

Cimarex Energy Co.

Location: Eddy County, NM
Field: Parkway
Facility: Parkway 11 State No. 1H

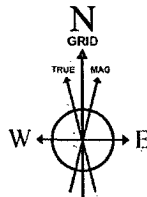
Slot: No. 1H SHL
Well: No. 1H
Wellbore: No. 1H PWB

30-015-38045

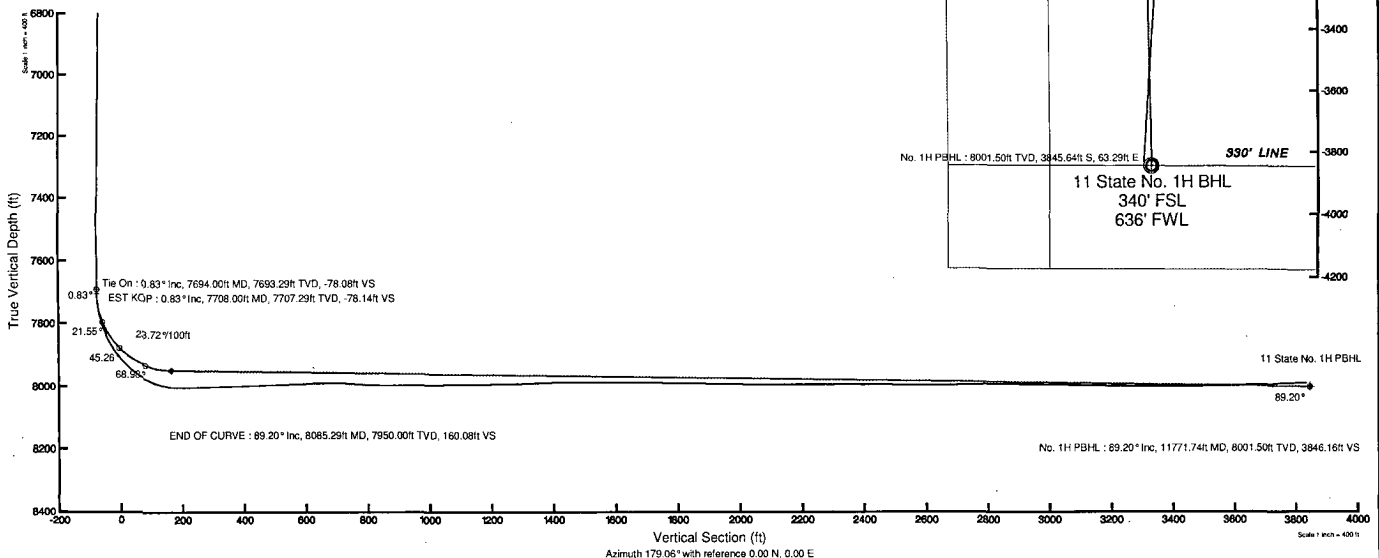
Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	7694.00	0.830	288.470	7693.29	78.00	-5.57	0.00	-78.08
EST KOP	7708.00	0.830	288.470	7707.29	78.06	-5.77	0.00	-78.14
END OF CURVE	8085.29	89.200	178.944	7950.00	-160.17	-4.64	23.72	160.08
No. 1H PBHL	11771.74	89.200	178.944	8001.50	-3845.64	63.29	0.00	3846.16

Plot reference wellpath is Plan #1 vs Actual (FINAL)	
True vertical depths are referenced to Rig on No. 1H SHL (KB)	Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (2001), US feet
Measured depths are referenced to Rig on No. 1H SHL (KB)	North Reference: Grid north
Rig on No. 1H SHL (KB) to Mean Sea Level: 3385 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: Parkway 11 State No. 1H): -3394 feet	Depths are in feet
Coordinates are in feet referenced to Facility Center	Created by: Victor Hernandez on 10/26/2010



BGGM (1945.0 to 2011.0) Dip: 60.56° Field: 48972.2 nT
Magnetic North is 7.96 degrees East of True North (at 10/12/2010)
Grid North is 0.15 degrees East of True North
To correct azimuth from True to Grid subtract 0.15 degrees
To correct azimuth from Magnetic to Grid add 7.81 degrees
For example: If the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.81 = 97.81





Actual Wellpath Report

No. 1H AWP

Page 1 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	Parkway	Wellbore	No. 1H AWP
Facility	Parkway 11 State No. 1H	Sidetrack from	No. 1 AWB at 7694.00 MD

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	Victor Hernandez
Scale	0.999918	Report Generated	10/27/2010 at 8:53:44 AM
Convergence at slot	0.15° East	Database/Source file	WA_Midland/No. 1H_AWP.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	627862.70	611019.70	32°40'45.921"N	104°03'07.618"W
Facility Reference Pt			627862.70	611019.70	32°40'45.921"N	104°03'07.618"W
Field Reference Pt			623994.14	604893.77	32°39'45.403"N	104°03'53.063"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 1H SHL (KB) to Facility Vertical Datum	21.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 1H SHL (KB) to Mean Sea Level	3385.00ft
Vertical Reference Pt	Rig on No. 1H SHL (KB)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 1H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.06°



Actual Wellpath Report

No. 1H AWP

Page 2 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	Parkway	Wellbore	No. 1H AWP
Facility	Parkway 11 State No. 1H	Sidetrack from	No. 1 AWP at 7694.00 MD

WELLPATH DATA (157 stations)											
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]
0.00	0.000	117.200	0.00	0.00	0.00	0.00	627862.70	611019.70	32°40'45.921"N	104°03'07.618"W	0.00
100.00	0.680	117.200	100.00	-0.28	-0.27	0.53	627863.23	611019.43	32°40'45.918"N	104°03'07.612"W	0.68
200.00	0.340	98.650	199.99	0.61	-0.59	1.35	627864.05	611019.11	32°40'45.915"N	104°03'07.602"W	0.37
300.00	0.500	35.430	299.99	0.31	-0.28	1.90	627864.60	611019.42	32°40'45.918"N	104°03'07.596"W	0.46
400.00	0.610	27.190	399.99	-0.51	0.55	2.39	627865.09	611020.25	32°40'45.926"N	104°03'07.590"W	0.14
500.00	0.430	24.120	499.98	-1.32	1.37	2.79	627865.49	611021.07	32°40'45.935"N	104°03'07.585"W	0.18
600.00	0.540	14.430	599.98	-2.12	2.17	3.06	627865.76	611021.87	32°40'45.942"N	104°03'07.582"W	0.14
728.60	0.430	34.880	728.57	-3.09	3.15	3.49	627866.19	611022.85	32°40'45.952"N	104°03'07.577"W	0.16
824.00	0.550	52.950	823.97	-3.65	3.72	4.06	627866.76	611023.42	32°40'45.958"N	104°03'07.570"W	0.20
919.40	0.770	75.090	919.36	-4.08	4.16	5.04	627867.74	611023.86	32°40'45.962"N	104°03'07.559"W	0.35
1014.80	0.940	74.160	1014.75	-4.43	4.54	6.41	627869.11	611024.24	32°40'45.966"N	104°03'07.543"W	0.18
1110.20	1.080	76.050	1110.14	-4.84	4.97	8.04	627870.74	611024.67	32°40'45.970"N	104°03'07.524"W	0.15
1205.60	0.880	62.910	1205.53	-5.36	5.52	9.56	627872.26	611025.22	32°40'45.975"N	104°03'07.506"W	0.31
1301.00	0.790	48.350	1300.92	-6.11	6.29	10.71	627873.41	611025.99	32°40'45.983"N	104°03'07.492"W	0.24
1396.40	0.640	28.740	1396.31	-7.01	7.19	11.45	627874.15	611026.89	32°40'45.992"N	104°03'07.484"W	0.30
1491.80	0.620	20.810	1491.70	-7.95	8.14	11.89	627874.59	611027.84	32°40'46.001"N	104°03'07.478"W	0.09
1587.20	0.350	25.650	1587.10	-8.69	8.89	12.20	627874.90	611028.59	32°40'46.009"N	104°03'07.475"W	0.29
1682.60	0.150	34.410	1682.50	-9.05	9.26	12.40	627875.10	611028.95	32°40'46.012"N	104°03'07.472"W	0.21
1778.00	0.080	31.230	1777.90	-9.21	9.42	12.51	627875.20	611029.11	32°40'46.014"N	104°03'07.471"W	0.07
1873.40	0.210	27.760	1873.30	-9.42	9.63	12.62	627875.32	611029.33	32°40'46.016"N	104°03'07.470"W	0.14
1968.80	0.400	352.690	1968.70	-9.90	10.11	12.66	627875.36	611029.81	32°40'46.021"N	104°03'07.469"W	0.27
2064.20	0.700	350.390	2064.09	-10.81	11.02	12.52	627875.22	611030.72	32°40'46.030"N	104°03'07.471"W	0.32
2159.60	0.880	336.090	2159.48	-12.06	12.26	12.13	627874.83	611031.96	32°40'46.042"N	104°03'07.476"W	0.28
2255.00	0.460	348.910	2254.88	-13.11	13.31	11.76	627874.45	611033.01	32°40'46.052"N	104°03'07.480"W	0.46
2350.40	0.450	350.060	2350.27	-13.86	14.05	11.62	627874.32	611033.75	32°40'46.060"N	104°03'07.481"W	0.01
2445.80	0.270	342.090	2445.67	-14.44	14.63	11.48	627874.18	611034.33	32°40'46.066"N	104°03'07.483"W	0.20
2541.20	0.380	343.730	2541.07	-14.96	15.15	11.33	627874.03	611034.85	32°40'46.071"N	104°03'07.485"W	0.12
2636.60	0.440	340.260	2636.47	-15.62	15.80	11.11	627873.81	611035.50	32°40'46.077"N	104°03'07.487"W	0.07
2732.00	0.430	349.510	2731.86	-16.32	16.50	10.92	627873.62	611036.20	32°40'46.084"N	104°03'07.489"W	0.07
2827.40	0.420	348.410	2827.26	-17.01	17.19	10.79	627873.49	611036.89	32°40'46.091"N	104°03'07.491"W	0.01



Actual Wellpath Report

No. 1H AWP

Page 3 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	Parkway	Wellbore	No. 1H AWP
Facility	Parkway 11 State No. 1H	Sidetrack from	No. 1 AWB at 7694.00 MD

WELLPATH DATA (157 stations)											
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]
3018.20	0.420	353.210	3018.06	-18.39	18.57	10.57	627873.27	611038.27	32°40'46.105"N	104°03'07.494"W	0.02
3113.60	0.390	355.200	3113.45	-19.07	19.24	10.50	627873.20	611038.94	32°40'46.111"N	104°03'07.494"W	0.03
3209.00	0.460	352.990	3208.85	-19.77	19.95	10.42	627873.12	611039.64	32°40'46.118"N	104°03'07.495"W	0.08
3304.40	0.410	358.410	3304.25	-20.49	20.67	10.37	627873.07	611040.37	32°40'46.125"N	104°03'07.496"W	0.07
3399.80	0.460	357.150	3399.65	-21.22	21.39	10.34	627873.04	611041.09	32°40'46.132"N	104°03'07.496"W	0.05
3590.60	0.590	353.840	3590.44	-22.96	23.13	10.20	627872.89	611042.83	32°40'46.150"N	104°03'07.498"W	0.07
3686.00	0.590	347.220	3685.83	-23.93	24.10	10.03	627872.73	611043.80	32°40'46.159"N	104°03'07.500"W	0.07
3781.40	0.400	331.100	3781.23	-24.71	24.87	9.76	627872.46	611044.57	32°40'46.167"N	104°03'07.503"W	0.25
3876.80	0.300	315.010	3876.63	-25.18	25.34	9.43	627872.13	611045.04	32°40'46.172"N	104°03'07.507"W	0.15
3972.20	0.360	308.810	3972.03	-25.55	25.70	9.02	627871.72	611045.40	32°40'46.175"N	104°03'07.512"W	0.07
4067.60	0.340	298.380	4067.42	-25.88	26.03	8.53	627871.23	611045.72	32°40'46.178"N	104°03'07.517"W	0.07
4163.00	0.380	292.090	4162.82	-26.14	26.28	7.99	627870.69	611045.98	32°40'46.181"N	104°03'07.523"W	0.06
4258.40	0.590	328.640	4258.22	-26.69	26.82	7.44	627870.14	611046.51	32°40'46.186"N	104°03'07.530"W	0.38
4353.80	0.840	340.430	4353.61	-27.78	27.90	6.95	627869.65	611047.59	32°40'46.197"N	104°03'07.536"W	0.30
4449.20	0.970	342.160	4449.00	-29.21	29.32	6.47	627869.17	611049.02	32°40'46.211"N	104°03'07.541"W	0.14
4544.60	1.020	344.210	4544.39	-30.81	30.91	5.99	627868.69	611050.61	32°40'46.227"N	104°03'07.547"W	0.06
4640.00	1.030	345.900	4639.77	-32.46	32.56	5.55	627868.25	611052.25	32°40'46.243"N	104°03'07.552"W	0.03
4735.40	0.970	351.250	4735.16	-34.10	34.19	5.22	627867.92	611053.88	32°40'46.259"N	104°03'07.556"W	0.12
4830.80	1.030	352.690	4830.54	-35.75	35.84	4.99	627867.69	611055.53	32°40'46.276"N	104°03'07.558"W	0.07
4926.20	1.060	354.920	4925.92	-37.48	37.57	4.80	627867.50	611057.26	32°40'46.293"N	104°03'07.560"W	0.05
5021.60	1.090	359.550	5021.31	-39.27	39.35	4.72	627867.42	611059.05	32°40'46.310"N	104°03'07.561"W	0.10
5117.00	1.260	4.960	5116.69	-41.22	41.30	4.80	627867.50	611061.00	32°40'46.330"N	104°03'07.560"W	0.21
5212.40	1.110	12.190	5212.07	-43.16	43.25	5.09	627867.79	611062.95	32°40'46.349"N	104°03'07.557"W	0.22
5307.80	1.130	14.080	5307.45	-44.97	45.07	5.51	627868.21	611064.76	32°40'46.367"N	104°03'07.552"W	0.04
5403.20	1.280	18.090	5402.83	-46.89	46.99	6.07	627868.77	611066.69	32°40'46.386"N	104°03'07.545"W	0.18
5498.60	1.250	10.520	5498.21	-48.91	49.03	6.59	627869.29	611068.72	32°40'46.406"N	104°03'07.539"W	0.18
5594.00	1.130	13.290	5593.58	-50.85	50.97	7.00	627869.70	611070.66	32°40'46.425"N	104°03'07.534"W	0.14
5689.40	0.980	12.680	5688.97	-52.55	52.68	7.39	627870.09	611072.37	32°40'46.442"N	104°03'07.530"W	0.16
5784.80	0.810	20.700	5784.36	-53.97	54.11	7.81	627870.51	611073.80	32°40'46.456"N	104°03'07.525"W	0.22
5880.20	0.830	16.150	5879.75	-55.26	55.40	8.24	627870.94	611075.10	32°40'46.469"N	104°03'07.520"W	0.07



Actual Wellpath Report

No. 1H AWP

Page 4 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	Parkway	Wellbore	No. 1H AWP
Facility	Parkway 11 State No. 1H	Sidetrack from	No. 1 AWB at 7694.00 MD

WELLPATH DATA (157 stations)

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]
5975.60	0.910	346.410	5975.14	-56.66	56.80	8.25	627870.95	611076.50	32°40'46.483"N	104°03'07.519"W	0.48
6071.00	1.260	334.150	6070.52	-58.35	58.48	7.62	627870.32	611078.18	32°40'46.499"N	104°03'07.527"W	0.44
6166.40	1.440	336.180	6165.89	-60.40	60.52	6.68	627869.38	611080.22	32°40'46.520"N	104°03'07.538"W	0.20
6261.80	1.510	334.700	6261.26	-62.65	62.75	5.66	627868.36	611082.45	32°40'46.542"N	104°03'07.550"W	0.08
6357.20	1.520	327.840	6356.63	-64.88	64.96	4.45	627867.15	611084.66	32°40'46.564"N	104°03'07.564"W	0.19
6452.60	1.350	325.370	6452.00	-66.90	66.96	3.13	627865.83	611086.65	32°40'46.583"N	104°03'07.579"W	0.19
6548.00	1.220	329.710	6547.37	-68.72	68.76	1.98	627864.68	611088.45	32°40'46.601"N	104°03'07.592"W	0.17
6643.40	0.840	333.540	6642.76	-70.23	70.26	1.16	627863.86	611089.96	32°40'46.616"N	104°03'07.602"W	0.40
6738.80	0.530	332.220	6738.15	-71.26	71.28	0.64	627863.34	611090.97	32°40'46.626"N	104°03'07.608"W	0.33
6834.20	0.640	333.280	6833.55	-72.13	72.14	0.20	627862.90	611091.84	32°40'46.635"N	104°03'07.613"W	0.12
6929.60	0.820	344.480	6928.94	-73.27	73.28	-0.23	627862.47	611092.97	32°40'46.646"N	104°03'07.618"W	0.24
7025.00	0.670	351.640	7024.33	-74.49	74.49	-0.49	627862.21	611094.18	32°40'46.658"N	104°03'07.621"W	0.18
7120.40	0.660	354.080	7119.72	-75.59	75.59	-0.63	627862.07	611095.28	32°40'46.669"N	104°03'07.623"W	0.03
7215.80	0.550	339.090	7215.12	-76.56	76.56	-0.85	627861.85	611096.25	32°40'46.679"N	104°03'07.625"W	0.20
7311.20	0.670	318.350	7310.51	-77.42	77.41	-1.38	627861.32	611097.10	32°40'46.687"N	104°03'07.632"W	0.26
7404.60	0.640	289.370	7403.91	-78.01	77.99	-2.24	627860.46	611097.68	32°40'46.693"N	104°03'07.642"W	0.35
7499.00	0.680	262.950	7498.30	-78.14	78.09	-3.29	627859.41	611097.79	32°40'46.694"N	104°03'07.654"W	0.32
7594.40	0.640	256.880	7593.70	-77.96	77.90	-4.37	627858.33	611097.60	32°40'46.692"N	104°03'07.667"W	0.08
7658.00	0.710	278.590	7657.29	-77.95	77.88	-5.11	627857.59	611097.57	32°40'46.692"N	104°03'07.675"W	0.41
7694.00	0.830	288.470	7693.29	-78.08	78.00	-5.57	627857.13	611097.69	32°40'46.693"N	104°03'07.681"W	0.50
7718.00	2.900	187.800	7717.28	-77.53	77.45	-5.82	627856.88	611097.14	32°40'46.688"N	104°03'07.684"W	13.17
7749.00	8.200	172.800	7748.12	-74.56	74.48	-5.65	627857.05	611094.17	32°40'46.658"N	104°03'07.682"W	17.58
7781.00	13.400	168.400	7779.55	-68.64	68.58	-4.62	627858.08	611088.27	32°40'46.600"N	104°03'07.670"W	16.44
7813.00	18.800	165.900	7810.28	-59.97	59.94	-2.61	627860.09	611079.63	32°40'46.514"N	104°03'07.647"W	17.01
7845.00	24.600	162.100	7840.00	-48.57	48.59	-0.69	627863.39	611068.28	32°40'46.402"N	104°03'07.608"W	18.64
7876.00	30.600	159.700	7867.46	-34.94	35.03	5.42	627868.12	611054.73	32°40'46.268"N	104°03'07.553"W	19.68
7908.00	36.900	159.900	7894.05	-18.17	18.36	11.55	627874.25	611038.06	32°40'46.102"N	104°03'07.482"W	19.69
7940.00	43.900	159.200	7918.41	1.37	-1.06	18.80	627881.50	611018.64	32°40'45.910"N	104°03'07.398"W	21.92
7972.00	49.900	159.300	7940.26	23.34	-22.90	27.07	627889.77	610996.80	32°40'45.694"N	104°03'07.302"W	18.75
8003.00	56.000	158.900	7958.93	46.59	-46.00	35.90	627898.60	610973.70	32°40'45.465"N	104°03'07.199"W	19.70



Actual Wellpath Report

No. 1H AWP

Page 5 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	Parkway	Wellbore	No. 1H AWP
Facility	Parkway 11 State No. 1H	Sidetrack from	No. 1 AWB at 7694.00 MD

WELLPATH DATA (157 stations)											
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]
8035.00	62.900	157.900	7975.19	72.35	-71.60	46.05	627908.74	610948.10	32°40'45.211"N	104°03'07.081"W	21.73
8067.00	70.200	157.000	7987.91	99.63	-98.70	57.30	627920.00	610921.01	32°40'44.943"N	104°03'06.950"W	22.96
8098.00	76.600	157.200	7996.77	127.16	-126.05	68.85	627931.55	610893.66	32°40'44.672"N	104°03'06.816"W	20.65
8121.00	81.200	158.100	8001.19	148.17	-146.92	77.43	627940.13	610872.79	32°40'44.465"N	104°03'06.716"W	20.37
8130.00	83.500	158.600	8002.39	156.51	-155.21	80.72	627943.42	610864.51	32°40'44.383"N	104°03'06.678"W	26.14
8162.00	89.500	159.100	8004.34	186.48	-184.98	92.24	627954.94	610834.73	32°40'44.088"N	104°03'06.544"W	18.81
8193.00	91.000	159.200	8004.21	215.62	-213.95	103.28	627965.97	610805.77	32°40'43.801"N	104°03'06.416"W	4.85
8225.00	91.200	159.100	8003.59	245.70	-243.85	114.66	627977.35	610775.87	32°40'43.505"N	104°03'06.284"W	0.70
8288.00	91.600	159.300	8002.05	304.94	-302.73	137.03	627999.72	610717.00	32°40'42.922"N	104°03'06.024"W	0.71
8352.00	91.800	159.200	8000.16	365.13	-362.55	159.69	628022.38	610657.18	32°40'42.330"N	104°03'05.761"W	0.35
8415.00	91.500	160.900	7998.34	424.67	-421.74	181.18	628043.86	610597.99	32°40'41.743"N	104°03'05.511"W	2.74
8479.00	91.900	160.300	7996.44	485.35	-482.08	202.43	628065.11	610537.66	32°40'41.146"N	104°03'05.265"W	1.13
8542.00	92.000	161.400	7994.30	545.16	-541.56	223.08	628085.76	610478.19	32°40'40.557"N	104°03'05.025"W	1.75
8605.00	92.200	162.000	7991.99	605.25	-601.33	242.85	628105.53	610418.42	32°40'39.965"N	104°03'04.795"W	1.00
8669.00	90.900	164.100	7990.26	666.74	-662.53	261.50	628124.18	610357.23	32°40'39.359"N	104°03'04.579"W	3.86
8716.00	87.600	166.100	7990.87	712.34	-707.93	273.58	628136.26	610311.83	32°40'38.909"N	104°03'04.439"W	8.21
8733.00	86.600	166.700	7991.73	728.90	-724.43	277.57	628140.25	610295.33	32°40'38.746"N	104°03'04.393"W	6.86
8796.00	86.900	171.800	7995.31	790.86	-786.21	289.30	628151.98	610233.56	32°40'38.134"N	104°03'04.258"W	8.10
8859.00	89.500	174.600	7997.29	853.49	-848.72	296.76	628159.43	610171.05	32°40'37.516"N	104°03'04.172"W	6.06
8922.00	91.000	178.600	7997.01	916.42	-911.60	300.49	628163.17	610108.18	32°40'36.893"N	104°03'04.131"W	6.78
8986.00	90.300	181.000	7996.29	980.40	-975.59	300.71	628163.39	610044.19	32°40'36.260"N	104°03'04.130"W	3.91
9049.00	90.700	180.300	7995.74	1043.38	-1038.58	300.00	628162.67	609981.21	32°40'35.637"N	104°03'04.140"W	1.28
9113.00	90.500	183.400	7995.07	1107.29	-1102.54	297.93	628160.61	609917.26	32°40'35.004"N	104°03'04.166"W	4.85
9176.00	90.500	184.900	7994.52	1170.04	-1165.37	293.38	628156.05	609854.43	32°40'34.383"N	104°03'04.222"W	2.38
9240.00	90.900	185.100	7993.74	1233.69	-1229.12	287.80	628150.47	609790.69	32°40'33.752"N	104°03'04.289"W	0.70
9303.00	91.500	185.200	7992.42	1296.32	-1291.85	282.14	628144.82	609727.96	32°40'33.132"N	104°03'04.357"W	0.97
9366.00	91.900	185.400	7990.55	1358.92	-1354.55	276.33	628139.00	609665.26	32°40'32.511"N	104°03'04.427"W	0.71
9430.00	90.300	186.400	7989.32	1422.45	-1418.20	269.75	628132.43	609601.62	32°40'31.882"N	104°03'04.506"W	2.95
9493.00	90.200	186.200	7989.04	1484.94	-1480.82	262.84	628125.51	609539.01	32°40'31.262"N	104°03'04.589"W	0.35
9557.00	90.100	186.500	7988.88	1548.42	-1544.43	255.76	628118.44	609475.41	32°40'30.633"N	104°03'04.674"W	0.49



Actual Wellpath Report

No. 1H AWP

Page 6 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	Parkway	Wellbore	No. 1H AWP
Facility	Parkway 11 State No. 1H	Sidetrack from	No. 1 AWP at 7694.00 MD

WELLPATH DATA (157 stations)											
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]
9620.00	90.500	186.700	7988.55	1610.88	-1607.01	248.52	628111.20	609412.83	32°40'30.014"N	104°03'04.760"W	0.71
9683.00	89.100	187.000	7988.77	1673.29	-1669.55	241.00	628103.68	609350.29	32°40'29.395"N	104°03'04.850"W	2.27
9747.00	88.800	186.800	7989.94	1736.68	-1733.08	233.32	628096.00	609286.77	32°40'28.767"N	104°03'04.942"W	0.56
9810.00	89.100	187.200	7991.09	1799.07	-1795.60	225.64	628088.32	609224.25	32°40'28.149"N	104°03'05.034"W	0.79
9873.00	89.500	186.700	7991.86	1861.47	-1858.13	218.02	628080.70	609161.72	32°40'27.530"N	104°03'05.125"W	1.02
9937.00	88.800	186.900	7992.81	1924.88	-1921.67	210.44	628073.12	609098.19	32°40'26.902"N	104°03'05.216"W	1.14
10000.00	88.900	186.800	7994.08	1987.28	-1984.21	202.93	628065.61	609035.65	32°40'26.283"N	104°03'05.305"W	0.22
10064.00	89.400	186.700	7995.03	2050.70	-2047.76	195.41	628058.09	608972.11	32°40'25.655"N	104°03'05.395"W	0.80
10127.00	90.000	186.900	7995.36	2113.12	-2110.32	187.95	628050.63	608909.56	32°40'25.036"N	104°03'05.485"W	1.00
10190.00	90.200	187.100	7995.25	2175.52	-2172.85	180.27	628042.95	608847.04	32°40'24.417"N	104°03'05.576"W	0.45
10254.00	90.200	186.700	7995.02	2238.92	-2236.38	172.58	628035.27	608783.51	32°40'23.789"N	104°03'05.668"W	0.62
10317.00	90.800	187.000	7994.47	2301.34	-2298.93	165.07	628027.75	608720.96	32°40'23.170"N	104°03'05.758"W	1.06
10380.00	89.600	185.900	7994.25	2363.81	-2361.53	157.99	628020.68	608658.37	32°40'22.551"N	104°03'05.843"W	2.58
10444.00	89.200	185.300	7994.92	2427.39	-2425.22	151.74	628014.43	608594.68	32°40'21.921"N	104°03'05.918"W	1.13
10507.00	89.400	185.300	7995.69	2490.01	-2487.95	145.93	628008.61	608531.96	32°40'21.300"N	104°03'05.988"W	0.32
10570.00	89.700	185.000	7996.19	2552.65	-2550.69	140.27	628002.96	608469.23	32°40'20.680"N	104°03'06.056"W	0.67
10634.00	90.100	184.900	7996.30	2616.31	-2614.45	134.75	627997.44	608405.47	32°40'20.049"N	104°03'06.123"W	0.64
10697.00	90.600	185.000	7995.91	2678.98	-2677.21	129.31	627992.00	608342.71	32°40'19.428"N	104°03'06.188"W	0.81
10761.00	91.100	185.200	7994.96	2742.62	-2740.95	123.62	627986.31	608278.98	32°40'18.798"N	104°03'06.257"W	0.84
10824.00	90.000	185.100	7994.36	2805.26	-2803.70	117.97	627980.66	608216.24	32°40'18.177"N	104°03'06.325"W	1.75
10888.00	90.200	185.200	7994.25	2868.90	-2867.44	112.22	627974.91	608152.50	32°40'17.547"N	104°03'06.394"W	0.35
10951.00	89.100	184.900	7994.63	2931.55	-2930.19	106.68	627969.37	608089.76	32°40'16.926"N	104°03'06.461"W	1.81
11015.00	88.700	185.300	7995.86	2995.18	-2993.93	100.99	627963.68	608026.03	32°40'16.295"N	104°03'06.529"W	0.88
11078.00	89.200	185.300	7997.02	3057.80	-3056.65	95.17	627957.86	607963.31	32°40'15.675"N	104°03'06.599"W	0.79
11142.00	88.900	184.500	7998.08	3121.46	-3120.40	89.71	627952.40	607899.56	32°40'15.044"N	104°03'06.665"W	1.33
11205.00	89.200	184.700	7999.12	3184.15	-3183.19	84.65	627947.35	607836.78	32°40'14.423"N	104°03'06.726"W	0.57
11268.00	89.600	184.500	7999.78	3246.85	-3245.98	79.60	627942.30	607773.99	32°40'13.802"N	104°03'06.787"W	0.71
11332.00	89.800	184.500	8000.12	3310.56	-3309.79	74.58	627937.27	607710.19	32°40'13.171"N	104°03'06.848"W	0.31
11395.00	89.900	184.000	8000.28	3373.31	-3372.61	69.91	627932.61	607647.37	32°40'12.549"N	104°03'06.905"W	0.81
11458.00	90.300	183.900	8000.17	3436.08	-3435.46	65.57	627928.27	607584.53	32°40'11.927"N	104°03'06.957"W	0.65



Actual Wellpath Report

No. 1H AWP

Page 7 of 7



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	Parkway	Wellbore	No. 1H AWP
Facility	Parkway 11 State No. 1H	Sidetrack from	No. 1 AWB at 7694.00 MD

WELLPATH DATA (157 stations)											
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]
11522.00	90.700	184.000	7999.61	3499.84	-3499.31	61.16	627923.86	607520.69	32°40'11.296"N	104°03'07.011"W	0.64
11585.00	91.100	183.600	7998.62	3562.62	-3562.16	56.99	627919.68	607457.84	32°40'10.674"N	104°03'07.062"W	0.90
11648.00	91.400	183.900	7997.25	3625.39	-3625.01	52.87	627915.57	607394.99	32°40'10.052"N	104°03'07.112"W	0.67
11712.00	91.900	184.000	7995.41	3689.13	-3688.83	48.46	627911.16	607331.18	32°40'09.421"N	104°03'07.165"W	0.80
11775.00	92.100	183.600	7993.21	3751.88	-3751.66	44.29	627906.99	607268.36	32°40'08.800"N	104°03'07.216"W	0.71
11804.00	92.300	183.600	7992.09	3780.76	-3780.58	42.47	627905.17	607239.44	32°40'08.513"N	104°03'07.238"W	0.69
11859.00	92.300	183.600	7989.89	3835.55	-3835.42	39.02	627901.72	607184.60	32°40'07.971"N	104°03'07.280"W	0.00

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
11 State No. 1H PBHL		8001.50	-3845.64	63.29	627925.98	607174.38	32°40'07.869"N	104°03'06.997"W	point

WELLPATH COMPOSITION Ref Wellbore: No. 1H AWP Ref Wellpath: No. 1H AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	7694.00	Gyrodatta standard - Drop gyro or Multi-shot	GYRO (100 - 7694)	No. 1 AWB
7694.00	11804.00	NaviTrak (Standard)	MWD (7718 - 11804)	No. 1H AWP
11804.00	11859.00	Blind Drilling (std)	Projection to bit	No. 1H AWP