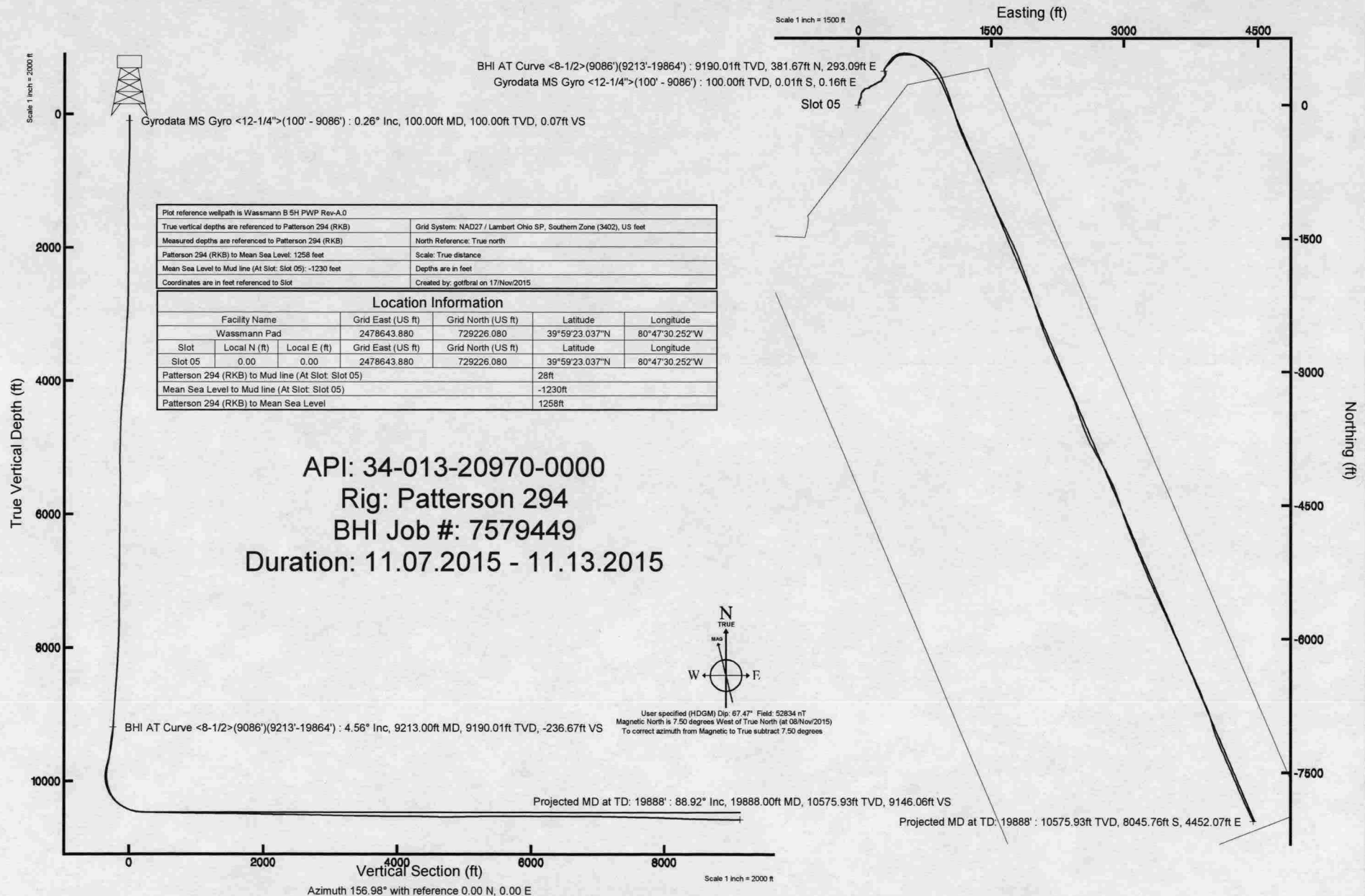




XTO ENERGY INC

Location: Belmont County, OH
Field: Belmont (True)
Facility: Wassmann Pad

Slot: Slot 05
Well: Wassmann B 5H
Wellbore: Wassmann B 5H PWB





Actual Wellpath Report

Wassmann B 5H AWP Proj: 19888'

Page 1 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Slot	Slot 05
Area	Belmont County, OH	Well	Wassmann B 5H
Field	Belmont (True)	Wellbore	Wassmann B 5H AWB
Facility	Wassmann Pad		

REPORT SETUP INFORMATION

Projection System	NAD27 / Lambert Ohio SP, Southern Zone (3402), US feet	Software System	WellArchitect® 4.0.1
North Reference	True	User	Gottfbral
Scale	0.999992	Report Generated	17/Nov/2015 at 08:53
Convergence at slot	n/a	Database/Source file	WA_MPL_EASTERNUS_Defn/Wassmann_B_5H_AWB.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	2478643.88	729226.08	39°59'23.037"N	80°47'30.252"W
Facility Reference Pt			2478643.88	729226.08	39°59'23.037"N	80°47'30.252"W
Field Reference Pt			609601.22	0.00	37°53'53.200"N	87°19'09.285"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 294 (RKB) to Facility Vertical Datum	28.00ft
Horizontal Reference Pt	Slot	Patterson 294 (RKB) to Mean Sea Level	1258.00ft
Vertical Reference Pt	Patterson 294 (RKB)	Patterson 294 (RKB) to Mud Line at Slot (Slot 05)	28.00ft
MD Reference Pt	Patterson 294 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	156.98°



Actual Wellpath Report

Wassmann B 5H AWP Proj: 19888'

Page 2 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Slot	Slot 05
Area	Belmont County, OH	Well	Wassmann B 5H
Field	Belmont (True)	Wellbore	Wassmann B 5H AWP
Facility	Wassmann Pad		

WELLPATH DATA (209 stations) † = interpolated/extrapolated station

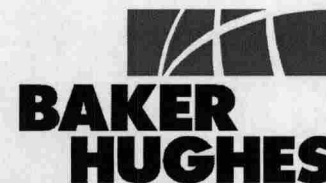
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
0.00†	0.000	92.880	0.00	0.00	0.00	0.00	2478643.88	729226.08	39°59'23.037"N	80°47'30.252"W	0.00	0.000	0.00
28.00	0.000	92.880	28.00	0.00	0.00	0.00	2478643.88	729226.08	39°59'23.037"N	80°47'30.252"W	0.00	0.000	0.00
100.00	0.260	92.880	100.00	0.07	-0.01	0.16	2478644.04	729226.07	39°59'23.037"N	80°47'30.250"W	0.16	92.880	0.36
200.00	0.210	88.580	200.00	0.24	-0.02	0.57	2478644.45	729226.08	39°59'23.037"N	80°47'30.245"W	0.57	91.506	0.05
300.00	0.210	78.570	300.00	0.34	0.03	0.94	2478644.82	729226.12	39°59'23.037"N	80°47'30.240"W	0.94	88.421	0.04
400.00	0.400	47.160	400.00	0.26	0.30	1.37	2478645.25	729226.41	39°59'23.040"N	80°47'30.235"W	1.40	77.682	0.25
500.00	0.630	42.710	499.99	-0.08	0.94	2.00	2478645.86	729227.06	39°59'23.046"N	80°47'30.227"W	2.21	64.811	0.23
600.00	1.970	19.990	599.97	-1.57	2.96	2.96	2478646.78	729229.10	39°59'23.066"N	80°47'30.214"W	4.19	45.006	1.41
700.00	2.620	15.820	699.88	-4.60	6.77	4.17	2478647.92	729232.93	39°59'23.104"N	80°47'30.199"W	7.96	31.623	0.67
800.00	2.610	17.050	799.78	-8.13	11.15	5.46	2478649.13	729237.33	39°59'23.147"N	80°47'30.182"W	12.42	26.099	0.06
900.00	2.200	18.190	899.69	-11.31	15.15	6.73	2478650.32	729241.35	39°59'23.187"N	80°47'30.166"W	16.58	23.948	0.41
1000.00	1.840	18.700	999.63	-13.95	18.49	7.84	2478651.37	729244.72	39°59'23.220"N	80°47'30.152"W	20.09	22.980	0.36
1100.00	1.650	16.770	1099.58	-16.26	21.39	8.77	2478652.25	729247.64	39°59'23.248"N	80°47'30.140"W	23.12	22.297	0.20
1200.00	1.090	25.070	1199.55	-18.00	23.63	9.59	2478653.02	729249.89	39°59'23.270"N	80°47'30.129"W	25.51	22.089	0.59
1300.00	0.640	48.140	1299.54	-18.82	24.87	10.41	2478653.82	729251.14	39°59'23.283"N	80°47'30.119"W	26.96	22.715	0.56
1400.00	1.060	135.440	1399.54	-18.14	24.58	11.48	2478654.89	729250.87	39°59'23.280"N	80°47'30.105"W	27.13	25.024	1.21
1500.00	1.010	134.710	1499.52	-16.46	23.30	12.75	2478656.19	729249.62	39°59'23.267"N	80°47'30.089"W	26.56	28.687	0.05
1600.00	0.800	111.250	1599.51	-15.16	22.43	14.03	2478657.48	729248.77	39°59'23.258"N	80°47'30.072"W	26.45	32.022	0.42
1700.00	0.750	102.380	1699.50	-14.29	22.04	15.32	2478658.78	729248.40	39°59'23.255"N	80°47'30.056"W	26.84	34.804	0.13
1800.00	0.760	97.500	1799.49	-13.58	21.81	16.61	2478660.08	729248.20	39°59'23.252"N	80°47'30.039"W	27.42	37.300	0.07
1900.00	0.620	92.360	1899.48	-13.01	21.70	17.81	2478661.28	729248.11	39°59'23.251"N	80°47'30.023"W	28.07	39.380	0.15
2000.00	0.230	43.050	1999.48	-12.86	21.82	18.49	2478661.95	729248.25	39°59'23.252"N	80°47'30.015"W	28.60	40.271	0.50
2100.00	0.330	294.180	2099.48	-13.15	22.09	18.36	2478661.82	729248.51	39°59'23.255"N	80°47'30.016"W	28.73	39.739	0.46
2200.00	0.280	275.810	2199.48	-13.48	22.23	17.86	2478661.31	729248.65	39°59'23.257"N	80°47'30.023"W	28.52	38.774	0.11
2300.00	0.290	281.430	2299.48	-13.74	22.31	17.37	2478660.82	729248.71	39°59'23.257"N	80°47'30.029"W	28.27	37.903	0.03



Actual Wellpath Report

Wassmann B 5H AWP Proj: 19888'

Page 3 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Slot	Slot 05
Area	Belmont County, OH	Well	Wassmann B 5H
Field	Belmont (True)	Wellbore	Wassmann B 5H AWB
Facility	Wassmann Pad		

WELLPATH DATA (209 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]
2400.00	0.440	306.640	2399.47	-14.21	22.59	16.81	2478660.26	729248.98	39°59'23.260"N	80°47'30.036"W	28.16	36.661	0.22
2500.00	0.580	308.710	2499.47	-14.99	23.13	16.11	2478659.55	729249.51	39°59'23.265"N	80°47'30.045"W	28.19	34.852	0.14
2600.00	0.680	303.140	2599.46	-15.93	23.77	15.22	2478658.64	729250.14	39°59'23.272"N	80°47'30.057"W	28.23	32.622	0.12
2700.00	0.800	301.280	2699.46	-16.99	24.46	14.12	2478657.54	729250.80	39°59'23.279"N	80°47'30.071"W	28.24	30.002	0.12
2800.00	0.980	306.150	2799.44	-18.29	25.33	12.84	2478656.23	729251.64	39°59'23.287"N	80°47'30.087"W	28.39	26.876	0.20
2900.00	2.780	353.970	2899.39	-21.34	28.24	11.89	2478655.23	729254.54	39°59'23.316"N	80°47'30.100"W	30.64	22.831	2.24
3000.00	3.940	2.570	2999.22	-26.76	34.09	11.79	2478655.02	729260.38	39°59'23.374"N	80°47'30.101"W	36.07	19.079	1.26
3100.00	4.130	3.080	3098.97	-33.09	41.12	12.14	2478655.24	729267.42	39°59'23.443"N	80°47'30.096"W	42.87	16.447	0.19
3200.00	4.070	16.340	3198.72	-39.07	48.12	13.33	2478656.30	729274.44	39°59'23.512"N	80°47'30.081"W	49.93	15.484	0.95
3300.00	3.680	13.550	3298.49	-44.39	54.64	15.08	2478657.92	729281.00	39°59'23.577"N	80°47'30.059"W	56.68	15.428	0.43
3400.00	3.020	20.330	3398.32	-48.89	60.23	16.75	2478659.48	729286.62	39°59'23.632"N	80°47'30.037"W	62.52	15.538	0.77
3500.00	3.160	16.370	3498.17	-52.93	65.35	18.44	2478661.08	729291.76	39°59'23.683"N	80°47'30.015"W	67.90	15.757	0.26
3600.00	4.230	34.160	3597.96	-57.06	71.04	21.29	2478663.82	729297.51	39°59'23.739"N	80°47'29.979"W	74.16	16.680	1.56
3700.00	5.280	35.960	3697.62	-61.43	77.82	26.06	2478668.46	729304.38	39°59'23.806"N	80°47'29.918"W	82.07	18.514	1.06
3800.00	4.500	22.210	3797.26	-66.57	85.18	30.24	2478672.51	729311.81	39°59'23.879"N	80°47'29.864"W	90.39	19.549	1.40
3900.00	4.030	2.510	3896.99	-72.50	92.32	31.88	2478674.01	729318.98	39°59'23.949"N	80°47'29.843"W	97.67	19.052	1.53
4000.00	4.160	342.310	3996.74	-79.28	99.29	30.93	2478672.93	729325.93	39°59'24.018"N	80°47'29.855"W	103.99	17.305	1.44
4100.00	5.520	354.510	4096.38	-87.48	107.53	29.37	2478671.21	729334.14	39°59'24.099"N	80°47'29.875"W	111.47	15.277	1.70
4200.00	5.850	22.170	4195.91	-95.66	117.04	30.83	2478672.49	729343.68	39°59'24.193"N	80°47'29.856"W	121.03	14.759	2.73
4300.00	5.720	11.480	4295.40	-103.36	126.64	33.75	2478675.23	729353.34	39°59'24.288"N	80°47'29.819"W	131.06	14.922	1.08
4400.00	6.910	19.810	4394.79	-111.88	137.19	36.78	2478678.06	729363.93	39°59'24.393"N	80°47'29.780"W	142.03	15.008	1.50
4500.00	7.180	43.540	4494.06	-118.78	147.38	43.12	2478684.21	729374.24	39°59'24.493"N	80°47'29.698"W	153.56	16.310	2.90
4600.00	7.240	41.420	4593.27	-123.98	156.63	51.60	2478692.51	729383.66	39°59'24.585"N	80°47'29.589"W	164.91	18.233	0.27
4700.00	5.050	47.130	4692.69	-128.20	164.35	58.99	2478699.75	729391.52	39°59'24.661"N	80°47'29.494"W	174.62	19.745	2.27
4800.00	4.490	47.150	4792.34	-131.02	170.01	65.09	2478705.74	729397.29	39°59'24.717"N	80°47'29.416"W	182.04	20.950	0.56



Actual Wellpath Report

Wassmann B 5H AWP Proj: 19888'

Page 4 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Slot	Slot 05
Area	Belmont County, OH	Well	Wassmann B 5H
Field	Belmont (True)	Wellbore	Wassmann B 5H AWP
Facility	Wassmann Pad		

WELLPATH DATA (209 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]
4900.00	2.720	55.260	4892.14	-132.83	174.02	69.91	2478710.48	729401.39	39°59'24.757"N	80°47'29.354"W	187.54	21.886	1.84
5000.00	2.770	34.980	4992.03	-134.59	177.36	73.24	2478713.75	729404.79	39°59'24.790"N	80°47'29.311"W	191.88	22.439	0.97
5100.00	3.250	31.400	5091.89	-137.52	181.76	76.11	2478716.53	729409.24	39°59'24.833"N	80°47'29.275"W	197.05	22.720	0.52
5200.00	4.870	78.150	5191.66	-138.35	185.05	81.74	2478722.10	729412.64	39°59'24.866"N	80°47'29.202"W	202.30	23.832	3.55
5300.00	5.680	84.090	5291.24	-136.07	186.43	90.82	2478731.15	729414.19	39°59'24.879"N	80°47'29.086"W	207.37	25.972	0.98
5400.00	4.990	85.890	5390.80	-133.20	187.25	100.08	2478740.39	729415.19	39°59'24.887"N	80°47'28.967"W	212.32	28.122	0.71
5500.00	4.740	77.000	5490.44	-131.08	188.49	108.44	2478748.73	729416.59	39°59'24.900"N	80°47'28.859"W	217.46	29.912	0.79
5600.00	3.440	54.290	5590.19	-131.02	191.17	114.90	2478755.14	729419.39	39°59'24.926"N	80°47'28.776"W	223.05	31.008	2.05
5700.00	4.800	41.030	5689.94	-133.51	196.08	120.09	2478760.23	729424.39	39°59'24.975"N	80°47'28.710"W	229.93	31.485	1.65
5800.00	5.400	55.690	5789.54	-136.26	201.89	126.72	2478766.76	729430.33	39°59'25.032"N	80°47'28.624"W	238.36	32.115	1.43
5900.00	5.570	54.630	5889.09	-138.22	207.35	134.56	2478774.50	729435.94	39°59'25.086"N	80°47'28.524"W	247.19	32.982	0.20
6000.00	3.930	64.230	5988.74	-139.42	211.65	141.61	2478781.46	729440.37	39°59'25.128"N	80°47'28.433"W	254.65	33.785	1.82
6100.00	4.080	65.180	6088.50	-139.70	214.63	147.92	2478787.71	729443.47	39°59'25.158"N	80°47'28.352"W	260.67	34.574	0.16
6200.00	4.840	63.650	6188.19	-140.05	218.00	154.93	2478794.66	729446.97	39°59'25.191"N	80°47'28.262"W	267.45	35.401	0.77
6300.00	5.770	62.950	6287.76	-140.65	222.16	163.19	2478802.84	729451.28	39°59'25.232"N	80°47'28.156"W	275.65	36.300	0.93
6400.00	6.400	65.760	6387.20	-141.12	226.73	172.75	2478812.31	729456.04	39°59'25.277"N	80°47'28.033"W	285.04	37.304	0.70
6500.00	6.930	64.000	6486.52	-141.56	231.66	183.25	2478822.72	729461.17	39°59'25.326"N	80°47'27.898"W	295.38	38.345	0.57
6600.00	7.350	61.370	6585.75	-142.49	237.37	194.29	2478833.64	729467.08	39°59'25.383"N	80°47'27.756"W	306.75	39.300	0.53
6700.00	7.200	57.770	6684.94	-144.12	243.78	205.20	2478844.43	729473.70	39°59'25.446"N	80°47'27.616"W	318.65	40.089	0.48
6800.00	6.150	57.850	6784.26	-145.98	249.97	215.04	2478854.15	729480.07	39°59'25.507"N	80°47'27.490"W	329.74	40.704	1.05
6900.00	4.430	63.570	6883.84	-147.06	254.54	223.04	2478862.06	729484.79	39°59'25.552"N	80°47'27.387"W	338.43	41.225	1.80
7000.00	2.930	66.410	6983.63	-147.31	257.29	228.84	2478867.81	729487.65	39°59'25.579"N	80°47'27.312"W	344.33	41.651	1.51
7100.00	2.210	70.480	7083.53	-147.22	258.95	233.00	2478871.93	729489.39	39°59'25.596"N	80°47'27.259"W	348.34	41.980	0.74
7200.00	2.490	66.210	7183.44	-147.13	260.47	236.80	2478875.71	729490.98	39°59'25.611"N	80°47'27.210"W	352.02	42.275	0.33
7300.00	2.560	63.180	7283.34	-147.31	262.36	240.78	2478879.65	729492.94	39°59'25.630"N	80°47'27.159"W	356.10	42.545	0.15



Actual Wellpath Report

Wassmann B 5H AWP Proj: 19888'

Page 5 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Slot	Slot 05
Area	Belmont County, OH	Well	Wassmann B 5H
Field	Belmont (True)	Wellbore	Wassmann B 5H AWB
Facility	Wassmann Pad		

WELLPATH DATA (209 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]
7400.00	2.670	65.120	7383.24	-147.53	264.34	244.89	2478883.72	729495.01	39°59'25.649"N	80°47'27.106"W	360.34	42.812	0.14
7500.00	2.910	60.700	7483.12	-147.88	266.57	249.21	2478888.00	729497.31	39°59'25.671"N	80°47'27.051"W	364.92	43.073	0.32
7600.00	3.380	57.380	7582.97	-148.65	269.40	253.91	2478892.65	729500.23	39°59'25.699"N	80°47'26.990"W	370.20	43.305	0.50
7700.00	3.660	50.520	7682.78	-150.05	273.02	258.86	2478897.52	729503.94	39°59'25.735"N	80°47'26.927"W	376.22	43.475	0.51
7800.00	3.370	37.700	7782.60	-152.39	277.37	263.12	2478901.70	729508.38	39°59'25.778"N	80°47'26.872"W	382.32	43.489	0.84
7900.00	3.550	32.130	7882.41	-155.60	282.32	266.56	2478905.05	729513.39	39°59'25.827"N	80°47'26.828"W	388.28	43.356	0.38
8000.00	4.060	31.560	7982.19	-159.42	287.96	270.06	2478908.44	729519.09	39°59'25.883"N	80°47'26.783"W	394.78	43.163	0.51
8100.00	4.920	32.080	8081.88	-163.92	294.61	274.19	2478912.45	729525.82	39°59'25.948"N	80°47'26.730"W	402.46	42.944	0.86
8200.00	5.780	35.390	8181.45	-169.01	302.35	279.39	2478917.49	729533.65	39°59'26.025"N	80°47'26.663"W	411.67	42.740	0.91
8300.00	6.480	35.420	8280.88	-174.61	311.05	285.57	2478923.51	729542.47	39°59'26.111"N	80°47'26.583"W	422.26	42.555	0.70
8400.00	6.780	35.400	8380.21	-180.65	320.46	292.26	2478930.03	729552.01	39°59'26.204"N	80°47'26.497"W	433.72	42.365	0.30
8500.00	7.190	31.960	8479.47	-187.33	330.58	298.99	2478936.56	729562.25	39°59'26.304"N	80°47'26.411"W	445.74	42.128	0.59
8600.00	6.030	26.340	8578.80	-194.35	340.60	304.64	2478942.02	729572.38	39°59'26.403"N	80°47'26.338"W	456.96	41.810	1.33
8700.00	5.050	5.780	8678.34	-201.62	349.68	307.41	2478944.62	729581.51	39°59'26.493"N	80°47'26.303"W	465.60	41.319	2.20
8800.00	4.330	353.410	8778.01	-209.10	357.81	307.42	2478944.48	729589.64	39°59'26.573"N	80°47'26.303"W	471.74	40.668	1.24
8900.00	3.850	341.300	8877.76	-216.07	364.74	305.91	2478942.83	729596.54	39°59'26.641"N	80°47'26.322"W	476.05	39.987	0.99
9000.00	3.670	327.830	8977.54	-222.58	370.63	303.13	2478939.94	729602.38	39°59'26.700"N	80°47'26.358"W	478.81	39.279	0.90
9086.00	3.870	317.440	9063.36	-228.03	375.10	299.70	2478936.43	729606.78	39°59'26.744"N	80°47'26.402"W	480.13	38.625	0.83
9213.00	4.560	312.570	9190.01	-236.67	381.67	293.09	2478929.69	729613.23	39°59'26.809"N	80°47'26.487"W	481.22	37.521	0.61
9306.00	11.730	2.040	9282.10	-248.62	393.65	290.70	2478927.07	729625.15	39°59'26.927"N	80°47'26.518"W	489.35	36.445	10.13
9400.00	10.800	32.070	9374.37	-262.33	410.68	295.72	2478931.77	729642.27	39°59'27.095"N	80°47'26.453"W	506.07	35.757	6.25
9494.00	12.870	38.910	9466.37	-272.30	426.29	306.97	2478942.73	729658.09	39°59'27.250"N	80°47'26.309"W	525.31	35.758	2.66
9588.00	17.020	47.210	9557.18	-281.88	443.79	323.65	2478959.07	729675.91	39°59'27.423"N	80°47'26.094"W	549.27	36.103	4.96
9681.00	22.610	47.270	9644.64	-292.53	465.18	346.79	2478981.80	729697.73	39°59'27.634"N	80°47'25.797"W	580.22	36.704	6.01
9775.00	28.040	43.090	9729.58	-307.58	493.60	375.18	2479009.65	729726.68	39°59'27.915"N	80°47'25.432"W	620.00	37.238	6.08



Actual Wellpath Report

Wassmann B 5H AWP Proj: 19888'

Page 6 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Slot	Slot 05
Area	Belmont County, OH	Well	Wassmann B 5H
Field	Belmont (True)	Wellbore	Wassmann B 5H AWB
Facility	Wassmann Pad		

WELLPATH DATA (209 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]
9868.00	26.500	42.620	9812.24	-324.99	524.83	404.16	2479038.04	729758.46	39°59'28.223"N	80°47'25.060"W	662.42	37.599	1.67
9962.00	25.400	62.180	9896.92	-335.35	549.72	436.25	2479069.65	729783.95	39°59'28.469"N	80°47'24.648"W	701.79	38.435	9.14
10056.00	29.550	82.040	9980.48	-331.00	562.37	477.14	2479110.29	729797.37	39°59'28.594"N	80°47'24.122"W	737.51	40.313	10.64
10149.00	33.590	87.510	10059.71	-316.01	566.67	525.59	2479158.65	729802.58	39°59'28.637"N	80°47'23.500"W	772.89	42.846	5.32
10243.00	38.390	92.670	10135.76	-294.22	566.44	580.77	2479213.82	729803.40	39°59'28.635"N	80°47'22.791"W	811.26	45.716	6.04
10337.00	43.840	103.750	10206.65	-262.01	557.32	641.67	2479274.89	729795.43	39°59'28.544"N	80°47'22.008"W	849.91	49.024	9.66
10431.00	48.760	115.180	10271.69	-216.07	534.49	705.42	2479339.06	729773.82	39°59'28.319"N	80°47'21.189"W	885.05	52.849	10.22
10524.00	54.270	122.470	10329.59	-158.81	499.30	769.02	2479403.31	729739.83	39°59'27.971"N	80°47'20.372"W	916.89	57.006	8.52
10618.00	61.670	130.760	10379.47	-90.08	451.68	832.71	2479467.89	729693.42	39°59'27.500"N	80°47'19.554"W	947.32	61.524	10.85
10712.00	67.730	142.780	10419.74	-10.48	389.79	890.58	2479526.92	729632.64	39°59'26.889"N	80°47'18.811"W	972.15	66.362	13.23
10805.00	76.400	153.250	10448.43	76.72	314.83	937.16	2479574.91	729558.58	39°59'26.148"N	80°47'18.212"W	988.63	71.431	14.19
10899.00	87.820	158.240	10461.32	169.62	230.08	975.28	2479614.62	729474.57	39°59'25.310"N	80°47'17.722"W	1002.05	76.726	13.23
10993.00	88.860	159.120	10464.04	263.54	142.56	1009.44	2479650.43	729387.70	39°59'24.445"N	80°47'17.284"W	1019.46	81.962	1.45
11086.00	88.800	162.510	10465.94	356.30	54.75	1039.99	2479682.64	729300.49	39°59'23.578"N	80°47'16.891"W	1041.43	86.986	3.64
11180.00	89.080	161.850	10467.68	449.90	-34.72	1068.75	2479713.09	729211.58	39°59'22.693"N	80°47'16.522"W	1069.32	91.861	0.76
11274.00	89.080	163.440	10469.19	543.42	-124.43	1096.79	2479742.82	729122.42	39°59'21.807"N	80°47'16.162"W	1103.83	96.472	1.69
11367.00	89.010	159.690	10470.74	636.10	-212.63	1126.19	2479773.88	729034.80	39°59'20.935"N	80°47'15.784"W	1146.09	100.692	4.03
11461.00	89.050	157.310	10472.33	730.04	-300.07	1160.63	2479809.97	728948.02	39°59'20.071"N	80°47'15.341"W	1198.80	104.496	2.53
11555.00	89.080	157.150	10473.86	824.03	-386.73	1197.01	2479847.98	728862.07	39°59'19.215"N	80°47'14.874"W	1257.93	107.905	0.17
11648.00	89.080	155.090	10475.36	917.00	-471.75	1234.65	2479887.22	728777.77	39°59'18.374"N	80°47'14.391"W	1321.71	110.912	2.21
11742.00	88.980	152.120	10476.95	1010.81	-555.93	1276.43	2479930.58	728694.40	39°59'17.542"N	80°47'13.854"W	1392.24	113.535	3.16
11836.00	89.570	155.040	10478.14	1104.63	-640.10	1318.25	2479973.98	728611.04	39°59'16.711"N	80°47'13.317"W	1465.43	115.900	3.17
11930.00	89.450	157.000	10478.94	1198.61	-725.98	1356.45	2480013.80	728525.90	39°59'15.862"N	80°47'12.826"W	1538.50	118.156	2.09
12023.00	89.290	155.610	10479.96	1291.60	-811.13	1393.82	2480052.78	728441.47	39°59'15.020"N	80°47'12.346"W	1612.66	120.197	1.50
12117.00	89.380	156.470	10481.06	1385.58	-897.03	1431.99	2480092.56	728356.31	39°59'14.172"N	80°47'11.856"W	1689.75	122.064	0.92



Actual Wellpath Report

Wassmann B 5H AWP Proj: 19888'

Page 7 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Slot	Slot 05
Area	Belmont County, OH	Well	Wassmann B 5H
Field	Belmont (True)	Wellbore	Wassmann B 5H AWB
Facility	Wassmann Pad		

WELLPATH DATA (209 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]
12211.00	89.570	156.730	10481.92	1479.57	-983.29	1469.32	2480131.52	728270.77	39°59'13.319"N	80°47'11.376"W	1767.98	123.791	0.34
12305.00	89.450	156.360	10482.72	1573.56	-1069.52	1506.73	2480170.56	728185.26	39°59'12.467"N	80°47'10.896"W	1847.73	125.368	0.41
12399.00	88.830	155.610	10484.13	1667.54	-1155.37	1544.98	2480210.42	728100.15	39°59'11.618"N	80°47'10.404"W	1929.21	126.790	1.04
12492.00	88.890	153.920	10485.98	1760.45	-1239.48	1584.62	2480251.65	728016.81	39°59'10.787"N	80°47'09.895"W	2011.80	128.032	1.82
12586.00	88.920	153.380	10487.78	1854.27	-1323.70	1626.34	2480294.95	727933.40	39°59'09.955"N	80°47'09.359"W	2096.93	129.143	0.58
12680.00	89.110	152.920	10489.39	1948.05	-1407.55	1668.78	2480338.97	727850.37	39°59'09.126"N	80°47'08.814"W	2183.12	130.146	0.53
12773.00	88.950	153.900	10490.97	2040.85	-1490.70	1710.40	2480382.16	727768.02	39°59'08.304"N	80°47'08.279"W	2268.85	131.074	1.07
12867.00	88.830	155.190	10492.79	2134.75	-1575.56	1750.80	2480424.15	727683.94	39°59'07.466"N	80°47'07.761"W	2355.35	131.984	1.38
12961.00	88.950	157.440	10494.61	2228.72	-1661.62	1788.55	2480463.52	727598.61	39°59'06.615"N	80°47'07.276"W	2441.29	132.893	2.40
13055.00	88.980	159.710	10496.31	2322.66	-1749.10	1822.88	2480499.50	727511.79	39°59'05.751"N	80°47'06.835"W	2526.31	133.817	2.41
13149.00	88.890	158.160	10498.06	2416.58	-1836.80	1856.66	2480534.93	727424.75	39°59'04.884"N	80°47'06.401"W	2611.71	134.692	1.65
13243.00	88.980	160.150	10499.80	2510.50	-1924.63	1890.10	2480570.03	727337.57	39°59'04.016"N	80°47'05.971"W	2697.53	135.519	2.12
13337.00	88.860	162.490	10501.58	2604.20	-2013.66	1920.20	2480601.81	727249.13	39°59'03.136"N	80°47'05.585"W	2782.44	136.361	2.49
13430.00	88.860	160.600	10503.43	2696.89	-2101.85	1949.63	2480632.90	727161.51	39°59'02.264"N	80°47'05.207"W	2866.85	137.152	2.03
13524.00	88.920	161.150	10505.25	2790.65	-2190.65	1980.42	2480665.37	727073.31	39°59'01.387"N	80°47'04.811"W	2953.13	137.885	0.59
13618.00	88.800	161.020	10507.12	2884.39	-2279.55	2010.89	2480697.51	726985.00	39°59'00.508"N	80°47'04.420"W	3039.74	138.583	0.19
13712.00	88.800	161.690	10509.09	2978.10	-2368.60	2040.93	2480729.23	726896.54	39°58'59.628"N	80°47'04.034"W	3126.61	139.250	0.71
13806.00	88.890	158.990	10510.98	3071.91	-2457.09	2072.55	2480762.52	726808.66	39°58'58.754"N	80°47'03.628"W	3214.46	139.853	2.87
13900.00	88.920	158.250	10512.78	3165.85	-2544.61	2106.81	2480798.43	726721.81	39°58'57.889"N	80°47'03.188"W	3303.59	140.377	0.79
13993.00	88.860	158.250	10514.58	3258.81	-2630.97	2141.27	2480834.51	726636.11	39°58'57.035"N	80°47'02.746"W	3392.20	140.859	0.06
14087.00	89.020	156.880	10516.32	3352.79	-2717.84	2177.13	2480872.01	726549.94	39°58'56.177"N	80°47'02.285"W	3482.32	141.303	1.47
14181.00	89.020	155.340	10517.93	3446.76	-2803.77	2215.19	2480911.69	726464.74	39°58'55.328"N	80°47'01.796"W	3573.26	141.689	1.64
14274.00	88.980	155.320	10519.55	3539.71	-2888.27	2254.01	2480952.10	726381.00	39°58'54.492"N	80°47'01.298"W	3663.69	142.032	0.05
14368.00	89.020	154.400	10521.19	3633.63	-2973.35	2293.93	2480993.62	726296.69	39°58'53.652"N	80°47'00.785"W	3755.39	142.350	0.98
14462.00	88.860	155.510	10522.93	3727.55	-3058.50	2333.72	2481035.01	726212.31	39°58'52.810"N	80°47'00.274"W	3847.16	142.655	1.19



Actual Wellpath Report

Wassmann B 5H AWP Proj: 19888'

Page 8 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Slot	Slot 05
Area	Belmont County, OH	Well	Wassmann B 5H
Field	Belmont (True)	Wellbore	Wassmann B 5H AWB
Facility	Wassmann Pad		

WELLPATH DATA (209 stations)

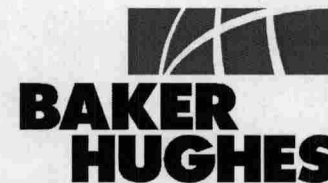
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
14555.00	89.850	156.000	10523.98	3820.52	-3143.29	2371.90	2481074.80	726128.26	39°58'51.972"N	80°46'59.783"W	3937.79	142.962	1.19
14649.00	89.880	156.330	10524.20	3914.51	-3229.27	2409.89	2481114.40	726043.01	39°58'51.122"N	80°46'59.296"W	4029.36	143.267	0.35
14743.00	90.090	158.540	10524.22	4008.50	-3316.07	2445.96	2481152.11	725956.91	39°58'50.264"N	80°46'58.832"W	4120.56	143.587	2.36
14836.00	89.970	161.020	10524.17	4101.38	-3403.33	2478.10	2481185.89	725870.27	39°58'49.402"N	80°46'58.420"W	4209.94	143.940	2.67
14930.00	90.000	162.650	10524.20	4195.04	-3492.64	2507.40	2481216.88	725781.53	39°58'48.519"N	80°46'58.043"W	4299.49	144.325	1.73
15023.00	89.080	159.390	10524.94	4287.80	-3580.57	2537.65	2481248.78	725694.19	39°58'47.650"N	80°46'57.655"W	4388.64	144.674	3.64
15117.00	88.860	159.290	10526.63	4381.70	-3668.51	2570.80	2481283.59	725606.89	39°58'46.781"N	80°46'57.229"W	4479.62	144.978	0.26
15211.00	87.850	155.830	10529.33	4475.64	-3755.34	2606.66	2481321.09	725520.76	39°58'45.923"N	80°46'56.768"W	4571.36	145.235	3.83
15304.00	88.620	150.970	10532.20	4568.39	-3838.43	2648.27	2481364.26	725438.47	39°58'45.102"N	80°46'56.234"W	4663.36	145.397	5.29
15398.00	89.720	151.410	10533.56	4661.90	-3920.79	2693.57	2481411.11	725356.99	39°58'44.288"N	80°46'55.652"W	4756.88	145.511	1.26
15492.00	89.940	150.380	10533.84	4755.37	-4002.92	2739.29	2481458.37	725275.74	39°58'43.476"N	80°46'55.065"W	4850.47	145.615	1.12
15585.00	90.950	149.220	10533.12	4847.63	-4083.29	2786.07	2481506.66	725196.26	39°58'42.682"N	80°46'54.464"W	4943.22	145.694	1.65
15679.00	91.260	154.380	10531.30	4941.20	-4166.09	2830.46	2481552.62	725114.32	39°58'41.864"N	80°46'53.894"W	5036.65	145.808	5.50
15773.00	91.080	153.660	10529.38	5035.05	-4250.57	2871.63	2481595.38	725030.63	39°58'41.029"N	80°46'53.366"W	5129.68	145.958	0.79
15866.00	90.980	160.240	10527.71	5127.99	-4336.09	2908.02	2481633.37	724945.82	39°58'40.184"N	80°46'52.898"W	5220.94	146.152	7.07
15960.00	90.520	161.340	10526.48	5221.77	-4424.84	2938.95	2481665.97	724857.67	39°58'39.306"N	80°46'52.501"W	5311.93	146.408	1.27
16054.00	90.460	161.250	10525.68	5315.50	-4513.88	2969.09	2481697.80	724769.22	39°58'38.427"N	80°46'52.114"W	5402.83	146.664	0.12
16147.00	90.370	160.680	10525.00	5408.27	-4601.79	2999.42	2481729.78	724681.90	39°58'37.558"N	80°46'51.725"W	5492.99	146.904	0.62
16241.00	89.880	160.720	10524.80	5502.07	-4690.51	3030.49	2481762.52	724593.79	39°58'36.681"N	80°46'51.326"W	5584.33	147.134	0.52
16334.00	90.000	159.780	10524.90	5594.92	-4778.03	3061.91	2481795.60	724506.87	39°58'35.816"N	80°46'50.922"W	5674.94	147.347	1.02
16428.00	90.030	156.680	10524.87	5688.89	-4865.32	3096.77	2481832.10	724420.26	39°58'34.953"N	80°46'50.475"W	5767.26	147.523	3.30
16522.00	90.120	157.400	10524.75	5782.89	-4951.87	3133.44	2481870.40	724334.42	39°58'34.098"N	80°46'50.004"W	5859.99	147.675	0.77
16615.00	89.970	158.010	10524.67	5875.88	-5037.92	3168.72	2481907.30	724249.06	39°58'33.247"N	80°46'49.551"W	5951.59	147.831	0.68
16709.00	90.030	157.680	10524.67	5969.87	-5124.98	3204.17	2481944.39	724162.68	39°58'32.387"N	80°46'49.095"W	6044.18	147.986	0.36
16802.00	89.910	157.790	10524.72	6062.86	-5211.04	3239.41	2481981.25	724077.30	39°58'31.536"N	80°46'48.643"W	6135.86	148.133	0.18



Actual Wellpath Report

Wassmann B 5H AWP Proj: 19888'

Page 9 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Slot	Slot 05
Area	Belmont County, OH	Well	Wassmann B 5H
Field	Belmont (True)	Wellbore	Wassmann B 5H AWB
Facility	Wassmann Pad		

WELLPATH DATA (209 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]
16896.00	89.880	157.140	10524.90	6156.85	-5297.87	3275.43	2482018.91	723991.18	39°58'30.678"N	80°46'48.180"W	6228.63	148.273	0.69
16990.00	90.000	156.310	10524.99	6250.85	-5384.22	3312.58	2482057.68	723905.55	39°58'29.825"N	80°46'47.703"W	6321.62	148.399	0.89
17083.00	89.970	155.420	10525.02	6343.83	-5469.08	3350.60	2482097.31	723821.41	39°58'28.986"N	80°46'47.215"W	6413.85	148.507	0.96
17177.00	89.910	155.130	10525.12	6437.79	-5554.47	3389.92	2482138.23	723736.79	39°58'28.142"N	80°46'46.710"W	6507.20	148.604	0.32
17271.00	89.850	155.470	10525.31	6531.75	-5639.87	3429.20	2482179.12	723652.15	39°58'27.298"N	80°46'46.206"W	6600.57	148.699	0.37
17364.00	89.940	155.670	10525.48	6624.72	-5724.54	3467.66	2482219.18	723568.22	39°58'26.461"N	80°46'45.712"W	6692.91	148.794	0.24
17458.00	89.850	155.800	10525.66	6718.70	-5810.24	3506.29	2482259.42	723483.27	39°58'25.615"N	80°46'45.216"W	6786.23	148.890	0.17
17551.00	89.780	155.920	10525.96	6811.68	-5895.10	3544.33	2482299.05	723399.14	39°58'24.776"N	80°46'44.728"W	6878.55	148.984	0.15
17645.00	89.820	155.910	10526.28	6905.67	-5980.92	3582.69	2482339.03	723314.07	39°58'23.928"N	80°46'44.235"W	6971.87	149.078	0.04
17739.00	89.970	155.520	10526.46	6999.64	-6066.60	3621.35	2482379.30	723229.13	39°58'23.081"N	80°46'43.739"W	7065.25	149.166	0.44
17833.00	89.850	155.540	10526.60	7093.61	-6152.16	3660.28	2482419.85	723144.33	39°58'22.235"N	80°46'43.239"W	7158.68	149.249	0.13
17926.00	89.380	155.260	10527.23	7186.57	-6236.71	3699.00	2482460.15	723060.52	39°58'21.400"N	80°46'42.742"W	7251.15	149.328	0.59
18020.00	88.370	155.200	10529.08	7280.51	-6322.05	3738.37	2482501.14	722975.95	39°58'20.556"N	80°46'42.236"W	7344.64	149.403	1.08
18114.00	88.430	156.530	10531.70	7374.45	-6407.79	3776.79	2482541.17	722890.94	39°58'19.709"N	80°46'41.743"W	7438.01	149.485	1.42
18207.00	88.430	154.920	10534.25	7467.39	-6492.54	3815.01	2482580.98	722806.94	39°58'18.871"N	80°46'41.252"W	7530.43	149.562	1.73
18301.00	88.980	157.340	10536.37	7561.35	-6578.47	3853.03	2482620.63	722721.74	39°58'18.022"N	80°46'40.764"W	7623.79	149.642	2.64
18394.00	88.920	159.800	10538.08	7654.29	-6665.02	3887.00	2482656.23	722635.85	39°58'17.167"N	80°46'40.328"W	7715.65	149.749	2.65
18488.00	88.920	155.330	10539.85	7748.25	-6751.87	3922.86	2482693.72	722549.70	39°58'16.308"N	80°46'39.867"W	7808.75	149.843	4.75
18581.00	88.980	161.530	10541.56	7841.16	-6838.30	3957.03	2482729.52	722463.93	39°58'15.454"N	80°46'39.429"W	7900.66	149.944	6.67
18675.00	87.970	164.250	10544.06	7934.62	-6928.09	3984.67	2482758.86	722374.67	39°58'14.566"N	80°46'39.074"W	7992.25	150.095	3.09
18768.00	87.940	163.410	10547.38	8026.89	-7017.36	4010.56	2482786.42	722285.92	39°58'13.684"N	80°46'38.741"W	8082.57	150.251	0.90
18862.00	88.000	158.030	10550.71	8120.60	-7106.00	4041.56	2482819.10	722197.88	39°58'12.808"N	80°46'38.343"W	8174.93	150.371	5.72
18956.00	87.910	157.600	10554.06	8214.53	-7192.98	4077.03	2482856.21	722111.58	39°58'11.949"N	80°46'37.888"W	8268.08	150.455	0.47
19049.00	87.880	157.160	10557.48	8307.46	-7278.77	4112.78	2482893.57	722026.49	39°58'11.101"N	80°46'37.429"W	8360.35	150.532	0.47
19143.00	87.940	156.940	10560.91	8401.40	-7365.27	4149.41	2482931.83	721940.70	39°58'10.246"N	80°46'36.959"W	8453.69	150.604	0.24



Actual Wellpath Report

Wassmann B 5H AWP Proj: 19888'

Page 10 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Slot	Slot 05
Area	Belmont County, OH	Well	Wassmann B 5H
Field	Belmont (True)	Wellbore	Wassmann B 5H AWB
Facility	Wassmann Pad		

WELLPATH DATA (209 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]
19236.00	88.860	155.620	10563.50	8494.35	-7450.38	4186.80	2482970.83	721856.31	39°58'09.405"N	80°46'36.479"W	8546.20	150.666	1.73
19330.00	88.920	157.230	10565.33	8588.33	-7536.52	4224.39	2483010.04	721770.90	39°58'08.553"N	80°46'35.996"W	8639.71	150.728	1.71
19423.00	88.920	157.070	10567.08	8681.31	-7622.20	4260.50	2483047.76	721685.92	39°58'07.706"N	80°46'35.533"W	8732.11	150.797	0.17
19517.00	88.920	156.510	10568.85	8775.29	-7708.58	4297.54	2483086.43	721600.26	39°58'06.853"N	80°46'35.057"W	8825.59	150.860	0.60
19611.00	88.920	155.700	10570.62	8869.27	-7794.51	4335.61	2483126.11	721515.07	39°58'06.004"N	80°46'34.568"W	8919.18	150.915	0.86
19704.00	88.920	155.700	10572.37	8962.23	-7879.25	4373.87	2483165.97	721431.06	39°58'05.166"N	80°46'34.077"W	9011.84	150.965	0.00
19798.00	88.860	154.030	10574.20	9056.14	-7964.33	4413.79	2483207.49	721346.75	39°58'04.325"N	80°46'33.565"W	9105.61	151.005	1.78
19864.00	88.920	155.280	10575.47	9122.07	-8023.97	4442.03	2483236.86	721287.66	39°58'03.736"N	80°46'33.202"W	9171.46	151.031	1.90
19888.00	88.920	155.280	10575.93	9146.06	-8045.76	4452.07	2483247.31	721266.06	39°58'03.520"N	80°46'33.073"W	9195.39	151.042	0.00

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Wassmann B 5H BHL Plat		10465.00	-8041.01	4464.86	2483260.00	721271.05	39°58'03.567"N	80°46'32.909"W	point
Wassmann B 5H LP Plat		10465.00	161.56	979.78	2479620.42	729406.14	39°59'24.633"N	80°47'17.665"W	point
Wassmann B 5H Last Take Plat		10465.00	-7672.68	4308.36	2483096.57	721636.35	39°58'07.207"N	80°46'34.918"W	point

WELLPATH COMPOSITION - Ref Wellbore: Wassmann B 5H AWB Ref Wellpath: Wassmann B 5H AWP Proj: 19888'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
28.00	9086.00	Generic gyro - northseeking (Standard)	01 Gyrodata MS Gyro <12-1/4">(100' - 9086')	Wassmann B 5H AWB
9086.00	19864.00	NaviTrak (AT Curve Short Spaced)	02 BHI AT Curve <8-1/2">(9086')(9213'-19864')	Wassmann B 5H AWB
19864.00	19888.00	Blind Drilling (std)	Projection to bit	Wassmann B 5H AWB



Actual Wellpath Report

Wassmann B 5H AWP Proj: 19888'

Page 11 of 11



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Slot	Slot 05
Area	Belmont County, OH	Well	Wassmann B 5H
Field	Belmont (True)	Wellbore	Wassmann B 5H AWB
Facility	Wassmann Pad		

COMMENTS

Wellpath general comments

API: 34-013-20970-0000

Rig: Patterson 294

BHI Job #: 7579449

Duration: 11.07.2015 - 11.13.2015

Gyrodata MS Gyro <12-1/4">(100' - 9086')

BHI AT Curve <8-1/2">(9086')(9213'-19864')

Projected MD at TD: 19888'