

Well Name: ALLEY CAT 17-20 FED COM	Well Location: T23S / R32E / SEC 17 / NWNE / 32.311262 / -103.6962118	County or Parish/State: LEA / NM
Well Number: 713H	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: 2789466

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 05/10/2024	Time Sundry Submitted: 06:56
Date proposed operation will begin: 05/10/2024	

**Procedure Description:** Devon Energy Production Co., L.P. (Devon) respectfully requests to change the well name, 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 Well name: ALLEY CAT 17-20 FED COM 814H Proposed Well name: ALLEY CAT 17-20 FED COM 713H Permitted BHL: SWSE, 20 FSL, 1950 FEL, 20-23S-32E Proposed BHL: SWSE, 20 FSL, 2300 FEL, 20-23S-32E No new leases have been added since approved APD. APD ID: 10400085546

NOI Attachments

Procedure Description

- WA018443686\_ALLEY\_CAT\_17\_20\_FED\_COM\_713H\_WL\_R4\_20240520133611.pdf
- Alley\_Cat\_17\_20\_Fed\_Com\_713H\_R4\_20240520133609.pdf
- Alley\_Cat\_17\_20\_Fed\_Com\_713H\_Directional\_Plan\_05\_20\_24\_20240520133609.pdf
- 5.5\_20\_\_P110HP\_CDC\_HTQ\_20240510065307.pdf
- 10.750\_45.5\_J55\_SEAH\_20240510065307.pdf
- 8.625\_32\_P110HSCY\_MO\_FXL\_\_with\_95\_\_RBW\_\_20240510065307.pdf

Received by OCD: 5/21/2024 9:26:13 AM

Well Name: ALLEY CAT 17-20 FED COM

Well Location: T23S / R32E / SEC 17 / NWNE / 32.311262 / -103.6962118

County or Parish/State: LEA / NM

Well Number: 713H

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

Conditions of Approval

Specialist Review

Alley\_Cat\_17\_20\_Fed\_Com\_713H\_Sundry\_ID\_2789466\_20240521085801.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

Signed on: MAY 20, 2024 01:36 PM

Name: DEVON ENERGY PRODUCTION COMPANY LP

Title: Regulatory Compliance Associate 3

Street Address: 333 W SHERIDAN AVE

City: OKLAHOMA CITYState: OK

Phone: (405) 235-3611

Email address: SHAYDA.OMOUMI@DVN.COM

Field

Representative Name:

Street Address:

City:State:Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: LONG VO

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5759885402

BLM POC Email Address: LVO@BLM.GOV

Disposition: Approved

Disposition Date: 05/21/2024

Signature: Long Vo

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office  
☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 3002552908	<sup>2</sup> Pool Code 98248	<sup>3</sup> Pool Name WC-025 G-08 S243217P; UPR WC
<sup>4</sup> Property Code 322236	<sup>5</sup> Property Name ALLEY CAT 17 20 FED COM	<sup>6</sup> Well Number 713H
<sup>7</sup> OGRID No. 6137	<sup>8</sup> Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.	<sup>9</sup> Elevation 3621.5

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	17	23 S	32 E		198	NORTH	2486	EAST	LEA

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	20	23 S	32 E		20	SOUTH	2300	EAST	LEA

<sup>12</sup> Dedicated Acres 640	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
--------------------------------------	-------------------------------	----------------------------------	-------------------------

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.

	<p>ALLEY CAT 17 20 FED COM 713H EL. = 3621.5</p> <p>GEODETTIC COORDINATES NAD 83 NMSP EAST SURFACE LOCATION N. = 477554.47 E. = 738169.20 LAT. = 32.3112620°N LONG. = 103.6962118°W</p> <p>KICK OFF POINT CALLS 41' FNL 2300' FEL N. = 477714.53 E. = 738353.52 LAT. = 32.31160499 LONG. = 103.69569566</p> <p>FIRST TAKE POINT (PPP 1) 100' FSL 2300' FEL N. = 477654.53 E. = 738354.52 LAT. = 32.3115340°N LONG. = 103.6956101°W</p> <p>LAST TAKE POINT 100' FSL 2300' FEL N. = 467294.24 E. = 738420.52 LAT. = 32.2830556°N LONG. = 103.6955959°W</p> <p>BOTTOM OF HOLE 20' FSL 2300' FEL N. = 467214.26 E. = 738421.01 LAT. = 32.2828357°N LONG. = 103.6955958°W</p> <p>PPP 2 2641' FNL 2300' FEL N. = 475114.47 E. = 738370.70 LAT. = 32.3045519°N LONG. = 103.6956066°W</p> <p>PPP 3 0' FSL 2300' FEL N. = 472473.38 E. = 738387.53 LAT. = 32.2972920°N LONG. = 103.6956030°W</p> <p>PPP 2 1321' FSL 2300' FEL N. = 468515.23 E. = 738412.74 LAT. = 32.2864118°N LONG. = 103.6955976°W</p> <p>CORNER COORDINATES TABLE NAD 83 NMSP EAST</p> <table border="1"> <tr><td>A</td><td>N. = 477724.51</td><td>E. = 735384.50</td></tr> <tr><td>B</td><td>N. = 477750.79</td><td>E. = 738021.18</td></tr> <tr><td>C</td><td>N. = 477780.18</td><td>E. = 740653.25</td></tr> <tr><td>D</td><td>N. = 475137.91</td><td>E. = 740670.42</td></tr> <tr><td>E</td><td>N. = 472497.97</td><td>E. = 740686.53</td></tr> <tr><td>F</td><td>N. = 469855.52</td><td>E. = 740704.48</td></tr> <tr><td>G</td><td>N. = 467217.53</td><td>E. = 740720.53</td></tr> <tr><td>H</td><td>N. = 467190.86</td><td>E. = 738084.99</td></tr> <tr><td>I</td><td>N. = 467168.68</td><td>E. = 735450.43</td></tr> <tr><td>J</td><td>N. = 469806.75</td><td>E. = 735434.10</td></tr> <tr><td>K</td><td>N. = 472446.64</td><td>E. = 735419.26</td></tr> <tr><td>L</td><td>N. = 475084.23</td><td>E. = 735403.66</td></tr> <tr><td>M</td><td>N. = 472469.80</td><td>E. = 738052.41</td></tr> </table> <p>LEGEND --- SECTION LINE --- QUARTER LINE --- LEASE LINE --- WELL PATH</p>	A	N. = 477724.51	E. = 735384.50	B	N. = 477750.79	E. = 738021.18	C	N. = 477780.18	E. = 740653.25	D	N. = 475137.91	E. = 740670.42	E	N. = 472497.97	E. = 740686.53	F	N. = 469855.52	E. = 740704.48	G	N. = 467217.53	E. = 740720.53	H	N. = 467190.86	E. = 738084.99	I	N. = 467168.68	E. = 735450.43	J	N. = 469806.75	E. = 735434.10	K	N. = 472446.64	E. = 735419.26	L	N. = 475084.23	E. = 735403.66	M	N. = 472469.80	E. = 738052.41	<p><b><sup>17</sup> OPERATOR CERTIFICATION</b></p> <p>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.</p> <p>Signature: <i>Shayda Omoumi</i> Date: 5/20/2024</p> <p>Printed Name: Shayda Omoumi</p> <p>E-mail Address: shayda.omoumi@dvn.com</p> <p><b><sup>18</sup> SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>MAY 20, 2024</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor: <i>Shayda Omoumi</i></p> <p>Certificate Number: 12797</p> <p>Surveyor's License No. 9364C</p>
A	N. = 477724.51	E. = 735384.50																																							
B	N. = 477750.79	E. = 738021.18																																							
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M	N. = 472469.80	E. = 738052.41																																							

Intent ☒ As Drilled ☐

API #		
Operator Name: DEVON ENERGY PRODUCTION COMPANY, L.P.	Property Name: ALLEY CAT 17 20 FED COM	Well Number 713H

## Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
B	17	23S	32E		41	NORTH	2300	EAST	LEA
Latitude					Longitude				NAD
32.31160499					-103.69569566				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	2300	EAST	LEA
Latitude					Longitude				NAD
32.3115340					103.6956101				83

## Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
O	20	23S	32E		100	SOUTH	2300	EAST	LEA
Latitude					Longitude				NAD
32.2830556					103.6955959				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 # 30-025-52906		
Operator Name: DEVON ENERGY PRODUCTION COMPANY, L.P.	Property Name: ALLEY CAT 17-20 FED COM	Well Number 714H

KZ 06/29/2018



10-3/4"    45.50#    0.400"    J-55

Dimensions (Nominal)

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

Internal Yield Pressure at Minimum Yield

Collapse	2090	psi
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Internal Yields Pressure

PE	3580	psi
STC	3580	psi
BTC	3580	psi

Yield Strength, Pipe Body	715	1000 lbs
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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.



## U. S. Steel Tubular Products

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

2/21/2024 7:47:29 AM

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

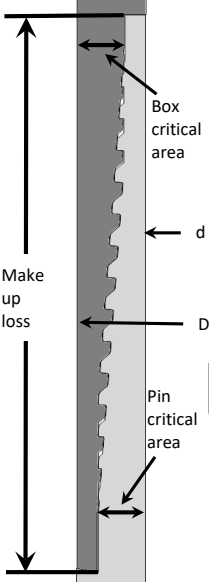
1-877-893-9461  
connections@uss.com  
www.usstubular.com

UNCONTROLLED

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



Geometry	Imperial		S.I.	
<b>Pipe Body</b>				
Grade *1	P110HSCY		P110HSCY	
MinYS *1	125	ksi	125	ksi
Pipe OD ( D )	8 5/8	in	219.08	mm
Weight	32.00	lb/ft	47.68	kg/m
Actual weight	31.10		46.34	kg/m
Wall Thickness ( t )	0.352	in	8.94	mm
Pipe ID ( d )	7.921	in	201.19	mm
Pipe body cross section	9.149	in <sup>2</sup>	5,902	mm <sup>2</sup>
Special Drift Dia. *1	7.875	in	200.03	mm
-	-	-	-	-
<b>Connection</b>				
Box OD ( W )	8.625	in	219.08	mm
PIN ID	7.921	in	201.19	mm
Make up Loss	3.847	in	97.71	mm
Box Critical Area	5.853	in <sup>2</sup>	3686	mm <sup>2</sup>
Joint load efficiency	69	%	69	%
Thread Taper	1 / 10 ( 1.2" per ft )			
Number of Threads	5 TPI			
<b>Performance</b>				
<b>Performance Properties for Pipe Body</b>				
S.M.Y.S. *1	1,144	kips	5,087	kN
M.I.Y.P. *1	9,690	psi	66.83	MPa
Collapse Strength *1	4,300	psi	29.66	MPa
Note S.M.Y.S.= Specified Minimum YIELD Strength of Pipe body M.I.Y.P. = Minimum Internal Yield Pressure of Pipe body *1: Borusan: SOP-12-F05 Rev.2, 10/17/2023 P110HSCY: MinYS125ksi, 95%RBW, SD7.875, Collapse Strength 4,300psi				
<b>Performance Properties for Connection</b>				
Tensile Yield load	789 kips ( 69% of S.M.Y.S. )			
Min. Compression Yield	789 kips ( 69% of S.M.Y.S. )			
Internal Pressure	6,780 psi ( 70% of M.I.Y.P. )			
External Pressure	100% of Collapse Strength			
Max. DLS ( deg. /100ft)	29			
<b>Recommended Torque</b>				
Min.	13,600	ft-lb	18,400	N-m
Opti.	14,900	ft-lb	20,200	N-m
Max.	16,200	ft-lb	21,900	N-m
Operational Max.	28,400	ft-lb	38,500	N-m
Note : Operational Max. torque can be applied for high torque application				

**Legal Notice**  
The use of this information is at the reader/user's risk and no warranty is implied or expressed by Metal One Corporation or its parents, subsidiaries or affiliates (herein collectively referred to as "Metal One") with respect to the use of information contained herein. The information provided on this Connection Data Sheet is for informational purposes only, and was prepared by reference to engineering information that is specific to the subject products, without regard to safety-related factors, all of which are the sole responsibility of the operators and users of the subject connectors. Metal One assumes no responsibility for any errors with respect to this information.

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

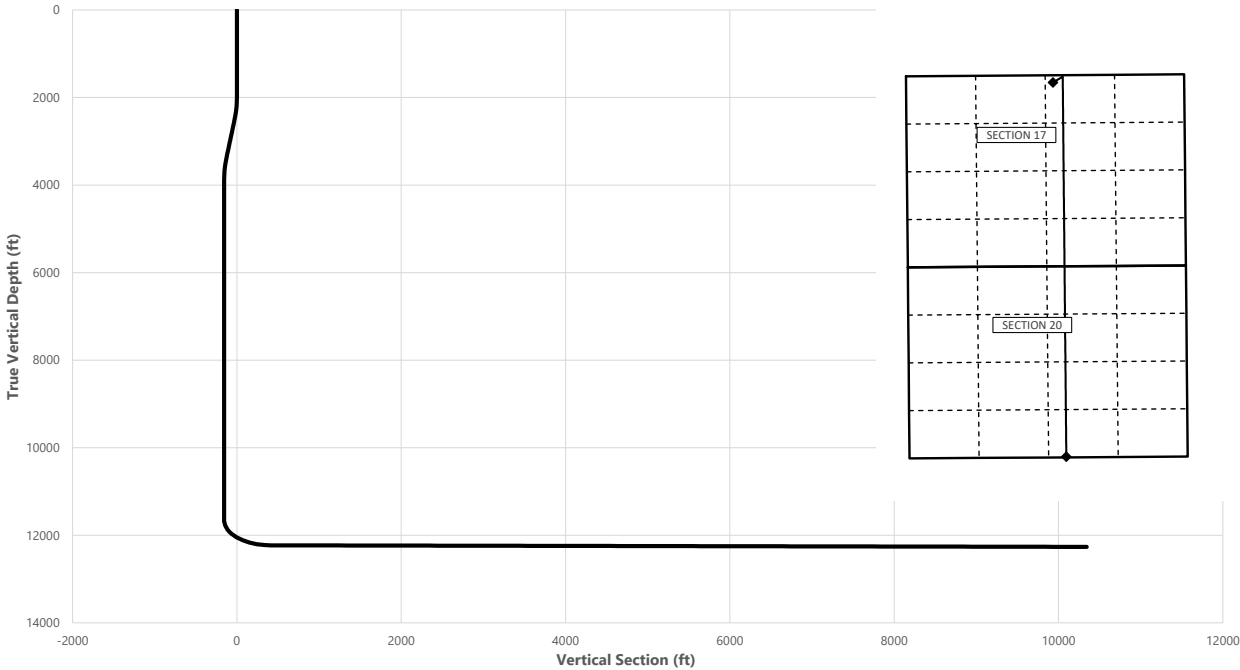
The products described in this Connection Data Sheet are not recommended for use in deep water offshore applications. For more information, please refer to [http://www.mto.co.jp/mo-con/\\_images/top/WebsiteTerms\\_Active\\_20333287\\_1.pdf](http://www.mto.co.jp/mo-con/_images/top/WebsiteTerms_Active_20333287_1.pdf) the contents of which are incorporated by reference into this Connection Data Sheet.



Well: Alley Cat 17-20 Fed Com 713H  
County: Lea  
Wellbore: Permit Plan  
Design: Permit Plan #1

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

MD	INC	AZI	TVD	NS	EW	VS	DLS	Comment
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
2000.00	0.00	49.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	10.00	49.00	2497.47	28.55	32.85	-27.75	2.00	Hold Tangent
3402.74	10.00	49.00	3386.49	131.40	151.15	-127.68	0.00	Drop to Vertical
3902.74	0.00	49.00	3883.96	159.95	184.00	-155.42	2.00	Hold Vertical
11675.83	0.00	179.63	11657.05	159.95	184.00	-155.42	0.00	KOP
12573.81	89.80	179.63	12230.00	-410.98	187.69	415.42	10.00	Landing Point
22503.31	89.80	179.63	12265.00	-10340.21	251.81	10343.28	0.00	BHL



Key Depths	MD	TVD
	(ft)	(ft)
Rustler	1000.00	1000.00
Salt	3010.29	3000.00
Base of Salt	4668.78	4650.00
Delaware	4708.78	4690.00
Cherry Canyon	5858.78	5840.00
Brushy Canyon	6818.78	6800.00
1st Bone Spring Lime	8558.78	8540.00
Bone Spring 1st	9718.78	9700.00
Bone Spring 2nd	10358.78	10340.00
3rd Bone Spring Lime	10808.78	10790.00
Bone Spring 3rd	11538.78	11520.00
Wolfcamp / Point of Penetration	11960.33	11930.00
exit	22423.31	12264.73

SHL  
KOP  
Point of Penetration  
Exit  
BHL

MD	TVD	Lat	Long	Section Footages
(ft)	(ft)	(°)	(°)	
0.00	0.00	32.3112	-103.6963	198' FNL, 2486' FEL of Sec 17 in T23S, R32E
11675.83	11657.05	32.3116	-103.6957	41' FNL, 2300' FEL of Sec 17 in T23S, R32E
11960.33	11930.00	32.3115	-103.6956	100' FNL, 2300' FEL of Sec 17 in T23S, R32E
22423.31	12264.73	32.2831	-103.6956	100' FSL, 2300' FEL of Sec 20 in T23S, R32E
22503.31	12265.00	32.2827	-103.6957	20' FSL, 2300' FEL of Sec 20 in T23S, R32E

	Y	X	MD
KOP	477714	738353	11675.83



Alley Cat 17-20 Fed Com 713H



Well: Alley Cat 17-20 Fed Com 713H  
County: Lea  
Wellbore: Permit Plan  
Design: Permit Plan #1

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

MD	INC	AZI	TVD	NS	EW	VS	DLS	Comment
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
100.00	0.00	49.00	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	49.00	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	49.00	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	49.00	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	49.00	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	49.00	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	49.00	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	49.00	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	49.00	900.00	0.00	0.00	0.00	0.00	
1000.00	0.00	49.00	1000.00	0.00	0.00	0.00	0.00	Rustler,
1100.00	0.00	49.00	1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	49.00	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	49.00	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	49.00	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	49.00	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	49.00	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	49.00	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	49.00	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	49.00	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	49.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	49.00	2099.98	1.14	1.32	-1.11	2.00	
2200.00	4.00	49.00	2199.84	4.58	5.27	-4.45	2.00	
2300.00	6.00	49.00	2299.45	10.30	11.84	-10.00	2.00	
2400.00	8.00	49.00	2398.70	18.29	21.04	-17.77	2.00	
2500.00	10.00	49.00	2497.47	28.55	32.85	-27.75	2.00	Hold Tangent
2600.00	10.00	49.00	2595.95	39.95	45.95	-38.82	0.00	
2700.00	10.00	49.00	2694.43	51.34	59.06	-49.89	0.00	
2800.00	10.00	49.00	2792.91	62.73	72.16	-60.95	0.00	
2900.00	10.00	49.00	2891.39	74.12	85.27	-72.02	0.00	
3000.00	10.00	49.00	2989.87	85.52	98.37	-83.09	0.00	
3010.29	10.00	49.00	3000.00	86.69	99.72	-84.23	0.00	Salt
3100.00	10.00	49.00	3088.35	96.91	111.48	-94.16	0.00	
3200.00	10.00	49.00	3186.83	108.30	124.58	-105.23	0.00	
3300.00	10.00	49.00	3285.31	119.69	137.69	-116.30	0.00	
3400.00	10.00	49.00	3383.79	131.08	150.80	-127.37	0.00	
3402.74	10.00	49.00	3386.49	131.40	151.15	-127.68	0.00	Drop to Vertical
3500.00	8.05	49.00	3482.54	141.41	162.67	-137.41	2.00	
3600.00	6.05	49.00	3581.78	149.47	171.94	-145.24	2.00	
3700.00	4.05	49.00	3681.39	155.25	178.59	-150.85	2.00	
3800.00	2.05	49.00	3781.24	158.74	182.61	-154.25	2.00	
3900.00	0.05	49.00	3881.22	159.95	184.00	-155.42	2.00	
3902.74	0.00	49.00	3883.96	159.95	184.00	-155.42	2.00	Hold Vertical
4000.00	0.00	179.63	3981.22	159.95	184.00	-155.42	0.00	
4100.00	0.00	179.63	4081.22	159.95	184.00	-155.42	0.00	
4200.00	0.00	179.63	4181.22	159.95	184.00	-155.42	0.00	
4300.00	0.00	179.63	4281.22	159.95	184.00	-155.42	0.00	
4400.00	0.00	179.63	4381.22	159.95	184.00	-155.42	0.00	
4500.00	0.00	179.63	4481.22	159.95	184.00	-155.42	0.00	
4600.00	0.00	179.63	4581.22	159.95	184.00	-155.42	0.00	
4668.78	0.00	179.63	4650.00	159.95	184.00	-155.42	0.00	Base of Salt
4700.00	0.00	179.63	4681.22	159.95	184.00	-155.42	0.00	
4708.78	0.00	179.63	4690.00	159.95	184.00	-155.42	0.00	Delaware
4800.00	0.00	179.63	4781.22	159.95	184.00	-155.42	0.00	
4900.00	0.00	179.63	4881.22	159.95	184.00	-155.42	0.00	
5000.00	0.00	179.63	4981.22	159.95	184.00	-155.42	0.00	
5100.00	0.00	179.63	5081.22	159.95	184.00	-155.42	0.00	
5200.00	0.00	179.63	5181.22	159.95	184.00	-155.42	0.00	
5300.00	0.00	179.63	5281.22	159.95	184.00	-155.42	0.00	
5400.00	0.00	179.63	5381.22	159.95	184.00	-155.42	0.00	
5500.00	0.00	179.63	5481.22	159.95	184.00	-155.42	0.00	
5600.00	0.00	179.63	5581.22	159.95	184.00	-155.42	0.00	
5700.00	0.00	179.63	5681.22	159.95	184.00	-155.42	0.00	
5800.00	0.00	179.63	5781.22	159.95	184.00	-155.42	0.00	
5858.78	0.00	179.63	5840.00	159.95	184.00	-155.42	0.00	Cherry Canyon
5900.00	0.00	179.63	5881.22	159.95	184.00	-155.42	0.00	
6000.00	0.00	179.63	5981.22	159.95	184.00	-155.42	0.00	
6100.00	0.00	179.63	6081.22	159.95	184.00	-155.42	0.00	
6200.00	0.00	179.63	6181.22	159.95	184.00	-155.42	0.00	
6300.00	0.00	179.63	6281.22	159.95	184.00	-155.42	0.00	

Alley Cat 17-20 Fed Com 713H



**Well:** Alley Cat 17-20 Fed Com 713H  
**County:** Lea  
**Wellbore:** Permit Plan  
**Design:** Permit Plan #1

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

MD (ft)	INC (")	AZI (")	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
6400.00	0.00	179.63	6381.22	159.95	184.00	-155.42	0.00	
6500.00	0.00	179.63	6481.22	159.95	184.00	-155.42	0.00	
6600.00	0.00	179.63	6581.22	159.95	184.00	-155.42	0.00	
6700.00	0.00	179.63	6681.22	159.95	184.00	-155.42	0.00	
6800.00	0.00	179.63	6781.22	159.95	184.00	-155.42	0.00	
6818.78	0.00	179.63	6800.00	159.95	184.00	-155.42	0.00	Brushy Canyon
6900.00	0.00	179.63	6881.22	159.95	184.00	-155.42	0.00	
7000.00	0.00	179.63	6981.22	159.95	184.00	-155.42	0.00	
7100.00	0.00	179.63	7081.22	159.95	184.00	-155.42	0.00	
7200.00	0.00	179.63	7181.22	159.95	184.00	-155.42	0.00	
7300.00	0.00	179.63	7281.22	159.95	184.00	-155.42	0.00	
7400.00	0.00	179.63	7381.22	159.95	184.00	-155.42	0.00	
7500.00	0.00	179.63	7481.22	159.95	184.00	-155.42	0.00	
7600.00	0.00	179.63	7581.22	159.95	184.00	-155.42	0.00	
7700.00	0.00	179.63	7681.22	159.95	184.00	-155.42	0.00	
7800.00	0.00	179.63	7781.22	159.95	184.00	-155.42	0.00	
7900.00	0.00	179.63	7881.22	159.95	184.00	-155.42	0.00	
8000.00	0.00	179.63	7981.22	159.95	184.00	-155.42	0.00	
8100.00	0.00	179.63	8081.22	159.95	184.00	-155.42	0.00	
8200.00	0.00	179.63	8181.22	159.95	184.00	-155.42	0.00	
8300.00	0.00	179.63	8281.22	159.95	184.00	-155.42	0.00	
8400.00	0.00	179.63	8381.22	159.95	184.00	-155.42	0.00	
8500.00	0.00	179.63	8481.22	159.95	184.00	-155.42	0.00	
8558.78	0.00	179.63	8540.00	159.95	184.00	-155.42	0.00	1st Bone Spring Lime
8600.00	0.00	179.63	8581.22	159.95	184.00	-155.42	0.00	
8700.00	0.00	179.63	8681.22	159.95	184.00	-155.42	0.00	
8800.00	0.00	179.63	8781.22	159.95	184.00	-155.42	0.00	
8900.00	0.00	179.63	8881.22	159.95	184.00	-155.42	0.00	
9000.00	0.00	179.63	8981.22	159.95	184.00	-155.42	0.00	
9100.00	0.00	179.63	9081.22	159.95	184.00	-155.42	0.00	
9200.00	0.00	179.63	9181.22	159.95	184.00	-155.42	0.00	
9300.00	0.00	179.63	9281.22	159.95	184.00	-155.42	0.00	
9400.00	0.00	179.63	9381.22	159.95	184.00	-155.42	0.00	
9500.00	0.00	179.63	9481.22	159.95	184.00	-155.42	0.00	
9600.00	0.00	179.63	9581.22	159.95	184.00	-155.42	0.00	
9700.00	0.00	179.63	9681.22	159.95	184.00	-155.42	0.00	
9718.78	0.00	179.63	9700.00	159.95	184.00	-155.42	0.00	Bone Spring 1st
9800.00	0.00	179.63	9781.22	159.95	184.00	-155.42	0.00	
9900.00	0.00	179.63	9881.22	159.95	184.00	-155.42	0.00	
10000.00	0.00	179.63	9981.22	159.95	184.00	-155.42	0.00	
10100.00	0.00	179.63	10081.22	159.95	184.00	-155.42	0.00	
10200.00	0.00	179.63	10181.22	159.95	184.00	-155.42	0.00	
10300.00	0.00	179.63	10281.22	159.95	184.00	-155.42	0.00	
10358.78	0.00	179.63	10340.00	159.95	184.00	-155.42	0.00	Bone Spring 2nd
10400.00	0.00	179.63	10381.22	159.95	184.00	-155.42	0.00	
10500.00	0.00	179.63	10481.22	159.95	184.00	-155.42	0.00	
10600.00	0.00	179.63	10581.22	159.95	184.00	-155.42	0.00	
10700.00	0.00	179.63	10681.22	159.95	184.00	-155.42	0.00	
10800.00	0.00	179.63	10781.22	159.95	184.00	-155.42	0.00	
10808.78	0.00	179.63	10790.00	159.95	184.00	-155.42	0.00	3rd Bone Spring Lime
10900.00	0.00	179.63	10881.22	159.95	184.00	-155.42	0.00	
11000.00	0.00	179.63	10981.22	159.95	184.00	-155.42	0.00	
11100.00	0.00	179.63	11081.22	159.95	184.00	-155.42	0.00	
11200.00	0.00	179.63	11181.22	159.95	184.00	-155.42	0.00	
11300.00	0.00	179.63	11281.22	159.95	184.00	-155.42	0.00	
11400.00	0.00	179.63	11381.22	159.95	184.00	-155.42	0.00	
11500.00	0.00	179.63	11481.22	159.95	184.00	-155.42	0.00	
11538.78	0.00	179.63	11520.00	159.95	184.00	-155.42	0.00	Bone Spring 3rd
11600.00	0.00	179.63	11581.22	159.95	184.00	-155.42	0.00	
11675.83	0.00	179.63	11657.05	159.95	184.00	-155.42	0.00	KOP
11700.00	2.42	179.63	11681.21	159.44	184.01	-154.91	10.00	
11800.00	12.42	179.63	11780.25	146.55	184.09	-142.02	10.00	
11900.00	22.42	179.63	11875.54	116.65	184.28	-112.13	10.00	
11960.33	28.45	179.63	11930.00	90.76	184.45	-86.24	10.00	Wolfcamp / Point of Penetration
12000.00	32.42	179.63	11964.20	70.67	184.58	-66.15	10.00	
12100.00	42.42	179.63	12043.52	9.98	184.97	-5.48	10.00	
12200.00	52.42	179.63	12111.10	-63.55	185.45	68.05	10.00	
12300.00	62.42	179.63	12164.88	-147.70	185.99	152.19	10.00	
12400.00	72.42	179.63	12203.24	-239.92	186.59	244.39	10.00	
12500.00	82.42	179.63	12224.99	-337.39	187.21	341.85	10.00	

Alley Cat 17-20 Fed Com 713H



**Well:** Alley Cat 17-20 Fed Com 713H  
**County:** Lea  
**Wellbore:** Permit Plan  
**Design:** Permit Plan #1

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

MD (ft)	INC (")	AZI (")	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12573.81	89.80	179.63	12230.00	-410.98	187.69	415.42	10.00	Landing Point
12600.00	89.80	179.63	12230.09	-437.17	187.86	441.61	0.00	
12700.00	89.80	179.63	12230.44	-537.16	188.50	541.59	0.00	
12800.00	89.80	179.63	12230.80	-637.16	189.15	641.58	0.00	
12900.00	89.80	179.63	12231.15	-737.16	189.80	741.56	0.00	
13000.00	89.80	179.63	12231.50	-837.15	190.44	841.54	0.00	
13100.00	89.80	179.63	12231.86	-937.15	191.09	941.53	0.00	
13200.00	89.80	179.63	12232.21	-1037.15	191.73	1041.51	0.00	
13300.00	89.80	179.63	12232.56	-1137.15	192.38	1141.49	0.00	
13400.00	89.80	179.63	12232.91	-1237.14	193.03	1241.48	0.00	
13500.00	89.80	179.63	12233.27	-1337.14	193.67	1341.46	0.00	
13600.00	89.80	179.63	12233.62	-1437.14	194.32	1441.44	0.00	
13700.00	89.80	179.63	12233.97	-1537.14	194.96	1541.43	0.00	
13800.00	89.80	179.63	12234.32	-1637.13	195.61	1641.41	0.00	
13900.00	89.80	179.63	12234.68	-1737.13	196.26	1741.39	0.00	
14000.00	89.80	179.63	12235.03	-1837.13	196.90	1841.38	0.00	
14100.00	89.80	179.63	12235.38	-1937.12	197.55	1941.36	0.00	
14200.00	89.80	179.63	12235.73	-2037.12	198.19	2041.34	0.00	
14300.00	89.80	179.63	12236.09	-2137.12	198.84	2141.33	0.00	
14400.00	89.80	179.63	12236.44	-2237.12	199.49	2241.31	0.00	
14500.00	89.80	179.63	12236.79	-2337.11	200.13	2341.29	0.00	
14600.00	89.80	179.63	12237.14	-2437.11	200.78	2441.28	0.00	
14700.00	89.80	179.63	12237.50	-2537.11	201.42	2541.26	0.00	
14800.00	89.80	179.63	12237.85	-2637.11	202.07	2641.24	0.00	
14900.00	89.80	179.63	12238.20	-2737.10	202.72	2741.23	0.00	
15000.00	89.80	179.63	12238.56	-2837.10	203.36	2841.21	0.00	
15100.00	89.80	179.63	12238.91	-2937.10	204.01	2941.19	0.00	
15200.00	89.80	179.63	12239.26	-3037.10	204.65	3041.18	0.00	
15300.00	89.80	179.63	12239.61	-3137.09	205.30	3141.16	0.00	
15400.00	89.80	179.63	12239.97	-3237.09	205.95	3241.14	0.00	
15500.00	89.80	179.63	12240.32	-3337.09	206.59	3341.13	0.00	
15600.00	89.80	179.63	12240.67	-3437.08	207.24	3441.11	0.00	
15700.00	89.80	179.63	12241.02	-3537.08	207.88	3541.09	0.00	
15800.00	89.80	179.63	12241.38	-3637.08	208.53	3641.08	0.00	
15900.00	89.80	179.63	12241.73	-3737.08	209.18	3741.06	0.00	
16000.00	89.80	179.63	12242.08	-3837.07	209.82	3841.04	0.00	
16100.00	89.80	179.63	12242.43	-3937.07	210.47	3941.03	0.00	
16200.00	89.80	179.63	12242.79	-4037.07	211.12	4041.01	0.00	
16300.00	89.80	179.63	12243.14	-4137.07	211.76	4140.99	0.00	
16400.00	89.80	179.63	12243.49	-4237.06	212.41	4240.98	0.00	
16500.00	89.80	179.63	12243.84	-4337.06	213.05	4340.96	0.00	
16600.00	89.80	179.63	12244.20	-4437.06	213.70	4440.94	0.00	
16700.00	89.80	179.63	12244.55	-4537.05	214.35	4540.93	0.00	
16800.00	89.80	179.63	12244.90	-4637.05	214.99	4640.91	0.00	
16900.00	89.80	179.63	12245.25	-4737.05	215.64	4740.89	0.00	
17000.00	89.80	179.63	12245.61	-4837.05	216.28	4840.88	0.00	
17100.00	89.80	179.63	12245.96	-4937.04	216.93	4940.86	0.00	
17200.00	89.80	179.63	12246.31	-5037.04	217.58	5040.85	0.00	
17300.00	89.80	179.63	12246.67	-5137.04	218.22	5140.83	0.00	
17400.00	89.80	179.63	12247.02	-5237.04	218.87	5240.81	0.00	
17500.00	89.80	179.63	12247.37	-5337.03	219.51	5340.80	0.00	
17600.00	89.80	179.63	12247.72	-5437.03	220.16	5440.78	0.00	
17700.00	89.80	179.63	12248.08	-5537.03	220.81	5540.76	0.00	
17800.00	89.80	179.63	12248.43	-5637.02	221.45	5640.75	0.00	
17900.00	89.80	179.63	12248.78	-5737.02	222.10	5740.73	0.00	
18000.00	89.80	179.63	12249.13	-5837.02	222.74	5840.71	0.00	
18100.00	89.80	179.63	12249.49	-5937.02	223.39	5940.70	0.00	
18200.00	89.80	179.63	12249.84	-6037.01	224.04	6040.68	0.00	
18300.00	89.80	179.63	12250.19	-6137.01	224.68	6140.66	0.00	
18400.00	89.80	179.63	12250.54	-6237.01	225.33	6240.65	0.00	
18500.00	89.80	179.63	12250.90	-6337.01	225.97	6340.63	0.00	
18600.00	89.80	179.63	12251.25	-6437.00	226.62	6440.61	0.00	
18700.00	89.80	179.63	12251.60	-6537.00	227.27	6540.60	0.00	
18800.00	89.80	179.63	12251.95	-6637.00	227.91	6640.58	0.00	
18900.00	89.80	179.63	12252.31	-6736.99	228.56	6740.56	0.00	
19000.00	89.80	179.63	12252.66	-6836.99	229.20	6840.55	0.00	
19100.00	89.80	179.63	12253.01	-6936.99	229.85	6940.53	0.00	
19200.00	89.80	179.63	12253.37	-7036.99	230.50	7040.51	0.00	
19300.00	89.80	179.63	12253.72	-7136.98	231.14	7140.50	0.00	
19400.00	89.80	179.63	12254.07	-7236.98	231.79	7240.48	0.00	

Alley Cat 17-20 Fed Com 713H



**Well:** Alley Cat 17-20 Fed Com 713H  
**County:** Lea  
**Wellbore:** Permit Plan  
**Design:** Permit Plan #1

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

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
19500.00	89.80	179.63	12254.42	-7336.98	232.43	7340.46	0.00	
19600.00	89.80	179.63	12254.78	-7436.98	233.08	7440.45	0.00	
19700.00	89.80	179.63	12255.13	-7536.97	233.73	7540.43	0.00	
19800.00	89.80	179.63	12255.48	-7636.97	234.37	7640.41	0.00	
19900.00	89.80	179.63	12255.83	-7736.97	235.02	7740.40	0.00	
20000.00	89.80	179.63	12256.19	-7836.97	235.66	7840.38	0.00	
20100.00	89.80	179.63	12256.54	-7936.96	236.31	7940.36	0.00	
20200.00	89.80	179.63	12256.89	-8036.96	236.96	8040.35	0.00	
20300.00	89.80	179.63	12257.24	-8136.96	237.60	8140.33	0.00	
20400.00	89.80	179.63	12257.60	-8236.95	238.25	8240.31	0.00	
20500.00	89.80	179.63	12257.95	-8336.95	238.89	8340.30	0.00	
20600.00	89.80	179.63	12258.30	-8436.95	239.54	8440.28	0.00	
20700.00	89.80	179.63	12258.65	-8536.95	240.19	8540.26	0.00	
20800.00	89.80	179.63	12259.01	-8636.94	240.83	8640.25	0.00	
20900.00	89.80	179.63	12259.36	-8736.94	241.48	8740.23	0.00	
21000.00	89.80	179.63	12259.71	-8836.94	242.12	8840.21	0.00	
21100.00	89.80	179.63	12260.06	-8936.94	242.77	8940.20	0.00	
21200.00	89.80	179.63	12260.42	-9036.93	243.42	9040.18	0.00	
21300.00	89.80	179.63	12260.77	-9136.93	244.06	9140.16	0.00	
21400.00	89.80	179.63	12261.12	-9236.93	244.71	9240.15	0.00	
21500.00	89.80	179.63	12261.48	-9336.92	245.35	9340.13	0.00	
21600.00	89.80	179.63	12261.83	-9436.92	246.00	9440.11	0.00	
21700.00	89.80	179.63	12262.18	-9536.92	246.65	9540.10	0.00	
21800.00	89.80	179.63	12262.53	-9636.92	247.29	9640.08	0.00	
21900.00	89.80	179.63	12262.89	-9736.91	247.94	9740.06	0.00	
22000.00	89.80	179.63	12263.24	-9836.91	248.58	9840.05	0.00	
22100.00	89.80	179.63	12263.59	-9936.91	249.23	9940.03	0.00	
22200.00	89.80	179.63	12263.94	-10036.91	249.88	10040.01	0.00	
22300.00	89.80	179.63	12264.30	-10136.90	250.52	10140.00	0.00	
22400.00	89.80	179.63	12264.65	-10236.90	251.17	10239.98	0.00	
22423.31	89.80	179.63	12264.73	-10260.21	251.32	10263.29	0.00	exit
22500.00	89.80	179.63	12265.00	-10336.90	251.81	10339.96	0.00	
22503.31	89.80	179.63	12265.00	-10340.21	251.81	10343.28	0.00	BHL

Alley Cat 17-20 Fed Com 713H

1. Geologic Formations

TVD of target	12265	Pilot hole depth	N/A
MD at TD:	22503	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
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.

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

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Casing Interval		Casing Interval	
					From (MD)	To (MD)	From (TVD)	To (TVD)
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	11576	0	11576
7 7/8	5 1/2	20	P110HP	CDC-HTQ	0	22503	0	12265

• 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	TOC	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	618	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	473	Surf	13.0	2.3	2nd State: Bradenhead Squeeze - Lead: Class C Cement + additives
	552	6818	13.2	1.44	Tail: Class H / C + additives
Production	117	9676	9	3.27	Lead: Class H / C + additives
	1433	11676	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%

Alley Cat 17-20 Fed Com 713H

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

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

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

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

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

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
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**6. Logging and Testing Procedures**

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

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

**7. Drilling Conditions**

Condition	Specify what type and where?
BH pressure at deepest TVD	6697
Abnormal temperature	No

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

Hydrogen Sulfide (H<sub>2</sub>S) monitors will be installed prior to drilling out the surface shoe. If H<sub>2</sub>S 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 measured values and formations will be provided to the BLM.

N	H <sub>2</sub> S is present
Y	H <sub>2</sub> S 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. At that time an approved BOP stack will be nipped up and tested on the wellhead before drilling operations commences on each well.
  - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

<u>X</u>	Directional Plan
<u>          </u>	Other, describe

Well Name: ALLEY CAT 17-20 FED COM	Well Location: T23S / R32E / SEC 17 / NWNE / 32.311262 / -103.6962118	County or Parish/State: LEA / NM
Well Number: 713H	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: 2789466

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 05/10/2024	Time Sundry Submitted: 06:56
Date proposed operation will begin: 05/10/2024	

**Procedure Description:** Devon Energy Production Co., L.P. (Devon) respectfully requests to change the well name, 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 Well name: ALLEY CAT 17-20 FED COM 814H Proposed Well name: ALLEY CAT 17-20 FED COM 713H Permitted BHL: SWSE, 20 FSL, 1950 FEL, 20-23S-32E Proposed BHL: SWSE, 20 FSL, 2300 FEL, 20-23S-32E No new leases have been added since approved APD. APD ID: 10400085546

NOI Attachments

Procedure Description

- WA018443686\_ALLEY\_CAT\_17\_20\_FED\_COM\_713H\_WL\_R4\_20240520133611.pdf
- Alley\_Cat\_17\_20\_Fed\_Com\_713H\_R4\_20240520133609.pdf
- Alley\_Cat\_17\_20\_Fed\_Com\_713H\_Directional\_Plan\_05\_20\_24\_20240520133609.pdf
- 5.5\_20\_\_P110HP\_CDC\_HTQ\_20240510065307.pdf
- 10.750\_45.5\_J55\_SEAH\_20240510065307.pdf
- 8.625\_32\_P110HSCY\_MO\_FXL\_\_with\_95\_\_RBW\_\_20240510065307.pdf

Received by OCD: 5/21/2024 9:26:13 AM

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Well Name: ALLEY CAT 17-20 FED COM	Well Location: T23S / R32E / SEC 17 / NWNE / 32.311262 / -103.6962118	County or Parish/State: LEA / NM
Well Number: 713H	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	Signed on: MAY 20, 2024 01:36 PM
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:	Zip:
Phone:		
Email address:		

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b> <b>LEASE NO.:</b> <b>LOCATION:</b> <b>COUNTY:</b>	<b>Devon Energy Production Company LP</b> <b>NMNM62223</b> Section 17, T.23 S., R.32 E., NMPM <div style="border: 1px solid black; padding: 2px;">Lea County, New Mexico ▼</div>
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<b>WELL NAME &amp; NO.:</b> <b>SURFACE HOLE FOOTAGE:</b> <b>BOTTOM HOLE FOOTAGE:</b> <b>ATS/API ID:</b> <b>APD ID:</b> <b>Sundry ID:</b>	<b>Alley Cat 17-20 Fed Com 713H</b> 198'/N & 2486'/E 20'/S & 2300'/E <b>ATS-20-1286</b> <b>10400085546</b> <b>2789466</b>
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COA

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

## A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware** formation. As a result, the Hydrogen Sulfide area must meet **43 CFR part 3170 Subpart 3176** requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

## B. CASING

1. The **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 **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

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

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

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

### **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 552' (6800 sxs Class H/C+ additives)**.
- b. Second stage:
  - Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified. **(Squeeze 473 sxs Class C)**

**Operator has proposed to pump down 10-3/4" X 8-5/8" annulus after primary cementing stage. Operator must run a CBL from TD of the 8-5/8" casing to surface. Submit results to the BLM. Operator may conduct a negative and positive pressure test during completion to remediate sustained casing pressure.**

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

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

### **C. PRESSURE CONTROL**

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

#### **Option 1:**

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi. 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 **10-3/4** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi.**

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

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

##### **Communitization Agreement**

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

##### **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 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report when present.

A. CASING

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

B. PRESSURE CONTROL

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

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

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to **43 CFR part 3170 Subpart 3172** with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for 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) 5/21/2024

Form 3160-5  
(June 2019)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

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

5. Lease Serial No.	
6. If Indian, Allottee or Tribe Name	
7. If Unit of CA/Agreement, Name and/or No.	
8. Well Name and No.	
9. API Well No.	
10. Field and Pool or Exploratory Area	
11. Country or Parish, State	

**SUBMIT IN TRIPLICATE** - Other instructions on page 2

1. Type of Well	
<input type="checkbox"/> Oil Well	<input type="checkbox"/> Gas Well <input type="checkbox"/> Other
2. Name of Operator	
3a. Address	3b. Phone No. (include area code)
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)	

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

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

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

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

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

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

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

(Instructions on page 2)

## GENERAL INSTRUCTIONS

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

## SPECIFIC INSTRUCTIONS

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

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

## NOTICES

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

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

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

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

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

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

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

Response to this request is mandatory.

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

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

## Additional Information

### Location of Well

0. SHL: NWNE / 198 FNL / 2486 FEL / TWSP: 23S / RANGE: 32E / SECTION: 17 / LAT: 32.311262 / LONG: -103.6962118 ( TVD: 0 feet, MD: 0 feet )

PPP: NWNE / 100 FNL / 1950 FEL / TWSP: 23S / RANGE: 32E / SECTION: 17 / LAT: 32.311539 / LONG: -103.6944775 ( TVD: 11930 feet, MD: 11976 feet )

PPP: NWSE / 2525 FSL / 1949 FEL / TWSP: 23S / RANGE: 32E / SECTION: 17 / LAT: 32.3042408 / LONG: -103.6944746 ( TVD: 12507 feet, MD: 15000 feet )

PPP: NWNE / 175 FNL / 1948 FEL / TWSP: 23S / RANGE: 32E / SECTION: 20 / LAT: 32.2968193 / LONG: -103.6944687 ( TVD: 12524 feet, MD: 17700 feet )

BHL: SWSE / 20 FSL / 1950 FEL / TWSP: 23S / RANGE: 32E / SECTION: 20 / LAT: 32.2828397 / LONG: -103.6944636 ( TVD: 12555 feet, MD: 22782 feet )

CONFIDENTIAL



District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720  
District II  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 3002552908	<sup>2</sup> Pool Code 98248	<sup>3</sup> Pool Name WC-025 G-08 S243217P; UPR WC
<sup>4</sup> Property Code 322236	<sup>5</sup> Property Name ALLEY CAT 17 20 FED COM	<sup>6</sup> Well Number 713H
<sup>7</sup> OGRID No. 6137	<sup>8</sup> Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.	<sup>9</sup> Elevation 3621.5

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	17	23 S	32 E		198	NORTH	2486	EAST	LEA

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	20	23 S	32 E		20	SOUTH	2300	EAST	LEA

<sup>12</sup> Dedicated Acres 640	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
--------------------------------------	-------------------------------	----------------------------------	-------------------------

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.

	<p>ALLEY CAT 17 20 FED COM 713H EL. = 3621.5</p> <p>GEODETTIC COORDINATES NAD 83 NMSP EAST SURFACE LOCATION N. = 477554.47 E. = 738169.20 LAT. = 32.3112620°N LONG. = 103.6962118°W</p> <p>KICK OFF POINT CALLS 41' FNL 2300' FEL N. = 477714.51 E. = 738353.52 LAT. = 32.31160499 LONG. = 103.69569566</p> <p>FIRST TAKE POINT (PPP 1) 100' FNL 2300' FEL N. = 477654.53 E. = 738354.52 LAT. = 32.3115340°N LONG. = 103.6956101°W</p> <p>LAST TAKE POINT 100' FSL 2300' FEL N. = 467294.24 E. = 738420.52 LAT. = 32.2830556°N LONG. = 103.6955959°W</p> <p>BOTTOM OF HOLE 20' FSL 2300' FEL N. = 467214.26 E. = 738421.01 LAT. = 32.2828357°N LONG. = 103.6955958°W</p> <p>PPP 2 2641' FNL 2300' FEL N. = 475114.47 E. = 738370.70 LAT. = 32.3045519°N LONG. = 103.6956066°W</p> <p>PPP 3 0' FSL 2300' FEL N. = 472473.38 E. = 738387.53 LAT. = 32.2972920°N LONG. = 103.6956030°W</p> <p>PPP 2 1321' FSL 2300' FEL N. = 468515.23 E. = 738412.74 LAT. = 32.2864118°N LONG. = 103.6955976°W</p> <p>CORNER COORDINATES TABLE NAD 83 NMSP EAST</p> <table border="1"> <tr><td>A - N. = 477724.51</td><td>E. = 735384.50</td></tr> <tr><td>B - N. = 477750.79</td><td>E. = 738021.18</td></tr> <tr><td>C - N. = 477780.18</td><td>E. = 740653.25</td></tr> <tr><td>D - N. = 475137.91</td><td>E. = 740670.42</td></tr> <tr><td>E - N. = 472497.97</td><td>E. = 740686.53</td></tr> <tr><td>F - N. = 469855.52</td><td>E. = 740704.48</td></tr> <tr><td>G - N. = 467217.53</td><td>E. = 740720.53</td></tr> <tr><td>H - N. = 467190.86</td><td>E. = 738084.99</td></tr> <tr><td>I - N. = 467168.68</td><td>E. = 735450.43</td></tr> <tr><td>J - N. = 469806.75</td><td>E. = 735434.10</td></tr> <tr><td>K - N. = 472446.64</td><td>E. = 735419.26</td></tr> <tr><td>L - N. = 475084.23</td><td>E. = 735403.66</td></tr> <tr><td>M - N. = 472469.80</td><td>E. = 738052.41</td></tr> </table> <p>LEGEND --- SECTION LINE --- QUARTER LINE --- LEASE LINE --- WELL PATH</p>	A - N. = 477724.51	E. = 735384.50	B - N. = 477750.79	E. = 738021.18	C - N. = 477780.18	E. = 740653.25	D - N. = 475137.91	E. = 740670.42	E - N. = 472497.97	E. = 740686.53	F - N. = 469855.52	E. = 740704.48	G - N. = 467217.53	E. = 740720.53	H - N. = 467190.86	E. = 738084.99	I - N. = 467168.68	E. = 735450.43	J - N. = 469806.75	E. = 735434.10	K - N. = 472446.64	E. = 735419.26	L - N. = 475084.23	E. = 735403.66	M - N. = 472469.80	E. = 738052.41	<p><b>17 OPERATOR CERTIFICATION</b></p> <p>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.</p> <p>Signature: <i>Shayda Omoumi</i> Date: 5/20/2024</p> <p>Printed Name: Shayda Omoumi</p> <p>E-mail Address: shayda.omoumi@dvn.com</p>
	A - N. = 477724.51	E. = 735384.50																										
	B - N. = 477750.79	E. = 738021.18																										
	C - N. = 477780.18	E. = 740653.25																										
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M - N. = 472469.80	E. = 738052.41																											
	<p><b>18 SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>MAY 20, 2024</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor: <i>Shayda Omoumi</i></p> <p>Certificate Number: 12797</p> <p>Professional Surveyor No. 9364C</p>																											

Intent ☒ As Drilled ☐

API #		
Operator Name: DEVON ENERGY PRODUCTION COMPANY, L.P.	Property Name: ALLEY CAT 17 20 FED COM	Well Number 713H

## Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
B	17	23S	32E		41	NORTH	2300	EAST	LEA
Latitude					Longitude				NAD
32.31160499					-103.69569566				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	2300	EAST	LEA
Latitude					Longitude				NAD
32.3115340					103.6956101				83

## Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
O	20	23S	32E		100	SOUTH	2300	EAST	LEA
Latitude					Longitude				NAD
32.2830556					103.6955959				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 # 30-025-52906		
Operator Name: DEVON ENERGY PRODUCTION COMPANY, L.P.	Property Name: ALLEY CAT 17-20 FED COM	Well Number 714H

KZ 06/29/2018

1. Geologic Formations

TVD of target	12265	Pilot hole depth	N/A
MD at TD:	22503	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
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.

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

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Casing Interval		Casing Interval	
					From (MD)	To (MD)	From (TVD)	To (TVD)
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	11576	0	11576
7 7/8	5 1/2	20	P110HP	CDC-HTQ	0	22503	0	12265

• 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	TOC	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	618	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	473	Surf	13.0	2.3	2nd State: Bradenhead Squeeze - Lead: Class C Cement + additives
	552	6818	13.2	1.44	Tail: Class H / C + additives
Production	117	9676	9	3.27	Lead: Class H / C + additives
	1433	11676	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	Type	✓	Tested to:
Int 1	13-5/8"	5M	Annular		X	50% of rated working pressure
			Blind Ram		X	5M
			Pipe Ram			
			Double Ram		X	
			Other*			
Production	13-5/8"	10M	Annular (5M)		X	100% of rated working pressure
			Blind Ram		X	10M
			Pipe Ram			
			Double Ram		X	
			Other*			
			Annular (5M)			
			Blind Ram			
			Pipe Ram			
			Double Ram			
			Other*			
N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.					
Y	A variance is requested to run a 5 M annular on a 10M system					

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

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

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

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

**6. Logging and Testing Procedures**

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

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

**7. Drilling Conditions**

Condition	Specify what type and where?
BH pressure at deepest TVD	6697
Abnormal temperature	No

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

Hydrogen Sulfide (H<sub>2</sub>S) monitors will be installed prior to drilling out the surface shoe. If H<sub>2</sub>S 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 measured values and formations will be provided to the BLM.

N	H <sub>2</sub> S is present
Y	H <sub>2</sub> S 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. At that time an approved BOP stack will be nipped up and tested on the wellhead before drilling operations commences on each well.
  - a. The NMOCD will be contacted / notified 24 hours before the drilling rig moves back on to the pad with the pre-set surface casing.

Attachments

<u>X</u>	Directional Plan
<u>          </u>	Other, describe

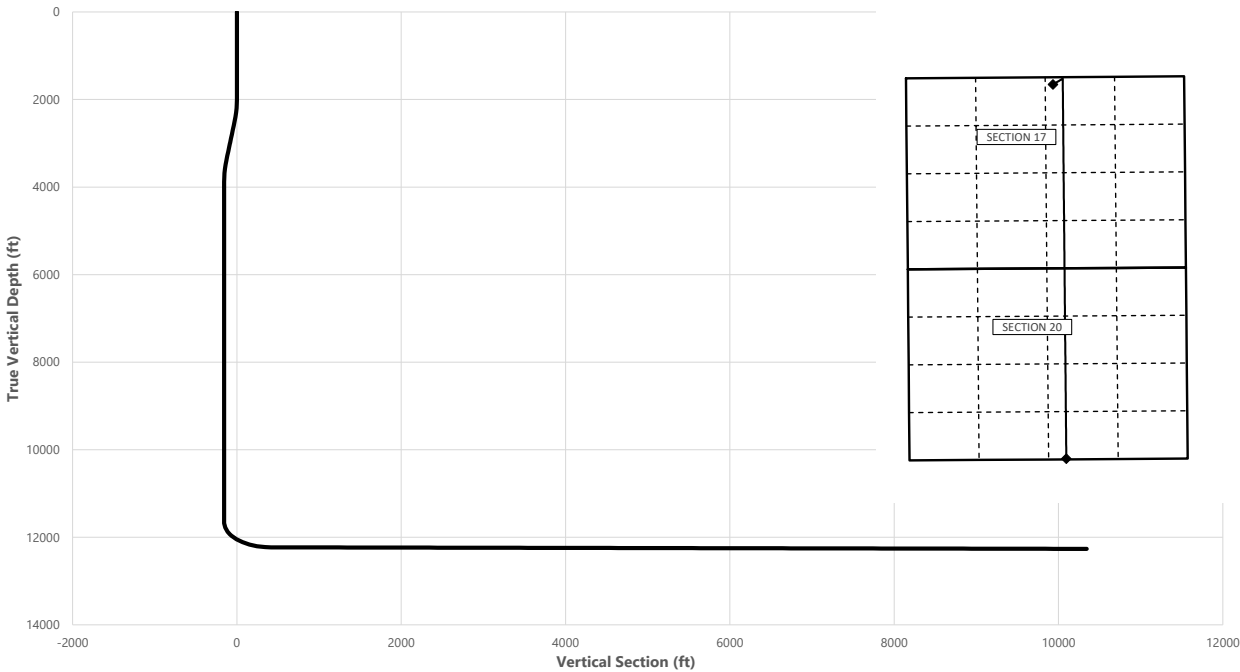
Alley Cat 17-20 Fed Com 713H



Well: Alley Cat 17-20 Fed Com 713H  
County: Lea  
Wellbore: Permit Plan  
Design: Permit Plan #1

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

MD	INC	AZI	TVD	NS	EW	VS	DLS	Comment
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
2000.00	0.00	49.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	10.00	49.00	2497.47	28.55	32.85	-27.75	2.00	Hold Tangent
3402.74	10.00	49.00	3386.49	131.40	151.15	-127.68	0.00	Drop to Vertical
3902.74	0.00	49.00	3883.96	159.95	184.00	-155.42	2.00	Hold Vertical
11675.83	0.00	179.63	11657.05	159.95	184.00	-155.42	0.00	KOP
12573.81	89.80	179.63	12230.00	-410.98	187.69	415.42	10.00	Landing Point
22503.31	89.80	179.63	12265.00	-10340.21	251.81	10343.28	0.00	BHL



Key Depths	MD	TVD
	(ft)	(ft)
Rustler	1000.00	1000.00
Salt	3010.29	3000.00
Base of Salt	4668.78	4650.00
Delaware	4708.78	4690.00
Cherry Canyon	5858.78	5840.00
Brushy Canyon	6818.78	6800.00
1st Bone Spring Lime	8558.78	8540.00
Bone Spring 1st	9718.78	9700.00
Bone Spring 2nd	10358.78	10340.00
3rd Bone Spring Lime	10808.78	10790.00
Bone Spring 3rd	11538.78	11520.00
Wolfcamp / Point of Penetration	11960.33	11930.00
exit	22423.31	12264.73

SHL  
KOP  
Point of Penetration  
Exit  
BHL

MD	TVD	Lat	Long	Section Footages
(ft)	(ft)	(°)	(°)	
0.00	0.00	32.3112	-103.6963	198' FNL, 2486' FEL of Sec 17 in T23S, R32E
11675.83	11657.05	32.3116	-103.6957	41' FNL, 2300' FEL of Sec 17 in T23S, R32E
11960.33	11930.00	32.3115	-103.6956	100' FNL, 2300' FEL of Sec 17 in T23S, R32E
22423.31	12264.73	32.2831	-103.6956	100' FSL, 2300' FEL of Sec 20 in T23S, R32E
22503.31	12265.00	32.2827	-103.6957	20' FSL, 2300' FEL of Sec 20 in T23S, R32E

	Y	X	MD
KOP	477714	738353	11675.83



Alley Cat 17-20 Fed Com 713H



**Well:** Alley Cat 17-20 Fed Com 713H  
**County:** Lea  
**Wellbore:** Permit Plan  
**Design:** Permit Plan #1

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

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
100.00	0.00	49.00	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	49.00	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	49.00	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	49.00	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	49.00	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	49.00	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	49.00	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	49.00	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	49.00	900.00	0.00	0.00	0.00	0.00	
1000.00	0.00	49.00	1000.00	0.00	0.00	0.00	0.00	Rustler,
1100.00	0.00	49.00	1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	49.00	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	49.00	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	49.00	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	49.00	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	49.00	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	49.00	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	49.00	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	49.00	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	49.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	49.00	2099.98	1.14	1.32	-1.11	2.00	
2200.00	4.00	49.00	2199.84	4.58	5.27	-4.45	2.00	
2300.00	6.00	49.00	2299.45	10.30	11.84	-10.00	2.00	
2400.00	8.00	49.00	2398.70	18.29	21.04	-17.77	2.00	
2500.00	10.00	49.00	2497.47	28.55	32.85	-27.75	2.00	Hold Tangent
2600.00	10.00	49.00	2595.95	39.95	45.95	-38.82	0.00	
2700.00	10.00	49.00	2694.43	51.34	59.06	-49.89	0.00	
2800.00	10.00	49.00	2792.91	62.73	72.16	-60.95	0.00	
2900.00	10.00	49.00	2891.39	74.12	85.27	-72.02	0.00	
3000.00	10.00	49.00	2989.87	85.52	98.37	-83.09	0.00	
3010.29	10.00	49.00	3000.00	86.69	99.72	-84.23	0.00	Salt
3100.00	10.00	49.00	3088.35	96.91	111.48	-94.16	0.00	
3200.00	10.00	49.00	3186.83	108.30	124.58	-105.23	0.00	
3300.00	10.00	49.00	3285.31	119.69	137.69	-116.30	0.00	
3400.00	10.00	49.00	3383.79	131.08	150.80	-127.37	0.00	
3402.74	10.00	49.00	3386.49	131.40	151.15	-127.68	0.00	Drop to Vertical
3500.00	8.05	49.00	3482.54	141.41	162.67	-137.41	2.00	
3600.00	6.05	49.00	3581.78	149.47	171.94	-145.24	2.00	
3700.00	4.05	49.00	3681.39	155.25	178.59	-150.85	2.00	
3800.00	2.05	49.00	3781.24	158.74	182.61	-154.25	2.00	
3900.00	0.05	49.00	3881.22	159.95	184.00	-155.42	2.00	
3902.74	0.00	49.00	3883.96	159.95	184.00	-155.42	2.00	Hold Vertical
4000.00	0.00	179.63	3981.22	159.95	184.00	-155.42	0.00	
4100.00	0.00	179.63	4081.22	159.95	184.00	-155.42	0.00	
4200.00	0.00	179.63	4181.22	159.95	184.00	-155.42	0.00	
4300.00	0.00	179.63	4281.22	159.95	184.00	-155.42	0.00	
4400.00	0.00	179.63	4381.22	159.95	184.00	-155.42	0.00	
4500.00	0.00	179.63	4481.22	159.95	184.00	-155.42	0.00	
4600.00	0.00	179.63	4581.22	159.95	184.00	-155.42	0.00	
4668.78	0.00	179.63	4650.00	159.95	184.00	-155.42	0.00	Base of Salt
4700.00	0.00	179.63	4681.22	159.95	184.00	-155.42	0.00	
4708.78	0.00	179.63	4690.00	159.95	184.00	-155.42	0.00	Delaware
4800.00	0.00	179.63	4781.22	159.95	184.00	-155.42	0.00	
4900.00	0.00	179.63	4881.22	159.95	184.00	-155.42	0.00	
5000.00	0.00	179.63	4981.22	159.95	184.00	-155.42	0.00	
5100.00	0.00	179.63	5081.22	159.95	184.00	-155.42	0.00	
5200.00	0.00	179.63	5181.22	159.95	184.00	-155.42	0.00	
5300.00	0.00	179.63	5281.22	159.95	184.00	-155.42	0.00	
5400.00	0.00	179.63	5381.22	159.95	184.00	-155.42	0.00	
5500.00	0.00	179.63	5481.22	159.95	184.00	-155.42	0.00	
5600.00	0.00	179.63	5581.22	159.95	184.00	-155.42	0.00	
5700.00	0.00	179.63	5681.22	159.95	184.00	-155.42	0.00	
5800.00	0.00	179.63	5781.22	159.95	184.00	-155.42	0.00	
5858.78	0.00	179.63	5840.00	159.95	184.00	-155.42	0.00	Cherry Canyon
5900.00	0.00	179.63	5881.22	159.95	184.00	-155.42	0.00	
6000.00	0.00	179.63	5981.22	159.95	184.00	-155.42	0.00	
6100.00	0.00	179.63	6081.22	159.95	184.00	-155.42	0.00	
6200.00	0.00	179.63	6181.22	159.95	184.00	-155.42	0.00	
6300.00	0.00	179.63	6281.22	159.95	184.00	-155.42	0.00	

Alley Cat 17-20 Fed Com 713H



**Well:** Alley Cat 17-20 Fed Com 713H  
**County:** Lea  
**Wellbore:** Permit Plan  
**Design:** Permit Plan #1

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

MD (ft)	INC (")	AZI (")	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
6400.00	0.00	179.63	6381.22	159.95	184.00	-155.42	0.00	
6500.00	0.00	179.63	6481.22	159.95	184.00	-155.42	0.00	
6600.00	0.00	179.63	6581.22	159.95	184.00	-155.42	0.00	
6700.00	0.00	179.63	6681.22	159.95	184.00	-155.42	0.00	
6800.00	0.00	179.63	6781.22	159.95	184.00	-155.42	0.00	
6818.78	0.00	179.63	6800.00	159.95	184.00	-155.42	0.00	Brushy Canyon
6900.00	0.00	179.63	6881.22	159.95	184.00	-155.42	0.00	
7000.00	0.00	179.63	6981.22	159.95	184.00	-155.42	0.00	
7100.00	0.00	179.63	7081.22	159.95	184.00	-155.42	0.00	
7200.00	0.00	179.63	7181.22	159.95	184.00	-155.42	0.00	
7300.00	0.00	179.63	7281.22	159.95	184.00	-155.42	0.00	
7400.00	0.00	179.63	7381.22	159.95	184.00	-155.42	0.00	
7500.00	0.00	179.63	7481.22	159.95	184.00	-155.42	0.00	
7600.00	0.00	179.63	7581.22	159.95	184.00	-155.42	0.00	
7700.00	0.00	179.63	7681.22	159.95	184.00	-155.42	0.00	
7800.00	0.00	179.63	7781.22	159.95	184.00	-155.42	0.00	
7900.00	0.00	179.63	7881.22	159.95	184.00	-155.42	0.00	
8000.00	0.00	179.63	7981.22	159.95	184.00	-155.42	0.00	
8100.00	0.00	179.63	8081.22	159.95	184.00	-155.42	0.00	
8200.00	0.00	179.63	8181.22	159.95	184.00	-155.42	0.00	
8300.00	0.00	179.63	8281.22	159.95	184.00	-155.42	0.00	
8400.00	0.00	179.63	8381.22	159.95	184.00	-155.42	0.00	
8500.00	0.00	179.63	8481.22	159.95	184.00	-155.42	0.00	
8558.78	0.00	179.63	8540.00	159.95	184.00	-155.42	0.00	1st Bone Spring Lime
8600.00	0.00	179.63	8581.22	159.95	184.00	-155.42	0.00	
8700.00	0.00	179.63	8681.22	159.95	184.00	-155.42	0.00	
8800.00	0.00	179.63	8781.22	159.95	184.00	-155.42	0.00	
8900.00	0.00	179.63	8881.22	159.95	184.00	-155.42	0.00	
9000.00	0.00	179.63	8981.22	159.95	184.00	-155.42	0.00	
9100.00	0.00	179.63	9081.22	159.95	184.00	-155.42	0.00	
9200.00	0.00	179.63	9181.22	159.95	184.00	-155.42	0.00	
9300.00	0.00	179.63	9281.22	159.95	184.00	-155.42	0.00	
9400.00	0.00	179.63	9381.22	159.95	184.00	-155.42	0.00	
9500.00	0.00	179.63	9481.22	159.95	184.00	-155.42	0.00	
9600.00	0.00	179.63	9581.22	159.95	184.00	-155.42	0.00	
9700.00	0.00	179.63	9681.22	159.95	184.00	-155.42	0.00	
9718.78	0.00	179.63	9700.00	159.95	184.00	-155.42	0.00	Bone Spring 1st
9800.00	0.00	179.63	9781.22	159.95	184.00	-155.42	0.00	
9900.00	0.00	179.63	9881.22	159.95	184.00	-155.42	0.00	
10000.00	0.00	179.63	9981.22	159.95	184.00	-155.42	0.00	
10100.00	0.00	179.63	10081.22	159.95	184.00	-155.42	0.00	
10200.00	0.00	179.63	10181.22	159.95	184.00	-155.42	0.00	
10300.00	0.00	179.63	10281.22	159.95	184.00	-155.42	0.00	
10358.78	0.00	179.63	10340.00	159.95	184.00	-155.42	0.00	Bone Spring 2nd
10400.00	0.00	179.63	10381.22	159.95	184.00	-155.42	0.00	
10500.00	0.00	179.63	10481.22	159.95	184.00	-155.42	0.00	
10600.00	0.00	179.63	10581.22	159.95	184.00	-155.42	0.00	
10700.00	0.00	179.63	10681.22	159.95	184.00	-155.42	0.00	
10800.00	0.00	179.63	10781.22	159.95	184.00	-155.42	0.00	
10808.78	0.00	179.63	10790.00	159.95	184.00	-155.42	0.00	3rd Bone Spring Lime
10900.00	0.00	179.63	10881.22	159.95	184.00	-155.42	0.00	
11000.00	0.00	179.63	10981.22	159.95	184.00	-155.42	0.00	
11100.00	0.00	179.63	11081.22	159.95	184.00	-155.42	0.00	
11200.00	0.00	179.63	11181.22	159.95	184.00	-155.42	0.00	
11300.00	0.00	179.63	11281.22	159.95	184.00	-155.42	0.00	
11400.00	0.00	179.63	11381.22	159.95	184.00	-155.42	0.00	
11500.00	0.00	179.63	11481.22	159.95	184.00	-155.42	0.00	
11538.78	0.00	179.63	11520.00	159.95	184.00	-155.42	0.00	Bone Spring 3rd
11600.00	0.00	179.63	11581.22	159.95	184.00	-155.42	0.00	
11675.83	0.00	179.63	11657.05	159.95	184.00	-155.42	0.00	KOP
11700.00	2.42	179.63	11681.21	159.44	184.01	-154.91	10.00	
11800.00	12.42	179.63	11780.25	146.55	184.09	-142.02	10.00	
11900.00	22.42	179.63	11875.54	116.65	184.28	-112.13	10.00	
11960.33	28.45	179.63	11930.00	90.76	184.45	-86.24	10.00	Wolfcamp / Point of Penetration
12000.00	32.42	179.63	11964.20	70.67	184.58	-66.15	10.00	
12100.00	42.42	179.63	12043.52	9.98	184.97	-5.48	10.00	
12200.00	52.42	179.63	12111.10	-63.55	185.45	68.05	10.00	
12300.00	62.42	179.63	12164.88	-147.70	185.99	152.19	10.00	
12400.00	72.42	179.63	12203.24	-239.92	186.59	244.39	10.00	
12500.00	82.42	179.63	12224.99	-337.39	187.21	341.85	10.00	

Alley Cat 17-20 Fed Com 713H



**Well:** Alley Cat 17-20 Fed Com 713H  
**County:** Lea  
**Wellbore:** Permit Plan  
**Design:** Permit Plan #1

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

MD (ft)	INC (")	AZI (")	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12573.81	89.80	179.63	12230.00	-410.98	187.69	415.42	10.00	Landing Point
12600.00	89.80	179.63	12230.09	-437.17	187.86	441.61	0.00	
12700.00	89.80	179.63	12230.44	-537.16	188.50	541.59	0.00	
12800.00	89.80	179.63	12230.80	-637.16	189.15	641.58	0.00	
12900.00	89.80	179.63	12231.15	-737.16	189.80	741.56	0.00	
13000.00	89.80	179.63	12231.50	-837.15	190.44	841.54	0.00	
13100.00	89.80	179.63	12231.86	-937.15	191.09	941.53	0.00	
13200.00	89.80	179.63	12232.21	-1037.15	191.73	1041.51	0.00	
13300.00	89.80	179.63	12232.56	-1137.15	192.38	1141.49	0.00	
13400.00	89.80	179.63	12232.91	-1237.14	193.03	1241.48	0.00	
13500.00	89.80	179.63	12233.27	-1337.14	193.67	1341.46	0.00	
13600.00	89.80	179.63	12233.62	-1437.14	194.32	1441.44	0.00	
13700.00	89.80	179.63	12233.97	-1537.14	194.96	1541.43	0.00	
13800.00	89.80	179.63	12234.32	-1637.13	195.61	1641.41	0.00	
13900.00	89.80	179.63	12234.68	-1737.13	196.26	1741.39	0.00	
14000.00	89.80	179.63	12235.03	-1837.13	196.90	1841.38	0.00	
14100.00	89.80	179.63	12235.38	-1937.12	197.55	1941.36	0.00	
14200.00	89.80	179.63	12235.73	-2037.12	198.19	2041.34	0.00	
14300.00	89.80	179.63	12236.09	-2137.12	198.84	2141.33	0.00	
14400.00	89.80	179.63	12236.44	-2237.12	199.49	2241.31	0.00	
14500.00	89.80	179.63	12236.79	-2337.11	200.13	2341.29	0.00	
14600.00	89.80	179.63	12237.14	-2437.11	200.78	2441.28	0.00	
14700.00	89.80	179.63	12237.50	-2537.11	201.42	2541.26	0.00	
14800.00	89.80	179.63	12237.85	-2637.11	202.07	2641.24	0.00	
14900.00	89.80	179.63	12238.20	-2737.10	202.72	2741.23	0.00	
15000.00	89.80	179.63	12238.56	-2837.10	203.36	2841.21	0.00	
15100.00	89.80	179.63	12238.91	-2937.10	204.01	2941.19	0.00	
15200.00	89.80	179.63	12239.26	-3037.10	204.65	3041.18	0.00	
15300.00	89.80	179.63	12239.61	-3137.09	205.30	3141.16	0.00	
15400.00	89.80	179.63	12239.97	-3237.09	205.95	3241.14	0.00	
15500.00	89.80	179.63	12240.32	-3337.09	206.59	3341.13	0.00	
15600.00	89.80	179.63	12240.67	-3437.08	207.24	3441.11	0.00	
15700.00	89.80	179.63	12241.02	-3537.08	207.88	3541.09	0.00	
15800.00	89.80	179.63	12241.38	-3637.08	208.53	3641.08	0.00	
15900.00	89.80	179.63	12241.73	-3737.08	209.18	3741.06	0.00	
16000.00	89.80	179.63	12242.08	-3837.07	209.82	3841.04	0.00	
16100.00	89.80	179.63	12242.43	-3937.07	210.47	3941.03	0.00	
16200.00	89.80	179.63	12242.79	-4037.07	211.12	4041.01	0.00	
16300.00	89.80	179.63	12243.14	-4137.07	211.76	4140.99	0.00	
16400.00	89.80	179.63	12243.49	-4237.06	212.41	4240.98	0.00	
16500.00	89.80	179.63	12243.84	-4337.06	213.05	4340.96	0.00	
16600.00	89.80	179.63	12244.20	-4437.06	213.70	4440.94	0.00	
16700.00	89.80	179.63	12244.55	-4537.05	214.35	4540.93	0.00	
16800.00	89.80	179.63	12244.90	-4637.05	214.99	4640.91	0.00	
16900.00	89.80	179.63	12245.25	-4737.05	215.64	4740.89	0.00	
17000.00	89.80	179.63	12245.61	-4837.05	216.28	4840.88	0.00	
17100.00	89.80	179.63	12245.96	-4937.04	216.93	4940.86	0.00	
17200.00	89.80	179.63	12246.31	-5037.04	217.58	5040.85	0.00	
17300.00	89.80	179.63	12246.67	-5137.04	218.22	5140.83	0.00	
17400.00	89.80	179.63	12247.02	-5237.04	218.87	5240.81	0.00	
17500.00	89.80	179.63	12247.37	-5337.03	219.51	5340.80	0.00	
17600.00	89.80	179.63	12247.72	-5437.03	220.16	5440.78	0.00	
17700.00	89.80	179.63	12248.08	-5537.03	220.81	5540.76	0.00	
17800.00	89.80	179.63	12248.43	-5637.02	221.45	5640.75	0.00	
17900.00	89.80	179.63	12248.78	-5737.02	222.10	5740.73	0.00	
18000.00	89.80	179.63	12249.13	-5837.02	222.74	5840.71	0.00	
18100.00	89.80	179.63	12249.49	-5937.02	223.39	5940.70	0.00	
18200.00	89.80	179.63	12249.84	-6037.01	224.04	6040.68	0.00	
18300.00	89.80	179.63	12250.19	-6137.01	224.68	6140.66	0.00	
18400.00	89.80	179.63	12250.54	-6237.01	225.33	6240.65	0.00	
18500.00	89.80	179.63	12250.90	-6337.01	225.97	6340.63	0.00	
18600.00	89.80	179.63	12251.25	-6437.00	226.62	6440.61	0.00	
18700.00	89.80	179.63	12251.60	-6537.00	227.27	6540.60	0.00	
18800.00	89.80	179.63	12251.95	-6637.00	227.91	6640.58	0.00	
18900.00	89.80	179.63	12252.31	-6736.99	228.56	6740.56	0.00	
19000.00	89.80	179.63	12252.66	-6836.99	229.20	6840.55	0.00	
19100.00	89.80	179.63	12253.01	-6936.99	229.85	6940.53	0.00	
19200.00	89.80	179.63	12253.37	-7036.99	230.50	7040.51	0.00	
19300.00	89.80	179.63	12253.72	-7136.98	231.14	7140.50	0.00	
19400.00	89.80	179.63	12254.07	-7236.98	231.79	7240.48	0.00	

Alley Cat 17-20 Fed Com 713H



**Well:** Alley Cat 17-20 Fed Com 713H  
**County:** Lea  
**Wellbore:** Permit Plan  
**Design:** Permit Plan #1

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

MD	INC	AZI	TVD	NS	EW	VS	DLS	Comment
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	
19500.00	89.80	179.63	12254.42	-7336.98	232.43	7340.46	0.00	
19600.00	89.80	179.63	12254.78	-7436.98	233.08	7440.45	0.00	
19700.00	89.80	179.63	12255.13	-7536.97	233.73	7540.43	0.00	
19800.00	89.80	179.63	12255.48	-7636.97	234.37	7640.41	0.00	
19900.00	89.80	179.63	12255.83	-7736.97	235.02	7740.40	0.00	
20000.00	89.80	179.63	12256.19	-7836.97	235.66	7840.38	0.00	
20100.00	89.80	179.63	12256.54	-7936.96	236.31	7940.36	0.00	
20200.00	89.80	179.63	12256.89	-8036.96	236.96	8040.35	0.00	
20300.00	89.80	179.63	12257.24	-8136.96	237.60	8140.33	0.00	
20400.00	89.80	179.63	12257.60	-8236.95	238.25	8240.31	0.00	
20500.00	89.80	179.63	12257.95	-8336.95	238.89	8340.30	0.00	
20600.00	89.80	179.63	12258.30	-8436.95	239.54	8440.28	0.00	
20700.00	89.80	179.63	12258.65	-8536.95	240.19	8540.26	0.00	
20800.00	89.80	179.63	12259.01	-8636.94	240.83	8640.25	0.00	
20900.00	89.80	179.63	12259.36	-8736.94	241.48	8740.23	0.00	
21000.00	89.80	179.63	12259.71	-8836.94	242.12	8840.21	0.00	
21100.00	89.80	179.63	12260.06	-8936.94	242.77	8940.20	0.00	
21200.00	89.80	179.63	12260.42	-9036.93	243.42	9040.18	0.00	
21300.00	89.80	179.63	12260.77	-9136.93	244.06	9140.16	0.00	
21400.00	89.80	179.63	12261.12	-9236.93	244.71	9240.15	0.00	
21500.00	89.80	179.63	12261.48	-9336.92	245.35	9340.13	0.00	
21600.00	89.80	179.63	12261.83	-9436.92	246.00	9440.11	0.00	
21700.00	89.80	179.63	12262.18	-9536.92	246.65	9540.10	0.00	
21800.00	89.80	179.63	12262.53	-9636.92	247.29	9640.08	0.00	
21900.00	89.80	179.63	12262.89	-9736.91	247.94	9740.06	0.00	
22000.00	89.80	179.63	12263.24	-9836.91	248.58	9840.05	0.00	
22100.00	89.80	179.63	12263.59	-9936.91	249.23	9940.03	0.00	
22200.00	89.80	179.63	12263.94	-10036.91	249.88	10040.01	0.00	
22300.00	89.80	179.63	12264.30	-10136.90	250.52	10140.00	0.00	
22400.00	89.80	179.63	12264.65	-10236.90	251.17	10239.98	0.00	
22423.31	89.80	179.63	12264.73	-10260.21	251.32	10263.29	0.00	exit
22500.00	89.80	179.63	12265.00	-10336.90	251.81	10339.96	0.00	
22503.31	89.80	179.63	12265.00	-10340.21	251.81	10343.28	0.00	BHL



U. S. Steel Tubular Products

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

2/21/2024 7:47:29 AM



MECHANICAL PROPERTIES	Pipe	USS-CDC HTQ <sup>®</sup>		--
Minimum Yield Strength	125,000	--	psi	--
Maximum Yield Strength	140,000	--	psi	--
Minimum Tensile Strength	130,000	--	psi	--
DIMENSIONS	Pipe	USS-CDC HTQ <sup>®</sup>		--
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 <sup>®</sup>		--
Critical Area	5.828	5.828	sq. in.	--
Joint Efficiency	--	97.0	%	--
PERFORMANCE	Pipe	USS-CDC HTQ <sup>®</sup>		--
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 <sup>®</sup>		--
Make-Up Loss	--	4.63	in.	--
Minimum Make-Up Torque	--	14,500	ft-lb	--
Maximum Make-Up Torque	--	20,500	ft-lb	--
Connection Yield Torque	--	25,300	ft-lb	--

UNCONTROLLED

Notes

1.

Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness and Specified Minimum Yield Strength (SMYS).
2.

Uniaxial bending rating shown is structural only, and equal to compression efficiency.
3.

Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
4.

Reference length is calculated by joint strength divided by nominal threaded and coupled weight with 1.5 safety factor.
5.

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

Legal Notice

USS - CDC HTQ<sup>®</sup> (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.



10-3/4"   45.50#   0.400"   J-55

**Dimensions (Nominal)**

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

**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**

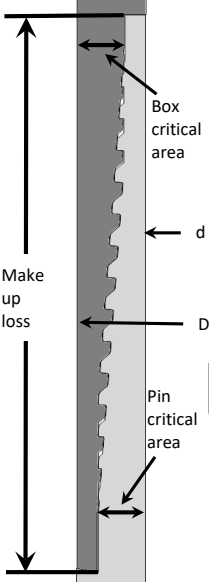
STC	493	1000 lbs
BTC	796	1000 lbs

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.

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

**MO-FXL**



Geometry	Imperial		S.I.	
<b>Pipe Body</b>				
Grade *1	P110HSCY		P110HSCY	
MinYS *1	125	ksi	125	ksi
Pipe OD ( D )	8 5/8	in	219.08	mm
Weight	32.00	lb/ft	47.68	kg/m
Actual weight	31.10		46.34	kg/m
Wall Thickness ( t )	0.352	in	8.94	mm
Pipe ID ( d )	7.921	in	201.19	mm
Pipe body cross section	9.149	in <sup>2</sup>	5,902	mm <sup>2</sup>
Special Drift Dia. *1	7.875	in	200.03	mm
-	-	-	-	-
<b>Connection</b>				
Box OD ( W )	8.625	in	219.08	mm
PIN ID	7.921	in	201.19	mm
Make up Loss	3.847	in	97.71	mm
Box Critical Area	5.853	in <sup>2</sup>	3686	mm <sup>2</sup>
Joint load efficiency	69	%	69	%
Thread Taper	1 / 10 ( 1.2" per ft )			
Number of Threads	5 TPI			
<b>Performance</b>				
<b>Performance Properties for Pipe Body</b>				
S.M.Y.S. *1	1,144	kips	5,087	kN
M.I.Y.P. *1	9,690	psi	66.83	MPa
Collapse Strength *1	4,300	psi	29.66	MPa
Note S.M.Y.S.= Specified Minimum YIELD Strength of Pipe body M.I.Y.P. = Minimum Internal Yield Pressure of Pipe body *1: Borusan: SOP-12-F05 Rev.2, 10/17/2023 P110HSCY: MinYS125ksi, 95%RBW, SD7.875, Collapse Strength 4,300psi				
<b>Performance Properties for Connection</b>				
Tensile Yield load	789 kips ( 69% of S.M.Y.S. )			
Min. Compression Yield	789 kips ( 69% of S.M.Y.S. )			
Internal Pressure	6,780 psi ( 70% of M.I.Y.P. )			
External Pressure	100% of Collapse Strength			
Max. DLS ( deg. /100ft)	29			
<b>Recommended Torque</b>				
Min.	13,600	ft-lb	18,400	N-m
Opti.	14,900	ft-lb	20,200	N-m
Max.	16,200	ft-lb	21,900	N-m
Operational Max.	28,400	ft-lb	38,500	N-m
Note : Operational Max. torque can be applied for high torque application				

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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 application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

The products described in this Connection Data Sheet are not recommended for use in deep water offshore applications. For more information, please refer to [http://www.mto.co.jp/mo-con/\\_images/top/WebsiteTerms\\_Active\\_20333287\\_1.pdf](http://www.mto.co.jp/mo-con/_images/top/WebsiteTerms_Active_20333287_1.pdf) the contents of which are incorporated by reference into this Connection Data Sheet.

17-23-32-B Sundry ID 2789466 Alley Cat 17-20 Fed Com 713H

## Alley Cat 17-20 Fed Com 713H

10 3/4		surface csg in a		14 3/4		inch hole.		Design Factors				Surface	
Segment	#/ft	Grade		Coupling		Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	45.50	j 55		btc		12.94	3.68	0.57	1,215	7	0.95	6.95	55,283
"B"				btc					0				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
Comparison of Proposed to Minimum Required Cement Volumes													
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE				Min Dist Hole-Cplg	
14 3/4	0.5563	618	890	676	32	9.00	3767	5M				1.50	
Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.													
Site plot (pipe racks S or F) as per D.D. 13103.1 - not found.													

8 5/8		casing inside the		10 3/4		Design Factors				Int 1		
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	32.00		p 110	mo-flx	2.13	0.68	0.93	11,576	1	1.57	1.14	370,432
"B"								0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: -676						Totals:		11,576				370,432
The cement volume(s) are intended to achieve a top of						ft from surface or a		1215				overlap.
Hole	Annular	1 Stage	1 Stage	Min	1 Stage	Drilling	Calc	Req'd				Min Dist
Size	Volume	Cmt Sx	CuFt Cmt	Cu Ft	% Excess	Mud Wt	MASP	BOPE				Hole-Cplg
9 7/8	0.1261	552	795	1470	-46	10.50	3992	5M				0.63
D V Tool(s):		6800				sum of sx		Σ CuFt				Σ%excess
t by stage % :		32		25				1025	1883			28
Class 'C' tail cmt yld > 1.35												
Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.54, b, c, d <0.70 a Problem!!												

Tail cmt		casing inside the		8 5/8		Design Factors				Prod 1		
Segment	#/ft	Grade		Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	20.00		p 110	cdc-htq	2.61	1.82	1.89	22,503	2	3.17	3.06	450,060
"B"								0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,698								Totals:	22,503			450,060
The cement volume(s) are intended to achieve a top of								11376	ft from surface or a		200	overlap.
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE				Min Dist Hole-Cplg
7 7/8	0.1733	1550	2446	1929	27	10.50						0.79
Class 'C' tail cmt yld > 1.35												

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



**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720  
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**District III**  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170  
**District IV**  
1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS  
  
Action 346191

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 346191
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	ALL PREVIOUS COA'S APPLY	5/22/2024