



Actual Wellpath Report

Crands Unit 8H AWP Proj: 20115'
Page 1 of 11



REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|----------------|----------|--------------------|
| Operator | XTO ENERGY INC | Well | Crands Unit 8H |
| Field | Marion | API | 47-049-02486-0000 |
| Facility | Crim Pad | Wellbore | Crands Unit 8H AWB |
| Slot | Slot #08 | | |

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 1:15:04 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 | 13.42 | -14.84 | 1773553.65 | 354907.66 | 39°28'17.9577"N | 80°18'7.7514"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 #08) | 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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| Field | Marion | API | 47-049-02486-0000 |
| Facility | Crims Pad | Wellbore | Crands Unit 8H AWB |
| Slot | Slot #08 | | |

WELLPATH DATA (223 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) | DLS (ft/100ft) | Build Rate (ft/100ft) | Turn Rate (ft/100ft) | Comments |
|---------|-----------------|-------------|----------|----------------|------------|-----------|----------------|-----------------|-----------------|----------------|-------------------|----------------|-----------------------|----------------------|-------------------------------|
| 0.00H | 0.000 | 146.600 | 0.00 | 0.00 | 0.00 | 0.00 | 1773553.65 | 354907.66 | 39°28'17.9577"N | 80°18'7.7514"W | 0.00 | 0.00 | 0.00 | 0.00 | |
| 26.00 | 0.000 | 146.600 | 26.00 | 0.00 | 0.00 | 0.00 | 1773553.65 | 354907.66 | 39°28'17.9577"N | 80°18'7.7514"W | 0.00 | 0.00 | 0.00 | 0.00 | |
| 76.00 | 0.280 | 146.600 | 76.00 | 0.12 | -0.10 | 0.07 | 1773553.72 | 354907.56 | 39°28'17.9567"N | 80°18'7.5066"W | 0.12 | 146.600 | 0.56 | 0.56 | Javins Gyro <17-1/2">(50-450) |
| 126.00 | 0.280 | 213.500 | 126.00 | 0.26 | -0.31 | 0.07 | 1773553.71 | 354907.35 | 39°28'17.9547"N | 80°18'7.5066"W | 0.31 | 167.631 | 0.62 | 0.00 | 133.80 |
| 176.00 | 0.330 | 53.600 | 176.00 | 0.31 | -0.32 | 0.12 | 1773553.76 | 354907.34 | 39°28'17.9545"N | 80°18'7.5000"W | 0.34 | 160.278 | 1.20 | 0.10 | -319.80 |
| 226.00 | 0.190 | 338.500 | 226.00 | 0.26 | -0.16 | 0.20 | 1773553.85 | 354907.50 | 39°28'17.9561"N | 80°18'7.4899"W | 0.26 | 128.465 | 0.67 | -0.28 | -150.20 |
| 276.00 | 0.110 | 220.800 | 276.00 | 0.18 | -0.12 | 0.14 | 1773553.79 | 354907.54 | 39°28'17.9566"N | 80°18'7.4979"W | 0.18 | 130.486 | 0.52 | -0.16 | -235.40 |
| 326.00 | 0.450 | 137.000 | 326.00 | 0.38 | -0.30 | 0.24 | 1773553.89 | 354907.36 | 39°28'17.9548"N | 80°18'7.4848"W | 0.38 | 141.018 | 0.90 | 0.68 | -167.60 |
| 376.00 | 0.680 | 106.500 | 376.00 | 0.84 | -0.53 | 0.66 | 1773554.31 | 354907.13 | 39°28'17.9525"N | 80°18'7.4300"W | 0.84 | 128.582 | 0.74 | 0.46 | -61.00 |
| 426.00 | 0.580 | 73.800 | 426.00 | 1.22 | -0.54 | 1.19 | 1773554.83 | 354907.11 | 39°28'17.9524"N | 80°18'7.3633"W | 1.30 | 114.464 | 0.73 | -0.20 | -65.40 |
| 476.00 | 0.550 | 45.100 | 476.00 | 1.34 | -0.30 | 1.60 | 1773555.25 | 354907.35 | 39°28'17.9548"N | 80°18'7.3100"W | 1.63 | 100.628 | 0.56 | -0.06 | -57.40 |
| 579.00 | 0.670 | 91.930 | 579.00 | 1.79 | 0.03 | 2.55 | 1773556.20 | 354907.67 | 39°28'17.9580"N | 80°18'7.1899"W | 2.55 | 89.365 | 0.48 | 0.12 | 45.47 |
| 674.00 | 0.770 | 98.220 | 674.00 | 2.70 | -0.08 | 3.74 | 1773557.39 | 354907.54 | 39°28'17.9569"N | 80°18'7.0388"W | 3.74 | 91.251 | 0.13 | 0.11 | 6.62 |
| 769.00 | 0.380 | 259.680 | 769.00 | 3.03 | -0.23 | 4.06 | 1773557.71 | 354907.39 | 39°28'17.9555"N | 80°18'7.6997"W | 4.07 | 93.233 | 1.20 | -0.41 | 169.96 |
| 863.00 | 1.260 | 268.390 | 863.00 | 2.15 | -0.31 | 2.72 | 1773556.37 | 354907.32 | 39°28'17.9546"N | 80°18'7.1677"W | 2.74 | 96.587 | 0.94 | 0.94 | 9.27 |
| 958.00 | 0.820 | 260.430 | 958.00 | 1.04 | -0.46 | 1.01 | 1773554.65 | 354907.19 | 39°28'17.9532"N | 80°18'7.7386"W | 1.11 | 114.385 | 0.49 | -0.46 | -8.38 |
| 1052.00 | 1.990 | 238.730 | 1052.00 | 0.26 | -1.42 | -1.05 | 1773552.59 | 354906.25 | 39°28'17.9437"N | 80°18'7.6487"W | 1.76 | 216.590 | 1.35 | 1.24 | -23.09 |
| 1147.00 | 5.930 | 229.720 | 1147.00 | -0.54 | -5.45 | -6.21 | 1773547.40 | 354902.27 | 39°28'17.9039"N | 80°18'7.8306"W | 8.26 | 228.734 | 4.19 | 4.15 | -9.48 |
| 1242.00 | 8.000 | 225.370 | 1242.00 | -0.99 | -13.26 | -14.66 | 1773538.88 | 354894.53 | 39°28'17.8266"N | 80°18'7.9363"W | 19.77 | 227.854 | 2.25 | 2.18 | -4.58 |
| 1336.00 | 8.900 | 223.140 | 1336.00 | -0.80 | -23.17 | -24.28 | 1773529.16 | 354884.71 | 39°28'17.7288"N | 80°18.8.0611"W | 33.56 | 226.350 | 1.02 | 0.96 | -2.37 |
| 1431.00 | 9.340 | 232.990 | 1431.00 | -1.63 | -33.17 | -35.46 | 1773517.89 | 354874.81 | 39°28'17.6299"N | 80°18.8.2037"W | 48.56 | 226.916 | 1.71 | 0.46 | 10.37 |
| 1525.00 | 9.680 | 237.590 | 1525.00 | -4.42 | -42.00 | -48.23 | 1773505.05 | 354866.10 | 39°28'17.5427"N | 80°18.8.3664"W | 63.95 | 228.951 | 0.89 | 0.36 | 4.89 |
| 1620.00 | 10.660 | 238.790 | 1620.00 | -8.26 | -50.83 | -62.49 | 1773490.72 | 354857.39 | 39°28'17.4554"N | 80°18.8.5482"W | 80.55 | 230.873 | 1.06 | 1.03 | 1.26 |
| 1714.00 | 10.980 | 237.120 | 1714.00 | -12.21 | -60.20 | -77.44 | 1773475.68 | 354848.16 | 39°28'17.3628"N | 80°18.8.7389"W | 98.08 | 232.142 | 0.48 | 0.34 | -1.78 |
| 1809.00 | 11.810 | 237.780 | 1809.00 | -16.26 | -70.29 | -93.26 | 1773459.77 | 354838.21 | 39°28'17.2630"N | 80°18.9.9407"W | 116.78 | 232.995 | 0.88 | 0.87 | 0.69 |
| 1903.00 | 11.620 | 234.800 | 1903.00 | -20.01 | -80.88 | -109.14 | 1773443.80 | 354827.77 | 39°28'17.1584"N | 80°18.9.1431"W | 135.84 | 233.460 | 0.67 | -0.20 | -3.17 |
| 1998.00 | 11.160 | 232.800 | 1998.00 | -22.89 | -91.95 | -124.28 | 1773428.56 | 354816.83 | 39°28'17.0489"N | 80°18.9.3362"W | 154.60 | 233.503 | 0.64 | -0.48 | -2.11 |
| 2093.00 | 10.210 | 231.740 | 2093.00 | -25.13 | -102.72 | -138.21 | 1773414.53 | 354806.16 | 39°28'16.9425"N | 80°18.9.5139"W | 172.20 | 233.380 | 1.02 | -1.00 | -1.12 |
| 2188.00 | 9.930 | 234.240 | 2188.00 | -27.43 | -112.72 | -151.47 | 1773401.19 | 354796.30 | 39°28'16.8436"N | 80°18.9.6829"W | 188.81 | 233.344 | 0.55 | -0.29 | 2.63 |
| 2282.00 | 10.050 | 235.740 | 2282.00 | -30.26 | -122.08 | -164.83 | 1773387.75 | 354787.07 | 39°28'16.7512"N | 80°18.9.8532"W | 205.11 | 233.475 | 0.30 | 0.13 | 1.60 |

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| Field | Marion | API | 47-049-02486-0000 |
| Facility | Crim Pad | Wellbore | Crands Unit 8H AWB |
| Slot | Slot #08 | | |

WELLPATH DATA (223 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/100ft | ft/100ft | ft/100ft | |
| 2377.00 | 10.640 | 237.710 | 2357.52 | -33.74 | -131.43 | -179.09 | 1773373.40 | 354777.84 | 39°28'16.6588"N | 80°18'10.0351"W | 222.14 | 233.727 | 0.72 | 0.62 | 2.07 | |
| 2472.00 | 10.960 | 235.460 | 2450.83 | -37.31 | -141.23 | -193.94 | 1773358.46 | 354768.17 | 39°28'16.5619"N | 80°18'10.2245"W | 239.92 | 233.937 | 0.56 | 0.34 | -2.37 | |
| 2566.00 | 10.410 | 233.850 | 2543.20 | -40.25 | -151.31 | -208.16 | 1773344.16 | 354758.22 | 39°28'16.4623"N | 80°18'10.4058"W | 257.34 | 233.987 | 0.67 | -0.59 | -1.71 | |
| 2661.00 | 10.290 | 231.980 | 2636.66 | -42.60 | -161.60 | -221.78 | 1773330.45 | 354748.06 | 39°28'16.3606"N | 80°18'10.5794"W | 274.41 | 233.921 | 0.38 | -0.13 | -1.97 | |
| 2756.00 | 9.880 | 232.230 | 2730.19 | -44.66 | -171.82 | -234.90 | 1773317.23 | 354737.96 | 39°28'16.2596"N | 80°18'10.7468"W | 291.03 | 233.817 | 0.43 | -0.43 | 0.26 | |
| 2850.00 | 9.780 | 233.100 | 2822.81 | -46.80 | -181.55 | -247.66 | 1773304.39 | 354728.34 | 39°28'16.1634"N | 80°18'10.9095"W | 307.08 | 233.757 | 0.19 | -0.11 | 0.93 | |
| 2945.00 | 10.130 | 231.560 | 2916.38 | -48.90 | -191.59 | -260.66 | 1773291.31 | 354718.42 | 39°28'16.0642"N | 80°18'11.0752"W | 323.50 | 233.684 | 0.46 | 0.37 | -1.62 | |
| 3039.00 | 9.570 | 234.420 | 3008.99 | -51.12 | -201.27 | -273.49 | 1773278.39 | 354708.85 | 39°28'15.9684"N | 80°18'11.2388"W | 339.57 | 233.649 | 0.79 | -0.60 | 3.04 | |
| 3134.00 | 9.360 | 235.210 | 3102.70 | -53.79 | -210.28 | -286.26 | 1773265.54 | 354699.96 | 39°28'15.8795"N | 80°18'11.4016"W | 355.19 | 233.700 | 0.26 | -0.22 | 0.83 | |
| 3170.00 | 9.210 | 236.700 | 3138.23 | -54.89 | -213.53 | -291.07 | 1773252.70 | 354690.75 | 39°28'15.8473"N | 80°18'11.4630"W | 360.99 | 233.736 | 0.79 | -0.42 | 4.14 | |
| 3261.00 | 11.560 | 236.700 | 3227.73 | -58.22 | -222.53 | -304.78 | 1773246.91 | 354687.87 | 39°28'15.7583"N | 80°18'11.6378"W | 377.37 | 233.865 | 2.58 | 2.58 | 0.00 | Javins MWD Surveys <8-3/4">(3144')(3235'-5544') |
| 3356.00 | 14.010 | 237.600 | 3320.37 | -62.66 | -233.92 | -322.45 | 1773229.15 | 354676.64 | 39°28'15.6457"N | 80°18'11.8631"W | 398.36 | 234.040 | 2.59 | 2.58 | 0.95 | |
| 3451.00 | 18.290 | 239.910 | 3411.60 | -69.01 | -247.57 | -345.06 | 1773206.41 | 354663.20 | 39°28'15.5109"N | 80°18'12.1515"W | 424.69 | 234.343 | 4.55 | 4.51 | 2.43 | |
| 3546.00 | 23.850 | 240.150 | 3500.21 | -77.88 | -264.61 | -374.64 | 1773176.68 | 354646.42 | 39°28'15.3424"N | 80°18'12.5287"W | 458.87 | 234.766 | 5.85 | 5.85 | 0.25 | |
| 3643.00 | 24.200 | 236.500 | 3588.82 | -86.98 | -285.35 | -408.23 | 1773142.91 | 354625.99 | 39°28'15.1375"N | 80°18'12.9570"W | 498.07 | 235.047 | 1.57 | 0.36 | -3.76 | |
| 3738.00 | 24.580 | 235.210 | 3675.34 | -94.37 | -307.37 | -440.70 | 1773110.25 | 354604.26 | 39°28'14.9198"N | 80°18'13.3710"W | 537.30 | 235.106 | 0.69 | 0.40 | -1.36 | |
| 3833.00 | 24.610 | 234.310 | 3761.72 | -101.08 | -330.18 | -472.99 | 1773077.76 | 354581.73 | 39°28'14.6944"N | 80°18'13.7827"W | 576.84 | 235.082 | 0.40 | 0.03 | -0.95 | |
| 3927.00 | 23.960 | 234.960 | 3847.40 | -107.55 | -352.56 | -504.51 | 1773046.04 | 354559.64 | 39°28'14.4732"N | 80°18'14.1847"W | 615.49 | 235.054 | 0.75 | -0.69 | 0.69 | |
| 4022.00 | 23.710 | 234.760 | 3934.30 | -114.13 | -374.66 | -535.91 | 1773014.45 | 354537.83 | 39°28'14.2548"N | 80°18'14.5850"W | 653.88 | 235.042 | 0.28 | -0.26 | -0.21 | |
| 4116.00 | 23.090 | 233.920 | 4020.57 | -120.20 | -396.42 | -566.24 | 1772983.93 | 354516.34 | 39°28'14.0397"N | 80°18'14.9718"W | 691.21 | 235.005 | 0.75 | -0.66 | -0.89 | |
| 4211.00 | 22.010 | 233.350 | 4108.30 | -125.68 | -418.01 | -595.58 | 1772954.40 | 354495.01 | 39°28'13.8263"N | 80°18'15.3459"W | 727.63 | 234.936 | 1.16 | -1.14 | -0.60 | |
| 4306.00 | 21.780 | 233.800 | 4196.45 | -130.97 | -439.05 | -624.08 | 1772925.71 | 354474.23 | 39°28'13.6184"N | 80°18'15.7093"W | 763.05 | 234.873 | 0.30 | -0.24 | 0.47 | |
| 4400.00 | 21.840 | 234.200 | 4283.72 | -136.44 | -459.58 | -652.34 | 1772897.27 | 354453.95 | 39°28'13.4155"N | 80°18'16.0696"W | 797.97 | 234.835 | 0.17 | 0.06 | 0.43 | |
| 4495.00 | 21.890 | 235.670 | 4371.89 | -142.55 | -479.90 | -681.29 | 1772868.14 | 354433.89 | 39°28'13.2146"N | 80°18'16.4388"W | 833.35 | 234.839 | 0.58 | 0.05 | 1.55 | |
| 4589.00 | 22.360 | 236.950 | 4458.97 | -149.50 | -499.53 | -710.75 | 1772838.51 | 354414.52 | 39°28'13.0205"N | 80°18'16.8145"W | 868.73 | 234.899 | 0.72 | 0.50 | 1.36 | |
| 4685.00 | 21.930 | 235.790 | 4547.89 | -156.65 | -519.57 | -740.88 | 1772808.20 | 354394.75 | 39°28'12.8225"N | 80°18'17.1987"W | 904.91 | 234.958 | 0.64 | -0.45 | -1.21 | |
| 4782.00 | 22.220 | 235.300 | 4637.77 | -163.32 | -540.20 | -770.94 | 1772777.96 | 354374.40 | 39°28'12.6186"N | 80°18'17.5819"W | 941.36 | 234.981 | 0.35 | 0.30 | -0.51 | |
| 4878.00 | 22.470 | 235.730 | 4726.57 | -169.99 | -560.86 | -801.02 | 1772747.70 | 354354.01 | 39°28'12.4144"N | 80°18'17.9655"W | 977.86 | 235.001 | 0.31 | 0.26 | 0.45 | |
| 4971.00 | 22.700 | 235.650 | 4812.43 | -176.62 | -580.99 | -830.53 | 1772718.02 | 354334.14 | 39°28'12.2154"N | 80°18'18.3417"W | 1013.57 | 235.025 | 0.25 | 0.25 | -0.09 | |
| 5066.00 | 23.360 | 235.810 | 4899.86 | -183.55 | -601.92 | -861.24 | 1772687.12 | 354313.49 | 39°28'12.0086"N | 80°18'18.7333"W | 1050.73 | 235.050 | 0.70 | 0.69 | 0.17 | |

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| Field | Marion | API | 47-049-02486-0000 |
| Facility | Crim Pad | Wellbore | Crands Unit 8H AWB |
| Slot | Slot #08 | | |

WELLPATH DATA (223 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 (ft/100ft) | Build Rate (ft/100ft) | Turn Rate (ft/100ft) | Comments |
|---------|-----------------|-------------|----------|----------------|------------|-----------|----------------|-----------------|----------------|----------------|-------------------|-----------------|----------------|-----------------------|----------------------|--|
| 5162.00 | 22.710 | 235.000 | 4988.21 | -190.34 | -623.24 | -892.16 | 1772656.01 | 354292.44 | 39°28'11.797"N | 80°18'19.127"W | 1088.30 | 235.063 | 0.75 | -0.68 | -0.84 | |
| 5256.00 | 23.560 | 235.710 | 5074.65 | -196.99 | -644.24 | -922.55 | 1772625.44 | 354271.72 | 39°28'11.590"N | 80°18'19.515"W | 1125.23 | 235.073 | 0.95 | 0.90 | 0.76 | |
| 5350.00 | 23.310 | 235.230 | 5160.89 | -203.79 | -665.43 | -953.35 | 1772594.45 | 354250.81 | 39°28'11.380"N | 80°18'19.907"W | 1162.61 | 235.085 | 0.33 | -0.27 | -0.51 | |
| 5444.00 | 22.610 | 233.280 | 5247.45 | -209.70 | -686.84 | -983.11 | 1772564.50 | 354229.67 | 39°28'11.169"N | 80°18'20.287"W | 1199.27 | 235.060 | 1.10 | -0.74 | -2.07 | |
| 5539.00 | 22.310 | 235.620 | 5335.24 | -215.66 | -707.94 | -1012.63 | 1772534.80 | 354208.82 | 39°28'10.967"N | 80°18'20.663"W | 1235.55 | 235.042 | 0.99 | -0.32 | 2.46 | |
| 5570.00 | 22.220 | 235.460 | 5363.93 | -217.81 | -714.58 | -1022.31 | 1772525.06 | 354202.27 | 39°28'10.895"N | 80°18'20.787"W | 1247.30 | 235.047 | 0.35 | -0.29 | -0.52 | |
| 5610.00 | 22.420 | 234.170 | 5400.94 | -220.40 | -723.34 | -1034.73 | 1772512.56 | 354193.63 | 39°28'10.808"N | 80°18'20.945"W | 1262.49 | 235.044 | 1.32 | 0.50 | -3.23 | BH AT Curve <8-1/2">(5670)(5610-20090) |
| 5699.00 | 23.000 | 238.180 | 5483.04 | -227.08 | -742.44 | -1063.27 | 1772483.86 | 354174.78 | 39°28'10.619"N | 80°18'21.309"W | 1296.82 | 235.075 | 1.86 | 0.65 | 4.51 | |
| 5793.00 | 22.970 | 236.020 | 5569.58 | -234.78 | -762.38 | -1094.08 | 1772452.87 | 354155.13 | 39°28'10.422"N | 80°18'21.702"W | 1333.50 | 235.130 | 0.90 | -0.03 | -2.30 | |
| 5888.00 | 22.840 | 233.320 | 5657.09 | -241.00 | -783.75 | -1124.24 | 1772422.52 | 354134.02 | 39°28'10.211"N | 80°18'22.068"W | 1370.47 | 235.118 | 1.11 | -0.14 | -2.84 | |
| 5983.00 | 22.770 | 234.560 | 5744.66 | -246.72 | -805.42 | -1154.00 | 1772392.57 | 354112.62 | 39°28'9.997"N | 80°18'22.466"W | 1407.28 | 235.087 | 0.51 | -0.07 | 1.31 | |
| 6077.00 | 22.850 | 236.450 | 5831.31 | -253.38 | -826.06 | -1184.03 | 1772362.36 | 354092.25 | 39°28'9.793"N | 80°18'22.849"W | 1443.71 | 235.098 | 0.78 | 0.09 | 2.01 | |
| 6172.00 | 22.680 | 235.130 | 5918.91 | -260.26 | -846.72 | -1214.43 | 1772331.77 | 354071.86 | 39°28'9.589"N | 80°18'23.236"W | 1480.47 | 235.115 | 0.57 | -0.18 | -1.39 | |
| 6267.00 | 21.680 | 235.950 | 6006.88 | -266.83 | -867.02 | -1244.00 | 1772302.03 | 354051.83 | 39°28'9.388"N | 80°18'23.613"W | 1516.33 | 235.125 | 1.10 | -1.05 | 0.86 | |
| 6362.00 | 22.580 | 236.380 | 6094.88 | -273.76 | -886.95 | -1273.73 | 1772272.13 | 354032.17 | 39°28'9.194"N | 80°18'23.992"W | 1552.11 | 235.149 | 0.96 | 0.95 | 0.45 | |
| 6456.00 | 22.910 | 235.730 | 6181.57 | -280.74 | -907.24 | -1303.88 | 1772241.80 | 354012.15 | 39°28'8.908"N | 80°18'24.377"W | 1588.45 | 235.170 | 0.44 | 0.35 | -0.69 | |
| 6550.00 | 22.750 | 236.150 | 6268.21 | -287.66 | -927.67 | -1334.09 | 1772211.41 | 353992.00 | 39°28'8.789"N | 80°18'24.762"W | 1624.92 | 235.187 | 0.24 | -0.17 | 0.45 | |
| 6645.00 | 22.930 | 234.570 | 6355.76 | -294.30 | -948.63 | -1364.43 | 1772180.89 | 353971.31 | 39°28'8.581"N | 80°18'25.149"W | 1661.79 | 235.191 | 0.67 | 0.19 | -1.66 | |
| 6739.00 | 22.900 | 233.690 | 6442.34 | -300.11 | -970.07 | -1394.08 | 1772151.04 | 353950.13 | 39°28'8.369"N | 80°18'25.527"W | 1698.38 | 235.168 | 0.37 | -0.03 | -0.94 | |
| 6833.00 | 22.710 | 234.510 | 6529.00 | -305.88 | -991.44 | -1423.60 | 1772121.34 | 353929.03 | 39°28'8.156"N | 80°18'25.903"W | 1734.81 | 235.145 | 0.39 | -0.20 | 0.87 | |
| 6928.00 | 22.620 | 234.040 | 6616.66 | -311.79 | -1012.81 | -1453.32 | 1772091.43 | 353907.92 | 39°28'7.947"N | 80°18'26.282"W | 1771.41 | 235.127 | 0.21 | -0.09 | -0.49 | |
| 7023.00 | 23.210 | 233.680 | 6704.16 | -317.49 | -1034.63 | -1483.19 | 1772061.37 | 353886.38 | 39°28'7.731"N | 80°18'26.663"W | 1808.40 | 235.102 | 0.64 | 0.62 | -0.38 | |
| 7117.00 | 23.200 | 234.700 | 6790.56 | -323.41 | -1056.30 | -1513.22 | 1772031.15 | 353864.98 | 39°28'7.517"N | 80°18'27.046"W | 1845.43 | 235.083 | 0.43 | -0.01 | 1.09 | |
| 7212.00 | 23.410 | 234.680 | 6877.81 | -329.74 | -1078.02 | -1543.89 | 1772000.28 | 353843.53 | 39°28'7.307"N | 80°18'27.437"W | 1883.01 | 235.075 | 0.22 | 0.22 | -0.02 | |
| 7307.00 | 22.760 | 225.410 | 6965.23 | -333.06 | -1101.84 | -1572.39 | 1771971.58 | 353819.97 | 39°28'7.067"N | 80°18'27.801"W | 1920.01 | 234.979 | 3.88 | -0.68 | -9.76 | |
| 7401.00 | 22.650 | 193.690 | 7052.27 | -323.75 | -1132.30 | -1589.68 | 1771954.01 | 353799.66 | 39°28'6.766"N | 80°18'28.021"W | 1951.72 | 234.538 | 12.88 | -0.12 | -33.74 | |
| 7495.00 | 26.950 | 172.030 | 7137.76 | -297.28 | -1171.08 | -1591.02 | 1771952.33 | 353780.90 | 39°28'6.382"N | 80°18'28.038"W | 1975.54 | 233.645 | 10.62 | 4.57 | -23.04 | |
| 7590.00 | 34.850 | 166.760 | 7219.22 | -256.95 | -1218.91 | -1581.80 | 1771961.12 | 353762.99 | 39°28'5.910"N | 80°18'27.920"W | 1996.96 | 232.383 | 8.78 | 8.32 | -5.55 | |
| 7685.00 | 41.610 | 156.720 | 7293.88 | -204.46 | -1274.42 | -1563.08 | 1771979.35 | 353664.73 | 39°28'5.361"N | 80°18'27.682"W | 2016.77 | 230.809 | 9.65 | 7.12 | -10.57 | |
| 7779.00 | 48.420 | 146.730 | 7360.37 | -140.89 | -1332.63 | -1531.38 | 1772010.52 | 353588.83 | 39°28'4.786"N | 80°18'27.279"W | 2030.03 | 228.970 | 10.42 | 7.24 | -10.63 | |

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Actual Wellpath Report

Crands Unit 8H AWP Proj: 20115'

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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|----------------|----------|--------------------|
| Operator | XTO ENERGY INC | Well | Crands Unit 8H |
| Field | Marion | API | 47-049-02486-0000 |
| Facility | Crim Pad | Wellbore | Crands Unit 8H AWB |
| Slot | Slot #08 | | |

WELLPATH DATA (223 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/100ft) | (ft/100ft) | (°/100ft) | |
| 7872.00 | 57.570 | 138.690 | 7416.35 | -67.43 | -1391.38 | -1486.24 | 1772055.13 | 353529.69 | 39°28'4.2057"N | 80°18'26.7023"W | 2035.89 | 226.888 | 12.01 | 9.84 | -8.65 | |
| 7967.00 | 64.110 | 137.520 | 7462.61 | 15.36 | -1453.08 | -1430.86 | 1772109.96 | 353467.50 | 39°28'3.5959"N | 80°18'25.9961"W | 2039.31 | 224.559 | 6.97 | 6.88 | -1.23 | |
| 8010.00† | 67.661 | 138.486 | 7480.18 | 54.54 | -1482.25 | -1404.61 | 1772135.95 | 353438.10 | 39°28'3.3077"N | 80°18'25.6613"W | 2042.05 | 223.459 | 8.51 | 8.28 | 2.25 | Landing Pt. at 8010' MD |
| 8061.00 | 71.880 | 139.570 | 7497.81 | 102.27 | -1518.37 | -1373.24 | 1772166.99 | 353401.70 | 39°28'2.9507"N | 80°18'25.2614"W | 2047.25 | 222.127 | 8.51 | 8.27 | 2.13 | |
| 8156.00 | 81.410 | 140.280 | 7519.73 | 194.25 | -1589.03 | -1313.81 | 1772225.78 | 353330.52 | 39°28'2.2524"N | 80°18'24.5036"W | 2061.82 | 219.584 | 10.06 | 10.03 | 0.75 | |
| 8250.00 | 89.820 | 133.150 | 7526.92 | 287.79 | -1657.12 | -1249.63 | 1772289.35 | 353261.85 | 39°28'1.5794"N | 80°18'23.6851"W | 2075.48 | 217.020 | 11.71 | 8.95 | -7.59 | |
| 8345.00 | 89.820 | 133.880 | 7527.22 | 382.75 | -1722.54 | -1180.73 | 1772357.65 | 353195.83 | 39°28'0.9329"N | 80°18'22.8066"W | 2088.36 | 214.429 | 0.77 | 0.00 | 0.77 | |
| 8439.00 | 89.970 | 134.230 | 7527.39 | 476.74 | -1787.90 | -1113.18 | 1772424.62 | 353129.88 | 39°28'0.2870"N | 80°18'21.9452"W | 2106.12 | 211.907 | 0.41 | 0.16 | 0.37 | |
| 8533.00 | 90.150 | 135.250 | 7527.29 | 570.74 | -1854.06 | -1046.41 | 1772490.79 | 353063.12 | 39°27'59.6330"N | 80°18'21.0939"W | 2128.97 | 209.440 | 1.10 | 0.19 | 1.09 | |
| 8627.00 | 90.950 | 136.810 | 7526.39 | 664.71 | -1921.71 | -981.15 | 1772555.43 | 352994.90 | 39°27'58.9645"N | 80°18'20.2618"W | 2157.69 | 207.047 | 1.86 | 0.85 | 1.66 | |
| 8722.00 | 88.430 | 136.000 | 7526.90 | 759.68 | -1990.50 | -915.65 | 1772620.31 | 352925.53 | 39°27'58.2846"N | 80°18'19.4265"W | 2191.01 | 204.703 | 2.79 | -2.65 | -0.85 | |
| 8817.00 | 89.080 | 134.960 | 7528.97 | 854.65 | -2058.22 | -849.06 | 1772686.30 | 352857.22 | 39°27'57.6153"N | 80°18'19.5774"W | 2226.47 | 202.417 | 1.29 | 0.68 | -1.09 | |
| 8911.00 | 90.490 | 134.320 | 7529.32 | 948.64 | -2124.27 | -782.18 | 1772752.58 | 352790.58 | 39°27'56.9626"N | 80°18'17.7246"W | 2263.70 | 200.214 | 1.65 | 1.50 | -0.68 | |
| 9005.00 | 90.090 | 134.680 | 7528.84 | 1042.64 | -2190.15 | -715.13 | 1772819.03 | 352724.11 | 39°27'56.3114"N | 80°18'16.8697"W | 2303.95 | 198.083 | 0.57 | -0.43 | 0.38 | |
| 9100.00 | 90.000 | 134.960 | 7528.77 | 1137.84 | -2257.12 | -647.75 | 1772885.81 | 352656.55 | 39°27'55.6496"N | 80°18'16.0105"W | 2348.22 | 196.012 | 0.31 | -0.09 | 0.29 | |
| 9193.00 | 89.910 | 135.030 | 7528.84 | 1230.64 | -2322.87 | -581.98 | 1772950.99 | 352590.21 | 39°27'54.9998"N | 80°18'15.1719"W | 2394.67 | 194.066 | 0.12 | -0.10 | 0.08 | |
| 9288.00 | 89.940 | 134.210 | 7528.97 | 1325.63 | -2389.60 | -514.36 | 1773018.00 | 352522.89 | 39°27'54.3403"N | 80°18'14.3098"W | 2444.33 | 192.148 | 0.86 | 0.03 | -0.86 | |
| 9383.00 | 90.550 | 135.420 | 7528.56 | 1420.63 | -2456.56 | -446.97 | 1773084.79 | 352455.34 | 39°27'53.6785"N | 80°18'13.4505"W | 2496.89 | 190.312 | 1.43 | 0.64 | 1.27 | |
| 9477.00 | 90.620 | 135.480 | 7527.60 | 1514.62 | -2523.54 | -381.03 | 1773150.12 | 352387.77 | 39°27'53.0165"N | 80°18'12.6097"W | 2552.14 | 188.586 | 0.10 | 0.07 | 0.06 | |
| 9572.00 | 90.430 | 134.260 | 7526.73 | 1609.62 | -2590.56 | -313.71 | 1773216.84 | 352320.16 | 39°27'52.3541"N | 80°18'11.7513"W | 2609.48 | 186.905 | 1.30 | -0.20 | -1.28 | |
| 9667.00 | 89.850 | 133.870 | 7526.50 | 1704.60 | -2656.63 | -245.45 | 1773284.51 | 352253.48 | 39°27'51.7012"N | 80°18'10.8810"W | 2667.94 | 185.279 | 0.74 | -0.61 | -0.41 | |
| 9761.00 | 89.910 | 133.450 | 7526.69 | 1798.58 | -2721.52 | -177.44 | 1773351.93 | 352187.99 | 39°27'51.0598"N | 80°18'10.0139"W | 2727.30 | 183.730 | 0.45 | 0.06 | -0.45 | |
| 9856.00 | 89.510 | 133.590 | 7527.17 | 1893.55 | -2786.94 | -108.56 | 1773420.22 | 352121.96 | 39°27'50.4132"N | 80°18'9.1356"W | 2789.05 | 182.231 | 0.45 | -0.42 | 0.15 | |
| 9950.00 | 90.680 | 132.890 | 7527.02 | 1987.50 | -2851.33 | -40.08 | 1773488.12 | 352056.96 | 39°27'49.7688"N | 80°18'8.2625"W | 2851.61 | 180.805 | 1.45 | 1.24 | -0.74 | |
| 10045.00 | 89.510 | 132.760 | 7526.86 | 2082.43 | -2915.91 | 29.59 | 1773557.21 | 351991.77 | 39°27'49.1386"N | 80°18'7.3741"W | 2916.06 | 179.419 | 1.24 | -1.23 | -0.14 | |
| 10139.00 | 89.970 | 136.370 | 7527.29 | 2176.41 | -2981.86 | 96.55 | 1773623.57 | 351925.23 | 39°27'48.4868"N | 80°18'6.5204"W | 2983.42 | 178.145 | 3.87 | 0.49 | 3.84 | |
| 10234.00 | 89.350 | 134.580 | 7527.85 | 2271.40 | -3049.58 | 163.16 | 1773689.57 | 351856.92 | 39°27'47.8174"N | 80°18'5.6711"W | 3053.95 | 176.937 | 1.99 | -0.65 | -1.88 | |
| 10328.00 | 89.970 | 134.920 | 7528.41 | 2365.40 | -3115.76 | 229.92 | 1773755.73 | 351790.15 | 39°27'47.1634"N | 80°18'4.8200"W | 3124.23 | 175.780 | 0.75 | 0.66 | 0.36 | |
| 10422.00 | 90.150 | 134.930 | 7528.31 | 2459.40 | -3182.14 | 296.48 | 1773821.69 | 351723.18 | 39°27'46.5073"N | 80°18'3.9714"W | 3195.92 | 174.677 | 0.19 | 0.19 | 0.01 | |
| 10517.00 | 90.180 | 137.490 | 7528.04 | 2554.37 | -3250.71 | 362.21 | 1773886.90 | 351654.03 | 39°27'45.8295"N | 80°18'3.1333"W | 3270.83 | 173.642 | 2.69 | 0.03 | 2.69 | |

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Actual Wellpath Report

Crands Unit 8H AWP Proj: 20115'

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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|----------------|----------|--------------------|
| Operator | XTO ENERGY INC | Well | Crands Unit 8H |
| Field | Marion | API | 47-049-02486-0000 |
| Facility | Crim Pad | Wellbore | Crands Unit 8H AWB |
| Slot | Slot #08 | | |

WELLPATH DATA (223 stations)

| ID | 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 |
|----------|--------------------|----------------|-------------|-------------------|---------------|--------------|----------------------|-----------------------|-----------------|-----------------|----------------------|--------------------|-------------------|--------------------------|------------------------|----------|
| 10612.00 | 90.150 | 136.330 | 7527.76 | 2649.31 | -3320.09 | 427.11 | 1773951.07 | 351584.08 | 39°27'45.1439"N | 80°18'2.3058"W | 3347.45 | 172.670 | 1.22 | -0.03 | -1.22 | |
| 10707.00 | 89.940 | 134.850 | 7527.69 | 2744.30 | -3387.95 | 493.59 | 1774016.94 | 351515.63 | 39°27'44.4732"N | 80°18'1.4583"W | 3423.72 | 171.711 | 1.57 | -0.22 | -1.56 | |
| 10801.00 | 89.970 | 134.980 | 7527.76 | 2838.30 | -3454.32 | 560.15 | 1774082.91 | 351448.68 | 39°27'43.8172"N | 80°18'0.6096"W | 3499.44 | 170.789 | 0.14 | 0.03 | 0.14 | |
| 10896.00 | 89.940 | 135.920 | 7527.84 | 2933.30 | -3522.02 | 626.80 | 1774148.94 | 351380.39 | 39°27'43.1481"N | 80°17'59.7599"W | 3577.36 | 169.909 | 0.99 | -0.03 | 0.99 | |
| 10990.00 | 89.910 | 135.190 | 7527.96 | 3027.29 | -3589.13 | 692.62 | 1774214.16 | 351312.70 | 39°27'42.4848"N | 80°17'58.9207"W | 3655.35 | 169.078 | 0.78 | -0.03 | -0.78 | |
| 11086.00 | 90.340 | 135.570 | 7527.75 | 3123.29 | -3657.46 | 760.05 | 1774280.97 | 351243.77 | 39°27'41.8094"N | 80°17'58.0610"W | 3735.60 | 168.261 | 0.60 | 0.45 | 0.40 | |
| 11181.00 | 90.740 | 136.620 | 7526.86 | 3218.27 | -3725.90 | 825.92 | 1774346.23 | 351174.75 | 39°27'41.1330"N | 80°17'57.2212"W | 3816.34 | 167.501 | 1.18 | 0.42 | 1.11 | |
| 11275.00 | 90.680 | 135.830 | 7525.69 | 3312.24 | -3793.77 | 890.95 | 1774410.64 | 351106.31 | 39°27'40.4622"N | 80°17'56.3921"W | 3896.98 | 166.784 | 0.84 | -0.06 | -0.84 | |
| 11370.00 | 90.550 | 135.930 | 7524.67 | 3407.22 | -3861.96 | 957.08 | 1774476.16 | 351037.53 | 39°27'39.7882"N | 80°17'55.5490"W | 3978.79 | 166.081 | 0.17 | -0.14 | 0.11 | |
| 11465.00 | 90.460 | 135.160 | 7523.83 | 3502.21 | -3929.77 | 1023.61 | 1774542.08 | 350969.13 | 39°27'39.1180"N | 80°17'54.7008"W | 4060.90 | 165.400 | 0.82 | -0.09 | -0.81 | |
| 11560.00 | 90.180 | 133.430 | 7523.30 | 3597.20 | -3996.11 | 1091.61 | 1774609.47 | 350902.19 | 39°27'38.4623"N | 80°17'53.8340"W | 4142.52 | 164.721 | 1.84 | -0.29 | -1.82 | |
| 11653.00 | 90.370 | 133.960 | 7522.86 | 3690.18 | -4060.36 | 1158.85 | 1774676.13 | 350837.35 | 39°27'37.8273"N | 80°17'52.9767"W | 4222.49 | 164.071 | 0.61 | 0.20 | 0.57 | |
| 11747.00 | 89.690 | 132.670 | 7522.81 | 3784.13 | -4124.84 | 1227.24 | 1774743.94 | 350772.26 | 39°27'37.1899"N | 80°17'52.1048"W | 4303.54 | 163.431 | 1.55 | -0.72 | -1.37 | |
| 11842.00 | 88.890 | 132.780 | 7523.99 | 3879.05 | -4189.29 | 1297.02 | 1774813.14 | 350707.20 | 39°27'36.5529"N | 80°17'51.2151"W | 4385.48 | 162.797 | 0.85 | -0.84 | 0.12 | |
| 11936.00 | 90.460 | 132.540 | 7524.52 | 3972.87 | -4252.99 | 1366.14 | 1774881.69 | 350642.89 | 39°27'35.9233"N | 80°17'50.3339"W | 4467.02 | 162.192 | 1.69 | 1.67 | -0.26 | |
| 12031.00 | 90.950 | 134.300 | 7523.35 | 4067.92 | -4318.28 | 1435.14 | 1774950.09 | 350576.99 | 39°27'35.2780"N | 80°17'49.4543"W | 4550.51 | 161.616 | 1.92 | 0.52 | 1.85 | |
| 12126.00 | 91.320 | 135.830 | 7521.47 | 4162.90 | -4385.51 | 1502.22 | 1775016.57 | 350509.16 | 39°27'34.6134"N | 80°17'48.5991"W | 4635.66 | 161.092 | 1.66 | 0.39 | 1.61 | |
| 12220.00 | 91.390 | 134.730 | 7519.24 | 4256.87 | -4452.28 | 1568.34 | 1775082.09 | 350441.81 | 39°27'33.9535"N | 80°17'47.7561"W | 4720.44 | 160.595 | 1.17 | 0.07 | -1.17 | |
| 12315.00 | 91.320 | 134.820 | 7517.00 | 4351.84 | -4519.18 | 1635.76 | 1775148.91 | 350374.32 | 39°27'33.2923"N | 80°17'46.8966"W | 4806.11 | 160.102 | 0.12 | -0.07 | 0.09 | |
| 12410.00 | 91.380 | 138.890 | 7514.76 | 4446.75 | -4588.46 | 1700.70 | 1775213.21 | 350304.47 | 39°27'32.6075"N | 80°17'46.0688"W | 4893.50 | 159.663 | 4.28 | 0.06 | 4.28 | |
| 12504.00 | 90.580 | 134.070 | 7513.15 | 4540.67 | -4656.59 | 1765.40 | 1775277.30 | 350235.76 | 39°27'31.9341"N | 80°17'45.2440"W | 4980.00 | 159.237 | 5.20 | -0.85 | -5.13 | |
| 12599.00 | 90.460 | 133.440 | 7512.29 | 4635.65 | -4722.28 | 1834.01 | 1775345.32 | 350169.46 | 39°27'31.2848"N | 80°17'44.3693"W | 5065.92 | 158.775 | 0.68 | -0.13 | -0.66 | |
| 12694.00 | 89.480 | 132.970 | 7512.34 | 4730.60 | -4787.32 | 1903.26 | 1775413.98 | 350103.81 | 39°27'30.6419"N | 80°17'43.4865"W | 5151.78 | 158.319 | 1.14 | -1.03 | -0.49 | |
| 12789.00 | 89.140 | 135.780 | 7513.48 | 4825.58 | -4853.75 | 1971.15 | 1775481.27 | 350036.79 | 39°27'29.9853"N | 80°17'42.6210"W | 5238.73 | 157.897 | 2.98 | -0.36 | 2.96 | |
| 12884.00 | 89.380 | 133.380 | 7514.71 | 4920.56 | -4920.42 | 2038.81 | 1775548.33 | 349969.52 | 39°27'29.3264"N | 80°17'41.7585"W | 5326.09 | 157.493 | 2.54 | 0.25 | -2.53 | |
| 12979.00 | 89.290 | 140.250 | 7515.81 | 5015.45 | -4989.64 | 2103.78 | 1775612.67 | 349899.72 | 39°27'28.6421"N | 80°17'40.9303"W | 5415.02 | 157.138 | 7.23 | -0.03 | 7.23 | |
| 13074.00 | 90.370 | 138.050 | 7516.09 | 5110.19 | -5061.61 | 2165.91 | 1775674.16 | 349827.32 | 39°27'27.9319"N | 80°17'40.1382"W | 5505.44 | 156.833 | 2.58 | 1.14 | -2.32 | |
| 13169.00 | 90.340 | 135.940 | 7515.51 | 5205.12 | -5130.96 | 2230.70 | 1775738.32 | 349757.28 | 39°27'27.2453"N | 80°17'39.3123"W | 5594.89 | 156.503 | 2.22 | -0.03 | -2.22 | |
| 13263.00 | 89.510 | 135.850 | 7515.63 | 5299.11 | -5198.46 | 2296.12 | 1775803.13 | 349689.20 | 39°27'26.5781"N | 80°17'38.4783"W | 5682.97 | 156.169 | 0.89 | -0.88 | -0.10 | |
| 13358.00 | 89.290 | 136.680 | 7516.62 | 5394.08 | -5267.10 | 2361.79 | 1775868.19 | 349619.99 | 39°27'25.8997"N | 80°17'37.6411"W | 5772.38 | 155.848 | 0.90 | -0.23 | 0.87 | |

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Crands Unit 8H AWP Proj: 20115'

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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|----------------|----------|--------------------|
| Operator | XTO ENERGY INC | Well | Crands Unit 8H |
| Field | Marion | API | 47-049-02486-0000 |
| Facility | Crim Pad | Wellbore | Crands Unit 8H AWB |
| Slot | Slot #08 | | |

WELLPATH DATA (223 stations)

| ID | 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 |
|----------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------------------|-----------------|---------------|----------------------|---------------------|----------|
| 13453.00 | 90.520 | 133.660 | 7516.78 | 5489.07 | -5334.46 | 2428.76 | 1775934.54 | 349552.03 | 39°27'25.2338"N | 80°17'36.7875"W | 5861.35 | 155.520 | 3.43 | 1.29 | -3.18 | |
| 13454.00 | 89.420 | 133.720 | 7516.83 | 5583.04 | -5399.39 | 2496.73 | 1776001.93 | 349486.50 | 39°27'24.5920"N | 80°17'35.9210"W | 5948.71 | 155.184 | 1.17 | -1.17 | 0.06 | |
| 13642.00 | 88.800 | 134.700 | 7518.31 | 5678.02 | -5465.63 | 2564.81 | 1776069.41 | 349419.67 | 39°27'23.9374"N | 80°17'35.0531"W | 6037.50 | 154.861 | 1.22 | -0.63 | 1.03 | |
| 13736.00 | 90.280 | 135.300 | 7519.06 | 5772.02 | -5532.09 | 2631.28 | 1776135.28 | 349352.62 | 39°27'23.2804"N | 80°17'34.2058"W | 6125.98 | 154.562 | 1.70 | 1.57 | 0.64 | |
| 13831.00 | 89.910 | 135.080 | 7518.90 | 5867.01 | -5599.49 | 2698.23 | 1776201.62 | 349284.63 | 39°27'22.6142"N | 80°17'33.3524"W | 6215.68 | 154.272 | 0.45 | -0.39 | -0.23 | |
| 13925.00 | 90.150 | 136.050 | 7518.85 | 5961.01 | -5666.61 | 2764.04 | 1776266.82 | 349216.93 | 39°27'21.9508"N | 80°17'32.5135"W | 6304.79 | 153.998 | 1.06 | 0.26 | 1.03 | |
| 14019.00 | 89.970 | 135.680 | 7518.76 | 6055.00 | -5734.07 | 2829.49 | 1776331.67 | 349148.88 | 39°27'21.2839"N | 80°17'31.6791"W | 6394.19 | 153.736 | 0.44 | -0.19 | -0.39 | |
| 14113.00 | 90.150 | 135.250 | 7518.66 | 6148.99 | -5801.08 | 2895.42 | 1776396.99 | 349081.30 | 39°27'20.6216"N | 80°17'30.8387"W | 6483.51 | 153.475 | 0.50 | 0.19 | -0.46 | |
| 14208.00 | 90.090 | 134.920 | 7518.46 | 6243.99 | -5868.35 | 2962.50 | 1776463.46 | 349013.43 | 39°27'19.9566"N | 80°17'29.9837"W | 6573.73 | 153.214 | 0.35 | -0.06 | -0.35 | |
| 14302.00 | 90.000 | 134.160 | 7518.38 | 6337.99 | -5934.28 | 3029.90 | 1776529.87 | 348946.91 | 39°27'19.3049"N | 80°17'29.1297"W | 6662.85 | 152.955 | 0.81 | -0.10 | -0.81 | |
| 14396.00 | 90.550 | 134.570 | 7517.93 | 6431.98 | -6000.01 | 3096.69 | 1776596.47 | 348880.99 | 39°27'18.6553"N | 80°17'28.2731"W | 6752.01 | 152.701 | 0.73 | 0.58 | 0.44 | |
| 14491.00 | 90.460 | 134.260 | 7517.10 | 6526.97 | -6066.49 | 3164.55 | 1776663.73 | 348813.51 | 39°27'17.9981"N | 80°17'27.4081"W | 6842.27 | 152.451 | 0.34 | -0.09 | -0.33 | |
| 14586.00 | 90.550 | 133.800 | 7516.26 | 6621.96 | -6132.52 | 3232.85 | 1776731.43 | 348746.88 | 39°27'17.3454"N | 80°17'26.5375"W | 6932.47 | 152.203 | 0.49 | 0.08 | -0.48 | |
| 14680.00 | 91.290 | 133.620 | 7514.75 | 6715.92 | -6197.46 | 3300.79 | 1776798.78 | 348681.33 | 39°27'16.7035"N | 80°17'25.6715"W | 7021.66 | 151.960 | 0.81 | 0.79 | -0.19 | |
| 14775.00 | 90.550 | 132.830 | 7513.22 | 6810.86 | -6262.52 | 3370.00 | 1776867.41 | 348615.67 | 39°27'16.0604"N | 80°17'24.7892"W | 7111.68 | 151.714 | 1.14 | -0.78 | -0.83 | |
| 14870.00 | 91.630 | 135.790 | 7511.42 | 6905.83 | -6328.86 | 3437.96 | 1776934.77 | 348548.72 | 39°27'15.4047"N | 80°17'23.9230"W | 7202.36 | 151.488 | 3.32 | 1.14 | 3.12 | |
| 14965.00 | 90.430 | 131.070 | 7509.71 | 7000.74 | -6394.14 | 3506.95 | 1777003.17 | 348482.87 | 39°27'14.7598"N | 80°17'23.0436"W | 7292.68 | 151.257 | 5.19 | -1.26 | -5.03 | |
| 15059.00 | 89.910 | 132.370 | 7509.43 | 7094.59 | -6456.62 | 3577.15 | 1777072.80 | 348419.74 | 39°27'14.1418"N | 80°17'22.1488"W | 7381.32 | 151.012 | 1.55 | -0.55 | 1.45 | |
| 15155.00 | 89.570 | 129.600 | 7509.86 | 7190.34 | -6519.57 | 3649.61 | 1777144.69 | 348356.14 | 39°27'13.5195"N | 80°17'21.2252"W | 7471.58 | 150.760 | 2.91 | -0.35 | -2.89 | |
| 15250.00 | 89.570 | 136.640 | 7510.58 | 7285.23 | -6584.46 | 3718.90 | 1777213.40 | 348292.63 | 39°27'12.8780"N | 80°17'20.3419"W | 7562.10 | 150.542 | 7.41 | 0.00 | 7.41 | |
| 15345.00 | 89.910 | 138.390 | 7511.01 | 7380.13 | -6654.52 | 3783.06 | 1777276.93 | 348220.01 | 39°27'12.1855"N | 80°17'19.5241"W | 7654.68 | 150.382 | 1.88 | 0.36 | 1.84 | |
| 15440.00 | 89.720 | 138.540 | 7511.32 | 7474.96 | -6725.63 | 3846.05 | 1777339.28 | 348148.35 | 39°27'11.4826"N | 80°17'18.7212"W | 7747.66 | 150.237 | 0.25 | -0.20 | 0.16 | |
| 15535.00 | 89.780 | 136.880 | 7511.73 | 7569.84 | -6795.90 | 3909.98 | 1777402.57 | 348077.51 | 39°27'10.7880"N | 80°17'17.9065"W | 7840.42 | 150.086 | 1.75 | 0.06 | -1.75 | |
| 15630.00 | 87.480 | 134.270 | 7514.00 | 7664.80 | -6863.72 | 3976.44 | 1777468.42 | 348009.10 | 39°27'10.1176"N | 80°17'17.0593"W | 7932.39 | 149.914 | 3.66 | -2.42 | -2.75 | |
| 15725.00 | 88.280 | 133.230 | 7517.52 | 7759.71 | -6929.37 | 4045.02 | 1777536.41 | 347942.85 | 39°27'9.4687"N | 80°17'16.1852"W | 8023.61 | 149.726 | 1.38 | 0.84 | -1.09 | |
| 15819.00 | 88.220 | 133.260 | 7520.39 | 7853.62 | -6993.74 | 4113.46 | 1777604.27 | 347877.88 | 39°27'8.8324"N | 80°17'15.3128"W | 8113.75 | 149.538 | 0.07 | -0.06 | 0.03 | |
| 15914.00 | 88.980 | 135.440 | 7522.71 | 7948.58 | -7060.12 | 4181.37 | 1777671.58 | 347810.89 | 39°27'8.1761"N | 80°17'14.4473"W | 8205.44 | 149.364 | 2.43 | 0.80 | 2.29 | |
| 16008.00 | 89.020 | 140.140 | 7524.35 | 8042.43 | -7129.72 | 4244.49 | 1777734.07 | 347740.74 | 39°27'7.4882"N | 80°17'13.6427"W | 8297.51 | 149.234 | 5.00 | 0.04 | 5.00 | |
| 16104.00 | 88.090 | 142.290 | 7526.77 | 8137.82 | -7204.52 | 4304.61 | 1777793.51 | 347665.41 | 39°27'6.7488"N | 80°17'12.8765"W | 8392.54 | 149.142 | 2.44 | -0.97 | 2.24 | |
| 16198.00 | 88.180 | 136.540 | 7529.83 | 8231.45 | -7275.84 | 4365.70 | 1777853.97 | 347593.55 | 39°27'6.0438"N | 80°17'12.0979"W | 8485.12 | 149.035 | 6.11 | 0.10 | -6.12 | |

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Actual Wellpath Report

Crands Unit 8H AWP Proj: 20115'
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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|----------------|----------|--------------------|
| Operator | XTO ENERGY INC | Well | Crands Unit 8H |
| Field | Marion | API | 47-049-02486-0000 |
| Facility | Crim Pad | Wellbore | Crands Unit 8H AWB |
| Slot | Slot #08 | | |

WELLPATH DATA (223 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 |
|----------|-----------------|-------------|----------|----------------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------------------|-----------------|---------------|----------------------|---------------------|-----------------------------|
| 16293.00 | 88.280 | 136.800 | 7532.77 | 8326.37 | -7344.91 | 4430.86 | 1777918.50 | 347523.90 | 39°27'5.3610"N | 80°17'11.2674"W | 8577.89 | 148.899 | 0.29 | 0.11 | 0.27 | |
| 16388.00 | 88.210 | 136.720 | 7535.68 | 8421.28 | -7414.09 | 4495.91 | 1777982.93 | 347454.16 | 39°27'4.6772"N | 80°17'10.4383"W | 8670.75 | 148.767 | 0.11 | -0.07 | -0.08 | |
| 16482.00 | 88.120 | 136.920 | 7538.69 | 8515.18 | -7482.80 | 4560.20 | 1778046.60 | 347385.08 | 39°27'4.0000"N | 80°17'9.6189"W | 8762.69 | 148.640 | 0.23 | -0.10 | 0.21 | |
| 16577.00 | 87.750 | 134.710 | 7542.11 | 8610.10 | -7550.67 | 4626.37 | 1778112.15 | 347316.42 | 39°27'3.3271"N | 80°17'8.7756"W | 8855.28 | 148.504 | 2.36 | -0.39 | -2.33 | |
| 16671.00 | 87.820 | 134.780 | 7545.74 | 8704.03 | -7616.79 | 4693.08 | 1778178.27 | 347249.71 | 39°27'2.6734"N | 80°17'7.9253"W | 8946.54 | 148.361 | 0.11 | 0.07 | 0.07 | |
| 16766.00 | 87.780 | 134.350 | 7549.39 | 8798.96 | -7683.41 | 4760.71 | 1778245.30 | 347182.50 | 39°27'2.0149"N | 80°17'7.0633"W | 9038.76 | 148.217 | 0.45 | -0.04 | -0.45 | |
| 16860.00 | 87.910 | 134.260 | 7552.93 | 8892.89 | -7749.02 | 4827.93 | 1778311.93 | 347116.29 | 39°27'1.3664"N | 80°17'6.2065"W | 9129.96 | 148.076 | 0.17 | 0.14 | -0.10 | |
| 16955.00 | 87.880 | 134.340 | 7556.41 | 8987.82 | -7815.32 | 4895.88 | 1778379.27 | 347049.39 | 39°27'0.7109"N | 80°17'5.3405"W | 9222.20 | 147.935 | 0.09 | -0.03 | 0.08 | |
| 17049.00 | 87.600 | 133.820 | 7560.12 | 9081.73 | -7880.66 | 4963.35 | 1778446.16 | 346983.45 | 39°27'0.0650"N | 80°17'4.4806"W | 9313.42 | 147.797 | 0.63 | -0.30 | -0.55 | |
| 17144.00 | 87.780 | 134.250 | 7563.95 | 9176.64 | -7946.65 | 5031.59 | 1778513.80 | 346916.87 | 39°26'59.4127"N | 80°17'3.6108"W | 9405.64 | 147.659 | 0.49 | 0.19 | 0.45 | |
| 17238.00 | 87.080 | 134.600 | 7568.17 | 9270.54 | -8012.38 | 5098.66 | 1778580.27 | 346850.54 | 39°26'58.7630"N | 80°17'2.7561"W | 9497.08 | 147.529 | 0.83 | -0.74 | 0.37 | |
| 17333.00 | 86.980 | 134.420 | 7573.09 | 9365.41 | -8078.88 | 5166.31 | 1778647.33 | 346783.44 | 39°26'58.1055"N | 80°17'1.8938"W | 9589.53 | 147.402 | 0.22 | -0.11 | -0.19 | |
| 17428.00 | 86.950 | 134.450 | 7578.12 | 9460.27 | -8145.30 | 5234.05 | 1778714.47 | 346716.42 | 39°26'57.4489"N | 80°17'1.0305"W | 9682.01 | 147.276 | 0.04 | -0.03 | 0.03 | |
| 17523.00 | 87.140 | 134.360 | 7583.02 | 9555.14 | -8211.69 | 5301.83 | 1778781.65 | 346649.44 | 39°26'56.7927"N | 80°17'0.1667"W | 9774.52 | 147.152 | 0.22 | 0.20 | -0.09 | |
| 17617.00 | 86.890 | 134.940 | 7587.91 | 9649.01 | -8277.66 | 5368.61 | 1778847.83 | 346582.88 | 39°26'56.1405"N | 80°16'59.3155"W | 9866.19 | 147.034 | 0.67 | -0.27 | 0.62 | |
| 17712.00 | 87.510 | 135.170 | 7592.55 | 9743.90 | -8344.82 | 5435.64 | 1778914.26 | 346515.13 | 39°26'55.4766"N | 80°16'58.4613"W | 9959.02 | 146.921 | 0.70 | 0.65 | 0.24 | |
| 17807.00 | 88.520 | 135.050 | 7595.84 | 9838.84 | -8412.08 | 5502.65 | 1778980.66 | 346447.27 | 39°26'54.8117"N | 80°16'57.6073"W | 10051.98 | 146.810 | 1.07 | 1.06 | -0.13 | |
| 17902.00 | 90.580 | 138.650 | 7596.59 | 9933.77 | -8481.37 | 5567.60 | 1779044.99 | 346377.41 | 39°26'54.1267"N | 80°16'56.7795"W | 10145.53 | 146.717 | 4.37 | 2.17 | 3.79 | |
| 17997.00 | 89.320 | 135.470 | 7596.67 | 10028.69 | -8550.91 | 5632.31 | 1779109.07 | 346307.30 | 39°26'53.4393"N | 80°16'55.9548"W | 10239.19 | 146.628 | 3.60 | -1.33 | -3.35 | |
| 18091.00 | 89.690 | 133.550 | 7597.48 | 10122.68 | -8616.80 | 5699.34 | 1779175.50 | 346240.82 | 39°26'52.7879"N | 80°16'55.1006"W | 10331.10 | 146.518 | 2.08 | 0.39 | -2.04 | |
| 18186.00 | 90.120 | 134.070 | 7597.64 | 10217.66 | -8682.56 | 5767.89 | 1779243.46 | 346174.45 | 39°26'52.1378"N | 80°16'54.2269"W | 10423.80 | 146.404 | 0.71 | 0.45 | 0.55 | Deepest TVD at 7597.64' TVD |
| 18281.00 | 91.230 | 134.220 | 7598.52 | 10312.64 | -8748.72 | 5836.06 | 1779311.03 | 346108.68 | 39°26'51.4837"N | 80°16'53.3582"W | 10516.64 | 146.294 | 1.18 | 1.17 | 0.16 | |
| 18375.00 | 91.260 | 134.460 | 7599.48 | 10406.61 | -8814.41 | 5903.27 | 1779377.65 | 346041.41 | 39°26'50.8344"N | 80°16'52.5016"W | 10608.60 | 146.189 | 0.26 | 0.03 | 0.26 | |
| 18469.00 | 91.260 | 134.300 | 7599.41 | 10500.58 | -8880.13 | 5970.44 | 1779444.22 | 345975.09 | 39°26'50.1846"N | 80°16'51.6456"W | 10700.60 | 146.086 | 0.17 | 0.00 | -0.17 | |
| 18564.00 | 90.340 | 131.590 | 7599.09 | 10595.50 | -8944.84 | 6039.97 | 1779513.16 | 345909.76 | 39°26'49.5449"N | 80°16'50.7595"W | 10793.12 | 145.971 | 3.01 | -0.97 | -2.85 | |
| 18658.00 | 91.750 | 134.310 | 7599.37 | 10689.42 | -9008.87 | 6108.75 | 1779581.37 | 345845.12 | 39°26'48.9119"N | 80°16'49.8830"W | 10884.70 | 145.860 | 3.26 | 1.50 | 2.89 | |
| 18753.00 | 91.230 | 134.080 | 7599.90 | 10784.37 | -9075.08 | 6176.84 | 1779648.86 | 345778.32 | 39°26'48.2575"N | 80°16'49.0152"W | 10977.72 | 145.759 | 0.60 | -0.55 | -0.24 | |
| 18848.00 | 90.890 | 133.710 | 7599.34 | 10879.34 | -9140.93 | 6245.28 | 1779716.71 | 345711.86 | 39°26'47.6064"N | 80°16'48.1429"W | 11070.69 | 145.658 | 0.53 | -0.36 | -0.39 | |
| 18943.00 | 91.140 | 134.800 | 7598.46 | 10974.32 | -9207.22 | 6313.32 | 1779784.15 | 345644.97 | 39°26'46.9511"N | 80°16'47.2760"W | 11163.82 | 145.562 | 1.18 | 0.26 | 1.15 | |
| 19038.00 | 91.020 | 134.900 | 7598.67 | 11069.30 | -9274.20 | 6380.65 | 1779850.88 | 345577.39 | 39°26'46.2889"N | 80°16'46.4178"W | 11257.16 | 145.472 | 0.16 | -0.13 | 0.11 | |

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Actual Wellpath Report

Crands Unit 8H AWP Proj: 20115'

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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|----------------|----------|--------------------|
| Operator | XTO ENERGY INC | Well | Crands Unit 8H |
| Field | Marion | API | 47-049-02486-0000 |
| Facility | Crim Pad | Wellbore | Crands Unit 8H AWB |
| Slot | Slot #08 | | |

WELLPATH DATA (223 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 (F'/100ft) | Build Rate (F'/100ft) | Turn Rate (F'/100ft) | Comments |
|-----------|-----------------|-------------|----------|----------------|------------|-----------|----------------|-----------------|-----------------|-----------------|-------------------|-----------------|----------------|-----------------------|----------------------|-------------------------------|
| 19132.00 | 91.020 | 135.270 | 7580.00 | 11163.28 | -9340.76 | 6447.01 | 1779916.64 | 345510.25 | 39°26'45.6309"N | 80°16'45.5722"W | 11349.61 | 145.386 | 0.00 | 0.00 | 0.39 | |
| 19225.00 | 91.260 | 135.280 | 7578.15 | 11256.26 | -9406.82 | 6512.45 | 1779981.47 | 345443.61 | 39°26'44.9778"N | 80°16'44.7383"W | 11441.16 | 145.305 | 0.26 | 0.26 | 0.01 | |
| 19320.00 | 91.380 | 135.470 | 7575.96 | 11351.24 | -9474.42 | 6579.16 | 1780047.58 | 345375.43 | 39°26'44.3096"N | 80°16'43.8881"W | 11534.73 | 145.223 | 0.24 | 0.13 | 0.20 | |
| 19414.00 | 91.320 | 135.260 | 7573.74 | 11445.21 | -9541.29 | 6645.19 | 1780113.00 | 345307.97 | 39°26'43.6485"N | 80°16'43.0467"W | 11627.32 | 145.144 | 0.23 | -0.06 | -0.22 | |
| 19509.00 | 91.230 | 135.270 | 7571.63 | 11540.18 | -9608.76 | 6712.03 | 1780179.24 | 345239.91 | 39°26'42.9815"N | 80°16'42.1949"W | 11720.90 | 145.064 | 0.10 | -0.09 | 0.01 | |
| 19603.00 | 92.430 | 134.980 | 7568.63 | 11634.13 | -9675.33 | 6778.32 | 1780244.93 | 345172.75 | 39°26'42.3233"N | 80°16'41.3502"W | 11813.46 | 144.986 | 1.31 | 1.28 | -0.31 | |
| 19697.00 | 92.680 | 135.560 | 7564.44 | 11728.04 | -9742.05 | 6844.41 | 1780310.41 | 345105.45 | 39°26'41.6638"N | 80°16'40.5080"W | 11906.03 | 144.910 | 0.67 | 0.27 | 0.62 | |
| 19793.00 | 92.370 | 135.380 | 7560.21 | 11823.94 | -9810.42 | 6911.67 | 1780377.05 | 345036.49 | 39°26'40.9879"N | 80°16'39.6509"W | 12000.64 | 144.834 | 0.37 | -0.32 | -0.19 | |
| 19888.00 | 92.550 | 135.550 | 7556.13 | 11918.85 | -9878.07 | 6978.23 | 1780443.01 | 344968.25 | 39°26'40.3190"N | 80°16'38.8027"W | 12094.30 | 144.761 | 0.26 | 0.19 | 0.18 | |
| 19982.00 | 92.490 | 135.640 | 7552.00 | 12012.75 | -9945.16 | 7043.94 | 1780508.11 | 344900.58 | 39°26'39.6558"N | 80°16'37.9653"W | 12187.02 | 144.691 | 0.11 | -0.06 | 0.10 | |
| 20077.00 | 92.460 | 135.670 | 7547.89 | 12107.66 | -10013.04 | 7110.28 | 1780573.84 | 344832.11 | 39°26'38.9847"N | 80°16'37.1199"W | 12280.76 | 144.621 | 0.04 | -0.03 | 0.03 | |
| 20090.00 | 92.370 | 135.260 | 7547.35 | 12120.65 | -10022.30 | 7119.39 | 1780582.87 | 344822.78 | 39°26'38.8932"N | 80°16'37.0039"W | 12293.58 | 144.612 | 3.23 | -0.69 | -3.15 | Last MWD Survey at 20090' MD |
| 20115.00‡ | 92.370 | 135.260 | 7546.31 | 12145.63 | -10040.04 | 7136.98 | 1780600.29 | 344804.88 | 39°26'38.7178"N | 80°16'36.7798"W | 12318.23 | 144.593 | 0.00 | 0.00 | 0.00 | Projected MD at TD: 20115' MD |

HOLE & CASING SECTIONS - Ref Wellbore: Crands Unit 8H AWB Ref Wellpath: Crands Unit 8H AWP Proj: 20115'

| 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 | -0.21 | 0.10 |
| 17.5in Open Hole | 102.00 | 536.00 | 434.00 | 102.00 | 535.99 | -0.21 | 0.10 | -0.02 | 2.09 |
| 13.375in Casing Surface | 26.00 | 536.00 | 510.00 | 26.00 | 535.99 | 0.00 | 0.00 | -0.02 | 2.09 |
| 12.25in Open Hole | 536.00 | 3217.00 | 2681.00 | 535.99 | 3184.54 | -0.02 | 2.09 | -217.93 | -297.77 |
| 9.625in Casing Intermediate | 26.00 | 3217.00 | 3191.00 | 26.00 | 3184.54 | 0.00 | 0.00 | -217.93 | -297.77 |
| 8.75in Open Hole | 3217.00 | 5639.00 | 2422.00 | 3184.54 | 5427.73 | -217.93 | -297.77 | -729.73 | -1043.80 |
| 8.5in Open Hole | 5639.00 | 20124.92 | 14485.92 | 5427.73 | N/A | -729.73 | -1043.80 | N/A | N/A |
| 5.5in Casing Production | 26.00 | 20124.92 | 20098.92 | 26.00 | N/A | 0.00 | 0.00 | N/A | N/A |

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Actual Wellpath Report

Crands Unit 8H AWP Proj: 20115'

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REFERENCE WELLPATH IDENTIFICATION

| | | | |
|----------|----------------|----------|--------------------|
| Operator | XTO ENERGY INC | Well | Crands Unit 8H |
| Field | Marion | API | 47-049-02486-0000 |
| Facility | Crim Pad | Wellbore | Crands Unit 8H AWB |
| Slot | Slot #08 | | |

TARGETS

| Name | TVD [ft] | North [ft] | East [ft] | Grid East [US ft] | Grid North [US ft] | Latitude | Longitude | Shape |
|--------------------------|----------|------------|-----------|-------------------|--------------------|-----------------|-----------------|-------|
| Crands Unit 8H BHL Rev-1 | 7527.00 | -10034.81 | 7143.72 | 1780607.08 | 344810.05 | 39°26'38.7695"N | 80°16'36.6938"W | point |
| Crands Unit 8H LP Rev-1 | 7527.00 | -1621.94 | -1271.41 | 1772267.88 | 353297.23 | 39°28'1.9271"N | 80°18'23.9629"W | point |

WELLPATH COMPOSITION - Ref Wellbore: Crands Unit 8H AWB Ref Wellpath: Crands Unit 8H AWP Proj: 20115'

| 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">(60-450) | Crands Unit 8H AWB | |
| 476.00 | 3170.00 | OWSG MWD rev2 + HRGM | 02 -Javins MWD Surveys <12-1/4">(450)(553-3144) | Crands Unit 8H AWB | |
| 3170.00 | 5570.00 | OWSG MWD rev2 + HRGM | 03 -Javins MWD Surveys <8-3/4">(3144)(3235-5544) | Crands Unit 8H AWB | |
| 5570.00 | 20115.00 | BH AutoTrak Curve (Short) | 04 -BH AT Curve <8-1/2">(5570)(5610-20090) | Crands Unit 8H AWB | |

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| Facility | Crim Pad | Wellbore | Crands Unit 8H AWB |
| Slot | Slot #08 | | |

COMMENTS

Wellpath general comments
 API: 47-049-02486-0000
 BHI Job #: 110023640A
 Rig: Patteron 579
 Duration: 09/11/2019-09/17/2019
 Javins Gyro <17-1/2">(50'-450')
 Javins MWD Surveys <12-1/4">(450')(553'-3144')
 Javins MWD Surveys <8-3/4">(3144')(3235'-5544')
 BH-AT Curve <8-1/2">(5570')(5610'-20090')
 Landing Pt. at 8010' MD
 Deepest TVD at 7597.64' TVD
 Last MWD Survey at 20090' MD
 Projected MD at TD: 20115'MD

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