



Planned Wellpath Report

Prelim_1
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 1H SHL
Area	Eddy County, NM	Well	No. 1H
Field	(Penny) Sec 21, T19S, R31E	Wellbore	No. 1H PWB
Facility	Penny Pincher Fed Com No. 1H		

REPORT SETUP INFORMATION			
Projection System	NAD27 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect@ 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999931	Report Generated	10/30/2009 at 10:52:19 AM
Convergence at slot	0.25° East	Database/Source file	WA_Midland/No. 1H_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	639790.60	600930.80	32°39'04.459"N	103°52'44.943"W
Facility Reference Pt			639790.60	600930.80	32°39'04.459"N	103°52'44.943"W
Field Reference Pt			639790.60	600930.80	32°39'04.459"N	103°52'44.943"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No. 1H SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 1H SHL (RT) to Mean Sea Level	3480.00ft
Vertical Reference Pt	Rig on No. 1H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 1H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	188.31°



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WELLPATH DATA (52 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]	DLS [°/100ft]	Comments
0.00	0.000	188.306	0.00	0.00	0.00	0.00	639790.60	600930.80	0.00	Tie On
4500.00†	0.000	188.306	4500.00	0.00	0.00	0.00	639790.60	600930.80	0.00	Delaware Sands
6650.00†	0.000	188.306	6650.00	0.00	0.00	0.00	639790.60	600930.80	0.00	Bone Spring
7900.00†	0.000	188.306	7900.00	0.00	0.00	0.00	639790.60	600930.80	0.00	1st BSS
8720.00†	0.000	188.306	8720.00	0.00	0.00	0.00	639790.60	600930.80	0.00	2nd BSS
8760.00	0.000	188.306	8760.00	0.00	0.00	0.00	639790.60	600930.80	0.00	EST. KOP
8860.00†	30.000	188.306	8855.49	25.59	-25.32	-3.70	639786.90	600905.48	30.00	
8960.00†	60.000	188.306	8925.40	95.49	-94.49	-13.79	639776.81	600836.32	30.00	
9057.74	89.323	188.306	8950.97	188.73	-186.75	-27.26	639763.34	600744.06	30.00	END OF CURVE
9060.00†	89.323	188.306	8951.00	190.99	-188.98	-27.59	639763.01	600741.83	0.00	
9160.00†	89.323	188.306	8952.18	290.98	-287.93	-42.03	639748.57	600642.89	0.00	
9260.00†	89.323	188.306	8953.36	390.97	-386.87	-56.48	639734.12	600543.96	0.00	
9360.00†	89.323	188.306	8954.54	490.96	-485.81	-70.92	639719.68	600445.02	0.00	
9460.00†	89.323	188.306	8955.72	590.96	-584.76	-85.37	639705.24	600346.08	0.00	
9560.00†	89.323	188.306	8956.91	690.95	-683.70	-99.81	639690.79	600247.14	0.00	
9660.00†	89.323	188.306	8958.09	790.94	-782.65	-114.26	639676.35	600148.21	0.00	
9760.00†	89.323	188.306	8959.27	890.94	-881.59	-128.70	639661.90	600049.27	0.00	
9860.00†	89.323	188.306	8960.45	990.93	-980.54	-143.15	639647.46	599950.33	0.00	
9960.00†	89.323	188.306	8961.63	1090.92	-1079.48	-157.59	639633.02	599851.40	0.00	
10060.00†	89.323	188.306	8962.81	1190.92	-1178.42	-172.04	639618.57	599752.46	0.00	
10160.00†	89.323	188.306	8963.99	1290.91	-1277.37	-186.48	639604.13	599653.52	0.00	
10260.00†	89.323	188.306	8965.17	1390.90	-1376.31	-200.93	639589.68	599554.58	0.00	
10360.00†	89.323	188.306	8966.35	1490.90	-1475.26	-215.37	639575.24	599455.65	0.00	
10460.00†	89.323	188.306	8967.54	1590.89	-1574.20	-229.82	639560.80	599356.71	0.00	
10560.00†	89.323	188.306	8968.72	1690.88	-1673.14	-244.26	639546.35	599257.77	0.00	
10660.00†	89.323	188.306	8969.90	1790.87	-1772.09	-258.71	639531.91	599158.84	0.00	
10760.00†	89.323	188.306	8971.08	1890.87	-1871.03	-273.15	639517.46	599059.90	0.00	
10860.00†	89.323	188.306	8972.26	1990.86	-1969.98	-287.60	639503.02	598960.96	0.00	
10960.00†	89.323	188.306	8973.44	2090.85	-2068.92	-302.05	639488.58	598862.02	0.00	
11060.00†	89.323	188.306	8974.62	2190.85	-2167.87	-316.49	639474.13	598763.09	0.00	



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Field	(Penny) Sec 21, T19S, R31E	Wellbore	No. 1H PWB
Facility	Penny Pincher Fed Com No. 1H		

WELLPATH DATA (52 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]	DLS [°/100ft]	Comments
11160.00†	89.323	188.306	8975.80	2290.84	-2266.81	-330.94	639459.69	598664.15	0.00	
11260.00†	89.323	188.306	8976.98	2390.83	-2365.75	-345.38	639445.24	598565.21	0.00	
11360.00†	89.323	188.306	8978.17	2490.83	-2464.70	-359.83	639430.80	598466.28	0.00	
11460.00†	89.323	188.306	8979.35	2590.82	-2563.64	-374.27	639416.36	598367.34	0.00	
11560.00†	89.323	188.306	8980.53	2690.81	-2662.59	-388.72	639401.91	598268.40	0.00	
11660.00†	89.323	188.306	8981.71	2790.80	-2761.53	-403.16	639387.47	598169.46	0.00	
11760.00†	89.323	188.306	8982.89	2890.80	-2860.47	-417.61	639373.02	598070.53	0.00	
11860.00†	89.323	188.306	8984.07	2990.79	-2959.42	-432.05	639358.58	597971.59	0.00	
11960.00†	89.323	188.306	8985.25	3090.78	-3058.36	-446.50	639344.14	597872.65	0.00	
12060.00†	89.323	188.306	8986.43	3190.78	-3157.31	-460.94	639329.69	597773.72	0.00	
12160.00†	89.323	188.306	8987.62	3290.77	-3256.25	-475.39	639315.25	597674.78	0.00	
12260.00†	89.323	188.306	8988.80	3390.76	-3355.20	-489.83	639300.80	597575.84	0.00	
12360.00†	89.323	188.306	8989.98	3490.76	-3454.14	-504.28	639286.36	597476.90	0.00	
12460.00†	89.323	188.306	8991.16	3590.75	-3553.08	-518.72	639271.92	597377.97	0.00	
12560.00†	89.323	188.306	8992.34	3690.74	-3652.03	-533.17	639257.47	597279.03	0.00	
12660.00†	89.323	188.306	8993.52	3790.73	-3750.97	-547.61	639243.03	597180.09	0.00	
12760.00†	89.323	188.306	8994.70	3890.73	-3849.92	-562.06	639228.58	597081.16	0.00	
12860.00†	89.323	188.306	8995.88	3990.72	-3948.86	-576.50	639214.14	596982.22	0.00	
12960.00†	89.323	188.306	8997.06	4090.71	-4047.80	-590.95	639199.70	596883.28	0.00	
13060.00†	89.323	188.306	8998.25	4190.71	-4146.75	-605.39	639185.25	596784.34	0.00	
13160.00†	89.323	188.306	8999.43	4290.70	-4245.69	-619.84	639170.81	596685.41	0.00	
13208.52	89.323	188.306	9000.00†	4339.22	-4293.70	-626.84	639163.80	596637.40	0.00	No. 1H PBHL

HOLE & CASING SECTIONS Ref Wellbore: No. 1H PWB Ref Wellpath: Prelim 1									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
7in Casing	0.00	8760.00	8760.00	0.00	8760.00	0.00	0.00	0.00	0.00
6.125in Open Hole	8760.00	13208.52	4448.52	8760.00	9000.00	0.00	0.00	-4293.70	-626.84



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Field	(Penny) Sec 21, T19S, R31E	Wellbore	No. 1H PWB
Facility	Penny Pincher Fed Com No. 1H		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) No. 1H PBHL	13208.52	9000.00	-4293.70	-626.84	639163.80	596637.40	32°38'22.001"N	103°52'52.488"W	point

SURVEY PROGRAM Ref Wellbore: No. 1H PWB Ref Wellpath: Prelim_1				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	13208.52	NaviTrak (Standard)		No. 1H PWB