

U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

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

**Notice of Intent**

**Sundry ID:** 2775054

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 02/14/2024

**Time Sundry Submitted:** 08:31

**Date proposed operation will begin:** 02/14/2024

**Procedure Description:** Devon Energy Production Company L.P. respectfully requests the following changes to the approved APD: SHL change from 317 FNL & 1920 FWL to 582 FNL & 1890 FWL, both 6-26S-35E BHL change from 2620 FNL & 2280 FWL to 2620 FNL & 1370 FWL, both 18-26S-35E. Pool Code change from 98117 WC-025 G-09 S263504N;WOLFCAMP to 97088 WC-025 G-08 S253534O;BONE SPRING & 96672 WC-025 G-08 S263412K;BONE SPRING Dedicated acreage change from 805.68acs to 400acs TVD/MD change from 12620' / 25515' to 10770'/23714' Casing program change: Surface, Intermediate, and Production Casing size changes. Cement volume changes to accommodate casing change. Change from 10M to 5M. Break test variance request. Please see attached revised C-102 and drilling & directional plans, and supporting documentation.

**NOI Attachments**

**Procedure Description**

- BILLIKEN\_6\_18\_FED\_COM\_8H\_C\_102\_SHL\_BHL\_FM\_NOI\_COMBO\_20240214083024.pdf
- BILLIKEN\_6\_18\_FEDERAL\_COM\_8H\_20240214083022.pdf
- BILLIKEN\_6\_18\_FEDERAL\_COM\_8H\_Directional\_Plan\_02\_08\_24\_20240214083022.pdf
- MB\_Wellhd\_5M\_13.375\_9.625\_5.5\_20240214082943.pdf
- break\_test\_variance\_BOP\_20240214082941.pdf
- MB\_Verb\_5M\_20240214082938.pdf
- 13.375\_54.50\_J55\_20240214082938.pdf

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

Well Status: Approved Application for Permit to Drill

Operator: DEVON ENERGY PRODUCTION COMPANY LP

9.625\_40lb\_J\_55\_20240214082938.pdf

5M\_BOPE\_\_CK\_20240214082938.pdf

5.5\_20lb\_P110EC\_DWC\_C\_IS\_20240214082936.pdf

### Conditions of Approval

#### Additional

6\_26\_35\_C\_Sundry\_ID\_2775054\_Billiken\_6\_18\_Fed\_Com\_8H\_20240220143631.pdf

Billiken\_6\_18\_Fed\_Com\_8H\_Dr\_COA\_20240220143631.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: FEB 14, 2024 08:25 AM

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: CHRISTOPHER WALLS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752342234

BLM POC Email Address: cwalls@blm.gov

Disposition: Approved

Disposition Date: 03/01/2024

Signature: Chris Walls

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**

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

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 recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

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

SHL change from 317 FNL & 1920 FWL to 582 FNL & 1890 FWL, both 6-26S-35E

BHL change from 2620 FNL & 2280 FWL to 2620 FNL & 1370 FWL, both 18-26S-35E.

Pool Code change from 98117 WC-025 G-09 S263504N;WOLFCAMP to 97088 WC-025 G-08 S253534O;BONE SPRING & 96672 WC-025 G-08 S263412K;BONE SPRING

Dedicated acreage change from 805.68acs to 400acs

TVD/MD change from 12620 / 25515 to 10770/23714

Casing program change: Surface, Intermediate, and Production Casing size changes. Cement volume changes to accommodate casing change.

Change from 10M to 5M. Break test variance request.

Continued on page 3 additional information

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed) <b>REBECCA DEAL / Ph: (303) 299-1406</b>	Title <b>Regulatory Analyst</b>
Signature (Electronic Submission)	Date <b>02/14/2024</b>

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

Approved by <b>CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved</b>	Title <b>Petroleum Engineer</b>	Date <b>03/01/2024</b>
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 <b>CARLSBAD</b>	

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

### Additional Remarks

Please see attached revised C-102 and drilling & directional plans, and supporting documentation.

### Location of Well

0. SHL: NENW / 317 FNL / 1920 FWL / TWSP: 26S / RANGE: 35E / SECTION: 6 / LAT: 32.078766 / LONG: -103.408932 ( TVD: 0 feet, MD: 0 feet )

PPP: NENW / 100 FNL / 2280 FWL / TWSP: 26S / RANGE: 35E / SECTION: 6 / LAT: 32.079361 / LONG: -103.40777 ( TVD: 12281 feet, MD: 12299 feet )

PPP: NESW / 2639 FSL / 2280 FWL / TWSP: 26S / RANGE: 35E / SECTION: 7 / LAT: 32.057736 / LONG: -103.407763 ( TVD: 12620 feet, MD: 20300 feet )

PPP: NENW / 1 FNL / 2880 FWL / TWSP: 26S / RANGE: 35E / SECTION: 7 / LAT: 32.064916 / LONG: -103.409829 ( TVD: 12620 feet, MD: 17700 feet )

BHL: SENW / 2620 FNL / 2280 FWL / TWSP: 26S / RANGE: 35E / SECTION: 18 / LAT: 32.043401 / LONG: -103.4077631 ( TVD: 12620 feet, MD: 25515 feet )

CONFIDENTIAL

6-26-35-C Sundry ID 2775054 Billiken 6-18 Fed Com 8H

Billiken 6-18 Fed Com 8H

13 3/8		surface csg in a		17 1/2		inch hole.		Design Factors			Surface	
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight
"A"	54.50		j 55	btc	12.78	1.97	0.97	1,225	5	1.63	3.73	66,763
"B"				btc				0				0
w/8.4#/g mud, 30min Sfc Csg Test psig: 1,376								Totals:	1,225			66,763
Comparison of Proposed to Minimum Required Cement Volumes												
Hole Size	Annular Volume	1 Stage Cmt Sx	1 Stage CuFt Cmt	Min Cu Ft	1 Stage % Excess	Drilling Mud Wt	Calc MASP	Req'd BOPE			Min Dist Hole-Cplg	
17 1/2	0.6946	809	1133	851	33	9.00	1675	2M			1.56	
Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.												

9 5/8		casing inside the		13 3/8		Design Factors			Int 1				
Segment	#/ft	Grade		Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight	
"A"	40.00		j 55	btc	3.06	0.92	0.78	5,148	1	1.48	1.53	205,920	
"B"								0				0	
w/8.4#/g mud, 30min Sfc Csg Test psig: 519								Totals:	5,148			205,920	
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		
12 1/4	0.3132	718	2077	1673	24	10.50	2666	3M			0.81		
r D V Tool(s):								sum of sx	Σ CuFt		Σ%excess		
t by stage % :								#VALUE!	#VALUE!		718	2077	24
Class 'C' tail cmt yld > 1.35													
Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.77, b, c, d All > 0.70, OK.													

5 1/2		casing inside the		9 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			474,280
The cement volume(s) are intended to achieve a top of								4948	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	
8 3/4	0.2526	3074	5212	4742	10	9.00					1.23	
Class 'C' tail cmt yld > 1.35												

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

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	Devon Energy Production Company LP
<b>LEASE NO.:</b>	NMNM125401
<b>LOCATION:</b>	Section 6, T.26 S., R.35 E., NMPM
<b>COUNTY:</b>	Lea County, New Mexico <span style="float: right;">▼</span>

<b>WELL NAME &amp; NO.:</b>	Billiken 6-18 Fed Com 8H
<b>SURFACE HOLE FOOTAGE:</b>	582'/N & 1890'/W
<b>BOTTOM HOLE FOOTAGE:</b>	2620'/N & 1370'/W
<b>ATS/API ID:</b>	3002547566
<b>APD ID:</b>	10400057929
<b>Sundry ID:</b>	2775054

COA

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

## A. HYDROGEN SULFIDE

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

## B. CASING

1. The **13-3/8** 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 **17 1/2** inch in diameter.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

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

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

**Option 2:**

Operator has proposed a DV tool(s), the depth may be adjusted as long as the cement is changed proportionally. The DV tool(s) may be cancelled if cement circulates to surface on the first stage.

DV tool(s) shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall contact the BLM if DV tool(s) depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

- a. First stage to DV tool(s): Cement to circulate. If cement does not circulate off the DV tool(s), contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool(s):
  - Cement to surface. If cement does not circulate, contact the appropriate BLM office.  
**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.**

**Operator has proposed to pump down 13-3/8" X 9-5/8" annulus after primary cementing stage. Operator must run a CBL from TD of the 9-5/8" casing to surface. Submit results to the BLM.**

**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 **3000 (3M) psi. Annular which shall be tested to 2100 (70% Working Pressure) psi.**
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** 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 **13-3/8** inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi.**

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

## 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.

## GENERAL REQUIREMENTS

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

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Lea County

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
  - b. When the operator proposes to set surface casing with Spudder Rig
    - Notify the BLM when moving in and removing the Spudder Rig.
    - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
    - BOP/BOPE test to be conducted per **43 CFR part 3170 Subpart 3172** as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report when present.

A. CASING

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

B. PRESSURE CONTROL

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

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

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

#### C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

LVO 2/20/2024

**DISTRICT I**  
1625 N. FRENCH DR., HOBBS, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

**DISTRICT II**  
811 S. FIRST ST., ARTESIA, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

**DISTRICT III**  
1000 RIO BRAZOS RD., AZTEC, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

**DISTRICT IV**  
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

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

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number <b>30-025-47566</b>	Pool Code <b>97088</b>	Pool Name <b>WC-025 G-08 S2535340;BONE SPRING</b>
Property Code <b>328242</b>	Property Name <b>BILLIKEN 6-18 FED COM</b>	Well Number <b>8H</b>
OGRID No. <b>6137</b>	Operator Name <b>DEVON ENERGY PRODUCTION COMPANY, L.P.</b>	Elevation <b>3273.2'</b>

Surface Location

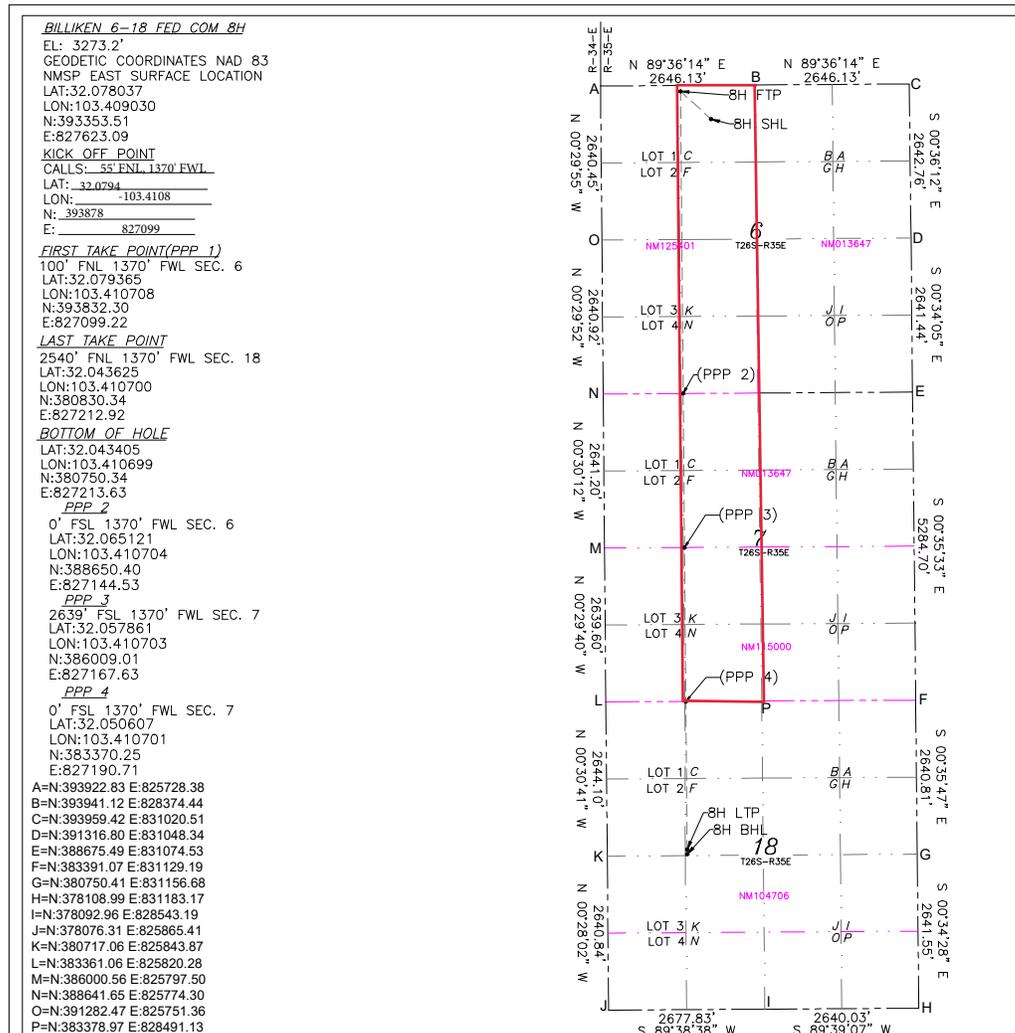
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	6	26-S	35-E		582	NORTH	1890	WEST	LEA

Bottom Hole Location If Different from Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	18	26-S	35-E		2620	NORTH	1370	WEST	LEA

Dedicated Acres <b>320</b>	Joint or Infill	Consolidation Code	Order No. <b>Per OCD, two Pools/C-102s. 400 total ded acs.</b>
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Rebecca Deal* 2/8/2024  
Signature Date

Rebecca Deal, Regulatory Analyst  
Printed Name

Rebecca.deal@dvn.com  
E-mail Address

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

02/2024  
Date of Survey

Signature & Seal of Professional Surveyor

02/07/2024  
Certificate No. 23261 Albert R. DeHoyos  
DRAWN BY: CM

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1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-47566</b>	Pool Code <b>96672</b>	Pool Name <b>WC-025 G-08 S263412K;BONE SPRING</b>
Property Code <b>328242</b>	Property Name <b>BILLIKEN 6-18 FED COM</b>	Well Number <b>8H</b>
OGRID No. <b>6137</b>	Operator Name <b>DEVON ENERGY PRODUCTION COMPANY, L.P.</b>	Elevation <b>3273.2'</b>

Surface Location

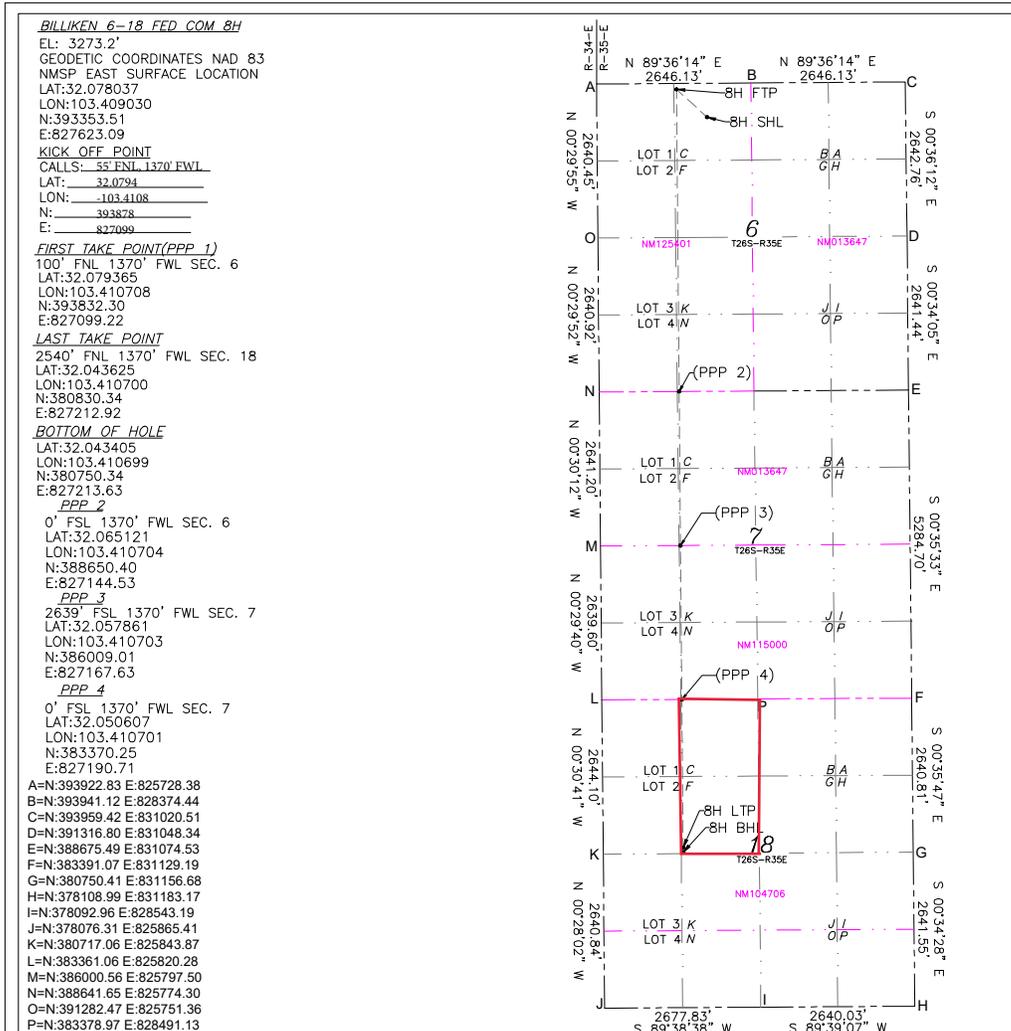
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	6	26-S	35-E		582	NORTH	1890	WEST	LEA

Bottom Hole Location If Different from Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	18	26-S	35-E		2620	NORTH	1370	WEST	LEA

Dedicated Acres <b>80</b>	Joint or Infill	Consolidation Code	Order No.
			<b>Per OCD, two Pools/C-102s. 400 total ded acs.</b>

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



**OPERATOR CERTIFICATION**

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Rebecca Deal* 2/8/2024  
Signature Date

Rebecca Deal, Regulatory Analyst  
Printed Name

Rebecca.deal@dvn.com  
E-mail Address

**SURVEYOR CERTIFICATION**

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

02/2024  
Date of Survey

Signature & Seal of Professional Surveyor

*Albert R. DeHoyos*  
ALBERT R. DEHOYOS  
NEW MEXICO  
23261  
PROFESSIONAL SURVEYOR

02/07/2024  
Certificate No. 23261 Albert R. DeHoyos  
DRAWN BY: CM

Intent  As Drilled

API #		
Operator Name: DEVON ENERGY PRODUCTION COMPANY, LP.	Property Name: BILLIKEN 6-18 FED COM	Well Number 8H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
	6	26S	35E		55	FNL	1370	FWL	LEA
Latitude					Longitude				NAD
32.0794					-103.4108				83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
C	6	26-S	35-E		100	NORTH	1370	WEST	LEA
Latitude					Longitude				NAD
32.079365					103.410708				83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
F	18	26-S	35-E		2540	NORTH	1370	WEST	LEA
Latitude					Longitude				NAD
32.043625					103.410700				83

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

Is this well an infill well?  Y

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

API #		
Operator Name: DEVON ENERGY PRODUCTION CO., L.P.	Property Name: BILLIKEN 6-18 FED COM	Well Number 10H

KZ 06/29/2018



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)
17 1/2	13 3/8	54 1/2	J-55	BTC	0	1065	0	1065
12 1/4	9 5/8	40	J-55	BTC	0	5148	0	5148
8 3/4	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	809	Surf	13.2	1.4	Lead: Class C Cement + additives
Int 1	564	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	4648	13.2	1.4	Tail: Class H / C + additives
Int 1 Intermediate Squeeze	733	Surf	9.0	3.3	Squeeze Lead: Class C Cement + additives
	564	Surf	9.0	3.3	Lead: Class C Cement + additives
	154	4648	13.2	1.4	Tail: Class H / C + additives
Production	478	4648	9.0	3.3	Lead: Class H / C + additives
	2596	10259	13.2	1.4	Tail: Class H / C + additives

If a DV tool is ran the depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Slurry weights will be adjusted based on estimated fracture gradient of the formation. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

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	H2S is present
Y	H2S 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

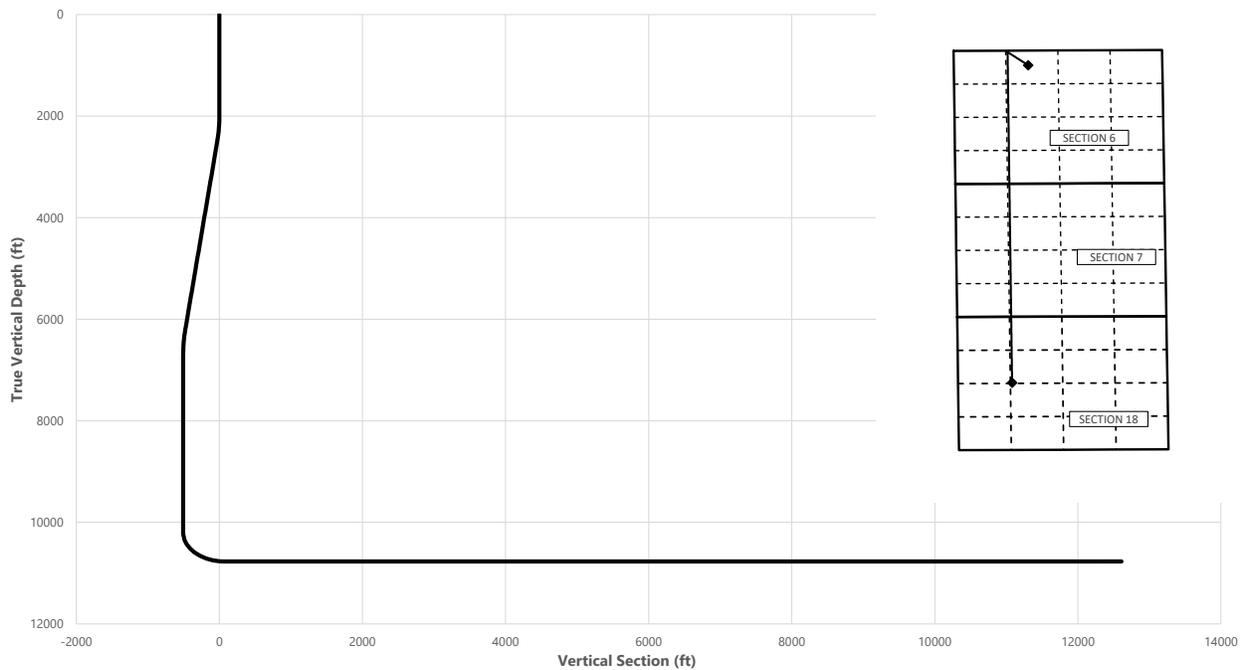
- Directional Plan
- Other, describe



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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	SHL
2000.00	0.00	315.00	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2500.00	10.00	315.00	2497.47	30.78	-30.78	-29.76	2.00	Hold Tangent
6266.41	10.00	315.00	6206.65	493.24	-493.24	-476.97	0.00	Drop to Vertical
6766.41	0.00	315.00	6704.12	524.02	-524.02	-506.73	2.00	Hold Vertical
10259.33	0.00	179.50	10197.04	524.02	-524.02	-506.73	0.00	KOP
11159.33	90.00	179.50	10770.00	-48.92	-519.02	65.75	10.00	Landing Point
23714.06	90.00	179.50	10770.00	-12603.17	-409.46	12609.82	0.00	BHL



Key Depths	MD (ft)	TVD (ft)
Rustler	1040.00	1040.00
Salt	1461.00	1461.00
Base of Salt	5089.88	5048.00
Delaware	5089.88	5048.00
Cherry Canyon	6436.56	6375.00
Brushy Canyon	8062.29	8000.00
Bone Spring 1st	10429.79	10365.00
Bone Spring Lime 2nd / Point of Pen	10682.80	10583.00
exit	23634.06	10770.02

	MD (ft)	TVD (ft)	Lat (°)	Long (°)	Section Footages
SHL	0.00	0.00	32.0779	-103.4091	582' FNL, 1890' FWL of Sec 6 in T26S, R35E
KOP	10259.33	10197.04	32.0794	-103.4108	55' FNL, 1370' FWL of Sec 6 in T26S, R35E
Point of Penetration	10682.80	10583.00	32.0794	-103.4107	100' FNL, 1370' FWL of Sec 6 in T26S, R35E
Exit	23634.06	10770.02	32.0436	-103.4107	100' FSL, 1370' FWL of Sec 18 in T26S, R35E
BHL	23714.06	10770.00	32.0433	-103.4108	20' FSL, 1370' FWL of Sec 18 in T26S, R35E

	Y	X	MD
KOP	393878	827099	10259.33



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

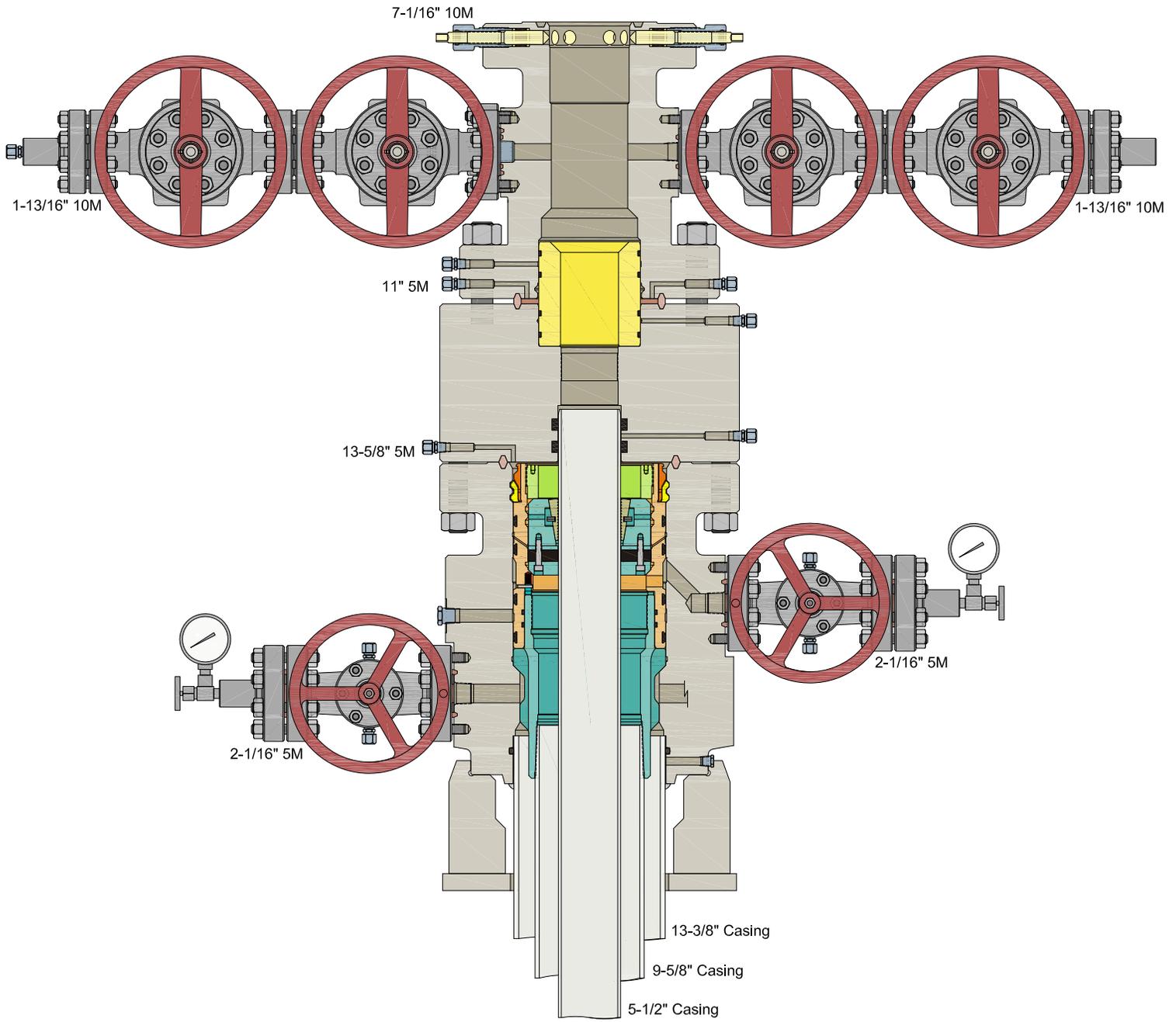
MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12900.00	90.00	179.50	10770.00	-1789.52	-503.82	1804.94	0.00	
13000.00	90.00	179.50	10770.00	-1889.51	-502.95	1904.85	0.00	
13100.00	90.00	179.50	10770.00	-1989.51	-502.08	2004.77	0.00	
13200.00	90.00	179.50	10770.00	-2089.51	-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  
**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
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



## Section 2 - Blowout Preventer Testing Procedure

### Variance Request

Devon Energy requests to only test BOP connection breaks after drilling out of surface casing and while skidding between wells which conforms to API Standard 53 and industry standards. This test will include the Top Pipe Rams, HCR, Kill Line Check Valve, QDC (quick disconnect to wellhead) and Shell of the 10M BOPE to 5M for 10 minutes. If a break to the flex hose that runs to the choke manifold is required due to repositioning from a skid, the HCR will remain open during the shell test to include that additional break. The variance only pertains to intermediate hole-sections and no deeper than the Bone Springs Formation where 5M BOP tests are required. The initial BOP test will follow OOGO2.III.A.2.i, 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 OOGO2.III.A.2.i per the following: Devon Energy will perform a full BOP test per OOGO2.III.A.2.i before drilling out of the intermediate casing string(s) and starting the production hole, before starting any hole section that requires a 10M test, before the expiration of the allotted 14-days for 5M intermediate batch drilling or when the drilling rig is fully mobilized to a new well pad, whichever is sooner. We will utilize a 200' TVD tolerance between intermediate shoes as the cutoff for a full BOP test. The BLM will be contacted 4hrs prior to a BOPE test. The BLM will be notified if and when a well control event is encountered. Break test will be a 14 day interval and not a 30 day full BOPE test interval. If in the event break testing is not utilized, then a full BOPE test would be conducted.

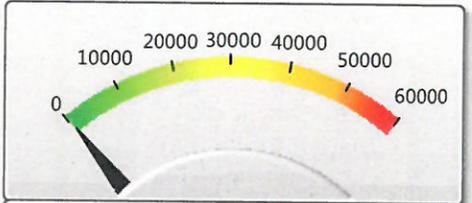
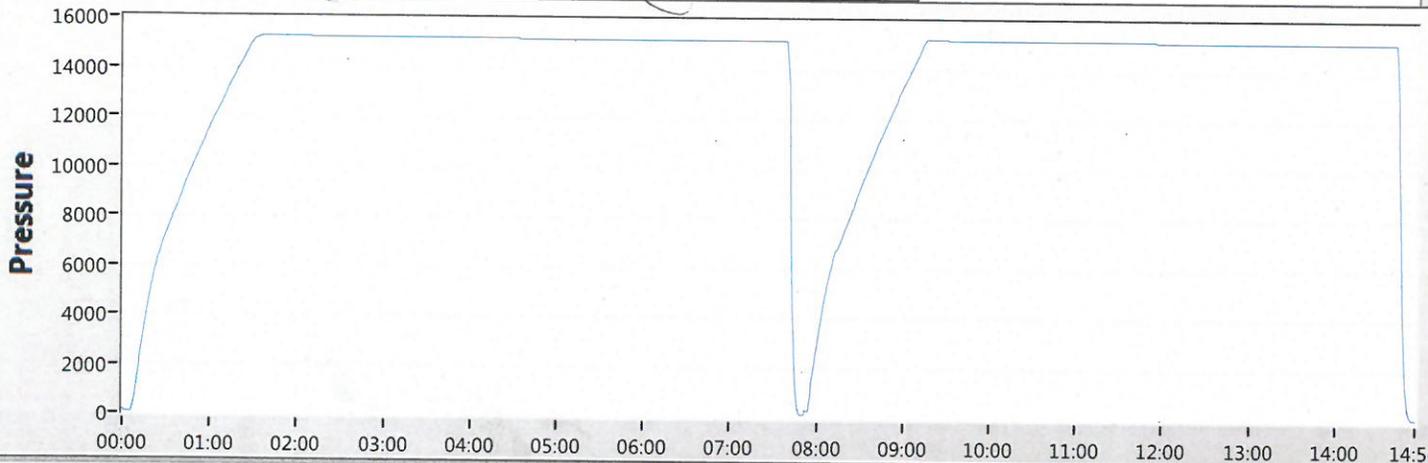
1. Well Control Response:
  1. Primary barrier remains fluid
  2. In the event of an influx due to being underbalanced and after a realized gain or flow, the order of closing BOPE is as follows:
    - a) Annular first
    - b) If annular were to not hold, Upper pipe rams second (which were tested on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

**Cactus**  
**Wellhead**

2-9-17  
E Bell

80.7 °F

15:49



50

Date 02-09-17

Tested By E.BELL

Transducer bay2

Transducer Serial 181504

Calibration Date 9/6/15

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

Start Stop Zero Config Save Print EXIT

A multibowl wellhead may be used. The BOP will be tested per 43 CFR 3172 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 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.

- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 5M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per 43 CFR 3172.

After running the surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 5,000 psi high pressure test. The 5,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per 43 CFR 3172. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per 43 CFR 3172.

After running the intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 5M will already be installed on the wellhead.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 5,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.



**13-3/8" 54.50# .380 J-55**

**Dimensions (Nominal)**

Outside Diameter	13.375	in.
Wall	0.380	in.
Inside Diameter	12.615	in.
Drift	12.459	in.
Weight, T&C	54.500	lbs/ft
Weight, PE	52.790	lbs/ft

**Performance Ratings, Minimum**

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

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



# U. S. Steel Tubular Products

## 9.625" 40.00lbs/ft (0.395" Wall) J55

1/24/2019 2:45:24 PM

MECHANICAL PROPERTIES	Pipe	BTC	LTC	STC	
Minimum Yield Strength	55,000	--	--	--	psi
Maximum Yield Strength	80,000	--	--	--	psi
Minimum Tensile Strength	75,000	--	--	--	psi
DIMENSIONS	Pipe	BTC	LTC	STC	
Outside Diameter	9.625	10.625	10.625	10.625	in.
Wall Thickness	0.395	--	--	--	in.
Inside Diameter	8.835	8.835	8.835	8.835	in.
Standard Drift	8.679	8.679	8.679	8.679	in.
Alternate Drift	8.750	8.750	8.750	8.750	in.
Nominal Linear Weight, T&C	40.00	--	--	--	lbs/ft
Plain End Weight	38.97	--	--	--	lbs/ft
PERFORMANCE	Pipe	BTC	LTC	STC	
Minimum Collapse Pressure	2,570	2,570	2,570	2,570	psi
Minimum Internal Yield Pressure	3,950	3,950	3,950	3,950	psi
Minimum Pipe Body Yield Strength	630	--	--	--	1,000 lbs
Joint Strength	--	714	520	452	1,000 lbs
Reference Length	--	11,898	8,665	7,529	ft
MAKE-UP DATA	Pipe	BTC	LTC	STC	
Make-Up Loss	--	4.81	4.75	3.38	in.
Minimum Make-Up Torque	--	--	3,900	3,390	ft-lbs
Maximum Make-Up Torque	--	--	6,500	5,650	ft-lbs

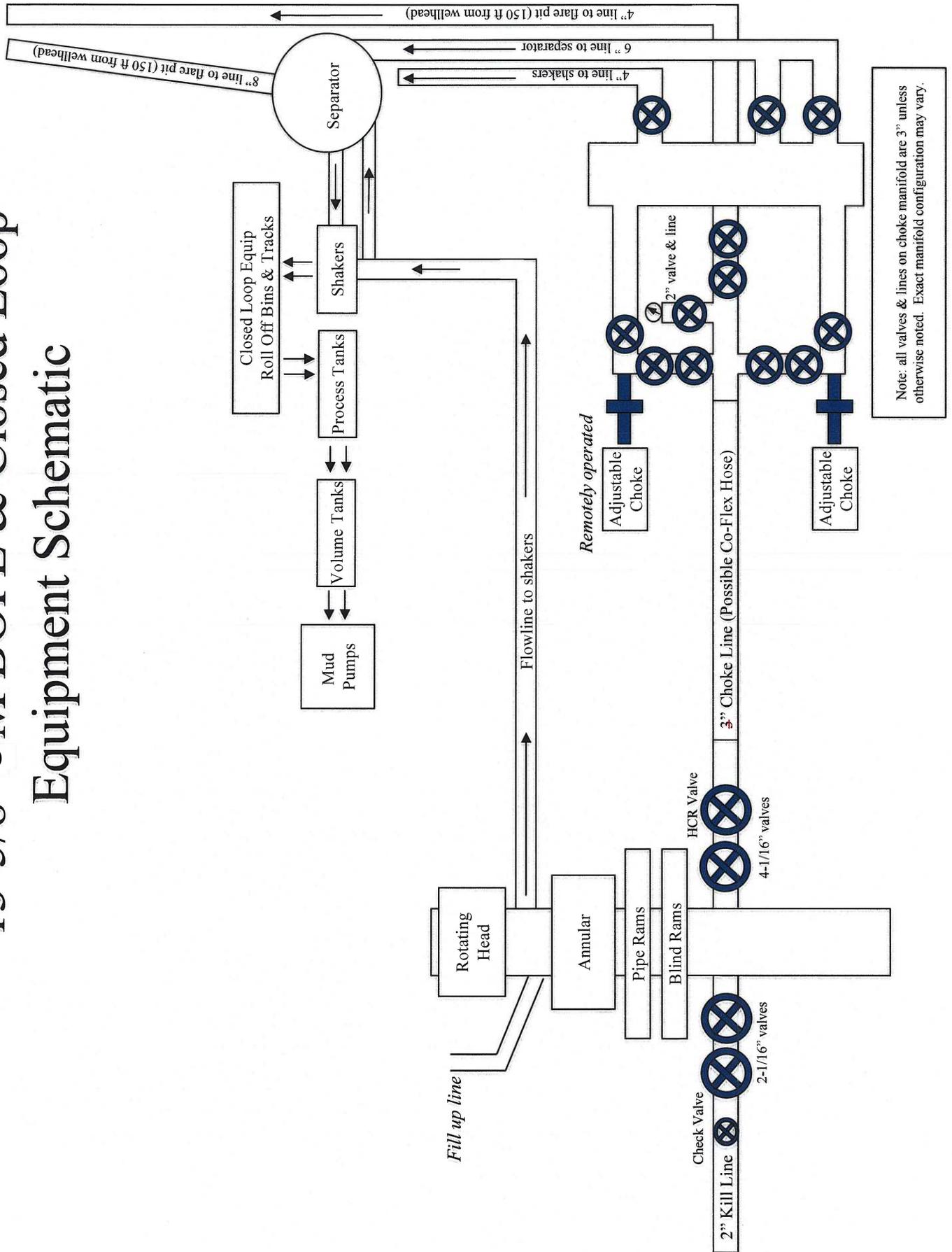
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U. S. Steel Tubular Products  
 460 Wildwood Forest Drive, Suite 300S  
 Spring, Texas 77380

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

# 13-5/8" 5M BOPE & Closed Loop Equipment Schematic



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

**District II**  
 811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 326594

**CONDITIONS**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 326594
	Action Type: [C-103] NOI Change of Plans (C-103A)

**CONDITIONS**

Created By	Condition	Condition Date
pkautz	ALL PREVIOUS COA'S APPLY	6/1/2024