



Actual Wellpath Report

Russell Hervey BRK 401H AWP Proj: 18783'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Russell Hervey BRK 401H
Field	Brooke	API/Legal	
Facility	Russell Hervey BRK Pad	Wellbore	Russell Hervey BRK 401H AWB
Slot	Slot #401		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect@ 6.0
North Reference	Grid	User	Atenjen
Scale	0.999617	Report Generated	2/26/2020 at 9:04:51 AM
Convergence at slot	0.29° East	Database	WA_MPL_EASTERNS_Defn

WELLPATH LOCATION

Local coordinates		Grid coordinates		Geographic coordinates	
North [ft]	East [ft]	Easting [US ft]	Northing [US ft]	Latitude	Longitude
28.77	-19.06	1764095.27	14621057.71	40°15'29.4397"N	80°33'24.1119"W
		1764114.32	14621028.95	40°15'29.1545"N	80°33'23.8679"W
Facility Reference Pt					
Field Reference Pt					
Slot Location					

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 #401)	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	337.84°

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WELLPATH DATA (222 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
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]	[Latitude]	[Longitude]	[ft]	[°]	[ft]	[ft/100ft]	[°/100ft]
0.00†	0.00	31.140	0.00	0.00	0.00	0.00	1764095.27	14621057.71	40°15'29.4397"N	80°33'24.1119"W	0.00	0.00	0.00	0.00	0.00
26.00	0.00	31.140	26.00	0.00	0.00	0.00	1764095.27	14621057.71	40°15'29.4397"N	80°33'24.1119"W	0.00	0.00	0.00	0.00	0.00
100.00	0.070	31.140	100.00	0.03	0.04	0.02	1764095.29	14621057.75	40°15'29.4401"N	80°33'24.1116"W	0.05	0.05	31.140	0.09	0.00
125.00	0.030	271.970	125.00	0.04	0.05	0.02	1764095.28	14621057.76	40°15'29.4403"N	80°33'24.1116"W	0.06	0.06	25.443	0.35	-0.16
150.00	0.140	202.240	150.00	0.02	0.02	0.01	1764095.28	14621057.73	40°15'29.4400"N	80°33'24.1116"W	0.02	0.02	15.482	0.53	-0.44
175.00	0.090	209.620	175.00	-0.01	-0.02	-0.01	1764095.26	14621057.69	40°15'29.4395"N	80°33'24.1121"W	0.03	0.03	214.365	0.21	-0.20
200.00	0.080	214.800	200.00	-0.04	-0.05	-0.03	1764095.24	14621057.66	40°15'29.4392"N	80°33'24.1123"W	0.06	0.06	213.007	0.05	-0.04
225.00	0.140	241.820	225.00	-0.05	-0.08	-0.07	1764095.20	14621057.63	40°15'29.4389"N	80°33'24.1128"W	0.11	0.11	221.115	0.31	0.24
250.00	0.200	193.030	250.00	-0.09	-0.14	-0.11	1764095.16	14621057.57	40°15'29.4384"N	80°33'24.1133"W	0.18	0.18	217.934	0.60	0.24
275.00	0.140	157.530	275.00	-0.15	-0.21	-0.11	1764095.16	14621057.50	40°15'29.4377"N	80°33'24.1133"W	0.23	0.23	206.892	0.47	-0.24
300.00	0.160	189.810	300.00	-0.21	-0.27	-0.10	1764095.17	14621057.44	40°15'29.4371"N	80°33'24.1132"W	0.29	0.29	200.267	0.34	0.08
325.00	0.060	77.650	325.00	-0.25	-0.30	-0.09	1764095.18	14621057.41	40°15'29.4368"N	80°33'24.1131"W	0.32	0.32	197.133	0.76	-0.40
350.00	0.130	170.110	350.00	-0.28	-0.33	-0.08	1764095.19	14621057.38	40°15'29.4365"N	80°33'24.1129"W	0.34	0.34	193.004	0.58	0.28
375.00	0.170	296.730	375.00	-0.28	-0.34	-0.10	1764095.17	14621057.37	40°15'29.4364"N	80°33'24.1132"W	0.36	0.36	197.037	1.07	0.16
400.00	0.260	276.130	400.00	-0.22	-0.32	-0.19	1764095.08	14621057.39	40°15'29.4366"N	80°33'24.1144"W	0.37	0.37	211.413	0.47	0.36
408.00	0.290	272.090	408.00	-0.20	-0.31	-0.23	1764095.04	14621057.40	40°15'29.4367"N	80°33'24.1149"W	0.39	0.39	216.415	0.45	0.37
519.00	2.410	272.220	518.96	0.88	-0.21	-2.84	1764092.43	14621057.50	40°15'29.4378"N	80°33'24.1486"W	2.85	2.85	265.703	1.91	1.91
612.00	5.290	269.040	611.74	3.23	-0.21	-9.09	1764086.19	14621057.50	40°15'29.4381"N	80°33'24.2291"W	9.09	9.09	268.677	3.10	3.10
704.00	7.850	266.360	703.13	6.76	-0.68	-19.60	1764075.68	14621057.03	40°15'29.4340"N	80°33'24.3647"W	19.61	19.61	268.013	2.80	2.78
797.00	10.460	261.440	794.94	10.77	-2.34	-34.29	1764061.00	14621055.37	40°15'29.4183"N	80°33'24.5543"W	34.37	34.37	266.096	2.93	2.81
890.00	13.250	256.070	885.95	14.28	-6.16	-52.98	1764042.31	14621051.55	40°15'29.3815"N	80°33'25.0785"W	53.34	53.34	263.365	3.22	3.00
983.00	15.400	249.230	976.06	16.10	-13.11	-74.88	1764020.42	14621044.61	40°15'29.3139"N	80°33'25.0785"W	76.02	76.02	260.070	2.94	2.31
1075.00	16.260	243.080	1064.58	15.33	-23.27	-97.79	1763997.52	14621034.45	40°15'29.2146"N	80°33'25.3747"W	100.52	100.52	256.613	2.05	0.93
1168.00	14.170	238.430	1154.31	12.39	-35.13	-119.10	1763976.22	14621022.59	40°15'29.0985"N	80°33'25.6503"W	124.17	124.17	253.566	2.60	-2.25
1261.00	14.930	236.500	1244.33	8.17	-47.70	-138.79	1763956.54	14621010.03	40°15'28.9752"N	80°33'25.9051"W	146.76	146.76	251.032	0.97	0.82
1354.00	17.330	234.700	1333.66	2.67	-62.32	-160.08	1763935.25	14620995.41	40°15'28.8318"N	80°33'26.1807"W	171.79	171.79	248.729	2.64	2.58
1447.00	18.120	232.810	1422.25	-4.23	-79.07	-182.91	1763912.43	14620978.67	40°15'28.6675"N	80°33'26.4762"W	199.27	199.27	246.623	1.05	0.85
1539.00	18.320	230.570	1509.64	-12.24	-96.90	-205.48	1763889.87	14620960.85	40°15'28.4924"N	80°33'26.7684"W	227.18	227.18	244.753	0.79	0.22
1632.00	21.320	228.400	1597.12	-22.20	-117.41	-229.41	1763865.94	14620940.35	40°15'28.2909"N	80°33'27.0785"W	257.71	257.71	242.897	3.32	3.23
1725.00	23.730	229.680	1683.02	-33.66	-140.75	-256.33	1763839.04	14620917.02	40°15'28.0616"N	80°33'27.4271"W	292.43	292.43	241.229	2.64	2.59

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Slot	Slot #401		

WELLPATH DATA (222 stations)												
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)	(ft)	(ft)	(ft)	(ft)
1816.00	25.590	232.560	1765.72	-44.55	-164.54	-285.90	1763809.48	14620893.23	40°15'27.8279"N	80°33'27.8100"W	329.87	240.078
1909.00	28.990	231.000	1848.36	-56.14	-190.75	-319.52	1763775.87	14620867.03	40°15'27.5706"N	80°33'28.2454"W	372.13	239.164
1960.00	30.870	231.000	1892.55	-63.37	-206.65	-339.39	1763756.02	14620851.14	40°15'27.4144"N	80°33'28.5026"W	397.35	238.662
2115.00	32.480	231.080	2024.46	-86.90	-257.83	-402.67	1763692.75	14620799.98	40°15'26.9118"N	80°33'29.3222"W	478.14	237.369
2208.00	30.430	232.350	2103.79	-100.39	-287.90	-440.75	1763654.69	14620769.92	40°15'26.6165"N	80°33'29.8153"W	526.45	236.847
2300.00	29.140	234.510	2183.64	-111.78	-315.14	-477.44	1763618.01	14620742.69	40°15'26.3491"N	80°33'30.2902"W	572.07	236.572
2393.00	29.660	233.180	2264.66	-122.82	-342.08	-514.30	1763581.17	14620715.76	40°15'26.0848"N	80°33'30.7673"W	617.67	236.371
2486.00	28.490	234.790	2345.94	-133.65	-368.66	-550.84	1763544.64	14620689.19	40°15'25.8239"N	80°33'31.2404"W	662.82	236.207
2579.00	29.030	233.900	2427.47	-144.10	-394.74	-587.20	1763508.30	14620663.12	40°15'25.5679"N	80°33'31.7110"W	707.55	236.089
2671.00	29.640	231.460	2507.68	-155.89	-422.07	-623.03	1763472.48	14620635.80	40°15'25.2996"N	80°33'32.1749"W	752.53	235.884
2764.00	30.190	230.680	2588.28	-169.28	-451.22	-659.11	1763436.42	14620606.67	40°15'25.0134"N	80°33'32.6421"W	798.76	235.605
2857.00	29.940	234.360	2668.78	-181.59	-479.56	-696.06	1763399.48	14620578.34	40°15'24.7352"N	80°33'33.1205"W	845.27	235.435
2949.00	30.170	233.690	2748.41	-192.59	-506.63	-733.35	1763362.21	14620551.28	40°15'24.4695"N	80°33'33.6032"W	891.33	235.362
3042.00	30.290	231.400	2828.76	-204.94	-535.10	-770.51	1763325.06	14620522.82	40°15'24.1900"N	80°33'34.0843"W	938.09	235.221
3135.00	30.560	229.970	2908.96	-218.83	-564.93	-806.94	1763288.64	14620492.99	40°15'23.8970"N	80°33'34.5561"W	985.04	235.004
3227.00	30.170	228.060	2988.35	-233.83	-595.42	-842.04	1763253.56	14620462.52	40°15'23.5974"N	80°33'35.0108"W	1031.29	234.735
3319.00	30.140	231.240	3067.90	-248.25	-625.34	-877.25	1763218.36	14620432.61	40°15'23.3035"N	80°33'35.4668"W	1077.31	234.517
3412.00	30.420	234.890	3148.22	-260.20	-653.50	-914.72	1763180.90	14620404.46	40°15'23.0271"N	80°33'35.9519"W	1124.17	234.457
3505.00	30.110	232.050	3228.55	-271.83	-681.39	-952.37	1763143.26	14620376.59	40°15'22.7533"N	80°33'36.4394"W	1171.03	234.418
3598.00	30.950	234.950	3308.66	-283.51	-709.47	-990.35	1763105.30	14620348.51	40°15'22.4777"N	80°33'36.9310"W	1218.25	234.383
3690.00	30.280	232.720	3387.84	-294.84	-737.10	-1028.17	1763067.49	14620320.89	40°15'22.2064"N	80°33'37.4206"W	1265.09	234.363
3783.00	30.110	233.110	3468.22	-306.88	-765.31	-1065.49	1763030.19	14620292.69	40°15'21.9296"N	80°33'37.9037"W	1311.85	234.311
3876.00	30.050	234.480	3548.70	-318.20	-792.84	-1103.10	1762992.60	14620265.17	40°15'21.6593"N	80°33'38.3905"W	1358.46	234.294
3969.00	32.310	233.370	3628.26	-329.79	-821.20	-1142.00	1762953.71	14620236.82	40°15'21.3810"N	80°33'38.8941"W	1406.60	234.280
4061.00	32.360	231.000	3706.00	-343.06	-851.37	-1180.87	1762914.86	14620206.67	40°15'21.0848"N	80°33'39.3973"W	1455.77	234.210
4154.00	32.280	233.480	3784.59	-356.43	-881.81	-1220.17	1762875.57	14620176.24	40°15'20.7859"N	80°33'39.9061"W	1505.46	234.144
4247.00	30.550	230.490	3863.96	-369.64	-911.63	-1258.37	1762837.39	14620146.43	40°15'20.4931"N	80°33'40.4007"W	1553.88	234.078
4343.00	31.770	229.840	3941.83	-383.94	-941.80	-1294.52	1762801.25	14620116.28	40°15'20.1968"N	80°33'40.8689"W	1600.86	233.963
4431.00	31.870	229.890	4020.85	-399.08	-973.40	-1332.01	1762763.78	14620084.68	40°15'19.8863"N	80°33'41.3545"W	1649.77	233.841
4524.00	32.880	230.880	4099.40	-414.01	-1005.15	-1370.37	1762725.43	14620052.95	40°15'19.5744"N	80°33'41.8513"W	1699.48	233.740

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(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)	(US ft)	(ft)	(ft)	(°)
4671.00	31.590	230.250	4178.06	-428.73	-1036.65	-1408.68	1762687.13	14620021.45	40°15'19.2650"N	80°33'42.3475"W	1749.01	233.651
4709.00	32.640	230.170	4255.98	-443.55	-1067.95	-1446.27	1762649.56	14619990.17	40°15'18.9575"N	80°33'42.8342"W	1797.83	233.557
4801.00	31.660	230.960	4333.87	-458.09	-1099.05	-1484.07	1762611.77	14619959.08	40°15'18.6520"N	80°33'43.3238"W	1846.72	233.478
4894.00	32.610	231.700	4412.63	-472.14	-1129.96	-1522.70	1762573.16	14619928.18	40°15'18.3485"N	80°33'43.8239"W	1896.16	233.422
4886.00	32.380	231.570	4490.22	-485.93	-1160.64	-1561.45	1762534.42	14619897.52	40°15'18.0473"N	80°33'44.3257"W	1945.56	233.376
5079.00	32.980	234.390	4568.50	-498.80	-1190.85	-1601.54	1762494.35	14619867.31	40°15'17.7506"N	80°33'44.8446"W	1995.76	233.367
5172.00	33.010	235.970	4646.51	-509.90	-1219.77	-1643.11	1762452.79	14619838.41	40°15'17.4669"N	80°33'45.3827"W	2046.38	233.412
5264.00	33.220	235.270	4723.56	-520.54	-1248.15	-1684.59	1762411.33	14619810.04	40°15'17.1885"N	80°33'45.9195"W	2096.60	233.464
5357.00	31.870	234.180	4801.98	-531.88	-1277.04	-1725.44	1762370.49	14619781.17	40°15'16.9050"N	80°33'46.4481"W	2146.62	233.494
5450.00	31.770	232.020	4880.98	-544.35	-1306.47	-1764.65	1762331.30	14619751.74	40°15'16.6161"N	80°33'46.9575"W	2195.64	233.485
5542.00	29.400	229.720	4960.18	-557.98	-1335.98	-1800.97	1762294.99	14619722.24	40°15'16.3262"N	80°33'47.4260"W	2242.40	233.432
5630.00	28.660	230.160	5037.13	-571.11	-1363.47	-1833.65	1762262.32	14619694.77	40°15'16.0562"N	80°33'47.8493"W	2285.02	233.366
5722.00	28.930	236.360	5117.77	-582.24	-1389.93	-1869.13	1762226.86	14619668.31	40°15'15.7964"N	80°33'48.3085"W	2329.28	233.365
5815.00	29.180	237.740	5199.07	-590.69	-1414.49	-1907.03	1762188.98	14619643.76	40°15'15.5555"N	80°33'48.7989"W	2374.35	233.435
5907.00	29.870	240.770	5279.12	-597.45	-1437.65	-1945.99	1762150.03	14619620.61	40°15'15.3286"N	80°33'49.3028"W	2419.45	233.544
5998.00	34.880	257.320	5356.11	-595.95	-1454.48	-1991.27	1762104.77	14619603.79	40°15'15.1646"N	80°33'49.8879"W	2465.89	233.855
6091.00	33.110	272.360	5433.35	-581.00	-1459.26	-2024.68	1762053.37	14619599.00	40°15'15.1196"N	80°33'50.5514"W	2510.39	234.458
6183.00	35.410	289.180	5509.55	-552.90	-1449.46	-2093.08	1762002.99	14619568.81	40°15'15.2191"N	80°33'51.2008"W	2545.96	235.297
6276.00	40.390	301.310	5583.01	-510.80	-1424.90	-2144.38	1761951.72	14619533.36	40°15'15.4642"N	80°33'51.8608"W	2574.63	236.397
6364.00	47.070	307.290	5646.60	-460.07	-1390.51	-2194.45	1761901.67	14619511.67	40°15'15.8065"N	80°33'52.5044"W	2597.91	237.640
6457.00	53.920	308.240	5705.72	-398.00	-1346.57	-2251.12	1761845.02	14619471.66	40°15'16.2435"N	80°33'53.2325"W	2623.13	239.113
6550.00	60.830	315.120	5755.87	-327.72	-1294.43	-2309.41	1761786.75	14619433.78	40°15'16.7615"N	80°33'53.9810"W	2647.44	240.729
6596.00	64.320	319.140	5777.07	-289.54	-1264.51	-2337.16	1761759.01	14619419.99	40°15'17.0586"N	80°33'54.3370"W	2657.31	241.585
6642.00	66.650	320.380	5796.15	-249.76	-1232.56	-2364.19	1761731.99	14619385.63	40°15'17.3756"N	80°33'54.6836"W	2666.19	242.465
6689.00	70.320	321.890	5813.39	-207.88	-1198.51	-2391.61	1761704.58	14619359.66	40°15'17.7133"N	80°33'55.0352"W	2675.12	243.383
6735.00	72.640	323.140	5828.00	-165.82	-1163.90	-2418.15	1761678.05	14619329.25	40°15'18.0566"N	80°33'55.3753"W	2683.68	244.298
6781.00	74.390	324.360	5841.05	-123.04	-1128.33	-2444.23	1761651.98	14619292.81	40°15'18.4094"N	80°33'55.7094"W	2692.10	245.220
6828.00	75.620	327.980	5853.21	-78.59	-1090.63	-2469.50	1761626.72	14619267.50	40°15'18.7832"N	80°33'56.0329"W	2699.61	246.172
6874.00	78.750	331.040	5863.42	-34.21	-1051.98	-2492.24	1761603.98	14620006.13	40°15'19.1662"N	80°33'56.3238"W	2705.17	247.115
6921.00	83.160	332.530	5870.81	11.93	-1011.09	-2514.18	1761582.06	14620047.01	40°15'19.5714"N	80°33'56.6041"W	2709.87	248.092

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Actual Wellpath Report
Russell Hervey BRK 401H AWP Proj: 18783
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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC
Field	Brooke
Facility	Russell Hervey BRK Pad
Wellbore	Wellbore
API/Legal	API/Legal
Well	Russell Hervey BRK 401H
Slot #401	Slot #401

WELLPATH DATA (222 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(%/100ft)	(%/100ft)	(%/100ft)
6967.00	85.520	333.880	5875.34	57.55	-970.23	-2534.81	1761561.43	14620087.85	40°15'19.9761"N	80°33'56.8677"W	2714.15	249.055	5.90	5.13	2.93
7028.00	88.120	333.620	5878.73	118.30	-915.61	-2561.75	1761534.51	14620142.45	40°15'20.5171"N	80°33'57.2116"W	2720.46	250.332	4.28	4.26	-0.43
7119.00	89.940	336.500	5880.27	209.16	-833.12	-2600.11	1761496.16	14620224.91	40°15'21.3342"N	80°33'57.7012"W	2730.32	252.234	3.74	2.00	3.16
7212.00	90.890	337.820	5879.59	302.15	-747.42	-2636.20	1761460.08	14620310.58	40°15'22.1828"N	80°33'58.1613"W	2740.11	254.171	1.75	1.02	1.42
7301.00	90.620	337.730	5878.42	391.14	-665.04	-2669.87	1761426.43	14620392.93	40°15'22.9985"N	80°33'58.5903"W	2751.45	256.013	0.32	-0.30	-0.10
7393.00	90.680	335.040	5877.38	483.10	-580.76	-2706.71	1761389.60	14620477.18	40°15'23.8331"N	80°33'59.0602"W	2768.32	257.890	2.92	0.07	-2.92
7486.00	90.740	334.840	5876.22	575.97	-496.52	-2746.10	1761350.22	14620561.38	40°15'24.6675"N	80°33'59.5630"W	2790.63	259.751	0.22	0.06	-0.22
7579.00	90.830	336.140	5874.95	668.88	-411.91	-2784.68	1761311.66	14620645.96	40°15'25.5054"N	80°34'0.0552"W	2814.98	261.586	1.40	0.10	1.40
7672.00	90.340	335.670	5874.00	761.83	-327.01	-2822.64	1761273.71	14620730.82	40°15'26.3461"N	80°34'0.5395"W	2841.52	263.392	0.73	-0.53	-0.51
7764.00	90.950	338.880	5872.96	853.80	-242.17	-2858.18	1761238.19	14620815.63	40°15'27.1862"N	80°34'0.9925"W	2868.42	265.157	3.55	0.66	3.49
7857.00	90.800	339.130	5871.54	946.77	-155.36	-2891.49	1761204.89	14620902.41	40°15'28.0457"N	80°34'1.4167"W	2895.66	266.924	0.31	-0.16	0.27
7950.00	90.860	337.090	5870.20	1039.76	-69.08	-2926.16	1761170.23	14620988.66	40°15'28.9000"N	80°34'1.8584"W	2926.98	268.648	2.19	0.06	-2.19
8042.00	90.220	336.470	5869.33	1131.74	15.47	-2962.43	1761133.98	14621073.17	40°15'29.7372"N	80°34'2.3209"W	2962.47	270.299	0.97	-0.70	-0.67
8135.00	91.020	338.400	5868.32	1224.72	101.34	-2998.11	1761098.31	14621159.01	40°15'30.5875"N	80°34'2.7758"W	2999.83	271.936	2.25	0.86	2.08
8228.00	90.620	336.310	5866.99	1317.71	187.15	-3033.92	1761062.52	14621244.79	40°15'31.4372"N	80°34'3.2322"W	3039.68	273.530	2.29	-0.43	-2.25
8319.00	90.550	334.630	5866.06	1408.62	269.93	-3071.69	1761024.76	14621327.54	40°15'32.2571"N	80°34'3.7142"W	3083.53	275.022	1.85	-0.08	-1.85
8412.00	90.520	335.320	5865.19	1501.50	354.20	-3111.03	1760985.43	14621411.77	40°15'33.0916"N	80°34'4.2163"W	3131.13	276.495	0.74	-0.03	0.74
8504.00	90.920	334.680	5864.94	1593.38	437.63	-3149.79	1760946.69	14621495.17	40°15'33.9179"N	80°34'4.7110"W	3180.05	277.910	0.68	0.43	-0.52
8593.00	90.490	334.680	5862.94	1682.25	518.12	-3187.74	1760908.76	14621575.63	40°15'34.7152"N	80°34'5.1954"W	3229.57	279.232	0.52	-0.48	-0.18
8685.00	89.970	338.720	5862.57	1774.21	602.60	-3224.12	1760872.39	14621660.08	40°15'35.5517"N	80°34'5.6594"W	3279.95	280.587	4.43	-0.57	4.39
8778.00	91.510	340.220	5861.37	1867.16	689.68	-3256.73	1760839.79	14621747.13	40°15'36.4138"N	80°34'6.0746"W	3328.96	281.957	2.31	1.66	1.61
8869.00	91.140	340.990	5859.27	1958.03	775.49	-3286.94	1760809.59	14621832.91	40°15'37.2633"N	80°34'6.4588"W	3377.19	283.275	0.94	-0.41	0.85
8962.00	91.080	339.560	5857.47	2050.92	863.02	-3318.33	1760778.22	14621920.40	40°15'38.1297"N	80°34'6.8581"W	3428.71	284.578	1.54	-0.06	-1.54
9054.00	90.310	336.670	5856.35	2142.91	948.37	-3352.61	1760743.95	14622005.72	40°15'38.9748"N	80°34'7.2950"W	3484.17	285.795	3.25	-0.84	-3.14
9146.00	91.050	339.300	5855.26	2234.89	1033.65	-3387.09	1760709.48	14622090.96	40°15'39.8191"N	80°34'7.7344"W	3541.30	286.971	2.97	0.80	2.86
9239.00	91.420	340.900	5853.25	2327.79	1121.07	-3418.74	1760677.85	14622178.35	40°15'40.6845"N	80°34'8.1371"W	3597.86	288.155	1.77	0.40	1.72
9332.00	90.740	338.510	5851.28	2420.72	1208.28	-3450.99	1760645.61	14622262.55	40°15'41.5478"N	80°34'8.5477"W	3656.40	289.296	2.67	-0.73	-2.57
9425.00	90.770	338.110	5850.50	2513.71	1294.69	-3485.36	1760611.25	14622351.90	40°15'42.4033"N	80°34'8.9856"W	3718.05	290.378	0.43	0.03	-0.43
9515.00	90.990	338.360	5848.89	2603.70	1378.26	-3518.72	1760577.90	14622435.44	40°15'43.2308"N	80°34'9.4107"W	3779.02	291.390	0.37	0.24	0.28
9608.00	91.020	337.360	5847.26	2696.68	1464.39	-3553.77	1760542.87	14622521.54	40°15'44.0836"N	80°34'9.8574"W	3843.66	292.395	1.08	0.03	-1.08

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Well	Russell Hervey BRK 401H
API/Legal	
Wellbore	Russell Hervey BRK 401H AWP
Slot #401	

WELLPATH DATA (222 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(%/100ft)	(%/100ft)	(%/100ft)
9701.00	91.020	336.990	5845.61	2789.66	1550.09	-3589.84	1760506.81	14622607.21	40°15'44.9322"N	80°34'10.3173"W	3910.21	293.355	0.40	0.00	-0.40
9792.00	90.980	333.610	5844.02	2880.62	1633.52	-3626.14	1760470.52	14622690.60	40°15'45.7584"N	80°34'10.7803"W	3977.10	294.251	1.11	-0.04	-1.11
9885.00	90.710	335.980	5842.65	2973.47	1717.65	-3665.74	1760430.94	14622774.70	40°15'46.5916"N	80°34'11.2858"W	4048.20	295.106	2.56	-0.29	-2.55
9978.00	90.770	334.430	5841.45	3066.26	1801.25	-3706.47	1760390.22	14622858.26	40°15'47.4196"N	80°34'11.8060"W	4120.97	295.918	0.88	0.06	0.88
10070.00	91.110	338.510	5839.94	3158.20	1885.57	-3743.19	1760353.52	14622942.55	40°15'48.2546"N	80°34'12.2744"W	4191.28	296.736	4.45	0.37	4.43
10163.00	90.000	336.900	5839.04	3251.19	1971.61	-3778.47	1760318.25	14623028.56	40°15'49.1065"N	80°34'12.7240"W	4261.93	297.556	2.10	-1.19	-1.73
10255.00	91.080	339.990	5838.17	3343.17	2057.16	-3812.26	1760284.47	14623114.08	40°15'49.9536"N	80°34'13.1546"W	4331.89	298.352	3.56	1.17	3.36
10347.00	90.580	339.810	5836.84	3435.10	2143.54	-3843.88	1760252.87	14623200.43	40°15'50.8087"N	80°34'13.5570"W	4401.16	299.146	0.58	-0.54	-0.20
10440.00	90.770	339.550	5835.74	3528.04	2230.75	-3876.17	1760220.59	14623287.60	40°15'51.6720"N	80°34'13.9681"W	4472.24	299.921	0.35	0.20	-0.28
10530.00	90.120	336.470	5835.04	3618.03	2314.19	-3909.86	1760186.91	14623371.01	40°15'52.4982"N	80°34'14.3975"W	4543.40	300.621	3.50	-0.72	-3.42
10623.00	90.650	339.380	5834.42	3711.02	2400.36	-3944.81	1760151.98	14623457.15	40°15'53.3514"N	80°34'14.8430"W	4617.71	301.320	3.18	0.57	3.13
10716.00	90.280	334.710	5833.66	3803.98	2485.97	-3981.07	1760115.73	14623542.72	40°15'54.1991"N	80°34'15.3053"W	4693.50	301.983	5.04	-0.40	-5.02
10809.00	90.280	336.810	5833.21	3896.91	2570.76	-4019.25	1760077.57	14623627.49	40°15'55.0388"N	80°34'15.7925"W	4771.08	302.604	2.26	0.00	2.26
10902.00	90.920	341.750	5832.23	3989.85	2657.72	-4052.14	1760044.69	14623714.40	40°15'55.8996"N	80°34'16.2114"W	4845.96	303.260	5.36	0.69	5.31
10991.00	90.340	341.390	5831.25	4078.65	2742.15	-4080.28	1760016.56	14623798.80	40°15'56.7353"N	80°34'16.5691"W	4916.10	303.903	0.77	-0.65	-0.40
11081.00	90.280	342.880	5830.77	4168.40	2827.80	-4107.89	1759988.96	14623884.43	40°15'57.5830"N	80°34'16.9199"W	4987.10	304.543	1.66	-0.07	1.66
11174.00	90.550	344.570	5830.09	4260.90	2917.07	-4133.95	1759962.91	14623973.66	40°15'58.4664"N	80°34'17.2505"W	5059.53	305.208	1.84	0.29	1.82
11266.00	90.620	342.750	5829.15	4352.42	3005.35	-4159.83	1759937.04	14624061.27	40°15'59.3400"N	80°34'17.5788"W	5131.89	305.847	1.98	0.08	-1.98
11359.00	91.170	341.140	5827.70	4445.16	3093.75	-4188.65	1759908.23	14624150.29	40°16'00.2150"N	80°34'17.9451"W	5207.31	306.450	1.83	0.59	-1.73
11450.00	90.490	337.550	5826.38	4536.11	3178.88	-4220.74	1759876.16	14624235.37	40°16'01.0577"N	80°34'18.3537"W	5283.93	306.986	4.01	-0.75	-3.95
11541.00	89.910	334.390	5826.06	4627.05	3261.98	-4257.79	1759839.12	14624318.44	40°16'01.8807"N	80°34'18.8265"W	5363.70	307.456	3.53	-0.64	-3.47
11633.00	90.060	333.280	5826.09	4718.82	3344.55	-4298.36	1759798.57	14624400.98	40°16'02.6985"N	80°34'19.3447"W	5446.27	307.887	1.22	0.16	-1.21
11724.00	90.120	332.110	5825.94	4809.45	3425.41	-4340.10	1759756.84	14624481.80	40°16'03.4996"N	80°34'19.8782"W	5529.01	308.282	1.29	0.07	-1.29
11817.00	90.370	331.170	5825.55	4901.91	3507.25	-4384.27	1759712.68	14624563.61	40°16'04.3104"N	80°34'20.4429"W	5614.50	308.658	1.05	0.27	-1.01
11909.00	90.710	332.680	5824.68	4993.41	3588.42	-4427.57	1759669.40	14624644.75	40°16'05.1145"N	80°34'20.9964"W	5699.13	309.024	1.68	0.37	1.64
11996.00	90.060	333.120	5824.70	5080.08	3665.86	-4467.20	1759629.79	14624722.16	40°16'05.8817"N	80°34'21.5028"W	5778.79	309.373	0.90	-0.75	0.51
12088.00	90.430	338.570	5823.70	5171.99	3749.78	-4504.83	1759592.17	14624806.04	40°16'06.7127"N	80°34'21.9830"W	5861.26	309.774	5.94	0.40	5.92
12179.00	90.860	341.550	5822.68	5262.91	3835.30	-4535.86	1759561.15	14624891.54	40°16'07.5593"N	80°34'22.3780"W	5940.00	310.216	3.31	0.47	3.27
12272.00	90.650	339.880	5821.45	5355.78	3923.08	-4566.57	1759530.45	14624979.28	40°16'08.4281"N	80°34'22.7677"W	6020.31	310.665	1.81	-0.23	-1.80
12364.00	90.710	340.210	5820.36	5447.70	4009.55	-4597.97	1759499.07	14625065.71	40°16'09.2841"N	80°34'23.1684"W	6100.64	311.089	0.36	0.07	0.36

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(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(°/100ft)	(°/100ft)	(°/100ft)
12457.00	90.490	338.850	5819.39	5540.66	4096.67	-4630.49	1759466.56	14625152.80	40°16'10.1466"N	80°34'23.5625"W	6182.56	311.500	1.48	-0.24	-1.46
12550.00	90.920	339.390	5818.24	5633.63	4183.55	-4663.63	1759430.43	14625239.65	40°16'11.0067"N	80°34'24.0047"W	6265.11	311.894	0.74	0.46	0.58
12642.00	90.950	339.870	5816.74	5725.57	4269.79	-4695.65	1759401.42	14625325.85	40°16'11.8604"N	80°34'24.4124"W	6346.67	312.280	0.52	0.03	0.52
12734.00	90.710	337.910	5815.41	5817.54	4355.60	-4728.78	1759368.31	14625411.63	40°16'12.7100"N	80°34'24.8344"W	6429.04	312.648	2.15	-0.26	-2.13
12827.00	89.970	334.810	5814.86	5910.49	4440.78	-4766.07	1759331.03	14625496.78	40°16'13.5635"N	80°34'25.3102"W	6514.29	312.977	3.43	-0.80	-3.33
12919.00	90.340	336.660	5814.61	6002.43	4524.65	-4803.87	1759293.24	14625580.62	40°16'14.3840"N	80°34'25.7927"W	6599.22	313.286	2.05	0.40	2.01
13012.00	90.490	339.770	5813.93	6095.41	4611.00	-4838.38	1759258.75	14625666.93	40°16'15.2389"N	80°34'26.2325"W	6683.65	313.622	3.35	0.16	3.34
13105.00	89.940	336.110	5813.58	6188.39	4697.17	-4873.31	1759223.84	14625753.08	40°16'16.0922"N	80°34'26.6777"W	6768.50	313.946	3.98	-0.59	-3.94
13198.00	90.460	340.090	5813.26	6281.37	4783.44	-4907.99	1759189.17	14625839.31	40°16'16.9463"N	80°34'27.1198"W	6853.44	314.264	4.32	0.56	4.28
13290.00	90.220	338.370	5812.71	6373.34	4869.46	-4940.61	1759156.56	14625925.30	40°16'17.7979"N	80°34'27.5353"W	6936.95	314.584	1.89	-0.26	-1.87
13383.00	90.740	336.310	5811.93	6466.33	4955.27	-4976.44	1759120.75	14626011.08	40°16'18.6475"N	80°34'27.9921"W	7022.79	314.878	2.28	0.56	-2.22
13476.00	90.490	335.380	5810.94	6559.27	5040.12	-5014.49	1759082.71	14626095.90	40°16'19.4878"N	80°34'28.4778"W	7109.71	315.146	1.04	-0.27	-1.00
13569.00	90.490	333.460	5810.14	6652.09	5124.00	-5054.64	1759042.57	14626179.74	40°16'20.3186"N	80°34'28.9906"W	7197.55	315.390	2.06	0.00	-2.06
13661.00	90.090	332.600	5809.67	6743.77	5205.99	-5096.36	1759000.87	14626261.70	40°16'21.1308"N	80°34'29.5238"W	7285.28	315.610	1.03	-0.43	-0.93
13754.00	89.720	334.730	5809.83	6836.51	5289.34	-5137.62	1758959.63	14626345.01	40°16'21.9563"N	80°34'30.0509"W	7373.75	315.834	2.32	-0.40	2.29
13845.00	89.910	338.170	5810.12	6927.47	5372.74	-5173.97	1758923.29	14626428.39	40°16'22.7823"N	80°34'30.5147"W	7458.98	316.080	3.79	0.21	3.78
13938.00	89.690	340.350	5810.45	7020.44	5459.71	-5206.90	1758890.37	14626515.32	40°16'23.6432"N	80°34'30.9342"W	7544.55	316.358	2.36	-0.24	2.34
14031.00	91.020	339.770	5809.87	7113.37	5547.13	-5238.62	1758858.07	14626602.71	40°16'24.5086"N	80°34'31.3379"W	7629.80	316.638	1.56	1.43	-0.62
14123.00	89.650	340.040	5809.17	7205.30	5633.53	-5270.23	1758827.67	14626689.07	40°16'25.3638"N	80°34'31.7404"W	7714.40	316.908	1.31	-1.27	0.29
14216.00	91.320	340.570	5808.22	7298.21	5721.08	-5301.57	1758795.74	14626776.59	40°16'26.2305"N	80°34'32.1393"W	7799.83	317.180	1.68	1.58	0.57
14309.00	91.630	339.020	5805.83	7391.12	5808.32	-5333.67	1758763.65	14626863.80	40°16'27.0941"N	80°34'32.5481"W	7885.73	317.439	1.70	0.33	-1.67
14396.00	91.020	336.890	5803.82	7478.09	5888.94	-5366.32	1758731.02	14626944.38	40°16'27.8923"N	80°34'32.9643"W	7967.24	317.659	2.55	-0.70	-2.45
14482.00	90.180	335.720	5802.92	7564.05	5967.68	-5400.88	1758696.47	14627023.10	40°16'28.6720"N	80°34'33.4053"W	8048.77	317.854	1.67	-0.98	-1.36
14572.00	90.430	334.830	5802.44	7653.96	6049.43	-5438.52	1758658.84	14627104.81	40°16'29.4816"N	80°34'33.8859"W	8134.68	318.044	1.03	0.28	-0.99
14662.00	90.090	336.360	5802.03	7743.89	6131.38	-5475.70	1758621.67	14627186.74	40°16'30.2932"N	80°34'34.3606"W	8220.53	318.233	1.74	-0.38	1.70
14751.00	89.970	337.410	5801.98	7832.87	6213.24	-5510.64	1758586.75	14627268.56	40°16'31.1037"N	80°34'34.8063"W	8304.91	318.430	1.19	-0.13	1.18
14840.00	89.970	339.440	5802.03	7921.86	6296.00	-5543.37	1758554.03	14627351.29	40°16'31.9231"N	80°34'35.2234"W	8388.59	318.637	2.28	0.00	2.28
14927.00	90.150	341.190	5801.94	8008.78	6377.91	-5572.67	1758524.74	14627433.17	40°16'32.7339"N	80°34'35.5964"W	8469.50	318.855	2.02	0.21	2.01
15019.00	90.740	343.840	5801.22	8100.46	6465.65	-5600.31	1758497.11	14627520.87	40°16'33.6022"N	80°34'35.9476"W	8553.83	319.102	2.95	0.64	2.88
15112.00	90.620	343.410	5800.12	8192.98	6554.87	-5626.53	1758470.91	14627610.06	40°16'34.4851"N	80°34'36.2803"W	8638.53	319.358	0.48	-0.13	-0.46

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WELLPATH DATA (222 stations)



Southwestern Energy

Actual Wellpath Report

Russell Hervey BRK 401H AWP Proj: 18783



REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Russell Hervey BRK 401H
Field	Brooke	API/Legal	
Facility	Russell Hervey BRK Pad	Wellbore	Russell Hervey BRK 401H AWB
Slot	Slot #401		

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(°/100ft)	(°/100ft)	(°/100ft)
15205.00	91.020	341.740	5798.79	8285.65	6643.65	-5654.37	1758443.07	14627698.74	40°16'35.3631"N	80°34'36.6341"W	8724.06	319.599	1.85	0.43	-1.80
15297.00	90.740	339.480	5797.37	8377.53	6730.35	-5684.91	17588412.54	14627785.48	40°16'36.3220"N	80°34'37.0722"W	8809.99	319.813	2.48	-0.30	-2.46
15389.00	90.490	340.320	5796.39	8469.49	6816.47	-5717.28	1758386.19	14627871.56	40°16'37.4350"N	80°34'37.4350"W	8896.71	320.012	0.32	-0.27	-0.17
15479.00	90.950	340.690	5795.26	8559.41	6901.03	-5748.05	1758349.43	14627956.09	40°16'37.9116"N	80°34'37.8268"W	8981.33	320.208	1.61	0.51	-1.52
15571.00	90.800	338.990	5793.85	8651.34	6987.38	-5779.75	17588317.74	14628042.41	40°16'38.7663"N	80°34'38.2305"W	9068.02	320.403	1.85	-0.16	-1.85
15662.00	91.200	338.540	5792.26	8742.32	7072.19	-5812.71	1758284.80	14628127.18	40°16'39.6060"N	80°34'38.6505"W	9154.42	320.583	0.66	0.44	-0.49
15755.00	90.580	337.930	5790.82	8835.30	7158.55	-5847.19	1758250.33	14628213.51	40°16'40.4610"N	80°34'39.0901"W	9243.07	320.758	0.94	-0.67	-0.66
15848.00	90.770	338.680	5789.72	8928.29	7244.96	-5881.56	1758215.97	14628299.88	40°16'41.3164"N	80°34'39.5283"W	9331.78	320.930	0.83	0.20	0.81
15941.00	91.320	338.680	5788.03	9021.27	7331.58	-5915.37	1758182.17	14628386.47	40°16'42.1740"N	80°34'39.9591"W	9420.38	321.102	0.59	0.59	0.00
16033.00	91.080	336.520	5786.10	9113.24	7416.61	-5950.42	1758147.14	14628471.47	40°16'43.0159"N	80°34'40.4061"W	9508.61	321.260	2.36	-0.26	-2.35
16125.00	91.110	334.740	5784.34	9205.15	7500.40	-5988.37	1758109.20	14628555.22	40°16'43.8456"N	80°34'41.4209"W	9597.74	321.396	1.93	0.03	-1.93
16218.00	90.830	332.250	5782.77	9297.86	7583.60	-6029.87	1758067.72	14628638.40	40°16'44.6698"N	80°34'41.4209"W	9688.67	321.511	2.69	-0.30	-2.68
16310.00	90.280	331.030	5781.88	9389.32	7664.55	-6073.56	1758024.04	14628719.32	40°16'45.4718"N	80°34'41.9797"W	9779.24	321.606	1.45	-0.60	-1.33
16403.00	89.880	332.830	5781.75	9481.82	7746.61	-6117.32	1757980.30	14628801.34	40°16'46.2847"N	80°34'42.5393"W	9870.75	321.703	1.98	-0.43	-1.94
16492.00	89.820	336.680	5781.98	9570.68	7827.10	-6155.27	1757942.36	14628881.80	40°16'47.0819"N	80°34'43.0240"W	9957.45	321.818	4.33	-0.07	4.33
16579.00	90.680	339.320	5781.60	9657.67	7907.75	-6187.86	1757909.79	14628962.42	40°16'47.8804"N	80°34'43.4395"W	10041.02	321.957	3.19	0.99	3.03
16668.00	90.770	337.910	5780.47	9746.65	7990.62	-6220.31	1757877.35	14629045.25	40°16'48.7008"N	80°34'43.8531"W	10126.31	322.101	1.59	0.10	-1.58
16754.00	90.490	336.060	5779.53	9832.63	8069.76	-6253.93	1757843.74	14629124.37	40°16'49.4845"N	80°34'44.2820"W	10209.44	322.225	2.18	-0.33	-2.15
16841.00	90.430	336.560	5778.83	9919.60	8149.43	-6288.88	1757808.80	14629204.00	40°16'50.2733"N	80°34'44.7281"W	10293.85	322.343	0.58	-0.07	0.57
16928.00	90.400	338.000	5778.20	10006.59	8229.67	-6322.48	1757775.22	14629284.22	40°16'51.0679"N	80°34'45.1567"W	10377.93	322.467	1.66	-0.03	1.66
17015.00	90.520	336.570	5777.50	10093.58	8309.92	-6356.08	1757741.64	14629364.44	40°16'51.8624"N	80°34'45.5852"W	10462.05	322.588	1.65	0.14	-1.64
17104.00	90.180	334.290	5776.96	10182.49	8390.85	-6393.08	1757704.65	14629445.34	40°16'52.6639"N	80°34'46.0577"W	10548.84	322.696	2.59	-0.38	-2.56
17191.00	89.910	335.680	5776.89	10269.38	8469.69	-6429.87	1757667.87	14629524.15	40°16'53.4447"N	80°34'46.5275"W	10633.86	322.796	1.63	-0.31	1.60
17278.00	90.120	338.570	5776.87	10356.36	8549.84	-6463.68	1757634.07	14629604.26	40°16'54.2383"N	80°34'46.9589"W	10718.16	322.911	3.33	0.24	3.32
17364.00	89.630	340.190	5777.05	10442.33	8630.33	-6493.97	1757603.80	14629684.72	40°16'55.0351"N	80°34'47.3448"W	10800.66	323.040	1.97	-0.57	1.88
17451.00	90.280	343.150	5777.12	10529.13	8712.90	-6521.33	1757575.45	14629767.26	40°16'55.8524"N	80°34'47.6927"W	10883.12	323.186	3.48	0.75	3.40
17537.00	90.710	343.990	5776.38	10614.69	8795.39	-6545.65	1757552.14	14629849.72	40°16'56.6666"N	80°34'48.0015"W	10963.78	323.343	1.10	0.50	0.98
17625.00	91.080	341.680	5775.00	10702.34	8879.45	-6571.62	1757526.18	14629933.75	40°16'57.5005"W	80°34'48.3314"W	11046.76	323.495	2.66	0.42	-2.62
17711.00	91.020	339.180	5773.43	10788.23	8960.47	-6600.41	1757497.39	14630014.73	40°16'58.3024"N	80°34'48.6980"W	11129.03	323.624	2.91	-0.07	-2.91
17798.00	90.430	337.690	5772.33	10875.22	9041.37	-6632.39	1757465.43	14630095.60	40°16'59.1033"N	80°34'49.1057"W	11213.16	323.738	1.84	-0.68	-1.71

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Actual Wellpath Report

Russell Hervey BRK 401H AWP Proj: 18783

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Russell Hervey BRK 401H
Field	Brooke	API/Legal	
Facility	Russell Hervey BRK Pad	Wellbore	Russell Hervey BRK 401H AWB
Slot	Slot #401		

WELLPATH DATA (222 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
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	[%/100ft]	[%/100ft]	[°/100ft]
17885.00	90.830	340.540	5771.37	10962.18	9122.64	-6663.40	1757434.43	14630176.84	40°16'59.9079"N	80°34'49.5008"W	11297.05	323.855	3.31	0.46	3.28
17972.00	90.620	337.910	5770.27	11049.14	9203.97	-6694.25	1757403.59	14630258.14	40°17'0.7130"N	80°34'49.8939"W	11380.95	323.971	3.03	-0.24	-3.02
18058.00	91.910	339.110	5768.37	11135.11	9283.97	-6725.75	1757372.11	14630338.11	40°17'1.5050"N	80°34'50.2955"W	11464.19	324.079	2.05	1.50	1.40
18145.00	92.250	339.180	5765.21	11222.03	9365.21	-6756.70	1757341.17	14630419.32	40°17'2.3093"N	80°34'50.6899"W	11548.17	324.191	0.40	0.39	0.08
18231.00	91.110	336.750	5762.69	11307.99	9444.89	-6788.95	1757308.93	14630498.97	40°17'3.0982"N	80°34'51.1011"W	11631.67	324.292	3.12	-1.33	-2.83
18318.00	90.460	335.160	5761.50	11394.93	9524.33	-6824.39	1757273.50	14630578.38	40°17'3.8848"N	80°34'51.5536"W	11716.88	324.378	1.97	-0.75	-1.83
18405.00	90.370	335.960	5760.87	11481.86	9603.53	-6860.39	1757237.52	14630657.55	40°17'4.6692"N	80°34'52.0132"W	11802.23	324.459	0.93	-0.10	0.92
18491.00	90.650	338.170	5760.10	11567.84	9682.72	-6893.90	1757204.02	14630736.71	40°17'5.4533"N	80°34'52.4408"W	11886.17	324.550	2.59	0.33	2.57
18578.00	91.110	336.440	5758.77	11654.82	9762.97	-6927.46	1757170.48	14630816.93	40°17'6.2479"N	80°34'52.8689"W	11971.02	324.642	2.06	0.53	-1.99
18664.00	90.180	335.770	5757.80	11740.78	9841.60	-6962.29	1757135.66	14630895.52	40°17'7.0264"N	80°34'53.3136"W	12055.31	324.723	1.33	-1.08	-0.78
18751.00	90.430	338.190	5757.34	11827.76	9921.66	-6996.31	1757101.65	14630975.56	40°17'7.8192"N	80°34'53.7477"W	12140.33	324.810	2.80	0.29	2.78
18783.00†	90.430	338.190	5757.10	11859.76	9951.37	-7008.20	1757089.77	14631005.25	40°17'8.1133"N	80°34'53.8993"W	12171.47	324.845	0.00	0.00	0.00

String/Diameter	Start MD	End MD	Interval	Start TVD	End TVD	Start N/S	Start E/W	End N/S	End E/W
	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]
20in Conductor	26.00	100.00	74.00	26.00	100.00	100.00	0.00	0.00	0.04
17.5in Open Hole	100.00	366.00	266.00	100.00	366.00	366.00	0.04	0.02	-0.35
13.375in Casing Surface	26.00	366.00	340.00	26.00	366.00	366.00	0.00	0.00	-0.35
12.25in Open Hole	366.00	2025.00	1659.00	366.00	1948.15	1948.15	-0.35	0.00	-365.57
9.625in Casing Intermediate	26.00	2025.00	1999.00	26.00	1948.15	1948.15	0.00	0.00	-227.84
8.75in Open Hole	2025.00	7037.00	5012.00	1948.15	5879.01	5879.01	-227.84	-365.57	-907.54
8.5in Open Hole	7037.00	18783.00	11746.00	5879.01	5757.10	5757.10	-907.54	-2565.72	9951.37
5.5in Casing Production	26.00	18783.00	18757.00	26.00	5757.10	5757.10	0.00	0.00	9951.37

HOLE & CASING SECTIONS - Ref Wellbore: Russell Hervey BRK 401H AWB Ref Wellpath: Russell Hervey BRK 401H AWP Proj: 18783

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Facility	Russell Hervey BRK Pad	Wellbore	Russell Hervey BRK 401H AWB	
Slot	Slot #401			

TARGETS									
Name	TVD	North	East	Grid East	Grid North	Latitude	Longitude	Shape	
Russell Hervey BRK 401H BHL Rev-4	5760.80	9945.57	-6998.62	1757099.34	14630999.46	40°17'8.0556"N	80°34'53.7761"W	point	
Russell Hervey BRK 401H LP Rev-4	5881.00	-982.29	-2548.03	1761548.22	14620075.80	40°15'19.8576"N	80°33'57.0389"W	point	
Russell Hervey Northwest Unit 1	5899.50	6044.50	-4130.53	1759966.33	14627099.89	40°16'29.3708"N	80°34'17.0113"W	polygon	2D Polygon: dimensions not calculated

WELLPATH COMPOSITION - Ref Wellbore: Russell Hervey BRK 401H AWB									
Start MD	End MD	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date				
26.00	350.00	SDI Keeper v1.04	01 Scientific Gyro <17 1/2"> (100'-350')	Russell Hervey BRK 401H AWB	2/19/2020				
350.00	408.00	SDI Keeper v1.04	02 Scientific Gyro <12 1/4"> (375'-408')	Russell Hervey BRK 401H AWB	2/19/2020				
408.00	2208.00	OWSG MWD rev2 + HRGM	03 Premier MWD <12 1/4"> (519'-2208')	Russell Hervey BRK 401H AWB	2/19/2020				
2208.00	6967.00	OWSG MWD rev2 + HRGM	04 Premier MWD <8 3/4"> (2300'-6967')	Russell Hervey BRK 401H AWB	2/19/2020				
6967.00	18783.00	BH AutoTrak Curve (2019) (Short spacing)	05 BH AT Curve <8 1/2"> (7028'-18751')	Russell Hervey BRK 401H AWB	2/19/2020				

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Slot	Slot #401		

COMMENTS	
Wellpath general comments API: 47-009-00292-0000 BH Job #: 110283341A Rig: SDC 42 Duration: 02/20/2020 - 02/23/2020	

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