



Planned Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 2H SHL
Area	Eddy County, NM	Well	No. 2H
Field	(Penny) Sec 21, T19S, R31E	Wellbore	No. 2H PWB
Facility	Penny Pincher Fed Com No. 2H		

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	0.999932	Report Generated	6/4/2010 at 3:02:59 PM
Convergence at slot	0.25° East	Database/Source file	WA_Midland/No. 2H_PWB.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	681958.50	601329.30	32°39'08.172"N	103°52'35.176"W
Facility Reference Pt			681958.50	601329.30	32°39'08.172"N	103°52'35.176"W
Field Reference Pt			681958.50	601329.30	32°39'08.172"N	103°52'35.176"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 2H SHL (GL) to GL	0.00ft
Horizontal Reference Pt	SL	Rig on No. 2H SHL (GL) to Mean Sea Level	3482.00ft
Vertical Reference Pt	Rig on No. 2H SHL (GL)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 2H SHL (GL)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.56°

Case No. 14480

CIMAREX ENERGY
Exhibit # 13



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WELLPATH DATA (51 stations) † = interpolated/extrapolated station												
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]	Comments
0.00	0.000	179.558	0.00	0.00	0.00	0.00	681958.50	601329.30	32°39'08.172"N	103°52'35.176"W	0.00	Tie On
8715.00	0.000	179.558	8715.00	0.00	0.00	0.00	681958.50	601329.30	32°39'08.172"N	103°52'35.176"W	0.00	EST. KOP
8815.00†	28.000	179.558	8811.07	23.95	-23.95	0.18	681958.68	601305.35	32°39'07.935"N	103°52'35.175"W	28.00	
8915.00†	56.000	179.558	8884.64	90.20	-90.20	0.70	681959.20	601239.11	32°39'07.280"N	103°52'35.172"W	28.00	
9015.00†	84.000	179.558	8918.51	183.24	-183.23	1.41	681959.91	601146.08	32°39'06.359"N	103°52'35.168"W	28.00	
9033.59	89.204	179.558	8919.61	201.78	-201.78	1.56	681960.06	601127.54	32°39'06.175"N	103°52'35.168"W	28.00	END OF CURVE
9115.00†	89.204	179.558	8920.74	283.19	-283.18	2.18	681960.68	601046.14	32°39'05.370"N	103°52'35.164"W	0.00	
9215.00†	89.204	179.558	8922.13	383.18	-383.17	2.96	681961.46	600946.16	32°39'04.381"N	103°52'35.160"W	0.00	
9315.00†	89.204	179.558	8923.52	483.17	-483.16	3.73	681962.23	600846.18	32°39'03.391"N	103°52'35.156"W	0.00	
9415.00†	89.204	179.558	8924.91	583.16	-583.15	4.50	681963.00	600746.20	32°39'02.402"N	103°52'35.152"W	0.00	
9515.00†	89.204	179.558	8926.30	683.15	-683.13	5.27	681963.77	600646.22	32°39'01.413"N	103°52'35.148"W	0.00	
9615.00†	89.204	179.558	8927.69	783.14	-783.12	6.04	681964.54	600546.24	32°39'00.423"N	103°52'35.144"W	0.00	
9715.00†	89.204	179.558	8929.08	883.13	-883.11	6.81	681965.31	600446.25	32°38'59.434"N	103°52'35.140"W	0.00	
9815.00†	89.204	179.558	8930.47	983.12	-983.09	7.59	681966.08	600346.27	32°38'58.445"N	103°52'35.136"W	0.00	
9915.00†	89.204	179.558	8931.86	1083.11	-1083.08	8.36	681966.86	600246.29	32°38'57.455"N	103°52'35.132"W	0.00	
10015.00†	89.204	179.558	8933.25	1183.10	-1183.07	9.13	681967.63	600146.31	32°38'56.466"N	103°52'35.128"W	0.00	
10115.00†	89.204	179.558	8934.63	1283.09	-1283.06	9.90	681968.40	600046.33	32°38'55.477"N	103°52'35.124"W	0.00	
10215.00†	89.204	179.558	8936.02	1383.09	-1383.04	10.67	681969.17	599946.35	32°38'54.487"N	103°52'35.120"W	0.00	
10315.00†	89.204	179.558	8937.41	1483.08	-1483.03	11.44	681969.94	599846.37	32°38'53.498"N	103°52'35.116"W	0.00	
10415.00†	89.204	179.558	8938.80	1583.07	-1583.02	12.21	681970.71	599746.39	32°38'52.508"N	103°52'35.112"W	0.00	
10515.00†	89.204	179.558	8940.19	1683.06	-1683.01	12.99	681971.48	599646.41	32°38'51.519"N	103°52'35.108"W	0.00	
10615.00†	89.204	179.558	8941.58	1783.05	-1782.99	13.76	681972.26	599546.43	32°38'50.530"N	103°52'35.104"W	0.00	
10715.00†	89.204	179.558	8942.97	1883.04	-1882.98	14.53	681973.03	599446.45	32°38'49.540"N	103°52'35.100"W	0.00	
10815.00†	89.204	179.558	8944.36	1983.03	-1982.97	15.30	681973.80	599346.47	32°38'48.551"N	103°52'35.096"W	0.00	
10915.00†	89.204	179.558	8945.75	2083.02	-2082.96	16.07	681974.57	599246.49	32°38'47.562"N	103°52'35.092"W	0.00	
11015.00†	89.204	179.558	8947.14	2183.01	-2182.94	16.84	681975.34	599146.51	32°38'46.572"N	103°52'35.088"W	0.00	
11115.00†	89.204	179.558	8948.53	2283.00	-2282.93	17.61	681976.11	599046.53	32°38'45.583"N	103°52'35.084"W	0.00	
11215.00†	89.204	179.558	8949.92	2382.99	-2382.92	18.39	681976.88	598946.55	32°38'44.594"N	103°52'35.080"W	0.00	
11315.00†	89.204	179.558	8951.31	2482.98	-2482.91	19.16	681977.66	598846.57	32°38'43.604"N	103°52'35.077"W	0.00	
11415.00†	89.204	179.558	8952.70	2582.97	-2582.89	19.93	681978.43	598746.59	32°38'42.615"N	103°52'35.073"W	0.00	



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Field	(Penny) Sec 21, T19S, R31E	Wellbore	No. 2H PWB
Facility	Penny Pincher Fed Com No. 2H		

WELLPATH DATA (51 stations) † = interpolated/extrapolated station												
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]	Comments
11515.00†	89.204	179.558	8954.09	2682.96	-2682.88	20.70	681979.20	598646.61	32°38'41.626"N	103°52'35.069"W	0.00	
11615.00†	89.204	179.558	8955.48	2782.95	-2782.87	21.47	681979.97	598546.63	32°38'40.636"N	103°52'35.065"W	0.00	
11715.00†	89.204	179.558	8956.87	2882.94	-2882.85	22.24	681980.74	598446.65	32°38'39.647"N	103°52'35.061"W	0.00	
11815.00†	89.204	179.558	8958.26	2982.93	-2982.84	23.01	681981.51	598346.67	32°38'38.658"N	103°52'35.057"W	0.00	
11915.00†	89.204	179.558	8959.65	3082.92	-3082.83	23.79	681982.28	598246.69	32°38'37.668"N	103°52'35.053"W	0.00	
12015.00†	89.204	179.558	8961.04	3182.91	-3182.82	24.56	681983.06	598146.71	32°38'36.679"N	103°52'35.049"W	0.00	
12115.00†	89.204	179.558	8962.43	3282.90	-3282.80	25.33	681983.83	598046.73	32°38'35.690"N	103°52'35.045"W	0.00	
12215.00†	89.204	179.558	8963.81	3382.89	-3382.79	26.10	681984.60	597946.75	32°38'34.700"N	103°52'35.041"W	0.00	
12315.00†	89.204	179.558	8965.20	3482.88	-3482.78	26.87	681985.37	597846.77	32°38'33.711"N	103°52'35.037"W	0.00	
12415.00†	89.204	179.558	8966.59	3582.87	-3582.77	27.64	681986.14	597746.79	32°38'32.722"N	103°52'35.033"W	0.00	
12515.00†	89.204	179.558	8967.98	3682.86	-3682.75	28.42	681986.91	597646.81	32°38'31.732"N	103°52'35.029"W	0.00	
12615.00†	89.204	179.558	8969.37	3782.85	-3782.74	29.19	681987.68	597546.82	32°38'30.743"N	103°52'35.025"W	0.00	
12715.00†	89.204	179.558	8970.76	3882.84	-3882.73	29.96	681988.46	597446.84	32°38'29.754"N	103°52'35.021"W	0.00	
12815.00†	89.204	179.558	8972.15	3982.83	-3982.72	30.73	681989.23	597346.86	32°38'28.764"N	103°52'35.017"W	0.00	
12915.00†	89.204	179.558	8973.54	4082.82	-4082.70	31.50	681990.00	597246.88	32°38'27.775"N	103°52'35.013"W	0.00	
13015.00†	89.204	179.558	8974.93	4182.81	-4182.69	32.27	681990.77	597146.90	32°38'26.785"N	103°52'35.009"W	0.00	
13115.00†	89.204	179.558	8976.32	4282.81	-4282.68	33.04	681991.54	597046.92	32°38'25.796"N	103°52'35.005"W	0.00	
13215.00†	89.204	179.558	8977.71	4382.80	-4382.67	33.82	681992.31	596946.94	32°38'24.807"N	103°52'35.001"W	0.00	
13315.00†	89.204	179.558	8979.10	4482.79	-4482.65	34.59	681993.08	596846.96	32°38'23.817"N	103°52'34.997"W	0.00	
13415.00†	89.204	179.558	8980.49	4582.78	-4582.64	35.36	681993.86	596746.98	32°38'22.828"N	103°52'34.993"W	0.00	
13451.79	89.204	179.558	8981.00†	4619.56	-4619.42	35.64	681994.14	596710.20	32°38'22.464"N	103°52'34.991"W	0.00	No. 2H PBHL



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Area	Eddy County, NM	Well	No. 2H
Field	(Penny) Sec 21, T19S, R31E	Wellbore	No. 2H PWB
Facility	Penny Pincher Fed Com No. 2H		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 2H PBHL	13451.79	8981.00	-4619.42	35.64	681994.14	596710.20	32°38'22.464"N	103°52'34.991"W	point

SURVEY PROGRAM Ref Wellbore: No. 2H PWB Ref Wellpath: Prelim_1

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	13451.79	NaviTrak (Standard)		No. 2H PWB