

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**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.Carlsbad Field Office
OCDNMNM114990
Carlsbad Field Office

6. If Indian Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other (6137)

HOBBS OCD

8. Well Name and No.
JAYHAWK 7 FED 10H2. Name of Operator
DEVON ENERGY PRODUCTION COMPANY
Contact: REBECCA DEAL
Email: Rebecca.Deal@dnv.com

JAN 29 2019

9. API Well No.

30-025-45548

3a. Address
333 WEST SHERIDAN AVE
OKLAHOMA CITY, OK 731023b. Phone No. (include area code)
Ph: 405-228-8429

RECEIVED

10. Field and Pool or Exploratory Area
BOBCAT DRAW; UWC

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 7 T26S R34E Mer NMP NENW 540FNL 2045FWL

11. County or Parish, State

LEA COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original APD
	☐ Convert to Injection	☐ Plug Back	☐ 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 recompleat 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 recompleat 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 Co. requests the following changes to the Jayhawk 7 Fed 10H APD:

TVD/MD Change from 12,576.48'/17,562.66' to 12,652'/17,642'

Alternate casing design change including removing the 10.625" hole size from the intermediate section and changing the 8.625" casing thread form to a Teklock wedge

Please see attached C-102, drilling plan, directional & AC plan, spec sheet and plot.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.	
Electronic Submission #450673 verified by the BLM Well Information System For DEVON ENERGY PRODUCTION COMPANY, sent to the Hobbs Committed to AFMSS for processing by MUSTAFA HAQUE on 01/16/2019 ()	
Name (Printed/Typed) REBECCA DEAL	Title REGULATORY COMPLIANCE PROFESSI
Signature (Electronic Submission)	Date 01/15/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>Mustafa Haque</u>	Title <u>Petroleum Engineer</u>	Date <u>01-16-2019</u>
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.	<u>Carlsbad Field Office</u>	

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)

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

K2

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	DEVON ENERGY PRODUCTION COMPANY LP
LEASE NO.:	NMNM114990
WELL NAME & NO.:	JAYHAWK 7 FED 10H
SURFACE HOLE FOOTAGE:	540'/N & 2045'/W
BOTTOM HOLE FOOTAGE:	20'/S & 2320'/W
LOCATION:	SECTION 7, T26S, R34E, NMPM
COUNTY:	LEA

COA

H2S	☐ Yes	☒ No	
Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst Potential	☒ Low	☐ Medium	☐ High
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	☐ Conventional	☒ Multibowl	☐ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP

All previous COAs still apply, except for the following:

A. CASING

Primary Casing Design

1. The 10-3/4 inch surface casing shall be set at approximately **900** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) 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 7-5/8 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 a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

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

Operator has proposed to pump down 10 3/4" X 7 5/8" annulus. Operator must run a CBL from TD of the 7 5/8" casing to surface. Submit results to BLM.

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.

Alternate Casing Design:

4. The 13-3/8 inch surface casing shall be set at approximately 900 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) 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.

5. The minimum required fill of cement behind the alternate 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. Excess calculates to 7% - additional cement will be required.

Option 2:

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

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

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

6. 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.

MHH 01162019

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)

☒ Chaves and Roosevelt Counties

Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.

During office hours call (575) 627-0272.

After office hours call (575)

☒ 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)
393-3612

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.

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: (505) 334-6170
District III
1000 Rio Brazos Road, Artec, 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

¹ API Number	² Pool Code 98094	³ Pool Name BOBCAT DRAW; UPPER WOLFCAMP
⁴ Property Code	⁵ Property Name JAYHAWK 7 FED	⁶ Well Number 10H
⁷ OGRID No. 6137	⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.	⁹ Elevation 3339.8

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	7	26 S	34 E		540	NORTH	2045	WEST	LEA

¹¹ 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
N	7	26 S	34 E		20	SOUTH	2310	WEST	LEA

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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.

		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided 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. <i>Rebecca Deal</i> 1/9/2019 Signature Date Rebecca Deal, Regulatory Analyst Printed Name Rebecca.deal@dmr.com E-mail Address ¹⁸ 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. DECEMBER 5, 2018 Date of Survey <i>[Signature]</i> Signature and Seal of Professional Surveyor Certificate Number 1277 (LAWSON, PLS 1277) SURVEY NO. 6361B
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Intent ☒ As Drilled ☐

API #

Operator Name:	Property Name:	Well Number
DEVON ENERGY PRODUCTION CO. L.P.	JAYHAWK 7 FED	10H

Kick Off Point (KOP)

UL	Section 7	Township 26S	Range 34E	Lot	Feet 620	From N/S FNL	Feet 2310	From E/W FWL	County LEA
Latitude 32.065087					Longitude -103.51004			NAD 83	

First Take Point (FTP)

UL	Section 7	Township 26S	Range 34E	Lot	Feet 100	From N/S NORTH	Feet 2310	From E/W WEST	County LEA
Latitude 32.0649462					Longitude 103.5100773			NAD 83	

Last Take Point (LTP)

UL	Section 7	Township 26S	Range 34E	Lot	Feet 100	From N/S SOUTH	Feet 2310	From E/W WEST	County LEA
Latitude 32.0509720					Longitude 103.5100806			NAD 83	

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

Is this well an infill well? ☐

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

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

1. Geologic Formations

TVD of target	12,652	Pilot hole depth	N/A
MD at TD:	17,642	Deepest expected fresh water:	890'

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
RUSTLER	891		
TOP SALT	1251		
BASE OF SALT	4961		
BELL CANYON	4961		
CHERRY CANYON	6301		
BRUSHY CANYON	7931		
BONE SPRING	9441		
BONE SPRING 1ST	10381		
BONE SPRING 2ND	10921		
BONE SPRING 3RD	12071		
WOLFCAMP	12491		
STRAWN	15011		

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

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
14.75"	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS
8.75"	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS
9.875"	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS	See AFMSS
6.75"	0	17,642 MD / 12,652 TVD	5.5"	20	P110	Vam SG	1.125	1.25	1.6

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.

A variance is requested to wave the centralizer requirement for the 7-5/8" flush casing in the 8-3/4" hole and the 5-1/2" SF/Flush casing in the 6-3/4" hole.

Casing Program (Alternate Design)

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Tension
	From	To							
17.5"	0	900' (TVD)	13.375"	48	H-40	STC	1.125	1.25	1.6
9.875"	0	12,071' (TVD)	8.625"	32	P110 HSCY	Tek-lock Wedge	1.125	1.25	1.6
7.875"	0	17,642' (MD)/ 12,652' TVD	5.5"	20	P110	Vam SG	1.125	1.25	1.6

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Rustler top will be validated via drilling parameters (i.e. reduction in ROP) and surface casing setting depth revised accordingly if needed.

A variance is requested to wave the centralizer requirement for the 8-5/8" casing in the 9-7/8" hole and the 5-1/2" SF/Flush casing in the 7-7/8" hole.

8-5/8" Intermediate casing will be kept fluid filled.

3. Cementing Program (Primary Design)

Casing	# Sks	Wt. lb/gal	Yld ft3/sack	Slurry Description
Surface	See AFMSS	See AFMSS	See AFMSS	See AFMSS
Int	See AFMSS	See AFMSS	See AFMSS	See AFMSS
	See AFMSS	See AFMSS	See AFMSS	See AFMSS
Intermediate Two-Stage (Bradenhead)	1000	14.8	1.33	Class C Cement + 0.125 lbs/sack Poly-E-Flake
	482	13.2	1.6	Class H w/ additives
Production	827	13.2	1.33	Class H w/ additives

If a DV tool is used, depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
10-3/4" Surface	Surface	50%
7-5/8" Intermediate	Surface	30%

5-1/2" Production Casing

200' Tie-Back to intermediate

25%

Cementing Program (Alternate Design)

Casing	# Sks	Wt. lb/ gal	Yld ft ³ / sack	Slurry Description
Surface	823	14.8	1.34	Tail: Class C Cement + 1% Calcium Chloride
Int	404	9	3.27	Lead: Tuned Light® Cement
	410	13.2	1.6	Tail: (50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite
Intermediate Two-Stage (Bradenhead)	750	14.8	1.33	Class C Cement + 0.125 lbs/sack Poly-E-Flake
	410	13.2	1.6	Tail: (50:50) Class H Cement w/ additives
Production	938	13.2	1.33	Class H Cement w/ additives

If a DV tool is used, depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
13-3/8" Surface	Surface	50%
8-5/8" Intermediate	Surface	30%
5-1/2" Production Casing	200' Tie-Back to intermediate	25%

WCDSC Permian NM

Lea County (NAD83 New Mexico East)

Sec 07-T26S-R34E

Jayhawk 7 FED 10H

Wellbore #1

Plan: Permit Plan 2

Standard Planning Report - Geographic

17 December, 2018

Planning Report - Geographic

Database: EDM r5000.141_Prod US
 Company: WCDSC Permian NM
 Project: Lea County (NAD83 New Mexico East)
 Site: Sec 07-T26S-R34E
 Well: Jayhawk 7 FED 10H
 Wellbore: Wellbore #1
 Design: Permit Plan 2

Local Co-ordinate Reference: Well Jayhawk 7 FED 10H
 TVD Reference: RKB @ 3364.80ft
 MD Reference: RKB @ 3364.80ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Project Lea County (NAD83 New Mexico East)

Map System: US State Plane 1983 **System Datum:** Mean Sea Level
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone

Site Sec 07-T26S-R34E

Site Position: **From:** Lat/Long **Northing:** 383,354.91 usft **Latitude:** 32.051193
Easting: 799,057.94 usft **Longitude:** -103.501496
Position Uncertainty: 0.00 ft **Slot Radius:** 13-3/16" **Grid Convergence:** 0.44 °

Well Jayhawk 7 FED 10H

Well Position **+N/-S** 0.00 ft **Northing:** 387,895.77 usft **Latitude:** 32.063737
+E/-W 0.00 ft **Easting:** 796,099.08 usft **Longitude:** -103.510933
Position Uncertainty 0.50 ft **Wellhead Elevation:** **Ground Level:** 3,339.80 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/23/2018	6.79	59.91	47,737.01281732

Design Permit Plan 2

Audit Notes:

Version: **Phase:** PROTOTYPE **Tie On Depth:** 0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	176.36

Plan Survey Tool Program **Date** 12/17/2018

Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,642.13 Permit Plan 2 (Wellbore #1)	MWD+HDGM OWSG MWD + HDGM	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,347.64	4.35	28.85	4,347.31	11.54	6.36	1.25	1.25	0.00	28.85	
11,460.36	4.35	28.85	11,439.58	483.56	266.45	0.00	0.00	0.00	0.00	
11,750.06	0.00	0.00	11,729.00	493.18	271.74	1.50	-1.50	0.00	180.00	
12,100.10	0.00	0.00	12,079.04	493.18	271.74	0.00	0.00	0.00	0.00	
13,000.10	90.00	179.69	12,652.00	-79.77	274.86	10.00	10.00	0.00	179.69	PBHL - Jayhawk 7 FE
17,642.13	90.00	179.69	12,652.00	-4,721.73	300.13	0.00	0.00	0.00	0.00	PBHL - Jayhawk 7 FE

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Jayhawk 7 FED 10H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3364.80ft
Project:	Lea County (NAD83 New Mexico East)	MD Reference:	RKB @ 3364.80ft
Site:	Sec 07-T26S-R34E	North Reference:	Grid
Well:	Jayhawk 7 FED 10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
100.00	0.00	0.00	100.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
200.00	0.00	0.00	200.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
300.00	0.00	0.00	300.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
400.00	0.00	0.00	400.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
500.00	0.00	0.00	500.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
600.00	0.00	0.00	600.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
700.00	0.00	0.00	700.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
800.00	0.00	0.00	800.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
900.00	0.00	0.00	900.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
1,000.00	0.00	0.00	1,000.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
1,100.00	0.00	0.00	1,100.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
1,200.00	0.00	0.00	1,200.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
1,300.00	0.00	0.00	1,300.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
1,400.00	0.00	0.00	1,400.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
1,500.00	0.00	0.00	1,500.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
1,600.00	0.00	0.00	1,600.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
1,700.00	0.00	0.00	1,700.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
1,800.00	0.00	0.00	1,800.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
1,900.00	0.00	0.00	1,900.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
2,000.00	0.00	0.00	2,000.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
2,100.00	0.00	0.00	2,100.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
2,200.00	0.00	0.00	2,200.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
2,300.00	0.00	0.00	2,300.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
2,400.00	0.00	0.00	2,400.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
2,500.00	0.00	0.00	2,500.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
2,600.00	0.00	0.00	2,600.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
2,700.00	0.00	0.00	2,700.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
2,800.00	0.00	0.00	2,800.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
2,900.00	0.00	0.00	2,900.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
3,000.00	0.00	0.00	3,000.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
3,100.00	0.00	0.00	3,100.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
3,200.00	0.00	0.00	3,200.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
3,300.00	0.00	0.00	3,300.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
3,400.00	0.00	0.00	3,400.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
3,500.00	0.00	0.00	3,500.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
3,600.00	0.00	0.00	3,600.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
3,700.00	0.00	0.00	3,700.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
3,800.00	0.00	0.00	3,800.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
3,900.00	0.00	0.00	3,900.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
4,000.00	0.00	0.00	4,000.00	0.00	0.00	387,895.77	796,099.08	32.063737	-103.510933
4,100.00	1.25	28.85	4,099.99	0.96	0.53	387,896.72	796,099.60	32.063740	-103.510932
4,200.00	2.50	28.85	4,199.94	3.82	2.11	387,899.59	796,101.18	32.063747	-103.510927
4,300.00	3.75	28.85	4,299.79	8.60	4.74	387,904.36	796,103.81	32.063761	-103.510918
4,347.64	4.35	28.85	4,347.31	11.54	6.36	387,907.31	796,105.44	32.063769	-103.510913
4,400.00	4.35	28.85	4,399.52	15.02	8.27	387,910.78	796,107.35	32.063778	-103.510906
4,500.00	4.35	28.85	4,499.23	21.65	11.93	387,917.42	796,111.01	32.063796	-103.510894
4,600.00	4.35	28.85	4,598.94	28.29	15.59	387,924.06	796,114.66	32.063814	-103.510882
4,700.00	4.35	28.85	4,698.65	34.92	19.24	387,930.69	796,118.32	32.063833	-103.510870
4,800.00	4.35	28.85	4,798.37	41.56	22.90	387,937.33	796,121.98	32.063851	-103.510858
4,900.00	4.35	28.85	4,898.08	48.20	26.56	387,943.97	796,125.63	32.063869	-103.510846
5,000.00	4.35	28.85	4,997.79	54.83	30.21	387,950.60	796,129.29	32.063887	-103.510835
5,100.00	4.35	28.85	5,097.50	61.47	33.87	387,957.24	796,132.95	32.063905	-103.510823
5,200.00	4.35	28.85	5,197.22	68.11	37.53	387,963.87	796,136.60	32.063923	-103.510811
5,300.00	4.35	28.85	5,296.93	74.74	41.18	387,970.51	796,140.26	32.063942	-103.510799

Planning Report - Geographic

Database: EDM r5000.141_Prod US
 Company: WCDSC Permian NM
 Project: Lea County (NAD83 New Mexico East)
 Site: Sec 07-T26S-R34E
 Well: Jayhawk 7 FED 10H
 Wellbore: Wellbore #1
 Design: Permit Plan 2

Local Co-ordinate Reference: Well Jayhawk 7 FED 10H
 TVD Reference: RKB @ 3364.80ft
 MD Reference: RKB @ 3364.80ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,400.00	4.35	28.85	5,396.64	81.38	44.84	387,977.15	796,143.92	32.063960	-103.510787	
5,500.00	4.35	28.85	5,496.35	88.02	48.50	387,983.78	796,147.57	32.063978	-103.510775	
5,600.00	4.35	28.85	5,596.07	94.65	52.15	387,990.42	796,151.23	32.063996	-103.510763	
5,700.00	4.35	28.85	5,695.78	101.29	55.81	387,997.06	796,154.89	32.064014	-103.510751	
5,800.00	4.35	28.85	5,795.49	107.92	59.47	388,003.69	796,158.54	32.064032	-103.510739	
5,900.00	4.35	28.85	5,895.20	114.56	63.12	388,010.33	796,162.20	32.064051	-103.510727	
6,000.00	4.35	28.85	5,994.92	121.20	66.78	388,016.97	796,165.86	32.064069	-103.510715	
6,100.00	4.35	28.85	6,094.63	127.83	70.44	388,023.60	796,169.51	32.064087	-103.510703	
6,200.00	4.35	28.85	6,194.34	134.47	74.09	388,030.24	796,173.17	32.064105	-103.510691	
6,300.00	4.35	28.85	6,294.05	141.11	77.75	388,036.87	796,176.83	32.064123	-103.510679	
6,400.00	4.35	28.85	6,393.77	147.74	81.41	388,043.51	796,180.48	32.064141	-103.510667	
6,500.00	4.35	28.85	6,493.48	154.38	85.06	388,050.15	796,184.14	32.064160	-103.510655	
6,600.00	4.35	28.85	6,593.19	161.01	88.72	388,056.78	796,187.80	32.064178	-103.510643	
6,700.00	4.35	28.85	6,692.90	167.65	92.38	388,063.42	796,191.45	32.064196	-103.510631	
6,800.00	4.35	28.85	6,792.62	174.29	96.03	388,070.06	796,195.11	32.064214	-103.510619	
6,900.00	4.35	28.85	6,892.33	180.92	99.69	388,076.69	796,198.77	32.064232	-103.510607	
7,000.00	4.35	28.85	6,992.04	187.56	103.35	388,083.33	796,202.42	32.064250	-103.510595	
7,100.00	4.35	28.85	7,091.75	194.20	107.00	388,089.96	796,206.08	32.064269	-103.510583	
7,200.00	4.35	28.85	7,191.47	200.83	110.66	388,096.60	796,209.74	32.064287	-103.510571	
7,300.00	4.35	28.85	7,291.18	207.47	114.32	388,103.24	796,213.39	32.064305	-103.510559	
7,400.00	4.35	28.85	7,390.89	214.11	117.97	388,109.87	796,217.05	32.064323	-103.510547	
7,500.00	4.35	28.85	7,490.60	220.74	121.63	388,116.51	796,220.71	32.064341	-103.510535	
7,600.00	4.35	28.85	7,590.32	227.38	125.29	388,123.15	796,224.36	32.064359	-103.510523	
7,700.00	4.35	28.85	7,690.03	234.01	128.94	388,129.78	796,228.02	32.064378	-103.510511	
7,800.00	4.35	28.85	7,789.74	240.65	132.60	388,136.42	796,231.68	32.064396	-103.510499	
7,900.00	4.35	28.85	7,889.45	247.29	136.26	388,143.05	796,235.33	32.064414	-103.510488	
8,000.00	4.35	28.85	7,989.17	253.92	139.91	388,149.69	796,238.99	32.064432	-103.510476	
8,100.00	4.35	28.85	8,088.88	260.56	143.57	388,156.33	796,242.65	32.064450	-103.510464	
8,200.00	4.35	28.85	8,188.59	267.20	147.23	388,162.96	796,246.30	32.064468	-103.510452	
8,300.00	4.35	28.85	8,288.31	273.83	150.88	388,169.60	796,249.96	32.064487	-103.510440	
8,400.00	4.35	28.85	8,388.02	280.47	154.54	388,176.24	796,253.62	32.064505	-103.510428	
8,500.00	4.35	28.85	8,487.73	287.10	158.20	388,182.87	796,257.27	32.064523	-103.510416	
8,600.00	4.35	28.85	8,587.44	293.74	161.85	388,189.51	796,260.93	32.064541	-103.510404	
8,700.00	4.35	28.85	8,687.16	300.38	165.51	388,196.15	796,264.59	32.064559	-103.510392	
8,800.00	4.35	28.85	8,786.87	307.01	169.17	388,202.78	796,268.24	32.064577	-103.510380	
8,900.00	4.35	28.85	8,886.58	313.65	172.82	388,209.42	796,271.90	32.064596	-103.510368	
9,000.00	4.35	28.85	8,986.29	320.29	176.48	388,216.05	796,275.56	32.064614	-103.510356	
9,100.00	4.35	28.85	9,086.01	326.92	180.14	388,222.69	796,279.21	32.064632	-103.510344	
9,200.00	4.35	28.85	9,185.72	333.56	183.79	388,229.33	796,282.87	32.064650	-103.510332	
9,300.00	4.35	28.85	9,285.43	340.20	187.45	388,235.96	796,286.53	32.064668	-103.510320	
9,400.00	4.35	28.85	9,385.14	346.83	191.11	388,242.60	796,290.18	32.064686	-103.510308	
9,500.00	4.35	28.85	9,484.86	353.47	194.76	388,249.24	796,293.84	32.064705	-103.510296	
9,600.00	4.35	28.85	9,584.57	360.10	198.42	388,255.87	796,297.50	32.064723	-103.510284	
9,700.00	4.35	28.85	9,684.28	366.74	202.08	388,262.51	796,301.15	32.064741	-103.510272	
9,800.00	4.35	28.85	9,783.99	373.38	205.73	388,269.14	796,304.81	32.064759	-103.510260	
9,900.00	4.35	28.85	9,883.71	380.01	209.39	388,275.78	796,308.47	32.064777	-103.510248	
10,000.00	4.35	28.85	9,983.42	386.65	213.05	388,282.42	796,312.12	32.064795	-103.510236	
10,100.00	4.35	28.85	10,083.13	393.29	216.70	388,289.05	796,315.78	32.064814	-103.510224	
10,200.00	4.35	28.85	10,182.84	399.92	220.36	388,295.69	796,319.44	32.064832	-103.510212	
10,300.00	4.35	28.85	10,282.56	406.56	224.02	388,302.33	796,323.09	32.064850	-103.510200	
10,400.00	4.35	28.85	10,382.27	413.19	227.67	388,308.96	796,326.75	32.064868	-103.510188	
10,500.00	4.35	28.85	10,481.98	419.83	231.33	388,315.60	796,330.41	32.064886	-103.510176	
10,600.00	4.35	28.85	10,581.69	426.47	234.99	388,322.24	796,334.06	32.064904	-103.510164	
10,700.00	4.35	28.85	10,681.41	433.10	238.64	388,328.87	796,337.72	32.064922	-103.510152	
10,800.00	4.35	28.85	10,781.12	439.74	242.30	388,335.51	796,341.38	32.064941	-103.510140	

Planning Report - Geographic

Database:	EDM r5000.141_Prod US	Local Co-ordinate Reference:	Well Jayhawk 7 FED 10H
Company:	WCDSC Permian NM	TVD Reference:	RKB @ 3364.80ft
Project:	Lea County (NAD83 New Mexico East)	MD Reference:	RKB @ 3364.80ft
Site:	Sec 07-T26S-R34E	North Reference:	Grid
Well:	Jayhawk 7 FED 10H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,900.00	4.35	28.85	10,880.83	446.38	245.96	388,342.14	796,345.03	32.064959	-103.510129
11,000.00	4.35	28.85	10,980.54	453.01	249.61	388,348.78	796,348.69	32.064977	-103.510117
11,100.00	4.35	28.85	11,080.26	459.65	253.27	388,355.42	796,352.35	32.064995	-103.510105
11,200.00	4.35	28.85	11,179.97	466.29	256.93	388,362.05	796,356.00	32.065013	-103.510093
11,300.00	4.35	28.85	11,279.68	472.92	260.58	388,368.69	796,359.66	32.065031	-103.510081
11,400.00	4.35	28.85	11,379.39	479.56	264.24	388,375.33	796,363.32	32.065050	-103.510069
11,460.36	4.35	28.85	11,439.58	483.56	266.45	388,379.33	796,365.52	32.065061	-103.510061
11,500.00	3.75	28.85	11,479.12	486.01	267.80	388,381.78	796,366.87	32.065067	-103.510057
11,600.00	2.25	28.85	11,578.98	490.60	270.32	388,386.37	796,369.40	32.065080	-103.510049
11,700.00	0.75	28.85	11,678.94	492.89	271.59	388,388.66	796,370.66	32.065086	-103.510045
11,750.06	0.00	0.00	11,729.00	493.18	271.74	388,388.95	796,370.82	32.065087	-103.510044
11,800.00	0.00	0.00	11,778.94	493.18	271.74	388,388.95	796,370.82	32.065087	-103.510044
11,900.00	0.00	0.00	11,878.94	493.18	271.74	388,388.95	796,370.82	32.065087	-103.510044
12,000.00	0.00	0.00	11,978.94	493.18	271.74	388,388.95	796,370.82	32.065087	-103.510044
12,100.00	0.00	0.00	12,078.94	493.18	271.74	388,388.95	796,370.82	32.065087	-103.510044
12,100.10	0.00	0.00	12,079.04	493.18	271.74	388,388.95	796,370.82	32.065087	-103.510044
KOP @ 12100' MD, 620' FNL, 2310' FWL									
12,200.00	9.99	179.69	12,178.44	484.49	271.79	388,380.26	796,370.87	32.065063	-103.510044
12,300.00	19.99	179.69	12,274.91	458.66	271.93	388,354.43	796,371.01	32.064992	-103.510044
12,348.91	24.88	179.69	12,320.11	440.00	272.03	388,335.77	796,371.11	32.064941	-103.510044
First Take Point @ 12349' MD, 100' FNL, 2310' FWL									
12,400.00	29.99	179.69	12,365.43	416.47	272.16	388,312.24	796,371.24	32.064876	-103.510045
12,500.00	39.99	179.69	12,447.26	359.20	272.47	388,254.97	796,371.55	32.064719	-103.510045
12,600.00	49.99	179.69	12,517.89	288.59	272.86	388,184.36	796,371.94	32.064525	-103.510046
12,700.00	59.99	179.69	12,575.19	206.79	273.30	388,102.56	796,372.38	32.064300	-103.510046
12,800.00	69.99	179.69	12,617.41	116.28	273.80	388,012.05	796,372.87	32.064051	-103.510047
12,900.00	79.99	179.69	12,643.28	19.82	274.32	387,915.59	796,373.40	32.063786	-103.510047
13,000.00	89.99	179.69	12,652.00	-79.67	274.86	387,816.10	796,373.94	32.063512	-103.510048
13,000.10	90.00	179.69	12,652.00	-79.77	274.86	387,816.00	796,373.94	32.063512	-103.510048
13,100.00	90.00	179.69	12,652.00	-179.67	275.41	387,716.10	796,374.48	32.063237	-103.510049
13,200.00	90.00	179.69	12,652.00	-279.67	275.95	387,616.10	796,375.03	32.062963	-103.510050
13,300.00	90.00	179.69	12,652.00	-379.67	276.50	387,516.10	796,375.57	32.062688	-103.510050
13,400.00	90.00	179.69	12,652.00	-479.66	277.04	387,416.11	796,376.12	32.062413	-103.510051
13,500.00	90.00	179.69	12,652.00	-579.66	277.58	387,316.11	796,376.66	32.062138	-103.510052
13,600.00	90.00	179.69	12,652.00	-679.66	278.13	387,216.11	796,377.21	32.061863	-103.510052
13,700.00	90.00	179.69	12,652.00	-779.66	278.67	387,116.11	796,377.75	32.061588	-103.510053
13,800.00	90.00	179.69	12,652.00	-879.66	279.22	387,016.11	796,378.29	32.061313	-103.510054
13,900.00	90.00	179.69	12,652.00	-979.66	279.76	386,916.11	796,378.84	32.061038	-103.510055
14,000.00	90.00	179.69	12,652.00	-1,079.66	280.31	386,816.12	796,379.38	32.060764	-103.510055
14,100.00	90.00	179.69	12,652.00	-1,179.65	280.85	386,716.12	796,379.93	32.060489	-103.510056
14,200.00	90.00	179.69	12,652.00	-1,279.65	281.39	386,616.12	796,380.47	32.060214	-103.510057
14,300.00	90.00	179.69	12,652.00	-1,379.65	281.94	386,516.12	796,381.02	32.059939	-103.510057
14,400.00	90.00	179.69	12,652.00	-1,479.65	282.48	386,416.12	796,381.56	32.059664	-103.510058
14,500.00	90.00	179.69	12,652.00	-1,579.65	283.03	386,316.12	796,382.10	32.059389	-103.510059
14,600.00	90.00	179.69	12,652.00	-1,679.65	283.57	386,216.13	796,382.65	32.059114	-103.510059
14,700.00	90.00	179.69	12,652.00	-1,779.64	284.12	386,116.13	796,383.19	32.058839	-103.510060
14,800.00	90.00	179.69	12,652.00	-1,879.64	284.66	386,016.13	796,383.74	32.058565	-103.510061
14,900.00	90.00	179.69	12,652.00	-1,979.64	285.20	385,916.13	796,384.28	32.058290	-103.510062
15,000.00	90.00	179.69	12,652.00	-2,079.64	285.75	385,816.13	796,384.83	32.058015	-103.510062
15,100.00	90.00	179.69	12,652.00	-2,179.64	286.29	385,716.13	796,385.37	32.057740	-103.510063
15,200.00	90.00	179.69	12,652.00	-2,279.64	286.84	385,616.14	796,385.92	32.057465	-103.510064
15,300.00	90.00	179.69	12,652.00	-2,379.64	287.38	385,516.14	796,386.46	32.057190	-103.510064
15,400.00	90.00	179.69	12,652.00	-2,479.63	287.93	385,416.14	796,387.00	32.056915	-103.510065
15,500.00	90.00	179.69	12,652.00	-2,579.63	288.47	385,316.14	796,387.55	32.056640	-103.510066

Planning Report - Geographic

Database: EDM r5000.141_Prod US
Company: WCDSC Permian NM
Project: Lea County (NAD83 New Mexico East)
Site: Sec 07-T26S-R34E
Well: Jayhawk 7 FED 10H
Wellbore: Wellbore #1
Design: Permit Plan 2

Local Co-ordinate Reference: Well Jayhawk 7 FED 10H
TVD Reference: RKB @ 3364.80ft
MD Reference: RKB @ 3364.80ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
15,600.00	90.00	179.69	12,652.00	-2,679.63	289.02	385,216.14	796,388.09	32.056366	-103.510066
15,700.00	90.00	179.69	12,652.00	-2,779.63	289.56	385,116.14	796,388.64	32.056091	-103.510067
15,800.00	90.00	179.69	12,652.00	-2,879.63	290.10	385,016.15	796,389.18	32.055816	-103.510068
15,900.00	90.00	179.69	12,652.00	-2,979.63	290.65	384,916.15	796,389.73	32.055541	-103.510069
16,000.00	90.00	179.69	12,652.00	-3,079.63	291.19	384,816.15	796,390.27	32.055266	-103.510069
16,100.00	90.00	179.69	12,652.00	-3,179.62	291.74	384,716.15	796,390.81	32.054991	-103.510070
16,200.00	90.00	179.69	12,652.00	-3,279.62	292.28	384,616.15	796,391.36	32.054716	-103.510071
16,300.00	90.00	179.69	12,652.00	-3,379.62	292.83	384,516.15	796,391.90	32.054441	-103.510071
16,400.00	90.00	179.69	12,652.00	-3,479.62	293.37	384,416.16	796,392.45	32.054166	-103.510072
16,500.00	90.00	179.69	12,652.00	-3,579.62	293.91	384,316.16	796,392.99	32.053892	-103.510073
16,600.00	90.00	179.69	12,652.00	-3,679.62	294.46	384,216.16	796,393.54	32.053617	-103.510074
16,700.00	90.00	179.69	12,652.00	-3,779.62	295.00	384,116.16	796,394.08	32.053342	-103.510074
16,800.00	90.00	179.69	12,652.00	-3,879.61	295.55	384,016.16	796,394.62	32.053067	-103.510075
16,900.00	90.00	179.69	12,652.00	-3,979.61	296.09	383,916.16	796,395.17	32.052792	-103.510076
17,000.00	90.00	179.69	12,652.00	-4,079.61	296.64	383,816.17	796,395.71	32.052517	-103.510076
17,100.00	90.00	179.69	12,652.00	-4,179.61	297.18	383,716.17	796,396.26	32.052242	-103.510077
17,200.00	90.00	179.69	12,652.00	-4,279.61	297.72	383,616.17	796,396.80	32.051967	-103.510078
17,300.00	90.00	179.69	12,652.00	-4,379.61	298.27	383,516.17	796,397.35	32.051693	-103.510078
17,400.00	90.00	179.69	12,652.00	-4,479.60	298.81	383,416.17	796,397.89	32.051418	-103.510079
17,500.00	90.00	179.69	12,652.00	-4,579.60	299.36	383,316.17	796,398.43	32.051143	-103.510080
17,561.50	90.00	179.69	12,652.00	-4,641.10	299.69	383,254.68	796,398.77	32.050974	-103.510080
Last Take Point @ 17562' MD, 100' FSL, 2310' FWL									
17,562.66	90.00	179.69	12,652.00	-4,642.26	299.70	383,253.52	796,398.78	32.050971	-103.510080
PBHL; 100' FSL, 2310' FWL									
17,600.00	90.00	179.69	12,652.00	-4,679.60	299.90	383,216.18	796,398.98	32.050868	-103.510081
17,642.13	90.00	179.69	12,652.00	-4,721.73	300.13	383,174.05	796,399.21	32.050752	-103.510081

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL - Jayhawk 7 FED	0.00	0.01	0.00	-4,721.73	300.13	383,174.05	796,399.21	32.050752	-103.510081
- plan misses target center by 4731.26ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
VP - Jayhawk 7 FED 10I	0.00	0.00	11,400.00	493.18	271.74	388,388.95	796,370.82	32.065087	-103.510044
- plan misses target center by 13.95ft at 11421.73ft MD (11401.06 TVD, 481.00 N, 265.03 E)									
- Point									

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
12,100.10	12,079.04	493.18	271.74	KOP @ 12100' MD, 620' FNL, 2310' FWL
12,348.91	12,320.11	440.00	272.03	First Take Point @ 12349' MD, 100' FNL, 2310' FWL
17,561.50	12,652.00	-4,641.10	299.69	Last Take Point @ 17562' MD, 100' FSL, 2310' FWL
17,562.66	12,652.00	-4,642.26	299.70	PBHL; 100' FSL, 2310' FWL

WCDSC Permian NM

WELL DETAILS: Jayhawk 7 FED 10H

RKB @ 3384.80ft
3339.80

Northing 367895.77 Easting 798099.08 Latitude 32.063737 Longitude -103.510933

SECTION DETAILS Permit Plan 1

MD	Inc	Azi	TVD	+N-S	+E-W	Dieg	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	
4347.84	4.35	28.85	4347.31	11.54	6.36	1.25	-11.11	
11480.36	4.35	28.85	11439.58	483.56	268.45	0.00	-485.69	
5 11750.06	0.00	0.00	11729.00	483.18	271.74	1.50	-474.95	
6 12100.10	0.00	0.00	12079.04	483.18	271.74	0.00	-474.95	KOP @ 12100' MD, 620' FNL, 2310' FWL
7 13000.10	90.00	179.89	12652.00	-79.77	274.88	10.00	97.05	
8 17842.13	90.00	179.89	12652.00	-4721.73	300.13	0.00	4731.26	

devon

