

Planned Wellpath Report

THORNTON B-29-30HC PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#13 THORNTON B-29-30HC (1661'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON B-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON B-29-30HC PWB
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	4/12/2018 at 1:30:29 PM
Convergence at slot	0.46° East	Database/Source file	Denver/THORNTON_B-29-30HC_PWP__REV-A.0_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-15.99	48.88	3196930.87	1443475.46	40°32'54.888"N	104°47'28.871"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#13 THORNTON B-29-30HC (1661'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	275.91°

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Facility	SEC.28-T07N-R66W		

WELLPATH DATA (186 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	349.297	0.00	0.00	0.00	0.00	40°32'54.888"N	104°47'28.871"W	0.00	
25.00	0.000	349.297	25.00	0.00	0.00	0.00	40°32'54.888"N	104°47'28.871"W	0.00	Tie On
125.00†	0.000	349.297	125.00	0.00	0.00	0.00	40°32'54.888"N	104°47'28.871"W	0.00	
225.00†	0.000	349.297	225.00	0.00	0.00	0.00	40°32'54.888"N	104°47'28.871"W	0.00	
300.00	0.000	349.297	300.00	0.00	0.00	0.00	40°32'54.888"N	104°47'28.871"W	0.00	End of Tangent
325.00†	0.500	349.297	325.00	0.03	0.11	-0.02	40°32'54.889"N	104°47'28.871"W	2.00	
425.00†	2.500	349.297	424.96	0.78	2.68	-0.51	40°32'54.914"N	104°47'28.877"W	2.00	
525.00†	4.500	349.297	524.77	2.53	8.68	-1.64	40°32'54.974"N	104°47'28.892"W	2.00	
625.00†	6.500	349.297	624.30	5.27	18.09	-3.42	40°32'55.067"N	104°47'28.915"W	2.00	
725.00†	8.500	349.297	723.44	9.00	30.92	-5.84	40°32'55.194"N	104°47'28.947"W	2.00	
825.00†	10.500	349.297	822.07	13.72	47.14	-8.91	40°32'55.354"N	104°47'28.986"W	2.00	
921.64	12.433	349.297	916.77	19.21	66.01	-12.48	40°32'55.540"N	104°47'29.032"W	2.00	End of Build
925.00†	12.433	349.297	920.05	19.42	66.72	-12.61	40°32'55.547"N	104°47'29.034"W	0.00	
1025.00†	12.433	349.297	1017.71	25.57	87.88	-16.61	40°32'55.756"N	104°47'29.086"W	0.00	
1125.00†	12.433	349.297	1115.36	31.73	109.03	-20.61	40°32'55.965"N	104°47'29.138"W	0.00	
1225.00†	12.433	349.297	1213.02	37.88	130.19	-24.61	40°32'56.174"N	104°47'29.190"W	0.00	
1325.00†	12.433	349.297	1310.67	44.04	151.34	-28.60	40°32'56.383"N	104°47'29.241"W	0.00	
1425.00†	12.433	349.297	1408.33	50.19	172.50	-32.60	40°32'56.593"N	104°47'29.293"W	0.00	
1525.00†	12.433	349.297	1505.98	56.35	193.65	-36.60	40°32'56.802"N	104°47'29.345"W	0.00	
1625.00†	12.433	349.297	1603.64	62.50	214.81	-40.60	40°32'57.011"N	104°47'29.397"W	0.00	
1725.00†	12.433	349.297	1701.29	68.66	235.96	-44.60	40°32'57.220"N	104°47'29.449"W	0.00	
1825.00†	12.433	349.297	1798.95	74.82	257.12	-48.60	40°32'57.429"N	104°47'29.500"W	0.00	
1925.00†	12.433	349.297	1896.60	80.97	278.27	-52.59	40°32'57.638"N	104°47'29.552"W	0.00	
2025.00†	12.433	349.297	1994.26	87.13	299.43	-56.59	40°32'57.847"N	104°47'29.604"W	0.00	
2125.00†	12.433	349.297	2091.91	93.28	320.58	-60.59	40°32'58.056"N	104°47'29.656"W	0.00	
2225.00†	12.433	349.297	2189.57	99.44	341.74	-64.59	40°32'58.265"N	104°47'29.707"W	0.00	
2325.00†	12.433	349.297	2287.22	105.59	362.89	-68.59	40°32'58.474"N	104°47'29.759"W	0.00	
2425.00†	12.433	349.297	2384.88	111.75	384.05	-72.59	40°32'58.683"N	104°47'29.811"W	0.00	
2525.00†	12.433	349.297	2482.53	117.91	405.20	-76.58	40°32'58.892"N	104°47'29.863"W	0.00	
2625.00†	12.433	349.297	2580.19	124.06	426.36	-80.58	40°32'59.101"N	104°47'29.915"W	0.00	

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Area	COLORADO	Well	THORNTON B-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON B-29-30HC PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (186 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2725.00†	12.433	349.297	2677.84	130.22	447.51	-84.58	40°32'59.310"N	104°47'29.966"W	0.00	
2825.00†	12.433	349.297	2775.50	136.37	468.67	-88.58	40°32'59.519"N	104°47'30.018"W	0.00	
2925.00†	12.433	349.297	2873.15	142.53	489.82	-92.58	40°32'59.728"N	104°47'30.070"W	0.00	
3025.00†	12.433	349.297	2970.81	148.68	510.98	-96.57	40°32'59.937"N	104°47'30.122"W	0.00	
3125.00†	12.433	349.297	3068.46	154.84	532.13	-100.57	40°33'00.146"N	104°47'30.174"W	0.00	
3225.00†	12.433	349.297	3166.12	161.00	553.29	-104.57	40°33'00.355"N	104°47'30.225"W	0.00	
3325.00†	12.433	349.297	3263.77	167.15	574.44	-108.57	40°33'00.564"N	104°47'30.277"W	0.00	
3425.00†	12.433	349.297	3361.43	173.31	595.60	-112.57	40°33'00.773"N	104°47'30.329"W	0.00	
3525.00†	12.433	349.297	3459.08	179.46	616.75	-116.57	40°33'00.982"N	104°47'30.381"W	0.00	
3625.00†	12.433	349.297	3556.74	185.62	637.90	-120.56	40°33'01.191"N	104°47'30.433"W	0.00	
3725.00†	12.433	349.297	3654.39	191.77	659.06	-124.56	40°33'01.400"N	104°47'30.484"W	0.00	
3825.00†	12.433	349.297	3752.05	197.93	680.21	-128.56	40°33'01.609"N	104°47'30.536"W	0.00	
3925.00†	12.433	349.297	3849.70	204.08	701.37	-132.56	40°33'01.818"N	104°47'30.588"W	0.00	
4025.00†	12.433	349.297	3947.36	210.24	722.52	-136.56	40°33'02.028"N	104°47'30.640"W	0.00	
4125.00†	12.433	349.297	4045.01	216.40	743.68	-140.56	40°33'02.237"N	104°47'30.692"W	0.00	
4225.00†	12.433	349.297	4142.67	222.55	764.83	-144.55	40°33'02.446"N	104°47'30.743"W	0.00	
4325.00†	12.433	349.297	4240.32	228.71	785.99	-148.55	40°33'02.655"N	104°47'30.795"W	0.00	
4425.00†	12.433	349.297	4337.98	234.86	807.14	-152.55	40°33'02.864"N	104°47'30.847"W	0.00	
4525.00†	12.433	349.297	4435.63	241.02	828.30	-156.55	40°33'03.073"N	104°47'30.899"W	0.00	
4625.00†	12.433	349.297	4533.29	247.17	849.45	-160.55	40°33'03.282"N	104°47'30.951"W	0.00	
4725.00†	12.433	349.297	4630.94	253.33	870.61	-164.55	40°33'03.491"N	104°47'31.002"W	0.00	
4825.00†	12.433	349.297	4728.60	259.49	891.76	-168.54	40°33'03.700"N	104°47'31.054"W	0.00	
4925.00†	12.433	349.297	4826.25	265.64	912.92	-172.54	40°33'03.909"N	104°47'31.106"W	0.00	
5025.00†	12.433	349.297	4923.91	271.80	934.07	-176.54	40°33'04.118"N	104°47'31.158"W	0.00	
5125.00†	12.433	349.297	5021.56	277.95	955.23	-180.54	40°33'04.327"N	104°47'31.210"W	0.00	
5225.00†	12.433	349.297	5119.22	284.11	976.38	-184.54	40°33'04.536"N	104°47'31.261"W	0.00	
5325.00†	12.433	349.297	5216.87	290.26	997.54	-188.54	40°33'04.745"N	104°47'31.313"W	0.00	
5425.00†	12.433	349.297	5314.53	296.42	1018.69	-192.53	40°33'04.954"N	104°47'31.365"W	0.00	
5525.00†	12.433	349.297	5412.18	302.58	1039.85	-196.53	40°33'05.163"N	104°47'31.417"W	0.00	
5625.00†	12.433	349.297	5509.84	308.73	1061.00	-200.53	40°33'05.372"N	104°47'31.469"W	0.00	

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Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON B-29-30HC PWB
Facility	SEC.28-T07N-R66W		

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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5725.00†	12.433	349.297	5607.49	314.89	1082.16	-204.53	40°33'05.581"N	104°47'31.520"W	0.00	
5825.00†	12.433	349.297	5705.15	321.04	1103.31	-208.53	40°33'05.790"N	104°47'31.572"W	0.00	
5925.00†	12.433	349.297	5802.80	327.20	1124.47	-212.53	40°33'05.999"N	104°47'31.624"W	0.00	
6025.00†	12.433	349.297	5900.46	333.35	1145.62	-216.52	40°33'06.208"N	104°47'31.676"W	0.00	
6125.00†	12.433	349.297	5998.11	339.51	1166.78	-220.52	40°33'06.417"N	104°47'31.728"W	0.00	
6225.00†	12.433	349.297	6095.77	345.66	1187.93	-224.52	40°33'06.626"N	104°47'31.779"W	0.00	
6325.00†	12.433	349.297	6193.42	351.82	1209.09	-228.52	40°33'06.835"N	104°47'31.831"W	0.00	
6425.00†	12.433	349.297	6291.08	357.98	1230.24	-232.52	40°33'07.044"N	104°47'31.883"W	0.00	
6525.00†	12.433	349.297	6388.73	364.13	1251.40	-236.52	40°33'07.254"N	104°47'31.935"W	0.00	
6625.00†	12.433	349.297	6486.39	370.29	1272.55	-240.51	40°33'07.463"N	104°47'31.987"W	0.00	
6725.00†	12.433	349.297	6584.04	376.44	1293.71	-244.51	40°33'07.672"N	104°47'32.038"W	0.00	
6825.00†	12.433	349.297	6681.70	382.60	1314.86	-248.51	40°33'07.881"N	104°47'32.090"W	0.00	
6872.10	12.433	349.297	6727.69	385.50	1324.82	-250.39	40°33'07.979"N	104°47'32.115"W	0.00	End of Tangent
6925.00†	7.143	349.297	6779.80	388.07	1333.66	-252.06	40°33'08.066"N	104°47'32.136"W	10.00	
6996.43	0.000	268.816	6851.05	389.34	1338.03	-252.89	40°33'08.110"N	104°47'32.147"W	10.00	End of Drop
7025.00†	2.857	268.816	6879.61	390.05	1338.01	-253.60	40°33'08.109"N	104°47'32.156"W	10.00	
7125.00†	12.857	268.816	6978.54	403.60	1337.73	-267.25	40°33'08.107"N	104°47'32.333"W	10.00	
7225.00†	22.857	268.816	7073.60	433.99	1337.10	-297.87	40°33'08.100"N	104°47'32.730"W	10.00	
7325.00†	32.857	268.816	7161.90	480.30	1336.13	-344.53	40°33'08.091"N	104°47'33.334"W	10.00	
7425.00†	42.857	268.816	7240.76	541.12	1334.87	-405.81	40°33'08.078"N	104°47'34.128"W	10.00	
7525.00†	52.857	268.816	7307.77	614.60	1333.34	-479.84	40°33'08.063"N	104°47'35.087"W	10.00	
7625.00†	62.857	268.816	7360.91	698.52	1331.59	-564.39	40°33'08.046"N	104°47'36.182"W	10.00	
7725.00†	72.857	268.816	7398.55	790.32	1329.68	-656.88	40°33'08.027"N	104°47'37.380"W	10.00	
7825.00†	82.857	268.816	7419.56	887.21	1327.66	-754.50	40°33'08.007"N	104°47'38.645"W	10.00	
7898.55	90.212	268.816	7424.00 [†]	960.02	1326.14	-827.85	40°33'07.992"N	104°47'39.595"W	10.00	End of Build
7925.00†	90.212	268.816	7423.90	986.26	1325.60	-854.29	40°33'07.987"N	104°47'39.938"W	0.00	
8025.00†	90.212	268.816	7423.53	1085.50	1323.53	-954.27	40°33'07.966"N	104°47'41.233"W	0.00	
8125.00†	90.212	268.816	7423.16	1184.73	1321.47	-1054.22	40°33'07.946"N	104°47'42.528"W	0.00	
8225.00†	90.212	268.816	7422.79	1283.96	1319.40	-1154.22	40°33'07.925"N	104°47'43.823"W	0.00	
8325.00†	90.212	268.816	7422.42	1383.20	1317.33	-1254.20	40°33'07.905"N	104°47'45.118"W	0.00	

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8425.00†	90.212	268.816	7422.05	1482.43	1315.27	-1354.18	40°33'07.884"N	104°47'46.414"W	0.00	
8525.00†	90.212	268.816	7421.68	1581.66	1313.20	-1454.16	40°33'07.864"N	104°47'47.709"W	0.00	
8625.00†	90.212	268.816	7421.31	1680.90	1311.14	-1554.13	40°33'07.843"N	104°47'49.004"W	0.00	
8725.00†	90.212	268.816	7420.94	1780.13	1309.07	-1654.11	40°33'07.823"N	104°47'50.299"W	0.00	
8825.00†	90.212	268.816	7420.57	1879.36	1307.00	-1754.09	40°33'07.802"N	104°47'51.594"W	0.00	
8925.00†	90.212	268.816	7420.20	1978.60	1304.94	-1854.07	40°33'07.782"N	104°47'52.889"W	0.00	
9025.00†	90.212	268.816	7419.83	2077.83	1302.87	-1954.05	40°33'07.761"N	104°47'54.185"W	0.00	
9125.00†	90.212	268.816	7419.46	2177.07	1300.80	-2054.02	40°33'07.741"N	104°47'55.480"W	0.00	
9225.00†	90.212	268.816	7419.09	2276.30	1298.74	-2154.00	40°33'07.720"N	104°47'56.775"W	0.00	
9325.00†	90.212	268.816	7418.72	2375.53	1296.67	-2253.98	40°33'07.700"N	104°47'58.070"W	0.00	
9425.00†	90.212	268.816	7418.35	2474.77	1294.61	-2353.96	40°33'07.679"N	104°47'59.365"W	0.00	
9525.00†	90.212	268.816	7417.98	2574.00	1292.54	-2453.94	40°33'07.659"N	104°48'00.660"W	0.00	
9625.00†	90.212	268.816	7417.61	2673.23	1290.47	-2553.91	40°33'07.638"N	104°48'01.956"W	0.00	
9725.00†	90.212	268.816	7417.24	2772.47	1288.41	-2653.89	40°33'07.618"N	104°48'03.251"W	0.00	
9825.00†	90.212	268.816	7416.86	2871.70	1286.34	-2753.87	40°33'07.597"N	104°48'04.546"W	0.00	
9925.00†	90.212	268.816	7416.49	2970.93	1284.28	-2853.85	40°33'07.577"N	104°48'05.841"W	0.00	
10025.00†	90.212	268.816	7416.12	3070.17	1282.21	-2953.83	40°33'07.556"N	104°48'07.136"W	0.00	
10125.00†	90.212	268.816	7415.75	3169.40	1280.14	-3053.80	40°33'07.536"N	104°48'08.432"W	0.00	
10225.00†	90.212	268.816	7415.38	3268.64	1278.08	-3153.78	40°33'07.515"N	104°48'09.727"W	0.00	
10325.00†	90.212	268.816	7415.01	3367.87	1276.01	-3253.76	40°33'07.495"N	104°48'11.022"W	0.00	
10425.00†	90.212	268.816	7414.64	3467.10	1273.94	-3353.74	40°33'07.474"N	104°48'12.317"W	0.00	
10525.00†	90.212	268.816	7414.27	3566.34	1271.88	-3453.72	40°33'07.454"N	104°48'13.612"W	0.00	
10625.00†	90.212	268.816	7413.90	3665.57	1269.81	-3553.69	40°33'07.433"N	104°48'14.907"W	0.00	
10725.00†	90.212	268.816	7413.53	3764.80	1267.75	-3653.67	40°33'07.412"N	104°48'16.203"W	0.00	
10825.00†	90.212	268.816	7413.16	3864.04	1265.68	-3753.65	40°33'07.392"N	104°48'17.498"W	0.00	
10925.00†	90.212	268.816	7412.79	3963.27	1263.61	-3853.63	40°33'07.371"N	104°48'18.793"W	0.00	
11025.00†	90.212	268.816	7412.42	4062.50	1261.55	-3953.61	40°33'07.351"N	104°48'20.088"W	0.00	
11125.00†	90.212	268.816	7412.05	4161.74	1259.48	-4053.58	40°33'07.330"N	104°48'21.383"W	0.00	
11225.00†	90.212	268.816	7411.68	4260.97	1257.42	-4153.56	40°33'07.310"N	104°48'22.678"W	0.00	
11325.00†	90.212	268.816	7411.31	4360.20	1255.35	-4253.54	40°33'07.289"N	104°48'23.974"W	0.00	

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THORNTON B-29-30HC PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#13 THORNTON B-29-30HC (1661'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON B-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON B-29-30HC PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (186 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11425.00†	90.212	268.816	7410.94	4459.44	1253.28	-4353.52	40°33'07.268"N	104°48'25.269"W	0.00	
11525.00†	90.212	268.816	7410.57	4558.67	1251.22	-4453.50	40°33'07.248"N	104°48'26.564"W	0.00	
11625.00†	90.212	268.816	7410.20	4657.91	1249.15	-4553.47	40°33'07.227"N	104°48'27.859"W	0.00	
11725.00†	90.212	268.816	7409.83	4757.14	1247.09	-4653.45	40°33'07.207"N	104°48'29.154"W	0.00	
11825.00†	90.212	268.816	7409.46	4856.37	1245.02	-4753.43	40°33'07.186"N	104°48'30.449"W	0.00	
11925.00†	90.212	268.816	7409.09	4955.61	1242.95	-4853.41	40°33'07.165"N	104°48'31.744"W	0.00	
12025.00†	90.212	268.816	7408.72	5054.84	1240.89	-4953.39	40°33'07.145"N	104°48'33.040"W	0.00	
12125.00†	90.212	268.816	7408.35	5154.07	1238.82	-5053.36	40°33'07.124"N	104°48'34.335"W	0.00	
12225.00†	90.212	268.816	7407.98	5253.31	1236.75	-5153.34	40°33'07.104"N	104°48'35.630"W	0.00	
12325.00†	90.212	268.816	7407.60	5352.54	1234.69	-5253.32	40°33'07.083"N	104°48'36.925"W	0.00	
12425.00†	90.212	268.816	7407.23	5451.77	1232.62	-5353.30	40°33'07.062"N	104°48'38.220"W	0.00	
12525.00†	90.212	268.816	7406.86	5551.01	1230.56	-5453.28	40°33'07.042"N	104°48'39.515"W	0.00	
12625.00†	90.212	268.816	7406.49	5650.24	1228.49	-5553.25	40°33'07.021"N	104°48'40.811"W	0.00	
12725.00†	90.212	268.816	7406.12	5749.48	1226.42	-5653.23	40°33'07.000"N	104°48'42.106"W	0.00	
12825.00†	90.212	268.816	7405.75	5848.71	1224.36	-5753.21	40°33'06.980"N	104°48'43.401"W	0.00	
12925.00†	90.212	268.816	7405.38	5947.94	1222.29	-5853.19	40°33'06.959"N	104°48'44.696"W	0.00	
13025.00†	90.212	268.816	7405.01	6047.18	1220.23	-5953.17	40°33'06.938"N	104°48'45.991"W	0.00	
13125.00†	90.212	268.816	7404.64	6146.41	1218.16	-6053.14	40°33'06.918"N	104°48'47.286"W	0.00	
13225.00†	90.212	268.816	7404.27	6245.64	1216.09	-6153.12	40°33'06.897"N	104°48'48.582"W	0.00	
13325.00†	90.212	268.816	7403.90	6344.88	1214.03	-6253.10	40°33'06.876"N	104°48'49.877"W	0.00	
13425.00†	90.212	268.816	7403.53	6444.11	1211.96	-6353.08	40°33'06.856"N	104°48'51.172"W	0.00	
13525.00†	90.212	268.816	7403.16	6543.34	1209.89	-6453.05	40°33'06.835"N	104°48'52.467"W	0.00	
13625.00†	90.212	268.816	7402.79	6642.58	1207.83	-6553.03	40°33'06.814"N	104°48'53.762"W	0.00	
13725.00†	90.212	268.816	7402.42	6741.81	1205.76	-6653.01	40°33'06.794"N	104°48'55.057"W	0.00	
13825.00†	90.212	268.816	7402.05	6841.05	1203.70	-6752.99	40°33'06.773"N	104°48'56.353"W	0.00	
13925.00†	90.212	268.816	7401.68	6940.28	1201.63	-6852.97	40°33'06.752"N	104°48'57.648"W	0.00	
14025.00†	90.212	268.816	7401.31	7039.51	1199.56	-6952.94	40°33'06.732"N	104°48'58.943"W	0.00	
14125.00†	90.212	268.816	7400.94	7138.75	1197.50	-7052.92	40°33'06.711"N	104°49'00.238"W	0.00	
14225.00†	90.212	268.816	7400.57	7237.98	1195.43	-7152.90	40°33'06.690"N	104°49'01.533"W	0.00	
14325.00†	90.212	268.816	7400.20	7337.21	1193.37	-7252.88	40°33'06.670"N	104°49'02.828"W	0.00	

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THORNTON B-29-30HC PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#13 THORNTON B-29-30HC (1661'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON B-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON B-29-30HC PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (186 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14425.00†	90.212	268.816	7399.83	7436.45	1191.30	-7352.86	40°33'06.649"N	104°49'04.124"W	0.00	
14525.00†	90.212	268.816	7399.46	7535.68	1189.23	-7452.83	40°33'06.628"N	104°49'05.419"W	0.00	
14625.00†	90.212	268.816	7399.09	7634.91	1187.17	-7552.81	40°33'06.607"N	104°49'06.714"W	0.00	
14725.00†	90.212	268.816	7398.72	7734.15	1185.10	-7652.79	40°33'06.587"N	104°49'08.009"W	0.00	
14825.00†	90.212	268.816	7398.35	7833.38	1183.03	-7752.77	40°33'06.566"N	104°49'09.304"W	0.00	
14925.00†	90.212	268.816	7397.97	7932.61	1180.97	-7852.75	40°33'06.545"N	104°49'10.599"W	0.00	
15025.00†	90.212	268.816	7397.60	8031.85	1178.90	-7952.72	40°33'06.525"N	104°49'11.894"W	0.00	
15125.00†	90.212	268.816	7397.23	8131.08	1176.84	-8052.70	40°33'06.504"N	104°49'13.190"W	0.00	
15225.00†	90.212	268.816	7396.86	8230.32	1174.77	-8152.68	40°33'06.483"N	104°49'14.485"W	0.00	
15325.00†	90.212	268.816	7396.49	8329.55	1172.70	-8252.66	40°33'06.462"N	104°49'15.780"W	0.00	
15425.00†	90.212	268.816	7396.12	8428.78	1170.64	-8352.64	40°33'06.442"N	104°49'17.075"W	0.00	
15525.00†	90.212	268.816	7395.75	8528.02	1168.57	-8452.61	40°33'06.421"N	104°49'18.370"W	0.00	
15625.00†	90.212	268.816	7395.38	8627.25	1166.51	-8552.59	40°33'06.400"N	104°49'19.665"W	0.00	
15725.00†	90.212	268.816	7395.01	8726.48	1164.44	-8652.57	40°33'06.379"N	104°49'20.961"W	0.00	
15825.00†	90.212	268.816	7394.64	8825.72	1162.37	-8752.55	40°33'06.358"N	104°49'22.256"W	0.00	
15925.00†	90.212	268.816	7394.27	8924.95	1160.31	-8852.53	40°33'06.338"N	104°49'23.551"W	0.00	
16025.00†	90.212	268.816	7393.90	9024.18	1158.24	-8952.50	40°33'06.317"N	104°49'24.846"W	0.00	
16125.00†	90.212	268.816	7393.53	9123.42	1156.18	-9052.48	40°33'06.296"N	104°49'26.141"W	0.00	
16225.00†	90.212	268.816	7393.16	9222.65	1154.11	-9152.46	40°33'06.275"N	104°49'27.436"W	0.00	
16325.00†	90.212	268.816	7392.79	9321.89	1152.04	-9252.44	40°33'06.255"N	104°49'28.731"W	0.00	
16425.00†	90.212	268.816	7392.42	9421.12	1149.98	-9352.42	40°33'06.234"N	104°49'30.027"W	0.00	
16525.00†	90.212	268.816	7392.05	9520.35	1147.91	-9452.39	40°33'06.213"N	104°49'31.322"W	0.00	
16625.00†	90.212	268.816	7391.68	9619.59	1145.84	-9552.37	40°33'06.192"N	104°49'32.617"W	0.00	
16725.00†	90.212	268.816	7391.31	9718.82	1143.78	-9652.35	40°33'06.171"N	104°49'33.912"W	0.00	
16825.00†	90.212	268.816	7390.94	9818.05	1141.71	-9752.33	40°33'06.151"N	104°49'35.207"W	0.00	
16925.00†	90.212	268.816	7390.57	9917.29	1139.65	-9852.31	40°33'06.130"N	104°49'36.502"W	0.00	
17025.00†	90.212	268.816	7390.20	10016.52	1137.58	-9952.28	40°33'06.109"N	104°49'37.798"W	0.00	
17125.00†	90.212	268.816	7389.83	10115.75	1135.51	-10052.26	40°33'06.088"N	104°49'39.093"W	0.00	
17225.00†	90.212	268.816	7389.46	10214.99	1133.45	-10152.24	40°33'06.067"N	104°49'40.388"W	0.00	
17325.00†	90.212	268.816	7389.09	10314.22	1131.38	-10252.22	40°33'06.047"N	104°49'41.683"W	0.00	

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THORNTON B-29-30HC PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#13 THORNTON B-29-30HC (1661'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON B-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON B-29-30HC PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (186 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17425.00†	90.212	268.816	7388.72	10413.45	1129.32	-10352.20	40°33'06.026"N	104°49'42.978"W	0.00	
17525.00†	90.212	268.816	7388.34	10512.69	1127.25	-10452.17	40°33'06.005"N	104°49'44.273"W	0.00	
17625.00†	90.212	268.816	7387.97	10611.92	1125.18	-10552.15	40°33'05.984"N	104°49'45.568"W	0.00	
17725.00†	90.212	268.816	7387.60	10711.16	1123.12	-10652.13	40°33'05.963"N	104°49'46.864"W	0.00	
17825.00†	90.212	268.816	7387.23	10810.39	1121.05	-10752.11	40°33'05.942"N	104°49'48.159"W	0.00	
17888.07	90.212	268.816	7387.00 ²	10872.97	1119.75	-10815.16	40°33'05.929"N	104°49'48.976"W	0.00	End of Tangent

HOLE & CASING SECTIONS - Ref Wellbore: THORNTON B-29-30HC PWB Ref Wellpath: THORNTON B-29-30HC PWP (REV-A.0)

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]
13.5in Open Hole	25.00	1550.00	1525.00	25.00	1530.40	0.00	0.00	198.94	-37.60
9.625in Casing Surface	25.00	1550.00	1525.00	25.00	1530.40	0.00	0.00	198.94	-37.60
8in Open Hole	1550.00	17888.07	16338.07	1530.40	N/A	198.94	-37.60	N/A	N/A

Planned Wellpath Report

THORNTON B-29-30HC PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#13 THORNTON B-29-30HC (1661'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON B-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON B-29-30HC PWB
Facility	SEC.28-T07N-R66W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
2) THORNTON B-29-30HC BHL PLAT (325'FNL & 470'FWL,SEC.30)	17888.07	7387.00	1119.75	-10815.16	3186107.44	1444508.71	40°33'05.929"N	104°49'48.976"W	point
1) THORNTON B-29-30HC LP PLAT (325'FNL & 470'FEL,SEC.29)	7898.55	7424.00	1326.14	-827.85	3196092.48	1444794.90	40°33'07.992"N	104°47'39.595"W	point
SEC.28-T07N-R66W HDL (460)		7900.00	15.67	0.28	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.29-T07N-R66W HDL (460)		7900.00	15.67	0.28	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.30-T07N-R66W HDL (460)		7900.00	15.67	0.28	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.28-T07N-R66W		8000.00	15.67	0.28	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.29-T07N-R66W		8000.00	15.67	0.28	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.30-T07N-R66W		8000.00	15.67	0.28	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon

SURVEY PROGRAM - Ref Wellbore: THORNTON B-29-30HC PWB Ref Wellpath: THORNTON B-29-30HC PWP (REV-A.0)

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	1550.00	BHI NaviTrak (Standard)		THORNTON B-29-30HC PWB
1550.00	17888.07	BHI AutoTrak Curve (Short)		THORNTON B-29-30HC PWB

Planned Wellpath Report

THORNTON B-29-30HC PWP (REV-A.0)

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REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#13 THORNTON B-29-30HC (1661'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON B-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON B-29-30HC PWB
Facility	SEC.28-T07N-R66W		

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
25.00	0.000	349.297	25.00	Tie On
300.00	0.000	349.297	300.00	End of Tangent
921.64	12.433	349.297	916.77	End of Build
6872.10	12.433	349.297	6727.69	End of Tangent
6996.43	0.000	268.816	6851.05	End of Drop
7898.55	90.212	268.816	7424.00	End of Build
17888.07	90.212	268.816	7387.00	End of Tangent