

Results of Directional Survey

API number:	30-025-39763		
OGRID:		Operator:	CIMAREX ENERGY CO OF COLORADO
		Property:	MALLON 34 FEDERAL COM # 18

surface	ULSTR:	M	34	T	19S	R	34E
				640	FSL	300	FWL

BH Loc	ULSTR:	P	34	T	19S	R	34E
15406	MD	10869.7	TVD	405	FSL	4955	FWL

Top Perf/OH	ULSTR:	M	34	T	19S	R	34E
10925	MD	10797.4	TVD	636	FSL	485	FWL

Bot Perf/OH	ULSTR:	P	34	T	19S	R	34E
15342	MD	10869.5	TVD	405	FSL	4891	FWL

	MD	N/S	E/W	VD
	10924	-4.45	184.34	10797.19
TOP PERFS/OH	10925	-4.45	185.32	10797.38
	10956	-4.50	215.72	10803.38
	15323	-234.92	4572.40	10869.43
BOT PERFS/OH	15342	-235.05	4591.40	10869.50
	15355	-235.14	4604.40	10869.54

NEXT TO LAST	15323	-234.92	4572.40	10869.43
LAST READING	15355	-235.14	4604.40	10869.54
TD	15406	-235.49	4655.40	10869.72

Surface Location	640	FS	300	FW
Projected BHL	405	FS	4955	FW
Location of				
Top Perfs/OH	636	FS	485	FW
Bottom Perfs/OH	405	FS	4891	FW

SUMMARY of Subsurface Locations

Surface Location	M-34-19S-34E	640	FS	300	FW	Vert. Depth
Top Perfs/OH	M-34-19S-34E	636	FS	485	FW	10797.38
Bottom Perfs/OH	P-34-19S-34E	405	FS	4891	FW	10869.50
Projected TD	P-34-19S-34E	405	FS	4955	FW	10869.72



Cimarex Energy Co.

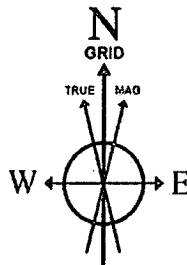
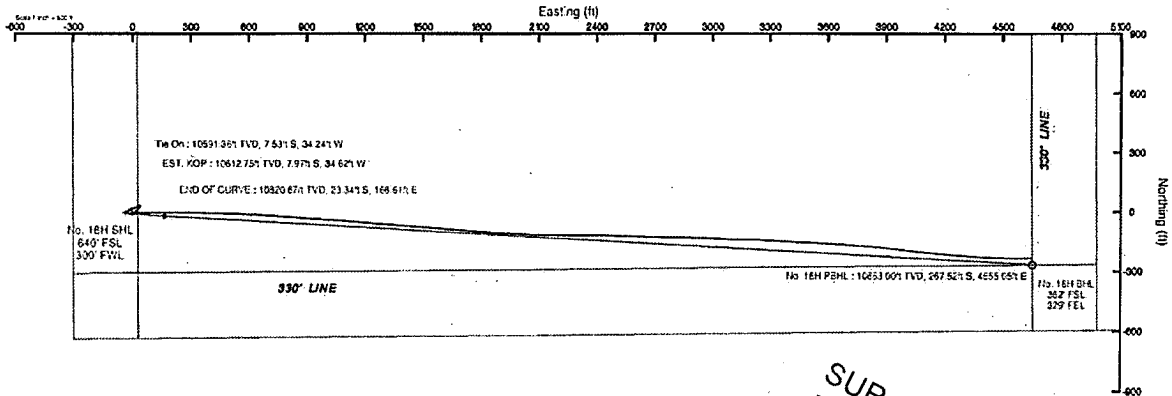
Location: Lea County, NM
Field: (Maton) Sec 34, T19S, R34E
Facility: Maton 34 Fed Com No. 18H

Spot: No. 18H SHL
Well: No. 18H
Wellbore: No. 18H PWB



Well Profile Data

Design Comment	M/D (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	10593.60	1.550	220.420	10591.36	-7.53	-34.24	0.00	-33.75
EST. KOP	10615.00	1.550	220.420	10612.75	-7.97	-34.62	0.00	-34.10
END OF CURVE	10936.95	89.206	93.114	10820.67	-23.34	166.61	28.00	167.69
No. 18H PBHL	15432.46	89.206	93.114	10883.00	-267.52	4655.05	0.00	4662.73

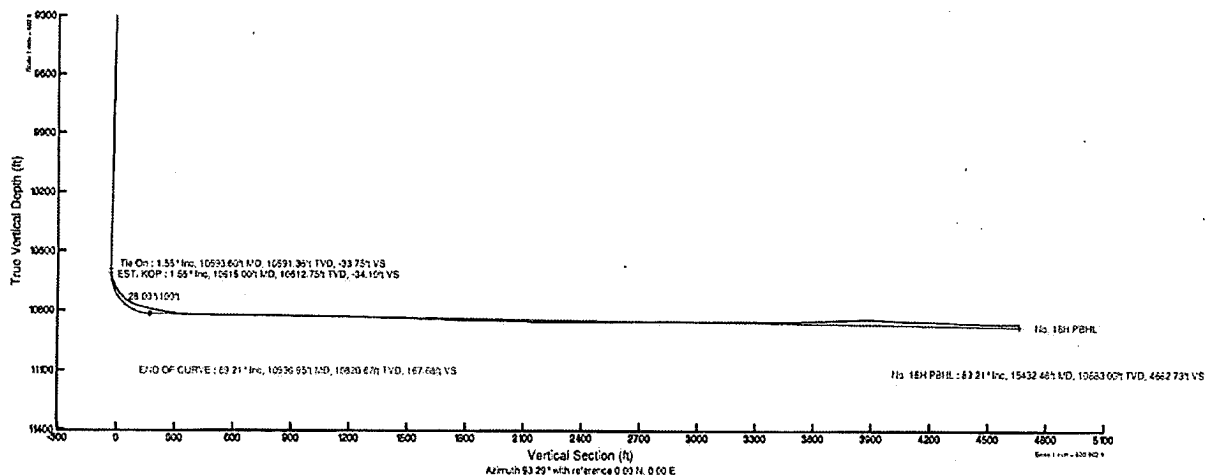


SUR @ M-34-19s-34e, 640/S & 300/W
BHL @ P-34-19s-34e, 405/S & 4955/W
API #30-025-39763

BGGM (1945.0 to 2011.0) Dip: 60.59° Field: 49000.6 nT
Magnetic North is 7.73 degrees East of True North (at 8/31/2010)
Grid North is 0.42 degrees East of True North
To correct azimuth from True to Grid subtract 0.42 degrees
To correct azimuth from Magnetic to Grid add 7.32 degrees

For example: If the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.32 = 97.32

Plot reference wellpath is Plan #1 vs Actual (FINAL)	Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
True vertical depths are referenced to Rig 884 on No. 18 SHL (KB)	North Reference: Grid north
Measured depths are referenced to Rig 884 on No. 18 SHL (KB)	Scale: True distance
Rig 884 on No. 18 SHL (KB) to Mean Sea Level: 3583 feet	Depths are in feet
Mean Sea Level to Mud Line (Facility: Maton 34 Fed Com No. 18H): -3565 feet	Created by: Victor Hernandez on 9/14/2010
Coordinates are in feet referenced to SL	





Actual Wellpath Report

No. 18H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 18H SHL
Area	Lea County, NM	Well	No. 18H
Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 18H AWB
Facility	Mallon 34 Fed Com No. 18H	Sidetrack from	No. 18 AWB at 10593.60 MD

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	0.999975	Report Generated	9/14/2010 at 2:05:48 PM
Convergence at slot	0.42° East	Database/Source file	WA_Midland/No._18H_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	780804.80	586972.60	32°36'40.432"N	103°33'20.286"W
Facility Reference Pt			780804.80	586972.60	32°36'40.432"N	103°33'20.286"W
Field Reference Pt			780804.80	586972.60	32°36'40.432"N	103°33'20.286"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig 884 on No. 18 SHL (KB) to GL	18.00ft
Horizontal Reference Pt	SL	Rig 884 on No. 18 SHL (KB) to Mean Sea Level	3683.00ft
Vertical Reference Pt	Rig 884 on No. 18 SHL (KB)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig 884 on No. 18 SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	93.29°



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Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 18H AWB
Facility	Mallon 34 Fed Com No. 18H	Sidetrack from	No. 18 AWB at 10593.60 MD

WELLPATH DATA (254 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]
0.00	0.000	14.360	0.00	0.00	0.00	0.00	780804.80	586972.60	32°36'40.432"N	103°33'20.286"W	0.00
58.40	0.440	14.360	58.40	0.04	0.22	0.06	780804.86	586972.82	32°36'40.435"N	103°33'20.286"W	0.75
120.70	0.360	6.690	120.70	0.10	0.64	0.14	780804.94	586973.24	32°36'40.439"N	103°33'20.285"W	0.15
183.00	0.350	6.390	183.00	0.12	1.03	0.18	780804.98	586973.63	32°36'40.443"N	103°33'20.284"W	0.02
245.30	0.370	1.060	245.30	0.12	1.42	0.21	780805.01	586974.02	32°36'40.446"N	103°33'20.284"W	0.06
307.60	0.380	2.490	307.59	0.11	1.82	0.22	780805.02	586974.42	32°36'40.450"N	103°33'20.283"W	0.02
369.80	0.370	2.460	369.79	0.11	2.23	0.24	780805.04	586974.83	32°36'40.454"N	103°33'20.283"W	0.02
432.10	0.330	346.970	432.09	0.06	2.61	0.21	780805.01	586975.21	32°36'40.458"N	103°33'20.284"W	0.16
494.50	0.300	331.090	494.49	-0.08	2.93	0.09	780804.89	586975.53	32°36'40.461"N	103°33'20.285"W	0.15
556.80	0.290	321.120	556.79	-0.28	3.19	-0.09	780804.71	586975.79	32°36'40.464"N	103°33'20.287"W	0.08
620.80	0.320	309.310	620.79	-0.53	3.43	-0.33	780804.47	586976.03	32°36'40.466"N	103°33'20.290"W	0.11
684.00	0.380	295.900	683.99	-0.86	3.63	-0.66	780804.14	586976.23	32°36'40.468"N	103°33'20.294"W	0.16
746.50	0.380	295.570	746.49	-1.25	3.81	-1.03	780803.77	586976.41	32°36'40.470"N	103°33'20.298"W	0.00
809.70	0.280	287.740	809.69	-1.59	3.95	-1.37	780803.43	586976.55	32°36'40.472"N	103°33'20.302"W	0.17
873.20	0.180	275.400	873.18	-1.84	4.01	-1.61	780803.19	586976.61	32°36'40.472"N	103°33'20.305"W	0.17
936.40	0.140	228.950	936.38	-2.00	3.97	-1.77	780803.03	586976.57	32°36'40.472"N	103°33'20.307"W	0.21
999.60	0.130	204.750	999.58	-2.08	3.85	-1.86	780802.94	586976.45	32°36'40.471"N	103°33'20.308"W	0.09
1063.20	0.140	192.820	1063.18	-2.12	3.71	-1.91	780802.89	586976.31	32°36'40.469"N	103°33'20.308"W	0.05
1126.40	0.220	189.110	1126.38	-2.14	3.51	-1.94	780802.86	586976.11	32°36'40.467"N	103°33'20.309"W	0.13
1189.40	0.360	187.060	1189.38	-2.17	3.20	-1.99	780802.81	586975.80	32°36'40.464"N	103°33'20.309"W	0.22
1252.70	0.550	180.490	1252.68	-2.16	2.70	-2.01	780802.79	586975.30	32°36'40.459"N	103°33'20.309"W	0.31
1315.90	0.630	181.640	1315.88	-2.14	2.05	-2.03	780802.77	586974.65	32°36'40.453"N	103°33'20.310"W	0.13
1379.20	0.740	187.100	1379.17	-2.16	1.29	-2.09	780802.71	586973.89	32°36'40.445"N	103°33'20.310"W	0.20
1442.40	0.740	186.990	1442.37	-2.21	0.48	-2.19	780802.61	586973.08	32°36'40.437"N	103°33'20.312"W	0.00
1505.50	0.770	191.330	1505.46	-2.30	-0.34	-2.32	780802.48	586972.26	32°36'40.429"N	103°33'20.313"W	0.10
1568.80	0.820	193.960	1568.76	-2.44	-1.19	-2.51	780802.29	586971.41	32°36'40.421"N	103°33'20.316"W	0.10
1631.50	0.830	193.450	1631.45	-2.60	-2.07	-2.73	780802.07	586970.53	32°36'40.412"N	103°33'20.318"W	0.02
1694.20	0.700	194.160	1694.14	-2.76	-2.88	-2.93	780801.87	586969.72	32°36'40.404"N	103°33'20.321"W	0.21
1756.60	0.580	188.620	1756.54	-2.86	-3.57	-3.07	780801.73	586969.03	32°36'40.397"N	103°33'20.322"W	0.22
1820.00	0.400	173.080	1819.94	-2.85	-4.10	-3.09	780801.71	586968.50	32°36'40.392"N	103°33'20.323"W	0.35



Actual Wellpath Report

No. 18H AWP

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Operator	Cimarex Energy Co.	Slot	No. 18H SHL
Area	Lea County, NM	Well	No. 18H
Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 18H AWP
Facility	Mallon 34 Fed Com No. 18H	Sidetrack from	No. 18 AWP at 10593.60 MD

WELLPATH DATA (254 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]
1882.80	0.290	165.780	1882.74	-2.76	-4.47	-3.02	780801.78	586968.13	32°36'40.388"N	103°33'20.322"W	0.19
1945.90	0.310	171.550	1945.84	-2.68	-4.80	-2.96	780801.84	586967.80	32°36'40.385"N	103°33'20.321"W	0.06
2009.20	0.280	163.820	2009.14	-2.59	-5.12	-2.89	780801.91	586967.48	32°36'40.382"N	103°33'20.320"W	0.08
2072.40	0.290	159.510	2072.33	-2.48	-5.41	-2.79	780802.01	586967.19	32°36'40.379"N	103°33'20.319"W	0.04
2135.50	0.310	161.870	2135.43	-2.35	-5.73	-2.68	780802.12	586966.87	32°36'40.376"N	103°33'20.318"W	0.04
2198.90	0.260	157.050	2198.83	-2.22	-6.02	-2.57	780802.23	586966.58	32°36'40.373"N	103°33'20.317"W	0.09
2262.00	0.300	154.330	2261.93	-2.08	-6.30	-2.44	780802.36	586966.30	32°36'40.370"N	103°33'20.315"W	0.07
2325.50	0.350	141.410	2325.43	-1.87	-6.60	-2.25	780802.55	586966.00	32°36'40.367"N	103°33'20.313"W	0.14
2388.20	0.350	139.920	2388.13	-1.61	-6.90	-2.01	780802.79	586965.70	32°36'40.364"N	103°33'20.310"W	0.01
2451.50	0.360	117.980	2451.43	-1.30	-7.14	-1.71	780803.09	586965.46	32°36'40.362"N	103°33'20.307"W	0.21
2514.60	0.560	91.930	2514.53	-0.81	-7.24	-1.23	780803.57	586965.36	32°36'40.361"N	103°33'20.301"W	0.45
2577.90	0.700	84.670	2577.82	-0.12	-7.22	-0.53	780804.27	586965.38	32°36'40.361"N	103°33'20.293"W	0.25
2641.10	0.810	85.350	2641.02	0.71	-7.15	0.30	780805.10	586965.45	32°36'40.362"N	103°33'20.283"W	0.17
2704.50	1.110	87.580	2704.41	1.76	-7.08	1.36	780806.16	586965.52	32°36'40.362"N	103°33'20.271"W	0.48
2767.70	1.480	87.270	2767.59	3.18	-7.02	2.79	780807.59	586965.58	32°36'40.363"N	103°33'20.254"W	0.59
2830.90	1.670	80.980	2830.77	4.89	-6.84	4.51	780809.31	586965.76	32°36'40.364"N	103°33'20.234"W	0.41
2894.00	1.860	72.970	2893.84	6.75	-6.39	6.40	780811.20	586966.21	32°36'40.369"N	103°33'20.212"W	0.49
2956.90	1.980	70.130	2956.70	8.71	-5.72	8.40	780813.20	586966.88	32°36'40.375"N	103°33'20.189"W	0.24
3020.30	2.040	67.410	3020.06	10.73	-4.92	10.47	780815.27	586967.68	32°36'40.383"N	103°33'20.164"W	0.18
3083.50	2.090	64.420	3083.22	12.75	-3.99	12.55	780817.34	586968.61	32°36'40.392"N	103°33'20.140"W	0.19
3146.80	2.200	57.930	3146.48	14.76	-2.85	14.62	780819.42	586969.75	32°36'40.403"N	103°33'20.116"W	0.42
3209.90	2.380	51.580	3209.53	16.72	-1.39	16.67	780821.47	586971.21	32°36'40.417"N	103°33'20.091"W	0.49
3272.80	2.420	50.680	3272.37	18.67	0.26	18.72	780823.52	586972.86	32°36'40.434"N	103°33'20.067"W	0.09
3336.30	2.460	50.590	3335.82	20.66	1.98	20.81	780825.61	586974.58	32°36'40.450"N	103°33'20.043"W	0.06
3399.70	2.430	48.090	3399.16	22.61	3.74	22.86	780827.66	586976.34	32°36'40.468"N	103°33'20.019"W	0.17
3462.90	2.300	46.550	3462.30	24.42	5.51	24.78	780829.58	586978.11	32°36'40.485"N	103°33'19.996"W	0.23
3526.30	2.130	46.110	3525.66	26.09	7.20	26.55	780831.35	586979.80	32°36'40.502"N	103°33'19.975"W	0.27
3589.30	1.940	43.070	3588.62	27.57	8.79	28.12	780832.92	586981.39	32°36'40.517"N	103°33'19.957"W	0.35
3652.70	1.800	38.670	3651.98	28.84	10.35	29.48	780834.28	586982.95	32°36'40.533"N	103°33'19.941"W	0.32
3715.10	1.770	36.040	3714.35	29.92	11.90	30.66	780835.46	586984.50	32°36'40.548"N	103°33'19.927"W	0.14



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Area	Lea County, NM	Well	No. 18H
Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 18H AWB
Facility	Mallon 34 Fed Com No. 18H	Sidetrack from	No. 18 AWB at 10593.60 MD

WELLPATH DATA (254 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]
3778.50	1.760	35.100	3777.72	30.97	13.48	31.79	780836.59	586986.08	32°36'40.564"N	103°33'19.913"W	0.05
3841.50	1.750	36.190	3840.69	32.00	15.05	32.92	780837.72	586987.65	32°36'40.579"N	103°33'19.900"W	0.06
3905.00	1.680	34.010	3904.17	33.00	16.61	34.01	780838.81	586989.21	32°36'40.594"N	103°33'19.887"W	0.15
3968.10	1.540	37.510	3967.24	33.95	18.05	35.04	780839.84	586990.65	32°36'40.608"N	103°33'19.875"W	0.27
4031.70	1.410	36.770	4030.82	34.86	19.35	36.03	780840.83	586991.95	32°36'40.621"N	103°33'19.863"W	0.21
4094.90	1.290	38.020	4094.00	35.70	20.53	36.94	780841.74	586993.13	32°36'40.633"N	103°33'19.853"W	0.20
4158.00	1.100	35.350	4157.09	36.42	21.59	37.72	780842.52	586994.19	32°36'40.643"N	103°33'19.843"W	0.31
4221.30	0.940	38.290	4220.38	37.04	22.49	38.40	780843.20	586995.09	32°36'40.652"N	103°33'19.835"W	0.27
4284.80	0.880	44.290	4283.87	37.66	23.25	39.06	780843.86	586995.85	32°36'40.660"N	103°33'19.828"W	0.18
4348.30	0.830	44.890	4347.36	38.29	23.92	39.73	780844.53	586996.52	32°36'40.666"N	103°33'19.820"W	0.08
4411.90	0.710	48.770	4410.96	38.88	24.51	40.35	780845.15	586997.11	32°36'40.672"N	103°33'19.812"W	0.21
4475.20	0.700	50.860	4474.25	39.44	25.01	40.94	780845.74	586997.61	32°36'40.677"N	103°33'19.805"W	0.04
4538.30	0.720	55.320	4537.35	40.04	25.48	41.57	780846.37	586998.08	32°36'40.681"N	103°33'19.798"W	0.09
4601.70	0.730	51.210	4600.74	40.65	25.96	42.21	780847.01	586998.56	32°36'40.686"N	103°33'19.791"W	0.08
4664.50	0.760	52.640	4663.54	41.26	26.46	42.85	780847.65	586999.06	32°36'40.691"N	103°33'19.783"W	0.06
4728.10	0.790	45.490	4727.13	41.88	27.03	43.50	780848.30	586999.63	32°36'40.697"N	103°33'19.775"W	0.16
4791.40	0.760	37.570	4790.43	42.41	27.67	44.07	780848.87	587000.27	32°36'40.703"N	103°33'19.769"W	0.18
4854.80	0.710	34.580	4853.82	42.85	28.32	44.55	780849.35	587000.92	32°36'40.709"N	103°33'19.763"W	0.10
4915.30	0.580	41.930	4914.32	43.23	28.86	44.96	780849.76	587001.46	32°36'40.715"N	103°33'19.758"W	0.25
4978.50	0.380	42.870	4977.51	43.57	29.25	45.32	780850.12	587001.85	32°36'40.719"N	103°33'19.754"W	0.32
5041.90	0.280	13.170	5040.91	43.73	29.56	45.50	780850.30	587002.15	32°36'40.722"N	103°33'19.752"W	0.31
5105.30	0.400	5.050	5104.31	43.76	29.93	45.55	780850.35	587002.53	32°36'40.725"N	103°33'19.751"W	0.20
5168.50	0.500	1.190	5167.51	43.76	30.42	45.58	780850.38	587003.02	32°36'40.730"N	103°33'19.751"W	0.17
5231.70	0.520	352.830	5230.71	43.70	30.98	45.55	780850.35	587003.58	32°36'40.736"N	103°33'19.751"W	0.12
5295.00	0.410	356.130	5294.01	43.62	31.49	45.50	780850.30	587004.09	32°36'40.741"N	103°33'19.752"W	0.18
5358.20	0.450	353.370	5357.20	43.55	31.97	45.45	780850.25	587004.56	32°36'40.745"N	103°33'19.752"W	0.07
5421.30	0.500	358.790	5420.30	43.48	32.49	45.42	780850.22	587005.09	32°36'40.751"N	103°33'19.752"W	0.11
5484.40	0.310	350.110	5483.40	43.42	32.93	45.38	780850.18	587005.53	32°36'40.755"N	103°33'19.753"W	0.32
5548.00	0.250	334.560	5547.00	43.31	33.23	45.30	780850.09	587005.82	32°36'40.758"N	103°33'19.754"W	0.15
5611.40	0.080	328.040	5610.40	43.22	33.39	45.21	780850.01	587005.99	32°36'40.759"N	103°33'19.755"W	0.27



Actual Wellpath Report

No. 18H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 18H SHL
Area	Lea County, NM	Well	No. 18H
Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 18H AWB
Facility	Mallon 34 Fed Com No. 18H	Sidetrack from	No. 18 AWB at 10593.60 MD

WELLPATH DATA (254 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]
5674.50	0.140	115.820	5673.50	43.27	33.39	45.26	780850.06	587005.99	32°36'40.759"N	103°33'19.754"W	0.34
5737.70	0.260	137.610	5736.70	43.44	33.25	45.42	780850.22	587005.85	32°36'40.758"N	103°33'19.752"W	0.22
5800.40	0.280	171.100	5799.40	43.58	33.00	45.54	780850.34	587005.59	32°36'40.756"N	103°33'19.751"W	0.25
5863.70	0.280	195.270	5862.70	43.58	32.69	45.53	780850.33	587005.29	32°36'40.753"N	103°33'19.751"W	0.19
5927.00	0.430	228.390	5926.00	43.38	32.39	45.31	780850.11	587004.99	32°36'40.750"N	103°33'19.754"W	0.39
5990.00	0.620	232.410	5988.99	42.95	32.02	44.86	780849.66	587004.62	32°36'40.746"N	103°33'19.759"W	0.31
6053.20	0.870	238.410	6052.19	42.30	31.56	44.18	780848.98	587004.16	32°36'40.741"N	103°33'19.767"W	0.41
6116.50	1.150	242.270	6115.48	41.36	31.01	43.21	780848.01	587003.61	32°36'40.736"N	103°33'19.778"W	0.45
6179.70	1.500	239.800	6178.66	40.13	30.30	41.93	780846.73	587002.90	32°36'40.729"N	103°33'19.793"W	0.56
6242.90	1.800	238.050	6241.83	38.63	29.36	40.38	780845.18	587001.96	32°36'40.720"N	103°33'19.812"W	0.48
6306.30	1.910	239.620	6305.20	36.93	28.30	38.62	780843.42	587000.90	32°36'40.710"N	103°33'19.832"W	0.19
6369.30	1.990	241.570	6368.16	35.13	27.25	36.75	780841.55	586999.85	32°36'40.699"N	103°33'19.854"W	0.16
6432.50	2.050	245.090	6431.33	33.20	26.25	34.76	780839.56	586998.85	32°36'40.690"N	103°33'19.878"W	0.22
6495.80	2.060	247.050	6494.58	31.18	25.33	32.69	780837.49	586997.93	32°36'40.681"N	103°33'19.902"W	0.11
6558.80	2.070	245.620	6557.54	29.16	24.42	30.61	780835.41	586997.02	32°36'40.672"N	103°33'19.926"W	0.08
6621.70	2.150	246.410	6620.40	27.10	23.48	28.49	780833.29	586996.08	32°36'40.663"N	103°33'19.951"W	0.14
6684.30	2.120	248.490	6682.96	25.00	22.58	26.34	780831.14	586995.18	32°36'40.654"N	103°33'19.976"W	0.13
6747.10	2.030	247.550	6745.72	22.95	21.73	24.23	780829.03	586994.33	32°36'40.646"N	103°33'20.001"W	0.15
6810.80	2.030	257.380	6809.38	20.84	21.06	22.09	780826.89	586993.65	32°36'40.639"N	103°33'20.026"W	0.55
6874.10	2.130	252.620	6872.64	18.67	20.46	19.87	780824.67	586993.06	32°36'40.633"N	103°33'20.052"W	0.32
6937.70	2.120	248.780	6936.19	16.49	19.68	17.65	780822.45	586992.28	32°36'40.626"N	103°33'20.078"W	0.22
7000.90	2.120	245.600	6999.35	14.39	18.77	15.49	780820.29	586991.37	32°36'40.617"N	103°33'20.103"W	0.19
7064.30	1.980	246.900	7062.71	12.37	17.86	13.42	780818.22	586990.46	32°36'40.608"N	103°33'20.128"W	0.23
7127.40	1.820	248.410	7125.77	10.49	17.06	11.48	780816.28	586989.66	32°36'40.600"N	103°33'20.150"W	0.27
7191.00	1.630	250.600	7189.34	8.73	16.39	9.69	780814.49	586988.99	32°36'40.594"N	103°33'20.171"W	0.32
7254.40	1.420	253.000	7252.72	7.17	15.86	8.09	780812.89	586988.46	32°36'40.589"N	103°33'20.190"W	0.35
7316.40	1.310	253.370	7314.70	5.78	15.43	6.68	780811.48	586988.03	32°36'40.585"N	103°33'20.207"W	0.18
7379.90	1.190	257.930	7378.19	4.46	15.09	5.34	780810.14	586987.69	32°36'40.581"N	103°33'20.223"W	0.25
7443.20	1.020	260.420	7441.48	3.28	14.86	4.14	780808.94	586987.46	32°36'40.579"N	103°33'20.237"W	0.28
7506.00	0.850	258.970	7504.27	2.28	14.68	3.13	780807.93	586987.28	32°36'40.577"N	103°33'20.248"W	0.27



Actual Wellpath Report

No. 18H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 18H SHL
Area	Lea County, NM	Well	No. 18H
Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 18H AWB
Facility	Mallon 34 Fed Com No. 18H	Sidetrack from	No. 18 AWB at 10593.60 MD

WELLPATH DATA (254 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]
7569.20	0.710	261.460	7567.46	1.44	14.53	2.28	780807.08	586987.13	32°36'40.576"N	103°33'20.258"W	0.23
7632.30	0.580	261.990	7630.56	0.75	14.43	-1.58	780806.38	586987.02	32°36'40.575"N	103°33'20.266"W	0.21
7695.30	0.440	260.350	7693.56	0.20	14.34	1.02	780805.82	586986.94	32°36'40.574"N	103°33'20.273"W	0.22
7758.60	0.420	263.090	7756.85	-0.27	14.27	0.55	780805.35	586986.87	32°36'40.574"N	103°33'20.278"W	0.05
7822.20	0.490	264.990	7820.45	-0.76	14.22	0.05	780804.85	586986.82	32°36'40.573"N	103°33'20.284"W	0.11
7885.50	0.500	263.980	7883.75	-1.30	14.17	-0.49	780804.31	586986.77	32°36'40.573"N	103°33'20.291"W	0.02
7947.90	0.530	261.650	7946.15	-1.86	14.10	-1.05	780803.75	586986.70	32°36'40.572"N	103°33'20.297"W	0.06
8011.30	0.620	257.760	8009.54	-2.47	13.98	-1.67	780803.13	586986.58	32°36'40.571"N	103°33'20.305"W	0.15
8074.30	0.720	261.120	8072.54	-3.19	13.85	-2.40	780802.40	586986.45	32°36'40.570"N	103°33'20.313"W	0.17
8137.80	0.680	270.160	8136.04	-3.96	13.79	-3.17	780801.63	586986.39	32°36'40.569"N	103°33'20.322"W	0.18
8201.30	0.590	278.470	8199.53	-4.66	13.84	-3.87	780800.93	586986.44	32°36'40.570"N	103°33'20.330"W	0.20
8264.20	0.400	274.290	8262.43	-5.20	13.90	-4.41	780800.39	586986.50	32°36'40.570"N	103°33'20.337"W	0.31
8327.60	0.420	258.980	8325.83	-5.65	13.87	-4.86	780799.94	586986.47	32°36'40.570"N	103°33'20.342"W	0.18
8391.00	0.560	250.690	8389.23	-6.16	13.73	-5.38	780799.42	586986.33	32°36'40.569"N	103°33'20.348"W	0.25
8454.20	0.550	255.500	8452.42	-6.73	13.55	-5.96	780798.84	586986.15	32°36'40.567"N	103°33'20.355"W	0.08
8517.50	0.350	270.180	8515.72	-7.21	13.47	-6.45	780798.35	586986.07	32°36'40.566"N	103°33'20.360"W	0.36
8580.30	0.180	257.130	8578.52	-7.50	13.45	-6.74	780798.06	586986.05	32°36'40.566"N	103°33'20.364"W	0.29
8643.60	0.210	155.340	8641.82	-7.54	13.32	-6.79	780798.01	586985.92	32°36'40.565"N	103°33'20.364"W	0.48
8707.20	0.060	95.290	8705.42	-7.45	13.21	-6.71	780798.09	586985.81	32°36'40.564"N	103°33'20.363"W	0.29
8770.40	0.070	228.470	8768.62	-7.45	13.19	-6.70	780798.10	586985.79	32°36'40.563"N	103°33'20.363"W	0.19
8833.90	0.570	181.550	8832.12	-7.46	12.84	-6.74	780798.06	586985.44	32°36'40.560"N	103°33'20.364"W	0.83
8897.00	1.090	162.580	8895.21	-7.24	11.96	-6.57	780798.23	586984.56	32°36'40.551"N	103°33'20.362"W	0.92
8960.10	1.130	154.480	8958.30	-6.73	10.82	-6.12	780798.68	586983.42	32°36'40.540"N	103°33'20.357"W	0.26
9023.70	0.740	167.130	9021.89	-6.31	9.86	-5.76	780799.04	586982.46	32°36'40.530"N	103°33'20.353"W	0.69
9086.90	0.560	181.210	9085.09	-6.19	9.15	-5.67	780799.13	586981.75	32°36'40.523"N	103°33'20.352"W	0.38
9212.60	0.720	266.950	9210.78	-6.95	8.49	-6.48	780798.32	586981.09	32°36'40.517"N	103°33'20.361"W	0.70
9275.90	1.430	277.910	9274.07	-8.13	8.58	-7.66	780797.15	586981.18	32°36'40.518"N	103°33'20.375"W	1.16
9339.10	1.900	270.170	9337.24	-9.97	8.69	-9.48	780795.32	586981.29	32°36'40.519"N	103°33'20.396"W	0.82
9402.50	1.790	262.600	9400.61	-11.99	8.57	-11.52	780793.28	586981.17	32°36'40.518"N	103°33'20.420"W	0.42
9465.70	1.620	259.120	9463.78	-13.83	8.27	-13.37	780791.43	586980.87	32°36'40.515"N	103°33'20.442"W	0.31



Actual Wellpath Report

No. 18H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 18H SHL
Area	Lea County, NM	Well	No. 18H
Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 18H AWB
Facility	Mallon 34 Fed Com No. 18H	Sidetrack from	No. 18 AWB at 10593.60 MD

WELLPATH DATA (254 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]
9529.50	1.480	255.080	9527.56	-15.48	7.89	-15.05	780789.75	586980.49	32°36'40.512"N	103°33'20.461"W	0.28
9592.80	1.360	247.020	9590.84	-16.93	7.39	-16.54	780788.26	586979.99	32°36'40.507"N	103°33'20.479"W	0.37
9656.00	1.320	231.210	9654.02	-18.15	6.64	-17.79	780787.01	586979.24	32°36'40.499"N	103°33'20.494"W	0.59
9719.60	1.250	216.270	9717.61	-19.07	5.62	-18.78	780786.02	586978.22	32°36'40.489"N	103°33'20.505"W	0.54
9782.60	1.250	218.600	9780.59	-19.84	4.53	-19.61	780785.19	586977.13	32°36'40.479"N	103°33'20.515"W	0.08
9845.80	1.270	219.660	9843.78	-20.65	3.45	-20.49	780784.31	586976.05	32°36'40.468"N	103°33'20.525"W	0.05
9909.10	1.210	225.240	9907.06	-21.51	2.44	-21.41	780783.39	586975.04	32°36'40.458"N	103°33'20.536"W	0.21
9972.70	1.250	229.590	9970.65	-22.47	1.52	-22.42	780782.39	586974.12	32°36'40.449"N	103°33'20.548"W	0.16
10036.40	1.470	235.680	10034.33	-23.61	0.61	-23.62	780781.18	586973.21	32°36'40.440"N	103°33'20.562"W	0.41
10099.40	1.500	235.790	10097.31	-24.91	-0.31	-24.97	780779.83	586972.29	32°36'40.431"N	103°33'20.578"W	0.05
10163.10	1.380	241.370	10160.99	-26.22	-1.15	-26.33	780778.47	586971.45	32°36'40.423"N	103°33'20.594"W	0.29
10225.80	1.250	246.070	10223.67	-27.47	-1.79	-27.62	780777.18	586970.81	32°36'40.417"N	103°33'20.609"W	0.27
10288.80	1.240	245.470	10286.66	-28.68	-2.35	-28.87	780775.93	586970.25	32°36'40.411"N	103°33'20.624"W	0.03
10351.60	1.320	243.040	10349.44	-29.91	-2.96	-30.13	780774.67	586969.64	32°36'40.405"N	103°33'20.639"W	0.15
10415.00	1.440	225.350	10412.82	-31.08	-3.85	-31.35	780773.45	586968.75	32°36'40.397"N	103°33'20.653"W	0.69
10478.40	1.640	219.180	10476.20	-32.14	-5.11	-32.49	780772.31	586967.49	32°36'40.384"N	103°33'20.666"W	0.41
10542.20	1.380	211.510	10539.98	-33.04	-6.48	-33.47	780771.34	586966.12	32°36'40.371"N	103°33'20.678"W	0.52
10593.60	1.550	220.420	10591.36	-33.75	-7.53	-34.24	780770.56	586965.07	32°36'40.360"N	103°33'20.687"W	0.55
10611.00	6.200	100.600	10608.73	-32.96	-7.89	-33.47	780771.33	586964.72	32°36'40.357"N	103°33'20.678"W	40.80
10642.00	15.400	97.000	10639.15	-27.18	-8.70	-27.72	780777.08	586963.90	32°36'40.348"N	103°33'20.611"W	29.74
10674.00	24.400	94.300	10669.21	-16.31	-9.71	-16.89	780787.91	586962.89	32°36'40.338"N	103°33'20.485"W	28.26
10706.00	33.400	91.500	10697.19	-0.86	-10.44	-1.47	780803.33	586962.16	32°36'40.329"N	103°33'20.304"W	28.43
10737.00	42.100	88.900	10721.68	18.06	-10.46	17.49	780822.29	586962.14	32°36'40.328"N	103°33'20.083"W	28.52
10769.00	51.300	88.600	10743.61	41.25	-9.95	40.75	780845.55	586962.65	32°36'40.331"N	103°33'19.811"W	28.76
10800.00	60.400	87.300	10760.99	66.77	-9.02	66.36	780871.16	586963.58	32°36'40.338"N	103°33'19.511"W	29.56
10829.00	69.400	86.400	10773.28	92.83	-7.57	92.55	780897.35	586965.03	32°36'40.351"N	103°33'19.205"W	31.16
10861.00	75.300	87.400	10782.98	123.13	-5.93	122.99	780927.78	586966.67	32°36'40.365"N	103°33'18.849"W	18.68
10893.00	77.200	88.700	10790.58	154.08	-4.87	154.05	780958.85	586967.73	32°36'40.373"N	103°33'18.486"W	7.13
10924.00	78.200	89.700	10797.19	184.29	-4.45	184.34	780989.13	586968.15	32°36'40.375"N	103°33'18.132"W	4.51
10956.00	79.500	90.500	10803.38	215.63	-4.50	215.73	781020.52	586968.10	32°36'40.372"N	103°33'17.765"W	4.75



Actual Wellpath Report

No. 18H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 18H SHL
Area	Lea County, NM	Well	No. 18H
Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 18H AWB
Facility	Mallon 34 Fed Com No. 18H	Sidetrack from	No. 18 AWB at 10593.60 MD

WELLPATH DATA (254 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]
10988.00	81.300	91.000	10808.71	247.15	-4.92	247.28	781052.07	586967.68	32°36'40.366"N	103°33'17.396"W	5.83
11019.00	82.200	91.700	10813.16	277.81	-5.64	277.95	781082.74	586966.96	32°36'40.356"N	103°33'17.037"W	3.66
11051.00	83.000	91.100	10817.28	309.53	-6.41	309.67	781114.46	586966.19	32°36'40.346"N	103°33'16.667"W	3.12
11083.00	84.700	91.300	10820.71	341.32	-7.08	341.48	781146.27	586965.52	32°36'40.338"N	103°33'16.295"W	5.35
11115.00	88.100	91.700	10822.72	373.24	-7.92	373.40	781178.19	586964.68	32°36'40.327"N	103°33'15.922"W	10.70
11146.00	89.100	91.600	10823.48	404.22	-8.81	404.38	781209.17	586963.79	32°36'40.316"N	103°33'15.560"W	3.24
11210.00	89.000	91.000	10824.54	468.17	-10.26	468.35	781273.14	586962.34	32°36'40.297"N	103°33'14.812"W	0.95
11273.00	89.600	92.000	10825.31	531.13	-11.91	531.33	781336.11	586960.69	32°36'40.276"N	103°33'14.076"W	1.85
11336.00	90.100	92.300	10825.47	594.12	-14.27	594.28	781399.06	586958.33	32°36'40.248"N	103°33'13.340"W	0.93
11399.00	90.200	93.300	10825.31	657.12	-17.35	657.20	781461.99	586955.25	32°36'40.213"N	103°33'12.605"W	1.60
11463.00	88.900	93.500	10825.81	721.11	-21.15	721.09	781525.87	586951.45	32°36'40.171"N	103°33'11.858"W	2.06
11526.00	88.900	93.200	10827.02	784.10	-24.83	783.97	781588.75	586947.77	32°36'40.130"N	103°33'11.124"W	0.48
11589.00	89.100	94.900	10828.12	847.08	-29.28	846.80	781651.58	586943.33	32°36'40.081"N	103°33'10.389"W	2.72
11652.00	88.800	93.800	10829.27	910.06	-34.05	909.61	781714.38	586938.55	32°36'40.029"N	103°33'09.656"W	1.81
11715.00	89.300	93.500	10830.32	973.05	-38.06	972.47	781777.24	586934.54	32°36'39.985"N	103°33'08.921"W	0.93
11778.00	88.800	94.200	10831.36	1036.04	-42.29	1035.32	781840.09	586930.31	32°36'39.939"N	103°33'08.187"W	1.37
11841.00	89.500	94.200	10832.30	1099.02	-46.91	1098.14	781902.91	586925.70	32°36'39.889"N	103°33'07.453"W	1.11
11904.00	88.700	94.600	10833.29	1162.00	-51.74	1160.95	781965.72	586920.86	32°36'39.836"N	103°33'06.719"W	1.42
11968.00	88.800	94.400	10834.68	1225.97	-56.76	1224.74	782029.50	586915.84	32°36'39.782"N	103°33'05.974"W	0.35
12031.00	89.200	94.100	10835.78	1288.96	-61.43	1287.55	782092.32	586911.17	32°36'39.731"N	103°33'05.240"W	0.79
12095.00	88.900	94.600	10836.84	1352.94	-66.28	1351.36	782156.12	586906.32	32°36'39.679"N	103°33'04.494"W	0.91
12158.00	89.200	94.400	10837.89	1415.91	-71.22	1414.16	782218.92	586901.38	32°36'39.625"N	103°33'03.761"W	0.57
12221.00	88.100	94.600	10839.37	1478.88	-76.16	1476.94	782281.70	586896.44	32°36'39.572"N	103°33'03.027"W	1.77
12284.00	88.000	94.600	10841.52	1541.83	-81.21	1539.70	782344.46	586891.39	32°36'39.517"N	103°33'02.294"W	0.16
12347.00	88.800	94.300	10843.28	1604.79	-86.10	1602.49	782407.25	586886.50	32°36'39.464"N	103°33'01.560"W	1.36
12411.00	88.100	94.600	10845.01	1668.75	-91.06	1666.27	782471.03	586881.54	32°36'39.410"N	103°33'00.815"W	1.19
12474.00	88.300	94.800	10846.99	1731.70	-96.22	1729.03	782533.78	586876.38	32°36'39.355"N	103°33'00.082"W	0.45
12538.00	88.600	94.000	10848.72	1795.67	-101.13	1792.82	782597.57	586871.47	32°36'39.302"N	103°32'59.337"W	1.33
12601.00	89.900	93.800	10849.54	1858.66	-105.42	1855.66	782660.41	586867.19	32°36'39.255"N	103°32'58.602"W	2.09
12664.00	89.000	92.900	10850.15	1921.65	-109.10	1918.55	782723.30	586863.51	32°36'39.214"N	103°32'57.867"W	2.02



Actual Wellpath Report

No. 18H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 18H SHL
Area	Lea County, NM	Well	No. 18H
Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 18H AWB
Facility	Mallon 34 Fed Com No. 18H	Sidetrack from	No. 18 AWB at 10593.60 MD

WELLPATH DATA (254 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]
12728.00	87.800	92.800	10851.93	1985.62	-112.28	1982.45	782787.19	586860.32	32°36'39.177"N	103°32'57.121"W	1.88
12791.00	88.300	92.700	10854.08	2048.58	-115.30	2045.34	782850.08	586857.30	32°36'39.143"N	103°32'56.386"W	0.81
12854.00	88.300	91.200	10855.95	2111.54	-117.44	2108.27	782913.01	586855.16	32°36'39.117"N	103°32'55.650"W	2.38
12917.00	88.700	91.100	10857.59	2174.47	-118.71	2171.24	782975.98	586853.90	32°36'39.100"N	103°32'54.914"W	0.65
12980.00	89.100	90.800	10858.80	2237.41	-119.75	2234.22	783038.96	586852.85	32°36'39.085"N	103°32'54.178"W	0.79
13044.00	89.400	89.800	10859.64	2301.31	-120.09	2298.21	783102.95	586852.52	32°36'39.077"N	103°32'53.430"W	1.63
13107.00	89.900	90.200	10860.03	2364.21	-120.09	2361.21	783165.94	586852.52	32°36'39.072"N	103°32'52.694"W	1.02
13171.00	90.200	90.000	10859.97	2428.11	-120.20	2425.21	783229.94	586852.41	32°36'39.067"N	103°32'51.945"W	0.56
13234.00	90.300	91.600	10859.70	2491.05	-121.08	2488.20	783292.93	586851.53	32°36'39.053"N	103°32'51.209"W	2.54
13296.00	90.700	91.600	10859.15	2553.02	-122.81	2550.17	783354.90	586849.80	32°36'39.032"N	103°32'50.485"W	0.65
13360.00	90.200	92.200	10858.65	2617.00	-124.93	2614.14	783418.86	586847.67	32°36'39.006"N	103°32'49.737"W	1.22
13423.00	90.600	91.500	10858.21	2679.98	-126.96	2677.10	783481.83	586845.64	32°36'38.981"N	103°32'49.001"W	1.28
13486.00	90.600	91.700	10857.55	2742.94	-128.72	2740.07	783544.80	586843.88	32°36'38.959"N	103°32'48.265"W	0.32
13550.00	90.800	91.400	10856.77	2806.91	-130.45	2804.04	783608.77	586842.15	32°36'38.938"N	103°32'47.518"W	0.56
13613.00	90.200	90.300	10856.22	2869.85	-131.39	2867.03	783671.76	586841.22	32°36'38.924"N	103°32'46.781"W	1.99
13676.00	89.600	90.200	10856.33	2932.76	-131.66	2930.03	783734.75	586840.94	32°36'38.916"N	103°32'46.045"W	0.97
13740.00	88.800	92.500	10857.22	2996.71	-133.17	2994.00	783798.72	586839.43	32°36'38.897"N	103°32'45.297"W	3.80
13803.00	89.900	93.200	10857.94	3059.71	-136.30	3056.92	783861.64	586836.30	32°36'38.861"N	103°32'44.562"W	2.07
13866.00	89.800	91.900	10858.10	3122.70	-139.11	3119.86	783924.57	586833.50	32°36'38.829"N	103°32'43.827"W	2.07
13929.00	89.700	90.600	10858.38	3185.66	-140.48	3182.84	783987.55	586832.12	32°36'38.811"N	103°32'43.090"W	2.07
13993.00	90.200	91.700	10858.44	3249.61	-141.76	3246.83	784051.54	586830.84	32°36'38.793"N	103°32'42.343"W	1.89
14056.00	90.200	93.800	10858.22	3312.60	-144.79	3309.75	784114.46	586827.82	32°36'38.759"N	103°32'41.607"W	3.33
14119.00	90.500	93.800	10857.83	3375.60	-148.96	3372.61	784177.32	586823.64	32°36'38.713"N	103°32'40.873"W	0.48
14183.00	90.200	92.200	10857.44	3439.60	-152.31	3436.52	784241.22	586820.29	32°36'38.675"N	103°32'40.126"W	2.54
14247.00	91.400	92.600	10856.55	3503.58	-154.99	3500.45	784305.16	586817.61	32°36'38.644"N	103°32'39.379"W	1.98
14310.00	92.000	93.000	10854.68	3566.55	-158.07	3563.35	784368.05	586814.54	32°36'38.609"N	103°32'38.644"W	1.14
14373.00	92.300	93.200	10852.31	3629.51	-161.47	3626.21	784430.92	586811.13	32°36'38.570"N	103°32'37.909"W	0.57
14435.00	91.500	94.300	10850.26	3691.47	-165.52	3688.05	784492.75	586807.08	32°36'38.526"N	103°32'37.187"W	2.19
14499.00	92.000	94.100	10848.30	3755.43	-170.21	3751.84	784556.54	586802.40	32°36'38.475"N	103°32'36.441"W	0.84
14562.00	91.900	94.200	10846.16	3818.39	-174.77	3814.64	784619.34	586797.84	32°36'38.425"N	103°32'35.708"W	0.22



Actual Wellpath Report

No. 18H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 18H SHL
Area	Lea County, NM	Well	No. 18H
Field	(Mallon) Sec 34, T19S, R34E	Wellbore	No. 18H AWB
Facility	Mallon 34 Fed Com No. 18H	Sidetrack from	No. 18 AWB at 10593.60 MD

WELLPATH DATA (254 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]
14626.00	89.600	95.800	10845.32	3882.35	-180.34	3878.39	784683.08	586792.26	32°36'38.365"N	103°32'34.963"W	4.38
14689.00	87.400	96.900	10846.97	3945.23	-187.31	3940.97	784745.67	586785.30	32°36'38.292"N	103°32'34.232"W	3.90
14753.00	86.400	96.400	10850.43	4009.03	-194.71	4004.45	784809.14	586777.90	32°36'38.214"N	103°32'33.490"W	1.75
14816.00	88.500	96.100	10853.23	4071.88	-201.56	4067.01	784871.70	586771.05	32°36'38.141"N	103°32'32.760"W	3.37
14879.00	89.400	96.000	10854.39	4134.79	-208.20	4129.65	784934.34	586764.41	32°36'38.071"N	103°32'32.028"W	1.44
14943.00	88.100	95.100	10855.79	4198.72	-214.39	4193.33	784998.02	586758.22	32°36'38.005"N	103°32'31.284"W	2.47
15007.00	87.500	94.300	10858.24	4262.66	-219.63	4257.07	785061.75	586752.98	32°36'37.948"N	103°32'30.540"W	1.56
15070.00	87.400	94.400	10861.05	4325.58	-224.40	4319.82	785124.51	586748.21	32°36'37.897"N	103°32'29.806"W	0.22
15133.00	87.100	93.100	10864.07	4388.51	-228.52	4382.62	785187.30	586744.09	32°36'37.851"N	103°32'29.073"W	2.12
15196.00	87.800	92.100	10866.87	4451.44	-231.37	4445.49	785250.17	586741.24	32°36'37.818"N	103°32'28.338"W	1.94
15260.00	89.000	91.800	10868.66	4515.40	-233.55	4509.42	785314.10	586739.06	32°36'37.792"N	103°32'27.591"W	1.93
15323.00	89.600	90.700	10869.43	4578.35	-234.92	4572.40	785377.08	586737.68	32°36'37.774"N	103°32'26.855"W	1.99
15355.00	90.000	90.100	10869.54	4610.31	-235.14	4604.40	785409.08	586737.46	32°36'37.769"N	103°32'26.481"W	2.25
15406.00	90.000	90.100	10869.54	4661.23	-235.23	4655.40	785460.07	586737.37	32°36'37.765"N	103°32'25.884"W	0.00

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
No. 18H PBHL		10883.00	-267.52	4655.05	785459.73	586705.09	32°36'37.445"N	103°32'25.891"W	point

WELLPATH COMPOSITION Ref Wellbore: No. 18H AWB Ref Wellpath: No. 18H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	10593.60	Gyrodata relative depth - Drop gyro or Multi-shot	GYRO (58.4 - 10593.6)	No. 18 AWB
10593.60	15355.00	NaviTrak (Standard)	MWD (10611 - 15355)	No. 18H AWB
15355.00	15406.00	Blind Drilling (std)	Projection to bit	No. 18H AWB