of Pipe body se Strength 4,3 of S.M.Y.S.) of S.M.Y.S.) of M.I.Y.P.) of Collapse St 9 18,400 20,200 21,900 38,500	MPa y 00psi rength N-m N-m N-m N-m	
1 Notice	Note S.M.Y.S.= Specit M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 99 Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure Max. DLS (deg. /100ft) Recommended Torque Min. Opti. Max. Operational Max.	ied Minimum YIE ium Internal Yield iv.2, 10/17/2023 5%RBW, SD7.875 for Connection 789 kips (6,780 psi (6,780 psi (13,600 14,900 16,200 28,400	LD Strer Pressur 5, Collap 1 69% 69% 70% 100% c 2 ft-lb ft-lb ft-lb ft-lb	ngth of Pipe bod e of Pipe body se Strength 4,3 of S.M.Y.S.) of S.M.Y.S.) of M.I.Y.P.) of Collapse St 9 18,400 20,200 21,900 38,500	MPa y 00psi rength N-m N-m N-m N-m	
	Note S.M.Y.S.= Specit M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 99 Performance Properties Tensile Yield Ioad Min. Compression Yield Internal Pressure External Pressure Max. DLS (deg. /100ft) Recommended Torque Min. Opti. Max. Operational Max.	ied Minimum YIE ium Internal Yield ium Internal Yield ium Internal Yield iv.2, 10/17/2023 5% RBW, SD7.875 for Connection 789 kips (789 kips (6,780 psi (6,780 psi (13,600 14,900 28,400 orque can be applie	LD Strer Pressur 5, Collap 1 69% 69% 70% 100% c 2 ft-lb ft-lb ft-lb ft-lb d for high	ngth of Pipe body e of Pipe body se Strength 4,3 of S.M.Y.S.) of S.M.Y.S.) of M.I.Y.P.) of Collapse St 9 18,400 20,200 21,900 38,500 torque application	MPa y 00psi rength N-m N-m n n	

Statements regarding the suitability of products for certain types of applications are based on Metal One's knowledge of typical requirements that are often placed on Metal One products in standard well configurations. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. The products described in this Connection Data Sheet are not recommended for use in deep water offshore applications. For more information, please refer to <u>http://www.mtlo.co.jp/mo-con/_images/top/WebsiteTerms_Active_20333287_1.pdf</u> the contents of which are incorporated by reference into this Connection Data Sheet.

Page 9 of 52

U. S. Steel Tubular Products 5.500" 20.00lb/ft (0.361" Wall) P110 HP USS-CDC HTQ[®]

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

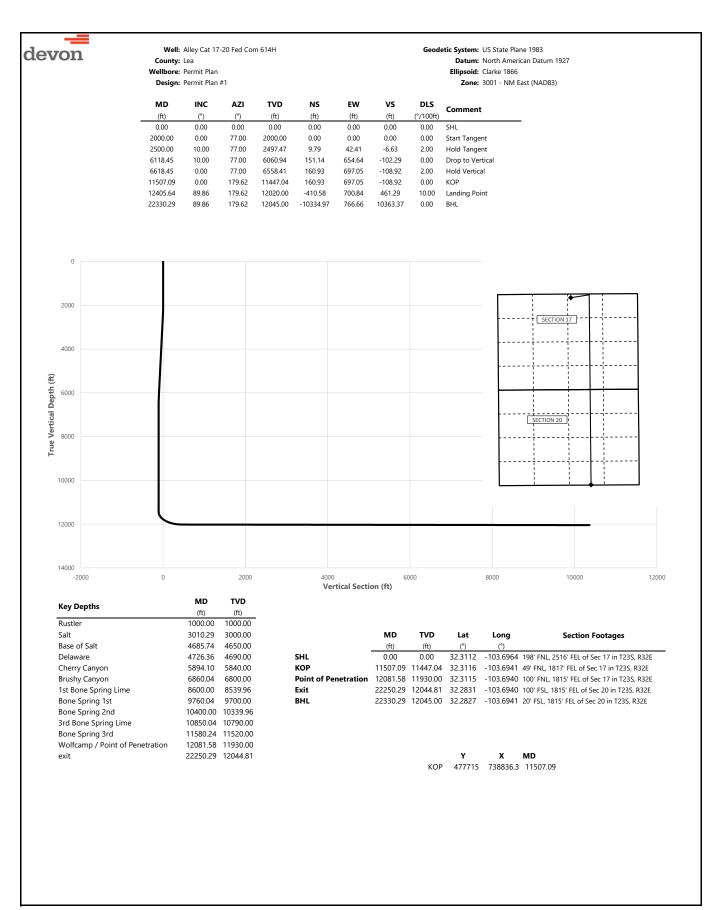
Notes

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

Legal Notice

USS - CDC HTQ[®] (High Torque Casing Drilling Connection) is a trademark of U. S. Steel Corporation. This product is a modified API Buttress threaded and coupled connection designed for drilling with casing applications. All material contained in this publication is for general information only. This material should not therefore be used or relied upon for any specific application without independent competent professional examination and verification of accuracy, suitability and applicability. Anyone making use of this material does so at their own risk and assumes any and all liability resulting from such use. U. S. Steel disclaims any and all expressed or implied warranties of fitness for any general or particular application.

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



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devon				7-20 Fed Com	n 614H				Geodetic System: US State Plane 1983
0101011		County:	Lea Permit Plar						Datum: North American Datum 1927 Ellipsoid: Clarke 1866
			Permit Plar						Zone: 3001 - NM East (NAD83)
	MD (ft)	INC	AZI	TVD	NS (ft)	EW	VS (ft)	DLS (°/100ft)	Comment
-	(ft) 0.00	(°) 0.00	(°) 0.00	(ft) 0.00	(ft) 0.00	(ft) 0.00	(ft) 0.00	0.00	SHL
	100.00	0.00	77.00	100.00	0.00	0.00	0.00	0.00	
	200.00	0.00	77.00	200.00	0.00	0.00	0.00	0.00	
	300.00	0.00	77.00	300.00	0.00	0.00	0.00	0.00	
	400.00	0.00	77.00	400.00	0.00	0.00	0.00	0.00	
	500.00	0.00	77.00	500.00	0.00	0.00	0.00	0.00	
	600.00 700.00	0.00 0.00	77.00 77.00	600.00 700.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	
	800.00	0.00	77.00	800.00	0.00	0.00	0.00	0.00	
	900.00	0.00	77.00	900.00	0.00	0.00	0.00	0.00	
	1000.00	0.00	77.00	1000.00	0.00	0.00	0.00	0.00	Rustler,
	1100.00	0.00	77.00	1100.00	0.00	0.00	0.00	0.00	
	1200.00	0.00	77.00	1200.00	0.00	0.00	0.00	0.00	
	1300.00	0.00	77.00	1300.00	0.00	0.00	0.00	0.00	
	1400.00 1500.00	0.00 0.00	77.00 77.00	1400.00 1500.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	
	1600.00	0.00	77.00	1600.00	0.00	0.00	0.00	0.00	
	1700.00	0.00	77.00	1700.00	0.00	0.00	0.00	0.00	
	1800.00	0.00	77.00	1800.00	0.00	0.00	0.00	0.00	
	1900.00	0.00	77.00	1900.00	0.00	0.00	0.00	0.00	
	2000.00	0.00	77.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
	2100.00	2.00	77.00	2099.98	0.39	1.70	-0.27	2.00	
	2200.00 2300.00	4.00	77.00 77.00	2199.84 2299.45	1.57 3.53	6.80	-1.06 -2.39	2.00 2.00	
	2400.00	6.00 8.00	77.00	2299.43	6.27	15.29 27.17	-2.59	2.00	
	2500.00	10.00	77.00	2497.47	9.79	42.41	-6.63	2.00	Hold Tangent
	2600.00	10.00	77.00	2595.95	13.70	59.33	-9.27	0.00	5
	2700.00	10.00	77.00	2694.43	17.60	76.25	-11.91	0.00	
	2800.00	10.00	77.00	2792.91	21.51	93.17	-14.56	0.00	
	2900.00	10.00	77.00	2891.39	25.42	110.09	-17.20	0.00	
	3000.00 3010.29	10.00 10.00	77.00 77.00	2989.87 3000.00	29.32 29.72	127.01 128.75	-19.85 -20.12	0.00 0.00	Salt
	3100.00	10.00	77.00	3088.35	33.23	143.93	-22.49	0.00	Sait
	3200.00	10.00	77.00	3186.83	37.13	160.85	-25.13	0.00	
	3300.00	10.00	77.00	3285.31	41.04	177.77	-27.78	0.00	
	3400.00	10.00	77.00	3383.79	44.95	194.68	-30.42	0.00	
	3500.00	10.00	77.00	3482.27	48.85	211.60	-33.06	0.00	
	3600.00	10.00	77.00	3580.75	52.76	228.52	-35.71	0.00	
	3700.00 3800.00	10.00 10.00	77.00 77.00	3679.23 3777.72	56.67 60.57	245.44 262.36	-38.35 -41.00	0.00 0.00	
	3900.00	10.00	77.00	3876.20	64.48	279.28	-43.64	0.00	
	4000.00	10.00	77.00	3974.68	68.38	296.20	-46.28	0.00	
	4100.00	10.00	77.00	4073.16	72.29	313.12	-48.93	0.00	
	4200.00	10.00	77.00	4171.64	76.20	330.04	-51.57	0.00	
	4300.00	10.00	77.00	4270.12	80.10	346.96	-54.22	0.00	
	4400.00 4500.00	10.00 10.00	77.00 77.00	4368.60 4467.08	84.01	363.88 380.80	-56.86	0.00	
	4600.00	10.00	77.00	4565.56	87.92 91.82	300.00	-59.50 -62.15	0.00 0.00	
	4685.74	10.00	77.00	4650.00	95.17	412.23	-64.41	0.00	Base of Salt
	4700.00	10.00	77.00	4664.04	95.73	414.64	-64.79	0.00	
	4726.36	10.00	77.00	4690.00	96.76	419.10	-65.49	0.00	Delaware
	4800.00	10.00	77.00	4762.52	99.63	431.56	-67.43	0.00	
	4900.00	10.00	77.00	4861.00	103.54	448.48	-70.08	0.00	
	5000.00 5100.00	10.00 10.00	77.00 77.00	4959.48 5057.97	107.45 111.35	465.40 482.32	-72.72 -75.37	0.00 0.00	
	5200.00	10.00	77.00	5156.45	115.26	499.24	-78.01	0.00	
	5300.00	10.00	77.00	5254.93	119.17	516.16	-80.65	0.00	
	5400.00	10.00	77.00	5353.41	123.07	533.08	-83.30	0.00	
	5500.00	10.00	77.00	5451.89	126.98	550.00	-85.94	0.00	
	5600.00	10.00	77.00	5550.37	130.88	566.92	-88.59	0.00	
	5700.00	10.00	77.00	5648.85	134.79	583.84	-91.23	0.00	
	5800.00 5894.10	10.00 10.00	77.00 77.00	5747.33 5840.00	138.70 142.37	600.76 616.68	-93.87 -96.36	0.00 0.00	Cherry Canyon
	5900.00	10.00	77.00	5845.81	142.57	617.68	-96.50	0.00	cherry carlyon
	6000.00	10.00	77.00	5944.29	146.51	634.60	-99.16	0.00	
	6100.00	10.00	77.00	6042.77	150.42	651.52	-101.80	0.00	
	6118.45	10.00	77.00	6060.94	151.14	654.64	-102.29	0.00	Drop to Vertical
	6200.00	8.37	77.00	6141.44	154.06	667.32	-104.27	2.00	
	6300.00 6400.00	6.37 4.37	77.00 77.00	6240.61 6340.17	156.95 159.05	679.82 688.94	-106.23 -107.65	2.00 2.00	
	0-00.00	4.57	77.00	0040.17	133.03	000.94	101.00	2.00	
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					CA 111				
devon		County:		7-20 Fed Com	614H				Geodetic System: US State Plane 1983 Datum: North American Datum 1927
			Permit Plar	ı					Ellipsoid: Clarke 1866
		Design:	Permit Plar	ו #1					Zone: 3001 - NM East (NAD83)
	MD		A 71	TVD	NS	EW	vs	DIC	
	(ft)	INC (°)	AZI (°)	(ft)	(ft)	(ft)	(ft)	DLS (°/100ft)	Comment
-	6500.00	2.37	77.00	6439.99	160.38	694.66	-108.55	2.00	
	6600.00	0.37	77.00	6539.96	160.91	696.99	-108.91	2.00	
	6618.45	0.00	77.00	6558.41	160.93	697.05	-108.92	2.00	Hold Vertical
	6700.00 6800.00	0.00 0.00	179.62 179.62	6639.96 6739.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	6860.04	0.00	179.62	6800.00	160.93	697.05	-108.92	0.00	Brushy Canyon
	6900.00	0.00	179.62	6839.96	160.93	697.05	-108.92	0.00	
	7000.00	0.00	179.62	6939.96	160.93	697.05	-108.92	0.00	
	7100.00 7200.00	0.00 0.00	179.62 179.62	7039.96 7139.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	7200.00	0.00	179.62	7239.96	160.93	697.05	-108.92	0.00	
	7400.00	0.00	179.62	7339.96	160.93	697.05	-108.92	0.00	
	7500.00	0.00	179.62	7439.96	160.93	697.05	-108.92	0.00	
	7600.00	0.00	179.62	7539.96	160.93	697.05	-108.92	0.00	
	7700.00 7800.00	0.00 0.00	179.62 179.62	7639.96 7739.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	7900.00	0.00	179.62	7839.96	160.93	697.05	-108.92	0.00	
	8000.00	0.00	179.62	7939.96	160.93	697.05	-108.92	0.00	
	8100.00	0.00	179.62	8039.96	160.93	697.05	-108.92	0.00	
	8200.00	0.00	179.62	8139.96	160.93	697.05	-108.92	0.00	
	8300.00 8400.00	0.00 0.00	179.62 179.62	8239.96 8339.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	8500.00	0.00	179.62	8439.96	160.93	697.05	-108.92	0.00	
	8600.00	0.00	179.62	8539.96	160.93	697.05	-108.92	0.00	, 1st Bone Spring Lime
	8700.00	0.00	179.62	8639.96	160.93	697.05	-108.92	0.00	
	8800.00 8900.00	0.00 0.00	179.62 179.62	8739.96 8839.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	9000.00	0.00	179.62	8939.96	160.93	697.05	-108.92	0.00	
	9100.00	0.00	179.62	9039.96	160.93	697.05	-108.92	0.00	
	9200.00	0.00	179.62	9139.96	160.93	697.05	-108.92	0.00	
	9300.00	0.00	179.62	9239.96	160.93	697.05	-108.92	0.00	
	9400.00 9500.00	0.00 0.00	179.62 179.62	9339.96 9439.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	9600.00	0.00	179.62	9539.96	160.93	697.05	-108.92	0.00	
	9700.00	0.00	179.62	9639.96	160.93	697.05	-108.92	0.00	
	9760.04	0.00	179.62	9700.00	160.93	697.05	-108.92	0.00	Bone Spring 1st
	9800.00 9900.00	0.00 0.00	179.62 179.62	9739.96 9839.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	10000.00	0.00	179.62	9939.96	160.93	697.05	-108.92	0.00	
	10100.00	0.00	179.62	10039.96	160.93	697.05	-108.92	0.00	
	10200.00	0.00	179.62	10139.96	160.93	697.05	-108.92	0.00	
	10300.00	0.00 0.00	179.62	10239.96	160.93	697.05	-108.92	0.00 0.00	Pono Spring and
	10400.00 10500.00	0.00	179.62 179.62	10339.96 10439.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00	, Bone Spring 2nd
	10600.00	0.00	179.62	10539.96	160.93	697.05	-108.92	0.00	
	10700.00	0.00	179.62	10639.96	160.93	697.05	-108.92	0.00	
	10800.00	0.00	179.62	10739.96	160.93	697.05	-108.92	0.00	
	10850.04 10900.00	0.00 0.00	179.62 179.62	10790.00 10839.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	3rd Bone Spring Lime
	11000.00	0.00	179.62	10939.96	160.93	697.05	-108.92	0.00	
	11100.00	0.00	179.62	11039.96	160.93	697.05	-108.92	0.00	
	11200.00	0.00	179.62	11139.96	160.93	697.05	-108.92	0.00	
	11300.00 11400.00	0.00 0.00	179.62 179.62	11239.96 11339.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	11500.00	0.00	179.62	11439.96	160.93	697.05	-108.92	0.00	
	11507.09	0.00	179.62	11447.04	160.93	697.05	-108.92	0.00	КОР
	11580.24	7.32	179.62	11520.00	156.26	697.08	-104.26	10.00	Bone Spring 3rd
	11600.00	9.29	179.62	11539.55	153.41	697.10	-101.42	10.00	
	11700.00 11800.00	19.29 29.29	179.62 179.62	11636.33 11727.36	128.76 87.67	697.26 697.53	-76.82 -35.83	10.00 10.00	
	11900.00	29.29 39.29	179.62	11727.36	87.87 31.40	697.53 697.91	20.31	10.00	
	12000.00	49.29	179.62	11881.37	-38.34	698.37	89.90	10.00	
	12081.58	57.45	179.62	11930.00	-103.75	698.80	155.16	10.00	Wolfcamp / Point of Penetration
	12100.00	59.29	179.62	11939.66	-119.43	698.91	170.81	10.00	
	12200.00 12300.00	69.29 79.29	179.62 179.62	11982.98 12010.02	-209.42 -305.56	699.50 700.14	260.59 356.52	10.00 10.00	
	12400.00	89.29	179.62	12019.96	-404.93	700.80	455.67	10.00	
	12405.64	89.86	179.62	12020.00	-410.58	700.84	461.29	10.00	Landing Point
	12500.00	89.86	179.62	12020.24	-504.93	701.46	555.44	0.00	
	12600.00	89.86	179.62	12020.49	-604.93	702.13	655.21	0.00	

devon			· ·	7-20 Fed Com	n 614H				Geodetic System: US State Plane 1983
0.01011		County: Wellbore	Lea Permit Plar	h					Datum: North American Datum 1927 Ellipsoid: Clarke 1866
			Permit Plar						Zone: 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	VS	DLS	Comment
-	(ft) 12700.00	(°) 89.86	(°) 179.62	(ft) 12020.74	(ft) -704.93	(ft) 702.79	(ft) 754.99	(°/100ft) 0.00	
	12800.00	89.86	179.62	12020.99	-804.92	703.45	854.76	0.00	
	12900.00	89.86	179.62	12021.25	-904.92	704.12	954.53	0.00	
	13000.00	89.86	179.62	12021.50	-1004.92	704.78	1054.30	0.00	
	13100.00 13200.00	89.86 89.86	179.62 179.62	12021.75 12022.00	-1104.92 -1204.91	705.44 706.11	1154.08 1253.85	0.00 0.00	
	13300.00	89.86	179.62	12022.25	-1304.91	706.77	1353.62	0.00	
	13400.00	89.86	179.62	12022.51	-1404.91	707.44	1453.39	0.00	
	13500.00	89.86	179.62	12022.76	-1504.91	708.10	1553.17	0.00	
	13600.00 13700.00	89.86 89.86	179.62 179.62	12023.01 12023.26	-1604.90 -1704.90	708.76 709.43	1652.94 1752.71	0.00 0.00	
	13800.00	89.86	179.62	12023.51	-1804.90	710.09	1852.48	0.00	
	13900.00	89.86	179.62	12023.77	-1904.90	710.75	1952.26	0.00	
	14000.00	89.86	179.62	12024.02	-2004.89	711.42	2052.03	0.00	
	14100.00 14200.00	89.86 89.86	179.62	12024.27 12024.52	-2104.89 -2204.89	712.08	2151.80 2251.58	0.00	
	14200.00	89.86	179.62 179.62	12024.32	-2304.89	712.74 713.41	2351.35	0.00 0.00	
	14400.00	89.86	179.62	12025.03	-2404.88	714.07	2451.12	0.00	
	14500.00	89.86	179.62	12025.28	-2504.88	714.73	2550.89	0.00	
	14600.00 14700.00	89.86 89.86	179.62 179.62	12025.53 12025.78	-2604.88 -2704.88	715.40 716.06	2650.67 2750.44	0.00 0.00	
	14700.00	89.86 89.86	179.62	12025.78	-2704.88	716.00	2850.21	0.00	
	14900.00	89.86	179.62	12026.29	-2904.87	717.39	2949.98	0.00	
	15000.00	89.86	179.62	12026.54	-3004.87	718.05	3049.76	0.00	
	15100.00	89.86	179.62	12026.79	-3104.87	718.71	3149.53	0.00	
	15200.00 15300.00	89.86 89.86	179.62 179.62	12027.04 12027.29	-3204.86 -3304.86	719.38 720.04	3249.30 3349.07	0.00 0.00	
	15400.00	89.86	179.62	12027.55	-3404.86	720.70	3448.85	0.00	
	15500.00	89.86	179.62	12027.80	-3504.86	721.37	3548.62	0.00	
	15600.00	89.86	179.62	12028.05	-3604.85	722.03	3648.39	0.00	
	15700.00 15800.00	89.86 89.86	179.62 179.62	12028.30 12028.55	-3704.85 -3804.85	722.70 723.36	3748.16 3847.94	0.00 0.00	
	15900.00	89.86	179.62	12028.81	-3904.85	724.02	3947.71	0.00	
	16000.00	89.86	179.62	12029.06	-4004.84	724.69	4047.48	0.00	
	16100.00	89.86	179.62	12029.31	-4104.84	725.35	4147.25	0.00	
	16200.00 16300.00	89.86 89.86	179.62 179.62	12029.56 12029.81	-4204.84 -4304.84	726.01 726.68	4247.03 4346.80	0.00 0.00	
	16400.00	89.86	179.62	12030.07	-4404.83	727.34	4446.57	0.00	
	16500.00	89.86	179.62	12030.32	-4504.83	728.00	4546.34	0.00	
	16600.00	89.86	179.62	12030.57	-4604.83	728.67	4646.12	0.00	
	16700.00 16800.00	89.86 89.86	179.62 179.62	12030.82 12031.08	-4704.83 -4804.82	729.33 729.99	4745.89 4845.66	0.00 0.00	
	16900.00	89.86	179.62	12031.33		730.66	4945.43	0.00	
	17000.00	89.86	179.62	12031.58	-5004.82	731.32	5045.21	0.00	
	17100.00 17200.00	89.86 89.86	179.62 179.62	12031.83	-5104.82	731.98 732.65	5144.98 5244.75	0.00	
	17200.00	89.86 89.86	179.62	12032.08 12032.34	-5204.81 -5304.81	733.31	5244.75 5344.52	0.00 0.00	
	17400.00	89.86	179.62	12032.59	-5404.81	733.97	5444.30	0.00	
	17500.00	89.86	179.62	12032.84	-5504.81	734.64	5544.07	0.00	
	17600.00 17700.00	89.86 89.86	179.62	12033.09 12033.34	-5604.80 -5704.80	735.30 735.96	5643.84	0.00	
	17800.00	89.86 89.86	179.62 179.62	12033.34	-5704.80	736.63	5743.61 5843.39	0.00 0.00	
	17900.00	89.86	179.62	12033.85	-5904.80	737.29	5943.16	0.00	
	18000.00	89.86	179.62	12034.10	-6004.79	737.96	6042.93	0.00	
	18100.00 18200.00	89.86 89.86	179.62 179.62	12034.35 12034.60	-6104.79 -6204.79	738.62	6142.70	0.00	
	18200.00	89.86	179.62	12034.80	-6204.79	739.28 739.95	6242.48 6342.25	0.00 0.00	
	18400.00	89.86	179.62	12035.11	-6404.78	740.61	6442.02	0.00	
	18500.00	89.86	179.62	12035.36	-6504.78	741.27	6541.79	0.00	
	18600.00	89.86	179.62	12035.61	-6604.78	741.94	6641.57 6741.24	0.00	
	18700.00 18800.00	89.86 89.86	179.62 179.62	12035.86 12036.12	-6704.78 -6804.77	742.60 743.26	6741.34 6841.11	0.00 0.00	
	18900.00	89.86	179.62	12036.37	-6904.77	743.93	6940.88	0.00	
	19000.00	89.86	179.62	12036.62	-7004.77	744.59	7040.66	0.00	
	19100.00	89.86	179.62	12036.87	-7104.77	745.25	7140.43	0.00	
	19200.00 19300.00	89.86 89.86	179.62 179.62	12037.12 12037.38	-7204.76 -7304.76	745.92 746.58	7240.20 7339.98	0.00 0.00	
	19400.00	89.86	179.62	12037.63	-7404.76	747.24	7439.75	0.00	
	19500.00	89.86	179.62	12037.88	-7504.76	747.91	7539.52	0.00	
	19600.00	89.86	179.62	12038.13	-7604.75	748.57	7639.29	0.00	

evon		County: Wellbore:			n 614H				Datum: Ellipsoid:	US State Plane 1983 North American Datum 1927 Clarke 1866 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	vs	DLS	Comment	
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft) 0.00		
	19700.00 19800.00	89.86 89.86	179.62 179.62	12038.38 12038.64	-7704.75 -7804.75	749.23 749.90	7739.07 7838.84	0.00		
	19800.00	89.86	179.62	12038.89	-7904.75	749.90	7938.61	0.00		
	20000.00	89.86	179.62	12038.89	-8004.73	751.23	8038.38	0.00		
	20100.00	89.86	179.62	12039.14	-8104.74	751.89	8138.16	0.00		
	20200.00	89.86	179.62	12039.64	-8204.74	752.55	8237.93	0.00		
	20300.00	89.86	179.62	12039.90	-8304.74	753.22	8337.70	0.00		
	20400.00	89.86	179.62	12040.15	-8404.73	753.88	8437.47	0.00		
	20500.00	89.86	179.62	12040.40	-8504.73	754.54	8537.25	0.00		
	20600.00	89.86	179.62	12040.65	-8604.73	755.21	8637.02	0.00		
	20700.00	89.86	179.62	12040.90	-8704.73	755.87	8736.79	0.00		
	20800.00	89.86	179.62	12041.16	-8804.72	756.53	8836.56	0.00		
	20900.00	89.86	179.62	12041.41	-8904.72	757.20	8936.34	0.00		
	21000.00	89.86	179.62	12041.66	-9004.72	757.86	9036.11	0.00		
	21100.00	89.86	179.62	12041.91	-9104.71	758.52	9135.88	0.00		
	21200.00	89.86	179.62	12042.16	-9204.71	759.19	9235.65	0.00		
	21300.00	89.86	179.62	12042.42	-9304.71	759.85	9335.43	0.00		
	21400.00	89.86	179.62	12042.67	-9404.71	760.51	9435.20	0.00		
	21500.00	89.86	179.62	12042.92	-9504.70	761.18	9534.97	0.00		
	21600.00	89.86	179.62	12043.17	-9604.70	761.84	9634.74	0.00		
	21700.00	89.86	179.62	12043.42	-9704.70	762.50	9734.52	0.00		
	21800.00	89.86	179.62	12043.68	-9804.70	763.17	9834.29	0.00		
	21900.00	89.86	179.62	12043.93	-9904.69	763.83	9934.06	0.00		
	22000.00	89.86	179.62		-10004.69	764.49	10033.83	0.00		
	22100.00	89.86	179.62		-10104.69	765.16	10133.61	0.00		
	22200.00	89.86	179.62		-10204.69	765.82	10233.38	0.00		
	22250.29	89.86	179.62		-10254.97	766.16	10283.55	0.00	exit	
	22300.00	89.86	179.62		-10304.68	766.49	10333.15	0.00		
	22330.29	89.86	179.62	12045.00	-10334.97	766.66	10363.37	0.00	BHL	

1. Geologic Formations

TVD of target	12045	Pilot hole depth	N/A
MD at TD:	22330	Deepest expected fresh water	

Basin

Dusin			
	Depth	Water/Mineral	
Formation	(TVD)	Bearing/Target	Hazards*
	from KB	Zone?	
Rustler	1000		
Salt	3000		
Base of Salt	4650		
Delaware	4690		
Cherry Canyon	5840		
Brushy Canyon	6800		
1st Bone Spring Lime	8540		
Bone Spring 1st	9700		
Bone Spring 2nd	10340		
3rd Bone Spring Lime	10790		
Bone Spring 3rd	11520		
Wolfcamp	11930		

*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	1025	0	1025	
9 7/8	8 5/8	32	P110HSCY	MOFXL	0	11407	0	11407	
7 7/8	5 1/2	20	P110HP	CDC-HTQ	0	22330	0	12045	

2. Casing Program (Primary Design)

• All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for contingency casing.

3. Cementing Program (Primary Design)

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.

Devon will report to the BLM the volume of fluid (limited to 1 bbls) used to flush intermediate casing valves following backside cementing procedures.

Casing	# Sks	тос	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	618	Surf 13.2 1.44		1.44	Lead: Class C Cement + additives
Int 1	476	Surf	13.0	2.3	2nd State: Bradenhead Squeeze - Lead: Class C Cement + additives
Int I	528	6860	13.2	1.44	Tail: Class H / C + additives
Production	117	9507	9	3.27	Lead: Class H /C + additives
Froduction	1432	11507	13.2	1.44	Tail: Class H / C + additives

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

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

4. Pressure Control Equipment (Three String Design)

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	T	уре	✓	Tested to:								
			An	nular	Х	50% of rated working pressure								
Int 1	13-5/8"	5M	Bline	d Ram	X									
	15-5/0	5111	Pipe Ram			- 5M								
				le Ram	Х	5101								
			Other*											
			Annul	ar (5M)	Х	100% of rated working pressure								
Production	13-5/8"	10M	Blind	d Ram	Х									
Troduction		15-5/8	15-5/8	13-3/8	15-5/8	13-5/8 10141	15-5/8 1014	13-5/8 10W	10101	10101	1011		e Ram	
			Other*											
			Annul	ar (5M)										
			Bline	d Ram										
			Pipe	e Ram]								
			Doub	le Ram										
			Other*											
	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.													
Y A variance is requested to r	A variance is requested to run a 5 M annular on a 10M system													

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
what will be used to monitor the loss of gain of huid.	i v i/i asoli/ v isuai wioliitoling

6. Logging and Testing Procedures

Logging, Co	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	6576
Abnormal temperature	No

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

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

8. Other facets of operation

Is this a walking operation? Potentially

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

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

Will be pre-setting casing? Potentially

- 1 Spudder rig will move in and batch drill surface hole.
 - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.,
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).

 3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.

- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pa.
- 6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7 Drilling operations will be performed with drilling rig. A that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
 - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

X Directional Plan Other, describe



<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.

ceived by OCD: 3/15/2024 9:47:10 AM U.S. Department of the Interior BUREAU OF LAND MANAGEMENT		Sundry Print Repor
Well Name: ALLEY CAT 17-20 FED COM	Well Location: T23S / R32E / SEC 17 / NWNE / 32.3112616 / -103.6963089	County or Parish/State: LEA / NM
Well Number: 614H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM62223	Unit or CA Name:	Unit or CA Number:
US Well Number:	Operator: DEVON ENERGY PRODUCTION COMPANY LP	

Notice of Intent

Sundry ID: 2788916

Type of Submission: Notice of Intent

Date Sundry Submitted: 05/08/2024

Date proposed operation will begin: 05/08/2024

Type of Action: APD Change Time Sundry Submitted: 07:09

Procedure Description: Devon Energy Production Co., L.P. (Devon) respectfully requests to change the BHL and update the casing/cement design on the subject well. Please see attached revised C102, drill plan (offline cement variance included), and directional plan. Permitted BHL: SWSE, 20 FSL, 2310 FEL, 20-23S-32E Proposed BHL: SWSE, 20 FSL, 1815 FEL, 20-23S-32E No new leases have been added since approved APD APD ID: 10400085541

NOI Attachments

Procedure Description

WA018443694_ALLEY_CAT_17_20_FED_COM_614H_WL_R2_20240508070706.pdf

8.625_32_P110HSCY_MO_FXL__with_95__RBW__20240508070705.pdf

5.5_20_P110HP_CDC_HTQ_20240508070705.pdf

Alley_Cat_17_20_Fed_Com_614H_Directional_Plan_05_02_24_20240508070705.pdf

Alley_Cat_17_20_Fed_Com_614H_20240508070705.pdf

10.750_45.5_J55_SEAH_20240508070705.pdf

Received by OCD: 5/15/2024 9:47:10 AM Well Name: ALLEY CAT 17-20 FED COM	Well Location: T23S / R32E / SEC 17 / NWNE / 32.3112616 / -103.6963089	County or Parish/State: LEA 22 of NM
Well Number: 614H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM62223	Unit or CA Name:	Unit or CA Number:
US Well Number:	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: SHAYDA OMOUMI Name: DEVON ENERGY PRODUCTION COMPANY LP Title: Regulatory Compliance Associate 3 Street Address: 333 W SHERIDAN AVE City: OKLAHOMA CITY State: OK

Phone: (405) 235-3611

Email address: SHAYDA.OMOUMI@DVN.COM

Field

Representative Name: Street Address: City: State: Phone: Email address: Signed on: MAY 08, 2024 07:08 AM

Zip:

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company LP
LEASE NO.:	NMNM62223
LOCATION:	Section 17, T.23 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Alley Cat 17-20 Fed Com 614H
SURFACE HOLE FOOTAGE:	198'/N & 2516'/E
BOTTOM HOLE FOOTAGE	20'/S & 1815'/E
ATS/API ID:	ATS-22-1285
APD ID:	10400085541
Sundry ID:	2788916

COA

H2S	Yes			
Potash	None 🔻			
Cave/Karst Potential	Low			
Cave/Karst Potential	Critical			
Variance	© 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 **Delaware** formation. As a result, the Hydrogen Sulfide area must meet **43 CFR part 3170 Subpart 3176** requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

- The 10-3/4 inch surface casing shall be set at approximately 1215 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt when present, and below usable fresh water) and cemented to the surface. The surface hole shall be 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 6800' (528 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 476 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.

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

Option 2:

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

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

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- The operator will submit an as-drilled survey well plat of the well completion, but are not limited to, those specified in 43 CFR part 3170 Subpart 3171
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. <u>When the Communitization Agreement number is known, it shall also be on the sign.</u>

BOPE Break Testing Variance (Approved)

- BOPE Break Testing is ONLY permitted for 5M BOPE or less. (Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP)
- BOPE Break Testing is NOT permitted to drilling the production hole section.

- Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation.
- While in transfer between wells, the BOPE shall be secured by the hydraulic carrier or cradle.
- Any well control event while drilling require notification to the BLM Petroleum Engineer (575-706-2779) prior to the commencement of any BOPE Break Testing operations.
- A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
- The BLM is to be contacted (575-689-5981 Lea County) 4 hours prior to BOPE tests.
- As a minimum, a full BOPE test shall be performed at **21**-day intervals.
- In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per 43 CFR part 3170 Subpart 3172.
- If in the event break testing is not utilized, then a full BOPE test would be conducted.

Offline Cementing

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

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

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

GENERAL REQUIREMENTS

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

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)
 - Lea County Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981
- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 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 when present.
- A. CASING

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

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

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

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

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

D. WASTE MATERIAL AND FLUIDS

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

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

Long Vo (LVO) 5/15/2024

Received by OCD: 5/15/2024 9:47:10 AM

Page 33 of 52				
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Do not	BURI SUNDRY N t use this f	UNITED STATI PARTMENT OF THE I EAU OF LAND MAN IOTICES AND REPO Form for proposals IUse Form 3160-3 (A	FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021 5. Lease Serial No. 6. If Indian, Allottee or Tribe Name				
	SUBMIT IN T	TRIPLICATE - Other instr	uctions on page 2		7. If Unit of CA/Agreement, Name and/or No.		
1. Type of Well Oil Well	Gas W	Vell Other			8. Well Name and No.		
2. Name of Operator					9. API Well No.		
3a. Address			3b. Phone No. (include area code	2)	10. Field and Pool or Ex	xploratory Area	
4. Location of Well (For	otage, Sec., T.,R	R.,M., or Survey Description,)		11. Country or Parish, S	State	
	12. CHE	CK THE APPROPRIATE B	OX(ES) TO INDICATE NATURE	E OF NOT	ICE, REPORT OR OTHI	ER DATA	
TYPE OF SUBM	ISSION		TY	PE OF AC	TION		
Notice of Intent		Acidize	Deepen Hydraulic Fracturing		luction (Start/Resume) lamation	Water Shut-Off Well Integrity	
Subsequent Repo	eport Casing Repair New Construction Recomplete Other Change Plans Plug and Abandon Temporarily Abandon				Other		
Final Abandonme	Final Abandonment Notice Convert to Injection Plug Back Water Disposal						
the proposal is to dee the Bond under whic completion of the im	epen directiona th the work wil volved operation andonment Not	Ily or recomplete horizontal l be perfonned or provide th ons. If the operation results i	ly, give subsurface locations and n e Bond No. on file with BLM/BIA n a multiple completion or recomp	neasured a Required letion in a	nd true vertical depths of l subsequent reports must new interval, a Form 310	k and approximate duration thereof. If fall pertinent markers and zones. Attach to be filed within 30 days following 60-4 must be filed once testing has been e operator has detennined that the site	

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

(Instructions on page 2)

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

SPECIFIC INSTRUCTIONS

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

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

NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

Additional Information

Location of Well

0. SHL: NWNE / 198 FNL / 2516 FEL / TWSP: 23S / RANGE: 32E / SECTION: 17 / LAT: 32.3112616 / LONG: -103.6963089 (TVD: 0 feet, MD: 0 feet) PPP: NWNE / 100 FNL / 2310 FEL / TWSP: 23S / RANGE: 32E / SECTION: 17 / LAT: 32.3115339 / LONG: -103.6956425 (TVD: 10070 feet, MD: 10359 feet) PPP: NWSE / 2506 FSL / 2309 FEL / TWSP: 23S / RANGE: 32E / SECTION: 17 / LAT: 32.3041849 / LONG: -103.6956396 (TVD: 10254 feet, MD: 13000 feet) PPP: NWNE / 194 FNL / 2308 FEL / TWSP: 23S / RANGE: 32E / SECTION: 20 / LAT: 32.2967634 / LONG: -103.6956337 (TVD: 12012 feet, MD: 17200 feet) BHL: SWSE / 20 FSL / 2310 FEL / TWSP: 23S / RANGE: 32E / SECTION: 20 / LAT: 32.2828356 / LONG: -103.6956282 (TVD: 10270 feet, MD: 20750 feet)

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 LC	OCATIO	N AND ACR	EAGE DEDIC	CATION PLA	Т		
¹ API Number ² Pool 0			² Pool Code	e	³ Pool Name					
				98248		WC-02	25 G-08 S243	217P; UPR V	VC	
⁴ Property C	Code		•		⁵ Property Name				⁶ Well Number	
				AL	ALLEY CAT 17 20 FED COM				614H	
⁷ OGRID N	No.				⁸ Operator	Name			⁹ Elevation	
6137			DEV	ON ENEI	NERGY PRODUCTION COMPANY, L.P. 3621.6			3621.6		
Surface Location										
UL or lot no.	Section	Townshij	p Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
В	17	23 S	32 E		198	NORTH	2516	EAST	LEA	
" Bottom Hole Location If Different From Surface										
UL or lot no.	Section	Townshi	p Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
0	20	23 S	32 E		20	SOUTH	1815	EAST	LEA	
¹² Dedicated Acres	s ¹³ Joint	or Infill	¹⁴ Consolidation	1 Code	¹⁵ Order No.					
640										

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.

Image: Subscription of the state o	$\begin{array}{c} ALLEY \ CAT \ 17 \ 20 \ FED \ COM \ 614H\\ EL. = 3621.6\\ \\ GEODETIC \ COORDINATES\\ NAD \ 83 \ NMSP \ EAST\\ SURFACE \ LOCATION\\ N.= 477554.14\\ E.= 738139.22\\ LAT. = 32.3112616'N\\ LONG. = 103.6963089'W\\ \\ KICK \ OFF \ POINT\\ KICK \ OFF \ POINT\\ RITY \ E.= 738830\\ E.= 738830.88\\ LAT. = 32.3115410'N\\ LONG. = -103.69413210\\ LONG. = 103.694406'W\\ \end{array}$	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 heretofore entered by the division. 5/1/2024
NMNM 097891 NMNM 097891 NMNM 097891 NMNY 2633.83 FT NMNY 2633.83 FT NMNY 0559539 NMNY 086153 NMNY 086153 NMNY 0559539 NMNY 086153 NMNY 086153 NMNY 0559539 NMNY 086153 NMNY 086153 NMNY 086153 NMNY 086153 NMNY 086153 NMNY 080100 NMNY 080100 NMNY 080100 NMNY 07063 NMY 007063 NMY 007063 NMY 007063 N	LONG. = -IIOS.09413210 LONG. = 103.0940406 w LAST TAKE POINT BOTTOM OF HOLE 100' FSL, 1815' FEL 20' FSL, 1815' FEL N.= 467299.15 N.= 467219.17 E.= 738905.40 E.= 738905.86 LAT. = 32.2830611'N LAT. = 32.2828413'N LONG. = 103.6940266'W LONG. = 103.6940268'W PPP 2 PPP 3 2641' FNL, 1815' FEL 0' FSL, 1815' FEL N.= 475119.42 N.= 472478.57 E.= 738855.57 E.= 738872.40 LAT. = 32.3045575'N LAT. = 32.2972984'N LONG. = 103.6940372'W LONG. = 103.6940337'W PPP 4 1321' FSL, 1815' FEL N.= 468519.71 E.= 738897.62 LAT. = 32.2864162'N LONG. = 103.6940285'W CORNER COORDINATES TABLE NAD 83 NMSP EAST A - N.= 477750.79 E.= 735821.18 C - N.= 477750.79 E.= 740650.42 E - N.= 477780.18 E.= 740650.42 E - N.= 467217.53 E.= 740704.48 G - N.= 467188.68 E.= 73804.43 J - N.= 467108.6 E.= 735434.10 K - N.= 475084.23 E.= 735431.10 K - N.= 475084.08 E.= 735431.10 K - N.= 47508.40.80 E.= 735431.10 K - N.= 47508.40.80 E.= 735430.26 M - N.= 47508.40.80 E.= 735430.10 K - N.= 47508.40.80 E.= 735430.26 M - N.= 47508.40.80 E.= 735430.26 M - N.= 47508.40.80 E.= 735430.10 K - N.= 47508.40.80 E.= 735430.10 K - N.= 47508.40.80 E.= 735430.10 K - N.= 47508.40.80 E.= 735430.26 M - N.= 47508.40.80 E.= 735430.10 K - N.= 47508.40.80 E.= 735430.20 LEGEND	Stenature Date Shayda Omoumi Date Printed Name shayda.omoumi@dvn.com E-mail Address IsSURVEYOR CERTIFICATION I*SURVEYOR CERTIFICATION 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. APRIL 18, 2024 Date of Survey Signature and Seal of Protectional Surveyor: Certificate Number: Certificate Number: Differentiation Survey

Received by OCD: 5/15/2024 9:47:10 AM

l	r	J	t	e	r	J	t

Х	As Drilled

API #	

Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION COMPANY, L.P.	ALLEY CAT 17 20 FED COM	614H

Kick Off Point (KOP)

B 17 23S 32E 49 NORTH 1817 E	ST LEA
Latitude Longitude	NAD
32.31159886 -103.69413210	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
B	17	23S	32E		100	NORTH	1815	EAST	LEA
	Latitude 32.3115410					0406			NAD 83

Last Take Point (LTP)

UL O	Section 20	Township 23S	Range 32E	Lot	Feet 100			From E/W EAST	County LEA
Latitude					Longitud			NAD	
32.2830611					103.6	103.6940269			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.	ALLEY CAT 17-20 FED COM	714H

KZ 06/29/2018

etal One Corp.				MO-FXL 8-	-5/8 32.0		
	MO-FXL	MO-FXL					
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	95%RBW Special Dri			95%RBW			
	Connection Data		Date	16-Jar			
		Chief	Bulo		· = ·		
	Geometry	<u>l</u>	<u>S.I.</u>				
	Pipe Body			D440UCOV			
	Grade *1 MinYS *1	P110HSCY	l ta i	P110HSCY	lue!		
		125	ksi	125	ksi		
MO-FXL	Pipe OD (D)	8 5/8	in lb/ft	219.08	mm		
	Weight	32.00	11/di	47.68	kg/m		
	Actual weight	31.10	Lu	46.34	kg/m		
	Wall Thickness (t)	0.352	in	8.94	mm		
	Pipe ID (d)	7.921	in	201.19	mm		
	Pipe body cross section	9.149	in ²	5,902	mm ²		
$\uparrow \leftrightarrow$	Special Drift Dia. *1	7.875	in	200.03	mm		
	-	-	-	-	-		
Box	O a man a still a m						
critical	Connection	0.005	:	040.00			
area	Box OD (W)	8.625	in	219.08	mm		
5	PIN ID	7.921	in	201.19	mm		
5	Make up Loss	3.847	in	97.71	mm		
$\zeta \leftarrow c$	_	5.853	in ²	3686	mm ²		
Make	Joint load efficiency	69	%	69 %			
ip	Thread Taper 1 / 10 (1.2" per ft) Number of Threads 5 TPI						
Pin critical							
aroa	Performance Properties	for Pipe Body					
area	Performance Properties S.M.Y.S. *1	for Pipe Body 1,144	kips	5,087	kN		
area	Performance Properties S.M.Y.S. *1 M.I.Y.P. *1		<mark>kips</mark> psi	5,087 66.83	kN MPa		
area	S.M.Y.S. *1 M.I.Y.P. *1	1,144	kips psi psi				
area	S.M.Y.S. *1	1,144 9,690 4,300	psi psi	66.83 29.66	MPa MPa		
area	S.M.Y.S. *1 M.I.Y.P. *1 Collapse Strength *1	1,144 9,690 4,300 ied Minimum YIE	psi <mark>psi</mark> LD Strer	66.83 29.66 ngth of Pipe bod	MPa MPa		
area	S.M.Y.S. *1 M.I.Y.P. *1 Collapse Strength *1 Note S.M.Y.S.= Specit	1,144 9,690 4,300 ied Minimum YIE um Internal Yield	psi <mark>psi</mark> LD Strer	66.83 29.66 ngth of Pipe bod	MPa MPa		
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area	S.M.Y.S. *1 M.I.Y.P. *1 Collapse Strength *1 Note S.M.Y.S.= Speci M.I.Y.P. = Minim *1: Borusan: SOP-12-F05 Re P110HSCY: MinYS125ksi, 95	1,144 9,690 4,300 ied Minimum YIE um Internal Yield v.2, 10/17/2023 5%RBW, SD7.87	psi psi LD Strer Pressur 5, Collap	66.83 29.66 ngth of Pipe body re of Pipe body	MPa MPa y		
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Statements regarding the suitability of products for certain types of applications are based on Metal One's knowledge of typical requirements that are often placed on Metal One products in standard well configurations. Such statements are not binding statements about the suitability of products for a particular placed of Metal One products in standard weil comparations. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application The products described in this Connection Data Sheet are not recommended for use in deep water offshore applications. For more information, please refer to <u>http://www.mtlo.co.jp/mo-con/_images/top/WebsiteTerms_Active_20333287_1.pdf</u> the contents of which are incorporated by reference into this Connection

Data Sheet.

Page 39 of 52

U. S. Steel Tubular Products 5.500" 20.00lb/ft (0.361" Wall) P110 HP USS-CDC HTQ[®]

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

Notes

1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness and Specified Minimum Yield Strength (SMYS).

2. Uniaxial bending rating shown is structural only, and equal to compression efficiency.

3. Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).

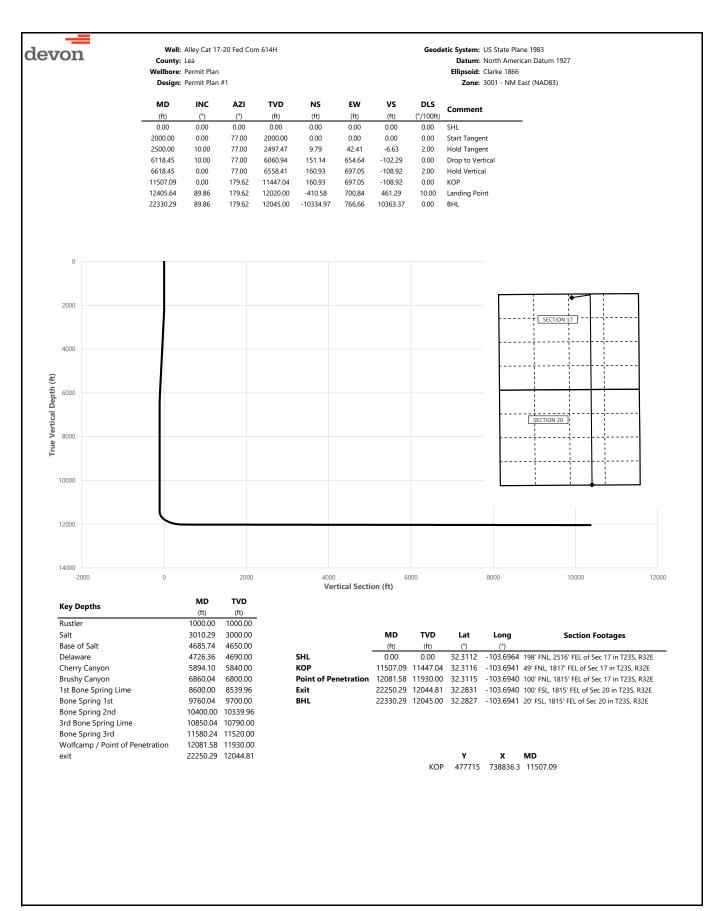
4. Reference length is calculated by joint strength divided by nominal threaded and coupled weight with 1.5 safety factor.

5. Connection external pressure leak resistance has been verified to 80% API pipe body collapse pressure following the guidelines of API 5C5 Cal II.

Legal Notice

USS - CDC HTQ[®] (High Torque Casing Drilling Connection) is a trademark of U. S. Steel Corporation. This product is a modified API Buttress threaded and coupled connection designed for drilling with casing applications. All material contained in this publication is for general information only. This material should not therefore be used or relied upon for any specific application without independent competent professional examination and verification of accuracy, suitability and applicability. Anyone making use of this material does so at their own risk and assumes any and all liability resulting from such use. U. S. Steel disclaims any and all expressed or implied warranties of fitness for any general or particular application.

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



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6000.00 10.00 77.00 5944.29 146.51 634.60 -99.16 0.00 6100.00 10.00 77.00 6042.77 150.42 651.52 -101.80 0.00 6118.45 10.00 77.00 6060.94 151.14 654.64 -102.29 0.00 Drop to Vertical 6200.00 8.37 77.00 6141.44 154.06 667.32 -104.27 2.00 6300.00 6.37 77.00 6240.61 156.95 679.82 -106.23 2.00										Cherry Canyon
6100.00 10.00 77.00 6042.77 150.42 651.52 -101.80 0.00 6118.45 10.00 77.00 6060.94 151.14 654.64 -102.29 0.00 Drop to Vertical 6200.00 8.37 77.00 6141.44 154.06 667.32 -104.27 2.00 6300.00 6.37 77.00 6240.61 156.95 679.82 -106.23 2.00										
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6200.00 8.37 77.00 6141.44 154.06 667.32 -104.27 2.00 6300.00 6.37 77.00 6240.61 156.95 679.82 -106.23 2.00										Drop to Vertical
6300.00 6.37 77.00 6240.61 156.95 679.82 -106.23 2.00										

					64 41 1				
devon		County:		7-20 Fed Com	614H				Geodetic System: US State Plane 1983 Datum: North American Datum 1927
			Permit Plar	ı					Ellipsoid: Clarke 1866
		Design:	Permit Plar	ו #1					Zone: 3001 - NM East (NAD83)
	MD		A 71	TVD	NS	EW	vs	DIC	
	(ft)	INC (°)	AZI (°)	(ft)	(ft)	(ft)	(ft)	DLS (°/100ft)	Comment
-	6500.00	2.37	77.00	6439.99	160.38	694.66	-108.55	2.00	
	6600.00	0.37	77.00	6539.96	160.91	696.99	-108.91	2.00	
	6618.45	0.00	77.00	6558.41	160.93	697.05	-108.92	2.00	Hold Vertical
	6700.00 6800.00	0.00 0.00	179.62 179.62	6639.96 6739.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	6860.04	0.00	179.62	6800.00	160.93	697.05	-108.92	0.00	Brushy Canyon
	6900.00	0.00	179.62	6839.96	160.93	697.05	-108.92	0.00	
	7000.00	0.00	179.62	6939.96	160.93	697.05	-108.92	0.00	
	7100.00 7200.00	0.00 0.00	179.62 179.62	7039.96 7139.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	7200.00	0.00	179.62	7239.96	160.93	697.05	-108.92	0.00	
	7400.00	0.00	179.62	7339.96	160.93	697.05	-108.92	0.00	
	7500.00	0.00	179.62	7439.96	160.93	697.05	-108.92	0.00	
	7600.00	0.00	179.62	7539.96	160.93	697.05	-108.92	0.00	
	7700.00 7800.00	0.00 0.00	179.62 179.62	7639.96 7739.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	7900.00	0.00	179.62	7839.96	160.93	697.05	-108.92	0.00	
	8000.00	0.00	179.62	7939.96	160.93	697.05	-108.92	0.00	
	8100.00	0.00	179.62	8039.96	160.93	697.05	-108.92	0.00	
	8200.00	0.00	179.62	8139.96	160.93	697.05	-108.92	0.00	
	8300.00 8400.00	0.00 0.00	179.62 179.62	8239.96 8339.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	8500.00	0.00	179.62	8439.96	160.93	697.05	-108.92	0.00	
	8600.00	0.00	179.62	8539.96	160.93	697.05	-108.92	0.00	, 1st Bone Spring Lime
	8700.00	0.00	179.62	8639.96	160.93	697.05	-108.92	0.00	
	8800.00 8900.00	0.00 0.00	179.62 179.62	8739.96 8839.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	9000.00	0.00	179.62	8939.96	160.93	697.05	-108.92	0.00	
	9100.00	0.00	179.62	9039.96	160.93	697.05	-108.92	0.00	
	9200.00	0.00	179.62	9139.96	160.93	697.05	-108.92	0.00	
	9300.00	0.00	179.62	9239.96	160.93	697.05	-108.92	0.00	
	9400.00 9500.00	0.00 0.00	179.62 179.62	9339.96 9439.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	9600.00	0.00	179.62	9539.96	160.93	697.05	-108.92	0.00	
	9700.00	0.00	179.62	9639.96	160.93	697.05	-108.92	0.00	
	9760.04	0.00	179.62	9700.00	160.93	697.05	-108.92	0.00	Bone Spring 1st
	9800.00 9900.00	0.00 0.00	179.62 179.62	9739.96 9839.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	10000.00	0.00	179.62	9939.96	160.93	697.05	-108.92	0.00	
	10100.00	0.00	179.62	10039.96	160.93	697.05	-108.92	0.00	
	10200.00	0.00	179.62	10139.96	160.93	697.05	-108.92	0.00	
	10300.00	0.00 0.00	179.62	10239.96	160.93	697.05	-108.92	0.00 0.00	Pono Spring and
	10400.00 10500.00	0.00	179.62 179.62	10339.96 10439.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00	, Bone Spring 2nd
	10600.00	0.00	179.62	10539.96	160.93	697.05	-108.92	0.00	
	10700.00	0.00	179.62	10639.96	160.93	697.05	-108.92	0.00	
	10800.00	0.00	179.62	10739.96	160.93	697.05	-108.92	0.00	
	10850.04 10900.00	0.00 0.00	179.62 179.62	10790.00 10839.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	3rd Bone Spring Lime
	11000.00	0.00	179.62	10939.96	160.93	697.05	-108.92	0.00	
	11100.00	0.00	179.62	11039.96	160.93	697.05	-108.92	0.00	
	11200.00	0.00	179.62	11139.96	160.93	697.05	-108.92	0.00	
	11300.00 11400.00	0.00 0.00	179.62 179.62	11239.96 11339.96	160.93 160.93	697.05 697.05	-108.92 -108.92	0.00 0.00	
	11500.00	0.00	179.62	11439.96	160.93	697.05	-108.92	0.00	
	11507.09	0.00	179.62	11447.04	160.93	697.05	-108.92	0.00	КОР
	11580.24	7.32	179.62	11520.00	156.26	697.08	-104.26	10.00	Bone Spring 3rd
	11600.00	9.29	179.62	11539.55	153.41	697.10	-101.42	10.00	
	11700.00 11800.00	19.29 29.29	179.62 179.62	11636.33 11727.36	128.76 87.67	697.26 697.53	-76.82 -35.83	10.00 10.00	
	11900.00	29.29 39.29	179.62	11727.36	87.87 31.40	697.53 697.91	20.31	10.00	
	12000.00	49.29	179.62	11881.37	-38.34	698.37	89.90	10.00	
	12081.58	57.45	179.62	11930.00	-103.75	698.80	155.16	10.00	Wolfcamp / Point of Penetration
	12100.00	59.29	179.62	11939.66	-119.43	698.91	170.81	10.00	
	12200.00 12300.00	69.29 79.29	179.62 179.62	11982.98 12010.02	-209.42 -305.56	699.50 700.14	260.59 356.52	10.00 10.00	
	12400.00	89.29	179.62	12019.96	-404.93	700.80	455.67	10.00	
	12405.64	89.86	179.62	12020.00	-410.58	700.84	461.29	10.00	Landing Point
	12500.00	89.86	179.62	12020.24	-504.93	701.46	555.44	0.00	
	12600.00	89.86	179.62	12020.49	-604.93	702.13	655.21	0.00	

devon			· ·	7-20 Fed Com	n 614H				Geodetic System: US State Plane 1983
0.01011		County: Wellbore	Lea Permit Plar	h					Datum: North American Datum 1927 Ellipsoid: Clarke 1866
			Permit Plar						Zone: 3001 - NM East (NAD83)
	MD	INC	AZI	TVD	NS	EW	VS	DLS	Comment
-	(ft) 12700.00	(°) 89.86	(°) 179.62	(ft) 12020.74	(ft) -704.93	(ft) 702.79	(ft) 754.99	(°/100ft) 0.00	
	12800.00	89.86	179.62	12020.99	-804.92	703.45	854.76	0.00	
	12900.00	89.86	179.62	12021.25	-904.92	704.12	954.53	0.00	
	13000.00	89.86	179.62	12021.50	-1004.92	704.78	1054.30	0.00	
	13100.00 13200.00	89.86 89.86	179.62 179.62	12021.75 12022.00	-1104.92 -1204.91	705.44 706.11	1154.08 1253.85	0.00 0.00	
	13300.00	89.86	179.62	12022.25	-1304.91	706.77	1353.62	0.00	
	13400.00	89.86	179.62	12022.51	-1404.91	707.44	1453.39	0.00	
	13500.00	89.86	179.62	12022.76	-1504.91	708.10	1553.17	0.00	
	13600.00 13700.00	89.86 89.86	179.62 179.62	12023.01 12023.26	-1604.90 -1704.90	708.76 709.43	1652.94 1752.71	0.00 0.00	
	13800.00	89.86	179.62	12023.51	-1804.90	710.09	1852.48	0.00	
	13900.00	89.86	179.62	12023.77	-1904.90	710.75	1952.26	0.00	
	14000.00	89.86	179.62	12024.02	-2004.89	711.42	2052.03	0.00	
	14100.00 14200.00	89.86 89.86	179.62	12024.27 12024.52	-2104.89 -2204.89	712.08	2151.80 2251.58	0.00	
	14200.00	89.86	179.62 179.62	12024.32	-2304.89	712.74 713.41	2351.35	0.00 0.00	
	14400.00	89.86	179.62	12025.03	-2404.88	714.07	2451.12	0.00	
	14500.00	89.86	179.62	12025.28	-2504.88	714.73	2550.89	0.00	
	14600.00 14700.00	89.86 89.86	179.62 179.62	12025.53 12025.78	-2604.88 -2704.88	715.40 716.06	2650.67 2750.44	0.00 0.00	
	14700.00	89.86 89.86	179.62	12025.78	-2704.88	716.00	2850.21	0.00	
	14900.00	89.86	179.62	12026.29	-2904.87	717.39	2949.98	0.00	
	15000.00	89.86	179.62	12026.54	-3004.87	718.05	3049.76	0.00	
	15100.00	89.86	179.62	12026.79	-3104.87	718.71	3149.53	0.00	
	15200.00 15300.00	89.86 89.86	179.62 179.62	12027.04 12027.29	-3204.86 -3304.86	719.38 720.04	3249.30 3349.07	0.00 0.00	
	15400.00	89.86	179.62	12027.55	-3404.86	720.70	3448.85	0.00	
	15500.00	89.86	179.62	12027.80	-3504.86	721.37	3548.62	0.00	
	15600.00	89.86	179.62	12028.05	-3604.85	722.03	3648.39	0.00	
	15700.00 15800.00	89.86 89.86	179.62 179.62	12028.30 12028.55	-3704.85 -3804.85	722.70 723.36	3748.16 3847.94	0.00 0.00	
	15900.00	89.86	179.62	12028.81	-3904.85	724.02	3947.71	0.00	
	16000.00	89.86	179.62	12029.06	-4004.84	724.69	4047.48	0.00	
	16100.00	89.86	179.62	12029.31	-4104.84	725.35	4147.25	0.00	
	16200.00 16300.00	89.86 89.86	179.62 179.62	12029.56 12029.81	-4204.84 -4304.84	726.01 726.68	4247.03 4346.80	0.00 0.00	
	16400.00	89.86	179.62	12030.07	-4404.83	727.34	4446.57	0.00	
	16500.00	89.86	179.62	12030.32	-4504.83	728.00	4546.34	0.00	
	16600.00	89.86	179.62	12030.57	-4604.83	728.67	4646.12	0.00	
	16700.00 16800.00	89.86 89.86	179.62 179.62	12030.82 12031.08	-4704.83 -4804.82	729.33 729.99	4745.89 4845.66	0.00 0.00	
	16900.00	89.86	179.62	12031.33		730.66	4945.43	0.00	
	17000.00	89.86	179.62	12031.58	-5004.82	731.32	5045.21	0.00	
	17100.00 17200.00	89.86 89.86	179.62 179.62	12031.83	-5104.82	731.98 732.65	5144.98 5244.75	0.00	
	17200.00	89.86 89.86	179.62	12032.08 12032.34	-5204.81 -5304.81	733.31	5244.75 5344.52	0.00 0.00	
	17400.00	89.86	179.62	12032.59	-5404.81	733.97	5444.30	0.00	
	17500.00	89.86	179.62	12032.84	-5504.81	734.64	5544.07	0.00	
	17600.00 17700.00	89.86 89.86	179.62	12033.09 12033.34	-5604.80 -5704.80	735.30 735.96	5643.84	0.00	
	17800.00	89.86 89.86	179.62 179.62	12033.34	-5704.80	736.63	5743.61 5843.39	0.00 0.00	
	17900.00	89.86	179.62	12033.85	-5904.80	737.29	5943.16	0.00	
	18000.00	89.86	179.62	12034.10	-6004.79	737.96	6042.93	0.00	
	18100.00 18200.00	89.86 89.86	179.62 179.62	12034.35 12034.60	-6104.79 -6204.79	738.62	6142.70	0.00	
	18200.00	89.86	179.62	12034.80	-6204.79	739.28 739.95	6242.48 6342.25	0.00 0.00	
	18400.00	89.86	179.62	12035.11	-6404.78	740.61	6442.02	0.00	
	18500.00	89.86	179.62	12035.36	-6504.78	741.27	6541.79	0.00	
	18600.00	89.86	179.62	12035.61	-6604.78	741.94	6641.57 6741.24	0.00	
	18700.00 18800.00	89.86 89.86	179.62 179.62	12035.86 12036.12	-6704.78 -6804.77	742.60 743.26	6741.34 6841.11	0.00 0.00	
	18900.00	89.86	179.62	12036.37	-6904.77	743.93	6940.88	0.00	
	19000.00	89.86	179.62	12036.62	-7004.77	744.59	7040.66	0.00	
	19100.00	89.86	179.62	12036.87	-7104.77	745.25	7140.43	0.00	
	19200.00 19300.00	89.86 89.86	179.62 179.62	12037.12 12037.38	-7204.76 -7304.76	745.92 746.58	7240.20 7339.98	0.00 0.00	
	19400.00	89.86	179.62	12037.63	-7404.76	747.24	7439.75	0.00	
	19500.00	89.86	179.62	12037.88	-7504.76	747.91	7539.52	0.00	
	19600.00	89.86	179.62	12038.13	-7604.75	748.57	7639.29	0.00	

. —		Well:	Allev Cat 1	7-20 Fed Con	n 614H				Geodetic System: US State Plane 1983
devon		County:	,						Datum: North American Datum 1927
			Permit Plar	h					Ellipsoid: Clarke 1866
			Permit Plar					Zone: 3001 - NM East (NAD83)	
		j							
	MD	INC	AZI	TVD	NS	EW	vs	DLS	• •
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	Comment
	19700.00	89.86	179.62	12038.38	-7704.75	749.23	7739.07	0.00	
	19800.00	89.86	179.62	12038.64	-7804.75	749.90	7838.84	0.00	
	19900.00	89.86	179.62	12038.89	-7904.75	750.56	7938.61	0.00	
	20000.00	89.86	179.62	12039.14	-8004.74	751.23	8038.38	0.00	
	20100.00	89.86	179.62	12039.39	-8104.74	751.89	8138.16	0.00	
	20200.00	89.86	179.62	12039.64	-8204.74	752.55	8237.93	0.00	
	20300.00	89.86	179.62	12039.90	-8304.74	753.22	8337.70	0.00	
	20400.00	89.86	179.62	12040.15	-8404.73	753.88	8437.47	0.00	
	20500.00	89.86	179.62	12040.40	-8504.73	754.54	8537.25	0.00	
	20600.00	89.86	179.62	12040.65	-8604.73	755.21	8637.02	0.00	
	20700.00	89.86	179.62	12040.90	-8704.73	755.87	8736.79	0.00	
	20800.00	89.86	179.62	12041.16	-8804.72	756.53	8836.56	0.00	
	20900.00	89.86	179.62	12041.41	-8904.72	757.20	8936.34	0.00	
	21000.00	89.86	179.62	12041.66	-9004.72	757.86	9036.11	0.00	
	21100.00	89.86	179.62	12041.91	-9104.71	758.52	9135.88	0.00	
	21200.00	89.86	179.62	12042.16	-9204.71	759.19	9235.65	0.00	
	21300.00	89.86	179.62	12042.42	-9304.71	759.85	9335.43	0.00	
	21400.00	89.86	179.62	12042.67	-9404.71	760.51	9435.20	0.00	
	21500.00	89.86	179.62	12042.92	-9504.70	761.18	9534.97	0.00	
	21600.00	89.86	179.62	12043.17	-9604.70	761.84	9634.74	0.00	
	21700.00	89.86	179.62	12043.42	-9704.70	762.50	9734.52	0.00	
	21800.00	89.86	179.62	12043.68	-9804.70	763.17	9834.29	0.00	
	21900.00	89.86	179.62	12043.93	-9904.69	763.83	9934.06	0.00	
	22000.00	89.86	179.62	12044.18	-10004.69	764.49	10033.83	0.00	
	22100.00	89.86	179.62	12044.43	-10104.69	765.16	10133.61	0.00	
	22200.00	89.86	179.62	12044.68	-10204.69	765.82	10233.38	0.00	
	22250.29	89.86	179.62	12044.81	-10254.97	766.16	10283.55	0.00	exit
	22300.00	89.86	179.62	12044.94	-10304.68	766.49	10333.15	0.00	
	22330.29	89.86	179.62	12045.00	-10334.97	766.66	10363.37	0.00	BHL

1. Geologic Formations

TVD of target	12045	Pilot hole depth	N/A
MD at TD:	22330	Deepest expected fresh water	

Basin

Dusin			
	Depth	Water/Mineral	
Formation	(TVD)	Bearing/Target	Hazards*
	from KB	Zone?	
Rustler	1000		
Salt	3000		
Base of Salt	4650		
Delaware	4690		
Cherry Canyon	5840		
Brushy Canyon	6800		
1st Bone Spring Lime	8540		
Bone Spring 1st	9700		
Bone Spring 2nd	10340		
3rd Bone Spring Lime	10790		
Bone Spring 3rd	11520		
Wolfcamp	11930		

*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	1025	0	1025	
9 7/8	8 5/8	32	P110HSCY	MOFXL	0	11407	0	11407	
7 7/8	5 1/2	20	P110HP	CDC-HTQ	0	22330	0	12045	

2. Casing Program (Primary Design)

• All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 IILB.1.h Must have table for contingency casing.

3. Cementing Program (Primary Design)

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.

Devon will report to the BLM the volume of fluid (limited to 1 bbls) used to flush intermediate casing valves following backside cementing procedures.

Casing	# Sks	тос	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	618	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	476	Surf	13.0	2.3	2nd State: Bradenhead Squeeze - Lead: Class C Cement + additives
Int 1	528	6860	13.2	1.44	Tail: Class H / C + additives
Production	117	9507	9	3.27	Lead: Class H /C + additives
rioddetion	1432	11507	13.2	1.44	Tail: Class H / C + additives

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

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

4. Pressure Control Equipment (Three String Design)

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

5. Mud Program (Three String Design)

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

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

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

6. Logging and Testing Procedures

Logging, C	oring 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	6576
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 Onshore Oil and Gas Order #6. If Hydrogen Sulfide is					
encountered	encountered measured values and formations will be provided to the BLM.					
Ν	H2S is present					
Y	H2S plan attached.					

8. Other facets of operation

Is this a walking operation? Potentially

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

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

Will be pre-setting casing? Potentially

- 1 Spudder rig will move in and batch drill surface hole.
 - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.,
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).

 3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.

- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pa.
- 6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7 Drilling operations will be performed with drilling rig. A that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
 - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

X Directional Plan Other, describe



<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.

Alley Cat 17-20 Fed Com 614H

10 3/4	sur	face csg in a	14 3/4	inch hole.		Design I	Factors			Surfac	3	
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	45.50		j 55	btc	12.94	3.68	0.58	1,215	7	0.96	6.95	55,283
"B"			,	btc				0	- i - i	0.00		0
	w/8.4#/	g mud, 30min Sfc Csg Test	psig: 1.500	Tail Cmt	does not	circ to sfc.	Totals:	1,215				55,283
omparison of		nimum Required Ceme					i otuloi	.,2.0				,
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	618	890	676	32	9.00	3712	5M				1.50
	0.0000	010	000	0.0	02	5.00	0112					
urst Frac Grad	lient(s) for Segme	ent(s) A, B = , b All > 0.	.70, ОК.									
0 E /0		ag incida the	10.2/4			Decign	Factors		-	Int 1		
8 5/8 Sogmont		ng inside the	10 3/4	Courting	10:+	Design I		Lorath	D@-		a-C	Maint
Segment "A"	#/ft	Grade	m 110	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	4	Weight
"A"	32.00		p 110	mo-fxl	2.16	0.69	0.95	11,407 0	1	1.59	1.16	365,024 0
	w/8.4#/	g mud, 30min Sfc Csg Test	psig: -603				Totals:	11,407				365,024
		The cement v	volume(s) are inten	ded to achieve a top of	0	ft from su	rface or a	1215				overlap.
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd				Min Dis
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cpl
9 7/8	0.1261	528	760	1449	-48	10.50	3920	5M				0.63
V Tool(s):			6800				sum of sx	<u>Σ</u> CuFt				Σ%exces
oy stage % : lass 'C' tail cm		31 ent(s): A, B, C, D = 0.55, I	26 b, c, d <0.70 a Prob	olem!!			1004	1855				28
by stage % : lass 'C' tail cm urst Frac Grad Tail cmt	lient(s) for Segme	nt(s): A, B, C, D = 0.55, I	b, c, d <0.70 a Prot	olem!!		Decim Ec		1855	-	Dred 1		28
by stage % : Class 'C' tail cm Burst Frac Grad Tail cmt 5 1/2	lient(s) for Segme	nt(s): A, B, C, D = 0.55, I		_		Design Far	<u>ctors</u>		Pen	Prod 1		
by stage % : lass 'C' tail cm turst Frac Grad Tail cmt 5 1/2 Segment	lient(s) for Segme casir #/ft	nt(s): A, B, C, D = 0.55, I	b, c, d <0.70 a Prot 8 5/8	Coupling	Joint	Collapse	<u>ctors</u> Burst	Length	B@s	a-B	a-C	Weight
by stage % : lass 'C' tail cm surst Frac Grad Tail cmt 5 1/2 Segment "A"	lient(s) for Segme	nt(s): A, B, C, D = 0.55, I	b, c, d <0.70 a Prot	_	Joint 2.66		<u>ctors</u>	Length 22,330	B@s 2			Weigh 446,600
by stage % : lass 'C' tail cm turst Frac Grad Tail cmt 5 1/2 Segment	lient(s) for Segme casin #/ft 20.00	nt(s): A, B, C, D = 0.55, I ng inside the Grade	b, c, d <0.70 a Prot 8 5/8 p 110	Coupling		Collapse	<u>ctors</u> Burst 1.92	Length 22,330 0	-	a-B	a-C	Weigh 446,600 0
by stage % : lass 'C' tail cm surst Frac Grad Tail cmt 5 1/2 Segment "A"	lient(s) for Segme casin #/ft 20.00	nt(s): A, B, C, D = 0.55, I ng inside the Grade g mud, 30min Sfc Csg Test J	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650	Coupling cdc-htq	2.66	Collapse 1.86	ctors Burst 1.92 Totals:	Length 22,330 0 22,330	-	a-B	a-C	Weigh 446,600 0 446,600
by stage % : Class 'C' tail cm Burst Frac Grad Tail cmt 5 1/2 Segment "A" "B"	lient(s) for Segme casir #/ft 20.00 w/8.4#/;	nt(s): A, B, C, D = 0.55, ng inside the Grade g mud, 30min Sfc Csg Test I The cement	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten	Coupling cdc-htq ded to achieve a top of	2.66 11207	Collapse 1.86 ft from su	<u>ctors</u> Burst 1.92 Totals: rface or a	Length 22,330 0 22,330 200	-	a-B	a-C	Weigh 446,600 0 446,600 overlap.
by stage % : class 'C' tail cm urst Frac Grad Tail cmt 5 1/2 Segment "A" "B" Hole	kient(s) for Segme casir #/ft 20.00 w/8.4#/ Annular	nt(s): A, B, C, D = 0.55, Ig inside the Grade g mud, 30min Sfc Csg Test The cement of 1 Stage	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage	Coupling cdc-htq ded to achieve a top of Min	2.66 11207 1 Stage	Collapse 1.86 ft from su Drilling	<u>ctors</u> Burst 1.92 Totals: rface or a Calc	Length 22,330 0 22,330 200 Req'd	-	a-B	a-C	Weigh 446,600 0 446,600 overlap. Min Dis
yy stage % : lass 'C' tail cmu urst Frac Grad Tail cmt 5 1/2 Segment "A" "B" Hole Size	kient(s) for Segme casir #/ft 20.00 w/8.4#/ Annular Volume	nt(s): A, B, C, D = 0.55, 1g inside the Grade g mud, 30min Sfc Csg Test r The cement v 1 Stage Cmt Sx	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage CuFt Cmt	Coupling cdc-htq ded to achieve a top of Min Cu Ft	2.66 11207 1 Stage % Excess	Collapse 1.86 ft from su Drilling Mud Wt	<u>ctors</u> Burst 1.92 Totals: rface or a	Length 22,330 0 22,330 200	-	a-B	a-C	Weigh 446,600 0 446,600 overlap. Min Dis Hole-Cpl
by stage % : llass 'C' tail cm turst Frac Grad Tail cmt 5 1/2 Segment "A" "B" Hole Size 7 7/8	kient(s) for Segme casir #/ft 20.00 w/8.4#/ Annular Volume 0.1733	nt(s): A, B, C, D = 0.55, Ig inside the Grade g mud, 30min Sfc Csg Test The cement of 1 Stage	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage	Coupling cdc-htq ded to achieve a top of Min	2.66 11207 1 Stage	Collapse 1.86 ft from su Drilling	<u>ctors</u> Burst 1.92 Totals: rface or a Calc	Length 22,330 0 22,330 200 Req'd	-	a-B	a-C	Weigh 446,600 0 446,600 overlap. Min Dis
by stage % : class 'C' tail cm burst Frac Grad Tail cmt 5 1/2 Segment "A" "B" Hole Size 7 7/8	kient(s) for Segme casir #/ft 20.00 w/8.4#/ Annular Volume 0.1733	nt(s): A, B, C, D = 0.55, 1g inside the Grade g mud, 30min Sfc Csg Test r The cement v 1 Stage Cmt Sx	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage CuFt Cmt	Coupling cdc-htq ded to achieve a top of Min Cu Ft	2.66 11207 1 Stage % Excess	Collapse 1.86 ft from su Drilling Mud Wt	<u>ctors</u> Burst 1.92 Totals: rface or a Calc	Length 22,330 0 22,330 200 Req'd	-	a-B	a-C	Weight 446,600 0 446,600 overlap. Min Dist Hole-Cpl
by stage % : Class 'C' tail cm Burst Frac Grad Tail cmt 5 1/2 Segment "A" "B" Hole Size 7 7/8 Class 'C' tail cm	kient(s) for Segme casir #/ft 20.00 w/8.4#/ Annular Volume 0.1733	nt(s): A, B, C, D = 0.55, 1g inside the Grade g mud, 30min Sfc Csg Test r The cement v 1 Stage Cmt Sx	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage CuFt Cmt 2445	Coupling cdc-htq ded to achieve a top of Min Cu Ft	2.66 11207 1 Stage % Excess	Collapse 1.86 ft from su Drilling Mud Wt 10.50	Ctors Burst 1.92 Totals: rface or a Calc MASP	Length 22,330 0 22,330 200 Req'd	2	a-B 3.22	a-C 3.11	Weight 446,600 0 446,600 overlap. Min Dist Hole-Cpl
by stage % : llass 'C' tail cmt surst Frac Grad Tail cmt 5 1/2 Segment "A" "B" Hole Size 7 7/8 class 'C' tail cm #N/A 0	kient(s) for Segme casir #/ft 20.00 w/8.4#// Annular Volume 0.1733 t yld > 1.35	nt(s): A, B, C, D = 0.55, I ng inside the Grade g mud, 30min Sfc Csg Test I The cement v 1 Stage Cmt Sx 1549	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage CuFt Cmt	Coupling cdc-htq ded to achieve a top of Min Cu Ft 1928	2.66 11207 1 Stage % Excess 27	Collapse 1.86 ft from su Drilling Mud Wt 10.50 Design I	Ctors Burst 1.92 Totals: rface or a Calc MASP	Length 22,330 0 22,330 200 Req'd BOPE	2	a-B 3.22 Choose Ca	a-C 3.11 sing>	Weight 446,600 0 446,600 overlap. Min Dist Hole-Cpl 0.79
by stage % : llass 'C' tail cm turst Frac Grad Tail cmt 5 1/2 Segment "A" "B" Hole Size 7 7/8 llass 'C' tail cm #N/A 0 Segment	kient(s) for Segme casir #/ft 20.00 w/8.4#/ Annular Volume 0.1733	nt(s): A, B, C, D = 0.55, 1g inside the Grade g mud, 30min Sfc Csg Test r The cement to 1 Stage Cmt Sx	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage CuFt Cmt 2445	Coupling cdc-htq ded to achieve a top of Min Cu Ft 1928 Coupling	2.66 11207 1 Stage % Excess	Collapse 1.86 ft from su Drilling Mud Wt 10.50	Ctors Burst 1.92 Totals: rface or a Calc MASP	Length 22,330 0 22,330 200 Req'd BOPE	2	a-B 3.22 Choose Ca	a-C 3.11	Weight 446,600 0 446,600 overlap. Min Dist Hole-Cpl 0.79 Weight
by stage % : llass 'C' tail cm turst Frac Grad Tail cmt 5 1/2 Segment "A" "B" Hole Size 7 7/8 llass 'C' tail cm #N/A 0 Segment "A"	kient(s) for Segme casir #/ft 20.00 w/8.4#// Annular Volume 0.1733 t yld > 1.35	nt(s): A, B, C, D = 0.55, I ng inside the Grade g mud, 30min Sfc Csg Test I The cement v 1 Stage Cmt Sx 1549	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage CuFt Cmt 2445	Coupling cdc-htq ded to achieve a top of Min Cu Ft 1928 Coupling 0.00	2.66 11207 1 Stage % Excess 27	Collapse 1.86 ft from su Drilling Mud Wt 10.50 Design I	Ctors Burst 1.92 Totals: rface or a Calc MASP	Length 22,330 0 22,330 200 Req'd BOPE	2	a-B 3.22 Choose Ca	a-C 3.11 sing>	Weigh 446,600 0 446,600 overlap. Min Dis Hole-Cpl 0.79 0.79
y stage % : lass 'C' tail cmu urst Frac Grad Tail cmt 5 1/2 Segment "A" "B" Hole Size 7 7/8 lass 'C' tail cmu #N/A 0 Segment	kient(s) for Segme casin #/ft 20.00 w/8.4#// Annular Volume 0.1733 t yld > 1.35 #/ft	nt(s): A, B, C, D = 0.55, I ng inside the Grade g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 1549 Grade	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage CuFt Cmt 2445 5 1/2	Coupling cdc-htq ded to achieve a top of Min Cu Ft 1928 Coupling	2.66 11207 1 Stage % Excess 27	Collapse 1.86 ft from su Drilling Mud Wt 10.50 Design I	ctors Burst 1.92 Totals: rface or a Calc MASP Factors Burst	Length 22,330 0 22,330 200 Req'd BOPE	2	a-B 3.22 Choose Ca	a-C 3.11 sing>	Weigh 446,60 0 446,60 overlap. Min Dis Hole-Cpl 0.79 0.79 0.79
yy stage % : lass 'C' tail cmu urst Frac Grad Tail cmt 5 1/2 Segment "A" "B" Hole Size 7 7/8 lass 'C' tail cmu #N/A 0 Segment "A"	kient(s) for Segme casin #/ft 20.00 w/8.4#// Annular Volume 0.1733 t yld > 1.35 #/ft	nt(s): A, B, C, D = 0.55, I ng inside the Grade g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 1549 Grade g mud, 30min Sfc Csg Test	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage CuFt Cmt 2445 5 1/2 psig:	Coupling cdc-htq ded to achieve a top of Min Cu Ft 1928 Coupling 0.00 0.00	2.66 11207 1 Stage % Excess 27 #N/A	Collapse 1.86 ft from su Drilling Mud Wt 10.50 <u>Design I</u> Collapse	Ctors Burst 1.92 Totals: rface or a Calc MASP Factors Burst Totals:	Length 22,330 0 22,330 200 Req'd BOPE	2	a-B 3.22 Choose Ca	a-C 3.11 sing>	Weigh 446,60 0 446,60 overlap. Min Dis Hole-Cpl 0.79 0.79
by stage % : llass 'C' tail cm furst Frac Grad Tail cmt 5 1/2 Segment "A" "B" Hole Size 7 7/8 class 'C' tail cm #N/A 0 Segment "A" "B"	(s) for Segme (casir (x) (x	nt(s): A, B, C, D = 0.55, I ng inside the Grade g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 1549 Grade g mud, 30min Sfc Csg Test r Cmt vol cs	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage CuFt Cmt 2445 5 1/2 psig: alc below includes	Coupling cdc-htq ded to achieve a top of Min Cu Ft 1928 Coupling 0.00 0.00 this csg, TOC intended	2.66 11207 1 Stage % Excess 27 #N/A	Collapse 1.86 ft from su Drilling Mud Wt 10.50 <u>Design I</u> Collapse ft from su	Ctors Burst 1.92 Totals: rface or a Calc MASP Factors Burst	Length 22,330 0 22,330 200 Req'd BOPE Length 0 0 0 0 %N/A	2	a-B 3.22 Choose Ca	a-C 3.11 sing>	Weigh 446,60 overlap. Min Dis Hole-Cp 0.79 Weigh 0 0 0 0 0 0 0
by stage % : class 'C' tail cmt 5 1/2 Segment "A" "B" Hole Size 7 7/8 class 'C' tail cm #N/A 0 Segment "A" "B" Hole	iiient(s) for Segme casir #/ft 20.00 w/8.4#// Annular Volume 0.1733 t yld > 1.35 #/ft w/8.4#// Annular w/8.4#// Mark	ant (s): A, B, C, D = 0.55, I rg inside the Grade g mud, 30min Sfc Csg Test J The cement of 1 Stage Cmt Sx 1549 Grade g mud, 30min Sfc Csg Test J Cmt vol ca 1 Stage	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage CuFt Cmt 2445 5 1/2 psig: alc below includes 1 Stage	Coupling cdc-htq ded to achieve a top of Min Cu Ft 1928 Coupling 0.00 0.00 0.00 this csg, TOC intended Min	2.66 11207 1 Stage % Excess 27 #N/A 1 Stage	Collapse 1.86 ft from su Drilling Mud Wt 10.50 Design I Collapse ft from su Drilling	Ctors Burst 1.92 Totals: rface or a Calc MASP Factors Burst	Length 22,330 0 22,330 200 Req'd BOPE Length 0 0 0 0 #N/A Req'd	2	a-B 3.22 Choose Ca	a-C 3.11 sing>	Weigh 446,600 overlap. Min Dis Hole-Cpl 0.79 Weigh 0 0 0 0 overlap. Min Dis
y stage % : lass 'C' tail cmu urst Frac Grad 5 1/2 Segment "A" "B" Hole Size 7 7/8 lass 'C' tail cmu <i>#N/A</i> 0 Segment "A" "B"	(s) for Segme (casir (x) (x	nt(s): A, B, C, D = 0.55, I ng inside the Grade g mud, 30min Sfc Csg Test The cement v 1 Stage Cmt Sx 1549 Grade g mud, 30min Sfc Csg Test r Cmt vol cs	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage CuFt Cmt 2445 5 1/2 psig: alc below includes	Coupling cdc-htq ded to achieve a top of Min Cu Ft 1928 Coupling 0.00 0.00 this csg, TOC intended	2.66 11207 1 Stage % Excess 27 #N/A 1 Stage % Excess	Collapse 1.86 ft from su Drilling Mud Wt 10.50 <u>Design I</u> Collapse ft from su	Ctors Burst 1.92 Totals: rface or a Calc MASP Factors Burst	Length 22,330 0 22,330 200 Req'd BOPE Length 0 0 0 0 %N/A	2	a-B 3.22 Choose Ca	a-C 3.11 sing>	Weigh 446,600 overlap. Min Dis Hole-Cpl 0.79 Weigh 0 0 0 0 overlap. Min Dis
by stage % : llass 'C' tail cmt furst Frac Grad Tail cmt 5 1/2 Segment "A" "B" Hole Size 7 7/8 class 'C' tail cm #N/A 0 Segment "A" "B" Hole	iiient(s) for Segme casir #/ft 20.00 w/8.4#// Annular Volume 0.1733 t yld > 1.35 #/ft w/8.4#// Annular w/8.4#// Mark	ant (s): A, B, C, D = 0.55, I rg inside the Grade g mud, 30min Sfc Csg Test J The cement of 1 Stage Cmt Sx 1549 Grade g mud, 30min Sfc Csg Test J Cmt vol ca 1 Stage	b, c, d <0.70 a Prot 8 5/8 p 110 psig: 2,650 volume(s) are inten 1 Stage CuFt Cmt 2445 5 1/2 psig: alc below includes 1 Stage	Coupling cdc-htq ded to achieve a top of Min Cu Ft 1928 Coupling 0.00 0.00 0.00 this csg, TOC intended Min	2.66 11207 1 Stage % Excess 27 #N/A 1 Stage	Collapse 1.86 ft from su Drilling Mud Wt 10.50 Design I Collapse ft from su Drilling	Ctors Burst 1.92 Totals: rface or a Calc MASP Factors Burst	Length 22,330 0 22,330 200 Req'd BOPE Length 0 0 0 0 #N/A Req'd	2	a-B 3.22 Choose Ca	a-C 3.11 sing>	Weigh 446,600 0 446,600 overlap. Min Dis Hole-Cpl 0.79 Weigh 0 0 0 0

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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	344619
	Action Type:
	[C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	ALL PREVIOUS COA'S APPLY	5/21/2024

Action 344619

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