



Actual Wellpath Report

Statler 10H AWP Proj: 13830'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #10
Area	Monongalia County, WV	Well	Statler 10H
Field	Monongalia	Wellbore	Statler 10H AWB
Facility	Statler		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 4.0.1
North Reference	Grid	User	Edsaryar
Scale	0.999942	Report Generated	19/Aug/2015 at 22:46
Convergence at slot	0.43° West	Database/Source file	WellArchitectEasternDB/Statler_10H_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	4.35	55.89	1777741.60	440645.00	39°42'28.161"N	80°10'40.975"W
Facility Reference Pt			1777685.71	440640.65	39°42'28.114"N	80°10'41.690"W
Field Reference Pt			1777685.71	440640.65	39°42'28.114"N	80°10'41.690"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 254 (RKB) to Facility Vertical Datum	22.50ft
Horizontal Reference Pt	Slot	Patterson 254 (RKB) to Mean Sea Level	1085.00ft
Vertical Reference Pt	Patterson 254 (RKB)	Patterson 254 (RKB) to Mud Line at Slot (Slot #10)	22.50ft
MD Reference Pt	Patterson 254 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	129.76°

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WELLPATH DATA (147 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]	Build Rate [°/100ft]	Turn Rate [°/100ft]
0.00†	0.000	168.500	0.00	0.00	0.00	0.00	1777741.60	440645.00	39°42'28.161"N	80°10'40.975"W	0.00	0.000	0.00	0.00	0.00
22.50	0.000	168.500	22.50	0.00	0.00	0.00	1777741.60	440645.00	39°42'28.161"N	80°10'40.975"W	0.00	0.000	0.00	0.00	0.00
142.50	0.200	168.500	142.50	0.16	-0.21	0.04	1777741.64	440644.79	39°42'28.159"N	80°10'40.975"W	0.21	168.500	0.17	0.17	0.00
236.50	0.500	117.300	236.50	0.69	-0.55	0.44	1777742.04	440644.45	39°42'28.156"N	80°10'40.970"W	0.71	141.616	0.43	0.32	-54.47
330.50	0.400	160.900	330.50	1.37	-1.05	0.91	1777742.51	440643.95	39°42'28.151"N	80°10'40.963"W	1.39	139.124	0.37	-0.11	46.38
425.50	0.300	124.400	425.49	1.90	-1.51	1.22	1777742.82	440643.49	39°42'28.146"N	80°10'40.959"W	1.94	140.889	0.25	-0.11	-38.42
519.50	0.400	173.200	519.49	2.39	-1.97	1.47	1777743.07	440643.03	39°42'28.142"N	80°10'40.956"W	2.46	143.351	0.32	0.11	51.91
615.50	0.200	137.000	615.49	2.80	-2.43	1.62	1777743.22	440642.57	39°42'28.137"N	80°10'40.954"W	2.92	146.264	0.28	-0.21	-37.71
710.50	0.200	145.500	710.49	3.12	-2.68	1.83	1777743.43	440642.32	39°42'28.135"N	80°10'40.952"W	3.25	145.754	0.03	0.00	8.95
804.50	0.200	62.000	804.49	3.34	-2.74	2.07	1777743.66	440642.26	39°42'28.134"N	80°10'40.949"W	3.43	143.019	0.28	0.00	-88.83
899.50	0.300	125.500	899.49	3.65	-2.81	2.41	1777744.01	440642.19	39°42'28.134"N	80°10'40.944"W	3.70	139.325	0.29	0.11	66.84
1088.50	0.100	210.300	1088.49	4.17	-3.24	2.73	1777744.33	440641.76	39°42'28.129"N	80°10'40.940"W	4.24	139.834	0.16	-0.11	44.87
1183.50	0.200	232.200	1183.49	4.15	-3.41	2.56	1777744.16	440641.59	39°42'28.128"N	80°10'40.942"W	4.27	143.110	0.12	0.11	23.05
1278.50	0.100	202.900	1278.49	4.14	-3.59	2.40	1777744.00	440641.41	39°42'28.126"N	80°10'40.944"W	4.32	146.263	0.13	-0.11	-30.84
1372.50	0.400	277.300	1372.49	3.89	-3.62	2.04	1777743.64	440641.38	39°42'28.125"N	80°10'40.949"W	4.16	150.621	0.41	0.32	79.15
1467.50	0.300	298.700	1467.48	3.36	-3.46	1.49	1777743.09	440641.54	39°42'28.127"N	80°10'40.956"W	3.77	156.672	0.17	-0.11	22.53
1561.50	0.400	297.800	1561.48	2.80	-3.19	0.99	1777742.59	440641.81	39°42'28.130"N	80°10'40.962"W	3.34	162.814	0.11	0.11	-0.96
1656.50	0.400	286.700	1656.48	2.17	-2.94	0.38	1777741.98	440642.06	39°42'28.132"N	80°10'40.970"W	2.96	172.715	0.08	0.00	-11.68
1750.50	0.100	255.900	1750.48	1.82	-2.87	-0.02	1777741.58	440642.13	39°42'28.133"N	80°10'40.975"W	2.87	180.357	0.34	-0.32	-32.77
1845.50	0.000	236.600	1845.48	1.77	-2.89	-0.10	1777741.50	440642.11	39°42'28.133"N	80°10'40.976"W	2.89	181.950	0.11	-0.11	0.00
1939.50	0.200	192.100	1939.48	1.85	-3.05	-0.13	1777741.47	440641.95	39°42'28.131"N	80°10'40.977"W	3.05	182.493	0.21	0.21	0.00
2034.50	0.100	279.800	2034.48	1.85	-3.20	-0.25	1777741.35	440641.80	39°42'28.130"N	80°10'40.978"W	3.21	184.458	0.23	-0.11	92.32
2129.50	0.200	164.900	2129.48	1.92	-3.34	-0.29	1777741.31	440641.66	39°42'28.128"N	80°10'40.979"W	3.35	184.920	0.27	0.11	-120.95
2320.50	0.300	203.800	2320.48	2.33	-4.12	-0.40	1777741.20	440640.88	39°42'28.120"N	80°10'40.980"W	4.14	185.580	0.10	0.05	20.37
2414.50	0.400	110.400	2414.48	2.70	-4.46	-0.19	1777741.41	440640.54	39°42'28.117"N	80°10'40.977"W	4.46	182.495	0.55	0.11	-99.36
2509.50	1.600	71.800	2509.46	3.72	-4.16	1.38	1777742.98	440640.84	39°42'28.120"N	80°10'40.957"W	4.38	161.698	1.38	1.26	-40.63
2604.50	4.400	59.700	2604.32	5.67	-1.91	5.78	1777747.38	440643.09	39°42'28.143"N	80°10'40.901"W	6.09	108.260	3.01	2.95	-12.74
2699.50	7.700	51.900	2698.78	8.25	3.86	13.94	1777755.54	440648.86	39°42'28.200"N	80°10'40.797"W	14.46	74.527	3.57	3.47	-8.21
2794.50	10.300	49.100	2792.60	10.97	13.35	25.37	1777766.97	440658.35	39°42'28.295"N	80°10'40.652"W	28.67	62.249	2.77	2.74	-2.95
2888.50	11.000	48.300	2884.98	13.66	24.82	38.42	1777780.02	440669.82	39°42'28.409"N	80°10'40.486"W	45.74	57.139	0.76	0.74	-0.85



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Area	Monongalia County, WV	Well	Statler 10H
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Facility	Statler		

WELLPATH DATA (147 stations)

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]	Build Rate [°/100ft]	Turn Rate [°/100ft]
2984.50	12.300	46.900	2979.00	16.29	37.90	52.72	1777794.32	440682.89	39°42'28.540"N	80°10'40.304"W	64.93	54.292	1.39	1.35	-1.46
3079.50	12.300	51.700	3071.83	19.64	51.08	68.05	1777809.65	440696.08	39°42'28.671"N	80°10'40.109"W	85.09	53.107	1.08	0.00	5.05
3173.50	11.300	55.000	3163.84	24.14	62.57	83.46	1777825.05	440707.57	39°42'28.786"N	80°10'39.913"W	104.31	53.139	1.28	-1.06	3.51
3267.50	11.100	54.300	3256.05	28.83	73.13	98.35	1777839.94	440718.13	39°42'28.891"N	80°10'39.724"W	122.56	53.365	0.26	-0.21	-0.74
3362.50	11.200	57.900	3349.26	34.00	83.37	113.59	1777855.18	440728.37	39°42'28.994"N	80°10'39.530"W	140.90	53.722	0.74	0.11	3.79
3457.50	12.000	61.000	3442.32	40.45	93.06	130.04	1777871.64	440738.06	39°42'29.091"N	80°10'39.320"W	159.91	54.411	1.07	0.84	3.26
3552.50	12.800	59.400	3535.10	47.56	103.21	147.74	1777889.33	440748.20	39°42'29.192"N	80°10'39.095"W	180.22	55.062	0.92	0.84	-1.68
3647.50	12.500	63.000	3627.80	55.16	113.23	165.96	1777907.55	440758.23	39°42'29.293"N	80°10'38.863"W	200.91	55.694	0.89	-0.32	3.79
3741.50	12.100	61.900	3719.64	62.88	122.49	183.71	1777925.30	440767.48	39°42'29.385"N	80°10'38.636"W	220.81	56.306	0.49	-0.43	-1.17
3836.50	10.900	62.700	3812.73	70.14	131.30	200.48	1777942.07	440776.29	39°42'29.474"N	80°10'38.423"W	239.65	56.778	1.27	-1.26	0.84
3932.50	11.000	62.400	3906.98	77.20	139.71	216.66	1777958.25	440784.70	39°42'29.558"N	80°10'38.217"W	257.80	57.185	0.12	0.10	-0.31
4027.50	11.500	60.500	4000.16	84.04	148.57	232.94	1777974.52	440793.56	39°42'29.647"N	80°10'38.009"W	276.28	57.470	0.66	0.53	-2.00
4121.50	10.800	61.400	4092.38	90.61	157.40	248.82	1777990.41	440802.39	39°42'29.735"N	80°10'37.807"W	294.43	57.683	0.77	-0.74	0.96
4216.50	11.100	60.800	4185.65	97.17	166.12	264.62	1778006.20	440811.11	39°42'29.823"N	80°10'37.605"W	312.44	57.880	0.34	0.32	-0.63
4311.50	11.700	59.900	4278.78	103.77	175.41	280.94	1778022.52	440820.40	39°42'29.916"N	80°10'37.398"W	331.20	58.020	0.66	0.63	-0.95
4405.50	12.400	59.000	4370.71	110.38	185.39	297.83	1778039.42	440830.38	39°42'30.015"N	80°10'37.182"W	350.82	58.099	0.77	0.74	-0.96
4499.50	12.200	63.200	4462.55	117.66	195.07	315.35	1778056.93	440840.06	39°42'30.112"N	80°10'36.959"W	370.81	58.260	0.98	-0.21	4.47
4594.50	11.400	65.500	4555.54	125.73	203.49	332.85	1778074.43	440848.48	39°42'30.197"N	80°10'36.736"W	390.13	58.561	0.98	-0.84	2.42
4688.50	12.400	64.900	4647.52	134.05	211.62	350.45	1778092.03	440856.61	39°42'30.279"N	80°10'36.512"W	409.39	58.874	1.07	1.06	-0.64
4783.50	12.000	62.300	4740.38	142.17	220.54	368.43	1778110.01	440865.53	39°42'30.368"N	80°10'36.282"W	429.39	59.095	0.72	-0.42	-2.74
4878.50	12.300	61.300	4833.25	149.67	229.99	386.05	1778127.63	440874.98	39°42'30.463"N	80°10'36.058"W	449.37	59.215	0.39	0.32	-1.05
4973.50	12.300	63.100	4926.07	157.40	239.43	403.95	1778145.52	440884.41	39°42'30.557"N	80°10'35.830"W	469.57	59.344	0.40	0.00	1.89
5067.50	11.400	59.500	5018.06	164.50	248.67	420.88	1778162.46	440893.66	39°42'30.650"N	80°10'35.614"W	488.86	59.424	1.24	-0.96	-3.83
5162.50	10.600	59.800	5111.32	170.67	257.83	436.52	1778178.10	440902.82	39°42'30.742"N	80°10'35.415"W	506.98	59.432	0.84	-0.84	0.32
5257.50	10.000	58.400	5204.79	176.30	266.55	451.10	1778192.67	440911.53	39°42'30.829"N	80°10'35.229"W	523.97	59.422	0.68	-0.63	-1.47
5351.50	10.200	52.800	5297.33	180.78	275.86	464.68	1778206.25	440920.84	39°42'30.922"N	80°10'35.056"W	540.40	59.304	1.07	0.21	-5.96
5446.50	11.400	52.500	5390.65	184.75	286.66	478.83	1778220.40	440931.64	39°42'31.030"N	80°10'34.876"W	558.08	59.092	1.26	1.26	-0.32
5541.50	10.800	55.500	5483.87	189.24	297.42	493.62	1778235.19	440942.40	39°42'31.137"N	80°10'34.688"W	576.29	58.930	0.88	-0.63	3.16
5636.50	10.100	56.100	5577.30	193.99	307.11	507.87	1778249.43	440952.09	39°42'31.234"N	80°10'34.507"W	593.50	58.839	0.75	-0.74	0.63
5731.50	10.400	60.200	5670.78	199.33	316.01	522.22	1778263.79	440960.99	39°42'31.323"N	80°10'34.324"W	610.39	58.820	0.83	0.32	4.32



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5826.50	11.900	59.700	5763.98	205.67	325.22	538.12	1778279.69	440970.20	39°42'31.415"N	80°10'34.121"W	628.76	58.853	1.58	1.58	-0.53
5921.50	12.600	62.000	5856.82	212.93	335.02	555.72	1778297.29	440980.00	39°42'31.513"N	80°10'33.897"W	648.90	58.916	0.90	0.74	2.42
6016.50	13.600	64.200	5949.35	221.47	344.75	574.93	1778316.50	440989.73	39°42'31.611"N	80°10'33.652"W	670.37	59.052	1.18	1.05	2.32
6111.50	13.800	66.800	6041.65	231.25	354.07	595.40	1778336.96	440999.05	39°42'31.705"N	80°10'33.391"W	692.73	59.261	0.68	0.21	2.74
6206.50	13.100	70.300	6134.04	241.87	362.17	615.95	1778357.51	441007.15	39°42'31.786"N	80°10'33.129"W	714.53	59.545	1.13	-0.74	3.68
6301.50	12.500	66.900	6226.68	252.03	369.83	635.54	1778377.11	441014.81	39°42'31.863"N	80°10'32.879"W	735.32	59.804	1.01	-0.63	-3.58
6395.50	11.600	62.400	6318.61	260.31	378.20	653.28	1778394.84	441023.18	39°42'31.947"N	80°10'32.653"W	754.85	59.932	1.38	-0.96	-4.79
6490.50	11.900	60.400	6411.62	267.44	387.46	670.26	1778411.82	441032.44	39°42'32.040"N	80°10'32.437"W	774.19	59.969	0.53	0.32	-2.11
6585.50	11.900	61.200	6504.58	274.47	397.02	687.36	1778428.92	441042.00	39°42'32.136"N	80°10'32.219"W	793.78	59.989	0.17	0.00	0.84
6680.50	15.700	60.400	6596.82	282.58	408.09	707.12	1778448.68	441053.07	39°42'32.247"N	80°10'31.967"W	816.43	60.010	4.00	4.00	-0.84
6743.00	15.250	63.910	6657.06	288.93	415.88	721.86	1778463.42	441060.86	39°42'32.325"N	80°10'31.779"W	833.09	60.053	1.66	-0.72	5.62
6838.00	12.520	65.950	6749.27	298.58	425.58	742.49	1778484.04	441070.55	39°42'32.422"N	80°10'31.516"W	855.80	60.180	2.92	-2.87	2.15
6933.00	11.930	64.890	6842.12	307.30	433.94	760.78	1778502.34	441078.91	39°42'32.506"N	80°10'31.283"W	875.84	60.300	0.66	-0.62	-1.12
7028.00	13.650	62.760	6934.76	315.85	443.24	779.64	1778521.19	441088.21	39°42'32.600"N	80°10'31.042"W	896.83	60.381	1.88	1.81	-2.24
7122.00	15.410	61.080	7025.75	324.73	454.36	800.43	1778541.99	441099.33	39°42'32.711"N	80°10'30.777"W	920.40	60.419	1.93	1.87	-1.79
7217.00	15.550	59.480	7117.30	333.61	466.93	822.45	1778564.00	441111.90	39°42'32.837"N	80°10'30.497"W	945.75	60.415	0.47	0.15	-1.68
7312.00	15.290	66.010	7208.89	343.45	478.49	844.87	1778586.42	441123.46	39°42'32.953"N	80°10'30.211"W	970.95	60.475	1.85	-0.27	6.87
7407.00	14.700	68.060	7300.65	354.70	488.08	867.49	1778609.04	441133.05	39°42'33.049"N	80°10'29.923"W	995.37	60.636	0.84	-0.62	2.16
7501.00	15.920	88.970	7391.39	370.13	492.77	891.46	1778633.01	441137.74	39°42'33.097"N	80°10'29.616"W	1018.59	61.068	5.98	1.30	22.24
7595.00	21.950	114.140	7480.40	396.88	485.80	920.46	1778662.00	441130.77	39°42'33.031"N	80°10'29.245"W	1040.79	62.176	10.66	6.41	26.78
7689.00	29.200	126.590	7565.20	436.77	464.91	954.97	1778696.52	441109.88	39°42'32.827"N	80°10'28.801"W	1062.13	64.042	9.56	7.71	13.24
7783.00	35.550	127.650	7644.55	487.03	434.52	995.06	1778736.60	441079.49	39°42'32.529"N	80°10'28.285"W	1085.80	66.410	6.78	6.76	1.13
7878.00	45.090	117.650	7716.97	547.72	401.93	1046.90	1778788.44	441046.90	39°42'32.211"N	80°10'27.619"W	1121.40	68.997	12.11	10.04	-10.53
7973.00	54.450	118.910	7778.26	618.73	367.55	1110.67	1778852.21	441012.53	39°42'31.876"N	80°10'26.800"W	1169.91	71.689	9.90	9.85	1.33
8067.00	64.860	123.810	7825.71	698.86	325.26	1179.72	1778921.25	440970.24	39°42'31.463"N	80°10'25.912"W	1223.74	74.586	11.95	11.07	5.21
8162.00	74.200	123.840	7858.89	787.29	275.77	1253.58	1778995.10	440920.75	39°42'30.980"N	80°10'24.962"W	1283.55	77.593	9.83	9.83	0.03
8256.00	81.160	123.830	7878.94	878.58	224.67	1329.81	1779071.33	440869.65	39°42'30.480"N	80°10'23.982"W	1348.66	80.411	7.40	7.40	-0.01
8350.00	84.700	124.010	7890.51	971.36	172.62	1407.21	1779148.72	440817.61	39°42'29.972"N	80°10'22.987"W	1417.76	83.007	3.77	3.77	0.19
8444.00	86.860	126.910	7897.42	1064.83	118.24	1483.55	1779225.06	440763.23	39°42'29.440"N	80°10'22.005"W	1488.25	85.443	3.84	2.30	3.09
8539.00	86.860	130.150	7902.63	1159.65	59.16	1557.75	1779299.25	440704.15	39°42'28.861"N	80°10'21.050"W	1558.87	87.825	3.41	0.00	3.41



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Statler 10H AWP Proj: 13830'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #10
Area	Monongalia County, WV	Well	Statler 10H
Field	Monongalia	Wellbore	Statler 10H AWB
Facility	Statler		

WELLPATH DATA (147 stations)

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]	Build Rate [°/100ft]	Turn Rate [°/100ft]
8633.00	86.800	130.190	7907.83	1253.50	-1.39	1629.46	1779370.97	440643.61	39°42'28.268"N	80°10'20.126"W	1629.47	90.049	0.08	-0.06	0.04
8728.00	88.800	129.680	7911.47	1348.43	-62.32	1702.25	1779443.75	440582.68	39°42'27.672"N	80°10'19.189"W	1703.39	92.097	2.17	2.11	-0.54
8823.00	89.020	129.490	7913.28	1443.41	-122.84	1775.45	1779516.94	440522.16	39°42'27.079"N	80°10'18.247"W	1779.70	93.958	0.31	0.23	-0.20
8916.00	88.920	128.050	7914.95	1536.38	-181.07	1847.95	1779589.44	440463.94	39°42'26.509"N	80°10'17.314"W	1856.80	95.596	1.55	-0.11	-1.55
9011.00	87.690	125.230	7917.76	1631.19	-237.73	1924.13	1779665.62	440407.28	39°42'25.955"N	80°10'16.333"W	1938.76	97.043	3.24	-1.29	-2.97
9105.00	87.350	127.420	7921.83	1724.92	-293.36	1999.79	1779741.27	440351.66	39°42'25.410"N	80°10'15.360"W	2021.19	98.345	2.36	-0.36	2.33
9200.00	88.430	130.590	7925.33	1819.84	-353.10	2073.55	1779815.03	440291.92	39°42'24.825"N	80°10'14.411"W	2103.40	99.664	3.52	1.14	3.34
9295.00	88.800	129.500	7927.63	1914.81	-414.21	2146.26	1779887.73	440230.82	39°42'24.227"N	80°10'13.475"W	2185.86	100.923	1.21	0.39	-1.15
9390.00	89.450	128.420	7929.08	2009.78	-473.93	2220.12	1779961.58	440171.10	39°42'23.642"N	80°10'12.524"W	2270.14	102.050	1.33	0.68	-1.14
9485.00	89.320	128.530	7930.10	2104.76	-533.03	2294.49	1780035.95	440112.00	39°42'23.064"N	80°10'11.567"W	2355.59	103.078	0.18	-0.14	0.12
9579.00	88.980	126.700	7931.49	2198.68	-590.40	2368.93	1780110.39	440054.64	39°42'22.502"N	80°10'10.609"W	2441.40	103.994	1.98	-0.36	-1.95
9674.00	88.740	125.660	7933.38	2293.47	-646.47	2445.60	1780187.05	439998.57	39°42'21.954"N	80°10'09.622"W	2529.60	104.807	1.12	-0.25	-1.09
9769.00	88.550	127.870	7935.63	2388.31	-703.31	2521.68	1780263.13	439941.73	39°42'21.398"N	80°10'08.644"W	2617.92	105.584	2.33	-0.20	2.33
9863.00	88.400	132.880	7938.13	2482.24	-764.16	2593.24	1780334.68	439880.89	39°42'20.801"N	80°10'07.722"W	2703.49	106.419	5.33	-0.16	5.33
9958.00	88.830	136.980	7940.43	2576.80	-831.22	2660.46	1780401.90	439813.83	39°42'20.144"N	80°10'06.856"W	2787.29	107.351	4.34	0.45	4.32
10053.00	87.910	136.360	7943.13	2671.07	-900.29	2725.62	1780467.06	439744.76	39°42'19.466"N	80°10'06.015"W	2870.46	108.279	1.17	-0.97	-0.65
10147.00	87.570	132.390	7946.84	2764.68	-965.97	2792.75	1780534.18	439679.09	39°42'18.822"N	80°10'05.150"W	2955.09	109.080	4.24	-0.36	-4.22
10242.00	88.150	130.620	7950.39	2859.56	-1028.88	2863.84	1780605.27	439616.18	39°42'18.205"N	80°10'04.235"W	3043.05	109.762	1.96	0.61	-1.86
10337.00	88.430	130.930	7953.22	2954.51	-1090.89	2935.75	1780677.17	439554.17	39°42'17.598"N	80°10'03.309"W	3131.88	110.385	0.44	0.29	0.33
10431.00	88.620	130.330	7955.64	3048.46	-1152.08	3007.07	1780748.48	439492.99	39°42'16.998"N	80°10'02.391"W	3220.21	110.963	0.67	0.20	-0.64
10526.00	89.350	130.300	7957.32	3143.44	-1213.54	3079.49	1780820.91	439431.54	39°42'16.396"N	80°10'01.458"W	3309.98	111.508	0.77	0.77	-0.03
10621.00	89.320	128.910	7958.43	3238.43	-1274.09	3152.68	1780894.09	439370.98	39°42'15.803"N	80°10'00.516"W	3400.40	112.005	1.46	-0.03	-1.46
10715.00	89.170	127.310	7959.66	3332.38	-1332.10	3226.63	1780968.04	439312.98	39°42'15.235"N	80°09'59.564"W	3490.79	112.433	1.71	-0.16	-1.70
10809.00	89.200	126.440	7961.00	3426.25	-1388.50	3301.82	1781043.22	439256.58	39°42'14.683"N	80°09'58.597"W	3581.89	112.808	0.93	0.03	-0.93
10903.00	89.660	125.890	7961.94	3520.06	-1443.97	3377.70	1781119.10	439201.12	39°42'14.141"N	80°09'57.621"W	3673.41	113.147	0.76	0.49	-0.59
10998.00	89.940	126.990	7962.27	3614.90	-1500.40	3454.12	1781195.52	439144.69	39°42'13.589"N	80°09'56.638"W	3765.92	113.479	1.19	0.29	1.16
11092.00	90.460	128.160	7961.94	3708.83	-1557.71	3528.62	1781270.01	439087.38	39°42'13.028"N	80°09'55.679"W	3857.16	113.819	1.36	0.55	1.24
11187.00	90.430	129.200	7961.20	3803.81	-1617.08	3602.78	1781344.16	439028.01	39°42'12.446"N	80°09'54.725"W	3949.05	114.173	1.10	-0.03	1.09
11282.00	89.850	130.330	7960.97	3898.81	-1677.85	3675.80	1781417.18	438967.25	39°42'11.851"N	80°09'53.785"W	4040.63	114.535	1.34	-0.61	1.19
11376.00	90.060	131.830	7961.04	3992.78	-1739.62	3746.66	1781488.03	438905.49	39°42'11.246"N	80°09'52.872"W	4130.82	114.906	1.61	0.22	1.60



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Statler 10H AWP Proj: 13830'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #10
Area	Monongalia County, WV	Well	Statler 10H
Field	Monongalia	Wellbore	Statler 10H AWB
Facility	Statler		

WELLPATH DATA (147 stations)

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]	Build Rate [°/100ft]	Turn Rate [°/100ft]
11471.00	90.030	131.780	7960.97	4087.72	-1802.94	3817.47	1781558.84	438842.17	39°42'10.625"N	80°09'51.960"W	4221.81	115.281	0.06	-0.03	-0.05
11565.00	89.970	132.910	7960.97	4181.62	-1866.26	3886.95	1781628.31	438778.85	39°42'10.005"N	80°09'51.066"W	4311.76	115.647	1.20	-0.06	1.20
11660.00	90.090	131.520	7960.92	4276.53	-1930.09	3957.31	1781698.67	438715.03	39°42'09.379"N	80°09'50.159"W	4402.90	116.000	1.47	0.13	-1.46
11755.00	90.430	129.610	7960.49	4371.52	-1991.87	4029.47	1781770.83	438653.25	39°42'08.774"N	80°09'49.230"W	4494.90	116.304	2.04	0.36	-2.01
11849.00	90.250	124.570	7959.93	4465.38	-2048.53	4104.43	1781845.78	438596.59	39°42'08.219"N	80°09'48.266"W	4587.24	116.524	5.37	-0.19	-5.36
11944.00	89.320	119.670	7960.29	4559.51	-2099.03	4184.86	1781926.21	438546.10	39°42'07.726"N	80°09'47.232"W	4681.77	116.637	5.25	-0.98	-5.16
12038.00	89.910	122.550	7960.92	4652.43	-2147.59	4265.33	1782006.67	438497.54	39°42'07.252"N	80°09'46.198"W	4775.48	116.725	3.13	0.63	3.06
12133.00	89.880	126.370	7961.09	4747.01	-2201.33	4343.64	1782084.98	438443.80	39°42'06.727"N	80°09'45.191"W	4869.61	116.876	4.02	-0.03	4.02
12228.00	90.220	129.570	7961.01	4841.95	-2259.78	4418.53	1782159.86	438385.36	39°42'06.155"N	80°09'44.227"W	4962.86	117.087	3.39	0.36	3.37
12322.00	90.460	131.080	7960.45	4935.94	-2320.60	4490.19	1782231.52	438324.54	39°42'05.559"N	80°09'43.305"W	5054.40	117.331	1.63	0.26	1.61
12417.00	90.400	131.430	7959.74	5030.90	-2383.24	4561.60	1782302.93	438261.90	39°42'04.945"N	80°09'42.385"W	5146.66	117.585	0.37	-0.06	0.37
12512.00	90.520	133.940	7958.98	5125.77	-2447.64	4631.43	1782372.75	438197.50	39°42'04.313"N	80°09'41.486"W	5238.43	117.856	2.65	0.13	2.64
12606.00	90.920	135.750	7957.80	5219.39	-2513.92	4698.07	1782439.39	438131.23	39°42'03.663"N	80°09'40.627"W	5328.38	118.151	1.97	0.43	1.93
12701.00	90.490	135.820	7956.63	5313.85	-2582.01	4764.31	1782505.63	438063.15	39°42'02.995"N	80°09'39.773"W	5418.99	118.455	0.46	-0.45	0.07
12795.00	90.650	136.570	7955.69	5407.26	-2649.84	4829.38	1782570.69	437995.32	39°42'02.330"N	80°09'38.934"W	5508.59	118.753	0.82	0.17	0.80
12890.00	90.490	136.370	7954.75	5501.60	-2718.72	4894.80	1782636.11	437926.45	39°42'01.654"N	80°09'38.091"W	5599.15	119.049	0.27	-0.17	-0.21
12985.00	90.650	132.670	7953.80	5596.25	-2785.31	4962.52	1782703.82	437859.86	39°42'01.000"N	80°09'37.218"W	5690.75	119.304	3.90	0.17	-3.89
13080.00	88.860	128.530	7954.21	5691.22	-2847.12	5034.64	1782775.93	437798.05	39°42'00.395"N	80°09'36.290"W	5783.91	119.488	4.75	-1.88	-4.36
13174.00	90.920	128.150	7954.39	5785.18	-2905.43	5108.36	1782849.65	437739.75	39°41'59.824"N	80°09'35.341"W	5876.80	119.629	2.23	2.19	-0.40
13268.00	90.280	127.760	7953.40	5879.13	-2963.24	5182.47	1782923.76	437681.94	39°41'59.258"N	80°09'34.388"W	5969.82	119.760	0.80	-0.68	-0.41
13363.00	90.680	129.170	7952.61	5974.10	-3022.33	5256.85	1782998.14	437622.86	39°41'58.680"N	80°09'33.430"W	6063.74	119.896	1.54	0.42	1.48
13458.00	91.020	129.380	7951.20	6069.09	-3082.46	5330.39	1783071.66	437562.73	39°41'58.091"N	80°09'32.484"W	6157.48	120.040	0.42	0.36	0.22
13552.00	91.260	126.880	7949.33	6163.02	-3140.48	5404.31	1783145.58	437504.71	39°41'57.523"N	80°09'31.533"W	6250.53	120.161	2.67	0.26	-2.66
13648.00	90.890	126.260	7947.53	6258.86	-3197.67	5481.39	1783222.66	437447.52	39°41'56.963"N	80°09'30.541"W	6345.92	120.258	0.75	-0.39	-0.65
13743.00	90.430	125.820	7946.43	6353.65	-3253.56	5558.20	1783299.47	437391.64	39°41'56.416"N	80°09'29.553"W	6440.44	120.343	0.67	-0.48	-0.46
13807.00	90.340	125.820	7946.00	6417.50	-3291.01	5610.10	1783351.36	437354.18	39°41'56.050"N	80°09'28.886"W	6504.15	120.397	0.14	-0.14	0.00
13830.00	90.340	125.820	7945.87	6440.44	-3304.47	5628.75	1783370.01	437340.73	39°41'55.918"N	80°09'28.646"W	6527.05	120.416	0.00	0.00	0.00

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Statler 10H AWP Proj: 13830'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #10
Area	Monongalia County, WV	Well	Statler 10H
Field	Monongalia	Wellbore	Statler 10H AWB
Facility	Statler		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Statler 10H TP Plat		7888.50	359.37	1207.12	1778948.64	441004.35	39°42'31.802"N	80°10'25.565"W	point
Statler 10H BHL Rev-3		7890.00	-3313.95	5622.56	1783363.82	437331.25	39°41'55.824"N	80°09'28.724"W	point
Statler 10H LP Rev-3		7890.00	209.30	1387.50	1779129.02	440854.29	39°42'30.333"N	80°10'23.242"W	point

WELLPATH COMPOSITION - Ref Wellbore: Statler 10H AWB Ref Wellpath: Statler 10H AWP Proj: 13830'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.50	6680.50	ISCWSA MWD, Rev. 2 (Standard)	01_Crescent MWD <8-3/4"> (134'-6672')	Statler 10H AWB
6680.50	13807.00	NaviTrak (AT Curve Short Spaced)	02_BHI AT Curve <8-1/2"> (6680.5')(6743'-13807')	Statler 10H AWB
13807.00	13830.00	Blind Drilling (std)	Projection to bit	Statler 10H AWB

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Actual Wellpath Report

Statler 10H AWP Proj: 13830'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #10
Area	Monongalia County, WV	Well	Statler 10H
Field	Monongalia	Wellbore	Statler 10H AWP
Facility	Statler		

COMMENTS
<p>Wellpath general comments API: 47-061-01698-0000 BHI Job #: 7427301 Rig: Patterson 254 Duration: 8/12/2015-8/19/2015 Crescent MWD <8-3/4"> (134'-6672') BHI AT Curve <8-1/2"> (6672')(6743'-13807') Projected MD at TD: 13830'</p>

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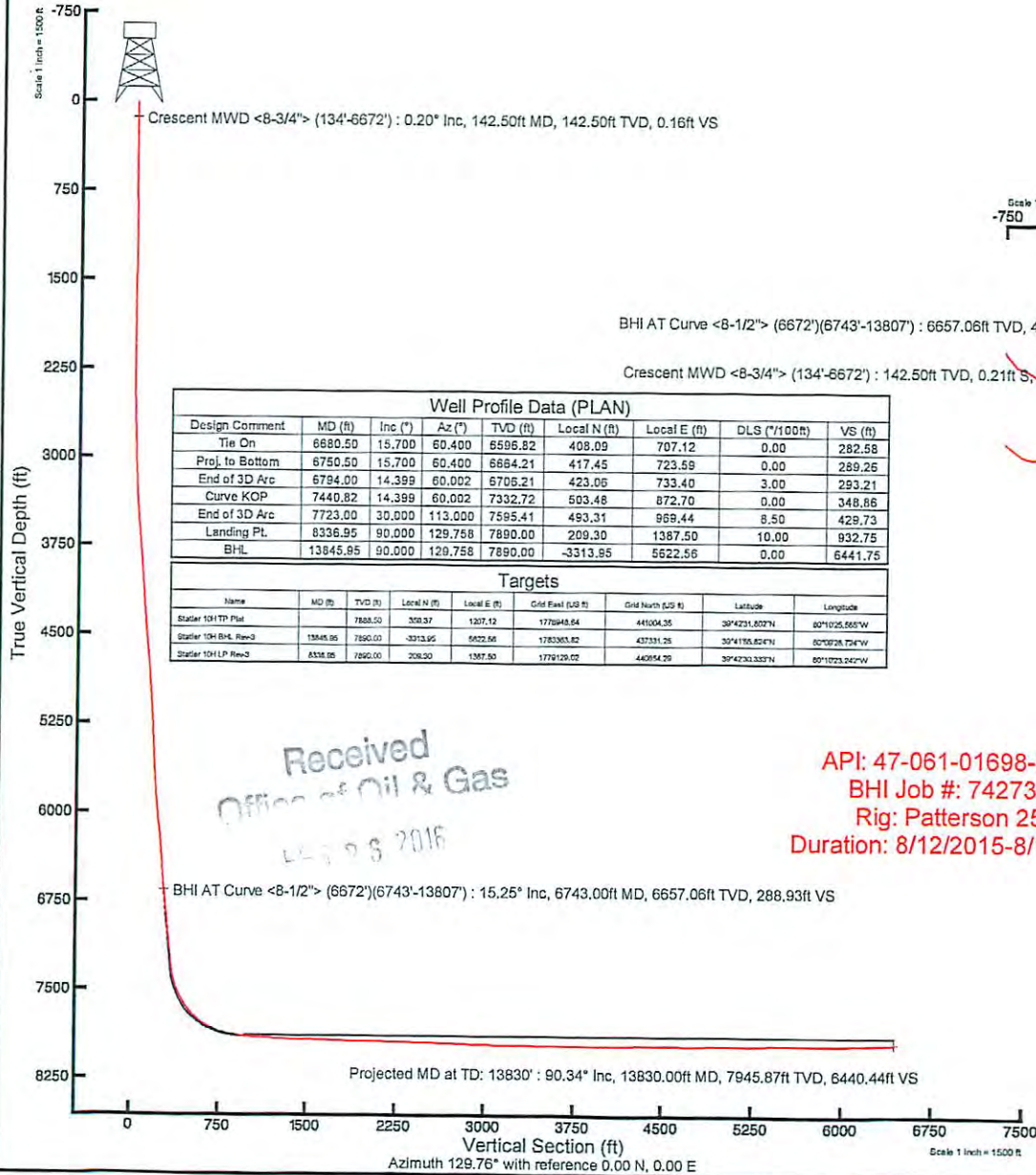
NORTHEAST NATURAL ENERGY, LLC

Location: Monongalia County, WV
 Field: Monongalia
 Facility: Staller

Slot: Slot #10
 Well: Staller 10H
 Wellbore: Staller 10H PWB

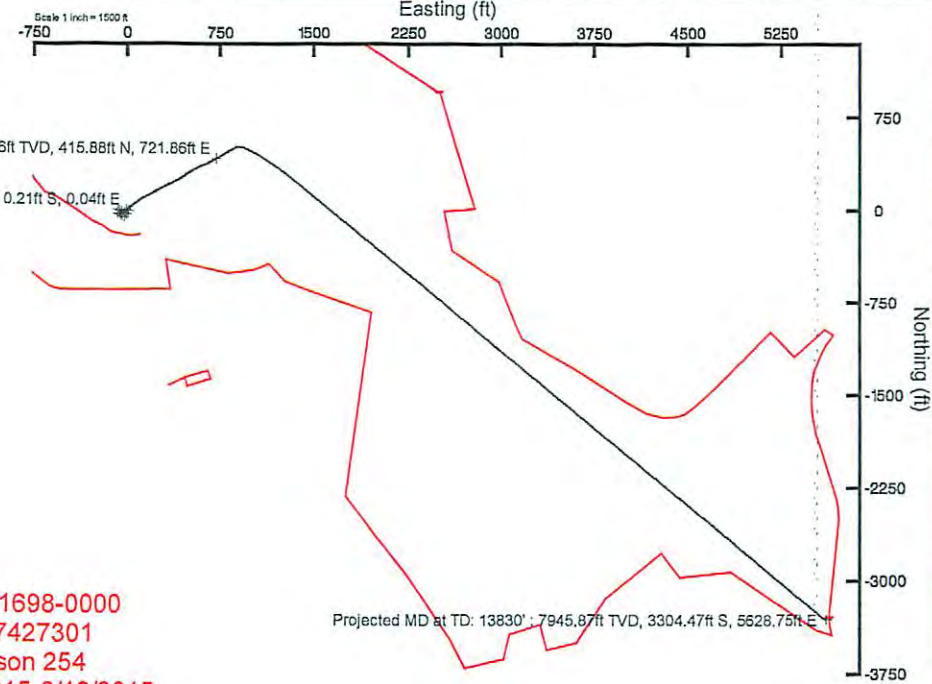
Plot reference well path to Staller 10H PWB Rev-D.0	
True vertical depths are referenced to Patterson 254 (RKB)	Grid System: NAD83 / Lambert West Virginia ZP, Northern Zone (4701), US feet
Measured depths are referenced to Patterson 254 (RKB)	North Reference: Grid north
Patterson 254 (RKB) to Mean Sea Level: 1085 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot #10): -1062.5 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: edsaysr on 19/Aug/2015

Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Staller		1777685.710	440640.650	39°42'28.114"N	80°10'41.690"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #10	4.35	55.89	1777741.600	440645.000	80°10'40.975"W
Patterson 254 (RKB) to Mud line (At Slot: Slot #10)				22.5ft	
Mean Sea Level to Mud line (At Slot: Slot #10)				-1062.5ft	
Patterson 254 (RKB) to Mean Sea Level				1085ft	



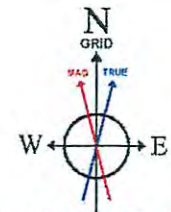
Well Profile Data (PLAN)								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	6680.50	15.700	60.400	6596.82	408.09	707.12	0.00	282.58
Proj. to Bottom	6750.50	15.700	60.400	6664.21	417.45	723.59	0.00	289.26
End of 3D Arc	6794.00	14.399	60.002	6705.21	423.06	733.40	3.00	293.21
Curve KOP	7440.82	14.399	60.002	7332.72	503.48	872.70	0.00	348.86
End of 3D Arc	7723.00	30.000	113.000	7595.41	493.31	959.44	8.50	429.73
Landing Pt.	8336.95	90.000	129.758	7890.00	209.30	1387.50	10.00	932.75
BHL	13845.95	90.000	129.758	7890.00	-3313.95	5622.56	0.00	6441.75

Targets								
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Staller 10H TP Plot	7888.50	359.37	1207.12	1776948.84	441004.36	39°42'31.607"N	80°10'05.565"W	
Staller 10H BHL Rev-D	13845.95	7890.00	-3313.95	5622.56	1779129.02	39°42'30.337"N	80°10'23.242"W	
Staller 10H LP Rev-D	8336.95	7890.00	209.30	1387.50	1779129.02	39°42'30.337"N	80°10'23.242"W	



API: 47-061-01698-0000
 BHI Job #: 7427301
 Rig: Patterson 254
 Duration: 8/12/2015-8/19/2015

Received
 Office of Oil & Gas
 AUG 20 2015



BGGM (1945.0 to 2017.0) Dip: 66.99° Field: 52296.5 nT
 Magnetic North is 9.01 degrees West of True North (at 10/Aug/2015)
 Grid North is 0.43 degrees West of True North
 To correct azimuth from True to Grid add 0.43 degrees
 To correct azimuth from Magnetic to Grid subtract 8.58 degrees