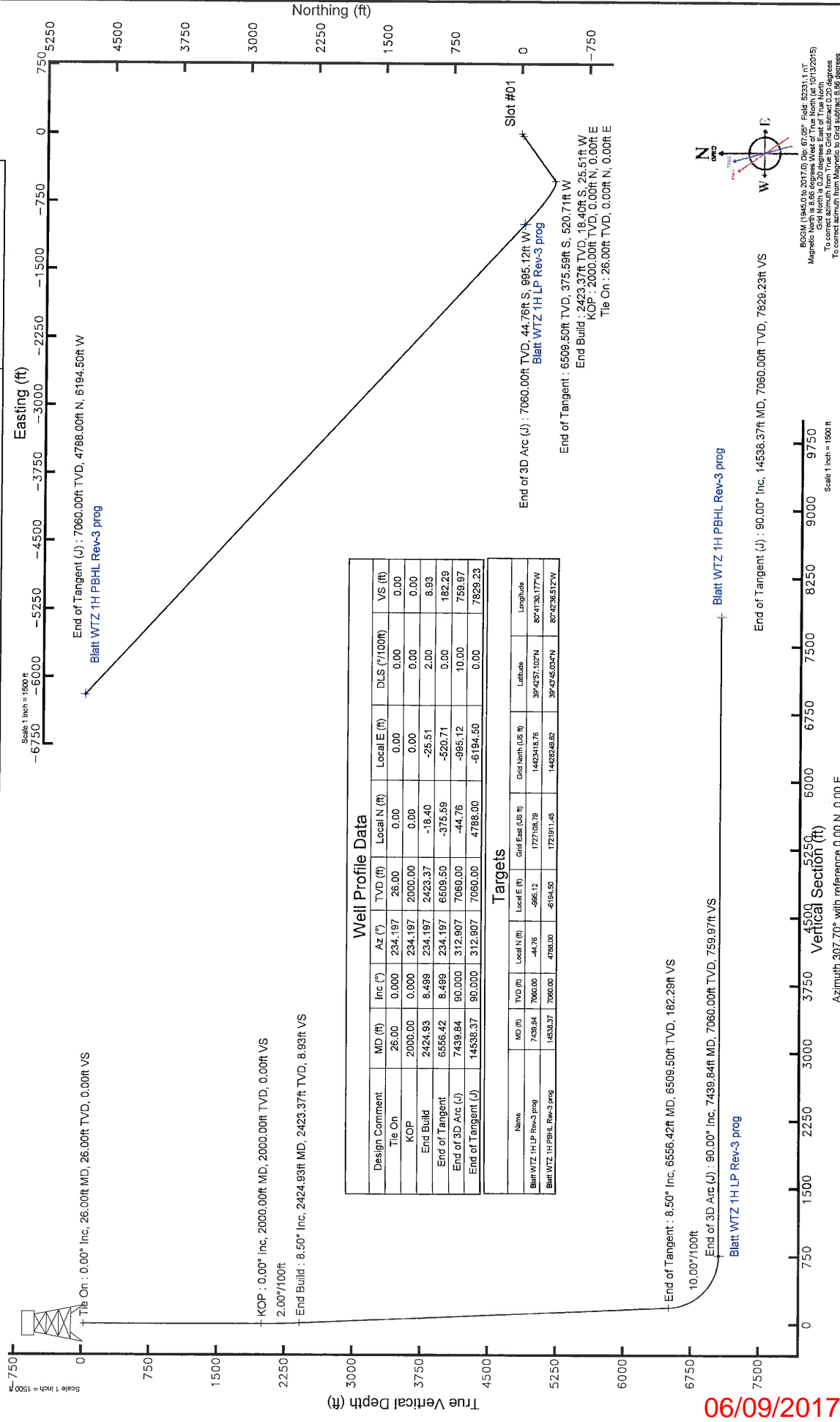


Plot reference wellpath is Blatt WTZ 1H PWP Ex-04

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
Scale: True distance
Depths are in feet
Created by: always on 10/14/2015
Coordinates are in feet referenced to Slot

Location Information

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



BGSN (1945.0 to 2017.0) Dip: 67.05° Field: 52331.1 NT
Magnetic Declination: 10.00° East of True North
Grid North is 0.20 degrees East of True North
To correct azimuth from True to Grid subtract 0.20 degrees
To correct azimuth from Magnetic to Grid subtract 8.16 degrees

Scale: 1 inch = 1500 ft
Azimuth 307.70° with reference 0.00 N, 0.00 E

11/02/2017

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY		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		
North Reference	Grid	Software System	WellArchitect® 4.0.1
Scale	0.999609	User	Alvayes
Convergence at slot	0.20° East	Report Generated	10/14/2015 at 2:54:10 PM
		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
Area	Wellbore
Field	Well
Facility	Wellbore
	Blatt WTZ 1H PWB
	Blatt WTZ 1H PWB
	Blatt WTZ 1H PWB

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	2125.96	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	2225.77	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	2325.30	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	
2526.00†	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	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]
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°41'24.267"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	285.570	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

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		

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	1424157.94	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	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]
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]	Vert Sect [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	7816.91	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 ²	7829.23	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	ISCSWA MWD, Rev. 2 (Standard)	Blatt WTZ 1H PWB