

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED  
OMB NO 1004-0135  
Expires July 31, 2010**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.*

HOBBS OCD

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

JUL 10 2012

|                                                                                                                                     |                                                                           |                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------|
| 1 Type of Well<br><input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other     |                                                                           | 5 Lease Serial No<br>NMNM15906                                |
| 2 Name of Operator<br>CIMAREX ENERGY COMPANY OF CO                                                                                  |                                                                           | 6. If Indian, Allottee or Tribe Name                          |
| Contact: ZENO FARRIS<br>E-Mail: zfarris@cimarex.com                                                                                 |                                                                           | 7. If Unit or CA/Agreement, Name and/or No                    |
| 3a Address<br>600 NORTH MARIENFELD STREET, SUITE 600<br>MIDLAND, TX 79701                                                           | 3b. Phone No. (include area code)<br>Ph: 432-620-1938<br>Fx: 432-620-1940 | 8 Well Name and No<br>SNODDY FEDERAL 20H                      |
| 4 Location of Well (Footage, Sec., T., R., M., or Survey Description)<br>Sec 26 T20S R32E NENE 811' FNL 644' FEL<br>727' N 4 526' E |                                                                           | 9. API Well No<br>30-025-40447-00-X1                          |
|                                                                                                                                     |                                                                           | 10 Field and Pool, or Exploratory<br>SALT LAKE<br>Bone Spring |
|                                                                                                                                     |                                                                           | 11 County or Parish, and State<br>LEA COUNTY, NM              |

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

| TYPE OF SUBMISSION                                   | TYPE OF ACTION                                |                                           |                                                    |                                           |
|------------------------------------------------------|-----------------------------------------------|-------------------------------------------|----------------------------------------------------|-------------------------------------------|
| <input checked="" type="checkbox"/> Notice of Intent | <input type="checkbox"/> Acidize              | <input type="checkbox"/> Deepen           | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water Shut-Off   |
| <input type="checkbox"/> Subsequent Report           | <input type="checkbox"/> Alter Casing         | <input type="checkbox"/> Fracture Treat   | <input type="checkbox"/> Reclamation               | <input type="checkbox"/> Well Integrity   |
| <input type="checkbox"/> Final Abandonment Notice    | <input type="checkbox"/> Casing Repair        | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete                | <input checked="" type="checkbox"/> Other |
|                                                      | <input type="checkbox"/> Change Plans         | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Temporarily Abandon       | Change to Original A                      |
|                                                      | <input type="checkbox"/> Convert to Injection | <input type="checkbox"/> Plug Back        | <input type="checkbox"/> Water Disposal            | 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 recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Due to drilling constraints with multiple wells on a potash restricted drilling island it will be necessary to move the the SHL for the Snoddy Federal No 20H as described below:

From: 811' FNL & 644' FEL Section 26-20S-32E  
To: 727' FNL & 526' FEL Section 26-20S-32E

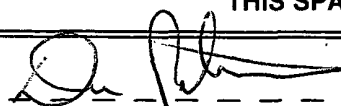
All other aspects of the permit remain the same except MD changes to 14129'. See attached C-102 and well pad plat, Rig plat and reclamation, and revised directional

APPROVED BY POTASH; 6-20-2012; JSR

Engineering reviewed 6/23/12 MWD

|                                                                                                                                                                                                                    |                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|
| 14. I hereby certify that the foregoing is true and correct                                                                                                                                                        |                                |
| Electronic Submission #141043 verified by the BLM Well Information System<br>For CIMAREX ENERGY COMPANY OF CO, sent to the Hobbs<br>Committed to AFMSS for processing by WESLEY INGRAM on 06/20/2012 (12WWW0020SE) |                                |
| Name (Printed/Typed) ZENO FARRIS                                                                                                                                                                                   | Title MANAGER OPERATIONS ADMIN |
| Signature (Electronic Submission)                                                                                                                                                                                  | Date 06/19/2012                |

## THIS SPACE FOR FEDERAL OR STATE OFFICE USE

|                                                                                                                                                                                                                                                          |           |                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------|
| Approved By                                                                                                                                                           | Title AFM | Date 7/9/12                  |
| Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon |           | Office CARLSBAD FIELD 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

\*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\* BLM REVISED \*\*

JUL 17 2012

HOEBS OCD

## DISTRICT I

1625 N. French Dr., Hobbs, NM 88240

## DISTRICT II

1391 W. Grand Avenue, Artesia, NM 88210

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

JUL 10 2012

State of New Mexico  
Energy, Minerals and Natural Resources DepartmentForm C-102  
Revised October 16, 2009Submit one copy to appropriate  
District Office

RECEIVED

## CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

## WELL LOCATION AND ACREAGE DEDICATION PLAT

AMENDED REPORT

|                                   |                                                 |                                     |
|-----------------------------------|-------------------------------------------------|-------------------------------------|
| API Number<br><b>30-025-40447</b> | Pool Code<br>53560                              | Pool Name<br>Salt Lake; Bone Spring |
| Property Code<br><b>39073</b>     | Property Name<br>SNODDY FEDERAL                 | Well Number<br>20H                  |
| OGRID No.<br>162683               | Operator Name<br>CIMAREX ENERGY CO. OF COLORADO | Elevation<br>3555'                  |

## Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| A             | 26      | 20 S     | 32 E  |         | 727           | NORTH            | 526           | EAST           | LEA    |

## Bottom Hole Location If Different From Surface

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| D             | 26      | 20 S     | 32 E  |         | 660           | NORTH            | 330           | WEST           | LEA    |

| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |
|-----------------|-----------------|--------------------|-----------|
| 160             |                 |                    |           |

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><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>Zeno Farris</i> 6/19/2012<br/>Signature _____ Date _____<br/><b>Zeno Farris</b><br/>Printed Name _____</p> |
| <p><b>PROPOSED BOTTOM HOLE LOCATION</b><br/>Lat - N 32°32'58.85"<br/>Long - W 103°44'39.89"<br/>NMSPCE- N 564185.7<br/>E 727299.8<br/>(NAD-83)</p> <p><b>SURFACE LOCATION</b><br/>Lat - N 32°32'57.78"<br/>Long - W 103°43'48.09"<br/>NMSPCE- N 564123.3<br/>E 727233.2<br/>(NAD-83)</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><i>Gary L. Jones</i><br/>Date Surveyed _____<br/>Signature &amp; Seal of Professional Surveyor _____<br/>Certificate No. Gary L. Jones 7977</p> <p><b>BASIN SURVEYS</b></p>                                                                                                                                                                                                                             |

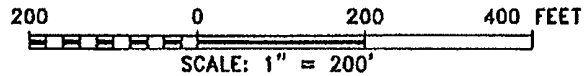
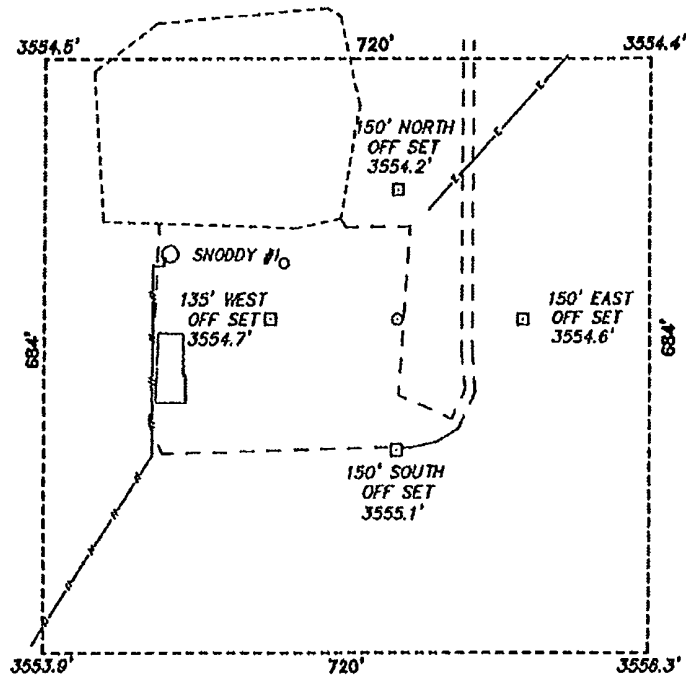
\* Amended

SECTION 26, TOWNSHIP 20 SOUTH, RANGE 32 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



CIMAREX ENERGY CO. OF COLORADO  
SNODDY FEDERAL #20H  
ELEV. - 3655'

Lat - N 32°32'57.78"  
Long - W 103°43'48.09"  
NMSPCE- N 564123.3  
E 727233.2  
(NAD-83)



Directions to Location:

AT MILE MARKER 68, GO WEST ON HWY 62-180  
FOR 0.25 MILES TO LEASE ROAD, ON LEASE ROAD  
GO SOUTH 0.3 MILES TO WELL PAD AND PROPOSED  
LOCATION.

**BASIN SURVEYS** P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 24723

Drawn By: J. SMALL

Date: 06-29-2011

Disk: JMS 24723

**CIMAREX ENERGY CO. OF COLORADO**

REF: SNODDY FEDERAL #20H / WELL PAD TOPO

THE SNODDY FEDERAL #20H LOCATED 727'

FROM THE NORTH LINE AND 526' FROM THE EAST LINE OF

SECTION 26, TOWNSHIP 20 SOUTH, RANGE 32 EAST,

N.M.P.M., LEA COUNTY, NEW MEXICO.

Survey Date: 06-22-2011

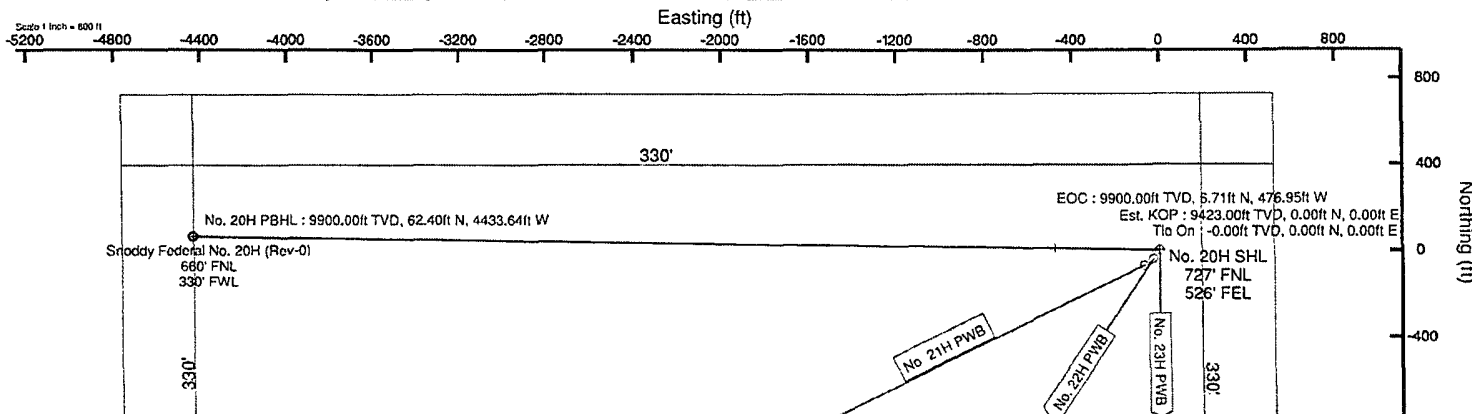
Sheet 1 of 1 Sheets



# Cimarex Energy Co. of Colorado

Location: Lea County, NM  
Field: (Snoddy) Sec 26, T20S, R32E  
Facility: Snoddy Federal No. 20H

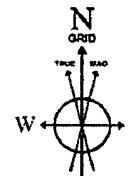
Slot: No. 20H SHL  
Well: No. 20H  
Wellbore: No. 20H PWB



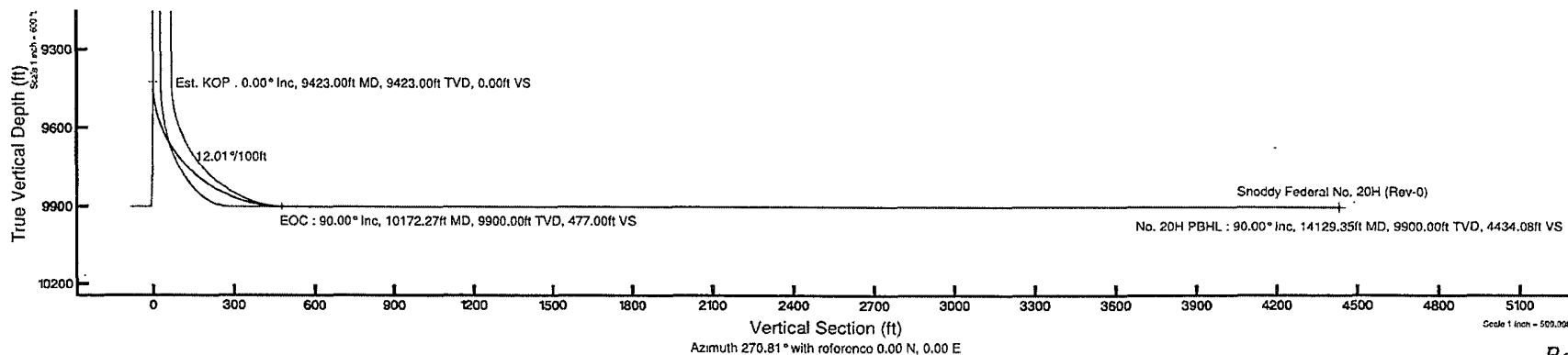
Well Profile Data

| Design Comment | MD (ft)  | Inc (°) | Az (°)  | TVD (ft) | Local N (ft) | Local E (ft) | DLS (°/100ft) | VS (ft) |
|----------------|----------|---------|---------|----------|--------------|--------------|---------------|---------|
| Tie On         | 0.00     | 0.000   | 270.806 | 0.00     | 0.00         | 0.00         | 0.00          | 0.00    |
| Est. KOP       | 9423.00  | 0.000   | 270.806 | 9423.00  | 0.00         | 0.00         | 0.00          | 0.00    |
| EOC            | 10172.27 | 90.000  | 270.806 | 9900.00  | 6.71         | -476.95      | 12.01         | 477.00  |
| No. 20H PWB    | 14129.35 | 90.000  | 270.806 | 9900.00  | 62.40        | -4433.64     | 0.00          | 4434.08 |

|                                                                     |                                                                    |
|---------------------------------------------------------------------|--------------------------------------------------------------------|
| Plot reference wellpath to Rev-B.0                                  |                                                                    |
| True vertical depths are referenced to Rig on No. 20H SHL (RT)      | Grid System: NAD83 / TM New Mexico SP, F extem Zone (3001), US Int |
| Measured depths are referenced to Rig on No. 20H SHL (RT)           | North Reference: Grid north                                        |
| Rig on No. 20H SHL (RT) is Marsh Sea Level 3355 feet                | Scale: True distance                                               |
| Mean Sea Level is Marsh Sea Level (At Site, No. 20H SHL) -3355 feet | Depths are in feet                                                 |
| Coordinates are in feet referenced to Grid                          | Created by: horkal on 07/2012                                      |



BGGM (1945.0 to 2013.0) Dip: 60.40° Fold: 48696.6 nT  
Magnetic North is 7.65 degrees East of True North (at 6/7/2012)  
Grid North is 0.32 degrees East of True North  
To correct azimuth from True to Grid subtract 0.32 degrees  
To correct azimuth from Magnetic to Grid add 7.32 degrees  
For example: If the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.32 = 97.32



Rev-B.0



# Planned Wellpath Report

Rev-B.0  
Page 1 of 5



## REFERENCE WELLPATH IDENTIFICATION

|          |                                |          |             |
|----------|--------------------------------|----------|-------------|
| Operator | Cimarex Energy Co. of Colorado | Slot     | No. 20H SHL |
| Area     | Lea County, NM                 | Well     | No. 20H     |
| Field    | (Snoddy) Sec 26, T20S, R32E    | Wellbore | No. 20H PWB |
| Facility | Snoddy Federal No. 20H         |          |             |

## REPORT SETUP INFORMATION

|                     |                                                        |                      |                            |
|---------------------|--------------------------------------------------------|----------------------|----------------------------|
| Projection System   | NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet | Software System      | WellArchitect@ 3.0.0       |
| North Reference     | Grid                                                   | User                 | Harrkol                    |
| Scale               | 0.999949                                               | Report Generated     | 6/7/2012 at 4:25:49 PM     |
| Convergence at slot | 0.32° East                                             | Database/Source file | WA Midland/No. 20H_PWB.xml |

## WELLPATH LOCATION

|                       | Local coordinates |          | Grid coordinates |                 | Geographic coordinates |                 |
|-----------------------|-------------------|----------|------------------|-----------------|------------------------|-----------------|
|                       | North[ft]         | East[ft] | Easting[US ft]   | Northing[US ft] | Latitude               | Longitude       |
| Slot Location         | 0.00              | 0.00     | 727233.20        | 564123.30       | 32°32'57.784"N         | 103°43'48.095"W |
| Facility Reference Pt |                   |          | 727233.20        | 564123.30       | 32°32'57.784"N         | 103°43'48.095"W |
| Field Reference Pt    |                   |          | 727115.80        | 564039.60       | 32°32'56.962"N         | 103°43'49.472"W |

## WELLPATH DATUM

|                          |                         |                                                           |                   |
|--------------------------|-------------------------|-----------------------------------------------------------|-------------------|
| Calculation method       | Minimum curvature       | Rig on No. 20H SHL (RT) to Facility Vertical Datum        | 0.00ft            |
| Horizontal Reference Pt  | Slot                    | Rig on No. 20H SHL (RT) to Mean Sea Level                 | 3555.00ft         |
| Vertical Reference Pt    | Rig on No. 20H SHL (RT) | Rig on No. 20H SHL (RT) to Mud Line at Slot (No. 20H SHL) | 0.00ft            |
| MD Reference Pt          | Rig on No. 20H SHL (RT) | Section Origin                                            | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level          | Section Azimuth                                           | 270.81°           |



# Planned Wellpath Report

Rev-B.0  
Page 2 of 5



## REFERENCE WELLPATH IDENTIFICATION

|          |                                |          |             |
|----------|--------------------------------|----------|-------------|
| Operator | Cimarex Energy Co. of Colorado | Slot     | No. 20H SHL |
| Area     | Lea County, NM                 | Well     | No. 20H     |
| Field    | (Snoddy) Sec 26, T20S, R32E    | Wellbore | No. 20H PWB |
| Facility | Snoddy Federal No. 20H         |          |             |

## WELLPATH DATA (152 stations) † = interpolated/extrapolated station

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude       | Longitude       | DLS<br>[°/100ft] | Comments  |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|------------------|-----------|
| 0.00       | 0.000              | 270.806        | 0.00        | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             | Tie On    |
| 100.00†    | 0.000              | 270.806        | 100.00      | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 200.00†    | 0.000              | 270.806        | 200.00      | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 300.00†    | 0.000              | 270.806        | 300.00      | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 400.00†    | 0.000              | 270.806        | 400.00      | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 500.00†    | 0.000              | 270.806        | 500.00      | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 600.00†    | 0.000              | 270.806        | 600.00      | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 700.00†    | 0.000              | 270.806        | 700.00      | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 800.00†    | 0.000              | 270.806        | 800.00      | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 900.00†    | 0.000              | 270.806        | 900.00      | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 1000.00†   | 0.000              | 270.806        | 1000.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 1100.00†   | 0.000              | 270.806        | 1100.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             | Rustler   |
| 1200.00†   | 0.000              | 270.806        | 1200.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 1300.00†   | 0.000              | 270.806        | 1300.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 1400.00†   | 0.000              | 270.806        | 1400.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 1450.00†   | 0.000              | 270.806        | 1450.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             | Top Salt  |
| 1500.00†   | 0.000              | 270.806        | 1500.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 1600.00†   | 0.000              | 270.806        | 1600.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 1700.00†   | 0.000              | 270.806        | 1700.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 1800.00†   | 0.000              | 270.806        | 1800.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 1900.00†   | 0.000              | 270.806        | 1900.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 2000.00†   | 0.000              | 270.806        | 2000.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 2100.00†   | 0.000              | 270.806        | 2100.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 2200.00†   | 0.000              | 270.806        | 2200.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 2300.00†   | 0.000              | 270.806        | 2300.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 2400.00†   | 0.000              | 270.806        | 2400.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 2500.00†   | 0.000              | 270.806        | 2500.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 2600.00†   | 0.000              | 270.806        | 2600.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 2700.00†   | 0.000              | 270.806        | 2700.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 2800.00†   | 0.000              | 270.806        | 2800.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 2900.00†   | 0.000              | 270.806        | 2900.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 2965.00†   | 0.000              | 270.806        | 2965.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             | Base Salt |
| 3000.00†   | 0.000              | 270.806        | 3000.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 3050.00†   | 0.000              | 270.806        | 3050.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             | Yates     |
| 3100.00†   | 0.000              | 270.806        | 3100.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 3200.00†   | 0.000              | 270.806        | 3200.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 3300.00†   | 0.000              | 270.806        | 3300.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 3400.00†   | 0.000              | 270.806        | 3400.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 3410.00†   | 0.000              | 270.806        | 3410.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             | Capitan   |
| 3500.00†   | 0.000              | 270.806        | 3500.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 3600.00†   | 0.000              | 270.806        | 3600.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 3700.00†   | 0.000              | 270.806        | 3700.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 3800.00†   | 0.000              | 270.806        | 3800.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 3900.00†   | 0.000              | 270.806        | 3900.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |
| 4000.00†   | 0.000              | 270.806        | 4000.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |           |



# Planned Wellpath Report

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## REFERENCE WELLPATH IDENTIFICATION

|          |                                |          |             |
|----------|--------------------------------|----------|-------------|
| Operator | Cimarex Energy Co. of Colorado | Slot     | No. 20H SHL |
| Area     | Lea County, NM                 | Well     | No. 20H     |
| Field    | (Snoddy) Sec 26, T20S, R32E    | Wellbore | No. 20H PWB |
| Facility | Snoddy Federal No. 20H         |          |             |

## WELLPATH DATA (152 stations) † = interpolated/extrapolated station

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude       | Longitude       | DLS<br>[°/100ft] | Comments                |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|------------------|-------------------------|
| 4100.00†   | 0.000              | 270.806        | 4100.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 4200.00†   | 0.000              | 270.806        | 4200.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 4300.00†   | 0.000              | 270.806        | 4300.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 4400.00†   | 0.000              | 270.806        | 4400.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 4500.00†   | 0.000              | 270.806        | 4500.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 4600.00†   | 0.000              | 270.806        | 4600.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 4700.00†   | 0.000              | 270.806        | 4700.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             | Delaware Sands          |
| 4800.00†   | 0.000              | 270.806        | 4800.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 4900.00†   | 0.000              | 270.806        | 4900.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 5000.00†   | 0.000              | 270.806        | 5000.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 5100.00†   | 0.000              | 270.806        | 5100.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 5200.00†   | 0.000              | 270.806        | 5200.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 5300.00†   | 0.000              | 270.806        | 5300.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 5400.00†   | 0.000              | 270.806        | 5400.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 5500.00†   | 0.000              | 270.806        | 5500.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 5600.00†   | 0.000              | 270.806        | 5600.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 5700.00†   | 0.000              | 270.806        | 5700.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 5800.00†   | 0.000              | 270.806        | 5800.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 5900.00†   | 0.000              | 270.806        | 5900.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 6000.00†   | 0.000              | 270.806        | 6000.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 6100.00†   | 0.000              | 270.806        | 6100.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 6200.00†   | 0.000              | 270.806        | 6200.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 6300.00†   | 0.000              | 270.806        | 6300.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 6400.00†   | 0.000              | 270.806        | 6400.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 6500.00†   | 0.000              | 270.806        | 6500.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 6600.00†   | 0.000              | 270.806        | 6600.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 6700.00†   | 0.000              | 270.806        | 6700.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 6800.00†   | 0.000              | 270.806        | 6800.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 6900.00†   | 0.000              | 270.806        | 6900.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 7000.00†   | 0.000              | 270.806        | 7000.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 7100.00†   | 0.000              | 270.806        | 7100.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 7200.00†   | 0.000              | 270.806        | 7200.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 7300.00†   | 0.000              | 270.806        | 7300.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 7400.00†   | 0.000              | 270.806        | 7400.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 7500.00†   | 0.000              | 270.806        | 7500.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 7600.00†   | 0.000              | 270.806        | 7600.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 7700.00†   | 0.000              | 270.806        | 7700.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 7800.00†   | 0.000              | 270.806        | 7800.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 7900.00†   | 0.000              | 270.806        | 7900.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             | Bone Spring             |
| 8000.00†   | 0.000              | 270.806        | 8000.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 8100.00†   | 0.000              | 270.806        | 8100.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 8200.00†   | 0.000              | 270.806        | 8200.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 8215.00†   | 0.000              | 270.806        | 8215.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             | Upper Bone Spring Shale |
| 8300.00†   | 0.000              | 270.806        | 8300.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |
| 8400.00†   | 0.000              | 270.806        | 8400.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |                         |



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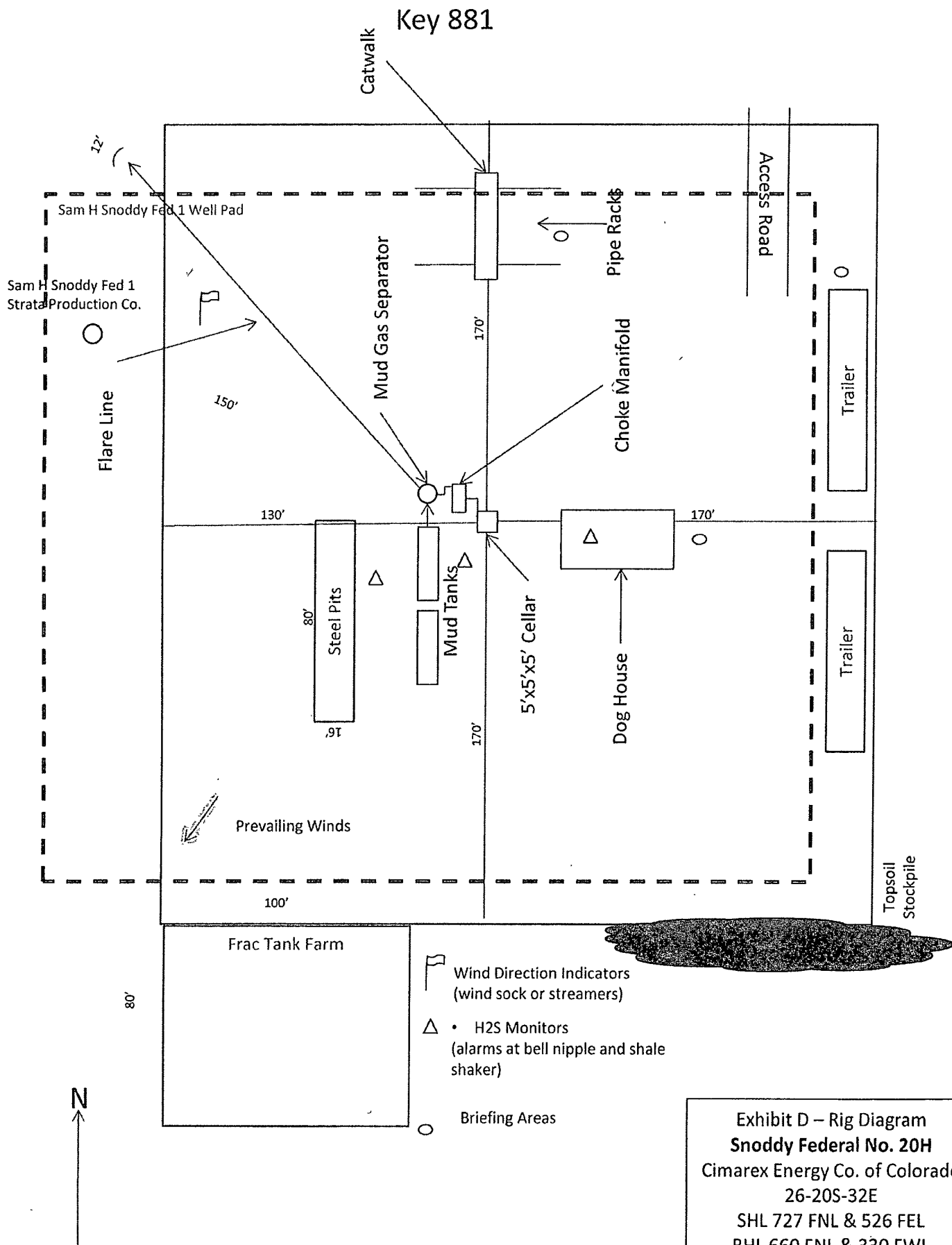


## REFERENCE WELLPATH IDENTIFICATION

|          |                                |          |             |
|----------|--------------------------------|----------|-------------|
| Operator | Cimarex Energy Co. of Colorado | Slot     | No. 20H SHL |
| Area     | Lea County, NM                 | Well     | No. 20H     |
| Field    | (Snoddy) Sec 26, T20S, R32E    | Wellbore | No. 20H PWB |
| Facility | Snoddy Federal No. 20H         |          |             |

## WELLPATH DATA (152 stations) † = interpolated/extrapolated station

| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude       | Longitude       | DLS<br>[°/100ft] | Comments |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|------------------|----------|
| 8500.00†   | 0.000              | 270.806        | 8500.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |          |
| 8600.00†   | 0.000              | 270.806        | 8600.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |          |
| 8700.00†   | 0.000              | 270.806        | 8700.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |          |
| 8800.00†   | 0.000              | 270.806        | 8800.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |          |
| 8900.00†   | 0.000              | 270.806        | 8900.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |          |
| 8965.00†   | 0.000              | 270.806        | 8965.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             | 1st BSS  |
| 9000.00†   | 0.000              | 270.806        | 9000.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |          |
| 9100.00†   | 0.000              | 270.806        | 9100.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |          |
| 9200.00†   | 0.000              | 270.806        | 9200.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |          |
| 9300.00†   | 0.000              | 270.806        | 9300.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |          |
| 9400.00†   | 0.000              | 270.806        | 9400.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             |          |
| 9423.00    | 0.000              | 270.806        | 9423.00     | 0.00              | 0.00          | 0.00         | 727233.20            | 564123.30             | 32°32'57.784"N | 103°43'48.095"W | 0.00             | Est. KOP |
| 9500.00†   | 9.249              | 270.806        | 9499.67     | 6.20              | 0.09          | -6.20        | 727227.00            | 564123.39             | 32°32'57.785"N | 103°43'48.167"W | 12.01            |          |
| 9520.68†   | 11.733             | 270.806        | 9520.00     | 9.97              | 0.14          | -9.97        | 727223.23            | 564123.44             | 32°32'57.786"N | 103°43'48.211"W | 12.01            | 2nd BSS  |
| 9600.00†   | 21.261             | 270.806        | 9595.97     | 32.46             | 0.46          | -32.46       | 727200.74            | 564123.76             | 32°32'57.790"N | 103°43'48.474"W | 12.01            |          |
| 9700.00†   | 33.272             | 270.806        | 9684.69     | 78.19             | 1.10          | -78.19       | 727155.02            | 564124.40             | 32°32'57.799"N | 103°43'49.008"W | 12.01            |          |
| 9800.00†   | 45.284             | 270.806        | 9761.96     | 141.39            | 1.99          | -141.37      | 727091.83            | 564125.29             | 32°32'57.811"N | 103°43'49.746"W | 12.01            |          |
| 9900.00†   | 57.296             | 270.806        | 9824.38     | 219.28            | 3.09          | -219.25      | 727013.96            | 564126.39             | 32°32'57.827"N | 103°43'50.656"W | 12.01            |          |
| 10000.00†  | 69.307             | 270.806        | 9869.23     | 308.45            | 4.34          | -308.42      | 726924.80            | 564127.64             | 32°32'57.844"N | 103°43'51.698"W | 12.01            |          |
| 10100.00†  | 81.319             | 270.806        | 9894.54     | 405.01            | 5.70          | -404.97      | 726828.26            | 564129.00             | 32°32'57.863"N | 103°43'52.825"W | 12.01            |          |
| 10172.27   | 90.000             | 270.806        | 9900.00     | 477.00            | 6.71          | -476.95      | 726756.27            | 564130.01             | 32°32'57.877"N | 103°43'53.666"W | 12.01            | EOC      |
| 10200.00†  | 90.000             | 270.806        | 9900.00     | 504.73            | 7.10          | -504.68      | 726728.55            | 564130.40             | 32°32'57.882"N | 103°43'53.990"W | 0.00             |          |
| 10300.00†  | 90.000             | 270.806        | 9900.00     | 604.73            | 8.51          | -604.67      | 726628.56            | 564131.81             | 32°32'57.902"N | 103°43'55.158"W | 0.00             |          |
| 10400.00†  | 90.000             | 270.806        | 9900.00     | 704.73            | 9.92          | -704.66      | 726528.58            | 564133.22             | 32°32'57.921"N | 103°43'56.326"W | 0.00             |          |
| 10500.00†  | 90.000             | 270.806        | 9900.00     | 804.73            | 11.33         | -804.65      | 726428.59            | 564134.62             | 32°32'57.941"N | 103°43'57.494"W | 0.00             |          |
| 10600.00†  | 90.000             | 270.806        | 9900.00     | 904.73            | 12.73         | -904.64      | 726328.61            | 564136.03             | 32°32'57.960"N | 103°43'58.662"W | 0.00             |          |
| 10700.00†  | 90.000             | 270.806        | 9900.00     | 1004.73           | 14.14         | -1004.63     | 726228.62            | 564137.44             | 32°32'57.980"N | 103°43'59.830"W | 0.00             |          |
| 10800.00†  | 90.000             | 270.806        | 9900.00     | 1104.73           | 15.55         | -1104.62     | 726128.64            | 564138.85             | 32°32'57.999"N | 103°44'00.998"W | 0.00             |          |
| 10900.00†  | 90.000             | 270.806        | 9900.00     | 1204.73           | 16.95         | -1204.61     | 726028.65            | 564140.25             | 32°32'58.019"N | 103°44'02.166"W | 0.00             |          |
| 11000.00†  | 90.000             | 270.806        | 9900.00     | 1304.73           | 18.36         | -1304.60     | 725928.67            | 564141.66             | 32°32'58.038"N | 103°44'03.334"W | 0.00             |          |
| 11100.00†  | 90.000             | 270.806        | 9900.00     | 1404.73           | 19.77         | -1404.59     | 725828.68            | 564143.07             | 32°32'58.058"N | 103°44'04.502"W | 0.00             |          |
| 11200.00†  | 90.000             | 270.806        | 9900.00     | 1504.73           | 21.18         | -1504.58     | 725728.70            | 564144.48             | 32°32'58.077"N | 103°44'05.670"W | 0.00             |          |
| 11300.00†  | 90.000             | 270.806        | 9900.00     | 1604.73           | 22.58         | -1604.57     | 725628.71            | 564145.88             | 32°32'58.097"N | 103°44'06.838"W | 0.00             |          |
| 11400.00†  | 90.000             | 270.806        | 9900.00     | 1704.73           | 23.99         | -1704.56     | 725528.73            | 564147.29             | 32°32'58.116"N | 103°44'08.007"W | 0.00             |          |
| 11500.00†  | 90.000             | 270.806        | 9900.00     | 1804.73           | 25.40         | -1804.55     | 725428.74            | 564148.70             | 32°32'58.136"N | 103°44'09.175"W | 0.00             |          |
| 11600.00†  | 90.000             | 270.806        | 9900.00     | 1904.73           | 26.81         | -1904.54     | 725328.76            | 564150.10             | 32°32'58.155"N | 103°44'10.343"W | 0.00             |          |
| 11700.00†  | 90.000             | 270.806        | 9900.00     | 2004.73           | 28.21         | -2004.53     | 725228.78            | 564151.51             | 32°32'58.175"N | 103°44'11.511"W | 0.00             |          |
| 11800.00†  | 90.000             | 270.806        | 9900.00     | 2104.73           | 29.62         | -2104.52     | 725128.79            | 564152.92             | 32°32'58.194"N | 103°44'12.679"W | 0.00             |          |
| 11900.00†  | 90.000             | 270.806        | 9900.00     | 2204.73           | 31.03         | -2204.51     | 725028.81            | 564154.33             | 32°32'58.214"N | 103°44'13.847"W | 0.00             |          |
| 12000.00†  | 90.000             | 270.806        | 9900.00     | 2304.73           | 32.44         | -2304.50     | 724928.82            | 564155.73             | 32°32'58.233"N | 103°44'15.015"W | 0.00             |          |
| 12100.00†  | 90.000             | 270.806        | 9900.00     | 2404.73           | 33.84         | -2404.49     | 724828.84            | 564157.14             | 32°32'58.253"N | 103°44'16.183"W | 0.00             |          |
| 12200.00†  | 90.000             | 270.806        | 9900.00     | 2504.73           | 35.25         | -2504.48     | 724728.85            | 564158.55             | 32°32'58.272"N | 103°44'17.351"W | 0.00             |          |
| 12300.00†  | 90.000             | 270.806        | 9900.00     | 2604.73           | 36.66         | -2604.47     | 724628.87            | 564159.96             | 32°32'58.291"N | 103°44'18.519"W | 0.00             |          |
| 12400.00†  | 90.000             | 270.806        | 9900.00     | 2704.73           | 38.07         | -2704.46     | 724528.88            | 564161.36             | 32°32'58.311"N | 103°44'19.687"W | 0.00             |          |
| 12500.00†  | 90.000             | 270.806        | 9900.00     | 2804.73           | 39.47         | -2804.45     | 724428.90            | 564162.77             | 32°32'58.330"N | 103°44'20.855"W | 0.00             |          |





# Planned Wellpath Report

Rev-B.0

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## REFERENCE WELLPATH IDENTIFICATION

|          |                                |          |             |
|----------|--------------------------------|----------|-------------|
| Operator | Cimarex Energy Co. of Colorado | Slot     | No. 20H SHL |
| Area     | Lea County, NM                 | Well     | No. 20H     |
| Field    | (Snoddy) Sec 26, T20S, R32E    | Wellbore | No. 20H PWB |
| Facility | Snoddy Federal No. 20H         |          |             |

## WELLPATH DATA (152 stations) † = interpolated/extrapolated station

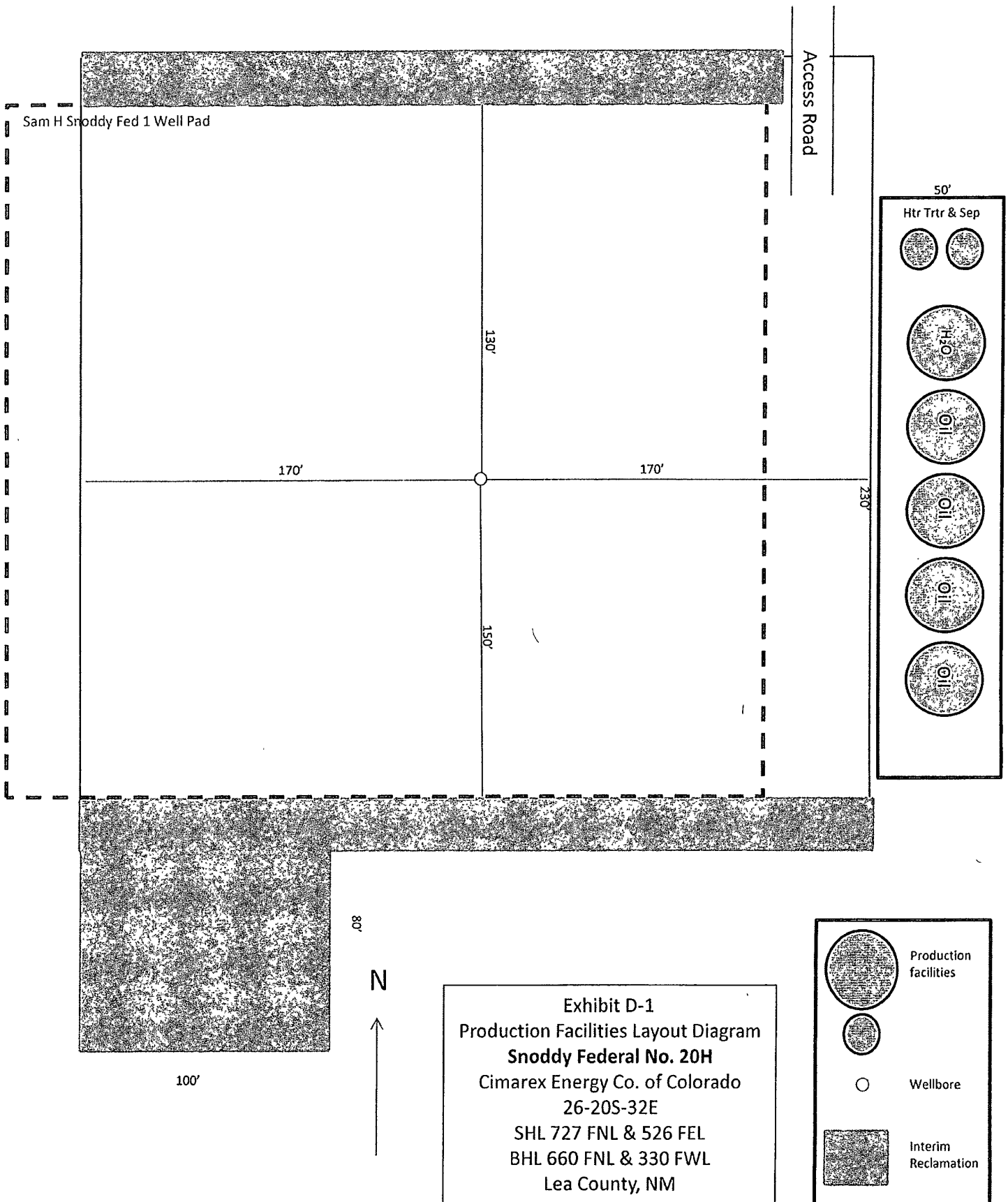
| MD<br>[ft] | Inclination<br>[°] | Azimuth<br>[°] | TVD<br>[ft] | Vert Sect<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude       | Longitude       | DLS<br>[°/100ft] | Comments     |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|------------------|--------------|
| 12600.00†  | 90.000             | 270.806        | 9900.00     | 2904.73           | 40.88         | -2904.44     | 724328.91            | 564164.18             | 32°32'58.350"N | 103°44'22.023"W | 0.00             |              |
| 12700.00†  | 90.000             | 270.806        | 9900.00     | 3004.73           | 42.29         | -3004.43     | 724228.93            | 564165.59             | 32°32'58.369"N | 103°44'23.191"W | 0.00             |              |
| 12800.00†  | 90.000             | 270.806        | 9900.00     | 3104.73           | 43.69         | -3104.42     | 724128.94            | 564166.99             | 32°32'58.389"N | 103°44'24.359"W | 0.00             |              |
| 12900.00†  | 90.000             | 270.806        | 9900.00     | 3204.73           | 45.10         | -3204.41     | 724028.96            | 564168.40             | 32°32'58.408"N | 103°44'25.527"W | 0.00             |              |
| 13000.00†  | 90.000             | 270.806        | 9900.00     | 3304.73           | 46.51         | -3304.40     | 723928.97            | 564169.81             | 32°32'58.428"N | 103°44'26.695"W | 0.00             |              |
| 13100.00†  | 90.000             | 270.806        | 9900.00     | 3404.73           | 47.92         | -3404.39     | 723828.99            | 564171.21             | 32°32'58.447"N | 103°44'27.863"W | 0.00             |              |
| 13200.00†  | 90.000             | 270.806        | 9900.00     | 3504.73           | 49.32         | -3504.38     | 723729.00            | 564172.62             | 32°32'58.466"N | 103°44'29.031"W | 0.00             |              |
| 13300.00†  | 90.000             | 270.806        | 9900.00     | 3604.73           | 50.73         | -3604.37     | 723629.02            | 564174.03             | 32°32'58.486"N | 103°44'30.199"W | 0.00             |              |
| 13400.00†  | 90.000             | 270.806        | 9900.00     | 3704.73           | 52.14         | -3704.36     | 723529.03            | 564175.44             | 32°32'58.505"N | 103°44'31.367"W | 0.00             |              |
| 13500.00†  | 90.000             | 270.806        | 9900.00     | 3804.73           | 53.55         | -3804.35     | 723429.05            | 564176.84             | 32°32'58.525"N | 103°44'32.535"W | 0.00             |              |
| 13600.00†  | 90.000             | 270.806        | 9900.00     | 3904.73           | 54.95         | -3904.34     | 723329.06            | 564178.25             | 32°32'58.544"N | 103°44'33.703"W | 0.00             |              |
| 13700.00†  | 90.000             | 270.806        | 9900.00     | 4004.73           | 56.36         | -4004.33     | 723229.08            | 564179.66             | 32°32'58.563"N | 103°44'34.871"W | 0.00             |              |
| 13800.00†  | 90.000             | 270.806        | 9900.00     | 4104.73           | 57.77         | -4104.32     | 723129.10            | 564181.07             | 32°32'58.583"N | 103°44'36.039"W | 0.00             |              |
| 13900.00†  | 90.000             | 270.806        | 9900.00     | 4204.73           | 59.18         | -4204.31     | 723029.11            | 564182.47             | 32°32'58.602"N | 103°44'37.207"W | 0.00             |              |
| 14000.00†  | 90.000             | 270.806        | 9900.00     | 4304.73           | 60.58         | -4304.30     | 722929.13            | 564183.88             | 32°32'58.622"N | 103°44'38.375"W | 0.00             |              |
| 14100.00†  | 90.000             | 270.806        | 9900.00     | 4404.73           | 61.99         | -4404.29     | 722829.14            | 564185.29             | 32°32'58.641"N | 103°44'39.543"W | 0.00             |              |
| 14129.35   | 90.000             | 270.806        | 9900.00     | 4434.08           | 62.40         | -4433.64     | 722799.80            | 564185.70             | 32°32'58.647"N | 103°44'39.886"W | 0.00             | No. 20H PBHL |

## TARGETS

| Name                                 | MD<br>[ft] | TVD<br>[ft] | North<br>[ft] | East<br>[ft] | Grid East<br>[US ft] | Grid North<br>[US ft] | Latitude       | Longitude       | Shape |
|--------------------------------------|------------|-------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|-------|
| 1) Snoddy Federal No. 20H<br>(Rev-0) | 14129.35   | 9900.00     | 62.40         | -4433.64     | 722799.80            | 564185.70             | 32°32'58.647"N | 103°44'39.886"W | point |

## SURVEY PROGRAM - Ref Wellbore: No. 20H PWB Ref Wellpath: Rev-B.0

| Start MD<br>[ft] | End MD<br>[ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore    |
|------------------|----------------|------------------------------|------------------|-------------|
| 0.00             | 14129.35       | NaviTrak (Standard)          |                  | No. 20H PWB |



## PECOS DISTRICT CONDITIONS OF APPROVAL

|                       |                                   |
|-----------------------|-----------------------------------|
| OPERATOR'S NAME:      | Cimarex Energy Co of Colorado     |
| LEASE NO.:            | NM-15906                          |
| WELL NAME & NO.:      | Snoddy Federal #20H               |
| SURFACE HOLE FOOTAGE: | 727' FNL & 526' FEL               |
| BOTTOM HOLE FOOTAGE:  | 660' FNL & 330' FWL               |
| LOCATION:             | Section 26, T.20S., R.32 E., NMPM |
| COUNTY:               | Lea County, New Mexico            |

### TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Lesser Prairie-Chicken Timing Stipulations
  - Ground-level Abandoned Well Marker
- ☒ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Production (Post Drilling)**
  - Well Structures & Facilities
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## V. SPECIAL REQUIREMENT(S)

### **Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken:**

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period.

Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted.

Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

**Ground-level Abandoned Well Marker to avoid raptor perching:** Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Hobbs Field Station at (575) 393-3612 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

### **D. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

## **VII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color  
Shale Green, Munsell Soil Color Chart # 5Y 4/2

## **VIII. INTERIM RECLAMATION**

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

## **X. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

### Seed Mixture 1, for Loamy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

| <u>Species</u>                                      | <u>lb/acre</u> |
|-----------------------------------------------------|----------------|
| Plains lovegrass ( <i>Eragrostis intermedia</i> )   | 0.5            |
| Sand dropseed ( <i>Sporobolus cryptandrus</i> )     | 1.0            |
| Sideoats grama ( <i>Bouteloua curtipendula</i> )    | 5.0            |
| Plains bristlegrass ( <i>Setaria macrostachya</i> ) | 2.0            |

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed