



Actual Wellpath Report

Crim South Unit 9H ST01 AWP Proj: 19651'
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REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Well	Crim South Unit 9H ST01
Field	Marion	API	47-049-02487-0001
Facility	Crim Pad	Wellbore	Crim South Unit 9H ST01 AWB
Slot	Slot #09	Sidetrack from	Crim South Unit 9H AWP Proj: 12466' at 12223.00 MD

REPORT SETUP INFORMATION

Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 6.0
North Reference	True	User	Delaset
Scale	0.999944	Report Generated	4/2/2020 at 1:25:55 PM
Convergence at slot	0.51° West	Database	WA_MPL_EasternUS_Defn

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	6.71	-7.42	1773561.01	354900.89	39°28'17.8915"N	80°18'7.6568"W
Facility Reference Pt			1773568.37	354894.11	39°28'17.8251"N	80°18'7.5622"W
Field Reference Pt			609601.22	0.00	38°23'48.7532"N	84°21'9.7646"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 579 (RKB) to Facility Vertical Datum	1247.00ft
Horizontal Reference Pt	Slot	Patterson 579 (RKB) to Mean Sea Level	1247.00ft
Vertical Reference Pt	Patterson 579 (RKB)	Patterson 579 (RKB) to Ground Level at Slot (Slot #09)	26.00ft
MD Reference Pt	Patterson 579 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	134.99°



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Slot	Slot #09	Sidetrack from	Crim South Unit 9H AWP Proj: 12466' at 12223.00 MD

WELLPATH DATA (218 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)	(US ft)	(US ft)	(°)	(°)	(ft)	(°)	(%/100ft)	(%/100ft)	(%/100ft)	
0.00†	0.000	85.300	0.00	0.00	0.00	0.00	1773561.01	354900.89	39°28'17.8915"N	80°18'7.6568"W	0.00	0.000	0.00	0.00	0.00	
26.00	0.000	85.300	26.00	0.00	0.00	0.00	1773561.01	354900.89	39°28'17.8915"N	80°18'7.6568"W	0.00	0.000	0.00	0.00	0.00	
76.00	0.520	85.300	76.00	0.15	0.02	0.23	1773561.24	354900.91	39°28'17.8916"N	80°18'7.6539"W	0.23	85.300	1.04	1.04	0.00	Javins Gyro <17-1/2">(50'-450')
126.00	0.360	23.100	126.00	0.23	0.18	0.51	1773561.53	354901.07	39°28'17.8933"N	80°18'7.6503"W	0.55	70.531	0.95	-0.32	-124.40	
176.00	0.260	237.900	176.00	0.15	0.27	0.48	1773561.49	354901.15	39°28'17.8941"N	80°18'7.6507"W	0.55	60.988	1.18	-0.20	-290.40	
226.00	0.360	118.300	226.00	0.28	0.13	0.52	1773561.53	354901.02	39°28'17.8928"N	80°18'7.6502"W	0.54	75.890	1.08	0.20	-239.20	
276.00	0.370	13.000	276.00	0.34	0.21	0.70	1773561.71	354901.10	39°28'17.8936"N	80°18'7.6479"W	0.73	72.918	1.16	0.02	-210.60	
326.00	0.180	267.100	326.00	0.20	0.37	0.65	1773561.67	354901.25	39°28'17.8951"N	80°18'7.6485"W	0.75	60.686	0.91	-0.38	-211.80	
376.00	0.390	137.200	376.00	0.32	0.24	0.69	1773561.70	354901.12	39°28'17.8938"N	80°18'7.6480"W	0.73	70.969	1.05	0.42	-259.80	
426.00	0.350	107.600	426.00	0.63	0.07	0.95	1773561.96	354900.95	39°28'17.8921"N	80°18'7.6447"W	0.95	85.952	0.39	-0.08	-59.20	
476.00	0.310	20.500	476.00	0.71	0.15	1.15	1773562.16	354901.03	39°28'17.8929"N	80°18'7.6422"W	1.15	82.641	0.91	-0.08	-174.20	
526.00	0.120	238.200	526.00	0.57	0.35	1.15	1773562.16	354901.23	39°28'17.8949"N	80°18'7.6421"W	1.20	73.257	0.41	-0.19	-142.20	Javins MWD Surveys <12-1/4">(450'-3131')
576.00	0.200	157.740	576.00	0.70	0.14	1.13	1773562.14	354900.57	39°28'17.8929"N	80°18'7.6424"W	1.14	82.906	0.23	0.08	-84.78	
626.00	0.360	183.570	626.00	1.05	-0.31	1.17	1773562.18	354900.57	39°28'17.8884"N	80°18'7.6419"W	1.21	104.622	0.21	0.17	27.48	
676.00	0.370	226.790	676.00	1.23	-0.81	0.93	1773561.93	354900.07	39°28'17.8834"N	80°18'7.6450"W	1.24	131.166	0.28	0.01	45.48	
726.00	0.760	218.800	726.00	1.29	-1.51	0.31	1773561.31	354899.37	39°28'17.8765"N	80°18'7.6528"W	1.55	168.345	0.42	0.41	-8.41	
776.00	0.540	222.630	776.00	1.38	-2.33	-0.38	1773560.61	354898.57	39°28'17.8685"N	80°18'7.6616"W	2.36	189.231	0.24	-0.23	4.07	
826.00	1.080	233.280	826.00	1.27	-3.19	-1.40	1773559.58	354897.71	39°28'17.8599"N	80°18'7.6747"W	3.48	203.671	0.59	0.57	11.21	
876.00	3.890	244.020	876.00	0.09	-5.14	-5.01	1773555.95	354895.80	39°28'17.8407"N	80°18'7.7208"W	7.18	224.297	2.99	2.96	11.31	
926.00	7.410	248.490	926.00	-3.37	-8.76	-13.52	1773547.41	354892.25	39°28'17.8049"N	80°18'7.8293"W	16.11	237.067	3.77	3.74	4.76	
976.00	11.590	250.620	976.00	-9.94	-14.17	-28.23	1773532.66	354886.97	39°28'17.7514"N	80°18'8.0168"W	31.59	243.339	4.41	4.40	2.24	
1026.00	13.890	254.290	1026.00	-19.55	-20.36	-48.00	1773512.83	354880.96	39°28'17.6902"N	80°18'8.2689"W	52.14	247.012	2.59	2.45	3.90	
1076.00	12.120	250.970	1076.00	-29.40	-26.64	-68.19	1773492.58	354874.86	39°28'17.6282"N	80°18'8.5264"W	73.21	248.664	2.04	-1.88	-3.53	
1126.00	12.850	240.050	1126.00	-36.51	-35.16	-86.78	1773473.93	354866.50	39°28'17.5439"N	80°18'8.7634"W	93.63	247.941	2.60	0.77	-11.49	
1176.00	11.170	241.730	1176.00	-41.91	-44.80	-104.04	1773456.58	354857.03	39°28'17.4487"N	80°18'8.9835"W	113.27	246.704	1.81	-1.77	1.77	
1226.00	11.390	245.630	1226.00	-47.80	-52.94	-120.51	1773440.04	354849.03	39°28'17.3682"N	80°18'9.1935"W	131.63	246.285	0.84	0.23	4.15	
1276.00	11.310	250.130	1276.00	-55.07	-59.98	-137.82	1773422.67	354842.15	39°28'17.2987"N	80°18'9.4142"W	150.30	246.482	0.94	-0.08	4.74	
1326.00	11.420	249.670	1326.00	-62.95	-66.41	-155.40	1773405.03	354835.87	39°28'17.2351"N	80°18'9.6384"W	168.99	246.860	0.15	0.12	-0.48	
1376.00	11.630	252.940	1376.00	-71.45	-72.55	-173.56	1773386.82	354829.90	39°28'17.1744"N	80°18'9.8700"W	188.11	247.314	0.71	0.22	3.41	
1426.00	12.190	254.960	1426.00	-80.85	-77.91	-192.20	1773368.13	354824.71	39°28'17.1215"N	80°18'10.1077"W	207.39	247.936	0.74	0.60	2.15	



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Field	Marion	API	47-049-02487-0001
Facility	Crim Pad	Wellbore	Crim South Unit 9H ST01 AWB
Slot	Slot #09	Sidetrack from	Crim South Unit 9H AWP Proj: 12466' at 12223.00 MD

WELLPATH DATA (218 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
2374.00	12.690	254.810	2351.33	-90.95	-83.19	-211.75	17733348.54	354819.60	39°28'17.0693"N	80°18'10.3570"W	227.51	248.553	0.53	0.53	-0.16	
2468.00	12.810	255.100	2443.01	-101.31	-88.57	-231.79	17733328.46	354814.40	39°28'17.0161"N	80°18'10.6124"W	248.13	249.087	0.14	0.13	0.31	
2561.00	12.500	250.200	2533.76	-110.77	-94.63	-251.22	17733308.97	354808.51	39°28'16.9562"N	80°18'10.8602"W	268.45	249.359	1.20	-0.33	-5.27	
2656.00	11.900	248.100	2626.61	-118.99	-101.77	-269.98	1773290.15	354801.54	39°28'16.8856"N	80°18'11.0995"W	288.52	249.346	0.79	-0.63	-2.21	
2751.00	12.070	247.490	2719.54	-126.64	-109.22	-288.24	1773271.82	354794.25	39°28'16.8119"N	80°18'11.3324"W	308.24	249.247	0.22	0.18	-0.64	
2844.00	11.800	247.010	2810.53	-133.92	-116.66	-305.98	1773254.02	354786.97	39°28'16.7384"N	80°18'11.5855"W	327.47	249.130	0.31	-0.29	-0.52	
2940.00	11.550	248.610	2904.54	-141.45	-124.00	-323.97	1773235.97	354779.80	39°28'16.6659"N	80°18'11.7879"W	346.89	249.055	0.43	-0.26	1.67	
3035.00	11.370	248.740	2997.65	-149.03	-130.86	-341.55	1773218.33	354773.09	39°28'16.5981"N	80°18'12.0121"W	365.76	249.036	0.19	-0.19	0.14	
3129.00	11.160	250.170	3089.84	-156.64	-137.31	-358.74	1773201.08	354766.80	39°28'16.5344"N	80°18'12.2313"W	384.12	249.055	0.37	-0.22	1.52	
3157.00	11.080	250.660	3117.31	-158.96	-139.12	-363.83	1773195.97	354765.03	39°28'16.5165"N	80°18'12.2962"W	389.52	249.074	0.44	-0.29	1.75	
3226.00	10.340	250.040	3185.11	-164.45	-143.43	-375.91	1773183.86	354760.83	39°28'16.4739"N	80°18'12.4502"W	402.34	249.115	1.09	-1.07	-0.90	Javins MWD Surveys <8-3/4">(3131')(3200'-5951')
3321.00	11.200	251.480	3278.44	-172.17	-149.27	-392.67	1773167.05	354755.14	39°28'16.4161"N	80°18'12.6639"W	420.08	249.186	0.95	0.91	1.52	
3416.00	12.340	252.030	3371.44	-180.91	-155.33	-411.07	1773148.59	354749.24	39°28'16.3562"N	80°18'12.8986"W	439.44	249.300	1.21	1.20	0.58	
3513.00	12.410	251.460	3466.18	-190.26	-161.84	-430.81	1773128.79	354742.91	39°28'16.2918"N	80°18'13.1503"W	460.21	249.410	0.15	0.07	-0.59	
3608.00	12.190	248.230	3559.00	-198.77	-168.81	-449.81	1773109.74	354736.11	39°28'16.2230"N	80°18'13.3925"W	480.44	249.429	0.76	-0.23	-3.40	
3703.00	11.720	247.980	3651.94	-206.50	-176.15	-468.07	1773091.42	354728.94	39°28'16.1505"N	80°18'13.6254"W	500.11	249.377	0.50	-0.49	-0.26	
3798.00	12.090	248.540	3744.90	-214.24	-183.41	-486.27	1773073.15	354721.84	39°28'16.0787"N	80°18'13.8575"W	519.71	249.335	0.41	0.39	0.59	
3892.00	11.910	248.110	3836.85	-221.98	-190.62	-504.43	1773054.93	354714.79	39°28'16.0074"N	80°18'14.0891"W	539.25	249.299	0.21	-0.19	-0.46	
3987.00	12.380	248.130	3929.72	-229.83	-198.07	-522.98	1773036.31	354707.51	39°28'15.9338"N	80°18'14.3256"W	559.23	249.256	0.49	0.49	0.02	
4081.00	11.770	249.160	4021.84	-237.72	-205.24	-541.29	1773017.94	354700.51	39°28'15.8630"N	80°18'14.5591"W	578.89	249.235	0.69	-0.65	1.10	
4176.00	11.920	248.620	4114.62	-245.62	-212.26	-559.48	1772999.69	354693.65	39°28'15.7936"N	80°18'14.7910"W	598.39	249.224	0.20	0.16	-0.57	
4271.00	12.450	250.130	4207.48	-253.90	-219.32	-578.25	1772980.86	354686.76	39°28'15.7238"N	80°18'15.0303"W	618.44	249.229	0.65	0.56	1.59	
4366.00	11.890	249.990	4300.34	-262.39	-226.15	-597.08	1772961.97	354680.10	39°28'15.6563"N	80°18'15.2704"W	638.47	249.255	0.59	-0.59	-0.15	
4460.00	12.330	247.980	4392.25	-270.40	-233.22	-615.48	1772943.51	354673.19	39°28'15.5864"N	80°18'15.5051"W	658.18	249.247	0.65	0.47	-2.14	
4555.00	11.550	246.620	4485.19	-277.87	-240.80	-633.61	1772925.31	354666.77	39°28'15.5115"N	80°18'15.7363"W	677.83	249.191	0.87	-0.82	-1.43	
4650.00	11.410	247.810	4578.29	-285.02	-248.12	-651.04	1772907.82	354659.60	39°28'15.4391"N	80°18'15.9586"W	696.72	249.137	0.29	-0.15	1.25	
4744.00	11.890	247.730	4670.36	-292.37	-255.30	-668.61	1772890.18	354651.58	39°28'15.3681"N	80°18'16.1826"W	715.70	249.101	0.51	0.51	-0.09	
4839.00	11.820	247.180	4763.33	-299.83	-262.79	-686.64	1772872.09	354644.26	39°28'15.2941"N	80°18'16.4124"W	735.21	249.057	0.14	-0.07	-0.58	
4933.00	12.000	246.800	4855.31	-307.09	-270.37	-704.49	1772854.17	354636.84	39°28'15.2192"N	80°18'16.6401"W	754.59	249.004	0.21	0.19	-0.40	
5030.00	11.850	246.650	4950.21	-314.51	-278.29	-722.91	1772835.69	354629.08	39°28'15.1409"N	80°18'16.8749"W	774.62	248.945	0.16	-0.15	-0.15	



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Facility	Crim South Unit 9H ST01 AWB
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5125.00	12.660	249.670	5043.05	-322.46	-285.77	-741.62	1772816.91	354621.77	39°28'15.0669"N	80°18'17.1136"W	794.78	248.927	1.09	0.85	3.18
5220.00	11.860	249.420	5135.88	-330.85	-292.82	-760.52	1772797.95	354614.89	39°28'14.9973"N	80°18'17.3546"W	814.95	248.942	0.84	-0.84	-0.28
5314.00	11.960	251.220	5227.86	-339.15	-299.35	-778.79	1772779.62	354608.52	39°28'14.9327"N	80°18'17.5875"W	834.34	248.974	0.41	0.11	1.91
5409.00	12.310	251.290	5320.73	-347.98	-305.77	-797.70	1772760.66	354602.27	39°28'14.8693"N	80°18'17.8286"W	854.30	249.027	0.37	0.37	0.07
5503.00	12.190	251.120	5412.59	-356.79	-312.20	-816.58	1772741.72	354596.02	39°28'14.8058"N	80°18'18.0694"W	874.23	249.077	0.13	-0.13	-0.18
5598.00	11.870	249.180	5505.51	-365.21	-318.91	-835.20	1772723.04	354589.46	39°28'14.7394"N	80°18'18.3089"W	894.02	249.101	0.54	-0.34	-2.04
5693.00	12.340	248.170	5598.40	-373.21	-326.16	-853.76	1772704.42	354582.38	39°28'14.6677"N	80°18'18.5435"W	913.94	249.092	0.54	0.49	-1.06
5787.00	12.540	247.590	5690.19	-381.09	-333.79	-872.82	1772685.60	354574.93	39°28'14.5924"N	80°18'18.7827"W	934.19	249.065	0.25	0.21	-0.62
5882.00	12.730	246.710	5782.89	-388.93	-341.86	-891.67	1772666.38	354567.03	39°28'14.5126"N	80°18'19.0288"W	954.95	249.024	0.28	0.20	-0.93
5977.00	12.370	248.610	5875.62	-396.88	-349.71	-910.76	1772647.22	354559.35	39°28'14.4350"N	80°18'19.2702"W	975.59	248.994	0.58	-0.38	2.00
6105.00	9.700	242.690	6001.24	-405.65	-359.66	-933.11	1772628.78	354549.60	39°28'14.3367"N	80°18'19.5552"W	1000.02	248.921	2.26	-2.09	-4.62 (MS Guidance <-8.3/4">(5977)(6105-6579))
6200.00	8.070	241.460	6095.10	-409.97	-366.52	-946.08	1772611.75	354542.86	39°28'14.2689"N	80°18'19.7206"W	1014.59	248.823	1.73	-1.72	-1.29
6295.00	9.680	242.650	6188.96	-414.29	-373.37	-959.03	1772598.74	354536.12	39°28'14.2011"N	80°18'19.8858"W	1029.15	248.728	1.71	1.69	1.25
6390.00	11.200	238.820	6282.39	-418.92	-381.82	-974.02	1772583.68	354527.81	39°28'14.1176"N	80°18'20.0769"W	1046.18	248.595	1.76	1.60	-4.03
6484.00	10.740	238.050	6374.67	-423.08	-391.18	-989.26	1772568.35	354518.58	39°28'14.0251"N	80°18'20.2713"W	1063.79	248.425	0.51	-0.49	-0.82
6579.00	8.720	239.950	6468.30	-426.94	-399.47	-1003.01	1772554.53	354510.41	39°28'13.9431"N	80°18'20.4465"W	1079.63	248.284	2.15	-2.13	2.00
6648.00	9.990	251.810	6536.38	-430.99	-403.96	-1013.22	1772544.28	354506.02	39°28'13.8988"N	80°18'20.5768"W	1090.78	248.263	3.34	1.84	17.19 (BH AT Curve <-8.1/2">(6579)(6648-12413))
6742.00	13.180	258.360	6628.46	-440.57	-408.67	-1031.47	1772525.99	354501.47	39°28'13.8522"N	80°18'20.8095"W	1109.48	248.387	3.67	3.39	6.97
6836.00	12.140	249.400	6720.18	-450.55	-414.31	-1051.22	1772506.19	354496.01	39°28'13.7965"N	80°18'21.0613"W	1129.92	248.490	2.36	-1.11	-9.53
6931.00	12.140	239.680	6813.07	-457.21	-422.87	-1069.20	1772488.14	354487.61	39°28'13.7119"N	80°18'21.2905"W	1149.78	248.421	2.15	0.00	-10.23
7026.00	14.500	199.280	6905.70	-454.58	-439.17	-1081.77	1772475.42	354471.42	39°28'13.5507"N	80°18'21.4509"W	1167.52	247.904	9.89	2.48	-42.53
7120.00	20.390	166.520	6995.55	-435.45	-466.29	-1081.84	1772475.11	354444.30	39°28'13.2827"N	80°18'21.4517"W	1178.05	246.683	11.95	6.27	-34.85
7215.00	27.470	152.250	7082.40	-400.35	-501.85	-1067.75	1772488.88	354408.62	39°28'12.9313"N	80°18'21.2721"W	1179.81	244.826	9.58	7.45	-15.02
7310.00	33.180	143.820	7164.40	-353.68	-542.27	-1042.17	1772514.10	354367.97	39°28'12.5317"N	80°18'20.9459"W	1174.81	242.511	7.48	6.01	-8.87
7405.00	39.590	139.080	7240.86	-297.73	-586.19	-1006.95	1772548.92	354323.75	39°28'12.0978"N	80°18'20.4968"W	1165.15	239.795	7.36	6.75	-4.99
7498.00	40.140	139.040	7312.24	-238.26	-631.22	-967.89	1772587.58	354278.38	39°28'11.6527"N	80°18'19.9987"W	1155.53	236.889	0.59	0.58	-0.04
7593.00	39.530	140.930	7385.19	-177.65	-677.81	-928.76	1772626.29	354231.43	39°28'11.1922"N	80°18'19.4997"W	1149.80	233.878	1.43	-0.64	1.99
7688.00	53.520	145.010	7450.41	-109.61	-732.86	-887.59	1772666.96	354176.02	39°28'10.6481"N	80°18'18.9747"W	1151.05	230.454	15.05	14.73	4.29
7705.00†	55.992	145.408	7460.22	-95.95	-744.26	-879.67	1772674.78	354164.55	39°28'10.5355"N	80°18'18.8737"W	1152.28	229.767	14.66	14.54	2.34 (landing Pt. at 7705' MD)
7782.00	67.200	146.970	7496.79	-29.63	-800.47	-842.09	1772711.86	354108.01	39°28'9.9799"N	80°18'18.3944"W	1161.84	226.451	14.66	14.56	2.03



Actual Wellpath Report

Crim South Unit 9H ST01 AWP Proj: 19651'
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REFERENCE WELLPATH IDENTIFICATION		
Operator	XTO ENERGY INC	Well
Field	Marion	API
Facility	Crim Pad	Wellbore
Slot	Slot #09	Sidetrack from
		Crim South Unit 9H AWP Proj: 12466' at 12223.00 MD

WELLPATH DATA (218 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
7876.00	78.850	140.340	7524.21	59.06	-872.62	-788.80	1772764.50	3540355.40	39°28'9.2669"N	80°18'17.7149"W	1176.30	222.112	14.10	12.39	-7.05	
7970.00	89.050	133.250	7534.12	152.31	-940.59	-724.89	1772827.79	3539666.87	39°28'8.5952"N	80°18'16.9000"W	1187.51	217.621	13.19	10.85	-7.54	
8065.00	89.780	131.950	7535.09	247.22	-1004.88	-654.97	1772897.13	3539019.95	39°28'7.9597"N	80°18'16.0084"W	1199.49	213.096	1.57	0.77	-1.37	
8159.00	89.910	132.180	7535.35	341.10	-1067.86	-585.18	1772966.35	353838.36	39°28'7.3373"N	80°18'15.1185"W	1217.69	208.723	0.28	0.14	0.24	
8254.00	89.780	132.880	7535.60	436.01	-1132.08	-515.18	1773035.78	353773.52	39°28'6.7026"N	80°18'14.2299"W	1243.79	204.469	0.75	-0.14	0.74	
8348.00	89.820	131.490	7535.93	529.90	-1195.20	-445.53	1773104.85	353709.79	39°28'6.0788"N	80°18'13.3377"W	1275.54	200.444	1.48	0.04	-1.48	
8442.00	89.750	132.080	7536.28	623.75	-1257.83	-375.44	1773174.38	353646.53	39°28'5.4597"N	80°18'12.4440"W	1312.67	196.619	0.63	-0.07	0.63	
8536.00	89.750	135.660	7536.69	717.71	-1322.97	-307.68	1773241.55	353580.80	39°28'4.8160"N	80°18'11.5801"W	1356.27	193.093	3.81	0.00	3.81	
8631.00	89.110	138.480	7537.64	812.64	-1392.51	-242.99	1773305.61	353510.68	39°28'4.1287"N	80°18'10.7551"W	1413.55	189.898	3.04	-0.67	2.97	
8726.00	89.510	137.510	7538.78	907.50	-1463.10	-179.42	1773368.54	353439.54	39°28'3.4310"N	80°18'9.9446"W	1474.06	186.991	1.10	0.42	-1.02	
8820.00	89.690	135.980	7539.44	1001.45	-1531.56	-115.01	1773432.34	353370.51	39°28'2.7544"N	80°18'9.1233"W	1535.87	184.294	1.64	0.19	-1.63	
8914.00	88.860	134.240	7540.63	1095.44	-1598.15	-48.68	1773498.07	353303.33	39°28'2.0963"N	80°18'8.2775"W	1598.89	181.745	2.05	-0.88	-1.85	
9009.00	89.020	134.950	7542.39	1190.42	-1664.83	18.96	1773565.10	353236.05	39°28'1.4372"N	80°18'7.4151"W	1664.94	179.348	0.77	0.17	0.75	
9103.00	89.450	137.580	7543.64	1284.38	-1732.74	83.93	1773629.46	353167.57	39°28'0.7661"N	80°18'6.5867"W	1734.77	177.227	2.83	0.46	2.80	
9197.00	88.460	136.920	7545.36	1378.29	-1801.75	147.73	1773692.64	353097.99	39°28'0.0840"N	80°18'5.7732"W	1807.80	175.313	1.27	-1.05	-0.70	
9291.00	89.380	135.570	7547.13	1472.24	-1869.64	212.72	1773757.02	353029.54	39°27'59.4131"N	80°18'4.9445"W	1881.70	173.509	1.74	0.98	-1.44	
9386.00	89.380	135.710	7548.16	1567.23	-1937.55	279.14	1773822.82	352961.03	39°27'58.7418"N	80°18'4.0977"W	1957.56	171.802	0.15	0.00	0.15	
9480.00	90.800	137.820	7548.01	1661.18	-2006.03	343.52	1773886.59	352891.99	39°27'58.0650"N	80°18'3.2767"W	2035.23	170.283	2.71	1.51	2.24	
9575.00	89.350	134.000	7547.88	1756.15	-2074.25	409.61	1773952.06	352823.19	39°27'57.3908"N	80°18'2.4341"W	2114.31	168.829	4.30	-1.53	-4.02	
9670.00	89.910	135.070	7548.50	1851.14	-2140.87	477.32	1774019.17	352755.96	39°27'56.7323"N	80°18'1.5707"W	2193.44	167.431	1.27	0.59	1.13	
9765.00	89.940	136.630	7548.62	1946.13	-2209.04	543.49	1774084.73	352687.22	39°27'56.0586"N	80°18'0.7271"W	2274.91	166.178	1.64	0.03	1.64	
9859.00	91.970	141.420	7547.05	2039.85	-2279.97	605.10	1774145.70	352615.74	39°27'55.3575"N	80°17'59.9415"W	2358.90	165.136	5.53	2.16	5.10	
9953.00	89.720	137.700	7545.67	2133.52	-2351.49	666.05	1774206.00	352543.68	39°27'54.6507"N	80°17'59.1644"W	2444.00	164.185	4.62	-2.39	-3.96	
10048.00	89.510	133.910	7546.31	2228.49	-2419.59	732.26	1774271.60	352475.00	39°27'53.9776"N	80°17'58.3202"W	2527.97	163.162	4.00	-0.22	-3.99	
10143.00	89.660	133.720	7546.99	2323.46	-2485.36	800.81	1774339.56	352408.63	39°27'53.3275"N	80°17'57.4462"W	2611.19	162.140	0.25	0.16	-0.20	
10237.00	89.690	133.770	7547.53	2417.44	-2550.35	868.72	1774406.88	352343.03	39°27'52.6851"N	80°17'56.5804"W	2694.25	161.190	0.06	0.03	0.05	
10332.00	89.690	133.080	7548.04	2512.40	-2615.65	937.71	1774475.28	352277.12	39°27'52.0397"N	80°17'55.7007"W	2778.66	160.277	0.73	0.00	-0.73	
10426.00	90.740	135.140	7547.69	2606.39	-2681.08	1005.20	1774542.18	352211.10	39°27'51.3931"N	80°17'54.8403"W	2863.32	159.448	2.46	1.12	2.19	
10521.00	89.820	132.610	7547.22	2701.36	-2746.91	1073.68	1774610.06	352144.66	39°27'50.7424"N	80°17'53.9673"W	2949.29	158.651	2.83	-0.97	-2.66	
10615.00	90.550	133.270	7546.92	2795.30	-2810.95	1142.49	1774678.29	352080.02	39°27'50.1095"N	80°17'53.0899"W	3034.26	157.881	1.05	0.78	0.70	



Actual Wellpath Report
Crim South Unit 9H ST01 AWP Proj: 19651'
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REFERENCE WELLPATH IDENTIFICATION

Table with 2 columns: Field/Wellbore/Sidetrack from and Well/API/Wellbore/Sidetrack from. Values include XTO ENERGY INC, Marion, Crim Pad, Slot #09, Crim South Unit 9H ST01, and Crim South Unit 9H ST01 AWB.

WELLPATH DATA (218 stations)

Main data table with 16 columns: 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), DLS (ft/100ft), Build Rate (ft/100ft), Turn Rate (ft/100ft), Comments. Contains 218 rows of wellpath data.



Actual Wellpath Report

Crim South Unit 9H ST01 AWP Proj: 19651'
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REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Well	Crim South Unit 9H ST01
Field	Marion	API	47-049-02487-0001
Facility	Crim Pad	Wellbore	Crim South Unit 9H ST01 AWB
Slot	Slot #09	Sidetrack from	Crim South Unit 9H AWP Proj: 12466' at 12223.00 MD

WELLPATH DATA (218 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Comments
13455.00	91.690	135.860	7533.61	5629.61	-4770.71	3191.03	1776709.14	350102.15	39°27'30.7385"N	80°17'26.9738"W	5739.55	146.222	7.39	0.28	7.39	
13549.00	90.250	137.810	7532.02	5723.54	-4839.26	3255.32	1776772.81	350033.04	39°27'30.0610"N	80°17'26.1543"W	5832.29	146.072	2.58	-1.53	2.07	
13644.00	90.310	136.990	7531.56	5818.45	-4909.19	3319.63	1776836.48	349962.54	39°27'29.3697"N	80°17'25.3346"W	5926.22	145.933	0.87	0.06	-0.86	
13738.00	90.520	138.100	7530.88	5912.36	-4978.54	3383.07	1776899.31	349892.63	39°27'28.6842"N	80°17'24.5258"W	6019.22	145.803	1.20	0.22	1.18	
13833.00	90.280	135.400	7530.21	6007.30	-5047.73	3448.16	1776963.77	349822.87	39°27'28.0003"N	80°17'23.6961"W	6113.05	145.663	2.85	-0.25	-2.84	
13927.00	89.510	136.560	7530.39	6101.28	-5115.32	3513.48	1777028.48	349754.70	39°27'27.3322"N	80°17'22.8635"W	6205.73	145.517	1.48	-0.82	1.23	
14021.00	89.780	136.790	7530.97	6195.24	-5183.70	3577.97	1777092.35	349685.75	39°27'26.6563"N	80°17'22.0414"W	6298.62	145.365	0.38	0.29	0.24	
14116.00	90.030	136.970	7531.13	6290.19	-5253.04	3642.91	1777156.66	349615.83	39°27'25.9708"N	80°17'21.2136"W	6392.59	145.259	0.32	0.26	0.19	
14195.00	89.420	137.610	7531.51	6369.12	-5311.09	3696.49	1777209.72	349546.08	39°27'25.3971"N	80°17'20.5306"W	6470.84	145.162	1.12	-0.77	0.81	
14210.00	88.950	138.350	7531.72	6384.10	-5322.23	3706.53	1777219.66	349546.08	39°27'25.2869"N	80°17'20.4026"W	6485.72	145.146	5.84	-3.13	4.93	
14304.00	90.490	133.860	7532.18	6478.06	-5389.95	3771.69	1777284.21	349477.79	39°27'24.6175"N	80°17'19.5721"W	6578.54	145.017	5.05	1.64	-4.78	
14398.00	90.520	136.940	7531.35	6572.04	-5456.87	3837.68	1777349.60	349410.29	39°27'23.9560"N	80°17'18.7309"W	6671.22	144.862	3.28	0.03	3.28	
14493.00	90.180	135.470	7530.77	6667.01	-5525.44	3903.42	1777414.72	349341.14	39°27'23.2782"N	80°17'17.8929"W	6765.15	144.761	1.59	-0.36	-1.55	
14588.00	90.250	134.000	7530.41	6762.01	-5592.30	3970.91	1777481.60	349273.68	39°27'22.6173"N	80°17'17.0327"W	6858.71	144.623	1.55	0.07	-1.55	
14682.00	90.030	134.630	7530.18	6856.00	-5657.97	4038.16	1777548.27	349207.42	39°27'21.9662"N	80°17'16.1754"W	6951.22	144.484	0.71	-0.23	0.67	
14777.00	90.580	133.800	7529.68	6950.99	-5724.22	4106.25	1777615.75	349140.57	39°27'21.3133"N	80°17'15.3075"W	7044.71	144.346	1.05	0.58	-0.87	
14872.00	90.220	135.240	7529.01	7045.98	-5790.82	4173.98	1777682.89	349073.37	39°27'20.6549"N	80°17'14.4441"W	7138.33	144.216	1.56	-0.38	1.52	
14967.00	89.940	135.330	7528.88	7140.98	-5858.33	4240.82	1777749.12	349005.27	39°27'19.9876"N	80°17'13.5922"W	7232.19	144.099	0.31	-0.29	0.09	
15062.00	88.920	135.700	7529.83	7235.97	-5926.10	4307.39	1777815.07	348936.91	39°27'19.3177"N	80°17'12.7437"W	7326.14	143.988	1.14	-1.07	0.39	
15157.00	88.950	136.130	7531.59	7330.94	-5994.33	4373.47	1777880.54	348868.10	39°27'18.6432"N	80°17'11.9014"W	7420.19	143.885	0.45	0.03	0.45	
15252.00	88.920	135.710	7533.36	7425.91	-6062.56	4439.55	1777946.00	348800.00	39°27'17.9688"N	80°17'11.0592"W	7514.27	143.785	0.44	-0.03	-0.44	
15347.00	88.980	135.590	7535.10	7520.89	-6130.49	4505.94	1778011.78	348730.77	39°27'17.2973"N	80°17'10.2129"W	7608.31	143.684	0.14	0.06	-0.13	
15442.00	88.800	135.110	7536.94	7615.87	-6198.06	4572.69	1778077.92	348662.61	39°27'16.6294"N	80°17'9.3621"W	7702.30	143.581	0.54	-0.19	-0.51	
15538.00	89.020	135.710	7538.77	7711.85	-6266.41	4640.08	1778144.69	348593.66	39°27'15.9537"N	80°17'8.5032"W	7797.32	143.481	0.67	0.23	0.63	
15632.00	89.020	135.600	7540.37	7805.83	-6333.62	4705.77	1778209.77	348525.87	39°27'15.2893"N	80°17'7.6659"W	7890.44	143.388	0.12	0.00	-0.12	
15727.00	89.140	136.780	7541.90	7900.80	-6402.17	4771.53	1778274.91	348456.74	39°27'14.6177"N	80°17'6.8277"W	7984.69	143.303	1.25	0.13	1.24	
15822.00	89.450	136.090	7543.07	7995.76	-6471.00	4836.99	1778339.76	348387.34	39°27'13.9313"N	80°17'5.9933"W	8079.01	143.222	0.80	0.33	-0.73	
15916.00	89.480	136.250	7543.95	8089.73	-6538.81	4902.09	1778404.24	348318.95	39°27'13.2610"N	80°17'5.1636"W	8172.30	143.141	0.17	0.03	0.17	
16010.00	89.380	136.000	7544.88	8183.71	-6606.57	4967.23	1778468.78	348250.62	39°27'12.5912"N	80°17'4.3333"W	8265.60	143.062	0.29	-0.11	-0.27	
16106.00	89.660	135.800	7545.68	8279.69	-6675.50	5034.04	1778534.96	348181.09	39°27'11.9097"N	80°17'3.4818"W	8360.86	142.980	0.36	0.29	-0.21	



Actual Wellpath Report

Crim South Unit 9H ST01 AWP Proj: 19651

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REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC
Field	Marion
Facility	Crim Pad
Slot	Slot #09
Well	Crim South Unit 9H ST01
API	47-049-02487-0001
Wellbore	Crim South Unit 9H ST01 AWB
Sidetrack from	Crim South Unit 9H AWP Proj: 12466' at 12223.00 MD

WELLPATH DATA (218 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	DLS	Build Rate	Turn Rate	Comments	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)	(°)	(°)	(ft)	(F'/100ft)	(F'/100ft)	(F'/100ft)		
16201.00	89.480	135.030	7546.40	8374.69	-6743.16	5100.72	1778601.03	348112.85	39°27'11.2409"N	80°17'2.6319"W	8455.03	0.83	-0.19	-0.81		
16295.00	89.570	134.740	7547.18	8468.68	-6809.49	5167.32	1778667.03	348045.93	39°27'10.5852"N	80°17'1.7830"W	8548.12	0.32	0.10	-0.31		
16390.00	88.980	135.370	7548.38	8563.68	-6876.73	5234.43	1778733.53	347978.10	39°27'9.9205"N	80°17'0.9278"W	8642.26	0.91	-0.62	0.66		
16484.00	88.340	132.950	7550.58	8657.63	-6942.19	5301.84	1778800.35	347912.04	39°27'9.2734"N	80°17'0.0686"W	8735.19	2.66	-0.68	-2.57		
16579.00	89.020	135.040	7552.77	8752.59	-7008.16	5370.16	1778868.08	347845.47	39°27'8.6213"N	80°16'59.1978"W	8829.09	2.31	0.72	2.20		
16673.00	88.950	134.400	7554.43	8846.57	-7074.29	5436.94	1778934.26	347778.75	39°27'7.9675"N	80°16'58.3466"W	8922.21	0.68	-0.07	-0.68		
16768.00	88.830	134.410	7556.27	8941.55	-7140.75	5504.80	1779001.52	347711.69	39°27'7.3105"N	80°16'57.4818"W	9016.27	1.13	-0.13	0.01		
16862.00	88.920	134.720	7558.12	9035.53	-7206.70	5571.75	1779067.88	347645.15	39°27'6.6586"N	80°16'56.6284"W	9109.39	0.34	0.10	0.33		
16957.00	88.890	134.410	7559.93	9130.51	-7273.35	5639.43	1779134.95	347577.90	39°27'5.9997"N	80°16'55.7659"W	9203.52	0.33	-0.03	-0.33		
17051.00	88.950	134.910	7561.70	9224.49	-7339.41	5706.27	1779201.20	347511.25	39°27'5.3466"N	80°16'54.9139"W	9296.69	0.54	0.06	0.53		
17146.00	88.830	134.540	7563.54	9319.47	-7406.25	5773.76	1779268.08	347444.82	39°27'4.6859"N	80°16'54.0538"W	9390.89	0.41	-0.13	-0.39		
17240.00	88.950	134.620	7565.37	9413.45	-7472.21	5840.70	1779334.43	347377.26	39°27'4.0338"N	80°16'53.2007"W	9484.08	0.15	0.13	0.09		
17335.00	88.280	135.210	7567.66	9508.42	-7539.27	5907.95	1779401.08	347309.61	39°27'3.3709"N	80°16'52.3435"W	9578.34	0.94	-0.71	0.62		
17430.00	88.680	134.790	7570.18	9603.39	-7606.42	5975.10	1779467.62	347241.86	39°27'2.7070"N	80°16'51.4877"W	9672.62	0.61	0.42	-0.44		
17525.00	88.800	134.190	7572.27	9698.36	-7672.98	6042.86	1779534.77	347174.71	39°27'2.0491"N	80°16'50.6242"W	9766.82	0.64	0.13	-0.63		
17619.00	88.340	135.230	7574.62	9792.33	-7739.09	6109.64	1779600.96	347108.01	39°27'1.3955"N	80°16'49.7731"W	9860.08	1.21	-0.49	1.11		
17714.00	89.380	134.860	7576.51	9887.31	-7806.30	6176.75	1779667.46	347040.20	39°27'0.7311"N	80°16'48.9178"W	9954.42	1.16	1.09	-0.39		
17809.00	89.510	134.590	7577.43	9982.30	-7873.15	6244.24	1779734.35	346972.76	39°27'0.0702"N	80°16'48.0577"W	10048.73	0.32	0.14	-0.28		
17904.00	89.510	134.950	7578.24	10077.30	-7940.05	6311.68	1779801.19	346905.26	39°26'59.4088"N	80°16'47.1982"W	10143.07	0.38	0.00	0.38		
17999.00	89.480	134.960	7579.08	10172.29	-8007.17	6378.91	1779867.81	346837.55	39°26'58.7455"N	80°16'46.3414"W	10237.45	0.03	-0.03	0.01		
18093.00	89.450	134.620	7579.95	10266.29	-8073.39	6445.62	1779933.92	346770.74	39°26'58.0906"N	80°16'45.4913"W	10330.81	0.36	-0.03	-0.36		
18188.00	89.380	134.930	7580.92	10361.28	-8140.30	6513.05	1780000.75	346703.23	39°26'57.4292"N	80°16'44.6319"W	10425.18	0.33	-0.07	0.33		
18283.00	89.480	134.780	7581.87	10456.28	-8207.30	6580.39	1780067.49	346635.64	39°26'56.7668"N	80°16'43.7736"W	10519.57	0.19	0.11	-0.16		
18377.00	89.380	134.590	7582.80	10550.27	-8273.40	6647.22	1780133.72	346568.95	39°26'56.1133"N	80°16'42.9220"W	10612.95	0.23	-0.11	-0.20		
18471.00	89.510	135.200	7583.71	10644.27	-8339.74	6713.81	1780199.71	346502.02	39°26'55.4575"N	80°16'42.0734"W	10706.38	0.66	0.14	0.65		
18566.00	89.970	135.470	7584.15	10739.27	-8407.31	6780.59	1780265.88	346433.86	39°26'54.7895"N	80°16'41.2223"W	10800.89	0.56	0.48	0.28		
18660.00	89.910	137.710	7584.24	10833.22	-8475.59	6845.18	1780332.96	346365.01	39°26'54.1145"N	80°16'40.3992"W	10894.59	2.38	-0.06	2.38		
18755.00	90.000	137.980	7584.32	10928.10	-8546.02	6908.94	1780399.28	346294.02	39°26'53.4182"N	80°16'39.5867"W	10989.44	141.074	0.30	0.09	0.28	Deepest TVD at 7584.32' TVD
18850.00	90.120	135.100	7584.22	11023.06	-8614.97	6974.28	1780467.47	346224.50	39°26'52.7366"N	80°16'38.7540"W	11084.14	141.008	3.03	0.13	-3.03	
18945.00	90.180	134.660	7583.97	11118.06	-8682.00	7041.60	1780524.41	346156.87	39°26'52.0739"N	80°16'37.8962"W	11178.60	140.956	0.47	0.06	-0.46	



Actual Wellpath Report

Crim South Unit 9H ST01 AWP Proj: 19651'

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REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Well	Crim South Unit 9H ST01
Field	Marion	API	47-049-02487-0001
Facility	Crim Pad	Wellbore	Crim South Unit 9H ST01 AWB
Slot	Slot #09	Sidetrack from	Crim South Unit 9H AWP Proj: 12466' at 12223.00 MD

WELLPATH DATA (218 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [ft]	Grid North [ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	Comments
19040.00	90.310	134.990	7583.56	11213.06	-8748.97	7108.97	1780591.18	346089.30	39°28'51.4118"N	80°16'37.0375"W	11273.06	140.904	0.37	0.14	0.35	
19134.00	90.310	134.810	7583.06	11307.06	-8815.32	7175.56	1780657.16	346022.37	39°28'50.7559"N	80°16'36.1890"W	11366.55	140.855	0.19	0.00	-0.19	
19227.00	90.150	135.610	7582.68	11400.05	-8881.32	7241.08	1780722.09	345955.79	39°28'50.1034"N	80°16'35.3541"W	11459.10	140.809	0.88	-0.17	0.88	
19322.00	91.140	135.550	7581.61	11495.04	-8949.17	7307.56	1780787.96	345887.35	39°28'49.4326"N	80°16'34.5068"W	11553.70	140.766	1.04	1.04	-0.06	
19416.00	90.620	132.320	7580.17	11589.00	-9014.37	7375.24	1780855.05	345821.55	39°28'48.7880"N	80°16'33.6444"W	11647.02	140.711	3.48	-0.55	-3.44	
19511.00	90.650	134.870	7579.12	11683.96	-9079.87	7444.03	1780923.25	345755.44	39°28'48.1405"N	80°16'32.7678"W	11741.28	140.654	2.68	0.03	2.68	
19605.00	91.720	134.740	7577.17	11777.94	-9146.10	7510.71	1780989.33	345688.63	39°28'47.4857"N	80°16'31.9180"W	11834.77	140.607	1.15	1.14	-0.14	Last MWD Survey at 19605' MD
19651.00	91.720	134.740	7575.79	11823.92	-9178.46	7543.37	1781021.70	345655.98	39°26'47.1657"N	80°16'31.5019"W	11880.51	140.585	0.00	0.00	0.00	Projected MD at TD [ST01]: 19651'MD

HOLE & CASING SECTIONS - Ref Wellbore: Crim South Unit 9H ST01 AWB Ref Wellpath: Crim South Unit 9H ST01 AWP Proj: 19651'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]
24in Conductor	26.00	102.00	76.00	26.00	102.00	0.00	0.00	0.00	0.42
17.5in Open Hole	102.00	550.00	448.00	102.00	549.99	0.07	0.42	0.42	1.18
13.375in Casing Surface	26.00	550.00	524.00	26.00	549.99	0.00	0.00	0.00	1.18
12.25in Open Hole	550.00	3200.00	2650.00	549.99	3159.54	0.35	1.18	1.18	-371.46
9.625in Casing Intermediate	26.00	3200.00	3174.00	26.00	3159.54	0.00	0.00	0.00	-371.46
8.75in Open Hole	3200.00	6599.00	3399.00	3159.54	6488.06	-141.82	-141.82	-371.46	-1005.73
8.5in Open Hole	6599.00	12223.00	5624.00	6488.06	7539.22	-400.93	-400.93	-1005.73	-3947.76
8.5in Open Hole	12223.00	19651.00	7428.00	7539.22	7575.79	-3947.76	-3947.76	2278.72	7543.37
5.5in Casing Production	26.00	19651.00	19625.00	26.00	7575.79	0.00	0.00	0.00	7543.37



Actual Wellpath Report

Crim South Unit 9H ST01 AWP Proj: 19651'

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REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Well	Crim South Unit 9H ST01
Field	Marion	API	47-049-02487-0001
Facility	Crim Pad	Wellbore	Crim South Unit 9H ST01 AWB
Slot	Slot #09	Sidetrack from	Crim South Unit 9H AWP Proj: 12466' at 12223.00 MD

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Crim South Unit 9H - BHL - Rev-1	7542.00	-9456.09	7815.94	1781291.77	345375.94	39°26'44.4210"N	80°16'28.0284"W	point
Crim South Unit 9H - LP - Rev-1	7542.00	-965.06	-677.37	1772875.09	353941.97	39°28'8.3533"N	80°18'16.2940"W	point

WELLPATH COMPOSITION - Ref Wellbore: Crim South Unit 9H ST01 AWB Ref Wellpath: Crim South Unit 9H ST01 AWP Proj: 19651'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	476.00	BH Generic gyro - northseeking (Standard)	01_Javins Gyro <17-1/2'> (50'-450')	Crim South Unit 9H AWB	
476.00	3157.00	OWSG MWD rev2 + HRGM	02_Javins MWD Surveys <12-1/4'> (450'-3131')	Crim South Unit 9H AWB	
3157.00	5977.00	OWSG MWD rev2 + HRGM	03_Javins MWD Surveys <8-3/4'> (3131'-5951')	Crim South Unit 9H AWB	
5977.00	6579.00	OWSG MWD rev2 + HRGM	04_MS Guidance <8-3/4'> (5977'-6105'-6579')	Crim South Unit 9H AWB	
6579.00	12223.00	BH AutoTrak Curve (Short)	05_BH AT Curve <8-1/2'> (6579'-12413')	Crim South Unit 9H AWB	
12223.00	19651.00	BH AutoTrak Curve (Short)	06_BH AT Curve <8-1/2'> (12223'-12280'-19605')	Crim South Unit 9H ST01 AWB	



Actual Wellpath Report

Crim South Unit 9H ST01 AWP Proj: 19651'
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REFERENCE WELLPATH IDENTIFICATION

Operator	XTO ENERGY INC	Well	Crim South Unit 9H ST01
Field	Marion	API	47-049-02487-0001
Facility	Crim Pad	Wellbore	Crim South Unit 9H ST01 AWB
Slot	Slot #09	Sidetrack from	Crim South Unit 9H AWP Proj: 12466' at 12223.00 MD

COMMENTS

Wellpath general comments

API: 47-049-02487-0100
 BHI Job #: 1100058193B
 Rig: Patteron 579
 Duration: 09/01/2019-09/09/2019
 Javins Gyro <17-1/2">(50'-450')
 Javins MWD Surveys <12-1/4">(450')(550'-3131')
 Javins MWD Surveys <8-3/4">(3131')(3200'-5951')
 MS Guidance <8-3/4">(5977')(6105'-6579')
 BH AT Curve <8-1/2">(6579')(6648'-12413')
 Landing Pt. at 7705' MD
 Projected MD at TD [OPH]: 12466'MD
 BH AT Curve <8-1/2">(12223')(12280'-19605')
 Deepest TVD at 7584.32' TVD
 Last MWD Survey at 19605' MD
 Projected MD at TD [ST01]: 19651'MD