



# Planned Wellpath Report

## THORNTON A-29-30HN PWP (REV-A.0)

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### REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#12 THORNTON A-29-30HN (1645'FNL & 404'FWL,SEC.28)
Area	COLORADO	Well	THORNTON A-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON A-29-30HN 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 1:25:40 PM
Convergence at slot	0.46° East	Database/Source file	Denver/THORNTON_A-29-30HN_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	-0.32	49.16	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"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#12 THORNTON A-29-30HN (1645'FNL & 404'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	276.69°

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Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON A-29-30HN 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
0.00†	0.000	350.600	0.00	0.00	0.00	0.00	40°32'55.043"N	104°47'28.867"W	0.00	
25.00	0.000	350.600	25.00	0.00	0.00	0.00	40°32'55.043"N	104°47'28.867"W	0.00	Tie On
125.00†	0.000	350.600	125.00	0.00	0.00	0.00	40°32'55.043"N	104°47'28.867"W	0.00	
225.00†	0.000	350.600	225.00	0.00	0.00	0.00	40°32'55.043"N	104°47'28.867"W	0.00	
300.00	0.000	350.600	300.00	0.00	0.00	0.00	40°32'55.043"N	104°47'28.867"W	0.00	End of Tangent
325.00†	0.500	350.600	325.00	0.03	0.11	-0.02	40°32'55.044"N	104°47'28.867"W	2.00	
425.00†	2.500	350.600	424.96	0.76	2.69	-0.45	40°32'55.069"N	104°47'28.873"W	2.00	
525.00†	4.500	350.600	524.77	2.45	8.71	-1.44	40°32'55.129"N	104°47'28.886"W	2.00	
625.00†	6.500	350.600	624.30	5.10	18.17	-3.01	40°32'55.222"N	104°47'28.906"W	2.00	
725.00†	8.500	350.600	723.44	8.72	31.04	-5.14	40°32'55.350"N	104°47'28.934"W	2.00	
825.00†	10.500	350.600	822.07	13.30	47.33	-7.83	40°32'55.510"N	104°47'28.969"W	2.00	
925.00†	12.500	350.600	920.05	18.82	67.00	-11.09	40°32'55.705"N	104°47'29.011"W	2.00	
999.34	13.987	350.600	992.42	23.54	83.80	-13.87	40°32'55.871"N	104°47'29.047"W	2.00	End of Build
1025.00†	13.987	350.600	1017.31	25.26	89.92	-14.89	40°32'55.931"N	104°47'29.060"W	0.00	
1125.00†	13.987	350.600	1114.35	31.96	113.76	-18.83	40°32'56.167"N	104°47'29.111"W	0.00	
1225.00†	13.987	350.600	1211.38	38.66	137.61	-22.78	40°32'56.403"N	104°47'29.162"W	0.00	
1325.00†	13.987	350.600	1308.42	45.36	161.45	-26.73	40°32'56.638"N	104°47'29.213"W	0.00	
1425.00†	13.987	350.600	1405.45	52.06	185.30	-30.68	40°32'56.874"N	104°47'29.265"W	0.00	
1525.00†	13.987	350.600	1502.49	58.76	209.14	-34.62	40°32'57.109"N	104°47'29.316"W	0.00	
1625.00†	13.987	350.600	1599.52	65.46	232.99	-38.57	40°32'57.345"N	104°47'29.367"W	0.00	
1725.00†	13.987	350.600	1696.56	72.16	256.83	-42.52	40°32'57.581"N	104°47'29.418"W	0.00	
1825.00†	13.987	350.600	1793.59	78.86	280.68	-46.47	40°32'57.816"N	104°47'29.469"W	0.00	
1925.00†	13.987	350.600	1890.63	85.56	304.52	-50.41	40°32'58.052"N	104°47'29.520"W	0.00	
2025.00†	13.987	350.600	1987.67	92.26	328.37	-54.36	40°32'58.288"N	104°47'29.571"W	0.00	
2125.00†	13.987	350.600	2084.70	98.96	352.21	-58.31	40°32'58.523"N	104°47'29.623"W	0.00	
2225.00†	13.987	350.600	2181.74	105.66	376.06	-62.26	40°32'58.759"N	104°47'29.674"W	0.00	
2325.00†	13.987	350.600	2278.77	112.36	399.90	-66.20	40°32'58.994"N	104°47'29.725"W	0.00	
2425.00†	13.987	350.600	2375.81	119.06	423.75	-70.15	40°32'59.230"N	104°47'29.776"W	0.00	
2525.00†	13.987	350.600	2472.84	125.76	447.60	-74.10	40°32'59.466"N	104°47'29.827"W	0.00	
2625.00†	13.987	350.600	2569.88	132.46	471.44	-78.05	40°32'59.701"N	104°47'29.878"W	0.00	

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Area	COLORADO	Well	THORNTON A-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON A-29-30HN 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†	13.987	350.600	2666.91	139.16	495.29	-81.99	40°32'59.937"N	104°47'29.929"W	0.00	
2825.00†	13.987	350.600	2763.95	145.86	519.13	-85.94	40°33'00.173"N	104°47'29.981"W	0.00	
2925.00†	13.987	350.600	2860.98	152.56	542.98	-89.89	40°33'00.408"N	104°47'30.032"W	0.00	
3025.00†	13.987	350.600	2958.02	159.26	566.82	-93.84	40°33'00.644"N	104°47'30.083"W	0.00	
3125.00†	13.987	350.600	3055.05	165.96	590.67	-97.78	40°33'00.879"N	104°47'30.134"W	0.00	
3225.00†	13.987	350.600	3152.09	172.66	614.51	-101.73	40°33'01.115"N	104°47'30.185"W	0.00	
3325.00†	13.987	350.600	3249.12	179.36	638.36	-105.68	40°33'01.351"N	104°47'30.236"W	0.00	
3425.00†	13.987	350.600	3346.16	186.06	662.20	-109.63	40°33'01.586"N	104°47'30.287"W	0.00	
3525.00†	13.987	350.600	3443.19	192.76	686.05	-113.58	40°33'01.822"N	104°47'30.338"W	0.00	
3625.00†	13.987	350.600	3540.23	199.46	709.89	-117.52	40°33'02.058"N	104°47'30.390"W	0.00	
3725.00†	13.987	350.600	3637.26	206.16	733.74	-121.47	40°33'02.293"N	104°47'30.441"W	0.00	
3825.00†	13.987	350.600	3734.30	212.86	757.59	-125.42	40°33'02.529"N	104°47'30.492"W	0.00	
3925.00†	13.987	350.600	3831.33	219.56	781.43	-129.37	40°33'02.764"N	104°47'30.543"W	0.00	
4025.00†	13.987	350.600	3928.37	226.26	805.28	-133.31	40°33'03.000"N	104°47'30.594"W	0.00	
4125.00†	13.987	350.600	4025.40	232.96	829.12	-137.26	40°33'03.236"N	104°47'30.645"W	0.00	
4225.00†	13.987	350.600	4122.44	239.66	852.97	-141.21	40°33'03.471"N	104°47'30.696"W	0.00	
4325.00†	13.987	350.600	4219.47	246.36	876.81	-145.16	40°33'03.707"N	104°47'30.748"W	0.00	
4425.00†	13.987	350.600	4316.51	253.06	900.66	-149.10	40°33'03.943"N	104°47'30.799"W	0.00	
4525.00†	13.987	350.600	4413.54	259.76	924.50	-153.05	40°33'04.178"N	104°47'30.850"W	0.00	
4625.00†	13.987	350.600	4510.58	266.46	948.35	-157.00	40°33'04.414"N	104°47'30.901"W	0.00	
4725.00†	13.987	350.600	4607.61	273.16	972.19	-160.95	40°33'04.649"N	104°47'30.952"W	0.00	
4825.00†	13.987	350.600	4704.65	279.86	996.04	-164.89	40°33'04.885"N	104°47'31.003"W	0.00	
4925.00†	13.987	350.600	4801.68	286.56	1019.88	-168.84	40°33'05.121"N	104°47'31.054"W	0.00	
5025.00†	13.987	350.600	4898.72	293.26	1043.73	-172.79	40°33'05.356"N	104°47'31.106"W	0.00	
5125.00†	13.987	350.600	4995.75	299.96	1067.58	-176.74	40°33'05.592"N	104°47'31.157"W	0.00	
5225.00†	13.987	350.600	5092.79	306.66	1091.42	-180.68	40°33'05.828"N	104°47'31.208"W	0.00	
5325.00†	13.987	350.600	5189.82	313.36	1115.27	-184.63	40°33'06.063"N	104°47'31.259"W	0.00	
5425.00†	13.987	350.600	5286.86	320.06	1139.11	-188.58	40°33'06.299"N	104°47'31.310"W	0.00	
5525.00†	13.987	350.600	5383.89	326.76	1162.96	-192.53	40°33'06.534"N	104°47'31.361"W	0.00	
5625.00†	13.987	350.600	5480.93	333.46	1186.80	-196.47	40°33'06.770"N	104°47'31.412"W	0.00	

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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†	13.987	350.600	5577.96	340.16	1210.65	-200.42	40°33'07.006"N	104°47'31.464"W	0.00	
5825.00†	13.987	350.600	5675.00	346.86	1234.49	-204.37	40°33'07.241"N	104°47'31.515"W	0.00	
5925.00†	13.987	350.600	5772.03	353.56	1258.34	-208.32	40°33'07.477"N	104°47'31.566"W	0.00	
6025.00†	13.987	350.600	5869.07	360.26	1282.18	-212.26	40°33'07.713"N	104°47'31.617"W	0.00	
6125.00†	13.987	350.600	5966.11	366.96	1306.03	-216.21	40°33'07.948"N	104°47'31.668"W	0.00	
6225.00†	13.987	350.600	6063.14	373.66	1329.87	-220.16	40°33'08.184"N	104°47'31.719"W	0.00	
6325.00†	13.987	350.600	6160.18	380.36	1353.72	-224.11	40°33'08.419"N	104°47'31.770"W	0.00	
6425.00†	13.987	350.600	6257.21	387.06	1377.57	-228.06	40°33'08.655"N	104°47'31.822"W	0.00	
6525.00†	13.987	350.600	6354.25	393.76	1401.41	-232.00	40°33'08.891"N	104°47'31.873"W	0.00	
6625.00†	13.987	350.600	6451.28	400.46	1425.26	-235.95	40°33'09.126"N	104°47'31.924"W	0.00	
6725.00†	13.987	350.600	6548.32	407.16	1449.10	-239.90	40°33'09.362"N	104°47'31.975"W	0.00	
6816.98	13.987	350.600	6637.57	413.32	1471.03	-243.53	40°33'09.579"N	104°47'32.022"W	0.00	End of Tangent
6825.00†	13.185	350.600	6645.36	413.85	1472.89	-243.84	40°33'09.597"N	104°47'32.026"W	10.00	
6925.00†	3.185	350.600	6744.22	417.79	1486.92	-246.16	40°33'09.736"N	104°47'32.056"W	10.00	
6956.85	0.000	268.815	6776.05	418.03	1487.79	-246.30	40°33'09.744"N	104°47'32.058"W	10.00	End of Drop
7025.00†	6.815	268.815	6844.04	422.04	1487.71	-250.35	40°33'09.743"N	104°47'32.110"W	10.00	
7125.00†	16.815	268.815	6941.80	442.30	1487.29	-270.80	40°33'09.739"N	104°47'32.375"W	10.00	
7225.00†	26.815	268.815	7034.52	479.06	1486.52	-307.90	40°33'09.732"N	104°47'32.856"W	10.00	
7325.00†	36.815	268.815	7119.39	531.22	1485.43	-360.54	40°33'09.721"N	104°47'33.538"W	10.00	
7425.00†	46.815	268.815	7193.82	597.18	1484.05	-427.12	40°33'09.707"N	104°47'34.400"W	10.00	
7525.00†	56.815	268.815	7255.56	674.94	1482.43	-505.60	40°33'09.691"N	104°47'35.417"W	10.00	
7625.00†	66.815	268.815	7302.74	762.14	1480.61	-593.62	40°33'09.673"N	104°47'36.557"W	10.00	
7725.00†	76.815	268.815	7333.90	856.13	1478.64	-688.48	40°33'09.654"N	104°47'37.786"W	10.00	
7825.00†	86.815	268.815	7348.12	954.05	1476.60	-787.32	40°33'09.634"N	104°47'39.067"W	10.00	
7859.71	90.287	268.815	7349.00 <sup>†</sup>	988.42	1475.88	-822.00	40°33'09.626"N	104°47'39.516"W	10.00	End of Build
7925.00†	90.287	268.815	7348.67	1053.09	1474.53	-887.28	40°33'09.613"N	104°47'40.362"W	0.00	
8025.00†	90.287	268.815	7348.17	1152.15	1472.46	-987.25	40°33'09.593"N	104°47'41.657"W	0.00	
8125.00†	90.287	268.815	7347.67	1251.20	1470.39	-1087.23	40°33'09.572"N	104°47'42.952"W	0.00	
8225.00†	90.287	268.815	7347.17	1350.26	1468.32	-1187.21	40°33'09.552"N	104°47'44.247"W	0.00	
8325.00†	90.287	268.815	7346.67	1449.31	1466.26	-1287.19	40°33'09.531"N	104°47'45.542"W	0.00	

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8425.00†	90.287	268.815	7346.17	1548.37	1464.19	-1387.16	40°33'09.511"N	104°47'46.837"W	0.00	
8525.00†	90.287	268.815	7345.67	1647.42	1462.12	-1487.14	40°33'09.490"N	104°47'48.133"W	0.00	
8625.00†	90.287	268.815	7345.17	1746.48	1460.05	-1587.12	40°33'09.470"N	104°47'49.428"W	0.00	
8725.00†	90.287	268.815	7344.67	1845.53	1457.98	-1687.10	40°33'09.449"N	104°47'50.723"W	0.00	
8825.00†	90.287	268.815	7344.17	1944.59	1455.91	-1787.07	40°33'09.429"N	104°47'52.018"W	0.00	
8925.00†	90.287	268.815	7343.67	2043.64	1453.84	-1887.05	40°33'09.408"N	104°47'53.313"W	0.00	
9025.00†	90.287	268.815	7343.17	2142.69	1451.77	-1987.03	40°33'09.388"N	104°47'54.608"W	0.00	
9125.00†	90.287	268.815	7342.67	2241.75	1449.71	-2087.01	40°33'09.367"N	104°47'55.904"W	0.00	
9225.00†	90.287	268.815	7342.17	2340.80	1447.64	-2186.98	40°33'09.346"N	104°47'57.199"W	0.00	
9325.00†	90.287	268.815	7341.67	2439.86	1445.57	-2286.96	40°33'09.326"N	104°47'58.494"W	0.00	
9425.00†	90.287	268.815	7341.17	2538.91	1443.50	-2386.94	40°33'09.305"N	104°47'59.789"W	0.00	
9525.00†	90.287	268.815	7340.67	2637.97	1441.43	-2486.92	40°33'09.285"N	104°48'01.084"W	0.00	
9625.00†	90.287	268.815	7340.17	2737.02	1439.36	-2586.89	40°33'09.264"N	104°48'02.380"W	0.00	
9725.00†	90.287	268.815	7339.67	2836.08	1437.29	-2686.87	40°33'09.244"N	104°48'03.675"W	0.00	
9825.00†	90.287	268.815	7339.17	2935.13	1435.23	-2786.85	40°33'09.223"N	104°48'04.970"W	0.00	
9925.00†	90.287	268.815	7338.67	3034.19	1433.16	-2886.82	40°33'09.203"N	104°48'06.265"W	0.00	
10025.00†	90.287	268.815	7338.17	3133.24	1431.09	-2986.80	40°33'09.182"N	104°48'07.560"W	0.00	
10125.00†	90.287	268.815	7337.67	3232.30	1429.02	-3086.78	40°33'09.162"N	104°48'08.855"W	0.00	
10225.00†	90.287	268.815	7337.17	3331.35	1426.95	-3186.76	40°33'09.141"N	104°48'10.151"W	0.00	
10325.00†	90.287	268.815	7336.67	3430.41	1424.88	-3286.73	40°33'09.120"N	104°48'11.446"W	0.00	
10425.00†	90.287	268.815	7336.17	3529.46	1422.81	-3386.71	40°33'09.100"N	104°48'12.741"W	0.00	
10525.00†	90.287	268.815	7335.67	3628.52	1420.74	-3486.69	40°33'09.079"N	104°48'14.036"W	0.00	
10625.00†	90.287	268.815	7335.17	3727.57	1418.68	-3586.67	40°33'09.059"N	104°48'15.331"W	0.00	
10725.00†	90.287	268.815	7334.67	3826.63	1416.61	-3686.64	40°33'09.038"N	104°48'16.626"W	0.00	
10825.00†	90.287	268.815	7334.17	3925.68	1414.54	-3786.62	40°33'09.018"N	104°48'17.922"W	0.00	
10925.00†	90.287	268.815	7333.67	4024.74	1412.47	-3886.60	40°33'08.997"N	104°48'19.217"W	0.00	
11025.00†	90.287	268.815	7333.17	4123.79	1410.40	-3986.58	40°33'08.976"N	104°48'20.512"W	0.00	
11125.00†	90.287	268.815	7332.67	4222.85	1408.33	-4086.55	40°33'08.956"N	104°48'21.807"W	0.00	
11225.00†	90.287	268.815	7332.16	4321.90	1406.26	-4186.53	40°33'08.935"N	104°48'23.102"W	0.00	
11325.00†	90.287	268.815	7331.66	4420.96	1404.19	-4286.51	40°33'08.914"N	104°48'24.397"W	0.00	



# Planned Wellpath Report

THORNTON A-29-30HN PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#12 THORNTON A-29-30HN (1645'FNL & 404'FWL,SEC.28)
Area	COLORADO	Well	THORNTON A-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON A-29-30HN 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†	90.287	268.815	7331.16	4520.01	1402.13	-4386.48	40°33'08.894"N	104°48'25.693"W	0.00	
11525.00†	90.287	268.815	7330.66	4619.07	1400.06	-4486.46	40°33'08.873"N	104°48'26.988"W	0.00	
11625.00†	90.287	268.815	7330.16	4718.12	1397.99	-4586.44	40°33'08.853"N	104°48'28.283"W	0.00	
11725.00†	90.287	268.815	7329.66	4817.18	1395.92	-4686.42	40°33'08.832"N	104°48'29.578"W	0.00	
11825.00†	90.287	268.815	7329.16	4916.23	1393.85	-4786.39	40°33'08.811"N	104°48'30.873"W	0.00	
11925.00†	90.287	268.815	7328.66	5015.29	1391.78	-4886.37	40°33'08.791"N	104°48'32.168"W	0.00	
12025.00†	90.287	268.815	7328.16	5114.34	1389.71	-4986.35	40°33'08.770"N	104°48'33.464"W	0.00	
12125.00†	90.287	268.815	7327.66	5213.39	1387.65	-5086.33	40°33'08.749"N	104°48'34.759"W	0.00	
12225.00†	90.287	268.815	7327.16	5312.45	1385.58	-5186.30	40°33'08.729"N	104°48'36.054"W	0.00	
12325.00†	90.287	268.815	7326.66	5411.50	1383.51	-5286.28	40°33'08.708"N	104°48'37.349"W	0.00	
12425.00†	90.287	268.815	7326.16	5510.56	1381.44	-5386.26	40°33'08.688"N	104°48'38.644"W	0.00	
12525.00†	90.287	268.815	7325.66	5609.61	1379.37	-5486.24	40°33'08.667"N	104°48'39.939"W	0.00	
12625.00†	90.287	268.815	7325.16	5708.67	1377.30	-5586.21	40°33'08.646"N	104°48'41.234"W	0.00	
12725.00†	90.287	268.815	7324.66	5807.72	1375.23	-5686.19	40°33'08.626"N	104°48'42.530"W	0.00	
12825.00†	90.287	268.815	7324.16	5906.78	1373.16	-5786.17	40°33'08.605"N	104°48'43.825"W	0.00	
12925.00†	90.287	268.815	7323.66	6005.83	1371.10	-5886.15	40°33'08.584"N	104°48'45.120"W	0.00	
13025.00†	90.287	268.815	7323.16	6104.89	1369.03	-5986.12	40°33'08.563"N	104°48'46.415"W	0.00	
13125.00†	90.287	268.815	7322.66	6203.94	1366.96	-6086.10	40°33'08.543"N	104°48'47.710"W	0.00	
13225.00†	90.287	268.815	7322.16	6303.00	1364.89	-6186.08	40°33'08.522"N	104°48'49.005"W	0.00	
13325.00†	90.287	268.815	7321.66	6402.05	1362.82	-6286.05	40°33'08.501"N	104°48'50.301"W	0.00	
13425.00†	90.287	268.815	7321.16	6501.11	1360.75	-6386.03	40°33'08.481"N	104°48'51.596"W	0.00	
13525.00†	90.287	268.815	7320.66	6600.16	1358.68	-6486.01	40°33'08.460"N	104°48'52.891"W	0.00	
13625.00†	90.287	268.815	7320.16	6699.22	1356.61	-6585.99	40°33'08.439"N	104°48'54.186"W	0.00	
13725.00†	90.287	268.815	7319.66	6798.27	1354.55	-6685.96	40°33'08.419"N	104°48'55.481"W	0.00	
13825.00†	90.287	268.815	7319.16	6897.33	1352.48	-6785.94	40°33'08.398"N	104°48'56.776"W	0.00	
13925.00†	90.287	268.815	7318.66	6996.38	1350.41	-6885.92	40°33'08.377"N	104°48'58.072"W	0.00	
14025.00†	90.287	268.815	7318.16	7095.44	1348.34	-6985.90	40°33'08.356"N	104°48'59.367"W	0.00	
14125.00†	90.287	268.815	7317.66	7194.49	1346.27	-7085.87	40°33'08.336"N	104°49'00.662"W	0.00	
14225.00†	90.287	268.815	7317.16	7293.55	1344.20	-7185.85	40°33'08.315"N	104°49'01.957"W	0.00	
14325.00†	90.287	268.815	7316.66	7392.60	1342.13	-7285.83	40°33'08.294"N	104°49'03.252"W	0.00	

# Planned Wellpath Report

THORNTON A-29-30HN PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#12 THORNTON A-29-30HN (1645'FNL & 404'FWL,SEC.28)
Area	COLORADO	Well	THORNTON A-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON A-29-30HN 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†	90.287	268.815	7316.16	7491.66	1340.07	-7385.81	40°33'08.274"N	104°49'04.547"W	0.00	
14525.00†	90.287	268.815	7315.66	7590.71	1338.00	-7485.78	40°33'08.253"N	104°49'05.843"W	0.00	
14625.00†	90.287	268.815	7315.16	7689.77	1335.93	-7585.76	40°33'08.232"N	104°49'07.138"W	0.00	
14725.00†	90.287	268.815	7314.66	7788.82	1333.86	-7685.74	40°33'08.211"N	104°49'08.433"W	0.00	
14825.00†	90.287	268.815	7314.16	7887.88	1331.79	-7785.71	40°33'08.191"N	104°49'09.728"W	0.00	
14925.00†	90.287	268.815	7313.66	7986.93	1329.72	-7885.69	40°33'08.170"N	104°49'11.023"W	0.00	
15025.00†	90.287	268.815	7313.15	8085.98	1327.65	-7985.67	40°33'08.149"N	104°49'12.318"W	0.00	
15125.00†	90.287	268.815	7312.65	8185.04	1325.58	-8085.65	40°33'08.128"N	104°49'13.613"W	0.00	
15225.00†	90.287	268.815	7312.15	8284.09	1323.52	-8185.62	40°33'08.108"N	104°49'14.909"W	0.00	
15325.00†	90.287	268.815	7311.65	8383.15	1321.45	-8285.60	40°33'08.087"N	104°49'16.204"W	0.00	
15425.00†	90.287	268.815	7311.15	8482.20	1319.38	-8385.58	40°33'08.066"N	104°49'17.499"W	0.00	
15525.00†	90.287	268.815	7310.65	8581.26	1317.31	-8485.56	40°33'08.045"N	104°49'18.794"W	0.00	
15625.00†	90.287	268.815	7310.15	8680.31	1315.24	-8585.53	40°33'08.024"N	104°49'20.089"W	0.00	
15725.00†	90.287	268.815	7309.65	8779.37	1313.17	-8685.51	40°33'08.004"N	104°49'21.384"W	0.00	
15825.00†	90.287	268.815	7309.15	8878.42	1311.10	-8785.49	40°33'07.983"N	104°49'22.680"W	0.00	
15925.00†	90.287	268.815	7308.65	8977.48	1309.03	-8885.47	40°33'07.962"N	104°49'23.975"W	0.00	
16025.00†	90.287	268.815	7308.15	9076.53	1306.97	-8985.44	40°33'07.941"N	104°49'25.270"W	0.00	
16125.00†	90.287	268.815	7307.65	9175.59	1304.90	-9085.42	40°33'07.920"N	104°49'26.565"W	0.00	
16225.00†	90.287	268.815	7307.15	9274.64	1302.83	-9185.40	40°33'07.900"N	104°49'27.860"W	0.00	
16325.00†	90.287	268.815	7306.65	9373.70	1300.76	-9285.37	40°33'07.879"N	104°49'29.155"W	0.00	
16425.00†	90.287	268.815	7306.15	9472.75	1298.69	-9385.35	40°33'07.858"N	104°49'30.451"W	0.00	
16525.00†	90.287	268.815	7305.65	9571.81	1296.62	-9485.33	40°33'07.837"N	104°49'31.746"W	0.00	
16625.00†	90.287	268.815	7305.15	9670.86	1294.55	-9585.31	40°33'07.816"N	104°49'33.041"W	0.00	
16725.00†	90.287	268.815	7304.65	9769.92	1292.49	-9685.28	40°33'07.796"N	104°49'34.336"W	0.00	
16825.00†	90.287	268.815	7304.15	9868.97	1290.42	-9785.26	40°33'07.775"N	104°49'35.631"W	0.00	
16925.00†	90.287	268.815	7303.65	9968.03	1288.35	-9885.24	40°33'07.754"N	104°49'36.926"W	0.00	
17025.00†	90.287	268.815	7303.15	10067.08	1286.28	-9985.22	40°33'07.733"N	104°49'38.221"W	0.00	
17125.00†	90.287	268.815	7302.65	10166.14	1284.21	-10085.19	40°33'07.712"N	104°49'39.517"W	0.00	
17225.00†	90.287	268.815	7302.15	10265.19	1282.14	-10185.17	40°33'07.691"N	104°49'40.812"W	0.00	
17325.00†	90.287	268.815	7301.65	10364.25	1280.07	-10285.15	40°33'07.670"N	104°49'42.107"W	0.00	



# Planned Wellpath Report

THORNTON A-29-30HN PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#12 THORNTON A-29-30HN (1645'FNL & 404'FWL,SEC.28)
Area	COLORADO	Well	THORNTON A-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON A-29-30HN 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†	90.287	268.815	7301.15	10463.30	1278.00	-10385.13	40°33'07.650"N	104°49'43.402"W	0.00	
17525.00†	90.287	268.815	7300.65	10562.36	1275.94	-10485.10	40°33'07.629"N	104°49'44.697"W	0.00	
17625.00†	90.287	268.815	7300.15	10661.41	1273.87	-10585.08	40°33'07.608"N	104°49'45.992"W	0.00	
17725.00†	90.287	268.815	7299.65	10760.47	1271.80	-10685.06	40°33'07.587"N	104°49'47.288"W	0.00	
17825.00†	90.287	268.815	7299.15	10859.52	1269.73	-10785.04	40°33'07.566"N	104°49'48.583"W	0.00	
17854.51	90.287	268.815	7299.00 <sup>2</sup>	10888.75	1269.12	-10814.53	40°33'07.560"N	104°49'48.965"W	0.00	End of Tangent

## HOLE & CASING SECTIONS - Ref Wellbore: THORNTON A-29-30HN PWB Ref Wellpath: THORNTON A-29-30HN 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	1526.75	0.00	0.00	215.10	-35.61
9.625in Casing Surface	25.00	1550.00	1525.00	25.00	1526.75	0.00	0.00	215.10	-35.61
8in Open Hole	1550.00	17854.51	16304.51	1526.75	N/A	215.10	-35.61	N/A	N/A

# Planned Wellpath Report

THORNTON A-29-30HN PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#12 THORNTON A-29-30HN (1645'FNL & 404'FWL,SEC.28)
Area	COLORADO	Well	THORNTON A-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON A-29-30HN 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 A-29-30HN BHL PLAT (160'FNL & 470'FWL,SEC.30)	17854.51	7299.00	1269.12	-10814.53	3186107.03	1444673.74	40°33'07.560"N	104°49'48.965"W	point
1) THORNTON A-29-30HN LP PLAT (160'FNL & 470'FEL,SEC.29)	7859.71	7349.00	1475.88	-822.00	3196097.27	1444960.34	40°33'09.626"N	104°47'39.516"W	point
SEC.28-T07N-R66W HDL (460)		7900.00	0.00	0.00	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.29-T07N-R66W HDL (460)		7900.00	0.00	0.00	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.30-T07N-R66W HDL (460)		7900.00	0.00	0.00	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.28-T07N-R66W		8000.00	0.00	0.00	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.29-T07N-R66W		8000.00	0.00	0.00	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.30-T07N-R66W		8000.00	0.00	0.00	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon

## SURVEY PROGRAM - Ref Wellbore: THORNTON A-29-30HN PWB Ref Wellpath: THORNTON A-29-30HN 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 A-29-30HN PWB
1550.00	17854.51	BHI AutoTrak Curve (Short)		THORNTON A-29-30HN PWB

# Planned Wellpath Report

THORNTON A-29-30HN PWP (REV-A.0)

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#12 THORNTON A-29-30HN (1645'FNL & 404'FWL,SEC.28)
Area	COLORADO	Well	THORNTON A-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON A-29-30HN PWB
Facility	SEC.28-T07N-R66W		

## DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
25.00	0.000	350.600	25.00	Tie On
300.00	0.000	350.600	300.00	End of Tangent
999.34	13.987	350.600	992.42	End of Build
6816.98	13.987	350.600	6637.57	End of Tangent
6956.85	0.000	268.815	6776.05	End of Drop
7859.71	90.287	268.815	7349.00	End of Build
17854.51	90.287	268.815	7299.00	End of Tangent