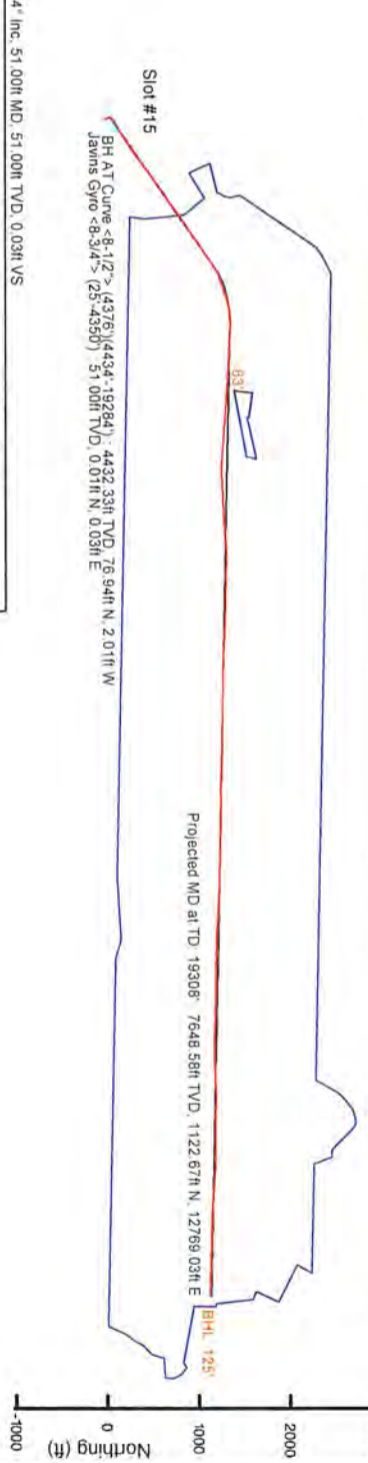
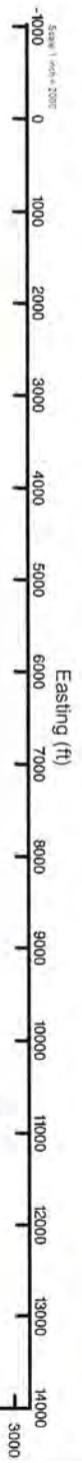


02/15/2019



**XTO ENERGY INC**  
 Location: Marion County, WV  
 Field: Marion  
 Facility: Brennan Snider Pad  
 Slot: Slot #15  
 Well: Snider 15H  
 Wellbore: Snider 15H PWB



Javins Gyro <8-3/4"> (25-4350) 0.14" Inc. 51.00ft MD, 51.00ft TVD, 0.03ft VS

Rotary/Service wellbore is Snider 15H PWB Rev A.0  
 True vertical depth was referenced to Patterson 583 (RKB)  
 Measured depths are referenced to Patterson 583 (RKB)  
 Patterson 583 (RKB) to Mean Sea Level: 1277.55 feet  
 Mean Sea Level to Ground level (At Slot: Slot #15): -1251.55 feet  
 Coordinates are in Northings/Easting to SR

**Location Information**

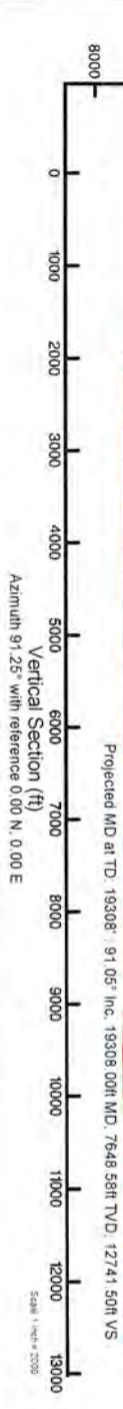
Facility Name	Brennan Snider Pad	Grid East (US ft)	1775488.090	Grid North (US ft)	3653522.860	Latitude	39°30'01.384" N	Longitude	80°17'44.283" W
Local N (ft)	-6.43	Local E (ft)	1775488.700	Grid North (US ft)	3653456.600	Latitude	39°30'01.300" N	Longitude	80°17'44.510" W
Slot #15						28ft			
Patterson 583 (RKB) to Ground level (At Slot: Slot #15)						-1251.55ft			
Mean Sea Level to Ground level (At Slot: Slot #15)						1277.55ft			

**Well Profile Data**

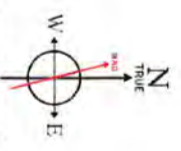
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (r/100ft)	VS (ft)
The Oh	4376.00	0.570	191.700	4374.33	77.27	-1.91	0.88	-3.50
Prof. To Bottom	4400.00	0.570	191.700	4398.33	77.04	-1.96	0.00	-3.84
KOP 1	4575.00	0.570	191.700	4573.32	75.33	-2.32	0.00	-3.96
Hold 40.67"	5396.62	40.665	55.131	5328.34	231.11	228.37	5.00	221.28
Curve KOP	8067.53	40.665	55.131	7354.39	1228.19	1654.41	0.00	1627.27
Landing Pt	8795.61	90.000	91.250	7657.00	1366.11	2266.55	8.00	2236.21
BHL	19312.56	90.000	91.250	7657.00	1138.69	12761.00	0.00	12753.16

**Well Data**

Slot	Slot #15	Well	Snider 15H	Wellbore	Snider 15H AWP
Slot	Slot #15	Well	Snider 15H	Wellbore	Snider 15H PWB
Slot	Slot #15	Well	Snider 15H	Wellbore	Snider 15H PWP Rev A.0



API: 47-049-02432-0000  
 BH Job #: 9201970  
 Rig: Patterson 583  
 Duration: 06/05/2018-06/17/2018



BIGCAM (1900.0 to 2019.0) Dir. 68.51° Fmld 51905.1 nT  
 Magnetic North is 8.95 degrees West of True North (at 30MAY2018)  
 To correct azimuth from Magnetic to True subtract 8.95 degrees.

RECEIVED  
 Office of Oil and Gas  
 DEC 20 2018  
 WV Department of  
 Environmental Protection

02/15/2019



**Actual Wellpath Report**  
 Snider 15H AWP Proj: 19308'  
 Page 1 of 12



RECEIVED  
 Office of Oil and Gas  
 DEC 20 2018  
 WV Department of  
 Environmental Protection

REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO ENERGY INC	Slot	Slot #15
Area	Marion County, WV	Well	Snider 15H
Field	Marion	Wellbore	Snider 15H AWB
Facility	Brennan Snider Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Delaset
Scale	0.999943	Report Generated	12/Jul/2018 at 16:16
Convergence at slot	0.51° West	Database/Source file	WA_MPL_EasternUS_Defn/Snider_15H_AWP_Proj_19308_.xml

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates		
	North(ft)	East(ft)	Easting[US ft]	Northing[US ft]	Latitude	Longitude	
Slot Location	-6.43	-19.33	1775468.70	365346.60	39°30'01.300"N	80°17'44.510"W	
Facility Reference Pt			1775488.09	365352.86	39°30'01.364"N	80°17'44.263"W	
Field Reference Pt			609601.22	0.00	38°23'48.753"N	84°21'09.765"W	

WELLPATH DATUM			
Calculation method	Minimum curvature	Patterson 583 (RKB) to Facility Vertical Datum	1277.55ft
Horizontal Reference Pt	Slot	Patterson 583 (RKB) to Mean Sea Level	1277.55ft
Vertical Reference Pt	Patterson 583 (RKB)	Patterson 583 (RKB) to Ground Level at Slot (Slot #15)	26.00ft
MD Reference Pt	Patterson 583 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	91.25°



02/15/2019



**Actual Wellpath Report**  
Snider 15H AWP Proj: 19308'  
Page 2 of 12



REFERENCE WELLPATH IDENTIFICATION		Operator	XTO ENERGY INC	Slot	Slot #15
Area	Marion County, WV	Well		Snider 15H	
Field	Marion	Wellbore		Snider 15H AWP	
Facility	Brennan Snider Pad				

WELLPATH DATA (260 stations) † = interpolated/extrapolated station																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
ft	°	°	ft	ft	ft	ft	ft	ft	ft	ft	ft	°	ft/100ft	ft/100ft	ft/100ft	
0.001	0.000	69.800	0.00	0.00	0.00	0.00	1775468.70	365346.60	39°30'01.300"N	80°17'44.510"W	0.00	0.000	0.00	0.00	0.00	
26.00	0.000	69.800	26.00	0.00	0.00	0.00	1775468.70	365346.60	39°30'01.300"N	80°17'44.510"W	0.00	0.000	0.00	0.00	0.00	
51.00	0.140	69.800	51.00	0.03	0.01	0.03	1775468.73	365346.61	39°30'01.300"N	80°17'44.510"W	0.03	69.800	0.56	0.56	279.20	Javins Gyro <B-3/4"> (25'-4350')
76.00	0.190	134.400	76.00	0.09	-0.01	0.09	1775468.79	365346.59	39°30'01.300"N	80°17'44.508"W	0.09	95.198	0.73	0.20	258.40	
101.00	0.370	97.700	101.00	0.20	-0.05	0.20	1775468.90	365346.55	39°30'01.300"N	80°17'44.508"W	0.20	103.648	0.98	0.72	-146.80	
126.00	0.280	67.200	126.00	0.33	-0.03	0.33	1775469.03	365346.56	39°30'01.300"N	80°17'44.506"W	0.33	95.980	0.77	-0.36	-122.00	
151.00	0.380	45.800	151.00	0.45	0.05	0.45	1775469.15	365346.64	39°30'01.302"N	80°17'44.504"W	0.45	84.070	0.63	0.40	-85.60	
176.00	0.360	40.800	176.00	0.56	0.16	0.56	1775469.26	365346.76	39°30'01.302"N	80°17'44.503"W	0.56	73.674	0.15	-0.08	-20.00	
201.00	0.210	55.500	201.00	0.64	0.25	0.65	1775469.35	365346.84	39°30'01.303"N	80°17'44.502"W	0.64	68.974	0.66	-0.60	58.80	
226.00	0.210	60.500	226.00	0.72	0.30	0.73	1775469.43	365346.89	39°30'01.303"N	80°17'44.501"W	0.72	67.701	0.07	0.00	20.00	
251.00	0.020	4.000	251.00	0.76	0.32	0.77	1775469.47	365346.92	39°30'01.304"N	80°17'44.500"W	0.83	67.037	0.80	-0.76	-226.00	
276.00	0.160	45.800	276.00	0.78	0.35	0.79	1775469.49	365346.95	39°30'01.304"N	80°17'44.500"W	0.87	65.944	0.58	0.56	167.20	
301.00	0.100	11.500	301.00	0.81	0.40	0.82	1775469.52	365346.99	39°30'01.304"N	80°17'44.500"W	0.91	64.075	0.38	-0.24	-137.20	
326.00	0.180	29.000	326.00	0.83	0.45	0.84	1775469.55	365347.05	39°30'01.305"N	80°17'44.499"W	0.96	61.691	0.36	0.32	70.00	
351.00	0.170	358.600	351.00	0.85	0.53	0.86	1775469.57	365347.12	39°30'01.305"N	80°17'44.499"W	1.01	58.611	0.37	-0.04	-121.60	
376.00	0.310	42.900	376.00	0.89	0.61	0.91	1775469.61	365347.20	39°30'01.306"N	80°17'44.499"W	1.10	55.971	0.89	0.56	177.20	
401.00	0.300	37.500	401.00	0.98	0.71	0.99	1775469.70	365347.31	39°30'01.307"N	80°17'44.497"W	1.22	54.284	0.12	-0.04	-21.60	
426.00	0.380	48.000	426.00	1.08	0.82	1.09	1775469.80	365347.41	39°30'01.308"N	80°17'44.496"W	1.37	53.113	0.40	0.32	42.00	
451.00	0.460	63.500	451.00	1.23	0.92	1.25	1775469.95	365347.51	39°30'01.309"N	80°17'44.494"W	1.55	53.509	0.55	0.32	62.00	
476.00	0.430	71.500	476.00	1.40	1.00	1.43	1775470.13	365347.56	39°30'01.310"N	80°17'44.492"W	1.74	55.037	0.28	-0.12	32.00	
501.00	0.400	90.500	500.99	1.58	1.03	1.60	1775470.31	365347.61	39°30'01.310"N	80°17'44.490"W	1.90	57.364	0.56	-0.12	76.00	
526.00	0.480	100.000	525.99	1.77	1.01	1.79	1775470.50	365347.59	39°30'01.310"N	80°17'44.487"W	2.06	60.674	0.43	0.32	38.00	
551.00	0.530	111.100	550.99	1.98	0.95	2.00	1775470.71	365347.53	39°30'01.309"N	80°17'44.485"W	2.22	64.699	0.44	0.20	44.40	
576.00	0.410	109.400	575.99	2.18	0.88	2.19	1775470.90	365347.46	39°30'01.309"N	80°17'44.482"W	2.36	68.257	0.48	-0.48	-6.80	
601.00	0.290	94.800	600.99	2.30	0.84	2.32	1775471.03	365347.42	39°30'01.308"N	80°17'44.481"W	2.47	70.074	0.89	-0.84	-58.40	
626.00	0.790	105.100	625.99	2.51	0.79	2.53	1775471.24	365347.37	39°30'01.308"N	80°17'44.478"W	2.65	72.604	2.38	2.36	41.20	
651.00	0.680	84.200	675.99	3.14	0.73	3.16	1775471.87	365347.31	39°30'01.307"N	80°17'44.470"W	3.24	76.931	0.58	-0.22	-41.80	
726.00	0.740	73.900	725.98	3.75	0.85	3.77	1775472.47	365347.42	39°30'01.308"N	80°17'44.462"W	3.86	77.235	0.28	0.12	-20.60	
776.00	0.960	48.400	775.98	4.36	1.22	4.39	1775473.10	365347.78	39°30'01.312"N	80°17'44.454"W	4.56	74.457	0.86	0.44	-51.00	
826.00	1.330	25.700	825.97	4.91	2.02	4.95	1775473.67	365348.58	39°30'01.320"N	80°17'44.447"W	5.35	67.800	1.16	0.74	-45.40	

RECEIVED  
Office of Oil and Gas  
DEC 20 2018  
WV Department of  
Environmental Protection



02/15/2019



Actual Wellpath Report  
Snider 15H AWP Proj: 19308'

Page 3 of 12



REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #15
Operator	XTO ENERGY INC	Well	Snider 15H
Area	Marion County, WV	Wellbore	Snider 15H AWP
Field	Marion		
Facility	Brennan Snider Pad		

WELLPATH DATA (260 stations)																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
ft	°	°	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft/100ft	ft/100ft	ft/100ft	
876.00	1.660	20.700	875.95	5.39	3.22	5.46	1775474.19	365349.77	39°30'01.332"N	80°17'44.440"W	6.34	59.463	0.71	0.66	-10.00	
926.00	1.740	3.600	925.93	5.66	4.66	5.77	1775474.51	365351.21	39°30'01.346"N	80°17'44.437"W	7.41	51.070	1.02	0.16	-34.20	
976.00	2.140	354.000	975.90	5.58	6.34	5.72	1775474.47	365352.89	39°30'01.363"N	80°17'44.437"W	8.54	42.021	1.03	0.80	-19.20	
1026.00	1.990	340.800	1025.87	5.15	8.09	5.33	1775474.10	365354.64	39°30'01.380"N	80°17'44.442"W	9.69	33.387	0.99	-0.30	-26.40	
1076.00	1.910	330.900	1075.84	4.43	9.64	4.64	1775473.43	365356.20	39°30'01.395"N	80°17'44.451"W	10.70	25.714	0.69	-0.16	-19.80	
1126.00	1.820	329.900	1125.81	3.60	11.05	3.84	1775472.87	365357.62	39°30'01.409"N	80°17'44.461"W	11.70	19.149	0.19	-0.18	-2.00	
1176.00	1.740	330.200	1175.79	2.79	12.40	3.06	1775471.87	365358.97	39°30'01.422"N	80°17'44.471"W	12.77	13.875	0.16	-0.16	0.60	
1226.00	2.070	333.700	1225.76	1.98	13.87	2.29	1775471.11	365360.45	39°30'01.437"N	80°17'44.481"W	14.06	9.359	0.70	0.66	7.00	
1276.00	1.890	331.600	1275.73	1.16	15.40	1.49	1775470.33	365361.99	39°30'01.452"N	80°17'44.491"W	15.48	5.538	0.39	-0.36	-4.20	
1326.00	2.040	334.200	1325.70	0.34	16.93	0.71	1775469.56	365363.52	39°30'01.467"N	80°17'44.501"W	16.94	2.415	0.35	0.30	5.20	
1376.00	2.050	328.200	1375.67	-0.55	18.48	-0.14	1775468.72	365365.09	39°30'01.483"N	80°17'44.512"W	18.49	359.552	0.43	0.02	-12.00	
1426.00	1.970	331.000	1425.64	-1.47	20.00	-1.03	1775467.84	365366.61	39°30'01.498"N	80°17'44.523"W	20.03	357.045	0.25	-0.16	5.60	
1476.00	2.340	320.600	1475.60	-2.57	21.54	-2.10	1775466.79	365368.16	39°30'01.513"N	80°17'44.537"W	21.64	354.440	1.07	0.74	-20.80	
1526.00	2.440	318.600	1525.56	-3.95	23.13	-3.45	1775465.46	365369.76	39°30'01.529"N	80°17'44.554"W	23.39	351.519	0.26	0.20	-4.00	
1576.00	3.070	321.100	1575.50	-5.54	24.97	-4.98	1775463.93	365371.61	39°30'01.547"N	80°17'44.574"W	25.46	348.692	1.28	1.26	5.00	
1626.00	2.930	314.700	1625.43	-7.33	26.91	-6.74	1775462.20	365373.57	39°30'01.566"N	80°17'44.596"W	27.74	345.934	0.73	-0.26	-12.80	
1676.00	3.340	314.600	1675.36	-9.31	28.83	-8.69	1775460.27	365375.51	39°30'01.585"N	80°17'44.621"W	30.11	343.231	0.82	0.82	-0.20	
1726.00	3.090	312.800	1725.28	-11.38	30.77	-10.71	1775458.26	365377.46	39°30'01.604"N	80°17'44.647"W	32.58	340.803	0.54	-0.50	-3.60	
1776.00	2.350	325.500	1775.22	-12.99	32.53	-12.28	1775456.71	365379.24	39°30'01.622"N	80°17'44.667"W	34.77	339.315	1.90	-1.48	26.40	
1826.00	2.510	1.100	1825.18	-13.59	34.47	-12.84	1775454.66	365381.18	39°30'01.641"N	80°17'44.674"W	36.79	339.566	2.99	0.32	71.20	
1876.00	2.270	350.300	1875.14	-13.78	36.54	-12.99	1775456.04	365383.25	39°30'01.661"N	80°17'44.676"W	38.78	340.432	1.02	-0.48	-21.60	
1926.00	2.360	352.800	1925.10	-14.12	38.54	-13.28	1775455.76	365385.25	39°30'01.681"N	80°17'44.680"W	40.76	340.981	0.27	0.18	5.00	
1976.00	2.860	2.400	1975.05	-14.25	40.81	-13.36	1775455.70	365387.52	39°30'01.703"N	80°17'44.681"W	42.94	341.870	1.33	1.00	19.20	
2026.00	3.380	0.900	2024.97	-14.23	43.53	-13.26	1775455.80	365390.24	39°30'01.730"N	80°17'44.680"W	45.51	343.026	1.05	-1.04	-3.00	
2076.00	3.250	355.500	2074.89	-14.38	46.41	-13.37	1775455.74	365393.13	39°30'01.759"N	80°17'44.681"W	48.30	343.926	0.68	-0.26	-10.80	
2126.00	3.330	347.800	2124.81	-14.86	49.25	-13.79	1775455.35	365395.96	39°30'01.787"N	80°17'44.686"W	51.14	344.354	0.90	0.16	-15.40	
2176.00	3.150	346.500	2174.73	-15.55	52.00	-14.42	1775454.74	365398.72	39°30'01.814"N	80°17'44.694"W	53.96	344.502	0.39	-0.36	-2.60	
2226.00	2.610	351.400	2224.66	-16.10	54.46	-14.91	1775454.27	365401.19	39°30'01.839"N	80°17'44.700"W	56.47	344.689	1.19	-1.08	9.80	
2276.00	2.310	3.700	2274.52	-16.25	56.59	-15.02	1775454.19	365403.32	39°30'01.859"N	80°17'44.702"W	58.55	345.140	1.21	-0.60	24.60	
2326.00	1.640	25.400	2324.59	-15.91	58.25	-14.64	1775454.57	365404.97	39°30'01.876"N	80°17'44.697"W	60.06	345.867	1.99	-1.34	43.40	

RECEIVED  
Office of Oil and Gas

DEC 20 2018

WV Department of  
Environmental Protection



02/15/2019



**Actual Wellpath Report**  
Snider 15H AWP Proj: 19308'  
Page 4 of 12



RECEIVED  
Office of Oil and Gas

DEC 20 2018

WV Department of  
Environmental Protection

**REFERENCE WELLPATH IDENTIFICATION**

Operator	XTO ENERGY INC	Slot	Slot #15
Area	Marion County, WV	Well	Snider 15H
Field	Marion	Wellbore	Snider 15H AWP
Facility	Brennan Snider Pad		

**WELLPATH DATA (260 stations)**

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
ft	°	°	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft/100ft	ft/100ft	ft/100ft	
2376.00	1.830	43.000	2374.56	-15.09	59.48	-13.79	1775455.44	365406.19	39°30'01.888"N	80°17'44.686"W	61.05	346.944	1.13	0.38	35.20	
2426.00	1.510	45.300	2424.54	-14.10	60.52	-12.78	1775456.46	365407.23	39°30'01.898"N	80°17'44.673"W	61.86	348.077	0.65	-0.64	4.60	
2476.00	1.370	44.700	2474.53	-13.23	61.41	-11.89	1775457.35	365408.11	39°30'01.907"N	80°17'44.662"W	62.55	349.041	0.28	-0.28	-1.20	
2526.00	1.860	48.900	2524.51	-12.22	62.37	-10.86	1775458.39	365409.06	39°30'01.916"N	80°17'44.649"W	63.31	350.123	1.01	0.98	8.40	
2576.00	1.440	42.800	2574.49	-11.20	63.36	-9.82	1775459.44	365410.05	39°30'01.926"N	80°17'44.635"W	64.12	351.190	0.91	-0.84	-12.20	
2626.00	1.720	49.300	2624.47	-10.23	64.31	-8.83	1775460.45	365411.09	39°30'01.936"N	80°17'44.623"W	64.92	352.187	0.66	0.56	13.00	
2676.00	1.350	33.200	2674.45	-9.36	65.30	-7.93	1775461.35	365411.96	39°30'01.945"N	80°17'44.611"W	65.78	353.072	1.13	-0.74	-32.20	
2726.00	1.590	33.600	2724.43	-8.67	66.37	-7.23	1775462.06	365413.03	39°30'01.956"N	80°17'44.602"W	66.76	353.785	0.48	0.48	0.80	
2776.00	1.020	20.900	2774.42	-8.15	67.36	-6.68	1775462.61	365414.01	39°30'01.966"N	80°17'44.595"W	67.69	354.333	1.27	-1.14	-25.40	
2826.00	0.850	19.600	2824.41	-7.89	68.13	-6.40	1775462.90	365414.78	39°30'01.973"N	80°17'44.582"W	68.43	354.632	0.34	-0.34	-2.60	
2876.00	0.610	45.800	2874.40	-7.18	69.51	-5.67	1775463.65	365416.16	39°30'01.987"N	80°17'44.582"W	69.17	354.968	0.53	0.48	13.20	
2926.00	1.170	44.700	2924.40	-6.64	70.06	-5.12	1775464.20	365417.70	39°30'01.993"N	80°17'44.575"W	70.25	355.823	1.12	-1.12	-2.20	
3026.00	1.040	38.000	3024.39	-6.02	70.78	-4.48	1775464.85	365417.42	39°30'02.000"N	80°17'44.567"W	70.92	356.380	0.37	-0.26	-13.40	
3076.00	1.350	31.300	3074.37	-5.45	71.64	-3.89	1775465.44	365418.27	39°30'02.008"N	80°17'44.560"W	71.75	356.890	0.68	0.62	-13.40	
3126.00	0.930	21.000	3124.36	-5.02	72.53	-3.44	1775465.90	365419.15	39°30'02.017"N	80°17'44.554"W	72.61	357.283	0.93	-0.84	-20.60	
3176.00	0.750	21.200	3174.36	-4.77	73.21	-3.18	1775466.17	365419.83	39°30'02.024"N	80°17'44.551"W	73.28	357.515	0.36	-0.36	0.40	
3226.00	0.670	28.500	3224.36	-4.53	73.77	-2.92	1775466.43	365420.39	39°30'02.029"N	80°17'44.547"W	73.83	357.734	0.24	-0.16	14.60	
3276.00	0.430	7.400	3274.35	-4.37	74.22	-2.76	1775466.60	365420.83	39°30'02.034"N	80°17'44.545"W	74.27	357.873	0.62	-0.48	-42.20	
3326.00	0.750	35.900	3324.35	-4.17	74.67	-2.54	1775466.82	365421.28	39°30'02.038"N	80°17'44.543"W	74.71	358.052	0.85	0.64	57.00	
3376.00	0.380	15.700	3374.35	-3.94	75.09	-2.30	1775467.06	365421.70	39°30'02.042"N	80°17'44.540"W	75.13	358.243	0.83	-0.74	-40.40	
3426.00	0.650	41.000	3424.35	-3.72	75.46	-2.07	1775467.30	365422.08	39°30'02.046"N	80°17'44.537"W	75.49	358.427	0.69	0.54	50.60	
3476.00	0.530	19.600	3474.34	-3.46	75.90	-1.81	1775467.56	365422.51	39°30'02.050"N	80°17'44.533"W	75.92	358.635	0.50	-0.24	-42.80	
3526.00	0.370	17.100	3524.34	-3.35	76.27	-1.68	1775467.69	365422.88	39°30'02.054"N	80°17'44.531"W	76.29	358.735	0.32	-0.32	-5.00	
3576.00	0.370	12.400	3574.34	-3.27	76.58	-1.60	1775467.78	365423.18	39°30'02.057"N	80°17'44.531"W	76.60	358.802	0.06	0.00	-9.40	
3626.00	0.240	340.900	3624.34	-3.28	76.84	-1.60	1775467.78	365423.44	39°30'02.059"N	80°17'44.531"W	76.85	358.806	0.42	-0.26	-63.00	
3676.00	0.330	25.600	3674.34	-3.25	77.07	-1.57	1775467.81	365423.67	39°30'02.062"N	80°17'44.530"W	77.08	358.831	0.46	-0.18	89.40	
3726.00	0.460	37.500	3724.34	-3.08	77.36	-1.39	1775468.00	365423.96	39°30'02.065"N	80°17'44.528"W	77.37	358.971	0.31	0.26	23.80	
3776.00	0.240	335.700	3774.34	-3.00	77.61	-1.31	1775468.08	365424.21	39°30'02.068"N	80°17'44.527"W	77.62	359.033	0.81	-0.44	-123.60	
3826.00	0.220	239.100	3824.34	-3.13	77.66	-1.44	1775467.95	365424.26	39°30'02.068"N	80°17'44.528"W	77.67	358.941	0.89	-0.04	-193.20	



02/15/2019



Actual Wellpath Report  
Snider 15H AWP Proj: 19308'  
Page 5 of 12



RECEIVED  
Office of Oil and Gas

DEC 20 2018

WV Department of  
Environmental Protection

REFERENCE WELLPATH IDENTIFICATION									
Operator	XTO ENERGY INC								
Area	Marion County, WV								
Field	Marion								
Facility	Brennan Snider Pad								
Well	Snider 15H								
Wellbore	Snider 15H AWB								

WELLPATH DATA (260 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
3876.00	0.240	145.200	3874.34	-3.15	77.52	-1.46	1775467.93	365424.13	39°30'02.066"N	80°17'44.529"W	77.53	358.923	0.67	0.04	-187.80	
3926.00	0.190	70.200	3924.34	-3.01	77.46	-1.32	1775468.07	365424.07	39°30'02.066"N	80°17'44.527"W	77.47	359.024	0.53	-0.10	-150.00	
3976.00	0.270	77.400	3974.34	-2.82	77.52	-1.13	1775468.26	365424.12	39°30'02.066"N	80°17'44.525"W	77.52	359.167	0.17	0.16	14.40	
4026.00	0.170	96.700	4024.34	-2.63	77.53	-0.94	1775468.45	365424.13	39°30'02.066"N	80°17'44.522"W	77.54	359.307	0.25	-0.20	38.60	
4076.00	0.390	296.200	4074.34	-2.71	77.60	-1.02	1775468.37	365424.20	39°30'02.067"N	80°17'44.523"W	77.61	359.249	1.11	0.44	-321.00	
4126.00	0.180	344.200	4124.34	-2.89	77.75	-1.19	1775468.20	365424.35	39°30'02.068"N	80°17'44.525"W	77.76	359.122	0.60	-0.42	96.00	
4176.00	0.330	283.800	4174.33	-3.05	77.86	-1.35	1775468.04	365424.47	39°30'02.070"N	80°17'44.521"W	77.87	359.005	0.57	0.30	-120.80	
4226.00	0.280	265.800	4224.33	-3.31	77.89	-1.61	1775467.78	365424.49	39°30'02.070"N	80°17'44.531"W	77.90	358.813	0.21	-0.10	-36.00	
4276.00	0.390	247.500	4274.33	-3.59	77.81	-1.89	1775467.50	365424.42	39°30'02.069"N	80°17'44.534"W	77.84	358.606	0.30	0.22	-36.60	
4326.00	0.340	140.900	4324.33	-3.65	77.63	-1.96	1775467.43	365424.24	39°30'02.064"N	80°17'44.535"W	77.66	358.556	1.17	-0.10	-213.20	
4376.00	0.570	191.700	4374.33	-3.60	77.27	-2.01	1775467.37	365423.55	39°30'02.060"N	80°17'44.535"W	76.96	358.503	0.78	-0.76	41.10	BH AT Curve <8-1/2"> (4376)(4434(-19284))
4426.00	0.040	197.640	4422.33	-3.76	76.82	-2.08	1775467.30	365423.43	39°30'02.059"N	80°17'44.537"W	76.85	358.446	0.10	-0.09	-18.84	
4476.00	2.650	39.390	4622.30	-2.41	78.48	-0.70	1775468.70	365425.08	39°30'02.076"N	80°17'44.519"W	78.49	358.489	2.83	2.75	-166.58	
4719.00	7.250	35.620	4716.92	2.33	85.06	4.19	1775473.64	365431.61	39°30'02.141"N	80°17'44.457"W	85.16	2.819	4.85	4.84	-3.97	
4813.00	9.070	54.970	4809.98	11.66	94.13	13.71	1775483.24	365440.60	39°30'02.230"N	80°17'44.335"W	95.13	8.288	3.48	1.94	20.59	
4907.00	12.740	57.520	4902.27	26.25	103.96	28.53	1775498.15	365450.29	39°30'02.327"N	80°17'44.146"W	107.80	15.345	3.94	3.90	2.71	
5002.00	18.920	56.890	4993.62	47.70	118.01	50.29	1775520.03	365464.15	39°30'02.466"N	80°17'43.869"W	128.28	23.080	6.51	6.51	-0.66	
5097.00	24.390	59.600	5081.88	77.13	136.36	80.13	1775550.03	365482.24	39°30'02.648"N	80°17'43.488"W	158.16	30.439	5.85	5.76	2.85	
5191.00	31.210	63.390	5164.98	115.24	157.12	118.89	1775588.77	365502.65	39°30'02.853"N	80°17'42.996"W	186.81	37.068	7.49	7.26	4.03	
5286.00	33.840	59.030	5245.10	158.39	181.76	163.39	1775633.69	365526.90	39°30'03.096"N	80°17'42.426"W	244.41	41.954	3.71	2.77	-4.59	
5380.00	41.430	55.640	5318.49	206.89	212.83	211.58	1775668.15	365557.54	39°30'03.404"N	80°17'41.811"W	300.11	44.831	8.37	8.07	-3.61	
5475.00	41.860	55.550	5390.48	258.18	248.50	263.67	1775734.54	365592.74	39°30'03.756"N	80°17'41.147"W	362.32	46.696	0.46	0.45	-0.09	
5570.00	41.770	56.250	5461.28	308.85	284.01	316.12	1775787.30	365627.79	39°30'04.107"N	80°17'40.477"W	424.96	48.062	0.50	-0.09	0.74	
5664.00	41.780	54.650	5531.39	360.63	319.53	367.89	1775839.19	365662.84	39°30'04.458"N	80°17'39.820"W	487.13	49.009	1.13	0.01	-1.70	
5759.00	41.710	53.830	5602.27	411.14	356.49	419.02	1775890.83	365699.34	39°30'04.823"N	80°17'39.165"W	550.15	49.610	0.58	-0.07	-0.86	
5854.00	41.780	51.860	5673.15	460.70	394.69	469.43	1775941.57	365737.09	39°30'05.201"N	80°17'38.522"W	613.30	49.943	1.38	0.07	-2.07	
5948.00	40.720	51.140	5743.83	508.36	433.27	517.93	1775990.42	365775.24	39°30'05.562"N	80°17'37.903"W	675.26	50.086	1.24	-1.13	-0.77	
6043.00	40.680	51.950	5815.85	556.02	471.79	566.44	1776039.27	365813.33	39°30'05.963"N	80°17'37.284"W	737.19	50.209	0.56	-0.04	0.85	
6138.00	40.570	55.320	5887.96	605.00	508.46	616.24	1776099.38	365849.55	39°30'06.325"N	80°17'36.649"W	798.92	50.474	2.31	-0.12	3.55	



02/15/2019



Actual Wellpath Report  
Snider 15H AWP Proj: 19308'

Page 6 of 12



RECEIVED  
Office of Oil and Gas

DEC 20 2018

WV Department of  
Environmental Protection

REFERENCE WELLPATH IDENTIFICATION		Operator	XTO ENERGY INC	Area	Marion County, WV	Field	Marion	Facility	Brennan Snider Pad	Slot	Slot #15
											Snider 15H
											Snider 15H AWP
											Wellbore

WELLPATH DATA (260 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
6233.00	40.560	55.890	5960.13	655.20	543.36	667.21	1776140.66	365883.99	39°30'06.670"N	80°17'35.998"W	860.47	50.842	0.39	-0.01	0.60	
6328.00	40.580	52.640	6032.30	704.54	579.43	717.35	1776191.11	365919.62	39°30'07.027"N	80°17'35.358"W	922.14	51.071	2.22	0.02	-3.42	
6422.00	40.530	52.950	6103.72	752.40	616.39	766.03	1776240.11	365956.14	39°30'07.392"N	80°17'34.738"W	983.23	51.178	0.22	-0.05	0.33	
6516.00	40.200	57.000	6175.36	801.45	651.32	815.86	1776290.25	365990.63	39°30'07.737"N	80°17'34.102"W	1043.95	51.389	2.81	-0.35	4.31	
6611.00	41.370	57.700	6247.29	852.95	684.79	868.11	1776342.79	366023.64	39°30'08.068"N	80°17'33.436"W	1105.69	51.732	1.32	1.23	0.74	
6705.00	41.690	55.380	6317.66	904.19	719.15	920.09	1776395.07	366052.53	39°30'08.408"N	80°17'32.772"W	1167.80	51.988	1.67	0.34	-2.47	
6799.00	41.680	54.570	6387.86	954.58	755.03	971.28	1776446.58	366092.96	39°30'08.762"N	80°17'32.119"W	1230.23	52.140	0.57	-0.01	-0.86	
6894.00	40.580	52.670	6459.42	1004.07	792.08	1021.59	1776497.21	366129.56	39°30'09.128"N	80°17'31.477"W	1292.69	52.212	1.75	-1.16	-2.00	
6988.00	40.830	53.520	6530.68	1052.28	828.89	1070.61	1776546.55	366165.93	39°30'09.492"N	80°17'30.852"W	1353.99	52.252	0.65	0.27	0.90	
7084.00	40.650	57.130	6603.42	1102.99	864.53	1122.12	1776598.36	366201.10	39°30'09.844"N	80°17'30.195"W	1416.53	52.388	2.46	-0.19	3.76	
7178.00	40.380	57.110	6674.89	1153.54	897.68	1173.40	1776649.94	366233.80	39°30'10.172"N	80°17'29.541"W	1477.40	52.583	0.29	-0.29	-0.02	
7273.00	40.810	54.920	6747.03	1204.02	932.23	1224.65	1776701.49	366267.90	39°30'10.513"N	80°17'28.887"W	1539.10	52.721	1.57	0.45	-2.31	
7368.00	40.670	54.970	6819.01	1253.99	967.84	1275.40	1776752.55	366303.05	39°30'10.865"N	80°17'28.239"W	1601.05	52.807	0.15	-0.15	0.05	
7463.00	40.670	55.690	6891.06	1304.12	1003.06	1326.32	1776803.78	366337.82	39°30'11.213"N	80°17'27.590"W	1662.91	52.901	0.49	0.00	0.78	
7558.00	40.560	55.940	6963.18	1354.51	1037.81	1377.48	1776855.24	366372.11	39°30'11.557"N	80°17'26.937"W	1724.67	53.005	0.21	-0.12	0.26	
7652.00	40.530	57.190	7034.61	1404.76	1071.47	1428.47	1776906.52	366405.32	39°30'11.899"N	80°17'26.287"W	1785.66	53.127	0.87	-0.03	1.33	
7747.00	40.710	55.560	7106.72	1455.49	1105.72	1479.96	1776958.31	366438.11	39°30'12.228"N	80°17'25.630"W	1847.41	53.236	1.13	0.19	-1.72	
7842.00	40.880	53.450	7178.64	1505.22	1141.76	1530.49	1777009.15	366474.69	39°30'12.584"N	80°17'24.985"W	1909.46	53.277	1.46	0.18	-2.22	
7937.00	40.710	56.380	7250.57	1555.21	1177.43	1581.27	1777060.24	366509.91	39°30'12.937"N	80°17'24.337"W	1971.48	53.328	2.02	-0.18	3.08	
8032.00	40.840	57.210	7322.51	1606.37	1211.41	1633.18	1777112.45	366543.42	39°30'13.272"N	80°17'23.675"W	2033.42	53.434	0.59	0.14	0.87	
8126.00	45.710	67.340	7391.01	1662.69	1241.07	1666.17	1777169.70	366572.58	39°30'13.565"N	80°17'22.948"W	2096.88	53.711	9.01	5.18	10.78	
8220.00	52.300	71.010	7452.65	1728.43	1266.16	1756.47	1777236.21	366597.08	39°30'13.813"N	80°17'22.102"W	2165.26	54.214	7.60	7.01	3.90	
8315.00	54.840	70.640	7509.06	1800.05	1291.27	1826.65	1777308.61	366621.55	39°30'14.061"N	80°17'21.161"W	2238.60	54.773	2.69	2.67	-0.39	
8410.00	62.450	71.170	7558.46	1876.06	1317.77	1905.26	1777385.45	366647.37	39°30'14.323"N	80°17'20.204"W	2316.58	55.330	8.02	8.01	0.56	
8505.00	69.270	74.750	7597.30	1958.33	1343.09	1988.10	1777468.50	366671.95	39°30'14.574"N	80°17'19.147"W	2399.26	55.959	7.96	7.18	3.77	
8599.00	74.520	81.170	7626.53	2045.22	1361.63	2075.42	1777555.97	366698.72	39°30'14.757"N	80°17'18.033"W	2482.22	56.732	8.56	5.59	6.83	
8694.00	79.920	87.050	7647.55	2137.07	1371.08	2167.50	1777648.13	366698.35	39°30'14.850"N	80°17'16.856"W	2564.75	57.684	8.29	5.68	6.19	
8788.00	90.000	91.940	7655.81	2230.52	1371.88	2260.98	1777741.63	366698.32	39°30'14.858"N	80°17'15.686"W	2644.63	58.752	11.91	10.72	5.20	
8883.00	89.170	93.900	7656.49	2325.47	1367.04	2355.85	1777836.43	366698.64	39°30'14.810"N	80°17'14.455"W	2723.75	59.875	2.24	-0.87	2.06	
8975.00	89.050	93.370	7657.92	2417.39	1361.20	2447.68	1777928.17	366685.99	39°30'14.752"N	80°17'13.284"W	2800.70	60.820	0.59	-0.13	-0.58	



02/15/2019



Actual Wellpath Report  
Snider 15H AWP Proj: 19308'  
Page 7 of 12



RECEIVED  
Office of Oil and Gas

DEC 20 2018

WV Department of  
Environmental Protection

REFERENCE WELLPATH IDENTIFICATION		Operator	XTO ENERGY INC	Area	Marion County, WV	Field	Marion	Facility	Brennan Snider Pad	Well	Wellbore	Slot #15	Snider 15H	Snider 15H AWP
-----------------------------------	--	----------	----------------	------	-------------------	-------	--------	----------	--------------------	------	----------	----------	------------	----------------

WELLPATH DATA (260 stations)																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
ft	°	°	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft/100ft	ft/100ft	
9072.00	88.740	92.600	7659.79	2514.31	1356.15	2544.50	1778024.97	366680.09	39°30'14.702"N	80°17'12.049"W	2883.34	61.944	0.86	-0.32	-0.79	
9166.00	87.780	93.400	7662.65	2608.23	1351.24	2638.33	1778118.74	366674.34	39°30'14.653"N	80°17'10.852"W	2964.23	62.880	1.33	-1.02	0.85	
9261.00	88.180	92.770	7666.00	2703.12	1346.13	2733.13	1778213.49	366668.39	39°30'14.603"N	80°17'09.642"W	3046.65	63.779	0.79	0.42	-0.66	
9356.00	89.080	93.220	7668.27	2798.05	1341.17	2827.98	1778308.28	366662.59	39°30'14.554"N	80°17'08.432"W	3129.88	64.627	1.06	0.95	0.47	
9450.00	89.140	92.980	7669.73	2891.98	1336.08	2921.83	1778402.07	366656.67	39°30'14.503"N	80°17'07.235"W	3212.82	65.426	0.28	0.08	-0.26	
9545.00	88.920	93.480	7671.34	2986.91	1330.73	3016.66	1778496.85	366650.48	39°30'14.450"N	80°17'06.025"W	3297.13	66.196	0.57	-0.23	0.53	
9639.00	89.420	93.690	7672.70	3080.83	1324.85	3110.47	1778590.60	366643.78	39°30'14.392"N	80°17'04.828"W	3380.86	66.929	0.58	0.53	0.22	
9734.00	90.120	95.470	7673.08	3175.66	1317.27	3205.16	1778685.21	366635.35	39°30'14.317"N	80°17'03.620"W	3465.29	67.658	2.01	0.74	1.87	
9828.00	89.720	95.870	7673.21	3269.38	1307.98	3298.70	1778778.66	366625.24	39°30'14.225"N	80°17'02.427"W	3548.55	68.371	0.60	-0.43	0.43	
9923.00	89.200	95.430	7674.11	3364.20	1300.28	3393.37	1778873.26	366615.70	39°30'14.149"N	80°17'01.219"W	3633.97	69.034	2.63	-0.55	-2.57	
10017.00	89.540	93.200	7675.14	3458.13	1294.85	3487.21	1778967.04	366610.43	39°30'14.024"N	80°17'00.022"W	3719.85	69.629	0.44	0.36	-0.24	
10112.00	89.690	95.460	7675.78	3552.99	1287.67	3581.93	1779061.68	366602.42	39°30'14.024"N	80°16'58.814"W	3806.35	70.227	2.38	0.16	2.38	
10206.00	90.150	94.840	7675.91	3646.77	1279.24	3675.55	1779155.22	366593.16	39°30'13.941"N	80°16'57.619"W	3891.80	70.810	0.82	0.49	-0.66	
10301.00	90.520	89.210	7675.35	3741.72	1275.88	3770.45	1779250.08	366588.96	39°30'13.907"N	80°16'56.409"W	3980.47	71.305	5.94	0.39	-5.93	
10395.00	90.650	87.930	7674.39	3835.61	1278.23	3864.42	1779344.06	366590.48	39°30'13.830"N	80°16'55.210"W	4070.33	71.697	1.37	0.14	-1.36	
10490.00	90.580	87.260	7673.37	3930.41	1282.21	3959.33	1779438.99	366593.62	39°30'13.970"N	80°16'53.999"W	4161.77	72.056	0.71	-0.07	-0.71	
10584.00	90.830	87.330	7672.22	4024.18	1286.65	4053.21	1779532.91	366597.22	39°30'14.013"N	80°16'52.801"W	4252.53	72.389	0.28	0.27	0.07	
10678.00	90.650	87.610	7670.99	4118.97	1290.84	4148.11	1779627.84	366600.58	39°30'14.055"N	80°16'51.591"W	4344.32	72.715	0.35	-0.19	0.29	
10773.00	90.770	86.820	7669.83	4212.73	1295.41	4241.99	1779721.75	366604.31	39°30'14.100"N	80°16'50.393"W	4435.38	73.019	0.85	0.13	-0.84	
10868.00	90.680	86.360	7668.82	4307.40	1301.06	4336.82	1779816.62	366608.12	39°30'14.155"N	80°16'49.183"W	4527.78	73.301	0.49	-0.09	-0.48	
10963.00	89.660	85.560	7668.34	4402.00	1307.75	4431.58	1779911.43	366614.97	39°30'14.221"N	80°16'47.974"W	4620.51	73.559	1.36	-1.07	-0.84	
11057.00	89.970	84.190	7668.64	4495.41	1316.15	4525.20	1780005.11	366622.54	39°30'14.304"N	80°16'46.780"W	4712.72	73.783	1.49	0.33	-1.46	
11151.00	90.620	86.710	7668.16	4588.92	1323.60	4618.90	1780098.87	366629.17	39°30'14.378"N	80°16'45.585"W	4804.80	74.010	2.77	0.69	2.68	
11246.00	90.770	89.550	7667.01	4683.74	1326.70	4713.83	1780193.82	366631.43	39°30'14.408"N	80°16'44.374"W	4896.97	74.281	2.99	0.16	2.99	
11340.00	90.520	90.800	7665.95	4777.74	1326.42	4807.82	1780287.80	366630.31	39°30'14.405"N	80°16'43.174"W	4987.44	74.576	1.36	-0.27	1.33	
11435.00	90.550	90.840	7665.06	4872.73	1325.06	4902.81	1780382.76	366628.11	39°30'14.391"N	80°16'41.963"W	5078.71	74.876	0.05	0.03	0.04	
11529.00	90.520	91.780	7664.19	4966.73	1322.91	4996.78	1780476.70	366625.12	39°30'14.370"N	80°16'40.764"W	5168.93	75.171	1.00	-0.03	1.00	
11624.00	90.550	92.700	7663.30	5061.71	1319.19	5091.70	1780571.58	366620.57	39°30'14.333"N	80°16'39.553"W	5259.82	75.475	0.97	0.03	0.97	
11718.00	90.650	90.630	7662.31	5155.70	1316.46	5185.70	1780665.50	366617.01	39°30'14.306"N	80°16'38.354"W	5350.14	75.755	2.20	0.11	-2.20	
11813.00	90.520	91.230	7661.34	5250.69	1314.92	5280.63	1780760.46	366614.63	39°30'14.290"N	80°16'37.143"W	5441.88	76.017	0.65	-0.14	0.63	



02/15/2019



Actual Wellpath Report  
Snider 15H AWP Proj: 19308'  
Page 8 of 12



RECEIVED  
Office of Oil and Gas

DEC 20 2018

WV Department of  
Environmental Protection

REFERENCE WELLPATH IDENTIFICATION		Operator	XTO ENERGY INC	Slot	Slot #15
Area	Marion County, WV	Well	Snider 15H		
Field	Marion	Wellbore	Snider 15H AWB		
Facility	Brennan Snider Pad				

WELLPATH DATA (260 stations)																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Buid Rate	Turn Rate	Comments
ft	°	°	ft	ft	ft	ft	ft	ft	°	°	ft	°	ft/100ft	ft/100ft	ft/100ft	
11908.00	90.710	92.070	7660.32	5345.68	1312.19	5375.59	1780855.38	366611.05	39°30'14.263"N	80°16'35.931"W	5533.42	76.282	0.91	0.20	0.88	
12003.00	90.400	92.880	7659.40	5440.65	1308.08	5470.49	1780950.24	366606.11	39°30'14.422"N	80°16'34.721"W	5624.71	76.552	0.91	-0.33	0.85	
12098.00	89.940	93.180	7659.12	5535.61	1303.06	5565.36	1781045.05	366600.25	39°30'14.173"N	80°16'33.510"W	5715.87	76.822	0.58	-0.48	0.32	
12193.00	89.940	92.860	7659.22	5630.56	1298.06	5660.23	1781139.87	366594.40	39°30'14.123"N	80°16'32.300"W	5807.16	77.084	0.34	0.00	-0.34	
12287.00	89.820	93.220	7659.42	5724.52	1293.07	5754.09	1781233.68	366588.59	39°30'14.073"N	80°16'31.103"W	5897.59	77.355	0.40	-0.13	0.38	
12382.00	89.050	92.960	7660.36	5819.46	1287.95	5848.95	1781328.48	366582.63	39°30'14.023"N	80°16'29.892"W	5989.08	77.582	0.86	-0.81	-0.27	
12476.00	89.140	91.240	7661.84	5913.44	1284.51	5942.87	1781422.36	366578.35	39°30'13.982"N	80°16'28.694"W	6080.11	77.804	1.83	0.10	-1.83	
12570.00	89.080	90.760	7663.30	6007.42	1282.87	6036.85	1781516.31	366575.88	39°30'13.922"N	80°16'27.495"W	6171.65	78.003	0.51	-0.06	-0.51	
12665.00	89.080	90.680	7664.83	6102.41	1281.67	6131.83	1781611.27	366573.84	39°30'13.960"N	80°16'26.284"W	6264.34	78.194	0.08	0.00	-0.08	
12759.00	88.920	91.470	7666.47	6196.39	1279.91	6225.79	1781705.22	366571.25	39°30'13.942"N	80°16'25.085"W	6356.00	78.383	0.86	-0.17	0.84	
12854.00	89.020	91.150	7668.17	6291.38	1277.74	6320.75	1781800.15	366568.23	39°30'13.921"N	80°16'23.873"W	6448.61	78.572	0.35	0.11	-0.34	
12949.00	89.050	90.850	7669.77	6386.36	1276.08	6415.73	1781895.10	366565.74	39°30'13.904"N	80°16'22.662"W	6541.40	78.751	0.32	0.03	-0.32	
13044.00	89.050	90.130	7671.35	6481.34	1275.27	6510.71	1781990.06	366564.08	39°30'13.896"N	80°16'21.450"W	6634.43	78.918	0.76	0.00	-0.76	
13138.00	89.080	88.440	7672.88	6575.30	1275.62	6604.69	1782084.04	366563.60	39°30'13.899"N	80°16'20.251"W	6726.75	79.069	0.73	0.03	-0.73	
13233.00	89.110	89.910	7674.38	6670.25	1276.16	6699.68	1782179.03	366563.30	39°30'13.904"N	80°16'19.039"W	6820.14	79.215	0.50	0.03	0.49	
13328.00	88.980	90.930	7675.97	6765.22	1275.46	6794.66	1782273.99	366561.76	39°30'13.897"N	80°16'17.828"W	6913.34	79.368	1.08	-0.14	1.07	
13423.00	89.880	92.330	7676.91	6860.21	1272.76	6889.62	1782368.91	366558.22	39°30'13.870"N	80°16'16.616"W	7006.19	79.533	1.75	0.95	1.47	
13517.00	89.940	94.990	7677.06	6954.12	1266.76	6983.42	1782462.65	366551.39	39°30'13.810"N	80°16'15.420"W	7097.38	79.719	2.83	0.06	2.83	
13612.00	91.450	93.830	7675.91	7048.96	1259.46	7078.12	1782557.28	366543.25	39°30'13.738"N	80°16'14.211"W	7189.30	79.911	2.00	1.59	-1.22	
13707.00	90.520	90.510	7674.27	7143.92	1255.86	7173.03	1782652.15	366538.81	39°30'13.702"N	80°16'13.007"W	7282.14	80.069	3.63	-0.98	-3.49	
13802.00	90.580	90.250	7673.36	7238.91	1255.23	7268.02	1782747.13	366537.34	39°30'13.696"N	80°16'11.789"W	7375.62	80.201	0.28	0.06	-0.27	
13897.00	90.580	89.590	7672.40	7333.88	1255.37	7363.02	1782842.11	366536.63	39°30'13.697"N	80°16'10.577"W	7469.27	80.324	0.69	0.00	-0.69	
13991.00	90.620	88.610	7671.42	7427.83	1256.02	7457.01	1782936.10	366536.46	39°30'13.703"N	80°16'09.378"W	7562.05	80.439	0.05	0.04	0.02	
14086.00	90.060	89.530	7670.85	7522.79	1256.73	7552.00	1783031.09	366536.33	39°30'13.710"N	80°16'08.166"W	7655.86	80.552	0.60	-0.59	-0.08	
14181.00	90.000	91.630	7670.80	7617.78	1255.77	7646.99	1783126.07	366534.52	39°30'13.700"N	80°16'06.954"W	7749.42	80.674	2.21	-0.06	2.21	
14276.00	90.060	92.360	7670.75	7712.77	1252.47	7741.94	1783220.97	366530.38	39°30'13.667"N	80°16'05.743"W	7842.59	80.810	0.77	0.06	0.77	
14371.00	90.060	92.120	7670.65	7807.76	1248.75	7836.86	1783315.85	366525.82	39°30'13.630"N	80°16'04.532"W	7935.73	80.946	0.25	0.00	-0.25	
14466.00	91.510	92.440	7669.35	7902.73	1244.97	7931.78	1783410.72	366521.20	39°30'13.592"N	80°16'03.321"W	8028.89	81.080	1.56	1.53	0.34	
14561.00	90.650	91.530	7668.56	7997.70	1241.68	8026.70	1783505.61	366517.07	39°30'13.559"N	80°16'02.110"W	8122.17	81.206	1.32	-0.91	-0.96	
14656.00	90.680	91.970	7668.46	8092.69	1238.76	8121.65	1783600.52	366513.33	39°30'13.531"N	80°16'00.899"W	8215.58	81.328	0.46	0.03	0.46	



02/15/2019



Actual Wellpath Report  
Snider 15H AWP Proj: 19308'

Page 9 of 12



RECEIVED  
Office of Oil and Gas

DEC 20 2018

WV Department of  
Environmental Protection

REFERENCE WELLPATH IDENTIFICATION									
Operator	XTO ENERGY INC								
Area	Marion County, WV								
Field	Marion								
Facility	Brennan Snider Pad								
	Slot	Slot #15							
	Well	Snider 15H							
	Wellbore	Snider 15H AWP							

WELLPATH DATA (260 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 ft/100ft	Build Rate ft/100ft	Turn Rate °/100ft	Comments
14751.00	90.180	91.280	7665.75	8187.69	1236.09	8216.61	1783595.45	366509.80	39°30'13.504"N	80°15'59.687"W	8309.06	81.445	0.90	-0.53	-0.73	
14846.00	90.220	91.090	7665.41	8282.69	1234.12	8311.59	1783790.40	366506.99	39°30'13.484"N	80°15'58.476"W	8402.71	81.554	0.20	0.04	-0.20	
14941.00	89.510	92.420	7665.64	8377.68	1231.22	8406.54	1783885.32	366503.24	39°30'13.455"N	80°15'57.264"W	8496.22	81.668	1.59	-0.75	1.40	
15036.00	89.290	92.800	7666.63	8472.65	1228.89	8501.43	1783980.17	366498.08	39°30'13.412"N	80°15'56.054"W	8589.51	81.788	0.46	-0.23	0.40	
15131.00	87.910	93.440	7668.95	8567.57	1221.72	8596.26	1784074.94	366492.07	39°30'13.360"N	80°15'54.844"W	8682.65	81.911	1.60	-1.45	0.67	
15227.00	87.690	93.370	7672.64	8663.43	1216.02	8692.02	1784170.64	366485.52	39°30'13.304"N	80°15'53.622"W	8776.67	82.036	0.24	-0.23	-0.07	
15322.00	87.910	94.000	7676.29	8758.27	1209.92	8786.76	1784265.31	366478.58	39°30'13.243"N	80°15'52.414"W	8869.67	82.160	0.70	0.23	0.66	
15417.00	87.420	93.090	7680.16	8853.11	1204.05	8881.49	1784359.99	366471.88	39°30'13.185"N	80°15'51.205"W	8962.74	82.280	1.09	-0.52	-0.96	
15512.00	87.780	90.800	7684.13	8948.02	1200.83	8976.35	1784454.80	366466.82	39°30'13.153"N	80°15'49.995"W	9056.32	82.380	2.44	0.38	-2.41	
15607.00	87.800	90.840	7687.96	9042.94	1199.47	9071.26	1784549.70	366465.62	39°30'13.139"N	80°15'48.784"W	9150.22	82.468	0.19	-0.19	0.04	
15702.00	88.490	90.160	7691.20	9137.87	1198.64	9166.20	1784644.62	366463.95	39°30'13.130"N	80°15'47.573"W	9244.24	82.550	1.18	0.94	-0.72	
15797.00	88.520	90.470	7693.68	9232.83	1198.12	9261.17	1784739.57	366462.58	39°30'13.125"N	80°15'46.362"W	9338.35	82.629	0.33	0.03	0.33	
15892.00	87.480	90.680	7697.00	9327.76	1197.17	9356.10	1784834.49	366460.79	39°30'13.115"N	80°15'45.150"W	9432.39	82.708	1.12	-1.09	0.22	
15987.00	87.630	91.280	7701.05	9422.67	1195.55	9451.00	1784929.36	366458.33	39°30'13.099"N	80°15'43.940"W	9526.32	82.790	0.65	0.16	0.63	
16083.00	90.690	92.230	7702.47	9518.65	1192.61	9546.94	1785025.26	366454.54	39°30'13.089"N	80°15'42.716"W	9621.14	82.879	3.33	3.18	0.99	
16177.00	90.740	90.620	7701.30	9612.64	1190.27	9640.90	1785119.19	366451.37	39°30'13.046"N	80°15'41.517"W	9714.09	82.962	1.71	0.06	-1.71	
16272.00	90.740	91.670	7700.08	9707.63	1188.37	9735.87	1785214.14	366448.63	39°30'13.027"N	80°15'40.306"W	9808.13	83.041	1.11	0.00	1.11	
16367.00	91.080	93.300	7698.57	9802.59	1184.25	9830.76	1785308.99	366443.67	39°30'12.986"N	80°15'39.095"W	9901.84	83.131	1.75	0.36	1.72	
16462.00	90.980	89.510	7696.86	9897.56	1181.92	9925.70	1785403.90	366440.50	39°30'12.962"N	80°15'37.884"W	9995.82	83.209	3.99	-0.11	-3.99	
16558.00	91.600	90.090	7694.70	9993.50	1182.26	10021.68	1785498.86	366438.99	39°30'12.965"N	80°15'36.660"W	10091.17	83.272	0.86	0.65	0.60	
16653.00	92.150	90.220	7691.59	10088.43	1182.00	10116.62	1785594.80	366438.99	39°30'12.962"N	80°15'35.448"W	10185.44	83.336	0.59	0.58	0.14	
16748.00	91.080	89.230	7688.91	10183.36	1182.46	10211.58	1785689.75	366438.50	39°30'12.966"N	80°15'34.237"W	10279.82	83.395	1.53	-1.13	-1.04	
16843.00	90.950	87.940	7687.23	10278.24	1184.80	10306.54	1785784.72	366440.01	39°30'12.989"N	80°15'33.025"W	10374.41	83.442	1.36	-0.14	-1.36	
16938.00	90.950	87.570	7685.65	10373.05	1188.53	10401.45	1785879.66	366442.89	39°30'13.026"N	80°15'31.815"W	10469.13	83.481	0.39	0.00	-0.39	
17033.00	90.950	88.190	7684.08	10467.87	1192.04	10496.37	1785974.60	366445.56	39°30'13.060"N	80°15'30.604"W	10563.84	83.521	0.65	0.00	0.65	
17128.00	90.550	89.490	7682.83	10562.78	1193.96	10591.34	1786069.58	366446.54	39°30'13.079"N	80°15'29.392"W	10658.43	83.568	1.43	-0.42	1.37	
17224.00	90.620	91.320	7681.85	10658.76	1193.28	10682.30	1786165.55	366445.11	39°30'13.071"N	80°15'28.167"W	10753.74	83.629	1.91	0.07	1.91	
17319.00	90.860	91.240	7680.63	10753.75	1191.16	10782.30	1786260.49	366442.15	39°30'13.050"N	80°15'26.956"W	10847.90	83.696	0.27	0.25	-0.08	
17414.00	91.320	90.300	7678.82	10848.73	1189.89	10877.27	1786355.44	366440.93	39°30'13.037"N	80°15'25.744"W	10942.16	83.757	1.10	0.48	-0.99	
17509.00	90.650	90.780	7677.19	10943.70	1188.99	10972.25	1786450.41	366438.50	39°30'13.028"N	80°15'24.533"W	11036.48	83.815	0.87	-0.71	0.51	



02/15/2019



**Actual Wellpath Report**  
Snider 15H AWP Proj: 19308'  
Page 10 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO ENERGY INC	Slot	Slot #15
Area	Marion County, WV	Well	Snider 15H
Field	Marion	Wellbore	Snider 15H AWB
Facility	Brennan Snider Pad		

WELLPATH DATA (260 stations)																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	Comments
ft	°	°	ft	ft	ft	ft	US ft	US ft			ft	°	ft/100ft	ft/100ft	ft/100ft	
17604.00	90.480	90.250	7676.24	11038.69	1188.14	11067.24	1786545.38	366436.60	39°30'13.019"N	80°15'23.321"W	1130.84	83.872	0.58	-0.17	-0.56	
17699.00	91.230	88.970	7674.82	11133.64	1188.78	11162.23	1786640.36	366436.41	39°30'13.025"N	80°15'22.109"W	1125.35	83.921	1.56	0.78	-1.35	
17794.00	90.650	89.400	7673.26	11228.56	1190.13	11257.21	1786735.34	366436.92	39°30'13.038"N	80°15'20.897"W	11319.94	83.965	0.76	-0.61	0.45	
17889.00	90.920	92.110	7671.96	11323.54	1188.88	11352.18	1786830.30	366434.83	39°30'13.025"N	80°15'19.686"W	11414.26	84.021	2.87	0.28	2.85	
17984.00	90.830	94.640	7670.50	11418.46	1183.29	11447.00	1786925.05	366428.39	39°30'12.969"N	80°15'18.476"W	11507.99	84.088	2.66	-0.09	2.66	
18078.00	90.920	95.590	7669.07	11512.23	1174.91	11540.61	1787018.58	366419.19	39°30'12.896"N	80°15'17.282"W	11600.26	84.187	1.02	0.10	1.01	
18172.00	90.920	94.900	7667.56	11605.99	1166.32	11634.20	1787112.09	366409.77	39°30'12.801"N	80°15'16.088"W	11692.52	84.275	0.73	0.00	-0.73	
18267.00	90.920	94.380	7666.03	11700.81	1158.54	11728.88	1787206.69	366401.25	39°30'12.724"N	80°15'14.880"W	11785.97	84.358	0.55	0.00	-0.55	
18362.00	91.080	92.890	7664.38	11795.71	1152.61	11823.67	1787301.42	366394.38	39°30'12.664"N	80°15'13.671"W	11879.72	84.432	1.58	0.17	-1.57	
18458.00	90.860	91.940	7662.75	11881.68	1148.57	11919.57	1787397.27	366389.49	39°30'12.624"N	80°15'12.448"W	11974.78	84.498	1.02	-0.23	-0.99	
18553.00	90.830	91.530	7661.28	11986.66	1142.96	12014.52	1787492.18	366385.77	39°30'12.595"N	80°15'11.236"W	12069.02	84.553	0.44	0.06	-0.43	
18648.00	91.770	7659.82	12081.65	1142.96	12109.47	12109.47	1787587.10	366382.20	39°30'12.568"N	80°15'10.028"W	12163.29	84.608	0.27	-0.09	0.25	
18743.00	91.010	91.350	7658.30	12176.64	1140.37	12204.42	1787682.02	366378.77	39°30'12.542"N	80°15'08.814"W	12257.58	84.662	0.48	0.19	-0.44	
18838.00	90.950	90.800	7656.67	12271.62	1138.59	12298.39	1787776.96	366376.15	39°30'12.524"N	80°15'07.602"W	12351.98	84.711	0.58	-0.06	-0.58	
18933.00	91.110	91.380	7654.97	12366.61	1138.78	12394.35	1787871.91	366373.50	39°30'12.505"N	80°15'06.391"W	12446.38	84.760	0.63	0.17	0.61	
19028.00	90.980	91.980	7653.23	12461.59	1134.00	12489.30	1787966.82	366369.88	39°30'12.477"N	80°15'05.179"W	12540.67	84.812	0.65	-0.14	0.63	
19181.00	90.890	92.270	7650.74	12642.55	1128.33	12642.17	1788119.62	366362.85	39°30'12.421"N	80°15'03.228"W	12692.42	84.900	0.20	-0.06	0.19	
19216.00	90.920	92.550	7650.18	12649.54	1126.85	12647.14	1788154.57	366361.07	39°30'12.406"N	80°15'02.783"W	12727.12	84.920	0.80	0.09	0.80	
19284.00	91.050	92.640	7649.02	12717.51	1123.78	12745.06	1788222.46	366357.39	39°30'12.375"N	80°15'01.917"W	12794.50	84.961	0.23	0.19	0.13	
19308.00	91.050	92.640	7648.58	12741.50	1122.67	12769.03	1788246.42	366356.07	39°30'12.364"N	80°15'01.611"W	12818.28	84.975	0.00	0.00	0.00	Projected MID at TD: 19308'

RECEIVED  
Office of Oil and Gas  
DEC 20 2018  
WV Department of  
Environmental Protection



02/15/2019



**Actual Wellpath Report**  
 Snider 15H AWP Proj: 19308'  
 Page 11 of 12



RECEIVED  
 Office of Oil and Gas

DEC 20 2018

WV Department of  
 Environmental Protection

**REFERENCE WELLPATH IDENTIFICATION**

Operator	XTO ENERGY INC	Slot	Slot #15
Area	Marion County, WV	Well	Snider 15H
Field	Marion	Wellbore	Snider 15H AWB
Facility	Brennan Snider Pad		

**HOLE & CASING SECTIONS - Ref Wellbore: Snider 15H AWB Ref Wellpath: Snider 15H AWP Proj: 19308'**

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)
17.5in Open Hole	26.00	639.00	613.00	26.00	638.99	0.00	0.00	0.75	2.70
13.375in Casing Surface	26.00	639.00	613.00	26.00	638.99	0.00	0.00	0.75	2.70
12.25in Open Hole	639.00	3166.00	2527.00	639.99	3164.36	0.75	2.70	73.09	-3.23
9.625in Casing Intermediate	26.00	3166.00	3140.00	26.00	3164.36	0.00	0.00	73.09	-3.23
8.75in Open Hole	3166.00	4400.00	1234.00	3164.36	4398.33	73.09	-3.23	77.08	-1.96
8.5in Open Hole	4400.00	19308.00	14908.00	4398.33	7648.58	77.08	-1.96	1122.67	12769.03
5.5in Casing Production	26.00	19308.00	19282.00	26.00	7648.58	0.00	0.00	1122.67	12769.03

**TARGETS**

Name	TVD (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Shape
Snider 15H BHL - Rev-1	7657.00	1136.69	12781.00	1788258.51	366369.99	39°30'12.503"N	80°15'01.458"W	point
Snider 15H LP - Rev-1	7657.00	1366.11	2266.55	1777747.13	366692.50	39°30'14.801"N	80°17'15.595"W	point

**WELLPATH COMPOSITION - Ref Wellbore: Snider 15H AWB Ref Wellpath: Snider 15H AWP Proj: 19308'**

Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	4376.00	BH Generic gyro - northseeking (Standard)	01_Javins Gyros <8-3/4"> (25-4350)	Snider 15H AWB
4376.00	19284.00	BH AutoTrak Curve (Short)	02_BH AT Curve <8-1/2"> (4376)(4434-19284)	Snider 15H AWB
19284.00	19308.00	Blind Drilling (std)	Projection to bit	Snider 15H AWB



02/15/2019



# Actual Wellpath Report

Snider 15H AWP Proj: 19308'  
Page 12 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	XTO ENERGY INC	Slot	Slot #15
Area	Marion County, WV	Well	Snider 15H
Field	Marion	Wellbore	Snider 15H AWP
Facility	Brennan Snider Pad		

### COMMENTS

Wellpath general comments

API: 47-049-02432-0000  
 BH Job #: 9201970  
 Rig: Patterson 583  
 Duration: 06/05/2018-06/17/2018  
 Javins Gyro <8-3/4"> (25'-4350')  
 BH AT Curve <8-1/2"> (4376')(4434'-19284')  
 Projected MD at TD: 19308'

RECEIVED  
Office of Oil and Gas

DEC 20 2018

WV Department of  
Environmental Protection