



Actual Wellpath Report

Russell Hervey BRK 201H AWP Proj: 18218'
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 SEP 04 2020
 WV Department of
 Environmental Protection



REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Russell Hervey BRK 201H
Field	Brooke	API/Legal	
Facility	Russell Hervey BRK Pad	Wellbore	Russell Hervey BRK 201H AWB
Slot	Slot #201		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Atenjen
Scale	0.999618	Report Generated	2/11/2020 at 9:12:55 AM
Convergence at slot	0.29° East	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	2.98	46.15	1764160.45	14621031.93	40°15'29.1817"N	80°33'23.2725"W
Facility Reference Pt			1764114.32	14621028.95	40°15'29.1545"N	80°33'23.8679"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM

Calculation method	Minimum curvature	SDC 42 (RKB) to Facility Vertical Datum	1192.00ft
Horizontal Reference Pt	Slot	SDC 42 (RKB) to Mean Sea Level	1192.00ft
Vertical Reference Pt	SDC 42 (RKB)	SDC 42 (RKB) to Ground Level at Slot (Slot #201)	26.00ft
MD Reference Pt	SDC 42 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	337.85°



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WELLPATH DATA (206 stations) † = interpolated, ‡ = extrapolated station															
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
0.00†	0.000	351.990	0.00	0.00	0.00	0.00	1764160.45	14621031.93	40°15'29.1817"N	80°33'23.2725"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	351.990	26.00	0.00	0.00	0.00	1764160.45	14621031.93	40°15'29.1817"N	80°33'23.2725"W	0.00	0.000	0.00	0.00	0.00
216.00	0.170	351.990	216.00	0.27	0.28	-0.04	1764160.41	14621032.21	40°15'29.1844"N	80°33'23.2730"W	0.28	351.990	0.09	0.09	0.00
307.00	0.100	41.050	307.00	0.44	0.47	-0.01	1764160.44	14621032.40	40°15'29.1863"N	80°33'23.2726"W	0.47	359.280	0.14	-0.08	53.91
421.00	0.440	319.820	421.00	0.90	0.88	-0.22	1764160.23	14621032.81	40°15'29.1904"N	80°33'23.2753"W	0.91	345.812	0.38	0.30	-71.25
512.00	1.140	153.560	511.99	0.33	0.34	-0.05	1764160.40	14621032.27	40°15'29.1850"N	80°33'23.2731"W	0.34	352.365	1.73	0.77	-182.70
605.00	2.400	153.890	604.95	-2.53	-2.24	1.22	1764161.67	14621029.69	40°15'29.1595"N	80°33'23.2569"W	2.55	151.339	1.35	1.35	0.35
697.00	4.340	147.440	696.78	-7.88	-6.90	3.95	1764164.39	14621025.03	40°15'29.1133"N	80°33'23.2221"W	7.95	150.251	2.15	2.11	-7.01
790.00	6.050	142.230	789.40	-16.06	-13.74	8.84	1764169.29	14621018.19	40°15'29.0454"N	80°33'23.1594"W	16.34	147.246	1.91	1.84	-5.60
883.00	6.410	141.520	881.85	-25.76	-21.68	15.07	1764175.52	14621010.26	40°15'28.9667"N	80°33'23.0795"W	26.41	145.192	0.40	0.39	-0.76
976.00	5.270	142.840	974.37	-34.87	-29.15	20.88	1764181.33	14621002.79	40°15'28.8926"N	80°33'23.0050"W	35.86	144.381	1.23	-1.23	1.42
1069.00	4.150	140.920	1067.05	-42.22	-35.17	25.58	1764186.02	14620996.78	40°15'28.8329"N	80°33'22.9448"W	43.49	143.962	1.22	-1.20	-2.06
1161.00	4.610	136.250	1158.78	-48.84	-40.42	30.24	1764190.68	14620991.53	40°15'28.7808"N	80°33'22.8851"W	50.48	143.198	0.63	0.50	-5.08
1254.00	6.120	133.220	1251.37	-56.82	-46.51	36.44	1764196.87	14620985.43	40°15'28.7202"N	80°33'22.8055"W	59.09	141.927	1.65	1.62	-3.26
1347.00	7.410	143.650	1343.73	-67.14	-54.74	43.61	1764204.04	14620977.21	40°15'28.6386"N	80°33'22.7136"W	69.99	141.460	1.91	1.39	11.22
1440.00	7.030	163.500	1436.00	-78.62	-65.03	48.78	1764209.21	14620966.93	40°15'28.5367"N	80°33'22.6476"W	81.29	143.127	2.70	-0.41	21.34
1532.00	6.590	183.290	1527.37	-88.99	-75.70	50.07	1764210.50	14620956.26	40°15'28.4312"N	80°33'22.6316"W	90.76	146.516	2.58	-0.48	21.51
1625.00	7.020	202.000	1619.72	-97.89	-86.30	47.64	1764208.07	14620945.67	40°15'28.3266"N	80°33'22.6637"W	98.57	151.101	2.42	0.46	20.12
1718.00	8.530	216.420	1711.87	-105.56	-97.12	41.41	1764201.85	14620934.85	40°15'28.2199"N	80°33'22.7446"W	105.58	156.906	2.64	1.62	15.51
1809.00	10.450	222.560	1801.63	-112.61	-108.63	31.82	1764192.26	14620923.34	40°15'28.1067"N	80°33'22.8691"W	113.19	163.672	2.38	2.11	6.75
1902.00	12.760	223.120	1892.72	-120.51	-122.34	19.10	1764179.54	14620909.64	40°15'27.9718"N	80°33'23.0341"W	123.82	171.128	2.49	2.48	0.60
1970.00	13.950	220.510	1958.88	-127.42	-134.05	8.64	1764169.09	14620897.93	40°15'27.8566"N	80°33'23.1697"W	134.33	176.313	1.96	1.75	-3.84
2116.00	14.700	221.060	2100.34	-143.85	-161.40	-14.96	1764145.50	14620870.59	40°15'27.5875"N	80°33'23.4759"W	162.09	185.296	0.52	0.51	0.38
2209.00	12.880	234.580	2190.68	-151.55	-176.31	-31.16	1764129.30	14620855.69	40°15'27.4410"N	80°33'23.6859"W	179.04	190.024	3.97	-1.96	14.54
2302.00	15.790	238.100	2280.77	-156.07	-189.01	-50.36	1764110.11	14620842.99	40°15'27.3164"N	80°33'23.9342"W	195.60	194.919	3.26	3.13	3.78
2394.00	19.360	237.990	2368.47	-160.81	-203.71	-73.92	1764086.56	14620828.30	40°15'27.1723"N	80°33'24.2391"W	216.71	199.945	3.88	3.88	-0.12
2487.00	20.770	235.770	2455.82	-166.90	-221.16	-100.63	1764059.86	14620810.86	40°15'27.0012"N	80°33'24.5847"W	242.98	204.466	1.72	1.52	-2.39
2580.00	22.100	233.350	2542.39	-174.73	-240.88	-128.30	1764032.20	14620791.14	40°15'26.8077"N	80°33'24.9429"W	272.92	208.041	1.72	1.43	-2.60
2673.00	23.370	230.780	2628.16	-184.52	-262.99	-156.63	1764003.88	14620769.05	40°15'26.5907"N	80°33'25.3097"W	306.09	210.777	1.73	1.37	-2.76
2765.00	24.780	233.320	2712.16	-194.72	-286.04	-186.23	1763974.29	14620746.00	40°15'26.3643"N	80°33'25.6929"W	341.32	213.066	1.90	1.53	2.76



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Slot	Slot #201		

WELLPATH DATA (206 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]
2858.00	26.230	235.800	2796.10	-203.90	-309.24	-218.86	1763941.67	14620722.81	40°15'26.1367"N	80°33'26.1153"W	378.85	215.289	1.94	1.56	2.67
2951.00	28.380	237.140	2878.73	-212.30	-332.78	-254.43	1763906.12	14620699.27	40°15'25.9057"N	80°33'26.5756"W	418.90	217.399	2.40	2.31	1.44
3043.00	30.340	237.460	2958.91	-220.55	-357.15	-292.39	1763868.18	14620674.92	40°15'25.6669"N	80°33'27.0668"W	461.57	219.306	2.14	2.13	0.35
3136.00	31.680	235.750	3038.62	-229.91	-383.53	-332.38	1763828.20	14620648.55	40°15'25.4081"N	80°33'27.5842"W	507.51	220.913	1.72	1.44	-1.84
3228.00	32.540	232.590	3116.55	-241.49	-412.16	-372.00	1763788.59	14620619.93	40°15'25.1272"N	80°33'28.0972"W	555.21	222.068	2.05	0.93	-3.43
3320.00	32.380	234.490	3194.18	-253.69	-441.50	-411.71	1763748.90	14620590.60	40°15'24.8392"N	80°33'28.6112"W	603.68	223.000	1.12	-0.17	2.07
3413.00	33.120	233.380	3272.39	-265.79	-471.12	-452.37	1763708.25	14620560.99	40°15'24.5485"N	80°33'29.1376"W	653.14	223.837	1.02	0.80	-1.19
3506.00	32.720	235.350	3350.46	-277.58	-500.57	-493.44	1763667.20	14620531.55	40°15'24.2595"N	80°33'29.6692"W	702.89	224.589	1.23	-0.43	2.12
3599.00	33.260	233.470	3428.47	-289.36	-530.04	-534.61	1763626.04	14620502.09	40°15'23.9703"N	80°33'30.2021"W	752.83	225.246	1.24	0.58	-2.02
3692.00	33.480	235.240	3506.14	-301.29	-559.85	-576.18	1763584.49	14620472.30	40°15'23.6778"N	80°33'30.7402"W	803.38	225.824	1.07	0.24	1.90
3784.00	33.710	233.710	3582.77	-313.07	-589.42	-617.61	1763543.08	14620442.73	40°15'23.3876"N	80°33'31.2764"W	853.73	226.338	0.95	0.25	-1.66
3877.00	33.850	236.160	3660.08	-324.62	-619.12	-659.92	1763500.78	14620413.04	40°15'23.0962"N	80°33'31.8241"W	904.88	226.827	1.47	0.15	2.63
3970.00	33.640	235.210	3737.41	-335.51	-648.25	-702.59	1763458.13	14620383.93	40°15'22.8105"N	80°33'32.3763"W	955.96	227.304	0.61	-0.23	-1.02
4063.00	33.630	236.250	3814.84	-346.32	-677.25	-745.16	1763415.58	14620354.94	40°15'22.5260"N	80°33'32.9272"W	1006.94	227.733	0.62	-0.01	1.12
4155.00	33.650	234.090	3891.44	-357.51	-706.36	-786.99	1763373.76	14620325.84	40°15'22.2404"N	80°33'33.4685"W	1057.49	228.091	1.30	0.02	-2.35
4248.00	34.260	235.960	3968.58	-369.03	-736.12	-829.55	1763331.22	14620296.09	40°15'21.9484"N	80°33'34.0194"W	1109.07	228.415	1.30	0.66	2.01
4340.00	34.740	234.600	4044.40	-380.37	-765.80	-872.38	1763288.41	14620266.42	40°15'21.6572"N	80°33'34.5737"W	1160.82	228.722	0.99	0.52	-1.48
4432.00	34.770	236.000	4119.99	-391.77	-795.66	-915.50	1763245.31	14620236.58	40°15'21.3643"N	80°33'35.1317"W	1212.93	229.006	0.87	0.03	1.52
4525.00	34.750	234.590	4196.39	-403.29	-825.85	-959.08	1763201.74	14620206.40	40°15'21.0681"N	80°33'35.6958"W	1265.65	229.269	0.86	-0.02	-1.52
4618.00	33.840	236.190	4273.23	-414.61	-855.61	-1002.20	1763158.63	14620176.65	40°15'20.7760"N	80°33'36.2539"W	1317.76	229.512	1.38	-0.98	1.72
4711.00	31.440	237.730	4351.53	-424.10	-882.98	-1044.23	1763116.62	14620149.29	40°15'20.5077"N	80°33'36.7977"W	1367.51	229.783	2.73	-2.58	1.66
4802.00	31.380	234.510	4429.20	-433.74	-909.40	-1083.59	1763077.27	14620122.87	40°15'20.2485"N	80°33'37.3071"W	1414.64	229.995	1.85	-0.07	-3.54
4895.00	30.980	234.460	4508.77	-444.87	-937.38	-1122.79	1763038.10	14620094.92	40°15'19.9740"N	80°33'37.8143"W	1462.64	230.143	0.43	-0.43	-0.05
4988.00	30.520	240.830	4588.72	-453.30	-962.80	-1162.89	1762998.00	14620069.50	40°15'19.7247"N	80°33'38.3332"W	1509.74	230.377	3.54	-0.49	6.85
5080.00	31.190	239.750	4667.70	-459.51	-986.19	-1203.87	1762957.04	14620046.12	40°15'19.4956"N	80°33'38.8633"W	1556.24	230.676	0.94	0.73	-1.17
5173.00	31.520	236.180	4747.12	-467.82	-1011.86	-1244.87	1762916.06	14620020.46	40°15'19.2440"N	80°33'39.3937"W	1604.23	230.895	2.03	0.35	-3.84
5265.00	32.010	232.360	4825.35	-479.20	-1040.14	-1284.16	1762876.78	14619992.19	40°15'18.9665"N	80°33'39.9023"W	1652.56	230.994	2.25	0.53	-4.15
5358.00	31.600	234.070	4904.39	-491.59	-1069.49	-1323.41	1762837.55	14619962.85	40°15'18.6783"N	80°33'40.4104"W	1701.53	231.057	1.06	-0.44	1.84
5451.00	31.650	237.840	4983.58	-501.63	-1096.77	-1363.80	1762797.17	14619935.58	40°15'18.4107"N	80°33'40.9331"W	1750.11	231.194	2.13	0.05	4.05
5544.00	31.250	235.740	5062.92	-510.94	-1123.34	-1404.40	1762756.59	14619909.02	40°15'18.1501"N	80°33'41.4583"W	1798.40	231.345	1.25	-0.43	-2.26



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5631.00	29.600	245.170	5137.98	-516.68	-1145.08	-1442.57	1762718.43	14619887.29	40°15'17.9371"N	80°33'41.9521"W	1841.80	231.558	5.80	-1.90	10.84
5724.00	29.680	262.470	5218.96	-511.93	-1157.77	-1486.32	1762674.70	14619874.61	40°15'17.8139"N	80°33'42.5172"W	1884.04	232.083	9.17	0.09	18.60
5816.00	29.940	277.810	5298.91	-494.69	-1157.63	-1531.72	1762629.32	14619874.74	40°15'17.8175"N	80°33'43.1027"W	1919.97	232.919	8.28	0.28	16.67
5908.00	32.460	294.540	5377.74	-465.20	-1144.23	-1577.01	1762584.04	14619888.14	40°15'17.9521"N	80°33'43.6860"W	1948.40	234.037	9.78	2.74	18.18
5999.00	33.850	303.500	5453.97	-426.48	-1120.09	-1620.39	1762540.68	14619912.27	40°15'18.1928"N	80°33'44.2439"W	1969.84	235.346	5.59	1.53	9.85
6092.00	40.470	308.600	5528.07	-378.70	-1086.92	-1665.64	1762495.45	14619945.43	40°15'18.5228"N	80°33'44.8254"W	1988.90	236.873	7.85	7.12	5.48
6184.00	44.760	314.880	5595.79	-322.78	-1045.40	-1711.97	1762449.14	14619986.94	40°15'18.9354"N	80°33'45.4203"W	2005.91	238.590	6.56	4.66	6.83
6277.00	47.370	320.950	5660.34	-259.86	-995.69	-1756.75	1762404.38	14620036.62	40°15'19.4287"N	80°33'45.9947"W	2019.30	240.456	5.47	2.81	6.53
6365.00	53.000	327.850	5716.70	-194.18	-940.71	-1795.90	1762365.24	14620091.58	40°15'19.9739"N	80°33'46.4962"W	2027.37	242.354	8.78	6.40	7.84
6458.00	59.930	333.010	5768.07	-117.38	-873.30	-1833.99	1762327.16	14620158.97	40°15'20.6419"N	80°33'46.9832"W	2031.30	244.537	8.77	7.45	5.55
6504.00	60.580	332.180	5790.90	-77.60	-837.84	-1852.38	1762308.79	14620194.41	40°15'20.9932"N	80°33'47.2181"W	2033.05	245.662	2.11	1.41	-1.80
6551.00	64.010	333.350	5812.75	-36.16	-800.85	-1871.41	1762289.76	14620231.39	40°15'21.3597"N	80°33'47.4612"W	2035.57	246.832	7.62	7.30	2.49
6597.00	69.090	334.960	5831.05	5.93	-762.88	-1889.79	1762271.39	14620269.34	40°15'21.7358"N	80°33'47.6958"W	2037.96	248.017	11.50	11.04	3.50
6643.00	74.350	336.840	5845.47	49.57	-723.02	-1907.61	1762253.58	14620309.19	40°15'22.1305"N	80°33'47.9231"W	2040.03	249.242	12.07	11.43	4.09
6690.00	76.710	338.980	5857.21	95.07	-680.85	-1924.72	1762236.47	14620351.34	40°15'22.5480"N	80°33'48.1411"W	2041.59	250.519	6.88	5.02	4.55
6736.00	78.520	338.660	5867.08	139.99	-638.96	-1940.95	1762220.25	14620393.21	40°15'22.9628"N	80°33'48.3478"W	2043.42	251.778	3.99	3.93	-0.70
6783.00	81.800	339.030	5875.11	186.29	-595.78	-1957.66	1762203.54	14620436.38	40°15'23.3903"N	80°33'48.5606"W	2046.31	253.073	7.02	6.98	0.79
6829.00	84.590	339.970	5880.56	231.94	-553.00	-1973.65	1762187.56	14620479.14	40°15'23.8138"N	80°33'48.7641"W	2049.66	254.348	6.40	6.07	2.04
6863.00	86.810	340.030	5883.11	265.82	-521.14	-1985.25	1762175.97	14620510.99	40°15'24.1292"N	80°33'48.9117"W	2052.51	255.291	6.53	6.53	0.18
6907.00	89.380	339.420	5884.57	309.77	-479.90	-2000.48	1762160.73	14620552.22	40°15'24.5376"N	80°33'49.1056"W	2057.24	256.510	6.00	5.84	-1.39
6991.00	89.320	338.140	5885.53	393.75	-401.60	-2030.89	1762130.35	14620630.49	40°15'25.3128"N	80°33'49.4927"W	2070.21	258.814	1.53	-0.07	-1.52
7084.00	88.890	338.640	5886.98	486.73	-315.15	-2065.13	1762096.11	14620716.91	40°15'26.1687"N	80°33'49.9290"W	2089.04	261.323	0.71	-0.46	0.54
7176.00	90.030	339.530	5887.85	578.71	-229.21	-2097.97	1762063.28	14620802.80	40°15'27.0195"N	80°33'50.3471"W	2110.46	263.765	1.57	1.24	0.97
7269.00	90.030	339.350	5887.80	671.67	-142.14	-2130.63	1762030.64	14620889.85	40°15'27.8815"N	80°33'50.7628"W	2135.37	266.183	0.19	0.00	-0.19
7362.00	90.550	339.010	5887.33	764.64	-55.21	-2163.69	1761997.59	14620976.74	40°15'28.7421"N	80°33'51.1836"W	2164.39	268.538	0.67	0.56	-0.37
7453.00	90.520	338.520	5886.48	855.63	29.61	-2196.65	1761964.65	14621061.52	40°15'29.5819"N	80°33'51.6034"W	2196.84	270.772	0.54	-0.03	-0.54
7545.00	90.620	338.420	5885.56	947.62	115.18	-2230.41	1761930.90	14621147.07	40°15'30.4291"N	80°33'52.0334"W	2233.38	272.956	0.15	0.11	-0.11
7638.00	90.950	339.130	5884.29	1040.60	201.86	-2264.07	1761897.25	14621233.72	40°15'31.2874"N	80°33'52.4621"W	2273.05	275.095	0.84	0.35	0.76
7727.00	90.980	337.880	5882.79	1129.58	284.66	-2296.68	1761864.66	14621316.48	40°15'32.1071"N	80°33'52.8775"W	2314.25	277.065	1.40	0.03	-1.40
7819.00	90.890	337.370	5881.29	1221.56	369.72	-2331.69	1761829.65	14621401.51	40°15'32.9494"N	80°33'53.3237"W	2360.82	279.010	0.56	-0.10	-0.55

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Russell Hervey BRK 201H
Field	Brooke	API/Legal	
Facility	Russell Hervey BRK Pad	Wellbore	Russell Hervey BRK 201H AWB
Slot	Slot #201		

WELLPATH DATA (206 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]
7911.00	91.140	337.430	5879.66	1313.55	454.65	-2367.04	1761794.32	14621486.40	40°15'33.7903"N	80°33'53.7743"W	2410.31	280.873	0.28	0.27	0.07
8003.00	90.800	335.270	5878.10	1405.49	538.90	-2403.94	1761757.43	14621570.62	40°15'34.6247"N	80°33'54.2449"W	2463.61	282.635	2.38	-0.37	-2.35
8096.00	90.680	333.610	5876.90	1498.32	622.79	-2444.06	1761717.33	14621654.48	40°15'35.4556"N	80°33'54.7571"W	2522.16	284.296	1.79	-0.13	-1.78
8187.00	90.620	333.300	5875.87	1589.05	704.19	-2484.73	1761676.68	14621735.85	40°15'36.2619"N	80°33'55.2765"W	2582.59	285.823	0.35	-0.07	-0.34
8280.00	90.680	333.440	5874.81	1681.76	787.32	-2526.41	1761635.01	14621818.95	40°15'37.0854"N	80°33'55.8089"W	2646.25	287.309	0.16	0.06	0.15
8373.00	90.180	334.670	5874.11	1774.55	870.94	-2567.10	1761594.34	14621902.54	40°15'37.9137"N	80°33'56.3284"W	2710.82	288.741	1.43	-0.54	1.32
8466.00	90.890	337.620	5873.24	1867.49	955.98	-2604.70	1761556.75	14621987.55	40°15'38.7559"N	80°33'56.8081"W	2774.60	290.154	3.26	0.76	3.17
8559.00	90.860	339.350	5871.82	1960.47	1042.49	-2638.80	1761522.66	14622074.02	40°15'39.6124"N	80°33'57.2425"W	2837.27	291.557	1.86	-0.03	1.86
8649.00	90.980	340.290	5870.38	2050.41	1126.95	-2669.85	1761491.63	14622158.45	40°15'40.4485"N	80°33'57.6375"W	2897.95	292.885	1.05	0.13	1.04
8742.00	90.800	340.330	5868.93	2143.31	1214.51	-2701.18	1761460.31	14622245.97	40°15'41.3152"N	80°33'58.0361"W	2961.65	294.210	0.20	-0.19	0.04
8835.00	90.980	340.010	5867.49	2236.22	1301.98	-2732.72	1761428.78	14622333.41	40°15'42.1812"N	80°33'58.4375"W	3027.03	295.475	0.39	0.19	-0.34
8926.00	90.860	339.750	5866.03	2327.15	1387.42	-2764.02	1761397.49	14622418.81	40°15'43.0269"N	80°33'58.8358"W	3092.69	296.655	0.31	-0.13	-0.29
9019.00	90.740	338.380	5864.73	2420.12	1474.27	-2797.25	1761364.28	14622505.63	40°15'43.8868"N	80°33'59.2589"W	3161.97	297.791	1.48	-0.13	-1.47
9112.00	90.830	337.190	5863.46	2513.11	1560.35	-2832.40	1761329.13	14622591.68	40°15'44.7391"N	80°33'59.7070"W	3233.76	298.850	1.28	0.10	-1.28
9204.00	90.650	335.910	5862.27	2605.08	1644.75	-2869.01	1761292.54	14622676.04	40°15'45.5749"N	80°34'0.1739"W	3307.03	299.825	1.40	-0.20	-1.39
9297.00	91.140	338.380	5860.82	2698.05	1730.43	-2905.13	1761256.44	14622761.69	40°15'46.4233"N	80°34'0.6343"W	3381.44	300.780	2.71	0.53	2.66
9388.00	90.650	339.360	5859.39	2789.02	1815.30	-2937.93	1761223.65	14622846.53	40°15'47.2635"N	80°34'1.0521"W	3453.51	301.711	1.20	-0.54	1.08
9481.00	91.350	340.680	5857.77	2881.94	1902.68	-2969.70	1761191.89	14622933.88	40°15'48.1286"N	80°34'1.4564"W	3526.94	302.648	1.61	0.75	1.42
9574.00	90.980	339.920	5855.88	2974.83	1990.22	-3001.04	1761160.56	14623021.39	40°15'48.9951"N	80°34'1.8552"W	3601.00	303.551	0.91	-0.40	-0.82
9664.00	90.800	337.860	5854.48	3064.80	2074.17	-3033.45	1761128.17	14623105.30	40°15'49.8262"N	80°34'2.2679"W	3674.78	304.363	2.30	-0.20	-2.29
9757.00	90.830	337.780	5853.16	3157.79	2160.28	-3068.56	1761093.07	14623191.38	40°15'50.6788"N	80°34'2.7154"W	3752.71	305.146	0.09	0.03	-0.09
9850.00	90.830	338.470	5851.81	3250.78	2246.57	-3103.20	1761058.44	14623277.64	40°15'51.5333"N	80°34'3.1568"W	3831.05	305.903	0.74	0.00	0.74
9943.00	90.890	338.420	5850.42	3343.77	2333.06	-3137.37	1761024.29	14623364.09	40°15'52.3895"N	80°34'3.5921"W	3909.76	306.636	0.08	0.06	-0.05
10035.00	90.920	338.890	5848.96	3435.75	2418.74	-3170.85	1760990.82	14623449.74	40°15'53.2378"N	80°34'4.0186"W	3988.05	307.337	0.51	0.03	0.51
10125.00	90.650	337.690	5847.73	3525.73	2502.34	-3204.14	1760957.55	14623533.31	40°15'54.0656"N	80°34'4.4427"W	4065.49	307.989	1.37	-0.30	-1.33
10215.00	90.460	337.560	5846.86	3615.73	2585.56	-3238.39	1760923.30	14623616.50	40°15'54.8896"N	80°34'4.8794"W	4143.95	308.604	0.26	-0.21	-0.14
10308.00	90.460	336.620	5846.11	3708.72	2671.22	-3274.60	1760887.11	14623702.13	40°15'55.7378"N	80°34'5.3410"W	4225.92	309.206	1.01	0.00	-1.01
10400.00	90.520	335.860	5845.32	3800.68	2755.42	-3311.66	1760850.06	14623786.29	40°15'56.5716"N	80°34'5.8139"W	4308.07	309.762	0.83	0.07	-0.83
10492.00	90.710	334.920	5844.34	3892.59	2839.06	-3349.97	1760811.77	14623869.90	40°15'57.4000"N	80°34'6.3028"W	4391.19	310.281	1.04	0.21	-1.02
10584.00	90.980	336.020	5842.98	3984.49	2922.74	-3388.16	1760773.59	14623953.55	40°15'58.2288"N	80°34'6.7902"W	4474.60	310.782	1.23	0.29	1.20



Actual Wellpath Report

Russell Hervey BRK 201H AWP Proj: 18218'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Russell Hervey BRK 201H
Field	Brooke	API/Legal	
Facility	Russell Hervey BRK Pad	Wellbore	Russell Hervey BRK 201H AWB
Slot	Slot #201		

WELLPATH DATA (206 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]
10675.00	90.770	336.260	5841.59	4075.44	3005.96	-3424.97	1760736.80	14624036.73	40°15'59.0528"N	80°34'7.2598"W	4556.99	311.272	0.35	-0.23	0.26
10767.00	90.680	336.510	5840.43	4167.41	3090.25	-3461.82	1760699.96	14624120.99	40°15'59.8875"N	80°34'7.7298"W	4640.45	311.754	0.29	-0.10	0.27
10858.00	89.540	337.340	5840.25	4258.39	3173.96	-3497.48	1760664.31	14624204.67	40°16'0.7165"N	80°34'8.1847"W	4722.97	312.224	1.55	-1.25	0.91
10951.00	90.490	338.750	5840.23	4351.39	3260.22	-3532.25	1760629.55	14624290.89	40°16'1.5705"N	80°34'8.6278"W	4806.85	312.707	1.83	1.02	1.52
11042.00	90.980	338.960	5839.06	4442.37	3345.08	-3565.08	1760596.74	14624375.73	40°16'2.4107"N	80°34'9.0459"W	4888.70	313.177	0.59	0.54	0.23
11130.00	90.710	338.850	5837.76	4530.34	3427.18	-3596.75	1760565.09	14624457.79	40°16'3.2234"N	80°34'9.4493"W	4968.11	313.617	0.33	-0.31	-0.12
11222.00	90.550	341.210	5836.75	4622.26	3513.63	-3628.16	1760533.68	14624544.21	40°16'4.0793"N	80°34'9.8491"W	5050.66	314.081	2.57	-0.17	2.57
11313.00	90.800	342.100	5835.68	4713.05	3600.00	-3656.80	1760505.05	14624630.55	40°16'4.9341"N	80°34'10.2131"W	5131.49	314.552	1.02	0.27	0.98
11405.00	90.400	342.010	5834.72	4804.80	3687.52	-3685.15	1760476.72	14624718.03	40°16'5.8004"N	80°34'10.5733"W	5213.26	315.018	0.45	-0.43	-0.10
11498.00	90.220	341.950	5834.21	4897.56	3775.96	-3713.91	1760447.96	14624806.44	40°16'6.6756"N	80°34'10.9389"W	5296.32	315.475	0.20	-0.19	-0.06
11591.00	90.920	342.400	5833.29	4990.29	3864.49	-3742.38	1760419.51	14624894.93	40°16'7.5518"N	80°34'11.3006"W	5379.56	315.920	0.89	0.75	0.48
11683.00	90.400	339.220	5832.23	5082.15	3951.36	-3772.62	1760389.28	14624981.77	40°16'8.4117"N	80°34'11.6852"W	5463.14	316.326	3.50	-0.57	-3.46
11776.00	90.490	338.270	5831.50	5175.13	4038.03	-3806.33	1760355.58	14625068.41	40°16'9.2698"N	80°34'12.1146"W	5549.22	316.692	1.03	0.10	-1.02
11868.00	90.310	338.100	5830.86	5267.13	4123.44	-3840.52	1760321.41	14625153.78	40°16'10.1154"N	80°34'12.5503"W	5634.92	317.035	0.27	-0.20	-0.18
11961.00	90.650	338.560	5830.08	5360.12	4209.86	-3874.86	1760287.08	14625240.17	40°16'10.9711"N	80°34'12.9879"W	5721.66	317.373	0.62	0.37	0.49
12053.00	90.370	337.310	5829.26	5452.12	4295.12	-3909.41	1760252.54	14625325.40	40°16'11.8152"N	80°34'13.4284"W	5807.89	317.692	1.39	-0.30	-1.36
12146.00	90.280	335.150	5828.74	5545.07	4380.22	-3946.90	1760215.07	14625410.47	40°16'12.6580"N	80°34'13.9066"W	5896.13	317.979	2.32	-0.10	-2.32
12239.00	90.220	334.840	5828.33	5637.95	4464.51	-3986.21	1760175.78	14625494.72	40°16'13.4928"N	80°34'14.4085"W	5985.12	318.239	0.34	-0.06	-0.33
12332.00	90.120	335.300	5828.05	5730.84	4548.84	-4025.41	1760136.59	14625579.02	40°16'14.3280"N	80°34'14.9089"W	6074.19	318.493	0.51	-0.11	0.49
12424.00	90.490	335.540	5827.57	5822.76	4632.50	-4063.68	1760098.34	14625662.65	40°16'15.1566"N	80°34'15.3974"W	6162.27	318.742	0.48	0.40	0.26
12517.00	89.820	335.120	5827.31	5915.67	4717.01	-4102.49	1760059.53	14625747.13	40°16'15.9935"N	80°34'15.8929"W	6251.45	318.986	0.85	-0.72	-0.45
12610.00	90.650	336.440	5826.93	6008.61	4801.82	-4140.64	1760021.40	14625831.91	40°16'16.8334"N	80°34'16.3797"W	6340.54	319.229	1.68	0.89	1.42
12702.00	90.280	337.140	5826.19	6100.59	4886.37	-4176.90	1759985.16	14625916.42	40°16'17.6707"N	80°34'16.8422"W	6428.31	319.476	0.86	-0.40	0.76
12795.00	90.650	337.750	5825.43	6193.58	4972.26	-4212.57	1759949.50	14626002.27	40°16'18.5210"N	80°34'17.2970"W	6516.83	319.728	0.77	0.40	0.66
12888.00	90.150	338.790	5824.78	6286.57	5058.64	-4247.00	1759915.08	14626088.63	40°16'19.3764"N	80°34'17.7358"W	6605.07	319.985	1.24	-0.54	1.12
12979.00	90.650	339.400	5824.15	6377.55	5143.65	-4279.47	1759882.63	14626173.60	40°16'20.2179"N	80°34'18.1494"W	6691.11	320.240	0.87	0.55	0.67
13072.00	90.550	338.370	5823.17	6470.53	5230.40	-4312.97	1759849.14	14626260.32	40°16'21.0768"N	80°34'18.5762"W	6779.29	320.491	1.11	-0.11	-1.11
13165.00	90.220	336.400	5822.55	6563.52	5316.24	-4348.73	1759813.39	14626346.13	40°16'21.9267"N	80°34'19.0321"W	6868.33	320.717	2.15	-0.35	-2.12
13257.00	90.430	336.240	5822.03	6655.48	5400.50	-4385.68	1759776.46	14626430.35	40°16'22.7611"N	80°34'19.5036"W	6956.98	320.920	0.29	0.23	-0.17
13350.00	90.340	335.550	5821.40	6748.43	5485.38	-4423.66	1759738.49	14626515.20	40°16'23.6017"N	80°34'19.9883"W	7046.86	321.116	0.75	-0.10	-0.74



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Operator	SWN PRODUCTION COMPANY, LLC	Well	Russell Hervey BRK 201H
Field	Brooke	API/Legal	
Facility	Russell Hervey BRK Pad	Wellbore	Russell Hervey BRK 201H AWB
Slot	Slot #201		

WELLPATH DATA (206 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)
13443.00	89.570	335.730	5821.47	6841.36	5570.10	-4462.02	1759700.15	14626599.89	40°16'24.4407"N	80°34'20.4779"W	7136.92	321.303	0.85	-0.83	0.19
13529.00	90.680	337.930	5821.29	6927.34	5649.16	-4495.85	1759666.33	14626678.92	40°16'25.2236"N	80°34'20.9095"W	7219.81	321.486	2.87	1.29	2.56
13616.00	89.480	336.450	5821.16	7014.33	5729.35	-4529.58	1759632.61	14626759.08	40°16'26.0176"N	80°34'21.3396"W	7303.60	321.670	2.19	-1.38	-1.70
13706.00	90.550	338.480	5821.14	7104.32	5812.48	-4564.07	1759598.13	14626842.17	40°16'26.8407"N	80°34'21.7794"W	7390.24	321.860	2.55	1.19	2.26
13795.00	89.940	337.260	5820.76	7193.32	5894.92	-4597.60	1759564.62	14626924.58	40°16'27.6569"N	80°34'22.2068"W	7475.82	322.048	1.53	-0.69	-1.37
13884.00	90.890	339.340	5820.12	7282.30	5977.60	-4630.50	1759531.73	14627007.23	40°16'28.4756"N	80°34'22.6262"W	7561.30	322.237	2.57	1.07	2.34
13974.00	90.580	338.570	5818.96	7372.28	6061.59	-4662.82	1759499.43	14627091.19	40°16'29.3071"N	80°34'23.0379"W	7647.53	322.431	0.92	-0.34	-0.86
14060.00	90.490	339.150	5818.16	7458.26	6141.80	-4693.83	1759468.42	14627171.37	40°16'30.1011"N	80°34'23.4330"W	7730.05	322.611	0.68	-0.10	0.67
14153.00	90.950	339.610	5816.99	7551.22	6228.83	-4726.58	1759435.69	14627258.37	40°16'30.9627"N	80°34'23.8501"W	7819.14	322.808	0.70	0.49	0.49
14246.00	90.890	339.010	5815.50	7644.18	6315.82	-4759.43	1759402.85	14627345.33	40°16'31.8239"N	80°34'24.2686"W	7908.34	322.999	0.65	-0.06	-0.65
14339.00	89.940	337.500	5814.82	7737.17	6402.20	-4793.89	1759368.41	14627431.67	40°16'32.6791"N	80°34'24.7077"W	7998.09	323.175	1.92	-1.02	-1.62
14431.00	91.020	339.570	5814.05	7829.15	6487.81	-4827.55	1759334.76	14627517.25	40°16'33.5267"N	80°34'25.1367"W	8086.84	323.347	2.54	1.17	2.25
14523.00	90.220	338.580	5813.06	7921.13	6573.74	-4860.40	1759301.92	14627603.14	40°16'34.3773"N	80°34'25.5552"W	8175.42	323.522	1.38	-0.87	-1.08
14613.00	90.580	339.610	5812.43	8011.10	6657.81	-4892.52	1759269.82	14627687.18	40°16'35.2097"N	80°34'25.9643"W	8262.15	323.690	1.21	0.40	1.14
14705.00	90.220	337.940	5811.79	8103.08	6743.56	-4925.82	1759236.52	14627772.90	40°16'36.0586"N	80°34'26.3887"W	8351.01	323.854	1.86	-0.39	-1.82
14796.00	90.550	337.350	5811.17	8194.08	6827.72	-4960.43	1759201.93	14627857.03	40°16'36.8919"N	80°34'26.8300"W	8439.41	324.001	0.74	0.36	-0.65
14889.00	90.710	336.430	5810.15	8287.06	6913.25	-4996.93	1759165.44	14627942.52	40°16'37.7388"N	80°34'27.2956"W	8530.09	324.140	1.00	0.17	-0.99
14982.00	90.620	336.290	5809.07	8380.02	6998.44	-5034.22	1759128.17	14628027.68	40°16'38.5824"N	80°34'27.7714"W	8621.00	324.271	0.18	-0.10	-0.15
15074.00	90.680	335.840	5808.03	8471.97	7082.53	-5071.54	1759090.86	14628111.73	40°16'39.4151"N	80°34'28.2477"W	8711.07	324.395	0.49	0.07	-0.49
15167.00	90.550	335.250	5807.03	8564.89	7167.18	-5110.04	1759052.38	14628196.35	40°16'40.2534"N	80°34'28.7392"W	8802.32	324.512	0.65	-0.14	-0.63
15259.00	90.400	335.780	5806.27	8656.81	7250.90	-5148.17	1759014.26	14628280.04	40°16'41.0826"N	80°34'29.2259"W	8892.65	324.625	0.60	-0.16	0.58
15352.00	90.520	335.810	5805.52	8749.75	7335.72	-5186.30	1758976.15	14628364.83	40°16'41.9226"N	80°34'29.7126"W	8983.90	324.740	0.13	0.13	0.03
15444.00	90.460	334.620	5804.73	8841.65	7419.24	-5224.86	1758937.60	14628448.32	40°16'42.7497"N	80°34'30.2050"W	9074.38	324.846	1.30	-0.07	-1.29
15536.00	90.400	334.620	5804.04	8933.50	7502.36	-5264.29	1758898.18	14628531.41	40°16'43.5729"N	80°34'30.7086"W	9165.05	324.943	0.07	-0.07	0.00
15626.00	90.680	336.200	5803.20	9023.41	7584.19	-5301.74	1758860.75	14628613.21	40°16'44.3833"N	80°34'31.1868"W	9253.56	325.044	1.78	0.31	1.76
15713.00	90.430	337.220	5802.35	9110.39	7664.10	-5336.14	1758826.36	14628693.08	40°16'45.1746"N	80°34'31.6256"W	9338.78	325.152	1.21	-0.29	1.17
15801.00	90.430	338.520	5801.69	9198.38	7745.61	-5369.29	1758793.23	14628774.56	40°16'45.9816"N	80°34'32.0483"W	9424.63	325.270	1.48	0.00	1.48
15888.00	90.520	340.690	5800.97	9285.33	7827.15	-5399.60	1758762.92	14628856.07	40°16'46.7888"N	80°34'32.4344"W	9508.94	325.400	2.50	0.10	2.49
15975.00	90.620	342.420	5800.11	9372.14	7909.67	-5427.13	1758735.41	14628938.56	40°16'47.6056"N	80°34'32.7844"W	9592.53	325.545	1.99	0.11	1.99
16062.00	90.620	343.540	5799.16	9458.79	7992.86	-5452.59	1758709.96	14629021.71	40°16'48.4288"N	80°34'33.1078"W	9675.56	325.699	1.29	0.00	1.29



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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Russell Hervey BRK 201H
Field	Brooke	API/Legal	
Facility	Russell Hervey BRK Pad	Wellbore	Russell Hervey BRK 201H AWB
Slot	Slot #201		

WELLPATH DATA (206 stations) † = interpolated, ‡ = extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
16149.00	90.890	343.630	5798.02	9545.34	8076.30	-5477.17	1758685.38	14629105.13	40°16'49.2546"N	80°34'33.4198"W	9758.39	325.856	0.33	0.31	0.10	
16238.00	90.710	342.700	5796.77	9633.95	8161.48	-5502.95	1758659.62	14629190.27	40°16'50.0975"N	80°34'33.7471"W	9843.38	326.010	1.06	-0.20	-1.04	
16325.00	90.890	342.910	5795.56	9720.62	8244.58	-5528.66	1758633.91	14629273.34	40°16'50.9199"N	80°34'34.0738"W	9926.69	326.155	0.32	0.21	0.24	
16411.00	91.080	340.840	5794.08	9806.39	8326.30	-5555.41	1758607.17	14629355.03	40°16'51.7287"N	80°34'34.4139"W	10009.49	326.288	2.42	0.22	-2.41	
16498.00	90.520	338.170	5792.87	9893.34	8407.78	-5585.87	1758576.73	14629436.47	40°16'52.5352"N	80°34'34.8018"W	10094.19	326.401	3.14	-0.64	-3.07	
16585.00	90.550	336.070	5792.05	9980.32	8487.92	-5619.69	1758542.92	14629516.59	40°16'53.3288"N	80°34'35.2332"W	10179.67	326.492	2.41	0.03	-2.41	
16671.00	90.520	334.190	5791.25	10066.22	8565.94	-5655.85	1758506.77	14629594.58	40°16'54.1015"N	80°34'35.6951"W	10264.70	326.564	2.19	-0.03	-2.19	
16758.00	90.370	333.700	5790.58	10153.01	8644.10	-5694.07	1758468.57	14629672.70	40°16'54.8756"N	80°34'36.1833"W	10350.98	326.626	0.59	-0.17	-0.56	
16845.00	90.370	334.900	5790.01	10239.84	8722.49	-5731.79	1758430.86	14629751.06	40°16'55.6520"N	80°34'36.6652"W	10437.20	326.690	1.38	0.00	1.38	
16932.00	89.970	334.820	5789.76	10326.72	8801.25	-5768.75	1758393.91	14629829.79	40°16'56.4320"N	80°34'37.1373"W	10523.33	326.757	0.47	-0.46	-0.09	
17019.00	90.220	335.550	5789.61	10413.63	8880.21	-5805.27	1758357.42	14629908.73	40°16'57.2141"N	80°34'37.6035"W	10609.40	326.826	0.89	0.29	0.84	
17106.00	90.310	335.590	5789.21	10500.56	8959.42	-5841.25	1758321.45	14629987.91	40°16'57.9985"N	80°34'38.0629"W	10695.39	326.897	0.11	0.10	0.05	
17192.00	90.370	335.570	5788.70	10586.49	9037.73	-5876.80	1758285.91	14630066.18	40°16'58.7740"N	80°34'38.5168"W	10780.41	326.966	0.07	0.07	-0.02	
17279.00	90.490	336.600	5788.05	10673.44	9117.25	-5912.07	1758250.66	14630145.68	40°16'59.5615"N	80°34'38.9670"W	10866.32	327.039	1.19	0.14	1.18	
17365.00	90.920	337.070	5786.99	10759.42	9196.31	-5945.90	1758216.84	14630224.71	40°17'0.3443"N	80°34'39.3986"W	10951.07	327.115	0.74	0.50	0.55	
17452.00	90.710	337.050	5785.75	10846.41	9276.43	-5979.80	1758182.95	14630304.79	40°17'1.1376"N	80°34'39.8312"W	11036.76	327.193	0.24	-0.24	-0.02	
17538.00	90.650	336.920	5784.73	10932.39	9355.57	-6013.42	1758149.34	14630383.91	40°17'1.9213"N	80°34'40.2601"W	11121.51	327.269	0.17	-0.07	-0.15	
17625.00	90.860	337.470	5783.58	11019.38	9435.77	-6047.14	1758115.63	14630464.07	40°17'2.7153"N	80°34'40.6903"W	11207.21	327.345	0.68	0.24	0.63	
17711.00	90.550	337.880	5782.52	11105.37	9515.31	-6079.81	1758082.98	14630543.59	40°17'3.5029"N	80°34'41.1068"W	11291.82	327.423	0.80	-0.36	0.48	
17798.00	90.490	338.610	5781.73	11192.36	9596.11	-6112.05	1758050.75	14630624.35	40°17'4.3029"N	80°34'41.5179"W	11377.28	327.506	0.84	-0.07	0.84	
17885.00	90.550	339.810	5780.95	11279.33	9677.44	-6142.93	1758019.88	14630705.65	40°17'5.1080"N	80°34'41.9114"W	11462.48	327.594	1.38	0.07	1.38	
17972.00	90.680	340.800	5780.01	11366.25	9759.35	-6172.25	1757990.58	14630787.53	40°17'5.9188"N	80°34'42.2846"W	11547.36	327.689	1.15	0.15	1.14	
18058.00	90.650	341.570	5779.01	11452.09	9840.75	-6199.98	1757962.85	14630868.89	40°17'6.7244"N	80°34'42.6375"W	11631.00	327.788	0.90	-0.03	0.90	
18145.00	90.460	342.290	5778.17	11538.87	9923.45	-6226.97	1757935.88	14630951.57	40°17'7.5430"N	80°34'42.9806"W	11715.37	327.892	0.86	-0.22	0.83	
18193.00	90.860	343.190	5777.62	11586.69	9989.29	-6241.21	1757921.64	14630997.38	40°17'7.9966"N	80°34'43.1616"W	11761.77	327.952	2.05	0.83	1.87	
18218.00†	90.860	343.190	5777.24	11611.58	9993.22	-6248.44	1757914.42	14631021.30	40°17'8.2334"N	80°34'43.2534"W	11785.89	327.984	0.00	0.00	0.00	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Russell Hervey BRK 201H
Field	Brooke	API/Legal	
Facility	Russell Hervey BRK Pad	Wellbore	Russell Hervey BRK 201H AWB
Slot	Slot #201		

HOLE & CASING SECTIONS - Ref Wellbore: Russell Hervey BRK 201H AWB Ref Wellpath: Russell Hervey BRK 201H AWP Proj: 18218'									
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]
20in Conductor	26.00	100.00	74.00	26.00	100.00	0.00	0.00	0.04	-0.01
17.5in Open Hole	100.00	361.00	261.00	100.00	361.00	0.04	-0.01	0.60	-0.02
13.375in Casing Surface	26.00	361.00	335.00	26.00	361.00	0.00	0.00	0.60	-0.02
12.25in Open Hole	361.00	2022.00	1661.00	361.00	2009.32	0.60	-0.02	-143.66	0.40
9.625in Casing Intermediate	26.00	2022.00	1996.00	26.00	2009.32	0.00	0.00	-143.66	0.40
8.75in Open Hole	2022.00	6932.00	4910.00	2009.32	5884.85	-143.66	0.40	-456.52	-2009.35
8.5in Open Hole	6932.00	18218.00	11286.00	5884.85	5777.24	-456.52	-2009.35	9993.22	-6248.44
5.5in Casing Production	26.00	18218.00	18192.00	26.00	5777.24	0.00	0.00	9993.22	-6248.44



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Facility	Russell Hervey BRK Pad	Wellbore	Russell Hervey BRK 201H AWB
Slot	Slot #201		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Russell Hervey BRK 201H LP Rev-3	5878.00	-580.59	-1957.72	1762203.48	14620451.56	40°15'23.5404"N	80°33'48.5604"W	point
Russell Hervey North Unit 1	5899.50	-545.88	-1420.11	1762740.89	14620486.26	40°15'23.8572"N	80°33'41.6242"W	polygon
2D Polygon: dimensions not calculated								
Russell Hervey North Unit 2	5899.50	3848.28	-2376.07	1761785.30	14624878.73	40°16'7.3258"N	80°33'53.6759"W	polygon
2D Polygon: dimensions not calculated								
Russell Hervey Northwest Unit 1	5899.50	6070.29	-4195.73	1759966.33	14627099.89	40°16'29.3708"N	80°34'17.0113"W	polygon
2D Polygon: dimensions not calculated								
Russell Hervey South Unit 1	5899.50	510.65	1052.26	1765212.31	14621542.38	40°15'34.1755"N	80°33'9.6671"W	polygon
2D Polygon: dimensions not calculated								
Russell Hervey South Unit 2	5899.50	-3547.95	269.88	1764430.23	14617485.34	40°14'54.1083"N	80°33'20.0210"W	polygon
2D Polygon: dimensions not calculated								
Russell Hervey BRK 201H BHL Rev-5	5984.50	9988.50	-6259.53	1757903.33	14631016.59	40°17'8.1873"N	80°34'43.3968"W	point



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Slot	Slot #201		

WELLPATH COMPOSITION - Ref Wellbore: Russell Hervey BRK 201H AWB Ref Wellpath: Russell Hervey BRK 201H AWP Proj: 18218'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	307.00	OWSG MWD rev2 + HRGM	01 Premier MWD <17 1/2"> (216'-307')	Russell Hervey BRK 201H AWB	2/5/2020
307.00	1970.00	OWSG MWD rev2 + HRGM	02 Premier MWD <12 1/4"> (421'-1970')	Russell Hervey BRK 201H AWB	2/5/2020
1970.00	6863.00	OWSG MWD rev2 + HRGM	03 Premier MWD <8 3/4"> (2116'-6863')	Russell Hervey BRK 201H AWB	2/5/2020
6863.00	18218.00	BH AutoTrak Curve (2019) (Short spacing)	04 BH AT Curve <8 1/2"> (6907'-18193')	Russell Hervey BRK 201H AWB	2/5/2020



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Field	Brooke	API/Legal	
Facility	Russell Hervey BRK Pad	Wellbore	Russell Hervey BRK 201H AWB
Slot	Slot #201		

COMMENTS
Wellpath general comments API: 47-009-00291-0000 BH Job #: 110260352A Rig: SDC 42 Duration: 02/06/2020 - 02/09/2020