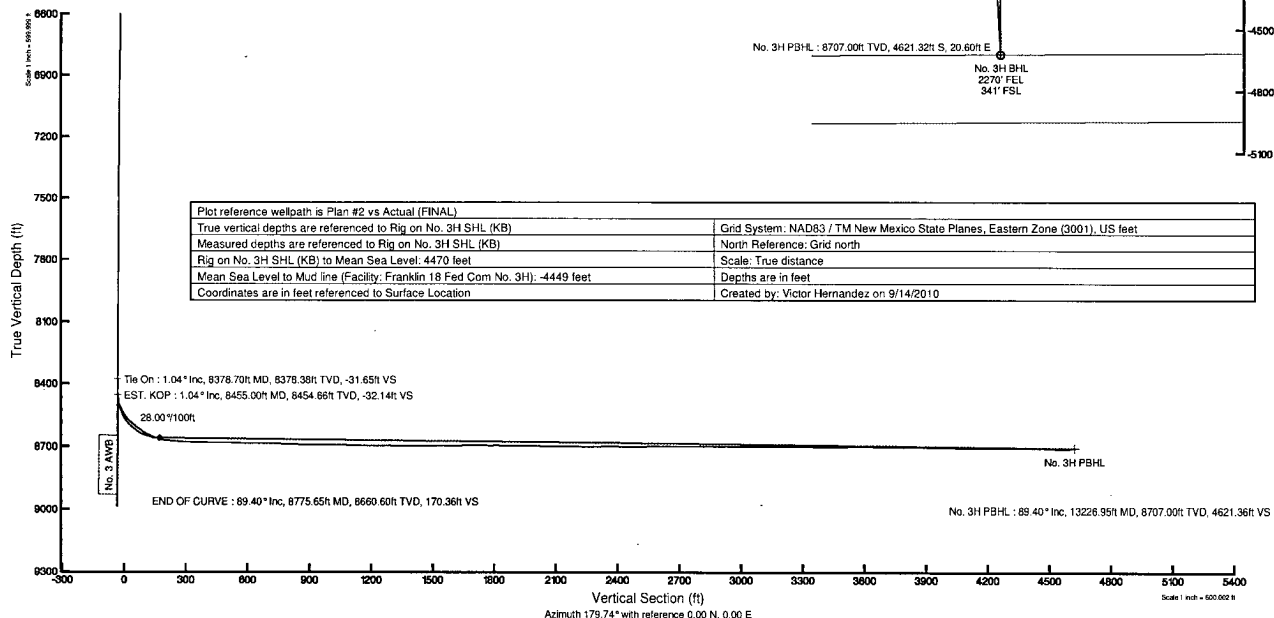


Slot: No. 3H SHL
Well: No. 3H
Wellbore: No. 3H PWB





Actual Wellpath Report

No. 3H AWP

Page 1 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 3H AWB
Facility	Franklin 18 Fed Com No. 3H	Sidetrack from	No. 3 AWB at 8378.70 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	0.999933	Report Generated	9/14/2010 at 2:52:32 PM
Convergence at slot	0.26° 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	686387.20	735955.20	33°01'20.072"N	103°51'36.322"W
Facility Reference Pt			686387.20	735955.20	33°01'20.072"N	103°51'36.322"W
Field Reference Pt			688326.60	735962.00	33°01'20.052"N	103°51'13.544"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 3H SHL (KB) to GL	21.00ft
Horizontal Reference Pt	Surface Location	Rig on No. 3H SHL (KB) to Mean Sea Level	4470.00ft
Vertical Reference Pt	Rig on No. 3H SHL (KB)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 3H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.74°

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Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 3H AWB
Facility	Franklin 18 Fed Com No. 3H	Sidetrack from	No. 3 AWB at 8378.70 MD

WELLPATH DATA (179 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	179.530	0.00	0.00	0.00	0.00	686387.20	735955.20	33°01'20.072"N	103°51'36.322"W	0.00
50.10	0.450	179.530	50.10	0.20	-0.20	0.00	686387.20	735955.00	33°01'20.070"N	103°51'36.322"W	0.90
145.90	0.050	345.860	145.90	0.53	-0.53	-0.01	686387.19	735954.67	33°01'20.066"N	103°51'36.323"W	0.52
233.90	0.260	304.630	233.90	0.38	-0.38	-0.18	686387.02	735954.82	33°01'20.068"N	103°51'36.325"W	0.26
323.70	0.310	305.590	323.70	0.12	-0.12	-0.54	686386.66	735955.08	33°01'20.070"N	103°51'36.329"W	0.06
413.60	0.570	300.820	413.59	-0.25	0.25	-1.13	686386.07	735955.45	33°01'20.074"N	103°51'36.336"W	0.29
502.70	0.530	288.020	502.69	-0.61	0.60	-1.90	686385.30	735955.80	33°01'20.078"N	103°51'36.345"W	0.14
592.20	0.510	297.580	592.19	-0.92	0.91	-2.65	686384.55	735956.11	33°01'20.081"N	103°51'36.353"W	0.10
681.60	0.450	292.060	681.58	-1.24	1.23	-3.32	686383.88	735956.43	33°01'20.084"N	103°51'36.361"W	0.08
771.00	0.420	281.100	770.98	-1.44	1.42	-3.97	686383.23	735956.62	33°01'20.086"N	103°51'36.369"W	0.10
866.30	0.390	283.010	866.28	-1.59	1.56	-4.63	686382.57	735956.76	33°01'20.087"N	103°51'36.377"W	0.03
961.40	0.430	274.690	961.38	-1.69	1.67	-5.30	686381.90	735956.87	33°01'20.088"N	103°51'36.385"W	0.08
1056.70	0.400	278.190	1056.67	-1.77	1.74	-5.99	686381.21	735956.94	33°01'20.089"N	103°51'36.393"W	0.04
1150.70	0.340	262.790	1150.67	-1.78	1.75	-6.59	686380.61	735956.95	33°01'20.089"N	103°51'36.400"W	0.12
1245.70	0.460	264.950	1245.67	-1.72	1.69	-7.25	686379.95	735956.89	33°01'20.089"N	103°51'36.407"W	0.13
1340.80	0.510	273.090	1340.77	-1.71	1.68	-8.05	686379.15	735956.87	33°01'20.089"N	103°51'36.417"W	0.09
1435.80	0.490	274.190	1435.76	-1.77	1.73	-8.88	686378.32	735956.93	33°01'20.089"N	103°51'36.427"W	0.02
1531.00	0.560	280.540	1530.96	-1.89	1.84	-9.74	686377.46	735957.04	33°01'20.090"N	103°51'36.437"W	0.10
1625.90	0.850	280.450	1625.85	-2.10	2.05	-10.89	686376.31	735957.25	33°01'20.092"N	103°51'36.450"W	0.31
1721.20	0.850	274.860	1721.14	-2.30	2.24	-12.29	686374.91	735957.44	33°01'20.094"N	103°51'36.467"W	0.09
1816.20	0.630	280.690	1816.13	-2.46	2.40	-13.50	686373.70	735957.60	33°01'20.096"N	103°51'36.481"W	0.24
1911.20	0.390	290.360	1911.13	-2.67	2.61	-14.32	686372.88	735957.81	33°01'20.098"N	103°51'36.490"W	0.27
2006.30	0.380	341.070	2006.23	-3.09	3.02	-14.73	686372.48	735958.22	33°01'20.102"N	103°51'36.495"W	0.35
2101.40	0.530	17.730	2101.32	-3.80	3.74	-14.69	686372.51	735958.94	33°01'20.109"N	103°51'36.495"W	0.34
2196.40	0.730	25.470	2196.32	-4.77	4.70	-14.30	686372.90	735959.90	33°01'20.119"N	103°51'36.490"W	0.23
2291.50	0.740	44.670	2291.41	-5.75	5.69	-13.61	686373.59	735960.89	33°01'20.129"N	103°51'36.482"W	0.26
2386.60	0.620	41.920	2386.50	-6.56	6.51	-12.83	686374.37	735961.70	33°01'20.137"N	103°51'36.473"W	0.13
2481.70	0.520	48.710	2481.60	-7.23	7.17	-12.16	686375.04	735962.37	33°01'20.143"N	103°51'36.465"W	0.13
2576.90	0.460	47.360	2576.80	-7.77	7.72	-11.56	686375.64	735962.92	33°01'20.149"N	103°51'36.458"W	0.06
2672.20	0.480	43.880	2672.09	-8.31	8.26	-11.00	686376.20	735963.46	33°01'20.154"N	103°51'36.451"W	0.04



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 3H AWP
Facility	Franklin 18 Fed Com No. 3H	Sidetrack from	No. 3 AWP at 8378.70 MD

WELLPATH DATA (179 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]
2767.30	0.450	54.040	2767.19	-8.82	8.77	-10.42	686376.78	735963.97	33°01'20.159"N	103°51'36.444"W	0.09
2862.40	0.460	55.170	2862.29	-9.25	9.21	-9.81	686377.39	735964.41	33°01'20.163"N	103°51'36.437"W	0.01
2957.70	0.520	47.650	2957.58	-9.76	9.72	-9.17	686378.03	735964.92	33°01'20.168"N	103°51'36.430"W	0.09
3053.00	0.570	40.080	3052.88	-10.41	10.37	-8.55	686378.65	735965.57	33°01'20.175"N	103°51'36.422"W	0.09
3147.50	0.550	32.140	3147.37	-11.15	11.11	-8.00	686379.20	735966.31	33°01'20.182"N	103°51'36.416"W	0.08
3242.60	0.540	31.920	3242.47	-11.92	11.88	-7.52	686379.68	735967.08	33°01'20.190"N	103°51'36.410"W	0.01
3337.90	0.460	32.070	3337.77	-12.62	12.59	-7.08	686380.12	735967.79	33°01'20.197"N	103°51'36.405"W	0.08
3433.10	0.570	30.710	3432.96	-13.35	13.32	-6.64	686380.56	735968.52	33°01'20.204"N	103°51'36.400"W	0.12
3528.20	0.440	32.610	3528.06	-14.06	14.03	-6.20	686381.00	735969.23	33°01'20.211"N	103°51'36.395"W	0.14
3623.10	0.300	38.510	3622.96	-14.56	14.53	-5.85	686381.35	735969.73	33°01'20.216"N	103°51'36.390"W	0.15
3718.20	0.260	51.160	3718.06	-14.89	14.86	-5.53	686381.67	735970.06	33°01'20.219"N	103°51'36.387"W	0.08
3813.40	0.180	77.790	3813.25	-15.05	15.03	-5.21	686381.99	735970.23	33°01'20.221"N	103°51'36.383"W	0.13
3908.50	0.160	70.020	3908.35	-15.13	15.11	-4.94	686382.26	735970.31	33°01'20.221"N	103°51'36.380"W	0.03
4003.70	0.130	85.480	4003.55	-15.18	15.16	-4.71	686382.49	735970.36	33°01'20.222"N	103°51'36.377"W	0.05
4098.70	0.130	68.110	4098.55	-15.23	15.21	-4.50	686382.70	735970.41	33°01'20.222"N	103°51'36.375"W	0.04
4193.70	0.140	55.720	4193.55	-15.34	15.32	-4.30	686382.90	735970.52	33°01'20.223"N	103°51'36.372"W	0.03
4288.80	0.100	56.280	4288.65	-15.45	15.43	-4.14	686383.06	735970.63	33°01'20.224"N	103°51'36.370"W	0.04
4383.90	0.150	62.990	4383.75	-15.55	15.53	-3.96	686383.24	735970.73	33°01'20.225"N	103°51'36.368"W	0.05
4478.80	0.110	81.860	4478.65	-15.62	15.60	-3.76	686383.44	735970.80	33°01'20.226"N	103°51'36.366"W	0.06
4574.20	0.120	86.800	4574.05	-15.63	15.62	-3.57	686383.63	735970.82	33°01'20.226"N	103°51'36.364"W	0.01
4669.40	0.120	94.110	4669.25	-15.63	15.62	-3.37	686383.83	735970.82	33°01'20.226"N	103°51'36.361"W	0.02
4764.40	0.100	92.420	4764.25	-15.62	15.61	-3.19	686384.01	735970.80	33°01'20.226"N	103°51'36.359"W	0.02
4859.50	0.150	117.270	4859.35	-15.56	15.55	-2.99	686384.21	735970.74	33°01'20.226"N	103°51'36.357"W	0.08
4954.40	0.110	107.100	4954.25	-15.47	15.46	-2.80	686384.40	735970.66	33°01'20.225"N	103°51'36.354"W	0.05
5049.60	0.130	96.030	5049.45	-15.43	15.42	-2.60	686384.60	735970.62	33°01'20.224"N	103°51'36.352"W	0.03
5144.90	0.060	204.240	5144.75	-15.38	15.37	-2.51	686384.69	735970.57	33°01'20.224"N	103°51'36.351"W	0.17
5240.10	0.010	40.210	5239.95	-15.34	15.33	-2.53	686384.67	735970.53	33°01'20.223"N	103°51'36.351"W	0.07
5335.30	0.120	43.330	5335.15	-15.42	15.41	-2.46	686384.74	735970.61	33°01'20.224"N	103°51'36.350"W	0.12
5430.30	0.070	35.490	5430.15	-15.54	15.53	-2.35	686384.85	735970.72	33°01'20.225"N	103°51'36.349"W	0.05
5525.40	0.110	0.730	5525.25	-15.67	15.66	-2.32	686384.88	735970.86	33°01'20.227"N	103°51'36.349"W	0.07



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 3H AWB
Facility	Franklin 18 Fed Com No. 3H	Sidetrack from	No. 3 AWB at 8378.70 MD

WELLPATH DATA (179 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]
5620.60	0.110	10.410	5620.45	-15.86	15.85	-2.30	686384.90	735971.04	33°01'20.229"N	103°51'36.349"W	0.02
5715.70	0.180	21.120	5715.55	-16.08	16.07	-2.23	686384.97	735971.27	33°01'20.231"N	103°51'36.348"W	0.08
5810.90	0.170	17.670	5810.75	-16.36	16.35	-2.13	686385.07	735971.55	33°01'20.234"N	103°51'36.347"W	0.02
5906.40	0.160	21.390	5906.25	-16.62	16.61	-2.04	686385.16	735971.81	33°01'20.236"N	103°51'36.346"W	0.02
6001.60	0.180	19.220	6001.45	-16.88	16.87	-1.95	686385.25	735972.07	33°01'20.239"N	103°51'36.344"W	0.02
6097.00	0.190	42.550	6096.85	-17.14	17.13	-1.79	686385.41	735972.33	33°01'20.241"N	103°51'36.343"W	0.08
6192.00	0.250	44.230	6191.85	-17.40	17.40	-1.54	686385.66	735972.59	33°01'20.244"N	103°51'36.340"W	0.06
6287.20	0.270	37.890	6287.05	-17.73	17.72	-1.26	686385.94	735972.92	33°01'20.247"N	103°51'36.336"W	0.04
6381.40	0.300	32.330	6381.25	-18.11	18.11	-0.99	686386.21	735973.30	33°01'20.251"N	103°51'36.333"W	0.04
6476.40	0.340	30.190	6476.24	-18.56	18.56	-0.71	686386.49	735973.76	33°01'20.255"N	103°51'36.330"W	0.04
6570.60	0.400	27.420	6570.44	-19.09	19.09	-0.42	686386.78	735974.29	33°01'20.261"N	103°51'36.326"W	0.07
6665.90	0.450	38.270	6665.74	-19.68	19.68	-0.04	686387.16	735974.88	33°01'20.266"N	103°51'36.322"W	0.10
6761.10	0.500	31.320	6760.94	-20.33	20.33	0.41	686387.61	735975.53	33°01'20.273"N	103°51'36.317"W	0.08
6856.20	0.480	22.880	6856.03	-21.05	21.05	0.78	686387.98	735976.25	33°01'20.280"N	103°51'36.312"W	0.08
6951.10	0.450	21.750	6950.93	-21.76	21.76	1.08	686388.28	735976.96	33°01'20.287"N	103°51'36.309"W	0.03
7046.30	0.450	26.770	7046.13	-22.44	22.44	1.38	686388.58	735977.64	33°01'20.294"N	103°51'36.305"W	0.04
7141.60	0.520	32.340	7141.42	-23.14	23.14	1.78	686388.98	735978.34	33°01'20.301"N	103°51'36.300"W	0.09
7237.00	0.520	38.080	7236.82	-23.84	23.85	2.28	686389.48	735979.05	33°01'20.308"N	103°51'36.294"W	0.05
7332.00	0.620	51.660	7331.82	-24.50	24.51	2.95	686390.15	735979.71	33°01'20.314"N	103°51'36.287"W	0.18
7427.40	0.940	57.870	7427.21	-25.23	25.25	4.02	686391.22	735980.44	33°01'20.321"N	103°51'36.274"W	0.35
7522.30	0.900	61.740	7522.09	-25.99	26.01	5.33	686392.53	735981.21	33°01'20.329"N	103°51'36.258"W	0.08
7617.30	0.880	61.060	7617.08	-26.69	26.72	6.63	686393.83	735981.92	33°01'20.336"N	103°51'36.243"W	0.02
7712.40	0.880	56.850	7712.17	-27.44	27.47	7.88	686395.08	735982.67	33°01'20.343"N	103°51'36.228"W	0.07
7807.80	0.880	59.240	7807.56	-28.21	28.25	9.12	686396.32	735983.44	33°01'20.351"N	103°51'36.214"W	0.04
7902.90	0.880	70.410	7902.65	-28.82	28.86	10.44	686397.64	735984.06	33°01'20.357"N	103°51'36.198"W	0.18
7997.90	0.950	67.230	7997.64	-29.36	29.41	11.85	686399.05	735984.61	33°01'20.362"N	103°51'36.182"W	0.09
8093.20	0.950	68.580	8092.92	-29.95	30.01	13.31	686400.51	735985.21	33°01'20.368"N	103°51'36.164"W	0.02
8188.50	1.060	72.760	8188.21	-30.49	30.56	14.89	686402.09	735985.76	33°01'20.373"N	103°51'36.146"W	0.14
8283.60	1.090	70.790	8283.29	-31.04	31.12	16.59	686403.79	735986.31	33°01'20.379"N	103°51'36.126"W	0.05
8378.70	1.040	68.680	8378.38	-31.65	31.73	18.24	686405.44	735986.93	33°01'20.385"N	103°51'36.107"W	0.07



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 3H AWB
Facility	Franklin 18 Fed Com No. 3H	Sidetrack from	No. 3 AWB at 8378.70 MD

WELLPATH DATA (179 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]
8399.00	0.900	58.800	8398.67	-31.79	31.88	18.55	686405.75	735987.08	33°01'20.386"N	103°51'36.103"W	1.07
8433.00	1.500	72.500	8432.67	-32.06	32.15	19.21	686406.40	735987.35	33°01'20.389"N	103°51'36.095"W	1.94
8465.00	5.700	165.200	8464.61	-30.65	30.74	20.01	686407.21	735985.94	33°01'20.375"N	103°51'36.086"W	18.63
8496.00	16.000	174.900	8495.02	-24.89	24.98	20.79	686407.99	735980.18	33°01'20.318"N	103°51'36.077"W	33.63
8528.00	25.600	175.600	8524.90	-13.57	13.67	21.71	686408.91	735968.87	33°01'20.206"N	103°51'36.067"W	30.01
8560.00	35.500	174.200	8552.42	2.61	-2.51	23.18	686410.38	735952.69	33°01'20.046"N	103°51'36.050"W	31.02
8589.00	44.200	175.400	8574.66	21.11	-21.00	24.85	686412.05	735934.20	33°01'19.863"N	103°51'36.032"W	30.12
8621.00	50.800	178.400	8596.27	44.66	-44.54	26.09	686413.29	735910.66	33°01'19.630"N	103°51'36.018"W	21.75
8652.00	53.600	183.100	8615.28	69.13	-69.02	25.75	686412.95	735886.18	33°01'19.388"N	103°51'36.024"W	15.00
8687.00	58.200	185.400	8634.90	98.01	-97.91	23.59	686410.79	735857.30	33°01'19.102"N	103°51'36.051"W	14.22
8719.00	65.500	184.800	8649.98	126.09	-126.00	21.09	686408.29	735829.21	33°01'18.824"N	103°51'36.081"W	22.87
8750.00	72.800	185.000	8661.01	154.92	-154.84	18.61	686405.81	735800.37	33°01'18.539"N	103°51'36.112"W	23.56
8779.00	79.500	183.900	8667.95	182.97	-182.90	16.43	686403.63	735772.32	33°01'18.261"N	103°51'36.139"W	23.39
8810.00	84.200	182.100	8672.34	213.59	-213.53	14.83	686402.03	735741.68	33°01'17.958"N	103°51'36.160"W	16.21
8842.00	84.600	180.300	8675.46	245.43	-245.37	14.16	686401.36	735709.85	33°01'17.643"N	103°51'36.169"W	5.74
8874.00	85.700	179.600	8678.17	277.31	-277.25	14.19	686401.39	735677.97	33°01'17.328"N	103°51'36.170"W	4.07
8906.00	87.400	179.600	8680.10	309.26	-309.19	14.42	686401.61	735646.03	33°01'17.012"N	103°51'36.170"W	5.31
8937.00	88.800	179.800	8681.12	340.24	-340.18	14.58	686401.78	735615.05	33°01'16.705"N	103°51'36.169"W	4.56
8969.00	89.300	178.400	8681.65	372.23	-372.17	15.08	686402.28	735583.06	33°01'16.389"N	103°51'36.165"W	4.65
9032.00	89.300	178.200	8682.42	435.21	-435.13	16.95	686404.15	735520.10	33°01'15.766"N	103°51'36.146"W	0.32
9095.00	88.900	178.500	8683.41	498.18	-498.10	18.76	686405.96	735457.13	33°01'15.143"N	103°51'36.128"W	0.79
9157.00	88.500	178.800	8684.82	560.15	-560.07	20.22	686407.42	735395.17	33°01'14.530"N	103°51'36.115"W	0.81
9222.00	89.800	178.900	8685.78	625.13	-625.05	21.53	686408.73	735330.20	33°01'13.887"N	103°51'36.103"W	2.01
9285.00	89.600	179.400	8686.11	688.13	-688.04	22.46	686409.66	735267.21	33°01'13.263"N	103°51'36.095"W	0.85
9349.00	88.400	178.800	8687.23	752.12	-752.02	23.47	686410.67	735203.23	33°01'12.630"N	103°51'36.087"W	2.10
9412.00	87.700	176.500	8689.38	815.03	-814.92	26.05	686413.25	735140.33	33°01'12.008"N	103°51'36.060"W	3.81
9444.00	88.000	178.400	8690.58	846.98	-846.87	27.47	686414.67	735108.39	33°01'11.692"N	103°51'36.045"W	6.01
9476.00	87.500	178.100	8691.83	878.95	-878.83	28.45	686415.65	735076.43	33°01'11.375"N	103°51'36.035"W	1.82
9539.00	90.000	178.400	8693.21	941.91	-941.78	30.37	686417.57	735013.49	33°01'10.753"N	103°51'36.016"W	4.00
9602.00	88.800	179.900	8693.87	1004.90	-1004.77	31.31	686418.50	734950.50	33°01'10.129"N	103°51'36.008"W	3.05



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 3H AWB
Facility	Franklin 18 Fed Com No. 3H	Sidetrack from	No. 3 AWB at 8378.70 MD

WELLPATH DATA (179 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]
9666.00	89.400	179.900	8694.87	1068.89	-1068.76	31.42	686418.62	734886.52	33°01'09.496"N	103°51'36.010"W	0.94
9726.00	89.000	179.800	8695.71	1128.88	-1128.75	31.57	686418.77	734826.53	33°01'08.903"N	103°51'36.011"W	0.69
9758.00	89.500	180.000	8696.13	1160.88	-1160.75	31.63	686418.83	734794.53	33°01'08.586"N	103°51'36.012"W	1.68
9824.00	88.700	180.300	8697.16	1226.87	-1226.74	31.46	686418.66	734728.55	33°01'07.933"N	103°51'36.018"W	1.29
9887.00	89.800	180.500	8697.99	1289.86	-1289.73	31.02	686418.22	734665.56	33°01'07.310"N	103°51'36.026"W	1.77
9950.00	89.900	180.600	8698.15	1352.85	-1352.73	30.41	686417.61	734602.56	33°01'06.687"N	103°51'36.037"W	0.22
10014.00	90.300	180.300	8698.04	1416.85	-1416.73	29.91	686417.11	734538.57	33°01'06.054"N	103°51'36.046"W	0.78
10077.00	90.400	180.500	8697.66	1479.84	-1479.72	29.47	686416.67	734475.58	33°01'05.430"N	103°51'36.055"W	0.35
10141.00	90.000	181.400	8697.43	1543.82	-1543.71	28.41	686415.61	734411.59	33°01'04.797"N	103°51'36.070"W	1.54
10203.00	91.400	180.700	8696.68	1605.80	-1605.70	27.27	686414.47	734349.61	33°01'04.184"N	103°51'36.087"W	2.52
10267.00	90.100	179.800	8695.84	1669.79	-1669.69	26.99	686414.19	734285.63	33°01'03.551"N	103°51'36.094"W	2.47
10330.00	89.700	180.100	8695.95	1732.79	-1732.69	27.05	686414.25	734222.63	33°01'02.928"N	103°51'36.096"W	0.79
10393.00	90.100	180.100	8696.06	1795.79	-1795.69	26.94	686414.14	734159.64	33°01'02.304"N	103°51'36.101"W	0.63
10457.00	89.800	179.900	8696.11	1859.79	-1859.69	26.94	686414.14	734095.64	33°01'01.671"N	103°51'36.104"W	0.56
10520.00	88.700	178.400	8696.94	1922.78	-1922.67	27.87	686415.07	734032.66	33°01'01.048"N	103°51'36.097"W	2.95
10583.00	89.300	180.100	8698.04	1985.76	-1985.65	28.70	686415.90	733969.68	33°01'00.425"N	103°51'36.090"W	2.86
10615.00	87.800	177.300	8698.85	2017.74	-2017.63	29.42	686416.62	733937.71	33°01'00.108"N	103°51'36.084"W	9.92
10679.00	89.300	177.700	8700.47	2081.67	-2081.55	32.21	686419.41	733873.79	33°00'59.476"N	103°51'36.054"W	2.43
10742.00	90.200	177.500	8700.74	2144.63	-2144.49	34.85	686422.05	733810.86	33°00'58.853"N	103°51'36.027"W	1.46
10805.00	89.300	178.000	8701.02	2207.59	-2207.44	37.33	686424.52	733747.91	33°00'58.230"N	103°51'36.001"W	1.63
10869.00	90.300	179.100	8701.24	2271.57	-2271.42	38.94	686426.14	733683.94	33°00'57.597"N	103°51'35.985"W	2.32
10932.00	90.200	179.700	8700.97	2334.57	-2334.42	39.60	686426.80	733620.95	33°00'56.974"N	103°51'35.981"W	0.97
10996.00	89.700	180.000	8701.02	2398.57	-2398.41	39.77	686426.97	733556.95	33°00'56.340"N	103°51'35.982"W	0.91
11059.00	89.600	179.500	8701.41	2461.57	-2461.41	40.05	686427.24	733493.96	33°00'55.717"N	103°51'35.982"W	0.81
11122.00	90.800	180.400	8701.19	2524.56	-2524.41	40.10	686427.30	733430.96	33°00'55.094"N	103°51'35.985"W	2.38
11186.00	91.000	181.400	8700.18	2588.54	-2588.39	39.10	686426.29	733366.98	33°00'54.461"N	103°51'36.000"W	1.59
11249.00	90.500	181.500	8699.36	2651.51	-2651.37	37.50	686424.70	733304.01	33°00'53.838"N	103°51'36.022"W	0.81
11313.00	89.600	181.900	8699.30	2715.47	-2715.34	35.60	686422.80	733240.05	33°00'53.205"N	103°51'36.048"W	1.54
11376.00	90.000	181.400	8699.52	2778.44	-2778.31	33.79	686420.99	733177.08	33°00'52.582"N	103°51'36.072"W	1.02
11439.00	89.500	181.200	8699.80	2841.41	-2841.30	32.36	686419.56	733114.10	33°00'51.959"N	103°51'36.093"W	0.85



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 3H AWB
Facility	Franklin 18 Fed Com No. 3H	Sidetrack from	No. 3 AWB at 8378.70 MD

WELLPATH DATA (179 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]
11503.00	90.400	182.500	8699.85	2905.37	-2905.26	30.29	686417.49	733050.14	33°00'51.326"N	103°51'36.120"W	2.47
11566.00	89.500	182.300	8699.91	2968.30	-2968.20	27.66	686414.85	732987.20	33°00'50.704"N	103°51'36.155"W	1.46
11629.00	90.100	182.900	8700.13	3031.22	-3031.14	24.80	686412.00	732924.27	33°00'50.081"N	103°51'36.191"W	1.35
11692.00	90.100	184.300	8700.02	3094.07	-3094.01	20.84	686408.04	732861.40	33°00'49.459"N	103°51'36.241"W	2.22
11755.00	89.400	183.000	8700.29	3156.93	-3156.88	16.83	686404.03	732798.54	33°00'48.837"N	103°51'36.292"W	2.34
11819.00	90.400	183.300	8700.40	3220.81	-3220.78	13.32	686400.52	732734.64	33°00'48.205"N	103°51'36.336"W	1.63
11882.00	89.400	182.100	8700.51	3283.73	-3283.71	10.35	686397.55	732671.71	33°00'47.583"N	103°51'36.374"W	2.48
11914.00	89.500	182.100	8700.82	3315.70	-3315.69	9.18	686396.38	732639.74	33°00'47.267"N	103°51'36.390"W	0.31
11977.00	89.700	182.500	8701.26	3378.63	-3378.64	6.65	686393.85	732576.80	33°00'46.644"N	103°51'36.423"W	0.71
12040.00	89.500	182.800	8701.70	3441.55	-3441.57	3.73	686390.93	732513.87	33°00'46.021"N	103°51'36.460"W	0.57
12104.00	91.400	183.200	8701.20	3505.44	-3505.48	0.39	686387.59	732449.97	33°00'45.389"N	103°51'36.503"W	3.03
12167.00	90.700	183.000	8700.04	3568.32	-3568.37	-3.02	686384.18	732387.07	33°00'44.767"N	103°51'36.547"W	1.16
12230.00	88.600	181.900	8700.43	3631.25	-3631.31	-5.71	686381.49	732324.14	33°00'44.145"N	103°51'36.581"W	3.76
12296.00	88.600	181.500	8702.04	3697.19	-3697.26	-7.67	686379.53	732258.19	33°00'43.492"N	103°51'36.608"W	0.61
12357.00	90.700	181.800	8702.41	3758.15	-3758.23	-9.43	686377.77	732197.23	33°00'42.889"N	103°51'36.632"W	3.48
12420.00	90.800	180.700	8701.59	3821.12	-3821.21	-10.80	686376.40	732134.25	33°00'42.266"N	103°51'36.651"W	1.75
12483.00	88.800	179.900	8701.81	3884.12	-3884.20	-11.13	686376.07	732071.26	33°00'41.643"N	103°51'36.658"W	3.42
12547.00	88.900	179.100	8703.09	3948.10	-3948.19	-10.57	686376.63	732007.28	33°00'41.010"N	103°51'36.655"W	1.26
12611.00	88.700	179.100	8704.43	4012.08	-4012.17	-9.57	686377.63	731943.31	33°00'40.377"N	103°51'36.647"W	0.31
12674.00	89.400	178.400	8705.48	4075.06	-4075.14	-8.19	686379.01	731880.34	33°00'39.753"N	103°51'36.634"W	1.57
12737.00	89.800	177.200	8705.92	4138.03	-4138.09	-5.78	686381.42	731817.39	33°00'39.130"N	103°51'36.609"W	2.01
12799.00	89.600	177.100	8706.24	4199.96	-4200.01	-2.69	686384.51	731755.47	33°00'38.518"N	103°51'36.576"W	0.36
12863.00	89.100	176.300	8706.97	4263.87	-4263.90	0.99	686388.19	731691.59	33°00'37.885"N	103°51'36.536"W	1.47
12927.00	89.300	176.400	8707.86	4327.75	-4327.77	5.06	686392.26	731627.73	33°00'37.253"N	103°51'36.492"W	0.35
12991.00	90.100	176.400	8708.20	4391.64	-4391.64	9.08	686396.28	731563.86	33°00'36.621"N	103°51'36.448"W	1.25
13054.00	89.600	177.500	8708.36	4454.56	-4454.55	12.44	686399.63	731500.96	33°00'35.999"N	103°51'36.412"W	1.92
13117.00	88.200	176.600	8709.57	4517.48	-4517.45	15.68	686402.88	731438.06	33°00'35.376"N	103°51'36.377"W	2.64
13168.00	90.300	177.300	8710.24	4568.41	-4568.37	18.39	686405.59	731387.14	33°00'34.872"N	103°51'36.348"W	4.34
13210.00	90.300	177.300	8710.02	4610.37	-4610.32	20.37	686407.57	731345.19	33°00'34.457"N	103°51'36.327"W	0.00



Actual Wellpath Report

No. 3H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 3H SHL
Area	Chaves County, NM	Well	No. 3H
Field	(Franklin) Sec 18, T15S, R31E	Wellbore	No. 3H AWB
Facility	Franklin 18 Fed Com No. 3H	Sidetrack from	No. 3 AWB at 8378.70 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		8707.00	-4621.32	20.60	686407.80	731334.20	33°00'34.348"N	103°51'36.325"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	8378.70	Gyrodata relative depth - Drop gyro or Multi-shot			GYRO (50.1 - 8989.5)		No. 3 AWB	
8378.70	13168.00	NaviTrak (Standard)			MWD (8399 - 13168)		No. 3H AWB	
13168.00	13210.00	Blind Drilling (std)			Projection to bit		No. 3H AWB	