

Results of Directional Survey

API number:	30-025-40187		
OGRID:		Operator:	CIMAREX ENERGY CO. OF COLORADO
		Property:	NORTH MADURO FEDERAL UNIT # 5H

surface	ULSTR:	P	20	T 19S	R 33E
				660 FSL	330 FEL

BH Loc	ULSTR:	M	20	T 19S	R 33E
14573	MD	9971.8	TVD	627 FSL	4940 FEL
					340 FWL

Top Perf/OH	ULSTR:	P	20	T 19S	R 33E
9850	MD	9845.5	TVD	635 FSL	313 FEL

Bot Perf/OH	ULSTR:	M	20	T 19S	R 33E
14424	MD	9976.5	TVD	627 FSL	4791 FEL
					489 FWL

	MD	N/S	E/W	VD
	9823	-23.96	26.05	9819.93
TOP PERFS/OH	9850	-24.60	17.27	9845.45
	9855	-24.72	15.64	9850.18
	14418	-33.22	-4455.00	9976.66
BOT PERFS/OH	14424	-33.20	-4461.00	9976.48
	14513	-32.97	-4549.95	9973.76

NEXT TO LAST	14518	-32.98	-4554.95	9973.60
LAST READING	14573	-33.17	-4609.92	9971.77
TD	14573	-33.17	-4609.92	9971.77

Surface Location	660	FS	330	FE
Projected BHL	627	FS	4940	FE
Location of				
Top Perfs/OH	635	FS	313	FE
Bottom Perfs/OH	627	FS	4791	FE

SUMMARY of Subsurface Locations

Surface Location	P-20-19S-33E	660	FS	330	FE	Vert. Depth
Top Perfs/OH	P-20-19S-33E	635	FS	313	FE	9845.45
Bottom Perfs/OH	M-20-19S-33E	627	FS	4791	FE	9976.48
Projected TD	M-20-19S-33E	627	FS	4940	FE	9971.77

FEB 21 2012



INTEQ

HOBBS OCD
FEB 08 2012
RECEIVED

SUR: P-20-19s-33e, 660/S & 330/E
BHL: M-20-19s-33e, 627/S & 4940/E
API # 30-025-40187

End of Well Report

Cimarex Energy Co.

Lea County, New Mexico

Maduro North Fed No. 5H

Cactus 115

Well Specifications

Well Name: Maduro North Fed No. 5H
Start Date: 10/20/2011
Client: Cimarex Energy Co.
Rig Name: Cactus 115
County: Lea County, New Mexico
Field: (N Maduro), T19S, R33E

Well Location:

NAD 83 / TM New Mexico SP, Eastern Zone (3001)

Grid Coordinates

Easting: 743128.20'
Northing: 597303.00'

Geographical Coordinates

Latitude: 32°38'25.162"N
Longitude: 103°40'40.007"W

RT: 3,630 ft above M.S.L.

Date TD Reached: 11/4/2011

Final Depth MD: 14,573 ft

Final Depth TVD: 9,971.77 ft



Cimarex Energy Co.

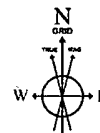
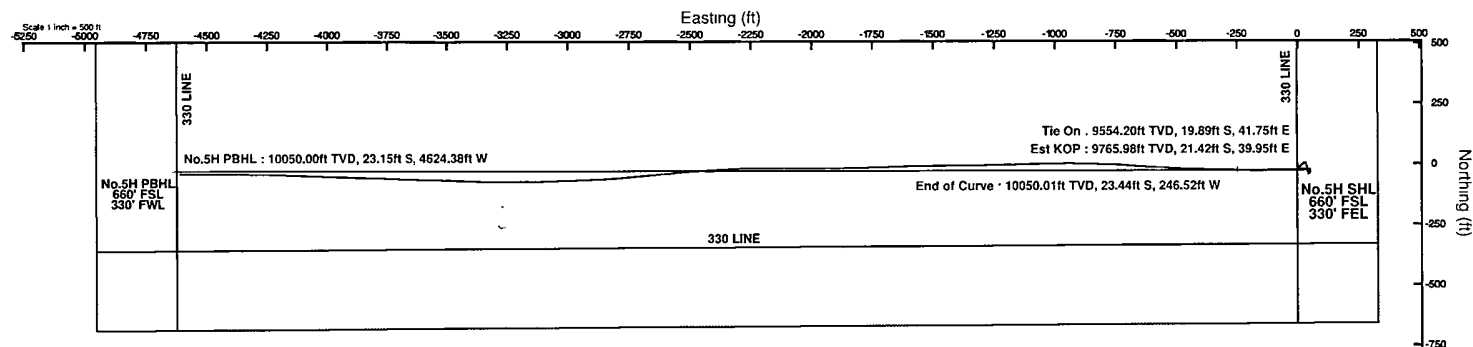
Location: Lea County, NM
Field: (N Maduro), T19S, R33E
Facility: North Maduro Unit Com No.5H

Slot: No.5H SHL
Well: No.5H
Wellbore: No.5H PWB

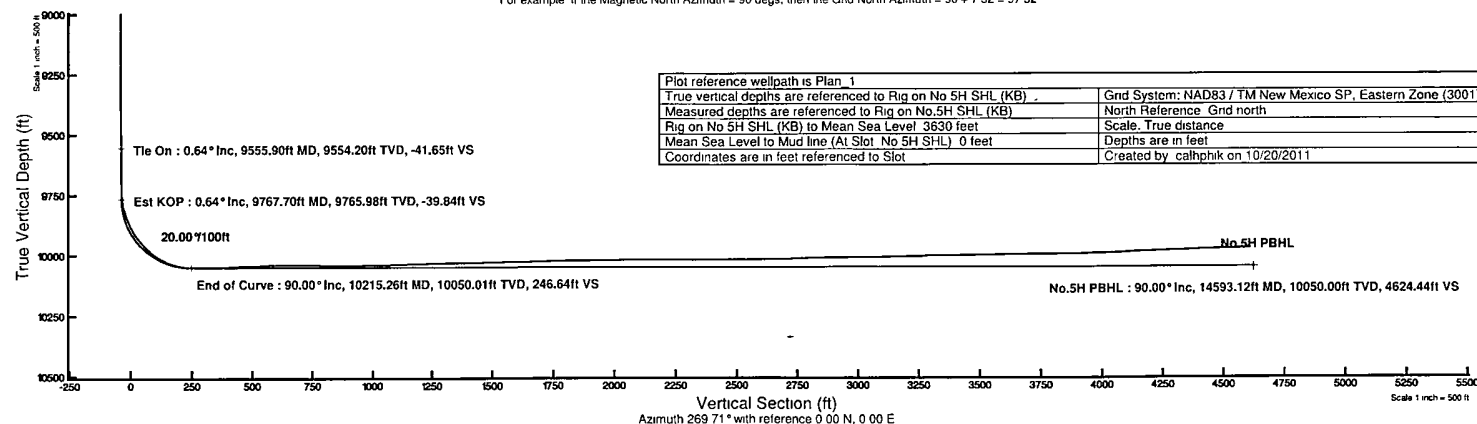


Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (%/100ft)	VS (ft)
Tie On	9555.90	0.640	229.790	9554.20	-19.89	41.75	0.00	-41.65
Est KOP	9767.70	0.640	229.790	9765.98	-21.42	39.95	0.00	-39.84
End of Curve	10215.26	90.000	270.004	10050.01	-23.44	-246.52	20.00	246.64
No.5H PBHL	14593.12	90.000	270.004	10050.00	-23.15	-4624.38	0.00	4624.44



BGGM (1945.0 to 2012.0) Dip 60.56° Field 48877.6 nT
Magnetic North is 7.67 degrees East of True North (at 10/18/2011)
Grid North is 0.35 degrees East of True North
To correct azimuth from True to Grid subtract 0.35 degrees
To correct azimuth from Magnetic to Grid add 7.32 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.32 = 97.32



Plot reference wellpath is Plan 1	Grid System: NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet
True vertical depths are referenced to Rig on No.5H SHL (KB)	North Reference: Grid north
Measured depths are referenced to Rig on No.5H SHL (KB)	Scale: True distance
Rig on No.5H SHL (KB) to Mean Sea Level: 3630 feet	Depths are in feet
Mean Sea Level to Mud line (At Slot: No.5H SHL) 0 feet	Created by: calphik on 10/20/2011
Coordinates are in feet referenced to Slot	



Actual Wellpath Report

No. 5H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.5H SHL
Area	Lea County, NM	Well	No.5H
Field	(N Maduro) , T19S, R33E	Wellbore	No. 5H AWB
Facility	North Maduro Unit Com No.5H		

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	0.999956	Report Generated	11/4/2011 at 8:20:01 AM
Convergence at slot	0.35° East	Database/Source file	WA_Midland/No. 5H_AWB.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	743128.20	597303.00	32°38'25.162"N	103°40'40.007"W
Facility Reference Pt			743128.20	597303.00	32°38'25.162"N	103°40'40.007"W
Field Reference Pt			738568.60	601242.10	32°39'04.414"N	103°41'33.052"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No.5H SHL (KB) to GL	3630.00ft
Horizontal Reference Pt	Slot	Rig on No.5H SHL (KB) to Mean Sea Level	3630.00ft
Vertical Reference Pt	Rig on No.5H SHL (KB)	Rig on No.5H SHL (KB) to Mud Line at Slot (No.5H SHL)	3630.00ft
MD Reference Pt	Rig on No.5H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	269.71°



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Operator	Cimarex Energy Co.	Slot	No.5H SHL
Area	Lea County, NM	Well	No.5H
Field	(N Maduro) , T19S, R33E	Wellbore	No. 5H AWB
Facility	North Maduro Unit Com No.5H		

WELLPATH DATA (248 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	165.560	0.00	0.00	0.00	0.00	743128.20	597303.00	32°38'25.162"N	103°40'40.007"W	0.00	
22.00	0.000	165.560	22.00	0.00	0.00	0.00	743128.20	597303.00	32°38'25.162"N	103°40'40.007"W	0.00	
100.00	0.180	165.560	100.00	-0.03	-0.12	0.03	743128.23	597302.88	32°38'25.161"N	103°40'40.007"W	0.23	
200.00	0.280	177.910	200.00	-0.08	-0.51	0.08	743128.28	597302.49	32°38'25.157"N	103°40'40.006"W	0.11	
300.00	0.330	200.600	300.00	0.02	-1.03	-0.01	743128.19	597301.97	32°38'25.152"N	103°40'40.007"W	0.13	
400.00	0.470	216.000	400.00	0.36	-1.63	-0.36	743127.84	597301.37	32°38'25.146"N	103°40'40.011"W	0.18	
500.00	0.530	220.130	499.99	0.91	-2.32	-0.90	743127.30	597300.68	32°38'25.139"N	103°40'40.018"W	0.07	
600.00	0.680	195.120	599.99	1.36	-3.24	-1.35	743126.85	597299.76	32°38'25.130"N	103°40'40.023"W	0.30	
700.00	0.640	185.820	699.98	1.58	-4.37	-1.56	743126.64	597298.63	32°38'25.119"N	103°40'40.026"W	0.11	
786.50	0.440	132.860	786.48	1.39	-5.08	-1.37	743126.83	597297.92	32°38'25.112"N	103°40'40.023"W	0.59	
881.80	0.550	131.490	881.77	0.78	-5.63	-0.75	743127.45	597297.37	32°38'25.107"N	103°40'40.016"W	0.12	
977.10	0.680	144.690	977.07	0.12	-6.39	-0.08	743128.12	597296.61	32°38'25.099"N	103°40'40.009"W	0.20	
1072.50	0.730	151.560	1072.46	-0.49	-7.39	0.53	743128.73	597295.61	32°38'25.089"N	103°40'40.001"W	0.10	
1167.80	0.650	156.180	1167.75	-1.00	-8.42	1.04	743129.24	597294.58	32°38'25.079"N	103°40'39.996"W	0.10	
1263.10	0.610	169.090	1263.05	-1.31	-9.41	1.35	743129.55	597293.59	32°38'25.069"N	103°40'39.992"W	0.15	
1358.40	0.730	135.360	1358.34	-1.82	-10.34	1.88	743130.08	597292.66	32°38'25.060"N	103°40'39.986"W	0.43	
1453.70	0.720	118.050	1453.63	-2.78	-11.05	2.83	743131.03	597291.95	32°38'25.053"N	103°40'39.975"W	0.23	
1549.10	0.550	117.390	1549.03	-3.71	-11.55	3.77	743131.97	597291.45	32°38'25.048"N	103°40'39.964"W	0.18	
1644.40	0.370	102.020	1644.32	-4.41	-11.82	4.47	743132.67	597291.18	32°38'25.045"N	103°40'39.956"W	0.23	
1739.70	0.250	86.340	1739.62	-4.92	-11.87	4.98	743133.18	597291.13	32°38'25.044"N	103°40'39.950"W	0.15	
1835.00	0.230	86.000	1834.92	-5.32	-11.85	5.38	743133.58	597291.15	32°38'25.045"N	103°40'39.945"W	0.02	
1930.30	0.120	84.790	1930.22	-5.61	-11.82	5.67	743133.87	597291.18	32°38'25.045"N	103°40'39.942"W	0.12	
2025.70	0.130	59.960	2025.62	-5.80	-11.76	5.86	743134.06	597291.24	32°38'25.045"N	103°40'39.939"W	0.06	
2121.00	0.320	62.770	2120.92	-6.14	-11.58	6.19	743134.39	597291.42	32°38'25.047"N	103°40'39.935"W	0.20	
2216.30	0.970	61.400	2216.21	-7.08	-11.08	7.14	743135.34	597291.92	32°38'25.052"N	103°40'39.924"W	0.68	
2311.60	1.680	57.250	2311.49	-8.97	-9.93	9.02	743137.22	597293.07	32°38'25.063"N	103°40'39.902"W	0.75	
2406.90	2.190	55.140	2406.73	-11.65	-8.14	11.69	743139.89	597294.86	32°38'25.081"N	103°40'39.871"W	0.54	
2502.30	2.750	51.250	2502.04	-14.94	-5.66	14.97	743143.17	597297.34	32°38'25.105"N	103°40'39.832"W	0.61	
2597.60	3.070	47.850	2597.22	-18.63	-2.52	18.65	743146.85	597300.48	32°38'25.136"N	103°40'39.789"W	0.38	
2692.90	3.130	48.150	2692.38	-22.48	0.93	22.48	743150.68	597303.93	32°38'25.170"N	103°40'39.744"W	0.07	
2788.20	3.070	50.500	2787.54	-26.41	4.29	26.38	743154.58	597307.29	32°38'25.203"N	103°40'39.698"W	0.15	
2883.50	2.190	58.480	2882.74	-29.94	6.86	29.91	743158.10	597309.86	32°38'25.228"N	103°40'39.657"W	1.00	
2978.90	1.090	103.580	2978.10	-32.38	7.60	32.34	743160.54	597310.60	32°38'25.235"N	103°40'39.628"W	1.69	
3074.20	1.560	162.970	3073.38	-33.63	6.15	33.60	743161.80	597309.15	32°38'25.221"N	103°40'39.614"W	1.44	
3169.50	2.190	170.390	3168.63	-34.30	3.11	34.29	743162.48	597306.11	32°38'25.191"N	103°40'39.606"W	0.71	
3264.80	2.680	169.260	3263.85	-35.00	-0.87	35.01	743163.20	597302.13	32°38'25.151"N	103°40'39.598"W	0.52	
3360.10	2.650	166.980	3359.04	-35.89	-5.21	35.92	743164.12	597297.79	32°38'25.108"N	103°40'39.587"W	0.12	
3455.50	2.230	156.880	3454.36	-37.10	-9.06	37.14	743165.34	597293.94	32°38'25.070"N	103°40'39.573"W	0.63	
3550.80	1.910	155.280	3549.59	-38.47	-12.21	38.53	743166.73	597290.79	32°38'25.039"N	103°40'39.557"W	0.34	
3646.10	1.750	169.040	3644.85	-39.40	-15.08	39.48	743167.67	597287.92	32°38'25.011"N	103°40'39.547"W	0.49	
3741.40	1.500	177.770	3740.11	-39.71	-17.76	39.80	743168.00	597285.25	32°38'24.984"N	103°40'39.543"W	0.37	
3836.70	1.360	179.030	3835.38	-39.77	-20.13	39.87	743168.07	597282.87	32°38'24.961"N	103°40'39.542"W	0.15	
3932.10	1.130	179.730	3930.75	-39.78	-22.21	39.89	743168.09	597280.80	32°38'24.940"N	103°40'39.542"W	0.24	
4027.40	0.930	173.690	4026.04	-39.86	-23.91	39.98	743168.18	597279.09	32°38'24.923"N	103°40'39.541"W	0.24	
4122.70	0.850	166.000	4121.33	-40.11	-25.37	40.24	743168.44	597277.63	32°38'24.909"N	103°40'39.538"W	0.15	



Actual Wellpath Report

No. 5H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.5H SHL
Area	Lea County, NM	Well	No.5H
Field	(N Maduro) , T19S, R33E	Wellbore	No. 5H AWB
Facility	North Maduro Unit Com No.5H		

WELLPATH DATA (248 stations)

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
4218.00	0.960	151.870	4216.62	-40.65	-26.76	40.79	743168.98	597276.24	32°38'24.895"N	103°40'39.532"W	0.26	
4313.30	0.990	154.450	4311.90	-41.37	-28.21	41.52	743169.71	597274.80	32°38'24.881"N	103°40'39.524"W	0.06	
4408.70	0.840	167.710	4407.29	-41.87	-29.63	42.02	743170.22	597273.37	32°38'24.866"N	103°40'39.518"W	0.27	
4504.00	0.820	167.960	4502.58	-42.16	-30.98	42.31	743170.51	597272.02	32°38'24.853"N	103°40'39.515"W	0.02	
4599.30	0.990	163.690	4597.87	-42.52	-32.44	42.69	743170.88	597270.56	32°38'24.839"N	103°40'39.510"W	0.19	
4694.60	0.960	181.410	4693.15	-42.73	-34.03	42.90	743171.09	597268.97	32°38'24.823"N	103°40'39.508"W	0.32	
4789.90	0.970	179.760	4788.44	-42.70	-35.63	42.88	743171.08	597267.37	32°38'24.807"N	103°40'39.508"W	0.03	
4885.30	0.800	176.720	4883.83	-42.74	-37.10	42.92	743171.12	597265.90	32°38'24.792"N	103°40'39.508"W	0.18	
4980.60	0.620	164.570	4979.12	-42.91	-38.27	43.10	743171.30	597264.74	32°38'24.781"N	103°40'39.506"W	0.25	
5075.90	0.390	145.040	5074.42	-43.22	-39.03	43.42	743171.62	597263.97	32°38'24.773"N	103°40'39.502"W	0.30	
5171.20	0.540	113.300	5169.72	-43.82	-39.47	44.02	743172.22	597263.53	32°38'24.769"N	103°40'39.495"W	0.31	
5266.50	0.530	101.410	5265.01	-44.66	-39.74	44.86	743173.06	597263.27	32°38'24.766"N	103°40'39.485"W	0.12	
5361.90	0.350	108.410	5360.41	-45.37	-39.92	45.57	743173.77	597263.09	32°38'24.764"N	103°40'39.477"W	0.20	
5457.20	0.280	91.750	5455.71	-45.88	-40.01	46.08	743174.28	597262.99	32°38'24.763"N	103°40'39.471"W	0.12	
5552.50	0.300	82.720	5551.01	-46.36	-39.99	46.56	743174.76	597263.01	32°38'24.764"N	103°40'39.465"W	0.05	
5647.80	0.330	60.760	5646.30	-46.85	-39.82	47.05	743175.25	597263.18	32°38'24.765"N	103°40'39.460"W	0.13	
5743.10	0.250	32.960	5741.60	-47.20	-39.52	47.40	743175.60	597263.49	32°38'24.768"N	103°40'39.456"W	0.17	
5838.50	0.340	354.280	5837.00	-47.29	-39.06	47.49	743175.68	597263.94	32°38'24.773"N	103°40'39.455"W	0.22	
5933.80	0.480	7.750	5932.30	-47.32	-38.38	47.51	743175.71	597264.62	32°38'24.780"N	103°40'39.454"W	0.18	
6029.10	0.360	16.180	6027.60	-47.46	-37.70	47.65	743175.85	597265.30	32°38'24.786"N	103°40'39.453"W	0.14	
6124.40	0.280	14.690	6122.90	-47.60	-37.19	47.79	743175.99	597265.81	32°38'24.791"N	103°40'39.451"W	0.08	
6219.70	0.250	53.170	6218.20	-47.83	-36.84	48.02	743176.21	597266.16	32°38'24.795"N	103°40'39.448"W	0.19	
6315.10	0.240	40.680	6313.59	-48.13	-36.56	48.31	743176.51	597266.44	32°38'24.797"N	103°40'39.445"W	0.06	
6410.40	0.220	38.480	6408.89	-48.38	-36.27	48.56	743176.76	597266.74	32°38'24.800"N	103°40'39.442"W	0.02	
6601.00	0.380	39.680	6599.49	-49.01	-35.49	49.19	743177.39	597267.51	32°38'24.808"N	103°40'39.434"W	0.08	
6696.30	0.450	30.160	6694.79	-49.40	-34.93	49.58	743177.78	597268.07	32°38'24.814"N	103°40'39.430"W	0.10	
6791.70	0.450	33.940	6790.19	-49.80	-34.29	49.98	743178.17	597268.71	32°38'24.820"N	103°40'39.425"W	0.03	
6887.00	0.450	35.530	6885.48	-50.23	-33.68	50.40	743178.60	597269.32	32°38'24.826"N	103°40'39.420"W	0.01	
6982.30	0.470	39.510	6980.78	-50.70	-33.07	50.87	743179.07	597269.93	32°38'24.832"N	103°40'39.415"W	0.04	
7077.60	0.560	34.940	7076.08	-51.22	-32.39	51.38	743179.58	597270.61	32°38'24.839"N	103°40'39.409"W	0.10	
7172.90	0.650	38.470	7171.37	-51.83	-31.58	51.99	743180.18	597271.42	32°38'24.847"N	103°40'39.401"W	0.10	
7268.30	0.480	41.340	7266.77	-52.43	-30.86	52.59	743180.79	597272.14	32°38'24.854"N	103°40'39.394"W	0.18	
7363.60	0.530	46.710	7362.06	-53.02	-30.26	53.17	743181.37	597272.74	32°38'24.860"N	103°40'39.387"W	0.07	
7458.90	0.360	13.620	7457.36	-53.41	-29.66	53.56	743181.76	597273.34	32°38'24.865"N	103°40'39.383"W	0.32	
7554.20	0.540	320.390	7552.66	-53.20	-29.03	53.35	743181.55	597273.97	32°38'24.872"N	103°40'39.385"W	0.46	
7649.50	0.760	323.750	7647.95	-52.55	-28.17	52.69	743180.89	597274.83	32°38'24.880"N	103°40'39.393"W	0.23	
7744.90	0.830	324.770	7743.34	-51.78	-27.10	51.91	743180.11	597275.90	32°38'24.891"N	103°40'39.402"W	0.07	
7840.20	0.780	309.600	7838.63	-50.89	-26.12	51.02	743179.21	597276.88	32°38'24.901"N	103°40'39.412"W	0.23	
7935.50	0.780	295.130	7933.92	-49.80	-25.43	49.93	743178.13	597277.57	32°38'24.908"N	103°40'39.425"W	0.21	
8030.80	0.490	246.000	8029.22	-48.84	-25.32	48.97	743177.17	597277.68	32°38'24.909"N	103°40'39.436"W	0.62	
8126.10	0.680	243.360	8124.51	-47.96	-25.74	48.09	743176.29	597277.26	32°38'24.905"N	103°40'39.447"W	0.20	
8221.50	1.030	240.640	8219.90	-46.71	-26.41	46.84	743175.04	597276.59	32°38'24.898"N	103°40'39.461"W	0.37	
8316.80	0.900	236.770	8315.19	-45.33	-27.24	45.47	743173.66	597275.76	32°38'24.890"N	103°40'39.477"W	0.15	
8412.10	0.840	240.050	8410.48	-44.09	-28.00	44.24	743172.43	597275.00	32°38'24.882"N	103°40'39.492"W	0.08	
8507.40	0.760	281.150	8505.77	-42.87	-28.23	43.01	743171.21	597274.77	32°38'24.880"N	103°40'39.506"W	0.59	



Actual Wellpath Report

No. 5H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No.5H SHL
Area	Lea County, NM	Well	No.5H
Field	(N Maduro) , T19S, R33E	Wellbore	No. 5H AWB
Facility	North Maduro Unit Com No.5H		

WELLPATH DATA (248 stations)												
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
8602.70	0.770	339.300	8601.06	-42.03	-27.51	42.16	743170.36	597275.49	32°38'24.887"N	103°40'39.516"W	0.78	
8698.10	1.170	34.600	8696.45	-42.36	-26.11	42.49	743170.69	597276.89	32°38'24.901"N	103°40'39.512"W	1.01	
8793.40	0.820	34.520	8791.74	-43.30	-24.74	43.43	743171.63	597278.26	32°38'24.915"N	103°40'39.501"W	0.37	
8888.70	0.580	14.740	8887.03	-43.82	-23.72	43.94	743172.14	597279.29	32°38'24.925"N	103°40'39.495"W	0.35	
8984.00	0.550	9.390	8982.32	-44.02	-22.80	44.14	743172.33	597280.20	32°38'24.934"N	103°40'39.493"W	0.06	
9079.30	0.560	11.710	9077.62	-44.19	-21.89	44.30	743172.50	597281.11	32°38'24.943"N	103°40'39.491"W	0.03	
9174.70	0.560	355.010	9173.01	-44.25	-20.97	44.36	743172.56	597282.03	32°38'24.952"N	103°40'39.490"W	0.17	
9270.00	0.490	319.580	9268.31	-43.95	-20.20	44.05	743172.25	597282.81	32°38'24.960"N	103°40'39.493"W	0.34	
9365.30	0.480	282.240	9363.61	-43.30	-19.80	43.40	743171.60	597283.20	32°38'24.964"N	103°40'39.501"W	0.33	
9460.90	0.520	281.340	9459.20	-42.48	-19.63	42.58	743170.78	597283.37	32°38'24.965"N	103°40'39.511"W	0.04	
9555.90	0.640	229.790	9554.20	-41.65	-19.89	41.75	743169.95	597283.11	32°38'24.963"N	103°40'39.520"W	0.54	
9600.00	0.900	227.400	9598.30	-41.21	-20.28	41.31	743169.51	597282.72	32°38'24.959"N	103°40'39.525"W	0.59	
9664.00	0.900	231.500	9662.29	-40.44	-20.93	40.55	743168.75	597282.07	32°38'24.953"N	103°40'39.534"W	0.10	
9696.00	0.800	241.600	9694.28	-40.05	-21.20	40.16	743168.35	597281.80	32°38'24.950"N	103°40'39.539"W	0.56	
9728.00	1.500	220.400	9726.28	-39.58	-21.62	39.69	743167.89	597281.38	32°38'24.946"N	103°40'39.545"W	2.52	
9760.00	5.300	256.100	9758.22	-37.87	-22.30	37.98	743166.18	597280.70	32°38'24.939"N	103°40'39.565"W	13.05	
9792.00	10.800	262.700	9789.89	-33.45	-23.03	33.57	743161.77	597279.97	32°38'24.932"N	103°40'39.616"W	17.40	
9823.00	17.500	263.200	9819.93	-25.93	-23.96	26.05	743154.25	597279.05	32°38'24.924"N	103°40'39.704"W	21.62	
9855.00	20.600	268.000	9850.18	-15.52	-24.72	15.64	743143.84	597278.28	32°38'24.917"N	103°40'39.826"W	10.85	
9887.00	25.200	270.400	9879.65	-3.07	-24.87	3.20	743131.40	597278.13	32°38'24.916"N	103°40'39.971"W	14.67	
9919.00	31.900	270.400	9907.74	12.21	-24.76	-12.09	743116.11	597278.24	32°38'24.918"N	103°40'40.150"W	20.94	
9951.00	37.500	269.300	9934.04	30.42	-24.82	-30.29	743097.91	597278.18	32°38'24.918"N	103°40'40.363"W	17.61	
9983.00	42.800	269.200	9958.49	51.04	-25.10	-50.92	743077.28	597277.91	32°38'24.917"N	103°40'40.604"W	16.56	
10014.00	48.700	268.700	9980.11	73.24	-25.51	-73.11	743055.09	597277.49	32°38'24.914"N	103°40'40.864"W	19.07	
10046.00	54.900	269.700	9999.89	98.37	-25.85	-98.24	743029.96	597277.15	32°38'24.912"N	103°40'41.158"W	19.53	
10078.00	60.900	269.900	10016.89	125.47	-25.94	-125.34	743002.87	597277.06	32°38'24.913"N	103°40'41.475"W	18.76	
10109.00	67.400	270.400	10030.40	153.35	-25.87	-153.22	742974.99	597277.14	32°38'24.916"N	103°40'41.801"W	21.02	
10141.00	74.100	271.500	10040.94	183.53	-25.36	-183.41	742944.80	597277.64	32°38'24.922"N	103°40'42.154"W	21.19	
10156.00	77.900	272.000	10044.57	198.08	-24.91	-197.95	742930.25	597278.09	32°38'24.928"N	103°40'42.324"W	25.54	
10173.00	82.000	271.900	10047.54	214.80	-24.34	-214.68	742913.53	597278.66	32°38'24.934"N	103°40'42.519"W	24.12	
10205.00	88.500	271.800	10050.19	246.65	-23.32	-246.54	742881.67	597279.69	32°38'24.947"N	103°40'42.892"W	20.31	
10236.00	89.900	271.800	10050.62	277.63	-22.34	-277.52	742850.70	597280.66	32°38'24.958"N	103°40'43.254"W	4.52	
10268.00	90.300	271.400	10050.56	309.61	-21.45	-309.51	742818.71	597281.55	32°38'24.969"N	103°40'43.628"W	1.77	
10300.00	91.400	271.000	10050.09	341.59	-20.78	-341.49	742786.72	597282.22	32°38'24.977"N	103°40'44.002"W	3.66	
10331.00	92.100	270.900	10049.14	372.57	-20.26	-372.48	742755.74	597282.74	32°38'24.984"N	103°40'44.364"W	2.28	
10395.00	92.700	271.600	10046.46	436.49	-18.87	-436.40	742691.82	597284.13	32°38'25.002"N	103°40'45.112"W	1.44	
10427.00	93.200	271.600	10044.82	468.43	-17.98	-468.35	742659.87	597285.02	32°38'25.013"N	103°40'45.485"W	1.56	
10459.00	92.800	272.400	10043.14	500.36	-16.86	-500.28	742627.94	597286.14	32°38'25.026"N	103°40'45.859"W	2.79	
10491.00	91.200	273.500	10042.02	532.29	-15.22	-532.22	742596.00	597287.78	32°38'25.044"N	103°40'46.232"W	6.07	
10523.00	91.000	274.000	10041.41	564.21	-13.12	-564.15	742564.08	597289.88	32°38'25.067"N	103°40'46.605"W	1.68	
10555.00	91.400	273.800	10040.74	596.11	-10.95	-596.07	742532.16	597292.05	32°38'25.090"N	103°40'46.978"W	1.40	
10587.00	90.500	273.600	10040.21	628.03	-8.88	-627.99	742500.24	597294.12	32°38'25.113"N	103°40'47.352"W	2.88	
10619.00	89.900	273.700	10040.10	659.95	-6.85	-659.93	742468.30	597296.15	32°38'25.135"N	103°40'47.725"W	1.90	
10651.00	89.400	274.000	10040.29	691.87	-4.70	-691.86	742436.38	597298.30	32°38'25.158"N	103°40'48.098"W	1.82	
10683.00	89.700	273.800	10040.54	723.78	-2.52	-723.78	742404.45	597300.48	32°38'25.181"N	103°40'48.471"W	1.13	



Actual Wellpath Report

No. 5H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.5H SHL
Area	Lea County, NM	Well	No.5H
Field	(N Maduro) , T19S, R33E	Wellbore	No. 5H AWB
Facility	North Maduro Unit Com No.5H		

WELLPATH DATA (248 stations)

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
10714.00	89.200	273.100	10040.84	754.72	-0.66	-754.72	742373.51	597302.34	32°38'25.202"N	103°40'48.833"W	2.77	
10746.00	89.400	272.700	10041.23	786.66	0.96	-786.68	742341.56	597303.96	32°38'25.220"N	103°40'49.206"W	1.40	
10778.00	89.800	272.200	10041.46	818.63	2.33	-818.65	742309.59	597305.33	32°38'25.235"N	103°40'49.580"W	2.00	
10810.00	89.800	271.800	10041.57	850.60	3.45	-850.63	742277.61	597306.45	32°38'25.248"N	103°40'49.954"W	1.25	
10841.00	90.000	271.500	10041.62	881.58	4.34	-881.62	742246.62	597307.34	32°38'25.259"N	103°40'50.316"W	1.16	
10873.00	90.400	270.900	10041.51	913.57	5.01	-913.61	742214.63	597308.01	32°38'25.267"N	103°40'50.691"W	2.25	
10905.00	90.300	269.700	10041.31	945.57	5.18	-945.61	742182.64	597308.18	32°38'25.271"N	103°40'51.065"W	3.76	
10937.00	90.600	269.400	10041.06	977.57	4.93	-977.61	742150.64	597307.93	32°38'25.270"N	103°40'51.439"W	1.33	
10969.00	90.900	269.300	10040.64	1009.56	4.56	-1009.60	742118.65	597307.56	32°38'25.269"N	103°40'51.813"W	0.99	
11001.00	91.000	268.600	10040.11	1041.56	3.98	-1041.59	742086.66	597306.98	32°38'25.265"N	103°40'52.187"W	2.21	
11033.00	91.300	268.100	10039.47	1073.54	3.06	-1073.57	742054.68	597306.06	32°38'25.258"N	103°40'52.561"W	1.82	
11063.00	92.200	268.300	10038.56	1103.52	2.11	-1103.54	742024.71	597305.11	32°38'25.250"N	103°40'52.912"W	3.07	
11126.00	91.600	268.600	10036.47	1166.47	0.41	-1166.48	741961.77	597303.41	32°38'25.237"N	103°40'53.648"W	1.06	
11187.00	91.900	268.900	10034.60	1227.43	-0.92	-1227.44	741900.82	597302.08	32°38'25.228"N	103°40'54.361"W	0.70	
11219.00	92.300	269.200	10033.43	1259.41	-1.45	-1259.41	741868.84	597301.55	32°38'25.225"N	103°40'54.735"W	1.56	
11251.00	91.600	269.300	10032.34	1291.39	-1.87	-1291.39	741836.87	597301.13	32°38'25.222"N	103°40'55.109"W	2.21	
11283.00	90.400	269.700	10031.78	1323.38	-2.15	-1323.39	741804.88	597300.85	32°38'25.221"N	103°40'55.483"W	3.95	
11315.00	90.400	269.600	10031.56	1355.38	-2.34	-1355.38	741772.88	597300.66	32°38'25.221"N	103°40'55.857"W	0.31	
11347.00	91.100	269.600	10031.14	1387.38	-2.57	-1387.38	741740.88	597300.43	32°38'25.221"N	103°40'56.231"W	2.19	
11379.00	91.500	269.100	10030.42	1419.37	-2.93	-1419.37	741708.90	597300.07	32°38'25.220"N	103°40'56.605"W	2.00	
11411.00	90.900	269.200	10029.75	1451.36	-3.40	-1451.36	741676.91	597299.60	32°38'25.217"N	103°40'56.980"W	1.90	
11442.00	90.900	269.100	10029.26	1482.35	-3.86	-1482.35	741645.92	597299.14	32°38'25.214"N	103°40'57.342"W	0.32	
11474.00	91.500	269.000	10028.59	1514.34	-4.39	-1514.34	741613.93	597298.61	32°38'25.211"N	103°40'57.716"W	1.90	
11505.00	90.800	269.100	10027.97	1545.34	-4.91	-1545.33	741582.94	597298.09	32°38'25.208"N	103°40'58.079"W	2.28	
11537.00	90.300	268.900	10027.66	1577.33	-5.47	-1577.32	741550.95	597297.53	32°38'25.204"N	103°40'58.453"W	1.68	
11569.00	90.300	268.200	10027.49	1609.32	-6.28	-1609.31	741518.96	597296.73	32°38'25.198"N	103°40'58.827"W	2.19	
11601.00	90.600	268.400	10027.24	1641.31	-7.22	-1641.30	741486.98	597295.78	32°38'25.191"N	103°40'59.201"W	1.13	
11633.00	91.000	268.200	10026.79	1673.30	-8.17	-1673.28	741455.00	597294.83	32°38'25.183"N	103°40'59.575"W	1.40	
11665.00	91.900	268.100	10025.98	1705.28	-9.21	-1705.25	741423.03	597293.79	32°38'25.175"N	103°40'59.949"W	2.83	
11697.00	92.200	268.000	10024.84	1737.24	-10.29	-1737.21	741391.07	597292.71	32°38'25.166"N	103°41'00.323"W	0.99	
11729.00	91.600	268.100	10023.78	1769.21	-11.38	-1769.18	741359.10	597291.62	32°38'25.157"N	103°41'00.697"W	1.90	
11761.00	91.100	269.000	10023.02	1801.20	-12.19	-1801.16	741327.12	597290.81	32°38'25.151"N	103°41'01.071"W	3.22	
11793.00	90.700	268.800	10022.52	1833.19	-12.81	-1833.15	741295.14	597290.19	32°38'25.147"N	103°41'01.445"W	1.40	
11824.00	90.300	269.500	10022.25	1864.19	-13.27	-1864.14	741264.14	597289.73	32°38'25.144"N	103°41'01.807"W	2.60	
11856.00	90.200	269.600	10022.11	1896.19	-13.52	-1896.14	741232.15	597289.48	32°38'25.144"N	103°41'02.182"W	0.44	
11888.00	90.700	269.600	10021.86	1928.19	-13.74	-1928.14	741200.15	597289.26	32°38'25.143"N	103°41'02.556"W	1.56	
11920.00	90.100	269.900	10021.64	1960.18	-13.88	-1960.14	741168.15	597289.12	32°38'25.144"N	103°41'02.930"W	2.10	
11952.00	91.000	269.600	10021.33	1992.18	-14.02	-1992.14	741136.16	597288.98	32°38'25.145"N	103°41'03.304"W	2.96	
11984.00	91.400	269.400	10020.66	2024.17	-14.30	-2024.13	741104.16	597288.70	32°38'25.144"N	103°41'03.678"W	1.40	
12016.00	91.000	269.500	10019.99	2056.17	-14.61	-2056.12	741072.17	597288.39	32°38'25.143"N	103°41'04.053"W	1.29	
12048.00	90.100	270.700	10019.68	2088.16	-14.55	-2088.12	741040.18	597288.45	32°38'25.145"N	103°41'04.427"W	4.69	
12079.00	89.900	270.700	10019.68	2119.16	-14.17	-2119.12	741009.18	597288.83	32°38'25.151"N	103°41'04.789"W	0.65	
12111.00	89.600	269.800	10019.82	2151.16	-14.03	-2151.11	740977.19	597288.97	32°38'25.154"N	103°41'05.163"W	2.96	
12143.00	89.800	270.100	10019.99	2183.16	-14.06	-2183.11	740945.19	597288.94	32°38'25.156"N	103°41'05.538"W	1.13	
12175.00	89.800	269.700	10020.10	2215.16	-14.12	-2215.11	740913.19	597288.88	32°38'25.157"N	103°41'05.912"W	1.25	



Actual Wellpath Report

No. 5H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.5H SHL
Area	Lea County, NM	Well	No.5H
Field	(N Maduro) , T19S, R33E	Wellbore	No. 5H AWB
Facility	North Maduro Unit Com No.5H		

WELLPATH DATA (248 stations)

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
12208.00	90.000	268.800	10020.16	2248.16	-14.55	-2248.11	740880.19	597288.45	32°38'25.155"N	103°41'06.298"W	2.79	
12240.00	90.100	268.200	10020.13	2280.15	-15.39	-2280.10	740848.21	597287.61	32°38'25.148"N	103°41'06.672"W	1.90	
12271.00	90.100	267.800	10020.08	2311.13	-16.47	-2311.08	740817.23	597286.53	32°38'25.140"N	103°41'07.034"W	1.29	
12303.00	90.000	267.500	10020.05	2343.11	-17.78	-2343.05	740785.26	597285.22	32°38'25.129"N	103°41'07.408"W	0.99	
12335.00	90.500	266.800	10019.91	2375.08	-19.37	-2375.01	740753.30	597283.63	32°38'25.115"N	103°41'07.782"W	2.69	
12367.00	90.700	266.500	10019.57	2407.03	-21.24	-2406.96	740721.35	597281.76	32°38'25.098"N	103°41'08.156"W	1.13	
12399.00	90.900	266.300	10019.13	2438.98	-23.25	-2438.89	740689.42	597279.75	32°38'25.080"N	103°41'08.529"W	0.88	
12431.00	90.700	265.600	10018.68	2470.90	-25.51	-2470.81	740657.51	597277.49	32°38'25.060"N	103°41'08.903"W	2.27	
12463.00	90.200	265.200	10018.43	2502.81	-28.08	-2502.70	740625.61	597274.93	32°38'25.036"N	103°41'09.276"W	2.00	
12495.00	90.100	265.100	10018.34	2534.71	-30.78	-2534.59	740593.73	597272.22	32°38'25.011"N	103°41'09.649"W	0.44	
12526.00	90.400	264.700	10018.21	2565.60	-33.54	-2565.47	740562.85	597269.46	32°38'24.986"N	103°41'10.010"W	1.61	
12559.00	90.900	264.400	10017.84	2598.46	-36.67	-2598.31	740530.01	597266.33	32°38'24.957"N	103°41'10.395"W	1.77	
12591.00	90.800	264.400	10017.36	2630.32	-39.79	-2630.16	740498.16	597263.21	32°38'24.928"N	103°41'10.767"W	0.31	
12623.00	90.800	264.800	10016.91	2662.19	-42.80	-2662.01	740466.31	597260.20	32°38'24.900"N	103°41'11.140"W	1.25	
12655.00	91.200	265.000	10016.36	2694.08	-45.65	-2693.88	740434.44	597257.35	32°38'24.874"N	103°41'11.513"W	1.40	
12687.00	91.900	264.800	10015.49	2725.95	-48.49	-2725.74	740402.58	597254.51	32°38'24.848"N	103°41'11.886"W	2.27	
12719.00	92.400	264.900	10014.29	2757.81	-51.36	-2757.59	740370.74	597251.64	32°38'24.821"N	103°41'12.258"W	1.59	
12751.00	92.500	265.400	10012.92	2789.68	-54.07	-2789.45	740338.88	597248.94	32°38'24.796"N	103°41'12.631"W	1.59	
12783.00	91.500	265.900	10011.80	2821.58	-56.49	-2821.33	740307.00	597246.51	32°38'24.774"N	103°41'13.004"W	3.49	
12815.00	91.000	267.300	10011.11	2853.53	-58.39	-2853.27	740275.06	597244.61	32°38'24.757"N	103°41'13.378"W	4.64	
12846.00	90.100	267.300	10010.81	2884.50	-59.85	-2884.23	740244.10	597243.15	32°38'24.745"N	103°41'13.740"W	2.90	
12878.00	90.100	268.000	10010.75	2916.48	-61.16	-2916.21	740212.13	597241.84	32°38'24.734"N	103°41'14.114"W	2.19	
12909.00	90.600	268.100	10010.56	2947.46	-62.22	-2947.19	740181.15	597240.79	32°38'24.725"N	103°41'14.476"W	1.64	
12941.00	90.800	267.900	10010.17	2979.45	-63.33	-2979.17	740149.17	597239.67	32°38'24.716"N	103°41'14.850"W	0.88	
12973.00	90.400	268.400	10009.84	3011.43	-64.37	-3011.15	740117.19	597238.64	32°38'24.708"N	103°41'15.224"W	2.00	
13005.00	90.600	268.000	10009.56	3043.42	-65.37	-3043.13	740085.21	597237.63	32°38'24.700"N	103°41'15.598"W	1.40	
13037.00	91.000	267.800	10009.11	3075.40	-66.54	-3075.11	740053.24	597236.46	32°38'24.690"N	103°41'15.972"W	1.40	
13069.00	91.000	267.700	10008.55	3107.38	-67.80	-3107.08	740021.27	597235.20	32°38'24.680"N	103°41'16.346"W	0.31	
13100.00	90.900	269.200	10008.04	3138.36	-68.64	-3138.06	739990.29	597234.37	32°38'24.673"N	103°41'16.709"W	4.85	
13132.00	91.300	270.100	10007.42	3170.36	-68.83	-3170.05	739958.29	597234.17	32°38'24.673"N	103°41'17.083"W	3.08	
13164.00	91.600	270.100	10006.62	3202.35	-68.78	-3202.04	739926.31	597234.23	32°38'24.676"N	103°41'17.457"W	0.94	
13196.00	92.200	269.700	10005.55	3234.33	-68.83	-3234.02	739894.33	597234.17	32°38'24.677"N	103°41'17.831"W	2.25	
13228.00	91.600	269.900	10004.49	3266.31	-68.94	-3266.01	739862.34	597234.06	32°38'24.678"N	103°41'18.205"W	1.98	
13260.00	91.700	270.300	10003.57	3298.30	-68.89	-3297.99	739830.36	597234.11	32°38'24.680"N	103°41'18.579"W	1.29	
13292.00	91.500	271.200	10002.68	3330.28	-68.47	-3329.98	739798.38	597234.53	32°38'24.686"N	103°41'18.953"W	2.88	
13323.00	91.100	271.900	10001.97	3361.25	-67.63	-3360.96	739767.40	597235.37	32°38'24.697"N	103°41'19.315"W	2.60	
13355.00	90.200	272.600	10001.61	3393.22	-66.38	-3392.93	739735.43	597236.63	32°38'24.711"N	103°41'19.689"W	3.56	
13387.00	90.200	272.500	10001.50	3425.18	-64.95	-3424.90	739703.46	597238.05	32°38'24.727"N	103°41'20.063"W	0.31	
13419.00	90.400	272.500	10001.33	3457.14	-63.56	-3456.87	739671.49	597239.45	32°38'24.743"N	103°41'20.436"W	0.62	
13451.00	90.600	272.100	10001.05	3489.11	-62.27	-3488.84	739639.52	597240.73	32°38'24.757"N	103°41'20.810"W	1.40	
13483.00	90.900	271.600	10000.63	3521.08	-61.24	-3520.82	739607.54	597241.76	32°38'24.769"N	103°41'21.184"W	1.82	
13515.00	91.500	271.300	9999.96	3553.06	-60.43	-3552.80	739575.56	597242.57	32°38'24.779"N	103°41'21.558"W	2.10	
13547.00	91.100	271.600	9999.24	3585.04	-59.62	-3584.79	739543.58	597243.38	32°38'24.789"N	103°41'21.932"W	1.56	
13579.00	91.300	271.400	9998.57	3617.02	-58.78	-3616.77	739511.60	597244.22	32°38'24.799"N	103°41'22.306"W	0.88	
13611.00	91.400	271.200	9997.81	3648.99	-58.06	-3648.75	739479.62	597244.95	32°38'24.809"N	103°41'22.680"W	0.70	



Actual Wellpath Report

No. 5H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No.5H SHL
Area	Lea County, NM	Well	No.5H
Field	(N Maduro) , T19S, R33E	Wellbore	No. 5H AWB
Facility	North Maduro Unit Com No.5H		

WELLPATH DATA (248 stations)

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
13643.00	90.800	271.800	9997.20	3680.97	-57.22	-3680.73	739447.64	597245.78	32°38'24.819"N	103°41'23.054"W	2.65	
13684.00	90.300	272.700	9996.81	3721.93	-55.61	-3721.70	739406.67	597247.39	32°38'24.837"N	103°41'23.533"W	2.51	
13716.00	90.300	272.300	9996.64	3753.89	-54.21	-3753.67	739374.71	597248.79	32°38'24.853"N	103°41'23.907"W	1.25	
13748.00	90.500	272.200	9996.42	3785.86	-52.96	-3785.64	739342.73	597250.05	32°38'24.867"N	103°41'24.280"W	0.70	
13780.00	90.600	272.000	9996.11	3817.83	-51.78	-3817.62	739310.76	597251.22	32°38'24.881"N	103°41'24.654"W	0.70	
13812.00	90.700	271.900	9995.75	3849.80	-50.70	-3849.60	739278.78	597252.31	32°38'24.893"N	103°41'25.028"W	0.44	
13844.00	91.000	272.300	9995.27	3881.77	-49.52	-3881.57	739246.81	597253.48	32°38'24.907"N	103°41'25.402"W	1.56	
13876.00	91.200	272.200	9994.66	3913.74	-48.27	-3913.54	739214.84	597254.73	32°38'24.921"N	103°41'25.776"W	0.70	
13940.00	91.100	271.900	9993.37	3977.67	-45.98	-3977.49	739150.89	597257.02	32°38'24.948"N	103°41'26.523"W	0.49	
14036.00	92.200	271.900	9990.61	4073.56	-42.80	-4073.39	739054.99	597260.20	32°38'24.985"N	103°41'27.645"W	1.15	
14068.00	92.800	271.900	9989.21	4105.50	-41.74	-4105.35	739023.04	597261.26	32°38'24.997"N	103°41'28.018"W	1.87	
14100.00	92.500	272.100	9987.73	4137.44	-40.62	-4137.29	738991.10	597262.38	32°38'25.010"N	103°41'28.392"W	1.13	
14132.00	92.200	272.200	9986.42	4169.39	-39.42	-4169.24	738959.15	597263.58	32°38'25.024"N	103°41'28.765"W	0.99	
14164.00	92.200	271.900	9985.19	4201.34	-38.28	-4201.20	738927.19	597264.72	32°38'25.037"N	103°41'29.139"W	0.94	
14196.00	92.100	271.700	9983.99	4233.29	-37.27	-4233.16	738895.23	597265.73	32°38'25.049"N	103°41'29.513"W	0.70	
14228.00	92.100	271.600	9982.82	4265.25	-36.35	-4265.13	738863.27	597266.65	32°38'25.060"N	103°41'29.886"W	0.31	
14259.00	92.000	271.200	9981.71	4296.22	-35.60	-4296.10	738832.30	597267.41	32°38'25.070"N	103°41'30.248"W	1.33	
14290.00	91.900	271.300	9980.65	4327.19	-34.92	-4327.07	738801.33	597268.08	32°38'25.078"N	103°41'30.611"W	0.46	
14322.00	91.900	270.900	9979.59	4359.17	-34.31	-4359.05	738769.35	597268.70	32°38'25.086"N	103°41'30.985"W	1.25	
14418.00	91.600	270.400	9976.66	4455.11	-33.22	-4455.00	738673.41	597269.78	32°38'25.103"N	103°41'32.106"W	0.61	
14513.00	91.900	269.900	9973.76	4550.06	-32.97	-4549.95	738578.46	597270.03	32°38'25.111"N	103°41'33.217"W	0.61	
14518.00	91.900	269.800	9973.60	4555.06	-32.98	-4554.95	738573.46	597270.02	32°38'25.111"N	103°41'33.275"W	2.00	
14573.00	91.900	269.800	9971.77	4610.03	-33.17	-4609.92	738518.49	597269.83	32°38'25.112"N	103°41'33.918"W	0.00	Project to Bit

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
No.5H PBHL		10050.00	-23.15	-4624.38	738504.03	597279.85	32°38'25.212"N	103°41'34.087"W	point

WELLPATH COMPOSITION - Ref Wellbore: No. 5H AWB Ref Wellpath: No. 5H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.00	9555.90	Generic gyro - northseeking (Standard)	Gyro < 100.0 - 95559 >	No. 5H AWB
9555.90	14573.00	NaviTrak (Standard)	MWD < 9600 - XXXXXX >	No. 5H AWB