

OCD-HOBBS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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.

5. Lease Serial No.
NMNM0559539

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
JAMES FEDERAL 22H

9. API Well No.
30-025-41363-00-X1

10. Field and Pool, or Exploratory
SAND DUNES

11. County or Parish, and State
LEA COUNTY, NM

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Contact: TERRI STATHEM

CIMAREX ENERGY COMPANY OF CO Mail: tstathem@cimarex.com

3a. Address

600 NORTH MARIENFELD STREET, SUITE 600
MIDLAND, TX 79701

3b. Phone No. (include area code)

Ph: 432-620-1936

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

Sec 29 T23S R32E NENE 185FNL 660FEL
32.165595 N Lat, 103.412496 W Lon

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

TYPE OF SUBMISSION	TYPE OF ACTION
☒ Notice of Intent	☐ Acidize ☐ Deepen ☐ Production (Start/Resume) ☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing ☐ Fracture Treat ☐ Reclamation ☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair ☐ New Construction ☐ Recomplete ☒ Other
	☐ Change Plans ☐ Plug and Abandon ☐ Temporarily Abandon ☐ Change to Original A
	☐ Convert to Injection ☐ Plug Back ☐ 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 recomple 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 recompletion 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.)

Cimarex Energy respectfully request approval to change casing design & BOP as follows:

Approved

1. 13-3/8" 48# H-40 STC Surface Casing
2. 10750 TVD / 15275 MD
3. 5.5" 17# P-110 Production Casing
4. 699 sx of 11.9 ppg, 2.4 yield, 1678 cubic feet, lead slurry on 5.5" production casing
5. 5M BOP below intermediate. BOP's tested to 250/5000, Annular Preventer to 250/2500. FIT required below intermediate casing.

Proposed

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

Electronic Submission #257967 verified by the BLM Well Information System

For CIMAREX ENERGY COMPANY OF CO, sent to the Hobbs

Committed to AFMSS for processing by CHRISTOPHER WALLS on 08/22/2014 (14CRW0201SE)

Name (Printed/Typed) TERRI STATHEM

Title COORDINATOR REGULATORY COMPLIA

Signature (Electronic Submission)

Date 08/22/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Title

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

Office

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

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

SEP 02 2014

Additional data for EC transaction #257967 that would not fit on the form

32. Additional remarks, continued

1. 13-3/8" 48# H-40 or J-55 STC Hybrid Casing
2. 9400 TVD / 13932 MD
3. KOP 8835', EOC 9755'
3. 5.5" 20# L-80 Production Casing
4. 603 sx of 10.8 ppg, 2.78 yield, 1678 cubic feet, lead slurry on 5.5" production casing
5. 3M BOP below intermediate. BOP's tested to 250/3000, Annular Preventer to 250/1500. No FIT to be performed below intermediate casing.

BOP & Directional plan attached.

Drilling 8-3/4" hole
below 9 5/8" Casing

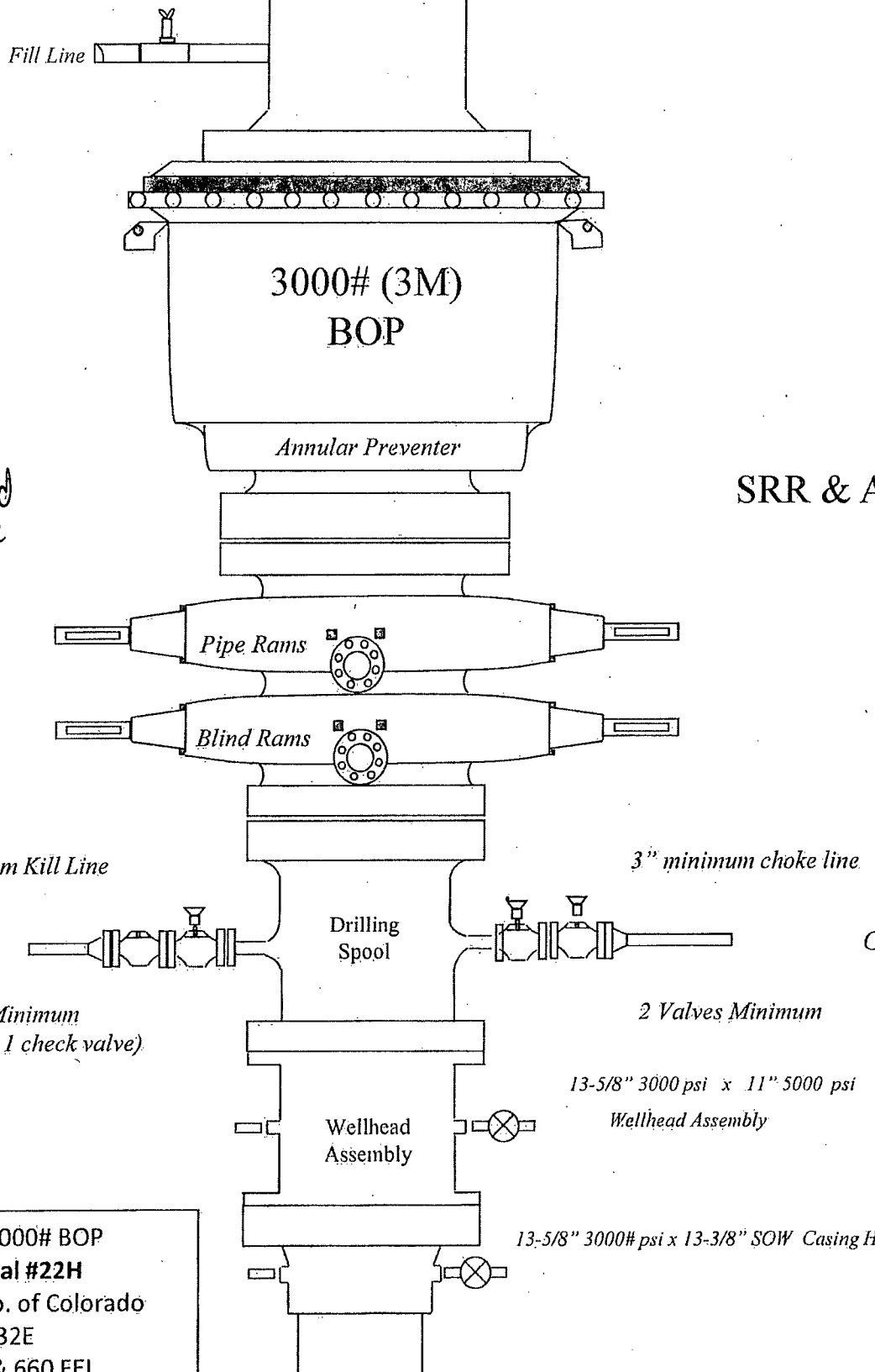


Exhibit E-1 – 3000# BOP
James Federal #22H
Cimarex Energy Co. of Colorado
29-23S-32E
SHL 185 FNL & 660 FEL
BHL 330 FSL & 440 FEL
Lea County, NM



Planned Wellpath Report

Rev-A.0

Page 1 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 22 SHL
Area	Lea County, NM	Well	No. 22
Field	(James Federal) Sec 29, TS 23 S, R 32 E	Wellbore	No. 22 PWB
Facility	James Federal No. 22		

REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 4.0.0
North Reference	Grid	User	Gilbjost
Scale	0.999954	Report Generated	11/Aug/2014 at 1:39:14 PM
Convergence at slot	0.34° East	Database/Source file	WA Midland/No. 22_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	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W
Facility Reference Pt			740069.30	466996.50	32°16'55.956"N	103°41'24.960"W
Field Reference Pt			165000.00	0.00	30°59'39.893"N	105°32'03.866"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 22 SHL (KB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Rig on No. 22 SHL (KB) to Mean Sea Level	3715.00ft
Vertical Reference Pt	Rig on No. 22 SHL (KB)	Rig on No. 22 SHL (KB) to Mud Line at Slot (No. 22 SHL)	25.00ft
MD Reference Pt	Rig on No. 22 SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	176.96°



Planned Wellpath Report

Rev-A.0

Page 2 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 22 SHL
Area	Lea County, NM	Well	No. 22
Field	(James Federal) Sec 29, TS 23 S, R 32 E	Wellbore	No. 22 PWB
Facility	James Federal No. 22		

WELLPATH DATA (146 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
0.00†	0.000	141.400	0.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
25.00	0.000	141.400	25.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	Tie On
125.00†	0.000	141.400	125.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
225.00†	0.000	141.400	225.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
325.00†	0.000	141.400	325.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
425.00†	0.000	141.400	425.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
525.00†	0.000	141.400	525.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
625.00†	0.000	141.400	625.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
725.00†	0.000	141.400	725.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
825.00†	0.000	141.400	825.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
925.00†	0.000	141.400	925.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
1025.00†	0.000	141.400	1025.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
1125.00†	0.000	141.400	1125.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
1225.00†	0.000	141.400	1225.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
1325.00†	0.000	141.400	1325.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
1425.00†	0.000	141.400	1425.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
1525.00†	0.000	141.400	1525.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
1625.00†	0.000	141.400	1625.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
1725.00†	0.000	141.400	1725.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
1825.00†	0.000	141.400	1825.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
1925.00†	0.000	141.400	1925.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
2025.00†	0.000	141.400	2025.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
2125.00†	0.000	141.400	2125.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
2225.00†	0.000	141.400	2225.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
2325.00†	0.000	141.400	2325.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
2425.00†	0.000	141.400	2425.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
2525.00†	0.000	141.400	2525.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
2625.00†	0.000	141.400	2625.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
2725.00†	0.000	141.400	2725.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
2825.00†	0.000	141.400	2825.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	



Planned Wellpath Report

Rev-A.0
Page 3 of 7.



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 22 SHL
Area	Lea County, NM	Well	No. 22
Field	(James Federal) Sec 29, TS 23 S, R 32 E	Wellbore	No. 22 PWB
Facility	James Federal No. 22		

WELLPATH DATA (146 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
2925.00†	0.000	141.400	2925.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
3025.00†	0.000	141.400	3025.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
3125.00†	0.000	141.400	3125.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
3225.00†	0.000	141.400	3225.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
3325.00†	0.000	141.400	3325.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
3425.00†	0.000	141.400	3425.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
3525.00†	0.000	141.400	3525.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
3625.00†	0.000	141.400	3625.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
3725.00†	0.000	141.400	3725.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
3825.00†	0.000	141.400	3825.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
3925.00†	0.000	141.400	3925.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
4025.00†	0.000	141.400	4025.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
4125.00†	0.000	141.400	4125.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
4225.00†	0.000	141.400	4225.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
4325.00†	0.000	141.400	4325.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
4425.00†	0.000	141.400	4425.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
4525.00†	0.000	141.400	4525.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
4625.00†	0.000	141.400	4625.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
4725.00†	0.000	141.400	4725.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
4825.00†	0.000	141.400	4825.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
4925.00†	0.000	141.400	4925.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
5025.00†	0.000	141.400	5025.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
5125.00†	0.000	141.400	5125.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
5225.00†	0.000	141.400	5225.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
5325.00†	0.000	141.400	5325.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
5425.00†	0.000	141.400	5425.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
5525.00†	0.000	141.400	5525.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
5625.00†	0.000	141.400	5625.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
5725.00†	0.000	141.400	5725.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
5825.00†	0.000	141.400	5825.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	



Planned Wellpath Report

Rev-A.0

Page 4 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 22 SHL
Area	Lea County, NM	Well	No. 22
Field	(James Federal) Sec 29, TS 23 S, R 32 E	Wellbore	No. 22 PWB
Facility	James Federal No. 22		

WELLPATH DATA (146 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
5925.00†	0.000	141.400	5925.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
6025.00†	0.000	141.400	6025.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
6125.00†	0.000	141.400	6125.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
6225.00†	0.000	141.400	6225.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
6325.00†	0.000	141.400	6325.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
6425.00†	0.000	141.400	6425.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
6525.00†	0.000	141.400	6525.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
6625.00†	0.000	141.400	6625.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
6725.00†	0.000	141.400	6725.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
6825.00†	0.000	141.400	6825.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
6925.00†	0.000	141.400	6925.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
7025.00†	0.000	141.400	7025.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
7125.00†	0.000	141.400	7125.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
7225.00†	0.000	141.400	7225.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
7325.00†	0.000	141.400	7325.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
7425.00†	0.000	141.400	7425.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
7525.00†	0.000	141.400	7525.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
7625.00†	0.000	141.400	7625.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
7725.00†	0.000	141.400	7725.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
7825.00†	0.000	141.400	7825.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
7925.00†	0.000	141.400	7925.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
8025.00†	0.000	141.400	8025.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
8125.00†	0.000	141.400	8125.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
8225.00†	0.000	141.400	8225.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
8325.00†	0.000	141.400	8325.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
8425.00†	0.000	141.400	8425.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
8525.00†	0.000	141.400	8525.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
8625.00†	0.000	141.400	8625.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
8725.00†	0.000	141.400	8725.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	
8825.00†	0.000	141.400	8825.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	



Planned Wellpath Report

Rev-A.0

Page 5 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 22 SHL
Area	Lea County, NM	Well	No. 22
Field	(James Federal) Sec 29, TS 23 S, R 32 E	Wellbore	No. 22 PWB
Facility	James Federal No. 22		

WELLPATH DATA (146 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
8835.00	0.000	141.400	8835.00	0.00	0.00	0.00	740069.30	466996.50	32°16'55.956"N	103°41'24.960"W	0.00	KOP
8925.00†	9.900	141.400	8924.55	6.31	-6.06	4.84	740074.14	466990.44	32°16'55.896"N	103°41'24.904"W	11.00	
9025.00†	20.900	141.400	9020.81	27.88	-26.78	21.38	740090.68	466969.72	32°16'55.690"N	103°41'24.713"W	11.00	
9125.00†	31.900	141.400	9110.25	63.99	-61.48	49.08	740118.38	466935.02	32°16'55.345"N	103°41'24.393"W	11.00	
9225.00†	42.900	141.400	9139.57	113.33	-108.87	86.91	740156.21	466887.69	32°16'54.874"N	103°41'23.955"W	11.00	
9244.09	45.000	141.400	9203.31	124.11	-119.23	95.18	740164.47	466877.28	32°16'54.771"N	103°41'23.860"W	11.00	Build & Turn
9325.00†	51.286	149.878	9257.33	175.58	-168.99	128.93	740198.23	466827.52	32°16'54.277"N	103°41'23.470"W	11.00	
9425.00†	59.739	158.438	9313.97	251.50	-243.13	164.49	740233.79	466753.39	32°16'53.541"N	103°41'23.061"W	11.00	
9525.00†	68.659	165.601	9357.50	338.38	-328.66	192.03	740261.32	466667.85	32°16'52.693"N	103°41'22.746"W	11.00	
9625.00†	77.847	171.927	9386.91	433.02	-422.45	210.59	740279.82	466574.07	32°16'51.764"N	103°41'22.507"W	11.00	
9725.00†	87.168	177.824	9399.35	531.95	-521.05	219.32	740288.61	466475.47	32°16'50.788"N	103°41'22.442"W	11.00	
9755.27	90.000	179.576	9400.09	562.19	-551.30	220.01	740289.30	466445.23	32°16'50.488"N	103°41'22.436"W	11.00	EOC
9755.33	90.001	179.576	9400.09	562.25	-551.36	220.01	740289.30	466445.16	32°16'50.488"N	103°41'22.436"W	2.00	TL
9825.00†	90.001	179.576	9400.09	631.85	-621.03	220.52	740289.81	466375.50	32°16'49.798"N	103°41'22.435"W	0.00	
9925.00†	90.001	179.576	9400.09	731.74	-721.03	221.26	740290.55	466275.51	32°16'48.809"N	103°41'22.433"W	0.00	
10025.00†	90.001	179.576	9400.09	831.64	-821.03	222.00	740291.29	466175.51	32°16'47.819"N	103°41'22.432"W	0.00	
10125.00†	90.001	179.576	9400.08	931.53	-921.02	222.74	740292.03	466075.52	32°16'46.830"N	103°41'22.430"W	0.00	
10225.00†	90.001	179.576	9400.08	1031.43	-1021.02	223.48	740292.77	465975.53	32°16'45.840"N	103°41'22.428"W	0.00	
10325.00†	90.001	179.576	9400.08	1131.33	-1121.02	224.22	740293.51	465875.54	32°16'44.851"N	103°41'22.427"W	0.00	
10425.00†	90.001	179.576	9400.08	1231.22	-1221.01	224.96	740294.25	465775.54	32°16'43.861"N	103°41'22.425"W	0.00	
10525.00†	90.001	179.576	9400.08	1331.12	-1321.01	225.70	740294.99	465675.55	32°16'42.872"N	103°41'22.423"W	0.00	
10625.00†	90.001	179.576	9400.07	1431.01	-1421.01	226.44	740295.73	465575.56	32°16'41.882"N	103°41'22.422"W	0.00	
10725.00†	90.001	179.576	9400.07	1530.91	-1521.01	227.18	740296.47	465475.57	32°16'40.893"N	103°41'22.420"W	0.00	
10825.00†	90.001	179.576	9400.07	1630.81	-1621.00	227.92	740297.21	465375.57	32°16'39.903"N	103°41'22.419"W	0.00	
10925.00†	90.001	179.576	9400.07	1730.70	-1721.00	228.66	740297.95	465275.58	32°16'38.914"N	103°41'22.417"W	0.00	
11025.00†	90.001	179.576	9400.06	1830.60	-1821.00	229.40	740298.69	465175.59	32°16'37.924"N	103°41'22.415"W	0.00	
11125.00†	90.001	179.576	9400.06	1930.49	-1921.00	230.14	740299.43	465075.60	32°16'36.935"N	103°41'22.414"W	0.00	
11225.00†	90.001	179.576	9400.06	2030.39	-2020.99	230.88	740300.17	464975.60	32°16'35.945"N	103°41'22.412"W	0.00	
11325.00†	90.001	179.576	9400.06	2130.28	-2120.99	231.62	740300.91	464875.61	32°16'34.956"N	103°41'22.410"W	0.00	
11425.00†	90.001	179.576	9400.06	2230.18	-2220.99	232.36	740301.65	464775.62	32°16'33.966"N	103°41'22.409"W	0.00	



Planned Wellpath Report

Rev-A.0

Page 6 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 22 SHL
Area	Lea County, NM	Well	No. 22
Field	(James Federal) Sec 29, TS 23 S, R 32 E	Wellbore	No. 22 PWB
Facility	James Federal No. 22		

WELLPATH DATA (U46 stations) T=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
11525.00†	90.001	179.576	9400.05	2330.08	-2320.98	233.10	740302.39	464675.63	32°16'32.977"N	103°41'22.407"W	0.00	
11625.00†	90.001	179.576	9400.05	2429.97	-2420.98	233.84	740303.13	464575.63	32°16'31.987"N	103°41'22.405"W	0.00	
11725.00†	90.001	179.576	9400.05	2529.87	-2520.98	234.58	740303.87	464475.64	32°16'30.998"N	103°41'22.404"W	0.00	
11825.00†	90.001	179.576	9400.05	2629.76	-2620.98	235.32	740304.61	464375.65	32°16'30.008"N	103°41'22.402"W	0.00	
11925.00†	90.001	179.576	9400.04	2729.66	-2720.97	236.06	740305.35	464275.66	32°16'29.019"N	103°41'22.401"W	0.00	
12025.00†	90.001	179.576	9400.04	2829.56	-2820.97	236.80	740306.09	464175.66	32°16'28.029"N	103°41'22.399"W	0.00	
12125.00†	90.001	179.576	9400.04	2929.45	-2920.97	237.54	740306.83	464075.67	32°16'27.040"N	103°41'22.397"W	0.00	
12225.00†	90.001	179.576	9400.04	3029.35	-3020.97	238.28	740307.57	463975.68	32°16'26.050"N	103°41'22.396"W	0.00	
12325.00†	90.001	179.576	9400.04	3129.24	-3120.96	239.02	740308.31	463875.69	32°16'25.061"N	103°41'22.394"W	0.00	
12425.00†	90.001	179.576	9400.03	3229.14	-3220.96	239.76	740309.05	463775.69	32°16'24.071"N	103°41'22.392"W	0.00	
12525.00†	90.001	179.576	9400.03	3329.04	-3320.96	240.50	740309.79	463675.70	32°16'23.082"N	103°41'22.391"W	0.00	
12625.00†	90.001	179.576	9400.03	3428.93	-3420.95	241.24	740310.53	463575.71	32°16'22.092"N	103°41'22.389"W	0.00	
12725.00†	90.001	179.576	9400.03	3528.83	-3520.95	241.98	740311.27	463475.72	32°16'21.103"N	103°41'22.388"W	0.00	
12825.00†	90.001	179.576	9400.02	3628.72	-3620.95	242.72	740312.01	463375.72	32°16'20.113"N	103°41'22.386"W	0.00	
12925.00†	90.001	179.576	9400.02	3728.62	-3720.95	243.46	740312.75	463275.73	32°16'19.124"N	103°41'22.384"W	0.00	
13025.00†	90.001	179.576	9400.02	3828.52	-3820.94	244.20	740313.49	463175.74	32°16'18.134"N	103°41'22.383"W	0.00	
13125.00†	90.001	179.576	9400.02	3928.41	-3920.94	244.94	740314.23	463075.75	32°16'17.145"N	103°41'22.381"W	0.00	
13225.00†	90.001	179.576	9400.02	4028.31	-4020.94	245.68	740314.97	462975.75	32°16'16.155"N	103°41'22.379"W	0.00	
13325.00†	90.001	179.576	9400.01	4128.20	-4120.94	246.42	740315.71	462875.76	32°16'15.166"N	103°41'22.378"W	0.00	
13425.00†	90.001	179.576	9400.01	4228.10	-4220.93	247.16	740316.45	462775.77	32°16'14.176"N	103°41'22.376"W	0.00	
13525.00†	90.001	179.576	9400.01	4328.00	-4320.93	247.90	740317.19	462675.78	32°16'13.187"N	103°41'22.375"W	0.00	
13625.00†	90.001	179.576	9400.01	4427.89	-4420.93	248.64	740317.93	462575.78	32°16'12.197"N	103°41'22.373"W	0.00	
13725.00†	90.001	179.576	9400.00	4527.79	-4520.92	249.38	740318.67	462475.79	32°16'11.208"N	103°41'22.371"W	0.00	
13825.00†	90.001	179.576	9400.00	4627.68	-4620.92	250.12	740319.41	462375.80	32°16'10.218"N	103°41'22.370"W	0.00	
13925.00†	90.001	179.576	9400.00	4727.58	-4720.92	250.86	740320.15	462275.81	32°16'09.229"N	103°41'22.368"W	0.00	
13931.61	90.001	179.576	9400.00	4734.18	-4727.53	250.91	740320.20	462269.20	32°16'09.163"N	103°41'22.368"W	0.00	No. 22 PBHL



Planned Wellpath Report

Rev-A.0

Page 7 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 22 SHL
Area	Lea County, NM	Well	No. 22
Field	(James Federal) Sec 29, TS 23 S, R 32 E	Wellbore	No. 22 PWB
Facility	James Federal No. 22		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No. 22 PBHL	13931.61	9400.00	4727.53	250.91	740320.20	462269.20	32°16'09.163"N	108°41'22.368"W	point

SURVEY PROGRAM - Ref Wellbore: No. 22 PWB - Ref Wellpath: Rev-A.0				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	13931.61	NaviTrak (Standard)		No. 22 PWB