



Cimarex Energy Co.

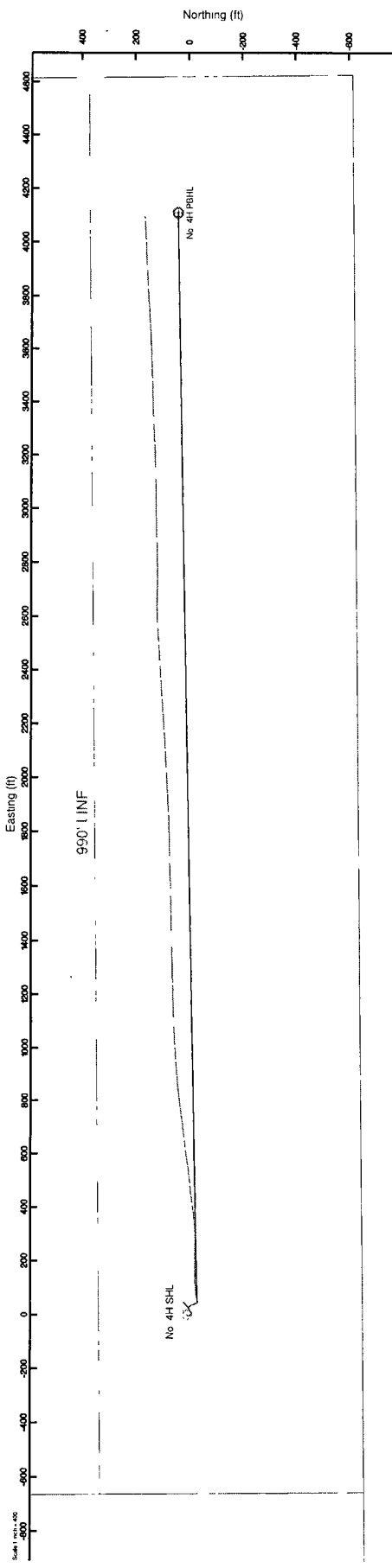


Location Lea County, NM
Field (Mallon) Sec 35, T19S, R34E
Facility Mallon 35 Fed No. 4H

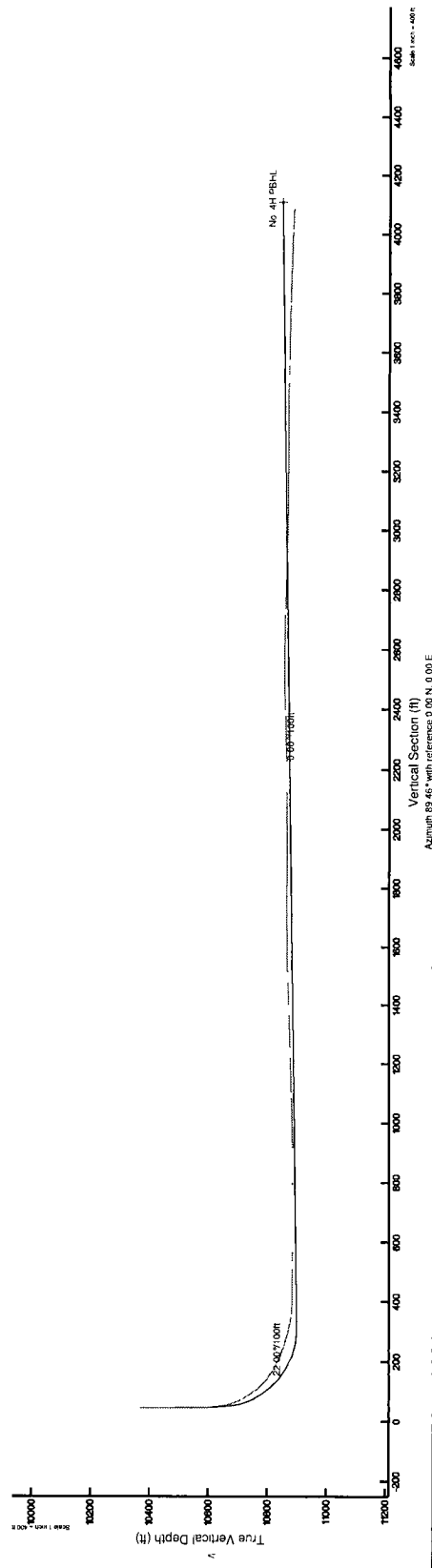
Slot No 4H SHL
Well No 4H
Wellbore No 4H PWB

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (%100ft)	VS (ft)
Tie On (Gyro)	10607.00	3.500	83.500	10605.44	-40.21	46.53	0.00	46.15
KOP	10657.07	3.500	83.500	10655.42	-39.87	49.57	0.00	49.19
End of Curve	11053.75	90.754	88.845	10900.00	-33.15	312.87	22.00	312.54
No 4H PBHL	14851.45	90.755	88.986	10850.00	38.73	4109.55	0.00	4109.73



Wellbore Name: No 4H SHL	Wellbore Number: 4H
Wellbore Type: Surface	Wellbore Status: Active
Wellbore Depth: 14851.45 ft	Wellbore Length: 14851.45 ft
Wellbore Diameter: 4.5 in	Wellbore Material: Steel
Wellbore Orientation: 90.755°	Wellbore Orientation: 90.755°
Wellbore Completion: 100%	Wellbore Completion: 100%
Wellbore Production: 0 bbl/d	Wellbore Production: 0 bbl/d
Wellbore Injection: 0 bbl/d	Wellbore Injection: 0 bbl/d
Wellbore Pressure: 0 psi	Wellbore Pressure: 0 psi
Wellbore Temperature: 0 °F	Wellbore Temperature: 0 °F
Wellbore Corrosion: 0 mpy	Wellbore Corrosion: 0 mpy
Wellbore Integrity: 100%	Wellbore Integrity: 100%
Wellbore Inspection: 100%	Wellbore Inspection: 100%
Wellbore Maintenance: 100%	Wellbore Maintenance: 100%
Wellbore Safety: 100%	Wellbore Safety: 100%
Wellbore Security: 100%	Wellbore Security: 100%
Wellbore Environmental: 100%	Wellbore Environmental: 100%
Wellbore Social: 100%	Wellbore Social: 100%
Wellbore Governance: 100%	Wellbore Governance: 100%





Actual Wellpath Report

No. 4H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 4H SHL
Area	Lea County, NM	Well	No. 4H
Field	(Mallon) Sec 35, T19S, R34E	Wellbore	No. 4H AWB
Facility	Mallon 35 Fed No. 4H		

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	Gomeoscr
Scale	0.999978	Report Generated	1/26/2011 at 7:19:41 AM
Convergence at slot	0.43° East	Database/Source file	WA Midland/No. 4H_AWB.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	786447.20	587045.00	32°36'40.736"N	103°32'14.318"W
Facility Reference Pt			786447.20	587045.00	32°36'40.736"N	103°32'14.318"W
Field Reference Pt			786447.20	587045.00	32°36'40.736"N	103°32'14.318"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 4H SHL (RT) to Facility Vertical Datum	18.00ft
Horizontal Reference Pt	Slot	Rig on No. 4H SHL (RT) to Mean Sea Level	3707.00ft
Vertical Reference Pt	Rig on No. 4H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 4H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	89.46°



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 4H SHL
Area	Lea County, NM	Well	No. 4H
Field	(Mallon) Sec 35, T19S, R34E	Wellbore	No. 4H AWP
Facility	Mallon 35 Fed No. 4H		

WELLPATH DATA (177 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	2.410	0.00	0.00	0.00	0.00	786447.20	587045.00	32°36'40.736"N	103°32'14.318"W	0.00	
18.00	0.000	2.410	18.00	0.00	0.00	0.00	786447.20	587045.00	32°36'40.736"N	103°32'14.318"W	0.00	
100.00	0.130	2.410	100.00	0.00	0.09	0.00	786447.20	587045.09	32°36'40.736"N	103°32'14.318"W	0.16	
200.00	0.200	281.420	200.00	-0.16	0.24	-0.16	786447.04	587045.24	32°36'40.738"N	103°32'14.319"W	0.22	
300.00	0.360	247.670	300.00	-0.62	0.16	-0.62	786446.58	587045.16	32°36'40.737"N	103°32'14.325"W	0.22	
400.00	0.460	210.960	400.00	-1.12	-0.31	-1.12	786446.08	587044.69	32°36'40.733"N	103°32'14.331"W	0.28	
500.00	0.560	214.160	499.99	-1.61	-1.06	-1.60	786445.60	587043.94	32°36'40.725"N	103°32'14.336"W	0.10	
600.00	0.690	217.350	599.99	-2.26	-1.94	-2.24	786444.96	587043.06	32°36'40.716"N	103°32'14.344"W	0.13	
700.00	0.800	202.900	699.98	-2.91	-3.06	-2.88	786444.32	587041.94	32°36'40.705"N	103°32'14.351"W	0.22	
716.80	0.740	198.800	716.78	-2.99	-3.27	-2.96	786444.24	587041.73	32°36'40.703"N	103°32'14.352"W	0.48	
812.00	0.740	195.550	811.97	-3.36	-4.45	-3.32	786443.88	587040.55	32°36'40.692"N	103°32'14.357"W	0.04	
907.20	0.910	174.990	907.16	-3.48	-5.79	-3.42	786443.78	587039.21	32°36'40.678"N	103°32'14.358"W	0.36	
1002.70	1.140	162.230	1002.64	-3.13	-7.45	-3.06	786444.14	587037.55	32°36'40.662"N	103°32'14.354"W	0.34	
1098.20	1.130	144.000	1098.12	-2.31	-9.12	-2.22	786444.98	587035.88	32°36'40.645"N	103°32'14.344"W	0.38	
1193.30	0.890	112.620	1193.21	-1.08	-10.16	-0.99	786446.21	587034.84	32°36'40.635"N	103°32'14.330"W	0.62	
1288.70	0.810	110.550	1288.60	0.23	-10.68	0.33	786447.53	587034.32	32°36'40.630"N	103°32'14.315"W	0.09	
1384.00	0.700	141.800	1383.89	1.21	-11.38	1.32	786448.52	587033.62	32°36'40.623"N	103°32'14.303"W	0.44	
1479.50	0.770	169.030	1479.38	1.68	-12.46	1.80	786449.00	587032.54	32°36'40.612"N	103°32'14.298"W	0.37	
1574.90	0.770	191.690	1574.78	1.66	-13.72	1.79	786448.99	587031.28	32°36'40.600"N	103°32'14.298"W	0.32	
1670.20	0.740	208.720	1670.07	1.23	-14.89	1.37	786448.57	587030.11	32°36'40.588"N	103°32'14.303"W	0.24	
1765.80	0.630	206.440	1765.66	0.69	-15.90	0.84	786448.04	587029.10	32°36'40.578"N	103°32'14.309"W	0.12	
1861.50	0.420	123.580	1861.36	0.74	-16.57	0.89	786448.09	587028.43	32°36'40.572"N	103°32'14.309"W	0.74	
1957.20	0.600	118.900	1957.05	1.46	-17.00	1.63	786448.83	587028.00	32°36'40.567"N	103°32'14.300"W	0.19	
2052.80	0.680	128.200	2052.65	2.34	-17.59	2.51	786449.71	587027.41	32°36'40.561"N	103°32'14.290"W	0.14	
2148.30	0.810	110.350	2148.14	3.42	-18.18	3.59	786450.79	587026.82	32°36'40.555"N	103°32'14.277"W	0.28	
2243.90	0.900	93.400	2243.73	4.80	-18.46	4.97	786452.17	587026.54	32°36'40.553"N	103°32'14.261"W	0.28	
2339.00	0.850	89.500	2338.82	6.25	-18.50	6.42	786453.62	587026.50	32°36'40.552"N	103°32'14.244"W	0.08	
2434.80	0.910	78.420	2434.61	7.70	-18.34	7.88	786455.08	587026.66	32°36'40.553"N	103°32'14.227"W	0.19	
2530.30	1.020	67.630	2530.09	9.24	-17.86	9.41	786456.61	587027.14	32°36'40.558"N	103°32'14.209"W	0.22	
2625.40	1.170	54.730	2625.18	10.82	-16.98	10.98	786458.18	587028.02	32°36'40.567"N	103°32'14.191"W	0.30	
2721.00	1.330	50.150	2720.75	12.48	-15.71	12.63	786459.83	587029.30	32°36'40.579"N	103°32'14.171"W	0.20	
2816.40	1.870	48.520	2816.12	14.51	-13.96	14.65	786461.85	587031.04	32°36'40.596"N	103°32'14.148"W	0.57	
2911.80	2.220	51.430	2911.46	17.15	-11.78	17.26	786464.46	587033.22	32°36'40.618"N	103°32'14.117"W	0.38	
3006.90	2.330	53.100	3006.48	20.15	-9.47	20.24	786467.44	587035.53	32°36'40.640"N	103°32'14.082"W	0.14	
3102.40	2.370	49.710	3101.90	23.23	-7.03	23.30	786470.50	587037.97	32°36'40.664"N	103°32'14.046"W	0.15	
3197.80	2.270	50.740	3197.22	26.23	-4.56	26.27	786473.47	587040.44	32°36'40.688"N	103°32'14.011"W	0.11	
3293.60	2.240	51.990	3292.95	29.19	-2.21	29.21	786476.41	587042.79	32°36'40.712"N	103°32'13.976"W	0.06	
3389.20	2.230	50.340	3388.48	32.12	0.13	32.12	786479.32	587045.13	32°36'40.734"N	103°32'13.942"W	0.07	
3484.90	1.530	43.570	3484.12	34.45	2.25	34.43	786481.63	587047.25	32°36'40.755"N	103°32'13.915"W	0.77	
3580.20	1.050	38.230	3579.40	35.88	3.85	35.85	786483.05	587048.85	32°36'40.771"N	103°32'13.898"W	0.52	
3675.80	0.800	45.800	3674.99	36.91	5.01	36.87	786484.07	587050.01	32°36'40.782"N	103°32'13.886"W	0.29	
3771.50	0.710	45.960	3770.68	37.83	5.89	37.77	786484.97	587050.88	32°36'40.791"N	103°32'13.875"W	0.09	
3867.00	0.530	49.340	3866.17	38.60	6.58	38.53	786485.73	587051.58	32°36'40.798"N	103°32'13.867"W	0.19	
3960.70	0.340	61.870	3959.87	39.17	7.00	39.11	786486.31	587052.00	32°36'40.802"N	103°32'13.860"W	0.23	
4056.10	0.300	98.520	4055.27	39.67	7.09	39.61	786486.80	587052.09	32°36'40.803"N	103°32'13.854"W	0.21	



Actual Wellpath Report

No. 4H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 4H SHL
Area	Lea County, NM	Well	No. 4H
Field	(Mallon) Sec 35, T19S, R34E	Wellbore	No. 4H AWB
Facility	Mallon 35 Fed No. 4H		

WELLPATH DATA (177 stations)

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
4151.80	0.420	100.200	4150.97	40.26	6.99	40.20	786487.40	587051.99	32°36'40.802"N	103°32'13.847"W	0.13	
4247.10	0.380	112.190	4246.26	40.90	6.81	40.83	786488.03	587051.81	32°36'40.800"N	103°32'13.840"W	0.10	
4342.60	0.270	120.720	4341.76	41.38	6.58	41.32	786488.52	587051.58	32°36'40.798"N	103°32'13.834"W	0.13	
4438.10	0.210	104.070	4437.26	41.74	6.42	41.68	786488.88	587051.42	32°36'40.796"N	103°32'13.830"W	0.10	
4533.30	0.300	56.190	4532.46	42.12	6.52	42.06	786489.26	587051.52	32°36'40.797"N	103°32'13.825"W	0.23	
4628.90	0.320	51.820	4628.06	42.54	6.82	42.48	786489.68	587051.82	32°36'40.800"N	103°32'13.820"W	0.03	
4724.30	0.220	29.230	4723.46	42.84	7.15	42.78	786489.98	587052.15	32°36'40.803"N	103°32'13.817"W	0.15	
4819.50	0.410	18.580	4818.66	43.05	7.63	42.98	786490.17	587052.63	32°36'40.808"N	103°32'13.815"W	0.21	
4913.60	0.300	47.570	4912.76	43.34	8.11	43.26	786490.46	587053.11	32°36'40.813"N	103°32'13.811"W	0.22	
5009.20	0.340	49.400	5008.35	43.74	8.47	43.66	786490.86	587053.47	32°36'40.816"N	103°32'13.806"W	0.04	
5104.50	0.650	16.130	5103.65	44.11	9.17	44.03	786491.23	587054.17	32°36'40.823"N	103°32'13.802"W	0.43	
5199.80	0.580	8.580	5198.95	44.35	10.17	44.25	786491.45	587055.17	32°36'40.833"N	103°32'13.799"W	0.11	
5295.40	0.540	356.400	5294.54	44.40	11.10	44.30	786491.49	587056.10	32°36'40.842"N	103°32'13.799"W	0.13	
5390.90	0.520	8.250	5390.04	44.44	11.97	44.33	786491.53	587056.97	32°36'40.851"N	103°32'13.798"W	0.12	
5485.70	0.380	22.420	5484.83	44.63	12.69	44.51	786491.71	587057.69	32°36'40.858"N	103°32'13.796"W	0.19	
5581.30	0.120	16.410	5580.43	44.78	13.08	44.66	786491.86	587058.08	32°36'40.862"N	103°32'13.794"W	0.27	
5676.60	0.110	194.950	5675.73	44.79	13.09	44.66	786491.86	587058.09	32°36'40.862"N	103°32'13.794"W	0.24	
5771.90	0.210	177.980	5771.03	44.77	12.82	44.65	786491.85	587057.82	32°36'40.859"N	103°32'13.795"W	0.12	
5867.20	0.180	173.440	5866.33	44.79	12.50	44.67	786491.87	587057.50	32°36'40.856"N	103°32'13.794"W	0.04	
5962.40	0.050	346.140	5961.53	44.79	12.39	44.68	786491.88	587057.39	32°36'40.855"N	103°32'13.794"W	0.24	
6058.10	0.190	57.460	6057.23	44.92	12.52	44.80	786492.00	587057.52	32°36'40.856"N	103°32'13.793"W	0.19	
6153.60	0.130	42.690	6152.73	45.13	12.68	45.01	786492.21	587057.68	32°36'40.858"N	103°32'13.790"W	0.08	
6249.10	0.040	94.830	6248.23	45.23	12.76	45.12	786492.31	587057.76	32°36'40.858"N	103°32'13.789"W	0.12	
6344.60	0.110	175.680	6343.73	45.27	12.67	45.16	786492.35	587057.66	32°36'40.857"N	103°32'13.789"W	0.12	
6439.90	0.260	161.040	6439.03	45.35	12.37	45.23	786492.43	587057.37	32°36'40.855"N	103°32'13.788"W	0.16	
6534.50	0.410	186.540	6533.63	45.37	11.83	45.26	786492.46	587056.83	32°36'40.849"N	103°32'13.787"W	0.22	
6630.10	0.550	212.260	6629.23	45.08	11.10	44.98	786492.18	587056.10	32°36'40.842"N	103°32'13.791"W	0.27	
6725.30	0.620	217.490	6724.42	44.52	10.31	44.42	786491.62	587055.31	32°36'40.834"N	103°32'13.797"W	0.09	
6820.60	0.740	211.950	6819.71	43.87	9.38	43.78	786490.98	587054.38	32°36'40.825"N	103°32'13.805"W	0.14	
6916.00	0.800	213.670	6915.11	43.16	8.30	43.09	786490.29	587053.30	32°36'40.814"N	103°32'13.813"W	0.07	
7011.00	0.810	216.620	7010.10	42.39	7.21	42.32	786489.52	587052.21	32°36'40.804"N	103°32'13.822"W	0.04	
7106.10	0.730	220.870	7105.19	41.58	6.21	41.52	786488.72	587051.21	32°36'40.794"N	103°32'13.832"W	0.10	
7201.70	0.770	225.650	7200.78	40.71	5.30	40.66	786487.86	587050.30	32°36'40.785"N	103°32'13.842"W	0.08	
7296.70	0.690	227.550	7295.77	39.83	4.47	39.79	786486.98	587049.47	32°36'40.777"N	103°32'13.852"W	0.09	
7390.90	0.780	233.710	7389.96	38.88	3.71	38.85	786486.05	587048.71	32°36'40.769"N	103°32'13.863"W	0.13	
7486.20	0.880	233.040	7485.25	37.77	2.88	37.74	786484.94	587047.88	32°36'40.761"N	103°32'13.876"W	0.11	
7581.80	1.040	227.340	7580.84	36.53	1.85	36.52	786483.72	587046.85	32°36'40.751"N	103°32'13.891"W	0.19	
7676.90	0.980	232.930	7675.93	35.24	0.78	35.23	786482.43	587045.78	32°36'40.741"N	103°32'13.906"W	0.12	
7771.80	0.790	233.240	7770.81	34.06	-0.10	34.06	786481.26	587044.90	32°36'40.732"N	103°32'13.919"W	0.20	
7866.80	0.650	238.280	7865.81	33.07	-0.78	33.08	786480.28	587044.22	32°36'40.725"N	103°32'13.931"W	0.16	
7962.10	0.600	232.720	7961.10	32.21	-1.36	32.22	786479.42	587043.64	32°36'40.720"N	103°32'13.941"W	0.08	
8057.10	0.710	228.360	8056.09	31.37	-2.06	31.39	786478.59	587042.94	32°36'40.713"N	103°32'13.951"W	0.13	
8152.20	0.580	225.110	8151.19	30.58	-2.79	30.61	786477.81	587042.21	32°36'40.706"N	103°32'13.960"W	0.14	
8247.30	0.480	212.900	8246.28	30.01	-3.46	30.05	786477.25	587041.54	32°36'40.699"N	103°32'13.967"W	0.16	
8342.30	0.340	193.630	8341.28	29.73	-4.07	29.77	786476.97	587040.93	32°36'40.693"N	103°32'13.970"W	0.20	



Actual Wellpath Report

No. 4H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 4H SHL
Area	Lea County, NM	Well	No. 4H
Field	(Mallon) Sec 35, T19S, R34E	Wellbore	No. 4H AWP
Facility	Mallon 35 Fed No. 4H		

WELLPATH DATA (177 stations)

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
8437.30	0.480	182.680	8436.28	29.63	-4.74	29.68	786476.88	587040.26	32°36'40.686"N	103°32'13.971"W	0.17	
8532.40	0.370	186.130	8531.38	29.58	-5.45	29.63	786476.83	587039.56	32°36'40.679"N	103°32'13.972"W	0.12	
8627.40	0.360	158.030	8626.38	29.65	-6.03	29.71	786476.91	587038.97	32°36'40.674"N	103°32'13.971"W	0.19	
8722.50	0.550	137.400	8721.47	30.07	-6.64	30.13	786477.33	587038.36	32°36'40.668"N	103°32'13.966"W	0.26	
8817.90	1.160	151.530	8816.86	30.82	-7.83	30.90	786478.10	587037.17	32°36'40.656"N	103°32'13.957"W	0.67	
8913.40	2.350	155.550	8912.31	32.07	-10.46	32.17	786479.37	587034.54	32°36'40.630"N	103°32'13.942"W	1.25	
9009.20	2.530	153.900	9008.03	33.78	-14.14	33.91	786481.11	587030.86	32°36'40.593"N	103°32'13.922"W	0.20	
9104.60	2.450	158.500	9103.34	35.42	-17.93	35.59	786482.79	587027.07	32°36'40.555"N	103°32'13.903"W	0.23	
9200.10	2.020	155.670	9198.76	36.83	-21.37	37.03	786484.23	587023.63	32°36'40.521"N	103°32'13.887"W	0.46	
9294.60	1.650	159.230	9293.22	37.97	-24.16	38.20	786485.40	587020.85	32°36'40.494"N	103°32'13.873"W	0.41	
9389.80	1.330	158.090	9388.38	38.84	-26.46	39.10	786486.29	587018.54	32°36'40.471"N	103°32'13.863"W	0.34	
9485.10	1.320	152.270	9483.66	39.75	-28.46	40.02	786487.22	587016.54	32°36'40.451"N	103°32'13.852"W	0.14	
9580.70	1.150	152.460	9579.24	40.69	-30.28	40.98	786488.17	587014.72	32°36'40.433"N	103°32'13.841"W	0.18	
9676.20	1.080	157.050	9674.72	41.47	-31.96	41.77	786488.97	587013.04	32°36'40.416"N	103°32'13.832"W	0.12	
9771.80	0.940	154.570	9770.30	42.14	-33.50	42.46	786489.66	587011.50	32°36'40.401"N	103°32'13.824"W	0.15	
9867.00	0.830	158.890	9865.49	42.71	-34.85	43.04	786490.24	587010.15	32°36'40.388"N	103°32'13.817"W	0.14	
9962.10	0.510	137.290	9960.59	43.24	-35.80	43.58	786490.78	587009.20	32°36'40.378"N	103°32'13.811"W	0.42	
10057.30	0.270	159.790	10055.78	43.60	-36.33	43.94	786491.14	587008.68	32°36'40.373"N	103°32'13.807"W	0.29	
10152.80	0.500	195.500	10151.28	43.56	-36.94	43.91	786491.11	587008.06	32°36'40.367"N	103°32'13.808"W	0.34	
10248.30	0.530	174.430	10246.78	43.48	-37.78	43.84	786491.04	587007.22	32°36'40.358"N	103°32'13.808"W	0.20	
10343.90	0.460	145.830	10342.37	43.73	-38.54	44.10	786491.30	587006.46	32°36'40.351"N	103°32'13.805"W	0.27	
10439.40	0.490	138.900	10437.87	44.21	-39.16	44.58	786491.78	587005.84	32°36'40.345"N	103°32'13.800"W	0.07	
10534.70	0.640	148.570	10533.17	44.75	-39.92	45.13	786492.33	587005.08	32°36'40.337"N	103°32'13.794"W	0.19	
10575.00	0.600	123.500	10573.46	45.04	-40.23	45.42	786492.62	587004.77	32°36'40.334"N	103°32'13.790"W	0.67	
10607.00	3.530	83.500	10605.44	46.16	-40.21	46.54	786493.74	587004.79	32°36'40.334"N	103°32'13.777"W	9.67	
10639.00	9.200	79.700	10637.23	49.66	-39.64	50.04	786497.24	587005.36	32°36'40.340"N	103°32'13.736"W	17.76	
10671.00	15.900	79.700	10668.45	56.51	-38.40	56.87	786504.07	587006.60	32°36'40.351"N	103°32'13.656"W	20.94	
10702.00	22.800	80.400	10697.68	66.64	-36.64	66.99	786514.19	587008.36	32°36'40.368"N	103°32'13.538"W	22.27	
10734.00	29.400	81.700	10726.40	80.56	-34.47	80.89	786528.09	587010.53	32°36'40.388"N	103°32'13.375"W	20.70	
10766.00	36.500	84.500	10753.24	97.85	-32.42	98.16	786545.35	587012.58	32°36'40.407"N	103°32'13.173"W	22.69	
10798.00	43.200	87.800	10777.79	118.30	-31.08	118.60	786565.80	587013.92	32°36'40.419"N	103°32'12.934"W	21.95	
10829.00	50.400	89.900	10799.00	140.88	-30.66	141.18	786588.37	587014.35	32°36'40.422"N	103°32'12.670"W	23.74	
10861.00	58.100	90.600	10817.68	166.83	-30.78	167.13	786614.32	587014.22	32°36'40.419"N	103°32'12.367"W	24.13	
10893.00	63.900	89.800	10833.19	194.80	-30.87	195.10	786642.30	587014.13	32°36'40.416"N	103°32'12.039"W	18.26	
10925.00	68.100	90.500	10846.20	224.03	-30.95	224.33	786671.52	587014.05	32°36'40.413"N	103°32'11.698"W	13.28	
10956.00	70.900	90.800	10857.06	253.06	-31.28	253.36	786700.56	587013.72	32°36'40.407"N	103°32'11.358"W	9.08	
10988.00	73.700	89.300	10866.79	283.53	-31.30	283.84	786731.04	587013.70	32°36'40.405"N	103°32'11.002"W	9.82	
11020.00	77.700	87.200	10874.69	314.53	-30.35	314.83	786762.02	587014.65	32°36'40.412"N	103°32'10.640"W	14.02	
11052.00	82.000	84.600	10880.33	345.96	-28.09	346.24	786793.43	587016.91	32°36'40.432"N	103°32'10.272"W	15.64	
11083.00	86.400	82.500	10883.46	376.62	-24.63	376.87	786824.06	587020.37	32°36'40.464"N	103°32'09.914"W	15.71	
11115.00	90.000	81.800	10884.47	408.34	-20.26	408.55	786855.74	587024.74	32°36'40.505"N	103°32'09.543"W	11.46	
11147.00	89.900	82.700	10884.50	440.09	-15.94	440.26	786887.45	587029.06	32°36'40.545"N	103°32'09.172"W	2.83	
11179.00	89.400	85.600	10884.69	471.95	-12.68	472.09	786919.28	587032.32	32°36'40.575"N	103°32'08.800"W	9.20	
11242.00	90.000	82.200	10885.02	534.64	-5.99	534.72	786981.91	587039.01	32°36'40.637"N	103°32'08.067"W	5.48	
11306.00	90.200	81.800	10884.91	598.10	-2.92	598.10	787045.28	587047.92	32°36'40.720"N	103°32'07.325"W	0.70	



Actual Wellpath Report

No. 4H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 4H SHL
Area	Lea County, NM	Well	No. 4H
Field	(Mallon) Sec 35, T19S, R34E	Wellbore	No. 4H AWB
Facility	Mallon 35 Fed No. 4H		

WELLPATH DATA (177 stations)

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
11369.00	89.900	83.700	10884.85	660.66	10.87	660.59	787107.78	587055.87	32°36'40.794"N	103°32'06.594"W	3.05	
11433.00	90.000	82.500	10884.91	724.27	18.56	724.13	787171.31	587063.56	32°36'40.865"N	103°32'05.851"W	1.88	
11496.00	90.100	82.300	10884.85	786.79	26.89	786.57	787233.75	587071.89	32°36'40.943"N	103°32'05.120"W	0.35	
11560.00	89.900	84.500	10884.85	850.43	34.24	850.15	787297.32	587079.24	32°36'41.011"N	103°32'04.376"W	3.45	
11624.00	90.000	85.900	10884.91	914.25	39.60	913.92	787361.10	587084.60	32°36'41.059"N	103°32'03.630"W	2.19	
11687.00	90.700	86.400	10884.53	977.15	43.83	976.78	787423.95	587088.83	32°36'41.097"N	103°32'02.895"W	1.37	
11751.00	92.000	86.100	10883.02	1041.03	48.01	1040.62	787487.79	587093.01	32°36'41.133"N	103°32'02.148"W	2.08	
11814.00	91.900	88.700	10880.87	1103.94	50.87	1103.51	787550.69	587095.87	32°36'41.157"N	103°32'01.413"W	4.13	
11878.00	91.600	88.300	10878.92	1167.90	52.54	1167.46	787614.63	587097.54	32°36'41.169"N	103°32'00.665"W	0.78	
11941.00	91.400	88.300	10877.27	1230.87	54.41	1230.41	787677.58	587099.41	32°36'41.182"N	103°31'59.929"W	0.32	
12004.00	91.700	89.200	10875.57	1293.84	55.79	1293.37	787740.54	587100.78	32°36'41.191"N	103°31'59.193"W	1.51	
12068.00	91.900	88.000	10873.56	1357.80	57.35	1357.32	787804.49	587102.35	32°36'41.202"N	103°31'58.445"W	1.90	
12163.00	92.300	88.300	10870.07	1452.71	60.41	1452.21	787899.37	587105.41	32°36'41.225"N	103°31'57.336"W	0.53	
12259.00	90.700	89.600	10867.56	1548.67	62.17	1548.15	787995.32	587107.17	32°36'41.236"N	103°31'56.214"W	2.15	
12353.00	90.900	87.300	10866.25	1642.64	64.71	1642.10	788089.26	587109.71	32°36'41.254"N	103°31'55.115"W	2.46	
12449.00	89.700	89.100	10865.75	1738.61	67.73	1738.05	788185.21	587112.73	32°36'41.276"N	103°31'53.994"W	2.25	
12544.00	89.800	87.800	10866.16	1833.59	70.30	1833.01	788280.17	587115.30	32°36'41.295"N	103°31'52.883"W	1.37	
12639.00	90.000	87.300	10866.33	1928.54	74.36	1927.92	788375.08	587119.36	32°36'41.328"N	103°31'51.773"W	0.57	
12735.00	90.300	86.800	10866.08	2024.45	79.30	2023.80	788470.95	587124.30	32°36'41.370"N	103°31'50.652"W	0.61	
12830.00	90.400	87.000	10865.50	2119.36	84.44	2118.65	788565.80	587129.44	32°36'41.413"N	103°31'49.543"W	0.24	
12925.00	90.700	85.800	10864.58	2214.21	90.40	2213.46	788660.61	587135.40	32°36'41.465"N	103°31'48.434"W	1.30	
13020.00	91.600	86.000	10862.68	2309.01	97.19	2308.20	788755.34	587142.19	32°36'41.525"N	103°31'47.326"W	0.97	
13116.00	92.100	87.000	10859.58	2404.83	103.05	2403.97	788851.11	587148.05	32°36'41.576"N	103°31'46.206"W	1.16	
13211.00	90.200	86.400	10857.67	2499.70	108.52	2498.79	788945.93	587153.52	32°36'41.623"N	103°31'45.097"W	2.10	
13306.00	89.600	87.000	10857.84	2594.59	113.99	2593.63	789040.76	587158.98	32°36'41.670"N	103°31'43.988"W	0.89	
13402.00	88.400	92.100	10859.51	2690.54	114.74	2689.58	789136.71	587159.74	32°36'41.670"N	103°31'42.866"W	5.46	
13497.00	88.200	88.800	10862.33	2785.47	114.00	2784.52	789231.65	587158.99	32°36'41.656"N	103°31'41.756"W	3.48	
13592.00	88.300	88.200	10865.23	2880.41	116.48	2879.44	789326.57	587161.48	32°36'41.673"N	103°31'40.646"W	0.64	
13688.00	88.400	89.500	10868.00	2976.36	118.41	2975.38	789422.51	587163.40	32°36'41.685"N	103°31'39.524"W	1.36	
13783.00	89.800	88.800	10869.49	3071.35	119.82	3070.35	789517.48	587164.81	32°36'41.692"N	103°31'38.414"W	1.65	
13878.00	89.700	88.300	10869.90	3166.33	122.22	3165.32	789612.45	587167.22	32°36'41.709"N	103°31'37.304"W	0.54	
13973.00	89.500	87.100	10870.57	3261.29	126.03	3260.24	789707.36	587171.03	32°36'41.739"N	103°31'36.194"W	1.28	
14068.00	89.800	88.400	10871.15	3356.24	129.76	3355.17	789802.28	587174.76	32°36'41.769"N	103°31'35.084"W	1.40	
14164.00	89.600	88.200	10871.65	3452.22	132.61	3451.12	789898.24	587177.61	32°36'41.790"N	103°31'33.962"W	0.29	
14258.00	88.900	88.300	10872.88	3546.19	135.48	3545.07	789992.18	587180.48	32°36'41.811"N	103°31'32.863"W	0.75	
14353.00	89.000	87.200	10874.62	3641.13	139.21	3639.98	790087.09	587184.21	32°36'41.841"N	103°31'31.753"W	1.16	
14449.00	88.600	86.500	10876.63	3737.01	144.48	3735.81	790182.92	587189.48	32°36'41.886"N	103°31'30.633"W	0.84	
14544.00	88.300	86.800	10879.20	3831.86	150.03	3830.61	790277.72	587195.03	32°36'41.934"N	103°31'29.524"W	0.45	
14639.00	88.000	87.200	10882.27	3926.72	155.00	3925.43	790372.54	587200.00	32°36'41.976"N	103°31'28.415"W	0.53	
14734.00	87.500	88.000	10886.00	4021.60	158.98	4020.28	790467.38	587203.97	32°36'42.008"N	103°31'27.306"W	0.99	
14756.00	87.400	86.600	10886.98	4043.56	160.01	4042.23	790489.33	587205.01	32°36'42.017"N	103°31'27.049"W	6.37	
14811.00	87.400	86.600	10889.47	4098.43	163.27	4097.08	790544.18	587208.27	32°36'42.045"N	103°31'26.408"W	0.00	Proj to Bit

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
No. 4H PBHL		10850.00	38.73	4109.55	790556.65	587083.73	32°36'40.812"N	103°31'26.273"W	point

WELLPATH COMPOSITION Ref Wellbore: No. 4H AWB Ref Wellpath: No. 4H AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.00	10534.70	Generic gyro - northseeking (Standard)	Gtro	No. 4H AWB
10534.70	14811.00	NaviTrak (Standard)	MWD	No. 4H AWB