



Cimarex Energy Co.

Location Eddy County, NM
Field (Parkway) Sec 15, T19S, R29E
Facility Parkway State Com No. 3H

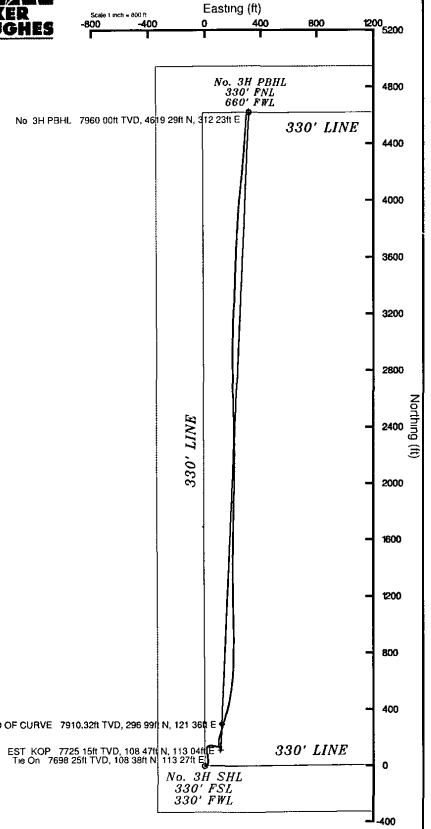
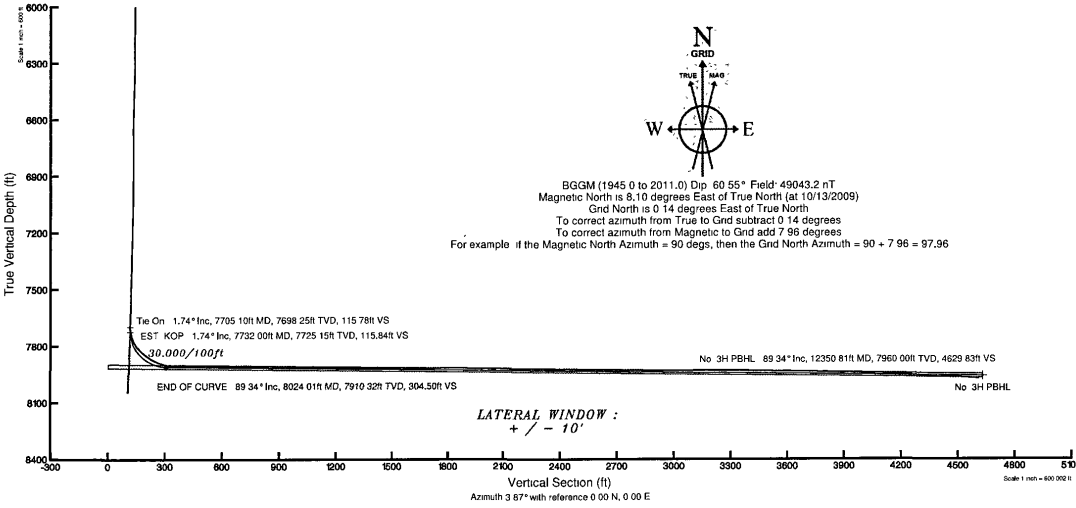
Slot No. 3H SHL
Well No. 3H
Wellbore No. 3H PWB

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	7705.10	1.740	216.800	7698.25	108.38	113.27	0.00	115.78
EST. KOP	7732.00	1.740	2.500	7725.15	108.47	113.04	12.36	115.84
END OF CURVE	8024.01	89.342	2.528	7910.32	296.99	121.36	30.00	304.50
No. 3H PBHL	12350.81	89.342	2.528	7960.00	4619.29	312.23	0.00	4629.83

Plot reference wellpath vs Plan #1 Vs Actual <FINAL>

True vertical depths are referenced to Rig on No. 3H SHL (RT)	Grid System NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 3H SHL (RT)	North Reference Grid north
Rig on No. 3H SHL (RT) to Mean Sea Level 3363 feet	Scale True distance
Mean Sea Level to Mud line (Facility Parkway State Com No. 3H) -3343 feet	Depths are in feet
Coordinates are in feet referenced to Facility Center	Created by: Victor Hernandez on 1/19/2010





Actual Wellpath Report

No. 3H AWP

Page 1 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Parkway) Sec 15, T19S, R29E	Wellbore	No. 3H AWB
Facility	Parkway State Com No. 3H	Sidetrack from	No. 3 AWB at 7705.10 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	0.999917	Report Generated	1/19/2010 at 4:40:48 PM
Convergence at slot	0.14° East	Database/Source file	WA_Midland/No_3H_AWB.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	622347.40	601916.20	32°39'15.980"N	104°04'12.413"W
Facility Reference Pt			622347.40	601916.20	32°39'15.980"N	104°04'12.413"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. 3H SHL (RT) to Facility Vertical Datum	20.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 3H SHL (RT) to Mean Sea Level	3363.00ft
Vertical Reference Pt	Rig on No. 3H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 3H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	3.87°



Actual Wellpath Report

No. 3H AWP

Page 2 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Parkway) Sec 15, T19S, R29E	Wellbore	No. 3H AWP
Facility	Parkway State Com No. 3H	Sidetrack from	No. 3 AWP at 7705.10 MD

WELLPATH DATA (208 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	171.120	0.00	0.00	0.00	0.00	622347.40	601916.20	32°39'15.980"N	104°04'12.413"W	0.00
67.10	0.560	171.120	67.10	-0.32	-0.32	0.05	622347.45	601915.88	32°39'15.976"N	104°04'12.412"W	0.83
129.20	0.450	113.980	129.20	-0.70	-0.72	0.32	622347.72	601915.48	32°39'15.972"N	104°04'12.409"W	0.79
191.50	0.440	84.880	191.50	-0.75	-0.80	0.78	622348.18	601915.40	32°39'15.972"N	104°04'12.404"W	0.36
253.70	0.410	77.960	253.69	-0.65	-0.73	1.24	622348.64	601915.47	32°39'15.972"N	104°04'12.398"W	0.10
315.90	0.430	43.300	315.89	-0.41	-0.52	1.62	622349.02	601915.68	32°39'15.974"N	104°04'12.394"W	0.40
377.70	0.130	356.040	377.69	-0.16	-0.28	1.77	622349.17	601915.92	32°39'15.977"N	104°04'12.392"W	0.57
439.90	0.830	41.160	439.89	0.27	0.13	2.06	622349.46	601916.33	32°39'15.981"N	104°04'12.389"W	1.20
502.00	1.030	80.880	501.98	0.75	0.56	2.91	622350.31	601916.76	32°39'15.985"N	104°04'12.379"W	1.06
564.00	1.450	39.510	563.97	1.52	1.25	3.96	622351.36	601917.45	32°39'15.992"N	104°04'12.366"W	1.55
626.20	1.070	18.410	626.15	2.72	2.41	4.64	622352.04	601918.61	32°39'16.003"N	104°04'12.358"W	0.95
687.70	0.910	69.260	687.64	3.48	3.13	5.28	622352.68	601919.33	32°39'16.010"N	104°04'12.351"W	1.40
751.00	0.520	40.620	750.94	3.92	3.52	5.94	622353.34	601919.72	32°39'16.014"N	104°04'12.343"W	0.82
814.20	1.240	9.930	814.13	4.83	4.42	6.24	622353.64	601920.61	32°39'16.023"N	104°04'12.340"W	1.32
877.50	1.620	49.220	877.41	6.14	5.67	7.04	622354.44	601921.87	32°39'16.036"N	104°04'12.330"W	1.62
940.50	2.130	79.190	940.38	7.06	6.48	8.86	622356.26	601922.68	32°39'16.043"N	104°04'12.309"W	1.73
1003.60	2.230	77.370	1003.44	7.70	6.96	11.21	622358.61	601923.16	32°39'16.048"N	104°04'12.281"W	0.19
1066.80	2.300	78.530	1066.59	8.39	7.49	13.65	622361.05	601923.68	32°39'16.053"N	104°04'12.253"W	0.13
1130.00	2.150	73.740	1129.74	9.13	8.07	16.03	622363.43	601924.27	32°39'16.059"N	104°04'12.225"W	0.38
1193.10	1.820	56.160	1192.80	10.15	8.96	18.00	622365.40	601925.16	32°39'16.068"N	104°04'12.202"W	1.09
1256.50	1.720	41.910	1256.17	11.52	10.23	19.48	622366.87	601926.43	32°39'16.080"N	104°04'12.185"W	0.71
1320.10	1.820	27.690	1319.74	13.19	11.83	20.58	622367.98	601928.03	32°39'16.096"N	104°04'12.172"W	0.71
1383.10	2.040	19.230	1382.71	15.19	13.78	21.42	622368.81	601929.98	32°39'16.115"N	104°04'12.162"W	0.57
1446.50	2.260	13.400	1446.06	17.51	16.06	22.08	622369.48	601932.26	32°39'16.138"N	104°04'12.154"W	0.49
1509.80	2.390	5.120	1509.31	20.06	18.59	22.48	622369.88	601934.79	32°39'16.163"N	104°04'12.149"W	0.57
1573.10	2.480	2.290	1572.55	22.75	21.27	22.66	622370.06	601937.47	32°39'16.189"N	104°04'12.147"W	0.24
1636.60	2.370	1.170	1636.00	25.43	23.96	22.74	622370.14	601940.15	32°39'16.216"N	104°04'12.146"W	0.19
1699.70	2.420	359.840	1699.04	28.07	26.59	22.76	622370.16	601942.79	32°39'16.242"N	104°04'12.146"W	0.12
1762.60	2.560	1.090	1761.88	30.79	29.32	22.78	622370.18	601945.52	32°39'16.269"N	104°04'12.145"W	0.24
1825.90	2.490	0.390	1825.12	33.58	32.11	22.82	622370.22	601948.31	32°39'16.297"N	104°04'12.145"W	0.12



Actual Wellpath Report

No. 3H AWP

Page 3 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Parkway) Sec 15, T19S, R29E	Wellbore	No. 3H AWP
Facility	Parkway State Com No. 3H	Sidetrack from	No. 3 AWP at 7705.10 MD

WELLPATH DATA (208 stations)											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude		DLS [°/100ft]
1889.10	2.390	0.200	1888.26	36.26	34.80	22.84	622370.23	601951.00	32°39'16.323"N		0.16
1952.50	2.250	358.940	1951.61	38.82	37.37	22.82	622370.21	601953.57	32°39'16.349"N		0.24
2015.60	2.070	358.250	2014.66	41.19	39.75	22.76	622370.16	601955.94	32°39'16.372"N		0.29
2078.70	1.940	355.990	2077.73	43.38	41.95	22.65	622370.05	601958.15	32°39'16.394"N		0.24
2142.10	1.690	353.540	2141.09	45.37	43.95	22.47	622369.87	601960.15	32°39'16.414"N		0.41
2205.40	1.620	351.060	2204.37	47.16	45.76	22.23	622369.62	601961.96	32°39'16.432"N		0.16
2268.50	1.540	353.300	2267.44	48.86	47.49	21.99	622369.39	601963.68	32°39'16.449"N		0.16
2331.80	1.520	354.940	2330.72	50.53	49.17	21.81	622369.21	601965.36	32°39'16.465"N		0.08
2395.10	1.560	354.640	2394.00	52.21	50.86	21.66	622369.06	601967.06	32°39'16.482"N		0.06
2458.40	1.460	352.270	2457.28	53.85	52.52	21.47	622368.87	601968.71	32°39'16.499"N		0.19
2521.60	1.520	357.350	2520.46	55.47	54.15	21.32	622368.72	601970.35	32°39'16.515"N		0.23
2584.80	1.470	358.960	2583.63	57.11	55.80	21.27	622368.67	601972.00	32°39'16.531"N		0.10
2647.90	1.430	356.570	2646.71	58.70	57.40	21.21	622368.61	601973.59	32°39'16.547"N		0.11
2711.10	1.380	352.550	2709.89	60.22	58.94	21.06	622368.46	601975.13	32°39'16.562"N		0.17
2774.10	1.240	352.850	2772.88	61.64	60.37	20.88	622368.28	601976.56	32°39'16.576"N		0.22
2837.40	1.170	359.650	2836.16	62.95	61.69	20.79	622368.19	601977.89	32°39'16.589"N		0.25
2900.80	1.170	4.820	2899.55	64.25	62.98	20.84	622368.24	601979.18	32°39'16.602"N		0.17
2964.20	1.190	10.630	2962.94	65.55	64.28	21.02	622368.41	601980.47	32°39'16.615"N		0.19
3027.40	1.190	14.030	3026.12	66.84	65.56	21.30	622368.69	601981.75	32°39'16.628"N		0.11
3090.30	1.250	13.130	3089.01	68.17	66.86	21.61	622369.01	601983.05	32°39'16.641"N		0.10
3153.50	1.280	9.900	3152.19	69.55	68.23	21.89	622369.29	601984.42	32°39'16.654"N		0.12
3216.70	1.340	2.610	3215.38	70.99	69.66	22.04	622369.44	601985.85	32°39'16.668"N		0.28
3279.90	1.570	355.190	3278.56	72.58	71.26	22.00	622369.40	601987.45	32°39'16.684"N		0.47
3343.10	1.580	352.500	3341.73	74.29	72.99	21.82	622369.22	601989.18	32°39'16.701"N		0.12
3405.90	1.530	345.190	3404.51	75.94	74.66	21.49	622368.89	601990.85	32°39'16.718"N		0.33
3469.30	1.460	339.910	3467.89	77.48	76.23	21.00	622368.40	601992.43	32°39'16.733"N		0.24
3532.60	1.360	336.380	3531.17	78.88	77.68	20.42	622367.82	601993.87	32°39'16.748"N		0.21
3595.60	1.490	338.370	3594.15	80.28	79.13	19.82	622367.22	601995.32	32°39'16.762"N		0.22
3658.90	1.630	336.630	3657.43	81.83	80.72	19.16	622366.56	601996.91	32°39'16.778"N		0.23
3722.10	1.660	333.620	3720.60	83.42	82.36	18.39	622365.79	601998.56	32°39'16.794"N		0.14



Actual Wellpath Report

No. 3H AWP

Page 4 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Parkway) Sec 15, T19S, R29E	Wellbore	No. 3H AWB
Facility	Parkway State Com No. 3H	Sidetrack from	No. 3 AWB at 7705.10 MD

WELLPATH DATA (208 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]
3785.40	1.720	331.480	3783.87	85.01	84.02	17.53	622364.93	602000.21	32°39'16.810"N	104°04'12.205"W	0.14
3848.60	1.670	332.120	3847.05	86.59	85.67	16.65	622364.05	602001.86	32°39'16.827"N	104°04'12.215"W	0.08
3911.80	1.620	332.110	3910.22	88.14	87.27	15.80	622363.20	602003.46	32°39'16.843"N	104°04'12.225"W	0.08
3975.10	1.610	344.230	3973.49	89.73	88.92	15.14	622362.54	602005.11	32°39'16.859"N	104°04'12.233"W	0.54
4038.40	1.600	351.860	4036.77	91.44	90.65	14.77	622362.17	602006.84	32°39'16.876"N	104°04'12.237"W	0.34
4101.60	1.500	353.050	4099.95	93.11	92.34	14.55	622361.95	602008.53	32°39'16.893"N	104°04'12.240"W	0.17
4164.80	1.360	355.260	4163.13	94.67	93.91	14.39	622361.79	602010.10	32°39'16.908"N	104°04'12.242"W	0.24
4228.00	1.240	357.170	4226.31	96.09	95.34	14.29	622361.69	602011.53	32°39'16.923"N	104°04'12.243"W	0.20
4291.30	1.270	358.960	4289.60	97.47	96.73	14.24	622361.64	602012.92	32°39'16.936"N	104°04'12.243"W	0.08
4354.50	1.310	364.840	4352.78	98.89	98.15	14.28	622361.68	602014.34	32°39'16.950"N	104°04'12.243"W	0.18
4417.90	1.250	370.000	4416.16	100.30	99.56	14.42	622361.82	602015.75	32°39'16.964"N	104°04'12.241"W	0.15
4481.20	1.240	372.600	4479.45	101.67	100.92	14.61	622362.01	602017.11	32°39'16.978"N	104°04'12.239"W	0.07
4544.40	1.270	374.900	4542.63	103.05	102.29	14.82	622362.21	602018.48	32°39'16.991"N	104°04'12.236"W	0.08
4607.80	1.250	376.140	4606.02	104.44	103.67	14.93	622362.33	602019.86	32°39'17.005"N	104°04'12.235"W	0.19
4671.10	1.210	382.440	4669.30	105.79	105.03	14.87	622362.27	602021.22	32°39'17.018"N	104°04'12.236"W	0.33
4734.40	1.660	342.720	4732.58	107.30	106.56	14.51	622361.91	602022.75	32°39'17.034"N	104°04'12.240"W	0.81
4797.40	2.030	346.290	4795.55	109.21	108.52	13.98	622361.37	602024.71	32°39'17.053"N	104°04'12.246"W	0.61
4860.80	2.330	350.210	4858.91	111.54	110.88	13.49	622360.89	602027.07	32°39'17.076"N	104°04'12.252"W	0.53
4924.10	2.350	350.830	4922.15	114.05	113.43	13.06	622360.46	602029.62	32°39'17.102"N	104°04'12.257"W	0.05
4987.40	2.330	354.680	4985.40	116.59	115.99	12.74	622360.14	602032.18	32°39'17.127"N	104°04'12.260"W	0.25
5050.50	2.150	1.030	5048.45	119.03	118.45	12.64	622360.04	602034.64	32°39'17.151"N	104°04'12.261"W	0.49
5113.70	2.220	7.830	5111.61	121.44	120.85	12.83	622360.23	602037.04	32°39'17.175"N	104°04'12.259"W	0.42
5177.00	2.280	14.440	5174.86	123.90	123.28	13.31	622360.71	602039.47	32°39'17.199"N	104°04'12.253"W	0.42
5240.00	2.560	25.710	5237.80	126.44	125.77	14.23	622361.63	602041.95	32°39'17.224"N	104°04'12.243"W	0.87
5302.90	2.700	32.050	5300.63	129.05	128.29	15.63	622363.03	602044.48	32°39'17.248"N	104°04'12.226"W	0.51
5366.60	2.680	39.740	5364.27	131.58	130.70	17.38	622364.78	602046.89	32°39'17.272"N	104°04'12.206"W	0.57
5429.70	3.080	47.430	5427.29	134.00	132.98	19.57	622366.97	602049.17	32°39'17.295"N	104°04'12.180"W	0.88
5493.20	3.790	56.050	5490.67	136.52	135.31	22.57	622369.96	602051.50	32°39'17.318"N	104°04'12.145"W	1.38
5556.60	4.420	60.260	5553.91	139.16	137.69	26.43	622373.82	602053.88	32°39'17.341"N	104°04'12.100"W	1.10
5619.90	4.700	68.410	5617.01	141.63	139.86	30.95	622378.35	602056.05	32°39'17.363"N	104°04'12.047"W	1.11



Actual Wellpath Report

No. 3H AWP

Page 5 of 9



BAKER
HUGHES

INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Parkway) Sec 15, T19S, R29E	Wellbore	No. 3H AWB
Facility	Parkway State Com No. 3H	Sidetrack from	No. 3 AWB at 7705.10 MD

WELLPATH DATA (208 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]
5683.10	4.510	78.430	5680.01	143.40	141.31	35.80	622383.19	602057.50	32°39'17.377"N	104°04'11.990"W	1.31
5746.30	4.580	85.920	5743.01	144.41	141.99	40.75	622388.14	602058.17	32°39'17.383"N	104°04'11.932"W	0.94
5809.40	4.280	91.440	5805.92	144.86	142.11	45.61	622393.01	602058.29	32°39'17.384"N	104°04'11.875"W	0.83
5872.80	4.330	99.560	5869.14	144.72	141.65	50.34	622397.74	602057.84	32°39'17.380"N	104°04'11.820"W	0.96
5936.40	4.870	102.550	5932.54	144.08	140.66	55.34	622402.74	602056.85	32°39'17.370"N	104°04'11.761"W	0.93
5999.60	5.880	101.020	5995.46	143.27	139.46	61.14	622408.53	602055.65	32°39'17.358"N	104°04'11.694"W	1.61
6062.90	6.840	98.330	6058.37	142.57	138.30	68.05	622415.45	602054.48	32°39'17.346"N	104°04'11.613"W	1.59
6126.20	7.630	95.670	6121.16	142.15	137.34	75.96	622423.36	602053.52	32°39'17.337"N	104°04'11.520"W	1.36
6189.70	7.060	95.040	6184.14	141.93	136.58	84.05	622431.44	602052.76	32°39'17.329"N	104°04'11.426"W	0.91
6252.50	5.620	100.550	6246.56	141.50	135.67	90.91	622438.31	602051.86	32°39'17.320"N	104°04'11.345"W	2.49
6315.60	4.280	103.870	6309.42	140.73	134.54	96.24	622443.63	602050.73	32°39'17.308"N	104°04'11.283"W	2.17
6378.50	3.700	111.340	6372.17	139.71	133.24	100.41	622447.80	602049.43	32°39'17.295"N	104°04'11.234"W	1.24
6441.50	3.060	123.120	6435.06	138.28	131.58	103.71	622451.10	602047.77	32°39'17.279"N	104°04'11.196"W	1.49
6504.80	2.410	136.980	6498.29	136.54	129.69	106.03	622453.42	602045.88	32°39'17.260"N	104°04'11.169"W	1.46
6567.80	2.060	145.510	6561.24	134.75	127.79	107.58	622454.97	602043.97	32°39'17.241"N	104°04'11.151"W	0.77
6630.90	1.310	141.660	6624.31	133.33	126.29	108.67	622456.06	602042.47	32°39'17.226"N	104°04'11.138"W	1.20
6694.10	0.670	32.440	6687.50	133.12	126.03	109.31	622456.70	602042.22	32°39'17.224"N	104°04'11.131"W	2.62
6757.60	0.440	40.780	6751.00	133.64	126.53	109.67	622457.06	602042.72	32°39'17.229"N	104°04'11.126"W	0.38
6820.90	0.500	99.910	6814.30	133.80	126.66	110.10	622457.49	602042.85	32°39'17.230"N	104°04'11.121"W	0.74
6884.00	0.670	131.500	6877.40	133.55	126.37	110.65	622458.04	602042.56	32°39'17.227"N	104°04'11.115"W	0.57
6947.10	1.210	130.310	6940.49	132.93	125.70	111.43	622458.82	602041.89	32°39'17.221"N	104°04'11.106"W	0.86
7010.00	1.270	140.130	7003.37	132.03	124.73	112.39	622459.78	602040.92	32°39'17.211"N	104°04'11.095"W	0.35
7073.20	1.160	154.580	7066.56	130.96	123.62	113.11	622460.50	602039.81	32°39'17.200"N	104°04'11.086"W	0.51
7136.10	1.190	170.660	7129.45	129.77	122.40	113.49	622460.88	602038.59	32°39'17.188"N	104°04'11.082"W	0.52
7199.50	1.420	180.320	7192.83	128.35	120.96	113.59	622460.98	602037.15	32°39'17.174"N	104°04'11.081"W	0.50
7262.80	1.620	182.370	7256.11	126.67	119.28	113.55	622460.94	602035.47	32°39'17.157"N	104°04'11.081"W	0.33
7326.10	1.440	179.750	7319.39	124.98	117.60	113.52	622460.91	602033.79	32°39'17.140"N	104°04'11.082"W	0.31
7389.20	1.340	167.260	7382.47	123.48	116.08	113.68	622461.07	602032.27	32°39'17.125"N	104°04'11.080"W	0.50
7452.20	1.480	157.560	7445.45	122.05	114.61	114.16	622461.55	602030.80	32°39'17.111"N	104°04'11.074"W	0.44
7515.40	1.480	159.140	7508.63	120.58	113.10	114.76	622462.15	602029.29	32°39'17.096"N	104°04'11.067"W	0.06



Actual Wellpath Report

No. 3H AWP

Page 6 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Parkway) Sec 15, T19S, R29E	Wellbore	No. 3H AWP
Facility	Parkway State Com No. 3H	Sidetrack from	No. 3 AWP at 7705.10 MD

WELLPATH DATA (208 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]
7578.50	1.410	187.290	7571.71	119.06	111.56	114.95	622462.34	602027.75	32°39'17.081"N	104°04'11.065"W	1.12
7641.70	1.740	211.590	7634.88	117.44	109.98	114.35	622461.74	602026.17	32°39'17.065"N	104°04'11.072"W	1.17
7705.10	1.740	216.800	7698.25	115.78	108.38	113.27	622460.66	602024.58	32°39'17.049"N	104°04'11.085"W	0.25
7721.00	7.000	339.000	7714.12	116.45	109.10	112.77	622460.17	602025.29	32°39'17.056"N	104°04'11.091"W	50.71
7737.00	11.700	343.200	7729.90	118.86	111.56	111.96	622459.35	602027.75	32°39'17.081"N	104°04'11.100"W	29.66
7753.00	17.100	344.300	7745.39	122.59	115.38	110.85	622458.24	602031.57	32°39'17.118"N	104°04'11.113"W	33.79
7768.00	21.000	339.900	7759.57	127.13	120.03	109.33	622456.72	602036.22	32°39'17.165"N	104°04'11.131"W	27.69
7784.00	25.800	342.100	7774.25	132.99	126.04	107.27	622454.66	602042.23	32°39'17.224"N	104°04'11.154"W	30.49
7800.00	30.900	346.800	7788.33	140.15	133.36	105.26	622452.65	602049.55	32°39'17.296"N	104°04'11.178"W	34.77
7813.00	35.300	349.600	7799.22	146.99	140.31	103.82	622451.21	602056.50	32°39'17.365"N	104°04'11.194"W	35.82
7829.00	39.900	351.800	7811.89	156.49	149.94	102.25	622449.64	602066.13	32°39'17.461"N	104°04'11.212"W	29.95
7843.00	43.900	354.600	7822.31	165.68	159.22	101.16	622448.55	602075.41	32°39'17.552"N	104°04'11.225"W	31.53
7859.00	48.000	359.600	7833.43	177.09	170.70	100.59	622447.98	602086.88	32°39'17.666"N	104°04'11.231"W	34.06
7871.00	50.700	3.800	7841.25	186.18	179.79	100.87	622448.26	602095.98	32°39'17.756"N	104°04'11.228"W	34.80
7891.00	54.000	10.700	7853.48	201.97	195.48	102.89	622450.28	602111.66	32°39'17.911"N	104°04'11.204"W	31.90
7904.00	55.200	15.600	7861.01	212.42	205.79	105.30	622452.69	602121.97	32°39'18.013"N	104°04'11.175"W	32.08
7921.00	58.800	19.900	7870.27	226.25	219.36	109.65	622457.04	602135.54	32°39'18.147"N	104°04'11.124"W	29.97
7943.00	64.300	14.700	7880.75	245.06	237.82	115.38	622462.77	602154.00	32°39'18.330"N	104°04'11.056"W	32.50
7955.00	67.600	13.300	7885.64	255.84	248.45	118.03	622465.42	602164.63	32°39'18.435"N	104°04'11.025"W	29.49
7971.00	70.600	17.200	7891.35	270.49	262.86	121.96	622469.35	602179.04	32°39'18.577"N	104°04'10.979"W	29.49
7991.00	74.800	18.200	7897.30	289.03	281.05	127.77	622475.16	602197.23	32°39'18.757"N	104°04'10.910"W	21.54
8006.00	79.400	15.200	7900.65	303.28	295.05	131.97	622479.35	602211.23	32°39'18.896"N	104°04'10.861"W	36.34
8021.00	83.000	14.500	7902.94	317.83	309.38	135.76	622483.15	602225.55	32°39'19.037"N	104°04'10.816"W	24.44
8036.00	85.000	15.900	7904.51	332.45	323.77	139.67	622487.06	602239.94	32°39'19.180"N	104°04'10.770"W	16.25
8084.00	89.800	16.700	7906.69	379.27	369.78	153.13	622500.52	602285.95	32°39'19.635"N	104°04'10.611"W	10.14
8117.00	89.700	14.700	7906.83	411.56	401.55	162.06	622509.44	602317.71	32°39'19.949"N	104°04'10.506"W	6.07
8146.00	89.200	10.900	7907.11	440.20	429.82	168.48	622515.87	602345.98	32°39'20.228"N	104°04'10.430"W	13.22
8211.00	89.200	10.500	7908.02	504.74	493.68	180.55	622527.93	602409.84	32°39'20.860"N	104°04'10.287"W	0.62
8275.00	89.200	7.300	7908.91	568.47	556.90	190.45	622537.83	602473.05	32°39'21.485"N	104°04'10.169"W	5.00
8334.00	90.000	5.700	7909.32	627.41	615.52	197.13	622544.51	602531.66	32°39'22.065"N	104°04'10.089"W	3.03



Actual Wellpath Report

No. 3H AWP

Page 7 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Parkway) Sec 15, T19S, R29E	Wellbore	No. 3H AWP
Facility	Parkway State Com No. 3H	Sidetrack from	No. 3 AWP at 7705.10 MD

WELLPATH DATA (208 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]
8398.00	89.200	2.400	7909.77	691.40	679.34	201.65	622549.03	602595.49	32°39'22.696"N	104°04'10.034"W	5.31
8461.00	89.200	1.400	7910.65	754.35	742.30	203.73	622551.12	602658.44	32°39'23.319"N	104°04'10.008"W	1.59
8525.00	89.200	1.200	7911.54	818.28	806.28	205.19	622552.57	602722.41	32°39'23.952"N	104°04'09.989"W	0.31
8588.00	89.200	1.500	7912.42	881.22	869.26	206.67	622554.05	602785.38	32°39'24.575"N	104°04'09.970"W	0.48
8651.00	88.400	358.100	7913.74	944.03	932.23	206.45	622553.83	602848.35	32°39'25.198"N	104°04'09.971"W	5.54
8717.00	88.900	358.700	7915.30	1009.71	998.19	204.61	622551.99	602914.30	32°39'25.851"N	104°04'09.991"W	1.18
8780.00	89.100	358.900	7916.40	1072.46	1061.16	203.29	622550.67	602977.27	32°39'26.474"N	104°04'10.004"W	0.45
8843.00	89.000	358.000	7917.44	1135.17	1124.13	201.59	622548.97	603040.24	32°39'27.097"N	104°04'10.022"W	1.44
8906.00	89.400	359.900	7918.32	1197.93	1187.11	200.43	622547.81	603103.21	32°39'27.720"N	104°04'10.034"W	3.08
9033.00	90.000	359.800	7918.99	1324.61	1314.11	200.10	622547.48	603230.20	32°39'28.977"N	104°04'10.034"W	0.48
9159.00	89.500	0.100	7919.54	1450.32	1440.11	199.99	622547.37	603356.19	32°39'30.224"N	104°04'10.032"W	0.46
9285.00	89.600	0.500	7920.53	1576.07	1566.10	200.65	622548.03	603482.17	32°39'31.470"N	104°04'10.020"W	0.33
9408.00	90.800	1.000	7920.10	1698.88	1689.09	202.26	622549.64	603605.14	32°39'32.687"N	104°04'09.998"W	1.06
9536.00	90.400	1.000	7918.76	1826.72	1817.06	204.49	622551.88	603733.11	32°39'33.953"N	104°04'09.968"W	0.31
9602.00	88.600	1.500	7919.33	1892.64	1883.04	205.93	622553.31	603799.08	32°39'34.606"N	104°04'09.949"W	2.83
9665.00	88.700	2.200	7920.82	1955.58	1945.99	207.97	622555.35	603862.02	32°39'35.229"N	104°04'09.924"W	1.12
9728.00	89.100	1.100	7922.03	2018.52	2008.95	209.78	622557.16	603924.98	32°39'35.852"N	104°04'09.901"W	1.86
9789.00	88.600	0.800	7923.25	2079.43	2069.93	210.79	622558.17	603985.95	32°39'36.455"N	104°04'09.887"W	0.96
9854.00	88.700	0.000	7924.78	2144.30	2134.91	211.24	622558.63	604050.93	32°39'37.098"N	104°04'09.880"W	1.24
9917.00	88.500	0.300	7926.32	2207.14	2197.89	211.41	622558.79	604113.90	32°39'37.721"N	104°04'09.876"W	0.57
9979.00	88.900	359.300	7927.73	2268.97	2259.87	211.19	622558.57	604175.88	32°39'38.335"N	104°04'09.877"W	1.74
10044.00	89.700	359.000	7928.52	2333.75	2324.86	210.23	622557.61	604240.86	32°39'38.978"N	104°04'09.886"W	1.31
10107.00	88.600	358.900	7929.46	2396.51	2387.84	209.07	622556.46	604303.84	32°39'39.601"N	104°04'09.898"W	1.75
10170.00	89.100	358.500	7930.72	2459.24	2450.81	207.64	622555.03	604366.80	32°39'40.224"N	104°04'09.913"W	1.02
10233.00	89.400	358.400	7931.54	2521.95	2513.78	205.94	622553.32	604429.77	32°39'40.847"N	104°04'09.931"W	0.50
10297.00	89.100	358.200	7932.38	2585.64	2577.75	204.04	622551.42	604493.73	32°39'41.480"N	104°04'09.951"W	0.56
10360.00	88.600	357.200	7933.65	2648.26	2640.69	201.51	622548.90	604556.66	32°39'42.103"N	104°04'09.979"W	1.77
10423.00	89.400	358.600	7934.75	2710.91	2703.63	199.21	622546.59	604619.60	32°39'42.726"N	104°04'10.004"W	2.56
10486.00	90.000	358.400	7935.08	2773.63	2766.61	197.56	622544.94	604682.57	32°39'43.349"N	104°04'10.022"W	1.00
10549.00	90.700	358.700	7934.69	2836.36	2829.59	195.96	622543.35	604745.55	32°39'43.972"N	104°04'10.038"W	1.21



Actual Wellpath Report

No. 3H AWP

Page 8 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Parkway) Sec 15, T19S, R29E	Wellbore	No. 3H AWB
Facility	Parkway State Com No. 3H	Sidetrack from	No. 3 AWB at 7705.10 MD

WELLPATH DATA (208 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]
10613.00	90.800	0.400	7933.85	2900.17	2893.58	195.46	622542.84	604809.53	32°39'44.605"N	104°04'10.042"W	2.66
10677.00	90.300	0.700	7933.24	2964.06	2957.57	196.08	622543.46	604873.52	32°39'45.238"N	104°04'10.033"W	0.91
10740.00	90.100	1.400	7933.02	3026.98	3020.56	197.23	622544.61	604936.50	32°39'45.861"N	104°04'10.018"W	1.16
10803.00	90.700	1.200	7932.58	3089.92	3083.54	198.66	622546.04	604999.48	32°39'46.485"N	104°04'10.000"W	1.00
10866.00	90.800	2.500	7931.75	3152.87	3146.50	200.69	622548.08	605062.43	32°39'47.107"N	104°04'09.974"W	2.07
10929.00	89.900	3.700	7931.37	3215.87	3209.41	204.10	622551.48	605125.33	32°39'47.730"N	104°04'09.932"W	2.38
10992.00	89.900	3.100	7931.48	3278.86	3272.30	207.84	622555.22	605188.22	32°39'48.352"N	104°04'09.887"W	0.95
11055.00	88.900	2.300	7932.14	3341.85	3335.22	210.80	622558.18	605251.14	32°39'48.974"N	104°04'09.850"W	2.03
11118.00	88.200	2.000	7933.73	3404.80	3398.16	213.17	622560.55	605314.07	32°39'49.597"N	104°04'09.821"W	1.21
11182.00	88.600	1.600	7935.52	3468.73	3462.10	215.18	622562.56	605378.00	32°39'50.230"N	104°04'09.795"W	0.88
11245.00	89.300	1.900	7936.68	3531.68	3525.06	217.10	622564.48	605440.96	32°39'50.853"N	104°04'09.771"W	1.21
11308.00	89.700	2.700	7937.22	3594.65	3588.01	219.63	622567.01	605503.90	32°39'51.475"N	104°04'09.740"W	1.42
11371.00	89.100	2.400	7937.88	3657.63	3650.94	222.43	622569.81	605566.83	32°39'52.098"N	104°04'09.705"W	1.06
11434.00	88.400	3.100	7939.26	3720.60	3713.85	225.45	622572.83	605629.73	32°39'52.720"N	104°04'09.668"W	1.57
11498.00	88.700	3.000	7940.88	3784.57	3777.74	228.86	622576.24	605693.62	32°39'53.353"N	104°04'09.626"W	0.49
11561.00	88.700	3.600	7942.31	3847.55	3840.62	232.48	622579.86	605756.49	32°39'53.975"N	104°04'09.582"W	0.95
11659.00	88.700	3.900	7944.53	3945.53	3938.38	238.89	622586.27	605854.25	32°39'54.942"N	104°04'09.504"W	0.31
11687.00	89.200	5.300	7945.04	3973.52	3966.29	241.13	622588.51	605882.15	32°39'55.218"N	104°04'09.477"W	5.31
11750.00	88.000	5.800	7946.58	4036.47	4028.97	247.23	622594.60	605944.83	32°39'55.838"N	104°04'09.404"W	2.06
11813.00	87.400	5.400	7949.11	4099.39	4091.62	253.37	622600.75	606007.47	32°39'56.458"N	104°04'09.330"W	1.14
11877.00	87.900	5.600	7951.74	4163.31	4155.27	259.50	622606.87	606071.12	32°39'57.087"N	104°04'09.257"W	0.84
11940.00	87.600	5.400	7954.21	4226.24	4217.93	265.53	622612.91	606133.77	32°39'57.707"N	104°04'09.184"W	0.57
12004.00	87.600	5.200	7956.89	4290.16	4281.60	271.44	622618.81	606197.44	32°39'58.337"N	104°04'09.113"W	0.31
12067.00	87.400	4.100	7959.64	4353.10	4344.34	276.54	622623.92	606260.17	32°39'58.957"N	104°04'09.052"W	1.77
12130.00	87.300	4.800	7962.55	4416.02	4407.08	281.42	622628.80	606322.90	32°39'59.578"N	104°04'08.993"W	1.12
12193.00	86.900	4.400	7965.74	4478.94	4469.80	286.47	622633.84	606385.61	32°40'00.199"N	104°04'08.932"W	0.90
12256.00	86.600	3.600	7969.31	4541.84	4532.54	290.86	622638.23	606448.35	32°40'00.819"N	104°04'08.879"W	1.35
12324.00	86.600	3.600	7973.34	4609.72	4600.29	295.12	622642.49	606516.09	32°40'01.490"N	104°04'08.827"W	0.00



Actual Wellpath Report

No. 3H AWP

Page 9 of 9



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Eddy County, NM	Well	No. 3H
Field	(Parkway) Sec 15, T19S, R29E	Wellbore	No. 3H AWB
Facility	Parkway State Com No. 3H	Sidetrack from	No. 3 AWB at 7705.10 MD

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
No. 3H PBHL		7960.00	4619.29	312.23	622659.60	606535.10	32°40'01.677"N	104°04'08.626"W	point

WELLPATH COMPOSITION					Ref Wellbore: No. 3H AWB	Ref Wellpath: No. 3H AWP
Start MD [ft]	End MD [ft]	Positional Uncertainty Model			Log Name/Comment	Wellbore
0.00	7705.10	Gyrodatta relative depth - Drop gyro or Multi-shot			Gyro - <67 - 8055>	No. 3 AWB
7705.10	12256.00	NaviTrak (Standard)			MWD - <7721 - 12256>	No. 3H AWB
12256.00	12324.00	Blind Drilling (std)			Projection to bit	No. 3H AWB