

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.*

**HOBBSOCD**

**JUN 19 2012**

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

**RECEIVED**

|                                                                                                                                  |                                                      |                                                              |
|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------|
| 1. Type of Well<br><input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other |                                                      | 7. If Unit or CA/Agreement, Name and/or No.                  |
| 2. Name of Operator<br>CIMAREX ENERGY COMPANY OF CO                                                                              |                                                      | 8. Well Name and No.<br>EAST LUSK 15 FEDERAL COM 2           |
| Contact: TERRI STATHEM<br>E-Mail: tstatthem@cimarex.com                                                                          |                                                      | 9. API Well No.<br>30-025-40557-00-X1                        |
| 3a. Address<br>600 NORTH MARIENFELD STREET, SUITE 600<br>MIDLAND, TX 79701                                                       | 3b. Phone No (include area code)<br>Ph: 432-620-1936 | 10. Field and Pool, or Exploratory<br>LUSK Bone Springs, E - |
| 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)<br>Sec 15 T19S R32E NESE 2325FSL 330FEL                   |                                                      | 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 recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 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.)

SHL: NMNM025497; BHL: NMNM063530

Cimarex Energy respectfully request approval to move the SHL 25' <sup>North</sup> due to pipeline to the <sup>North</sup> ~~South~~.

\* From: 2325' FSL & 330' FEL, Sec. 15, 19S, 32E  
\* To: 2350' FSL & 330' FEL, Sec. 15, 19S, 32E.

\* see email copy

All other aspects of approved APD remain the same except the MD TD changes to 14431'. Please see attached C102, directional plan, rig plat and reclamation plat.

|                                                                                                                                                                                                                   |                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 14. I hereby certify that the foregoing is true and correct.                                                                                                                                                      |                          |
| Electronic Submission #139357 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 KURT SIMMONS on 06/12/2012 (12KMS0897SE) |                          |
| Name (Printed/Typed) TERRI STATHEM                                                                                                                                                                                | Title REGULATORY ANALYST |
| Signature (Electronic Submission)                                                                                                                                                                                 | Date 05/31/2012          |

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

|                                                                                                                                                                                                                                                           |                      |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------|
| Approved By JAMES A AMOS                                                                                                                                                                                                                                  | Title SUPERVISOR EPS | Date 06/15/2012 |
| 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 Hobbs                                                                                                                                                                                                                                              |                      |                 |

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 \*\***

**JUN 20 2012**

DISTRICT I  
1025 N. French Dr., Hobbs, NM 88240  
Phone (505) 393-0101 Fax (505) 393-0720

DISTRICT II  
911 S. First St., Artesia, NM 88210  
Phone (505) 745-1283 Fax (505) 745-0750

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410  
Phone (505) 834-0178 Fax (505) 834-0170

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 and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102  
Revised August 1, 2011

Submit one copy to appropriate  
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

|                           |                                                 |                                      |
|---------------------------|-------------------------------------------------|--------------------------------------|
| API Number<br>30025-40557 | Pool Code<br>41442                              | Pool Name<br>Lusk; Bone Spring, East |
| Property Code<br>38371    | Property Name<br>EAST LUSK 15 FEDERAL COM       | Well Number<br>2                     |
| OGRID No.<br>162683       | Operator Name<br>CIMAREX ENERGY CO. OF COLORADO | Elevation<br>3628'                   |

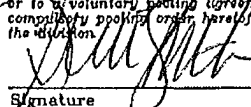
Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| I             | 15      | 19 S     | 32 E  |         | 2350          | SOUTH            | 330           | EAST           | LEA    |

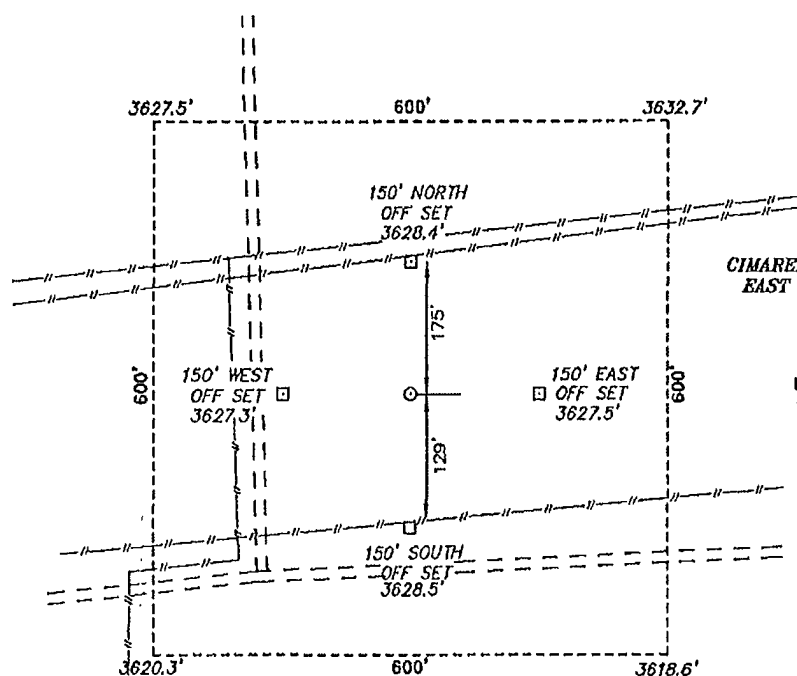
Bottom Hole Location If Different From Surface

| UL or lot No.          | Section         | Township           | Range     | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|------------------------|-----------------|--------------------|-----------|---------|---------------|------------------|---------------|----------------|--------|
| L                      | 15              | 19 S               | 32 E      |         | 1980          | SOUTH            | 330           | WEST           | LEA    |
| Dedicated Acres<br>320 | Joint or Infill | Consolidation Code | 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

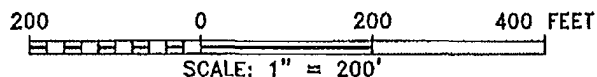
|                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>East Lusk 15 Fed Com 1Y</b><br/>660 FSL &amp; 380 FEL</p> <p><b>PROPOSED BOTTOM HOLE LOCATION</b><br/>Lat - N 32°39'30.90"<br/>Long - W 103°45'41.68"<br/>NMSPC- N 603797.43<br/>E 717297.52<br/>(NAD-83)</p> <p>John H. Hendrix Corp.<br/>Jennings A Fed 4<br/>1650 FSL &amp; 1980 FFL</p> | <p><b>East Lusk 15 Fed Com 2</b><br/>SHL &amp; P.P. Bone Spring<br/>2350 FSL &amp; 330 FEL<br/>EOC/Beg of Prod Interval<br/>2310 FSL &amp; 805 FEL</p> <p><b>SURFACE LOCATION</b><br/>Lat - N 32°39'34.53"<br/>Long - W 103°44'47.51"<br/>NMSPC- N 604189.7<br/>E 721926.6<br/>(NAD-83)</p> | <p><b>OPERATOR CERTIFICATION</b><br/>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>Signature  Date 5/31/12</p> <p>Printed Name Terri Stathem</p> <p>Email Address tstathem@cimarex.com</p> |
| <p>330' B.H.</p> <p>1980'</p> <p>4645.7'</p> <p>3627.5'</p> <p>3620.3'</p> <p>3632.7'</p> <p>330'</p> <p>2350'</p>                                                                                                                                                                                |                                                                                                                                                                                                                                                                                             | <p><b>SURVEYOR CERTIFICATION</b><br/>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>Date Surveyed MAY 24, 2012</p> <p>Signature &amp; Seal of Professional Surveyor </p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS 26805</p>                                                                                                                                                                                                                                         |

SECTION 15, TOWNSHIP 19 SOUTH, RANGE 32 EAST, N.M.P.M.,  
LEA COUNTY, NEW MEXICO.



CIMAREX ENERGY CO. OF COLORADO  
EAST LUSK 15 FEDERAL COM #2  
ELEV. - 3628'

Lat - N 32°39'34.53"  
Long - W 103°44'47.51"  
NMSPCE- N 604189.7  
E 721926.6  
(NAD-83)



Directions to Location:

FROM THE JUNCTION OF DRY LAKE AND MALJAMAR,  
GO EAST ON LEASE ROAD FOR 2.9 MILES TO  
PROPOSED LOCATION.

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

W.O. Number: 26805

Drawn By: J SMALL

Date: 05-24-2012

Disk: JMS 26805

**CIMAREX ENERGY CO. OF COLORADO**

REF: EAST LUSK 15 FEDERAL COM #2 / WELL PAD TOPO

THE EAST LUSK 15 FEDERAL COM #2 LOCATED 2350'

FROM THE SOUTH LINE AND 330' FROM THE EAST LINE OF

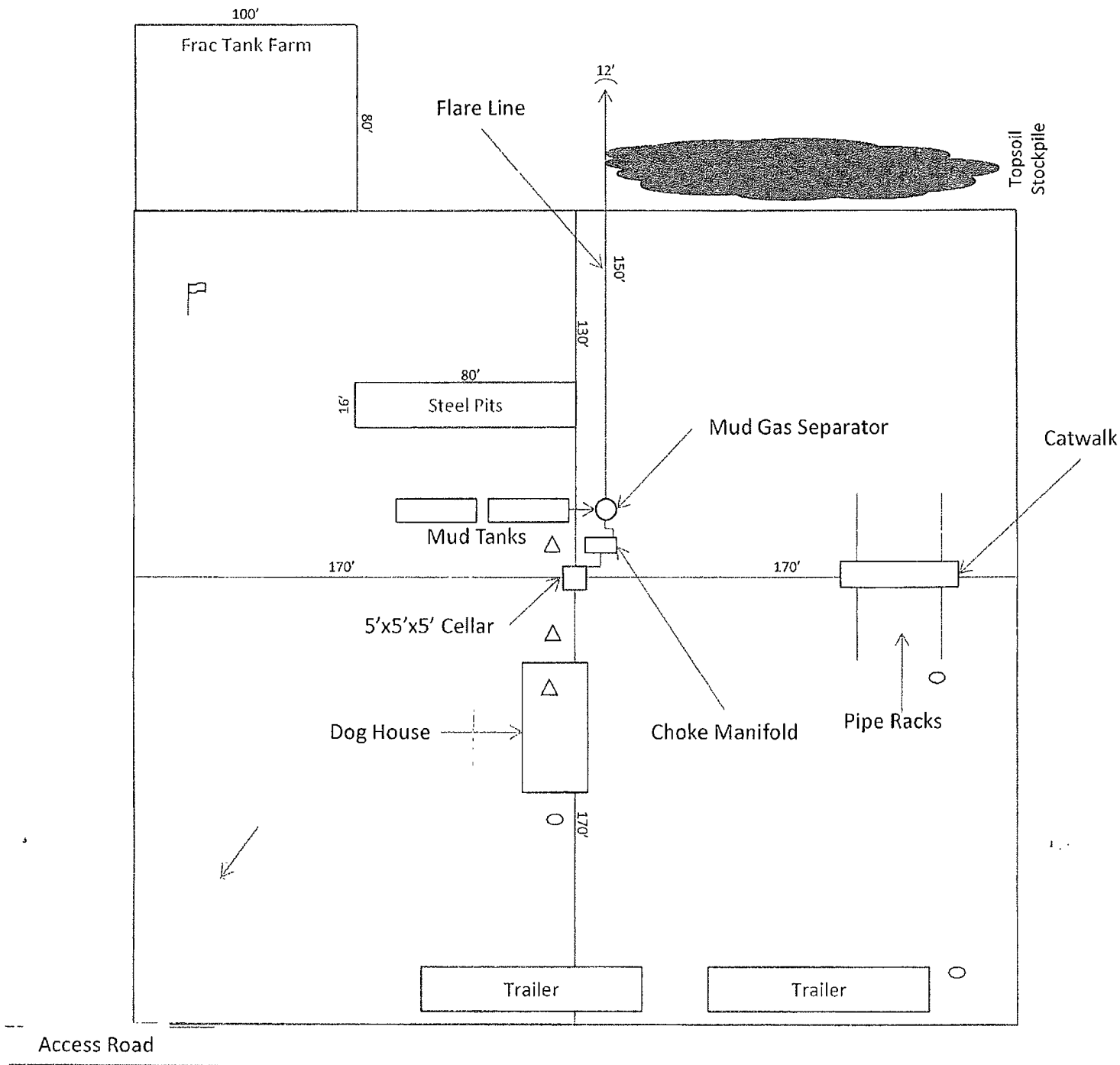
SECTION 15, TOWNSHIP 19 SOUTH, RANGE 32 EAST,

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

Survey Date: 05-24-2012

Sheet 1 of 1 Sheets

Patriot Rig 4



1"=50'



Wind Direction Indicators  
(wind sock or streamers)

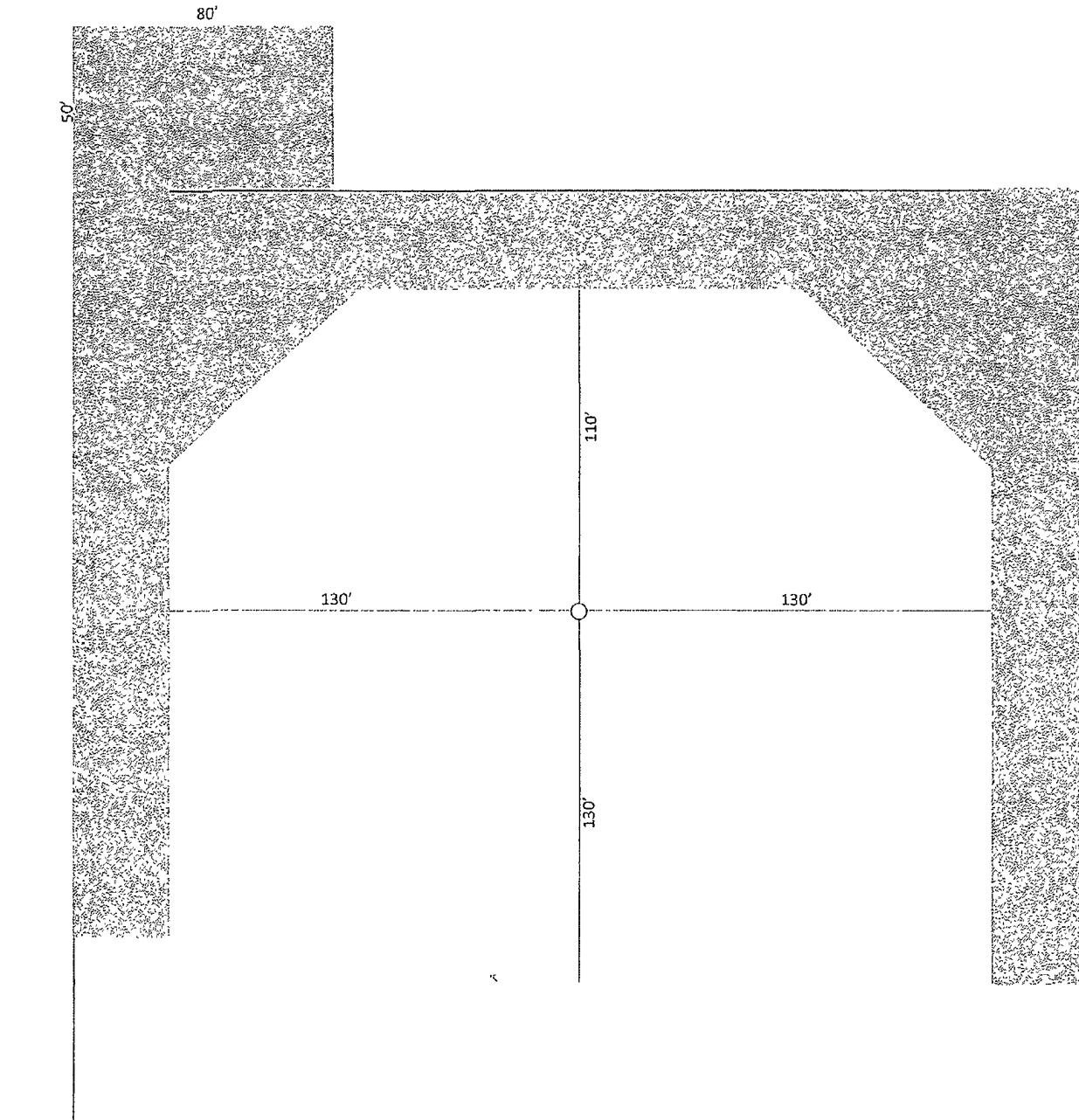


• H2S Monitors  
(alarms at bell nipple and shale  
shaker)



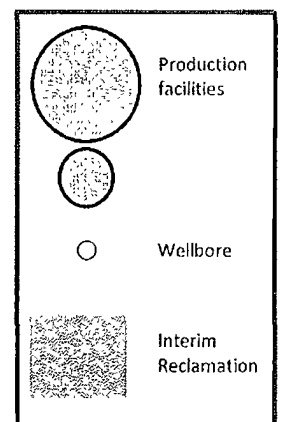
Briefing Areas

Exhibit D – Rig Diagram  
**East Lusk 15 Federal Com No. 2**  
Cimarex Energy Co. of Colorado  
15-19S-32E  
SHL 2350 FSL & 330 FEL  
BHL 1980 FSL & 330 FWL  
Lea County, NM



ss Road

Exhibit D-1  
 Production Facilities Layout Diagram  
**East Lusk 15 Federal Com No. 2**  
 Cimarex Energy Co. of Colorado  
 15-19S-32E  
 SHL 2350 FSL & 330 FEL  
 BHL 1980 FSL & 330 FWL  
 Lea County, NM



1"=50'



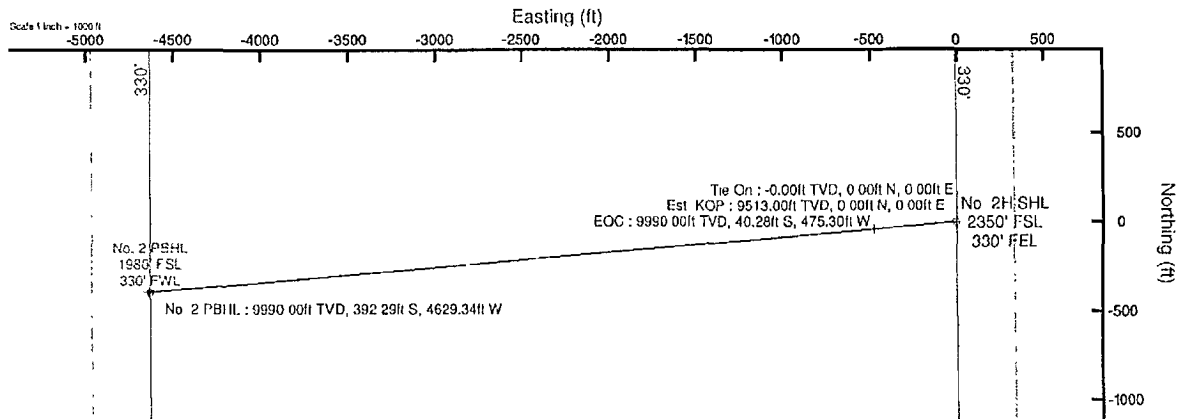
# Cimarex Energy Co.

Location: Lea County, NM  
Field: (East 15) Sec 15, T19S, R32E  
Facility: East Lusk 15 Federal Com No. 2

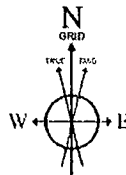
Slot: No. 2H SHL  
Well: No. 2H  
Wellbore: No. 2H PWB



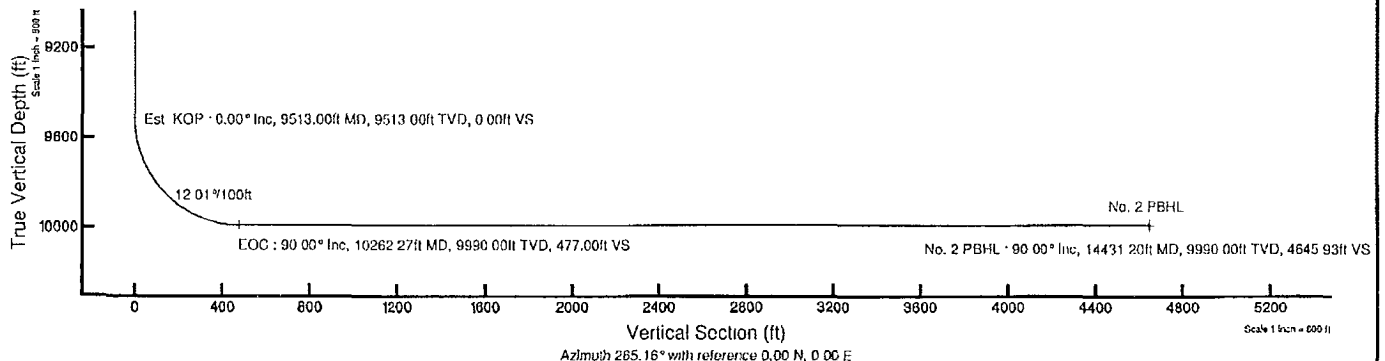
| Well Profile Data |          |         |         |          |              |              |         |
|-------------------|----------|---------|---------|----------|--------------|--------------|---------|
| Design Comment    | MD (ft)  | Inc (°) | Az (°)  | TVD (ft) | Local N (ft) | Local E (ft) | VS (ft) |
| Tie On            | 0.00     | 0.000   | 265.156 | 0.00     | 0.00         | 0.00         | 0.00    |
| Est KOP           | 9513.00  | 0.000   | 265.156 | 9513.00  | 0.00         | 0.00         | 0.00    |
| EOC               | 10262.27 | 90.000  | 265.156 | 9990.00  | -40.28       | -475.30      | 477.00  |
| No. 2 PBHL        | 14431.20 | 90.000  | 265.156 | 9990.00  | -392.29      | -4829.34     | 4645.93 |



|                                                               |                                                                     |
|---------------------------------------------------------------|---------------------------------------------------------------------|
| Plot reference is Rev-A.0                                     |                                                                     |
| True vertical depths are referenced to Rig on No. 2H SHL (KB) | Grid System: NAD83 / TM New Mexico SP, Eastern Zone (3201), US feet |
| Measured depths are referenced to Rig on No. 2H SHL (KB)      | North Reference: Grid north                                         |
| Rig on No. 2H SHL (KB) to Mean Sea Level: 3620 feet           | Scale: True distance                                                |
| Mean Sea Level to Mud line (At Slot: No. 2H SHL): -3526 feet  | Depths are in feet                                                  |
| Coordinates are in feet referenced to Slot                    | Created by hank on 5/30/2012                                        |



USGGM (1945 to 2013) Dip: 60.50° Field: 48790.8 nT  
Magnetic North is 7.67 degrees East of True North (at 5/30/2012)  
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 7.35 degrees  
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.35 = 97.35



Rev-A.0



# Planned Wellpath Report

Rev-A.0  
Page 1 of 5



## REFERENCE WELLPATH IDENTIFICATION

|          |                                |          |            |
|----------|--------------------------------|----------|------------|
| Operator | Cimarex Energy Co.             | Slot     | No. 2H SHL |
| Area     | Lea County, NM                 | Well     | No. 2H     |
| Field    | (East 15) Sec 15, T19S, R32E   | Wellbore | No. 2H PWB |
| Facility | East Lusk 15 Federal Com No. 2 |          |            |

## 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               | 0.999946                                               | Report Generated     | 5/30/2012 at 1:51:09 PM   |
| Convergence at slot | 0.32° East                                             | Database/Source file | WA Midland/No. 2H_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     | 721926.60        | 604189.70       | 32°39'34.532"N         | 103°44'47.508"W |
| Facility Reference Pt |                   |          | 721926.60        | 604189.70       | 32°39'34.532"N         | 103°44'47.508"W |
| Field Reference Pt    |                   |          | 721939.70        | 602500.30       | 32°39'17.815"N         | 103°44'47.464"W |

## WELLPATH DATUM

|                          |                        |                                                         |                   |
|--------------------------|------------------------|---------------------------------------------------------|-------------------|
| Calculation method       | Minimum curvature      | Rig on No. 2H SHL (KB) to GL                            | 3628.00ft         |
| Horizontal Reference Pt  | Slot                   | Rig on No. 2H SHL (KB) to Mean Sea Level                | 3628.00ft         |
| Vertical Reference Pt    | Rig on No. 2H SHL (KB) | Rig on No. 2H SHL (KB) to Mud Line at Slot (No. 2H SHL) | 0.00ft            |
| MD Reference Pt          | Rig on No. 2H SHL (KB) | Section Origin                                          | N 0.00, E 0.00 ft |
| Field Vertical Reference | Mean Sea Level         | Section Azimuth                                         | 265.16°           |



# Planned Wellpath Report

Rev-A.0

Page 2 of 5



## REFERENCE WELLPATH IDENTIFICATION

|          |                                |          |            |
|----------|--------------------------------|----------|------------|
| Operator | Cimarex Energy Co.             | Slot     | No. 2H SHL |
| Area     | Lea County, NM                 | Well     | No. 2H     |
| Field    | (East 15) Sec 15, T19S, R32E   | Wellbore | No. 2H PWB |
| Facility | East Lusk 15 Federal Com No. 2 |          |            |

## WELLPATH DATA (151 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              | 265.156        | 0.00        | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             | Tie On   |
| 100.00†    | 0.000              | 265.156        | 100.00      | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 200.00†    | 0.000              | 265.156        | 200.00      | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 300.00†    | 0.000              | 265.156        | 300.00      | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 400.00†    | 0.000              | 265.156        | 400.00      | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 500.00†    | 0.000              | 265.156        | 500.00      | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 600.00†    | 0.000              | 265.156        | 600.00      | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 700.00†    | 0.000              | 265.156        | 700.00      | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 800.00†    | 0.000              | 265.156        | 800.00      | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 900.00†    | 0.000              | 265.156        | 900.00      | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 1000.00†   | 0.000              | 265.156        | 1000.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 1100.00†   | 0.000              | 265.156        | 1100.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 1200.00†   | 0.000              | 265.156        | 1200.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 1300.00†   | 0.000              | 265.156        | 1300.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 1400.00†   | 0.000              | 265.156        | 1400.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 1500.00†   | 0.000              | 265.156        | 1500.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 1600.00†   | 0.000              | 265.156        | 1600.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 1700.00†   | 0.000              | 265.156        | 1700.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 1800.00†   | 0.000              | 265.156        | 1800.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 1900.00†   | 0.000              | 265.156        | 1900.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 2000.00†   | 0.000              | 265.156        | 2000.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 2100.00†   | 0.000              | 265.156        | 2100.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 2200.00†   | 0.000              | 265.156        | 2200.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 2300.00†   | 0.000              | 265.156        | 2300.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 2400.00†   | 0.000              | 265.156        | 2400.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 2500.00†   | 0.000              | 265.156        | 2500.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 2600.00†   | 0.000              | 265.156        | 2600.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 2700.00†   | 0.000              | 265.156        | 2700.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 2800.00†   | 0.000              | 265.156        | 2800.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 2900.00†   | 0.000              | 265.156        | 2900.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 3000.00†   | 0.000              | 265.156        | 3000.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 3100.00†   | 0.000              | 265.156        | 3100.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 3200.00†   | 0.000              | 265.156        | 3200.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 3300.00†   | 0.000              | 265.156        | 3300.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 3400.00†   | 0.000              | 265.156        | 3400.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 3500.00†   | 0.000              | 265.156        | 3500.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 3600.00†   | 0.000              | 265.156        | 3600.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 3700.00†   | 0.000              | 265.156        | 3700.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 3800.00†   | 0.000              | 265.156        | 3800.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 3900.00†   | 0.000              | 265.156        | 3900.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 4000.00†   | 0.000              | 265.156        | 4000.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 4100.00†   | 0.000              | 265.156        | 4100.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 4200.00†   | 0.000              | 265.156        | 4200.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 4300.00†   | 0.000              | 265.156        | 4300.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |
| 4400.00†   | 0.000              | 265.156        | 4400.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |          |



# Planned Wellpath Report

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## REFERENCE WELLPATH IDENTIFICATION

|          |                                |          |            |
|----------|--------------------------------|----------|------------|
| Operator | Cimarex Energy Co.             | Slot     | No. 2H SHL |
| Area     | Lea County, NM                 | Well     | No. 2H     |
| Field    | (East 15) Sec 15, T19S, R32E   | Wellbore | No. 2H PWB |
| Facility | East Lusk 15 Federal Com No. 2 |          |            |

## WELLPATH DATA (151 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      |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|------------------|---------------|
| 4500.00†   | 0.000              | 265.156        | 4500.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 4600.00†   | 0.000              | 265.156        | 4600.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 4700.00†   | 0.000              | 265.156        | 4700.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 4800.00†   | 0.000              | 265.156        | 4800.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 4900.00†   | 0.000              | 265.156        | 4900.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 5000.00†   | 0.000              | 265.156        | 5000.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 5100.00†   | 0.000              | 265.156        | 5100.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 5200.00†   | 0.000              | 265.156        | 5200.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 5300.00†   | 0.000              | 265.156        | 5300.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 5400.00†   | 0.000              | 265.156        | 5400.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 5500.00†   | 0.000              | 265.156        | 5500.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 5600.00†   | 0.000              | 265.156        | 5600.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 5700.00†   | 0.000              | 265.156        | 5700.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 5800.00†   | 0.000              | 265.156        | 5800.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 5900.00†   | 0.000              | 265.156        | 5900.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 6000.00†   | 0.000              | 265.156        | 6000.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             | Cherry Canyon |
| 6100.00†   | 0.000              | 265.156        | 6100.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 6200.00†   | 0.000              | 265.156        | 6200.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 6300.00†   | 0.000              | 265.156        | 6300.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 6400.00†   | 0.000              | 265.156        | 6400.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 6500.00†   | 0.000              | 265.156        | 6500.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 6600.00†   | 0.000              | 265.156        | 6600.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 6700.00†   | 0.000              | 265.156        | 6700.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 6800.00†   | 0.000              | 265.156        | 6800.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 6900.00†   | 0.000              | 265.156        | 6900.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 7000.00†   | 0.000              | 265.156        | 7000.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 7100.00†   | 0.000              | 265.156        | 7100.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 7200.00†   | 0.000              | 265.156        | 7200.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 7300.00†   | 0.000              | 265.156        | 7300.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 7400.00†   | 0.000              | 265.156        | 7400.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 7500.00†   | 0.000              | 265.156        | 7500.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 7600.00†   | 0.000              | 265.156        | 7600.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 7700.00†   | 0.000              | 265.156        | 7700.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 7770.00†   | 0.000              | 265.156        | 7770.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             | Bone Spring   |
| 7800.00†   | 0.000              | 265.156        | 7800.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 7900.00†   | 0.000              | 265.156        | 7900.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 8000.00†   | 0.000              | 265.156        | 8000.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 8100.00†   | 0.000              | 265.156        | 8100.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 8200.00†   | 0.000              | 265.156        | 8200.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 8300.00†   | 0.000              | 265.156        | 8300.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 8400.00†   | 0.000              | 265.156        | 8400.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 8500.00†   | 0.000              | 265.156        | 8500.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 8600.00†   | 0.000              | 265.156        | 8600.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 8700.00†   | 0.000              | 265.156        | 8700.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |
| 8800.00†   | 0.000              | 265.156        | 8800.00     | 0.00              | 0.00          | 0.00         | 721926.60            | 604189.70             | 32°39'34.532"N | 103°44'47.508"W | 0.00             |               |



# Planned Wellpath Report

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## REFERENCE WELLPATH IDENTIFICATION

|          |                                |          |            |
|----------|--------------------------------|----------|------------|
| Operator | Cimarex Energy Co.             | Slot     | No. 2H SHL |
| Area     | Lea County, NM                 | Well     | No. 2H     |
| Field    | (East 15) Sec 15, T19S, R32E   | Wellbore | No. 2H PWB |
| Facility | East Lusk 15 Federal Com No. 2 |          |            |

## WELLPATH DATA (151 stations) † = interpolated/extrapolated station

| MD [ft]   | Inclination [°] | Azimuth [°] | TVD [ft] | Vert Sect [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude       | Longitude       | DLS [°/100ft] | Comments |
|-----------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|----------------|-----------------|---------------|----------|
| 8900.00†  | 0.000           | 265.156     | 8900.00  | 0.00           | 0.00       | 0.00      | 721926.60         | 604189.70          | 32°39'34.532"N | 103°44'47.508"W | 0.00          |          |
| 8920.00†  | 0.000           | 265.156     | 8920.00  | 0.00           | 0.00       | 0.00      | 721926.60         | 604189.70          | 32°39'34.532"N | 103°44'47.508"W | 0.00          | 1st BSS  |
| 9000.00†  | 0.000           | 265.156     | 9000.00  | 0.00           | 0.00       | 0.00      | 721926.60         | 604189.70          | 32°39'34.532"N | 103°44'47.508"W | 0.00          |          |
| 9100.00†  | 0.000           | 265.156     | 9100.00  | 0.00           | 0.00       | 0.00      | 721926.60         | 604189.70          | 32°39'34.532"N | 103°44'47.508"W | 0.00          |          |
| 9200.00†  | 0.000           | 265.156     | 9200.00  | 0.00           | 0.00       | 0.00      | 721926.60         | 604189.70          | 32°39'34.532"N | 103°44'47.508"W | 0.00          |          |
| 9300.00†  | 0.000           | 265.156     | 9300.00  | 0.00           | 0.00       | 0.00      | 721926.60         | 604189.70          | 32°39'34.532"N | 103°44'47.508"W | 0.00          |          |
| 9400.00†  | 0.000           | 265.156     | 9400.00  | 0.00           | 0.00       | 0.00      | 721926.60         | 604189.70          | 32°39'34.532"N | 103°44'47.508"W | 0.00          |          |
| 9500.00†  | 0.000           | 265.156     | 9500.00  | 0.00           | 0.00       | 0.00      | 721926.60         | 604189.70          | 32°39'34.532"N | 103°44'47.508"W | 0.00          |          |
| 9513.00   | 0.000           | 265.156     | 9513.00  | 0.00           | 0.00       | 0.00      | 721926.60         | 604189.70          | 32°39'34.532"N | 103°44'47.508"W | 0.00          | Est KOP  |
| 9600.00†  | 10.450          | 265.156     | 9599.52  | 7.91           | -0.67      | -7.88     | 721918.72         | 604189.03          | 32°39'34.526"N | 103°44'47.600"W | 12.01         |          |
| 9651.96†  | 16.691          | 265.156     | 9650.00  | 20.10          | -1.70      | -20.03    | 721906.58         | 604188.00          | 32°39'34.516"N | 103°44'47.743"W | 12.01         | 2nd BSS  |
| 9700.00†  | 22.462          | 265.156     | 9695.25  | 36.19          | -3.06      | -36.06    | 721890.54         | 604186.64          | 32°39'34.504"N | 103°44'47.930"W | 12.01         |          |
| 9800.00†  | 34.474          | 265.156     | 9782.99  | 83.77          | -7.07      | -83.47    | 721843.14         | 604182.63          | 32°39'34.466"N | 103°44'48.485"W | 12.01         |          |
| 9900.00†  | 46.485          | 265.156     | 9858.92  | 148.57         | -12.54     | -148.04   | 721778.57         | 604177.16          | 32°39'34.416"N | 103°44'49.241"W | 12.01         |          |
| 10000.00† | 58.497          | 265.156     | 9919.70  | 227.75         | -19.23     | -226.93   | 721699.68         | 604170.47          | 32°39'34.354"N | 103°44'50.164"W | 12.01         |          |
| 10100.00† | 70.509          | 265.156     | 9962.66  | 317.84         | -26.84     | -316.71   | 721609.91         | 604162.86          | 32°39'34.284"N | 103°44'51.214"W | 12.01         |          |
| 10200.00† | 82.520          | 265.156     | 9985.94  | 414.91         | -35.03     | -413.43   | 721513.20         | 604154.67          | 32°39'34.208"N | 103°44'52.346"W | 12.01         |          |
| 10262.27  | 90.000          | 265.156     | 9990.00  | 477.00         | -40.28     | -475.30   | 721451.33         | 604149.43          | 32°39'34.159"N | 103°44'53.070"W | 12.01         | EOC      |
| 10300.00† | 90.000          | 265.156     | 9990.00  | 514.73         | -43.46     | -512.89   | 721413.74         | 604146.24          | 32°39'34.130"N | 103°44'53.510"W | 0.00          |          |
| 10400.00† | 90.000          | 265.156     | 9990.00  | 614.73         | -51.91     | -612.53   | 721314.10         | 604137.80          | 32°39'34.052"N | 103°44'54.676"W | 0.00          |          |
| 10500.00† | 90.000          | 265.156     | 9990.00  | 714.73         | -60.35     | -712.18   | 721214.46         | 604129.35          | 32°39'33.974"N | 103°44'55.842"W | 0.00          |          |
| 10600.00† | 90.000          | 265.156     | 9990.00  | 814.73         | -68.79     | -811.82   | 721114.82         | 604120.91          | 32°39'33.896"N | 103°44'57.008"W | 0.00          |          |
| 10700.00† | 90.000          | 265.156     | 9990.00  | 914.73         | -77.24     | -911.46   | 721015.19         | 604112.47          | 32°39'33.817"N | 103°44'58.174"W | 0.00          |          |
| 10800.00† | 90.000          | 265.156     | 9990.00  | 1014.73        | -85.68     | -1011.11  | 720915.55         | 604104.02          | 32°39'33.739"N | 103°44'59.340"W | 0.00          |          |
| 10900.00† | 90.000          | 265.156     | 9990.00  | 1114.73        | -94.13     | -1110.75  | 720815.91         | 604095.58          | 32°39'33.661"N | 103°44'59.506"W | 0.00          |          |
| 11000.00† | 90.000          | 265.156     | 9990.00  | 1214.73        | -102.57    | -1210.39  | 720716.28         | 604087.14          | 32°39'33.583"N | 103°45'01.672"W | 0.00          |          |
| 11100.00† | 90.000          | 265.156     | 9990.00  | 1314.73        | -111.01    | -1310.03  | 720616.64         | 604078.69          | 32°39'33.505"N | 103°45'02.838"W | 0.00          |          |
| 11200.00† | 90.000          | 265.156     | 9990.00  | 1414.73        | -119.46    | -1409.68  | 720517.00         | 604070.25          | 32°39'33.427"N | 103°45'04.004"W | 0.00          |          |
| 11300.00† | 90.000          | 265.156     | 9990.00  | 1514.73        | -127.90    | -1509.32  | 720417.36         | 604061.81          | 32°39'33.349"N | 103°45'05.170"W | 0.00          |          |
| 11400.00† | 90.000          | 265.156     | 9990.00  | 1614.73        | -136.34    | -1608.96  | 720317.73         | 604053.36          | 32°39'33.270"N | 103°45'06.336"W | 0.00          |          |
| 11500.00† | 90.000          | 265.156     | 9990.00  | 1714.73        | -144.79    | -1708.61  | 720218.09         | 604044.92          | 32°39'33.192"N | 103°45'07.502"W | 0.00          |          |
| 11600.00† | 90.000          | 265.156     | 9990.00  | 1814.73        | -153.23    | -1808.25  | 720118.45         | 604036.48          | 32°39'33.114"N | 103°45'08.668"W | 0.00          |          |
| 11700.00† | 90.000          | 265.156     | 9990.00  | 1914.73        | -161.68    | -1907.89  | 720018.81         | 604028.03          | 32°39'33.036"N | 103°45'09.834"W | 0.00          |          |
| 11800.00† | 90.000          | 265.156     | 9990.00  | 2014.73        | -170.12    | -2007.54  | 719919.18         | 604019.59          | 32°39'32.958"N | 103°45'11.000"W | 0.00          |          |
| 11900.00† | 90.000          | 265.156     | 9990.00  | 2114.73        | -178.56    | -2107.18  | 719819.54         | 604011.15          | 32°39'32.880"N | 103°45'12.166"W | 0.00          |          |
| 12000.00† | 90.000          | 265.156     | 9990.00  | 2214.73        | -187.01    | -2206.82  | 719719.90         | 604002.70          | 32°39'32.802"N | 103°45'13.332"W | 0.00          |          |
| 12100.00† | 90.000          | 265.156     | 9990.00  | 2314.73        | -195.45    | -2306.46  | 719620.26         | 603994.26          | 32°39'32.723"N | 103°45'14.498"W | 0.00          |          |
| 12200.00† | 90.000          | 265.156     | 9990.00  | 2414.73        | -203.89    | -2406.11  | 719520.63         | 603985.82          | 32°39'32.645"N | 103°45'15.665"W | 0.00          |          |
| 12300.00† | 90.000          | 265.156     | 9990.00  | 2514.73        | -212.34    | -2505.75  | 719420.99         | 603977.37          | 32°39'32.567"N | 103°45'16.831"W | 0.00          |          |
| 12400.00† | 90.000          | 265.156     | 9990.00  | 2614.73        | -220.78    | -2605.39  | 719321.35         | 603968.93          | 32°39'32.489"N | 103°45'17.997"W | 0.00          |          |
| 12500.00† | 90.000          | 265.156     | 9990.00  | 2714.73        | -229.23    | -2705.04  | 719221.71         | 603960.49          | 32°39'32.411"N | 103°45'19.163"W | 0.00          |          |
| 12600.00† | 90.000          | 265.156     | 9990.00  | 2814.73        | -237.67    | -2804.68  | 719122.08         | 603952.04          | 32°39'32.332"N | 103°45'20.329"W | 0.00          |          |
| 12700.00† | 90.000          | 265.156     | 9990.00  | 2914.73        | -246.11    | -2904.32  | 719022.44         | 603943.60          | 32°39'32.254"N | 103°45'21.495"W | 0.00          |          |
| 12800.00† | 90.000          | 265.156     | 9990.00  | 3014.73        | -254.56    | -3003.96  | 718922.80         | 603935.16          | 32°39'32.176"N | 103°45'22.661"W | 0.00          |          |
| 12900.00† | 90.000          | 265.156     | 9990.00  | 3114.73        | -263.00    | -3103.61  | 718823.17         | 603926.71          | 32°39'32.098"N | 103°45'23.827"W | 0.00          |          |



# Planned Wellpath Report

Rev-A.0  
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## REFERENCE WELLPATH IDENTIFICATION

|          |                                |          |            |
|----------|--------------------------------|----------|------------|
| Operator | Cimarex Energy Co.             | Slot     | No. 2H SHL |
| Area     | Lea County, NM                 | Well     | No. 2H     |
| Field    | (East 15) Sec 15, T19S, R32E   | Wellbore | No. 2H PWB |
| Facility | East Lusk 15 Federal Com No. 2 |          |            |

## WELLPATH DATA (151 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   |
|------------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|----------------|-----------------|------------------|------------|
| 13000.00†  | 90.000             | 265.156        | 9990.00     | 3214.73           | -271.44       | -3203.25     | 718723.53            | 603918.27             | 32°39'32.020"N | 103°45'24.993"W | 0.00             |            |
| 13100.00†  | 90.000             | 265.156        | 9990.00     | 3314.73           | -279.89       | -3302.89     | 718623.89            | 603909.83             | 32°39'31.942"N | 103°45'26.159"W | 0.00             |            |
| 13200.00†  | 90.000             | 265.156        | 9990.00     | 3414.73           | -288.33       | -3402.54     | 718524.25            | 603901.38             | 32°39'31.863"N | 103°45'27.325"W | 0.00             |            |
| 13300.00†  | 90.000             | 265.156        | 9990.00     | 3514.73           | -296.78       | -3502.18     | 718424.62            | 603892.94             | 32°39'31.785"N | 103°45'28.491"W | 0.00             |            |
| 13400.00†  | 90.000             | 265.156        | 9990.00     | 3614.73           | -305.22       | -3601.82     | 718324.98            | 603884.50             | 32°39'31.707"N | 103°45'29.657"W | 0.00             |            |
| 13500.00†  | 90.000             | 265.156        | 9990.00     | 3714.73           | -313.66       | -3701.46     | 718225.34            | 603876.05             | 32°39'31.629"N | 103°45'30.823"W | 0.00             |            |
| 13600.00†  | 90.000             | 265.156        | 9990.00     | 3814.73           | -322.11       | -3801.11     | 718125.70            | 603867.61             | 32°39'31.551"N | 103°45'31.989"W | 0.00             |            |
| 13700.00†  | 90.000             | 265.156        | 9990.00     | 3914.73           | -330.55       | -3900.75     | 718026.07            | 603859.17             | 32°39'31.472"N | 103°45'33.155"W | 0.00             |            |
| 13800.00†  | 90.000             | 265.156        | 9990.00     | 4014.73           | -338.99       | -4000.39     | 717926.43            | 603850.72             | 32°39'31.394"N | 103°45'34.321"W | 0.00             |            |
| 13900.00†  | 90.000             | 265.156        | 9990.00     | 4114.73           | -347.44       | -4100.04     | 717826.79            | 603842.28             | 32°39'31.316"N | 103°45'35.487"W | 0.00             |            |
| 14000.00†  | 90.000             | 265.156        | 9990.00     | 4214.73           | -355.88       | -4199.68     | 717727.15            | 603833.84             | 32°39'31.238"N | 103°45'36.653"W | 0.00             |            |
| 14100.00†  | 90.000             | 265.156        | 9990.00     | 4314.73           | -364.33       | -4299.32     | 717627.52            | 603825.39             | 32°39'31.159"N | 103°45'37.819"W | 0.00             |            |
| 14200.00†  | 90.000             | 265.156        | 9990.00     | 4414.73           | -372.77       | -4398.96     | 717527.88            | 603816.95             | 32°39'31.081"N | 103°45'38.985"W | 0.00             |            |
| 14300.00†  | 90.000             | 265.156        | 9990.00     | 4514.73           | -381.21       | -4498.61     | 717428.24            | 603808.51             | 32°39'31.003"N | 103°45'40.151"W | 0.00             |            |
| 14400.00†  | 90.000             | 265.156        | 9990.00     | 4614.73           | -389.66       | -4598.25     | 717328.61            | 603800.06             | 32°39'30.925"N | 103°45'41.317"W | 0.00             |            |
| 14431.20   | 90.000             | 265.156        | 9990.00     | 4645.93           | -392.29       | -4629.34     | 717297.52            | 603797.43             | 32°39'30.900"N | 103°45'41.681"W | 0.00             | No. 2 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) No. 2 PBHL | 14431.20   | 9990.00     | -392.29       | -4629.34     | 717297.52            | 603797.43             | 32°39'30.900"N | 103°45'41.681"W | point |

## SURVEY PROGRAM - Ref Wellbore: No. 2H PWB Ref Wellpath: Rev-A.0

| Start MD<br>[ft] | End MD<br>[ft] | Positional Uncertainty Model | Log Name/Comment | Wellbore   |
|------------------|----------------|------------------------------|------------------|------------|
| 0.00             | 14490.99       | NaviTrak (Standard)          |                  | No. 2H PWB |

## Mull, Donna, EMNRD

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**From:** Zeno Farris [zfarris@cimarex.com]  
**Sent:** Wednesday, June 20, 2012 10:25 AM  
**To:** Mull, Donna, EMNRD; Terri Stathem  
**Subject:** RE: East Lusk 15 Federal Com #2, API # 30-025-40557  
**Attachments:** 3160-5 E Lusk 15 Fed 2 Chg SHL NOI.pdf

Donna the wording in the sundry is wrong but the location move is correct. The pipeline we are moving away from is to the south. See well pad plat on attached sundry 3<sup>rd</sup> page. The sundry should have said we are moving 25' north due to a pipeline to the south. 129' to the pit side will work for us. CXO came in after our PAD was approved and laid there water line inside our 150' stake. I called the BLM and asked them to note in their system that the move was to the north not the south. Thanks for checking things out for us Donna.

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**From:** Mull, Donna, EMNRD [mailto:[donna.mull@state.nm.us](mailto:donna.mull@state.nm.us)]  
**Sent:** Wednesday, June 20, 2012 10:32 AM  
**To:** Terri Stathem  
**Cc:** Zeno Farris  
**Subject:** East Lusk 15 Federal Com #2, API # 30-025-40557

Terri,

We have received the Federal Sundry notice of intent to move the location of this well because of a pipeline.

That is fine, but you are moving it the wrong direction to get it away from the pipeline.

You stated: From 2325/S & 330/E, To 2350/S & 330/E

It should be to move it 25" south of the present location, From 2325/S & 330/E, To 2300/S & 330/E

The BLM did not catch this error. Please re-submit the correct location and attach C-102 with the correct location.

Thanks and have a nice day. Donna