

Results of Directional Survey

API number:	30-025-40115		
OGRID:		Operator:	CIMAREX ENERGY CO. OF COLORADO
		Property:	LYNCH 23 FEDERAL COM # 1H

surface	ULSTR:	B	23	T	20S	R	34E
				330	FNL	1830	FWL

BH Loc	ULSTR:	O	23	T	20S	R	34E
15461	MD	11056.2	TVD	341	FSL	1947	FEL
				4939	FNL		

Top Perf/OH	ULSTR:	B	23	T	20S	R	34E
9550	MD	9548.1	TVD	336	FNL	1842	FEL

Bot Perf/OH	ULSTR:	O	23	T	20S	R	34E
15333	MD	11054.2	TVD	469	FSL	1943	FEL
				4811	FNL		

	MD	N/S	E/W	VD
	9520.6	-5.42	-11.34	9518.74
TOP PERFS/OH	9550	-5.64	-12.04	9548.13
	9584.1	-5.90	-12.85	9582.22
	15283	-4430.63	-111.23	11053.10
BOT PERFS/OH	15333	-4480.59	-112.80	11054.15
	15346	-4493.58	-113.21	11054.42

NEXT TO LAST	5417	-4564.53	-115.68	11055.53
LAST READING	15461	-4608.50	-117.22	11056.15
TD	15461	-4608.50	-117.22	11056.15

Surface Location	330	FN	1830	FE
Projected BHL	4939	FN	1947	FE
Location of				
Top Perfs/OH	336	FN	1842	FE
Bottom Perfs/OH	4811	FN	1943	FE

SUMMARY of Subsurface Locations

Surface Location	B-23-20S-34E	330	FN	1830	FE	Vert. Depth
Top Perfs/OH	B-23-20S-34E	336	FN	1842	FE	9548.13
Bottom Perfs/OH	O-23-20S-34E	4811	FN	1943	FE	11054.15
Projected TD	O-23-20S-34E	4939	FN	1947	FE	11056.15

MAR 01 2012



Cimarex Energy Co.

Location: Lea County, NM
Field: (Lynch) Sec 23, T20S, R34E
Facility: Lynch 23 Fed Com

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



Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	10641.80	1.200	239.960	10639.65	-14.90	-34.16	0.00	15.75
Est KOP	10694.00	1.200	239.960	10691.84	-15.45	-35.10	0.00	16.33
End of Curve	11135.72	89.007	180.945	10975.00	-296.68	-44.74	20.01	297.71
No. 1H PBHL	15461.54	89.007	180.945	11050.00	-4621.26	-116.06	0.00	4622.72

Plot reference wellpath is Plan #1

True vertical depths are referenced to Rig on No. 1H SHL (KB)

Grid System NAD83 / TM New Mexico SP, Eastern Zone (3001), 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: 3655 feet

Scale: True distance

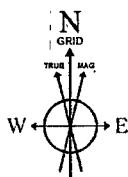
Mean Sea Level to Mud line (At Slot, No. 1H SHL): 0 feet

Depths are in feet

Coordinates are in feet referenced to Slot

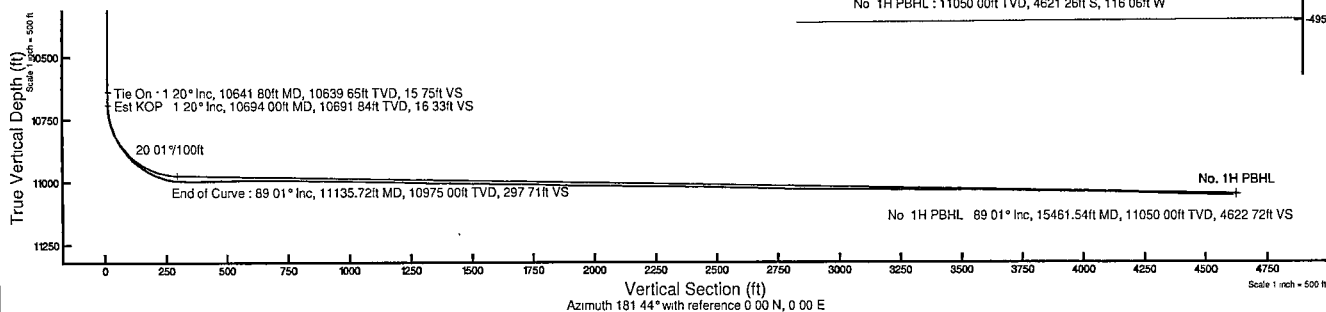
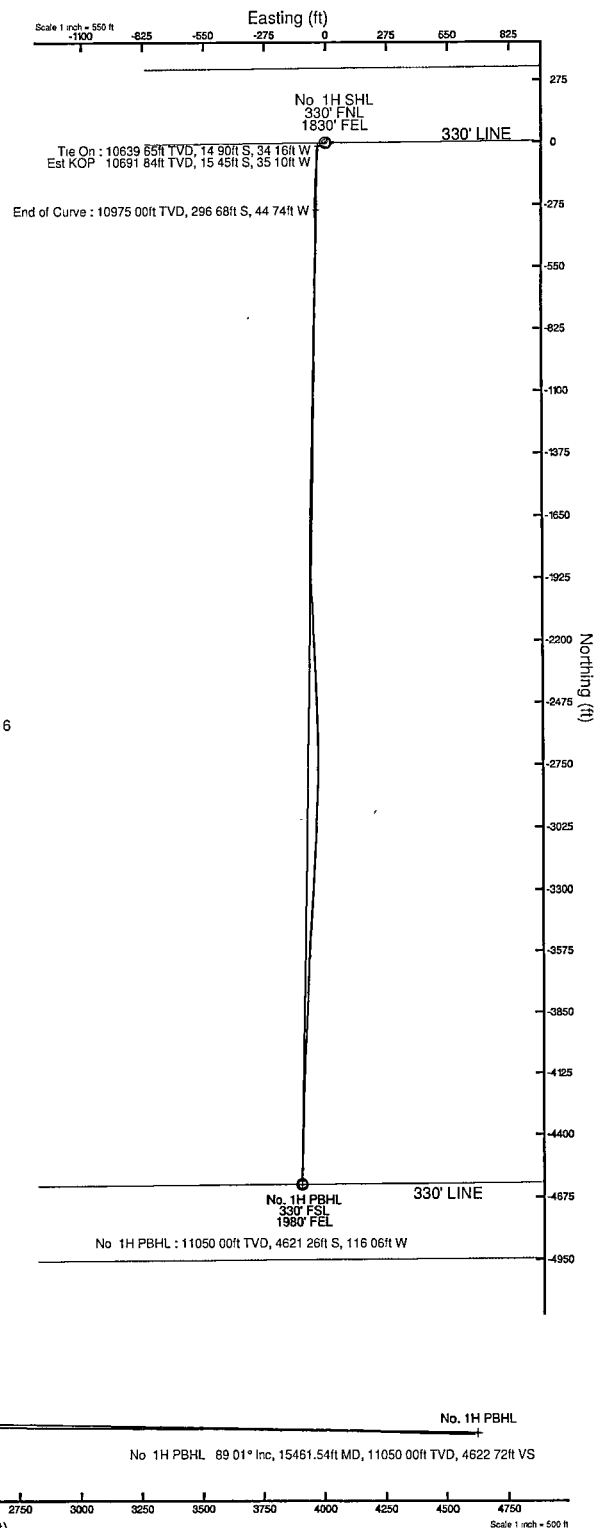
Created by: genibry on 10/17/2011

SUR: B-23-20s-34e, 330/N & 1830/E
BHL: O-23-20s-34e, 4939/N & 1947/E
API # 30-025-40115



BGGM (1945.0 to 2012.0) Dip: 60.51° Field: 48826.4 nT
Magnetic North is 7.59 degrees East of True North (at 10/6/2011)
Grid North is 0.43 degrees East of True North
To correct azimuth from True to Grid subtract 0.43 degrees
To correct azimuth from Magnetic to Grid add 7.16 degrees

For example if the Magnetic North Azimuth = 90 degrees, then the Grid North Azimuth = 90 + 7.16 = 97.16





Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Lynch) Sec 23, T20S, R34E	Wellbore	No.1H AWB
Facility	Lynch 23 Fed Com		

REPORT SETUP INFORMATION			
Projection System	NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Calhphik
Scale	0.99998	Report Generated	10/31/2011 at 8:54:56 AM
Convergence at slot	0.43° East	Database/Source file	WA_Midland/No.1H_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-9.10	-1169.83	789361.60	570203.60	32°33'53.881"N	103°31'41.737"W
Facility Reference Pt			790531.40	570212.70	32°33'53.883"N	103°31'28.068"W
Field Reference Pt			789361.60	570203.60	32°33'53.881"N	103°31'41.737"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 1H SHL (KB) to Mean Sea level	3655.00ft
Horizontal Reference Pt	Slot	Rig on No. 1H SHL (KB) to Mean Sea Level	3655.00ft
Vertical Reference Pt	Rig on No. 1H SHL (KB)	Rig on No. 1H SHL (KB) to Mud Line at Slot (No. 1H SHL)	3655.00ft
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	181.46°



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Area	Lea County, NM	Well	No. 1H
Field	(Lynch) Sec 23, T20S, R34E	Wellbore	No.1H AWB
Facility	Lynch 23 Fed Com		

WELLPATH DATA (254 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	59.440	0.00	0.00	0.00	0.00	789361.60	570203.60	32°33'53.881"N	103°31'41.737"W	0.00	
69.60	0.330	59.440	69.60	-0.11	0.10	0.17	789361.77	570203.70	32°33'53.882"N	103°31'41.735"W	0.47	
131.40	0.260	27.430	131.40	-0.33	0.32	0.39	789361.99	570203.92	32°33'53.884"N	103°31'41.732"W	0.28	
193.70	0.290	16.440	193.70	-0.61	0.59	0.50	789362.10	570204.19	32°33'53.887"N	103°31'41.731"W	0.10	
256.00	0.350	7.960	256.00	-0.95	0.93	0.57	789362.17	570204.53	32°33'53.890"N	103°31'41.730"W	0.12	
317.50	0.410	349.120	317.50	-1.35	1.34	0.56	789362.16	570204.94	32°33'53.894"N	103°31'41.730"W	0.22	
379.00	0.430	338.890	378.99	-1.78	1.77	0.43	789362.03	570205.37	32°33'53.898"N	103°31'41.732"W	0.13	
440.60	0.390	332.760	440.59	-2.17	2.17	0.25	789361.85	570205.77	32°33'53.902"N	103°31'41.734"W	0.10	
502.20	0.460	332.510	502.19	-2.57	2.57	0.04	789361.64	570206.17	32°33'53.906"N	103°31'41.736"W	0.11	
563.70	0.510	334.190	563.69	-3.03	3.04	-0.19	789361.41	570206.64	32°33'53.911"N	103°31'41.739"W	0.08	
625.70	0.420	345.240	625.69	-3.50	3.51	-0.37	789361.23	570207.11	32°33'53.916"N	103°31'41.741"W	0.20	
688.00	0.330	20.430	687.99	-3.89	3.90	-0.37	789361.23	570207.50	32°33'53.919"N	103°31'41.741"W	0.39	
750.70	0.220	57.690	750.68	-4.12	4.13	-0.20	789361.40	570207.73	32°33'53.922"N	103°31'41.739"W	0.33	
814.20	0.280	180.760	814.18	-4.04	4.04	-0.10	789361.50	570207.64	32°33'53.921"N	103°31'41.738"W	0.69	
877.80	0.620	196.360	877.78	-3.55	3.55	-0.20	789361.40	570207.15	32°33'53.916"N	103°31'41.739"W	0.56	
941.30	0.940	197.330	941.28	-2.72	2.73	-0.45	789361.15	570206.33	32°33'53.908"N	103°31'41.742"W	0.50	
1004.90	1.190	193.470	1004.87	-1.57	1.59	-0.76	789360.84	570205.19	32°33'53.897"N	103°31'41.746"W	0.41	
1068.40	1.160	185.880	1068.35	-0.28	0.31	-0.98	789360.62	570203.91	32°33'53.884"N	103°31'41.748"W	0.25	
1132.00	0.710	179.800	1131.94	0.75	-0.73	-1.04	789360.56	570202.87	32°33'53.874"N	103°31'41.749"W	0.72	
1195.50	0.400	233.350	1195.44	1.28	-1.25	-1.22	789360.38	570202.35	32°33'53.869"N	103°31'41.751"W	0.90	
1259.10	0.570	244.920	1259.04	1.56	-1.52	-1.68	789359.92	570202.08	32°33'53.866"N	103°31'41.757"W	0.31	
1322.60	0.730	240.510	1322.53	1.91	-1.85	-2.32	789359.28	570201.75	32°33'53.863"N	103°31'41.764"W	0.26	
1386.20	0.850	246.600	1386.13	2.32	-2.24	-3.11	789358.49	570201.36	32°33'53.859"N	103°31'41.774"W	0.23	
1449.70	0.880	242.070	1449.62	2.76	-2.65	-3.97	789357.63	570200.95	32°33'53.855"N	103°31'41.784"W	0.12	
1513.30	0.890	238.980	1513.21	3.26	-3.14	-4.83	789356.77	570200.46	32°33'53.850"N	103°31'41.794"W	0.08	
1576.80	0.860	237.450	1576.71	3.79	-3.65	-5.65	789355.95	570199.95	32°33'53.845"N	103°31'41.803"W	0.06	
1640.40	0.770	237.390	1640.30	4.30	-4.14	-6.41	789355.19	570199.46	32°33'53.840"N	103°31'41.812"W	0.14	
1703.90	0.610	241.490	1703.80	4.71	-4.53	-7.07	789354.53	570199.07	32°33'53.837"N	103°31'41.820"W	0.26	
1767.50	0.250	201.420	1767.39	5.00	-4.82	-7.42	789354.18	570198.78	32°33'53.834"N	103°31'41.824"W	0.71	
1831.00	0.490	139.660	1830.89	5.34	-5.15	-7.29	789354.31	570198.45	32°33'53.830"N	103°31'41.823"W	0.68	
1894.60	0.620	144.860	1894.49	5.82	-5.64	-6.92	789354.68	570197.96	32°33'53.826"N	103°31'41.818"W	0.22	
1958.10	0.650	149.840	1957.99	6.40	-6.23	-6.54	789355.06	570197.37	32°33'53.820"N	103°31'41.814"W	0.10	
2021.70	0.700	153.230	2021.58	7.05	-6.89	-6.18	789355.42	570196.71	32°33'53.813"N	103°31'41.810"W	0.10	
2085.20	0.730	153.490	2085.08	7.75	-7.60	-5.83	789355.77	570196.00	32°33'53.806"N	103°31'41.806"W	0.05	
2148.80	0.710	155.530	2148.67	8.46	-8.32	-5.48	789356.12	570195.28	32°33'53.799"N	103°31'41.802"W	0.05	
2212.30	0.740	154.650	2212.17	9.18	-9.05	-5.15	789356.45	570194.55	32°33'53.792"N	103°31'41.798"W	0.05	
2275.90	0.740	155.040	2275.76	9.91	-9.80	-4.80	789356.80	570193.80	32°33'53.784"N	103°31'41.794"W	0.01	
2339.40	0.770	152.470	2339.25	10.65	-10.55	-4.43	789357.17	570193.05	32°33'53.777"N	103°31'41.790"W	0.07	
2403.00	0.740	151.000	2402.85	11.38	-11.28	-4.03	789357.57	570192.32	32°33'53.770"N	103°31'41.785"W	0.06	
2466.50	0.740	152.620	2466.34	12.10	-12.01	-3.64	789357.96	570191.59	32°33'53.762"N	103°31'41.781"W	0.03	
2530.10	0.760	151.300	2529.94	12.82	-12.74	-3.25	789358.35	570190.86	32°33'53.755"N	103°31'41.776"W	0.04	
2593.60	0.640	139.760	2593.43	13.45	-13.38	-2.82	789358.78	570189.22	32°33'53.749"N	103°31'41.771"W	0.29	
2657.20	0.580	105.540	2657.03	13.79	-13.74	-2.28	789359.32	570189.86	32°33'53.745"N	103°31'41.765"W	0.57	
2720.70	1.030	84.210	2720.52	13.80	-13.77	-1.40	789360.20	570189.83	32°33'53.745"N	103°31'41.755"W	0.84	
2784.30	1.930	71.690	2784.10	13.36	-13.37	0.18	789361.78	570190.23	32°33'53.749"N	103°31'41.736"W	1.50	



Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Lynch) Sec 23, T20S, R34E	Wellbore	No.1H AWB
Facility	Lynch 23 Fed Com		

WELLPATH DATA (254 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
2847.80	2.840	70.580	2847.55	12.44	-12.51	2.68	789364.28	570191.09	32°33'53.757"N	103°31'41.707"W	1.43	
2911.40	3.610	69.530	2911.05	11.13	-11.29	6.04	789367.64	570192.31	32°33'53.769"N	103°31'41.667"W	1.21	
2974.90	3.930	67.710	2974.41	9.51	-9.77	9.93	789371.53	570193.83	32°33'53.784"N	103°31'41.622"W	0.54	
3038.50	3.490	68.250	3037.87	7.87	-8.22	13.75	789375.34	570195.38	32°33'53.798"N	103°31'41.577"W	0.69	
3102.00	3.520	67.670	3101.26	6.32	-6.76	17.34	789378.94	570196.84	32°33'53.813"N	103°31'41.535"W	0.07	
3165.60	3.370	67.360	3164.74	4.77	-5.30	20.87	789382.47	570198.30	32°33'53.827"N	103°31'41.494"W	0.24	
3229.10	3.280	67.840	3228.13	3.28	-3.90	24.28	789385.88	570199.70	32°33'53.840"N	103°31'41.454"W	0.15	
3292.70	2.990	61.900	3291.64	1.73	-2.43	27.43	789389.03	570201.17	32°33'53.855"N	103°31'41.417"W	0.68	
3356.20	3.000	61.140	3355.05	0.08	-0.85	30.34	789391.94	570202.75	32°33'53.870"N	103°31'41.383"W	0.06	
3419.80	2.740	58.900	3418.57	-1.58	0.74	33.10	789394.70	570204.34	32°33'53.886"N	103°31'41.350"W	0.45	
3483.30	1.950	54.680	3482.02	-3.04	2.15	35.28	789396.88	570205.75	32°33'53.899"N	103°31'41.325"W	1.27	
3546.90	0.720	33.000	3545.60	-4.03	3.11	36.39	789397.98	570206.71	32°33'53.909"N	103°31'41.312"W	2.06	
3610.40	0.350	323.640	3609.10	-4.53	3.60	36.49	789398.09	570207.20	32°33'53.914"N	103°31'41.310"W	1.07	
3674.00	0.660	268.200	3672.70	-4.66	3.74	36.01	789397.61	570207.34	32°33'53.915"N	103°31'41.316"W	0.86	
3737.50	1.070	253.660	3736.19	-4.46	3.57	35.07	789396.67	570207.17	32°33'53.914"N	103°31'41.327"W	0.73	
3801.10	1.360	251.470	3799.77	-4.02	3.16	33.79	789395.39	570206.76	32°33'53.910"N	103°31'41.342"W	0.46	
3864.60	1.540	248.870	3863.25	-3.43	2.61	32.28	789393.88	570206.21	32°33'53.904"N	103°31'41.360"W	0.30	
3928.20	1.550	255.630	3926.83	-2.87	2.09	30.65	789392.24	570205.69	32°33'53.899"N	103°31'41.379"W	0.29	
3991.70	1.500	264.340	3990.31	-2.53	1.79	28.99	789390.59	570205.39	32°33'53.896"N	103°31'41.398"W	0.37	
4055.30	1.790	271.830	4053.88	-2.43	1.74	27.17	789388.76	570205.34	32°33'53.896"N	103°31'41.419"W	0.57	
4118.80	1.750	271.730	4117.35	-2.45	1.81	25.20	789386.80	570205.41	32°33'53.897"N	103°31'41.442"W	0.06	
4182.40	1.390	267.840	4180.93	-2.40	1.81	23.46	789385.06	570205.41	32°33'53.897"N	103°31'41.463"W	0.59	
4245.90	1.230	273.570	4244.41	-2.38	1.82	22.01	789383.61	570205.42	32°33'53.897"N	103°31'41.480"W	0.33	
4309.50	1.190	273.130	4308.00	-2.42	1.90	20.67	789382.27	570205.50	32°33'53.898"N	103°31'41.495"W	0.06	
4373.00	1.040	279.960	4371.49	-2.53	2.03	19.45	789381.05	570205.63	32°33'53.900"N	103°31'41.510"W	0.32	
4436.60	0.870	286.380	4435.08	-2.74	2.27	18.41	789380.01	570205.87	32°33'53.902"N	103°31'41.522"W	0.32	
4500.10	0.600	302.250	4498.57	-3.03	2.58	17.67	789379.27	570206.18	32°33'53.905"N	103°31'41.530"W	0.53	
4563.70	0.590	311.910	4562.17	-3.41	2.98	17.15	789378.75	570206.58	32°33'53.909"N	103°31'41.536"W	0.16	
4627.20	0.680	311.930	4625.66	-3.87	3.45	16.62	789378.22	570207.05	32°33'53.914"N	103°31'41.543"W	0.14	
4690.80	0.770	318.380	4689.26	-4.43	4.02	16.06	789377.66	570207.62	32°33'53.919"N	103°31'41.549"W	0.19	
4754.30	0.900	328.820	4752.75	-5.16	4.77	15.52	789377.12	570208.37	32°33'53.927"N	103°31'41.555"W	0.31	
4817.90	1.110	336.110	4816.34	-6.14	5.76	15.01	789376.61	570209.36	32°33'53.937"N	103°31'41.561"W	0.39	
4881.40	1.130	340.480	4879.83	-7.28	6.91	14.55	789376.15	570210.51	32°33'53.948"N	103°31'41.566"W	0.14	
4945.00	1.030	347.440	4943.42	-8.42	8.06	14.22	789375.82	570211.66	32°33'53.960"N	103°31'41.570"W	0.26	
5008.50	1.020	354.200	5006.91	-9.53	9.18	14.03	789375.63	570212.78	32°33'53.971"N	103°31'41.572"W	0.19	
5072.10	0.860	356.710	5070.50	-10.57	10.22	13.95	789375.55	570213.82	32°33'53.981"N	103°31'41.573"W	0.26	
5135.60	0.450	359.740	5134.00	-11.29	10.94	13.92	789375.52	570214.54	32°33'53.988"N	103°31'41.573"W	0.65	
5199.20	0.150	32.990	5197.60	-11.61	11.26	13.97	789375.57	570214.86	32°33'53.991"N	103°31'41.573"W	0.53	
5262.70	0.050	139.550	5261.10	-11.66	11.31	14.03	789375.63	570214.91	32°33'53.992"N	103°31'41.572"W	0.27	
5326.30	0.090	182.900	5324.70	-11.59	11.24	14.04	789375.64	570214.84	32°33'53.991"N	103°31'41.572"W	0.10	
5389.80	0.210	242.270	5388.19	-11.49	11.14	13.94	789375.54	570214.74	32°33'53.990"N	103°31'41.573"W	0.29	
5453.40	0.280	256.500	5451.79	-11.39	11.05	13.68	789375.28	570214.65	32°33'53.989"N	103°31'41.576"W	0.15	
5516.90	0.360	251.000	5515.29	-11.28	10.94	13.35	789374.94	570214.54	32°33'53.988"N	103°31'41.580"W	0.13	
5580.50	0.550	250.320	5578.89	-11.10	10.78	12.87	789374.47	570214.38	32°33'53.987"N	103°31'41.586"W	0.30	
5644.00	0.630	251.300	5642.39	-10.87	10.56	12.25	789373.85	570214.16	32°33'53.984"N	103°31'41.593"W	0.13	



Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Lynch) Sec 23, T20S, R34E	Wellbore	No.1H AWB
Facility	Lynch 23 Fed Com		

WELLPATH DATA (254 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
5707.60	0.720	255.740	5705.98	-10.64	10.35	11.53	789373.13	570213.95	32°33'53.982"N	103°31'41.601"W	0.16	
5771.10	0.670	264.550	5769.48	-10.49	10.22	10.78	789372.38	570213.82	32°33'53.981"N	103°31'41.610"W	0.19	
5834.70	0.560	271.820	5833.08	-10.45	10.19	10.10	789371.70	570213.79	32°33'53.981"N	103°31'41.618"W	0.21	
5898.20	0.540	267.420	5896.57	-10.43	10.19	9.49	789371.09	570213.79	32°33'53.981"N	103°31'41.625"W	0.07	
5961.80	0.520	257.720	5960.17	-10.34	10.11	8.91	789370.50	570213.71	32°33'53.980"N	103°31'41.632"W	0.14	
6025.30	0.430	242.280	6023.67	-10.15	9.94	8.41	789370.01	570213.54	32°33'53.979"N	103°31'41.638"W	0.25	
6088.90	0.430	223.680	6087.27	-9.86	9.66	8.04	789369.64	570213.26	32°33'53.976"N	103°31'41.642"W	0.22	
6152.40	0.480	217.550	6150.76	-9.47	9.28	7.71	789369.31	570212.87	32°33'53.972"N	103°31'41.646"W	0.11	
6216.00	0.500	209.420	6214.36	-9.01	8.82	7.41	789369.01	570212.42	32°33'53.968"N	103°31'41.650"W	0.11	
6279.50	0.520	209.210	6277.86	-8.51	8.33	7.13	789368.73	570211.93	32°33'53.963"N	103°31'41.653"W	0.03	
6343.10	0.540	208.630	6341.46	-7.99	7.81	6.85	789368.45	570211.41	32°33'53.958"N	103°31'41.656"W	0.03	
6406.60	0.440	211.090	6404.95	-7.51	7.34	6.58	789368.18	570210.94	32°33'53.953"N	103°31'41.660"W	0.16	
6470.20	0.480	199.690	6468.55	-7.04	6.88	6.36	789367.96	570210.48	32°33'53.948"N	103°31'41.662"W	0.16	
6533.70	0.540	194.420	6532.05	-6.50	6.34	6.20	789367.80	570209.94	32°33'53.943"N	103°31'41.664"W	0.12	
6597.30	0.310	216.010	6595.65	-6.06	5.91	6.02	789367.62	570209.51	32°33'53.939"N	103°31'41.666"W	0.43	
6660.80	0.280	222.400	6659.15	-5.81	5.66	5.82	789367.42	570209.26	32°33'53.936"N	103°31'41.669"W	0.07	
6724.40	0.180	184.710	6722.75	-5.59	5.45	5.71	789367.31	570209.05	32°33'53.934"N	103°31'41.670"W	0.28	
6787.90	0.230	181.400	6786.25	-5.36	5.22	5.70	789367.29	570208.82	32°33'53.932"N	103°31'41.670"W	0.08	
6851.50	0.320	183.930	6849.84	-5.06	4.91	5.68	789367.28	570208.51	32°33'53.929"N	103°31'41.670"W	0.14	
6915.00	0.400	184.580	6913.34	-4.66	4.52	5.65	789367.25	570208.12	32°33'53.925"N	103°31'41.671"W	0.13	
6978.60	0.420	185.790	6976.94	-4.20	4.06	5.61	789367.21	570207.66	32°33'53.921"N	103°31'41.671"W	0.03	
7042.10	0.460	186.050	7040.44	-3.72	3.58	5.56	789367.16	570207.18	32°33'53.916"N	103°31'41.672"W	0.06	
7105.70	0.540	186.000	7104.04	-3.16	3.03	5.50	789367.10	570206.63	32°33'53.910"N	103°31'41.673"W	0.13	
7169.20	0.500	180.030	7167.54	-2.59	-2.45	5.47	789367.07	570206.05	32°33'53.905"N	103°31'41.673"W	0.11	
7232.80	0.420	180.550	7231.13	-2.08	1.94	5.47	789367.07	570205.54	32°33'53.900"N	103°31'41.673"W	0.13	
7296.30	0.330	185.900	7294.63	-1.66	1.53	5.45	789367.05	570205.13	32°33'53.896"N	103°31'41.673"W	0.15	
7359.90	0.270	189.840	7358.23	-1.33	1.20	5.40	789367.00	570204.80	32°33'53.892"N	103°31'41.674"W	0.10	
7423.40	0.250	192.160	7421.73	-1.05	0.91	5.35	789366.95	570204.51	32°33'53.890"N	103°31'41.675"W	0.04	
7487.00	0.260	190.560	7485.33	-0.77	0.64	5.29	789366.89	570204.24	32°33'53.887"N	103°31'41.675"W	0.02	
7550.50	0.290	192.160	7548.83	-0.47	0.34	5.23	789366.83	570203.94	32°33'53.884"N	103°31'41.676"W	0.05	
7614.10	0.240	196.040	7612.43	-0.18	0.05	5.16	789366.76	570203.65	32°33'53.881"N	103°31'41.677"W	0.08	
7677.60	0.360	205.550	7675.93	0.13	-0.26	5.04	789366.64	570203.34	32°33'53.878"N	103°31'41.678"W	0.20	
7741.20	0.450	206.260	7739.53	0.54	-0.66	4.84	789366.44	570202.94	32°33'53.874"N	103°31'41.681"W	0.14	
7804.70	0.500	205.600	7803.02	1.02	-1.13	4.61	789366.21	570202.47	32°33'53.869"N	103°31'41.683"W	0.08	
7868.30	0.500	214.440	7866.62	1.50	-1.61	4.33	789365.93	570201.99	32°33'53.865"N	103°31'41.687"W	0.12	
7931.80	0.520	224.280	7930.12	1.95	-2.05	3.98	789365.58	570201.55	32°33'53.860"N	103°31'41.691"W	0.14	
7995.40	0.650	228.040	7993.72	2.41	-2.50	3.51	789365.11	570201.10	32°33'53.856"N	103°31'41.696"W	0.21	
8058.90	0.700	234.520	8057.21	2.89	-2.96	2.92	789364.52	570200.64	32°33'53.851"N	103°31'41.703"W	0.14	
8122.50	0.720	238.640	8120.81	3.34	-3.39	2.26	789363.86	570200.21	32°33'53.847"N	103°31'41.711"W	0.09	
8186.00	0.850	236.800	8184.30	3.82	-3.86	1.53	789363.13	570199.74	32°33'53.843"N	103°31'41.720"W	0.21	
8249.60	1.000	241.260	8247.89	4.37	-4.39	0.65	789362.25	570199.21	32°33'53.837"N	103°31'41.730"W	0.26	
8313.10	0.930	253.680	8311.38	4.80	-4.80	-0.33	789361.27	570198.80	32°33'53.833"N	103°31'41.741"W	0.35	
8376.70	0.720	266.380	8374.98	5.00	-4.97	-1.23	789360.37	570198.63	32°33'53.832"N	103°31'41.752"W	0.44	
8440.20	0.620	293.060	8438.47	4.91	-4.86	-1.94	789359.66	570198.74	32°33'53.833"N	103°31'41.760"W	0.51	
8503.80	0.740	308.320	8502.07	4.53	-4.47	-2.58	789359.02	570199.13	32°33'53.837"N	103°31'41.768"W	0.34	



Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Lynch) Sec 23, T20S, R34E	Wellbore	No.1H AWB
Facility	Lynch 23 Fed Com		

WELLPATH DATA (254 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
8567.30	0.770	337.210	8565.56	3.90	-3.82	-3.07	789358.53	570199.78	32°33'53.843"N	103°31'41.773"W	0.59	
8630.90	0.800	347.970	8629.16	3.08	-2.99	-3.32	789358.28	570200.61	32°33'53.852"N	103°31'41.776"W	0.24	
8694.40	0.650	5.910	8692.65	2.29	-2.20	-3.38	789358.22	570201.40	32°33'53.859"N	103°31'41.777"W	0.43	
8758.00	0.520	10.950	8756.25	1.64	-1.56	-3.29	789358.31	570202.04	32°33'53.866"N	103°31'41.776"W	0.22	
8821.50	0.600	350.490	8819.74	1.03	-0.95	-3.29	789358.31	570202.65	32°33'53.872"N	103°31'41.776"W	0.34	
8885.10	0.430	330.530	8883.34	0.50	-0.41	-3.46	789358.14	570203.19	32°33'53.877"N	103°31'41.778"W	0.38	
8948.60	0.290	218.270	8946.84	0.42	-0.33	-3.68	789357.92	570203.27	32°33'53.878"N	103°31'41.780"W	0.95	
9012.20	0.530	200.910	9010.44	0.83	-0.73	-3.88	789357.72	570202.87	32°33'53.874"N	103°31'41.782"W	0.42	
9075.70	0.600	192.180	9073.94	1.43	-1.33	-4.06	789357.54	570202.27	32°33'53.868"N	103°31'41.785"W	0.17	
9139.30	0.660	203.350	9137.53	2.10	-1.99	-4.27	789357.33	570201.61	32°33'53.861"N	103°31'41.787"W	0.21	
9202.80	0.930	221.330	9201.03	2.84	-2.72	-4.76	789356.84	570200.88	32°33'53.854"N	103°31'41.793"W	0.57	
9266.40	1.270	231.870	9264.62	3.68	-3.54	-5.65	789355.95	570200.06	32°33'53.846"N	103°31'41.803"W	0.62	
9329.90	1.390	248.380	9328.10	4.43	-4.26	-6.92	789354.68	570199.34	32°33'53.839"N	103°31'41.818"W	0.63	
9393.50	1.350	252.420	9391.68	4.98	-4.77	-8.35	789353.25	570198.83	32°33'53.834"N	103°31'41.835"W	0.16	
9457.00	1.390	260.890	9455.16	5.36	-5.11	-9.83	789351.77	570198.49	32°33'53.831"N	103°31'41.852"W	0.32	
9520.60	1.390	256.080	9518.74	5.71	-5.42	-11.34	789350.26	570198.18	32°33'53.828"N	103°31'41.870"W	0.18	
9584.10	1.470	248.830	9582.22	6.23	-5.90	-12.85	789348.76	570197.70	32°33'53.823"N	103°31'41.888"W	0.31	
9647.70	1.710	246.790	9645.80	6.94	-6.57	-14.48	789347.12	570197.03	32°33'53.817"N	103°31'41.907"W	0.39	
9711.20	1.810	244.960	9709.27	7.78	-7.37	-16.26	789345.34	570196.23	32°33'53.809"N	103°31'41.928"W	0.18	
9774.80	1.640	240.340	9772.84	8.70	-8.24	-17.96	789343.64	570195.36	32°33'53.801"N	103°31'41.948"W	0.35	
9838.30	1.450	239.100	9836.32	9.60	-9.11	-19.44	789342.16	570194.49	32°33'53.792"N	103°31'41.965"W	0.30	
9901.90	1.270	233.440	9899.90	10.46	-9.94	-20.69	789340.91	570193.66	32°33'53.784"N	103°31'41.980"W	0.35	
9965.40	1.370	229.520	9963.38	11.40	-10.85	-21.84	789339.76	570192.75	32°33'53.775"N	103°31'41.993"W	0.21	
10029.00	1.370	239.270	10026.96	12.32	-11.73	-23.07	789338.53	570191.87	32°33'53.767"N	103°31'42.008"W	0.37	
10092.50	1.390	247.130	10090.45	13.04	-12.42	-24.43	789337.17	570191.18	32°33'53.760"N	103°31'42.024"W	0.30	
10156.10	1.350	246.630	10154.03	13.67	-13.02	-25.83	789335.77	570190.58	32°33'53.754"N	103°31'42.040"W	0.07	
10219.60	1.340	251.630	10217.51	14.24	-13.55	-27.22	789334.38	570190.05	32°33'53.749"N	103°31'42.056"W	0.19	
10283.20	1.010	269.360	10281.10	14.51	-13.79	-28.49	789333.11	570189.81	32°33'53.747"N	103°31'42.071"W	0.77	
10346.70	0.950	277.990	10344.59	14.47	-13.72	-29.57	789332.03	570189.88	32°33'53.747"N	103°31'42.084"W	0.25	
10410.30	0.880	272.230	10408.18	14.40	-13.63	-30.58	789331.02	570189.97	32°33'53.748"N	103°31'42.096"W	0.18	
10473.80	0.990	251.300	10471.67	14.58	-13.79	-31.58	789330.02	570189.81	32°33'53.747"N	103°31'42.107"W	0.56	
10537.40	0.920	248.510	10535.26	14.97	-14.15	-32.58	789329.02	570189.45	32°33'53.743"N	103°31'42.119"W	0.13	
10600.90	0.890	244.330	10598.75	15.40	-14.55	-33.50	789328.10	570189.05	32°33'53.739"N	103°31'42.130"W	0.11	
10641.80	1.200	239.960	10639.65	15.77	-14.90	-34.16	789327.44	570188.70	32°33'53.736"N	103°31'42.137"W	0.78	
10673.00	1.600	229.200	10670.84	16.23	-15.35	-34.77	789326.83	570188.25	32°33'53.732"N	103°31'42.145"W	1.53	
10704.00	4.700	187.900	10701.79	17.78	-16.89	-35.27	789326.33	570186.71	32°33'53.716"N	103°31'42.151"W	11.79	
10736.00	9.600	179.500	10733.53	21.75	-20.86	-35.43	789326.17	570182.74	32°33'53.677"N	103°31'42.153"W	15.62	
10768.00	15.400	181.600	10764.76	28.68	-27.78	-35.52	789326.08	570175.82	32°33'53.609"N	103°31'42.155"W	18.18	
10800.00	20.800	183.400	10795.17	38.61	-37.71	-35.98	789325.62	570165.89	32°33'53.510"N	103°31'42.161"W	16.96	
10832.00	26.400	185.100	10824.48	51.40	-50.48	-36.95	789324.65	570153.12	32°33'53.384"N	103°31'42.173"W	17.63	
10864.00	32.000	183.700	10852.40	66.98	-66.04	-38.13	789323.47	570137.57	32°33'53.230"N	103°31'42.188"W	17.63	
10896.00	37.800	184.000	10878.64	85.27	-84.30	-39.36	789322.24	570119.31	32°33'53.050"N	103°31'42.204"W	18.13	
10928.00	43.700	184.100	10902.87	106.13	-105.12	-40.84	789320.76	570098.48	32°33'52.844"N	103°31'42.223"W	18.44	
10959.00	50.000	184.600	10924.06	128.70	-127.66	-42.56	789319.04	570075.94	32°33'52.621"N	103°31'42.246"W	20.36	
10991.00	55.900	184.100	10943.33	154.20	-153.12	-44.49	789317.11	570050.49	32°33'52.369"N	103°31'42.270"W	18.48	



Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Lynch) Sec 23, T20S, R34E	Wellbore	No.1H AWP
Facility	Lynch 23 Fed Com		

WELLPATH DATA (254 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
11023.00	61.300	182.500	10960.00	181.49	-180.37	-46.05	789315.55	570023.23	32°33'52.100"N	103°31'42.291"W	17.41	
11055.00	67.000	182.200	10973.94	210.27	-209.14	-47.23	789314.37	569994.47	32°33'51.815"N	103°31'42.307"W	17.83	
11087.00	72.900	180.900	10984.91	240.32	-239.17	-48.03	789313.57	569964.43	32°33'51.518"N	103°31'42.319"W	18.83	
11118.00	79.100	180.200	10992.41	270.38	-269.23	-48.32	789313.28	569934.37	32°33'51.221"N	103°31'42.325"W	20.12	
11150.00	86.000	179.600	10996.55	302.08	-300.95	-48.26	789313.34	569902.66	32°33'50.907"N	103°31'42.328"W	21.64	
11182.00	89.100	179.800	10997.92	334.03	-332.91	-48.10	789313.50	569870.70	32°33'50.591"N	103°31'42.328"W	9.71	
11245.00	90.600	180.100	10998.09	397.00	-395.91	-48.04	789313.56	569807.70	32°33'49.967"N	103°31'42.333"W	2.43	
11309.00	91.300	180.100	10997.02	460.98	-459.90	-48.15	789313.45	569743.71	32°33'49.334"N	103°31'42.340"W	1.09	
11373.00	91.700	180.000	10995.35	524.93	-523.88	-48.21	789313.39	569679.73	32°33'48.701"N	103°31'42.347"W	0.64	
11436.00	89.900	181.000	10994.47	587.92	-586.87	-48.76	789312.84	569616.75	32°33'48.078"N	103°31'42.359"W	3.27	
11500.00	90.600	181.100	10994.19	651.91	-650.85	-49.93	789311.67	569552.76	32°33'47.445"N	103°31'42.378"W	1.10	
11563.00	89.700	181.800	10994.02	714.91	-713.83	-51.53	789310.07	569489.78	32°33'46.822"N	103°31'42.402"W	1.81	
11626.00	89.500	181.600	10994.46	777.91	-776.80	-53.40	789308.21	569426.81	32°33'46.199"N	103°31'42.430"W	0.45	
11690.00	88.400	181.300	10995.64	841.90	-840.77	-55.01	789306.59	569362.85	32°33'45.566"N	103°31'42.454"W	1.78	
11754.00	89.200	180.900	10996.98	905.88	-904.74	-56.24	789305.36	569298.88	32°33'44.933"N	103°31'42.474"W	1.40	
11817.00	89.700	181.000	10997.58	968.88	-967.73	-57.29	789304.31	569235.89	32°33'44.310"N	103°31'42.492"W	0.81	
11881.00	88.600	180.900	10998.53	1032.87	-1031.72	-58.35	789303.25	569171.91	32°33'43.677"N	103°31'42.510"W	1.73	
11945.00	88.800	180.900	10999.98	1096.85	-1095.69	-59.35	789302.25	569107.93	32°33'43.044"N	103°31'42.527"W	0.31	
12008.00	89.500	181.200	11000.92	1159.84	-1158.67	-60.51	789301.09	569044.95	32°33'42.421"N	103°31'42.546"W	1.21	
12072.00	88.200	181.400	11002.20	1223.82	-1222.64	-61.96	789299.64	568980.98	32°33'41.788"N	103°31'42.569"W	2.06	
12135.00	88.600	181.100	11003.96	1286.80	-1285.60	-63.33	789298.27	568918.03	32°33'41.165"N	103°31'42.591"W	0.79	
12199.00	89.300	181.300	11005.13	1350.79	-1349.58	-64.67	789296.93	568854.05	32°33'40.533"N	103°31'42.612"W	1.14	
12263.00	89.800	181.400	11005.64	1414.78	-1413.56	-66.18	789295.42	568790.07	32°33'39.900"N	103°31'42.635"W	0.80	
12326.00	88.300	181.200	11006.68	1477.77	-1476.53	-67.61	789293.99	568727.10	32°33'39.277"N	103°31'42.657"W	2.40	
12390.00	88.800	181.500	11008.30	1541.75	-1540.49	-69.12	789292.48	568663.14	32°33'38.644"N	103°31'42.681"W	0.91	
12453.00	89.500	181.600	11009.24	1604.74	-1603.46	-70.82	789290.78	568600.17	32°33'38.021"N	103°31'42.706"W	1.12	
12517.00	90.400	181.300	11009.29	1668.74	-1667.44	-72.44	789289.16	568536.20	32°33'37.388"N	103°31'42.731"W	1.48	
12580.00	88.400	180.300	11009.95	1731.73	-1730.43	-73.32	789288.28	568473.21	32°33'36.765"N	103°31'42.747"W	3.55	
12644.00	88.100	179.200	11011.91	1795.67	-1794.40	-73.04	789288.56	568409.24	32°33'36.132"N	103°31'42.749"W	1.78	
12707.00	88.300	178.700	11013.89	1858.58	-1857.35	-71.89	789289.71	568346.29	32°33'35.509"N	103°31'42.741"W	0.85	
12771.00	88.700	177.600	11015.56	1922.45	-1921.30	-69.82	789291.78	568282.35	32°33'34.876"N	103°31'42.723"W	1.83	
12835.00	89.900	176.600	11016.34	1986.26	-1985.21	-66.58	789295.02	568218.44	32°33'34.244"N	103°31'42.690"W	2.44	
12898.00	89.800	178.300	11016.51	2049.10	-2048.14	-63.78	789297.82	568155.50	32°33'33.621"N	103°31'42.663"W	2.70	
12962.00	88.900	178.600	11017.23	2113.01	-2112.12	-62.05	789299.55	568091.53	32°33'32.988"N	103°31'42.649"W	1.48	
13025.00	88.600	177.500	11018.61	2175.88	-2175.06	-59.91	789301.69	568028.59	32°33'32.365"N	103°31'42.629"W	1.81	
13089.00	89.500	176.700	11019.67	2239.69	-2238.97	-56.67	789304.93	567964.68	32°33'31.732"N	103°31'42.597"W	1.88	
13152.00	90.100	177.500	11019.89	2302.51	-2301.89	-53.48	789308.12	567901.76	32°33'31.109"N	103°31'42.565"W	1.59	
13215.00	89.100	177.600	11020.33	2365.36	-2364.83	-50.79	789310.81	567838.82	32°33'30.486"N	103°31'42.539"W	1.60	
13279.00	89.600	177.400	11021.05	2429.20	-2428.76	-48.00	789313.60	567774.89	32°33'29.853"N	103°31'42.512"W	0.84	
13342.00	88.400	177.600	11022.15	2492.04	-2491.69	-45.25	789316.35	567711.96	32°33'29.231"N	103°31'42.486"W	1.93	
13406.00	88.500	178.200	11023.89	2555.89	-2555.63	-42.91	789318.69	567648.03	32°33'28.598"N	103°31'42.464"W	0.95	
13438.00	88.900	178.400	11024.61	2587.84	-2587.60	-41.96	789319.64	567616.05	32°33'28.281"N	103°31'42.456"W	1.40	
13501.00	88.800	178.600	11025.88	2650.74	-2650.57	-40.31	789321.29	567553.09	32°33'27.658"N	103°31'42.442"W	0.35	
13565.00	88.500	180.100	11027.38	2714.68	-2714.55	-39.58	789322.02	567489.11	32°33'27.025"N	103°31'42.439"W	2.39	
13629.00	88.600	181.300	11029.00	2778.65	-2778.52	-40.36	789321.24	567425.14	32°33'26.392"N	103°31'42.454"W	1.88	



Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Lynch) Sec 23, T20S, R34E	Wellbore	No.1H AWP
Facility	Lynch 23 Fed Com		

WELLPATH DATA (254 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
13692.00	89.100	181.100	11030.27	2841.63	-2841.49	-41.68	789319.92	567362.17	32°33'25.769"N	103°31'42.475"W	0.85	
13756.00	89.800	182.600	11030.88	2905.63	-2905.45	-43.75	789317.85	567298.21	32°33'25.137"N	103°31'42.505"W	2.59	
13820.00	90.300	182.500	11030.83	2969.62	-2969.39	-46.60	789315.00	567234.28	32°33'24.504"N	103°31'42.544"W	0.80	
13883.00	89.000	182.300	11031.21	3032.61	-3032.33	-49.23	789312.37	567171.33	32°33'23.882"N	103°31'42.580"W	2.09	
13947.00	89.500	182.900	11032.05	3096.59	-3096.26	-52.14	789309.46	567107.41	32°33'23.249"N	103°31'42.620"W	1.22	
14010.00	89.500	182.800	11032.60	3159.57	-3159.18	-55.27	789306.33	567044.49	32°33'22.627"N	103°31'42.662"W	0.16	
14074.00	89.200	182.900	11033.32	3223.54	-3223.10	-58.45	789303.15	566980.57	32°33'21.995"N	103°31'42.705"W	0.49	
14138.00	89.000	182.600	11034.33	3287.52	-3287.02	-61.52	789300.08	566916.66	32°33'21.363"N	103°31'42.746"W	0.56	
14202.00	89.400	183.500	11035.22	3351.49	-3350.92	-64.93	789296.67	566852.76	32°33'20.731"N	103°31'42.792"W	1.54	
14265.00	89.800	183.600	11035.66	3414.44	-3413.80	-68.83	789292.77	566789.88	32°33'20.109"N	103°31'42.843"W	0.65	
14329.00	90.200	183.600	11035.66	3478.40	-3477.67	-72.85	789288.76	566726.01	32°33'19.477"N	103°31'42.895"W	0.62	
14392.00	90.100	183.300	11035.50	3541.36	-3540.56	-76.64	789284.96	566663.12	32°33'18.855"N	103°31'42.945"W	0.50	
14456.00	89.300	182.900	11035.83	3605.33	-3604.46	-80.10	789281.50	566599.22	32°33'18.223"N	103°31'42.991"W	1.40	
14519.00	88.500	182.100	11037.04	3668.31	-3667.39	-82.85	789278.76	566536.29	32°33'17.601"N	103°31'43.029"W	1.80	
14583.00	88.400	182.500	11038.77	3732.28	-3731.31	-85.41	789276.19	566472.37	32°33'16.968"N	103°31'43.065"W	0.64	
14647.00	88.700	182.000	11040.39	3796.25	-3795.24	-87.93	789273.68	566408.44	32°33'16.336"N	103°31'43.100"W	0.91	
14710.00	89.400	182.500	11041.44	3859.24	-3858.18	-90.40	789271.20	566345.50	32°33'15.713"N	103°31'43.134"W	1.37	
14774.00	89.700	182.500	11041.94	3923.22	-3922.12	-93.19	789268.41	566281.57	32°33'15.081"N	103°31'43.172"W	0.47	
14837.00	89.800	182.500	11042.22	3986.21	-3985.06	-95.94	789265.66	566218.63	32°33'14.459"N	103°31'43.210"W	0.16	
14901.00	89.900	182.500	11042.38	4050.20	-4049.00	-98.73	789262.87	566154.69	32°33'13.826"N	103°31'43.248"W	0.16	
14965.00	88.200	182.200	11043.44	4114.18	-4112.93	-101.35	789260.25	566090.76	32°33'13.194"N	103°31'43.285"W	2.70	
15029.00	88.000	182.100	11045.57	4178.14	-4176.85	-103.75	789257.85	566026.84	32°33'12.561"N	103°31'43.318"W	0.35	
15092.00	88.200	182.000	11047.65	4241.10	-4239.78	-106.01	789255.60	565963.92	32°33'11.939"N	103°31'43.350"W	0.35	
15156.00	88.400	181.500	11049.55	4305.07	-4303.72	-107.96	789253.64	565899.98	32°33'11.306"N	103°31'43.379"W	0.84	
15219.00	88.300	181.400	11051.37	4368.05	-4366.67	-109.55	789252.05	565837.02	32°33'10.684"N	103°31'43.403"W	0.22	
15283.00	88.600	181.600	11053.10	4432.03	-4430.63	-111.23	789250.38	565773.07	32°33'10.051"N	103°31'43.428"W	0.56	
15346.00	89.000	182.000	11054.42	4495.01	-4493.58	-113.21	789248.40	565710.12	32°33'09.428"N	103°31'43.457"W	0.90	
15417.00	89.200	182.000	11055.53	4566.00	-4564.53	-115.68	789245.92	565639.17	32°33'08.727"N	103°31'43.492"W	0.28	
15461.00	89.200	182.000	11056.15	4609.99	-4608.50	-117.22	789244.38	565595.20	32°33'08.292"N	103°31'43.514"W	0.00	Project to Bit



Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(Lynch) Sec 23, T20S, R34E	Wellbore	No.1H AWB
Facility	Lynch 23 Fed Com		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
No. 1H PBHL		11050.00	-4621.26	-116.06	789245.54	565582.44	32°33'08.165"N	103°31'43.501"W	point

WELLPATH COMPOSITION - Ref Wellbore: No.1H AWB Ref Wellpath: No.1H AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	10641.80	Generic gyro - northseeking (Standard)	Gyro <69.6-10641.8>	No.1H AWB
10641.80	15461.00	NaviTrak (Standard)	MWD < 10673 - XXXXXX >	No.1H AWB