



Cimarex Energy Co.

Location: Eddy County, NM
Field: (West Shugart) Sec 32, T18S, R31E
Facility: West Shugart 32 State Com No.1

Slot: No. 1H SHL
Well: No. 1H
Wellbore: No. 1H PWB

**BAKER
HUGHES**
INTEQ

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	183.746	0.00	0.00	0.00	0.00	0.00
Est KOP	2515.00	0.000	183.746	8515.00	0.00	0.00	0.00	0.00
End of Curve	8916.72	88.496	183.746	8775.00	252.72	-16.55	22.03	252.26
EOD	8916.74	88.496	183.746	8775.00	252.75	-16.55	2.00	253.29
No. 1H PBHL	13297.06	88.496	183.746	8890.00	-4622.19	-302.65	0.00	4632.09

Plot reference wellpath is Prelim. 1

True vertical depths are referenced to Rig on No. 1H SHL (RT)

Measured depths are referenced to Rig on No. 1H SHL (RT)

Rig on No. 1H SHL (RT) to Mean Sea Level: 3570 feet

Mean Sea Level to Mud line (Facility: West Shugart 32 State Com No.1): -3570 feet

Coordinates are in feet referenced to Slot

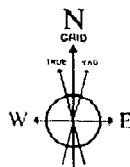
Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet

North Reference: Grid north

Scale: True distance

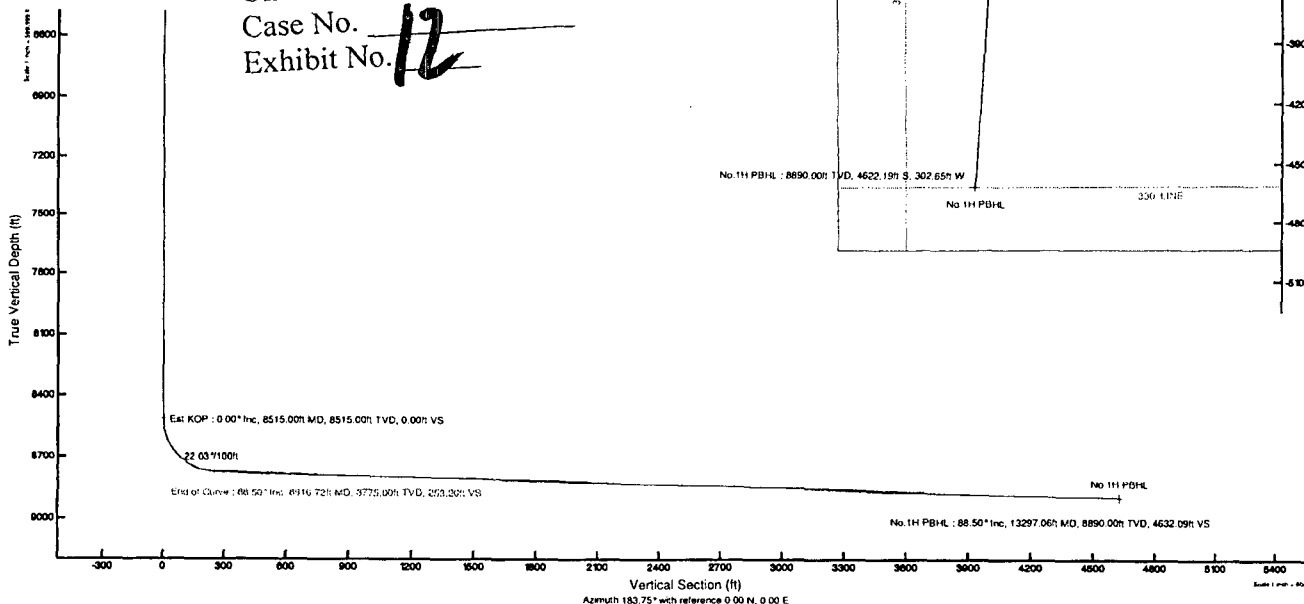
Depths are in feet

Created by: gomeoscr on 11/23/2010



BGGM (1945.0 to 2011.0) Dip: 60.61° Field: 48998.8 nT
Magnetic North is 7.87 degrees East of True North (at 11/23/2010)
Grid North is 0.24 degrees East of True North
To correct azimuth from True to Grid subtract 0.24 degrees
To correct azimuth from Magnetic to Grid add 7.64 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.64 = 97.64

Oil Conservation Division
Case No. 12
Exhibit No. 12





Planned Wellpath Report

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(West Shugart) Sec 32, T18S, R31E	Wellbore	No. 1H PWB
Facility	West Shugart 32 State Com No.1		

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	Gomeoscr
Scale	0.99993	Report Generated	11/23/2010 at 9:57:42 AM
Convergence at slot	0.24° East	Database/Source file	WA Midland/No. 1H_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	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W
Facility Reference Pt			675547.00	622399.50	32°42'36.930"N	103°53'49.155"W
Field Reference Pt			675547.00	622399.50	32°42'36.930"N	103°53'49.155"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 1H SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No. 1H SHL (RT) to Mean Sea Level	3570.00ft
Vertical Reference Pt	Rig on No. 1H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 1H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	183.75°



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(West Shugart) Sec 32, T18S, R31E	Wellbore	No. 1H PWB
Facility	West Shugart 32 State Com No.1		

WELLPATH DATA (140 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	183.746	0.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	Tie On
100.00†	0.000	183.746	100.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
200.00†	0.000	183.746	200.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
300.00†	0.000	183.746	300.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
400.00†	0.000	183.746	400.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
500.00†	0.000	183.746	500.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
600.00†	0.000	183.746	600.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
700.00†	0.000	183.746	700.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
800.00†	0.000	183.746	800.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
900.00†	0.000	183.746	900.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
1000.00†	0.000	183.746	1000.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
1100.00†	0.000	183.746	1100.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
1200.00†	0.000	183.746	1200.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
1300.00†	0.000	183.746	1300.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
1400.00†	0.000	183.746	1400.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
1500.00†	0.000	183.746	1500.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
1600.00†	0.000	183.746	1600.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
1700.00†	0.000	183.746	1700.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
1800.00†	0.000	183.746	1800.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
1900.00†	0.000	183.746	1900.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
2000.00†	0.000	183.746	2000.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
2100.00†	0.000	183.746	2100.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
2200.00†	0.000	183.746	2200.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
2300.00†	0.000	183.746	2300.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
2400.00†	0.000	183.746	2400.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
2500.00†	0.000	183.746	2500.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
2600.00†	0.000	183.746	2600.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
2700.00†	0.000	183.746	2700.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
2800.00†	0.000	183.746	2800.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
2900.00†	0.000	183.746	2900.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
3000.00†	0.000	183.746	3000.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
3100.00†	0.000	183.746	3100.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
3200.00†	0.000	183.746	3200.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
3300.00†	0.000	183.746	3300.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
3400.00†	0.000	183.746	3400.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
3500.00†	0.000	183.746	3500.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
3600.00†	0.000	183.746	3600.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
3700.00†	0.000	183.746	3700.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
3800.00†	0.000	183.746	3800.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
3900.00†	0.000	183.746	3900.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
4000.00†	0.000	183.746	4000.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
4100.00†	0.000	183.746	4100.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
4200.00†	0.000	183.746	4200.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
4300.00†	0.000	183.746	4300.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
4400.00†	0.000	183.746	4400.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(West Shugart) Sec 32, T18S, R31E	Wellbore	No. 1H PWB
Facility	West Shugart 32 State Com No.1		

WELLPATH DATA (140 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	183.746	4500.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
4600.00†	0.000	183.746	4600.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
4700.00†	0.000	183.746	4700.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
4800.00†	0.000	183.746	4800.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
4900.00†	0.000	183.746	4900.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
5000.00†	0.000	183.746	5000.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
5100.00†	0.000	183.746	5100.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
5200.00†	0.000	183.746	5200.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
5300.00†	0.000	183.746	5300.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
5400.00†	0.000	183.746	5400.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
5500.00†	0.000	183.746	5500.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
5600.00†	0.000	183.746	5600.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
5700.00†	0.000	183.746	5700.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
5800.00†	0.000	183.746	5800.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
5900.00†	0.000	183.746	5900.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
6000.00†	0.000	183.746	6000.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
6060.00†	0.000	183.746	6060.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	Bone Spring
6100.00†	0.000	183.746	6100.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
6200.00†	0.000	183.746	6200.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
6300.00†	0.000	183.746	6300.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
6400.00†	0.000	183.746	6400.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
6500.00†	0.000	183.746	6500.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
6600.00†	0.000	183.746	6600.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
6700.00†	0.000	183.746	6700.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
6800.00†	0.000	183.746	6800.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
6900.00†	0.000	183.746	6900.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
7000.00†	0.000	183.746	7000.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
7100.00†	0.000	183.746	7100.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
7200.00†	0.000	183.746	7200.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
7300.00†	0.000	183.746	7300.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
7400.00†	0.000	183.746	7400.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
7500.00†	0.000	183.746	7500.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
7600.00†	0.000	183.746	7600.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
7663.00†	0.000	183.746	7663.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	1st BSS
7700.00†	0.000	183.746	7700.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
7800.00†	0.000	183.746	7800.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
7900.00†	0.000	183.746	7900.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
8000.00†	0.000	183.746	8000.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
8100.00†	0.000	183.746	8100.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
8200.00†	0.000	183.746	8200.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
8300.00†	0.000	183.746	8300.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
8400.00†	0.000	183.746	8400.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
8460.00†	0.000	183.746	8460.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	2nd BSS
8500.00†	0.000	183.746	8500.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	
8515.00†	0.000	183.746	8515.00	0.00	0.00	0.00	675547.00	622399.50	32°42'36.930"N	103°53'49.155"W	0.00	End of PWB



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(West Shugart) Sec 32, T18S, R31E	Wellbore	No. 1H PWB
Facility	West Shugart 32 State Com No.1		

WELLPATH DATA (140 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
8600.00†	18.725	183.746	8598.49	13.77	-13.74	-0.90	675546.10	622385.76	32°42'36.794"N	103°53'49.166"W	22.03	
8700.00†	40.754	183.746	8684.79	63.07	-62.93	-4.12	675542.88	622336.57	32°42'36.307"N	103°53'49.206"W	22.03	
8800.00†	62.783	183.746	8746.29	141.14	-140.83	-9.22	675537.78	622258.68	32°42'35.537"N	103°53'49.269"W	22.03	
8900.00†	84.813	183.746	8774.02	236.57	-236.07	-15.46	675531.54	622163.45	32°42'34.594"N	103°53'49.347"W	22.03	
8916.72	88.496	183.746	8775.00	253.26	-252.72	-16.55	675530.45	622146.80	32°42'34.430"N	103°53'49.360"W	22.03	End of Curve
8916.74	88.496	183.746	8775.00	253.29	-252.75	-16.55	675530.45	622146.77	32°42'34.430"N	103°53'49.361"W	2.00	EOD
9000.00†	88.496	183.746	8777.19	336.51	-335.79	-21.99	675525.02	622063.73	32°42'33.608"N	103°53'49.428"W	0.00	
9100.00†	88.496	183.746	8779.81	436.48	-435.55	-28.52	675518.48	621963.98	32°42'32.621"N	103°53'49.509"W	0.00	
9200.00†	88.496	183.746	8782.44	536.44	-535.30	-35.05	675511.95	621864.24	32°42'31.635"N	103°53'49.591"W	0.00	
9300.00†	88.496	183.746	8785.06	636.41	-635.05	-41.58	675505.42	621764.50	32°42'30.648"N	103°53'49.672"W	0.00	
9400.00†	88.496	183.746	8787.69	736.38	-734.80	-48.11	675498.89	621664.75	32°42'29.661"N	103°53'49.753"W	0.00	
9500.00†	88.496	183.746	8790.31	836.34	-834.55	-54.64	675492.36	621565.01	32°42'28.674"N	103°53'49.834"W	0.00	
9600.00†	88.496	183.746	8792.94	936.31	-934.31	-61.18	675485.83	621465.26	32°42'27.688"N	103°53'49.916"W	0.00	
9700.00†	88.496	183.746	8795.56	1036.27	-1034.06	-67.71	675479.30	621365.52	32°42'26.701"N	103°53'49.997"W	0.00	
9800.00†	88.496	183.746	8798.19	1136.24	-1133.81	-74.24	675472.77	621265.77	32°42'25.714"N	103°53'50.078"W	0.00	
9900.00†	88.496	183.746	8800.81	1236.20	-1233.56	-80.77	675466.24	621166.03	32°42'24.728"N	103°53'50.159"W	0.00	
10000.00†	88.496	183.746	8803.44	1336.17	-1333.31	-87.30	675459.70	621066.28	32°42'23.741"N	103°53'50.241"W	0.00	
10100.00†	88.496	183.746	8806.07	1436.13	-1433.07	-93.83	675453.17	620966.54	32°42'22.754"N	103°53'50.322"W	0.00	
10200.00†	88.496	183.746	8808.69	1536.10	-1532.82	-100.36	675446.64	620866.79	32°42'21.768"N	103°53'50.403"W	0.00	
10300.00†	88.496	183.746	8811.32	1636.07	-1632.57	-106.90	675440.11	620767.05	32°42'20.781"N	103°53'50.484"W	0.00	
10400.00†	88.496	183.746	8813.94	1736.03	-1732.32	-113.43	675433.58	620667.30	32°42'19.794"N	103°53'50.566"W	0.00	
10500.00†	88.496	183.746	8816.57	1836.00	-1832.07	-119.96	675427.05	620567.56	32°42'18.807"N	103°53'50.647"W	0.00	
10600.00†	88.496	183.746	8819.19	1935.96	-1931.83	-126.49	675420.52	620467.81	32°42'17.821"N	103°53'50.728"W	0.00	
10700.00†	88.496	183.746	8821.82	2035.93	-2031.58	-133.02	675413.99	620368.07	32°42'16.834"N	103°53'50.809"W	0.00	
10800.00†	88.496	183.746	8824.44	2135.89	-2131.33	-139.55	675407.46	620268.32	32°42'15.847"N	103°53'50.890"W	0.00	
10900.00†	88.496	183.746	8827.07	2235.86	-2231.08	-146.09	675400.92	620168.58	32°42'14.861"N	103°53'50.972"W	0.00	
11000.00†	88.496	183.746	8829.69	2335.82	-2330.83	-152.62	675394.39	620068.84	32°42'13.874"N	103°53'51.053"W	0.00	
11100.00†	88.496	183.746	8832.32	2435.79	-2430.59	-159.15	675387.86	619969.09	32°42'12.887"N	103°53'51.134"W	0.00	
11200.00†	88.496	183.746	8834.94	2535.76	-2530.34	-165.68	675381.33	619869.35	32°42'11.900"N	103°53'51.215"W	0.00	
11300.00†	88.496	183.746	8837.57	2635.72	-2630.09	-172.21	675374.80	619769.60	32°42'10.914"N	103°53'51.297"W	0.00	
11400.00†	88.496	183.746	8840.20	2735.69	-2729.84	-178.74	675368.27	619669.86	32°42'09.927"N	103°53'51.378"W	0.00	
11500.00†	88.496	183.746	8842.82	2835.65	-2829.59	-185.28	675361.74	619570.11	32°42'08.940"N	103°53'51.459"W	0.00	
11600.00†	88.496	183.746	8845.45	2935.62	-2929.34	-191.81	675355.21	619470.37	32°42'07.954"N	103°53'51.540"W	0.00	
11700.00†	88.496	183.746	8848.07	3035.58	-3029.10	-198.34	675348.68	619370.62	32°42'06.967"N	103°53'51.622"W	0.00	
11800.00†	88.496	183.746	8850.70	3135.55	-3128.85	-204.87	675342.14	619270.88	32°42'05.980"N	103°53'51.703"W	0.00	
11900.00†	88.496	183.746	8853.32	3235.51	-3228.60	-211.40	675335.61	619171.13	32°42'04.993"N	103°53'51.784"W	0.00	
12000.00†	88.496	183.746	8855.95	3335.48	-3328.35	-217.93	675329.08	619071.39	32°42'04.007"N	103°53'51.865"W	0.00	
12100.00†	88.496	183.746	8858.57	3435.45	-3428.10	-224.46	675322.55	618971.64	32°42'03.020"N	103°53'51.946"W	0.00	
12200.00†	88.496	183.746	8861.20	3535.41	-3527.86	-231.00	675316.02	618871.90	32°42'02.033"N	103°53'52.028"W	0.00	
12300.00†	88.496	183.746	8863.82	3635.38	-3627.61	-237.53	675309.49	618772.15	32°42'01.047"N	103°53'52.109"W	0.00	
12400.00†	88.496	183.746	8866.45	3735.34	-3727.36	-244.06	675302.96	618672.41	32°42'00.060"N	103°53'52.190"W	0.00	
12500.00†	88.496	183.746	8869.07	3835.31	-3827.11	-250.59	675296.43	618572.66	32°41'59.073"N	103°53'52.271"W	0.00	
12600.00†	88.496	183.746	8871.70	3935.27	-3926.86	-257.12	675289.90	618472.92	32°41'58.086"N	103°53'52.353"W	0.00	
12700.00†	88.496	183.746	8874.32	4035.24	-4026.62	-263.65	675283.36	618373.18	32°41'57.100"N	103°53'52.434"W	0.00	
12800.00†	88.496	183.746	8876.95	4135.20	-4126.37	-270.19	675276.83	618273.43	32°41'56.113"N	103°53'52.515"W	0.00	



Planned Wellpath Report

Prelim_1
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(West Shugart) Sec 32, T18S, R31E	Wellbore	No. 1H PWB
Facility	West Shugart 32 State Com No.1		

WELLPATH DATA (140 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
12900.00†	88.496	183.746	8879.58	4235.17	-4226.12	-276.72	675270.30	618173.69	32°41'55.126"N	103°53'52.596"W	0.00	
13000.00†	88.496	183.746	8882.20	4335.14	-4325.87	-283.25	675263.77	618073.94	32°41'54.140"N	103°53'52.677"W	0.00	
13100.00†	88.496	183.746	8884.83	4435.10	-4425.62	-289.78	675257.24	617974.20	32°41'53.153"N	103°53'52.759"W	0.00	
13200.00†	88.496	183.746	8887.45	4535.07	-4525.38	-296.31	675250.71	617874.45	32°41'52.166"N	103°53'52.840"W	0.00	
13297.06	88.496	183.746	8890.00	4632.09	-4622.19	-302.65	675244.37	617777.64	32°41'51.208"N	103°53'52.919"W	0.00	No. 1H PBHL

HOLE & CASING SECTIONS Ref Wellbore: No. 1H 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	0.00	4200.00	4200.00	0.00	4200.00	0.00	0.00	0.00	0.00
8.75in Open Hole	4200.00	13297.06	9097.06	4200.00	NA	0.00	0.00	NA	NA

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No.1H PBHL	13297.06	8890.00	-4622.19	-302.65	675244.37	617777.64	32°41'51.208"N	103°53'52.919"W	point

SURVEY PROGRAM Ref Wellbore: No. 1H PWB Ref Wellpath: Prelim_1				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	13297.06	NaviTrak (Standard)		No. 1H PWB