



Cimarex Energy Co. of Colorado

Location: Eddy County, NM
Field: (Da Vinci) Sec. 7, T25S, R27E
Facility: Da Vinci 7 Federal Corn No.3H

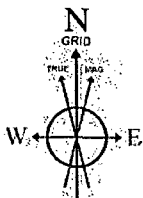
Slot: No.3H SHL
Well: No.3H ST01
Wellbore: No.3H ST01 PWB



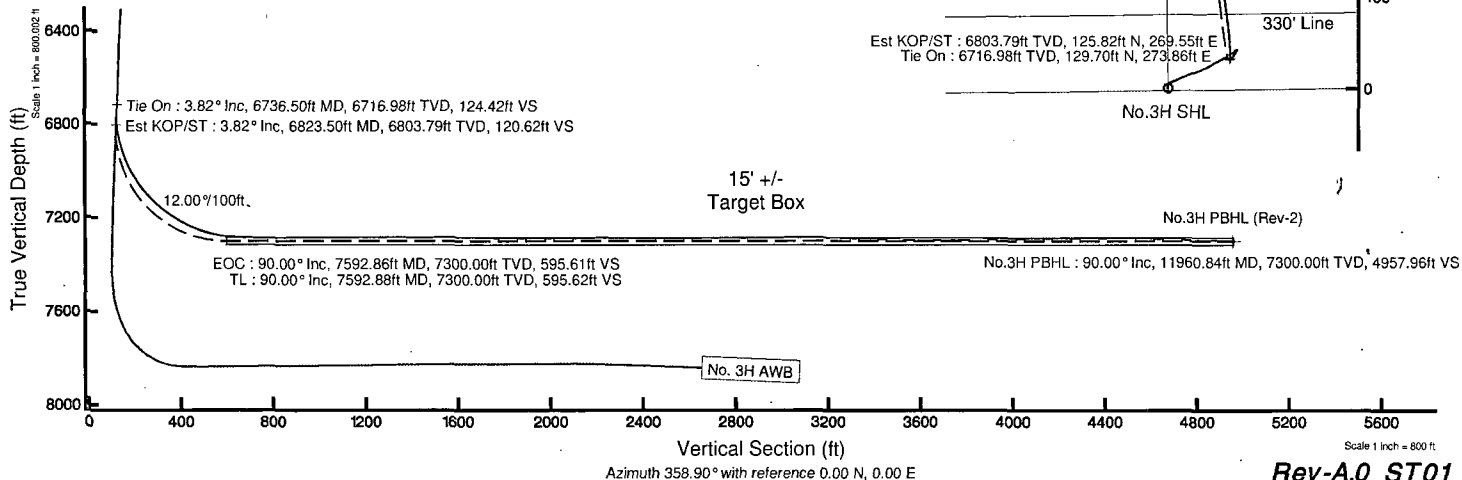
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Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	6736.50	3.820	228.000	6716.98	129.70	273.86	0.00	124.42
Est KOP/ST	6823.50	3.820	228.000	6803.79	125.82	269.55	0.00	120.62
EOC	7592.86	90.000	355.992	7300.00	599.75	210.17	12.00	595.61
TL	7592.88	90.000	355.992	7300.00	599.77	210.17	2.00	595.62
No.3H PBHL	11960.84	90.000	355.992	7300.00	4957.05	-95.11	0.00	4957.96

Plot reference wellpath is Rev-A.0 ST01	
True vertical depths are referenced to Cactus 122 (RT)	Grid System: NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Cactus 122 (RT)	North Reference: Grid north
Cactus 122 (RT) to Mean Sea Level: 3239.5 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot No.3H SHL): -3211 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gembry on 10/22/2012



BGGM (1945.0 to 2014.0) Dip: 59.92° Field: 48353.7 nT
Magnetic North is 7.83 degrees East of True North (at 09/05/2012)
Grid North is 0.06 degrees East of True North
To correct azimuth from True to Grid subtract 0.06 degrees
To correct azimuth from Magnetic to Grid add 7.77 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.77 = 97.77





Actual Wellpath Report

No.3H ST01 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co. of Colorado	Slot	No.3H SHL
Area	Eddy County, NM	Well	No.3H ST01
Field	(Da Vinci) Sec. 7, T25S, R27E	Wellbore	No.3H ST01 AWB
Facility	Da Vinci 7 Federal Com No.3H	Sidetrack from	No. 3H AWB at 6736.50 MD

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	Gentbry
Scale	0.99991	Report Generated	11/06/2012 at 8:30:31 AM
Convergence at slot	0.06° East	Database/Source file	WA Midland/No.3H_ST01_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	574486.10	413706.00	32°08'14.320"N	104°13'34.458"W
Facility Reference Pt			574486.10	413706.00	32°08'14.320"N	104°13'34.458"W
Field Reference Pt			575554.70	414038.30	32°08'17.598"N	104°13'22.026"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Cactus 122 (RT) to Facility Vertical Datum	28.50ft
Horizontal Reference Pt	Slot	Cactus 122 (RT) to Mean Sea Level	3239.50ft
Vertical Reference Pt	Cactus 122 (RT)	Cactus 122 (RT) to Mud Line at Slot (No.3H SHL)	28.50ft
MD Reference Pt	Cactus 122 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	358.90°



Actual Wellpath Report

No.3H ST01 AWP

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REFERENCE WELLPATH IDENTIFICATION					
Operator	Cimarex Energy Co. of Colorado			Slot	No.3H SHL
Area	Eddy County, NM			Well	No.3H ST01
Field	(Da Vinci) Sec. 7, T25S, R27E			Wellbore	No.3H ST01 AWB
Facility	Da Vinci 7 Federal Com No.3H			Sidetrack from	No. 3H AWB at 6736.50 MD

WELLPATH DATA (147 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
0.00	0.000	332.630	0.00	0.00	0.00	0.00	574486.10	413706.00	32°08'14.320"N	104°13'34.458"W	0.00	
100.00	0.870	332.630	100.00	0.68	0.67	-0.35	574485.75	413706.67	32°08'14.327"N	104°13'34.462"W	0.87	
200.00	1.030	333.470	199.98	2.17	2.15	-1.10	574485.00	413708.15	32°08'14.342"N	104°13'34.471"W	0.16	
216.00	0.740	316.690	215.98	2.38	2.36	-1.23	574484.87	413708.36	32°08'14.344"N	104°13'34.472"W	2.41	
300.00	0.600	345.480	299.97	3.21	3.18	-1.72	574484.38	413709.18	32°08'14.352"N	104°13'34.478"W	0.43	
405.00	0.710	351.320	404.97	4.39	4.35	-1.95	574484.15	413710.35	32°08'14.364"N	104°13'34.481"W	0.12	
499.50	0.640	356.480	499.46	5.50	5.46	-2.07	574484.03	413711.46	32°08'14.375"N	104°13'34.482"W	0.10	
594.00	0.670	357.570	593.96	6.58	6.54	-2.13	574483.97	413712.54	32°08'14.385"N	104°13'34.483"W	0.03	
688.50	0.720	1.210	688.45	7.72	7.68	-2.14	574483.96	413713.68	32°08'14.397"N	104°13'34.483"W	0.07	
783.00	0.850	2.400	782.94	9.01	8.98	-2.10	574484.00	413714.98	32°08'14.409"N	104°13'34.482"W	0.14	
877.50	0.860	6.650	877.43	10.42	10.38	-1.99	574484.11	413716.38	32°08'14.423"N	104°13'34.481"W	0.07	
972.00	1.200	13.400	971.91	12.08	12.05	-1.68	574484.42	413718.05	32°08'14.440"N	104°13'34.477"W	0.38	
1066.50	1.580	33.900	1066.39	14.10	14.09	-0.72	574485.38	413720.09	32°08'14.460"N	104°13'34.466"W	0.66	
1161.00	2.280	45.740	1160.83	16.46	16.49	1.35	574487.45	413722.48	32°08'14.484"N	104°13'34.442"W	0.85	
1255.50	2.660	52.420	1255.24	19.05	19.13	4.44	574490.54	413725.13	32°08'14.510"N	104°13'34.406"W	0.50	
1350.00	3.260	56.340	1349.62	21.80	21.96	8.41	574494.51	413727.96	32°08'14.538"N	104°13'34.360"W	0.67	
1444.50	3.750	57.110	1443.94	24.87	25.13	13.24	574499.34	413731.13	32°08'14.569"N	104°13'34.304"W	0.52	
1539.00	4.390	65.570	1538.20	27.93	28.30	19.13	574505.23	413734.30	32°08'14.600"N	104°13'34.235"W	0.93	
1633.50	4.860	67.780	1632.40	30.81	31.31	26.13	574512.23	413737.31	32°08'14.630"N	104°13'34.154"W	0.53	
1728.00	5.530	67.750	1726.51	33.89	34.55	34.05	574520.15	413740.55	32°08'14.662"N	104°13'34.062"W	0.71	
1822.50	5.540	67.460	1820.57	37.20	38.02	42.48	574528.57	413744.02	32°08'14.696"N	104°13'33.964"W	0.03	
1917.00	6.230	62.190	1914.57	41.17	42.16	51.23	574537.32	413748.16	32°08'14.737"N	104°13'33.862"W	0.93	
2011.50	8.100	68.590	2008.33	45.79	46.99	61.96	574548.06	413752.98	32°08'14.785"N	104°13'33.737"W	2.15	
2106.00	9.190	68.860	2101.75	50.69	52.14	75.20	574561.29	413758.13	32°08'14.836"N	104°13'33.583"W	1.15	
2200.50	9.340	69.190	2195.02	55.86	57.58	89.40	574575.50	413763.58	32°08'14.889"N	104°13'33.418"W	0.17	
2295.00	9.360	68.350	2288.26	61.14	63.14	103.71	574589.81	413769.14	32°08'14.944"N	104°13'33.251"W	0.15	
2389.50	8.860	68.710	2381.57	66.35	68.62	117.64	574603.73	413774.62	32°08'14.998"N	104°13'33.089"W	0.53	
2484.00	8.820	68.350	2474.95	71.41	73.94	131.15	574617.24	413779.93	32°08'15.051"N	104°13'32.932"W	0.07	
2578.50	8.270	65.640	2568.40	76.63	79.41	144.08	574630.16	413785.41	32°08'15.105"N	104°13'32.782"W	0.72	
2673.00	7.600	68.430	2662.00	81.50	84.51	156.08	574642.17	413790.51	32°08'15.155"N	104°13'32.642"W	0.82	
2767.50	7.800	65.350	2755.64	86.25	89.49	167.72	574653.81	413795.48	32°08'15.204"N	104°13'32.507"W	0.49	
2862.00	6.890	62.690	2849.37	91.32	94.76	178.59	574664.67	413800.75	32°08'15.256"N	104°13'32.380"W	1.03	
2956.50	6.470	62.540	2943.23	96.19	99.82	188.35	574674.43	413805.81	32°08'15.306"N	104°13'32.267"W	0.44	
3051.00	6.210	52.490	3037.15	101.58	105.38	197.13	574683.21	413811.37	32°08'15.361"N	104°13'32.164"W	1.20	
3145.50	6.360	65.450	3131.09	106.70	110.67	205.94	574692.02	413816.66	32°08'15.414"N	104°13'32.062"W	1.51	
3240.00	6.080	63.790	3225.03	110.91	115.06	215.19	574701.27	413821.05	32°08'15.457"N	104°13'31.954"W	0.35	
3334.50	5.650	60.710	3319.04	115.23	119.54	223.74	574709.82	413825.53	32°08'15.501"N	104°13'31.855"W	0.56	
3429.00	5.160	60.800	3413.12	119.43	123.89	231.51	574717.59	413829.88	32°08'15.544"N	104°13'31.764"W	0.52	
3523.50	4.690	61.810	3507.27	123.19	127.79	238.62	574724.70	413833.78	32°08'15.583"N	104°13'31.682"W	0.51	
3618.00	4.660	61.010	3601.45	126.74	131.48	245.38	574731.46	413837.46	32°08'15.619"N	104°13'31.603"W	0.08	
3712.50	4.420	60.820	3695.66	130.25	135.11	251.92	574738.00	413841.10	32°08'15.655"N	104°13'31.527"W	0.25	
3807.00	4.130	62.540	3789.89	133.48	138.46	258.12	574744.20	413844.44	32°08'15.688"N	104°13'31.455"W	0.34	
3901.50	3.690	58.080	3884.17	136.55	141.63	263.72	574749.80	413847.62	32°08'15.719"N	104°13'31.389"W	0.57	
3996.00	3.280	59.260	3978.50	139.44	144.62	268.63	574754.70	413850.61	32°08'15.749"N	104°13'31.332"W	0.44	
4090.50	2.920	51.020	4072.86	142.26	147.52	272.82	574758.89	413853.51	32°08'15.778"N	104°13'31.284"W	0.61	



Actual Wellpath Report

No.3H ST01 AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co. of Colorado	Slot	No.3H SHL
Area	Eddy County, NM	Well	No.3H ST01
Field	(Da Vinci) Sec. 7, T25S, R27E	Wellbore	No.3H ST01 AWB
Facility	Da Vinci 7 Federal Com No.3H	Sidetrack from	No. 3H AWB at 6736.50 MD

WELLPATH DATA (147 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
4185.00	2.690	73.580	4167.25	144.32	149.66	276.82	574762.89	413855.65	32°08'15.799"N	104°13'31.237"W	1.19	
4279.50	2.520	50.060	4261.65	146.21	151.62	280.54	574766.61	413857.61	32°08'15.818"N	104°13'31.194"W	1.14	
4374.00	2.350	59.510	4356.07	148.46	153.94	283.80	574769.87	413859.92	32°08'15.841"N	104°13'31.156"W	0.46	
4468.50	1.990	46.220	4450.50	150.53	156.06	286.65	574772.73	413862.04	32°08'15.862"N	104°13'31.123"W	0.65	
4563.00	1.750	40.780	4544.95	152.71	158.28	288.78	574774.86	413864.27	32°08'15.884"N	104°13'31.098"W	0.32	
4657.50	1.700	50.260	4639.41	154.66	160.27	290.80	574776.88	413866.26	32°08'15.904"N	104°13'31.074"W	0.31	
4752.00	1.580	56.510	4733.87	156.24	161.89	292.97	574779.04	413867.87	32°08'15.920"N	104°13'31.049"W	0.23	
4846.50	1.520	54.650	4828.34	157.64	163.33	295.08	574781.15	413869.32	32°08'15.934"N	104°13'31.025"W	0.08	
4941.00	1.370	56.280	4922.81	158.95	164.68	297.04	574783.11	413870.67	32°08'15.947"N	104°13'31.002"W	0.16	
5035.50	1.130	62.940	5017.28	159.97	165.73	298.81	574784.88	413871.72	32°08'15.958"N	104°13'30.981"W	0.30	
5130.00	1.020	66.140	5111.77	160.71	166.50	300.41	574786.48	413872.48	32°08'15.965"N	104°13'30.963"W	0.13	
5224.50	0.760	90.830	5206.26	161.01	166.83	301.80	574787.87	413872.81	32°08'15.968"N	104°13'30.946"W	0.48	
5319.00	0.610	90.470	5300.75	160.97	166.82	302.93	574789.00	413872.80	32°08'15.968"N	104°13'30.933"W	0.16	
5413.50	0.430	340.930	5395.25	161.30	167.15	303.32	574789.39	413873.13	32°08'15.971"N	104°13'30.929"W	0.91	
5508.00	0.520	312.260	5489.74	161.93	167.77	302.89	574788.96	413873.76	32°08'15.978"N	104°13'30.934"W	0.27	
5602.50	0.620	275.840	5584.24	162.29	168.11	302.06	574788.13	413874.10	32°08'15.981"N	104°13'30.943"W	0.39	
5697.00	1.000	171.410	5678.73	161.53	167.35	301.67	574787.75	413873.33	32°08'15.973"N	104°13'30.948"W	1.38	
5791.50	1.290	233.400	5773.22	160.09	165.90	300.94	574787.02	413871.88	32°08'15.959"N	104°13'30.956"W	1.28	
5886.00	1.830	207.540	5867.68	158.15	163.93	299.39	574785.46	413869.91	32°08'15.940"N	104°13'30.974"W	0.93	
5980.50	1.840	215.360	5962.14	155.61	161.35	297.82	574783.89	413867.34	32°08'15.914"N	104°13'30.993"W	0.26	
6075.00	2.020	198.600	6056.58	152.82	158.54	296.41	574782.48	413864.52	32°08'15.886"N	104°13'31.009"W	0.62	
6169.50	2.070	195.210	6151.02	149.61	155.31	295.43	574781.50	413861.30	32°08'15.854"N	104°13'31.021"W	0.14	
6264.00	3.400	211.190	6245.41	145.61	151.27	293.53	574779.60	413857.25	32°08'15.814"N	104°13'31.043"W	1.61	
6358.50	3.900	206.310	6339.72	140.39	145.99	290.65	574776.73	413851.97	32°08'15.762"N	104°13'31.076"W	0.62	
6453.00	3.520	221.770	6434.03	135.41	140.94	287.30	574773.37	413846.93	32°08'15.712"N	104°13'31.115"W	1.13	
6547.50	3.500	231.810	6528.35	131.54	137.00	283.10	574769.17	413842.98	32°08'15.673"N	104°13'31.164"W	0.65	
6642.00	3.490	233.650	6622.67	128.14	133.51	278.51	574764.59	413839.50	32°08'15.639"N	104°13'31.218"W	0.12	
6736.50	3.820	228.000	6716.98	124.42	129.70	273.86	574759.93	413835.68	32°08'15.601"N	104°13'31.272"W	0.52	
6781.00	3.400	259.500	6761.40	123.23	128.46	271.46	574757.53	413834.45	32°08'15.589"N	104°13'31.300"W	4.49	
6848.00	7.700	356.400	6828.17	127.40	132.59	269.22	574755.29	413838.58	32°08'15.630"N	104°13'31.326"W	13.10	
6880.00	11.200	7.700	6859.73	132.62	137.81	269.50	574755.57	413843.80	32°08'15.682"N	104°13'31.322"W	12.33	
6912.00	15.100	6.700	6890.89	139.82	145.03	270.40	574756.48	413851.02	32°08'15.753"N	104°13'31.312"W	12.21	
6943.00	18.700	2.700	6920.54	148.78	154.01	271.11	574757.18	413860.00	32°08'15.842"N	104°13'31.303"W	12.20	
6975.00	22.300	358.900	6950.51	159.98	165.21	271.23	574757.31	413871.19	32°08'15.953"N	104°13'31.302"W	11.99	
7007.00	25.400	357.900	6979.78	172.91	178.14	270.86	574756.94	413884.12	32°08'16.081"N	104°13'31.306"W	9.77	
7038.00	29.500	357.500	7007.28	187.20	192.42	270.29	574756.36	413898.40	32°08'16.222"N	104°13'31.313"W	13.24	
7070.00	33.100	356.800	7034.62	203.81	209.02	269.46	574755.53	413915.00	32°08'16.386"N	104°13'31.322"W	11.31	
7102.00	35.900	354.900	7060.99	221.90	227.09	268.13	574754.21	413933.07	32°08'16.565"N	104°13'31.337"W	9.37	
7133.00	39.500	353.900	7085.51	240.80	245.95	266.28	574752.35	413951.93	32°08'16.752"N	104°13'31.359"W	11.78	
7165.00	42.700	353.900	7109.62	261.75	266.87	264.04	574750.12	413972.84	32°08'16.959"N	104°13'31.384"W	10.00	
7197.00	46.300	353.300	7132.44	284.08	289.15	261.54	574747.62	413995.13	32°08'17.179"N	104°13'31.413"W	11.33	
7228.00	49.800	353.600	7153.16	307.03	312.05	258.91	574744.99	414018.02	32°08'17.406"N	104°13'31.443"W	11.31	
7260.00	53.400	353.900	7173.04	332.00	336.98	256.18	574742.26	414042.95	32°08'17.652"N	104°13'31.475"W	11.27	
7292.00	56.600	353.400	7191.39	358.10	363.03	253.28	574739.36	414068.99	32°08'17.910"N	104°13'31.508"W	10.08	
7323.00	59.500	353.900	7207.79	384.29	389.17	250.38	574736.45	414095.13	32°08'18.169"N	104°13'31.542"W	9.45	



Actual Wellpath Report

No.3H ST01 AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co. of Colorado	Slot	No.3H SHL
Area	Eddy County, NM	Well	No.3H ST01
Field	(Da Vinci) Sec. 7, T25S, R27E	Wellbore	No.3H ST01 AWB
Facility	Da Vinci 7 Federal Com No.3H	Sidetrack from	No. 3H AWP at 6736.50 MD

WELLPATH DATA (147 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
7355.00	62.200	354.500	7223.38	412.14	416.97	247.55	574733.63	414122.93	32°08'18.444"N	104°13'31.574"W	8.59	
7387.00	65.600	354.400	7237.45	440.79	445.57	244.77	574730.85	414151.53	32°08'18.727"N	104°13'31.606"W	10.63	
7418.00	69.700	354.200	7249.24	469.36	474.09	241.93	574728.00	414180.05	32°08'19.009"N	104°13'31.639"W	13.24	
7449.00	74.000	354.600	7258.89	498.72	503.40	239.05	574725.13	414209.35	32°08'19.299"N	104°13'31.672"W	13.93	
7481.00	76.500	354.700	7267.04	529.58	534.21	236.17	574722.25	414240.16	32°08'19.604"N	104°13'31.705"W	7.82	
7512.00	78.600	354.800	7273.72	559.77	564.35	233.40	574719.48	414270.30	32°08'19.903"N	104°13'31.737"W	6.78	
7544.00	81.900	354.700	7279.14	591.22	595.75	230.51	574716.59	414301.70	32°08'20.213"N	104°13'31.770"W	10.32	
7576.00	86.300	355.200	7282.43	622.97	627.45	227.71	574713.79	414333.39	32°08'20.527"N	104°13'31.803"W	13.84	
7600.00	87.400	355.200	7283.75	646.88	651.33	225.71	574711.79	414357.27	32°08'20.763"N	104°13'31.826"W	4.58	
7632.00	88.700	355.400	7284.84	678.80	683.20	223.09	574709.17	414389.14	32°08'21.079"N	104°13'31.856"W	4.11	
7664.00	89.000	355.600	7285.48	710.73	715.10	220.58	574706.66	414421.03	32°08'21.394"N	104°13'31.885"W	1.13	
7696.00	89.500	355.100	7285.90	742.67	746.99	217.98	574704.06	414452.92	32°08'21.710"N	104°13'31.914"W	2.21	
7791.00	90.800	355.700	7285.65	837.49	841.68	210.36	574696.45	414547.60	32°08'22.647"N	104°13'32.002"W	1.51	
7885.00	91.300	356.200	7283.93	931.35	935.43	203.73	574689.81	414641.34	32°08'23.575"N	104°13'32.078"W	0.75	
7980.00	89.800	354.900	7283.02	1026.18	1030.13	196.36	574682.44	414736.04	32°08'24.512"N	104°13'32.163"W	2.09	
8075.00	89.800	354.300	7283.35	1120.91	1124.71	187.42	574673.50	414830.61	32°08'25.448"N	104°13'32.265"W	0.63	
8170.00	90.600	354.100	7283.02	1215.59	1219.22	177.82	574663.90	414925.11	32°08'26.383"N	104°13'32.376"W	0.87	
8264.00	89.100	354.200	7283.26	1309.26	1312.73	168.24	574654.32	415018.61	32°08'27.309"N	104°13'32.486"W	1.60	
8360.00	89.700	354.200	7284.27	1404.93	1408.23	158.53	574644.62	415114.10	32°08'28.254"N	104°13'32.598"W	0.62	
8455.00	90.700	354.600	7283.94	1499.64	1502.78	149.26	574635.35	415208.64	32°08'29.189"N	104°13'32.705"W	1.13	
8551.00	89.000	355.000	7284.19	1595.39	1598.38	140.56	574626.65	415304.23	32°08'30.136"N	104°13'32.805"W	1.82	
8645.00	89.100	355.400	7285.75	1689.18	1692.04	132.70	574618.79	415397.88	32°08'31.062"N	104°13'32.895"W	0.44	
8740.00	89.400	355.000	7286.99	1783.97	1786.70	124.75	574610.84	415492.53	32°08'31.999"N	104°13'32.987"W	0.53	
8836.00	90.600	355.000	7286.99	1879.75	1882.33	116.38	574602.47	415588.16	32°08'32.945"N	104°13'33.083"W	1.25	
8931.00	89.400	356.300	7286.99	1974.59	1977.05	109.18	574595.27	415682.87	32°08'33.883"N	104°13'33.165"W	1.86	
9027.00	90.300	356.800	7287.24	2070.51	2072.88	103.40	574589.49	415778.69	32°08'34.831"N	104°13'33.232"W	1.07	
9121.00	91.300	357.000	7285.93	2164.44	2166.73	98.32	574584.41	415872.53	32°08'35.760"N	104°13'33.290"W	1.08	
9215.00	89.300	355.900	7285.44	2258.35	2260.54	92.50	574578.59	415966.33	32°08'36.688"N	104°13'33.356"W	2.43	
9309.00	89.300	356.500	7286.59	2352.24	2354.33	86.27	574572.36	416060.11	32°08'37.616"N	104°13'33.428"W	0.64	
9405.00	89.600	356.500	7287.51	2448.15	2450.14	80.41	574566.50	416155.92	32°08'38.565"N	104°13'33.495"W	0.31	
9499.00	90.200	356.400	7287.67	2542.06	2543.96	74.59	574560.68	416249.73	32°08'39.493"N	104°13'33.561"W	0.65	
9594.00	90.800	356.900	7286.84	2636.98	2638.79	69.04	574555.13	416344.55	32°08'40.431"N	104°13'33.625"W	0.82	
9689.00	89.900	355.000	7286.26	2731.85	2733.55	62.33	574548.42	416439.30	32°08'41.369"N	104°13'33.702"W	2.21	
9785.00	90.500	355.700	7285.93	2827.67	2829.23	54.55	574540.64	416534.97	32°08'42.316"N	104°13'33.791"W	0.96	
9879.00	90.400	355.300	7285.19	2921.50	2922.94	47.17	574533.27	416628.67	32°08'43.243"N	104°13'33.876"W	0.44	
9975.00	91.100	355.400	7283.93	3017.30	3018.61	39.39	574525.49	416724.34	32°08'44.190"N	104°13'33.965"W	0.74	
10070.00	90.200	355.400	7282.85	3112.12	3113.30	31.77	574517.87	416819.02	32°08'45.127"N	104°13'34.053"W	0.95	
10165.00	88.100	356.600	7284.26	3206.98	3208.05	25.14	574511.24	416913.76	32°08'46.065"N	104°13'34.129"W	2.55	
10261.00	88.300	356.000	7287.28	3302.83	3303.80	18.95	574505.05	417009.50	32°08'47.012"N	104°13'34.199"W	0.66	
10355.00	88.200	356.800	7290.15	3396.70	3397.57	13.05	574499.15	417103.26	32°08'47.940"N	104°13'34.267"W	0.86	
10451.00	88.400	356.800	7293.00	3492.59	3493.38	7.70	574493.80	417199.06	32°08'48.888"N	104°13'34.328"W	0.21	
10546.00	89.500	357.000	7294.74	3587.52	3588.23	2.56	574488.66	417293.90	32°08'49.827"N	104°13'34.387"W	1.18	
10641.00	90.000	357.600	7295.15	3682.48	3683.12	-1.91	574484.19	417388.78	32°08'50.766"N	104°13'34.438"W	0.82	
10737.00	90.600	357.600	7294.65	3778.45	3779.03	-5.93	574480.17	417484.69	32°08'51.715"N	104°13'34.483"W	0.62	
10832.00	91.100	357.900	7293.24	3873.42	3873.95	-9.66	574476.44	417579.59	32°08'52.654"N	104°13'34.526"W	0.61	



Actual Wellpath Report

No.3H ST01 AWP

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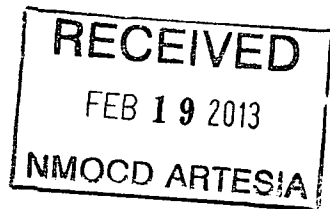


REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co. of Colorado	Slot	No.3H SHL
Area	Eddy County, NM	Well	No.3H ST01
Field	(Da Vinci) Sec. 7, T25S, R27E	Wellbore	No.3H ST01 AWB
Facility	Da Vinci 7 Federal Com No.3H	Sidetrack from	No. 3H AWB at 6736.50 MD

WELLPATH DATA (147 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
10928.00	90.900	356.800	7291.57	3969.37	3969.83	-14.10	574472.00	417675.47	32°08'53.603"N	104°13'34.576"W	1.16	
11023.00	91.500	356.700	7289.58	4064.28	4064.66	-19.49	574466.62	417770.28	32°08'54.542"N	104°13'34.638"W	0.64	
11118.00	89.800	355.900	7288.50	4159.17	4159.45	-25.62	574460.49	417865.07	32°08'55.480"N	104°13'34.708"W	1.98	
11214.00	90.500	356.400	7288.25	4255.06	4255.23	-32.06	574454.04	417960.84	32°08'56.427"N	104°13'34.782"W	0.90	
11309.00	90.400	356.300	7287.50	4349.96	4350.03	-38.11	574447.99	418055.64	32°08'57.366"N	104°13'34.851"W	0.15	
11405.00	91.000	356.600	7286.33	4445.87	4445.84	-44.05	574442.05	418151.43	32°08'58.314"N	104°13'34.919"W	0.70	
11501.00	87.900	354.500	7287.25	4541.68	4541.53	-51.50	574434.60	418247.12	32°08'59.261"N	104°13'35.005"W	3.90	
11596.00	88.300	354.500	7290.40	4636.35	4636.04	-60.60	574425.51	418341.62	32°09'00.196"N	104°13'35.109"W	0.42	
11691.00	88.600	354.800	7292.97	4731.06	4730.59	-69.46	574416.65	418436.16	32°09'01.132"N	104°13'35.211"W	0.45	
11786.00	89.000	354.300	7294.96	4825.76	4825.14	-78.48	574407.63	418530.70	32°09'02.067"N	104°13'35.315"W	0.67	
11870.00	89.200	354.300	7296.28	4909.48	4908.72	-86.82	574399.29	418614.27	32°09'02.894"N	104°13'35.411"W	0.24	
11916.00	89.200	354.300	7296.92	4955.33	4954.49	-91.39	574394.72	418660.03	32°09'03.347"N	104°13'35.464"W	0.00	Proj to Bit

TARGETS										
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape	
No.3H PBHL (Rev-2)		7300.00	4957.05	-95.11	574391.00	418662.60	32°09'03.373"N	104°13'35.507"W	rectangle	

WELLPATH COMPOSITION - Ref Wellbore: No.3H ST01 AWB					Ref Wellpath: No.3H ST01 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model			Log Name/Comment			Wellbore	
0.00	6736.50	Generic gyro - northseeking (Standard)			Gyrodata / Gyros <100-7398>			No. 3H AWB	
6736.50	11870.00	NaviTrak (Standard)			BHI / Navitrak MWD <6781' - xxxx>			No.3H ST01 AWB	
11870.00	11916.00	Blind Drilling (std)			Projection to bit			No.3H ST01 AWB	



A Gyrodata Directional Survey

for

CIMAREX

Lease: EDDY COUNTY, NEW MEXICO Well: 3, 4 1/2" XH DRILLPIPE
Location: DAVINCI FED COM, EDDY COUNTY, NEW MEXICO

Job Number: MD1012GDM557

Run Date: 01 Oct 2012

Surveyor: Che Garcia

Calculation Method: MINIMUM CURVATURE

Survey surface coordinates obtained from: Hand Held GPS
Survey Latitude: 32.137139 deg. N Longitude: 104.225333 deg. W

Azimuth Correction:

Gyro: -0.06000 deg to Grid North

Depth Reference: Rotary Table

Rotary Table Elevation: 28.50

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

A Gyrodata Directional Survey

CIMAREX

Lease: EDDY COUNTY, NEW MEXICO Well: 3, 4 1/2" XH DRILLPIPE

Location: DAVINCI FED COM, EDDY COUNTY, NEW MEXICO

Job Number: MD1012GDM557

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	AZIMUTH deg.	HORIZONTAL COORDINATES feet
0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00 N 0.00 E
0 TO 7398 FT RATE GYROSCOPIC DROP MULTISHOT SURVEY TO RUN INSIDE 4 1/2 INCH DRILLPIPE ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO CACTUS 122 RIG WITH A R.K.B HEIGHT OF 28.5FT							
100.00	0.87	332.63	0.87	100.00	0.8	332.6	0.67 N 0.35 W
200.00	1.03	333.48	0.16	199.98	2.4	332.9	2.15 N 1.10 W
300.00	0.60	345.48	0.46	299.97	3.8	334.8	3.46 N 1.63 W
405.00	0.71	351.32	0.12	404.97	5.0	338.1	4.64 N 1.87 W
499.50	0.64	356.48	0.10	499.46	6.1	340.9	5.74 N 1.99 W
594.00	0.67	357.57	0.03	593.95	7.1	343.3	6.82 N 2.04 W
688.50	0.72	357.21	0.07	688.45	8.2	345.5	7.97 N 2.06 W
783.00	0.85	357.40	0.14	782.94	9.5	347.7	9.26 N 2.01 W
877.50	0.86	357.66	0.07	877.43	10.8	349.9	10.67 N 1.90 W
972.00	1.20	357.40	0.38	971.91	12.4	352.7	12.33 N 1.59 W
1066.50	1.58	357.90	0.66	1066.38	14.4	357.5	14.38 N 0.63 W
1161.00	2.28	357.74	0.85	1160.83	16.8	357.9	16.77 N 1.44 E
1255.50	2.66	357.43	0.50	1255.24	19.9	357.1	19.42 N 4.52 E
1350.00	3.26	357.35	0.67	1349.62	23.8	357.9	22.25 N 8.50 E
1444.50	3.75	357.11	0.52	1443.94	28.7	357.7	25.41 N 13.33 E
1539.00	4.39	357.57	0.93	1538.20	34.4	357.9	28.59 N 19.22 E
1633.50	4.86	357.78	0.53	1632.39	41.1	357.7	31.60 N 26.22 E
1728.00	5.53	357.76	0.71	1726.50	48.8	357.4	34.83 N 34.14 E
1822.50	5.54	357.47	0.03	1820.56	57.3	357.0	38.31 N 42.56 E

A Gyrodata Directional Survey

CIMAREX

Lease: EDDY COUNTY, NEW MEXICO Well: 3, 4 1/2" XH DRILLPIPE

Location: DAVINCI FED COM, EDDY COUNTY, NEW MEXICO

Job Number: MD1012GDM557

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	AZIMUTH deg.	HORIZONTAL COORDINATES feet
1917.00	6.23	62.19	0.93	1914.57	66.6	50.4	42.45 N 51.31 E
2011.50	8.10	68.59	2.15	2008.32	78.0	52.7	47.27 N 62.05 E
2106.00	9.19	68.87	1.15	2101.75	91.7	55.2	52.42 N 75.29 E
2200.50	9.34	69.19	0.17	2195.02	106.6	57.1	57.86 N 89.49 E
2295.00	9.36	68.35	0.15	2288.26	121.6	58.6	63.42 N 103.80 E
2389.50	8.86	68.72	0.53	2381.57	136.4	59.7	68.90 N 117.73 E
2484.00	8.82	68.35	0.07	2474.95	150.8	60.5	74.21 N 131.24 E
2578.50	8.27	65.64	0.72	2568.40	164.7	61.1	79.69 N 144.17 E
2673.00	7.60	68.44	0.82	2661.99	177.7	61.5	84.79 N 156.17 E
2767.50	7.80	65.35	0.49	2755.64	190.3	61.9	89.76 N 167.81 E
2862.00	6.89	62.70	1.03	2849.36	202.4	62.0	95.04 N 178.68 E
2956.50	6.47	62.54	0.44	2943.22	213.4	62.0	100.09 N 188.44 E
3051.00	6.21	52.49	1.20	3037.15	223.7	61.8	105.66 N 197.22 E
3145.50	6.36	65.45	1.51	3131.08	234.0	61.7	110.95 N 206.03 E
3240.00	6.08	63.79	0.35	3225.03	244.2	61.8	115.33 N 215.28 E
3334.50	5.65	60.71	0.56	3319.03	253.9	61.8	119.82 N 223.83 E
3429.00	5.16	60.80	0.52	3413.11	262.8	61.8	124.17 N 231.60 E
3523.50	4.69	61.82	0.51	3507.26	270.9	61.8	128.06 N 238.71 E
3618.00	4.66	61.01	0.08	3601.45	278.6	61.8	131.75 N 245.48 E
3712.50	4.42	60.83	0.25	3695.65	286.1	61.8	135.38 N 252.01 E
3807.00	4.13	62.54	0.34	3789.89	293.1	61.8	138.73 N 258.21 E

A Gyrodata Directional Survey

CIMAREX

Lease: EDDY COUNTY, NEW MEXICO Well: 3, 4 1/2" XH DRILLPIPE

Location: DAVINCI FED COM, EDDY COUNTY, NEW MEXICO

Job Number: MD1012GDM557

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	AZIMUTH deg.	HORIZONTAL COORDINATES feet
3901.50	3.69	58.08	0.57	3884.17	299.6	61.7	141.90 N 263.81 E
3996.00	3.28	59.26	0.44	3978.50	305.3	61.7	144.89 N 268.72 E
4090.50	2.92	51.02	0.61	4072.86	310.4	61.6	147.79 N 272.91 E
4185.00	2.69	73.58	1.19	4167.25	314.9	61.6	149.93 N 276.91 E
4279.50	2.52	50.06	1.14	4261.65	319.1	61.6	151.89 N 280.63 E
4374.00	2.35	59.51	0.46	4356.07	323.1	61.5	154.21 N 283.89 E
4468.50	1.99	46.22	0.65	4450.50	326.6	61.4	156.33 N 286.75 E
4563.00	1.75	40.79	0.32	4544.95	329.5	61.2	158.55 N 288.87 E
4657.50	1.70	50.27	0.31	4639.41	332.3	61.1	160.54 N 290.90 E
4752.00	1.58	56.52	0.23	4733.87	334.9	61.0	162.16 N 293.06 E
4846.50	1.52	54.65	0.08	4828.33	337.5	61.0	163.60 N 295.17 E
4941.00	1.37	56.28	0.16	4922.80	339.8	61.0	164.95 N 297.13 E
5035.50	1.13	62.94	0.30	5017.28	341.9	61.0	166.00 N 298.90 E
5130.00	1.02	66.15	0.13	5111.76	343.7	61.0	166.77 N 300.50 E
5224.50	0.76	90.83	0.48	5206.25	345.1	61.0	167.10 N 301.90 E
5319.00	0.61	90.47	0.16	5300.75	346.0	61.1	167.09 N 303.02 E
5413.50	0.43	340.93	0.91	5395.24	346.5	61.1	167.42 N 303.41 E
5508.00	0.52	312.27	0.27	5489.74	346.5	61.0	168.04 N 302.98 E
5602.50	0.62	275.84	0.39	5584.24	345.9	60.9	168.38 N 302.15 E
5697.00	1.00	171.42	1.38	5678.73	345.2	60.9	167.62 N 301.77 E
5791.50	1.29	233.40	1.28	5773.21	343.9	61.1	166.17 N 301.04 E
5886.00	1.83	207.54	0.93	5867.68	341.5	61.3	164.20 N 299.48 E

A Gyrodata Directional Survey

CIMAREX

Lease: EDDY COUNTY, NEW MEXICO Well: 3, 4 1/2" XH DRILLPIPE

Location: DAVINCI FED COM, EDDY COUNTY, NEW MEXICO

Job Number: MD1012GDM557

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
5980.50	1.84	215.36	0.26	5962.13	338.9 61.5	161.62 N 297.91 E
6075.00	2.02	198.60	0.62	6056.58	336.3 61.8	158.81 N 296.50 E
6169.50	2.07	195.21	0.14	6151.02	334.0 62.2	155.58 N 295.52 E
6264.00	3.40	211.19	1.61	6245.41	330.4 62.7	151.54 N 293.62 E
6358.50	3.90	206.32	0.62	6339.72	325.5 63.3	146.26 N 290.75 E
6453.00	3.52	221.77	1.13	6434.02	320.2 63.8	141.21 N 287.39 E
6547.50	3.50	231.81	0.65	6528.35	314.7 64.1	137.27 N 283.19 E
6642.00	3.49	233.65	0.12	6622.67	309.1 64.4	133.78 N 278.60 E
6736.50	3.82	228.00	0.52	6716.98	303.2 64.6	129.97 N 273.95 E
6831.00	3.80	227.84	0.02	6811.27	297.2 65.0	125.76 N 269.29 E
6925.50	3.66	224.74	0.26	6905.57	291.4 65.4	121.51 N 264.84 E
7020.00	3.15	220.36	0.61	6999.90	286.2 65.8	117.39 N 261.04 E
7114.50	2.77	213.03	0.57	7094.28	282.0 66.3	113.50 N 258.11 E
7209.00	2.36	216.71	0.47	7188.68	278.4 66.7	110.03 N 255.71 E
7303.50	2.05	217.05	0.33	7283.11	275.2 67.1	107.12 N 253.52 E
7398.00	1.98	217.77	0.08	7377.55	272.3 67.4	104.48 N 251.51 E

Final Station Closure: Distance: 272.34 ft Az: 67.44 deg.