

BAYSWATER E & P LLC

Location: COLORADO Slot: SLOTH15 THORNTON D-29-30HN (1692FNL & 405FWL,SEC.28)

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

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

Plot reference wellpath is THORNTON D-29-30HN PWP (REV-A.0)

Grid System NAD83 / Lambert Colorado SP Northern Zone (S01), US feet

True vertical depths are referenced to TRUE 38 (4909GL+25KB @ 4034FWS) (RWB)

North Reference: True north

Measured depths are referenced to TRUE 38 (4909GL+25KB @ 4034FWS) (RWB)

Scale: True distance

TRUE 38 (4909GL+25KB @ 4034FWS) (RWB) to Mean Sea Level: 4934 feet

Depths are in feet

Mean Sea Level to Ground level (At Slot: SLOTH15 THORNTON D-29-30HN (1692FNL & 405FWL,SEC.28)): 0 feet

Created by: bushpath on 2018-04-12

Database: Denver

Coordinates are in feet referenced to Slot

Location Information					
Facility Name		Grid East (US It)		Latitude	Longitude
SEC.28-T07N-R66W		310881.880		1403461.083	40°32'55.04"N
Slot		Local N (ft)		Local E (ft)	Local S (ft)
SLOTH15 THORNTON D-29-30HN (1692FNL & 405FWL,SEC.28)		-46.96		47.77	3108833.001
TRUE 38 (4909GL+25KB @ 4034FWS) (RWB) to Ground level (At Slot: SLOTH15 THORNTON D-29-30HN (1692FNL & 405FWL,SEC.28))				1403464.481	40°32'54.58"N
Mean Sea Level to Ground level (At Slot: SLOTH15 THORNTON D-29-30HN (1692FNL & 405FWL,SEC.28))					01
TRUE 38 (4909GL+25KB @ 4034FWS) (RWB) to Mean Sea Level					4934

Targets									
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US It)	Grid North (US It)	Latitude	Longitude	
THORNTON D-29-30HN BHL PLAT (820FNL & 470FWL,SEC.30)	17719.58	7299.00	655.60	-10816.77	3108158.68	1444013.60	40°32'55.03"N	104°47'28.80"W	
THORNTON D-29-30HN LP PLAT (820FNL & 470FWL,SEC.29)	7744.81	7340.00	862.00	-444.26	3108078.91	1444028.68	40°32'55.03"N	104°47'28.80"W	
SEC.28-T07N-R66W HDL (460)		7600.00	46.63	1.39	3108031.02	1443481.12	40°32'55.04"N	104°47'28.80"W	
SEC.29-T07N-R66W HDL (460)		7600.00	46.63	1.39	3108031.02	1443481.12	40°32'55.04"N	104°47'28.80"W	
SEC.30-T07N-R66W HDL (460)		7600.00	46.63	1.39	3108031.02	1443481.12	40°32'55.04"N	104°47'28.80"W	
SEC.28-T07N-R66W		8000.00	46.63	1.39	3108031.02	1443481.12	40°32'55.04"N	104°47'28.80"W	
SEC.29-T07N-R66W		8000.00	46.63	1.39	3108031.02	1443481.12	40°32'55.04"N	104°47'28.80"W	
SEC.30-T07N-R66W		8000.00	46.63	1.39	3108031.02	1443481.12	40°32'55.04"N	104°47'28.80"W	

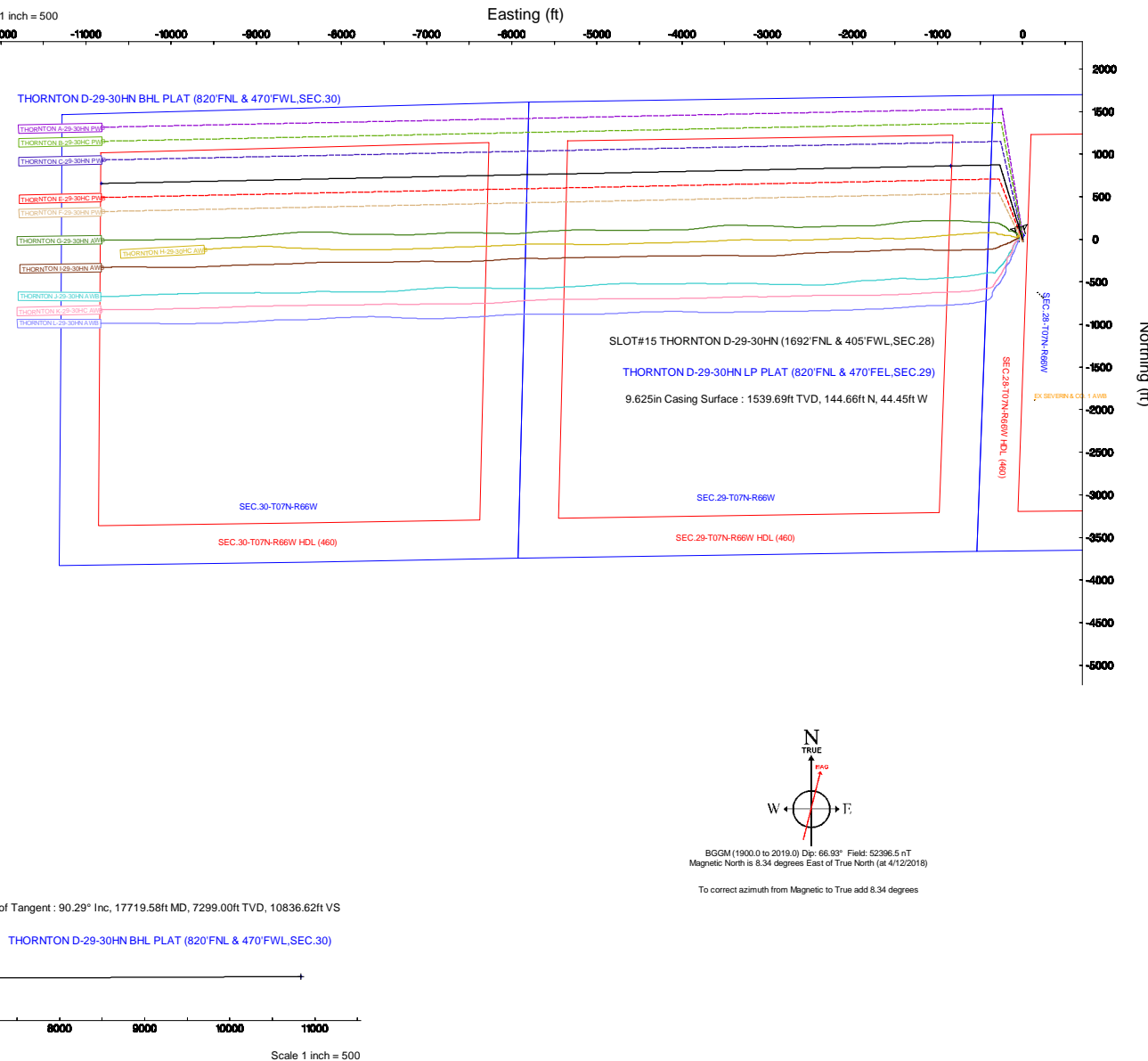
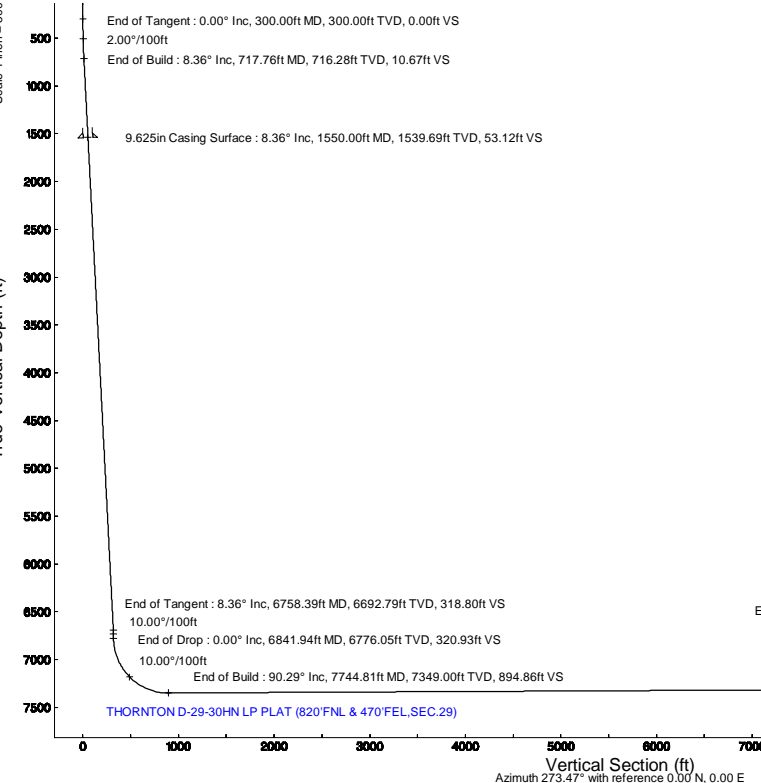
Survey Program					
Start MD (ft)	End MD (ft)	Tool	Model	Log Name/Comment	Wellbore
25.00	1550.00	BHI NewTrak	BHI NewTrak (Standard)		THORNTON D-29-30HN PWB
1550.00	17719.58	BHI AutoTrak Curve	BHI AutoTrak Curve (Short)		THORNTON D-29-30HN PWB

Well Profile Data									
Design Comment	MD (ft)	Inc. (°)	Az. (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US It)	Grid North (US It)	VS (ft)
Tie On	25.00	0.000	342.918	25.00	0.00	0.00	0.00	0.00	0.00
End of Build	300.00	0.000	342.918	300.00	0.00	0.00	0.00	0.00	0.00
End of Tangent	717.76	8.365	342.918	716.28	29.06	-8.93	2.00	10.67	0.67
End of Build	6758.39	8.365	342.918	6692.79	666.10	-266.77	0.00	318.80	318.80
End of Drop	6841.94	0.000	268.814	6776.05	873.91	-208.05	10.00	320.93	320.93
End of Build	7744.81	90.287	268.814	7349.00	862.00	-844.26	10.00	894.86	894.86
End of Tangent	17719.58	90.287	268.814	7299.00	655.60	-10816.77	0.00	10836.62	10836.62

Bottom Hole Location							
MD (ft)	Inc. (°)	Az. (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US It)	Grid North (US It)
17719.58	90.287	268.814	7299.00	655.60	-10816.77	3108158.68	1444013.60



TRUE #38



Planned Wellpath Report

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

Page 1 of 10

REFERENCE WELLPATH IDENTIFICATION			
Operator	BAYSWATER E & P LLC	Slot	SLOT#15 THORNTON D-29-30HN (1692'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON D-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON D-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 1:40:11 PM
Convergence at slot	0.46° East	Database/Source file	Denver/THORNTON_D-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	-46.96	47.77	3196930.00	1443444.48	40°32'54.582"N	104°47'28.885"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#15 THORNTON D-29-30HN (1692'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	273.47°

Planned Wellpath Report

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

Page 2 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#15 THORNTON D-29-30HN (1692'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON D-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON D-29-30HN PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (184 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	342.918	0.00	0.00	0.00	0.00	40°32'54.582"N	104°47'28.885"W	0.00	
25.00	0.000	342.918	25.00	0.00	0.00	0.00	40°32'54.582"N	104°47'28.885"W	0.00	Tie On
125.00†	0.000	342.918	125.00	0.00	0.00	0.00	40°32'54.582"N	104°47'28.885"W	0.00	
225.00†	0.000	342.918	225.00	0.00	0.00	0.00	40°32'54.582"N	104°47'28.885"W	0.00	
300.00	0.000	342.918	300.00	0.00	0.00	0.00	40°32'54.582"N	104°47'28.885"W	0.00	End of Tangent
325.00†	0.500	342.918	325.00	0.04	0.10	-0.03	40°32'54.583"N	104°47'28.886"W	2.00	
425.00†	2.500	342.918	424.96	0.96	2.61	-0.80	40°32'54.608"N	104°47'28.896"W	2.00	
525.00†	4.500	342.918	524.77	3.10	8.44	-2.59	40°32'54.665"N	104°47'28.919"W	2.00	
625.00†	6.500	342.918	624.30	6.46	17.60	-5.41	40°32'54.756"N	104°47'28.955"W	2.00	
717.76	8.355	342.918	716.28	10.67	29.06	-8.93	40°32'54.869"N	104°47'29.001"W	2.00	End of Build
725.00†	8.355	342.918	723.44	11.04	30.07	-9.24	40°32'54.879"N	104°47'29.005"W	0.00	
825.00†	8.355	342.918	822.38	16.14	43.96	-13.51	40°32'55.016"N	104°47'29.060"W	0.00	
925.00†	8.355	342.918	921.32	21.24	57.85	-17.78	40°32'55.154"N	104°47'29.115"W	0.00	
1025.00†	8.355	342.918	1020.26	26.35	71.74	-22.05	40°32'55.291"N	104°47'29.171"W	0.00	
1125.00†	8.355	342.918	1119.20	31.45	85.63	-26.31	40°32'55.428"N	104°47'29.226"W	0.00	
1225.00†	8.355	342.918	1218.14	36.55	99.52	-30.58	40°32'55.565"N	104°47'29.281"W	0.00	
1325.00†	8.355	342.918	1317.08	41.65	113.41	-34.85	40°32'55.703"N	104°47'29.337"W	0.00	
1425.00†	8.355	342.918	1416.01	46.75	127.30	-39.12	40°32'55.840"N	104°47'29.392"W	0.00	
1525.00†	8.355	342.918	1514.95	51.85	141.19	-43.39	40°32'55.977"N	104°47'29.447"W	0.00	
1625.00†	8.355	342.918	1613.89	56.95	155.08	-47.66	40°32'56.114"N	104°47'29.503"W	0.00	
1725.00†	8.355	342.918	1712.83	62.05	168.97	-51.92	40°32'56.252"N	104°47'29.558"W	0.00	
1825.00†	8.355	342.918	1811.77	67.15	182.86	-56.19	40°32'56.389"N	104°47'29.613"W	0.00	
1925.00†	8.355	342.918	1910.71	72.25	196.75	-60.46	40°32'56.526"N	104°47'29.668"W	0.00	
2025.00†	8.355	342.918	2009.65	77.35	210.64	-64.73	40°32'56.663"N	104°47'29.724"W	0.00	
2125.00†	8.355	342.918	2108.58	82.45	224.53	-69.00	40°32'56.801"N	104°47'29.779"W	0.00	
2225.00†	8.355	342.918	2207.52	87.56	238.42	-73.27	40°32'56.938"N	104°47'29.834"W	0.00	
2325.00†	8.355	342.918	2306.46	92.66	252.31	-77.53	40°32'57.075"N	104°47'29.890"W	0.00	
2425.00†	8.355	342.918	2405.40	97.76	266.20	-81.80	40°32'57.212"N	104°47'29.945"W	0.00	
2525.00†	8.355	342.918	2504.34	102.86	280.09	-86.07	40°32'57.350"N	104°47'30.000"W	0.00	
2625.00†	8.355	342.918	2603.28	107.96	293.98	-90.34	40°32'57.487"N	104°47'30.055"W	0.00	

Planned Wellpath Report

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Page 3 of 10

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

WELLPATH DATA (184 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2725.00†	8.355	342.918	2702.22	113.06	307.87	-94.61	40°32'57.624"N	104°47'30.111"W	0.00	
2825.00†	8.355	342.918	2801.16	118.16	321.76	-98.88	40°32'57.761"N	104°47'30.166"W	0.00	
2925.00†	8.355	342.918	2900.09	123.26	335.65	-103.14	40°32'57.899"N	104°47'30.221"W	0.00	
3025.00†	8.355	342.918	2999.03	128.36	349.54	-107.41	40°32'58.036"N	104°47'30.277"W	0.00	
3125.00†	8.355	342.918	3097.97	133.46	363.43	-111.68	40°32'58.173"N	104°47'30.332"W	0.00	
3225.00†	8.355	342.918	3196.91	138.56	377.32	-115.95	40°32'58.310"N	104°47'30.387"W	0.00	
3325.00†	8.355	342.918	3295.85	143.66	391.21	-120.22	40°32'58.448"N	104°47'30.443"W	0.00	
3425.00†	8.355	342.918	3394.79	148.77	405.10	-124.49	40°32'58.585"N	104°47'30.498"W	0.00	
3525.00†	8.355	342.918	3493.73	153.87	418.99	-128.75	40°32'58.722"N	104°47'30.553"W	0.00	
3625.00†	8.355	342.918	3592.66	158.97	432.88	-133.02	40°32'58.859"N	104°47'30.608"W	0.00	
3725.00†	8.355	342.918	3691.60	164.07	446.77	-137.29	40°32'58.997"N	104°47'30.664"W	0.00	
3825.00†	8.355	342.918	3790.54	169.17	460.66	-141.56	40°32'59.134"N	104°47'30.719"W	0.00	
3925.00†	8.355	342.918	3889.48	174.27	474.55	-145.83	40°32'59.271"N	104°47'30.774"W	0.00	
4025.00†	8.355	342.918	3988.42	179.37	488.44	-150.10	40°32'59.408"N	104°47'30.830"W	0.00	
4125.00†	8.355	342.918	4087.36	184.47	502.33	-154.36	40°32'59.546"N	104°47'30.885"W	0.00	
4225.00†	8.355	342.918	4186.30	189.57	516.22	-158.63	40°32'59.683"N	104°47'30.940"W	0.00	
4325.00†	8.355	342.918	4285.23	194.67	530.11	-162.90	40°32'59.820"N	104°47'30.995"W	0.00	
4425.00†	8.355	342.918	4384.17	199.77	544.00	-167.17	40°32'59.957"N	104°47'31.051"W	0.00	
4525.00†	8.355	342.918	4483.11	204.87	557.89	-171.44	40°33'00.095"N	104°47'31.106"W	0.00	
4625.00†	8.355	342.918	4582.05	209.98	571.78	-175.71	40°33'00.232"N	104°47'31.161"W	0.00	
4725.00†	8.355	342.918	4680.99	215.08	585.67	-179.97	40°33'00.369"N	104°47'31.217"W	0.00	
4825.00†	8.355	342.918	4779.93	220.18	599.56	-184.24	40°33'00.506"N	104°47'31.272"W	0.00	
4925.00†	8.355	342.918	4878.87	225.28	613.45	-188.51	40°33'00.644"N	104°47'31.327"W	0.00	
5025.00†	8.355	342.918	4977.81	230.38	627.34	-192.78	40°33'00.781"N	104°47'31.382"W	0.00	
5125.00†	8.355	342.918	5076.74	235.48	641.23	-197.05	40°33'00.918"N	104°47'31.438"W	0.00	
5225.00†	8.355	342.918	5175.68	240.58	655.12	-201.32	40°33'01.055"N	104°47'31.493"W	0.00	
5325.00†	8.355	342.918	5274.62	245.68	669.01	-205.58	40°33'01.193"N	104°47'31.548"W	0.00	
5425.00†	8.355	342.918	5373.56	250.78	682.90	-209.85	40°33'01.330"N	104°47'31.604"W	0.00	
5525.00†	8.355	342.918	5472.50	255.88	696.79	-214.12	40°33'01.467"N	104°47'31.659"W	0.00	
5625.00†	8.355	342.918	5571.44	260.98	710.68	-218.39	40°33'01.604"N	104°47'31.714"W	0.00	

Planned Wellpath Report

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

Page 4 of 10

REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#15 THORNTON D-29-30HN (1692'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON D-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON D-29-30HN PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (184 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5725.00†	8.355	342.918	5670.38	266.08	724.57	-222.66	40°33'01.742"N	104°47'31.770"W	0.00	
5825.00†	8.355	342.918	5769.31	271.19	738.46	-226.93	40°33'01.879"N	104°47'31.825"W	0.00	
5925.00†	8.355	342.918	5868.25	276.29	752.35	-231.19	40°33'02.016"N	104°47'31.880"W	0.00	
6025.00†	8.355	342.918	5967.19	281.39	766.24	-235.46	40°33'02.153"N	104°47'31.935"W	0.00	
6125.00†	8.355	342.918	6066.13	286.49	780.12	-239.73	40°33'02.291"N	104°47'31.991"W	0.00	
6225.00†	8.355	342.918	6165.07	291.59	794.01	-244.00	40°33'02.428"N	104°47'32.046"W	0.00	
6325.00†	8.355	342.918	6264.01	296.69	807.90	-248.27	40°33'02.565"N	104°47'32.101"W	0.00	
6425.00†	8.355	342.918	6362.95	301.79	821.79	-252.54	40°33'02.702"N	104°47'32.157"W	0.00	
6525.00†	8.355	342.918	6461.88	306.89	835.68	-256.80	40°33'02.840"N	104°47'32.212"W	0.00	
6625.00†	8.355	342.918	6560.82	311.99	849.57	-261.07	40°33'02.977"N	104°47'32.267"W	0.00	
6725.00†	8.355	342.918	6659.76	317.09	863.46	-265.34	40°33'03.114"N	104°47'32.323"W	0.00	
6758.39	8.355	342.918	6692.79	318.80	868.10	-266.77	40°33'03.160"N	104°47'32.341"W	0.00	End of Tangent
6825.00†	1.694	342.918	6759.11	320.84	873.68	-268.48	40°33'03.215"N	104°47'32.363"W	10.00	
6841.94	0.000	268.814	6776.05	320.93	873.91	-268.55	40°33'03.217"N	104°47'32.364"W	10.00	End of Drop
6925.00†	8.306	268.814	6858.82	326.92	873.79	-274.56	40°33'03.216"N	104°47'32.442"W	10.00	
7025.00†	18.306	268.814	6956.01	349.83	873.31	-297.54	40°33'03.212"N	104°47'32.740"W	10.00	
7125.00†	28.306	268.814	7047.74	389.22	872.50	-337.05	40°33'03.203"N	104°47'33.251"W	10.00	
7225.00†	38.306	268.814	7131.21	443.88	871.36	-391.88	40°33'03.192"N	104°47'33.962"W	10.00	
7325.00†	48.306	268.814	7203.88	512.15	869.94	-460.37	40°33'03.178"N	104°47'34.849"W	10.00	
7425.00†	58.306	268.814	7263.56	591.97	868.29	-540.43	40°33'03.162"N	104°47'35.886"W	10.00	
7525.00†	68.306	268.814	7308.43	680.91	866.44	-629.64	40°33'03.144"N	104°47'37.042"W	10.00	
7625.00†	78.306	268.814	7337.12	776.25	864.46	-725.28	40°33'03.124"N	104°47'38.281"W	10.00	
7725.00†	88.306	268.814	7348.76	875.12	862.41	-824.46	40°33'03.104"N	104°47'39.565"W	10.00	
7744.81	90.287	268.814	7349.00†	894.86	862.00	-844.26	40°33'03.100"N	104°47'39.822"W	10.00	End of Build
7825.00†	90.287	268.814	7348.60	974.79	860.34	-924.43	40°33'03.083"N	104°47'40.861"W	0.00	
7925.00†	90.287	268.814	7348.10	1074.46	858.27	-1024.41	40°33'03.063"N	104°47'42.156"W	0.00	
8025.00†	90.287	268.814	7347.60	1174.12	856.20	-1124.38	40°33'03.042"N	104°47'43.451"W	0.00	
8125.00†	90.287	268.814	7347.09	1273.79	854.13	-1224.36	40°33'03.022"N	104°47'44.746"W	0.00	
8225.00†	90.287	268.814	7346.59	1373.46	852.06	-1324.34	40°33'03.001"N	104°47'46.041"W	0.00	
8325.00†	90.287	268.814	7346.09	1473.13	849.99	-1424.32	40°33'02.981"N	104°47'47.336"W	0.00	

Planned Wellpath Report

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

Page 5 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#15 THORNTON D-29-30HN (1692'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON D-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON D-29-30HN PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (184 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8425.00†	90.287	268.814	7345.59	1572.80	847.92	-1524.29	40°33'02.960"N	104°47'48.631"W	0.00	
8525.00†	90.287	268.814	7345.09	1672.47	845.86	-1624.27	40°33'02.940"N	104°47'49.927"W	0.00	
8625.00†	90.287	268.814	7344.59	1772.14	843.79	-1724.25	40°33'02.919"N	104°47'51.222"W	0.00	
8725.00†	90.287	268.814	7344.09	1871.81	841.72	-1824.23	40°33'02.899"N	104°47'52.517"W	0.00	
8825.00†	90.287	268.814	7343.59	1971.48	839.65	-1924.20	40°33'02.878"N	104°47'53.812"W	0.00	
8925.00†	90.287	268.814	7343.08	2071.15	837.58	-2024.18	40°33'02.858"N	104°47'55.107"W	0.00	
9025.00†	90.287	268.814	7342.58	2170.81	835.51	-2124.16	40°33'02.837"N	104°47'56.402"W	0.00	
9125.00†	90.287	268.814	7342.08	2270.48	833.44	-2224.14	40°33'02.817"N	104°47'57.697"W	0.00	
9225.00†	90.287	268.814	7341.58	2370.15	831.37	-2324.11	40°33'02.796"N	104°47'58.992"W	0.00	
9325.00†	90.287	268.814	7341.08	2469.82	829.30	-2424.09	40°33'02.775"N	104°48'00.288"W	0.00	
9425.00†	90.287	268.814	7340.58	2569.49	827.23	-2524.07	40°33'02.755"N	104°48'01.583"W	0.00	
9525.00†	90.287	268.814	7340.08	2669.16	825.16	-2624.04	40°33'02.734"N	104°48'02.878"W	0.00	
9625.00†	90.287	268.814	7339.58	2768.83	823.09	-2724.02	40°33'02.714"N	104°48'04.173"W	0.00	
9725.00†	90.287	268.814	7339.07	2868.50	821.03	-2824.00	40°33'02.693"N	104°48'05.468"W	0.00	
9825.00†	90.287	268.814	7338.57	2968.17	818.96	-2923.98	40°33'02.673"N	104°48'06.763"W	0.00	
9925.00†	90.287	268.814	7338.07	3067.84	816.89	-3023.95	40°33'02.652"N	104°48'08.058"W	0.00	
10025.00†	90.287	268.814	7337.57	3167.50	814.82	-3123.93	40°33'02.632"N	104°48'09.354"W	0.00	
10125.00†	90.287	268.814	7337.07	3267.17	812.75	-3223.91	40°33'02.611"N	104°48'10.649"W	0.00	
10225.00†	90.287	268.814	7336.57	3366.84	810.68	-3323.89	40°33'02.590"N	104°48'11.944"W	0.00	
10325.00†	90.287	268.814	7336.07	3466.51	808.61	-3423.86	40°33'02.570"N	104°48'13.239"W	0.00	
10425.00†	90.287	268.814	7335.57	3566.18	806.54	-3523.84	40°33'02.549"N	104°48'14.534"W	0.00	
10525.00†	90.287	268.814	7335.06	3665.85	804.47	-3623.82	40°33'02.529"N	104°48'15.829"W	0.00	
10625.00†	90.287	268.814	7334.56	3765.52	802.40	-3723.80	40°33'02.508"N	104°48'17.124"W	0.00	
10725.00†	90.287	268.814	7334.06	3865.19	800.33	-3823.77	40°33'02.487"N	104°48'18.419"W	0.00	
10825.00†	90.287	268.814	7333.56	3964.86	798.26	-3923.75	40°33'02.467"N	104°48'19.715"W	0.00	
10925.00†	90.287	268.814	7333.06	4064.53	796.20	-4023.73	40°33'02.446"N	104°48'21.010"W	0.00	
11025.00†	90.287	268.814	7332.56	4164.20	794.13	-4123.70	40°33'02.426"N	104°48'22.305"W	0.00	
11125.00†	90.287	268.814	7332.06	4263.86	792.06	-4223.68	40°33'02.405"N	104°48'23.600"W	0.00	
11225.00†	90.287	268.814	7331.56	4363.53	789.99	-4323.66	40°33'02.384"N	104°48'24.895"W	0.00	
11325.00†	90.287	268.814	7331.05	4463.20	787.92	-4423.64	40°33'02.364"N	104°48'26.190"W	0.00	

Planned Wellpath Report

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

Page 6 of 10

REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#15 THORNTON D-29-30HN (1692'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON D-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON D-29-30HN PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (184 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	268.814	7330.55	4562.87	785.85	-4523.61	40°33'02.343"N	104°48'27.485"W	0.00	
11525.00†	90.287	268.814	7330.05	4662.54	783.78	-4623.59	40°33'02.323"N	104°48'28.781"W	0.00	
11625.00†	90.287	268.814	7329.55	4762.21	781.71	-4723.57	40°33'02.302"N	104°48'30.076"W	0.00	
11725.00†	90.287	268.814	7329.05	4861.88	779.64	-4823.55	40°33'02.281"N	104°48'31.371"W	0.00	
11825.00†	90.287	268.814	7328.55	4961.55	777.57	-4923.52	40°33'02.261"N	104°48'32.666"W	0.00	
11925.00†	90.287	268.814	7328.05	5061.22	775.50	-5023.50	40°33'02.240"N	104°48'33.961"W	0.00	
12025.00†	90.287	268.814	7327.54	5160.89	773.43	-5123.48	40°33'02.219"N	104°48'35.256"W	0.00	
12125.00†	90.287	268.814	7327.04	5260.55	771.36	-5223.46	40°33'02.199"N	104°48'36.551"W	0.00	
12225.00†	90.287	268.814	7326.54	5360.22	769.30	-5323.43	40°33'02.178"N	104°48'37.846"W	0.00	
12325.00†	90.287	268.814	7326.04	5459.89	767.23	-5423.41	40°33'02.157"N	104°48'39.142"W	0.00	
12425.00†	90.287	268.814	7325.54	5559.56	765.16	-5523.39	40°33'02.137"N	104°48'40.437"W	0.00	
12525.00†	90.287	268.814	7325.04	5659.23	763.09	-5623.36	40°33'02.116"N	104°48'41.732"W	0.00	
12625.00†	90.287	268.814	7324.54	5758.90	761.02	-5723.34	40°33'02.095"N	104°48'43.027"W	0.00	
12725.00†	90.287	268.814	7324.04	5858.57	758.95	-5823.32	40°33'02.075"N	104°48'44.322"W	0.00	
12825.00†	90.287	268.814	7323.53	5958.24	756.88	-5923.30	40°33'02.054"N	104°48'45.617"W	0.00	
12925.00†	90.287	268.814	7323.03	6057.91	754.81	-6023.27	40°33'02.033"N	104°48'46.912"W	0.00	
13025.00†	90.287	268.814	7322.53	6157.58	752.74	-6123.25	40°33'02.013"N	104°48'48.207"W	0.00	
13125.00†	90.287	268.814	7322.03	6257.24	750.67	-6223.23	40°33'01.992"N	104°48'49.503"W	0.00	
13225.00†	90.287	268.814	7321.53	6356.91	748.60	-6323.21	40°33'01.971"N	104°48'50.798"W	0.00	
13325.00†	90.287	268.814	7321.03	6456.58	746.53	-6423.18	40°33'01.951"N	104°48'52.093"W	0.00	
13425.00†	90.287	268.814	7320.53	6556.25	744.47	-6523.16	40°33'01.930"N	104°48'53.388"W	0.00	
13525.00†	90.287	268.814	7320.03	6655.92	742.40	-6623.14	40°33'01.909"N	104°48'54.683"W	0.00	
13625.00†	90.287	268.814	7319.52	6755.59	740.33	-6723.12	40°33'01.888"N	104°48'55.978"W	0.00	
13725.00†	90.287	268.814	7319.02	6855.26	738.26	-6823.09	40°33'01.868"N	104°48'57.273"W	0.00	
13825.00†	90.287	268.814	7318.52	6954.93	736.19	-6923.07	40°33'01.847"N	104°48'58.568"W	0.00	
13925.00†	90.287	268.814	7318.02	7054.60	734.12	-7023.05	40°33'01.826"N	104°48'59.864"W	0.00	
14025.00†	90.287	268.814	7317.52	7154.27	732.05	-7123.02	40°33'01.805"N	104°49'01.159"W	0.00	
14125.00†	90.287	268.814	7317.02	7253.93	729.98	-7223.00	40°33'01.785"N	104°49'02.454"W	0.00	
14225.00†	90.287	268.814	7316.52	7353.60	727.91	-7322.98	40°33'01.764"N	104°49'03.749"W	0.00	
14325.00†	90.287	268.814	7316.02	7453.27	725.84	-7422.96	40°33'01.743"N	104°49'05.044"W	0.00	

Planned Wellpath Report

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

Page 7 of 10

REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#15 THORNTON D-29-30HN (1692'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON D-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON D-29-30HN PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (184 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	268.814	7315.51	7552.94	723.77	-7522.93	40°33'01.723"N	104°49'06.339"W	0.00	
14525.00†	90.287	268.814	7315.01	7652.61	721.70	-7622.91	40°33'01.702"N	104°49'07.634"W	0.00	
14625.00†	90.287	268.814	7314.51	7752.28	719.64	-7722.89	40°33'01.681"N	104°49'08.929"W	0.00	
14725.00†	90.287	268.814	7314.01	7851.95	717.57	-7822.87	40°33'01.660"N	104°49'10.225"W	0.00	
14825.00†	90.287	268.814	7313.51	7951.62	715.50	-7922.84	40°33'01.640"N	104°49'11.520"W	0.00	
14925.00†	90.287	268.814	7313.01	8051.29	713.43	-8022.82	40°33'01.619"N	104°49'12.815"W	0.00	
15025.00†	90.287	268.814	7312.51	8150.96	711.36	-8122.80	40°33'01.598"N	104°49'14.110"W	0.00	
15125.00†	90.287	268.814	7312.01	8250.62	709.29	-8222.78	40°33'01.577"N	104°49'15.405"W	0.00	
15225.00†	90.287	268.814	7311.50	8350.29	707.22	-8322.75	40°33'01.556"N	104°49'16.700"W	0.00	
15325.00†	90.287	268.814	7311.00	8449.96	705.15	-8422.73	40°33'01.536"N	104°49'17.995"W	0.00	
15425.00†	90.287	268.814	7310.50	8549.63	703.08	-8522.71	40°33'01.515"N	104°49'19.290"W	0.00	
15525.00†	90.287	268.814	7310.00	8649.30	701.01	-8622.68	40°33'01.494"N	104°49'20.586"W	0.00	
15625.00†	90.287	268.814	7309.50	8748.97	698.94	-8722.66	40°33'01.473"N	104°49'21.881"W	0.00	
15725.00†	90.287	268.814	7309.00	8848.64	696.87	-8822.64	40°33'01.452"N	104°49'23.176"W	0.00	
15825.00†	90.287	268.814	7308.50	8948.31	694.81	-8922.62	40°33'01.432"N	104°49'24.471"W	0.00	
15925.00†	90.287	268.814	7308.00	9047.98	692.74	-9022.59	40°33'01.411"N	104°49'25.766"W	0.00	
16025.00†	90.287	268.814	7307.49	9147.65	690.67	-9122.57	40°33'01.390"N	104°49'27.061"W	0.00	
16125.00†	90.287	268.814	7306.99	9247.32	688.60	-9222.55	40°33'01.369"N	104°49'28.356"W	0.00	
16225.00†	90.287	268.814	7306.49	9346.98	686.53	-9322.53	40°33'01.348"N	104°49'29.651"W	0.00	
16325.00†	90.287	268.814	7305.99	9446.65	684.46	-9422.50	40°33'01.328"N	104°49'30.947"W	0.00	
16425.00†	90.287	268.814	7305.49	9546.32	682.39	-9522.48	40°33'01.307"N	104°49'32.242"W	0.00	
16525.00†	90.287	268.814	7304.99	9645.99	680.32	-9622.46	40°33'01.286"N	104°49'33.537"W	0.00	
16625.00†	90.287	268.814	7304.49	9745.66	678.25	-9722.44	40°33'01.265"N	104°49'34.832"W	0.00	
16725.00†	90.287	268.814	7303.99	9845.33	676.18	-9822.41	40°33'01.244"N	104°49'36.127"W	0.00	
16825.00†	90.287	268.814	7303.48	9945.00	674.11	-9922.39	40°33'01.223"N	104°49'37.422"W	0.00	
16925.00†	90.287	268.814	7302.98	10044.67	672.04	-10022.37	40°33'01.203"N	104°49'38.717"W	0.00	
17025.00†	90.287	268.814	7302.48	10144.34	669.97	-10122.34	40°33'01.182"N	104°49'40.012"W	0.00	
17125.00†	90.287	268.814	7301.98	10244.01	667.91	-10222.32	40°33'01.161"N	104°49'41.307"W	0.00	
17225.00†	90.287	268.814	7301.48	10343.67	665.84	-10322.30	40°33'01.140"N	104°49'42.603"W	0.00	
17325.00†	90.287	268.814	7300.98	10443.34	663.77	-10422.28	40°33'01.119"N	104°49'43.898"W	0.00	

Planned Wellpath Report

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

Page 8 of 10

REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#15 THORNTON D-29-30HN (1692'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON D-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON D-29-30HN PWB
Facility	SEC.28-T07N-R66W		

WELLPATH DATA (184 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	268.814	7300.48	10543.01	661.70	-10522.25	40°33'01.098"N	104°49'45.193"W	0.00	
17525.00†	90.287	268.814	7299.98	10642.68	659.63	-10622.23	40°33'01.077"N	104°49'46.488"W	0.00	
17625.00†	90.287	268.814	7299.47	10742.35	657.56	-10722.21	40°33'01.057"N	104°49'47.783"W	0.00	
17719.58	90.287	268.814	7299.00 ²	10836.62	655.60	-10816.77	40°33'01.037"N	104°49'49.008"W	0.00	End of Tangent

HOLE & CASING SECTIONS - Ref Wellbore: THORNTON D-29-30HN PWB Ref Wellpath: THORNTON D-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	1539.69	0.00	0.00	144.66	-44.45
9.625in Casing Surface	25.00	1550.00	1525.00	25.00	1539.69	0.00	0.00	144.66	-44.45
8in Open Hole	1550.00	17719.58	16169.58	1539.69	7299.00	144.66	-44.45	655.60	-10816.77

Planned Wellpath Report

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

Page 9 of 10

REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#15 THORNTON D-29-30HN (1692'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON D-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON D-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 D-29-30HN BHL PLAT (820'FNL & 470'FWL,SEC.30)	17719.58	7299.00	655.60	-10816.77	3186108.68	1444013.60	40°33'01.037"N	104°49'49.008"W	point
1) THORNTON D-29-30HN LP PLAT (820'FNL & 470'FEL,SEC.29)	7744.81	7349.00	862.00	-844.26	3196078.91	1444299.68	40°33'03.100"N	104°47'39.822"W	point
SEC.28-T07N-R66W HDL (460)		7900.00	46.63	1.39	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.29-T07N-R66W HDL (460)		7900.00	46.63	1.39	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.30-T07N-R66W HDL (460)		7900.00	46.63	1.39	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.28-T07N-R66W		8000.00	46.63	1.39	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.29-T07N-R66W		8000.00	46.63	1.39	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon
SEC.30-T07N-R66W		8000.00	46.63	1.39	3196931.02	1443491.12	40°32'55.043"N	104°47'28.867"W	polygon

SURVEY PROGRAM - Ref Wellbore: THORNTON D-29-30HN PWB Ref Wellpath: THORNTON D-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 D-29-30HN PWB
1550.00	17719.58	BHI AutoTrak Curve (Short)		THORNTON D-29-30HN PWB

Planned Wellpath Report

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

Page 10 of 10

REFERENCE WELLPATH IDENTIFICATION

Operator	BAYSWATER E & P LLC	Slot	SLOT#15 THORNTON D-29-30HN (1692'FNL & 405'FWL,SEC.28)
Area	COLORADO	Well	THORNTON D-29-30HN
Field	WELD COUNTY (NAD83/TRUE NORTH)	Wellbore	THORNTON D-29-30HN PWB
Facility	SEC.28-T07N-R66W		

DESIGN COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
25.00	0.000	342.918	25.00	Tie On
300.00	0.000	342.918	300.00	End of Tangent
717.76	8.355	342.918	716.28	End of Build
6758.39	8.355	342.918	6692.79	End of Tangent
6841.94	0.000	268.814	6776.05	End of Drop
7744.81	90.287	268.814	7349.00	End of Build
17719.58	90.287	268.814	7299.00	End of Tangent