

Well Name: BILLIKEN 6-18 FED COM	Well Location: T26S / R35E / SEC 6 / NENW / 32.078766 / -103.408932	County or Parish/State: LEA / NM
Well Number: 8H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM125401	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547566	Operator: DEVON ENERGY PRODUCTION COMPANY LP	

Notice of Intent

Sundry ID: 2797372

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 06/26/2024

Time Sundry Submitted: 01:08

Date proposed operation will begin: 06/26/2024

Procedure Description: Engineering Only - Devon Energy Production Company L.P. respectfully requests the following changes to the approved APD: Casing program change to deepen intermediate casing: Surface, Intermediate, and Production casing size changes. Intermediate and Production casing depth changes. Cement volume changes to accommodate casing change. Break test and offline cement variance request included. Please see attached revised spec sheets, and drilling & directional plans, and supporting documentation.

NOI Attachments

Procedure Description

8.625_32lb_P110EC_SPRINT_FJ_VST_20240626130039.pdf

BILLIKEN_6_18_FEDERAL_COM_8H_Directional_Plan_06_26_24_20240626130039.pdf

5.5_20lb_P110EC_DWC_C_IS_PLUS_20240626130032.pdf

10.750_45.5lb_J55_BTC_20240626130031.pdf

BOP_Break_Test_Variance___Int_Csg_1_15_24_20240626130032.pdf

MB_Wellhd_10.75_8.625_5.5_20240626130034.pdf

BILLIKEN_6_18_FEDERAL_COM_8H_R3_20240626130031.pdf

Well Number: 8H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM125401

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002547566

Operator: DEVON ENERGY
PRODUCTION COMPANY LP**Conditions of Approval****Specialist Review**

Billiken_6_18_Fed_Com_8H_Sundry_ID_2797372_20240716105510.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: REBECCA DEAL

Signed on: JUN 26, 2024 01:00 PM

Name: DEVON ENERGY PRODUCTION COMPANY LP

Title: Regulatory Analyst

Street Address: 333 W SHERIDAN AVE

City: OKLAHOMA CITY

State: OK

Phone: (303) 299-1406

Email address: REBECCA.DEAL@DVN.COM

Field

Representative Name:

Street Address:

City:

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: 07/16/2024

Signature: Long Vo

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 <i>Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.</i>		5. Lease Serial No. NMNM125401
		6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No.
1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No. BILLIKEN 6-18 FED COM/8H
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY LP		9. API Well No. 3002547566
3a. Address 333 WEST SHERIDAN AVE, OKLAHOMA CITY,	3b. Phone No. (include area code) (405) 235-3611	10. Field and Pool or Exploratory Area WC-025 G-09 S263504N/WOLFCAMP
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) SEC 6/T26S/R35E/NMP		11. Country or Parish, State LEA/NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA					
TYPE OF SUBMISSION	TYPE OF ACTION				
<input checked="" 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 checked="" 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 recompleation 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.)

Engineering Only - Devon Energy Production Company L.P. respectfully requests the following changes to the approved APD:

Casing program change to deepen intermediate casing: Surface, Intermediate, and Production casing size changes. Intermediate and Production casing depth changes. Cement volume changes to accommodate casing change. Break test and offline cement variance request included.

Please see attached revised spec sheets, and drilling & directional plans, and supporting documentation.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) REBECCA DEAL / Ph: (303) 299-1406	Title Regulatory Analyst
Signature (Electronic Submission)	Date 06/26/2024

THE SPACE FOR FEDERAL OR STATE OFFICE USE		
Approved by LONG VO / Ph: (575) 988-5402 / Approved	Title Petroleum Engineer	Date 07/16/2024
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 CARLSBAD	

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: NENW / 582 FNL / 1890 FWL / TWSP: 26S / RANGE: 35E / SECTION: 6 / LAT: 32.078766 / LONG: -103.408932 (TVD: 0 feet, MD: 0 feet)

PPP: NENW / 100 FNL / 1370 FWL / TWSP: 26S / RANGE: 35E / SECTION: 6 / LAT: 32.079361 / LONG: -103.40777 (TVD: 12281 feet, MD: 12299 feet)

PPP: NESW / 2639 FSL / 1370 FWL / TWSP: 26S / RANGE: 35E / SECTION: 7 / LAT: 32.057736 / LONG: -103.407763 (TVD: 12620 feet, MD: 20300 feet)

PPP: NENW / 1 FNL / 1370 FWL / TWSP: 26S / RANGE: 35E / SECTION: 7 / LAT: 32.064916 / LONG: -103.409829 (TVD: 12620 feet, MD: 17700 feet)

BHL: SENW / 2620 FNL / 1370 FWL / TWSP: 26S / RANGE: 35E / SECTION: 18 / LAT: 32.043401 / LONG: -103.4077631 (TVD: 12620 feet, MD: 25515 feet)

CONFIDENTIAL

Issued on: 16 Dec. 2020 by Logan Van Gorp



Connection Data Sheet

OD	Weight (lb/ft)	Wall Th.	Grade	Alt. Drift:	Connection
8 5/8 in.	Nominal: 32.00 Plain End: 31.13	0.352 in.	P110EC	7.875 in.	VAM® SPRINT-FJ

PIPE PROPERTIES		
Nominal OD	8.625	in.
Nominal ID	7.921	in.
Nominal Cross Section Area	9.149	sqin.
Grade Type	High Yield	
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Ultimate Tensile Strength	135	ksi

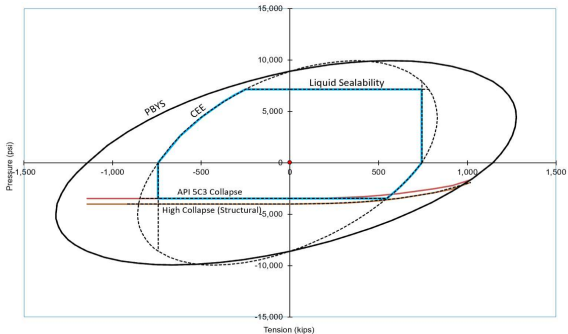
CONNECTION PROPERTIES		
Connection Type	Semi-Premium Integral Flush	
Connection OD (nom):	8.665	in.
Connection ID (nom):	7.954	in.
Make-Up Loss	2.614	in.
Critical Cross Section	6.038	sqin.
Tension Efficiency	65.0	% of pipe
Compression Efficiency	65.0	% of pipe
Internal Pressure Efficiency	80.0	% of pipe
External Pressure Efficiency	100	% of pipe

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

TORQUE VALUES		
Min. Make-up torque	15,000	ft.lb
Opt. Make-up torque	16,500	ft.lb
Max. Make-up torque	18,000	ft.lb
Max. Torque with Sealability (MTS)	TBD	ft.lb

* 87.5% RBW

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



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

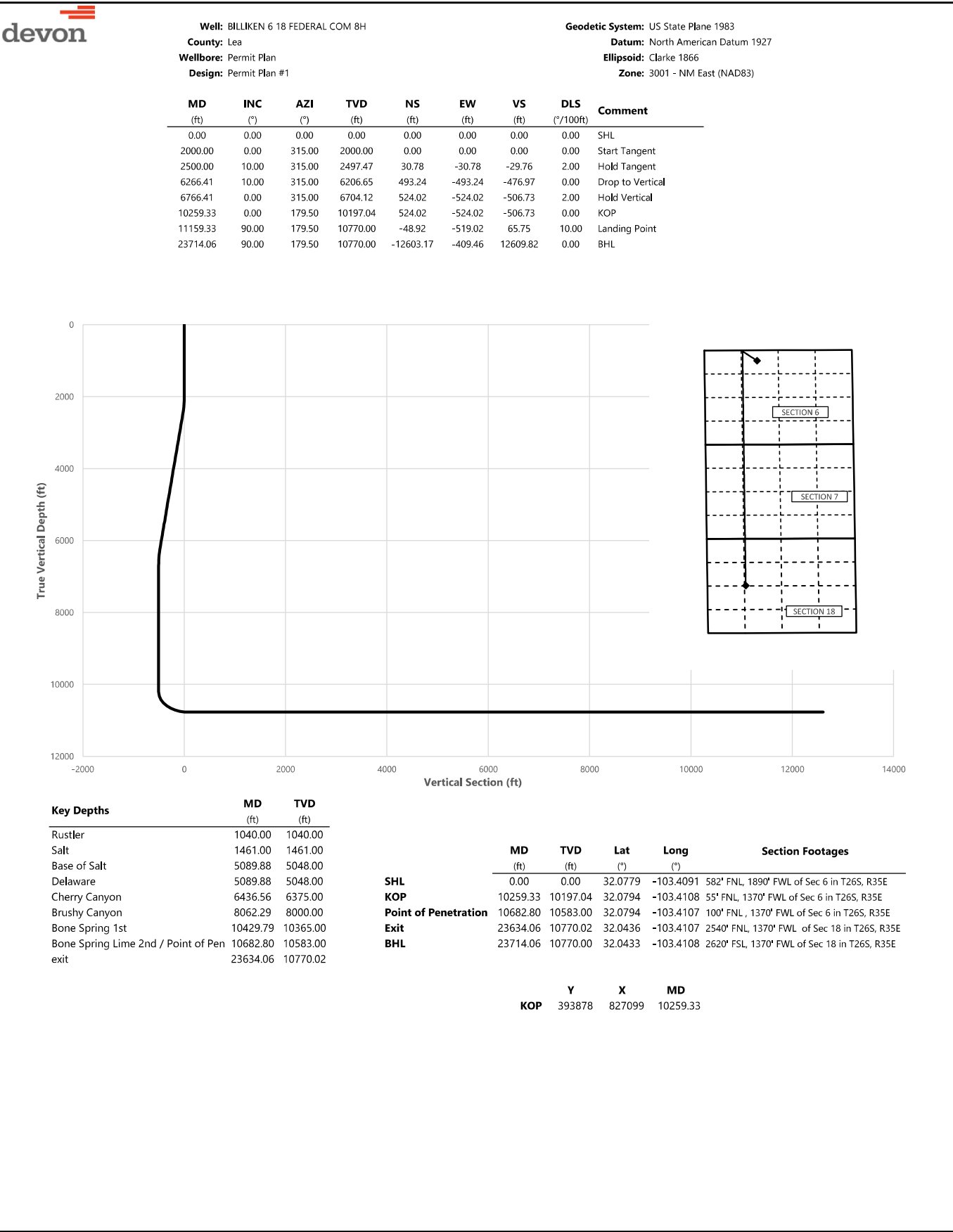
canada@vamfieldservice.com
usa@vamfieldservice.com
mexico@vamfieldservice.com
brazil@vamfieldservice.com

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

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

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








Well: BILLIKEN 6 18 FEDERAL COM 8H
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	315.00	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	315.00	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	315.00	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	315.00	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	315.00	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	315.00	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	315.00	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	315.00	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	315.00	900.00	0.00	0.00	0.00	0.00	
1000.00	0.00	315.00	1000.00	0.00	0.00	0.00	0.00	
1040.00	0.00	315.00	1040.00	0.00	0.00	0.00	0.00	Rustler
1100.00	0.00	315.00	1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	315.00	1200.00	0.00	0.00	0.00	0.00	
1300.00	0.00	315.00	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	315.00	1400.00	0.00	0.00	0.00	0.00	
1461.00	0.00	315.00	1461.00	0.00	0.00	0.00	0.00	Salt
1500.00	0.00	315.00	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	315.00	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	315.00	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	315.00	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	315.00	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	315.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	315.00	2099.98	1.23	-1.23	-1.19	2.00	
2200.00	4.00	315.00	2199.84	4.93	-4.93	-4.77	2.00	
2300.00	6.00	315.00	2299.45	11.10	-11.10	-10.73	2.00	
2400.00	8.00	315.00	2398.70	19.71	-19.71	-19.06	2.00	
2500.00	10.00	315.00	2497.47	30.78	-30.78	-29.76	2.00	Hold Tangent
2600.00	10.00	315.00	2595.95	43.05	-43.05	-41.63	0.00	
2700.00	10.00	315.00	2694.43	55.33	-55.33	-53.51	0.00	
2800.00	10.00	315.00	2792.91	67.61	-67.61	-65.38	0.00	
2900.00	10.00	315.00	2891.39	79.89	-79.89	-77.25	0.00	
3000.00	10.00	315.00	2989.87	92.17	-92.17	-89.13	0.00	
3100.00	10.00	315.00	3088.35	104.45	-104.45	-101.00	0.00	
3200.00	10.00	315.00	3186.83	116.73	-116.73	-112.87	0.00	
3300.00	10.00	315.00	3285.31	129.00	-129.01	-124.75	0.00	
3400.00	10.00	315.00	3383.79	141.28	-141.28	-136.62	0.00	
3500.00	10.00	315.00	3482.27	153.56	-153.56	-148.49	0.00	
3600.00	10.00	315.00	3580.75	165.84	-165.84	-160.37	0.00	
3700.00	10.00	315.00	3679.23	178.12	-178.12	-172.24	0.00	
3800.00	10.00	315.00	3777.72	190.40	-190.40	-184.12	0.00	
3900.00	10.00	315.00	3876.20	202.68	-202.68	-195.99	0.00	
4000.00	10.00	315.00	3974.68	214.96	-214.96	-207.86	0.00	
4100.00	10.00	315.00	4073.16	227.23	-227.24	-219.74	0.00	
4200.00	10.00	315.00	4171.64	239.51	-239.52	-231.61	0.00	
4300.00	10.00	315.00	4270.12	251.79	-251.79	-243.48	0.00	
4400.00	10.00	315.00	4368.60	264.07	-264.07	-255.36	0.00	
4500.00	10.00	315.00	4467.08	276.35	-276.35	-267.23	0.00	
4600.00	10.00	315.00	4565.56	288.63	-288.63	-279.10	0.00	
4700.00	10.00	315.00	4664.04	300.91	-300.91	-290.98	0.00	
4800.00	10.00	315.00	4762.52	313.19	-313.19	-302.85	0.00	
4900.00	10.00	315.00	4861.00	325.46	-325.47	-314.72	0.00	
5000.00	10.00	315.00	4959.48	337.74	-337.75	-326.60	0.00	
5089.88	10.00	315.00	5048.00	348.78	-348.78	-337.27	0.00	Base of Salt, Delaware
5100.00	10.00	315.00	5057.97	350.02	-350.02	-338.47	0.00	
5200.00	10.00	315.00	5156.45	362.30	-362.30	-350.34	0.00	
5300.00	10.00	315.00	5254.93	374.58	-374.58	-362.22	0.00	
5400.00	10.00	315.00	5353.41	386.86	-386.86	-374.09	0.00	
5500.00	10.00	315.00	5451.89	399.14	-399.14	-385.96	0.00	
5600.00	10.00	315.00	5550.37	411.42	-411.42	-397.84	0.00	
5700.00	10.00	315.00	5648.85	423.69	-423.70	-409.71	0.00	
5800.00	10.00	315.00	5747.33	435.97	-435.98	-421.59	0.00	
5900.00	10.00	315.00	5845.81	448.25	-448.26	-433.46	0.00	
6000.00	10.00	315.00	5944.29	460.53	-460.53	-445.33	0.00	
6100.00	10.00	315.00	6042.77	472.81	-472.81	-457.21	0.00	
6200.00	10.00	315.00	6141.25	485.09	-485.09	-469.08	0.00	
6266.41	10.00	315.00	6206.65	493.24	-493.24	-476.97	0.00	Drop to Vertical
6300.00	9.33	315.00	6239.77	497.23	-497.23	-480.82	2.00	
6400.00	7.33	315.00	6338.71	507.47	-507.47	-490.73	2.00	
6436.56	6.60	315.00	6375.00	510.61	-510.61	-493.76	2.00	Cherry Canyon

		Well: BILLIKEN 6 18 FEDERAL COM 8H						Geodetic System: US State Plane 1983	
		County: Lea						Datum: North American Datum 1927	
		Wellbore: Permit Plan						Ellipsoid: Clarke 1866	
		Design: Permit Plan #1						Zone: 3001 - NM East (NAD83)	
MD	INC	AZI	TVD	NS	EW	VS	DLS	Comment	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)		
6500.00	5.33	315.00	6438.09	515.27	-515.27	-498.26	2.00		
6600.00	3.33	315.00	6537.80	520.60	-520.60	-503.42	2.00		
6700.00	1.33	315.00	6637.72	523.47	-523.48	-506.20	2.00		
6766.41	0.00	315.00	6704.12	524.02	-524.02	-506.73	2.00	Hold Vertical	
6800.00	0.00	179.50	6737.71	524.02	-524.02	-506.73	0.00		
6900.00	0.00	179.50	6837.71	524.02	-524.02	-506.73	0.00		
7000.00	0.00	179.50	6937.71	524.02	-524.02	-506.73	0.00		
7100.00	0.00	179.50	7037.71	524.02	-524.02	-506.73	0.00		
7200.00	0.00	179.50	7137.71	524.02	-524.02	-506.73	0.00		
7300.00	0.00	179.50	7237.71	524.02	-524.02	-506.73	0.00		
7400.00	0.00	179.50	7337.71	524.02	-524.02	-506.73	0.00		
7500.00	0.00	179.50	7437.71	524.02	-524.02	-506.73	0.00		
7600.00	0.00	179.50	7537.71	524.02	-524.02	-506.73	0.00		
7700.00	0.00	179.50	7637.71	524.02	-524.02	-506.73	0.00		
7800.00	0.00	179.50	7737.71	524.02	-524.02	-506.73	0.00		
7900.00	0.00	179.50	7837.71	524.02	-524.02	-506.73	0.00		
8000.00	0.00	179.50	7937.71	524.02	-524.02	-506.73	0.00		
8062.29	0.00	179.50	8000.00	524.02	-524.02	-506.73	0.00	Brushy Canyon	
8100.00	0.00	179.50	8037.71	524.02	-524.02	-506.73	0.00		
8200.00	0.00	179.50	8137.71	524.02	-524.02	-506.73	0.00		
8300.00	0.00	179.50	8237.71	524.02	-524.02	-506.73	0.00		
8400.00	0.00	179.50	8337.71	524.02	-524.02	-506.73	0.00		
8500.00	0.00	179.50	8437.71	524.02	-524.02	-506.73	0.00		
8600.00	0.00	179.50	8537.71	524.02	-524.02	-506.73	0.00		
8700.00	0.00	179.50	8637.71	524.02	-524.02	-506.73	0.00		
8800.00	0.00	179.50	8737.71	524.02	-524.02	-506.73	0.00		
8900.00	0.00	179.50	8837.71	524.02	-524.02	-506.73	0.00		
9000.00	0.00	179.50	8937.71	524.02	-524.02	-506.73	0.00		
9100.00	0.00	179.50	9037.71	524.02	-524.02	-506.73	0.00		
9200.00	0.00	179.50	9137.71	524.02	-524.02	-506.73	0.00		
9300.00	0.00	179.50	9237.71	524.02	-524.02	-506.73	0.00		
9400.00	0.00	179.50	9337.71	524.02	-524.02	-506.73	0.00		
9500.00	0.00	179.50	9437.71	524.02	-524.02	-506.73	0.00		
9600.00	0.00	179.50	9537.71	524.02	-524.02	-506.73	0.00		
9700.00	0.00	179.50	9637.71	524.02	-524.02	-506.73	0.00		
9800.00	0.00	179.50	9737.71	524.02	-524.02	-506.73	0.00		
9900.00	0.00	179.50	9837.71	524.02	-524.02	-506.73	0.00		
10000.00	0.00	179.50	9937.71	524.02	-524.02	-506.73	0.00		
10100.00	0.00	179.50	10037.71	524.02	-524.02	-506.73	0.00		
10200.00	0.00	179.50	10137.71	524.02	-524.02	-506.73	0.00		
10259.33	0.00	179.50	10197.04	524.02	-524.02	-506.73	0.00	KOP	
10300.00	4.07	179.50	10237.68	522.58	-524.01	-505.29	10.00		
10400.00	14.07	179.50	10336.30	506.84	-523.87	-489.56	10.00		
10429.79	17.05	179.50	10365.00	498.85	-523.80	-481.58	10.00	Bone Spring 1st	
10500.00	24.07	179.50	10430.70	474.21	-523.58	-456.96	10.00		
10600.00	34.07	179.50	10517.99	425.70	-523.16	-408.48	10.00		
10682.80	42.35	179.50	10583.00	374.53	-522.71	-357.36	10.00	Bone Spring Lime 2nd / Point of Penetration	
10700.00	44.07	179.50	10595.53	362.76	-522.61	-345.59	10.00		
10800.00	54.07	179.50	10660.97	287.31	-521.95	-270.21	10.00		
10900.00	64.07	179.50	10712.31	201.64	-521.21	-184.61	10.00		
11000.00	74.07	179.50	10747.99	108.36	-520.39	-91.41	10.00		
11100.00	84.07	179.50	10766.93	10.31	-519.53	6.57	10.00		
11159.33	90.00	179.50	10770.00	-48.92	-519.02	65.75	10.00	Landing Point	
11200.00	90.00	179.50	10770.00	-89.58	-518.66	106.38	0.00		
11300.00	90.00	179.50	10770.00	-189.58	-517.79	206.29	0.00		
11400.00	90.00	179.50	10770.00	-289.58	-516.92	306.21	0.00		
11500.00	90.00	179.50	10770.00	-389.57	-516.05	406.12	0.00		
11600.00	90.00	179.50	10770.00	-489.57	-515.17	506.04	0.00		
11700.00	90.00	179.50	10770.00	-589.56	-514.30	605.95	0.00		
11800.00	90.00	179.50	10770.00	-689.56	-513.43	705.87	0.00		
11900.00	90.00	179.50	10770.00	-789.56	-512.55	805.78	0.00		
12000.00	90.00	179.50	10770.00	-889.55	-511.68	905.70	0.00		
12100.00	90.00	179.50	10770.00	-989.55	-510.81	1005.61	0.00		
12200.00	90.00	179.50	10770.00	-1089.54	-509.94	1105.53	0.00		
12300.00	90.00	179.50	10770.00	-1189.54	-509.06	1205.44	0.00		
12400.00	90.00	179.50	10770.00	-1289.54	-508.19	1305.36	0.00		
12500.00	90.00	179.50	10770.00	-1389.53	-507.32	1405.27	0.00		
12600.00	90.00	179.50	10770.00	-1489.53	-506.44	1505.19	0.00		
12700.00	90.00	179.50	10770.00	-1589.53	-505.57	1605.10	0.00		
12800.00	90.00	179.50	10770.00	-1689.52	-504.70	1705.02	0.00		



Well: BILLIKEN 6 18 FEDERAL COM 8H
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Wellbore: Permit Plan
Design: Permit Plan #1

Geodetic System: US State Plane 1983
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Zone: 3001 - NM East (NAD83)

MD	INC	AZI	TVD	NS	EW	VS	DLS	Comment
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	
12900.00	90.00	179.50	10770.00	-1789.52	-503.82	1804.94	0.00	
13000.00	90.00	179.50	10770.00	-1889.51	-502.95	1904.85	0.00	
13100.00	90.00	179.50	10770.00	-1989.51	-502.08	2004.77	0.00	
13200.00	90.00	179.50	10770.00	-2089.51	-501.21	2104.68	0.00	
13300.00	90.00	179.50	10770.00	-2189.50	-500.33	2204.60	0.00	
13400.00	90.00	179.50	10770.00	-2289.50	-499.46	2304.51	0.00	
13500.00	90.00	179.50	10770.00	-2389.50	-498.59	2404.43	0.00	
13600.00	90.00	179.50	10770.00	-2489.49	-497.71	2504.34	0.00	
13700.00	90.00	179.50	10770.00	-2589.49	-496.84	2604.26	0.00	
13800.00	90.00	179.50	10770.00	-2689.48	-495.97	2704.17	0.00	
13900.00	90.00	179.50	10770.00	-2789.48	-495.10	2804.09	0.00	
14000.00	90.00	179.50	10770.00	-2889.48	-494.22	2904.00	0.00	
14100.00	90.00	179.50	10770.00	-2989.47	-493.35	3003.92	0.00	
14200.00	90.00	179.50	10770.00	-3089.47	-492.48	3103.83	0.00	
14300.00	90.00	179.50	10770.01	-3189.46	-491.60	3203.75	0.00	
14400.00	90.00	179.50	10770.01	-3289.46	-490.73	3303.66	0.00	
14500.00	90.00	179.50	10770.01	-3389.46	-489.86	3403.58	0.00	
14600.00	90.00	179.50	10770.01	-3489.45	-488.99	3503.49	0.00	
14700.00	90.00	179.50	10770.01	-3589.45	-488.11	3603.41	0.00	
14800.00	90.00	179.50	10770.01	-3689.45	-487.24	3703.32	0.00	
14900.00	90.00	179.50	10770.01	-3789.44	-486.37	3803.24	0.00	
15000.00	90.00	179.50	10770.01	-3889.44	-485.49	3903.15	0.00	
15100.00	90.00	179.50	10770.01	-3989.43	-484.62	4003.07	0.00	
15200.00	90.00	179.50	10770.01	-4089.43	-483.75	4102.98	0.00	
15300.00	90.00	179.50	10770.01	-4189.43	-482.87	4202.90	0.00	
15400.00	90.00	179.50	10770.01	-4289.42	-482.00	4302.81	0.00	
15500.00	90.00	179.50	10770.01	-4389.42	-481.13	4402.73	0.00	
15600.00	90.00	179.50	10770.01	-4489.42	-480.26	4502.64	0.00	
15700.00	90.00	179.50	10770.01	-4589.41	-479.38	4602.56	0.00	
15800.00	90.00	179.50	10770.01	-4689.41	-478.51	4702.47	0.00	
15900.00	90.00	179.50	10770.01	-4789.40	-477.64	4802.39	0.00	
16000.00	90.00	179.50	10770.01	-4889.40	-476.76	4902.30	0.00	
16100.00	90.00	179.50	10770.01	-4989.40	-475.89	5002.22	0.00	
16200.00	90.00	179.50	10770.01	-5089.39	-475.02	5102.13	0.00	
16300.00	90.00	179.50	10770.01	-5189.39	-474.15	5202.05	0.00	
16400.00	90.00	179.50	10770.01	-5289.38	-473.27	5301.96	0.00	
16500.00	90.00	179.50	10770.01	-5389.38	-472.40	5401.88	0.00	
16600.00	90.00	179.50	10770.01	-5489.38	-471.53	5501.79	0.00	
16700.00	90.00	179.50	10770.01	-5589.37	-470.65	5601.71	0.00	
16800.00	90.00	179.50	10770.01	-5689.37	-469.78	5701.62	0.00	
16900.00	90.00	179.50	10770.01	-5789.37	-468.91	5801.54	0.00	
17000.00	90.00	179.50	10770.01	-5889.36	-468.04	5901.45	0.00	
17100.00	90.00	179.50	10770.01	-5989.36	-467.16	6001.37	0.00	
17200.00	90.00	179.50	10770.01	-6089.35	-466.29	6101.28	0.00	
17300.00	90.00	179.50	10770.01	-6189.35	-465.42	6201.20	0.00	
17400.00	90.00	179.50	10770.01	-6289.35	-464.54	6301.11	0.00	
17500.00	90.00	179.50	10770.01	-6389.34	-463.67	6401.03	0.00	
17600.00	90.00	179.50	10770.01	-6489.34	-462.80	6500.95	0.00	
17700.00	90.00	179.50	10770.01	-6589.34	-461.92	6600.86	0.00	
17800.00	90.00	179.50	10770.01	-6689.33	-461.05	6700.78	0.00	
17900.00	90.00	179.50	10770.01	-6789.33	-460.18	6800.69	0.00	
18000.00	90.00	179.50	10770.01	-6889.32	-459.31	6900.61	0.00	
18100.00	90.00	179.50	10770.01	-6989.32	-458.43	7000.52	0.00	
18200.00	90.00	179.50	10770.01	-7089.32	-457.56	7100.44	0.00	
18300.00	90.00	179.50	10770.01	-7189.31	-456.69	7200.35	0.00	
18400.00	90.00	179.50	10770.01	-7289.31	-455.81	7300.27	0.00	
18500.00	90.00	179.50	10770.01	-7389.30	-454.94	7400.18	0.00	
18600.00	90.00	179.50	10770.01	-7489.30	-454.07	7500.10	0.00	
18700.00	90.00	179.50	10770.01	-7589.30	-453.20	7600.01	0.00	
18800.00	90.00	179.50	10770.01	-7689.29	-452.32	7699.93	0.00	
18900.00	90.00	179.50	10770.01	-7789.29	-451.45	7799.84	0.00	
19000.00	90.00	179.50	10770.01	-7889.29	-450.58	7899.76	0.00	
19100.00	90.00	179.50	10770.01	-7989.28	-449.70	7999.67	0.00	
19200.00	90.00	179.50	10770.01	-8089.28	-448.83	8099.59	0.00	
19300.00	90.00	179.50	10770.01	-8189.27	-447.96	8199.50	0.00	
19400.00	90.00	179.50	10770.01	-8289.27	-447.09	8299.42	0.00	
19500.00	90.00	179.50	10770.01	-8389.27	-446.21	8399.33	0.00	
19600.00	90.00	179.50	10770.01	-8489.26	-445.34	8499.25	0.00	
19700.00	90.00	179.50	10770.01	-8589.26	-444.47	8599.16	0.00	
19800.00	90.00	179.50	10770.01	-8689.26	-443.59	8699.08	0.00	



Well: BILLIKEN 6 18 FEDERAL COM 8H

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Wellbore: Permit Plan

Design: Permit Plan #1

Geodetic System: US State Plane 1983

Datum: North American Datum 1927

Ellipsoid: Clarke 1866

Zone: 3001 - NM East (NAD83)

MD	INC	AZI	TVD	NS	EW	VS	DLS	Comment
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	
19900.00	90.00	179.50	10770.01	-8789.25	-442.72	8798.99	0.00	
20000.00	90.00	179.50	10770.01	-8889.25	-441.85	8898.91	0.00	
20100.00	90.00	179.50	10770.01	-8989.24	-440.97	8998.82	0.00	
20200.00	90.00	179.50	10770.01	-9089.24	-440.10	9098.74	0.00	
20300.00	90.00	179.50	10770.01	-9189.24	-439.23	9198.65	0.00	
20400.00	90.00	179.50	10770.01	-9289.23	-438.36	9298.57	0.00	
20500.00	90.00	179.50	10770.01	-9389.23	-437.48	9398.48	0.00	
20600.00	90.00	179.50	10770.01	-9489.22	-436.61	9498.40	0.00	
20700.00	90.00	179.50	10770.01	-9589.22	-435.74	9598.31	0.00	
20800.00	90.00	179.50	10770.01	-9689.22	-434.86	9698.23	0.00	
20900.00	90.00	179.50	10770.01	-9789.21	-433.99	9798.14	0.00	
21000.00	90.00	179.50	10770.01	-9889.21	-433.12	9898.06	0.00	
21100.00	90.00	179.50	10770.01	-9989.21	-432.25	9997.97	0.00	
21200.00	90.00	179.50	10770.01	-10089.20	-431.37	10097.89	0.00	
21300.00	90.00	179.50	10770.01	-10189.20	-430.50	10197.80	0.00	
21400.00	90.00	179.50	10770.01	-10289.19	-429.63	10297.72	0.00	
21500.00	90.00	179.50	10770.01	-10389.19	-428.75	10397.63	0.00	
21600.00	90.00	179.50	10770.01	-10489.19	-427.88	10497.55	0.00	
21700.00	90.00	179.50	10770.01	-10589.18	-427.01	10597.46	0.00	
21800.00	90.00	179.50	10770.02	-10689.18	-426.14	10697.38	0.00	
21900.00	90.00	179.50	10770.02	-10789.18	-425.26	10797.29	0.00	
22000.00	90.00	179.50	10770.02	-10889.17	-424.39	10897.21	0.00	
22100.00	90.00	179.50	10770.02	-10989.17	-423.52	10997.12	0.00	
22200.00	90.00	179.50	10770.02	-11089.16	-422.64	11097.04	0.00	
22300.00	90.00	179.50	10770.02	-11189.16	-421.77	11196.96	0.00	
22400.00	90.00	179.50	10770.02	-11289.16	-420.90	11296.87	0.00	
22500.00	90.00	179.50	10770.02	-11389.15	-420.02	11396.79	0.00	
22600.00	90.00	179.50	10770.02	-11489.15	-419.15	11496.70	0.00	
22700.00	90.00	179.50	10770.02	-11589.14	-418.28	11596.62	0.00	
22800.00	90.00	179.50	10770.02	-11689.14	-417.41	11696.53	0.00	
22900.00	90.00	179.50	10770.02	-11789.14	-416.53	11796.45	0.00	
23000.00	90.00	179.50	10770.02	-11889.13	-415.66	11896.36	0.00	
23100.00	90.00	179.50	10770.02	-11989.13	-414.79	11996.28	0.00	
23200.00	90.00	179.50	10770.02	-12089.13	-413.91	12096.19	0.00	
23300.00	90.00	179.50	10770.02	-12189.12	-413.04	12196.11	0.00	
23400.00	90.00	179.50	10770.02	-12289.12	-412.17	12296.02	0.00	
23500.00	90.00	179.50	10770.02	-12389.11	-411.30	12395.94	0.00	
23600.00	90.00	179.50	10770.02	-12489.11	-410.42	12495.85	0.00	
23634.06	90.00	179.50	10770.02	-12523.17	-410.13	12529.89	0.00	exit
23700.00	90.00	179.50	10770.02	-12589.11	-409.55	12595.77	0.00	
23714.06	90.00	179.50	10770.00	-12603.17	-409.46	12609.82	0.00	BHL



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

Dimensions (Nominal)

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

Performance Properties

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

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

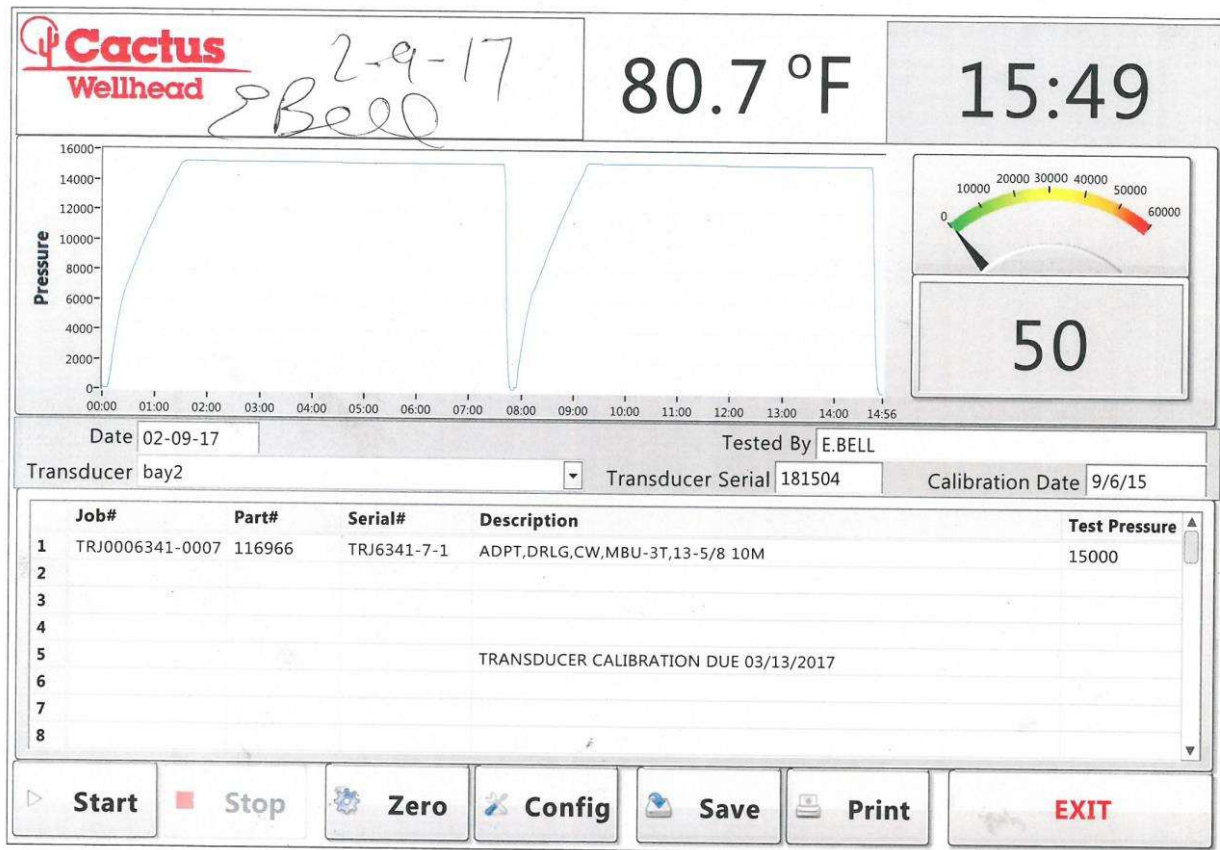
BOP Break Test Variance – Intermediate Casing

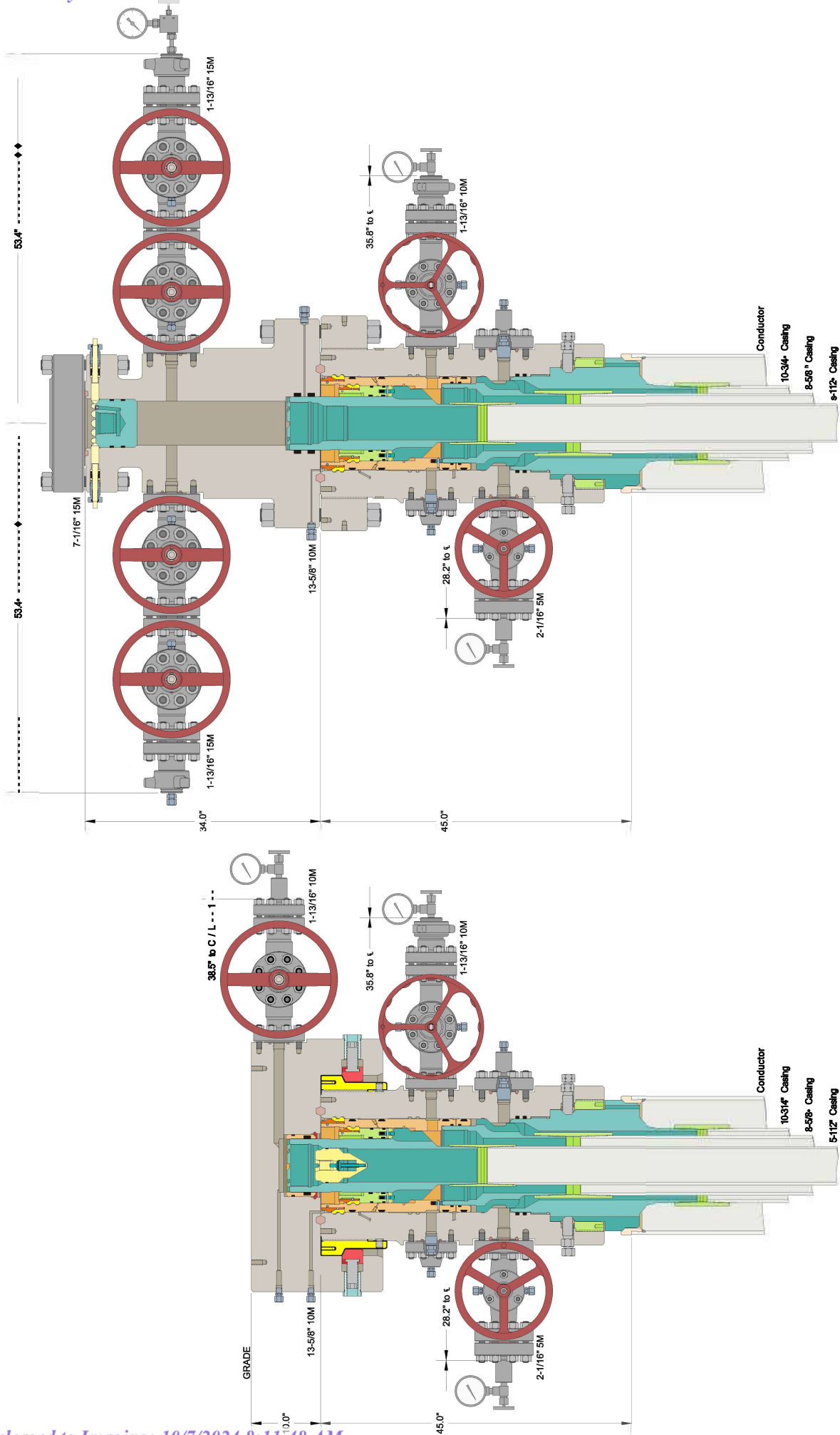
Devon Energy will perform a full BOP test per 43 CFR 3172 before drilling out of the intermediate casing string(s) and starting the production hole, before starting any hole section that requires a 10M test, before the expiration of the allotted 14-days for 5M intermediate batch drilling or when the drilling rig is fully mobilized to a new well pad, whichever is sooner.

Devon Energy requests to only test BOP connection breaks after drilling out of surface casing and while skidding between wells which conforms to API Standard 53 and industry standards. This test will include the Top Pipe Rams, HCR, Kill Line Check Valve, QDC (quick disconnect to wellhead) and Shell of BOP to 5M for 10 minutes. If a break to the flex hose that runs to the choke manifold is required due to repositioning from a skid, the HCR will remain open during the shell test to include that additional break. The variance only pertains to intermediate hole-sections and no deeper than the Bone Springs Formation where 5M BOP tests are required. The initial BOP test will follow 43 CFR 3172 and subsequent tests following a skid will only test connections that are broken. The annular preventer will be tested to 100% working pressure. This variance will meet or exceed 43 CFR 3172 per the following: Devon Energy will perform a full BOP test per 43 CFR 3172 before drilling out of the intermediate casing string(s) and starting the production hole, before starting any hole section that requires a 10M test, or before the expiration of the allotted 14-days for 5M intermediate batch drilling, whichever is sooner. We will utilize a 200' TVD tolerance between intermediate shoes as the cutoff for a full BOP test. The BLM will be contacted 4hrs prior to a BOPE test. The BLM will be notified if and when a well control event is encountered.

Well Control Response:

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





ALL DIMENSIONS APPROXIMATE

DEVON ENERGY CORPORATION
DELAWARE BASIN

DRAWN	OLE	16SEP21
APPRV		
DRAWING NO.	HBE00000595	

CACTUS WELLHEAD LLC

10-3/4" x 8-5/8" x 5-1/2" 10M MBU-3T-CFL-R-DBLO Wellhead Sys.
With 8-5/8" And 5-1/2" Mandrel Casing Hangers
And 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head

INFORMATION CONTAINED HEREIN IS THE PROPERTY OF CACTUS WELLHEAD, LLC. REPRODUCTION, DISCLOSURE, OR USE THEREOF IS PERMISSIBLE ONLY AS PROVIDED BY CONTRACT OR AS EXPRESSLY AUTHORIZED BY CACTUS WELLHEAD, LLC.

BILLIKEN 6 18 FEDERAL COM 8H

1. Geologic Formations

TVD of target	10770	Pilot hole depth	N/A
MD at TD:	23714	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	1040		
Salt	1461		
Base of Salt	5048		
Delaware	5048		
Cherry Canyon	6375		
Brushy Canyon	8000		
Bone Spring 1st	10365		
Bone Spring Lime 2nd	10583		

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

BILLIKEN 6 18 FEDERAL COM 8H

2. Casing Program

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	1065	0	1065
9 7/8	8 5/8	32	P110	Sprint FJ	0	10159	0	10097
7 7/8	5 1/2	20	P110	DWC / C-IS+	0	23714	0	10770

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

3. Cementing Program (3-String Primary Design)

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft3/sack)	Slurry Description
Surface	641	Surf	13.2	1.4	Lead: Class C Cement + additives
Int 1	395	Surf	9.0	3.3	Lead: Class C Cement + additives
	256	8000	13.2	1.4	Tail: Class H / C + additives
Int 1 Intermediate Squeeze	514	Surf	9.0	3.3	Squeeze Lead: Class C Cement + additives
	395	Surf	9.0	3.3	Lead: Class C Cement + additives
	256	8000	13.2	1.4	Tail: Class H / C + additives
Production	35	9659	9.0	3.3	Lead: Class H / C + additives
	1781	10259	13.2	1.4	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	30%
Production	10%

BILLIKEN 6 18 FEDERAL COM 8H

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"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
			Annular (5M)		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		

BILLIKEN 6 18 FEDERAL COM 8H

5. Mud Program (Three String Design)

Section	Type	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	Brine	10-10.5
Production	WBM	8.5-9

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

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

6. Logging and Testing Procedures**Logging, Coring and Testing**

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

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

7. Drilling Conditions

Condition	Specify what type and where?
BH pressure at deepest TVD	5040
Abnormal temperature	No

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

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

N	H ₂ S is present
Y	H ₂ S plan attached.

BILLIKEN 6 18 FEDERAL COM 8H

8. Other facets of operation

Is this a walking operation? Potentially

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

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

Will be pre-setting casing? Potentially

- 1 Spudder rig will move in and batch drill surface hole.
 - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (43 CFR 3172, all COAs and NMOCD regulations).
- 3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pad.
- 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

X Directional Plan
 Other, describe

Well Name: BILLIKEN 6-18 FED COM	Well Location: T26S / R35E / SEC 6 / NENW / 32.078766 / -103.408932	County or Parish/State: LEA / NM
Well Number: 8H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM125401	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002547566	Operator: DEVON ENERGY PRODUCTION COMPANY LP	

LONG VO
Digitally signed by
LONG VO
Date: 2024.07.16
11:54:35 -05'00'

Notice of Intent

Sundry ID: 2797372

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 06/26/2024

Time Sundry Submitted: 01:08

Date proposed operation will begin: 06/26/2024

Procedure Description: Engineering Only - Devon Energy Production Company L.P. respectfully requests the following changes to the approved APD: Casing program change to deepen intermediate casing: Surface, Intermediate, and Production casing size changes. Intermediate and Production casing depth changes. Cement volume changes to accommodate casing change. Break test and offline cement variance request included. Please see attached revised spec sheets, and drilling & directional plans, and supporting documentation.

NOI Attachments

Procedure Description

8.625_32lb_P110EC_SPRINT_FJ_VST_20240626130039.pdf

BILLIKEN_6_18_FEDERAL_COM_8H_Directional_Plan_06_26_24_20240626130039.pdf

5.5_20lb_P110EC_DWC_C_IS_PLUS_20240626130032.pdf

10.750_45.5lb_J55_BTC_20240626130031.pdf

BOP_Break_Test_Variance___Int_Csg_1_15_24_20240626130032.pdf

MB_Wellhd_10.75_8.625_5.5_20240626130034.pdf

BILLIKEN_6_18_FEDERAL_COM_8H_R3_20240626130031.pdf

Well Number: 8H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM125401

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002547566

Operator: DEVON ENERGY
PRODUCTION COMPANY LP

Operator

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

Operator Electronic Signature: REBECCA DEAL

Signed on: JUN 26, 2024 01:00 PM

Name: DEVON ENERGY PRODUCTION COMPANY LP

Title: Regulatory Analyst

Street Address: 333 W SHERIDAN AVE

City: OKLAHOMA CITY State: OK

Phone: (303) 299-1406

Email address: REBECCA.DEAL@DVN.COM

Field

Representative Name:

Street Address:

City: State: Zip:

Phone:

Email address:

**PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Devon Energy Production Company LP
LEASE NO.:	NMNM125401
LOCATION:	Section 6, T.26 S., R.35 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Billiken 6-18 Fed Com 8H
BOTTOM HOLE FOOTAGE	2620'/N & 1370'/W
ATS/API ID:	3002547566
APD ID:	10400057929
Sundry ID:	2797372
Date APD Submitted:	N/a

COA

H2S	No		
Potash	None	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 Int 1	Echo-Meter None	Primary Cement Squeeze None
Special Requirements	<input type="checkbox"/> Water Disposal/Injection	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit
Special Requirements	<input type="checkbox"/> Batch Sundry	Waste Prevention None	
Special Requirements Variance	<input checked="" type="checkbox"/> Break Testing	<input checked="" type="checkbox"/> Offline Cementing	<input type="checkbox"/> Casing Clearance

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet **43 CFR part 3170 Subpart 3176**, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **1225 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:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.

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.
Cement excess is less than 25%, more cement is required if washout occurs. Adjust cement volume and excess based on a fluid caliper or similar method that reflects the as-drilled size of the wellbore.

C. PRESSURE CONTROL

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

Option 1:

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi. Annular which shall be tested to 3500 (70% Working Pressure) 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 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke

manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be

initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

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

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and

disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

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

Long Vo (LVO) 7/16/2024

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. **NMNM125401**
6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No.
1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No. BILLIKEN 6-18 FED COM/8H
2. Name of Operator DEVON ENERGY PRODUCTION COMPANY LP		9. API Well No. 3002547566
3a. Address 333 WEST SHERIDAN AVE, OKLAHOMA CITY,	3b. Phone No. (include area code) (405) 235-3611	10. Field and Pool or Exploratory Area WC-025 G-09 S263504N/WOLFCAMP
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) SEC 6/T26S/R35E/NMP		11. Country or Parish, State LEA/NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA					
TYPE OF SUBMISSION	TYPE OF ACTION				
<input checked="" 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 checked="" 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 recompleation 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.)

Engineering Only - Devon Energy Production Company L.P. respectfully requests the following changes to the approved APD:
Casing program change to deepen intermediate casing: Surface, Intermediate, and Production casing size changes. Intermediate and Production casing depth changes. Cement volume changes to accommodate casing change. Break test and offline cement variance request included.
Please see attached revised spec sheets, and drilling & directional plans, and supporting documentation.

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) REBECCA DEAL / Ph: (303) 299-1406	Title Regulatory Analyst
Signature (Electronic Submission)	Date 06/26/2024

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: NENW / 582 FNL / 1890 FWL / TWSP: 26S / RANGE: 35E / SECTION: 6 / LAT: 32.078766 / LONG: -103.408932 (TVD: 0 feet, MD: 0 feet)

PPP: NENW / 100 FNL / 1370 FWL / TWSP: 26S / RANGE: 35E / SECTION: 6 / LAT: 32.079361 / LONG: -103.40777 (TVD: 12281 feet, MD: 12299 feet)

PPP: NESW / 2639 FSL / 1370 FWL / TWSP: 26S / RANGE: 35E / SECTION: 7 / LAT: 32.057736 / LONG: -103.407763 (TVD: 12620 feet, MD: 20300 feet)

PPP: NENW / 1 FNL / 1370 FWL / TWSP: 26S / RANGE: 35E / SECTION: 7 / LAT: 32.064916 / LONG: -103.409829 (TVD: 12620 feet, MD: 17700 feet)

BHL: SENW / 2620 FNL / 1370 FWL / TWSP: 26S / RANGE: 35E / SECTION: 18 / LAT: 32.043401 / LONG: -103.4077631 (TVD: 12620 feet, MD: 25515 feet)

CONFIDENTIAL

Issued on: 16 Dec. 2020 by Logan Van Gorp



Connection Data Sheet

OD	Weight (lb/ft)	Wall Th.	Grade	Alt. Drift:	Connection
8 5/8 in.	Nominal: 32.00 Plain End: 31.13	0.352 in.	P110EC	7.875 in.	VAM® SPRINT-FJ

PIPE PROPERTIES		
Nominal OD	8.625	in.
Nominal ID	7.921	in.
Nominal Cross Section Area	9.149	sqin.
Grade Type	High Yield	
Min. Yield Strength	125	ksi
Max. Yield Strength	140	ksi
Min. Ultimate Tensile Strength	135	ksi

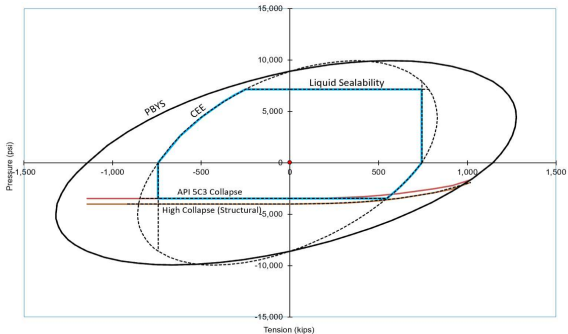
CONNECTION PROPERTIES		
Connection Type	Semi-Premium Integral Flush	
Connection OD (nom):	8.665	in.
Connection ID (nom):	7.954	in.
Make-Up Loss	2.614	in.
Critical Cross Section	6.038	sqin.
Tension Efficiency	65.0	% of pipe
Compression Efficiency	65.0	% of pipe
Internal Pressure Efficiency	80.0	% of pipe
External Pressure Efficiency	100	% of pipe

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

TORQUE VALUES		
Min. Make-up torque	15,000	ft.lb
Opt. Make-up torque	16,500	ft.lb
Max. Make-up torque	18,000	ft.lb
Max. Torque with Sealability (MTS)	TBD	ft.lb

* 87.5% RBW

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



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

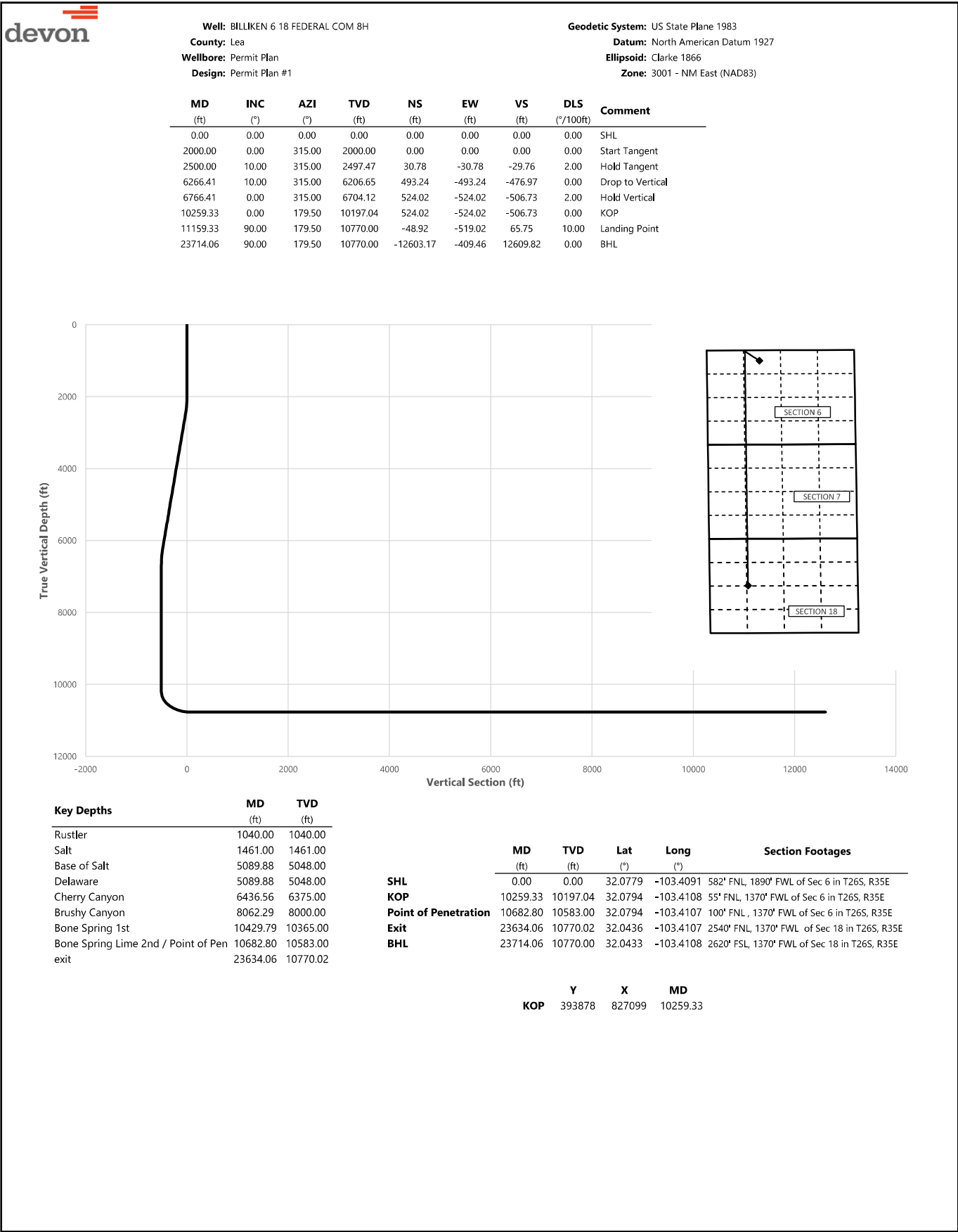
canada@vamfieldservice.com
usa@vamfieldservice.com
mexico@vamfieldservice.com
brazil@vamfieldservice.com


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





		Well: BILLIKEN 6 18 FEDERAL COM 8H						Geodetic System: US State Plane 1983	
		County: Lea						Datum: North American Datum 1927	
		Wellbore: Permit Plan						Ellipsoid: Clarke 1866	
		Design: Permit Plan #1						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	315.00	100.00	0.00	0.00	0.00	0.00		
200.00	0.00	315.00	200.00	0.00	0.00	0.00	0.00		
300.00	0.00	315.00	300.00	0.00	0.00	0.00	0.00		
400.00	0.00	315.00	400.00	0.00	0.00	0.00	0.00		
500.00	0.00	315.00	500.00	0.00	0.00	0.00	0.00		
600.00	0.00	315.00	600.00	0.00	0.00	0.00	0.00		
700.00	0.00	315.00	700.00	0.00	0.00	0.00	0.00		
800.00	0.00	315.00	800.00	0.00	0.00	0.00	0.00		
900.00	0.00	315.00	900.00	0.00	0.00	0.00	0.00		
1000.00	0.00	315.00	1000.00	0.00	0.00	0.00	0.00	Rustler	
1040.00	0.00	315.00	1040.00	0.00	0.00	0.00	0.00		
1100.00	0.00	315.00	1100.00	0.00	0.00	0.00	0.00		
1200.00	0.00	315.00	1200.00	0.00	0.00	0.00	0.00		
1300.00	0.00	315.00	1300.00	0.00	0.00	0.00	0.00		
1400.00	0.00	315.00	1400.00	0.00	0.00	0.00	0.00		
1461.00	0.00	315.00	1461.00	0.00	0.00	0.00	0.00		Salt
1500.00	0.00	315.00	1500.00	0.00	0.00	0.00	0.00		
1600.00	0.00	315.00	1600.00	0.00	0.00	0.00	0.00		
1700.00	0.00	315.00	1700.00	0.00	0.00	0.00	0.00		
1800.00	0.00	315.00	1800.00	0.00	0.00	0.00	0.00		
1900.00	0.00	315.00	1900.00	0.00	0.00	0.00	0.00		
2000.00	0.00	315.00	2000.00	0.00	0.00	0.00	0.00		Start Tangent
2100.00	2.00	315.00	2099.98	1.23	-1.23	-1.19	2.00		
2200.00	4.00	315.00	2199.84	4.93	-4.93	-4.77	2.00		
2300.00	6.00	315.00	2299.45	11.10	-11.10	-10.73	2.00		
2400.00	8.00	315.00	2398.70	19.71	-19.71	-19.06	2.00		
2500.00	10.00	315.00	2497.47	30.78	-30.78	-29.76	2.00		Hold Tangent
2600.00	10.00	315.00	2595.95	43.05	-43.05	-41.63	0.00		
2700.00	10.00	315.00	2694.43	55.33	-55.33	-53.51	0.00		
2800.00	10.00	315.00	2792.91	67.61	-67.61	-65.38	0.00		
2900.00	10.00	315.00	2891.39	79.89	-79.89	-77.25	0.00		
3000.00	10.00	315.00	2989.87	92.17	-92.17	-89.13	0.00		
3100.00	10.00	315.00	3088.35	104.45	-104.45	-101.00	0.00		
3200.00	10.00	315.00	3186.83	116.73	-116.73	-112.87	0.00		
3300.00	10.00	315.00	3285.31	129.00	-129.01	-124.75	0.00		
3400.00	10.00	315.00	3383.79	141.28	-141.28	-136.62	0.00		
3500.00	10.00	315.00	3482.27	153.56	-153.56	-148.49	0.00		
3600.00	10.00	315.00	3580.75	165.84	-165.84	-160.37	0.00		
3700.00	10.00	315.00	3679.23	178.12	-178.12	-172.24	0.00		
3800.00	10.00	315.00	3777.72	190.40	-190.40	-184.12	0.00		
3900.00	10.00	315.00	3876.20	202.68	-202.68	-195.99	0.00		
4000.00	10.00	315.00	3974.68	214.96	-214.96	-207.86	0.00		
4100.00	10.00	315.00	4073.16	227.23	-227.24	-219.74	0.00		
4200.00	10.00	315.00	4171.64	239.51	-239.52	-231.61	0.00		
4300.00	10.00	315.00	4270.12	251.79	-251.79	-243.48	0.00		
4400.00	10.00	315.00	4368.60	264.07	-264.07	-255.36	0.00		
4500.00	10.00	315.00	4467.08	276.35	-276.35	-267.23	0.00		
4600.00	10.00	315.00	4565.56	288.63	-288.63	-279.10	0.00		
4700.00	10.00	315.00	4664.04	300.91	-300.91	-290.98	0.00		
4800.00	10.00	315.00	4762.52	313.19	-313.19	-302.85	0.00		
4900.00	10.00	315.00	4861.00	325.46	-325.47	-314.72	0.00		
5000.00	10.00	315.00	4959.48	337.74	-337.75	-326.60	0.00		
5089.88	10.00	315.00	5048.00	348.78	-348.78	-337.27	0.00	Base of Salt, Delaware	
5100.00	10.00	315.00	5057.97	350.02	-350.02	-338.47	0.00		
5200.00	10.00	315.00	5156.45	362.30	-362.30	-350.34	0.00		
5300.00	10.00	315.00	5254.93	374.58	-374.58	-362.22	0.00		
5400.00	10.00	315.00	5353.41	386.86	-386.86	-374.09	0.00		
5500.00	10.00	315.00	5451.89	399.14	-399.14	-385.96	0.00		
5600.00	10.00	315.00	5550.37	411.42	-411.42	-397.84	0.00		
5700.00	10.00	315.00	5648.85	423.69	-423.70	-409.71	0.00		
5800.00	10.00	315.00	5747.33	435.97	-435.98	-421.59	0.00		
5900.00	10.00	315.00	5845.81	448.25	-448.26	-433.46	0.00		
6000.00	10.00	315.00	5944.29	460.53	-460.53	-445.33	0.00		
6100.00	10.00	315.00	6042.77	472.81	-472.81	-457.21	0.00		
6200.00	10.00	315.00	6141.25	485.09	-485.09	-469.08	0.00		
6266.41	10.00	315.00	6206.65	493.24	-493.24	-476.97	0.00	Drop to Vertical	
6300.00	9.33	315.00	6239.77	497.23	-497.23	-480.82	2.00		
6400.00	7.33	315.00	6338.71	507.47	-507.47	-490.73	2.00	Cherry Canyon	
6436.56	6.60	315.00	6375.00	510.61	-510.61	-493.76	2.00		


BILLIKEN 6 18 FEDERAL COM 8H



Well: BILLIKEN 6 18 FEDERAL COM 8H
 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
6500.00	5.33	315.00	6438.09	515.27	-515.27	-498.26	2.00	
6600.00	3.33	315.00	6537.80	520.60	-520.60	-503.42	2.00	
6700.00	1.33	315.00	6637.72	523.47	-523.48	-506.20	2.00	
6766.41	0.00	315.00	6704.12	524.02	-524.02	-506.73	2.00	Hold Vertical
6800.00	0.00	179.50	6737.71	524.02	-524.02	-506.73	0.00	
6900.00	0.00	179.50	6837.71	524.02	-524.02	-506.73	0.00	
7000.00	0.00	179.50	6937.71	524.02	-524.02	-506.73	0.00	
7100.00	0.00	179.50	7037.71	524.02	-524.02	-506.73	0.00	
7200.00	0.00	179.50	7137.71	524.02	-524.02	-506.73	0.00	
7300.00	0.00	179.50	7237.71	524.02	-524.02	-506.73	0.00	
7400.00	0.00	179.50	7337.71	524.02	-524.02	-506.73	0.00	
7500.00	0.00	179.50	7437.71	524.02	-524.02	-506.73	0.00	
7600.00	0.00	179.50	7537.71	524.02	-524.02	-506.73	0.00	
7700.00	0.00	179.50	7637.71	524.02	-524.02	-506.73	0.00	
7800.00	0.00	179.50	7737.71	524.02	-524.02	-506.73	0.00	
7900.00	0.00	179.50	7837.71	524.02	-524.02	-506.73	0.00	
8000.00	0.00	179.50	7937.71	524.02	-524.02	-506.73	0.00	
8062.29	0.00	179.50	8000.00	524.02	-524.02	-506.73	0.00	Brushy Canyon
8100.00	0.00	179.50	8037.71	524.02	-524.02	-506.73	0.00	
8200.00	0.00	179.50	8137.71	524.02	-524.02	-506.73	0.00	
8300.00	0.00	179.50	8237.71	524.02	-524.02	-506.73	0.00	
8400.00	0.00	179.50	8337.71	524.02	-524.02	-506.73	0.00	
8500.00	0.00	179.50	8437.71	524.02	-524.02	-506.73	0.00	
8600.00	0.00	179.50	8537.71	524.02	-524.02	-506.73	0.00	
8700.00	0.00	179.50	8637.71	524.02	-524.02	-506.73	0.00	
8800.00	0.00	179.50	8737.71	524.02	-524.02	-506.73	0.00	
8900.00	0.00	179.50	8837.71	524.02	-524.02	-506.73	0.00	
9000.00	0.00	179.50	8937.71	524.02	-524.02	-506.73	0.00	
9100.00	0.00	179.50	9037.71	524.02	-524.02	-506.73	0.00	
9200.00	0.00	179.50	9137.71	524.02	-524.02	-506.73	0.00	
9300.00	0.00	179.50	9237.71	524.02	-524.02	-506.73	0.00	
9400.00	0.00	179.50	9337.71	524.02	-524.02	-506.73	0.00	
9500.00	0.00	179.50	9437.71	524.02	-524.02	-506.73	0.00	
9600.00	0.00	179.50	9537.71	524.02	-524.02	-506.73	0.00	
9700.00	0.00	179.50	9637.71	524.02	-524.02	-506.73	0.00	
9800.00	0.00	179.50	9737.71	524.02	-524.02	-506.73	0.00	
9900.00	0.00	179.50	9837.71	524.02	-524.02	-506.73	0.00	
10000.00	0.00	179.50	9937.71	524.02	-524.02	-506.73	0.00	
10100.00	0.00	179.50	10037.71	524.02	-524.02	-506.73	0.00	
10200.00	0.00	179.50	10137.71	524.02	-524.02	-506.73	0.00	
10259.33	0.00	179.50	10197.04	524.02	-524.02	-506.73	0.00	KOP
10300.00	4.07	179.50	10237.68	522.58	-524.01	-505.29	10.00	
10400.00	14.07	179.50	10336.30	506.84	-523.87	-489.56	10.00	
10429.79	17.05	179.50	10365.00	498.85	-523.80	-481.58	10.00	Bone Spring 1st
10500.00	24.07	179.50	10430.70	474.21	-523.58	-456.96	10.00	
10600.00	34.07	179.50	10517.99	425.70	-523.16	-408.48	10.00	
10682.80	42.35	179.50	10583.00	374.53	-522.71	-357.36	10.00	Bone Spring Lime 2nd / Point of Penetration
10700.00	44.07	179.50	10595.53	362.76	-522.61	-345.59	10.00	
10800.00	54.07	179.50	10660.97	287.31	-521.95	-270.21	10.00	
10900.00	64.07	179.50	10712.31	201.64	-521.21	-184.61	10.00	
11000.00	74.07	179.50	10747.99	108.36	-520.39	-91.41	10.00	
11100.00	84.07	179.50	10766.93	10.31	-519.53	6.57	10.00	
11159.33	90.00	179.50	10770.00	-48.92	-519.02	65.75	10.00	Landing Point
11200.00	90.00	179.50	10770.00	-89.58	-518.66	106.38	0.00	
11300.00	90.00	179.50	10770.00	-189.58	-517.79	206.29	0.00	
11400.00	90.00	179.50	10770.00	-289.58	-516.92	306.21	0.00	
11500.00	90.00	179.50	10770.00	-389.57	-516.05	406.12	0.00	
11600.00	90.00	179.50	10770.00	-489.57	-515.17	506.04	0.00	
11700.00	90.00	179.50	10770.00	-589.56	-514.30	605.95	0.00	
11800.00	90.00	179.50	10770.00	-689.56	-513.43	705.87	0.00	
11900.00	90.00	179.50	10770.00	-789.56	-512.55	805.78	0.00	
12000.00	90.00	179.50	10770.00	-889.55	-511.68	905.70	0.00	
12100.00	90.00	179.50	10770.00	-989.55	-510.81	1005.61	0.00	
12200.00	90.00	179.50	10770.00	-1089.54	-509.94	1105.53	0.00	
12300.00	90.00	179.50	10770.00	-1189.54	-509.06	1205.44	0.00	
12400.00	90.00	179.50	10770.00	-1289.54	-508.19	1305.36	0.00	
12500.00	90.00	179.50	10770.00	-1389.53	-507.32	1405.27	0.00	
12600.00	90.00	179.50	10770.00	-1489.53	-506.44	1505.19	0.00	
12700.00	90.00	179.50	10770.00	-1589.53	-505.57	1605.10	0.00	
12800.00	90.00	179.50	10770.00	-1689.52	-504.70	1705.02	0.00	

		Well: BILLIKEN 6 18 FEDERAL COM 8H						Geodetic System: US State Plane 1983	
		County: Lea						Datum: North American Datum 1927	
		Wellbore: Permit Plan						Ellipsoid: Clarke 1866	
		Design: Permit Plan #1						Zone: 3001 - NM East (NAD83)	
MD	INC	AZI	TVD	NS	EW	VS	DLS	Comment	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)		
12900.00	90.00	179.50	10770.00	-1789.52	-503.82	1804.94	0.00		
13000.00	90.00	179.50	10770.00	-1889.51	-502.95	1904.85	0.00		
13100.00	90.00	179.50	10770.00	-1989.51	-502.08	2004.77	0.00		
13200.00	90.00	179.50	10770.00	-2089.51	-501.21	2104.68	0.00		
13300.00	90.00	179.50	10770.00	-2189.50	-500.33	2204.60	0.00		
13400.00	90.00	179.50	10770.00	-2289.50	-499.46	2304.51	0.00		
13500.00	90.00	179.50	10770.00	-2389.50	-498.59	2404.43	0.00		
13600.00	90.00	179.50	10770.00	-2489.49	-497.71	2504.34	0.00		
13700.00	90.00	179.50	10770.00	-2589.49	-496.84	2604.26	0.00		
13800.00	90.00	179.50	10770.00	-2689.48	-495.97	2704.17	0.00		
13900.00	90.00	179.50	10770.00	-2789.48	-495.10	2804.09	0.00		
14000.00	90.00	179.50	10770.00	-2889.48	-494.22	2904.00	0.00		
14100.00	90.00	179.50	10770.00	-2989.47	-493.35	3003.92	0.00		
14200.00	90.00	179.50	10770.00	-3089.47	-492.48	3103.83	0.00		
14300.00	90.00	179.50	10770.01	-3189.46	-491.60	3203.75	0.00		
14400.00	90.00	179.50	10770.01	-3289.46	-490.73	3303.66	0.00		
14500.00	90.00	179.50	10770.01	-3389.46	-489.86	3403.58	0.00		
14600.00	90.00	179.50	10770.01	-3489.45	-488.99	3503.49	0.00		
14700.00	90.00	179.50	10770.01	-3589.45	-488.11	3603.41	0.00		
14800.00	90.00	179.50	10770.01	-3689.45	-487.24	3703.32	0.00		
14900.00	90.00	179.50	10770.01	-3789.44	-486.37	3803.24	0.00		
15000.00	90.00	179.50	10770.01	-3889.44	-485.49	3903.15	0.00		
15100.00	90.00	179.50	10770.01	-3989.43	-484.62	4003.07	0.00		
15200.00	90.00	179.50	10770.01	-4089.43	-483.75	4102.98	0.00		
15300.00	90.00	179.50	10770.01	-4189.43	-482.87	4202.90	0.00		
15400.00	90.00	179.50	10770.01	-4289.42	-482.00	4302.81	0.00		
15500.00	90.00	179.50	10770.01	-4389.42	-481.13	4402.73	0.00		
15600.00	90.00	179.50	10770.01	-4489.42	-480.26	4502.64	0.00		
15700.00	90.00	179.50	10770.01	-4589.41	-479.38	4602.56	0.00		
15800.00	90.00	179.50	10770.01	-4689.41	-478.51	4702.47	0.00		
15900.00	90.00	179.50	10770.01	-4789.40	-477.64	4802.39	0.00		
16000.00	90.00	179.50	10770.01	-4889.40	-476.76	4902.30	0.00		
16100.00	90.00	179.50	10770.01	-4989.40	-475.89	5002.22	0.00		
16200.00	90.00	179.50	10770.01	-5089.39	-475.02	5102.13	0.00		
16300.00	90.00	179.50	10770.01	-5189.39	-474.15	5202.05	0.00		
16400.00	90.00	179.50	10770.01	-5289.38	-473.27	5301.96	0.00		
16500.00	90.00	179.50	10770.01	-5389.38	-472.40	5401.88	0.00		
16600.00	90.00	179.50	10770.01	-5489.38	-471.53	5501.79	0.00		
16700.00	90.00	179.50	10770.01	-5589.37	-470.65	5601.71	0.00		
16800.00	90.00	179.50	10770.01	-5689.37	-469.78	5701.62	0.00		
16900.00	90.00	179.50	10770.01	-5789.37	-468.91	5801.54	0.00		
17000.00	90.00	179.50	10770.01	-5889.36	-468.04	5901.45	0.00		
17100.00	90.00	179.50	10770.01	-5989.36	-467.16	6001.37	0.00		
17200.00	90.00	179.50	10770.01	-6089.35	-466.29	6101.28	0.00		
17300.00	90.00	179.50	10770.01	-6189.35	-465.42	6201.20	0.00		
17400.00	90.00	179.50	10770.01	-6289.35	-464.54	6301.11	0.00		
17500.00	90.00	179.50	10770.01	-6389.34	-463.67	6401.03	0.00		
17600.00	90.00	179.50	10770.01	-6489.34	-462.80	6500.95	0.00		
17700.00	90.00	179.50	10770.01	-6589.34	-461.92	6600.86	0.00		
17800.00	90.00	179.50	10770.01	-6689.33	-461.05	6700.78	0.00		
17900.00	90.00	179.50	10770.01	-6789.33	-460.18	6800.69	0.00		
18000.00	90.00	179.50	10770.01	-6889.32	-459.31	6900.61	0.00		
18100.00	90.00	179.50	10770.01	-6989.32	-458.43	7000.52	0.00		
18200.00	90.00	179.50	10770.01	-7089.32	-457.56	7100.44	0.00		
18300.00	90.00	179.50	10770.01	-7189.31	-456.69	7200.35	0.00		
18400.00	90.00	179.50	10770.01	-7289.31	-455.81	7300.27	0.00		
18500.00	90.00	179.50	10770.01	-7389.30	-454.94	7400.18	0.00		
18600.00	90.00	179.50	10770.01	-7489.30	-454.07	7500.10	0.00		
18700.00	90.00	179.50	10770.01	-7589.30	-453.20	7600.01	0.00		
18800.00	90.00	179.50	10770.01	-7689.29	-452.32	7699.93	0.00		
18900.00	90.00	179.50	10770.01	-7789.29	-451.45	7799.84	0.00		
19000.00	90.00	179.50	10770.01	-7889.29	-450.58	7899.76	0.00		
19100.00	90.00	179.50	10770.01	-7989.28	-449.70	7999.67	0.00		
19200.00	90.00	179.50	10770.01	-8089.28	-448.83	8099.59	0.00		
19300.00	90.00	179.50	10770.01	-8189.27	-447.96	8199.50	0.00		
19400.00	90.00	179.50	10770.01	-8289.27	-447.09	8299.42	0.00		
19500.00	90.00	179.50	10770.01	-8389.27	-446.21	8399.33	0.00		
19600.00	90.00	179.50	10770.01	-8489.26	-445.34	8499.25	0.00		
19700.00	90.00	179.50	10770.01	-8589.26	-444.47	8599.16	0.00		
19800.00	90.00	179.50	10770.01	-8689.26	-443.59	8699.08	0.00		

BILLIKEN 6 18 FEDERAL COM 8H



Well: BILLIKEN 6 18 FEDERAL COM 8H
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)	
19900.00	90.00	179.50	10770.01	-8789.25	-442.72	8798.99	0.00	
20000.00	90.00	179.50	10770.01	-8889.25	-441.85	8898.91	0.00	
20100.00	90.00	179.50	10770.01	-8989.24	-440.97	8998.82	0.00	
20200.00	90.00	179.50	10770.01	-9089.24	-440.10	9098.74	0.00	
20300.00	90.00	179.50	10770.01	-9189.24	-439.23	9198.65	0.00	
20400.00	90.00	179.50	10770.01	-9289.23	-438.36	9298.57	0.00	
20500.00	90.00	179.50	10770.01	-9389.23	-437.48	9398.48	0.00	
20600.00	90.00	179.50	10770.01	-9489.22	-436.61	9498.40	0.00	
20700.00	90.00	179.50	10770.01	-9589.22	-435.74	9598.31	0.00	
20800.00	90.00	179.50	10770.01	-9689.22	-434.86	9698.23	0.00	
20900.00	90.00	179.50	10770.01	-9789.21	-433.99	9798.14	0.00	
21000.00	90.00	179.50	10770.01	-9889.21	-433.12	9898.06	0.00	
21100.00	90.00	179.50	10770.01	-9989.21	-432.25	9997.97	0.00	
21200.00	90.00	179.50	10770.01	-10089.20	-431.37	10097.89	0.00	
21300.00	90.00	179.50	10770.01	-10189.20	-430.50	10197.80	0.00	
21400.00	90.00	179.50	10770.01	-10289.19	-429.63	10297.72	0.00	
21500.00	90.00	179.50	10770.01	-10389.19	-428.75	10397.63	0.00	
21600.00	90.00	179.50	10770.01	-10489.19	-427.88	10497.55	0.00	
21700.00	90.00	179.50	10770.01	-10589.18	-427.01	10597.46	0.00	
21800.00	90.00	179.50	10770.02	-10689.18	-426.14	10697.38	0.00	
21900.00	90.00	179.50	10770.02	-10789.18	-425.26	10797.29	0.00	
22000.00	90.00	179.50	10770.02	-10889.17	-424.39	10897.21	0.00	
22100.00	90.00	179.50	10770.02	-10989.17	-423.52	10997.12	0.00	
22200.00	90.00	179.50	10770.02	-11089.16	-422.64	11097.04	0.00	
22300.00	90.00	179.50	10770.02	-11189.16	-421.77	11196.96	0.00	
22400.00	90.00	179.50	10770.02	-11289.16	-420.90	11296.87	0.00	
22500.00	90.00	179.50	10770.02	-11389.15	-420.02	11396.79	0.00	
22600.00	90.00	179.50	10770.02	-11489.15	-419.15	11496.70	0.00	
22700.00	90.00	179.50	10770.02	-11589.14	-418.28	11596.62	0.00	
22800.00	90.00	179.50	10770.02	-11689.14	-417.41	11696.53	0.00	
22900.00	90.00	179.50	10770.02	-11789.14	-416.53	11796.45	0.00	
23000.00	90.00	179.50	10770.02	-11889.13	-415.66	11896.36	0.00	
23100.00	90.00	179.50	10770.02	-11989.13	-414.79	11996.28	0.00	
23200.00	90.00	179.50	10770.02	-12089.13	-413.91	12096.19	0.00	
23300.00	90.00	179.50	10770.02	-12189.12	-413.04	12196.11	0.00	
23400.00	90.00	179.50	10770.02	-12289.12	-412.17	12296.02	0.00	
23500.00	90.00	179.50	10770.02	-12389.11	-411.30	12395.94	0.00	
23600.00	90.00	179.50	10770.02	-12489.11	-410.42	12495.85	0.00	
23634.06	90.00	179.50	10770.02	-12523.17	-410.13	12529.89	0.00	exit
23700.00	90.00	179.50	10770.02	-12589.11	-409.55	12595.77	0.00	
23714.06	90.00	179.50	10770.00	-12603.17	-409.46	12609.82	0.00	BHL



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

Dimensions (Nominal)

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

Performance Properties

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

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

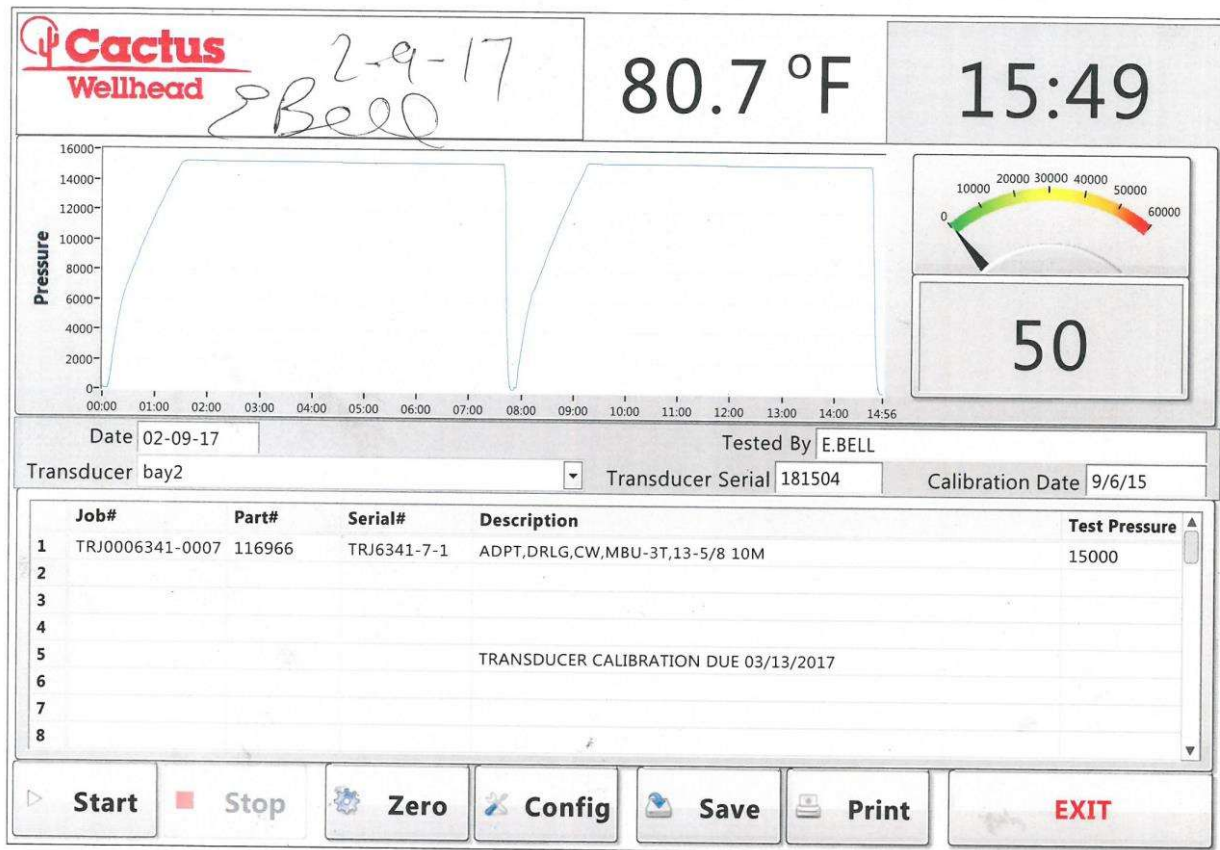
BOP Break Test Variance – Intermediate Casing

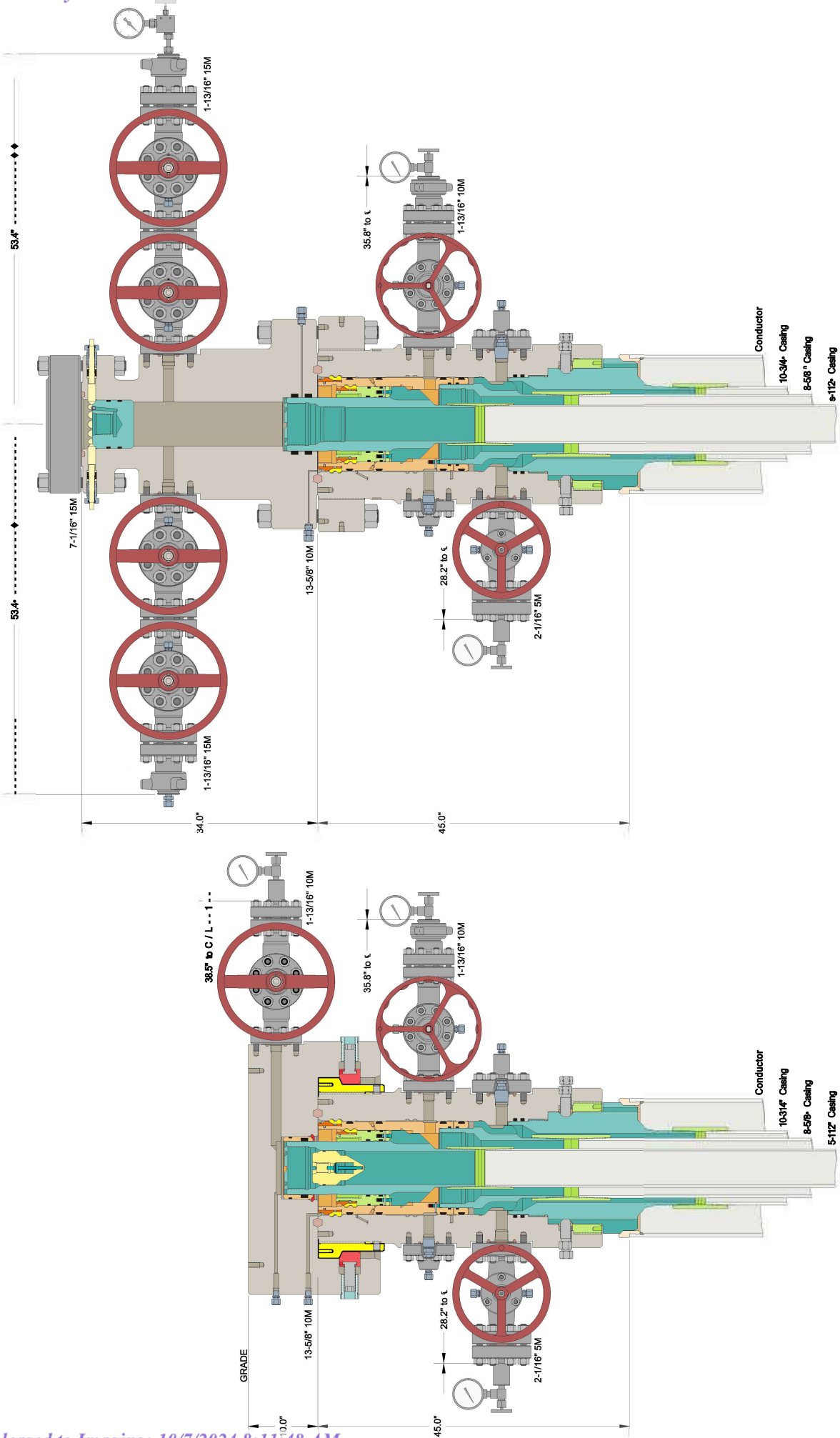
Devon Energy will perform a full BOP test per 43 CFR 3172 before drilling out of the intermediate casing string(s) and starting the production hole, before starting any hole section that requires a 10M test, before the expiration of the allotted 14-days for 5M intermediate batch drilling or when the drilling rig is fully mobilized to a new well pad, whichever is sooner.

Devon Energy requests to only test BOP connection breaks after drilling out of surface casing and while skidding between wells which conforms to API Standard 53 and industry standards. This test will include the Top Pipe Rams, HCR, Kill Line Check Valve, QDC (quick disconnect to wellhead) and Shell of BOP to 5M for 10 minutes. If a break to the flex hose that runs to the choke manifold is required due to repositioning from a skid, the HCR will remain open during the shell test to include that additional break. The variance only pertains to intermediate hole-sections and no deeper than the Bone Springs Formation where 5M BOP tests are required. The initial BOP test will follow 43 CFR 3172 and subsequent tests following a skid will only test connections that are broken. The annular preventer will be tested to 100% working pressure. This variance will meet or exceed 43 CFR 3172 per the following: Devon Energy will perform a full BOP test per 43 CFR 3172 before drilling out of the intermediate casing string(s) and starting the production hole, before starting any hole section that requires a 10M test, or before the expiration of the allotted 14-days for 5M intermediate batch drilling, whichever is sooner. We will utilize a 200' TVD tolerance between intermediate shoes as the cutoff for a full BOP test. The BLM will be contacted 4hrs prior to a BOPE test. The BLM will be notified if and when a well control event is encountered.

Well Control Response:

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





ALL DIMENSIONS APPROXIMATE

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CACTUS WELLHEAD LLC

DEVON ENERGY CORPORATION
DELAWARE BASIN

10-3/4" x 8-5/8" x 5-1/2" 10M MBU-3T-CFL-R-DBLO Wellhead Sys.
With 8-5/8" And 5-1/2" Mandrel Casing Hangers
And 13-5/8" 10M x 7-1/16" 15M CTH-DBLHPS Tubing Head

DRAWN	OLE	16SEP21
APPRV		
DRAWING NO.	HBE00000595	

BILLIKEN 6 18 FEDERAL COM 8H

1. Geologic Formations

TVD of target	10770	Pilot hole depth	N/A
MD at TD:	23714	Deepest expected fresh water	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	1040		
Salt	1461		
Base of Salt	5048		
Delaware	5048		
Cherry Canyon	6375		
Brushy Canyon	8000		
Bone Spring 1st	10365		
Bone Spring Lime 2nd	10583		

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

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2. Casing Program

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	1065	0	1065
9 7/8	8 5/8	32	P110	Sprint FJ	0	10159	0	10097
7 7/8	5 1/2	20	P110	DWC / C-IS+	0	23714	0	10770

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

3. Cementing Program (3-String Primary Design)

Casing	# Sks	TOC	Wt. (lb/gal)	Yld (ft3/sack)	Slurry Description
Surface	641	Surf	13.2	1.4	Lead: Class C Cement + additives
Int 1	395	Surf	9.0	3.3	Lead: Class C Cement + additives
	256	8000	13.2	1.4	Tail: Class H / C + additives
Int 1 Intermediate Squeeze	514	Surf	9.0	3.3	Squeeze Lead: Class C Cement + additives
	395	Surf	9.0	3.3	Lead: Class C Cement + additives
	256	8000	13.2	1.4	Tail: Class H / C + additives
Production	35	9659	9.0	3.3	Lead: Class H / C + additives
	1781	10259	13.2	1.4	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	30%
Production	10%

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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"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram		
			Double Ram	X	
			Other*		
			Annular (5M)		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other*		

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5. Mud Program (Three String Design)

Section	Type	Weight (ppg)
Surface	FW Gel	8.5-9
Intermediate	Brine	10-10.5
Production	WBM	8.5-9

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

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

6. Logging and Testing Procedures**Logging, Coring and Testing**

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

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

7. Drilling Conditions

Condition	Specify what type and where?
BH pressure at deepest TVD	5040
Abnormal temperature	No

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

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

N	H ₂ S is present
Y	H ₂ S plan attached.

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8. Other facets of operation

Is this a walking operation? Potentially

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

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

Will be pre-setting casing? Potentially

- 1 Spudder rig will move in and batch drill surface hole.
 - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (43 CFR 3172, all COAs and NMOCD regulations).
- 3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pad.
- 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

X Directional Plan
 Other, describe

6-26-35-C Sundry ID 2797372 Billiken 6-18 Fed Com 8H Lea NM125401 DEVON ENERGY PRODUCTION COMPANY LP 13-22g 1-30-2024
LV

Billiken 6-18 Fed Com 8H

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	12.83	3.65	0.65	1,225	7	1.08	6.89	55,738
"B"				btc				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,500				Tail Cmt	does not	circ to sfc.		Totals:	1,225			55,738
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	641	897	681	32	9.00	3306	5M				1.50
Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.												
Site plot (pipe racks E or F) as per D.D. 1.01 D-4 (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	vam sprint fj	2.29	0.72	1.42	10,159	1	2.68	1.21	325,088
"B"							0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 572											
Totals: 10,159											
The cement volume(s) are intended to achieve a top of 0 ft from surface or a 1225 overlap.											
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg
9 7/8	0.1261	651	1662	1291	29	10.50	2666	3M			0.61
r D V Tool(s):											
t by stage % :											
Class 'H' tail cmt yld > 1.20											
#VALUE! #VALUE!											
sum of sx 651 1662											
Σ CuFt 29											
Σ%excess 29											

5 1/2	casing inside the	8 5/8	Design Factors					Prod 1			
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	20.00	p 110	dwc/c is+	3.38	2.4	2.85	23,714	3	5.39	4.54	474,280
"B"							0				0
"C"							0				0
"D"							0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 2,369											
Totals: 23,714											
The cement volume(s) are intended to achieve a top of 9959 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	1816	2609	2384	9	9.00					0.79
Class 'C' tail cmt yld > 1.35											

0	#N/A	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											
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.											

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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 364488

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 364488
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	NONE	10/7/2024