

HOBBS OCD

NOV 14 2011

DISTRICT I RECEIVED

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210DISTRICT III
1000 Rio Drazos Rd., Aledo, NM 87410DISTRICT IV
1100 N. St. Francis Dr., Santa Fe, NM 87505State of New Mexico
Energy, Minerals and Natural Resources DepartmentForm C-102
Revised July 16, 2010Submit one copy to appropriate
District OfficeOIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-4033	Pool Code 96403	Pool Name Wildcat; Bone Spring
Property Code 38816	Property Name ADAMS STATE COM	Well Number 4H
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3790'

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	6	21 S	33 E		2310	SOUTH	710	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
P	7	21 S	33 E		330	SOUTH	660	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
240			

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

SURFACE LOCATION
 Lot - N 32°30'25.21"
 Long - W 103°36'10.78"
 NMSPCE- N 548943.8
 E 765711.0
 (NAO-83)

PROPOSED BOTTOM HOLE LOCATION
 Lot - N 32°29'13.43"
 Long - W 103°36'10.13"
 NMSPCE- N 541691.0
 E 765816.1
 (NAD-83)

OPERATOR CERTIFICATION
 I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or 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 state.

Signature: *[Signature]* Date: 11/7/11
 Printed Name: Terri Stathem
 Email Address: tstathem@cimarex.com

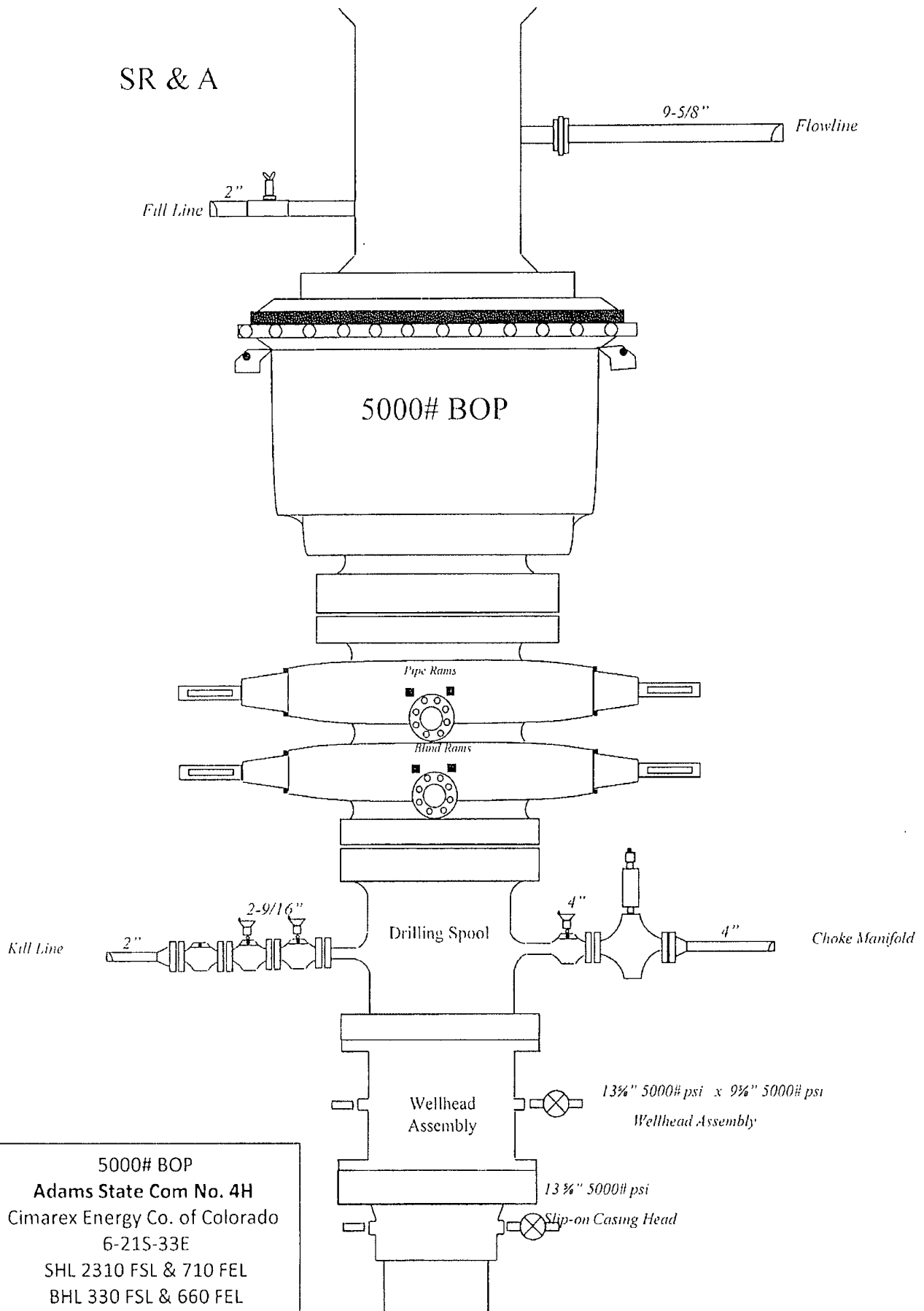
SURVEYOR CERTIFICATION
 I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief.

SEPT 11 2011
 Date Surveyed: 11/7/11
 Signature & Seal of Professional Surveyor: *[Signature]*
 Certificate No. Gary L. Jones 7977
 BASIN SURVEYS 25205

SCALE 1" = 3000'

DEC 08 2011

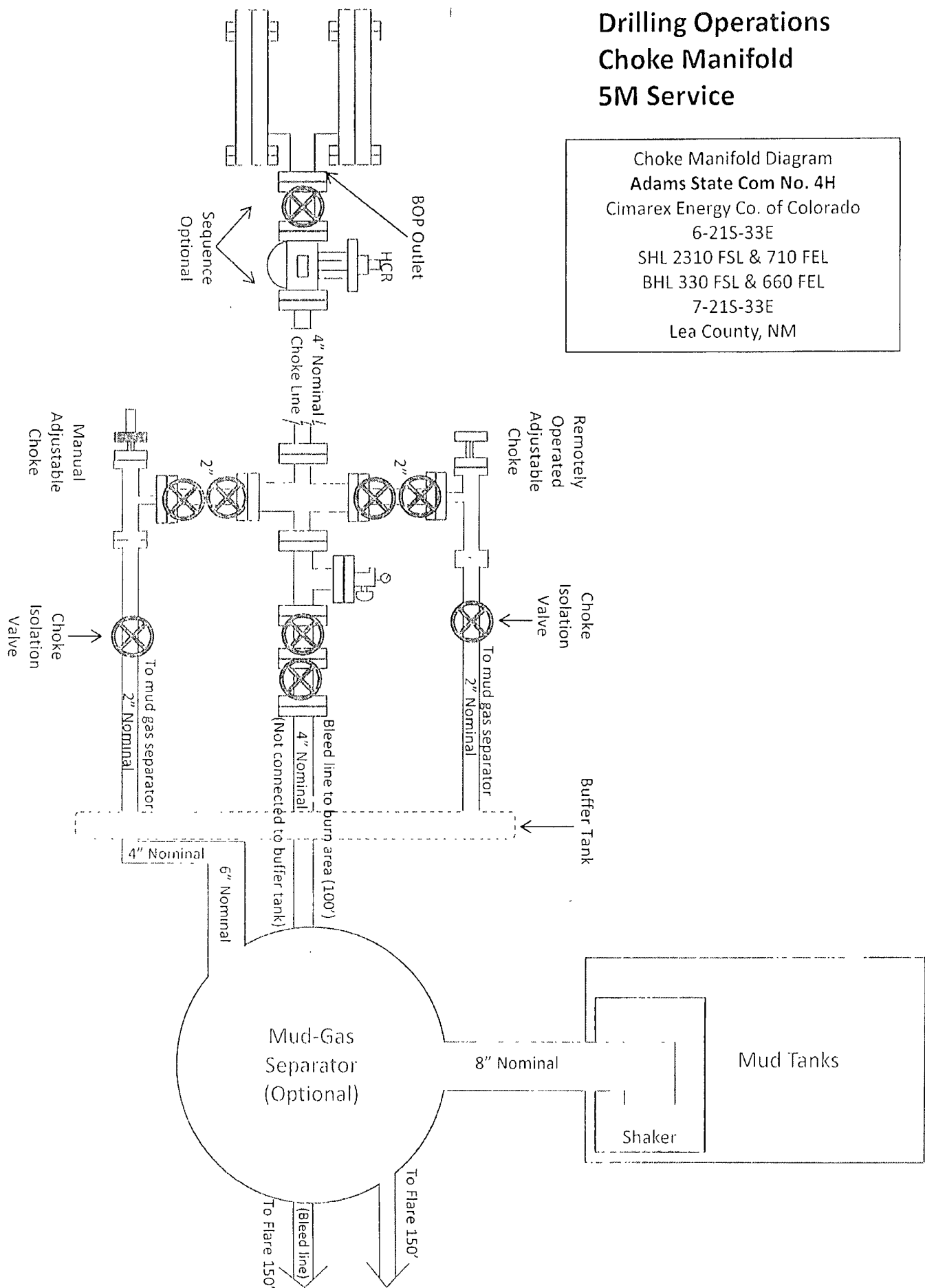
SR & A

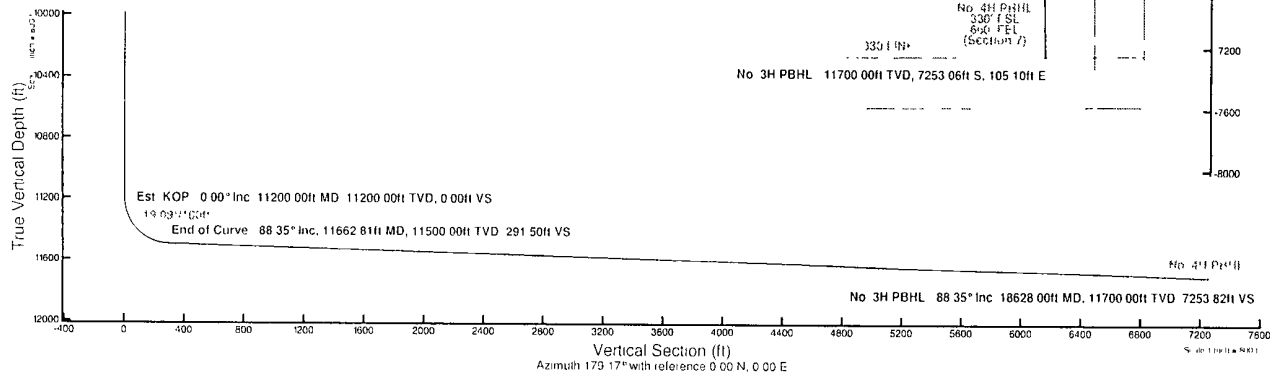


5000# BOP
Adams State Com No. 4H
Cimarex Energy Co. of Colorado
6-21S-33E
SHL 2310 FSL & 710 FEL
BHL 330 FSL & 660 FEL
7-21S-33E
Lea County, NM

Drilling Operations
Choke Manifold
5M Service

Choke Manifold Diagram
Adams State Com No. 4H
Cimarex Energy Co. of Colorado
6-215-33E
SHL 2310 FSL & 710 FEL
BHL 330 FSL & 660 FEL
7-215-33E
Lea County, NM







Planned Wellpath Report

Prelim_3

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 4H SHL
Area	Lea County, NM	Well	No. 4H
Field	(Adams) Sec 6&7, T21S, R33E	Wellbore	No. 4H PWB
Facility	Adams State Com		

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	Calhphik
Scale	0.999967	Report Generated	11/7/2011 at 3:41:35 PM
Convergence at slot	0.39° East	Database/Source file	WA_Midland/No._4H_PWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	548810.54	765525.12	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W
Facility Reference Pt			0.00	0.00	30°59'18.404"N	106°03'38.987"W
Field Reference Pt			0.00	0.00	30°59'18.404"N	106°03'38.987"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 4H SHL (KB) to GL	3790.00ft
Horizontal Reference Pt	Slot	Rig on No. 4H SHL (KB) to Mean Sea Level	3790.00ft
Vertical Reference Pt	Rig on No. 4H SHL (KB)	Rig on No. 4H SHL (KB) to Mud Line at Slot (No. 4H SHL)	3790.00ft
MD Reference Pt	Rig on No. 4H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.17°



Planned Wellpath Report

Prelim_3

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 4H SHL
Area	Lea County, NM	Well	No. 4H
Field	(Adams) Sec 6&7, T21S, R33E	Wellbore	No. 4H PWB
Facility	Adams State Com		

WELLPATH DATA (196 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	179.170	0.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	Tie On
100 00	0.000	179.170	100.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
200 00	0.000	179.170	200.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
300 00	0.000	179.170	300.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
400 00	0.000	179.170	400.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
500 00	0.000	179.170	500.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
600 00	0.000	179.170	600.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
700 00	0.000	179.170	700.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
800 00	0.000	179.170	800.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
900 00	0.000	179.170	900.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
1000 00	0.000	179.170	1000.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
1100 00	0.000	179.170	1100.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
1200 00	0.000	179.170	1200.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
1300 00	0.000	179.170	1300.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
1400 00	0.000	179.170	1400.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
1500 00	0.000	179.170	1500.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
1550 00	0.000	179.170	1550.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	Rustler
1600 00	0.000	179.170	1600.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
1700 00	0.000	179.170	1700.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
1780 00	0.000	179.170	1780.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	Salt
1800 00	0.000	179.170	1800.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
1900 00	0.000	179.170	1900.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
2000 00	0.000	179.170	2000.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
2100 00	0.000	179.170	2100.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
2200 00	0.000	179.170	2200.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
2300 00	0.000	179.170	2300.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
2400 00	0.000	179.170	2400.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
2500 00	0.000	179.170	2500.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
2600 00	0.000	179.170	2600.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
2700 00	0.000	179.170	2700.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
2800 00	0.000	179.170	2800.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
2900 00	0.000	179.170	2900.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
3000 00	0.000	179.170	3000.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
3100 00	0.000	179.170	3100.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
3200 00	0.000	179.170	3200.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
3300 00	0.000	179.170	3300.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
3400 00	0.000	179.170	3400.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
3500 00	0.000	179.170	3500.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
3600 00	0.000	179.170	3600.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
3700 00	0.000	179.170	3700.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
3800 00	0.000	179.170	3800.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
3900 00	0.000	179.170	3900.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
4000 00	0.000	179.170	4000.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
4100 00	0.000	179.170	4100.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
4200 00	0.000	179.170	4200.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	



Planned Wellpath Report

Prelim_3

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 4H SHL
Area	Lea County, NM	Well	No. 4H
Field	(Adams) Sec 6&7, T21S, R33E	Wellbore	No. 4H PWB
Facility	Adams State Com		

WELLPATH DATA (196 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
4300.00†	0.000	179.170	4300.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
4400.00†	0.000	179.170	4400.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
4500.00†	0.000	179.170	4500.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
4600.00†	0.000	179.170	4600.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
4700.00†	0.000	179.170	4700.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
4800.00†	0.000	179.170	4800.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
4900.00†	0.000	179.170	4900.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
5000.00†	0.000	179.170	5000.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
5100.00†	0.000	179.170	5100.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
5200.00†	0.000	179.170	5200.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
5250.00†	0.000	179.170	5250.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	Delaware
5300.00†	0.000	179.170	5300.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
5400.00†	0.000	179.170	5400.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
5500.00†	0.000	179.170	5500.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
5600.00†	0.000	179.170	5600.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
5700.00†	0.000	179.170	5700.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
5800.00†	0.000	179.170	5800.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
5900.00†	0.000	179.170	5900.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
6000.00†	0.000	179.170	6000.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
6100.00†	0.000	179.170	6100.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
6200.00†	0.000	179.170	6200.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
6300.00†	0.000	179.170	6300.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
6400.00†	0.000	179.170	6400.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
6500.00†	0.000	179.170	6500.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
6600.00†	0.000	179.170	6600.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
6700.00†	0.000	179.170	6700.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
6800.00†	0.000	179.170	6800.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
6900.00†	0.000	179.170	6900.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
7000.00†	0.000	179.170	7000.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
7100.00†	0.000	179.170	7100.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
7200.00†	0.000	179.170	7200.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
7300.00†	0.000	179.170	7300.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
7400.00†	0.000	179.170	7400.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
7500.00†	0.000	179.170	7500.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
7600.00†	0.000	179.170	7600.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
7700.00†	0.000	179.170	7700.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
7800.00†	0.000	179.170	7800.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
7900.00†	0.000	179.170	7900.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
8000.00†	0.000	179.170	8000.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
8100.00†	0.000	179.170	8100.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
8200.00†	0.000	179.170	8200.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
8300.00†	0.000	179.170	8300.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
8400.00†	0.000	179.170	8400.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
8500.00†	0.000	179.170	8500.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
8575.00†	0.000	179.170	8575.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	Basal Brushy Canyon



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 4H SHL
Area	Lea County, NM	Well	No. 4H
Field	(Adams) Sec 6&7, T21S, R33E	Wellbore	No. 4H PWB
Facility	Adams State Com		

WELLPATH DATA (196 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
8600.00†	0.000	179.170	8600.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
8700.00†	0.000	179.170	8700.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
8775.00†	0.000	179.170	8775.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	Bone Spring
8800.00†	0.000	179.170	8800.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
8900.00†	0.000	179.170	8900.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
9000.00†	0.000	179.170	9000.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
9100.00†	0.000	179.170	9100.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
9150.00†	0.000	179.170	9150.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	Upper Bone Spring Shale
9200.00†	0.000	179.170	9200.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
9300.00†	0.000	179.170	9300.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
9400.00†	0.000	179.170	9400.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
9500.00†	0.000	179.170	9500.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
9600.00†	0.000	179.170	9600.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
9700.00†	0.000	179.170	9700.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
9800.00†	0.000	179.170	9800.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
9900.00†	0.000	179.170	9900.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	1st Bone Spring Shale
10000.00†	0.000	179.170	10000.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
10100.00†	0.000	179.170	10100.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
10200.00†	0.000	179.170	10200.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
10300.00†	0.000	179.170	10300.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	2nd Bone Spring Shale
10400.00†	0.000	179.170	10400.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
10500.00†	0.000	179.170	10500.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
10600.00†	0.000	179.170	10600.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
10700.00†	0.000	179.170	10700.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
10800.00†	0.000	179.170	10800.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
10900.00†	0.000	179.170	10900.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
11000.00†	0.000	179.170	11000.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
11100.00†	0.000	179.170	11100.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	
11200.00†	0.000	179.170	11200.00	0.00	0.00	0.00	765711.00	548943.80	32°30'25.206"N	103°36'19.781"W	0.00	Est KOP
11250.23†	9.590	179.170	11250.00	4.19	-4.19	0.06	765711.06	548939.61	32°30'25.164"N	103°36'19.781"W	19.09	3rd Bone Spring Shale
11300.00†	19.091	179.170	11298.16	16.51	-16.50	0.24	765711.24	548927.30	32°30'25.042"N	103°36'19.780"W	19.09	
11400.00†	38.182	179.170	11385.52	64.21	-64.20	0.93	765711.93	548879.60	32°30'24.570"N	103°36'19.775"W	19.09	
11500.00†	57.273	179.170	11452.48	137.86	-137.85	2.00	765713.00	548805.96	32°30'23.842"N	103°36'19.769"W	19.09	
11600.00†	76.364	179.170	11491.66	229.37	-229.34	3.32	765714.32	548714.47	32°30'22.936"N	103°36'19.760"W	19.09	
11662.81	88.355	179.170	11500.00	291.50	-291.47	4.22	765715.22	548652.34	32°30'22.321"N	103°36'19.755"W	19.09	End of Curve
11700.00†	88.355	179.170	11501.06	328.68	-328.64	4.76	765715.76	548615.17	32°30'21.954"N	103°36'19.752"W	0.00	
11800.00†	88.355	179.170	11503.94	428.64	-428.59	6.21	765717.21	548515.22	32°30'20.964"N	103°36'19.743"W	0.00	
11900.00†	88.355	179.170	11506.81	528.60	-528.54	7.66	765718.66	548415.28	32°30'19.975"N	103°36'19.734"W	0.00	
12000.00†	88.355	179.170	11509.68	628.56	-628.49	9.11	765720.11	548315.33	32°30'18.986"N	103°36'19.725"W	0.00	
12100.00†	88.355	179.170	11512.55	728.51	-728.44	10.56	765721.56	548215.39	32°30'17.997"N	103°36'19.716"W	0.00	
12200.00†	88.355	179.170	11515.42	828.47	-828.39	12.00	765723.00	548115.44	32°30'17.008"N	103°36'19.707"W	0.00	
12300.00†	88.355	179.170	11518.29	928.43	-928.33	13.45	765724.45	548015.50	32°30'16.019"N	103°36'19.698"W	0.00	
12400.00†	88.355	179.170	11521.16	1028.39	-1028.28	14.90	765725.90	547915.55	32°30'15.030"N	103°36'19.689"W	0.00	
12500.00†	88.355	179.170	11524.04	1128.35	-1128.23	16.35	765727.35	547815.61	32°30'14.041"N	103°36'19.680"W	0.00	
12600.00†	88.355	179.170	11526.91	1228.31	-1228.18	17.80	765728.80	547715.66	32°30'13.052"N	103°36'19.671"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 4H SHL
Area	Lea County, NM	Well	No. 4H
Field	(Adams) Sec 6&7, T21S, R33E	Wellbore	No. 4H PWB
Facility	Adams State Com		

WELLPATH DATA (196 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
12700.00†	88.355	179.170	11529.78	1328.27	-1328.13	19.25	765730.25	547615.72	32°30'12.063"N	103°36'19.662"W	0.00	
12800.00†	88.355	179.170	11532.65	1428.23	-1428.08	20.69	765731.69	547515.78	32°30'11.074"N	103°36'19.653"W	0.00	
12900.00†	88.355	179.170	11535.52	1528.18	-1528.02	22.14	765733.14	547415.83	32°30'10.085"N	103°36'19.644"W	0.00	
13000.00†	88.355	179.170	11538.39	1628.14	-1627.97	23.59	765734.59	547315.89	32°30'09.096"N	103°36'19.635"W	0.00	
13100.00†	88.355	179.170	11541.26	1728.10	-1727.92	25.04	765736.04	547215.94	32°30'08.107"N	103°36'19.626"W	0.00	
13200.00†	88.355	179.170	11544.14	1828.06	-1827.87	26.49	765737.49	547116.00	32°30'07.118"N	103°36'19.617"W	0.00	
13300.00†	88.355	179.170	11547.01	1928.02	-1927.82	27.94	765738.93	547016.05	32°30'06.129"N	103°36'19.609"W	0.00	
13400.00†	88.355	179.170	11549.88	2027.98	-2027.76	29.38	765740.38	546916.11	32°30'05.140"N	103°36'19.600"W	0.00	
13500.00†	88.355	179.170	11552.75	2127.94	-2127.71	30.83	765741.83	546816.16	32°30'04.151"N	103°36'19.591"W	0.00	
13600.00†	88.355	179.170	11555.62	2227.90	-2227.66	32.28	765743.28	546716.22	32°30'03.162"N	103°36'19.582"W	0.00	
13700.00†	88.355	179.170	11558.49	2327.85	-2327.61	33.73	765744.73	546616.27	32°30'02.173"N	103°36'19.573"W	0.00	
13800.00†	88.355	179.170	11561.36	2427.81	-2427.56	35.18	765746.18	546516.33	32°30'01.184"N	103°36'19.564"W	0.00	
13900.00†	88.355	179.170	11564.24	2527.77	-2527.51	36.63	765747.62	546416.38	32°30'00.195"N	103°36'19.555"W	0.00	
14000.00†	88.355	179.170	11567.11	2627.73	-2627.45	38.07	765749.07	546316.44	32°29'59.206"N	103°36'19.546"W	0.00	
14100.00†	88.355	179.170	11569.98	2727.69	-2727.40	39.52	765750.52	546216.49	32°29'58.217"N	103°36'19.537"W	0.00	
14200.00†	88.355	179.170	11572.85	2827.65	-2827.35	40.97	765751.97	546116.55	32°29'57.228"N	103°36'19.528"W	0.00	
14300.00†	88.355	179.170	11575.72	2927.61	-2927.30	42.42	765753.42	546016.60	32°29'56.239"N	103°36'19.519"W	0.00	
14400.00†	88.355	179.170	11578.59	3027.57	-3027.25	43.87	765754.87	545916.66	32°29'55.250"N	103°36'19.510"W	0.00	
14500.00†	88.355	179.170	11581.47	3127.52	-3127.20	45.32	765756.31	545816.71	32°29'54.261"N	103°36'19.501"W	0.00	
14600.00†	88.355	179.170	11584.34	3227.48	-3227.14	46.76	765757.76	545716.77	32°29'53.272"N	103°36'19.492"W	0.00	
14700.00†	88.355	179.170	11587.21	3327.44	-3327.09	48.21	765759.21	545616.82	32°29'52.282"N	103°36'19.483"W	0.00	
14800.00†	88.355	179.170	11590.08	3427.40	-3427.04	49.66	765760.66	545516.88	32°29'51.293"N	103°36'19.474"W	0.00	
14900.00†	88.355	179.170	11592.95	3527.36	-3526.99	51.11	765762.11	545416.94	32°29'50.304"N	103°36'19.465"W	0.00	
15000.00†	88.355	179.170	11595.82	3627.32	-3626.94	52.56	765763.56	545316.99	32°29'49.315"N	103°36'19.456"W	0.00	
15100.00†	88.355	179.170	11598.69	3727.28	-3726.89	54.01	765765.00	545217.05	32°29'48.326"N	103°36'19.448"W	0.00	
15200.00†	88.355	179.170	11601.57	3827.24	-3826.83	55.45	765766.45	545117.10	32°29'47.337"N	103°36'19.439"W	0.00	
15300.00†	88.355	179.170	11604.44	3927.19	-3926.78	56.90	765767.90	545017.16	32°29'46.348"N	103°36'19.430"W	0.00	
15400.00†	88.355	179.170	11607.31	4027.15	-4026.73	58.35	765769.35	544917.21	32°29'45.359"N	103°36'19.421"W	0.00	
15500.00†	88.355	179.170	11610.18	4127.11	-4126.68	59.80	765770.80	544817.27	32°29'44.370"N	103°36'19.412"W	0.00	
15600.00†	88.355	179.170	11613.05	4227.07	-4226.63	61.25	765772.25	544717.32	32°29'43.381"N	103°36'19.403"W	0.00	
15700.00†	88.355	179.170	11615.92	4327.03	-4326.58	62.70	765773.69	544617.38	32°29'42.392"N	103°36'19.394"W	0.00	
15800.00†	88.355	179.170	11618.79	4426.99	-4426.52	64.14	765775.14	544517.43	32°29'41.403"N	103°36'19.385"W	0.00	
15900.00†	88.355	179.170	11621.67	4526.95	-4526.47	65.59	765776.59	544417.49	32°29'40.414"N	103°36'19.376"W	0.00	
16000.00†	88.355	179.170	11624.54	4626.91	-4626.42	67.04	765778.04	544317.54	32°29'39.425"N	103°36'19.367"W	0.00	
16100.00†	88.355	179.170	11627.41	4726.86	-4726.37	68.49	765779.49	544217.60	32°29'38.436"N	103°36'19.358"W	0.00	
16200.00†	88.355	179.170	11630.28	4826.82	-4826.32	69.94	765780.94	544117.65	32°29'37.447"N	103°36'19.349"W	0.00	
16300.00†	88.355	179.170	11633.15	4926.78	-4926.26	71.39	765782.38	544017.71	32°29'36.458"N	103°36'19.340"W	0.00	
16400.00†	88.355	179.170	11636.02	5026.74	-5026.21	72.83	765783.83	543917.76	32°29'35.469"N	103°36'19.331"W	0.00	
16500.00†	88.355	179.170	11638.89	5126.70	-5126.16	74.28	765785.28	543817.82	32°29'34.480"N	103°36'19.322"W	0.00	
16600.00†	88.355	179.170	11641.77	5226.66	-5226.11	75.73	765786.73	543717.87	32°29'33.491"N	103°36'19.313"W	0.00	
16700.00†	88.355	179.170	11644.64	5326.62	-5326.06	77.18	765788.18	543617.93	32°29'32.502"N	103°36'19.304"W	0.00	
16800.00†	88.355	179.170	11647.51	5426.58	-5426.01	78.63	765789.63	543517.99	32°29'31.513"N	103°36'19.295"W	0.00	
16900.00†	88.355	179.170	11650.38	5526.53	-5525.95	80.08	765791.07	543418.04	32°29'30.524"N	103°36'19.287"W	0.00	
17000.00†	88.355	179.170	11653.25	5626.49	-5625.90	81.52	765792.52	543318.10	32°29'29.535"N	103°36'19.278"W	0.00	
17100.00†	88.355	179.170	11656.12	5726.45	-5725.85	82.97	765793.97	543218.15	32°29'28.546"N	103°36'19.269"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 4H SHL
Area	Lea County, NM	Well	No. 4H
Field	(Adams) Sec 6&7, T21S, R33E	Wellbore	No. 4H PWB
Facility	Adams State Com		

WELLPATH DATA (196 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
17200.00†	88.355	179.170	11659.00	5826.41	-5825.80	84.42	765795.42	543118.21	32°29'27.557"N	103°36'19.260"W	0.00	
17300.00†	88.355	179.170	11661.87	5926.37	-5925.75	85.87	765796.87	543018.26	32°29'26.568"N	103°36'19.251"W	0.00	
17400.00†	88.355	179.170	11664.74	6026.33	-6025.70	87.32	765798.32	542918.32	32°29'25.579"N	103°36'19.242"W	0.00	
17500.00†	88.355	179.170	11667.61	6126.29	-6125.64	88.77	765799.76	542818.37	32°29'24.590"N	103°36'19.233"W	0.00	
17600.00†	88.355	179.170	11670.48	6226.25	-6225.59	90.21	765801.21	542718.43	32°29'23.600"N	103°36'19.224"W	0.00	
17700.00†	88.355	179.170	11673.35	6326.20	-6325.54	91.66	765802.66	542618.48	32°29'22.611"N	103°36'19.215"W	0.00	
17800.00†	88.355	179.170	11676.22	6426.16	-6425.49	93.11	765804.11	542518.54	32°29'21.622"N	103°36'19.206"W	0.00	
17900.00†	88.355	179.170	11679.10	6526.12	-6525.44	94.56	765805.56	542418.59	32°29'20.633"N	103°36'19.197"W	0.00	
18000.00†	88.355	179.170	11681.97	6626.08	-6625.39	96.01	765807.00	542318.65	32°29'19.644"N	103°36'19.188"W	0.00	
18100.00†	88.355	179.170	11684.84	6726.04	-6725.33	97.46	765808.45	542218.70	32°29'18.655"N	103°36'19.179"W	0.00	
18200.00†	88.355	179.170	11687.71	6826.00	-6825.28	98.90	765809.90	542118.76	32°29'17.666"N	103°36'19.170"W	0.00	
18300.00†	88.355	179.170	11690.58	6925.96	-6925.23	100.35	765811.35	542018.81	32°29'16.677"N	103°36'19.161"W	0.00	
18400.00†	88.355	179.170	11693.45	7025.92	-7025.18	101.80	765812.80	541918.87	32°29'15.688"N	103°36'19.152"W	0.00	
18500.00†	88.355	179.170	11696.32	7125.87	-7125.13	103.25	765814.25	541818.92	32°29'14.699"N	103°36'19.143"W	0.00	
18600.00†	88.355	179.170	11699.20	7225.83	-7225.08	104.70	765815.69	541718.98	32°29'13.710"N	103°36'19.134"W	0.00	
18628.00	88.355	179.170	11700.00†	7253.82	-7253.06	105.10	765816.10	541691.00	32°29'13.433"N	103°36'19.132"W	0.00	No. 3H PBHL

HOLE & CASING SECTIONS - Ref Wellbore: No. 4H PWB Ref Wellpath: Prelim_3									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
7in Casing	0.00	17552.00	17552.00	0.00	11669.10	0.00	0.00	-6177.62	89.52
4.5in Liner	11000.00	18628.00	7628.00	11000.00	11700.00	0.00	0.00	-7253.06	105.10

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) No. 4H PBHL	18628.00	11700.00	-7253.06	105.10	765816.10	541691.00	32°29'13.433"N	103°36'19.132"W	point

SURVEY PROGRAM - Ref Wellbore: No. 4H PWB Ref Wellpath: Prelim_3				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
3790.00	18628.00	NaviTrak (Standard)		No. 4H PWB