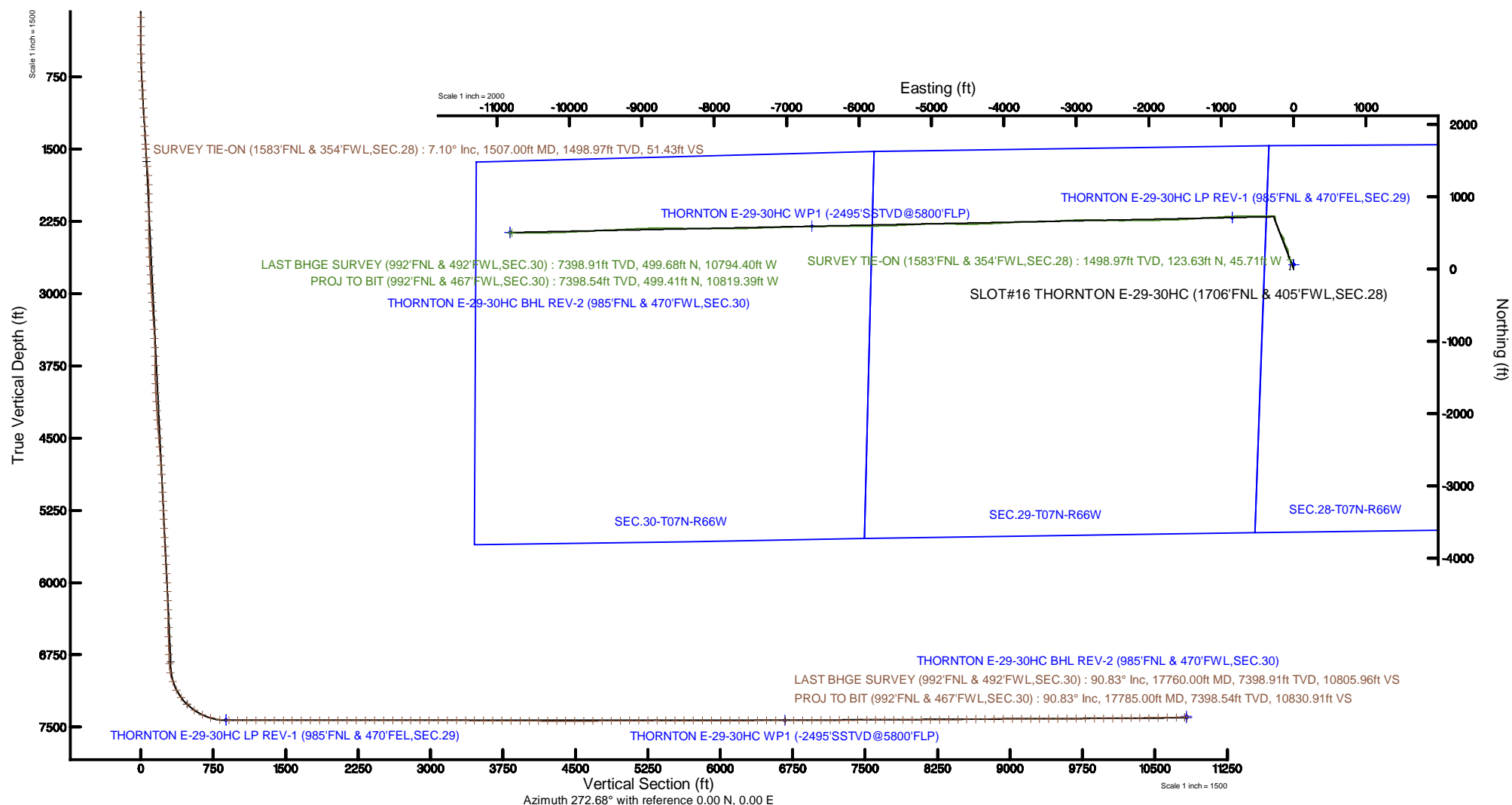


Location:	COLORADO	Slot:	SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL,SEC.28)
Field:	WELD COUNTY (NAD83/TRUE NORTH)	Well:	THORNTON E-29-30HC
Facility:	SEC.28-T07N-R66W	Wellbore:	THORNTON E-29-30HC PWB



Plot reference wellpath is THORNTON E-29-30HC PWP (REV-C.0)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
True vertical depths are referenced to TRUE 38 (4909'GL+25'KB @ 4934'RKB) (RKB)	North Reference: True north
Measured depths are referenced to TRUE 38 (4909'GL+25'KB @ 4934'RKB) (RKB)	Scale: True distance
TRUE 38 (4909'GL+25'KB @ 4934'RKB) (RKB) to Mean Sea Level: 4934 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL, SEC.28)): 0 feet	Created by: bushjarnh on 2018-08-29
Coordinates are in feet referenced to Slot	Database: Denver



Actual Wellpath Report

THORNTON E-29-30HC AWP

Page 1 of 11

REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON E-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON E-29-30HC AWB
Facility	SEC.28-T07N-R66W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Bushjamh
Scale	0.999970	Report Generated	8/29/2018 at 5:56:19 PM
Convergence at slot	0.46° East	Database/Source file	Denver/THORNTON_E-29-30HC_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-61.89	47.21	3196929.57	1443429.54	40°32'54.434"N	104°47'28.892"W
Facility Reference Pt			3196881.86	1443491.05	40°32'55.046"N	104°47'29.504"W
Field Reference Pt			3174587.00	1430859.71	40°30'51.890"N	104°52'19.470"W

WELLPATH DATUM			
Calculation method	Minimum curvature	TRUE 38 (4909'GL+25'KB @ 4934'RKB) (RKB) to Facility Vertical Datum	4934.00ft
Horizontal Reference Pt	Slot	TRUE 38 (4909'GL+25'KB @ 4934'RKB) (RKB) to Mean Sea Level	4934.00ft
Vertical Reference Pt	TRUE 38 (4909'GL+25'KB @ 4934'RKB) (RKB)	TRUE 38 (4909'GL+25'KB @ 4934'RKB) (RKB) to Ground Level at Slot (SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL,SEC.28))	4934.00ft
MD Reference Pt	TRUE 38 (4909'GL+25'KB @ 4934'RKB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	272.68°

Actual Wellpath Report

THORNTON E-29-30HC AWP

Page 2 of 11

REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON E-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON E-29-30HC AWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (191 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	13.920	0.00	0.00	0.00	0.00	40°32'54.434"N	104°47'28.892"W	0.00	
25.00	0.000	13.920	25.00	0.00	0.00	0.00	40°32'54.434"N	104°47'28.892"W	0.00	
134.00	0.200	13.920	134.00	-0.04	0.18	0.05	40°32'54.436"N	104°47'28.892"W	0.18	
229.00	0.280	336.830	229.00	0.03	0.56	-0.01	40°32'54.440"N	104°47'28.892"W	0.18	
324.00	0.490	359.880	324.00	0.15	1.18	-0.10	40°32'54.446"N	104°47'28.894"W	0.27	
418.00	2.280	353.950	417.97	0.46	3.44	-0.30	40°32'54.468"N	104°47'28.896"W	1.91	
513.00	3.960	347.010	512.82	1.63	8.52	-1.23	40°32'54.519"N	104°47'28.908"W	1.81	
607.00	5.480	344.240	606.50	3.92	16.00	-3.18	40°32'54.592"N	104°47'28.934"W	1.63	
702.00	7.190	344.110	700.92	7.25	26.08	-6.04	40°32'54.692"N	104°47'28.971"W	1.80	
796.00	8.040	340.670	794.09	11.59	37.94	-9.83	40°32'54.809"N	104°47'29.020"W	1.03	
891.00	7.290	338.120	888.24	16.58	49.81	-14.27	40°32'54.927"N	104°47'29.077"W	0.87	
986.00	6.670	342.030	982.53	21.03	60.65	-18.22	40°32'55.034"N	104°47'29.128"W	0.82	
1080.00	7.850	335.100	1075.78	25.93	71.66	-22.61	40°32'55.143"N	104°47'29.185"W	1.56	
1175.00	8.100	334.500	1169.86	32.09	83.59	-28.22	40°32'55.260"N	104°47'29.258"W	0.28	
1270.00	7.020	333.860	1264.03	38.05	94.84	-33.66	40°32'55.372"N	104°47'29.328"W	1.14	
1365.00	8.010	337.950	1358.22	43.62	106.19	-38.70	40°32'55.484"N	104°47'29.394"W	1.18	
1459.00	7.510	338.690	1451.36	48.85	117.98	-43.39	40°32'55.600"N	104°47'29.455"W	0.54	
1507.00	7.100	336.630	1498.97	51.43	123.63	-45.71	40°32'55.656"N	104°47'29.485"W	1.01	SURVEY TIE-ON (1583'FNL & 354'FWL,SEC.28)
1597.00	9.170	337.100	1588.06	56.97	135.34	-50.71	40°32'55.772"N	104°47'29.549"W	2.30	
1692.00	8.270	316.570	1681.98	65.16	147.28	-58.35	40°32'55.890"N	104°47'29.648"W	3.39	
1787.00	6.880	319.710	1776.15	73.97	156.58	-66.73	40°32'55.982"N	104°47'29.757"W	1.53	
1881.00	6.900	344.800	1869.49	79.54	166.33	-71.85	40°32'56.078"N	104°47'29.823"W	3.18	
1976.00	6.930	355.450	1963.80	82.01	177.55	-73.80	40°32'56.189"N	104°47'29.848"W	1.35	
2070.00	6.980	2.580	2057.12	82.73	188.91	-74.00	40°32'56.301"N	104°47'29.851"W	0.92	
2165.00	6.980	0.660	2151.41	82.95	200.44	-73.67	40°32'56.415"N	104°47'29.847"W	0.25	
2259.00	7.030	1.770	2244.71	83.24	211.91	-73.43	40°32'56.528"N	104°47'29.844"W	0.15	
2354.00	7.070	358.510	2338.99	83.75	223.56	-73.40	40°32'56.643"N	104°47'29.843"W	0.42	
2449.00	7.070	354.290	2433.27	85.03	235.22	-74.13	40°32'56.759"N	104°47'29.853"W	0.55	
2543.00	7.080	348.310	2526.56	87.31	246.65	-75.88	40°32'56.872"N	104°47'29.875"W	0.78	
2638.00	7.030	347.350	2620.84	90.30	258.06	-78.34	40°32'56.984"N	104°47'29.907"W	0.13	

Actual Wellpath Report

THORNTON E-29-30HC AWP

Page 3 of 11

REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON E-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON E-29-30HC AWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (191 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2732.00	7.040	339.750	2714.13	94.07	269.07	-81.59	40°32'57.093"N	104°47'29.949"W	0.99	
2827.00	7.000	335.090	2808.42	99.01	279.79	-86.05	40°32'57.199"N	104°47'30.007"W	0.60	
2921.00	7.020	328.230	2901.72	104.92	289.87	-91.48	40°32'57.299"N	104°47'30.077"W	0.89	
3016.00	6.960	325.360	2996.01	111.69	299.54	-97.81	40°32'57.394"N	104°47'30.159"W	0.37	
3110.00	6.950	330.310	3089.32	118.19	309.16	-103.87	40°32'57.489"N	104°47'30.238"W	0.64	
3205.00	7.010	329.310	3183.62	124.45	319.14	-109.67	40°32'57.588"N	104°47'30.313"W	0.14	
3299.00	7.140	329.480	3276.90	130.80	329.11	-115.57	40°32'57.686"N	104°47'30.389"W	0.14	
3394.00	6.900	331.180	3371.19	137.02	339.19	-121.32	40°32'57.786"N	104°47'30.464"W	0.33	
3489.00	6.950	339.930	3465.50	142.22	349.59	-126.04	40°32'57.889"N	104°47'30.525"W	1.11	
3584.00	6.750	345.820	3559.82	146.06	360.40	-129.38	40°32'57.996"N	104°47'30.568"W	0.77	
3678.00	6.680	357.100	3653.18	148.20	371.22	-131.01	40°32'58.103"N	104°47'30.590"W	1.40	
3773.00	6.790	358.170	3747.53	149.17	382.35	-131.47	40°32'58.213"N	104°47'30.595"W	0.18	
3867.00	6.900	359.940	3840.86	149.88	393.55	-131.65	40°32'58.323"N	104°47'30.598"W	0.25	
3962.00	6.870	346.880	3935.18	151.70	404.79	-132.95	40°32'58.434"N	104°47'30.615"W	1.64	
4057.00	7.000	337.330	4029.48	155.72	415.67	-136.47	40°32'58.542"N	104°47'30.660"W	1.22	
4151.00	6.860	332.780	4122.80	160.97	425.94	-141.24	40°32'58.643"N	104°47'30.722"W	0.60	
4246.00	6.850	331.400	4217.12	166.74	435.96	-146.55	40°32'58.742"N	104°47'30.791"W	0.17	
4341.00	6.930	328.590	4311.43	172.90	445.83	-152.25	40°32'58.840"N	104°47'30.865"W	0.36	
4436.00	6.860	325.440	4405.75	179.54	455.39	-158.46	40°32'58.934"N	104°47'30.945"W	0.40	
4531.00	6.880	324.160	4500.07	186.52	464.68	-165.01	40°32'59.026"N	104°47'31.030"W	0.16	
4625.00	6.980	320.880	4593.38	193.83	473.67	-171.91	40°32'59.115"N	104°47'31.119"W	0.43	
4720.00	7.000	318.560	4687.67	201.71	482.49	-179.38	40°32'59.202"N	104°47'31.216"W	0.30	
4814.00	6.900	328.570	4780.99	208.86	491.60	-186.11	40°32'59.292"N	104°47'31.303"W	1.29	
4909.00	6.900	335.380	4875.30	214.68	501.66	-191.47	40°32'59.391"N	104°47'31.373"W	0.86	
5003.00	6.850	338.700	4968.62	219.54	512.02	-195.86	40°32'59.494"N	104°47'31.430"W	0.43	
5098.00	6.610	338.430	5062.97	224.09	522.38	-199.92	40°32'59.596"N	104°47'31.482"W	0.25	
5193.00	6.870	337.730	5157.31	228.73	532.72	-204.09	40°32'59.698"N	104°47'31.536"W	0.29	
5287.00	6.860	341.150	5250.64	233.16	543.24	-208.03	40°32'59.802"N	104°47'31.587"W	0.43	
5381.00	7.040	340.600	5343.95	237.39	553.98	-211.76	40°32'59.909"N	104°47'31.636"W	0.20	
5476.00	6.930	341.020	5438.24	241.69	564.89	-215.56	40°33'00.016"N	104°47'31.685"W	0.13	

Actual Wellpath Report

THORNTON E-29-30HC AWP

Page 4 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON E-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON E-29-30HC AWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (191 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5571.00	7.230	342.090	5532.52	245.91	576.00	-219.26	40°33'00.126"N	104°47'31.733"W	0.34	
5665.00	7.330	342.120	5625.76	250.09	587.34	-222.92	40°33'00.238"N	104°47'31.780"W	0.11	
5760.00	7.350	337.240	5719.98	254.83	598.71	-227.13	40°33'00.350"N	104°47'31.835"W	0.66	
5854.00	7.400	336.030	5813.21	260.13	609.78	-231.92	40°33'00.460"N	104°47'31.897"W	0.17	
5948.00	7.300	335.180	5906.43	265.60	620.74	-236.88	40°33'00.568"N	104°47'31.961"W	0.16	
6043.00	7.370	337.840	6000.66	270.95	631.86	-241.71	40°33'00.678"N	104°47'32.024"W	0.36	
6137.00	7.410	343.810	6093.88	275.44	643.26	-245.68	40°33'00.791"N	104°47'32.075"W	0.82	
6231.00	7.500	350.840	6187.08	278.66	655.14	-248.35	40°33'00.908"N	104°47'32.110"W	0.97	
6326.00	7.370	354.570	6281.29	280.79	667.33	-249.91	40°33'01.029"N	104°47'32.130"W	0.53	
6420.00	7.270	355.630	6374.52	282.37	679.26	-250.93	40°33'01.146"N	104°47'32.143"W	0.18	
6515.00	7.370	352.980	6468.75	284.13	691.30	-252.14	40°33'01.265"N	104°47'32.159"W	0.37	
6609.00	7.350	351.940	6561.97	286.27	703.24	-253.72	40°33'01.383"N	104°47'32.179"W	0.14	
6703.00	7.280	348.480	6655.21	288.85	715.03	-255.75	40°33'01.500"N	104°47'32.205"W	0.47	
6798.00	7.340	344.790	6749.44	292.19	726.78	-258.54	40°33'01.616"N	104°47'32.242"W	0.50	
6893.00	2.740	248.780	6844.15	296.13	731.82	-262.26	40°33'01.666"N	104°47'32.290"W	8.52	
6987.00	10.840	267.450	6937.42	307.01	730.61	-273.20	40°33'01.654"N	104°47'32.432"W	8.82	
7081.00	18.860	274.120	7028.21	331.04	731.31	-297.23	40°33'01.661"N	104°47'32.743"W	8.71	
7176.00	27.650	270.460	7115.41	368.49	732.60	-334.66	40°33'01.673"N	104°47'33.228"W	9.37	
7270.00	36.750	268.850	7194.87	418.45	732.21	-384.69	40°33'01.670"N	104°47'33.876"W	9.72	
7364.00	46.530	270.370	7265.04	480.75	731.86	-447.07	40°33'01.666"N	104°47'34.684"W	10.46	
7458.00	55.010	270.500	7324.43	553.44	732.42	-519.81	40°33'01.672"N	104°47'35.626"W	9.02	
7553.00	66.110	270.650	7371.05	635.99	733.25	-602.41	40°33'01.680"N	104°47'36.696"W	11.69	
7648.00	72.720	270.000	7404.44	724.79	733.75	-691.30	40°33'01.685"N	104°47'37.848"W	6.99	
7742.00	82.900	267.060	7424.26	816.30	731.35	-783.01	40°33'01.661"N	104°47'39.036"W	11.25	
7837.00	90.090	267.540	7430.07	910.64	726.89	-877.67	40°33'01.617"N	104°47'40.262"W	7.59	
7931.00	90.280	266.220	7429.77	1004.16	721.77	-971.53	40°33'01.566"N	104°47'41.478"W	1.42	
8026.00	90.150	266.310	7429.41	1098.57	715.58	-1066.32	40°33'01.505"N	104°47'42.706"W	0.17	
8121.00	90.120	266.430	7429.18	1192.99	709.57	-1161.13	40°33'01.446"N	104°47'43.934"W	0.13	
8215.00	90.090	266.210	7429.01	1286.41	703.53	-1254.94	40°33'01.386"N	104°47'45.149"W	0.24	
8310.00	90.030	266.090	7428.91	1380.80	697.15	-1349.72	40°33'01.323"N	104°47'46.377"W	0.14	

Actual Wellpath Report

THORNTON E-29-30HC AWP

Page 5 of 11

REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON E-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON E-29-30HC AWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (191 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8404.00	89.910	265.990	7428.96	1474.17	690.66	-1443.50	40°33'01.259"N	104°47'47.592"W	0.17	
8499.00	89.940	266.880	7429.09	1568.60	684.76	-1538.32	40°33'01.200"N	104°47'48.820"W	0.94	
8594.00	90.000	267.770	7429.14	1663.19	680.32	-1633.21	40°33'01.156"N	104°47'50.049"W	0.94	
8688.00	90.000	268.960	7429.14	1756.92	677.64	-1727.17	40°33'01.130"N	104°47'51.267"W	1.27	
8783.00	90.000	269.450	7429.14	1851.75	676.32	-1822.16	40°33'01.117"N	104°47'52.497"W	0.52	
8877.00	89.910	269.460	7429.21	1945.60	675.43	-1916.16	40°33'01.108"N	104°47'53.715"W	0.10	
8972.00	89.820	269.640	7429.43	2040.46	674.68	-2011.15	40°33'01.100"N	104°47'54.945"W	0.21	
9067.00	89.880	269.220	7429.68	2135.30	673.74	-2106.15	40°33'01.091"N	104°47'56.176"W	0.45	
9162.00	89.970	268.580	7429.81	2230.10	671.91	-2201.13	40°33'01.073"N	104°47'57.406"W	0.68	
9257.00	89.970	269.140	7429.86	2324.89	670.02	-2296.11	40°33'01.054"N	104°47'58.637"W	0.59	
9350.00	90.060	270.160	7429.83	2417.75	669.46	-2389.11	40°33'01.048"N	104°47'59.841"W	1.10	
9445.00	90.000	271.120	7429.78	2512.69	670.52	-2484.10	40°33'01.059"N	104°48'01.072"W	1.01	
9540.00	90.000	272.260	7429.78	2607.68	673.32	-2579.06	40°33'01.086"N	104°48'02.302"W	1.20	
9635.00	89.970	273.140	7429.81	2702.68	677.79	-2673.95	40°33'01.130"N	104°48'03.531"W	0.93	
9729.00	90.090	271.200	7429.76	2796.67	681.35	-2767.88	40°33'01.166"N	104°48'04.748"W	2.07	
9824.00	89.970	269.530	7429.71	2891.59	681.96	-2862.88	40°33'01.171"N	104°48'05.979"W	1.76	
9918.00	89.940	267.830	7429.78	2985.36	679.79	-2956.85	40°33'01.150"N	104°48'07.196"W	1.81	
10013.00	89.970	267.100	7429.86	3079.96	675.59	-3051.75	40°33'01.108"N	104°48'08.425"W	0.77	
10108.00	90.000	266.630	7429.88	3174.47	670.39	-3146.61	40°33'01.057"N	104°48'09.654"W	0.50	
10202.00	90.000	267.110	7429.88	3267.99	665.26	-3240.47	40°33'01.006"N	104°48'10.870"W	0.51	
10297.00	89.630	266.840	7430.19	3362.52	660.25	-3335.34	40°33'00.956"N	104°48'12.099"W	0.48	
10391.00	89.600	268.040	7430.82	3456.13	656.05	-3429.24	40°33'00.915"N	104°48'13.315"W	1.28	
10486.00	89.600	269.530	7431.48	3550.90	654.04	-3524.21	40°33'00.895"N	104°48'14.546"W	1.57	
10580.00	89.570	269.390	7432.16	3644.75	653.15	-3618.21	40°33'00.886"N	104°48'15.763"W	0.15	
10675.00	89.660	268.400	7432.80	3739.54	651.32	-3713.19	40°33'00.868"N	104°48'16.994"W	1.05	
10770.00	89.660	267.420	7433.37	3834.21	647.85	-3808.12	40°33'00.833"N	104°48'18.224"W	1.03	
10865.00	89.540	267.220	7434.03	3928.79	643.41	-3903.01	40°33'00.789"N	104°48'19.453"W	0.25	
10960.00	89.600	266.460	7434.74	4023.30	638.18	-3997.87	40°33'00.737"N	104°48'20.682"W	0.80	
11054.00	89.600	266.810	7435.40	4116.77	632.66	-4091.70	40°33'00.683"N	104°48'21.897"W	0.37	
11149.00	90.060	267.400	7435.68	4211.32	627.86	-4186.58	40°33'00.635"N	104°48'23.126"W	0.79	

Actual Wellpath Report

THORNTON E-29-30HC AWP

Page 6 of 11

REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON E-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON E-29-30HC AWP
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (191 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11243.00	89.970	268.490	7435.66	4305.00	624.49	-4280.52	40°33'00.602"N	104°48'24.343"W	1.16	
11337.00	89.970	268.810	7435.71	4398.77	622.27	-4374.49	40°33'00.579"N	104°48'25.560"W	0.34	
11432.00	89.910	269.300	7435.80	4493.58	620.71	-4469.48	40°33'00.564"N	104°48'26.791"W	0.52	
11527.00	90.090	270.400	7435.80	4588.46	620.46	-4564.48	40°33'00.561"N	104°48'28.021"W	1.17	
11622.00	90.090	271.840	7435.66	4683.43	622.32	-4659.45	40°33'00.579"N	104°48'29.252"W	1.52	
11716.00	90.520	270.940	7435.16	4777.40	624.60	-4753.42	40°33'00.602"N	104°48'30.469"W	1.06	
11811.00	90.550	271.320	7434.27	4872.36	626.47	-4848.40	40°33'00.620"N	104°48'31.700"W	0.40	
11906.00	90.520	269.170	7433.38	4967.26	626.88	-4943.39	40°33'00.624"N	104°48'32.930"W	2.26	
12000.00	90.550	268.120	7432.50	5061.03	624.65	-5037.36	40°33'00.602"N	104°48'34.147"W	1.12	
12095.00	90.460	267.520	7431.67	5155.68	621.04	-5132.29	40°33'00.566"N	104°48'35.377"W	0.64	
12190.00	90.550	266.990	7430.83	5250.25	616.49	-5227.17	40°33'00.521"N	104°48'36.606"W	0.57	
12284.00	89.910	266.510	7430.45	5343.75	611.16	-5321.02	40°33'00.468"N	104°48'37.822"W	0.85	
12379.00	90.000	266.780	7430.53	5438.22	605.60	-5415.86	40°33'00.413"N	104°48'39.050"W	0.30	
12474.00	89.910	268.510	7430.60	5532.85	601.70	-5510.77	40°33'00.374"N	104°48'40.280"W	1.82	
12569.00	90.090	268.390	7430.60	5627.60	599.13	-5605.74	40°33'00.348"N	104°48'41.510"W	0.23	
12663.00	89.910	268.670	7430.60	5721.35	596.72	-5699.71	40°33'00.324"N	104°48'42.727"W	0.35	
12758.00	89.940	268.830	7430.72	5816.13	594.64	-5794.69	40°33'00.304"N	104°48'43.958"W	0.17	
12852.00	89.940	269.230	7430.82	5909.94	593.05	-5888.67	40°33'00.288"N	104°48'45.175"W	0.43	
12947.00	90.000	269.540	7430.87	6004.78	592.03	-5983.67	40°33'00.277"N	104°48'46.406"W	0.33	
13042.00	90.030	270.330	7430.85	6099.67	591.93	-6078.66	40°33'00.276"N	104°48'47.637"W	0.83	
13136.00	90.150	270.210	7430.70	6193.59	592.37	-6172.66	40°33'00.280"N	104°48'48.854"W	0.18	
13231.00	90.060	269.360	7430.53	6288.46	592.01	-6267.66	40°33'00.276"N	104°48'50.085"W	0.90	
13326.00	90.030	269.370	7430.45	6383.31	590.96	-6362.66	40°33'00.266"N	104°48'51.315"W	0.03	
13420.00	90.090	269.260	7430.35	6477.14	589.84	-6456.65	40°33'00.254"N	104°48'52.533"W	0.13	
13515.00	90.150	268.870	7430.15	6571.96	588.29	-6551.64	40°33'00.239"N	104°48'53.763"W	0.42	
13610.00	90.060	268.800	7429.98	6666.74	586.35	-6646.62	40°33'00.220"N	104°48'54.994"W	0.12	
13704.00	90.120	269.450	7429.83	6760.56	584.92	-6740.60	40°33'00.205"N	104°48'56.211"W	0.69	
13798.00	90.430	269.370	7429.38	6854.41	583.95	-6834.60	40°33'00.195"N	104°48'57.429"W	0.34	
13893.00	90.310	269.080	7428.77	6949.23	582.67	-6929.59	40°33'00.182"N	104°48'58.659"W	0.33	
13987.00	90.370	268.800	7428.21	7043.03	580.93	-7023.57	40°33'00.165"N	104°48'59.877"W	0.30	

Actual Wellpath Report

THORNTON E-29-30HC AWP

Page 7 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON E-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON E-29-30HC AWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (191 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14082.00	90.400	267.860	7427.57	7137.76	578.16	-7118.53	40°33'00.137"N	104°49'01.107"W	0.99	
14177.00	90.400	267.600	7426.91	7232.40	574.40	-7213.45	40°33'00.100"N	104°49'02.337"W	0.27	
14271.00	90.400	267.510	7426.25	7326.02	570.39	-7307.36	40°33'00.060"N	104°49'03.553"W	0.10	
14366.00	90.460	268.650	7425.54	7420.71	567.20	-7402.30	40°33'00.028"N	104°49'04.783"W	1.20	
14461.00	90.150	267.810	7425.03	7515.42	564.27	-7497.26	40°32'59.999"N	104°49'06.013"W	0.94	
14555.00	89.910	268.210	7424.98	7609.11	561.00	-7591.20	40°32'59.966"N	104°49'07.230"W	0.50	
14650.00	89.970	269.060	7425.08	7703.88	558.74	-7686.17	40°32'59.944"N	104°49'08.460"W	0.90	
14744.00	89.970	270.190	7425.13	7797.74	558.13	-7780.17	40°32'59.937"N	104°49'09.678"W	1.20	
14839.00	89.940	270.670	7425.21	7892.67	558.84	-7875.17	40°32'59.944"N	104°49'10.909"W	0.51	
14933.00	89.910	270.370	7425.33	7986.60	559.69	-7969.16	40°32'59.952"N	104°49'12.126"W	0.32	
15028.00	90.550	270.220	7424.95	8081.52	560.18	-8064.16	40°32'59.957"N	104°49'13.357"W	0.69	
15122.00	90.430	270.570	7424.15	8175.44	560.83	-8158.15	40°32'59.963"N	104°49'14.574"W	0.39	
15217.00	90.520	270.220	7423.36	8270.36	561.48	-8253.15	40°32'59.969"N	104°49'15.805"W	0.38	
15311.00	90.490	270.230	7422.53	8364.27	561.85	-8347.14	40°32'59.972"N	104°49'17.023"W	0.03	
15406.00	91.020	271.140	7421.28	8459.20	562.99	-8442.13	40°32'59.983"N	104°49'18.253"W	1.11	
15500.00	91.050	271.300	7419.58	8553.16	564.99	-8536.09	40°33'00.003"N	104°49'19.470"W	0.17	
15595.00	91.020	271.070	7417.86	8648.11	566.95	-8631.05	40°33'00.022"N	104°49'20.701"W	0.24	
15690.00	90.920	269.900	7416.26	8743.03	567.76	-8726.04	40°33'00.029"N	104°49'21.931"W	1.24	
15784.00	90.220	268.200	7415.32	8836.83	566.20	-8820.01	40°33'00.014"N	104°49'23.148"W	1.96	
15879.00	90.180	267.660	7414.99	8931.50	562.77	-8914.95	40°32'59.979"N	104°49'24.378"W	0.57	
15973.00	90.180	268.200	7414.69	9025.18	559.37	-9008.89	40°32'59.946"N	104°49'25.595"W	0.57	
16068.00	90.280	267.200	7414.31	9119.82	555.56	-9103.81	40°32'59.907"N	104°49'26.825"W	1.06	
16162.00	90.150	267.020	7413.96	9213.38	550.82	-9197.69	40°32'59.860"N	104°49'28.041"W	0.24	
16256.00	90.310	267.280	7413.58	9306.94	546.15	-9291.57	40°32'59.814"N	104°49'29.257"W	0.32	
16351.00	90.220	267.820	7413.14	9401.56	542.09	-9386.48	40°32'59.773"N	104°49'30.486"W	0.58	
16446.00	90.150	267.750	7412.84	9496.21	538.41	-9481.41	40°32'59.737"N	104°49'31.716"W	0.10	
16541.00	90.430	265.990	7412.36	9590.72	533.23	-9576.27	40°32'59.685"N	104°49'32.945"W	1.88	
16636.00	90.460	266.300	7411.62	9685.10	526.84	-9671.05	40°32'59.622"N	104°49'34.173"W	0.33	
16730.00	90.460	267.200	7410.86	9778.59	521.51	-9764.89	40°32'59.569"N	104°49'35.388"W	0.96	
16825.00	90.430	268.010	7410.12	9873.22	517.54	-9859.81	40°32'59.529"N	104°49'36.618"W	0.85	

Actual Wellpath Report

THORNTON E-29-30HC AWP

Page 8 of 11

REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON E-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON E-29-30HC AWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (191 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16921.00	90.280	267.710	7409.53	9968.88	513.96	-9955.74	40°32'59.493"N	104°49'37.860"W	0.35	
17016.00	90.430	266.370	7408.94	10063.41	509.05	-10050.61	40°32'59.444"N	104°49'39.089"W	1.42	
17110.00	90.340	268.660	7408.31	10157.02	504.98	-10144.51	40°32'59.404"N	104°49'40.306"W	2.44	
17205.00	90.770	269.040	7407.39	10251.81	503.07	-10239.49	40°32'59.384"N	104°49'41.536"W	0.60	
17299.00	90.920	269.590	7406.00	10345.63	501.95	-10333.47	40°32'59.373"N	104°49'42.754"W	0.61	
17393.00	90.860	270.070	7404.54	10439.51	501.67	-10427.46	40°32'59.370"N	104°49'43.971"W	0.51	
17488.00	90.950	270.210	7403.04	10534.40	501.90	-10522.44	40°32'59.372"N	104°49'45.202"W	0.18	
17583.00	90.860	269.750	7401.54	10629.29	501.87	-10617.43	40°32'59.371"N	104°49'46.432"W	0.49	
17677.00	90.860	269.020	7400.13	10723.12	500.86	-10711.42	40°32'59.361"N	104°49'47.649"W	0.78	
17760.00	90.830	269.360	7398.91	10805.96	499.68	-10794.40	40°32'59.349"N	104°49'48.724"W	0.41	LAST BHGE SURVEY (992'FNL & 492'FWL,SEC.30)
17785.00	90.830	269.360	7398.54	10830.91	499.41	-10819.39	40°32'59.346"N	104°49'49.048"W	0.00	PROJ TO BIT (992'FNL & 467'FWL,SEC.30)

Actual Wellpath Report

THORNTON E-29-30HC AWP

Page 9 of 11

REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON E-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON E-29-30HC AWB
Facility	SEC.28-T07N-R66W		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
THORNTON E-29-30HC BHL PLAT (985'FNL & 470'FWL,SEC.30)	7387.00	505.50	-10817.12	3186109.09	1443848.57	40°32'59.406"N	104°49'49.019"W	point
THORNTON E-29-30HC BHL REV-2 (985'FNL & 470'FWL,SEC.30)	7404.00	505.50	-10817.12	3186109.09	1443848.57	40°32'59.406"N	104°49'49.019"W	point
THORNTON E-29-30HC LP PLAT (985'FNL & 470'FEL,SEC.29)	7424.00	711.90	-849.54	3196074.39	1444134.61	40°33'01.469"N	104°47'39.898"W	point
THORNTON E-29-30HC LP REV-1 (985'FNL & 470'FEL,SEC.29)	7429.00	711.90	-849.54	3196074.39	1444134.61	40°33'01.469"N	104°47'39.898"W	point
THORNTON E-29-30HC WP1 (-2495'SSTVD@5800'FLP)	7429.00	591.83	-6648.26	3190276.99	1443968.20	40°33'00.274"N	104°48'55.015"W	point
SEC.28-T07N-R66W HDL (460)	7900.00	61.57	1.95	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.29-T07N-R66W HDL (460)	7900.00	61.57	1.95	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.30-T07N-R66W HDL (460)	7900.00	61.57	1.95	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.28-T07N-R66W	8000.00	61.57	1.95	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.29-T07N-R66W	8000.00	61.57	1.95	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.30-T07N-R66W	8000.00	61.57	1.95	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon

Actual Wellpath Report

THORNTON E-29-30HC AWP

Page 10 of 11

REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON E-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON E-29-30HC AWB
Facility	SEC.28-T07N-R66W		

WELLPATH COMPOSITION - Ref Wellbore: THORNTON E-29-30HC AWB Ref Wellpath: THORNTON E-29-30HC AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	1507.00	BHI AutoTrak Curve (Short)	BHI AUTOTRAK CURVE (SHORT) <134-1507>	THORNTON E-29-30HC AWB
1507.00	17760.00	BHI AutoTrak Curve (Short)	BHI AUTOTRAK CURVE (SHORT) <1597-17785>	THORNTON E-29-30HC AWB
17760.00	17785.00	Blind Drilling (std)	Projection to bit	THORNTON E-29-30HC AWB

Actual Wellpath Report

THORNTON E-29-30HC AWP

Page 11 of 11

REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#16 THORNTON E-29-30HC (1706'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON E-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON E-29-30HC AWB
Facility	SEC.28-T07N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1507.00	7.100	336.630	1498.97	SURVEY TIE-ON (1583'FNL & 354'FWL,SEC.28)
17760.00	90.830	269.360	7398.91	LAST BHGE SURVEY (992'FNL & 492'FWL,SEC.30)
17785.00	90.830	269.360	7398.54	PROJ TO BIT (992'FNL & 467'FWL,SEC.30)