

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

<b>Well Name:</b> JAYHAWK 7-6 FED FEE COM	<b>Well Location:</b> T26S / R34E / SEC 7 / SWSE /	<b>County or Parish/State:</b>
<b>Well Number:</b> 21H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM114990	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b> 3002548341	<b>Well Status:</b> Approved Application for Permit to Drill	<b>Operator:</b> DEVON ENERGY PRODUCTION COMPANY LP

**Notice of Intent**

**Sundry ID:** 2711721

**Type of Submission:** Notice of Intent

**Type of Action:** APD Change

**Date Sundry Submitted:** 01/19/2023

**Time Sundry Submitted:** 02:41

**Date proposed operation will begin:** 01/19/2023

**Procedure Description:** DRILLING ONLY Devon Energy Production Co., L.P. (Devon) respectfully requests to change the BHL, depth, and for optional surface casing/drilling plan of 10-3/4" surface casing inside of 13-1/2" surface hole on the subject well. Please see attached revised C102, Drill plan, directional plan. Permitted BHL: NENE, 20 FNL, 1170 FEL, 6-26S-34E Proposed BHL: NENE, 20 FNL, 400 FEL, 6-26S-34E Permitted TVD/MD: 10900/21098 Proposed TVD/MD: 13426/23933

**NOI Attachments**

**Procedure Description**

Jayhawk\_7\_6\_Fed\_Fee\_Com\_21H\_Directional\_Plan\_01\_13\_23\_20230119144054.pdf

WA018096303\_JAYHAWK\_7\_6\_FED\_FEE\_COM\_21H\_WL\_R2\_SIGNED\_20230119144054.pdf

Jayhawk\_7\_6\_Fed\_Fee\_Com\_21H\_20230119144054.pdf

8.625\_32lb\_P110EC\_SPRINT\_FJ\_VST\_20230119143923.pdf

10.750\_40.5lb\_H40\_20230119143923.pdf

Well Name: JAYHAWK 7-6 FED FEE  
COMWell Location: T26S / R34E / SEC 7 /  
SWSE /

County or Parish/State:

Well Number: 21H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM114990

Unit or CA Name:

Unit or CA Number:

US Well Number: 3002548341

Well Status: Approved Application for  
Permit to DrillOperator: DEVON ENERGY  
PRODUCTION COMPANY LP

## Conditions of Approval

### Specialist Review

7\_26\_34\_O\_Sundry\_ID\_2711721\_Jayhawk\_7\_6\_Fed\_Fee\_Com\_21H\_Lea\_NM114990\_DEVON\_ENERGY\_PRODUCT  
ION\_COMPANY\_LP\_13\_22d\_1\_23\_2023\_LV\_20230124083919.pdf

Jayhawk\_7\_6\_Fed\_Fee\_Com\_21H\_Sundry\_ID\_2711721\_Dr\_COA\_20230124083919.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: CHELSEY GREEN

Signed on: JAN 19, 2023 02:41 PM

Name: DEVON ENERGY PRODUCTION COMPANY LP

Title: Regulatory Compliance Professional

Street Address: 333 West Sheridan Avenue

City: Oklahoma City State: OK

Phone: (405) 228-8595

Email address: Chelsey.Green@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: 5752345972

BLM POC Email Address: LVO@BLM.GOV

Disposition: Approved

Disposition Date: 01/24/2023

## PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

<b>OPERATOR'S NAME:</b>	<b>Devon Energy Production Company LP</b>
<b>LEASE NO.:</b>	<b>NMNM114990</b>
<b>LOCATION:</b>	Section 7, T.26 S., R.34 E., NMPM
<b>COUNTY:</b>	Lea County, New Mexico

<b>WELL NAME &amp; NO.:</b>	<b>Jayhawk 7-6 Fed Fee Com 21H</b>
<b>SURFACE HOLE FOOTAGE:</b>	875'/S & 2095'/E
<b>BOTTOM HOLE FOOTAGE:</b>	20'/N & 400'/E
<b>ATS/API ID:</b>	<b>3002548341</b>
<b>APD ID:</b>	
<b>Sundry ID:</b>	<b>2711721</b>

COA

H2S	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Potash	<input checked="" type="checkbox"/> None	<input type="checkbox"/> Secretary	<input type="checkbox"/> R-111-P
Cave/Karst Potential	<input checked="" type="checkbox"/> Low	<input type="checkbox"/> Medium	<input type="checkbox"/> High
Cave/Karst Potential	<input type="checkbox"/> Critical		
Variance	<input type="checkbox"/> None	<input checked="" type="checkbox"/> Flex Hose	<input type="checkbox"/> Other
Wellhead	<input type="checkbox"/> Conventional	<input type="checkbox"/> Multibowl	<input checked="" type="checkbox"/> Both
Wellhead Variance	<input type="checkbox"/> Diverter		
Other	<input type="checkbox"/> 4 String	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP
Other	<input checked="" type="checkbox"/> Fluid Filled	<input type="checkbox"/> Pilot Hole	<input type="checkbox"/> Open Annulus
Cementing	<input type="checkbox"/> Contingency Cement Squeeze	<input checked="" type="checkbox"/> EchoMeter	<input type="checkbox"/> Primary Cement Squeeze
Special Requirements	<input type="checkbox"/> Water Disposal	<input checked="" type="checkbox"/> COM	<input type="checkbox"/> Unit
Special Requirements Variance	<input type="checkbox"/> Break Testing	<input type="checkbox"/> Offline Cementing	<input type="checkbox"/> Batch Sundry

### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Wolfcamp** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

## B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **925 feet** (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

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

**Option 1 (Single Stage):**

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

**Option 2:**

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

- a. First stage: Operator will cement with intent to reach the top of the **Brushy Canyon at 7935' (1005 sxs Class H/C+ additives)**.
- b. Second stage:
  - Operator will perform bradenhead squeeze and top-out. Cement to surface. If cement does not reach surface, the appropriate BLM office shall be notified. (**Squeeze 855 sxs Class C**)

Operator has proposed to pump down 10-3/4" X 8-5/8" annulus after primary cementing stage. Operator must run Echo-meter to verify Cement Slurry/Fluid top in the annulus Or operator shall run a CBL from TD of the 8-5/8" casing to surface after the second stage BH to verify TOC.

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

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

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

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

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

### C. PRESSURE CONTROL

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

#### Option 1:

- a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
- b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 8-5/8 inch intermediate casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

#### Option 2:

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the 10-3/4 inch surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required

for drilling below the surface casing shoe shall be **10,000 (10M) psi**. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

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

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

##### **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 Onshore Order 1 and 2.
- 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.

## 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)

Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

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 Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

## A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
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 Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
  - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin

after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 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 Onshore Order No. 2.

### 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 1/23/2023

7-26-34-O Sundry ID 2711721 Jayhawk 7-6 Fed Fee Com 21H Lea NM114990 DEVON ENERGY PRODUCTION COMPANY LP 13-22d 1-23-2023 LV.xlsm

Jayhawk 7-6 Fed Fee Com 21H

10 3/4		surface csg in a		13 1/2		inch hole.		Design Factors				Surface		
Segment	#/ft	Grade	Coupling	Joint	Collapse	Burst	Length	B@s	a-B	a-C	Weight			
"A"	40.50		h 40	btc	12.20	3.21	0.32	925	6	0.53	6.07	37,463		
"B"				btc			0					0		
w/8.4#/g mud, 30min 5fc Csg Test psig: 1,192												Totals:	925	37,463
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	
13 1/2	0.3637	377	543	336	61	9.00	4263	5M				1.38		
Burst Frac Gradient(s) for Segment(s) A, B = , b All > 0.70, OK.														
Site plot (pipe racks) for C as per O.D. Callouts not found.														

8 5/8		casing inside the		10 3/4		A Buoyant		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	2.08	0.56	0.98	13,100	1	1.64	0.94	419,200		
"B"							0					0		
w/8.4#/g mud, 30min 5fc Csg Test psig: -711												Totals:	13,100	419,200
The cement volume(s) are intended to achieve a top of 0 ft from surface or a 925 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	1005	2192	1670	31	10.50	4370	5M				0.61		
D V Tool(s):												sum of sx	Σ CuFt	Σ%excess
t by stage % :												1860	3423	105
Class 'H' tail cmt yld > 1.20														
Burst Frac Gradient(s) for Segment(s): A, B, C, D = 0.55, b, c, d <0.70 a Problem!!														

5 1/2		casing inside the		8 5/8		Design Factors				Prod 1				
Segment	#/ft	Grade	Coupling	Body	Collapse	Burst	Length	B@s	a-B	a-C	Weight			
"A"	17.00		p 110	btc	2.39	1.02	1.45	23,933	1	2.44	1.71	406,861		
"B"							0					0		
w/8.4#/g mud, 30min 5fc Csg Test psig: 2,954												Totals:	23,933	406,861
The cement volume(s) are intended to achieve a top of 12900 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	1548	2443	1912	28	10.50						0.91		
Class 'C' tail cmt yld > 1.35														

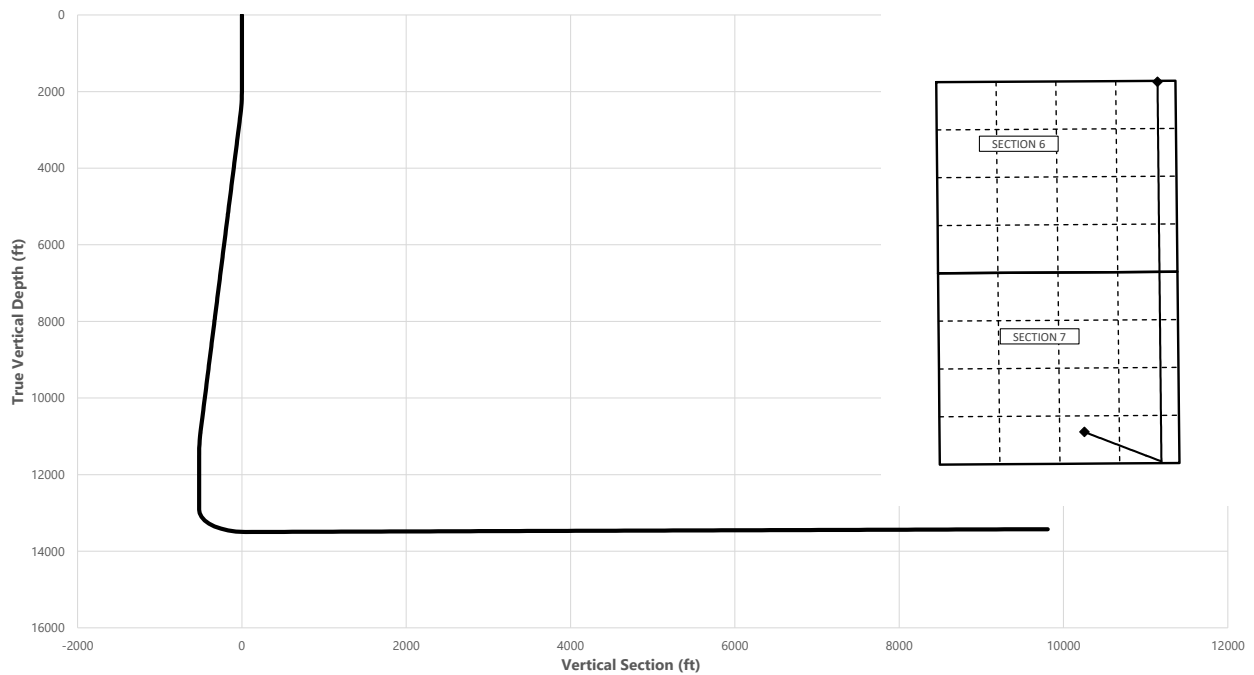
#N/A		5 1/2		Design Factors				<Choose Casing>						
Segment	#/ft	Grade	Coupling	#N/A	Collapse	Burst	Length	B@s	a-B	a-C	Weight			
"A"			0.00				0				0			
"B"			0.00				0				0			
w/8.4#/g mud, 30min 5fc Csg Test psig:												Totals:	0	0
Cmt vol calc below includes this csg, TOC intendec #N/A ft from 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.														



**Well:** Jayhawk 7-6 Fed Fee Com 21H  
**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	115.50	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2600.00	12.00	115.50	2595.62	-26.95	56.50	-17.27	2.00	Hold Tangent
11073.18	12.00	115.50	10883.65	-785.37	1646.56	-503.14	0.00	Drop to Vertical
11673.18	0.00	115.50	11479.27	-812.32	1703.07	-520.41	2.00	Hold Vertical
13118.97	0.00	359.53	12925.06	-812.32	1703.07	-520.41	0.00	KOP
14023.19	90.42	359.53	13498.00	-235.16	1698.33	48.07	10.00	Landing Point
23932.60	90.42	359.53	13425.00	9673.64	1617.05	9807.86	0.00	BHL



Key Depths	MD (ft)	TVD (ft)
Rustler	900.00	900.00
Salt	1251.00	1251.00
Base of Salt	5027.42	4970.00
Delaware	5274.83	5212.00
Cherry Canyon	6385.09	6298.00
Brushy Canyon	8058.66	7935.00
1st Bone Spring Lime	9590.13	9433.00
Bone Spring 1st	10558.28	10380.00
Bone Spring 2nd	11110.30	10920.00
3rd Bone Spring Lime	11623.91	11430.00
Bone Spring 3rd	12204.91	12011.00
Wolfcamp / Point of Penetration	12688.91	12495.00
exit	23852.60	13425.60

	MD (ft)	TVD (ft)	Lat (°)	Long (°)	Section Footages
<b>SHL</b>	0.00	0.00	32.0530	-103.5073	875' FSL, 2095' FEL of Sec 7 in T26S, R34E
<b>KOP</b>	13118.97	12925.06	32.0507	-103.5018	49' FSL, 399' FEL of Sec 7 in T26S, R34E
<b>Point of Penetration</b>	12688.91	12495.00	32.0525	-103.5017	100' FSL, 400' FEL of Sec 7 in T26S, R34E
<b>Exit</b>	23852.60	13425.60	32.0794	-103.5018	100' FNL, 400' FEL of Sec 6 in T26S, R34E
<b>BHL</b>	23932.60	13425.00	32.0796	-103.5018	20' FNL, 400' FEL of Sec 6 in T26S, R34E



**Well:** Jayhawk 7-6 Fed Fee Com 21H  
**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	115.50	100.00	0.00	0.00	0.00	0.00	
200.00	0.00	115.50	200.00	0.00	0.00	0.00	0.00	
300.00	0.00	115.50	300.00	0.00	0.00	0.00	0.00	
400.00	0.00	115.50	400.00	0.00	0.00	0.00	0.00	
500.00	0.00	115.50	500.00	0.00	0.00	0.00	0.00	
600.00	0.00	115.50	600.00	0.00	0.00	0.00	0.00	
700.00	0.00	115.50	700.00	0.00	0.00	0.00	0.00	
800.00	0.00	115.50	800.00	0.00	0.00	0.00	0.00	
900.00	0.00	115.50	900.00	0.00	0.00	0.00	0.00	Rustler,
1000.00	0.00	115.50	1000.00	0.00	0.00	0.00	0.00	
1100.00	0.00	115.50	1100.00	0.00	0.00	0.00	0.00	
1200.00	0.00	115.50	1200.00	0.00	0.00	0.00	0.00	
1251.00	0.00	115.50	1251.00	0.00	0.00	0.00	0.00	Salt
1300.00	0.00	115.50	1300.00	0.00	0.00	0.00	0.00	
1400.00	0.00	115.50	1400.00	0.00	0.00	0.00	0.00	
1500.00	0.00	115.50	1500.00	0.00	0.00	0.00	0.00	
1600.00	0.00	115.50	1600.00	0.00	0.00	0.00	0.00	
1700.00	0.00	115.50	1700.00	0.00	0.00	0.00	0.00	
1800.00	0.00	115.50	1800.00	0.00	0.00	0.00	0.00	
1900.00	0.00	115.50	1900.00	0.00	0.00	0.00	0.00	
2000.00	0.00	115.50	2000.00	0.00	0.00	0.00	0.00	Start Tangent
2100.00	2.00	115.50	2099.98	-0.75	1.58	-0.48	2.00	
2200.00	4.00	115.50	2199.84	-3.00	6.30	-1.92	2.00	
2300.00	6.00	115.50	2299.45	-6.76	14.16	-4.33	2.00	
2400.00	8.00	115.50	2398.70	-12.00	25.16	-7.69	2.00	
2500.00	10.00	115.50	2497.47	-18.74	39.28	-12.00	2.00	
2600.00	12.00	115.50	2595.62	-26.95	56.50	-17.27	2.00	Hold Tangent
2700.00	12.00	115.50	2693.44	-35.90	75.27	-23.00	0.00	
2800.00	12.00	115.50	2791.25	-44.85	94.04	-28.73	0.00	
2900.00	12.00	115.50	2889.07	-53.80	112.80	-34.47	0.00	
3000.00	12.00	115.50	2986.88	-62.75	131.57	-40.20	0.00	
3100.00	12.00	115.50	3084.70	-71.71	150.33	-45.94	0.00	
3200.00	12.00	115.50	3182.51	-80.66	169.10	-51.67	0.00	
3300.00	12.00	115.50	3280.33	-89.61	187.86	-57.41	0.00	
3400.00	12.00	115.50	3378.14	-98.56	206.63	-63.14	0.00	
3500.00	12.00	115.50	3475.96	-107.51	225.40	-68.87	0.00	
3600.00	12.00	115.50	3573.77	-116.46	244.16	-74.61	0.00	
3700.00	12.00	115.50	3671.59	-125.41	262.93	-80.34	0.00	
3800.00	12.00	115.50	3769.40	-134.36	281.69	-86.08	0.00	
3900.00	12.00	115.50	3867.22	-143.31	300.46	-91.81	0.00	
4000.00	12.00	115.50	3965.03	-152.26	319.23	-97.55	0.00	
4100.00	12.00	115.50	4062.84	-161.21	337.99	-103.28	0.00	
4200.00	12.00	115.50	4160.66	-170.16	356.76	-109.02	0.00	
4300.00	12.00	115.50	4258.47	-179.11	375.52	-114.75	0.00	
4400.00	12.00	115.50	4356.29	-188.07	394.29	-120.48	0.00	
4500.00	12.00	115.50	4454.10	-197.02	413.05	-126.22	0.00	
4600.00	12.00	115.50	4551.92	-205.97	431.82	-131.95	0.00	
4700.00	12.00	115.50	4649.73	-214.92	450.59	-137.69	0.00	
4800.00	12.00	115.50	4747.55	-223.87	469.35	-143.42	0.00	
4900.00	12.00	115.50	4845.36	-232.82	488.12	-149.16	0.00	
5000.00	12.00	115.50	4943.18	-241.77	506.88	-154.89	0.00	
5027.42	12.00	115.50	4970.00	-244.22	512.03	-156.46	0.00	Base of Salt
5100.00	12.00	115.50	5040.99	-250.72	525.65	-160.62	0.00	
5200.00	12.00	115.50	5138.81	-259.67	544.41	-166.36	0.00	
5274.83	12.00	115.50	5212.00	-266.37	558.46	-170.65	0.00	Delaware
5300.00	12.00	115.50	5236.62	-268.62	563.18	-172.09	0.00	
5400.00	12.00	115.50	5334.44	-277.57	581.95	-177.83	0.00	
5500.00	12.00	115.50	5432.25	-286.52	600.71	-183.56	0.00	
5600.00	12.00	115.50	5530.07	-295.47	619.48	-189.30	0.00	
5700.00	12.00	115.50	5627.88	-304.43	638.24	-195.03	0.00	
5800.00	12.00	115.50	5725.70	-313.38	657.01	-200.76	0.00	
5900.00	12.00	115.50	5823.51	-322.33	675.78	-206.50	0.00	
6000.00	12.00	115.50	5921.33	-331.28	694.54	-212.23	0.00	
6100.00	12.00	115.50	6019.14	-340.23	713.31	-217.97	0.00	
6200.00	12.00	115.50	6116.95	-349.18	732.07	-223.70	0.00	
6300.00	12.00	115.50	6214.77	-358.13	750.84	-229.44	0.00	
6385.09	12.00	115.50	6298.00	-365.75	766.81	-234.31	0.00	Cherry Canyon
6400.00	12.00	115.50	6312.58	-367.08	769.60	-235.17	0.00	
6500.00	12.00	115.50	6410.40	-376.03	788.37	-240.90	0.00	



Well: Jayhawk 7-6 Fed Fee Com 21H  
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Geodetic System: US State Plane 1983  
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 Zone: 3001 - NM East (NAD83)

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
6600.00	12.00	115.50	6508.21	-384.98	807.14	-246.64	0.00	
6700.00	12.00	115.50	6606.03	-393.93	825.90	-252.37	0.00	
6800.00	12.00	115.50	6703.84	-402.88	844.67	-258.11	0.00	
6900.00	12.00	115.50	6801.66	-411.84	863.43	-263.84	0.00	
7000.00	12.00	115.50	6899.47	-420.79	882.20	-269.58	0.00	
7100.00	12.00	115.50	6997.29	-429.74	900.97	-275.31	0.00	
7200.00	12.00	115.50	7095.10	-438.69	919.73	-281.04	0.00	
7300.00	12.00	115.50	7192.92	-447.64	938.50	-286.78	0.00	
7400.00	12.00	115.50	7290.73	-456.59	957.26	-292.51	0.00	
7500.00	12.00	115.50	7388.55	-465.54	976.03	-298.25	0.00	
7600.00	12.00	115.50	7486.36	-474.49	994.79	-303.98	0.00	
7700.00	12.00	115.50	7584.18	-483.44	1013.56	-309.72	0.00	
7800.00	12.00	115.50	7681.99	-492.39	1032.33	-315.45	0.00	
7900.00	12.00	115.50	7779.81	-501.34	1051.09	-321.18	0.00	
8000.00	12.00	115.50	7877.62	-510.29	1069.86	-326.92	0.00	
8058.66	12.00	115.50	7935.00	-515.54	1080.87	-330.28	0.00	Brushy Canyon
8100.00	12.00	115.50	7975.44	-519.24	1088.62	-332.65	0.00	
8200.00	12.00	115.50	8073.25	-528.20	1107.39	-338.39	0.00	
8300.00	12.00	115.50	8171.06	-537.15	1126.15	-344.12	0.00	
8400.00	12.00	115.50	8268.88	-546.10	1144.92	-349.86	0.00	
8500.00	12.00	115.50	8366.69	-555.05	1163.69	-355.59	0.00	
8600.00	12.00	115.50	8464.51	-564.00	1182.45	-361.32	0.00	
8700.00	12.00	115.50	8562.32	-572.95	1201.22	-367.06	0.00	
8800.00	12.00	115.50	8660.14	-581.90	1219.98	-372.79	0.00	
8900.00	12.00	115.50	8757.95	-590.85	1238.75	-378.53	0.00	
9000.00	12.00	115.50	8855.77	-599.80	1257.52	-384.26	0.00	
9100.00	12.00	115.50	8953.58	-608.75	1276.28	-390.00	0.00	
9200.00	12.00	115.50	9051.40	-617.70	1295.05	-395.73	0.00	
9300.00	12.00	115.50	9149.21	-626.65	1313.81	-401.46	0.00	
9400.00	12.00	115.50	9247.03	-635.60	1332.58	-407.20	0.00	
9500.00	12.00	115.50	9344.84	-644.56	1351.34	-412.93	0.00	
9590.13	12.00	115.50	9433.00	-652.62	1368.26	-418.10	0.00	1st Bone Spring Lime
9600.00	12.00	115.50	9442.66	-653.51	1370.11	-418.67	0.00	
9700.00	12.00	115.50	9540.47	-662.46	1388.88	-424.40	0.00	
9800.00	12.00	115.50	9638.29	-671.41	1407.64	-430.14	0.00	
9900.00	12.00	115.50	9736.10	-680.36	1426.41	-435.87	0.00	
10000.00	12.00	115.50	9833.92	-689.31	1445.17	-441.60	0.00	
10100.00	12.00	115.50	9931.73	-698.26	1463.94	-447.34	0.00	
10200.00	12.00	115.50	10029.55	-707.21	1482.71	-453.07	0.00	
10300.00	12.00	115.50	10127.36	-716.16	1501.47	-458.81	0.00	
10400.00	12.00	115.50	10225.17	-725.11	1520.24	-464.54	0.00	
10500.00	12.00	115.50	10322.99	-734.06	1539.00	-470.28	0.00	
10558.28	12.00	115.50	10380.00	-739.28	1549.94	-473.62	0.00	Bone Spring 1st
10600.00	12.00	115.50	10420.80	-743.01	1557.77	-476.01	0.00	
10700.00	12.00	115.50	10518.62	-751.97	1576.53	-481.74	0.00	
10800.00	12.00	115.50	10616.43	-760.92	1595.30	-487.48	0.00	
10900.00	12.00	115.50	10714.25	-769.87	1614.07	-493.21	0.00	
11000.00	12.00	115.50	10812.06	-778.82	1632.83	-498.95	0.00	
11073.18	12.00	115.50	10883.65	-785.37	1646.56	-503.14	0.00	Drop to Vertical
11100.00	11.46	115.50	10909.90	-787.72	1651.49	-504.65	2.00	
11110.30	11.26	115.50	10920.00	-788.59	1653.32	-505.21	2.00	Bone Spring 2nd
11200.00	9.46	115.50	11008.24	-795.54	1667.88	-509.66	2.00	
11300.00	7.46	115.50	11107.14	-801.87	1681.16	-513.72	2.00	
11400.00	5.46	115.50	11206.50	-806.72	1691.32	-516.82	2.00	
11500.00	3.46	115.50	11306.19	-810.07	1698.35	-518.97	2.00	
11600.00	1.46	115.50	11406.09	-811.92	1702.23	-520.16	2.00	
11623.91	0.99	115.50	11430.00	-812.14	1702.69	-520.30	2.00	3rd Bone Spring Lime
11673.18	0.00	115.50	11479.27	-812.32	1703.07	-520.41	2.00	Hold Vertical
11700.00	0.00	359.53	11506.09	-812.32	1703.07	-520.41	0.00	
11800.00	0.00	359.53	11606.09	-812.32	1703.07	-520.41	0.00	
11900.00	0.00	359.53	11706.09	-812.32	1703.07	-520.41	0.00	
12000.00	0.00	359.53	11806.09	-812.32	1703.07	-520.41	0.00	
12100.00	0.00	359.53	11906.09	-812.32	1703.07	-520.41	0.00	
12200.00	0.00	359.53	12006.09	-812.32	1703.07	-520.41	0.00	
12204.91	0.00	359.53	12011.00	-812.32	1703.07	-520.41	0.00	Bone Spring 3rd
12300.00	0.00	359.53	12106.09	-812.32	1703.07	-520.41	0.00	
12400.00	0.00	359.53	12206.09	-812.32	1703.07	-520.41	0.00	
12500.00	0.00	359.53	12306.09	-812.32	1703.07	-520.41	0.00	
12600.00	0.00	359.53	12406.09	-812.32	1703.07	-520.41	0.00	
12688.91	0.00	359.53	12495.00	-812.32	1703.07	-520.41	0.00	Wolfcamp / Point of Penetration



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MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
12700.00	0.00	359.53	12506.09	-812.32	1703.07	-520.41	0.00	
12800.00	0.00	359.53	12606.09	-812.32	1703.07	-520.41	0.00	
12900.00	0.00	359.53	12706.09	-812.32	1703.07	-520.41	0.00	
13000.00	0.00	359.53	12806.09	-812.32	1703.07	-520.41	0.00	
13100.00	0.00	359.53	12906.09	-812.32	1703.07	-520.41	0.00	
13118.97	0.00	359.53	12925.06	-812.32	1703.07	-520.41	0.00	KOP
13200.00	8.10	359.53	13005.82	-806.60	1703.02	-514.78	10.00	
13300.00	18.10	359.53	13103.09	-783.96	1702.84	-492.48	10.00	
13400.00	28.10	359.53	13194.95	-744.77	1702.51	-453.88	10.00	
13500.00	38.10	359.53	13278.62	-690.23	1702.07	-400.16	10.00	
13600.00	48.10	359.53	13351.54	-621.99	1701.51	-332.94	10.00	
13700.00	58.10	359.53	13411.50	-542.12	1700.85	-254.28	10.00	
13800.00	68.10	359.53	13456.68	-453.06	1700.12	-166.55	10.00	
13900.00	78.10	359.53	13485.71	-357.50	1699.34	-72.43	10.00	
14000.00	88.10	359.53	13497.70	-258.35	1698.52	25.23	10.00	
14023.19	90.42	359.53	13498.00	-235.16	1698.33	48.07	10.00	Landing Point
14100.00	90.42	359.53	13497.43	-158.36	1697.70	123.72	0.00	
14200.00	90.42	359.53	13496.70	-58.36	1696.88	222.21	0.00	
14300.00	90.42	359.53	13495.96	41.63	1696.06	320.70	0.00	
14400.00	90.42	359.53	13495.22	141.62	1695.24	419.19	0.00	
14500.00	90.42	359.53	13494.49	241.62	1694.42	517.68	0.00	
14600.00	90.42	359.53	13493.75	341.61	1693.60	616.17	0.00	
14700.00	90.42	359.53	13493.02	441.60	1692.78	714.66	0.00	
14800.00	90.42	359.53	13492.28	541.60	1691.96	813.15	0.00	
14900.00	90.42	359.53	13491.54	641.59	1691.14	911.64	0.00	
15000.00	90.42	359.53	13490.81	741.59	1690.32	1010.13	0.00	
15100.00	90.42	359.53	13490.07	841.58	1689.50	1108.62	0.00	
15200.00	90.42	359.53	13489.33	941.57	1688.67	1207.11	0.00	
15300.00	90.42	359.53	13488.60	1041.57	1687.85	1305.60	0.00	
15400.00	90.42	359.53	13487.86	1141.56	1687.03	1404.09	0.00	
15500.00	90.42	359.53	13487.12	1241.56	1686.21	1502.58	0.00	
15600.00	90.42	359.53	13486.39	1341.55	1685.39	1601.07	0.00	
15700.00	90.42	359.53	13485.65	1441.54	1684.57	1699.56	0.00	
15800.00	90.42	359.53	13484.91	1541.54	1683.75	1798.05	0.00	
15900.00	90.42	359.53	13484.18	1641.53	1682.93	1896.54	0.00	
16000.00	90.42	359.53	13483.44	1741.53	1682.11	1995.03	0.00	
16100.00	90.42	359.53	13482.70	1841.52	1681.29	2093.52	0.00	
16200.00	90.42	359.53	13481.97	1941.51	1680.47	2192.01	0.00	
16300.00	90.42	359.53	13481.23	2041.51	1679.65	2290.50	0.00	
16400.00	90.42	359.53	13480.49	2141.50	1678.83	2388.99	0.00	
16500.00	90.42	359.53	13479.76	2241.50	1678.00	2487.48	0.00	
16600.00	90.42	359.53	13479.02	2341.49	1677.18	2585.97	0.00	
16700.00	90.42	359.53	13478.28	2441.48	1676.36	2684.46	0.00	
16800.00	90.42	359.53	13477.55	2541.48	1675.54	2782.95	0.00	
16900.00	90.42	359.53	13476.81	2641.47	1674.72	2881.44	0.00	
17000.00	90.42	359.53	13476.07	2741.46	1673.90	2979.93	0.00	
17100.00	90.42	359.53	13475.34	2841.46	1673.08	3078.42	0.00	
17200.00	90.42	359.53	13474.60	2941.45	1672.26	3176.91	0.00	
17300.00	90.42	359.53	13473.86	3041.45	1671.44	3275.40	0.00	
17400.00	90.42	359.53	13473.13	3141.44	1670.62	3373.89	0.00	
17500.00	90.42	359.53	13472.39	3241.43	1669.80	3472.38	0.00	
17600.00	90.42	359.53	13471.66	3341.43	1668.98	3570.87	0.00	
17700.00	90.42	359.53	13470.92	3441.42	1668.15	3669.36	0.00	
17800.00	90.42	359.53	13470.18	3541.42	1667.33	3767.85	0.00	
17900.00	90.42	359.53	13469.45	3641.41	1666.51	3866.34	0.00	
18000.00	90.42	359.53	13468.71	3741.40	1665.69	3964.83	0.00	
18100.00	90.42	359.53	13467.97	3841.40	1664.87	4063.32	0.00	
18200.00	90.42	359.53	13467.24	3941.39	1664.05	4161.81	0.00	
18300.00	90.42	359.53	13466.50	4041.39	1663.23	4260.30	0.00	
18400.00	90.42	359.53	13465.76	4141.38	1662.41	4358.79	0.00	
18500.00	90.42	359.53	13465.03	4241.37	1661.59	4457.28	0.00	
18600.00	90.42	359.53	13464.29	4341.37	1660.77	4555.77	0.00	
18700.00	90.42	359.53	13463.55	4441.36	1659.95	4654.26	0.00	
18800.00	90.42	359.53	13462.82	4541.36	1659.13	4752.75	0.00	
18900.00	90.42	359.53	13462.08	4641.35	1658.31	4851.24	0.00	
19000.00	90.42	359.53	13461.34	4741.34	1657.48	4949.73	0.00	
19100.00	90.42	359.53	13460.61	4841.34	1656.66	5048.22	0.00	
19200.00	90.42	359.53	13459.87	4941.33	1655.84	5146.71	0.00	
19300.00	90.42	359.53	13459.13	5041.32	1655.02	5245.20	0.00	
19400.00	90.42	359.53	13458.40	5141.32	1654.20	5343.69	0.00	





Well: Jayhawk 7-6 Fed Fee Com 21H  
 County: Lea  
 Wellbore: Permit Plan  
 Design: Permit Plan #1

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

MD (ft)	INC (°)	AZI (°)	TVD (ft)	NS (ft)	EW (ft)	VS (ft)	DLS (°/100ft)	Comment
19500.00	90.42	359.53	13457.66	5241.31	1653.38	5442.18	0.00	
19600.00	90.42	359.53	13456.92	5341.31	1652.56	5540.67	0.00	
19700.00	90.42	359.53	13456.19	5441.30	1651.74	5639.16	0.00	
19800.00	90.42	359.53	13455.45	5541.29	1650.92	5737.65	0.00	
19900.00	90.42	359.53	13454.71	5641.29	1650.10	5836.14	0.00	
20000.00	90.42	359.53	13453.98	5741.28	1649.28	5934.63	0.00	
20100.00	90.42	359.53	13453.24	5841.28	1648.46	6033.12	0.00	
20200.00	90.42	359.53	13452.51	5941.27	1647.63	6131.61	0.00	
20300.00	90.42	359.53	13451.77	6041.26	1646.81	6230.10	0.00	
20400.00	90.42	359.53	13451.03	6141.26	1645.99	6328.59	0.00	
20500.00	90.42	359.53	13450.30	6241.25	1645.17	6427.08	0.00	
20600.00	90.42	359.53	13449.56	6341.25	1644.35	6525.57	0.00	
20700.00	90.42	359.53	13448.82	6441.24	1643.53	6624.06	0.00	
20800.00	90.42	359.53	13448.09	6541.23	1642.71	6722.55	0.00	
20900.00	90.42	359.53	13447.35	6641.23	1641.89	6821.04	0.00	
21000.00	90.42	359.53	13446.61	6741.22	1641.07	6919.53	0.00	
21100.00	90.42	359.53	13445.88	6841.22	1640.25	7018.03	0.00	
21200.00	90.42	359.53	13445.14	6941.21	1639.43	7116.52	0.00	
21300.00	90.42	359.53	13444.40	7041.20	1638.61	7215.01	0.00	
21400.00	90.42	359.53	13443.67	7141.20	1637.79	7313.50	0.00	
21500.00	90.42	359.53	13442.93	7241.19	1636.96	7411.99	0.00	
21600.00	90.42	359.53	13442.19	7341.19	1636.14	7510.48	0.00	
21700.00	90.42	359.53	13441.46	7441.18	1635.32	7608.97	0.00	
21800.00	90.42	359.53	13440.72	7541.17	1634.50	7707.46	0.00	
21900.00	90.42	359.53	13439.98	7641.17	1633.68	7805.95	0.00	
22000.00	90.42	359.53	13439.25	7741.16	1632.86	7904.44	0.00	
22100.00	90.42	359.53	13438.51	7841.15	1632.04	8002.93	0.00	
22200.00	90.42	359.53	13437.77	7941.15	1631.22	8101.42	0.00	
22300.00	90.42	359.53	13437.04	8041.14	1630.40	8199.91	0.00	
22400.00	90.42	359.53	13436.30	8141.14	1629.58	8298.40	0.00	
22500.00	90.42	359.53	13435.56	8241.13	1628.76	8396.89	0.00	
22600.00	90.42	359.53	13434.83	8341.12	1627.94	8495.38	0.00	
22700.00	90.42	359.53	13434.09	8441.12	1627.11	8593.87	0.00	
22800.00	90.42	359.53	13433.36	8541.11	1626.29	8692.36	0.00	
22900.00	90.42	359.53	13432.62	8641.11	1625.47	8790.85	0.00	
23000.00	90.42	359.53	13431.88	8741.10	1624.65	8889.34	0.00	
23100.00	90.42	359.53	13431.15	8841.09	1623.83	8987.83	0.00	
23200.00	90.42	359.53	13430.41	8941.09	1623.01	9086.32	0.00	
23300.00	90.42	359.53	13429.67	9041.08	1622.19	9184.81	0.00	
23400.00	90.42	359.53	13428.94	9141.08	1621.37	9283.30	0.00	
23500.00	90.42	359.53	13428.20	9241.07	1620.55	9381.79	0.00	
23600.00	90.42	359.53	13427.46	9341.06	1619.73	9480.28	0.00	
23700.00	90.42	359.53	13426.73	9441.06	1618.91	9578.77	0.00	
23800.00	90.42	359.53	13425.99	9541.05	1618.09	9677.26	0.00	
23852.60	90.42	359.53	13425.60	9593.65	1617.65	9729.06	0.00	exit
23900.00	90.42	359.53	13425.25	9641.05	1617.27	9775.75	0.00	
23932.60	90.42	359.53	13425.00	9673.64	1617.05	9807.86	0.00	BHL

**Well:** Jayhawk 7-6 Fed Fee Com 21H  
**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)

<b>MD</b>	<b>INC</b>	<b>AZI</b>	<b>TVD</b>	<b>NS</b>	<b>EW</b>	<b>VS</b>	<b>DLS</b>	<b>Comment</b>
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100ft)	

**1. Geologic Formations**

TVD of target	13426	Pilot hole depth	N/A
MD at TD:	23933	Deepest expected fresh water	

**Basin**

Formation	Depth (TVD) from KB	Water/Mineral Bearing/Target Zone?	Hazards*
Rustler	900		
Salt	1251		
Base of Salt	4970		
Delaware	5212		
Cherry Canyon	6298		
Brushy Canyon	7935		
1st Bone Spring Lime	9433		
Bone Spring 1st	10380		
Bone Spring 2nd	10920		
3rd Bone Spring Lime	11430		
Bone Spring 3rd	12011		
Wolfcamp	12495		

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

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

Hole Size	Csg. Size	Wt (PPF)	Grade	Conn	Casing Interval		Casing Interval	
					From (MD)	To (MD)	From (TVD)	To (TVD)
13 1/2	10 3/4	40 1/2	H40	BTC	0	925	0	925
9 7/8	8 5/8	32	P110	Sprint FJ	0	13100	0	13100
7 7/8	5 1/2	17	P110	BTC	0	23933	0	13426

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

**3. Cementing Program (Primary Design)**

Casing	# Sks	TOC	Wt. ppg	Yld (ft3/sack)	Slurry Description
Surface	377	Surf	13.2	1.44	Lead: Class C Cement + additives
Int 1	407	Surf	9	3.27	Lead: Class C Cement + additives
	598	7935	13.2	1.44	Tail: Class H / C + additives
Int 1 Intermediate Squeeze	855	Surf	13.2	1.44	Squeeze Lead: Class C Cement + additives
	407	Surf	9	3.27	Lead: Class C Cement + additives
	598	7935	13.2	1.44	Tail: Class H / C + additives
Production	117	11119	9	3.27	Lead: Class H / C + additives
	1431	13119	13.2	1.44	Tail: Class H / C + additives

Cementing Program (Primary Design) Assuming no returns are established while drilling, Devon requests to pump a two stage cement job on the 8-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. The final cement top will be verified by Echo-meter. Devon will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program. Devon will report to the BLM the volume of fluid (limited to 1 bbls) used to flush intermediate casing valves following backside cementing procedures.

Casing String	% Excess
Surface	50%
Intermediate 1	30%
Intermediate 1 (Two Stage)	25%
Prod	10%

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

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

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

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

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

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

**6. Logging and Testing Procedures**

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

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

**7. Drilling Conditions**

Condition	Specify what type and where?
BH pressure at deepest TVD	7330
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 Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S plan attached.

**8. Other facets of operation**

Is this a walking operation? Potentially

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

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

Will be pre-setting casing? Potentially

- 1 Spudder rig will move in and batch drill surface hole.
  - a. Rig will utilize fresh water based mud to drill surface hole to TD. Solids control will be handled entirely on a closed loop basis.,
- 2 After drilling the surface hole section, the spudder rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
- 3 The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
- 4 A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with a pressure gauge installed on the wellhead.
- 5 Spudder rig operations is expected to take 4-5 days per well on a multi-well pa.
- 6 The NMOCD will be contacted and notified 24 hours prior to commencing spudder rig operations.
- 7 Drilling operations will be performed with drilling rig. A that time an approved BOP stack will be 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

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

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

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

**District IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number <b>30-025-48341</b>	<sup>2</sup> Pool Code <b>98094</b>	<sup>3</sup> Pool Name <b>BOBCAT DRAW; UPPER WOLFCAMP</b>
<sup>4</sup> Property Code <b>319566</b>	<sup>5</sup> Property Name <b>JAYHAWK 7-6 FED FEE COM</b>	
<sup>7</sup> OGRID No. <b>6137</b>	<sup>8</sup> Operator Name <b>DEVON ENERGY PRODUCTION COMPANY, L.P.</b>	<sup>6</sup> Well Number <b>21H</b>
		<sup>9</sup> Elevation <b>3369.9</b>

<sup>10</sup> Surface Location

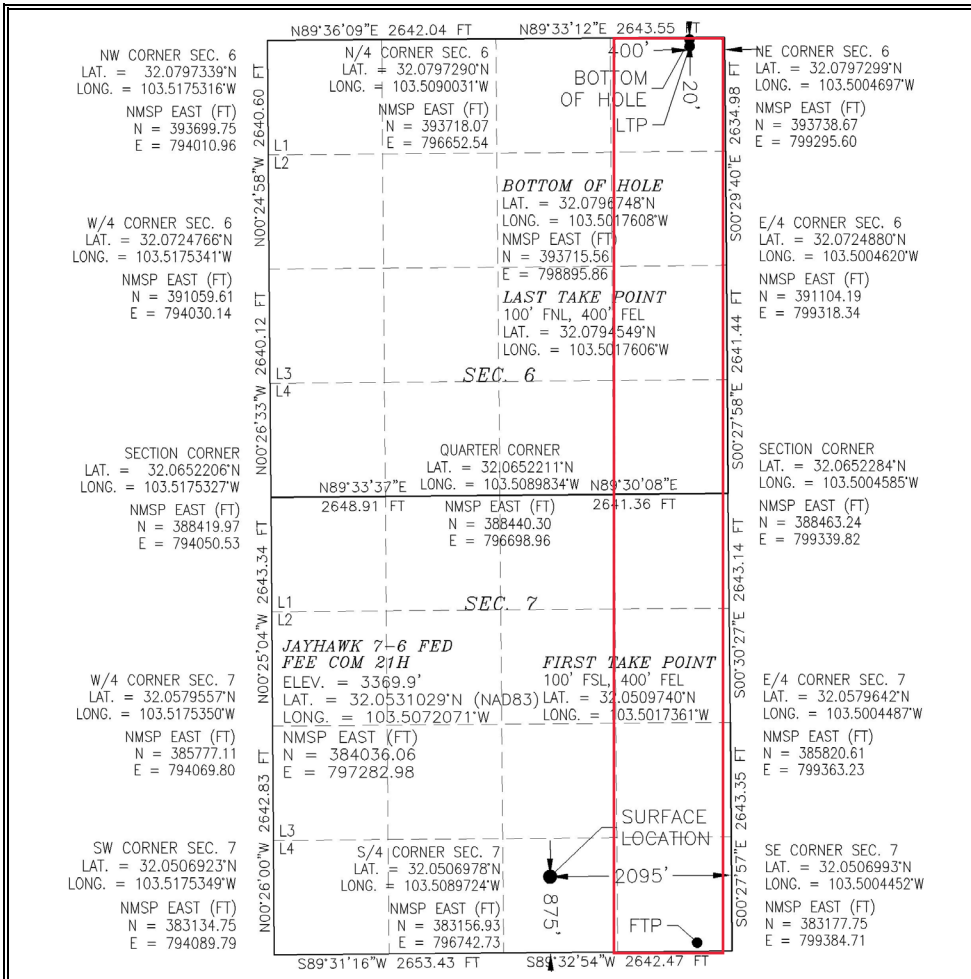
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>O</b>	<b>7</b>	<b>26 S</b>	<b>34 E</b>		<b>875</b>	<b>SOUTH</b>	<b>2095</b>	<b>EAST</b>	<b>LEA</b>

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

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>A</b>	<b>6</b>	<b>26 S</b>	<b>34 E</b>		<b>20</b>	<b>NORTH</b>	<b>400</b>	<b>EAST</b>	<b>LEA</b>

<sup>12</sup> Dedicated Acres <b>320</b>	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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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.



**<sup>17</sup> OPERATOR CERTIFICATION**

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

*Chelsey Green*      01/19/23  
Signature      Date

Chelsey Green  
Printed Name

chelsey.green@dvn.com  
E-mail Address

**<sup>18</sup> 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.

JANUARY 12, 2023  
Date of Survey

*[Signature]*  
Signature and Seal of Professional Surveyor

Certificate Number: **LS 12797**

Professional Surveyor No. **8166B**



Intent  As Drilled

API # 30-025-48341		
Operator Name: DEVON ENERGY PRODUCTION COMPANY, L.P.	Property Name: JAYHAWK 7-6 FED FEE COM	Well Number 21H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	7	26S	34E		49	SOUTH	399	EAST	LEA
Latitude 32.0507					Longitude -103.5018				NAD 83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	7	26S	34E		100	SOUTH	400	EAST	LEA
Latitude 32.0509740					Longitude 103.5017361				NAD 83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	6	26S	34E		100	NORTH	400	EAST	LEA
Latitude 32.0794549					Longitude 103.5017606				NAD 83

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

Is this well an infill well?  Y

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

API # 30-025-45538		
Operator Name: DEVON ENERGY PRODUCTION COMPANY, LP	Property Name: JAYHAWK 7-6 FED FEE COM	Well Number 7H

KZ 06/29/2018

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

CONDITIONS

Action 277675

**CONDITIONS**

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 277675
	Action Type: [C-103] NOI Change of Plans (C-103A)

**CONDITIONS**

Created By	Condition	Condition Date
pkautz	None	10/26/2023