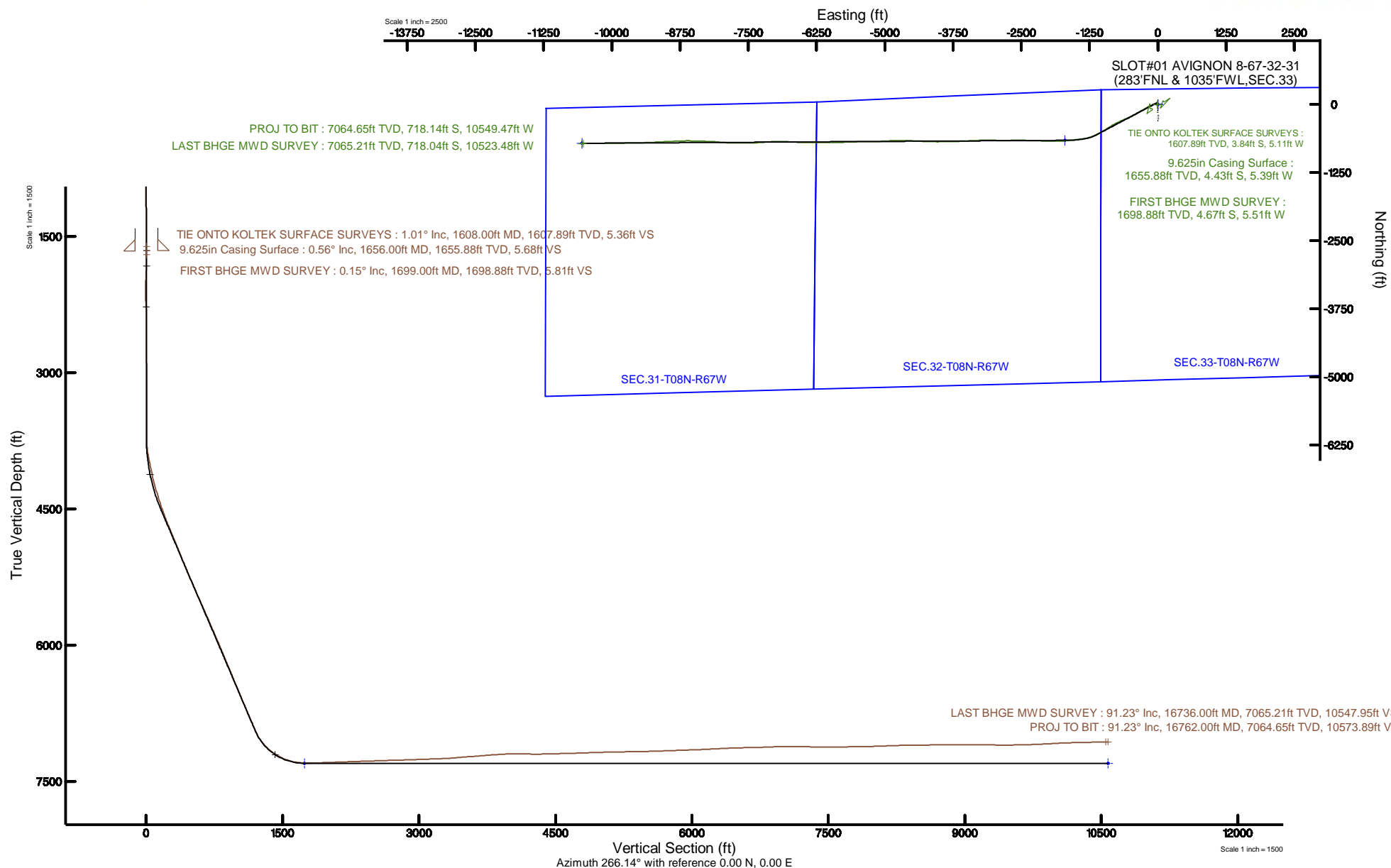


ENERPLUS RESOURCES USA CORPORATION

Location: COLORADO Slot: SLOT#01 AVIGNON 8-67-32-31 (283'FNL & 1035'FWL,SEC.33)
 Field: WELD COUNTY (NAD83/TRUE) Well: AVIGNON 8-67-32-31
 Facility: SEC.33-T08N-R67W Wellbore: AVIGNON 8-67-32-31 PWB

Plot reference wellpath is AVIGNON 8-67-32-31 (REV-B.0) PWP	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to ENSIGN 147 (5177'GL+28'KB@5205') (RKB)	North Reference: True north
Measured depths are referenced to ENSIGN 147 (5177'GL+28'KB@5205') (RKB)	Scale: True distance
ENSIGN 147 (5177'GL+28'KB@5205') (RKB) to Mean Sea Level: 5205 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: SLOT#01 AVIGNON 8-67-32-31 (283'FNL & 1035'FWL,SEC.33)): 0 feet	Created by: robale01 on 2019-06-13
Coordinates are in feet referenced to Slot	Database: WA DENVER

enerPLUS



Actual Wellpath Report

AVIGNON 8-67-32-31 AWP

Page 1 of 7

REFERENCE WELLPATH IDENTIFICATION

Operator	ENERPLUS RESOURCES USA CORPORATION	Slot	SLOT#01 AVIGNON 8-67-32-31 (283'FNL & 1035'FWL,SEC.33)
Area	COLORADO	Well	AVIGNON 8-67-32-31
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	AVIGNON 8-67-32-31 AWB
Facility	SEC.33-T08N-R67W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Robiale01
Scale	0.999978	Report Generated	6/12/2019 at 4:57:52 PM
Convergence at slot	0.39° East	Database/Source file	WA DENVER/AVIGNON_8-67-32-31_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.00	0.00	3165536.54	1470928.66	40°37'28.445"N	104°54'13.162"W
Facility Reference Pt			3165536.54	1470928.66	40°37'28.445"N	104°54'13.162"W
Field Reference Pt			3206754.66	1456523.33	40°35'03.023"N	104°45'20.196"W

WELLPATH DATUM

Calculation method	Minimum curvature	ENSIGN 147 (5177'GL+28'KB@5205') (RKB) to Facility Vertical Datum	5205.00ft
Horizontal Reference Pt	Slot	ENSIGN 147 (5177'GL+28'KB@5205') (RKB) to Mean Sea Level	5205.00ft
Vertical Reference Pt	ENSIGN 147 (5177'GL+28'KB@5205') (RKB)	ENSIGN 147 (5177'GL+28'KB@5205') (RKB) to Ground Level at Slot (SLOT#01 AVIGNON 8-67-32-31 (283'FNL & 1035'FWL,SEC.33))	5205.00ft
MD Reference Pt	ENSIGN 147 (5177'GL+28'KB@5205') (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	266.14°

Actual Wellpath Report

AVIGNON 8-67-32-31 AWP

Page 2 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	ENERPLUS RESSOURCES USA CORPORATION	Slot	SLOT#01 AVIGNON 8-67-32-31 (283'FNL & 1035'FWL,SEC.33)
Area	COLORADO	Well	AVIGNON 8-67-32-31
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	AVIGNON 8-67-32-31 AWB
Facility	SEC.33-T08N-R67W		

WELLPATH DATA (190 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	313.780	0.00	0.00	0.00	0.00	40°37'28.445"N	104°54'13.162"W	0.00	
28.00	0.000	313.780	28.00	0.00	0.00	0.00	40°37'28.445"N	104°54'13.162"W	0.00	
147.00	1.270	313.780	146.99	0.89	0.91	-0.95	40°37'28.454"N	104°54'13.174"W	1.07	
234.00	0.660	335.580	233.98	1.71	2.04	-1.86	40°37'28.465"N	104°54'13.186"W	0.81	
321.00	0.530	295.240	320.97	2.24	2.66	-2.43	40°37'28.471"N	104°54'13.193"W	0.49	
409.00	0.400	333.030	408.97	2.72	3.11	-2.93	40°37'28.476"N	104°54'13.200"W	0.37	
496.00	0.440	29.900	495.97	2.65	3.67	-2.91	40°37'28.481"N	104°54'13.199"W	0.46	
583.00	0.790	80.610	582.96	1.87	4.06	-2.15	40°37'28.485"N	104°54'13.189"W	0.71	
670.00	0.530	103.200	669.96	0.89	4.06	-1.16	40°37'28.485"N	104°54'13.177"W	0.42	
758.00	0.830	103.810	757.95	-0.11	3.82	-0.15	40°37'28.483"N	104°54'13.164"W	0.34	
845.00	0.480	250.410	844.95	-0.36	3.55	0.12	40°37'28.480"N	104°54'13.160"W	1.45	
932.00	0.660	194.080	931.95	0.15	2.94	-0.34	40°37'28.474"N	104°54'13.166"W	0.64	
1020.00	0.970	209.460	1019.94	0.71	1.80	-0.83	40°37'28.463"N	104°54'13.172"W	0.43	
1107.00	0.620	212.010	1106.93	1.39	0.76	-1.45	40°37'28.452"N	104°54'13.180"W	0.40	
1194.00	0.970	228.270	1193.92	2.25	-0.13	-2.25	40°37'28.444"N	104°54'13.191"W	0.47	
1281.00	0.790	216.660	1280.91	3.22	-1.10	-3.15	40°37'28.434"N	104°54'13.202"W	0.29	
1369.00	0.310	176.760	1368.91	3.62	-1.83	-3.50	40°37'28.427"N	104°54'13.207"W	0.67	
1456.00	0.790	252.440	1455.90	4.20	-2.24	-4.06	40°37'28.423"N	104°54'13.214"W	0.89	
1543.00	0.700	194.430	1542.90	4.95	-2.94	-4.76	40°37'28.416"N	104°54'13.223"W	0.84	
1608.00	1.010	205.410	1607.89	5.36	-3.84	-5.11	40°37'28.407"N	104°54'13.228"W	0.54	TIE ONTO KOLTEK SURFACE SURVEYS
1699.00	0.150	207.860	1698.88	5.81	-4.67	-5.51	40°37'28.399"N	104°54'13.233"W	0.95	FIRST BHGE MWD SURVEY
1788.00	2.030	37.450	1787.87	4.83	-3.52	-4.60	40°37'28.410"N	104°54'13.221"W	2.45	
1878.00	4.390	29.170	1877.72	1.90	0.75	-1.96	40°37'28.452"N	104°54'13.187"W	2.67	
1968.00	5.370	29.890	1967.39	-2.32	7.41	1.82	40°37'28.518"N	104°54'13.138"W	1.09	
2057.00	6.060	12.760	2055.96	-5.97	15.60	4.93	40°37'28.599"N	104°54'13.098"W	2.06	
2147.00	6.540	342.870	2145.44	-6.16	25.14	4.47	40°37'28.693"N	104°54'13.104"W	3.64	
2237.00	5.190	312.070	2234.98	-2.15	32.77	-0.06	40°37'28.769"N	104°54'13.162"W	3.75	
2326.00	3.280	272.920	2323.75	3.18	35.59	-5.59	40°37'28.797"N	104°54'13.234"W	3.77	
2416.00	0.640	173.990	2413.70	5.72	35.22	-8.11	40°37'28.793"N	104°54'13.267"W	3.82	
2505.00	0.220	166.420	2502.70	5.67	34.56	-8.02	40°37'28.786"N	104°54'13.266"W	0.48	
2594.00	0.440	265.370	2591.70	5.99	34.37	-8.32	40°37'28.784"N	104°54'13.269"W	0.59	
2683.00	0.200	209.940	2680.70	6.41	34.21	-8.74	40°37'28.783"N	104°54'13.275"W	0.41	
2773.00	0.090	241.910	2770.70	6.57	34.04	-8.88	40°37'28.781"N	104°54'13.277"W	0.15	
2862.00	0.490	195.680	2859.70	6.76	33.64	-9.04	40°37'28.777"N	104°54'13.279"W	0.49	
2951.00	0.500	270.480	2948.70	7.27	33.28	-9.53	40°37'28.774"N	104°54'13.285"W	0.68	
3041.00	0.180	112.070	3038.69	7.54	33.23	-9.80	40°37'28.773"N	104°54'13.289"W	0.75	

WELLPATH DATA (190 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3130.00	0.130	94.390	3127.69	7.31	33.17	-9.57	40°37'28.773"N	104°54'13.286"W	0.08	
3220.00	0.400	192.070	3217.69	7.29	32.85	-9.53	40°37'28.769"N	104°54'13.285"W	0.49	
3309.00	0.190	176.480	3306.69	7.38	32.40	-9.58	40°37'28.765"N	104°54'13.286"W	0.25	
3398.00	0.400	193.350	3395.69	7.47	31.95	-9.65	40°37'28.761"N	104°54'13.287"W	0.25	
3488.00	0.180	260.090	3485.69	7.71	31.62	-9.86	40°37'28.757"N	104°54'13.289"W	0.41	
3577.00	0.260	166.450	3574.69	7.81	31.40	-9.95	40°37'28.755"N	104°54'13.291"W	0.37	
3666.00	0.110	357.520	3663.69	7.78	31.29	-9.91	40°37'28.754"N	104°54'13.290"W	0.41	
3756.00	1.420	234.120	3753.68	8.72	30.72	-10.81	40°37'28.748"N	104°54'13.302"W	1.65	
3845.00	6.450	243.010	3842.44	14.26	27.81	-16.16	40°37'28.720"N	104°54'13.371"W	5.68	

Actual Wellpath Report

AVIGNON 8-67-32-31 AWP

Page 3 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	ENERPLUS RESOURCES USA CORPORATION	Slot	SLOT#01 AVIGNON 8-67-32-31 (283'FNL & 1035'FWL,SEC.33)
Area	COLORADO	Well	AVIGNON 8-67-32-31
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	AVIGNON 8-67-32-31 AWB
Facility	SEC.33-T08N-R67W		

WELLPATH DATA (190 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3933.00	11.510	247.820	3929.34	27.14	22.24	-28.71	40°37'28.665"N	104°54'13.534"W	5.81	
4023.00	12.940	245.660	4017.29	45.11	14.70	-46.20	40°37'28.590"N	104°54'13.761"W	1.67	
4112.00	12.940	247.610	4104.03	63.89	6.80	-64.50	40°37'28.512"N	104°54'13.998"W	0.49	
4201.00	14.160	248.410	4190.56	83.71	-1.00	-83.83	40°37'28.435"N	104°54'14.249"W	1.39	
4290.00	16.850	247.730	4276.31	106.32	-9.90	-105.90	40°37'28.347"N	104°54'14.535"W	3.03	
4380.00	18.680	244.640	4362.02	132.11	-21.02	-131.00	40°37'28.237"N	104°54'14.860"W	2.29	
4469.00	20.250	240.710	4445.93	159.29	-34.66	-157.31	40°37'28.102"N	104°54'15.202"W	2.30	
4558.00	20.930	238.660	4529.24	187.30	-50.46	-184.32	40°37'27.946"N	104°54'15.552"W	1.11	
4647.00	22.910	240.200	4611.81	216.99	-67.34	-212.93	40°37'27.779"N	104°54'15.923"W	2.32	
4737.00	24.960	242.090	4694.06	250.08	-84.94	-244.92	40°37'27.605"N	104°54'16.338"W	2.43	
4827.00	24.760	241.250	4775.73	284.52	-102.89	-278.22	40°37'27.428"N	104°54'16.770"W	0.45	
4917.00	25.130	240.240	4857.33	318.81	-121.44	-311.34	40°37'27.245"N	104°54'17.199"W	0.63	
5007.00	24.100	239.830	4939.15	352.47	-140.16	-343.81	40°37'27.060"N	104°54'17.620"W	1.16	
5098.00	23.220	240.300	5022.50	385.28	-158.39	-375.46	40°37'26.880"N	104°54'18.031"W	0.99	
5186.00	24.670	239.480	5102.92	417.30	-176.31	-406.35	40°37'26.703"N	104°54'18.431"W	1.69	
5276.00	25.020	239.480	5184.59	451.10	-195.52	-438.93	40°37'26.513"N	104°54'18.854"W	0.39	
5365.00	25.020	242.170	5265.25	485.12	-213.86	-471.78	40°37'26.332"N	104°54'19.280"W	1.28	
5455.00	25.000	244.930	5346.81	520.24	-230.80	-505.84	40°37'26.164"N	104°54'19.722"W	1.30	
5545.00	25.310	246.730	5428.28	556.12	-246.46	-540.74	40°37'26.009"N	104°54'20.174"W	0.92	
5634.00	25.150	246.980	5508.78	591.92	-261.37	-575.63	40°37'25.862"N	104°54'20.627"W	0.22	
5723.00	25.400	248.720	5589.27	628.00	-275.70	-610.82	40°37'25.720"N	104°54'21.083"W	0.88	
5813.00	25.060	246.230	5670.68	664.34	-290.39	-646.25	40°37'25.575"N	104°54'21.542"W	1.24	
5903.00	25.320	243.520	5752.13	700.03	-306.65	-680.92	40°37'25.415"N	104°54'21.992"W	1.31	
5992.00	24.960	242.360	5832.70	734.78	-323.85	-714.59	40°37'25.245"N	104°54'22.429"W	0.69	
6081.00	24.900	244.900	5913.41	769.43	-340.51	-748.19	40°37'25.080"N	104°54'22.864"W	1.20	
6171.00	25.190	243.720	5994.94	804.80	-357.03	-782.52	40°37'24.917"N	104°54'23.310"W	0.64	
6261.00	25.020	241.450	6076.44	839.79	-374.60	-816.42	40°37'24.743"N	104°54'23.749"W	1.09	
6350.00	25.040	239.270	6157.09	873.70	-393.22	-849.14	40°37'24.559"N	104°54'24.174"W	1.04	
6440.00	25.060	237.050	6238.62	907.34	-413.32	-881.51	40°37'24.361"N	104°54'24.593"W	1.04	
6530.00	24.980	237.370	6320.18	940.66	-433.94	-913.51	40°37'24.157"N	104°54'25.008"W	0.17	
6619.00	24.350	237.860	6401.06	973.29	-453.83	-944.87	40°37'23.960"N	104°54'25.415"W	0.74	
6709.00	24.880	237.560	6482.88	1006.26	-473.86	-976.56	40°37'23.762"N	104°54'25.826"W	0.61	
6798.00	25.210	237.720	6563.51	1039.37	-494.02	-1008.38	40°37'23.563"N	104°54'26.239"W	0.38	
6888.00	24.750	240.850	6645.09	1073.26	-513.44	-1041.04	40°37'23.371"N	104°54'26.662"W	1.55	
6977.00	25.100	242.500	6725.81	1107.40	-531.23	-1074.06	40°37'23.195"N	104°54'27.090"W	0.87	
7067.00	25.320	243.510	6807.23	1142.65	-548.63	-1108.21	40°37'23.023"N	104°54'27.533"W	0.54	

WELLPATH DATA (190 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7157.00	25.360	245.170	6888.58	1178.41	-565.30	-1142.93	40°37'22.859"N	104°54'27.983"W	0.79	
7246.00	26.680	247.790	6968.56	1215.18	-580.86	-1178.73	40°37'22.705"N	104°54'28.448"W	1.97	
7336.00	35.230	251.550	7045.67	1259.57	-596.75	-1222.15	40°37'22.548"N	104°54'29.011"W	9.74	
7425.00	44.100	255.720	7114.13	1314.99	-612.54	-1276.63	40°37'22.392"N	104°54'29.717"W	10.40	
7514.00	53.050	259.530	7172.97	1380.92	-626.68	-1341.75	40°37'22.252"N	104°54'30.562"W	10.55	
7604.00	61.670	263.100	7221.47	1456.36	-637.99	-1416.60	40°37'22.140"N	104°54'31.532"W	10.14	
7694.00	69.500	264.450	7258.65	1538.17	-646.84	-1498.01	40°37'22.053"N	104°54'32.588"W	8.81	
7783.00	77.750	263.190	7283.72	1623.42	-656.05	-1582.82	40°37'21.962"N	104°54'33.688"W	9.37	
7872.00	87.440	264.600	7295.17	1711.50	-665.41	-1670.47	40°37'21.869"N	104°54'34.825"W	11.00	

Actual Wellpath Report

AVIGNON 8-67-32-31 AWP

Page 4 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	ENERPLUS RESOURCES USA CORPORATION	Slot	SLOT#01 AVIGNON 8-67-32-31 (283'FNL & 1035'FWL,SEC.33)
Area	COLORADO	Well	AVIGNON 8-67-32-31
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	AVIGNON 8-67-32-31 AWB
Facility	SEC.33-T08N-R67W		

WELLPATH DATA (190 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7962.00	90.950	266.740	7296.44	1801.47	-672.20	-1760.19	40°37'21.802"N	104°54'35.988"W	4.57	
8051.00	91.320	268.680	7294.68	1890.41	-675.76	-1849.10	40°37'21.767"N	104°54'37.141"W	2.22	
8141.00	92.090	271.440	7292.00	1980.15	-675.66	-1939.05	40°37'21.768"N	104°54'38.308"W	3.18	
8230.00	92.060	272.760	7288.78	2068.61	-672.40	-2027.93	40°37'21.800"N	104°54'39.460"W	1.48	
8319.00	91.940	272.390	7285.67	2157.00	-668.41	-2116.78	40°37'21.839"N	104°54'40.612"W	0.44	
8408.00	91.970	271.060	7282.63	2245.52	-665.73	-2205.69	40°37'21.866"N	104°54'41.765"W	1.49	
8498.00	92.090	272.330	7279.44	2335.04	-663.07	-2295.59	40°37'21.892"N	104°54'42.931"W	1.42	
8587.00	91.790	271.370	7276.43	2423.54	-660.20	-2384.49	40°37'21.920"N	104°54'44.084"W	1.13	
8677.00	92.160	270.480	7273.33	2513.18	-658.75	-2474.43	40°37'21.934"N	104°54'45.250"W	1.07	
8766.00	92.030	269.850	7270.08	2601.90	-658.49	-2563.37	40°37'21.937"N	104°54'46.404"W	0.72	
8855.00	91.510	269.380	7267.33	2690.69	-659.09	-2652.32	40°37'21.931"N	104°54'47.557"W	0.79	
8944.00	91.540	269.130	7264.96	2779.53	-660.24	-2741.28	40°37'21.919"N	104°54'48.711"W	0.28	
9034.00	91.420	268.680	7262.63	2869.39	-661.96	-2831.23	40°37'21.902"N	104°54'49.878"W	0.52	
9123.00	93.050	272.630	7259.16	2958.03	-660.95	-2920.14	40°37'21.912"N	104°54'51.031"W	4.80	
9212.00	91.360	272.450	7255.74	3046.40	-657.01	-3008.98	40°37'21.951"N	104°54'52.183"W	1.91	
9302.00	92.090	270.140	7253.03	3135.99	-654.98	-3098.91	40°37'21.971"N	104°54'53.349"W	2.69	
9391.00	92.560	268.320	7249.42	3224.79	-656.17	-3187.83	40°37'21.959"N	104°54'54.502"W	2.11	
9481.00	92.770	267.530	7245.23	3314.64	-659.43	-3277.67	40°37'21.927"N	104°54'55.667"W	0.91	
9571.00	94.530	267.420	7239.50	3404.43	-663.38	-3367.40	40°37'21.887"N	104°54'56.831"W	1.96	
9661.00	94.680	266.740	7232.28	3494.13	-667.95	-3456.99	40°37'21.842"N	104°54'57.993"W	0.77	
9751.00	94.590	267.250	7225.00	3583.82	-672.65	-3546.57	40°37'21.796"N	104°54'59.154"W	0.57	
9839.00	94.620	267.980	7217.94	3671.51	-676.30	-3634.21	40°37'21.759"N	104°55'00.291"W	0.83	
9928.00	94.380	269.130	7210.96	3760.16	-678.54	-3722.91	40°37'21.737"N	104°55'01.441"W	1.32	
10017.00	93.510	269.100	7204.83	3848.82	-679.91	-3811.68	40°37'21.723"N	104°55'02.592"W	0.98	
10107.00	93.290	267.980	7199.50	3938.59	-682.20	-3901.50	40°37'21.701"N	104°55'03.757"W	1.27	
10198.00	90.710	269.120	7196.32	4029.44	-684.50	-3992.40	40°37'21.678"N	104°55'04.936"W	3.10	
10286.00	88.980	270.970	7196.56	4117.23	-684.43	-4080.39	40°37'21.678"N	104°55'06.077"W	2.88	
10375.00	88.890	272.460	7198.21	4205.79	-681.77	-4169.34	40°37'21.705"N	104°55'07.230"W	1.68	
10464.00	89.970	271.960	7199.10	4294.28	-678.34	-4258.26	40°37'21.738"N	104°55'08.384"W	1.34	
10553.00	91.480	272.430	7197.97	4382.78	-674.93	-4347.19	40°37'21.772"N	104°55'09.537"W	1.78	
10643.00	91.540	272.830	7195.60	4472.17	-670.80	-4437.06	40°37'21.812"N	104°55'10.702"W	0.45	
10733.00	91.630	273.380	7193.11	4561.47	-665.93	-4526.90	40°37'21.860"N	104°55'11.867"W	0.62	
10823.00	91.570	271.350	7190.60	4650.90	-662.22	-4616.78	40°37'21.897"N	104°55'13.033"W	2.26	
10913.00	91.970	269.450	7187.82	4740.60	-661.59	-4706.73	40°37'21.903"N	104°55'14.199"W	2.16	
11003.00	91.940	268.590	7184.75	4830.44	-663.13	-4796.66	40°37'21.888"N	104°55'15.366"W	0.96	
11092.00	92.030	267.160	7181.66	4919.34	-666.43	-4885.55	40°37'21.855"N	104°55'16.518"W	1.61	

WELLPATH DATA (190 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11182.00	91.570	266.500	7178.84	5009.29	-671.40	-4975.36	40°37'21.806"N	104°55'17.683"W	0.89	
11271.00	91.570	267.760	7176.40	5098.24	-675.85	-5064.22	40°37'21.761"N	104°55'18.835"W	1.42	
11360.00	90.710	268.770	7174.63	5187.16	-678.55	-5153.16	40°37'21.735"N	104°55'19.989"W	1.49	
11450.00	90.860	268.360	7173.39	5277.07	-680.80	-5243.12	40°37'21.712"N	104°55'21.155"W	0.49	
11539.00	90.490	269.820	7172.35	5365.94	-682.21	-5332.10	40°37'21.698"N	104°55'22.309"W	1.69	
11628.00	91.570	269.510	7170.75	5454.76	-682.74	-5421.08	40°37'21.693"N	104°55'23.463"W	1.26	
11718.00	91.600	268.170	7168.26	5544.62	-684.56	-5511.03	40°37'21.674"N	104°55'24.630"W	1.49	
11807.00	92.120	267.550	7165.37	5633.53	-687.88	-5599.92	40°37'21.641"N	104°55'25.782"W	0.91	
11897.00	91.970	268.020	7162.16	5723.44	-691.35	-5689.79	40°37'21.607"N	104°55'26.948"W	0.55	

Actual Wellpath Report

AVIGNON 8-67-32-31 AWP

Page 5 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	ENERPLUS RESOURCES USA CORPORATION	Slot	SLOT#01 AVIGNON 8-67-32-31 (283'FNL & 1035'FWL,SEC.33)
Area	COLORADO	Well	AVIGNON 8-67-32-31
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	AVIGNON 8-67-32-31 AWB
Facility	SEC.33-T08N-R67W		

WELLPATH DATA (190 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11986.00	92.030	268.730	7159.05	5812.32	-693.88	-5778.70	40°37'21.582"N	104°55'28.101"W	0.80	
12076.00	92.150	268.780	7155.77	5902.16	-695.83	-5868.62	40°37'21.562"N	104°55'29.267"W	0.14	
12166.00	92.150	269.440	7152.39	5991.98	-697.23	-5958.55	40°37'21.548"N	104°55'30.433"W	0.73	
12255.00	91.970	269.720	7149.19	6080.76	-697.88	-6047.49	40°37'21.542"N	104°55'31.587"W	0.37	
12345.00	92.860	270.320	7145.40	6170.47	-697.85	-6137.41	40°37'21.542"N	104°55'32.753"W	1.19	
12434.00	93.170	270.270	7140.72	6259.11	-697.39	-6226.28	40°37'21.546"N	104°55'33.905"W	0.35	
12523.00	92.960	270.180	7135.96	6347.76	-697.04	-6315.15	40°37'21.549"N	104°55'35.058"W	0.26	
12613.00	91.760	270.280	7132.25	6437.45	-696.68	-6405.07	40°37'21.552"N	104°55'36.224"W	1.34	
12703.00	91.820	270.250	7129.44	6527.18	-696.26	-6495.03	40°37'21.556"N	104°55'37.390"W	0.07	
12792.00	90.830	272.170	7127.38	6615.80	-694.39	-6583.98	40°37'21.575"N	104°55'38.544"W	2.43	
12882.00	91.080	273.020	7125.88	6705.22	-690.31	-6673.88	40°37'21.615"N	104°55'39.710"W	0.98	
12972.00	92.550	273.480	7123.03	6794.48	-685.21	-6763.68	40°37'21.665"N	104°55'40.874"W	1.71	
13061.00	92.520	271.810	7119.10	6882.81	-681.11	-6852.50	40°37'21.705"N	104°55'42.026"W	1.87	
13151.00	90.250	270.300	7116.92	6972.45	-679.45	-6942.45	40°37'21.721"N	104°55'43.193"W	3.03	
13241.00	90.030	266.980	7116.70	7062.35	-681.59	-7032.41	40°37'21.700"N	104°55'44.359"W	3.70	
13330.00	89.380	265.970	7117.16	7151.34	-687.06	-7121.24	40°37'21.646"N	104°55'45.511"W	1.35	
13420.00	89.480	266.110	7118.06	7241.34	-693.28	-7211.02	40°37'21.584"N	104°55'46.676"W	0.19	
13510.00	89.260	265.960	7119.05	7331.33	-699.50	-7300.80	40°37'21.522"N	104°55'47.840"W	0.30	
13599.00	89.910	266.860	7119.69	7420.33	-705.07	-7389.62	40°37'21.467"N	104°55'48.992"W	1.25	
13689.00	90.000	269.110	7119.76	7510.28	-708.24	-7479.56	40°37'21.435"N	104°55'50.158"W	2.50	
13779.00	90.030	270.590	7119.74	7600.08	-708.47	-7569.56	40°37'21.433"N	104°55'51.325"W	1.64	
13868.00	91.020	270.600	7118.92	7688.81	-707.55	-7658.55	40°37'21.442"N	104°55'52.479"W	1.11	
13958.00	90.920	270.790	7117.40	7778.51	-706.46	-7748.53	40°37'21.452"N	104°55'53.646"W	0.24	
14048.00	90.950	271.690	7115.93	7868.14	-704.51	-7838.49	40°37'21.471"N	104°55'54.813"W	1.00	
14137.00	91.050	273.290	7114.38	7956.58	-700.64	-7927.39	40°37'21.509"N	104°55'55.966"W	1.80	
14227.00	92.090	275.960	7111.91	8045.55	-693.39	-8017.06	40°37'21.580"N	104°55'57.128"W	3.18	
14316.00	91.970	274.200	7108.76	8133.41	-685.51	-8105.65	40°37'21.658"N	104°55'58.277"W	1.98	
14405.00	91.940	273.010	7105.72	8221.60	-679.92	-8194.42	40°37'21.713"N	104°55'59.428"W	1.34	
14495.00	92.310	271.450	7102.38	8311.03	-676.42	-8284.28	40°37'21.747"N	104°56'00.594"W	1.78	
14584.00	90.400	271.870	7100.28	8399.59	-673.84	-8373.22	40°37'21.772"N	104°56'01.747"W	2.20	
14673.00	90.430	272.110	7099.63	8488.12	-670.75	-8462.16	40°37'21.803"N	104°56'02.901"W	0.27	
14763.00	90.620	271.020	7098.81	8577.71	-668.30	-8552.12	40°37'21.827"N	104°56'04.067"W	1.23	
14852.00	90.400	269.450	7098.02	8666.48	-667.93	-8641.12	40°37'21.830"N	104°56'05.221"W	1.78	
14942.00	90.550	267.860	7097.27	8756.39	-670.04	-8731.09	40°37'21.809"N	104°56'06.388"W	1.77	
15033.00	90.340	266.990	7096.56	8847.36	-674.13	-8821.99	40°37'21.768"N	104°56'07.567"W	0.98	
15122.00	90.460	267.350	7095.94	8936.34	-678.53	-8910.88	40°37'21.724"N	104°56'08.720"W	0.43	

WELLPATH DATA (190 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
15212.00	89.510	267.270	7095.97	9026.32	-682.75	-9000.78	40°37'21.682"N	104°56'09.886"W	1.06	
15301.00	89.570	267.600	7096.68	9115.30	-686.73	-9089.69	40°37'21.642"N	104°56'11.038"W	0.38	
15391.00	89.450	266.700	7097.45	9205.28	-691.21	-9179.57	40°37'21.598"N	104°56'12.204"W	1.01	
15480.00	89.540	267.270	7098.24	9294.27	-695.89	-9268.44	40°37'21.551"N	104°56'13.357"W	0.65	
15569.00	89.320	268.120	7099.12	9383.23	-699.47	-9357.37	40°37'21.516"N	104°56'14.510"W	0.99	
15659.00	90.520	268.180	7099.25	9473.17	-702.37	-9447.32	40°37'21.487"N	104°56'15.676"W	1.33	
15749.00	91.450	269.160	7097.70	9563.07	-704.46	-9537.28	40°37'21.466"N	104°56'16.843"W	1.50	
15839.00	91.450	268.740	7095.42	9652.93	-706.11	-9627.23	40°37'21.449"N	104°56'18.009"W	0.47	
15929.00	91.690	268.440	7092.96	9742.82	-708.32	-9717.17	40°37'21.427"N	104°56'19.176"W	0.43	

Actual Wellpath Report

AVIGNON 8-67-32-31 AWP

Page 6 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	ENERPLUS RESOURCES USA CORPORATION	Slot	SLOT#01 AVIGNON 8-67-32-31 (283'FNL & 1035'FWL,SEC.33)
Area	COLORADO	Well	AVIGNON 8-67-32-31
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	AVIGNON 8-67-32-31 AWB
Facility	SEC.33-T08N-R67W		

WELLPATH DATA (190 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16019.00	93.020	269.040	7089.26	9832.64	-710.30	-9807.07	40°37'21.407"N	104°56'20.342"W	1.62	
16108.00	92.960	269.210	7084.62	9921.40	-711.66	-9895.94	40°37'21.393"N	104°56'21.494"W	0.20	
16197.00	93.020	269.860	7079.97	10010.12	-712.38	-9984.82	40°37'21.386"N	104°56'22.647"W	0.73	
16287.00	92.060	270.140	7075.98	10099.83	-712.38	-10074.73	40°37'21.385"N	104°56'23.813"W	1.11	
16377.00	92.000	270.740	7072.80	10189.52	-711.69	-10164.67	40°37'21.392"N	104°56'24.979"W	0.67	
16466.00	90.800	269.850	7070.62	10278.26	-711.23	-10253.64	40°37'21.396"N	104°56'26.133"W	1.68	
16556.00	91.140	267.820	7069.10	10368.14	-713.06	-10343.60	40°37'21.377"N	104°56'27.299"W	2.29	
16645.00	91.290	268.020	7067.21	10457.08	-716.29	-10432.52	40°37'21.345"N	104°56'28.452"W	0.28	
16736.00	91.230	269.780	7065.21	10547.95	-718.04	-10523.48	40°37'21.327"N	104°56'29.632"W	1.93	LAST BHGE MWD SURVEY
16762.00	91.230	269.780	7064.65	10573.89	-718.14	-10549.47	40°37'21.326"N	104°56'29.969"W	0.00	PROJ TO BIT

HOLE & CASING SECTIONS - Ref Wellbore: AVIGNON 8-67-32-31 AWB Ref Wellpath: AVIGNON 8-67-32-31 AWP

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]
9.625in Casing Surface	28.00	1656.00	1628.00	28.00	1655.88	0.00	0.00	-4.43	-5.39

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
AVIGNON 8-67-32-31 BHL PLAT (650'FNL & 650'FWL,SEC.31)	7300.00	-712.20	-10549.69	3154992.13	1470145.54	40°37'21.385"N	104°56'29.972"W	point
AVIGNON 8-67-32-31 LP PLAT (900'FNL & 663'FEL,SEC.32)	7300.00	-658.64	-1698.95	3163842.10	1470258.62	40°37'21.936"N	104°54'35.194"W	point
SEC.31-T08N-R67W	12001.00	0.00	0.00	3165536.54	1470928.66	40°37'28.445"N	104°54'13.162"W	polygon
SEC.32-T08N-R67W	12001.00	0.00	0.00	3165536.54	1470928.66	40°37'28.445"N	104°54'13.162"W	polygon
SEC.33-T08N-R67W	12001.00	0.00	0.00	3165536.54	1470928.66	40°37'28.445"N	104°54'13.162"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: AVIGNON 8-67-32-31 AWB Ref Wellpath: AVIGNON 8-67-32-31 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
28.00	1608.00	ISCWSA MWD, Rev. 4 (Standard)	MWD SURVEYS FROM KOLTEK <147-1608>	AVIGNON 8-67-32-31 AWB
1608.00	16736.00	BHI AutoTrak Curve (Short)	BHGE 8 1/2" ATC (SHORT) <1699-16736>	AVIGNON 8-67-32-31 AWB
16736.00	16762.00	Blind Drilling (std)	Projection to bit	AVIGNON 8-67-32-31 AWB

Actual Wellpath Report

AVIGNON 8-67-32-31 AWP

Page 7 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	ENERPLUS RESOURCES USA CORPORATION	Slot	SLOT#01 AVIGNON 8-67-32-31 (283'FNL & 1035'FWL,SEC.33)
Area	COLORADO	Well	AVIGNON 8-67-32-31
Field	WELD COUNTY (NAD83/TRUE)	Wellbore	AVIGNON 8-67-32-31 AWB
Facility	SEC.33-T08N-R67W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1608.00	1.010	205.410	1607.89	TIE ONTO KOLTEK SURFACE SURVEYS
1699.00	0.150	207.860	1698.88	FIRST BHGE MWD SURVEY
16736.00	91.230	269.780	7065.21	LAST BHGE MWD SURVEY
16762.00	91.230	269.780	7064.65	PROJ TO BIT