

Planned Wellpath Report

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

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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 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 1:41:22 PM
Convergence at slot	0.46° East	Database/Source file	Denver/THORNTON_E-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	-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°

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

WELLPATH DATA (185 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	339.225	0.00	0.00	0.00	0.00	40°32'54.434"N	104°47'28.892"W	0.00	
25.00	0.000	339.225	25.00	0.00	0.00	0.00	40°32'54.434"N	104°47'28.892"W	0.00	Tie On
125.00†	0.000	339.225	125.00	0.00	0.00	0.00	40°32'54.434"N	104°47'28.892"W	0.00	
225.00†	0.000	339.225	225.00	0.00	0.00	0.00	40°32'54.434"N	104°47'28.892"W	0.00	
300.00	0.000	339.225	300.00	0.00	0.00	0.00	40°32'54.434"N	104°47'28.892"W	0.00	End of Tangent
325.00†	0.500	339.225	325.00	0.04	0.10	-0.04	40°32'54.435"N	104°47'28.893"W	2.00	
425.00†	2.500	339.225	424.96	1.09	2.55	-0.97	40°32'54.460"N	104°47'28.905"W	2.00	
525.00†	4.500	339.225	524.77	3.51	8.26	-3.13	40°32'54.516"N	104°47'28.933"W	2.00	
625.00†	6.500	339.225	624.30	7.33	17.22	-6.53	40°32'54.605"N	104°47'28.977"W	2.00	
647.97	6.959	339.225	647.11	8.40	19.73	-7.49	40°32'54.629"N	104°47'28.989"W	2.00	End of Build
725.00†	6.959	339.225	723.58	12.11	28.46	-10.80	40°32'54.716"N	104°47'29.032"W	0.00	
825.00†	6.959	339.225	822.84	16.94	39.79	-15.09	40°32'54.828"N	104°47'29.088"W	0.00	
925.00†	6.959	339.225	922.10	21.76	51.12	-19.39	40°32'54.940"N	104°47'29.144"W	0.00	
1025.00†	6.959	339.225	1021.37	26.58	62.45	-23.69	40°32'55.051"N	104°47'29.199"W	0.00	
1125.00†	6.959	339.225	1120.63	31.40	73.78	-27.99	40°32'55.163"N	104°47'29.255"W	0.00	
1225.00†	6.959	339.225	1219.89	36.22	85.11	-32.29	40°32'55.275"N	104°47'29.311"W	0.00	
1325.00†	6.959	339.225	1319.16	41.04	96.43	-36.58	40°32'55.387"N	104°47'29.366"W	0.00	
1425.00†	6.959	339.225	1418.42	45.87	107.76	-40.88	40°32'55.499"N	104°47'29.422"W	0.00	
1525.00†	6.959	339.225	1517.68	50.69	119.09	-45.18	40°32'55.611"N	104°47'29.478"W	0.00	
1625.00†	6.959	339.225	1616.95	55.51	130.42	-49.48	40°32'55.723"N	104°47'29.533"W	0.00	
1725.00†	6.959	339.225	1716.21	60.33	141.75	-53.77	40°32'55.835"N	104°47'29.589"W	0.00	
1825.00†	6.959	339.225	1815.47	65.15	153.08	-58.07	40°32'55.947"N	104°47'29.645"W	0.00	
1925.00†	6.959	339.225	1914.74	69.98	164.41	-62.37	40°32'56.059"N	104°47'29.700"W	0.00	
2025.00†	6.959	339.225	2014.00	74.80	175.74	-66.67	40°32'56.171"N	104°47'29.756"W	0.00	
2125.00†	6.959	339.225	2113.26	79.62	187.06	-70.96	40°32'56.283"N	104°47'29.812"W	0.00	
2225.00†	6.959	339.225	2212.53	84.44	198.39	-75.26	40°32'56.395"N	104°47'29.867"W	0.00	
2325.00†	6.959	339.225	2311.79	89.26	209.72	-79.56	40°32'56.507"N	104°47'29.923"W	0.00	
2425.00†	6.959	339.225	2411.05	94.09	221.05	-83.86	40°32'56.619"N	104°47'29.979"W	0.00	
2525.00†	6.959	339.225	2510.32	98.91	232.38	-88.16	40°32'56.731"N	104°47'30.034"W	0.00	
2625.00†	6.959	339.225	2609.58	103.73	243.71	-92.45	40°32'56.843"N	104°47'30.090"W	0.00	

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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 PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (185 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2725.00†	6.959	339.225	2708.84	108.55	255.04	-96.75	40°32'56.955"N	104°47'30.146"W	0.00	
2825.00†	6.959	339.225	2808.11	113.37	266.37	-101.05	40°32'57.066"N	104°47'30.201"W	0.00	
2925.00†	6.959	339.225	2907.37	118.19	277.69	-105.35	40°32'57.178"N	104°47'30.257"W	0.00	
3025.00†	6.959	339.225	3006.63	123.02	289.02	-109.64	40°32'57.290"N	104°47'30.313"W	0.00	
3125.00†	6.959	339.225	3105.89	127.84	300.35	-113.94	40°32'57.402"N	104°47'30.368"W	0.00	
3225.00†	6.959	339.225	3205.16	132.66	311.68	-118.24	40°32'57.514"N	104°47'30.424"W	0.00	
3325.00†	6.959	339.225	3304.42	137.48	323.01	-122.54	40°32'57.626"N	104°47'30.480"W	0.00	
3425.00†	6.959	339.225	3403.68	142.30	334.34	-126.83	40°32'57.738"N	104°47'30.535"W	0.00	
3525.00†	6.959	339.225	3502.95	147.13	345.67	-131.13	40°32'57.850"N	104°47'30.591"W	0.00	
3625.00†	6.959	339.225	3602.21	151.95	357.00	-135.43	40°32'57.962"N	104°47'30.647"W	0.00	
3725.00†	6.959	339.225	3701.47	156.77	368.32	-139.73	40°32'58.074"N	104°47'30.702"W	0.00	
3825.00†	6.959	339.225	3800.74	161.59	379.65	-144.03	40°32'58.186"N	104°47'30.758"W	0.00	
3925.00†	6.959	339.225	3900.00	166.41	390.98	-148.32	40°32'58.298"N	104°47'30.814"W	0.00	
4025.00†	6.959	339.225	3999.26	171.23	402.31	-152.62	40°32'58.410"N	104°47'30.869"W	0.00	
4125.00†	6.959	339.225	4098.53	176.06	413.64	-156.92	40°32'58.522"N	104°47'30.925"W	0.00	
4225.00†	6.959	339.225	4197.79	180.88	424.97	-161.22	40°32'58.634"N	104°47'30.981"W	0.00	
4325.00†	6.959	339.225	4297.05	185.70	436.30	-165.51	40°32'58.746"N	104°47'31.036"W	0.00	
4425.00†	6.959	339.225	4396.32	190.52	447.63	-169.81	40°32'58.858"N	104°47'31.092"W	0.00	
4525.00†	6.959	339.225	4495.58	195.34	458.95	-174.11	40°32'58.970"N	104°47'31.148"W	0.00	
4625.00†	6.959	339.225	4594.84	200.17	470.28	-178.41	40°32'59.081"N	104°47'31.204"W	0.00	
4725.00†	6.959	339.225	4694.11	204.99	481.61	-182.70	40°32'59.193"N	104°47'31.259"W	0.00	
4825.00†	6.959	339.225	4793.37	209.81	492.94	-187.00	40°32'59.305"N	104°47'31.315"W	0.00	
4925.00†	6.959	339.225	4892.63	214.63	504.27	-191.30	40°32'59.417"N	104°47'31.371"W	0.00	
5025.00†	6.959	339.225	4991.90	219.45	515.60	-195.60	40°32'59.529"N	104°47'31.426"W	0.00	
5125.00†	6.959	339.225	5091.16	224.28	526.93	-199.90	40°32'59.641"N	104°47'31.482"W	0.00	
5225.00†	6.959	339.225	5190.42	229.10	538.26	-204.19	40°32'59.753"N	104°47'31.538"W	0.00	
5325.00†	6.959	339.225	5289.69	233.92	549.58	-208.49	40°32'59.865"N	104°47'31.593"W	0.00	
5425.00†	6.959	339.225	5388.95	238.74	560.91	-212.79	40°32'59.977"N	104°47'31.649"W	0.00	
5525.00†	6.959	339.225	5488.21	243.56	572.24	-217.09	40°33'00.089"N	104°47'31.705"W	0.00	
5625.00†	6.959	339.225	5587.48	248.38	583.57	-221.38	40°33'00.201"N	104°47'31.760"W	0.00	

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Area	COLORADO	Well	THORNTON E-29-30HC
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON E-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†	6.959	339.225	5686.74	253.21	594.90	-225.68	40°33'00.313"N	104°47'31.816"W	0.00	
5825.00†	6.959	339.225	5786.00	258.03	606.23	-229.98	40°33'00.425"N	104°47'31.872"W	0.00	
5925.00†	6.959	339.225	5885.27	262.85	617.56	-234.28	40°33'00.537"N	104°47'31.927"W	0.00	
6025.00†	6.959	339.225	5984.53	267.67	628.89	-238.57	40°33'00.649"N	104°47'31.983"W	0.00	
6125.00†	6.959	339.225	6083.79	272.49	640.22	-242.87	40°33'00.761"N	104°47'32.039"W	0.00	
6225.00†	6.959	339.225	6183.06	277.32	651.54	-247.17	40°33'00.873"N	104°47'32.094"W	0.00	
6325.00†	6.959	339.225	6282.32	282.14	662.87	-251.47	40°33'00.984"N	104°47'32.150"W	0.00	
6425.00†	6.959	339.225	6381.58	286.96	674.20	-255.77	40°33'01.096"N	104°47'32.206"W	0.00	
6525.00†	6.959	339.225	6480.84	291.78	685.53	-260.06	40°33'01.208"N	104°47'32.261"W	0.00	
6625.00†	6.959	339.225	6580.11	296.60	696.86	-264.36	40°33'01.320"N	104°47'32.317"W	0.00	
6725.00†	6.959	339.225	6679.37	301.42	708.19	-268.66	40°33'01.432"N	104°47'32.373"W	0.00	
6825.00†	6.959	339.225	6778.63	306.25	719.52	-272.96	40°33'01.544"N	104°47'32.428"W	0.00	
6828.01	6.959	339.225	6781.62	306.39	719.86	-273.09	40°33'01.548"N	104°47'32.430"W	0.00	End of Tangent
6897.60	0.000	268.814	6851.05	308.07	723.80	-274.58	40°33'01.587"N	104°47'32.449"W	10.00	End of Drop
6925.00†	2.740	268.814	6878.43	308.72	723.79	-275.24	40°33'01.586"N	104°47'32.458"W	10.00	
7025.00†	12.740	268.814	6977.39	322.14	723.51	-288.68	40°33'01.584"N	104°47'32.632"W	10.00	
7125.00†	22.740	268.814	7072.52	352.51	722.88	-319.11	40°33'01.577"N	104°47'33.026"W	10.00	
7225.00†	32.740	268.814	7160.91	398.89	721.92	-365.58	40°33'01.568"N	104°47'33.628"W	10.00	
7325.00†	42.740	268.814	7239.89	459.88	720.65	-426.70	40°33'01.555"N	104°47'34.420"W	10.00	
7425.00†	52.740	268.814	7307.06	533.62	719.12	-500.60	40°33'01.540"N	104°47'35.377"W	10.00	
7525.00†	62.740	268.814	7360.37	617.89	717.38	-585.04	40°33'01.523"N	104°47'36.471"W	10.00	
7625.00†	72.740	268.814	7398.20	710.11	715.46	-677.45	40°33'01.504"N	104°47'37.668"W	10.00	
7725.00†	82.740	268.814	7419.41	807.48	713.44	-775.02	40°33'01.484"N	104°47'38.932"W	10.00	
7799.73	90.213	268.814	7424.00†	881.85	711.90	-849.54	40°33'01.469"N	104°47'39.898"W	10.00	End of Build
7825.00†	90.213	268.814	7423.91	907.06	711.38	-874.81	40°33'01.464"N	104°47'40.225"W	0.00	
7925.00†	90.213	268.814	7423.54	1006.83	709.31	-974.79	40°33'01.443"N	104°47'41.520"W	0.00	
8025.00†	90.213	268.814	7423.16	1106.61	707.24	-1074.76	40°33'01.423"N	104°47'42.815"W	0.00	
8125.00†	90.213	268.814	7422.79	1206.38	705.17	-1174.74	40°33'01.402"N	104°47'44.110"W	0.00	
8225.00†	90.213	268.814	7422.42	1306.15	703.09	-1274.72	40°33'01.382"N	104°47'45.405"W	0.00	
8325.00†	90.213	268.814	7422.05	1405.92	701.02	-1374.70	40°33'01.361"N	104°47'46.701"W	0.00	

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8425.00†	90.213	268.814	7421.68	1505.69	698.95	-1474.67	40°33'01.341"N	104°47'47.996"W	0.00	
8525.00†	90.213	268.814	7421.31	1605.47	696.88	-1574.65	40°33'01.320"N	104°47'49.291"W	0.00	
8625.00†	90.213	268.814	7420.94	1705.24	694.81	-1674.63	40°33'01.300"N	104°47'50.586"W	0.00	
8725.00†	90.213	268.814	7420.57	1805.01	692.74	-1774.61	40°33'01.279"N	104°47'51.881"W	0.00	
8825.00†	90.213	268.814	7420.20	1904.78	690.67	-1874.59	40°33'01.259"N	104°47'53.176"W	0.00	
8925.00†	90.213	268.814	7419.82	2004.56	688.60	-1974.56	40°33'01.238"N	104°47'54.471"W	0.00	
9025.00†	90.213	268.814	7419.45	2104.33	686.53	-2074.54	40°33'01.217"N	104°47'55.766"W	0.00	
9125.00†	90.213	268.814	7419.08	2204.10	684.46	-2174.52	40°33'01.197"N	104°47'57.062"W	0.00	
9225.00†	90.213	268.814	7418.71	2303.87	682.39	-2274.50	40°33'01.176"N	104°47'58.357"W	0.00	
9325.00†	90.213	268.814	7418.34	2403.64	680.32	-2374.48	40°33'01.156"N	104°47'59.652"W	0.00	
9425.00†	90.213	268.814	7417.97	2503.42	678.25	-2474.45	40°33'01.135"N	104°48'00.947"W	0.00	
9525.00†	90.213	268.814	7417.60	2603.19	676.18	-2574.43	40°33'01.115"N	104°48'02.242"W	0.00	
9625.00†	90.213	268.814	7417.23	2702.96	674.11	-2674.41	40°33'01.094"N	104°48'03.537"W	0.00	
9725.00†	90.213	268.814	7416.85	2802.73	672.04	-2774.39	40°33'01.074"N	104°48'04.832"W	0.00	
9825.00†	90.213	268.814	7416.48	2902.51	669.97	-2874.36	40°33'01.053"N	104°48'06.128"W	0.00	
9925.00†	90.213	268.814	7416.11	3002.28	667.90	-2974.34	40°33'01.032"N	104°48'07.423"W	0.00	
10025.00†	90.213	268.814	7415.74	3102.05	665.83	-3074.32	40°33'01.012"N	104°48'08.718"W	0.00	
10125.00†	90.213	268.814	7415.37	3201.82	663.76	-3174.30	40°33'00.991"N	104°48'10.013"W	0.00	
10225.00†	90.213	268.814	7415.00	3301.60	661.69	-3274.28	40°33'00.971"N	104°48'11.308"W	0.00	
10325.00†	90.213	268.814	7414.63	3401.37	659.62	-3374.25	40°33'00.950"N	104°48'12.603"W	0.00	
10425.00†	90.213	268.814	7414.26	3501.14	657.55	-3474.23	40°33'00.929"N	104°48'13.898"W	0.00	
10525.00†	90.213	268.814	7413.89	3600.91	655.48	-3574.21	40°33'00.909"N	104°48'15.193"W	0.00	
10625.00†	90.213	268.814	7413.51	3700.68	653.41	-3674.19	40°33'00.888"N	104°48'16.489"W	0.00	
10725.00†	90.213	268.814	7413.14	3800.46	651.34	-3774.17	40°33'00.868"N	104°48'17.784"W	0.00	
10825.00†	90.213	268.814	7412.77	3900.23	649.27	-3874.14	40°33'00.847"N	104°48'19.079"W	0.00	
10925.00†	90.213	268.814	7412.40	4000.00	647.20	-3974.12	40°33'00.826"N	104°48'20.374"W	0.00	
11025.00†	90.213	268.814	7412.03	4099.77	645.13	-4074.10	40°33'00.806"N	104°48'21.669"W	0.00	
11125.00†	90.213	268.814	7411.66	4199.55	643.06	-4174.08	40°33'00.785"N	104°48'22.964"W	0.00	
11225.00†	90.213	268.814	7411.29	4299.32	640.99	-4274.06	40°33'00.765"N	104°48'24.259"W	0.00	
11325.00†	90.213	268.814	7410.92	4399.09	638.92	-4374.03	40°33'00.744"N	104°48'25.555"W	0.00	

Planned Wellpath Report

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

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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 PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (185 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11425.00†	90.213	268.814	7410.55	4498.86	636.85	-4474.01	40°33'00.723"N	104°48'26.850"W	0.00	
11525.00†	90.213	268.814	7410.17	4598.63	634.78	-4573.99	40°33'00.703"N	104°48'28.145"W	0.00	
11625.00†	90.213	268.814	7409.80	4698.41	632.71	-4673.97	40°33'00.682"N	104°48'29.440"W	0.00	
11725.00†	90.213	268.814	7409.43	4798.18	630.64	-4773.94	40°33'00.661"N	104°48'30.735"W	0.00	
11825.00†	90.213	268.814	7409.06	4897.95	628.57	-4873.92	40°33'00.641"N	104°48'32.030"W	0.00	
11925.00†	90.213	268.814	7408.69	4997.72	626.50	-4973.90	40°33'00.620"N	104°48'33.325"W	0.00	
12025.00†	90.213	268.814	7408.32	5097.50	624.43	-5073.88	40°33'00.599"N	104°48'34.620"W	0.00	
12125.00†	90.213	268.814	7407.95	5197.27	622.36	-5173.86	40°33'00.579"N	104°48'35.916"W	0.00	
12225.00†	90.213	268.814	7407.58	5297.04	620.29	-5273.83	40°33'00.558"N	104°48'37.211"W	0.00	
12325.00†	90.213	268.814	7407.21	5396.81	618.22	-5373.81	40°33'00.537"N	104°48'38.506"W	0.00	
12425.00†	90.213	268.814	7406.83	5496.58	616.15	-5473.79	40°33'00.517"N	104°48'39.801"W	0.00	
12525.00†	90.213	268.814	7406.46	5596.36	614.08	-5573.77	40°33'00.496"N	104°48'41.096"W	0.00	
12625.00†	90.213	268.814	7406.09	5696.13	612.01	-5673.75	40°33'00.475"N	104°48'42.391"W	0.00	
12725.00†	90.213	268.814	7405.72	5795.90	609.93	-5773.72	40°33'00.455"N	104°48'43.686"W	0.00	
12825.00†	90.213	268.814	7405.35	5895.67	607.86	-5873.70	40°33'00.434"N	104°48'44.981"W	0.00	
12925.00†	90.213	268.814	7404.98	5995.45	605.79	-5973.68	40°33'00.413"N	104°48'46.277"W	0.00	
13025.00†	90.213	268.814	7404.61	6095.22	603.72	-6073.66	40°33'00.393"N	104°48'47.572"W	0.00	
13125.00†	90.213	268.814	7404.24	6194.99	601.65	-6173.63	40°33'00.372"N	104°48'48.867"W	0.00	
13225.00†	90.213	268.814	7403.87	6294.76	599.58	-6273.61	40°33'00.351"N	104°48'50.162"W	0.00	
13325.00†	90.213	268.814	7403.49	6394.53	597.51	-6373.59	40°33'00.331"N	104°48'51.457"W	0.00	
13425.00†	90.213	268.814	7403.12	6494.31	595.44	-6473.57	40°33'00.310"N	104°48'52.752"W	0.00	
13525.00†	90.213	268.814	7402.75	6594.08	593.37	-6573.55	40°33'00.289"N	104°48'54.047"W	0.00	
13625.00†	90.213	268.814	7402.38	6693.85	591.30	-6673.52	40°33'00.268"N	104°48'55.342"W	0.00	
13725.00†	90.213	268.814	7402.01	6793.62	589.23	-6773.50	40°33'00.248"N	104°48'56.638"W	0.00	
13825.00†	90.213	268.814	7401.64	6893.40	587.16	-6873.48	40°33'00.227"N	104°48'57.933"W	0.00	
13925.00†	90.213	268.814	7401.27	6993.17	585.09	-6973.46	40°33'00.206"N	104°48'59.228"W	0.00	
14025.00†	90.213	268.814	7400.90	7092.94	583.02	-7073.44	40°33'00.185"N	104°49'00.523"W	0.00	
14125.00†	90.213	268.814	7400.53	7192.71	580.95	-7173.41	40°33'00.165"N	104°49'01.818"W	0.00	
14225.00†	90.213	268.814	7400.15	7292.49	578.88	-7273.39	40°33'00.144"N	104°49'03.113"W	0.00	
14325.00†	90.213	268.814	7399.78	7392.26	576.81	-7373.37	40°33'00.123"N	104°49'04.408"W	0.00	

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

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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 PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (185 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14425.00†	90.213	268.814	7399.41	7492.03	574.74	-7473.35	40°33'00.102"N	104°49'05.703"W	0.00	
14525.00†	90.213	268.814	7399.04	7591.80	572.67	-7573.33	40°33'00.082"N	104°49'06.999"W	0.00	
14625.00†	90.213	268.814	7398.67	7691.57	570.60	-7673.30	40°33'00.061"N	104°49'08.294"W	0.00	
14725.00†	90.213	268.814	7398.30	7791.35	568.53	-7773.28	40°33'00.040"N	104°49'09.589"W	0.00	
14825.00†	90.213	268.814	7397.93	7891.12	566.46	-7873.26	40°33'00.019"N	104°49'10.884"W	0.00	
14925.00†	90.213	268.814	7397.56	7990.89	564.39	-7973.24	40°32'59.999"N	104°49'12.179"W	0.00	
15025.00†	90.213	268.814	7397.19	8090.66	562.32	-8073.21	40°32'59.978"N	104°49'13.474"W	0.00	
15125.00†	90.213	268.814	7396.81	8190.44	560.25	-8173.19	40°32'59.957"N	104°49'14.769"W	0.00	
15225.00†	90.213	268.814	7396.44	8290.21	558.18	-8273.17	40°32'59.936"N	104°49'16.064"W	0.00	
15325.00†	90.213	268.814	7396.07	8389.98	556.11	-8373.15	40°32'59.915"N	104°49'17.360"W	0.00	
15425.00†	90.213	268.814	7395.70	8489.75	554.04	-8473.13	40°32'59.895"N	104°49'18.655"W	0.00	
15525.00†	90.213	268.814	7395.33	8589.52	551.97	-8573.10	40°32'59.874"N	104°49'19.950"W	0.00	
15625.00†	90.213	268.814	7394.96	8689.30	549.90	-8673.08	40°32'59.853"N	104°49'21.245"W	0.00	
15725.00†	90.213	268.814	7394.59	8789.07	547.83	-8773.06	40°32'59.832"N	104°49'22.540"W	0.00	
15825.00†	90.213	268.814	7394.22	8888.84	545.76	-8873.04	40°32'59.811"N	104°49'23.835"W	0.00	
15925.00†	90.213	268.814	7393.85	8988.61	543.69	-8973.02	40°32'59.791"N	104°49'25.130"W	0.00	
16025.00†	90.213	268.814	7393.47	9088.39	541.62	-9072.99	40°32'59.770"N	104°49'26.425"W	0.00	
16125.00†	90.213	268.814	7393.10	9188.16	539.55	-9172.97	40°32'59.749"N	104°49'27.720"W	0.00	
16225.00†	90.213	268.814	7392.73	9287.93	537.48	-9272.95	40°32'59.728"N	104°49'29.016"W	0.00	
16325.00†	90.213	268.814	7392.36	9387.70	535.41	-9372.93	40°32'59.707"N	104°49'30.311"W	0.00	
16425.00†	90.213	268.814	7391.99	9487.47	533.34	-9472.90	40°32'59.687"N	104°49'31.606"W	0.00	
16525.00†	90.213	268.814	7391.62	9587.25	531.27	-9572.88	40°32'59.666"N	104°49'32.901"W	0.00	
16625.00†	90.213	268.814	7391.25	9687.02	529.20	-9672.86	40°32'59.645"N	104°49'34.196"W	0.00	
16725.00†	90.213	268.814	7390.88	9786.79	527.13	-9772.84	40°32'59.624"N	104°49'35.491"W	0.00	
16825.00†	90.213	268.814	7390.51	9886.56	525.06	-9872.82	40°32'59.603"N	104°49'36.786"W	0.00	
16925.00†	90.213	268.814	7390.13	9986.34	522.99	-9972.79	40°32'59.582"N	104°49'38.081"W	0.00	
17025.00†	90.213	268.814	7389.76	10086.11	520.92	-10072.77	40°32'59.561"N	104°49'39.377"W	0.00	
17125.00†	90.213	268.814	7389.39	10185.88	518.85	-10172.75	40°32'59.541"N	104°49'40.672"W	0.00	
17225.00†	90.213	268.814	7389.02	10285.65	516.77	-10272.73	40°32'59.520"N	104°49'41.967"W	0.00	
17325.00†	90.213	268.814	7388.65	10385.42	514.70	-10372.71	40°32'59.499"N	104°49'43.262"W	0.00	

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

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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 PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (185 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17425.00†	90.213	268.814	7388.28	10485.20	512.63	-10472.68	40°32'59.478"N	104°49'44.557"W	0.00	
17525.00†	90.213	268.814	7387.91	10584.97	510.56	-10572.66	40°32'59.457"N	104°49'45.852"W	0.00	
17625.00†	90.213	268.814	7387.54	10684.74	508.49	-10672.64	40°32'59.436"N	104°49'47.147"W	0.00	
17725.00†	90.213	268.814	7387.17	10784.51	506.42	-10772.62	40°32'59.415"N	104°49'48.442"W	0.00	
17769.51	90.213	268.814	7387.00 ²	10828.92	505.50	-10817.12	40°32'59.406"N	104°49'49.019"W	0.00	End of Tangent

HOLE & CASING SECTIONS - Ref Wellbore: THORNTON E-29-30HC PWB Ref Wellpath: THORNTON E-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	1542.50	0.00	0.00	121.92	-46.25
9.625in Casing Surface	25.00	1550.00	1525.00	25.00	1542.50	0.00	0.00	121.92	-46.25
8in Open Hole	1550.00	17769.51	16219.51	1542.50	7387.00	121.92	-46.25	505.50	-10817.12

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

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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 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 E-29-30HC BHL PLAT (985'FNL & 470'FWL,SEC.30)	17769.51	7387.00	505.50	-10817.12	3186109.09	1443848.57	40°32'59.406"N	104°49'49.019"W	point
1) THORNTON E-29-30HC LP PLAT (985'FNL & 470'FEL,SEC.29)	7799.73	7424.00	711.90	-849.54	3196074.39	1444134.61	40°33'01.469"N	104°47'39.898"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

SURVEY PROGRAM - Ref Wellbore: THORNTON E-29-30HC PWB Ref Wellpath: THORNTON E-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 E-29-30HC PWB
1550.00	22819.75	BHI AutoTrak Curve (Short)		THORNTON E-29-30HC PWB

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

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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 PWB
Facility	SEC.28-T07N-R66W		

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
25.00	0.000	339.225	25.00	Tie On
300.00	0.000	339.225	300.00	End of Tangent
647.97	6.959	339.225	647.11	End of Build
6828.01	6.959	339.225	6781.62	End of Tangent
6897.60	0.000	268.814	6851.05	End of Drop
7799.73	90.213	268.814	7424.00	End of Build
17769.51	90.213	268.814	7387.00	End of Tangent