

XTO ENERGY INC

Location: Marion County, WV
 Field: Marion
 Facility: Sands Pad

Slot: Slot #08
 Well: Sands Unit A 8H
 Wellbore: Sands Unit A 8H PWB



API: 47-049-02495-0000
 BHI Job #: 110282427A
 Rig: Patteron 579
 Duration: 02/14/2020-02/17/2020



Plot reference wellpath is Sands Unit A 8H PWB Rev-A.0	Grid System: NAD27 / Lambert West Virginia SP, Northern Zone (4701) US feet
True vertical depths are referenced to Patterson 579 (RKB)	North Reference: True north
Reference wellpath measured depths are referenced to Patterson 579 (RKB)	Scale: True distance
Patterson 579 (RKB) to Mean Sea Level: 1261 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot #08): +1295 feet	Depths are in feet
Other wellpath MDs are referenced to each path's default MD datum	Created by: detest on 20/02/27 Database: WA, MPL, EasternUS, Det

Scale 1 inch = 1500

True Vertical Depth (ft)



Javins Gyro Surveys <17-1/2">(50'-445') : 0.39° Inc, 76.00ft MD, 76.00ft TVD, 0.05ft VS

Javins EM Surveys <12-1/4">(445')(552'-3104') : 0.42° Inc, 578.00ft MD, 577.99ft TVD, 0.92ft VS

Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Sands Pad	1770291.903	351831.811	39°27'47.2674"N	80°18'48.9893"W
Slot	Local N (ft)	Local E (ft)	Latitude	Longitude
Slot #08	-20.57	21.84	39°27'47.0641"N	80°18'48.7108"W
Patterson 579 (RKB) to Ground level (At Slot: Slot #08)	26ft			
Mean Sea Level to Ground level (At Slot: Slot #08)	-1235ft			
Patterson 579 (RKB) to Mean Sea Level	1261ft			

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #08	Sands Unit A 8H	Sands Unit A 8H AWB	Sands Unit A 8H AWP Proj: 18960'
Slot #08	Sands Unit A 8H	Sands Unit A 8H PWB	Sands Unit A 8H PWP Rev-A.0

Javins EM Surveys <8-3/4">(3059')(3267'-5923') : 9.55° Inc, 3293.00ft MD, 3263.41ft TVD, 31.95ft VS

Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	5949.00	23.200	218.650	5716.07	-1072.92	-856.70	117.60
Proj To Bottom	6018.00	23.200	218.650	5779.49	-1094.15	-873.67	119.91
Hold Tangent	6040.51	24.320	218.921	5800.09	-1101.22	-879.35	120.66
Curve KOP	7290.34	24.320	218.921	6939.01	-1501.68	-1202.72	161.93
FTP	7989.95	70.000	133.516	7441.45	-1889.52	-1033.26	551.89
Landing Pt	8189.95	90.000	133.516	7476.00	-2024.46	-891.15	747.85
IP #1	13337.43	90.000	133.516	7476.00	-5568.81	2841.70	5895.34
End of Turn	13504.60	90.000	143.546	7476.00	-5693.92	2952.26	6061.66
Hold 143.55°	13837.24	90.000	143.546	7476.00	-5961.47	3149.90	6389.22
IP #2	14004.35	90.000	153.573	7476.00	-6103.86	3236.96	6550.39
BHL	18956.21	90.000	153.573	7476.00	-10538.26	5440.83	11202.06

Final Superior Corrected Surveys <8-1/2">(5949')(5993'-18935') : 22.96° Inc, 5993.00ft MD, 5756.55ft TVD, 119.01ft VS

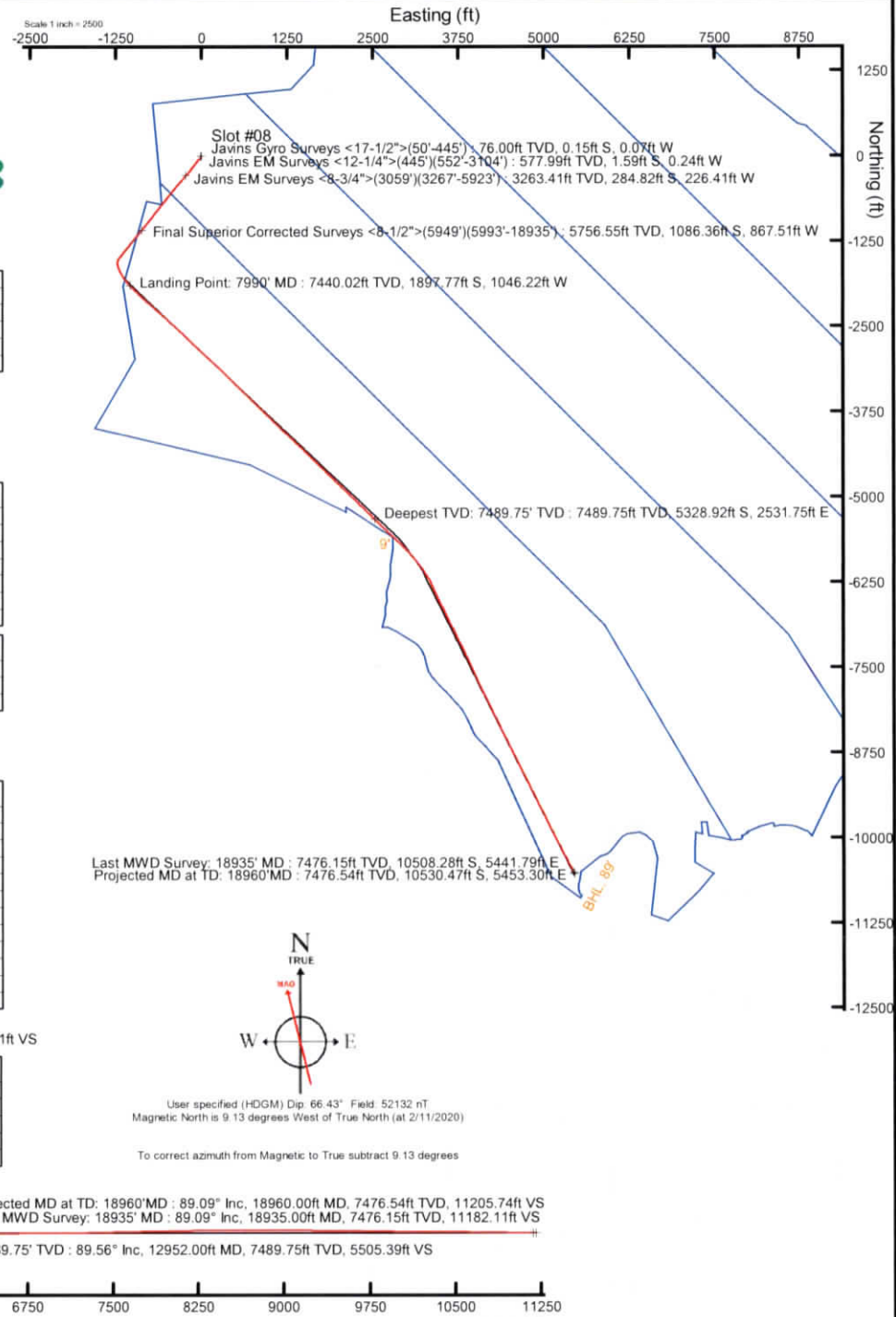
As Drilled Target Details						
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	VS (ft)
Landing Pt	7990.00	71.07	137.57	7440.02	-1897.77	548.17
Deepest TVD	12952.00	89.56	133.59	7489.75	-5328.92	5505.39
Last MWD Survey	18935.00	89.09	152.58	7476.15	-10508.28	11182.11
Projection to TD	18960.00	89.09	152.58	7476.54	-10530.47	11205.74

Landing Point: 7990' MD : 71.07° Inc, 7990.00ft MD, 7440.02ft TVD, 548.17ft VS

Projected MD at TD: 18960' MD : 89.09° Inc, 18960.00ft MD, 7476.54ft TVD, 11205.74ft VS
 Last MWD Survey: 18935' MD : 89.09° Inc, 18935.00ft MD, 7476.15ft TVD, 11182.11ft VS

Deepest TVD: 7489.75' TVD : 89.56° Inc, 12952.00ft MD, 7489.75ft TVD, 5505.39ft VS

Vertical Section (ft)
 Azimuth 133.52° with reference 0.00 N, 0.00 E



DEC 23 2021

WV Department of Environmental Protection



Actual Wellpath Report
Sands Unit A 8H AWP Proj: 18960'
Page 2 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Well	Sands Unit A 8H
Field	Marion	API	47-049-02495-0000
Facility	Sands Pad	Wellbore	Sands Unit A 8H AWB
Slot	Slot #08		

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)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
0.00†	0.000	205.800	0.00	0.00	0.00	0.00	1770313.56	351811.05	39°27'47.0641"N	80°18'48.7108"W	0.00	0.000	0.00	0.00	0.00	
26.00	0.000	205.800	26.00	0.00	0.00	0.00	1770313.56	351811.05	39°27'47.0641"N	80°18'48.7108"W	0.00	0.000	0.00	0.00	0.00	
76.00	0.390	205.800	76.00	0.05	-0.15	-0.07	1770313.48	351810.90	39°27'47.0626"N	80°18'48.7117"W	0.17	205.800	0.78	0.78	0.00	Javins Gyro Surveys <17-1/2">(50'-445')
126.00	0.100	161.700	126.00	0.14	-0.35	-0.13	1770313.42	351810.70	39°27'47.0607"N	80°18'48.7125"W	0.37	201.129	0.65	-0.58	-88.20	
176.00	0.690	192.100	176.00	0.34	-0.68	-0.18	1770313.37	351810.37	39°27'47.0574"N	80°18'48.7131"W	0.71	195.051	1.21	1.18	60.80	
226.00	0.420	171.100	226.00	0.64	-1.16	-0.22	1770313.33	351809.89	39°27'47.0527"N	80°18'48.7136"W	1.18	190.680	0.67	-0.54	-42.00	
276.00	0.120	148.700	275.99	0.84	-1.38	-0.16	1770313.38	351809.67	39°27'47.0505"N	80°18'48.7129"W	1.39	186.714	0.62	-0.60	-44.80	
326.00	0.120	296.100	325.99	0.84	-1.41	-0.18	1770313.36	351809.65	39°27'47.0502"N	80°18'48.7131"W	1.42	187.407	0.46	0.00	294.80	
376.00	0.120	261.400	375.99	0.75	-1.39	-0.28	1770313.27	351809.66	39°27'47.0504"N	80°18'48.7144"W	1.42	191.443	0.14	0.00	-69.40	
426.00	0.030	357.700	425.99	0.71	-1.39	-0.33	1770313.21	351809.67	39°27'47.0504"N	80°18'48.7150"W	1.43	193.546	0.25	-0.18	192.60	
471.00	0.120	318.400	470.99	0.66	-1.34	-0.37	1770313.18	351809.71	39°27'47.0509"N	80°18'48.7154"W	1.39	195.275	0.22	0.20	-87.33	
578.00	0.420	149.530	577.99	0.92	-1.59	-0.24	1770313.30	351809.46	39°27'47.0484"N	80°18'48.7139"W	1.61	188.609	0.50	0.28	-157.82	Javins EM Surveys <12-1/4">(445')(552'-3104')
673.00	0.690	146.930	672.99	1.81	-2.37	0.25	1770313.79	351808.68	39°27'47.0407"N	80°18'48.7076"W	2.39	174.046	0.29	0.28	-2.74	
767.00	1.150	133.410	766.98	3.31	-3.50	1.24	1770314.77	351807.54	39°27'47.0296"N	80°18'48.6949"W	3.71	160.445	0.54	0.49	-14.38	
862.00	0.980	150.450	861.96	5.04	-4.86	2.33	1770315.85	351806.17	39°27'47.0161"N	80°18'48.6810"W	5.39	154.327	0.38	-0.18	17.94	
956.00	1.170	150.250	955.94	6.73	-6.39	3.21	1770316.71	351804.63	39°27'47.0010"N	80°18'48.6699"W	7.15	153.345	0.20	0.20	-0.21	
1051.00	2.860	197.960	1050.89	8.68	-9.49	2.96	1770316.43	351801.54	39°27'46.9704"N	80°18'48.6731"W	9.94	162.683	2.36	1.78	50.22	
1145.00	5.810	217.230	1144.61	10.21	-15.51	-0.64	1770312.77	351795.55	39°27'46.9109"N	80°18'48.7190"W	15.52	182.381	3.46	3.14	20.50	
1240.00	8.860	227.730	1238.83	10.20	-24.26	-8.97	1770304.37	351786.87	39°27'46.8244"N	80°18'48.8251"W	25.86	200.292	3.49	3.21	11.05	
1335.00	10.450	226.700	1332.48	9.19	-35.09	-20.65	1770292.59	351776.15	39°27'46.7173"N	80°18'48.9741"W	40.72	210.482	1.68	1.67	-1.08	
1429.00	10.690	226.490	1424.88	8.26	-46.94	-33.18	1770279.96	351764.42	39°27'46.6002"N	80°18'49.1338"W	57.48	215.257	0.26	0.26	-0.22	
1524.00	10.270	222.150	1518.30	8.01	-59.28	-45.26	1770267.77	351752.18	39°27'46.4782"N	80°18'49.2878"W	74.58	217.357	0.94	-0.44	-4.57	
1619.00	9.770	219.590	1611.85	8.76	-71.77	-56.08	1770256.84	351739.79	39°27'46.3548"N	80°18'49.4257"W	91.08	218.000	0.70	-0.53	-2.69	
1714.00	9.950	216.730	1705.45	10.28	-84.56	-66.12	1770246.68	351727.09	39°27'46.2284"N	80°18'49.5538"W	107.34	218.022	0.55	0.19	-3.01	
1808.00	9.830	217.930	1798.05	12.03	-97.40	-75.91	1770236.78	351714.35	39°27'46.1015"N	80°18'49.6786"W	123.49	217.931	0.25	-0.13	1.28	
1903.00	9.980	221.040	1891.64	13.17	-110.01	-86.30	1770226.27	351701.84	39°27'45.9769"N	80°18'49.8111"W	139.82	218.114	0.58	0.16	3.27	
1998.00	10.030	217.050	1985.19	14.46	-122.82	-96.69	1770215.77	351689.12	39°27'45.8503"N	80°18'49.9436"W	156.31	218.212	0.73	0.05	-4.20	
2093.00	9.700	215.250	2078.79	16.54	-135.96	-106.29	1770206.05	351676.07	39°27'45.7204"N	80°18'50.0660"W	172.58	218.019	0.48	-0.35	-1.89	
2188.00	9.460	215.140	2172.46	18.83	-148.88	-115.41	1770196.82	351663.23	39°27'45.5927"N	80°18'50.1822"W	188.37	217.782	0.25	-0.25	-0.12	
2282.00	9.160	217.450	2265.23	20.75	-161.13	-124.40	1770187.71	351651.06	39°27'45.4716"N	80°18'50.2969"W	203.57	217.669	0.51	-0.32	2.46	

07/10/2021 10:00 AM

DEC 28 2021

WV Department of Environmental Protection



Actual Wellpath Report

Sands Unit A 8H AWP Proj: 18960'
Page 3 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO ENERGY INC	Well	Sands Unit A 8H
Field	Marion	API	47-049-02495-0000
Facility	Sands Pad	Wellbore	Sands Unit A 8H AWB
Slot	Slot #08		

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)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
2377.00	9.110	216.480	2359.02	22.47	-173.18	-133.47	1770178.53	351639.09	39°27'45.3525"N	80°18'50.4125"W	218.65	217.621	0.17	-0.05	-1.02	
2471.00	9.250	216.480	2451.82	24.31	-185.24	-142.39	1770169.51	351627.12	39°27'45.2333"N	80°18'50.5262"W	233.64	217.548	0.15	0.15	0.00	
2566.00	9.170	218.310	2545.59	25.93	-197.32	-151.62	1770160.17	351615.12	39°27'45.1139"N	80°18'50.6439"W	248.85	217.538	0.32	-0.08	1.93	
2661.00	9.160	220.410	2639.38	27.03	-209.02	-161.21	1770150.47	351603.51	39°27'44.9983"N	80°18'50.7662"W	263.97	217.643	0.35	-0.01	2.21	
2755.00	9.270	220.900	2732.17	27.78	-220.44	-171.02	1770140.56	351592.18	39°27'44.8855"N	80°18'50.8913"W	279.00	217.805	0.14	0.12	0.52	
2850.00	9.330	218.930	2825.92	28.75	-232.21	-180.87	1770130.61	351580.50	39°27'44.7691"N	80°18'51.0168"W	294.34	217.915	0.34	0.06	-2.07	
2945.00	8.880	218.700	2919.72	29.98	-243.93	-190.29	1770121.08	351568.87	39°27'44.6533"N	80°18'51.1370"W	309.37	217.959	0.48	-0.47	-0.24	
3040.00	8.700	222.740	3013.61	30.69	-254.92	-199.75	1770111.52	351557.96	39°27'44.5446"N	80°18'51.2576"W	323.86	218.082	0.68	-0.19	4.25	
3130.00	8.980	222.890	3102.54	30.86	-265.07	-209.15	1770102.03	351547.90	39°27'44.4443"N	80°18'51.3775"W	337.65	218.275	0.31	0.31	0.17	
3293.00	9.550	219.510	3263.41	31.95	-284.82	-226.41	1770084.59	351528.31	39°27'44.2491"N	80°18'51.5975"W	363.85	218.482	0.48	0.35	-2.07	Javins EM Surveys <8-3/4">(3059')(3267'-5923')
3388.00	13.410	220.360	3356.49	33.11	-299.30	-238.57	1770072.31	351513.94	39°27'44.1060"N	80°18'51.7525"W	382.75	218.558	4.07	4.06	0.89	
3482.00	16.510	222.630	3447.30	33.92	-317.44	-254.68	1770056.04	351495.95	39°27'43.9267"N	80°18'51.9579"W	406.97	218.739	3.36	3.30	2.41	
3577.00	18.160	218.310	3537.98	35.47	-338.99	-273.00	1770037.52	351474.57	39°27'43.7137"N	80°18'52.1914"W	435.25	218.845	2.20	1.74	-4.55	
3672.00	19.960	218.730	3627.77	38.17	-363.26	-292.32	1770017.98	351450.47	39°27'43.4739"N	80°18'52.4378"W	466.27	218.824	1.90	1.89	0.44	
3770.00	21.510	219.940	3719.42	40.69	-390.08	-314.32	1769995.74	351423.85	39°27'43.2088"N	80°18'52.7183"W	500.96	218.861	1.64	1.58	1.23	
3865.00	22.250	220.450	3807.58	42.74	-417.12	-337.17	1769972.64	351397.02	39°27'42.9415"N	80°18'53.0097"W	536.36	218.950	0.80	0.78	0.54	
3959.00	22.930	220.100	3894.36	44.79	-444.67	-360.51	1769949.06	351369.68	39°27'42.6692"N	80°18'53.3072"W	572.46	219.033	0.74	0.72	-0.37	
4054.00	23.280	218.580	3981.75	47.51	-473.51	-384.14	1769925.17	351341.07	39°27'42.3843"N	80°18'53.6085"W	609.73	219.051	0.73	0.37	-1.60	
4148.00	24.030	218.050	4067.85	50.93	-503.10	-407.52	1769901.52	351311.69	39°27'42.0918"N	80°18'53.9066"W	647.44	219.008	0.83	0.80	-0.56	
4243.00	23.700	218.460	4154.72	54.46	-533.28	-431.32	1769877.45	351281.73	39°27'41.7935"N	80°18'54.2100"W	685.88	218.966	0.39	-0.35	0.43	
4338.00	23.630	218.760	4241.74	57.72	-563.08	-455.11	1769853.39	351252.15	39°27'41.4990"N	80°18'54.5133"W	724.01	218.947	0.15	-0.07	0.32	
4432.00	24.080	218.180	4327.71	61.07	-592.84	-478.76	1769829.48	351222.60	39°27'41.2048"N	80°18'54.8148"W	762.02	218.923	0.54	0.48	-0.62	
4527.00	24.290	217.870	4414.37	64.80	-623.50	-502.74	1769805.23	351192.16	39°27'40.9018"N	80°18'55.1205"W	800.94	218.880	0.26	0.22	-0.33	
4621.00	23.240	217.990	4500.39	68.49	-653.38	-526.02	1769781.68	351162.50	39°27'40.6065"N	80°18'55.4174"W	838.81	218.837	1.12	-1.12	0.13	
4716.00	22.930	218.480	4587.79	71.92	-682.64	-549.07	1769758.36	351133.45	39°27'40.3173"N	80°18'55.7113"W	876.06	218.811	0.38	-0.33	0.52	
4811.00	23.270	219.030	4675.17	75.01	-711.70	-572.41	1769734.77	351104.60	39°27'40.0300"N	80°18'56.0087"W	913.33	218.809	0.42	0.36	0.58	
4905.00	24.030	218.210	4761.28	78.24	-741.17	-595.94	1769710.97	351075.35	39°27'39.7388"N	80°18'56.3088"W	951.04	218.801	0.88	0.81	-0.87	
5000.00	25.070	218.080	4847.69	81.94	-772.21	-620.32	1769686.31	351044.53	39°27'39.4320"N	80°18'56.6196"W	990.50	218.775	1.10	1.09	-0.14	
5094.00	24.090	217.690	4933.17	85.77	-803.07	-644.33	1769662.02	351013.90	39°27'39.1270"N	80°18'56.9257"W	1029.60	218.741	1.06	-1.04	-0.41	
5189.00	22.030	216.880	5020.57	89.80	-832.66	-666.88	1769639.21	350984.51	39°27'38.8345"N	80°18'57.2132"W	1066.80	218.691	2.19	-2.17	-0.85	

DEC 28 2021
 WV Department of Environmental Protection



Actual Wellpath Report
Sands Unit A 8H AWP Proj: 18960'
Page 4 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO ENERGY INC	Well	Sands Unit A 8H
Field	Marion	API	47-049-02495-0000
Facility	Sands Pad	Wellbore	Sands Unit A 8H AWB
Slot	Slot #08		

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]	Build Rate ["/100ft]	Turn Rate ["/100ft]	Comments
5287.00	22.540	216.650	5111.25	94.18	-862.44	-689.12	1769616.70	350954.94	39°27'38.5402"N	80°18'57.4967"W	1103.94	218.626	0.53	0.52	-0.23	
5382.00	24.170	217.860	5198.47	98.27	-892.40	-711.93	1769593.62	350925.18	39°27'38.2441"N	80°18'57.7875"W	1141.59	218.582	1.79	1.72	1.27	
5476.00	24.150	218.410	5284.23	101.88	-922.66	-735.68	1769569.59	350895.14	39°27'37.9450"N	80°18'58.0904"W	1180.06	218.567	0.24	-0.02	0.59	
5570.00	24.340	218.390	5369.94	105.33	-952.91	-759.66	1769545.35	350865.11	39°27'37.6460"N	80°18'58.3961"W	1218.66	218.562	0.20	0.20	-0.02	
5665.00	24.690	218.990	5456.38	108.65	-983.68	-784.30	1769520.43	350834.57	39°27'37.3419"N	80°18'58.7102"W	1258.08	218.566	0.45	0.37	0.63	
5760.00	24.390	220.130	5542.80	111.37	-1014.10	-809.43	1769495.03	350804.38	39°27'37.0412"N	80°18'59.0306"W	1297.52	218.596	0.59	-0.32	1.20	
5854.00	23.280	218.150	5628.78	114.26	-1043.55	-833.41	1769470.78	350775.15	39°27'36.7502"N	80°18'59.3363"W	1335.50	218.612	1.46	-1.18	-2.11	
5949.00	23.200	218.650	5716.07	117.60	-1072.92	-856.70	1769447.23	350745.99	39°27'36.4598"N	80°18'59.6332"W	1372.99	218.606	0.22	-0.08	0.53	
5993.00	22.960	219.020	5756.55	119.01	-1086.36	-867.51	1769436.30	350732.65	39°27'36.3270"N	80°18'59.7711"W	1390.24	218.609	0.64	-0.55	0.84	Final Superior Corrected Surveys <8-1/2">(5949')(5993'-18935')
6046.00	21.720	219.340	5805.57	120.54	-1101.98	-880.24	1769423.43	350717.15	39°27'36.1727"N	80°18'59.9333"W	1410.38	218.617	2.35	-2.34	0.60	
6141.00	21.840	219.450	5893.79	123.08	-1129.22	-902.61	1769400.81	350690.12	39°27'35.9035"N	80°19'0.2185"W	1445.63	218.636	0.13	0.13	0.12	
6236.00	23.450	221.560	5981.46	124.98	-1157.01	-926.38	1769376.80	350662.54	39°27'35.6288"N	80°19'0.5216"W	1482.18	218.683	1.90	1.69	2.22	
6330.00	25.770	221.680	6066.92	126.27	-1186.27	-952.38	1769350.53	350633.52	39°27'35.3396"N	80°19'0.8530"W	1521.27	218.759	2.47	2.47	0.13	
6425.00	26.140	218.620	6152.34	128.72	-1218.04	-979.17	1769323.45	350601.99	39°27'35.0255"N	80°19'1.1946"W	1562.82	218.795	1.46	0.39	-3.22	
6520.00	25.080	218.620	6238.01	132.23	-1250.13	-1004.80	1769297.54	350570.14	39°27'34.7084"N	80°19'1.5214"W	1603.88	218.791	1.12	-1.12	0.00	
6614.00	24.930	218.950	6323.20	135.51	-1281.10	-1029.69	1769272.37	350539.40	39°27'34.4023"N	80°19'1.8387"W	1643.62	218.791	0.22	-0.16	0.35	
6709.00	24.620	219.390	6409.45	138.53	-1311.96	-1054.84	1769246.95	350508.77	39°27'34.0972"N	80°19'2.1592"W	1683.43	218.800	0.38	-0.33	0.46	
6803.00	24.520	218.970	6494.94	141.49	-1342.26	-1079.53	1769221.98	350478.70	39°27'33.7978"N	80°19'2.4740"W	1722.51	218.808	0.21	-0.11	-0.45	
6898.00	24.360	219.120	6581.43	144.56	-1372.79	-1104.29	1769196.95	350448.40	39°27'33.4961"N	80°19'2.7897"W	1761.82	218.814	0.18	-0.17	0.16	
6993.00	24.470	218.940	6667.93	147.63	-1403.29	-1129.02	1769171.95	350418.12	39°27'33.1946"N	80°19'3.1049"W	1801.08	218.818	0.14	0.12	-0.19	
7088.00	24.060	218.490	6754.54	150.90	-1433.75	-1153.43	1769147.26	350387.88	39°27'32.8935"N	80°19'3.4162"W	1840.12	218.816	0.47	-0.43	-0.47	
7182.00	25.020	218.800	6840.05	154.21	-1464.24	-1177.82	1769122.60	350357.62	39°27'32.5921"N	80°19'3.7271"W	1879.16	218.813	1.03	1.02	0.33	
7277.00	25.410	218.000	6926.00	157.83	-1495.96	-1202.95	1769097.18	350326.13	39°27'32.2786"N	80°19'4.0475"W	1919.63	218.804	0.55	0.41	-0.84	
7372.00	25.520	197.430	7011.94	168.81	-1531.62	-1221.67	1769078.14	350290.65	39°27'31.9262"N	80°19'4.2861"W	1959.16	218.577	9.27	0.12	-21.65	
7466.00	25.520	174.420	7096.97	193.08	-1571.19	-1225.77	1769073.68	350251.12	39°27'31.5351"N	80°19'4.3384"W	1992.77	217.960	10.49	0.00	-24.48	
7561.00	34.180	165.230	7179.34	231.34	-1617.47	-1216.96	1769082.07	350204.76	39°27'31.0777"N	80°19'4.2260"W	2024.15	216.957	10.29	9.12	-9.67	
7655.00	41.190	157.670	7253.72	282.14	-1671.73	-1198.44	1769100.10	350150.34	39°27'30.5415"N	80°19'3.9898"W	2056.92	215.636	8.92	7.46	-8.04	
7749.00	48.520	150.290	7320.36	344.22	-1731.06	-1169.16	1769128.84	350090.74	39°27'29.9550"N	80°19'3.6166"W	2088.91	214.035	9.55	7.80	-7.85	
7844.00	58.850	145.880	7376.56	418.23	-1795.82	-1128.60	1769168.81	350025.62	39°27'29.3150"N	80°19'3.0994"W	2121.02	212.148	11.49	10.87	-4.64	
7939.00	65.290	139.380	7421.07	501.02	-1862.36	-1077.61	1769219.19	349958.63	39°27'28.6575"N	80°19'2.4493"W	2151.65	210.055	9.08	6.78	-6.84	

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DEC 23 2021

WV Department of
Environmental Protection



Actual Wellpath Report
Sands Unit A 8H AWP Proj: 18960'
Page 5 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO ENERGY INC	Well	Sands Unit A 8H
Field	Marion	API	47-049-02495-0000
Facility	Sands Pad	Wellbore	Sands Unit A 8H AWB
Slot	Slot #08		

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)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
7990.00†	71.070	137.566	7440.02	548.17	-1897.77	-1046.22	1769250.25	349922.94	39°27'28.3074"N	80°19'2.0492"W	2167.06	208.868	11.80	11.33	-3.56	Landing Point: 7990' MD
8034.00	76.070	136.100	7452.46	590.29	-1928.54	-1017.36	1769278.84	349891.91	39°27'28.0034"N	80°19'1.6811"W	2180.43	207.813	11.80	11.36	-3.33	
8128.00	82.800	133.780	7469.69	682.61	-1993.76	-951.98	1769343.62	349826.11	39°27'27.3588"N	80°19'0.8475"W	2209.37	205.523	7.56	7.16	-2.47	
8223.00	90.600	132.450	7475.15	777.37	-2058.52	-882.79	1769412.21	349760.72	39°27'26.7187"N	80°18'59.9655"W	2239.83	203.212	8.33	8.21	-1.40	
8317.00	89.870	132.260	7474.77	871.35	-2121.85	-813.33	1769481.10	349696.77	39°27'26.0928"N	80°18'59.0799"W	2272.39	200.972	0.80	-0.78	-0.20	
8412.00	89.590	132.250	7475.22	966.33	-2185.73	-743.02	1769550.82	349632.26	39°27'25.4615"N	80°18'58.1834"W	2308.57	198.775	0.29	-0.29	-0.01	
8506.00	88.570	132.020	7476.72	1060.28	-2248.79	-673.32	1769619.94	349568.58	39°27'24.8383"N	80°18'57.2948"W	2347.42	196.668	1.11	-1.09	-0.24	
8601.00	88.170	131.250	7479.43	1155.19	-2311.88	-602.35	1769690.34	349504.86	39°27'24.2148"N	80°18'56.3900"W	2389.06	194.603	0.91	-0.42	-0.81	
8696.00	88.630	132.100	7482.08	1250.11	-2375.02	-531.42	1769760.69	349441.08	39°27'23.5908"N	80°18'55.4857"W	2433.74	192.612	1.02	0.48	0.89	
8791.00	88.970	132.600	7484.07	1345.07	-2439.00	-461.22	1769830.30	349376.47	39°27'22.9584"N	80°18'54.5908"W	2482.23	190.708	0.64	0.36	0.53	
8885.00	89.370	131.990	7485.43	1439.03	-2502.25	-391.70	1769899.24	349312.59	39°27'22.3333"N	80°18'53.7045"W	2532.72	188.897	0.78	0.43	-0.65	
8980.00	89.900	133.360	7486.04	1534.02	-2566.64	-321.86	1769968.49	349247.58	39°27'21.6969"N	80°18'52.8141"W	2586.74	187.148	1.55	0.56	1.44	
9074.00	89.560	133.690	7486.48	1628.02	-2631.38	-253.70	1770036.06	349182.23	39°27'21.0571"N	80°18'51.9452"W	2643.58	185.507	0.50	-0.36	0.35	
9169.00	89.740	134.120	7487.06	1723.01	-2697.25	-185.26	1770103.90	349115.74	39°27'20.4060"N	80°18'51.0726"W	2703.61	183.929	0.49	0.19	0.45	
9263.00	90.270	133.200	7487.05	1817.01	-2762.15	-117.25	1770171.31	349050.24	39°27'19.7646"N	80°18'50.2056"W	2764.64	182.431	1.13	0.56	-0.98	
9358.00	90.360	133.070	7486.53	1912.01	-2827.10	-47.93	1770240.04	348984.66	39°27'19.1227"N	80°18'49.3218"W	2827.51	180.971	0.17	0.09	-0.14	
9452.00	90.110	133.860	7486.14	2006.01	-2891.76	20.29	1770307.67	348919.39	39°27'18.4836"N	80°18'48.4521"W	2891.83	179.598	0.88	-0.27	0.84	
9547.00	90.480	133.490	7485.65	2101.00	-2957.37	89.00	1770375.78	348853.17	39°27'17.8352"N	80°18'47.5761"W	2958.70	178.276	0.55	0.39	-0.39	
9642.00	89.500	131.560	7485.67	2195.98	-3021.57	159.01	1770445.20	348788.33	39°27'17.2006"N	80°18'46.6836"W	3025.75	176.988	2.28	-1.03	-2.03	
9736.00	89.770	133.140	7486.27	2289.96	-3084.89	228.48	1770514.08	348724.39	39°27'16.5748"N	80°18'45.7980"W	3093.34	175.764	1.71	0.29	1.68	
9830.00	90.640	133.960	7485.93	2383.96	-3149.66	296.61	1770581.62	348659.02	39°27'15.9347"N	80°18'44.9295"W	3163.59	174.620	1.27	0.93	0.87	
9924.00	89.900	135.140	7485.49	2477.94	-3215.60	363.59	1770648.00	348592.47	39°27'15.2830"N	80°18'44.0756"W	3236.09	173.549	1.48	-0.79	1.26	
10019.00	90.670	134.430	7485.02	2572.91	-3282.52	431.02	1770714.81	348524.95	39°27'14.6216"N	80°18'43.2160"W	3310.70	172.519	1.10	0.81	-0.75	
10113.00	90.420	135.490	7484.12	2666.88	-3348.94	497.53	1770780.71	348457.94	39°27'13.9651"N	80°18'42.3681"W	3385.69	171.550	1.16	-0.27	1.13	
10208.00	89.960	133.700	7483.81	2761.86	-3415.63	565.17	1770847.75	348390.64	39°27'13.3059"N	80°18'41.5058"W	3462.08	170.605	1.95	-0.48	-1.88	
10303.00	90.200	134.890	7483.68	2856.85	-3481.97	633.17	1770915.14	348323.68	39°27'12.6502"N	80°18'40.6390"W	3539.07	169.694	1.28	0.25	1.25	
10398.00	90.080	133.690	7483.44	2951.84	-3548.31	701.17	1770982.53	348256.74	39°27'11.9946"N	80°18'39.7721"W	3616.93	168.822	1.27	-0.13	-1.26	
10492.00	90.790	134.730	7482.73	3045.82	-3613.85	768.54	1771049.30	348190.59	39°27'11.3468"N	80°18'38.9132"W	3694.67	167.994	1.34	0.76	1.11	
10587.00	90.140	133.710	7481.96	3140.81	-3680.10	836.62	1771116.78	348123.73	39°27'10.6920"N	80°18'38.0454"W	3774.00	167.192	1.27	-0.68	-1.07	
10681.00	90.170	134.280	7481.71	3234.81	-3745.40	904.25	1771183.80	348057.83	39°27'10.0466"N	80°18'37.1833"W	3853.01	166.427	0.61	0.03	0.61	

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Actual Wellpath Report
Sands Unit A 8H AWP Proj: 18960'
Page 6 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Well	Sands Unit A 8H
Field	Marion	API	47-049-02495-0000
Facility	Sands Pad	Wellbore	Sands Unit A 8H AWB
Slot	Slot #08		

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)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
10776.00	90.450	134.810	7481.19	3329.79	-3812.03	971.95	1771250.90	347990.59	39°27'9.3880"N	80°18'36.3203"W	3933.99	165.696	0.63	0.29	0.56	
10870.00	90.600	134.900	7480.33	3423.76	-3878.33	1038.58	1771316.92	347923.70	39°27'8.7327"N	80°18'35.4708"W	4014.99	165.008	0.19	0.16	0.10	
10965.00	90.360	134.380	7479.53	3518.74	-3945.08	1106.18	1771383.91	347856.34	39°27'8.0730"N	80°18'34.6092"W	4097.23	164.337	0.60	-0.25	-0.55	
11059.00	90.510	134.790	7478.82	3612.72	-4011.06	1173.12	1771450.25	347789.76	39°27'7.4208"N	80°18'33.7558"W	4179.10	163.697	0.46	0.16	0.44	
11153.00	89.770	132.680	7478.59	3706.71	-4076.04	1241.04	1771517.57	347724.17	39°27'6.7786"N	80°18'32.8901"W	4260.79	163.066	2.38	-0.79	-2.24	
11248.00	89.770	134.110	7478.97	3801.71	-4141.31	1310.07	1771586.00	347658.29	39°27'6.1335"N	80°18'32.0102"W	4343.58	162.446	1.51	0.00	1.51	
11342.00	90.910	133.920	7478.41	3895.70	-4206.62	1377.66	1771653.00	347592.37	39°27'5.4879"N	80°18'31.1485"W	4426.47	161.866	1.23	1.21	-0.20	
11437.00	89.900	132.700	7477.74	3990.70	-4271.78	1446.79	1771721.52	347526.59	39°27'4.8439"N	80°18'30.2673"W	4510.13	161.290	1.67	-1.06	-1.28	
11532.00	90.300	134.030	7477.58	4085.69	-4337.01	1515.85	1771789.99	347460.74	39°27'4.1991"N	80°18'29.3870"W	4594.29	160.735	1.46	0.42	1.40	
11626.00	89.590	134.680	7477.67	4179.68	-4402.73	1583.06	1771856.60	347394.42	39°27'3.5496"N	80°18'28.5302"W	4678.68	160.223	1.02	-0.76	0.69	
11721.00	89.770	134.680	7478.20	4274.66	-4469.52	1650.61	1771923.54	347327.02	39°27'2.8894"N	80°18'27.6692"W	4764.57	159.731	0.19	0.19	0.00	
11816.00	89.530	134.130	7478.78	4369.65	-4536.00	1718.48	1771990.80	347259.94	39°27'2.2324"N	80°18'26.8041"W	4850.61	159.251	0.63	-0.25	-0.58	
11911.00	89.500	134.460	7479.58	4464.64	-4602.34	1786.47	1772058.18	347192.99	39°27'1.5766"N	80°18'25.9374"W	4936.90	158.785	0.35	-0.03	0.35	
12005.00	90.200	134.120	7479.83	4558.63	-4667.98	1853.76	1772124.87	347126.75	39°27'0.9278"N	80°18'25.0797"W	5022.59	158.341	0.83	0.74	-0.36	
12100.00	90.790	133.890	7479.01	4653.62	-4733.97	1922.09	1772192.59	347060.14	39°27'0.2755"N	80°18'24.2087"W	5109.30	157.902	0.67	0.62	-0.24	
12194.00	89.590	135.130	7478.70	4747.60	-4799.87	1989.12	1772259.02	346993.64	39°26'59.6242"N	80°18'23.3543"W	5195.70	157.490	1.84	-1.28	1.32	
12289.00	88.730	133.900	7480.09	4842.57	-4866.46	2056.85	1772326.14	346926.44	39°26'58.9660"N	80°18'22.4910"W	5283.28	157.088	1.58	-0.91	-1.29	
12383.00	88.200	134.010	7482.61	4936.54	-4931.68	2124.49	1772393.19	346860.61	39°26'58.3213"N	80°18'21.6287"W	5369.82	156.694	0.58	-0.56	0.12	
12478.00	88.230	133.350	7485.57	5031.49	-4997.26	2193.16	1772461.26	346794.42	39°26'57.6731"N	80°18'20.7534"W	5457.34	156.305	0.70	0.03	-0.69	
12573.00	89.310	134.880	7487.60	5126.46	-5063.37	2261.35	1772528.84	346727.70	39°26'57.0197"N	80°18'19.8843"W	5545.40	155.934	1.97	1.14	1.61	
12668.00	89.500	134.570	7488.59	5221.43	-5130.22	2328.84	1772595.72	346660.25	39°26'56.3589"N	80°18'19.0240"W	5634.06	155.585	0.38	0.20	-0.33	
12762.00	89.930	134.630	7489.06	5315.41	-5196.22	2395.77	1772662.05	346593.65	39°26'55.7065"N	80°18'18.1709"W	5721.93	155.247	0.46	0.46	0.06	
12857.00	89.840	134.490	7489.25	5410.40	-5262.88	2463.46	1772729.12	346526.38	39°26'55.0477"N	80°18'17.3081"W	5810.90	154.917	0.18	-0.09	-0.15	
12952.00	89.560	133.590	7489.75	5505.39	-5328.92	2531.75	1772796.81	346459.73	39°26'54.3949"N	80°18'16.4377"W	5899.76	154.588	0.99	-0.29	-0.95	Deepest TVD: 7489.75' TVD
13047.00	91.060	134.430	7489.23	5600.38	-5394.92	2600.07	1772864.53	346393.12	39°26'53.7425"N	80°18'15.5669"W	5988.78	154.268	1.81	1.58	0.88	
13141.00	90.570	133.670	7487.90	5694.37	-5460.27	2667.63	1772931.48	346327.16	39°26'53.0966"N	80°18'14.7058"W	6077.07	153.962	0.96	-0.52	-0.81	
13235.00	91.090	133.720	7486.53	5788.36	-5525.20	2735.58	1772998.85	346261.62	39°26'52.4548"N	80°18'13.8397"W	6165.32	153.659	0.56	0.55	0.05	
13330.00	91.220	132.580	7484.62	5883.34	-5590.15	2804.88	1773067.54	346196.05	39°26'51.8127"N	80°18'12.9565"W	6254.37	153.355	1.21	0.14	-1.20	
13425.00	91.190	133.230	7482.62	5978.31	-5654.81	2874.45	1773136.52	346130.76	39°26'51.1735"N	80°18'12.0697"W	6343.45	153.055	0.68	-0.03	0.68	
13520.00	91.190	135.110	7480.65	6073.28	-5720.99	2942.57	1773204.04	346063.97	39°26'50.5194"N	80°18'11.2014"W	6433.39	152.781	1.98	0.00	1.98	

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Environmental Protection



Actual Wellpath Report
Sands Unit A 8H AWP Proj: 18960'
Page 7 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO ENERGY INC	Well	Sands Unit A 8H
Field	Marion	API	47-049-02495-0000
Facility	Sands Pad	Wellbore	Sands Unit A 8H AWB
Slot	Slot #08		

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)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
13614.00	90.660	137.870	7479.13	6167.13	-5789.15	3007.27	1773268.12	345995.24	39°26'49.8457"N	80°18'10.3768"W	6523.65	152.550	2.99	-0.56	2.94	
13709.00	90.260	139.560	7478.37	6261.73	-5860.53	3069.95	1773330.14	345923.30	39°26'49.1401"N	80°18'9.5779"W	6615.92	152.353	1.83	-0.42	1.78	
13803.00	90.140	139.670	7478.04	6355.20	-5932.13	3130.85	1773390.39	345851.15	39°26'48.4324"N	80°18'8.8017"W	6707.64	152.176	0.17	-0.13	0.12	
13898.00	89.960	143.120	7477.96	6449.29	-6006.36	3190.12	1773448.98	345776.39	39°26'47.6987"N	80°18'8.0464"W	6800.97	152.026	3.64	-0.19	3.63	
13993.00	90.200	145.800	7477.82	6542.56	-6083.66	3245.34	1773503.49	345698.61	39°26'46.9347"N	80°18'7.3426"W	6895.15	151.922	2.83	0.25	2.82	
14087.00	90.020	146.420	7477.64	6634.30	-6161.69	3297.75	1773555.19	345620.11	39°26'46.1634"N	80°18'6.6747"W	6988.67	151.844	0.69	-0.19	0.66	
14182.00	90.260	152.290	7477.41	6725.65	-6243.38	3346.15	1773602.85	345537.98	39°26'45.3559"N	80°18'6.0578"W	7083.54	151.811	6.18	0.25	6.18	
14277.00	89.710	154.770	7477.44	6814.91	-6328.42	3388.49	1773644.42	345452.57	39°26'44.5154"N	80°18'5.5183"W	7178.49	151.834	2.67	-0.58	2.61	
14372.00	90.760	156.510	7477.05	6902.91	-6414.95	3427.68	1773682.81	345365.69	39°26'43.6601"N	80°18'5.0190"W	7273.28	151.883	2.14	1.11	1.83	
14466.00	90.820	155.030	7475.75	6989.90	-6500.66	3466.25	1773720.60	345279.64	39°26'42.8129"N	80°18'4.5274"W	7367.05	151.933	1.58	0.06	-1.57	
14560.00	89.930	152.710	7475.14	7078.02	-6585.05	3507.64	1773761.23	345194.89	39°26'41.9789"N	80°18'3.9999"W	7460.99	151.957	2.64	-0.95	-2.47	
14655.00	90.140	153.810	7475.08	7167.44	-6669.88	3550.39	1773803.20	345109.67	39°26'41.1403"N	80°18'3.4552"W	7555.97	151.974	1.18	0.22	1.16	
14750.00	91.800	154.550	7473.47	7256.31	-6755.38	3591.76	1773843.79	345023.81	39°26'40.2952"N	80°18'2.9281"W	7650.88	152.001	1.91	1.75	0.78	
14844.00	91.160	153.450	7471.04	7344.34	-6839.84	3632.95	1773884.22	344938.98	39°26'39.4604"N	80°18'2.4032"W	7744.79	152.025	1.35	-0.68	-1.17	
14938.00	91.190	153.970	7469.11	7432.55	-6924.10	3674.57	1773925.07	344854.36	39°26'38.6276"N	80°18'1.8727"W	7838.73	152.045	0.55	0.03	0.55	
15033.00	91.190	153.830	7467.14	7521.58	-7009.39	3716.36	1773966.08	344768.69	39°26'37.7845"N	80°18'1.3403"W	7933.66	152.068	0.15	0.00	-0.15	
15128.00	91.190	153.680	7465.17	7610.70	-7094.58	3758.36	1774007.31	344683.13	39°26'36.9425"N	80°18'0.8051"W	8028.60	152.088	0.16	0.00	-0.16	
15222.00	90.910	152.800	7463.45	7699.17	-7178.50	3800.68	1774048.86	344598.84	39°26'36.1131"N	80°18'0.2659"W	8122.56	152.101	0.98	-0.30	-0.94	
15317.00	91.000	155.330	7461.86	7788.11	-7263.91	3842.21	1774089.62	344513.06	39°26'35.2688"N	80°17'59.7365"W	8217.49	152.124	2.66	0.09	2.66	
15412.00	91.310	155.380	7459.95	7876.27	-7350.24	3881.82	1774128.44	344426.38	39°26'34.4155"N	80°17'59.2319"W	8312.32	152.161	0.33	0.33	0.05	
15507.00	91.060	154.270	7457.98	7964.76	-7436.20	3922.22	1774168.06	344340.07	39°26'33.5659"N	80°17'58.7171"W	8407.19	152.191	1.20	-0.26	-1.17	
15601.00	91.500	155.510	7455.88	8052.28	-7521.29	3962.10	1774207.17	344254.62	39°26'32.7249"N	80°17'58.2089"W	8501.06	152.220	1.40	0.47	1.32	
15696.00	91.030	154.580	7453.78	8140.63	-7607.40	4002.17	1774246.46	344168.16	39°26'31.8738"N	80°17'57.6984"W	8595.93	152.252	1.10	-0.49	-0.98	
15791.00	91.860	154.600	7451.39	8229.25	-7693.18	4042.92	1774286.43	344082.01	39°26'31.0259"N	80°17'57.1791"W	8690.82	152.277	0.87	0.87	0.02	
15885.00	91.430	154.910	7448.69	8316.83	-7778.17	4083.00	1774325.72	343996.67	39°26'30.1858"N	80°17'56.6685"W	8784.69	152.304	0.56	-0.46	0.33	
15980.00	89.960	154.160	7447.54	8405.50	-7863.93	4123.84	1774365.79	343910.55	39°26'29.3382"N	80°17'56.1481"W	8879.61	152.328	1.74	-1.55	-0.79	
16074.00	89.130	154.660	7448.28	8493.32	-7948.71	4164.44	1774405.61	343825.42	39°26'28.5002"N	80°17'55.6308"W	8973.54	152.349	1.03	-0.88	0.53	
16169.00	89.490	154.480	7449.43	8581.97	-8034.50	4205.23	1774445.62	343739.27	39°26'27.6523"N	80°17'55.1111"W	9068.47	152.373	0.42	0.38	-0.19	
16264.00	89.530	153.110	7450.24	8671.08	-8119.73	4247.18	1774486.80	343653.66	39°26'26.8098"N	80°17'54.5766"W	9163.43	152.387	1.44	0.04	-1.44	
16358.00	90.200	153.500	7450.46	8759.53	-8203.71	4289.41	1774528.26	343569.31	39°26'25.9797"N	80°17'54.0385"W	9257.42	152.397	0.82	0.71	0.41	

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Actual Wellpath Report

Sands Unit A 8H AWP Proj: 18960'
Page 8 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO ENERGY INC	Well	Sands Unit A 8H
Field	Marion	API	47-049-02495-0000
Facility	Sands Pad	Wellbore	Sands Unit A 8H AWB
Slot	Slot #08		

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)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
16453.00	90.510	153.840	7449.87	8848.71	-8288.85	4331.54	1774569.62	343483.79	39°26'25.1382"N	80°17'53.5017"W	9352.39	152.410	0.48	0.33	0.36	
16548.00	90.080	154.170	7449.38	8937.70	-8374.24	4373.18	1774610.48	343398.04	39°26'24.2942"N	80°17'52.9711"W	9447.36	152.426	0.57	-0.45	0.35	
16642.00	89.560	154.160	7449.68	9025.67	-8458.84	4414.14	1774650.67	343313.07	39°26'23.4579"N	80°17'52.4492"W	9541.31	152.443	0.55	-0.55	-0.01	
16736.00	88.970	152.980	7450.89	9113.96	-8543.01	4455.98	1774691.74	343228.53	39°26'22.6260"N	80°17'51.9162"W	9635.28	152.454	1.40	-0.63	-1.26	
16831.00	89.530	153.390	7452.13	9203.41	-8627.78	4498.83	1774733.82	343143.38	39°26'21.7880"N	80°17'51.3702"W	9730.27	152.461	0.73	0.59	0.43	
16926.00	89.400	154.030	7453.02	9292.57	-8712.95	4540.90	1774775.12	343057.84	39°26'20.9462"N	80°17'50.8341"W	9825.24	152.473	0.69	-0.14	0.67	
17020.00	89.000	153.100	7454.33	9380.87	-8797.11	4582.75	1774816.20	342973.30	39°26'20.1143"N	80°17'50.3010"W	9919.21	152.483	1.08	-0.43	-0.99	
17115.00	89.280	153.480	7455.75	9470.26	-8881.97	4625.44	1774858.12	342888.07	39°26'19.2756"N	80°17'49.7570"W	10014.19	152.491	0.50	0.29	0.40	
17210.00	90.080	154.220	7456.29	9559.34	-8967.24	4667.31	1774899.21	342802.43	39°26'18.4327"N	80°17'49.2236"W	10109.16	152.504	1.15	0.84	0.78	
17305.00	89.000	154.220	7457.05	9648.20	-9052.78	4708.62	1774939.75	342716.52	39°26'17.5872"N	80°17'48.6972"W	10204.12	152.520	1.14	-1.14	0.00	
17399.00	89.130	153.370	7458.58	9736.36	-9137.11	4750.13	1774980.48	342631.83	39°26'16.7537"N	80°17'48.1685"W	10298.08	152.531	0.91	0.14	-0.90	
17494.00	89.130	153.500	7460.02	9825.67	-9222.07	4792.61	1775022.19	342546.49	39°26'15.9139"N	80°17'47.6272"W	10393.06	152.540	0.14	0.00	0.14	
17588.00	88.790	153.280	7461.73	9914.06	-9306.10	4834.70	1775063.52	342462.09	39°26'15.0833"N	80°17'47.0909"W	10487.03	152.547	0.43	-0.36	-0.23	
17683.00	89.710	154.240	7462.97	10003.18	-9391.30	4876.70	1775104.74	342376.51	39°26'14.2412"N	80°17'46.5558"W	10582.00	152.558	1.40	0.97	1.01	
17778.00	88.570	153.220	7464.40	10092.32	-9476.48	4918.74	1775146.01	342290.97	39°26'13.3992"N	80°17'46.0202"W	10676.97	152.569	1.61	-1.20	-1.07	
17873.00	89.650	153.610	7465.88	10181.64	-9561.42	4961.25	1775187.75	342205.65	39°26'12.5596"N	80°17'45.4786"W	10771.94	152.576	1.21	1.14	0.41	
17968.00	89.710	153.350	7466.41	10270.93	-9646.42	5003.67	1775229.39	342120.27	39°26'11.7194"N	80°17'44.9382"W	10866.93	152.584	0.28	0.06	-0.27	
18062.00	89.930	154.990	7466.70	10358.89	-9731.03	5044.62	1775269.57	342035.30	39°26'10.8832"N	80°17'44.4165"W	10960.89	152.598	1.76	0.23	1.74	
18157.00	89.530	153.190	7467.15	10447.83	-9816.47	5086.13	1775310.30	341949.49	39°26'10.0386"N	80°17'43.8877"W	11055.85	152.610	1.94	-0.42	-1.89	
18252.00	90.140	154.140	7467.42	10537.01	-9901.61	5128.28	1775351.67	341863.97	39°26'9.1970"N	80°17'43.3508"W	11150.84	152.619	1.19	0.64	1.00	
18347.00	89.680	152.660	7467.57	10626.35	-9986.55	5170.81	1775393.44	341778.65	39°26'8.3574"N	80°17'42.8089"W	11245.82	152.626	1.63	-0.48	-1.56	
18441.00	89.460	153.110	7468.28	10715.03	-10070.22	5213.65	1775435.52	341694.61	39°26'7.5304"N	80°17'42.2631"W	11339.82	152.628	0.53	-0.23	0.48	
18536.00	88.910	151.990	7469.63	10804.83	-10154.51	5257.44	1775478.53	341609.93	39°26'6.6972"N	80°17'41.7052"W	11434.81	152.627	1.31	-0.58	-1.18	
18630.00	89.030	153.450	7471.32	10893.58	-10238.04	5300.52	1775520.85	341526.02	39°26'5.8716"N	80°17'41.1564"W	11528.79	152.628	1.56	0.13	1.55	
18725.00	88.820	150.890	7473.10	10983.57	-10322.03	5344.85	1775564.42	341441.63	39°26'5.0414"N	80°17'40.5916"W	11623.76	152.624	2.70	-0.22	-2.69	
18820.00	89.400	153.100	7474.58	11073.66	-10405.89	5389.45	1775608.26	341357.38	39°26'4.2124"N	80°17'40.0234"W	11718.74	152.619	2.40	0.61	2.33	
18915.00	89.090	152.840	7475.83	11163.23	-10490.51	5432.62	1775650.66	341272.38	39°26'3.3760"N	80°17'39.4734"W	11813.73	152.622	0.43	-0.33	-0.27	
18935.00	89.090	152.580	7476.15	11182.11	-10508.28	5441.79	1775659.67	341254.52	39°26'3.2004"N	80°17'39.3566"W	11833.73	152.622	1.30	0.00	-1.30	Last MWD Survey: 18935' MD
18960.00	89.090	152.580	7476.54	11205.74	-10530.47	5453.30	1775670.97	341232.23	39°26'2.9811"N	80°17'39.2100"W	11858.72	152.622	0.00	0.00	0.00	Projected MD at TD: 18960' MD

HOLE & CASING SECTIONS - Ref Wellbore: Sands Unit A 8H AWB Ref Wellpath: Sands Unit A 8H AWP Proj: 18960'									
String/Diameter	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start N/S (ft)	Start E/W (ft)	End N/S (ft)	End E/W (ft)
24in Conductor	26.00	102.00	76.00	26.00	102.00	0.00	0.00	-0.28	-0.13
17.5in Open Hole	102.00	550.00	448.00	102.00	549.99	-0.28	-0.13	-1.45	-0.33
13.375in Casing Surface	26.00	550.00	524.00	26.00	549.99	0.00	0.00	-1.45	-0.33
12.25in Open Hole	550.00	3150.00	2600.00	549.99	3122.29	-1.45	-0.33	-267.37	-211.28
9.625in Casing Intermediate	26.00	3150.00	3124.00	26.00	3122.29	0.00	0.00	-267.37	-211.28
8.75in Open Hole	3150.00	6018.00	2868.00	3122.29	5779.62	-267.37	-211.28	-1093.84	-873.59
8.5in Open Hole	6018.00	18960.00	12942.00	5779.62	7476.54	-1093.84	-873.59	-10530.47	5453.30
5.5in Casing Production	26.00	18960.00	18934.00	26.00	7476.54	0.00	0.00	-10530.47	5453.30

WV Department of Environmental Protection
 DEC 28 2021
 Gas

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Sands Unit A 8H - BHL - Rev-3	7476.00	-10538.27	5440.83	1775658.43	341224.55	39°26'2.9040"N	80°17'39.3690"W	point
Sands Unit A 8H - IP #1 - Rev-3	7476.00	-5568.81	2841.70	1773104.55	346217.05	39°26'52.0236"N	80°18'12.4871"W	point
Sands Unit A 8H - IP #2 - Rev-3	7476.00	-6103.86	3236.96	1773494.93	345678.48	39°26'46.7350"N	80°18'7.4495"W	point
Sands Unit A 8H - LP - Rev-3	7476.00	-2024.46	-891.15	1769404.17	349794.86	39°27'27.0554"N	80°19'0.0720"W	point

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WV Department of
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Actual Wellpath Report
 Sands Unit A 8H AWP Proj: 18960'
 Page 9 of 10



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Field	Marion	API	47-049-02495-0000
Facility	Sands Pad	Wellbore	Sands Unit A 8H AWB
Slot	Slot #08		

WELLPATH COMPOSITION - Ref Wellbore: Sands Unit A 8H AWB Ref Wellpath: Sands Unit A 8H AWP Proj: 18960'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	471.00	BH Generic gyro - northseeking (Standard)	01_Javins Gyro Surveys <17-1/2">(50'-445')	Sands Unit A 8H AWB	12/16/2019
471.00	3130.00	OWSG MWD rev2 + HRGM	02_Javins EM Surveys <12-1/4">(445')(552'-3104')	Sands Unit A 8H AWB	12/16/2019
3130.00	5949.00	OWSG MWD rev2 - Standard	03_Javins EM Surveys <8-3/4">(3059')(3267'-5923')	Sands Unit A 8H AWB	12/16/2019
5949.00	18960.00	OWSG MWD rev2 +HRGM + Multi-Station Correction	07_Final Superior Corrected Surveys <8-1/2">(5949')(5993'-18935')	Sands Unit A 8H AWB	2/11/2020

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Actual Wellpath Report
Sands Unit A 8H AWP Proj: 18960'
Page 10 of 10



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Slot	Slot #08		

COMMENTS
<p>Wellpath general comments API: 47-049-02495-0000 BHI Job #: 110282427A Rig: Patteron 579 Duration: 02/14/2020-02/17/2020 Javins Gyro Surveys <17-1/2">(50'-445') Javins EM Surveys <12-1/4">(445')(552'-3104') Javins EM Surveys <8-3/4">(3059')(3267'-5923') Final Superior Corrected Surveys <8-1/2">(5949')(5993'-18935') Landing Point: 7990' MD Deepest TVD: 7489.75' TVD Last MWD Survey: 18935' MD Projected MD at TD: 18960'MD</p>

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