



Cimarex Energy Co.

Location Lea County, NM
Field (State DR) Sec 16, T19S, R32E
Facility State DR No. 8H

Slot No. 8H SHL
Well No. 8H
Wellbore No. 8H PWB

30-025-39795

Scale 1 inch = 200 ft
Easting (ft)



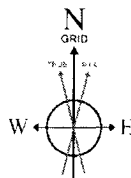
No. 8H SHL
330' FNL
1630' FEL

Tie On: 0.00% TVD, 0.00% N, 0.00% E
Est. KOP: 9209.20' TVD, 0.00% N, 0.00% E

Local N: 0.00% TVD, 0.00% N, 0.00% E

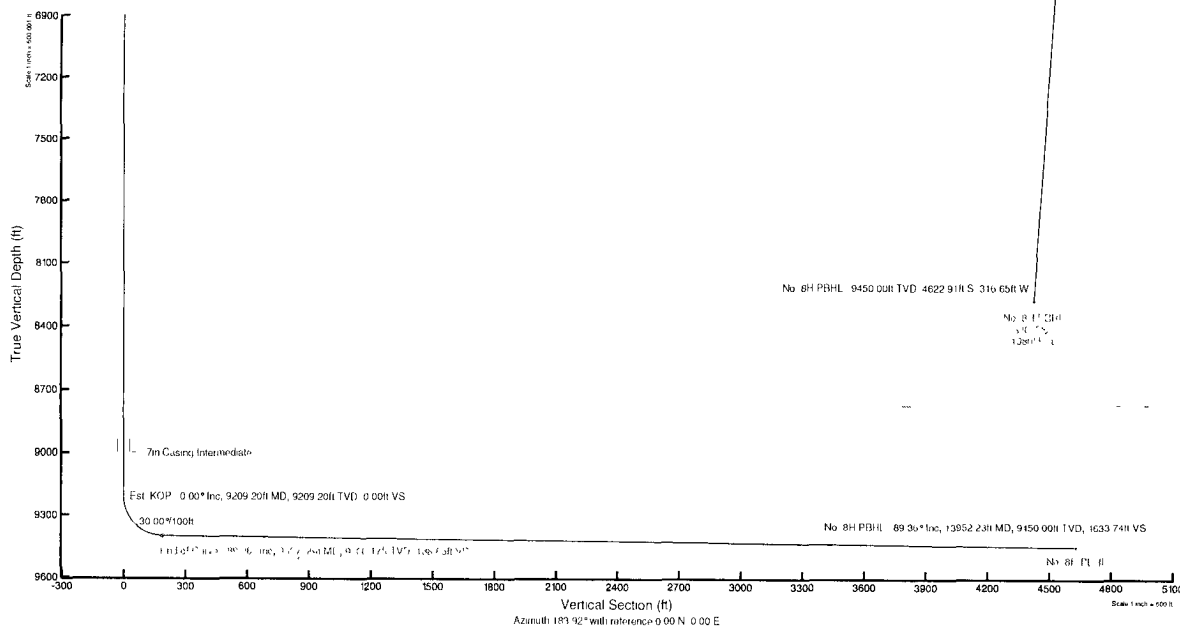
Well Profile Data								
Design Comment	MD (ft)	Inc. (%)	Az. (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	183.918	0.00	0.00	0.00	0.00	0.00
Est. KOP	9209.20	0.000	183.918	9209.20	0.00	0.00	0.00	0.00
Est. KOP	9209.20	0.000	183.918	9209.20	0.00	0.00	0.00	0.00
No. 8H PWB	13952.23	89.358	183.918	9450.00	4622.91	316.65	0.00	4633.74

Hole and Casing Sections										
Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	Start Local E (ft)	End Local N (ft)	End Local E (ft)	Wellbore
9 625in Casing Surface	0.00	4900.00	4900.00	0.00	4900.00	0.00	0.00	0.00	0.00	No. 8H PWB
7in Casing Intermediate	0.00	9000.00	9000.00	0.00	9000.00	0.00	0.00	0.00	0.00	No. 8H PWB



BGGM (1945.0 to 2011.0) Dip: 60.61° Field: 49028.6 nT
Magnetic North is 7.87 degrees East of True North (at 6/8/2010)
Grid North is 0.31 degrees East of True North
To correct azimuth from True to Grid subtract 0.31 degrees
To correct azimuth from Magnetic to Grid add 7.57 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.57 = 97.57

Plot reference wellpath is Profile 1	
True vertical depths are referenced to Rig on No. 8H SHL (GL)	Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001) US feet
Measured depths are referenced to Rig on No. 8H SHL (GL)	North Reference: Grid north
Rig on No. 8H SHL (GL) to Mean Sea Level: 3629 feet	Scale: True distance
Mean Sea Level to Mud line (Facility, State DR No. 8H): 1629 feet	Depths are in feet
Coordinates are in feet referenced to Slot location	Created by: Roland Flores on 6/8/2010





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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 8H SHL
Area	Lea County, NM	Well	No. 8H
Field	(State DR) Sec 16, T19S, R32E	Wellbore	No. 8H PWB
Facility	State DR No. 8H		

REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Florroll
Scale	0.999944	Report Generated	6/8/2010 at 10:08:58 AM
Convergence at slot	0.31° East	Database/Source file	WA Midland/No. 8H_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W
Facility Reference Pt			715316.50	606765.40	32°40'00.373"N	103°46'04.668"W
Field Reference Pt			712327.80	606759.10	32°40'00.467"N	103°46'39.631"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 8H SHL (GL) to Ground Level	0.00ft
Horizontal Reference Pt	Slot Location	Rig on No. 8H SHL (GL) to Mean Sea Level	3629.00ft
Vertical Reference Pt	Rig on No. 8H SHL (GL)	Ground Level to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 8H SHL (GL)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	183.92°



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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 8H SHL
Area	Lea County, NM	Well	No. 8H
Field	(State DR) Sec 16, T19S, R32E	Wellbore	No. 8H PWB
Facility	State DR No. 8H		

WELLPATH DATA (143 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	183.918	0.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	Tie On
100.00†	0.000	183.918	100.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
200.00†	0.000	183.918	200.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
300.00†	0.000	183.918	300.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
400.00†	0.000	183.918	400.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
500.00†	0.000	183.918	500.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
600.00†	0.000	183.918	600.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
700.00†	0.000	183.918	700.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
800.00†	0.000	183.918	800.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
900.00†	0.000	183.918	900.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
1000.00†	0.000	183.918	1000.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
1100.00†	0.000	183.918	1100.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
1200.00†	0.000	183.918	1200.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
1300.00†	0.000	183.918	1300.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
1400.00†	0.000	183.918	1400.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
1500.00†	0.000	183.918	1500.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
1600.00†	0.000	183.918	1600.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
1700.00†	0.000	183.918	1700.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
1800.00†	0.000	183.918	1800.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
1900.00†	0.000	183.918	1900.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
2000.00†	0.000	183.918	2000.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
2100.00†	0.000	183.918	2100.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
2200.00†	0.000	183.918	2200.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
2300.00†	0.000	183.918	2300.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
2400.00†	0.000	183.918	2400.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
2500.00†	0.000	183.918	2500.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
2600.00†	0.000	183.918	2600.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
2700.00†	0.000	183.918	2700.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
2800.00†	0.000	183.918	2800.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
2900.00†	0.000	183.918	2900.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
3000.00†	0.000	183.918	3000.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
3100.00†	0.000	183.918	3100.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
3200.00†	0.000	183.918	3200.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
3300.00†	0.000	183.918	3300.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
3400.00†	0.000	183.918	3400.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
3500.00†	0.000	183.918	3500.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
3600.00†	0.000	183.918	3600.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
3700.00†	0.000	183.918	3700.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
3800.00†	0.000	183.918	3800.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
3900.00†	0.000	183.918	3900.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
4000.00†	0.000	183.918	4000.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
4100.00†	0.000	183.918	4100.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
4200.00†	0.000	183.918	4200.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
4300.00†	0.000	183.918	4300.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
4400.00†	0.000	183.918	4400.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

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Area	Lea County, NM	Well	No. 8H
Field	(State DR) Sec 16, T19S, R32E	Wellbore	No. 8H PWB
Facility	State DR No. 8H		

WELLPATH DATA (143 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4500.00†	0.000	183.918	4500.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
4600.00†	0.000	183.918	4600.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
4700.00†	0.000	183.918	4700.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
4800.00†	0.000	183.918	4800.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
4900.00†	0.000	183.918	4900.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
5000.00†	0.000	183.918	5000.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
5100.00†	0.000	183.918	5100.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
5200.00†	0.000	183.918	5200.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
5300.00†	0.000	183.918	5300.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
5400.00†	0.000	183.918	5400.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
5500.00†	0.000	183.918	5500.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
5600.00†	0.000	183.918	5600.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
5700.00†	0.000	183.918	5700.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
5800.00†	0.000	183.918	5800.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
5900.00†	0.000	183.918	5900.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
6000.00†	0.000	183.918	6000.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
6100.00†	0.000	183.918	6100.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
6200.00†	0.000	183.918	6200.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
6300.00†	0.000	183.918	6300.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
6400.00†	0.000	183.918	6400.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
6500.00†	0.000	183.918	6500.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
6600.00†	0.000	183.918	6600.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
6700.00†	0.000	183.918	6700.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
6800.00†	0.000	183.918	6800.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
6900.00†	0.000	183.918	6900.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
7000.00†	0.000	183.918	7000.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
7100.00†	0.000	183.918	7100.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
7200.00†	0.000	183.918	7200.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
7300.00†	0.000	183.918	7300.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
7400.00†	0.000	183.918	7400.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
7500.00†	0.000	183.918	7500.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
7600.00†	0.000	183.918	7600.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
7700.00†	0.000	183.918	7700.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
7800.00†	0.000	183.918	7800.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
7900.00†	0.000	183.918	7900.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
8000.00†	0.000	183.918	8000.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
8100.00†	0.000	183.918	8100.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
8200.00†	0.000	183.918	8200.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
8300.00†	0.000	183.918	8300.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
8400.00†	0.000	183.918	8400.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
8500.00†	0.000	183.918	8500.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
8600.00†	0.000	183.918	8600.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
8700.00†	0.000	183.918	8700.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
8800.00†	0.000	183.918	8800.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
8900.00†	0.000	183.918	8900.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 8H SHL
Area	Lea County, NM	Well	No. 8H
Field	(State DR) Sec 16, T19S, R32E	Wellbore	No. 8H PWB
Facility	State DR No. 8H		

WELLPATH DATA (143 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	Comments
9000.00†	0.000	183.918	9000.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
9100.00†	0.000	183.918	9100.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
9200.00†	0.000	183.918	9200.00	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	
9209.20	0.000	183.918	9209.20	0.00	0.00	0.00	715316.50	606765.40	32°40'00.373"N	103°46'04.668"W	0.00	Est KOP
9300.00†	27.240	183.918	9296.62	21.18	-21.13	-1.45	715315.05	606744.27	32°40'00.164"N	103°46'04.686"W	30.00	
9400.00†	57.240	183.918	9369.81	87.64	-87.43	-5.99	715310.51	606677.97	32°39'59.508"N	103°46'04.743"W	30.00	
9500.00†	87.240	183.918	9399.96	181.79	-181.36	-12.42	715304.08	606584.05	32°39'58.579"N	103°46'04.825"W	30.00	
9507.06	89.358	183.918	9400.17	188.85	-188.40	-12.90	715303.60	606577.01	32°39'58.510"N	103°46'04.831"W	30.00	End of Curve
9600.00†	89.358	183.918	9401.22	281.78	-281.12	-19.26	715297.25	606484.29	32°39'57.593"N	103°46'04.911"W	0.00	
9700.00†	89.358	183.918	9402.34	381.77	-380.88	-26.09	715290.41	606384.54	32°39'56.606"N	103°46'04.997"W	0.00	
9800.00†	89.358	183.918	9403.46	481.77	-480.64	-32.92	715283.58	606284.79	32°39'55.619"N	103°46'05.083"W	0.00	
9900.00†	89.358	183.918	9404.58	581.76	-580.40	-39.75	715276.75	606185.03	32°39'54.632"N	103°46'05.169"W	0.00	
10000.00†	89.358	183.918	9405.70	681.76	-680.16	-46.59	715269.91	606085.28	32°39'53.646"N	103°46'05.255"W	0.00	
10100.00†	89.358	183.918	9406.82	781.75	-779.92	-53.42	715263.08	605985.52	32°39'52.659"N	103°46'05.341"W	0.00	
10200.00†	89.358	183.918	9407.94	881.74	-879.68	-60.25	715256.25	605885.77	32°39'51.672"N	103°46'05.428"W	0.00	
10300.00†	89.358	183.918	9409.06	981.74	-979.44	-67.09	715249.42	605786.02	32°39'50.686"N	103°46'05.514"W	0.00	
10400.00†	89.358	183.918	9410.18	1081.73	-1079.20	-73.92	715242.58	605686.26	32°39'49.699"N	103°46'05.600"W	0.00	
10500.00†	89.358	183.918	9411.30	1181.72	-1178.96	-80.75	715235.75	605586.51	32°39'48.712"N	103°46'05.686"W	0.00	
10600.00†	89.358	183.918	9412.42	1281.72	-1278.72	-87.59	715228.92	605486.75	32°39'47.726"N	103°46'05.772"W	0.00	
10700.00†	89.358	183.918	9413.55	1381.71	-1378.48	-94.42	715222.09	605387.00	32°39'46.739"N	103°46'05.858"W	0.00	
10800.00†	89.358	183.918	9414.67	1481.70	-1478.24	-101.25	715215.25	605287.24	32°39'45.752"N	103°46'05.944"W	0.00	
10900.00†	89.358	183.918	9415.79	1581.70	-1578.00	-108.09	715208.42	605187.49	32°39'44.765"N	103°46'06.031"W	0.00	
11000.00†	89.358	183.918	9416.91	1681.69	-1677.76	-114.92	715201.59	605087.74	32°39'43.779"N	103°46'06.117"W	0.00	
11100.00†	89.358	183.918	9418.03	1781.69	-1777.52	-121.75	715194.75	604987.98	32°39'42.792"N	103°46'06.203"W	0.00	
11200.00†	89.358	183.918	9419.15	1881.68	-1877.28	-128.59	715187.92	604888.23	32°39'41.805"N	103°46'06.289"W	0.00	
11300.00†	89.358	183.918	9420.27	1981.67	-1977.04	-135.42	715181.09	604788.47	32°39'40.819"N	103°46'06.375"W	0.00	
11400.00†	89.358	183.918	9421.39	2081.67	-2076.80	-142.25	715174.26	604688.72	32°39'39.832"N	103°46'06.461"W	0.00	
11500.00†	89.358	183.918	9422.51	2181.66	-2176.56	-149.08	715167.42	604588.97	32°39'38.845"N	103°46'06.547"W	0.00	
11600.00†	89.358	183.918	9423.63	2281.65	-2276.32	-155.92	715160.59	604489.21	32°39'37.859"N	103°46'06.633"W	0.00	
11700.00†	89.358	183.918	9424.75	2381.65	-2376.08	-162.75	715153.76	604389.46	32°39'36.872"N	103°46'06.720"W	0.00	
11800.00†	89.358	183.918	9425.88	2481.64	-2475.84	-169.58	715146.93	604289.70	32°39'35.885"N	103°46'06.806"W	0.00	
11900.00†	89.358	183.918	9427.00	2581.64	-2575.60	-176.42	715140.09	604189.95	32°39'34.899"N	103°46'06.892"W	0.00	
12000.00†	89.358	183.918	9428.12	2681.63	-2675.36	-183.25	715133.26	604090.20	32°39'33.912"N	103°46'06.978"W	0.00	
12100.00†	89.358	183.918	9429.24	2781.62	-2775.12	-190.08	715126.43	603990.44	32°39'32.925"N	103°46'07.064"W	0.00	
12200.00†	89.358	183.918	9430.36	2881.62	-2874.88	-196.92	715119.60	603890.69	32°39'31.938"N	103°46'07.150"W	0.00	
12300.00†	89.358	183.918	9431.48	2981.61	-2974.64	-203.75	715112.76	603790.93	32°39'30.952"N	103°46'07.236"W	0.00	
12400.00†	89.358	183.918	9432.60	3081.60	-3074.40	-210.58	715105.93	603691.18	32°39'29.965"N	103°46'07.323"W	0.00	
12500.00†	89.358	183.918	9433.72	3181.60	-3174.16	-217.42	715099.10	603591.42	32°39'28.978"N	103°46'07.409"W	0.00	
12600.00†	89.358	183.918	9434.84	3281.59	-3273.92	-224.25	715092.26	603491.67	32°39'27.992"N	103°46'07.495"W	0.00	
12700.00†	89.358	183.918	9435.96	3381.59	-3373.68	-231.08	715085.43	603391.92	32°39'27.005"N	103°46'07.581"W	0.00	
12800.00†	89.358	183.918	9437.08	3481.58	-3473.44	-237.92	715078.60	603292.16	32°39'26.018"N	103°46'07.667"W	0.00	
12900.00†	89.358	183.918	9438.21	3581.57	-3573.20	-244.75	715071.77	603192.41	32°39'25.032"N	103°46'07.753"W	0.00	
13000.00†	89.358	183.918	9439.33	3681.57	-3672.96	-251.58	715064.93	603092.65	32°39'24.045"N	103°46'07.839"W	0.00	
13100.00†	89.358	183.918	9440.45	3781.56	-3772.72	-258.41	715058.10	602992.90	32°39'23.058"N	103°46'07.925"W	0.00	
13200.00†	89.358	183.918	9441.57	3881.55	-3872.48	-265.25	715051.27	602893.15	32°39'22.071"N	103°46'08.012"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 8H SHL
Area	Lea County, NM	Well	No. 8H
Field	(State DR) Sec 16, T19S, R32E	Wellbore	No. 8H PWB
Facility	State DR No. 8H		

WELLPATH DATA (143 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [%/100ft]	Comments
13300.00†	89.358	183.918	9442.69	3981.55	-3972.24	-272.08	715044.44	602793.39	32°39'21.085"N	103°46'08.098"W	0.00	
13400.00†	89.358	183.918	9443.81	4081.54	-4072.00	-278.91	715037.60	602693.64	32°39'20.098"N	103°46'08.184"W	0.00	
13500.00†	89.358	183.918	9444.93	4181.54	-4171.76	-285.75	715030.77	602593.88	32°39'19.111"N	103°46'08.270"W	0.00	
13600.00†	89.358	183.918	9446.05	4281.53	-4271.52	-292.58	715023.94	602494.13	32°39'18.125"N	103°46'08.356"W	0.00	
13700.00†	89.358	183.918	9447.17	4381.52	-4371.28	-299.41	715017.10	602394.37	32°39'17.138"N	103°46'08.442"W	0.00	
13800.00†	89.358	183.918	9448.29	4481.52	-4471.04	-306.25	715010.27	602294.62	32°39'16.151"N	103°46'08.528"W	0.00	
13900.00†	89.358	183.918	9449.41	4581.51	-4570.80	-313.08	715003.44	602194.87	32°39'15.165"N	103°46'08.614"W	0.00	
13952.23	89.358	183.918	9450.00†	4633.74	-4622.91	-316.65	714999.87	602142.76	32°39'14.649"N	103°46'08.659"W	0.00	No. 8H PBHL

HOLE & CASING SECTIONS Ref Wellbore: No. 8H PWB Ref Wellpath: Prelim 1

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]
9.625in Casing Surface	0.00	4800.00	4800.00	0.00	4800.00	0.00	0.00	0.00	0.00
7in Casing Intermediate	0.00	9000.00	9000.00	0.00	9000.00	0.00	0.00	0.00	0.00

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 8H PBHL	13952.23	9450.00	-4622.91	-316.65	714999.87	602142.76	32°39'14.649"N	103°46'08.659"W	point

SURVEY PROGRAM Ref Wellbore: No. 8H PWB Ref Wellpath: Prelim 1

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	13952.23	NavTrak (Standard)		No. 8H PWB