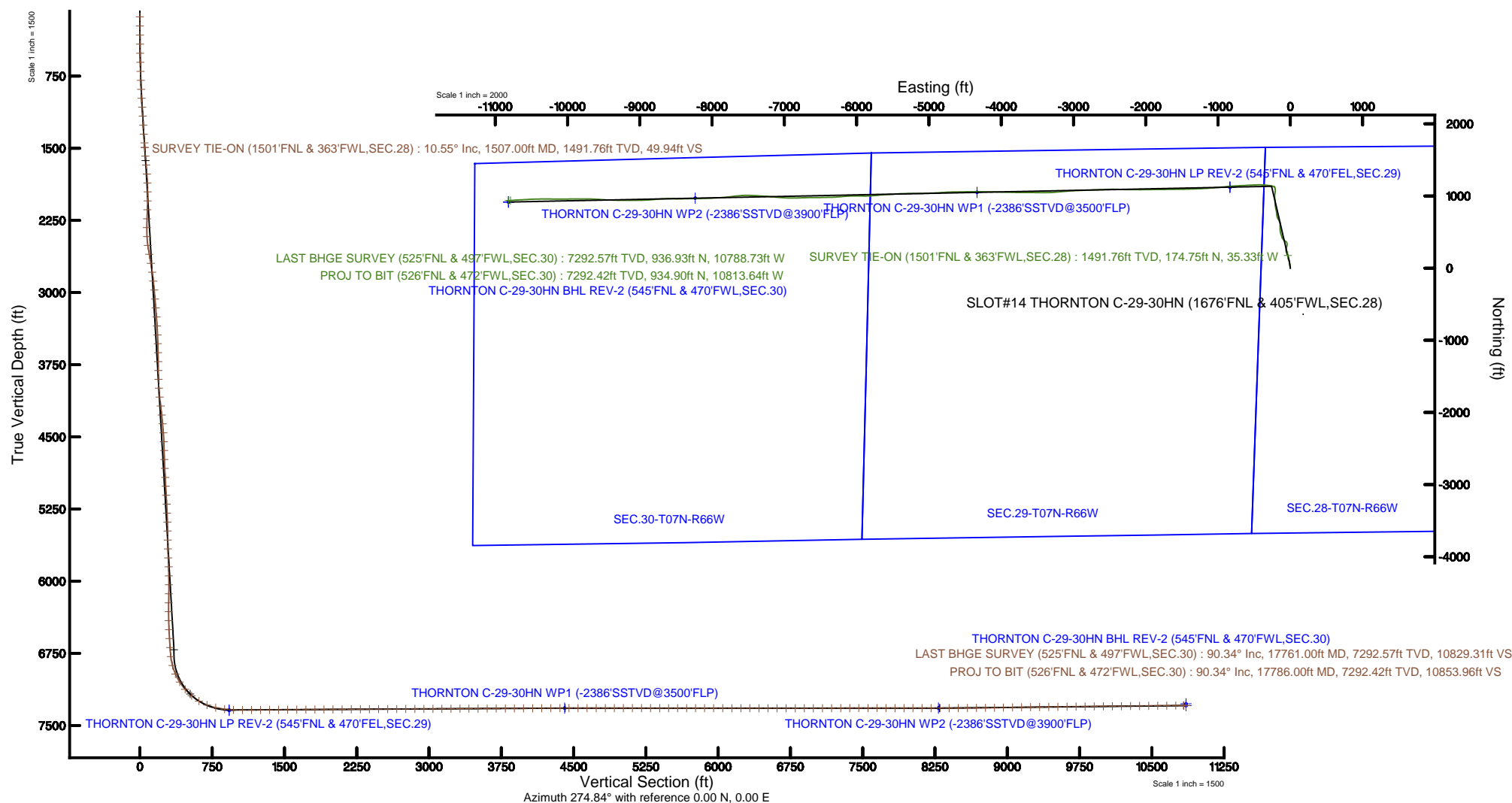


Location:	COLORADO	Slot:	SLOT#14 THORNTON C-29-30HN (1676'FNL & 405'FWL, SEC.28)
Field:	WELD COUNTY (NAD83/TRUE NORTH)	Well:	THORNTON C-29-30HN
Facility:	SEC.28-T07N-R66W	Wellbore:	THORNTON C-29-30HN PWB



Plot reference wellpath is THORNTON C-29-30HN PWP (REV-D.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#14 THORNTON C-29-30HN (1676'FNL & 405'FWL,SEC.28)): 0 feet	Created by: bushjamm on 2018-08-29
Coordinates are in feet referenced to Slot	Database: Denver



# Actual Wellpath Report

THORNTON C-29-30HN AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#14 THORNTON C-29-30HN (1676'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON C-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON C-29-30HN 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 5:55:08 PM
Convergence at slot	0.46° East	Database/Source file	Denver/THORNTON_C-29-30HN_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-31.66	48.33	3196930.44	1443459.79	40°32'54.733"N	104°47'28.878"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#14 THORNTON C-29-30HN (1676'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	274.84°

# Actual Wellpath Report

THORNTON C-29-30HN AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#14 THORNTON C-29-30HN (1676'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON C-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON C-29-30HN AWP
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	346.490	0.00	0.00	0.00	0.00	40°32'54.733"N	104°47'28.878"W	0.00	
25.00	0.000	346.490	25.00	0.00	0.00	0.00	40°32'54.733"N	104°47'28.878"W	0.00	
134.00	0.410	346.490	134.00	0.12	0.38	-0.09	40°32'54.737"N	104°47'28.879"W	0.38	
229.00	0.340	359.750	229.00	0.25	0.99	-0.17	40°32'54.743"N	104°47'28.880"W	0.12	
324.00	1.320	349.540	323.99	0.57	2.35	-0.37	40°32'54.756"N	104°47'28.883"W	1.04	
418.00	2.420	355.880	417.93	1.16	5.39	-0.71	40°32'54.786"N	104°47'28.887"W	1.19	
513.00	4.100	349.660	512.78	2.36	10.74	-1.46	40°32'54.839"N	104°47'28.897"W	1.80	
607.00	5.770	350.690	606.43	4.40	18.70	-2.83	40°32'54.918"N	104°47'28.915"W	1.78	
702.00	7.190	352.170	700.82	6.87	29.31	-4.41	40°32'55.023"N	104°47'28.935"W	1.50	
796.00	8.830	351.990	793.90	9.76	42.28	-6.22	40°32'55.151"N	104°47'28.959"W	1.74	
891.00	10.390	350.500	887.56	13.51	57.95	-8.65	40°32'55.306"N	104°47'28.990"W	1.66	
986.00	12.150	349.980	980.72	18.19	76.25	-11.81	40°32'55.487"N	104°47'29.031"W	1.86	
1080.00	11.920	347.580	1072.66	23.61	95.47	-15.61	40°32'55.677"N	104°47'29.080"W	0.59	
1175.00	11.210	346.880	1165.73	29.37	114.04	-19.82	40°32'55.860"N	104°47'29.135"W	0.76	
1270.00	10.240	347.200	1259.07	34.77	131.27	-23.79	40°32'56.030"N	104°47'29.186"W	1.02	
1365.00	11.340	344.410	1352.39	40.59	148.50	-28.17	40°32'56.201"N	104°47'29.243"W	1.28	
1459.00	11.020	345.160	1444.61	46.84	166.09	-32.95	40°32'56.374"N	104°47'29.305"W	0.37	
1507.00	10.550	344.120	1491.76	49.94	174.75	-35.33	40°32'56.460"N	104°47'29.336"W	1.06	SURVEY TIE-ON (1501'FNL & 363'FWL,SEC.28)
1598.00	8.370	330.990	1581.52	56.58	188.56	-40.82	40°32'56.596"N	104°47'29.407"W	3.36	
1692.00	10.640	333.930	1674.23	64.85	202.34	-47.96	40°32'56.733"N	104°47'29.499"W	2.47	
1787.00	10.260	340.790	1767.66	72.80	218.21	-54.59	40°32'56.889"N	104°47'29.585"W	1.37	
1882.00	10.590	352.890	1861.10	78.06	234.86	-58.46	40°32'57.054"N	104°47'29.635"W	2.33	
1976.00	10.410	358.630	1953.53	80.76	251.92	-59.73	40°32'57.223"N	104°47'29.652"W	1.13	
2071.00	10.260	12.190	2047.00	80.61	268.77	-58.15	40°32'57.389"N	104°47'29.631"W	2.56	
2165.00	10.810	17.140	2139.42	77.66	285.38	-53.78	40°32'57.553"N	104°47'29.575"W	1.13	
2260.00	10.750	15.890	2232.74	74.06	302.42	-48.73	40°32'57.721"N	104°47'29.509"W	0.25	
2354.00	11.400	6.850	2325.00	72.06	320.07	-45.22	40°32'57.896"N	104°47'29.464"W	1.97	
2449.00	12.890	352.940	2417.89	73.91	339.92	-45.41	40°32'58.092"N	104°47'29.466"W	3.45	
2543.00	12.290	324.260	2509.72	82.59	358.46	-52.55	40°32'58.275"N	104°47'29.559"W	6.61	
2638.00	11.030	299.820	2602.81	97.41	371.19	-66.35	40°32'58.401"N	104°47'29.737"W	5.32	

# Actual Wellpath Report

THORNTON C-29-30HN AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#14 THORNTON C-29-30HN (1676'FNL & 405'FWL, SEC.28)
Area	COLORADO	Well	THORNTON C-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON C-29-30HN 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
2733.00	10.900	307.230	2696.08	113.24	381.15	-81.38	40°32'58.499"N	104°47'29.932"W	1.49	
2827.00	11.080	318.160	2788.37	127.31	393.25	-94.49	40°32'58.619"N	104°47'30.102"W	2.22	
2921.00	11.040	327.060	2880.63	139.40	407.54	-105.41	40°32'58.760"N	104°47'30.243"W	1.82	
3016.00	10.970	338.970	2973.89	148.91	423.61	-113.60	40°32'58.919"N	104°47'30.350"W	2.39	
3111.00	11.880	341.890	3067.01	156.67	441.34	-119.88	40°32'59.094"N	104°47'30.431"W	1.13	
3206.00	11.810	340.960	3159.99	164.42	459.83	-126.09	40°32'59.277"N	104°47'30.511"W	0.21	
3302.00	11.910	343.240	3253.94	172.04	478.60	-132.15	40°32'59.462"N	104°47'30.590"W	0.50	
3397.00	11.750	349.190	3346.93	178.26	497.49	-136.79	40°32'59.649"N	104°47'30.650"W	1.29	
3492.00	11.800	352.860	3439.93	182.88	516.63	-139.81	40°32'59.838"N	104°47'30.689"W	0.79	
3586.00	11.730	357.020	3531.95	186.18	535.71	-141.51	40°33'00.027"N	104°47'30.711"W	0.91	
3681.00	11.690	359.570	3624.98	188.38	554.97	-142.08	40°33'00.217"N	104°47'30.719"W	0.55	
3776.00	11.710	359.740	3718.00	190.12	574.24	-142.20	40°33'00.407"N	104°47'30.720"W	0.04	
3870.00	11.810	2.140	3810.03	191.42	593.39	-141.88	40°33'00.597"N	104°47'30.716"W	0.53	
3964.00	12.070	358.370	3902.00	192.98	612.83	-141.80	40°33'00.789"N	104°47'30.715"W	0.87	
4058.00	11.870	346.960	3993.97	197.05	632.07	-144.26	40°33'00.979"N	104°47'30.747"W	2.52	
4153.00	11.350	330.770	4087.05	205.29	649.75	-151.03	40°33'01.154"N	104°47'30.835"W	3.46	
4247.00	11.220	328.760	4179.23	215.86	665.64	-160.29	40°33'01.311"N	104°47'30.954"W	0.44	
4342.00	11.260	332.040	4272.41	226.32	681.74	-169.44	40°33'01.470"N	104°47'31.073"W	0.67	
4436.00	11.230	337.600	4364.61	235.48	698.31	-177.23	40°33'01.633"N	104°47'31.174"W	1.15	
4531.00	11.040	342.310	4457.82	243.20	715.53	-183.52	40°33'01.804"N	104°47'31.255"W	0.98	
4625.00	11.160	354.620	4550.08	248.26	733.16	-187.10	40°33'01.978"N	104°47'31.302"W	2.52	
4719.00	10.640	355.680	4642.38	251.26	750.87	-188.61	40°33'02.153"N	104°47'31.321"W	0.59	
4814.00	10.700	354.200	4735.74	254.28	768.39	-190.16	40°33'02.326"N	104°47'31.341"W	0.30	
4908.00	10.720	349.540	4828.10	258.20	785.67	-192.63	40°33'02.497"N	104°47'31.373"W	0.92	
5003.00	10.700	347.080	4921.45	263.22	802.95	-196.21	40°33'02.667"N	104°47'31.420"W	0.48	
5097.00	10.660	349.190	5013.82	268.23	820.00	-199.79	40°33'02.836"N	104°47'31.466"W	0.42	
5192.00	10.770	348.340	5107.16	273.12	837.32	-203.23	40°33'03.007"N	104°47'31.511"W	0.20	
5286.00	10.740	350.410	5199.51	277.80	854.56	-206.46	40°33'03.177"N	104°47'31.553"W	0.41	
5381.00	10.700	351.650	5292.86	282.01	872.01	-209.22	40°33'03.350"N	104°47'31.588"W	0.25	
5476.00	10.660	356.600	5386.21	285.28	889.51	-211.02	40°33'03.523"N	104°47'31.612"W	0.97	

# Actual Wellpath Report

THORNTON C-29-30HN AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#14 THORNTON C-29-30HN (1676'FNL & 405'FWL, SEC.28)
Area	COLORADO	Well	THORNTON C-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON C-29-30HN 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
5570.00	10.690	357.060	5478.59	287.71	906.90	-211.99	40°33'03.695"N	104°47'31.624"W	0.10	
5665.00	10.640	1.890	5571.95	289.35	924.46	-212.15	40°33'03.868"N	104°47'31.626"W	0.94	
5760.00	10.680	358.100	5665.31	290.84	942.03	-212.15	40°33'04.042"N	104°47'31.626"W	0.74	
5855.00	10.460	350.050	5758.70	294.07	959.32	-213.93	40°33'04.213"N	104°47'31.649"W	1.57	
5949.00	10.690	355.160	5851.11	297.71	976.41	-216.14	40°33'04.381"N	104°47'31.678"W	1.03	
6044.00	10.680	0.660	5944.46	299.84	993.99	-216.78	40°33'04.555"N	104°47'31.686"W	1.07	
6139.00	10.730	4.240	6037.81	300.57	1011.62	-216.03	40°33'04.729"N	104°47'31.677"W	0.70	
6234.00	10.490	8.460	6131.19	300.12	1028.99	-214.10	40°33'04.901"N	104°47'31.652"W	0.86	
6329.00	10.580	8.750	6224.59	298.97	1046.16	-211.50	40°33'05.071"N	104°47'31.618"W	0.11	
6423.00	10.690	5.740	6316.97	298.25	1063.37	-209.32	40°33'05.241"N	104°47'31.590"W	0.60	
6518.00	10.590	358.200	6410.34	299.12	1080.86	-208.71	40°33'05.414"N	104°47'31.582"W	1.47	
6613.00	10.630	351.720	6503.72	302.12	1098.26	-210.25	40°33'05.585"N	104°47'31.602"W	1.26	
6707.00	10.740	342.720	6596.10	307.38	1115.20	-214.10	40°33'05.753"N	104°47'31.652"W	1.78	
6802.00	4.380	321.970	6690.24	313.19	1126.52	-218.97	40°33'05.865"N	104°47'31.715"W	7.18	
6896.00	6.490	280.100	6783.85	320.92	1130.28	-226.41	40°33'05.902"N	104°47'31.811"W	4.63	
6990.00	15.280	289.300	6876.07	338.24	1135.32	-243.37	40°33'05.952"N	104°47'32.031"W	9.50	
7084.00	23.320	278.760	6964.74	368.86	1142.26	-273.51	40°33'06.020"N	104°47'32.421"W	9.29	
7179.00	32.440	274.390	7048.63	413.20	1147.09	-317.59	40°33'06.068"N	104°47'32.992"W	9.83	
7273.00	40.630	275.920	7124.10	469.10	1152.18	-373.27	40°33'06.118"N	104°47'33.713"W	8.77	
7368.00	49.610	268.910	7191.11	536.19	1154.69	-440.38	40°33'06.143"N	104°47'34.583"W	10.79	
7463.00	59.250	266.330	7246.31	612.74	1151.38	-517.49	40°33'06.110"N	104°47'35.582"W	10.38	
7557.00	68.540	267.290	7287.63	696.23	1146.72	-601.67	40°33'06.064"N	104°47'36.672"W	9.93	
7652.00	78.160	267.050	7314.81	786.33	1142.22	-692.47	40°33'06.020"N	104°47'37.849"W	10.13	
7747.00	82.970	266.410	7330.38	879.08	1136.87	-786.01	40°33'05.967"N	104°47'39.060"W	5.11	
7841.00	87.750	264.480	7337.99	971.48	1129.43	-879.37	40°33'05.893"N	104°47'40.270"W	5.48	
7936.00	90.310	264.440	7339.59	1064.91	1120.26	-973.90	40°33'05.803"N	104°47'41.494"W	2.70	
8031.00	90.430	265.550	7338.98	1158.51	1111.97	-1068.54	40°33'05.721"N	104°47'42.720"W	1.18	
8125.00	90.400	266.520	7338.30	1251.40	1105.47	-1162.31	40°33'05.657"N	104°47'43.935"W	1.03	
8220.00	90.370	267.340	7337.66	1345.49	1100.39	-1257.17	40°33'05.606"N	104°47'45.164"W	0.86	
8315.00	90.220	268.110	7337.17	1439.76	1096.62	-1352.09	40°33'05.569"N	104°47'46.394"W	0.83	

# Actual Wellpath Report

THORNTON C-29-30HN AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#14 THORNTON C-29-30HN (1676'FNL & 405'FWL, SEC.28)
Area	COLORADO	Well	THORNTON C-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON C-29-30HN 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
8409.00	90.310	268.860	7336.74	1533.18	1094.13	-1446.06	40°33'05.544"N	104°47'47.611"W	0.80	
8504.00	90.280	269.590	7336.25	1627.72	1092.85	-1541.05	40°33'05.532"N	104°47'48.841"W	0.77	
8599.00	90.550	268.970	7335.56	1722.27	1091.65	-1636.04	40°33'05.520"N	104°47'50.072"W	0.71	
8693.00	90.370	269.680	7334.80	1815.83	1090.54	-1730.03	40°33'05.509"N	104°47'51.290"W	0.78	
8788.00	90.400	269.430	7334.17	1910.43	1089.81	-1825.02	40°33'05.501"N	104°47'52.520"W	0.27	
8882.00	90.340	269.280	7333.56	2003.99	1088.75	-1919.02	40°33'05.491"N	104°47'53.738"W	0.17	
8977.00	90.370	269.290	7332.97	2098.55	1087.56	-2014.01	40°33'05.479"N	104°47'54.968"W	0.03	
9072.00	90.310	270.340	7332.41	2193.18	1087.26	-2109.00	40°33'05.476"N	104°47'56.199"W	1.11	
9167.00	90.490	269.890	7331.74	2287.85	1087.45	-2204.00	40°33'05.478"N	104°47'57.430"W	0.51	
9261.00	90.460	271.660	7330.96	2381.61	1088.72	-2297.98	40°33'05.490"N	104°47'58.647"W	1.88	
9356.00	90.280	271.720	7330.35	2476.47	1091.52	-2392.94	40°33'05.518"N	104°47'59.877"W	0.20	
9451.00	90.310	268.760	7329.86	2571.15	1091.92	-2487.93	40°33'05.522"N	104°48'01.108"W	3.12	
9545.00	90.280	267.800	7329.38	2664.53	1089.10	-2581.88	40°33'05.494"N	104°48'02.325"W	1.02	
9640.00	90.310	267.390	7328.89	2758.77	1085.11	-2676.80	40°33'05.454"N	104°48'03.554"W	0.43	
9735.00	90.340	267.460	7328.35	2852.98	1080.84	-2771.70	40°33'05.412"N	104°48'04.784"W	0.08	
9830.00	90.250	268.600	7327.86	2947.30	1077.58	-2866.64	40°33'05.379"N	104°48'06.014"W	1.20	
9924.00	90.280	267.300	7327.43	3040.62	1074.21	-2960.58	40°33'05.346"N	104°48'07.231"W	1.38	
10018.00	90.340	265.970	7326.92	3133.66	1068.70	-3054.41	40°33'05.292"N	104°48'08.446"W	1.42	
10113.00	90.430	264.710	7326.28	3227.35	1060.98	-3149.10	40°33'05.215"N	104°48'09.673"W	1.33	
10208.00	90.310	265.240	7325.67	3320.94	1052.66	-3243.73	40°33'05.133"N	104°48'10.899"W	0.57	
10302.00	90.180	268.080	7325.26	3413.98	1047.18	-3337.56	40°33'05.079"N	104°48'12.114"W	3.02	
10397.00	90.400	270.810	7324.78	3508.55	1046.26	-3432.54	40°33'05.069"N	104°48'13.345"W	2.88	
10492.00	90.120	270.320	7324.35	3603.28	1047.20	-3527.54	40°33'05.078"N	104°48'14.575"W	0.59	
10586.00	90.460	270.240	7323.88	3696.98	1047.66	-3621.53	40°33'05.083"N	104°48'15.793"W	0.37	
10681.00	90.280	270.120	7323.26	3791.67	1047.96	-3716.53	40°33'05.086"N	104°48'17.024"W	0.23	
10775.00	90.220	271.180	7322.85	3885.41	1049.02	-3810.52	40°33'05.096"N	104°48'18.241"W	1.13	
10870.00	90.220	271.420	7322.49	3980.23	1051.18	-3905.50	40°33'05.117"N	104°48'19.472"W	0.25	
10965.00	90.400	271.590	7321.97	4075.07	1053.67	-4000.46	40°33'05.142"N	104°48'20.702"W	0.26	
11059.00	90.400	271.110	7321.32	4168.89	1055.89	-4094.44	40°33'05.163"N	104°48'21.919"W	0.51	
11154.00	90.460	270.700	7320.60	4263.67	1057.39	-4189.42	40°33'05.178"N	104°48'23.150"W	0.44	



# Actual Wellpath Report

THORNTON C-29-30HN AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#14 THORNTON C-29-30HN (1676'FNL & 405'FWL, SEC.28)
Area	COLORADO	Well	THORNTON C-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON C-29-30HN 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
11249.00	90.400	270.180	7319.89	4358.39	1058.12	-4284.42	40°33'05.185"N	104°48'24.380"W	0.55	
11343.00	90.060	270.030	7319.51	4452.06	1058.29	-4378.41	40°33'05.187"N	104°48'25.598"W	0.40	
11437.00	89.910	269.140	7319.54	4545.67	1057.61	-4472.41	40°33'05.180"N	104°48'26.816"W	0.96	
11532.00	90.090	268.880	7319.54	4640.18	1055.97	-4567.40	40°33'05.163"N	104°48'28.046"W	0.33	
11627.00	89.970	269.460	7319.49	4734.71	1054.59	-4662.39	40°33'05.150"N	104°48'29.277"W	0.62	
11722.00	89.880	266.690	7319.61	4829.04	1051.40	-4757.32	40°33'05.118"N	104°48'30.506"W	2.92	
11817.00	90.030	265.850	7319.69	4922.98	1045.22	-4852.12	40°33'05.057"N	104°48'31.734"W	0.90	
11911.00	89.940	268.120	7319.71	5016.09	1040.28	-4945.98	40°33'05.008"N	104°48'32.950"W	2.42	
12006.00	89.880	267.620	7319.86	5110.39	1036.75	-5040.92	40°33'04.973"N	104°48'34.180"W	0.53	
12101.00	89.970	270.050	7319.99	5204.86	1034.82	-5135.89	40°33'04.953"N	104°48'35.411"W	2.56	
12195.00	90.030	269.600	7319.99	5298.50	1034.53	-5229.89	40°33'04.950"N	104°48'36.628"W	0.48	
12290.00	89.780	268.710	7320.14	5393.04	1033.13	-5324.88	40°33'04.936"N	104°48'37.859"W	0.97	
12384.00	90.030	267.020	7320.30	5486.34	1029.63	-5418.81	40°33'04.901"N	104°48'39.076"W	1.82	
12478.00	90.030	265.700	7320.25	5579.31	1023.66	-5512.62	40°33'04.842"N	104°48'40.291"W	1.40	
12573.00	89.880	266.760	7320.32	5673.24	1017.41	-5607.41	40°33'04.780"N	104°48'41.519"W	1.13	
12667.00	89.970	264.370	7320.45	5766.00	1010.14	-5701.12	40°33'04.708"N	104°48'42.733"W	2.54	
12761.00	90.000	265.760	7320.47	5858.63	1002.06	-5794.77	40°33'04.628"N	104°48'43.946"W	1.48	
12856.00	89.880	269.970	7320.57	5952.91	998.52	-5889.69	40°33'04.593"N	104°48'45.175"W	4.43	
12951.00	89.970	271.610	7320.70	6047.67	999.83	-5984.67	40°33'04.606"N	104°48'46.406"W	1.73	
13046.00	90.090	267.600	7320.65	6142.26	999.17	-6079.65	40°33'04.599"N	104°48'47.636"W	4.22	
13141.00	89.940	265.420	7320.62	6236.25	993.39	-6174.47	40°33'04.542"N	104°48'48.865"W	2.30	
13235.00	89.970	265.340	7320.70	6328.97	985.82	-6268.16	40°33'04.467"N	104°48'50.078"W	0.09	
13330.00	89.850	269.100	7320.84	6423.12	981.21	-6363.04	40°33'04.421"N	104°48'51.307"W	3.96	
13425.00	90.060	268.800	7320.92	6517.61	979.47	-6458.02	40°33'04.403"N	104°48'52.538"W	0.39	
13519.00	89.910	270.120	7320.94	6611.20	978.59	-6552.01	40°33'04.394"N	104°48'53.755"W	1.41	
13614.00	90.000	268.610	7321.02	6705.76	977.53	-6647.00	40°33'04.384"N	104°48'54.986"W	1.59	
13709.00	89.880	267.940	7321.12	6800.14	974.67	-6741.96	40°33'04.355"N	104°48'56.216"W	0.72	
13803.00	90.030	268.100	7321.19	6893.47	971.43	-6835.90	40°33'04.323"N	104°48'57.433"W	0.23	
13898.00	90.090	271.630	7321.09	6988.10	971.20	-6930.89	40°33'04.320"N	104°48'58.663"W	3.72	
13993.00	90.220	274.210	7320.84	7083.04	976.04	-7025.76	40°33'04.368"N	104°48'59.892"W	2.72	

# Actual Wellpath Report

THORNTON C-29-30HN AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#14 THORNTON C-29-30HN (1676'FNL & 405'FWL, SEC.28)
Area	COLORADO	Well	THORNTON C-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON C-29-30HN 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
14087.00	90.220	275.020	7320.47	7177.04	983.60	-7119.45	40°33'04.442"N	104°49'01.106"W	0.86	
14182.00	90.310	274.360	7320.03	7272.04	991.37	-7214.13	40°33'04.519"N	104°49'02.333"W	0.70	
14276.00	90.400	273.690	7319.45	7366.02	997.97	-7307.90	40°33'04.584"N	104°49'03.547"W	0.72	
14370.00	90.000	273.850	7319.12	7460.01	1004.15	-7401.69	40°33'04.645"N	104°49'04.763"W	0.46	
14465.00	89.970	271.070	7319.15	7554.92	1008.23	-7496.60	40°33'04.685"N	104°49'05.992"W	2.93	
14559.00	89.940	266.000	7319.22	7648.32	1005.82	-7590.53	40°33'04.661"N	104°49'07.209"W	5.39	
14654.00	89.820	262.800	7319.42	7741.73	996.56	-7685.07	40°33'04.569"N	104°49'08.434"W	3.37	
14749.00	90.000	263.990	7319.57	7834.84	985.63	-7779.44	40°33'04.460"N	104°49'09.656"W	1.27	
14844.00	90.000	265.500	7319.57	7928.37	976.93	-7874.03	40°33'04.374"N	104°49'10.881"W	1.59	
14938.00	90.030	267.410	7319.55	8021.36	971.12	-7967.85	40°33'04.316"N	104°49'12.097"W	2.03	
15033.00	90.000	268.370	7319.52	8115.66	967.62	-8062.78	40°33'04.282"N	104°49'13.326"W	1.01	
15128.00	90.060	268.730	7319.47	8210.09	965.21	-8157.75	40°33'04.258"N	104°49'14.557"W	0.38	
15222.00	89.940	269.220	7319.47	8303.60	963.53	-8251.74	40°33'04.241"N	104°49'15.774"W	0.54	
15316.00	89.780	268.390	7319.70	8397.08	961.57	-8345.72	40°33'04.221"N	104°49'16.992"W	0.90	
15411.00	90.710	269.940	7319.30	8491.61	960.19	-8440.70	40°33'04.207"N	104°49'18.222"W	1.90	
15506.00	90.580	270.730	7318.23	8586.31	960.74	-8535.69	40°33'04.212"N	104°49'19.453"W	0.84	
15600.00	90.430	269.780	7317.40	8680.00	961.16	-8629.69	40°33'04.216"N	104°49'20.670"W	1.02	
15695.00	90.490	265.600	7316.63	8774.24	957.33	-8724.59	40°33'04.178"N	104°49'21.900"W	4.40	
15789.00	90.920	264.450	7315.48	8866.86	949.18	-8818.22	40°33'04.097"N	104°49'23.113"W	1.31	
15883.00	90.800	267.310	7314.07	8959.69	942.43	-8911.96	40°33'04.030"N	104°49'24.327"W	3.04	
15978.00	90.980	269.260	7312.59	9054.05	939.59	-9006.90	40°33'04.001"N	104°49'25.557"W	2.06	
16072.00	90.740	270.290	7311.18	9147.68	939.22	-9100.89	40°33'03.997"N	104°49'26.774"W	1.12	
16166.00	90.830	269.420	7309.89	9241.31	938.98	-9194.88	40°33'03.995"N	104°49'27.992"W	0.93	
16261.00	90.770	271.150	7308.57	9336.00	939.45	-9289.87	40°33'03.999"N	104°49'29.222"W	1.82	
16355.00	90.950	272.370	7307.15	9429.85	942.34	-9383.81	40°33'04.027"N	104°49'30.439"W	1.31	
16450.00	90.770	272.830	7305.73	9524.77	946.65	-9478.70	40°33'04.069"N	104°49'31.669"W	0.52	
16545.00	90.520	274.060	7304.66	9619.73	952.36	-9573.52	40°33'04.125"N	104°49'32.897"W	1.32	
16639.00	90.430	272.040	7303.88	9713.68	957.36	-9667.38	40°33'04.174"N	104°49'34.113"W	2.15	
16733.00	90.710	269.060	7302.94	9807.40	958.26	-9761.36	40°33'04.183"N	104°49'35.330"W	3.18	
16828.00	90.620	270.290	7301.84	9902.00	957.72	-9856.35	40°33'04.177"N	104°49'36.561"W	1.30	



# Actual Wellpath Report

## THORNTON C-29-30HN AWP

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### REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#14 THORNTON C-29-30HN (1676'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON C-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON C-29-30HN 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
16923.00	90.460	269.430	7300.95	9996.64	957.49	-9951.34	40°33'04.175"N	104°49'37.792"W	0.92	
17018.00	90.550	269.590	7300.11	10091.23	956.68	-10046.34	40°33'04.166"N	104°49'39.022"W	0.19	
17112.00	90.710	270.270	7299.08	10184.88	956.56	-10140.33	40°33'04.165"N	104°49'40.240"W	0.74	
17207.00	90.580	270.640	7298.01	10279.59	957.32	-10235.32	40°33'04.172"N	104°49'41.470"W	0.41	
17301.00	90.520	269.770	7297.10	10373.28	957.65	-10329.32	40°33'04.175"N	104°49'42.688"W	0.93	
17396.00	90.800	268.720	7296.01	10467.82	956.40	-10424.30	40°33'04.162"N	104°49'43.918"W	1.14	
17490.00	90.650	267.360	7294.82	10561.15	953.19	-10518.23	40°33'04.130"N	104°49'45.135"W	1.46	
17585.00	90.460	266.710	7293.90	10655.27	948.27	-10613.10	40°33'04.081"N	104°49'46.364"W	0.71	
17679.00	90.460	266.530	7293.15	10748.30	942.73	-10706.94	40°33'04.026"N	104°49'47.580"W	0.19	
17761.00	90.340	265.350	7292.57	10829.31	936.93	-10788.73	40°33'03.968"N	104°49'48.639"W	1.45	LAST BHGE SURVEY (525'FNL & 497'FWL,SEC.30)
17786.00	90.340	265.350	7292.42	10853.96	934.90	-10813.64	40°33'03.948"N	104°49'48.962"W	0.00	PROJ TO BIT (526'FNL & 472'FWL,SEC.30)

### TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
THORNTON C-29-30HN BHL PLAT (545'FNL & 470'FWL,SEC.30)	7214.00	915.36	-10815.81	3186107.99	1444288.66	40°33'03.755"N	104°49'48.990"W	point
THORNTON C-29-30HN BHL REV-1 (545'FNL & 470'FWL,SEC.30)	7274.00	915.36	-10815.81	3186107.99	1444288.66	40°33'03.755"N	104°49'48.990"W	point
THORNTON C-29-30HN LP PLAT (545'FNL & 470'FEL,SEC.29)	7274.00	1121.76	-835.08	3196086.45	1444574.80	40°33'05.818"N	104°47'39.696"W	point
THORNTON C-29-30HN BHL REV-2 (545'FNL & 470'FWL,SEC.30)	7294.00	915.36	-10815.81	3186107.99	1444288.66	40°33'03.755"N	104°49'48.990"W	point
THORNTON C-29-30HN WP1 (-2386'SSTVD@3500'FLP)	7320.00	1049.26	-4334.36	3192587.96	1444474.35	40°33'05.098"N	104°48'25.027"W	point
THORNTON C-29-30HN WP2 (-2386'SSTVD@3900'FLP)	7320.00	968.65	-8233.28	3188689.93	1444362.58	40°33'04.291"N	104°49'15.535"W	point
THORNTON C-29-30HN LP REV-2 (545'FNL & 470'FEL,SEC.29)	7339.00	1121.76	-835.08	3196086.45	1444574.80	40°33'05.818"N	104°47'39.696"W	point
THORNTON C-29-30HN LP REV-1 (545'FNL & 470'FEL,SEC.29)	7344.00	1121.76	-835.08	3196086.45	1444574.80	40°33'05.818"N	104°47'39.696"W	point

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.28-T07N-R66W HDL (460)	7900.00	31.33	0.83	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.29-T07N-R66W HDL (460)	7900.00	31.33	0.83	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.30-T07N-R66W HDL (460)	7900.00	31.33	0.83	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.28-T07N-R66W	8000.00	31.33	0.83	3196931.02	1443491.12	<b>40°32'55.043"N</b>	<b>104°47'28.867"W</b>	polygon

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.29-T07N-R66W	8000.00	31.33	0.83	3196931.02	1443491.12	<b>40°32'55.043"N</b>	<b>104°47'28.867"W</b>	polygon
SEC.30-T07N-R66W	8000.00	31.33	0.83	3196931.02	1443491.12	<b>40°32'55.043"N</b>	<b>104°47'28.867"W</b>	polygon

WELLPATH COMPOSITION - Ref Wellbore: THORNTON C-29-30HN AWB					Ref Wellpath: THORNTON C-29-30HN AWP			
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment			Wellbore		
25.00	1507.00	BHI NaviTrak (Axial)	BHI NAVITRAK (AXIAL) <134-1507>			THORNTON C-29-30HN AWB		
1507.00	17761.00	BHI AutoTrak Curve (Short)	BHI AUTOTRAK CURVE (SHORT) <1598-17786>			THORNTON C-29-30HN AWB		
17761.00	17786.00	Blind Drilling (std)	Projection to bit			THORNTON C-29-30HN AWB		

# Actual Wellpath Report

THORNTON C-29-30HN AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#14 THORNTON C-29-30HN (1676'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON C-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON C-29-30HN AWB
Facility	SEC.28-T07N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
1507.00	10.550	344.120	1491.76	SURVEY TIE-ON (1501'FNL & 363'FWL,SEC.28)
17761.00	90.340	265.350	7292.57	LAST BHGE SURVEY (525'FNL & 497'FWL,SEC.30)
17786.00	90.340	265.350	7292.42	PROJ TO BIT (526'FNL & 472'FWL,SEC.30)