

Location: Wetzel County, WV  
Field: Wetzel  
Facility: Blatt WZ Pad

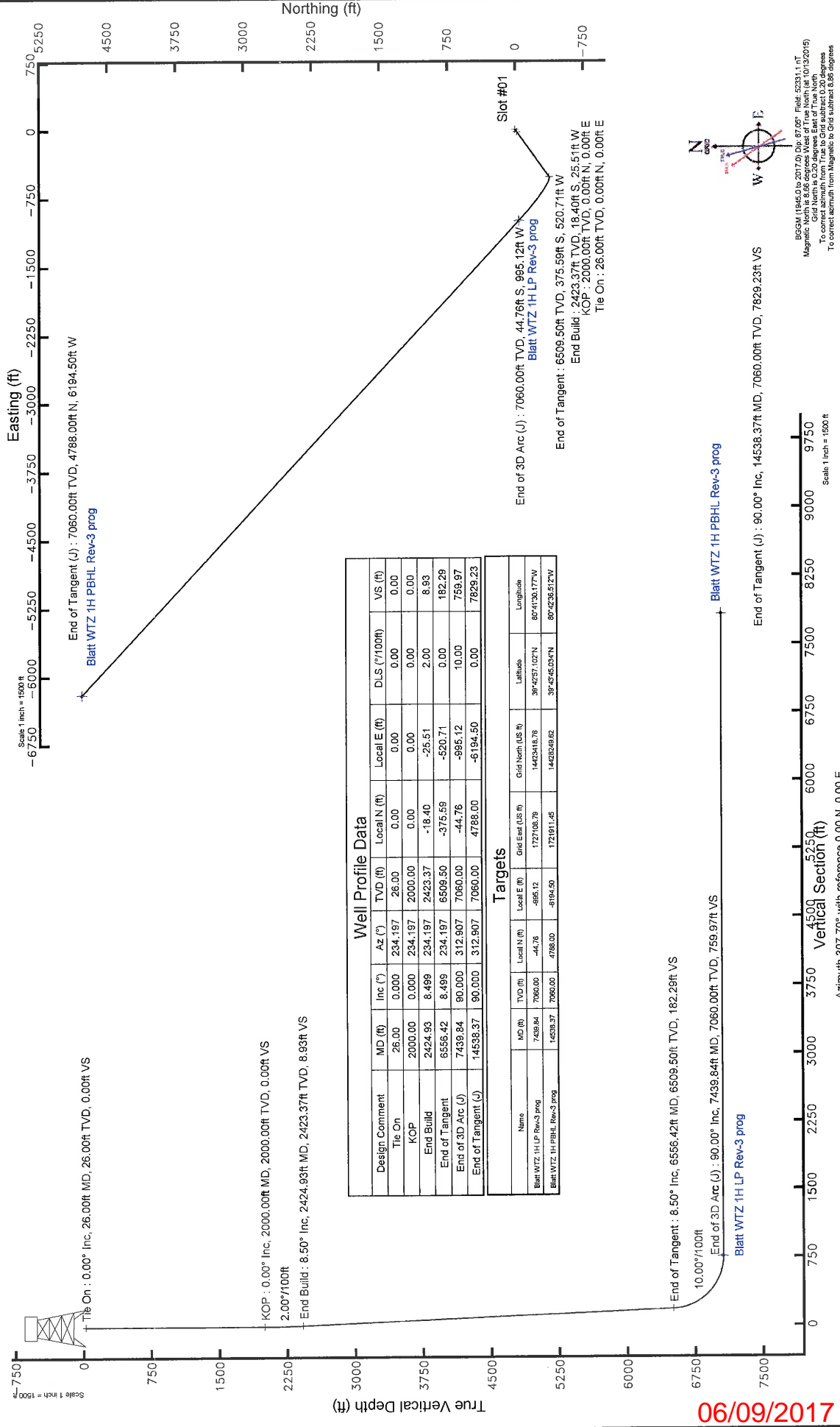
Slot: Slot #01  
Well: Blatt WZ 1H  
Wellbore: Blatt WZ 1H PWB

**Plot reference wellpath is Blatt WZ 1H PWB Ex-04**

True vertical depths are referenced to Rig on Slot #03 (RT)  
Measured depths are referenced to Rig on Slot #03 (RT)  
Rig on Slot #03 (RT) to Mean Sea Level: 1306 feet  
Mean Sea Level to Mud line (At Slot #01): -1280 feet  
Coordinates are in feet referenced to Slot

**Location Information**

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Blatt WZ Pad	1728103.520	14423463.500	39°42'57.510"N	80°41'17.441"W
Slot #01	0.00	1728103.520	39°42'57.510"N	80°41'17.441"W
Rig on Slot #03 (RT) to Mud line (At Slot: Slot #01)	26ft			
Mean Sea Level to Mud line (At Slot: Slot #01)	-1280ft			
Rig on Slot #03 (RT) to Mean Sea Level	1306ft			



**Well Profile Data**

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.000	234.197	26.00	0.00	0.00	0.00	0.00
KOP	2000.00	0.000	234.197	2000.00	0.00	0.00	0.00	0.00
End Build	2424.93	8.498	234.197	2423.37	-18.40	-25.51	2.00	8.93
End of Tangent	6556.42	8.499	234.197	6508.50	-375.59	-520.71	10.00	182.29
End of 3D Arc (J)	7439.84	90.000	312.907	7060.00	-44.76	-895.12	10.00	759.97
End of Tangent (J)	14538.37	90.000	312.907	7060.00	4788.00	-6194.50	0.00	7829.23

**Targets**

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Blatt WZ 1H LP Rev-3 prog	7439.84	7060.00	-44.76	-895.12	1727102.79	14423463.76	39°42'57.107"N	80°41'30.177"W
Blatt WZ 1H PBHL Rev-3 prog	14538.37	7060.00	4788.00	-6194.50	1721911.45	14423246.62	39°42'56.024"N	80°42'36.612"W

BIGSM (1946.0) 2017.0 Doc: 87007 Field: 52331.1.17  
Magnetic Grid North is 0.26 degrees East of True North  
To correct azimuth from True to Grid subtract 0.26 degrees  
To correct azimuth from Magnetic to Grid subtract 0.26 degrees

Scale: 1 inch = 1500 ft  
Azimuth 307.70° with reference 0.00 N, 0.00 E  
Vertical Section (ft)  
7500 7000 6750 6500 6250 6000 5750 5500 5250 5000 4750 4500 4250 4000 3750 3500 3250 3000 2750 2500 2250 2000 1750 1500 1250 1000 750 500 250 0

11/02/60/90

# Planned Wellpath Report

Blatt WTZ 1H PWP Ex-04

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## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #01
Area	Wetzel County, WV	Well	Blatt WTZ 1H
Field	Wetzel	Wellbore	Blatt WTZ 1H PWB
Facility	Blatt WTZ Pad		

## REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 4.0.1
North Reference	Grid	User	Alvayes
Scale	0.999609	Report Generated	10/14/2015 at 2:54:10 PM
Convergence at slot	0.20° East	Database/Source file	Local/Blatt_WTZ_1H_PWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North [ft]	East [ft]	Easting [US ft]	Northing [US ft]	Latitude	Longitude
Slot Location	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W
Facility Reference Pt			1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.478"W

## WELLPATH DATUM

Calculation method	Minimum curvature	Rig on Slot #03 (RT) to Facility Vertical Datum	26.00ft
Horizontal Reference Pt	Slot	Rig on Slot #03 (RT) to Mean Sea Level	1306.00ft
Vertical Reference Pt	Rig on Slot #03 (RT)	Rig on Slot #03 (RT) to Mud Line at Slot (Slot #01)	26.00ft
MD Reference Pt	Rig on Slot #03 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	307.70°

**REFERENCE WELLPATH IDENTIFICATION**

Operator	SOUTHWESTERN ENERGY	Slot	Slot #01
Area	Wetzel County, WV	Well	Blatt WTZ 1H
Field	Wetzel	Wellbore	Blatt WTZ 1H PWB
Facility	Blatt WTZ Pad		

**WELLPATH DATA (152 stations) † = interpolated/extrapolated station**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
0.00†	0.000	234.197	0.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
26.00	0.000	234.197	26.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
126.00†	0.000	234.197	126.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
226.00†	0.000	234.197	226.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
326.00†	0.000	234.197	326.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
426.00†	0.000	234.197	426.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
526.00†	0.000	234.197	526.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
626.00†	0.000	234.197	626.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
726.00†	0.000	234.197	726.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
826.00†	0.000	234.197	826.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
926.00†	0.000	234.197	926.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
1026.00†	0.000	234.197	1026.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
1126.00†	0.000	234.197	1126.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
1226.00†	0.000	234.197	1226.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
1326.00†	0.000	234.197	1326.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
1426.00†	0.000	234.197	1426.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
1526.00†	0.000	234.197	1526.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
1626.00†	0.000	234.197	1626.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
1726.00†	0.000	234.197	1726.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
1826.00†	0.000	234.197	1826.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
1926.00†	0.000	234.197	1926.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
2000.00	0.000	234.197	2000.00	0.00	0.00	0.00	1728103.52	14423463.50	39°42'57.510"N	80°41'17.441"W	0.00	0.000	0.00
2026.00†	0.520	234.197	2026.00	0.03	-0.07	-0.10	1728103.42	14423463.43	39°42'57.509"N	80°41'17.442"W	0.12	234.197	2.00
2126.00†	2.520	234.197	2126.00	0.79	-1.62	-2.25	1728101.27	14423461.88	39°42'57.494"N	80°41'17.470"W	2.77	234.197	2.00
2226.00†	4.520	234.197	2226.00	2.53	-5.21	-7.23	1728096.30	14423458.29	39°42'57.459"N	80°41'17.534"W	8.91	234.197	2.00
2326.00†	6.520	234.197	2326.00	5.26	-10.84	-15.03	1728088.50	14423452.67	39°42'57.403"N	80°41'17.634"W	18.53	234.197	2.00
2424.93	8.499	234.197	2423.37	8.93	-18.40	-25.51	1728078.02	14423445.10	39°42'57.329"N	80°41'17.768"W	31.46	234.197	2.00
2426.00†	8.499	234.197	2424.43	8.98	-18.49	-25.64	1728077.89	14423445.01	39°42'57.328"N	80°41'17.770"W	31.62	234.197	0.00
2526.00†	8.499	234.197	2523.33	13.17	-27.14	-37.63	1728065.91	14423436.37	39°42'57.243"N	80°41'17.924"W	46.39	234.197	0.00
2626.00†	8.499	234.197	2622.24	17.37	-35.79	-49.61	1728053.93	14423427.73	39°42'57.158"N	80°41'18.077"W	61.17	234.197	0.00

## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #01
Area	Wetzel County, WV	Well	Blatt WTZ 1H
Field	Wetzel	Wellbore	Blatt WTZ 1H PWB
Facility	Blatt WTZ Pad		

## WELLPATH DATA (152 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
2726.00†	8.499	234.197	2721.14	21.56	-44.43	-61.60	1728041.95	14423419.09	39°42'57.073"N	80°41'18.231"W	75.95	234.197	0.00
2826.00†	8.499	234.197	2820.04	25.76	-53.08	-73.58	1728029.96	14423410.44	39°42'56.988"N	80°41'18.385"W	90.73	234.197	0.00
2926.00†	8.499	234.197	2918.94	29.96	-61.72	-85.57	1728017.98	14423401.80	39°42'56.903"N	80°41'18.539"W	105.51	234.197	0.00
3026.00†	8.499	234.197	3017.84	34.15	-70.37	-97.56	1728006.00	14423393.16	39°42'56.818"N	80°41'18.692"W	120.29	234.197	0.00
3126.00†	8.499	234.197	3116.75	38.35	-79.01	-109.54	1727994.02	14423384.52	39°42'56.733"N	80°41'18.846"W	135.06	234.197	0.00
3226.00†	8.499	234.197	3215.65	42.55	-87.66	-121.53	1727982.04	14423375.88	39°42'56.648"N	80°41'19.000"W	149.84	234.197	0.00
3326.00†	8.499	234.197	3314.55	46.74	-96.30	-133.51	1727970.06	14423367.23	39°42'56.563"N	80°41'19.154"W	164.62	234.197	0.00
3426.00†	8.499	234.197	3413.45	50.94	-104.95	-145.50	1727958.08	14423358.59	39°42'56.478"N	80°41'19.307"W	179.40	234.197	0.00
3526.00†	8.499	234.197	3512.35	55.13	-113.59	-157.49	1727946.10	14423349.95	39°42'56.393"N	80°41'19.461"W	194.18	234.197	0.00
3626.00†	8.499	234.197	3611.26	59.33	-122.24	-169.47	1727934.12	14423341.31	39°42'56.308"N	80°41'19.615"W	208.96	234.197	0.00
3726.00†	8.499	234.197	3710.16	63.53	-130.89	-181.46	1727922.13	14423332.67	39°42'56.223"N	80°41'19.769"W	223.74	234.197	0.00
3826.00†	8.499	234.197	3809.06	67.72	-139.53	-193.44	1727910.15	14423324.02	39°42'56.138"N	80°41'19.922"W	238.51	234.197	0.00
3926.00†	8.499	234.197	3907.96	71.92	-148.18	-205.43	1727898.17	14423315.38	39°42'56.053"N	80°41'20.076"W	253.29	234.197	0.00
4026.00†	8.499	234.197	4006.86	76.11	-156.82	-217.42	1727886.19	14423306.74	39°42'55.968"N	80°41'20.230"W	268.07	234.197	0.00
4126.00†	8.499	234.197	4105.76	80.31	-165.47	-229.40	1727874.21	14423298.10	39°42'55.883"N	80°41'20.384"W	282.85	234.197	0.00
4226.00†	8.499	234.197	4204.67	84.51	-174.11	-241.39	1727862.23	14423289.46	39°42'55.798"N	80°41'20.538"W	297.63	234.197	0.00
4326.00†	8.499	234.197	4303.57	88.70	-182.76	-253.37	1727850.25	14423280.81	39°42'55.713"N	80°41'20.691"W	312.41	234.197	0.00
4426.00†	8.499	234.197	4402.47	92.90	-191.40	-265.36	1727838.27	14423272.17	39°42'55.627"N	80°41'20.845"W	327.19	234.197	0.00
4526.00†	8.499	234.197	4501.37	97.09	-200.05	-277.34	1727826.28	14423263.53	39°42'55.542"N	80°41'20.999"W	341.96	234.197	0.00
4626.00†	8.499	234.197	4600.27	101.29	-208.69	-289.33	1727814.30	14423254.89	39°42'55.457"N	80°41'21.153"W	356.74	234.197	0.00
4726.00†	8.499	234.197	4699.18	105.49	-217.34	-301.32	1727802.32	14423246.25	39°42'55.372"N	80°41'21.306"W	371.52	234.197	0.00
4826.00†	8.499	234.197	4798.08	109.68	-225.99	-313.30	1727790.34	14423237.60	39°42'55.287"N	80°41'21.460"W	386.30	234.197	0.00
4926.00†	8.499	234.197	4896.98	113.88	-234.63	-325.29	1727778.36	14423228.96	39°42'55.202"N	80°41'21.614"W	401.08	234.197	0.00
5026.00†	8.499	234.197	4995.88	118.08	-243.28	-337.27	1727766.38	14423220.32	39°42'55.117"N	80°41'21.768"W	415.86	234.197	0.00
5126.00†	8.499	234.197	5094.78	122.27	-251.92	-349.26	1727754.40	14423211.68	39°42'55.032"N	80°41'21.921"W	430.64	234.197	0.00
5226.00†	8.499	234.197	5193.69	126.47	-260.57	-361.25	1727742.42	14423203.04	39°42'54.947"N	80°41'22.075"W	445.41	234.197	0.00
5326.00†	8.499	234.197	5292.59	130.66	-269.21	-373.23	1727730.44	14423194.39	39°42'54.862"N	80°41'22.229"W	460.19	234.197	0.00
5426.00†	8.499	234.197	5391.49	134.86	-277.86	-385.22	1727718.45	14423185.75	39°42'54.777"N	80°41'22.383"W	474.97	234.197	0.00
5526.00†	8.499	234.197	5490.39	139.06	-286.50	-397.20	1727706.47	14423177.11	39°42'54.692"N	80°41'22.536"W	489.75	234.197	0.00
5626.00†	8.499	234.197	5589.29	143.25	-295.15	-409.19	1727694.49	14423168.47	39°42'54.607"N	80°41'22.690"W	504.53	234.197	0.00

## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #01
SOUTHWESTERN ENERGY	Well	Blatt WTZ 1H
Area	Wellbore	Blatt WTZ 1H PWB
Field		
Facility		

## WELLPATH DATA (152 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [%/100ft]
5726.00†	8.499	234.197	5688.20	147.45	-303.79	-421.18	1727682.51	14423159.83	39°42'54.522"N	80°41'22.844"W	519.31	234.197	0.00
5826.00†	8.499	234.197	5787.10	151.64	-312.44	-433.16	1727670.53	14423151.18	39°42'54.437"N	80°41'22.998"W	534.09	234.197	0.00
5926.00†	8.499	234.197	5886.00	155.84	-321.08	-445.15	1727658.55	14423142.54	39°42'54.352"N	80°41'23.151"W	548.86	234.197	0.00
6026.00†	8.499	234.197	5984.90	160.04	-329.73	-457.13	1727646.57	14423133.90	39°42'54.267"N	80°41'23.305"W	563.64	234.197	0.00
6126.00†	8.499	234.197	6083.80	164.23	-338.38	-469.12	1727634.59	14423125.26	39°42'54.182"N	80°41'23.459"W	578.42	234.197	0.00
6226.00†	8.499	234.197	6182.71	168.43	-347.02	-481.10	1727622.60	14423116.62	39°42'54.097"N	80°41'23.613"W	593.20	234.197	0.00
6326.00†	8.499	234.197	6281.61	172.62	-355.67	-493.09	1727610.62	14423107.97	39°42'54.012"N	80°41'23.766"W	607.98	234.197	0.00
6426.00†	8.499	234.197	6380.51	176.82	-364.31	-505.08	1727598.64	14423099.33	39°42'53.927"N	80°41'23.920"W	622.76	234.197	0.00
6526.00†	8.499	234.197	6479.41	181.02	-372.96	-517.06	1727586.66	14423090.69	39°42'53.842"N	80°41'24.074"W	637.53	234.197	0.00
6556.42	8.499	234.197	6509.50	182.29	-375.59	-520.71	1727583.02	14423088.06	39°42'53.816"N	80°41'24.121"W	642.03	234.197	0.00
6626.00†	11.967	269.169	6578.02	189.40	-378.70	-532.11	1727571.62	14423084.95	39°42'53.786"N	80°41'24.269"W	653.11	234.560	10.00
6726.00†	20.337	289.619	6674.06	214.10	-373.00	-558.91	1727544.83	14423090.64	39°42'53.843"N	80°41'24.609"W	671.94	236.282	10.00
6826.00†	29.707	298.025	6764.61	255.14	-355.48	-597.25	1727506.51	14423108.16	39°42'54.017"N	80°41'25.099"W	695.03	239.239	10.00
6926.00†	39.368	302.619	6846.90	311.30	-326.67	-645.95	1727457.82	14423136.96	39°42'54.304"N	80°41'25.721"W	723.86	243.173	10.00
7026.00†	49.147	305.627	6918.44	380.86	-287.45	-703.55	1727400.24	14423176.17	39°42'54.693"N	80°41'26.457"W	760.01	247.777	10.00
7126.00†	58.984	307.853	6977.06	461.71	-239.00	-768.29	1727335.53	14423224.59	39°42'55.174"N	80°41'27.283"W	804.61	252.720	10.00
7226.00†	68.853	309.658	7020.97	551.40	-182.80	-838.21	1727265.64	14423280.77	39°42'55.732"N	80°41'28.175"W	857.91	257.697	10.00
7326.00†	78.738	311.235	7048.85	647.19	-120.56	-911.17	1727192.71	14423342.99	39°42'56.350"N	80°41'29.106"W	919.11	262.463	10.00
7426.00†	88.631	312.706	7059.83	746.18	-54.16	-984.97	1727118.94	14423409.36	39°42'57.008"N	80°41'30.048"W	986.45	266.852	10.00
7439.84	90.000	312.907	7060.00†	759.97	-44.76	-995.12	1727108.79	14423418.76	39°42'57.102"N	80°41'30.177"W	996.13	267.425	10.00
7526.00†	90.000	312.907	7060.00	845.77	13.90	-1058.23	1727045.71	14423477.39	39°42'57.683"N	80°41'30.982"W	1058.32	270.752	0.00
7626.00†	90.000	312.907	7060.00	945.36	81.98	-1131.47	1726972.49	14423545.45	39°42'58.359"N	80°41'31.916"W	1134.44	274.144	0.00
7726.00†	90.000	312.907	7060.00	1044.95	150.06	-1204.72	1726899.27	14423613.50	39°42'59.034"N	80°41'32.851"W	1214.03	277.100	0.00
7826.00†	90.000	312.907	7060.00	1144.53	218.14	-1277.97	1726826.06	14423681.56	39°42'59.709"N	80°41'33.785"W	1296.45	279.687	0.00
7926.00†	90.000	312.907	7060.00	1244.12	286.22	-1351.21	1726752.84	14423749.61	39°43'00.385"N	80°41'34.719"W	1381.19	281.960	0.00
8026.00†	90.000	312.907	7060.00	1343.71	354.30	-1424.46	1726679.62	14423817.66	39°43'01.060"N	80°41'35.654"W	1467.86	283.968	0.00
8126.00†	90.000	312.907	7060.00	1443.30	422.38	-1497.70	1726606.41	14423885.72	39°43'01.735"N	80°41'36.588"W	1556.12	285.750	0.00
8226.00†	90.000	312.907	7060.00	1542.88	490.47	-1570.95	1726533.19	14423953.77	39°43'02.411"N	80°41'37.522"W	1645.73	287.339	0.00
8326.00†	90.000	312.907	7060.00	1642.47	558.55	-1644.19	1726459.97	14424021.83	39°43'03.086"N	80°41'38.457"W	1736.48	288.763	0.00
8426.00†	90.000	312.907	7060.00	1742.06	626.63	-1717.44	1726386.75	14424089.88	39°43'03.761"N	80°41'39.391"W	1828.19	290.045	0.00

**REFERENCE WELLPATH IDENTIFICATION**

Operator	SOUTHWESTERN ENERGY	Slot	Slot #01
Area	Wetzel County, WV	Well	Blatt WTZ 1H
Field	Wetzel	Wellbore	Blatt WTZ 1H PWB
Facility	Blatt WTZ Pad		

**WELLPATH DATA (152 stations) † = interpolated/extrapolated station**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
8526.00†	90.000	312.907	7060.00	1841.65	694.71	-1790.69	1726313.54	14424157.94	39°43'04.437"N	80°41'40.325"W	1920.72	291.204	0.00
8626.00†	90.000	312.907	7060.00	1941.24	762.79	-1863.93	1726240.32	14424225.99	39°43'05.112"N	80°41'41.260"W	2013.97	292.256	0.00
8726.00†	90.000	312.907	7060.00	2040.82	830.87	-1937.18	1726167.10	14424294.05	39°43'05.787"N	80°41'42.194"W	2107.84	293.215	0.00
8826.00†	90.000	312.907	7060.00	2140.41	898.95	-2010.42	1726093.89	14424362.10	39°43'06.462"N	80°41'43.129"W	2202.25	294.092	0.00
8926.00†	90.000	312.907	7060.00	2240.00	967.03	-2083.67	1726020.67	14424430.15	39°43'07.138"N	80°41'44.063"W	2297.14	294.896	0.00
9026.00†	90.000	312.907	7060.00	2339.59	1035.12	-2156.92	1725947.45	14424498.21	39°43'07.813"N	80°41'44.997"W	2392.44	295.637	0.00
9126.00†	90.000	312.907	7060.00	2439.17	1103.20	-2230.16	1725874.24	14424566.26	39°43'08.488"N	80°41'45.932"W	2488.10	296.320	0.00
9226.00†	90.000	312.907	7060.00	2538.76	1171.28	-2303.41	1725801.02	14424634.32	39°43'09.164"N	80°41'46.866"W	2584.10	296.953	0.00
9326.00†	90.000	312.907	7060.00	2638.35	1239.36	-2376.65	1725727.80	14424702.37	39°43'09.839"N	80°41'47.800"W	2680.39	297.541	0.00
9426.00†	90.000	312.907	7060.00	2737.94	1307.44	-2449.90	1725654.58	14424770.43	39°43'10.514"N	80°41'48.735"W	2776.94	298.088	0.00
9526.00†	90.000	312.907	7060.00	2837.52	1375.52	-2523.15	1725581.37	14424838.48	39°43'11.189"N	80°41'49.669"W	2873.73	298.598	0.00
9626.00†	90.000	312.907	7060.00	2937.11	1443.60	-2596.39	1725508.15	14424906.53	39°43'11.865"N	80°41'50.604"W	2970.73	299.074	0.00
9726.00†	90.000	312.907	7060.00	3036.70	1511.68	-2669.64	1725434.93	14424974.59	39°43'12.540"N	80°41'51.538"W	3067.92	299.521	0.00
9826.00†	90.000	312.907	7060.00	3136.29	1579.76	-2742.88	1725361.72	14425042.64	39°43'13.215"N	80°41'52.473"W	3165.29	299.940	0.00
9926.00†	90.000	312.907	7060.00	3235.87	1647.85	-2816.13	1725288.50	14425110.70	39°43'13.890"N	80°41'53.407"W	3262.82	300.334	0.00
10026.00†	90.000	312.907	7060.00	3335.46	1715.93	-2889.37	1725215.28	14425178.75	39°43'14.566"N	80°41'54.341"W	3360.49	300.705	0.00
10126.00†	90.000	312.907	7060.00	3435.05	1784.01	-2962.62	1725142.06	14425246.81	39°43'15.241"N	80°41'55.276"W	3458.29	301.055	0.00
10226.00†	90.000	312.907	7060.00	3534.64	1852.09	-3035.87	1725068.85	14425314.86	39°43'15.916"N	80°41'56.210"W	3556.22	301.386	0.00
10326.00†	90.000	312.907	7060.00	3634.23	1920.17	-3109.11	1724995.63	14425382.92	39°43'16.591"N	80°41'57.145"W	3654.26	301.699	0.00
10426.00†	90.000	312.907	7060.00	3733.81	1988.25	-3182.36	1724922.41	14425450.97	39°43'17.267"N	80°41'58.079"W	3752.41	301.996	0.00
10526.00†	90.000	312.907	7060.00	3833.40	2056.33	-3255.60	1724849.20	14425519.02	39°43'17.942"N	80°41'59.014"W	3850.64	302.278	0.00
10626.00†	90.000	312.907	7060.00	3932.99	2124.41	-3328.85	1724775.98	14425587.08	39°43'18.617"N	80°41'59.948"W	3948.97	302.545	0.00
10726.00†	90.000	312.907	7060.00	4032.58	2192.49	-3402.10	1724702.76	14425655.13	39°43'19.293"N	80°42'00.883"W	4047.38	302.800	0.00
10826.00†	90.000	312.907	7060.00	4132.16	2260.58	-3475.34	1724629.55	14425723.19	39°43'19.968"N	80°42'01.817"W	4145.87	303.042	0.00
10926.00†	90.000	312.907	7060.00	4231.75	2328.66	-3548.59	1724556.33	14425791.24	39°43'20.643"N	80°42'02.752"W	4244.42	303.274	0.00
11026.00†	90.000	312.907	7060.00	4331.34	2396.74	-3621.83	1724483.11	14425859.30	39°43'21.318"N	80°42'03.686"W	4343.04	303.494	0.00
11126.00†	90.000	312.907	7060.00	4430.93	2464.82	-3695.08	1724409.89	14425927.35	39°43'21.993"N	80°42'04.621"W	4441.73	303.705	0.00
11226.00†	90.000	312.907	7060.00	4530.51	2532.90	-3768.32	1724336.68	14425995.40	39°43'22.669"N	80°42'05.555"W	4540.47	303.907	0.00
11326.00†	90.000	312.907	7060.00	4630.10	2600.98	-3841.57	1724263.46	14426063.46	39°43'23.344"N	80°42'06.490"W	4639.26	304.100	0.00
11426.00†	90.000	312.907	7060.00	4729.69	2669.06	-3914.82	1724190.24	14426131.51	39°43'24.019"N	80°42'07.424"W	4738.11	304.286	0.00

## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #01
SOUTHWESTERN ENERGY	Well	Blatt WTZ 1H
Wetzel County, WV	Wellbore	Blatt WTZ 1H PWB
Wetzel		
Blatt WTZ Pad		

## WELLPATH DATA (152 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
11526.00†	90.000	312.907	7060.00	4829.28	2737.14	-3988.06	1724117.03	14426199.57	39°43'24.694"N	80°42'08.359"W	4837.00	304.463	0.00
11626.00†	90.000	312.907	7060.00	4928.86	2805.23	-4061.31	1724043.81	14426267.62	39°43'25.370"N	80°42'09.293"W	4935.94	304.634	0.00
11726.00†	90.000	312.907	7060.00	5028.45	2873.31	-4134.55	1723970.59	14426335.68	39°43'26.045"N	80°42'10.228"W	5034.92	304.797	0.00
11826.00†	90.000	312.907	7060.00	5128.04	2941.39	-4207.80	1723897.37	14426403.73	39°43'26.720"N	80°42'11.162"W	5133.94	304.955	0.00
11926.00†	90.000	312.907	7060.00	5227.63	3009.47	-4281.05	1723824.16	14426471.79	39°43'27.395"N	80°42'12.097"W	5233.00	305.106	0.00
12026.00†	90.000	312.907	7060.00	5327.21	3077.55	-4354.29	1723750.94	14426539.84	39°43'28.071"N	80°42'13.031"W	5332.09	305.252	0.00
12126.00†	90.000	312.907	7060.00	5426.80	3145.63	-4427.54	1723677.72	14426607.89	39°43'28.746"N	80°42'13.966"W	5431.21	305.393	0.00
12226.00†	90.000	312.907	7060.00	5526.39	3213.71	-4500.78	1723604.51	14426675.95	39°43'29.421"N	80°42'14.900"W	5530.37	305.528	0.00
12326.00†	90.000	312.907	7060.00	5625.98	3281.79	-4574.03	1723531.29	14426744.00	39°43'30.096"N	80°42'15.835"W	5629.56	305.659	0.00
12426.00†	90.000	312.907	7060.00	5725.57	3349.87	-4647.28	1723458.07	14426812.06	39°43'30.771"N	80°42'16.769"W	5728.77	305.785	0.00
12526.00†	90.000	312.907	7060.00	5825.15	3417.96	-4720.52	1723384.86	14426880.11	39°43'31.447"N	80°42'17.704"W	5828.01	305.907	0.00
12626.00†	90.000	312.907	7060.00	5924.74	3486.04	-4793.77	1723311.64	14426948.17	39°43'32.122"N	80°42'18.639"W	5927.28	306.025	0.00
12726.00†	90.000	312.907	7060.00	6024.33	3554.12	-4867.01	1723238.42	14427016.22	39°43'32.797"N	80°42'19.573"W	6026.57	306.139	0.00
12826.00†	90.000	312.907	7060.00	6123.92	3622.20	-4940.26	1723165.20	14427084.27	39°43'33.472"N	80°42'20.508"W	6125.89	306.249	0.00
12926.00†	90.000	312.907	7060.00	6223.50	3690.28	-5013.50	1723091.99	14427152.33	39°43'34.147"N	80°42'21.442"W	6225.22	306.356	0.00
13026.00†	90.000	312.907	7060.00	6323.09	3758.36	-5086.75	1723018.77	14427220.38	39°43'34.823"N	80°42'22.377"W	6324.58	306.459	0.00
13126.00†	90.000	312.907	7060.00	6422.68	3826.44	-5160.00	1722945.55	14427288.44	39°43'35.498"N	80°42'23.312"W	6423.96	306.559	0.00
13226.00†	90.000	312.907	7060.00	6522.27	3894.52	-5233.24	1722872.34	14427356.49	39°43'36.173"N	80°42'24.246"W	6523.35	306.656	0.00
13326.00†	90.000	312.907	7060.00	6621.85	3962.60	-5306.49	1722799.12	14427424.55	39°43'36.848"N	80°42'25.181"W	6622.77	306.750	0.00
13426.00†	90.000	312.907	7060.00	6721.44	4030.69	-5379.73	1722725.90	14427492.60	39°43'37.523"N	80°42'26.115"W	6722.20	306.842	0.00
13526.00†	90.000	312.907	7060.00	6821.03	4098.77	-5452.98	1722652.68	14427560.66	39°43'38.199"N	80°42'27.050"W	6821.65	306.931	0.00
13626.00†	90.000	312.907	7060.00	6920.62	4166.85	-5526.23	1722579.47	14427628.71	39°43'38.874"N	80°42'27.985"W	6921.11	307.017	0.00
13726.00†	90.000	312.907	7060.00	7020.20	4234.93	-5599.47	1722506.25	14427696.76	39°43'39.549"N	80°42'28.919"W	7020.59	307.101	0.00
13826.00†	90.000	312.907	7060.00	7119.79	4303.01	-5672.72	1722433.03	14427764.82	39°43'40.224"N	80°42'29.854"W	7120.09	307.182	0.00
13926.00†	90.000	312.907	7060.00	7219.38	4371.09	-5745.96	1722359.82	14427832.87	39°43'40.899"N	80°42'30.788"W	7219.59	307.261	0.00
14026.00†	90.000	312.907	7060.00	7318.97	4439.17	-5819.21	1722286.60	14427900.93	39°43'41.575"N	80°42'31.723"W	7319.12	307.338	0.00
14126.00†	90.000	312.907	7060.00	7418.56	4507.25	-5892.45	1722213.38	14427968.98	39°43'42.250"N	80°42'32.658"W	7418.65	307.413	0.00
14226.00†	90.000	312.907	7060.00	7518.14	4575.34	-5965.70	1722140.17	14428037.04	39°43'42.925"N	80°42'33.592"W	7518.20	307.486	0.00
14326.00†	90.000	312.907	7060.00	7617.73	4643.42	-6038.95	1722066.95	14428105.09	39°43'43.600"N	80°42'34.527"W	7617.75	307.557	0.00
14426.00†	90.000	312.907	7060.00	7717.32	4711.50	-6112.19	1721993.73	14428173.14	39°43'44.275"N	80°42'35.462"W	7717.32	307.626	0.00

## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #01
Area	Wetzel County, WV	Well	Blatt WTZ 1H
Field	Wetzel	Wellbore	Blatt WTZ 1H PWB
Facility	Blatt WTZ Pad		

## WELLPATH DATA (152 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
14526.00†	90.000	312.907	7060.00	4779.58	-6185.44	1721920.51	14428241.20	39°43'44.950"N	80°42'36.396"W	7816.91	307.694	0.00
14538.37	90.000	312.907	7060.00 <sup>2</sup>	4788.00	-6194.50	1721911.45	14428249.62	39°43'45.034"N	80°42'36.512"W	7829.23	307.702	0.00

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) Blatt WTZ 1H LP Rev-3 prog	7439.84	7060.00	-44.76	-995.12	1727108.79	14423418.76	39°42'57.102"N	80°41'30.177"W	point
2) Blatt WTZ 1H PBHL Rev-3 prog	14538.37	7060.00	4788.00	-6194.50	1721911.45	14428249.62	39°43'45.034"N	80°42'36.512"W	point

## SURVEY PROGRAM - Ref Wellbore: Blatt WTZ 1H PWB Ref Wellpath: Blatt WTZ 1H PWP Ex-04

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment
26.00	304.00	EMS (Standard)	Blatt WTZ 1H PWB
304.00	20004.00	ISCWSA MWD, Rev. 2 (Standard)	Blatt WTZ 1H PWB