

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.*Lease Serial No.  
NM114990

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.  
JAYHAWK 6-7 FED 14H

9. API Well No.

10. Field and Pool or Exploratory Area  
BOBCAT DRAW; UWC11. County or Parish, State  
LEA COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

DEVON ENERGY PRODUCTION COMPANY

Contact: REBECCA DEAL

Email: Rebecca.Deal@dvn.com

3a. Address

333 WEST SHERIDAN AVE  
OKLAHOMA CITY, OK 73102

3b. Phone No. (include area code)

Ph: 405-228-8429

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

Sec 6 T26S R34E Mer NMP 450FNL 870FWL

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

## TYPE OF SUBMISSION

## TYPE OF ACTION

☒ Notice of Intent☐ Subsequent Report☐ Final Abandonment Notice☐ Acidize☐ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☐ Deepen☐ Hydraulic Fracturing☐ New Construction☐ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☒ Other  
Change to Original A  
PD

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

Devon Energy Production Co. requests the following changes to the Jayhawk 6-7 Fed 14H APD:

BHL change from 20 FSL &amp; 360 FWL, 6-26S-34E to 20 FNL &amp; 360 FEL, 7-26S-34E

TVD/MD Change from 12,723'/17,630' to 12,805'/23,077'

Alternate casing design change 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 revised C-102, drilling plan, directional &amp; AC plan, spec sheet and plot.

SEE ATTACHED FOR  
CONDITIONS OF APPROV.

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #450696 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 MUSTAFA HAQUETitle Petroleum Engineer  
Carlsbad Field Office

Date 01-16-2019

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

Office

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

(Instructions on page 2)

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

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

|                              |                                    |
|------------------------------|------------------------------------|
| <b>OPERATOR'S NAME:</b>      | DEVON ENERGY PRODUCTION COMPANY LP |
| <b>LEASE NO.:</b>            | NMNM114990                         |
| <b>WELL NAME &amp; NO.:</b>  | JAYHAWK 6-7 FED 14H                |
| <b>SURFACE HOLE FOOTAGE:</b> | 450'/N & 870'/W                    |
| <b>BOTTOM HOLE FOOTAGE:</b>  | 20'/S & 360'/W                     |
| <b>LOCATION:</b>             | SECTION 7, T26S, R34E, NMPM        |
| <b>COUNTY:</b>               | LEA                                |

COA

|                      |                                        |                                            |                               |
|----------------------|----------------------------------------|--------------------------------------------|-------------------------------|
| H2S                  | <input type="radio"/> Yes              | <input checked="" type="radio"/> No        |                               |
| Potash               | <input checked="" type="radio"/> None  | <input type="radio"/> Secretary            | <input type="radio"/> R-111-P |
| Cave/Karst Potential | <input checked="" type="radio"/> Low   | <input type="radio"/> Medium               | <input type="radio"/> High    |
| Variance             | <input type="radio"/> None             | <input checked="" type="radio"/> Flex Hose | <input type="radio"/> Other   |
| Wellhead             | <input type="radio"/> Conventional     | <input checked="" type="radio"/> Multibowl | <input type="radio"/> Both    |
| Other                | <input type="checkbox"/> 4 String Area | <input type="checkbox"/> Capitan Reef      | <input type="checkbox"/> 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. **Excess calculates to 18% - additional cement might be required.**

**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: (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<br><b>30-026-45546</b> | <sup>2</sup> Pool Code<br><b>98094</b>                                     | <sup>3</sup> Pool Name<br><b>BOBCAT DRAW; UPPER WOLFCAMP</b> |
| <sup>4</sup> Property Code<br><b>324946</b>    | <sup>5</sup> Property Name<br><b>JAYHAWK 6-7 FED</b>                       | <sup>6</sup> Well Number<br><b>14H</b>                       |
| <sup>7</sup> OGRID No.<br><b>6137</b>          | <sup>8</sup> Operator Name<br><b>DEVON ENERGY PRODUCTION COMPANY, L.P.</b> | <sup>9</sup> Elevation<br><b>3315.2</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>1</b>      | <b>6</b> | <b>26 S</b> | <b>34 E</b> |         | <b>450</b>    | <b>NORTH</b>     | <b>870</b>    | <b>WEST</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>4</b>      | <b>7</b> | <b>26 S</b> | <b>34 E</b> |         | <b>20</b>     | <b>SOUTH</b>     | <b>360</b>    | <b>WEST</b>    | <b>LEA</b> |

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

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>NW CORNER SEC. 6<br/>LAT. = 32.0797339°N<br/>LONG. = 103.5175316°W<br/>NMSP EAST (FT)<br/>N = 393699.75<br/>E = 794010.97</p> <p>W/4 CORNER SEC. 6<br/>LAT. = 32.0724766°N<br/>LONG. = 103.5175341°W<br/>NMSP EAST (FT)<br/>N = 391059.61<br/>E = 794030.14</p> <p>SW CORNER SEC. 6<br/>LAT. = 32.0652206°N<br/>LONG. = 103.5175327°W<br/>NMSP EAST (FT)<br/>N = 388419.97<br/>E = 794050.53</p> <p>W/4 CORNER SEC. 7<br/>LAT. = 32.0579557°N<br/>LONG. = 103.5175350°W<br/>NMSP EAST (FT)<br/>N = 385777.11<br/>E = 794069.80</p> <p>SW CORNER SEC. 7<br/>LAT. = 32.0506923°N<br/>LONG. = 103.5175349°W<br/>NMSP EAST (FT)<br/>N = 383134.75<br/>E = 794089.79</p> | <p>FTP</p> <p>870'</p> <p>LOT 1<br/>40.16 AC.</p> <p>LOT 2</p> <p>JAYHAWK 6-7 FED 14H<br/>ELEV. = 3315.2'</p> <p>W/4 CORNER SEC. 6<br/>LAT. = 32.0784956°N (NAD83)<br/>LONG. = 103.5147237°W<br/>NMSP EAST (FT)<br/>N = 393255.88<br/>E = 794884.09</p> <p>5/4 CORNER SEC. 6<br/>LAT. = 32.0652211°N<br/>LONG. = 103.5089834°W<br/>NMSP EAST (FT)<br/>N = 388440.30<br/>E = 796698.96</p> <p>LOT 3</p> <p>LOT 4</p> <p>589°33'37"W 2648.91 FT 589°30'08"W 2641.36 FT</p> <p>LOT 1</p> <p>LOT 2</p> <p>W/4 CORNER SEC. 7<br/>LAT. = 32.0579557°N<br/>LONG. = 103.5175350°W<br/>NMSP EAST (FT)<br/>N = 385777.11<br/>E = 794069.80</p> <p>SW CORNER SEC. 7<br/>LAT. = 32.0506923°N<br/>LONG. = 103.5175349°W<br/>NMSP EAST (FT)<br/>N = 383134.75<br/>E = 794089.79</p> <p>LOT 3</p> <p>LOT 4</p> <p>40.33 AC.</p> <p>FTP</p> <p>360'</p> <p>LOT 1</p> <p>LOT 2</p> <p>589°31'16"W 2653.43 FT 589°32'54"W 2642.47 FT</p> | <p>NE CORNER SEC. 6<br/>LAT. = 32.0797299°N<br/>LONG. = 103.5004697°W<br/>NMSP EAST (FT)<br/>N = 393738.67<br/>E = 799795.61</p> <p>E/4 CORNER SEC. 6<br/>LAT. = 32.0724880°N<br/>LONG. = 103.5004620°W<br/>NMSP EAST (FT)<br/>N = 391104.19<br/>E = 799318.34</p> <p>SE CORNER SEC. 6<br/>LAT. = 32.0652284°N<br/>LONG. = 103.5004487°W<br/>NMSP EAST (FT)<br/>N = 388463.24<br/>E = 799339.82</p> <p>E/4 CORNER SEC. 7<br/>LAT. = 32.0579642°N<br/>LONG. = 103.5004487°W<br/>NMSP EAST (FT)<br/>N = 385820.61<br/>E = 799363.23</p> <p>SE CORNER SEC. 7<br/>LAT. = 32.0506993°N<br/>LONG. = 103.5004452°W<br/>NMSP EAST (FT)<br/>N = 383177.75<br/>E = 799384.71</p> | <p><b>" OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Rebecca Deal</i> <b>1/9/2018</b><br/>Signature Date</p> <p><b>Rebecca Deal, Regulatory Analyst</b><br/>Printed Name</p> <p><b>rebecca.deal@dmn.com</b><br/>E-mail Address</p> <p><b>" SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>NOVEMBER 26, 2018<br/>Date of Survey</p> <p><i>[Signature]</i><br/>Signature and Seal of Professional Surveyor</p> <p>Certificate Number: F11M0N.E. JARAMILLO, PLS 12797<br/>SURVEY NO. 6365B</p> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Intent ☒ As Drilled ☐

API #

|                                                            |                                   |                    |
|------------------------------------------------------------|-----------------------------------|--------------------|
| Operator Name:<br>DEVON ENERGY PRODUCTION<br>COMPANY, L.P. | Property Name:<br>JAYHAWK 6-7 FED | Well Number<br>14H |
|------------------------------------------------------------|-----------------------------------|--------------------|

Kick Off Point (KOP)

|                       |              |                 |              |     |                          |                 |             |                 |               |
|-----------------------|--------------|-----------------|--------------|-----|--------------------------|-----------------|-------------|-----------------|---------------|
| UL                    | Section<br>6 | Township<br>26S | Range<br>34E | Lot | Feet<br>50               | From N/S<br>FNL | Feet<br>360 | From E/W<br>FWL | County<br>LEA |
| Latitude<br>32.076596 |              |                 |              |     | Longitude<br>-103.516370 |                 |             |                 | NAD<br>83     |

First Take Point (FTP)

|                        |              |                 |              |          |                          |               |             |               |               |
|------------------------|--------------|-----------------|--------------|----------|--------------------------|---------------|-------------|---------------|---------------|
| UL<br>D                | Section<br>6 | Township<br>26S | Range<br>34E | Lot<br>1 | Feet<br>100              | From N/S<br>N | Feet<br>360 | From E/W<br>W | County<br>LEA |
| Latitude<br>32.0794584 |              |                 |              |          | Longitude<br>103.5163696 |               |             |               | NAD<br>83     |

Last Take Point (LTP)

|                        |              |                 |              |          |                          |               |             |               |               |
|------------------------|--------------|-----------------|--------------|----------|--------------------------|---------------|-------------|---------------|---------------|
| UL<br>M                | Section<br>7 | Township<br>26S | Range<br>34E | Lot<br>4 | Feet<br>100              | From N/S<br>S | Feet<br>360 | From E/W<br>W | County<br>LEA |
| Latitude<br>32.0509679 |              |                 |              |          | Longitude<br>103.5163732 |               |             |               | NAD<br>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 | 12,805 | Pilot hole depth              | N/A  |
| MD at TD:     | 23,077 | 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               | 23,077 MD / 12,805 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               | 23,077' (MD)/<br>12,805' 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           | 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 |
| Production                          | 827       | 13.2        | 1.33          | Class H                                                                                                                    |

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.<br>lb/<br>gal | Yld<br>ft3/<br>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<br>Two-Stage<br>(Bradenhead) | 1000  | 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: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% BWOC HR-601 + 2% bwoc Bentonite |
| Production                                | 1716  | 13.2              | 1.33                | Class H Cement                                                                                                             |

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 06-T26S-R34E**

**Jayhawk 6-7 FED 14H**

**Wellbore #1**

**Plan: Permit Plan 2**

## **Standard Planning Report - Geographic**

**17 December, 2018**

# Planning Report - Geographic

|                  |                                    |                                     |                                      |
|------------------|------------------------------------|-------------------------------------|--------------------------------------|
| <b>Database:</b> | EDM r5000.141_Prod US              | <b>Local Co-ordinate Reference:</b> | Well Jayhawk 6-7 FED 14H             |
| <b>Company:</b>  | WCDSC Permian NM                   | <b>TVD Reference:</b>               | RKB @ 3340.20ft (Original Well Elev) |
| <b>Project:</b>  | Lea County (NAD83 New Mexico East) | <b>MD Reference:</b>                | RKB @ 3340.20ft (Original Well Elev) |
| <b>Site:</b>     | Sec 06-T26S-R34E                   | <b>North Reference:</b>             | Grid                                 |
| <b>Well:</b>     | Jayhawk 6-7 FED 14H                | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Wellbore:</b> | Wellbore #1                        |                                     |                                      |
| <b>Design:</b>   | Permit Plan 2                      |                                     |                                      |

|                    |                                    |                      |                |
|--------------------|------------------------------------|----------------------|----------------|
| <b>Project</b>     | Lea County (NAD83 New Mexico East) |                      |                |
| <b>Map System:</b> | US State Plane 1983                | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983          |                      |                |
| <b>Map Zone:</b>   | New Mexico Eastern Zone            |                      |                |

|                              |                  |                     |                 |                                 |
|------------------------------|------------------|---------------------|-----------------|---------------------------------|
| <b>Site</b>                  | Sec 06-T26S-R34E |                     |                 |                                 |
| <b>Site Position:</b>        |                  | <b>Northing:</b>    | 393,700.60 usft | <b>Latitude:</b> 32.079736      |
| <b>From:</b>                 | Map              | <b>Easting:</b>     | 794,011.60 usft | <b>Longitude:</b> -103.517530   |
| <b>Position Uncertainty:</b> | 5.00 ft          | <b>Slot Radius:</b> | 13-3/16 "       | <b>Grid Convergence:</b> 0.43 ° |

|                             |                     |                            |                  |                                  |
|-----------------------------|---------------------|----------------------------|------------------|----------------------------------|
| <b>Well</b>                 | Jayhawk 6-7 FED 14H |                            |                  |                                  |
| <b>Well Position</b>        | <b>+N/-S</b>        | 0.00 ft                    | <b>Northing:</b> | 393,255.88 usft                  |
|                             | <b>+E/-W</b>        | 0.00 ft                    | <b>Easting:</b>  | 794,884.09 usft                  |
| <b>Position Uncertainty</b> | 0.50 ft             | <b>Wellhead Elevation:</b> |                  | <b>Ground Level:</b> 3,315.20 ft |

|                  |                   |                    |                    |                  |                       |
|------------------|-------------------|--------------------|--------------------|------------------|-----------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                    |                  |                       |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b> | <b>Dip Angle</b> | <b>Field Strength</b> |
|                  |                   |                    | (°)                | (°)              | (nT)                  |
|                  | IGRF2015          | 7/23/2018          | 6.80               | 59.92            | 47,745.56035239       |

|                          |                         |               |              |                      |      |
|--------------------------|-------------------------|---------------|--------------|----------------------|------|
| <b>Design</b>            | Permit Plan 2           |               |              |                      |      |
| <b>Audit Notes:</b>      |                         |               |              |                      |      |
| <b>Version:</b>          |                         | <b>Phase:</b> | PROTOTYPE    | <b>Tie On Depth:</b> | 0.00 |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S</b>  | <b>+E/-W</b> | <b>Direction</b>     |      |
|                          | (ft)                    | (ft)          | (ft)         | (°)                  |      |
|                          | 0.00                    | 0.00          | 0.00         | 182.46               |      |

|                                 |                  |                             |                  |                 |  |
|---------------------------------|------------------|-----------------------------|------------------|-----------------|--|
| <b>Plan Survey Tool Program</b> | Date: 12/17/2018 |                             |                  |                 |  |
| <b>Depth From</b>               | <b>Depth To</b>  | <b>Survey (Wellbore)</b>    | <b>Tool Name</b> | <b>Remarks</b>  |  |
| (ft)                            | (ft)             |                             |                  |                 |  |
| 1 0.00                          | 23,077.62        | Permit Plan 2 (Wellbore #1) | MWD+HDGM         | OWSG MWD + HDGM |  |

|                      |                    |                |                 |              |              |               |              |             |            |                      |
|----------------------|--------------------|----------------|-----------------|--------------|--------------|---------------|--------------|-------------|------------|----------------------|
| <b>Plan Sections</b> |                    |                |                 |              |              |               |              |             |            |                      |
| <b>Measured</b>      | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical</b> | <b>+N/-S</b> | <b>+E/-W</b> | <b>Dogleg</b> | <b>Build</b> | <b>Turn</b> | <b>TFO</b> | <b>Target</b>        |
| <b>Depth</b>         | (°)                | (°)            | <b>Depth</b>    | (ft)         | (ft)         | <b>Rate</b>   | <b>Rate</b>  | <b>Rate</b> | (°)        |                      |
| (ft)                 |                    |                | (ft)            |              |              | (°/100usft)   | (°/100usft)  | (°/100usft) |            |                      |
| 0.00                 | 0.00               | 0.00           | 0.00            | 0.00         | 0.00         | 0.00          | 0.00         | 0.00        | 0.00       |                      |
| 2,750.00             | 0.00               | 0.00           | 2,750.00        | 0.00         | 0.00         | 0.00          | 0.00         | 0.00        | 0.00       |                      |
| 3,172.23             | 4.22               | 307.72         | 3,171.84        | 9.51         | -12.30       | 1.00          | 1.00         | 0.00        | 307.72     |                      |
| 11,624.09            | 4.22               | 307.72         | 11,600.77       | 390.18       | -504.56      | 0.00          | 0.00         | 0.00        | 0.00       |                      |
| 11,905.58            | 0.00               | 0.00           | 11,882.00       | 396.52       | -512.76      | 1.50          | -1.50        | 0.00        | 180.00     |                      |
| 12,255.62            | 0.00               | 0.00           | 12,232.04       | 396.52       | -512.76      | 0.00          | 0.00         | 0.00        | 0.00       |                      |
| 13,155.62            | 90.00              | 179.57         | 12,805.00       | -176.42      | -508.48      | 10.00         | 10.00        | 0.00        | 179.57     | PBHL - Jayhawk 6-7 f |
| 23,077.62            | 90.00              | 179.57         | 12,805.00       | -10,098.15   | -434.52      | 0.00          | 0.00         | 0.00        | 0.00       | PBHL - Jayhawk 6-7 f |

# Planning Report - Geographic

|           |                                    |                              |                                      |
|-----------|------------------------------------|------------------------------|--------------------------------------|
| Database: | EDM r5000.141_Prod US              | Local Co-ordinate Reference: | Well Jayhawk 6-7 FED 14H             |
| Company:  | WCDSC Permian NM                   | TVD Reference:               | RKB @ 3340.20ft (Original Well Elev) |
| Project:  | Lea County (NAD83 New Mexico East) | MD Reference:                | RKB @ 3340.20ft (Original Well Elev) |
| Site:     | Sec 06-T26S-R34E                   | North Reference:             | Grid                                 |
| Well:     | Jayhawk 6-7 FED 14H                | 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       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 100.00              | 0.00            | 0.00        | 100.00              | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 200.00              | 0.00            | 0.00        | 200.00              | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 300.00              | 0.00            | 0.00        | 300.00              | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 400.00              | 0.00            | 0.00        | 400.00              | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 500.00              | 0.00            | 0.00        | 500.00              | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 600.00              | 0.00            | 0.00        | 600.00              | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 700.00              | 0.00            | 0.00        | 700.00              | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 800.00              | 0.00            | 0.00        | 800.00              | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 900.00              | 0.00            | 0.00        | 900.00              | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 1,000.00            | 0.00            | 0.00        | 1,000.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 1,100.00            | 0.00            | 0.00        | 1,100.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 1,200.00            | 0.00            | 0.00        | 1,200.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 1,300.00            | 0.00            | 0.00        | 1,300.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 1,400.00            | 0.00            | 0.00        | 1,400.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 1,500.00            | 0.00            | 0.00        | 1,500.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 1,600.00            | 0.00            | 0.00        | 1,600.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 1,700.00            | 0.00            | 0.00        | 1,700.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 1,800.00            | 0.00            | 0.00        | 1,800.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 1,900.00            | 0.00            | 0.00        | 1,900.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 2,000.00            | 0.00            | 0.00        | 2,000.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 2,100.00            | 0.00            | 0.00        | 2,100.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 2,200.00            | 0.00            | 0.00        | 2,200.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 2,300.00            | 0.00            | 0.00        | 2,300.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 2,400.00            | 0.00            | 0.00        | 2,400.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 2,500.00            | 0.00            | 0.00        | 2,500.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 2,600.00            | 0.00            | 0.00        | 2,600.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 2,700.00            | 0.00            | 0.00        | 2,700.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 2,750.00            | 0.00            | 0.00        | 2,750.00            | 0.00       | 0.00       | 393,255.88          | 794,884.09         | 32.078496 | -103.514724 |  |
| 2,800.00            | 0.50            | 307.72      | 2,800.00            | 0.13       | -0.17      | 393,256.01          | 794,883.92         | 32.078496 | -103.514724 |  |
| 2,900.00            | 1.50            | 307.72      | 2,899.98            | 1.20       | -1.55      | 393,257.08          | 794,882.53         | 32.078499 | -103.514729 |  |
| 3,000.00            | 2.50            | 307.72      | 2,999.92            | 3.34       | -4.31      | 393,259.21          | 794,879.77         | 32.078505 | -103.514738 |  |
| 3,100.00            | 3.50            | 307.72      | 3,099.78            | 6.54       | -8.45      | 393,262.42          | 794,875.63         | 32.078514 | -103.514751 |  |
| 3,172.23            | 4.22            | 307.72      | 3,171.84            | 9.51       | -12.30     | 393,265.39          | 794,871.79         | 32.078522 | -103.514763 |  |
| 3,200.00            | 4.22            | 307.72      | 3,199.54            | 10.76      | -13.92     | 393,266.64          | 794,870.17         | 32.078526 | -103.514769 |  |
| 3,300.00            | 4.22            | 307.72      | 3,299.27            | 15.27      | -19.74     | 393,271.15          | 794,864.34         | 32.078538 | -103.514787 |  |
| 3,400.00            | 4.22            | 307.72      | 3,399.00            | 19.77      | -25.57     | 393,275.65          | 794,858.52         | 32.078551 | -103.514806 |  |
| 3,500.00            | 4.22            | 307.72      | 3,498.73            | 24.28      | -31.39     | 393,280.15          | 794,852.70         | 32.078563 | -103.514825 |  |
| 3,600.00            | 4.22            | 307.72      | 3,598.46            | 28.78      | -37.22     | 393,284.66          | 794,846.87         | 32.078576 | -103.514843 |  |
| 3,700.00            | 4.22            | 307.72      | 3,698.19            | 33.28      | -43.04     | 393,289.16          | 794,841.05         | 32.078588 | -103.514862 |  |
| 3,800.00            | 4.22            | 307.72      | 3,797.91            | 37.79      | -48.86     | 393,293.67          | 794,835.22         | 32.078601 | -103.514881 |  |
| 3,900.00            | 4.22            | 307.72      | 3,897.64            | 42.29      | -54.69     | 393,298.17          | 794,829.40         | 32.078613 | -103.514899 |  |
| 4,000.00            | 4.22            | 307.72      | 3,997.37            | 46.80      | -60.51     | 393,302.67          | 794,823.58         | 32.078626 | -103.514918 |  |
| 4,100.00            | 4.22            | 307.72      | 4,097.10            | 51.30      | -66.34     | 393,307.18          | 794,817.75         | 32.078638 | -103.514937 |  |
| 4,200.00            | 4.22            | 307.72      | 4,196.83            | 55.80      | -72.16     | 393,311.68          | 794,811.93         | 32.078651 | -103.514956 |  |
| 4,300.00            | 4.22            | 307.72      | 4,296.56            | 60.31      | -77.99     | 393,316.19          | 794,806.10         | 32.078663 | -103.514974 |  |
| 4,400.00            | 4.22            | 307.72      | 4,396.29            | 64.81      | -83.81     | 393,320.69          | 794,800.28         | 32.078676 | -103.514993 |  |
| 4,500.00            | 4.22            | 307.72      | 4,496.01            | 69.32      | -89.63     | 393,325.19          | 794,794.45         | 32.078688 | -103.515012 |  |
| 4,600.00            | 4.22            | 307.72      | 4,595.74            | 73.82      | -95.46     | 393,329.70          | 794,788.63         | 32.078701 | -103.515030 |  |
| 4,700.00            | 4.22            | 307.72      | 4,695.47            | 78.32      | -101.28    | 393,334.20          | 794,782.81         | 32.078713 | -103.515049 |  |
| 4,800.00            | 4.22            | 307.72      | 4,795.20            | 82.83      | -107.11    | 393,338.71          | 794,776.98         | 32.078726 | -103.515068 |  |
| 4,900.00            | 4.22            | 307.72      | 4,894.93            | 87.33      | -112.93    | 393,343.21          | 794,771.16         | 32.078738 | -103.515086 |  |
| 5,000.00            | 4.22            | 307.72      | 4,994.66            | 91.84      | -118.75    | 393,347.71          | 794,765.33         | 32.078751 | -103.515105 |  |
| 5,100.00            | 4.22            | 307.72      | 5,094.39            | 96.34      | -124.58    | 393,352.22          | 794,759.51         | 32.078763 | -103.515124 |  |
| 5,200.00            | 4.22            | 307.72      | 5,194.11            | 100.84     | -130.40    | 393,356.72          | 794,753.69         | 32.078776 | -103.515142 |  |

# Planning Report - Geographic

Database: EDM r5000.141\_Prod US  
 Company: WCDSC Permian NM  
 Project: Lea County (NAD83 New Mexico East)  
 Site: Sec 06-T26S-R34E  
 Well: Jayhawk 6-7 FED 14H  
 Wellbore: Wellbore #1  
 Design: Permit Plan 2

Local Co-ordinate Reference: Well Jayhawk 6-7 FED 14H  
 TVD Reference: RKB @ 3340.20ft (Original Well Elev)  
 MD Reference: RKB @ 3340.20ft (Original Well Elev)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

## Planned Survey

| Measured<br>Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Map<br>Northing<br>(usft) | Map<br>Easting<br>(usft) | Latitude  | Longitude   |
|---------------------------|--------------------|----------------|---------------------------|---------------|---------------|---------------------------|--------------------------|-----------|-------------|
| 5,300.00                  | 4.22               | 307.72         | 5,293.84                  | 105.35        | -136.23       | 393,361.23                | 794,747.86               | 32.078788 | -103.515161 |
| 5,400.00                  | 4.22               | 307.72         | 5,393.57                  | 109.85        | -142.05       | 393,365.73                | 794,742.04               | 32.078801 | -103.515180 |
| 5,500.00                  | 4.22               | 307.72         | 5,493.30                  | 114.35        | -147.88       | 393,370.23                | 794,736.21               | 32.078813 | -103.515199 |
| 5,600.00                  | 4.22               | 307.72         | 5,593.03                  | 118.86        | -153.70       | 393,374.74                | 794,730.39               | 32.078826 | -103.515217 |
| 5,700.00                  | 4.22               | 307.72         | 5,692.76                  | 123.36        | -159.52       | 393,379.24                | 794,724.56               | 32.078838 | -103.515236 |
| 5,800.00                  | 4.22               | 307.72         | 5,792.49                  | 127.87        | -165.35       | 393,383.75                | 794,718.74               | 32.078851 | -103.515255 |
| 5,900.00                  | 4.22               | 307.72         | 5,892.21                  | 132.37        | -171.17       | 393,388.25                | 794,712.92               | 32.078863 | -103.515273 |
| 6,000.00                  | 4.22               | 307.72         | 5,991.94                  | 136.87        | -177.00       | 393,392.75                | 794,707.09               | 32.078876 | -103.515292 |
| 6,100.00                  | 4.22               | 307.72         | 6,091.67                  | 141.38        | -182.82       | 393,397.26                | 794,701.27               | 32.078888 | -103.515311 |
| 6,200.00                  | 4.22               | 307.72         | 6,191.40                  | 145.88        | -188.65       | 393,401.76                | 794,695.44               | 32.078901 | -103.515329 |
| 6,300.00                  | 4.22               | 307.72         | 6,291.13                  | 150.39        | -194.47       | 393,406.27                | 794,689.62               | 32.078913 | -103.515348 |
| 6,400.00                  | 4.22               | 307.72         | 6,390.86                  | 154.89        | -200.29       | 393,410.77                | 794,683.79               | 32.078926 | -103.515367 |
| 6,500.00                  | 4.22               | 307.72         | 6,490.59                  | 159.39        | -206.12       | 393,415.27                | 794,677.97               | 32.078938 | -103.515385 |
| 6,600.00                  | 4.22               | 307.72         | 6,590.31                  | 163.90        | -211.94       | 393,419.78                | 794,672.15               | 32.078951 | -103.515404 |
| 6,700.00                  | 4.22               | 307.72         | 6,690.04                  | 168.40        | -217.77       | 393,424.28                | 794,666.32               | 32.078963 | -103.515423 |
| 6,800.00                  | 4.22               | 307.72         | 6,789.77                  | 172.91        | -223.59       | 393,428.78                | 794,660.50               | 32.078976 | -103.515442 |
| 6,900.00                  | 4.22               | 307.72         | 6,889.50                  | 177.41        | -229.41       | 393,433.29                | 794,654.67               | 32.078988 | -103.515460 |
| 7,000.00                  | 4.22               | 307.72         | 6,989.23                  | 181.91        | -235.24       | 393,437.79                | 794,648.85               | 32.079001 | -103.515479 |
| 7,100.00                  | 4.22               | 307.72         | 7,088.96                  | 186.42        | -241.06       | 393,442.30                | 794,643.03               | 32.079013 | -103.515498 |
| 7,200.00                  | 4.22               | 307.72         | 7,188.69                  | 190.92        | -246.89       | 393,446.80                | 794,637.20               | 32.079026 | -103.515516 |
| 7,300.00                  | 4.22               | 307.72         | 7,288.42                  | 195.43        | -252.71       | 393,451.30                | 794,631.38               | 32.079038 | -103.515535 |
| 7,400.00                  | 4.22               | 307.72         | 7,388.14                  | 199.93        | -258.54       | 393,455.81                | 794,625.55               | 32.079051 | -103.515554 |
| 7,500.00                  | 4.22               | 307.72         | 7,487.87                  | 204.43        | -264.36       | 393,460.31                | 794,619.73               | 32.079063 | -103.515572 |
| 7,600.00                  | 4.22               | 307.72         | 7,587.60                  | 208.94        | -270.18       | 393,464.82                | 794,613.90               | 32.079076 | -103.515591 |
| 7,700.00                  | 4.22               | 307.72         | 7,687.33                  | 213.44        | -276.01       | 393,469.32                | 794,608.08               | 32.079088 | -103.515610 |
| 7,800.00                  | 4.22               | 307.72         | 7,787.06                  | 217.95        | -281.83       | 393,473.82                | 794,602.26               | 32.079101 | -103.515628 |
| 7,900.00                  | 4.22               | 307.72         | 7,886.79                  | 222.45        | -287.66       | 393,478.33                | 794,596.43               | 32.079113 | -103.515647 |
| 8,000.00                  | 4.22               | 307.72         | 7,986.52                  | 226.95        | -293.48       | 393,482.83                | 794,590.61               | 32.079126 | -103.515666 |
| 8,100.00                  | 4.22               | 307.72         | 8,086.24                  | 231.46        | -299.30       | 393,487.34                | 794,584.78               | 32.079138 | -103.515685 |
| 8,200.00                  | 4.22               | 307.72         | 8,185.97                  | 235.96        | -305.13       | 393,491.84                | 794,578.96               | 32.079151 | -103.515703 |
| 8,300.00                  | 4.22               | 307.72         | 8,285.70                  | 240.47        | -310.95       | 393,496.34                | 794,573.14               | 32.079163 | -103.515722 |
| 8,400.00                  | 4.22               | 307.72         | 8,385.43                  | 244.97        | -316.78       | 393,500.85                | 794,567.31               | 32.079176 | -103.515741 |
| 8,500.00                  | 4.22               | 307.72         | 8,485.16                  | 249.47        | -322.60       | 393,505.35                | 794,561.49               | 32.079188 | -103.515759 |
| 8,600.00                  | 4.22               | 307.72         | 8,584.89                  | 253.98        | -328.43       | 393,509.86                | 794,555.66               | 32.079201 | -103.515778 |
| 8,700.00                  | 4.22               | 307.72         | 8,684.62                  | 258.48        | -334.25       | 393,514.36                | 794,549.84               | 32.079213 | -103.515797 |
| 8,800.00                  | 4.22               | 307.72         | 8,784.34                  | 262.99        | -340.07       | 393,518.86                | 794,544.01               | 32.079226 | -103.515815 |
| 8,900.00                  | 4.22               | 307.72         | 8,884.07                  | 267.49        | -345.90       | 393,523.37                | 794,538.19               | 32.079238 | -103.515834 |
| 9,000.00                  | 4.22               | 307.72         | 8,983.80                  | 271.99        | -351.72       | 393,527.87                | 794,532.37               | 32.079251 | -103.515853 |
| 9,100.00                  | 4.22               | 307.72         | 9,083.53                  | 276.50        | -357.55       | 393,532.38                | 794,526.54               | 32.079263 | -103.515871 |
| 9,200.00                  | 4.22               | 307.72         | 9,183.26                  | 281.00        | -363.37       | 393,536.88                | 794,520.72               | 32.079276 | -103.515890 |
| 9,300.00                  | 4.22               | 307.72         | 9,282.99                  | 285.51        | -369.20       | 393,541.38                | 794,514.89               | 32.079288 | -103.515909 |
| 9,400.00                  | 4.22               | 307.72         | 9,382.72                  | 290.01        | -375.02       | 393,545.89                | 794,509.07               | 32.079301 | -103.515928 |
| 9,500.00                  | 4.22               | 307.72         | 9,482.44                  | 294.51        | -380.84       | 393,550.39                | 794,503.24               | 32.079313 | -103.515946 |
| 9,600.00                  | 4.22               | 307.72         | 9,582.17                  | 299.02        | -386.67       | 393,554.90                | 794,497.42               | 32.079326 | -103.515965 |
| 9,700.00                  | 4.22               | 307.72         | 9,681.90                  | 303.52        | -392.49       | 393,559.40                | 794,491.60               | 32.079338 | -103.515984 |
| 9,800.00                  | 4.22               | 307.72         | 9,781.63                  | 308.03        | -398.32       | 393,563.90                | 794,485.77               | 32.079351 | -103.516002 |
| 9,900.00                  | 4.22               | 307.72         | 9,881.36                  | 312.53        | -404.14       | 393,568.41                | 794,479.95               | 32.079363 | -103.516021 |
| 10,000.00                 | 4.22               | 307.72         | 9,981.09                  | 317.03        | -409.96       | 393,572.91                | 794,474.12               | 32.079376 | -103.516040 |
| 10,100.00                 | 4.22               | 307.72         | 10,080.82                 | 321.54        | -415.79       | 393,577.42                | 794,468.30               | 32.079388 | -103.516058 |
| 10,200.00                 | 4.22               | 307.72         | 10,180.54                 | 326.04        | -421.61       | 393,581.92                | 794,462.48               | 32.079401 | -103.516077 |
| 10,300.00                 | 4.22               | 307.72         | 10,280.27                 | 330.54        | -427.44       | 393,586.42                | 794,456.65               | 32.079413 | -103.516096 |
| 10,400.00                 | 4.22               | 307.72         | 10,380.00                 | 335.05        | -433.26       | 393,590.93                | 794,450.83               | 32.079426 | -103.516114 |
| 10,500.00                 | 4.22               | 307.72         | 10,479.73                 | 339.55        | -439.09       | 393,595.43                | 794,445.00               | 32.079438 | -103.516133 |
| 10,600.00                 | 4.22               | 307.72         | 10,579.46                 | 344.06        | -444.91       | 393,599.93                | 794,439.18               | 32.079451 | -103.516152 |
| 10,700.00                 | 4.22               | 307.72         | 10,679.19                 | 348.56        | -450.73       | 393,604.44                | 794,433.35               | 32.079463 | -103.516171 |

# Planning Report - Geographic

|           |                                    |                              |                                      |
|-----------|------------------------------------|------------------------------|--------------------------------------|
| Database: | EDM r5000.141_Prod US              | Local Co-ordinate Reference: | Well Jayhawk 6-7 FED 14H             |
| Company:  | WCDSC Permian NM                   | TVD Reference:               | RKB @ 3340.20ft (Original Well Elev) |
| Project:  | Lea County (NAD83 New Mexico East) | MD Reference:                | RKB @ 3340.20ft (Original Well Elev) |
| Site:     | Sec 06-T26S-R34E                   | North Reference:             | Grid                                 |
| Well:     | Jayhawk 6-7 FED 14H                | Survey Calculation Method:   | Minimum Curvature                    |
| Wellbore: | Wellbore #1                        |                              |                                      |
| Design:   | Permit Plan 2                      |                              |                                      |

| Planned Survey                                   |                    |                |                           |               |               |                           |                          |           |             |  |
|--------------------------------------------------|--------------------|----------------|---------------------------|---------------|---------------|---------------------------|--------------------------|-----------|-------------|--|
| Measured<br>Depth<br>(ft)                        | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Map<br>Northing<br>(usft) | Map<br>Easting<br>(usft) | Latitude  | Longitude   |  |
| 10,800.00                                        | 4.22               | 307.72         | 10,778.92                 | 353.06        | -456.56       | 393,608.94                | 794,427.53               | 32.079476 | -103.516189 |  |
| 10,900.00                                        | 4.22               | 307.72         | 10,878.64                 | 357.57        | -462.38       | 393,613.45                | 794,421.71               | 32.079488 | -103.516208 |  |
| 11,000.00                                        | 4.22               | 307.72         | 10,978.37                 | 362.07        | -468.21       | 393,617.95                | 794,415.88               | 32.079501 | -103.516227 |  |
| 11,100.00                                        | 4.22               | 307.72         | 11,078.10                 | 366.58        | -474.03       | 393,622.45                | 794,410.06               | 32.079513 | -103.516245 |  |
| 11,200.00                                        | 4.22               | 307.72         | 11,177.83                 | 371.08        | -479.86       | 393,626.96                | 794,404.23               | 32.079526 | -103.516264 |  |
| 11,300.00                                        | 4.22               | 307.72         | 11,277.56                 | 375.58        | -485.68       | 393,631.46                | 794,398.41               | 32.079538 | -103.516283 |  |
| 11,400.00                                        | 4.22               | 307.72         | 11,377.29                 | 380.09        | -491.50       | 393,635.97                | 794,392.58               | 32.079551 | -103.516301 |  |
| 11,500.00                                        | 4.22               | 307.72         | 11,477.02                 | 384.59        | -497.33       | 393,640.47                | 794,386.76               | 32.079563 | -103.516320 |  |
| 11,600.00                                        | 4.22               | 307.72         | 11,576.74                 | 389.10        | -503.15       | 393,644.97                | 794,380.94               | 32.079576 | -103.516339 |  |
| 11,624.09                                        | 4.22               | 307.72         | 11,600.77                 | 390.18        | -504.56       | 393,646.06                | 794,379.53               | 32.079579 | -103.516343 |  |
| 11,700.00                                        | 3.08               | 307.72         | 11,676.52                 | 393.14        | -508.38       | 393,649.02                | 794,375.71               | 32.079587 | -103.516356 |  |
| 11,800.00                                        | 1.58               | 307.72         | 11,776.44                 | 395.63        | -511.60       | 393,651.51                | 794,372.49               | 32.079594 | -103.516366 |  |
| 11,900.00                                        | 0.08               | 307.72         | 11,876.42                 | 396.52        | -512.75       | 393,652.40                | 794,371.34               | 32.079596 | -103.516370 |  |
| 11,905.58                                        | 0.00               | 0.00           | 11,882.00                 | 396.52        | -512.76       | 393,652.40                | 794,371.33               | 32.079596 | -103.516370 |  |
| 12,000.00                                        | 0.00               | 0.00           | 11,976.42                 | 396.52        | -512.76       | 393,652.40                | 794,371.33               | 32.079596 | -103.516370 |  |
| 12,100.00                                        | 0.00               | 0.00           | 12,076.42                 | 396.52        | -512.76       | 393,652.40                | 794,371.33               | 32.079596 | -103.516370 |  |
| 12,200.00                                        | 0.00               | 0.00           | 12,176.42                 | 396.52        | -512.76       | 393,652.40                | 794,371.33               | 32.079596 | -103.516370 |  |
| 12,255.62                                        | 0.00               | 0.00           | 12,232.04                 | 396.52        | -512.76       | 393,652.40                | 794,371.33               | 32.079596 | -103.516370 |  |
| KOP @ 12255' MD, 50' FNL, 360' FWL               |                    |                |                           |               |               |                           |                          |           |             |  |
| 12,300.00                                        | 4.44               | 179.57         | 12,276.38                 | 394.81        | -512.74       | 393,650.68                | 794,371.35               | 32.079592 | -103.516370 |  |
| 12,400.00                                        | 14.44              | 179.57         | 12,374.90                 | 378.43        | -512.62       | 393,634.31                | 794,371.47               | 32.079547 | -103.516370 |  |
| 12,494.33                                        | 23.87              | 179.57         | 12,463.91                 | 347.51        | -512.39       | 393,603.39                | 794,371.70               | 32.079462 | -103.516370 |  |
| First Take Point @ 12494' MD, 100' FNL, 358' FWL |                    |                |                           |               |               |                           |                          |           |             |  |
| 12,500.00                                        | 24.44              | 179.57         | 12,469.08                 | 345.19        | -512.37       | 393,601.07                | 794,371.72               | 32.079455 | -103.516370 |  |
| 12,600.00                                        | 34.44              | 179.57         | 12,556.06                 | 296.11        | -512.01       | 393,551.98                | 794,372.08               | 32.079320 | -103.516370 |  |
| 12,700.00                                        | 44.44              | 179.57         | 12,633.19                 | 232.66        | -511.53       | 393,488.54                | 794,372.55               | 32.079146 | -103.516370 |  |
| 12,800.00                                        | 54.44              | 179.57         | 12,698.14                 | 156.79        | -510.97       | 393,412.67                | 794,373.12               | 32.078937 | -103.516370 |  |
| 12,900.00                                        | 64.44              | 179.57         | 12,748.92                 | 70.80         | -510.33       | 393,326.67                | 794,373.76               | 32.078701 | -103.516370 |  |
| 13,000.00                                        | 74.44              | 179.57         | 12,784.00                 | -22.71        | -509.63       | 393,233.17                | 794,374.46               | 32.078444 | -103.516370 |  |
| 13,100.00                                        | 84.44              | 179.57         | 12,802.30                 | -120.89       | -508.90       | 393,134.99                | 794,375.19               | 32.078174 | -103.516370 |  |
| 13,155.62                                        | 90.00              | 179.57         | 12,805.00                 | -176.42       | -508.48       | 393,079.46                | 794,375.60               | 32.078021 | -103.516370 |  |
| 13,200.00                                        | 90.00              | 179.57         | 12,805.00                 | -220.80       | -508.15       | 393,035.08                | 794,375.93               | 32.077899 | -103.516370 |  |
| 13,300.00                                        | 90.00              | 179.57         | 12,805.00                 | -320.80       | -507.41       | 392,935.08                | 794,376.68               | 32.077625 | -103.516370 |  |
| 13,400.00                                        | 90.00              | 179.57         | 12,805.00                 | -420.80       | -506.66       | 392,835.08                | 794,377.43               | 32.077350 | -103.516370 |  |
| 13,500.00                                        | 90.00              | 179.57         | 12,805.00                 | -520.79       | -505.92       | 392,735.09                | 794,378.17               | 32.077075 | -103.516370 |  |
| 13,600.00                                        | 90.00              | 179.57         | 12,805.00                 | -620.79       | -505.17       | 392,635.09                | 794,378.92               | 32.076800 | -103.516370 |  |
| 13,700.00                                        | 90.00              | 179.57         | 12,805.00                 | -720.79       | -504.43       | 392,535.09                | 794,379.66               | 32.076525 | -103.516370 |  |
| 13,800.00                                        | 90.00              | 179.57         | 12,805.00                 | -820.78       | -503.68       | 392,435.10                | 794,380.41               | 32.076250 | -103.516370 |  |
| 13,900.00                                        | 90.00              | 179.57         | 12,805.00                 | -920.78       | -502.94       | 392,335.10                | 794,381.15               | 32.075975 | -103.516370 |  |
| 14,000.00                                        | 90.00              | 179.57         | 12,805.00                 | -1,020.78     | -502.19       | 392,235.10                | 794,381.90               | 32.075700 | -103.516370 |  |
| 14,100.00                                        | 90.00              | 179.57         | 12,805.00                 | -1,120.78     | -501.45       | 392,135.10                | 794,382.64               | 32.075425 | -103.516370 |  |
| 14,200.00                                        | 90.00              | 179.57         | 12,805.00                 | -1,220.77     | -500.70       | 392,035.11                | 794,383.39               | 32.075151 | -103.516370 |  |
| 14,300.00                                        | 90.00              | 179.57         | 12,805.00                 | -1,320.77     | -499.95       | 391,935.11                | 794,384.13               | 32.074876 | -103.516370 |  |
| 14,400.00                                        | 90.00              | 179.57         | 12,805.00                 | -1,420.77     | -499.21       | 391,835.11                | 794,384.88               | 32.074601 | -103.516370 |  |
| 14,500.00                                        | 90.00              | 179.57         | 12,805.00                 | -1,520.77     | -498.46       | 391,735.12                | 794,385.63               | 32.074326 | -103.516370 |  |
| 14,600.00                                        | 90.00              | 179.57         | 12,805.00                 | -1,620.76     | -497.72       | 391,635.12                | 794,386.37               | 32.074051 | -103.516370 |  |
| 14,700.00                                        | 90.00              | 179.57         | 12,805.00                 | -1,720.76     | -496.97       | 391,535.12                | 794,387.12               | 32.073776 | -103.516370 |  |
| 14,800.00                                        | 90.00              | 179.57         | 12,805.00                 | -1,820.76     | -496.23       | 391,435.13                | 794,387.86               | 32.073501 | -103.516370 |  |
| 14,900.00                                        | 90.00              | 179.57         | 12,805.00                 | -1,920.75     | -495.48       | 391,335.13                | 794,388.61               | 32.073226 | -103.516370 |  |
| 15,000.00                                        | 90.00              | 179.57         | 12,805.00                 | -2,020.75     | -494.74       | 391,235.13                | 794,389.35               | 32.072952 | -103.516371 |  |
| 15,100.00                                        | 90.00              | 179.57         | 12,805.00                 | -2,120.75     | -493.99       | 391,135.13                | 794,390.10               | 32.072677 | -103.516371 |  |
| 15,200.00                                        | 90.00              | 179.57         | 12,805.00                 | -2,220.75     | -493.25       | 391,035.14                | 794,390.84               | 32.072402 | -103.516371 |  |
| 15,300.00                                        | 90.00              | 179.57         | 12,805.00                 | -2,320.74     | -492.50       | 390,935.14                | 794,391.59               | 32.072127 | -103.516371 |  |
| 15,400.00                                        | 90.00              | 179.57         | 12,805.00                 | -2,420.74     | -491.75       | 390,835.14                | 794,392.33               | 32.071852 | -103.516371 |  |

# Planning Report - Geographic

Database: EDM r5000.141\_Prod US  
 Company: WCDSC Permian NM  
 Project: Lea County (NAD83 New Mexico East)  
 Site: Sec 06-T26S-R34E  
 Well: Jayhawk 6-7 FED 14H  
 Wellbore: Wellbore #1  
 Design: Permit Plan 2

Local Co-ordinate Reference: Well Jayhawk 6-7 FED 14H  
 TVD Reference: RKB @ 3340.20ft (Original Well Elev)  
 MD Reference: RKB @ 3340.20ft (Original Well Elev)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

| Planned Survey                              |                    |                |                        |               |               |                        |                       |           |             |  |
|---------------------------------------------|--------------------|----------------|------------------------|---------------|---------------|------------------------|-----------------------|-----------|-------------|--|
| Measured Depth<br>(ft)                      | Inclination<br>(°) | Azimuth<br>(°) | Vertical Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Map Northing<br>(usft) | Map Easting<br>(usft) | Latitude  | Longitude   |  |
| 15,500.00                                   | 90.00              | 179.57         | 12,805.00              | -2,520.74     | -491.01       | 390,735.15             | 794,393.08            | 32.071577 | -103.516371 |  |
| 15,600.00                                   | 90.00              | 179.57         | 12,805.00              | -2,620.73     | -490.26       | 390,635.15             | 794,393.83            | 32.071302 | -103.516371 |  |
| 15,700.00                                   | 90.00              | 179.57         | 12,805.00              | -2,720.73     | -489.52       | 390,535.15             | 794,394.57            | 32.071027 | -103.516371 |  |
| 15,800.00                                   | 90.00              | 179.57         | 12,805.00              | -2,820.73     | -488.77       | 390,435.16             | 794,395.32            | 32.070753 | -103.516371 |  |
| 15,900.00                                   | 90.00              | 179.57         | 12,805.00              | -2,920.73     | -488.03       | 390,335.16             | 794,396.06            | 32.070478 | -103.516371 |  |
| 16,000.00                                   | 90.00              | 179.57         | 12,805.00              | -3,020.72     | -487.28       | 390,235.16             | 794,396.81            | 32.070203 | -103.516371 |  |
| 16,100.00                                   | 90.00              | 179.57         | 12,805.00              | -3,120.72     | -486.54       | 390,135.16             | 794,397.55            | 32.069928 | -103.516371 |  |
| 16,200.00                                   | 90.00              | 179.57         | 12,805.00              | -3,220.72     | -485.79       | 390,035.17             | 794,398.30            | 32.069653 | -103.516371 |  |
| 16,300.00                                   | 90.00              | 179.57         | 12,805.00              | -3,320.72     | -485.05       | 389,935.17             | 794,399.04            | 32.069378 | -103.516371 |  |
| 16,400.00                                   | 90.00              | 179.57         | 12,805.00              | -3,420.71     | -484.30       | 389,835.17             | 794,399.79            | 32.069103 | -103.516371 |  |
| 16,500.00                                   | 90.00              | 179.57         | 12,805.00              | -3,520.71     | -483.55       | 389,735.18             | 794,400.53            | 32.068828 | -103.516371 |  |
| 16,600.00                                   | 90.00              | 179.57         | 12,805.00              | -3,620.71     | -482.81       | 389,635.18             | 794,401.28            | 32.068554 | -103.516371 |  |
| 16,700.00                                   | 90.00              | 179.57         | 12,805.00              | -3,720.70     | -482.06       | 389,535.18             | 794,402.03            | 32.068279 | -103.516371 |  |
| 16,800.00                                   | 90.00              | 179.57         | 12,805.00              | -3,820.70     | -481.32       | 389,435.19             | 794,402.77            | 32.068004 | -103.516371 |  |
| 16,900.00                                   | 90.00              | 179.57         | 12,805.00              | -3,920.70     | -480.57       | 389,335.19             | 794,403.52            | 32.067729 | -103.516371 |  |
| 17,000.00                                   | 90.00              | 179.57         | 12,805.00              | -4,020.70     | -479.83       | 389,235.19             | 794,404.26            | 32.067454 | -103.516371 |  |
| 17,100.00                                   | 90.00              | 179.57         | 12,805.00              | -4,120.69     | -479.08       | 389,135.19             | 794,405.01            | 32.067179 | -103.516371 |  |
| 17,200.00                                   | 90.00              | 179.57         | 12,805.00              | -4,220.69     | -478.34       | 389,035.20             | 794,405.75            | 32.066904 | -103.516371 |  |
| 17,300.00                                   | 90.00              | 179.57         | 12,805.00              | -4,320.69     | -477.59       | 388,935.20             | 794,406.50            | 32.066629 | -103.516371 |  |
| 17,400.00                                   | 90.00              | 179.57         | 12,805.00              | -4,420.68     | -476.85       | 388,835.20             | 794,407.24            | 32.066355 | -103.516371 |  |
| 17,500.00                                   | 90.00              | 179.57         | 12,805.00              | -4,520.68     | -476.10       | 388,735.21             | 794,407.99            | 32.066080 | -103.516371 |  |
| 17,600.00                                   | 90.00              | 179.57         | 12,805.00              | -4,620.68     | -475.35       | 388,635.21             | 794,408.73            | 32.065805 | -103.516371 |  |
| 17,700.00                                   | 90.00              | 179.57         | 12,805.00              | -4,720.68     | -474.61       | 388,535.21             | 794,409.48            | 32.065530 | -103.516372 |  |
| 17,800.00                                   | 90.00              | 179.57         | 12,805.00              | -4,820.67     | -473.86       | 388,435.21             | 794,410.23            | 32.065255 | -103.516372 |  |
| 17,809.00                                   | 90.00              | 179.57         | 12,805.00              | -4,829.67     | -473.80       | 388,426.22             | 794,410.29            | 32.065230 | -103.516372 |  |
| Cross Section @ 17809' MD, 0' FNL, 360' FWL |                    |                |                        |               |               |                        |                       |           |             |  |
| 17,900.00                                   | 90.00              | 179.57         | 12,805.00              | -4,920.67     | -473.12       | 388,335.22             | 794,410.97            | 32.064980 | -103.516372 |  |
| 18,000.00                                   | 90.00              | 179.57         | 12,805.00              | -5,020.67     | -472.37       | 388,235.22             | 794,411.72            | 32.064705 | -103.516372 |  |
| 18,100.00                                   | 90.00              | 179.57         | 12,805.00              | -5,120.67     | -471.63       | 388,135.22             | 794,412.46            | 32.064430 | -103.516372 |  |
| 18,200.00                                   | 90.00              | 179.57         | 12,805.00              | -5,220.66     | -470.88       | 388,035.23             | 794,413.21            | 32.064156 | -103.516372 |  |
| 18,300.00                                   | 90.00              | 179.57         | 12,805.00              | -5,320.66     | -470.14       | 387,935.23             | 794,413.95            | 32.063881 | -103.516372 |  |
| 18,400.00                                   | 90.00              | 179.57         | 12,805.00              | -5,420.66     | -469.39       | 387,835.23             | 794,414.70            | 32.063606 | -103.516372 |  |
| 18,500.00                                   | 90.00              | 179.57         | 12,805.00              | -5,520.65     | -468.65       | 387,735.24             | 794,415.44            | 32.063331 | -103.516372 |  |
| 18,600.00                                   | 90.00              | 179.57         | 12,805.00              | -5,620.65     | -467.90       | 387,635.24             | 794,416.19            | 32.063056 | -103.516372 |  |
| 18,700.00                                   | 90.00              | 179.57         | 12,805.00              | -5,720.65     | -467.15       | 387,535.24             | 794,416.93            | 32.062781 | -103.516372 |  |
| 18,800.00                                   | 90.00              | 179.57         | 12,805.00              | -5,820.65     | -466.41       | 387,435.24             | 794,417.68            | 32.062506 | -103.516372 |  |
| 18,900.00                                   | 90.00              | 179.57         | 12,805.00              | -5,920.64     | -465.66       | 387,335.25             | 794,418.43            | 32.062231 | -103.516372 |  |
| 19,000.00                                   | 90.00              | 179.57         | 12,805.00              | -6,020.64     | -464.92       | 387,235.25             | 794,419.17            | 32.061957 | -103.516372 |  |
| 19,100.00                                   | 90.00              | 179.57         | 12,805.00              | -6,120.64     | -464.17       | 387,135.25             | 794,419.92            | 32.061682 | -103.516372 |  |
| 19,200.00                                   | 90.00              | 179.57         | 12,805.00              | -6,220.63     | -463.43       | 387,035.26             | 794,420.66            | 32.061407 | -103.516372 |  |
| 19,300.00                                   | 90.00              | 179.57         | 12,805.00              | -6,320.63     | -462.68       | 386,935.26             | 794,421.41            | 32.061132 | -103.516372 |  |
| 19,400.00                                   | 90.00              | 179.57         | 12,805.00              | -6,420.63     | -461.94       | 386,835.26             | 794,422.15            | 32.060857 | -103.516372 |  |
| 19,500.00                                   | 90.00              | 179.57         | 12,805.00              | -6,520.63     | -461.19       | 386,735.27             | 794,422.90            | 32.060582 | -103.516372 |  |
| 19,600.00                                   | 90.00              | 179.57         | 12,805.00              | -6,620.62     | -460.45       | 386,635.27             | 794,423.64            | 32.060307 | -103.516372 |  |
| 19,700.00                                   | 90.00              | 179.57         | 12,805.00              | -6,720.62     | -459.70       | 386,535.27             | 794,424.39            | 32.060032 | -103.516372 |  |
| 19,800.00                                   | 90.00              | 179.57         | 12,805.00              | -6,820.62     | -458.95       | 386,435.27             | 794,425.13            | 32.059758 | -103.516372 |  |
| 19,900.00                                   | 90.00              | 179.57         | 12,805.00              | -6,920.62     | -458.21       | 386,335.28             | 794,425.88            | 32.059483 | -103.516372 |  |
| 20,000.00                                   | 90.00              | 179.57         | 12,805.00              | -7,020.61     | -457.46       | 386,235.28             | 794,426.63            | 32.059208 | -103.516372 |  |
| 20,100.00                                   | 90.00              | 179.57         | 12,805.00              | -7,120.61     | -456.72       | 386,135.28             | 794,427.37            | 32.058933 | -103.516372 |  |
| 20,200.00                                   | 90.00              | 179.57         | 12,805.00              | -7,220.61     | -455.97       | 386,035.29             | 794,428.12            | 32.058658 | -103.516372 |  |
| 20,300.00                                   | 90.00              | 179.57         | 12,805.00              | -7,320.60     | -455.23       | 385,935.29             | 794,428.86            | 32.058383 | -103.516372 |  |
| 20,400.00                                   | 90.00              | 179.57         | 12,805.00              | -7,420.60     | -454.48       | 385,835.29             | 794,429.61            | 32.058108 | -103.516373 |  |
| 20,500.00                                   | 90.00              | 179.57         | 12,805.00              | -7,520.60     | -453.74       | 385,735.30             | 794,430.35            | 32.057833 | -103.516373 |  |
| 20,600.00                                   | 90.00              | 179.57         | 12,805.00              | -7,620.60     | -452.99       | 385,635.30             | 794,431.10            | 32.057559 | -103.516373 |  |

# Planning Report - Geographic

|                  |                                    |                                     |                                      |
|------------------|------------------------------------|-------------------------------------|--------------------------------------|
| <b>Database:</b> | EDM r5000.141_Prod US              | <b>Local Co-ordinate Reference:</b> | Well Jayhawk 6-7 FED 14H             |
| <b>Company:</b>  | WCDSC Permian NM                   | <b>TVD Reference:</b>               | RKB @ 3340.20ft (Original Well Elev) |
| <b>Project:</b>  | Lea County (NAD83 New Mexico East) | <b>MD Reference:</b>                | RKB @ 3340.20ft (Original Well Elev) |
| <b>Site:</b>     | Sec 06-T26S-R34E                   | <b>North Reference:</b>             | Grid                                 |
| <b>Well:</b>     | Jayhawk 6-7 FED 14H                | <b>Survey Calculation Method:</b>   | Minimum Curvature                    |
| <b>Wellbore:</b> | Wellbore #1                        |                                     |                                      |
| <b>Design:</b>   | 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   |
| 20,700.00                                       | 90.00           | 179.57      | 12,805.00           | -7,720.59  | -452.24    | 385,535.30          | 794,431.84         | 32.057284 | -103.516373 |
| 20,800.00                                       | 90.00           | 179.57      | 12,805.00           | -7,820.59  | -451.50    | 385,435.30          | 794,432.59         | 32.057009 | -103.516373 |
| 20,900.00                                       | 90.00           | 179.57      | 12,805.00           | -7,920.59  | -450.75    | 385,335.31          | 794,433.33         | 32.056734 | -103.516373 |
| 21,000.00                                       | 90.00           | 179.57      | 12,805.00           | -8,020.58  | -450.01    | 385,235.31          | 794,434.08         | 32.056459 | -103.516373 |
| 21,100.00                                       | 90.00           | 179.57      | 12,805.00           | -8,120.58  | -449.26    | 385,135.31          | 794,434.83         | 32.056184 | -103.516373 |
| 21,200.00                                       | 90.00           | 179.57      | 12,805.00           | -8,220.58  | -448.52    | 385,035.32          | 794,435.57         | 32.055909 | -103.516373 |
| 21,300.00                                       | 90.00           | 179.57      | 12,805.00           | -8,320.58  | -447.77    | 384,935.32          | 794,436.32         | 32.055634 | -103.516373 |
| 21,400.00                                       | 90.00           | 179.57      | 12,805.00           | -8,420.57  | -447.03    | 384,835.32          | 794,437.06         | 32.055359 | -103.516373 |
| 21,500.00                                       | 90.00           | 179.57      | 12,805.00           | -8,520.57  | -446.28    | 384,735.33          | 794,437.81         | 32.055085 | -103.516373 |
| 21,600.00                                       | 90.00           | 179.57      | 12,805.00           | -8,620.57  | -445.54    | 384,635.33          | 794,438.55         | 32.054810 | -103.516373 |
| 21,700.00                                       | 90.00           | 179.57      | 12,805.00           | -8,720.57  | -444.79    | 384,535.33          | 794,439.30         | 32.054535 | -103.516373 |
| 21,800.00                                       | 90.00           | 179.57      | 12,805.00           | -8,820.56  | -444.04    | 384,435.33          | 794,440.04         | 32.054260 | -103.516373 |
| 21,900.00                                       | 90.00           | 179.57      | 12,805.00           | -8,920.56  | -443.30    | 384,335.34          | 794,440.79         | 32.053985 | -103.516373 |
| 22,000.00                                       | 90.00           | 179.57      | 12,805.00           | -9,020.56  | -442.55    | 384,235.34          | 794,441.53         | 32.053710 | -103.516373 |
| 22,100.00                                       | 90.00           | 179.57      | 12,805.00           | -9,120.55  | -441.81    | 384,135.34          | 794,442.28         | 32.053435 | -103.516373 |
| 22,200.00                                       | 90.00           | 179.57      | 12,805.00           | -9,220.55  | -441.06    | 384,035.35          | 794,443.03         | 32.053160 | -103.516373 |
| 22,300.00                                       | 90.00           | 179.57      | 12,805.00           | -9,320.55  | -440.32    | 383,935.35          | 794,443.77         | 32.052886 | -103.516373 |
| 22,400.00                                       | 90.00           | 179.57      | 12,805.00           | -9,420.55  | -439.57    | 383,835.35          | 794,444.52         | 32.052611 | -103.516373 |
| 22,500.00                                       | 90.00           | 179.57      | 12,805.00           | -9,520.54  | -438.83    | 383,735.35          | 794,445.26         | 32.052336 | -103.516373 |
| 22,600.00                                       | 90.00           | 179.57      | 12,805.00           | -9,620.54  | -438.08    | 383,635.36          | 794,446.01         | 32.052061 | -103.516373 |
| 22,700.00                                       | 90.00           | 179.57      | 12,805.00           | -9,720.54  | -437.34    | 383,535.36          | 794,446.75         | 32.051786 | -103.516373 |
| 22,800.00                                       | 90.00           | 179.57      | 12,805.00           | -9,820.53  | -436.59    | 383,435.36          | 794,447.50         | 32.051511 | -103.516373 |
| 22,900.00                                       | 90.00           | 179.57      | 12,805.00           | -9,920.53  | -435.84    | 383,335.37          | 794,448.24         | 32.051236 | -103.516373 |
| 22,977.61                                       | 90.00           | 179.57      | 12,805.00           | -9,998.14  | -435.27    | 383,257.76          | 794,448.82         | 32.051023 | -103.516373 |
| Last Take Point @ 22977' MD, 100' FSL, 360' FWL |                 |             |                     |            |            |                     |                    |           |             |
| 23,000.00                                       | 90.00           | 179.57      | 12,805.00           | -10,020.53 | -435.10    | 383,235.37          | 794,448.99         | 32.050961 | -103.516373 |
| 23,077.61                                       | 90.00           | 179.57      | 12,805.00           | -10,098.14 | -434.52    | 383,157.76          | 794,449.57         | 32.050748 | -103.516374 |
| PBHL; 100' FSL, 360' FWL                        |                 |             |                     |            |            |                     |                    |           |             |
| 23,077.62                                       | 90.00           | 179.57      | 12,805.00           | -10,098.15 | -434.52    | 383,157.75          | 794,449.57         | 32.050748 | -103.516374 |

| 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 6-7 FEI                                                                     | 0.00          | 0.00         | 0.00      | -10,098.15 | -434.52    | 383,157.75      | 794,449.57     | 32.050748 | -103.516374 |
| - plan misses target center by 10107.49ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)          |               |              |           |            |            |                 |                |           |             |
| - Point                                                                                    |               |              |           |            |            |                 |                |           |             |
| VP - Jayhawk 14H                                                                           | 0.00          | 0.00         | 11,800.00 | 396.52     | -512.76    | 393,652.40      | 794,371.33     | 32.079596 | -103.516370 |
| - plan misses target center by 0.88ft at 11823.58ft MD (11800.01 TVD, 395.99 N, -512.06 E) |               |              |           |            |            |                 |                |           |             |
| - Point                                                                                    |               |              |           |            |            |                 |                |           |             |

| Plan Annotations    |                     |                    |            |                                                  |
|---------------------|---------------------|--------------------|------------|--------------------------------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates: |            | Comment                                          |
|                     |                     | +N/-S (ft)         | +E/-W (ft) |                                                  |
| 12,255.62           | 12,232.04           | 396.52             | -512.76    | KOP @ 12255' MD, 50' FNL, 360' FWL               |
| 12,494.33           | 12,463.91           | 347.51             | -512.39    | First Take Point @ 12494' MD, 100' FNL, 358' FWL |
| 17,809.00           | 12,805.00           | -4,829.67          | -473.80    | Cross Section @ 17809' MD, 0' FNL, 360' FWL      |
| 22,977.61           | 12,805.00           | -9,998.14          | -435.27    | Last Take Point @ 22977' MD, 100' FSL, 360' FWL  |
| 23,077.61           | 12,805.00           | -10,098.14         | -434.52    | PBHL; 100' FSL, 360' FWL                         |

# WCDSC Permian NM

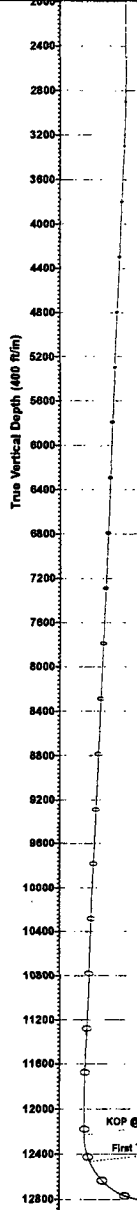
WELL DETAILS: Jayhawk 6-7 FED 14H

RKB @ 3340.20ft (Original Well Elev)  
3315.20

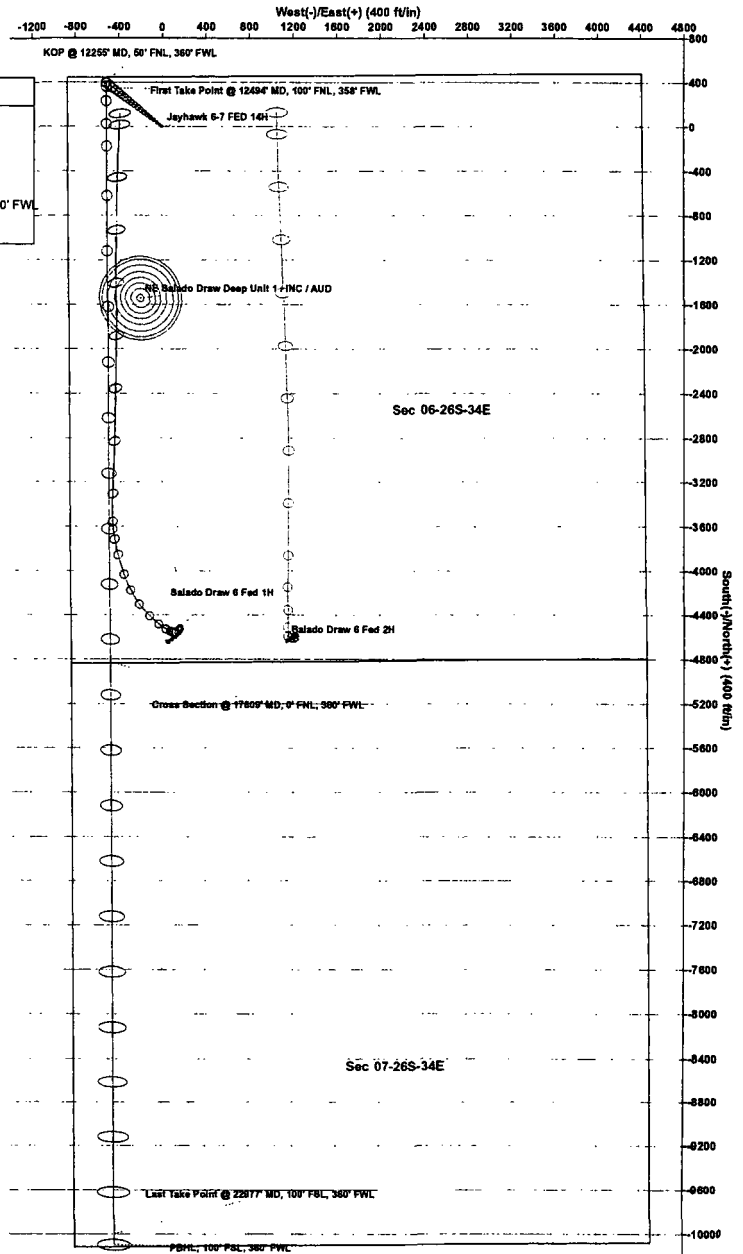
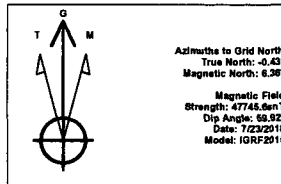
Northing 393255.88 Easting 794884.09 Latitude 32.078498 Longitude -103.514724

## SECTION DETAILS Permit Plan 2

| MD       | Inc   | Azi    | TVD      | +N/-S     | +E/-W   | Dleg  | V/Sect   | Annotation                         |
|----------|-------|--------|----------|-----------|---------|-------|----------|------------------------------------|
| 0.00     | 0.00  | 0.00   | 0.00     | 0.00      | 0.00    | 0.00  | 0.00     |                                    |
| 2750.00  | 0.00  | 0.00   | 2750.00  | 0.00      | 0.00    | 0.00  | 0.00     |                                    |
| 3172.23  | 4.22  | 307.72 | 3171.84  | 9.51      | -12.30  | 1.00  | -8.98    |                                    |
| 11624.09 | 4.22  | 307.72 | 11600.77 | 390.18    | -504.56 | 0.00  | -368.13  |                                    |
| 11905.58 | 0.00  | 0.00   | 11882.00 | 396.52    | -512.76 | 1.50  | -374.11  |                                    |
| 12255.62 | 0.00  | 0.00   | 12232.04 | 396.52    | -512.76 | 0.00  | -374.11  | KOP @ 12255' MD, 50' FNL, 360' FWL |
| 13155.62 | 90.00 | 179.57 | 12805.00 | -176.42   | -508.48 | 10.00 | 198.12   |                                    |
| 23077.62 | 90.00 | 179.57 | 12805.00 | -10098.15 | -434.52 | 0.00  | 10107.49 | PBHL: 100' FSL, 360' FWL           |



devon



KOP @ 12255' MD, 50' FNL, 360' FWL

First Take Point @ 12494' MD, 100' FNL, 358' FWL

Last Take Point @ 22977' MD, 100' FSL, 360' FWL

PBHL: 100' FSL, 360' FWL

Cross Section @ 17809' MD, 0' FNL, 360' FWL

Vertical Section at 182.46° (400 ft/in)