

PATRIOT DRILLING, LLC

HOBBS OCD

FEB 08 2012

RECEIVED

OPERATOR: Cimarex Energy Co.
WELL/LEASE: Parkway 17 State # 5H
COUNTY: Eddy Co., New Mexico
Sec. 17, T19S, R29E

30-015-39164

HOBBS OCD

FEB 08 2012

RECEIVED

STATE OF NEW MEXICO
DEVIATION REPORT

<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
277	1	4,141	1
585	1	4,616	1
1,117	1	1,906	1
2,067	1	5,504	1
2,718	1	5,826	1
2,971	1	6,228	1
3,287	1	6,512	1
3,572	2	7,176	1
3,825	2		

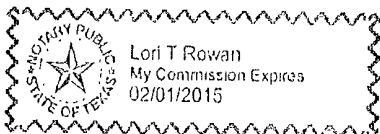
Patriot Drilling, LLC

M. Leroy Peterson, Executive Vice-
President

The foregoing instrument was acknowledged before me on this 3rd day of October, 2011 by M. Leroy Peterson, Executive Vice-President of Patriot Drilling, LLC.

My Commission Expires 02/01/2015

Lori T. Rowan
Notary Public for Ector Co., Texas



HOBBS OGD

FEB 08 2012

RECEIVED

30-015-39164

End Of Well Report



INTEQ

End of Well Report

Cimarex Energy Co.

Eddy County, NM

Parkway State 17 Com No. 5H

Patriot 4

Well Specifications

Well Name: Parkway State 17 Com No. 5H
Start Date: 9/17/2011
Client: Cimarex Energy Co.
Rig Name: Patriot 4
County: Eddy County, NM
Field: Parkway Sec 15, T19S, R29E

Well Location:

NAD83 / TM New Mexico State Planes, Eastern Zone (3001)

Grid Coordinates

Easting: 611761.50'
Northing: 605972.40'

Geographical Coordinates

Latitude: 32°39'56.360"N
Longitude: 104°06'15.740"W

RT: 3,398' above M.S.L.

Date TD Reached: 9/28/2011

Final Depth MD: 12,232'

Final Depth TVD: 7,881.10'



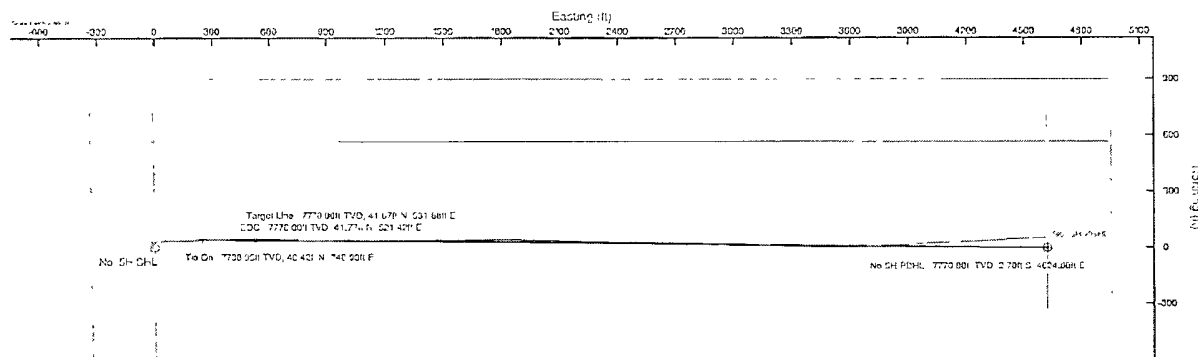
Cimarex Energy Co.

Location: Edgy County, NM
Field: (Parkway) Sec 17 T19S R29E
Facility: Parkway State 1" Conn. No. 1H

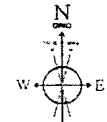
Slot: No. 5H SHL
Well: No. 5H
Wellbore: No. 5H PVH



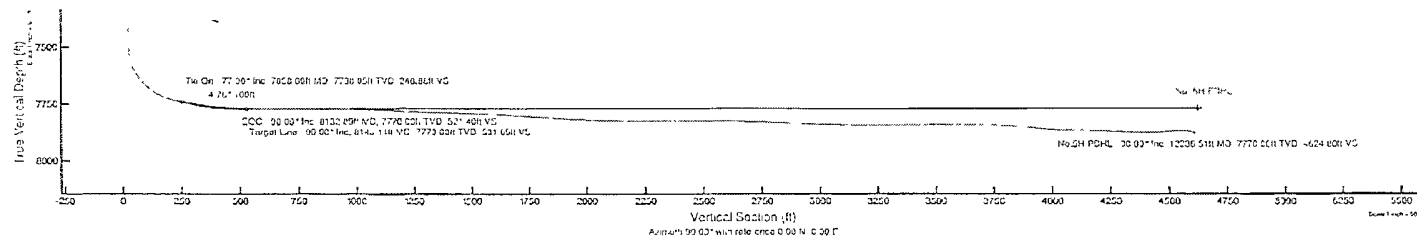
Well Profile Data								
Decline Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (77100ft)	VS (ft)
To Cr.	7850.00	77.000	89.000	7739.05	40.42	248.90	0.00	248.88
EOC	8132.80	90.000	90.416	7773.00	41.77	521.42	4.76	521.40
Target Line	8143.14	90.000	90.621	7773.60	41.67	531.58	2.00	531.65
No 5H PSHL	12236.51	90.000	90.621	7773.60	-2.70	4024.60	0.00	4644.80



Plot reference wellbore is Plan #2	
True vertical depth are referenced to Rig on No. 5H SHL (KB)	Grid System: NAD83 / TM New Mexico G3 Eastern Zone (GCS1) US foot
Measured depth are referenced to Rig on No. 5H SHL (KB)	North Reference: Grid north
Rig on No. 5H SHL (KB) to Mean Sea Level: 3398 feet	Scale: True distance
Mean Sea Level is 3398 feet (At Slot No. 5H SHL 1.0 feet)	Depths are in feet
Coordinates are referenced to 1983	Created by: geobase on 9/20/2011



DDCM (947.0 to 2017.0) Dg: 03.50° E and 48466.3 mT
Magnetic North is 7.42 degrees East of True North (at 6292311)
Grid North is 0.15 degrees East of True North
To correct az from True to Grid subtract 0.15 degrees
To correct az from Magnetic to Grid add 7.57 degrees
(for example if the Magnetic North Azimuth = 90.00°, then the Grid North Azimuth = 90 + 7.57 = 97.57°)





Actual Wellpath Report

No.5H AWP

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REFERENCE AND IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 5H SHL
Area	Eddy County, NM	Well	No. 5H
Field	(Parkway) Sec 17, T19S, R29E	Wellbore	No.5H AWB
Facility	Parkway State 17 Com No.4H		

REPORT INFORMATION			
Projection System	NAD83 / TMI New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Gentbry
Scale	0.999915	Report Generated	9/28/2011 at 7:48:11 AM
Convergence at slot	0.12° East	Database/Source file	WA Midland/No.5H_AWB.xml

WELLBORE LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	3713.06	-41.75	611761.50	605972.40	32°39'56.360"N	104°06'16.135"W
Facility Reference Pt			611803.25	602259.66	32°39'19.620"N	104°06'15.740"W
Field Reference Pt			611803.25	602259.66	32°39'19.620"N	104°06'15.740"W

WELLBORE DATA			
Calculation method	Minimum curvature	Rig on No. 5H SHL (KB) to GL	3398.00ft
Horizontal Reference Pt	Slot	Rig on No. 5H SHL (KB) to Mean Sea Level	3398.00ft
Vertical Reference Pt	Rig on No. 5H SHL (KB)	Rig on No. 5H SHL (KB) to Mud Line at Slot (No. 5H SHL)	3398.00ft
MD Reference Pt	Rig on No. 5H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	90.03°



Actual Wellpath Report

No.5H AWP

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REFERENCE WELL INFORMATION			
Operator	Cimarex Energy Co.	Slot	No. 5H SHL
Area	Eddy County, NM	Well	No. 5H
Field	(Parkway) Sec 17, T19S, R29E	Wellbore	No.5H AWP
Facility	Parkway State 17 Com No.4H		

WELLPATH DATA (145 stations) † = interpolated/extrapolated station

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	3.600	0.00	0.00	0.00	0.00	611761.50	605972.40	32°39'56.360"N	104°06'16.135"W	0.00	
21.00	0.000	3.600	21.00	0.00	0.00	0.00	611761.50	605972.40	32°39'56.360"N	104°06'16.135"W	0.00	
100.00	0.070	3.600	100.00	0.00	0.05	0.00	611761.50	605972.45	32°39'56.360"N	104°06'16.135"W	0.09	
200.00	0.250	100.810	200.00	0.22	0.07	0.22	611761.72	605972.47	32°39'56.360"N	104°06'16.132"W	0.27	
300.00	0.110	111.760	300.00	0.52	-0.01	-0.52	611762.02	605972.39	32°39'56.359"N	104°06'16.129"W	0.14	
400.00	0.070	16.270	400.00	0.63	0.01	0.63	611762.13	605972.41	32°39'56.360"N	104°06'16.127"W	0.14	
500.00	0.260	97.600	500.00	0.87	0.04	0.87	611762.37	605972.44	32°39'56.360"N	104°06'16.124"W	0.26	
600.00	0.480	63.620	600.00	1.47	0.20	1.47	611762.97	605972.60	32°39'56.361"N	104°06'16.117"W	0.30	
700.00	0.700	68.890	699.99	2.42	0.61	2.42	611763.92	605973.01	32°39'56.365"N	104°06'16.106"W	0.23	
802.00	0.720	68.340	801.98	3.59	1.07	3.60	611765.09	605973.47	32°39'56.370"N	104°06'16.093"W	0.02	
897.00	0.560	59.810	896.98	4.55	1.52	4.55	611766.05	605973.92	32°39'56.375"N	104°06'16.081"W	0.20	
992.00	0.290	20.890	991.97	5.04	1.98	5.04	611766.54	605974.38	32°39'56.379"N	104°06'16.076"W	0.40	
1087.00	0.230	296.580	1086.97	4.95	2.29	4.95	611766.45	605974.69	32°39'56.382"N	104°06'16.077"W	0.37	
1181.00	0.650	273.340	1180.97	4.25	2.40	4.25	611765.75	605974.80	32°39'56.383"N	104°06'16.085"W	0.48	
1276.00	0.960	265.960	1275.96	2.92	2.38	2.92	611764.42	605974.78	32°39'56.383"N	104°06'16.100"W	0.34	
1371.00	0.960	256.300	1370.95	1.35	2.13	1.35	611762.85	605974.53	32°39'56.381"N	104°06'16.119"W	0.17	
1466.00	0.870	239.110	1465.94	-0.04	1.58	-0.04	611761.46	605973.98	32°39'56.375"N	104°06'16.135"W	0.30	
1560.00	0.930	245.410	1559.93	-1.35	0.89	-1.34	611760.16	605973.29	32°39'56.368"N	104°06'16.150"W	0.12	
1655.00	0.760	241.800	1654.91	-2.60	0.27	-2.60	611758.90	605972.67	32°39'56.362"N	104°06'16.165"W	0.19	
1750.00	0.660	247.440	1749.91	-3.66	-0.23	-3.66	611757.84	605972.17	32°39'56.357"N	104°06'16.178"W	0.13	
1845.00	0.720	256.330	1844.90	-4.75	-0.59	-4.75	611756.75	605971.81	32°39'56.354"N	104°06'16.190"W	0.13	
1940.00	0.680	266.730	1939.89	-5.89	-0.76	-5.89	611755.61	605971.64	32°39'56.352"N	104°06'16.204"W	0.14	
2035.00	0.650	294.700	2034.89	-6.94	-0.57	-6.94	611754.56	605971.83	32°39'56.354"N	104°06'16.216"W	0.34	
2130.00	0.660	295.040	2129.88	-7.93	-0.11	-7.93	611753.57	605972.29	32°39'56.359"N	104°06'16.227"W	0.01	
2224.00	0.630	292.640	2223.88	-8.89	0.32	-8.89	611752.61	605972.72	32°39'56.363"N	104°06'16.239"W	0.04	
2319.00	0.680	300.550	2318.87	-9.86	0.81	-9.86	611751.64	605973.21	32°39'56.368"N	104°06'16.250"W	0.11	
2414.00	0.690	297.990	2413.86	-10.85	1.36	-10.85	611750.65	605973.76	32°39'56.373"N	104°06'16.262"W	0.03	
2508.00	0.510	298.600	2507.86	-11.72	1.83	-11.72	611749.78	605974.23	32°39'56.378"N	104°06'16.272"W	0.19	
2603.00	0.410	304.490	2602.85	-12.37	2.22	-12.37	611749.13	605974.62	32°39'56.382"N	104°06'16.279"W	0.12	
2698.00	0.370	305.300	2697.85	-12.90	2.59	-12.90	611748.60	605974.99	32°39'56.385"N	104°06'16.286"W	0.04	
2793.00	0.350	299.110	2792.85	-13.41	2.91	-13.41	611748.10	605975.31	32°39'56.389"N	104°06'16.291"W	0.05	
2887.00	0.220	263.410	2886.85	-13.84	3.03	-13.84	611747.67	605975.43	32°39'56.390"N	104°06'16.296"W	0.23	
2982.00	0.110	259.120	2981.85	-14.11	2.99	-14.11	611747.39	605975.39	32°39'56.389"N	104°06'16.300"W	0.12	
3077.00	0.150	206.800	3076.85	-14.25	2.86	-14.25	611747.25	605975.26	32°39'56.388"N	104°06'16.301"W	0.13	
3172.00	0.210	188.100	3171.85	-14.33	2.58	-14.33	611747.17	605974.98	32°39'56.385"N	104°06'16.302"W	0.09	
3267.00	0.110	169.570	3266.85	-14.34	2.32	-14.34	611747.16	605974.72	32°39'56.383"N	104°06'16.302"W	0.12	
3361.00	0.080	67.870	3360.85	-14.26	2.25	-14.26	611747.24	605974.65	32°39'56.382"N	104°06'16.301"W	0.16	
3456.00	0.250	43.870	3455.85	-14.06	2.43	-14.06	611747.44	605974.83	32°39'56.384"N	104°06'16.299"W	0.19	
3551.00	0.560	7.240	3550.84	-13.86	3.04	-13.86	611747.64	605975.44	32°39'56.390"N	104°06'16.297"W	0.41	
3646.00	1.550	6.020	3645.83	-13.67	4.78	-13.66	611747.84	605977.18	32°39'56.407"N	104°06'16.294"W	1.04	
3741.00	2.230	13.580	3740.78	-13.10	7.85	-13.09	611748.41	605980.25	32°39'56.438"N	104°06'16.288"W	0.76	
3836.00	2.140	16.860	3835.71	-12.15	11.35	-12.15	611749.36	605983.74	32°39'56.472"N	104°06'16.276"W	0.16	
3931.00	1.860	8.490	3930.65	-11.41	14.57	-11.40	611750.10	605986.97	32°39'56.504"N	104°06'16.268"W	0.43	
4026.00	1.640	2.790	4025.60	-11.12	17.45	-11.11	611750.39	605989.85	32°39'56.532"N	104°06'16.264"W	0.30	
4121.00	1.560	354.960	4120.57	-11.17	20.10	-11.16	611750.34	605992.49	32°39'56.559"N	104°06'16.265"W	0.24	



Actual Wellpath Report

No.5H AWP

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GENERAL INFORMATION			
Operator	Cimarex Energy Co.	Slot	No. 5H SHL
Area	Eddy County, NM	Well	No. 5H
Field	(Parkway) Sec 17, T19S, R29E	Wellbore	No.5H AWP
Facility	Parkway State 17 Com No.4H		

WELLPATH DATA (145 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
4216.00	1.400	353.430	4215.54	-11.42	22.54	-11.40	611750.10	605994.94	32°39'56.583"N	104°06'16.268"W	0.17	
4312.00	1.150	348.240	4311.51	-11.75	24.65	-11.73	611749.77	605997.04	32°39'56.604"N	104°06'16.271"W	0.29	
4407.00	1.130	349.070	4406.49	-12.12	26.50	-12.11	611749.39	605998.90	32°39'56.622"N	104°06'16.276"W	0.03	
4502.00	1.000	348.120	4501.48	-12.47	28.23	-12.45	611749.05	606000.63	32°39'56.639"N	104°06'16.280"W	0.14	
4597.00	0.770	324.030	4596.47	-13.02	29.56	-13.00	611748.50	606001.95	32°39'56.652"N	104°06'16.286"W	0.46	
4691.00	0.720	314.280	4690.46	-13.81	30.48	-13.79	611747.71	606002.88	32°39'56.661"N	104°06'16.295"W	0.14	
4786.00	0.680	288.430	4785.45	-14.77	31.08	-14.76	611746.74	606003.47	32°39'56.667"N	104°06'16.307"W	0.33	
4881.00	0.630	283.100	4880.44	-15.82	31.37	-15.80	611745.70	606003.77	32°39'56.670"N	104°06'16.319"W	0.08	
4976.00	0.680	308.990	4975.44	-16.77	31.85	-16.75	611744.75	606004.24	32°39'56.675"N	104°06'16.330"W	0.31	
5071.00	0.800	314.230	5070.43	-17.68	32.66	-17.66	611743.84	606005.06	32°39'56.683"N	104°06'16.340"W	0.14	
5165.00	0.770	309.640	5164.42	-18.64	33.52	-18.62	611742.88	606005.92	32°39'56.692"N	104°06'16.352"W	0.07	
5260.00	0.380	305.460	5259.42	-19.38	34.11	-19.36	611742.14	606006.51	32°39'56.698"N	104°06'16.360"W	0.41	
5355.00	0.320	126.400	5354.42	-19.43	34.14	-19.41	611742.09	606006.54	32°39'56.698"N	104°06'16.361"W	0.74	
5450.00	0.950	121.790	5449.41	-18.54	33.57	-18.52	611742.98	606005.96	32°39'56.692"N	104°06'16.351"W	0.66	
5545.00	1.710	122.430	5544.38	-16.68	32.39	-16.66	611744.84	606004.79	32°39'56.680"N	104°06'16.329"W	0.80	
5639.00	3.100	124.570	5638.30	-13.40	30.20	-13.38	611748.12	606002.59	32°39'56.659"N	104°06'16.290"W	1.48	
5735.00	2.770	126.740	5734.17	-9.40	27.34	-9.39	611752.11	605999.73	32°39'56.630"N	104°06'16.244"W	0.36	
5830.00	1.950	132.940	5829.09	-6.38	24.86	-6.36	611755.14	605997.26	32°39'56.606"N	104°06'16.208"W	0.90	
5924.00	1.440	127.220	5923.05	-4.27	23.06	-4.25	611757.25	605995.46	32°39'56.588"N	104°06'16.184"W	0.57	
6019.00	0.910	117.480	6018.03	-2.64	21.99	-2.63	611758.87	605994.39	32°39'56.577"N	104°06'16.165"W	0.59	
6114.00	0.510	99.650	6113.02	-1.56	21.57	-1.55	611759.95	605993.97	32°39'56.573"N	104°06'16.152"W	0.48	
6208.00	0.400	22.010	6207.02	-1.02	21.80	-1.01	611760.49	605994.20	32°39'56.575"N	104°06'16.146"W	0.61	
6303.00	0.650	5.880	6302.02	-0.84	22.65	-0.83	611760.67	605995.04	32°39'56.584"N	104°06'16.144"W	0.30	
6398.00	0.850	17.960	6397.01	-0.57	23.85	-0.56	611760.94	605996.25	32°39'56.596"N	104°06'16.141"W	0.27	
6493.00	1.470	16.070	6491.99	-0.02	25.69	0.00	611761.50	605998.09	32°39'56.614"N	104°06'16.134"W	0.65	
6588.00	1.500	29.850	6586.96	0.94	27.94	0.95	611762.45	606000.34	32°39'56.636"N	104°06'16.123"W	0.38	
6683.00	1.680	15.490	6681.92	2.55	30.00	2.56	611764.06	606002.40	32°39'56.656"N	104°06'16.104"W	0.49	
6778.00	1.750	56.290	6776.88	4.75	31.78	4.76	611766.26	606001.18	32°39'56.674"N	104°06'16.078"W	0.35	
6873.00	1.590	59.750	6871.84	7.09	33.25	7.11	611768.61	606005.65	32°39'56.688"N	104°06'16.051"W	0.20	
6968.00	1.180	59.890	6966.81	9.07	34.40	9.09	611770.59	606006.80	32°39'56.700"N	104°06'16.027"W	0.43	
7063.00	0.910	63.670	7061.79	10.60	35.23	10.62	611772.12	606007.63	32°39'56.708"N	104°06'16.010"W	0.29	
7158.00	0.880	94.480	7156.78	12.00	35.51	12.02	611773.52	606007.90	32°39'56.711"N	104°06'15.993"W	0.50	
7253.00	1.680	106.180	7251.76	14.06	35.06	14.08	611775.58	606007.46	32°39'56.706"N	104°06'15.969"W	0.88	
7348.00	2.720	106.240	7346.69	17.57	34.04	17.59	611779.08	606006.44	32°39'56.696"N	104°06'15.928"W	1.09	
7443.00	1.590	104.370	7441.62	21.01	33.09	21.03	611782.53	606005.48	32°39'56.686"N	104°06'15.888"W	1.19	
7522.00	6.600	83.500	7520.39	26.58	33.33	26.60	611788.10	606005.72	32°39'56.689"N	104°06'15.823"W	6.51	
7554.00	14.100	83.500	7551.85	32.29	33.98	32.31	611793.81	606006.37	32°39'56.695"N	104°06'15.756"W	23.44	
7586.00	21.500	82.500	7582.30	41.99	35.19	42.01	611803.51	606007.58	32°39'56.707"N	104°06'15.642"W	23.14	
7617.00	28.800	84.200	7610.34	55.07	36.68	55.09	611816.59	606009.08	32°39'56.721"N	104°06'15.489"W	23.66	
7649.00	36.400	86.400	7637.28	72.24	38.06	72.26	611833.75	606010.46	32°39'56.735"N	104°06'15.288"W	24.03	
7680.00	43.800	89.100	7660.98	92.17	38.81	92.20	611853.69	606011.21	32°39'56.742"N	104°06'15.055"W	24.52	
7712.00	51.200	90.200	7682.58	115.75	38.94	115.77	611877.26	606011.34	32°39'56.742"N	104°06'14.779"W	23.26	
7744.00	58.900	90.500	7700.90	141.96	38.78	141.98	611903.47	606011.17	32°39'56.740"N	104°06'14.473"W	24.07	
7775.00	66.800	89.300	7715.04	169.52	38.83	169.54	611931.03	606011.23	32°39'56.740"N	104°06'14.150"W	25.71	
7807.00	73.400	88.600	7725.92	199.59	39.39	199.61	611961.09	606011.79	32°39'56.745"N	104°06'13.799"W	20.73	



Actual Wellpath Report

No.5H AWP

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RECORDING INFORMATION			
Operator	Cimarex Energy Co.	Slot	No. 5H SHL
Area	Eddy County, NM	Well	No. 5H
Field	(Parkway) Sec 17, T19S, R29E	Wellbore	No.5H AWP
Facility	Parkway State 17 Com No.4H		

WELLPATH DATA (145 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
7839.00	75.700	88.800	7734.45	230.42	40.09	230.44	611991.92	606012.49	32°39'56.751"N	104°06'13.438"W	7.21	
7870.00	76.400	89.400	7741.92	260.50	40.56	260.53	612022.00	606012.96	32°39'56.755"N	104°06'13.086"W	2.94	
7902.00	77.400	89.600	7749.17	291.67	40.83	291.69	612053.17	606013.23	32°39'56.757"N	104°06'12.722"W	3.18	
7934.00	78.600	89.900	7755.82	322.97	40.97	322.99	612084.46	606013.37	32°39'56.758"N	104°06'12.355"W	3.86	
7965.00	81.100	90.300	7761.29	353.48	40.92	353.50	612114.97	606013.31	32°39'56.757"N	104°06'11.999"W	8.16	
7997.00	82.900	91.400	7765.74	385.16	40.44	385.19	612146.65	606012.84	32°39'56.751"N	104°06'11.628"W	6.57	
8029.00	85.500	92.000	7768.97	416.98	39.50	417.01	612178.47	606011.90	32°39'56.741"N	104°06'11.256"W	8.34	
8060.00	87.700	91.700	7770.81	447.91	38.50	447.93	612209.39	606010.90	32°39'56.731"N	104°06'10.894"W	7.16	
8092.00	90.300	91.500	7771.37	479.89	37.61	479.91	612241.37	606010.00	32°39'56.721"N	104°06'10.520"W	8.15	
8124.00	90.500	91.200	7771.15	511.88	36.85	511.90	612273.36	606009.25	32°39'56.713"N	104°06'10.146"W	1.13	
8155.00	90.600	90.500	7770.85	542.88	36.39	542.90	612304.35	606008.79	32°39'56.708"N	104°06'09.783"W	2.28	
8186.00	90.300	89.700	7770.61	573.88	36.34	573.90	612335.35	606008.74	32°39'56.707"N	104°06'09.421"W	2.76	
8281.00	90.700	89.600	7769.78	608.87	36.92	608.89	612430.33	606009.32	32°39'56.711"N	104°06'08.309"W	0.43	
8376.00	90.900	89.500	7768.45	763.86	37.67	763.88	612525.31	606010.06	32°39'56.716"N	104°06'07.198"W	0.24	
8471.00	89.600	90.100	7768.04	858.85	38.00	858.88	612620.30	606010.39	32°39'56.717"N	104°06'06.087"W	1.51	
8566.00	87.700	90.000	7770.27	953.82	37.92	953.84	612715.26	606010.31	32°39'56.714"N	104°06'04.976"W	2.00	
8660.00	87.400	89.600	7774.29	1047.73	38.24	1047.76	612809.17	606010.64	32°39'56.715"N	104°06'03.878"W	0.53	
8755.00	87.200	89.500	7778.77	1142.63	38.99	1142.65	612904.05	606011.38	32°39'56.721"N	104°06'02.768"W	0.24	
8850.00	87.900	90.300	7782.83	1237.54	39.15	1237.56	612998.95	606011.55	32°39'56.720"N	104°06'01.657"W	1.12	
8945.00	87.900	90.100	7786.31	1332.47	38.82	1332.50	613093.88	606011.22	32°39'56.715"N	104°06'00.547"W	0.21	
9010.00	88.300	89.500	7789.46	1427.42	39.15	1427.44	613188.82	606011.55	32°39'56.716"N	104°05'59.436"W	0.76	
9135.00	86.800	89.900	7793.52	1522.33	39.65	1522.35	613283.72	606012.05	32°39'56.719"N	104°05'58.326"W	1.63	
9230.00	87.100	89.200	7798.58	1617.19	40.40	1617.21	613378.57	606012.79	32°39'56.724"N	104°05'57.216"W	0.80	
9326.00	86.400	90.300	7804.02	1713.03	40.81	1713.06	613474.41	606013.21	32°39'56.726"N	104°05'56.095"W	1.36	
9420.00	86.100	89.700	7810.17	1806.83	40.81	1806.85	613568.20	606013.21	32°39'56.724"N	104°05'54.998"W	0.71	
9515.00	86.100	91.000	7816.63	1901.61	40.24	1901.63	613662.96	606012.63	32°39'56.717"N	104°05'53.889"W	1.37	
9610.00	87.500	91.100	7821.93	1996.44	38.50	1996.46	613757.79	606010.89	32°39'56.697"N	104°05'52.780"W	1.48	
9706.00	89.300	91.100	7824.61	2092.38	36.66	2092.41	613853.72	606009.05	32°39'56.677"N	104°05'51.658"W	1.87	
9801.00	89.800	91.600	7825.36	2187.35	34.42	2187.38	613948.68	606006.81	32°39'56.653"N	104°05'50.547"W	0.74	
9895.00	90.300	91.100	7825.28	2281.33	32.20	2281.35	614042.65	606004.60	32°39'56.629"N	104°05'49.448"W	0.75	
9990.00	90.800	90.400	7824.36	2376.32	30.96	2376.34	614137.63	606003.36	32°39'56.614"N	104°05'48.337"W	0.91	
10085.00	89.600	91.000	7824.03	2471.31	29.80	2471.33	614232.61	606002.20	32°39'56.601"N	104°05'47.225"W	1.41	
10180.00	89.700	90.900	7824.61	2566.29	28.22	2566.31	614327.59	606000.62	32°39'56.583"N	104°05'46.114"W	0.15	
10275.00	87.900	91.500	7826.60	2661.25	26.23	2661.26	614422.53	605998.63	32°39'56.561"N	104°05'45.004"W	2.00	
10369.00	88.100	91.200	7829.88	2755.17	24.02	2755.18	614516.44	605996.42	32°39'56.537"N	104°05'43.905"W	0.38	
10464.00	88.000	91.000	7833.12	2850.09	22.20	2850.11	614611.36	605994.60	32°39'56.517"N	104°05'42.795"W	0.24	
10559.00	88.200	90.800	7836.26	2945.03	20.71	2945.04	614706.29	605993.11	32°39'56.500"N	104°05'41.684"W	0.30	
10654.00	88.500	92.400	7839.00	3039.95	18.06	3039.96	614801.20	605990.45	32°39'56.472"N	104°05'40.574"W	1.71	
10748.00	89.500	92.200	7840.64	3133.86	14.28	3133.87	614895.10	605986.68	32°39'56.433"N	104°05'39.476"W	1.08	
10843.00	90.300	92.300	7840.81	3228.79	10.55	3228.80	614990.02	605982.95	32°39'56.394"N	104°05'38.365"W	0.85	
10938.00	90.100	91.700	7840.48	3323.74	7.24	3323.74	615084.95	605979.64	32°39'56.359"N	104°05'37.255"W	0.67	
11033.00	90.200	90.800	7840.23	3418.71	5.17	3418.72	615179.92	605977.57	32°39'56.336"N	104°05'36.144"W	0.95	
11127.00	90.300	90.400	7839.32	3512.71	4.18	3512.71	615273.90	605976.58	32°39'56.324"N	104°05'35.045"W	0.44	
11222.00	90.100	89.200	7839.48	3607.70	4.51	3607.71	615368.89	605976.91	32°39'56.325"N	104°05'33.933"W	1.28	
11317.00	88.500	88.500	7840.65	3702.67	6.42	3702.68	615463.85	605978.82	32°39'56.342"N	104°05'32.822"W	1.84	



Actual Wellpath Report

No.5H AWP

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REFERENCE AND WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 5H SHL
Area	Eddy County, NM	Well	No. 5H
Field	(Parkway) Sec 17, T19S, R29E	Wellbore	No.5H AWB
Facility	Parkway State 17 Com No.4H		

WELLPATH DATA (145 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
11412.00	86.900	87.600	7844.46	3797.54	9.65	3797.54	615558.71	605982.05	32°39'56.372"N	104°05'31.713"W	1.93	
11507.00	83.700	85.700	7852.24	3892.03	15.18	3892.04	615653.20	605987.58	32°39'56.424"N	104°05'30.607"W	3.91	
11601.00	85.300	86.700	7861.25	3985.39	21.38	3985.40	615746.55	605993.78	32°39'56.484"N	104°05'29.515"W	2.00	
11696.00	88.800	88.300	7866.14	4080.15	25.51	4080.17	615841.31	605997.91	32°39'56.522"N	104°05'28.406"W	4.05	
11791.00	88.200	87.700	7868.63	4175.06	28.83	4175.08	615936.21	606001.22	32°39'56.553"N	104°05'27.296"W	0.89	
11886.00	87.100	86.800	7872.52	4269.86	33.38	4269.88	616031.01	606005.78	32°39'56.596"N	104°05'26.187"W	1.50	
11981.00	87.000	86.200	7877.41	4364.56	39.17	4364.58	616125.70	606011.57	32°39'56.651"N	104°05'25.079"W	0.64	
12076.00	95.000	87.300	7875.75	4459.31	44.55	4459.34	616220.45	606016.95	32°39'56.702"N	104°05'23.970"W	8.50	
12170.00	94.000	87.800	7868.38	4552.93	48.56	4552.96	616314.06	606020.96	32°39'56.740"N	104°05'22.875"W	1.19	
12232.00	62.000	87.800	7881.10	4612.74	50.86	4612.77	616373.87	606023.25	32°39'56.761"N	104°05'22.175"W	51.61	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. 5H PBHL		7770.00	-2.70	4624.80	616385.90	605969.70	32°39'56.231"N	104°05'22.036"W	point

WELLPATH COMPOSITION - Ref Wellbore: No.5H AWB Ref Wellpath: No.5H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	7063.00	Generic gyro - northseeking (Standard)	GyroData Gyro <100-7443>	No.5H AWB
7063.00	12232.00	NaviTrak (Standard)	MWD NaviTrak <7158-XXXX>	No.5H AWB

4.3 Bottom Hole Assembly