

# BAYSWATER E & P LLC

Location: COLORADO Slot: SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL,SEC.28)

Field: WELD COUNTY (NAD83/TRUE NORTH) Well: THORNTON F-29-30HN

Facility: SEC.28-T07N-R66W Wellbore: THORNTON F-29-30HN PWB

Plot reference wellpath is THORNTON F-29-30HN PWP (REV-A.0)  
True vertical depths are referenced to TRUE 38 (4909'GL+25KB @ 4934'99KB) (RWB)  
Measured depths are referenced to TRUE 38 (4909'GL+25KB @ 4934'99KB) (RWB)  
TRUE 38 (4909'GL+25KB @ 4934'99KB) (RWB) to Mean Sea Level: 4934 feet  
Mean Sea Level to Ground level (At Slot: SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL,SEC.28)): 0 feet  
Coordinates are in feet referenced to Slot  
Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet  
North Reference: True north  
Scale: True distance  
Depths are in feet  
Created by: bushjmh on 2018-04-12  
Database: Denver

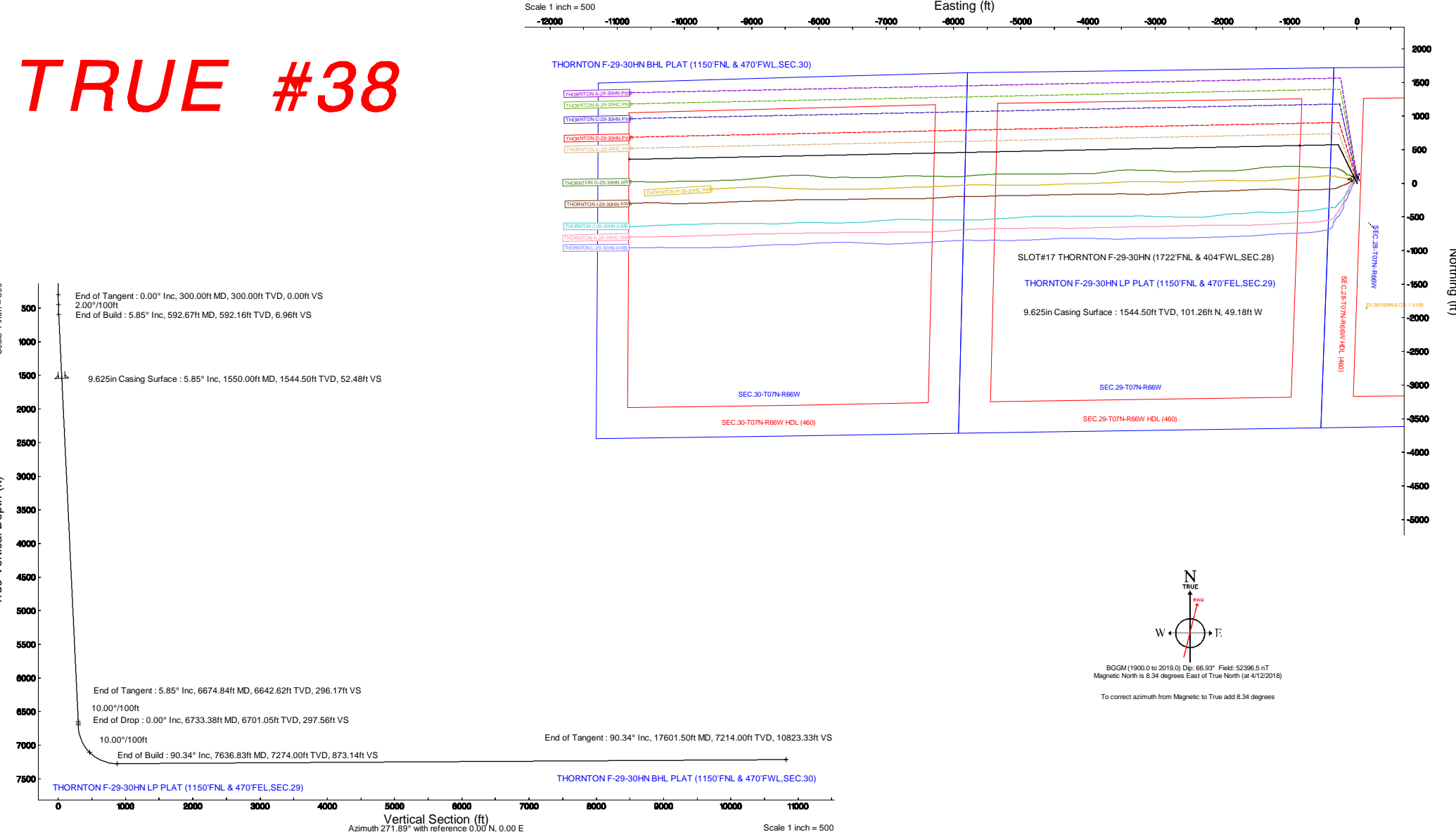
Location Information						
Facility Name		Grid East (US F)		Grid North (US F)	Latitude	Longitude
SEC.28-T07N-R66W		318881.880		1443415.880	40°32'55.046"N	104°47'29.504"W
Site	Local N (F)	Local E (F)	Grid East (US F)	Grid North (US F)	Latitude	Longitude
SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL,SEC.28)	-77.56	-46.86	318882.134	1443415.871	40°32'54.280"N	104°47'28.907"W
TRUE 38 (4909'GL+25KB @ 4934'99KB) (RWB) to Ground level (At Slot: SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL,SEC.28))						4934'
Mean Sea Level to Ground level (At Slot: SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL,SEC.28))						0'
TRUE 38 (4909'GL+25KB @ 4934'99KB) (RWB) to Mean Sea Level						-4934'

Targets									
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US F)	Grid North (US F)	Latitude	Longitude	
THORNTON F-29-30HN BHL PLAT (1150'FNL & 470'FWL,SEC.30)	17601.50	7214.00	356.13	-10817.47	3188103.51	1443883.54	40°32'57.775"N	104°46'49.035"W	
THORNTON F-29-30HN LP PLAT (1150'FNL & 470'FWL,SEC.28)	7636.83	7214.00	356.16	-855.11	3188885.55	1443885.17	40°32'58.834"N	104°47'28.971"W	
SEC.28-T07N-R66W HDL (460)	7636.83	77.24	2.50	3188891.02	1443481.12	40°32'58.043"N	104°47'28.861"W		
SEC.29-T07N-R66W HDL (460)	7636.83	77.24	2.50	3188891.02	1443481.12	40°32'58.043"N	104°47'28.861"W		
SEC.30-T07N-R66W HDL (460)	7636.83	77.24	2.50	3188891.02	1443481.12	40°32'58.043"N	104°47'28.861"W		
SEC.28-T07N-R66W	8000.00	77.24	2.50	3188891.02	1443481.12	40°32'58.043"N	104°47'28.861"W		
SEC.29-T07N-R66W	8000.00	77.24	2.50	3188891.02	1443481.12	40°32'58.043"N	104°47'28.861"W		
SEC.30-T07N-R66W	8000.00	77.24	2.50	3188891.02	1443481.12	40°32'58.043"N	104°47'28.861"W		
Survey Program									
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment		Wellbore			
25.00	1550.00	BHI NewTrak	BHI NewTrak (Standard)	THORNTON F-29-30HN PWB		THORNTON F-29-30HN PWB			
1550.00	17601.50	BHI AutoTrak Curve	BHI AutoTrak Curve (Short)	THORNTON F-29-30HN PWB		THORNTON F-29-30HN PWB			

Well Profile Data									
Design Comment	MD (ft)	Inc. (°)	Az. (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US F)	Grid North (US F)	Latitude
Tie On	25.00	0.000	334.095	25.00	0.00	0.00	0.00	0.00	0.00
End of Tangent	300.00	0.000	334.095	300.00	0.00	0.00	0.00	0.00	0.00
End of Build	592.67	5.853	334.095	592.16	13.44	-6.53	2.00	6.96	
End of Tangent	6674.84	5.853	334.095	6642.62	571.39	-277.52	0.00	296.17	
End of Drop	6733.38	0.000	268.815	6701.05	574.08	-278.82	10.00	297.56	
End of Build	7636.83	90.345	268.815	7274.00	562.16	-855.11	10.00	873.14	
End of Tangent	17601.50	90.345	268.815	7214.00	356.13	-10817.47	0.00	10823.33	
Bottom Hole Location									
MD (ft)	Inc. (°)	Az. (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US F)	Grid North (US F)	Latitude	Longitude
17601.50	90.345	268.815	7214.00	356.13	-10817.47	3188103.51	1443883.54	40°32'57.775"N	104°46'49.035"W



## TRUE #38



# Planned Wellpath Report

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

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL,SEC.28)
Area	COLORADO	Well	THORNTON F-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON F-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 1:42:57 PM
Convergence at slot	0.46° East	Database/Source file	Denver/THORNTON_F-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	-77.56	46.66	3196929.13	1443413.87	40°32'54.280"N	104°47'28.900"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#17 THORNTON F-29-30HN (1722'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	271.89°

# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL,SEC.28)
Area	COLORADO	Well	THORNTON F-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON F-29-30HN PWB
Facility	SEC.28-T07N-R66W		

## WELLPATH DATA (183 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	334.095	0.00	0.00	0.00	0.00	40°32'54.280"N	104°47'28.900"W	0.00	
25.00	0.000	334.095	25.00	0.00	0.00	0.00	40°32'54.280"N	104°47'28.900"W	0.00	Tie On
125.00†	0.000	334.095	125.00	0.00	0.00	0.00	40°32'54.280"N	104°47'28.900"W	0.00	
225.00†	0.000	334.095	225.00	0.00	0.00	0.00	40°32'54.280"N	104°47'28.900"W	0.00	
300.00	0.000	334.095	300.00	0.00	0.00	0.00	40°32'54.280"N	104°47'28.900"W	0.00	End of Tangent
325.00†	0.500	334.095	325.00	0.05	0.10	-0.05	40°32'54.281"N	104°47'28.900"W	2.00	
425.00†	2.500	334.095	424.96	1.27	2.45	-1.19	40°32'54.304"N	104°47'28.915"W	2.00	
525.00†	4.500	334.095	524.77	4.12	7.94	-3.86	40°32'54.358"N	104°47'28.950"W	2.00	
592.67	5.853	334.095	592.16	6.96	13.44	-6.53	40°32'54.412"N	104°47'28.984"W	2.00	End of Build
625.00†	5.853	334.095	624.32	8.50	16.40	-7.97	40°32'54.442"N	104°47'29.003"W	0.00	
725.00†	5.853	334.095	723.80	13.26	25.58	-12.42	40°32'54.532"N	104°47'29.061"W	0.00	
825.00†	5.853	334.095	823.28	18.01	34.75	-16.88	40°32'54.623"N	104°47'29.118"W	0.00	
925.00†	5.853	334.095	922.76	22.77	43.92	-21.33	40°32'54.714"N	104°47'29.176"W	0.00	
1025.00†	5.853	334.095	1022.24	27.52	53.10	-25.79	40°32'54.804"N	104°47'29.234"W	0.00	
1125.00†	5.853	334.095	1121.72	32.28	62.27	-30.24	40°32'54.895"N	104°47'29.291"W	0.00	
1225.00†	5.853	334.095	1221.19	37.03	71.44	-34.70	40°32'54.986"N	104°47'29.349"W	0.00	
1325.00†	5.853	334.095	1320.67	41.79	80.62	-39.15	40°32'55.076"N	104°47'29.407"W	0.00	
1425.00†	5.853	334.095	1420.15	46.54	89.79	-43.61	40°32'55.167"N	104°47'29.465"W	0.00	
1525.00†	5.853	334.095	1519.63	51.30	98.96	-48.07	40°32'55.258"N	104°47'29.522"W	0.00	
1625.00†	5.853	334.095	1619.11	56.05	108.14	-52.52	40°32'55.348"N	104°47'29.580"W	0.00	
1725.00†	5.853	334.095	1718.59	60.81	117.31	-56.98	40°32'55.439"N	104°47'29.638"W	0.00	
1825.00†	5.853	334.095	1818.07	65.56	126.49	-61.43	40°32'55.529"N	104°47'29.695"W	0.00	
1925.00†	5.853	334.095	1917.54	70.32	135.66	-65.89	40°32'55.620"N	104°47'29.753"W	0.00	
2025.00†	5.853	334.095	2017.02	75.07	144.83	-70.34	40°32'55.711"N	104°47'29.811"W	0.00	
2125.00†	5.853	334.095	2116.50	79.83	154.01	-74.80	40°32'55.801"N	104°47'29.869"W	0.00	
2225.00†	5.853	334.095	2215.98	84.58	163.18	-79.25	40°32'55.892"N	104°47'29.926"W	0.00	
2325.00†	5.853	334.095	2315.46	89.34	172.35	-83.71	40°32'55.983"N	104°47'29.984"W	0.00	
2425.00†	5.853	334.095	2414.94	94.09	181.53	-88.17	40°32'56.073"N	104°47'30.042"W	0.00	
2525.00†	5.853	334.095	2514.42	98.85	190.70	-92.62	40°32'56.164"N	104°47'30.099"W	0.00	
2625.00†	5.853	334.095	2613.89	103.60	199.88	-97.08	40°32'56.255"N	104°47'30.157"W	0.00	

# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL,SEC.28)
Area	COLORADO	Well	THORNTON F-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON F-29-30HN PWB
Facility	SEC.28-T07N-R66W		

## WELLPATH DATA (183 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2725.00†	5.853	334.095	2713.37	108.36	209.05	-101.53	40°32'56.345"N	104°47'30.215"W	0.00	
2825.00†	5.853	334.095	2812.85	113.11	218.22	-105.99	40°32'56.436"N	104°47'30.273"W	0.00	
2925.00†	5.853	334.095	2912.33	117.87	227.40	-110.44	40°32'56.527"N	104°47'30.330"W	0.00	
3025.00†	5.853	334.095	3011.81	122.62	236.57	-114.90	40°32'56.617"N	104°47'30.388"W	0.00	
3125.00†	5.853	334.095	3111.29	127.38	245.74	-119.35	40°32'56.708"N	104°47'30.446"W	0.00	
3225.00†	5.853	334.095	3210.77	132.13	254.92	-123.81	40°32'56.799"N	104°47'30.503"W	0.00	
3325.00†	5.853	334.095	3310.24	136.89	264.09	-128.27	40°32'56.889"N	104°47'30.561"W	0.00	
3425.00†	5.853	334.095	3409.72	141.64	273.26	-132.72	40°32'56.980"N	104°47'30.619"W	0.00	
3525.00†	5.853	334.095	3509.20	146.40	282.44	-137.18	40°32'57.070"N	104°47'30.677"W	0.00	
3625.00†	5.853	334.095	3608.68	151.15	291.61	-141.63	40°32'57.161"N	104°47'30.734"W	0.00	
3725.00†	5.853	334.095	3708.16	155.91	300.79	-146.09	40°32'57.252"N	104°47'30.792"W	0.00	
3825.00†	5.853	334.095	3807.64	160.66	309.96	-150.54	40°32'57.342"N	104°47'30.850"W	0.00	
3925.00†	5.853	334.095	3907.12	165.42	319.13	-155.00	40°32'57.433"N	104°47'30.907"W	0.00	
4025.00†	5.853	334.095	4006.60	170.17	328.31	-159.45	40°32'57.524"N	104°47'30.965"W	0.00	
4125.00†	5.853	334.095	4106.07	174.93	337.48	-163.91	40°32'57.614"N	104°47'31.023"W	0.00	
4225.00†	5.853	334.095	4205.55	179.68	346.65	-168.36	40°32'57.705"N	104°47'31.081"W	0.00	
4325.00†	5.853	334.095	4305.03	184.44	355.83	-172.82	40°32'57.796"N	104°47'31.138"W	0.00	
4425.00†	5.853	334.095	4404.51	189.19	365.00	-177.28	40°32'57.886"N	104°47'31.196"W	0.00	
4525.00†	5.853	334.095	4503.99	193.94	374.17	-181.73	40°32'57.977"N	104°47'31.254"W	0.00	
4625.00†	5.853	334.095	4603.47	198.70	383.35	-186.19	40°32'58.068"N	104°47'31.311"W	0.00	
4725.00†	5.853	334.095	4702.95	203.45	392.52	-190.64	40°32'58.158"N	104°47'31.369"W	0.00	
4825.00†	5.853	334.095	4802.42	208.21	401.70	-195.10	40°32'58.249"N	104°47'31.427"W	0.00	
4925.00†	5.853	334.095	4901.90	212.96	410.87	-199.55	40°32'58.340"N	104°47'31.485"W	0.00	
5025.00†	5.853	334.095	5001.38	217.72	420.04	-204.01	40°32'58.430"N	104°47'31.542"W	0.00	
5125.00†	5.853	334.095	5100.86	222.47	429.22	-208.46	40°32'58.521"N	104°47'31.600"W	0.00	
5225.00†	5.853	334.095	5200.34	227.23	438.39	-212.92	40°32'58.611"N	104°47'31.658"W	0.00	
5325.00†	5.853	334.095	5299.82	231.98	447.56	-217.38	40°32'58.702"N	104°47'31.716"W	0.00	
5425.00†	5.853	334.095	5399.30	236.74	456.74	-221.83	40°32'58.793"N	104°47'31.773"W	0.00	
5525.00†	5.853	334.095	5498.77	241.49	465.91	-226.29	40°32'58.883"N	104°47'31.831"W	0.00	
5625.00†	5.853	334.095	5598.25	246.25	475.09	-230.74	40°32'58.974"N	104°47'31.889"W	0.00	

# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

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Area	COLORADO	Well	THORNTON F-29-30HN
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5725.00†	5.853	334.095	5697.73	251.00	484.26	-235.20	40°32'59.065"N	104°47'31.946"W	0.00	
5825.00†	5.853	334.095	5797.21	255.76	493.43	-239.65	40°32'59.155"N	104°47'32.004"W	0.00	
5925.00†	5.853	334.095	5896.69	260.51	502.61	-244.11	40°32'59.246"N	104°47'32.062"W	0.00	
6025.00†	5.853	334.095	5996.17	265.27	511.78	-248.56	40°32'59.337"N	104°47'32.120"W	0.00	
6125.00†	5.853	334.095	6095.65	270.02	520.95	-253.02	40°32'59.427"N	104°47'32.177"W	0.00	
6225.00†	5.853	334.095	6195.12	274.78	530.13	-257.48	40°32'59.518"N	104°47'32.235"W	0.00	
6325.00†	5.853	334.095	6294.60	279.53	539.30	-261.93	40°32'59.609"N	104°47'32.293"W	0.00	
6425.00†	5.853	334.095	6394.08	284.29	548.47	-266.39	40°32'59.699"N	104°47'32.350"W	0.00	
6525.00†	5.853	334.095	6493.56	289.04	557.65	-270.84	40°32'59.790"N	104°47'32.408"W	0.00	
6625.00†	5.853	334.095	6593.04	293.80	566.82	-275.30	40°32'59.881"N	104°47'32.466"W	0.00	
6674.84	5.853	334.095	6642.62	296.17	571.39	-277.52	40°32'59.926"N	104°47'32.495"W	0.00	End of Tangent
6725.00†	0.838	334.095	6692.68	297.53	574.03	-278.80	40°32'59.952"N	104°47'32.511"W	10.00	
6733.38	0.000	268.815	6701.05	297.56	574.08	-278.82	40°32'59.952"N	104°47'32.512"W	10.00	End of Drop
6825.00†	9.162	268.815	6792.29	304.86	573.93	-286.13	40°32'59.951"N	104°47'32.606"W	10.00	
6925.00†	19.162	268.815	6889.12	329.26	573.42	-310.56	40°32'59.946"N	104°47'32.923"W	10.00	
7025.00†	29.162	268.815	6980.25	370.08	572.58	-351.44	40°32'59.937"N	104°47'33.452"W	10.00	
7125.00†	39.162	268.815	7062.89	426.09	571.42	-407.51	40°32'59.926"N	104°47'34.178"W	10.00	
7225.00†	49.162	268.815	7134.53	495.57	569.98	-477.07	40°32'59.912"N	104°47'35.080"W	10.00	
7325.00†	59.162	268.815	7193.01	576.42	568.31	-558.02	40°32'59.895"N	104°47'36.128"W	10.00	
7425.00†	69.162	268.815	7236.53	666.18	566.45	-647.89	40°32'59.877"N	104°47'37.292"W	10.00	
7525.00†	79.162	268.815	7263.79	762.12	564.46	-743.95	40°32'59.857"N	104°47'38.537"W	10.00	
7625.00†	89.162	268.815	7273.95	861.33	562.41	-843.29	40°32'59.837"N	104°47'39.824"W	10.00	
7636.83	90.345	268.815	7274.00†	873.14	562.16	-855.11	40°32'59.834"N	104°47'39.977"W	10.00	End of Build
7725.00†	90.345	268.815	7273.47	961.19	560.34	-943.26	40°32'59.816"N	104°47'41.119"W	0.00	
7825.00†	90.345	268.815	7272.87	1061.04	558.27	-1043.24	40°32'59.796"N	104°47'42.414"W	0.00	
7925.00†	90.345	268.815	7272.26	1160.90	556.20	-1143.22	40°32'59.775"N	104°47'43.709"W	0.00	
8025.00†	90.345	268.815	7271.66	1260.75	554.14	-1243.19	40°32'59.755"N	104°47'45.004"W	0.00	
8125.00†	90.345	268.815	7271.06	1360.61	552.07	-1343.17	40°32'59.734"N	104°47'46.299"W	0.00	
8225.00†	90.345	268.815	7270.46	1460.46	550.00	-1443.15	40°32'59.714"N	104°47'47.594"W	0.00	
8325.00†	90.345	268.815	7269.86	1560.32	547.93	-1543.12	40°32'59.693"N	104°47'48.889"W	0.00	

# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL, SEC.28)
Area	COLORADO	Well	THORNTON F-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON F-29-30HN PWB
Facility	SEC.28-T07N-R66W		

## WELLPATH DATA (183 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8425.00†	90.345	268.815	7269.25	1660.17	545.87	-1643.10	40°32'59.673"N	104°47'50.185"W	0.00	
8525.00†	90.345	268.815	7268.65	1760.03	543.80	-1743.08	40°32'59.652"N	104°47'51.480"W	0.00	
8625.00†	90.345	268.815	7268.05	1859.88	541.73	-1843.05	40°32'59.632"N	104°47'52.775"W	0.00	
8725.00†	90.345	268.815	7267.45	1959.73	539.66	-1943.03	40°32'59.611"N	104°47'54.070"W	0.00	
8825.00†	90.345	268.815	7266.85	2059.59	537.60	-2043.01	40°32'59.591"N	104°47'55.365"W	0.00	
8925.00†	90.345	268.815	7266.24	2159.44	535.53	-2142.98	40°32'59.570"N	104°47'56.660"W	0.00	
9025.00†	90.345	268.815	7265.64	2259.30	533.46	-2242.96	40°32'59.550"N	104°47'57.955"W	0.00	
9125.00†	90.345	268.815	7265.04	2359.15	531.39	-2342.94	40°32'59.529"N	104°47'59.250"W	0.00	
9225.00†	90.345	268.815	7264.44	2459.01	529.33	-2442.91	40°32'59.509"N	104°48'00.545"W	0.00	
9325.00†	90.345	268.815	7263.84	2558.86	527.26	-2542.89	40°32'59.488"N	104°48'01.841"W	0.00	
9425.00†	90.345	268.815	7263.23	2658.72	525.19	-2642.87	40°32'59.468"N	104°48'03.136"W	0.00	
9525.00†	90.345	268.815	7262.63	2758.57	523.12	-2742.84	40°32'59.447"N	104°48'04.431"W	0.00	
9625.00†	90.345	268.815	7262.03	2858.43	521.05	-2842.82	40°32'59.427"N	104°48'05.726"W	0.00	
9725.00†	90.345	268.815	7261.43	2958.28	518.99	-2942.80	40°32'59.406"N	104°48'07.021"W	0.00	
9825.00†	90.345	268.815	7260.82	3058.14	516.92	-3042.77	40°32'59.386"N	104°48'08.316"W	0.00	
9925.00†	90.345	268.815	7260.22	3157.99	514.85	-3142.75	40°32'59.365"N	104°48'09.611"W	0.00	
10025.00†	90.345	268.815	7259.62	3257.85	512.78	-3242.73	40°32'59.345"N	104°48'10.906"W	0.00	
10125.00†	90.345	268.815	7259.02	3357.70	510.72	-3342.71	40°32'59.324"N	104°48'12.201"W	0.00	
10225.00†	90.345	268.815	7258.42	3457.55	508.65	-3442.68	40°32'59.303"N	104°48'13.497"W	0.00	
10325.00†	90.345	268.815	7257.81	3557.41	506.58	-3542.66	40°32'59.283"N	104°48'14.792"W	0.00	
10425.00†	90.345	268.815	7257.21	3657.26	504.51	-3642.64	40°32'59.262"N	104°48'16.087"W	0.00	
10525.00†	90.345	268.815	7256.61	3757.12	502.45	-3742.61	40°32'59.242"N	104°48'17.382"W	0.00	
10625.00†	90.345	268.815	7256.01	3856.97	500.38	-3842.59	40°32'59.221"N	104°48'18.677"W	0.00	
10725.00†	90.345	268.815	7255.41	3956.83	498.31	-3942.57	40°32'59.200"N	104°48'19.972"W	0.00	
10825.00†	90.345	268.815	7254.80	4056.68	496.24	-4042.54	40°32'59.180"N	104°48'21.267"W	0.00	
10925.00†	90.345	268.815	7254.20	4156.54	494.18	-4142.52	40°32'59.159"N	104°48'22.562"W	0.00	
11025.00†	90.345	268.815	7253.60	4256.39	492.11	-4242.50	40°32'59.139"N	104°48'23.857"W	0.00	
11125.00†	90.345	268.815	7253.00	4356.25	490.04	-4342.47	40°32'59.118"N	104°48'25.153"W	0.00	
11225.00†	90.345	268.815	7252.39	4456.10	487.97	-4442.45	40°32'59.097"N	104°48'26.448"W	0.00	
11325.00†	90.345	268.815	7251.79	4555.96	485.91	-4542.43	40°32'59.077"N	104°48'27.743"W	0.00	



# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL,SEC.28)
Area	COLORADO	Well	THORNTON F-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON F-29-30HN PWB
Facility	SEC.28-T07N-R66W		

## WELLPATH DATA (183 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11425.00†	90.345	268.815	7251.19	4655.81	483.84	-4642.40	40°32'59.056"N	104°48'29.038"W	0.00	
11525.00†	90.345	268.815	7250.59	4755.66	481.77	-4742.38	40°32'59.036"N	104°48'30.333"W	0.00	
11625.00†	90.345	268.815	7249.99	4855.52	479.70	-4842.36	40°32'59.015"N	104°48'31.628"W	0.00	
11725.00†	90.345	268.815	7249.38	4955.37	477.63	-4942.33	40°32'58.994"N	104°48'32.923"W	0.00	
11825.00†	90.345	268.815	7248.78	5055.23	475.57	-5042.31	40°32'58.974"N	104°48'34.218"W	0.00	
11925.00†	90.345	268.815	7248.18	5155.08	473.50	-5142.29	40°32'58.953"N	104°48'35.513"W	0.00	
12025.00†	90.345	268.815	7247.58	5254.94	471.43	-5242.26	40°32'58.932"N	104°48'36.808"W	0.00	
12125.00†	90.345	268.815	7246.98	5354.79	469.36	-5342.24	40°32'58.912"N	104°48'38.104"W	0.00	
12225.00†	90.345	268.815	7246.37	5454.65	467.30	-5442.22	40°32'58.891"N	104°48'39.399"W	0.00	
12325.00†	90.345	268.815	7245.77	5554.50	465.23	-5542.20	40°32'58.871"N	104°48'40.694"W	0.00	
12425.00†	90.345	268.815	7245.17	5654.36	463.16	-5642.17	40°32'58.850"N	104°48'41.989"W	0.00	
12525.00†	90.345	268.815	7244.57	5754.21	461.09	-5742.15	40°32'58.829"N	104°48'43.284"W	0.00	
12625.00†	90.345	268.815	7243.96	5854.07	459.03	-5842.13	40°32'58.809"N	104°48'44.579"W	0.00	
12725.00†	90.345	268.815	7243.36	5953.92	456.96	-5942.10	40°32'58.788"N	104°48'45.874"W	0.00	
12825.00†	90.345	268.815	7242.76	6053.78	454.89	-6042.08	40°32'58.767"N	104°48'47.169"W	0.00	
12925.00†	90.345	268.815	7242.16	6153.63	452.82	-6142.06	40°32'58.747"N	104°48'48.464"W	0.00	
13025.00†	90.345	268.815	7241.56	6253.48	450.76	-6242.03	40°32'58.726"N	104°48'49.759"W	0.00	
13125.00†	90.345	268.815	7240.95	6353.34	448.69	-6342.01	40°32'58.705"N	104°48'51.055"W	0.00	
13225.00†	90.345	268.815	7240.35	6453.19	446.62	-6441.99	40°32'58.685"N	104°48'52.350"W	0.00	
13325.00†	90.345	268.815	7239.75	6553.05	444.55	-6541.96	40°32'58.664"N	104°48'53.645"W	0.00	
13425.00†	90.345	268.815	7239.15	6652.90	442.48	-6641.94	40°32'58.643"N	104°48'54.940"W	0.00	
13525.00†	90.345	268.815	7238.55	6752.76	440.42	-6741.92	40°32'58.622"N	104°48'56.235"W	0.00	
13625.00†	90.345	268.815	7237.94	6852.61	438.35	-6841.89	40°32'58.602"N	104°48'57.530"W	0.00	
13725.00†	90.345	268.815	7237.34	6952.47	436.28	-6941.87	40°32'58.581"N	104°48'58.825"W	0.00	
13825.00†	90.345	268.815	7236.74	7052.32	434.21	-7041.85	40°32'58.560"N	104°49'00.120"W	0.00	
13925.00†	90.345	268.815	7236.14	7152.18	432.15	-7141.82	40°32'58.540"N	104°49'01.415"W	0.00	
14025.00†	90.345	268.815	7235.54	7252.03	430.08	-7241.80	40°32'58.519"N	104°49'02.711"W	0.00	
14125.00†	90.345	268.815	7234.93	7351.89	428.01	-7341.78	40°32'58.498"N	104°49'04.006"W	0.00	
14225.00†	90.345	268.815	7234.33	7451.74	425.94	-7441.75	40°32'58.477"N	104°49'05.301"W	0.00	
14325.00†	90.345	268.815	7233.73	7551.59	423.88	-7541.73	40°32'58.457"N	104°49'06.596"W	0.00	

# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL, SEC.28)
Area	COLORADO	Well	THORNTON F-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON F-29-30HN PWB
Facility	SEC.28-T07N-R66W		

## WELLPATH DATA (183 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
14425.00†	90.345	268.815	7233.13	7651.45	421.81	-7641.71	40°32'58.436"N	104°49'07.891"W	0.00	
14525.00†	90.345	268.815	7232.52	7751.30	419.74	-7741.68	40°32'58.415"N	104°49'09.186"W	0.00	
14625.00†	90.345	268.815	7231.92	7851.16	417.67	-7841.66	40°32'58.394"N	104°49'10.481"W	0.00	
14725.00†	90.345	268.815	7231.32	7951.01	415.61	-7941.64	40°32'58.374"N	104°49'11.776"W	0.00	
14825.00†	90.345	268.815	7230.72	8050.87	413.54	-8041.62	40°32'58.353"N	104°49'13.071"W	0.00	
14925.00†	90.345	268.815	7230.12	8150.72	411.47	-8141.59	40°32'58.332"N	104°49'14.366"W	0.00	
15025.00†	90.345	268.815	7229.51	8250.58	409.40	-8241.57	40°32'58.311"N	104°49'15.661"W	0.00	
15125.00†	90.345	268.815	7228.91	8350.43	407.34	-8341.55	40°32'58.291"N	104°49'16.957"W	0.00	
15225.00†	90.345	268.815	7228.31	8450.29	405.27	-8441.52	40°32'58.270"N	104°49'18.252"W	0.00	
15325.00†	90.345	268.815	7227.71	8550.14	403.20	-8541.50	40°32'58.249"N	104°49'19.547"W	0.00	
15425.00†	90.345	268.815	7227.11	8650.00	401.13	-8641.48	40°32'58.228"N	104°49'20.842"W	0.00	
15525.00†	90.345	268.815	7226.50	8749.85	399.06	-8741.45	40°32'58.208"N	104°49'22.137"W	0.00	
15625.00†	90.345	268.815	7225.90	8849.71	397.00	-8841.43	40°32'58.187"N	104°49'23.432"W	0.00	
15725.00†	90.345	268.815	7225.30	8949.56	394.93	-8941.41	40°32'58.166"N	104°49'24.727"W	0.00	
15825.00†	90.345	268.815	7224.70	9049.41	392.86	-9041.38	40°32'58.145"N	104°49'26.022"W	0.00	
15925.00†	90.345	268.815	7224.09	9149.27	390.79	-9141.36	40°32'58.124"N	104°49'27.317"W	0.00	
16025.00†	90.345	268.815	7223.49	9249.12	388.73	-9241.34	40°32'58.104"N	104°49'28.612"W	0.00	
16125.00†	90.345	268.815	7222.89	9348.98	386.66	-9341.31	40°32'58.083"N	104°49'29.908"W	0.00	
16225.00†	90.345	268.815	7222.29	9448.83	384.59	-9441.29	40°32'58.062"N	104°49'31.203"W	0.00	
16325.00†	90.345	268.815	7221.69	9548.69	382.52	-9541.27	40°32'58.041"N	104°49'32.498"W	0.00	
16425.00†	90.345	268.815	7221.08	9648.54	380.46	-9641.24	40°32'58.020"N	104°49'33.793"W	0.00	
16525.00†	90.345	268.815	7220.48	9748.40	378.39	-9741.22	40°32'58.000"N	104°49'35.088"W	0.00	
16625.00†	90.345	268.815	7219.88	9848.25	376.32	-9841.20	40°32'57.979"N	104°49'36.383"W	0.00	
16725.00†	90.345	268.815	7219.28	9948.11	374.25	-9941.17	40°32'57.958"N	104°49'37.678"W	0.00	
16825.00†	90.345	268.815	7218.68	10047.96	372.19	-10041.15	40°32'57.937"N	104°49'38.973"W	0.00	
16925.00†	90.345	268.815	7218.07	10147.82	370.12	-10141.13	40°32'57.916"N	104°49'40.268"W	0.00	
17025.00†	90.345	268.815	7217.47	10247.67	368.05	-10241.11	40°32'57.895"N	104°49'41.563"W	0.00	
17125.00†	90.345	268.815	7216.87	10347.52	365.98	-10341.08	40°32'57.875"N	104°49'42.859"W	0.00	
17225.00†	90.345	268.815	7216.27	10447.38	363.92	-10441.06	40°32'57.854"N	104°49'44.154"W	0.00	
17325.00†	90.345	268.815	7215.66	10547.23	361.85	-10541.04	40°32'57.833"N	104°49'45.449"W	0.00	



# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL, SEC.28)
Area	COLORADO	Well	THORNTON F-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON F-29-30HN PWB
Facility	SEC.28-T07N-R66W		

## WELLPATH DATA (183 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
17425.00†	90.345	268.815	7215.06	10647.09	359.78	-10641.01	40°32'57.812"N	104°49'46.744"W	0.00	
17525.00†	90.345	268.815	7214.46	10746.94	357.71	-10740.99	40°32'57.791"N	104°49'48.039"W	0.00	
17601.50	90.345	268.815	7214.00 <sup>2</sup>	10823.33	356.13	-10817.47	40°32'57.775"N	104°49'49.030"W	0.00	End of Tangent

## HOLE & CASING SECTIONS - Ref Wellbore: THORNTON F-29-30HN PWB Ref Wellpath: THORNTON F-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	1544.50	0.00	0.00	101.26	-49.18
9.625in Casing Surface	25.00	1550.00	1525.00	25.00	1544.50	0.00	0.00	101.26	-49.18
8in Open Hole	1550.00	17601.50	16051.50	1544.50	N/A	101.26	-49.18	N/A	N/A

# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL,SEC.28)
Area	COLORADO	Well	THORNTON F-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON F-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 F-29-30HN BHL PLAT (1150'FNL & 470'FWL,SEC.30)	17601.50	7214.00	356.13	-10817.47	3186109.51	1443683.54	40°32'57.775"N	104°49'49.030"W	point
1) THORNTON F-29-30HN LP PLAT (1150'FNL & 470'FEL,SEC.29)	7636.83	7274.00	562.16	-855.11	3196069.59	1443969.17	40°32'59.834"N	104°47'39.977"W	point
SEC.28-T07N-R66W HDL (460)		7900.00	77.24	2.50	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.29-T07N-R66W HDL (460)		7900.00	77.24	2.50	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.30-T07N-R66W HDL (460)		7900.00	77.24	2.50	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.28-T07N-R66W		8000.00	77.24	2.50	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.29-T07N-R66W		8000.00	77.24	2.50	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.30-T07N-R66W		8000.00	77.24	2.50	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon

SURVEY PROGRAM - Ref Wellbore: THORNTON F-29-30HN PWB Ref Wellpath: THORNTON F-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 F-29-30HN PWB
1550.00	17601.50	BHI AutoTrak Curve (Short)		THORNTON F-29-30HN PWB

# Planned Wellpath Report

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

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#17 THORNTON F-29-30HN (1722'FNL & 404'FWL,SEC.28)
Area	COLORADO	Well	THORNTON F-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON F-29-30HN PWB
Facility	SEC.28-T07N-R66W		

## DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
25.00	0.000	334.095	25.00	Tie On
300.00	0.000	334.095	300.00	End of Tangent
592.67	5.853	334.095	592.16	End of Build
6674.84	5.853	334.095	6642.62	End of Tangent
6733.38	0.000	268.815	6701.05	End of Drop
7636.83	90.345	268.815	7274.00	End of Build
17601.50	90.345	268.815	7214.00	End of Tangent