

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Robert Bone BRK 205H
Field	Brooke	API/Legal	
Facility	Robert Bone BRK Pad	Wellbore	Robert Bone BRK 205H AWB
Slot	Slot 205H		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect@ 6.0
North Reference	Grid	User	Manajohj
Scale	0.999614	Report Generated	8/20/2021 at 4:42:07 PM
Convergence at slot	0.26° 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	19.52	36.96	1751421.15	14606717.82	40°13'8.2750"N	80°36'8.4781"W
Facility Reference Pt			1751384.20	14606698.31	40°13'8.0838"N	80°36'8.9557"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM

Calculation method	Minimum curvature	SDC 40 (RKB) to Facility Vertical Datum	1174.70ft
Horizontal Reference Pt	Slot	SDC 40 (RKB) to Mean Sea Level	1174.70ft
Vertical Reference Pt	SDC 40 (RKB)	SDC 40 (RKB) to Ground Level at Slot (Slot 205H)	26.00ft
MD Reference Pt	SDC 40 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	337.32°

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WELLPATH DATA (263 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	323.780	0.00	0.00	0.00	0.00	1751421.15	14606717.82	40°13'8.2750"N	80°36'8.4781"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	323.780	26.00	0.00	0.00	0.00	1751421.15	14606717.82	40°13'8.2750"N	80°36'8.4781"W	0.00	0.000	0.00	0.00	0.00
100.00	0.190	323.780	100.00	0.12	0.10	-0.07	1751421.08	14606717.92	40°13'8.2760"N	80°36'8.4790"W	0.12	323.780	0.26	0.26	0.00
150.00	0.280	344.750	150.00	0.32	0.28	-0.15	1751421.00	14606718.10	40°13'8.2778"N	80°36'8.4801"W	0.32	331.568	0.25	0.18	41.94
200.00	0.390	25.150	200.00	0.56	0.56	-0.11	1751421.04	14606718.38	40°13'8.2805"N	80°36'8.4795"W	0.57	348.461	0.51	0.22	80.80
250.00	0.300	4.610	250.00	0.79	0.84	-0.03	1751421.12	14606718.66	40°13'8.2833"N	80°36'8.4785"W	0.84	357.914	0.30	-0.18	-41.08
300.00	0.430	27.880	300.00	1.02	1.14	0.07	1751421.22	14606718.96	40°13'8.2862"N	80°36'8.4772"W	1.14	3.407	0.39	0.26	46.54
350.00	0.450	20.290	350.00	1.29	1.49	0.22	1751421.37	14606719.31	40°13'8.2897"N	80°36'8.4752"W	1.50	8.550	0.12	0.04	-15.18
386.00	0.400	43.540	385.99	1.44	1.71	0.36	1751421.51	14606719.53	40°13'8.2919"N	80°36'8.4734"W	1.75	11.858	0.49	-0.14	64.58
495.00	0.210	41.860	494.99	1.68	2.13	0.75	1751421.90	14606719.95	40°13'8.2961"N	80°36'8.4683"W	2.26	19.464	0.17	-0.17	-1.54
595.00	0.810	122.470	594.99	1.18	1.89	1.47	1751422.62	14606719.71	40°13'8.2936"N	80°36'8.4590"W	2.40	37.908	0.80	0.60	80.61
691.00	2.100	129.350	690.96	-0.93	0.41	3.41	1751424.55	14606718.23	40°13'8.2789"N	80°36'8.4342"W	3.43	83.100	1.35	1.34	7.17
787.00	4.010	124.330	786.82	-5.30	-2.60	7.54	1751428.69	14606715.22	40°13'8.2490"N	80°36'8.3811"W	7.97	109.005	2.01	1.99	-5.23
883.00	6.040	118.620	882.44	-12.06	-6.91	14.74	1751435.89	14606710.91	40°13'8.2061"N	80°36'8.2884"W	16.28	115.107	2.18	2.11	-5.95
979.00	7.940	116.030	977.72	-20.98	-12.24	25.14	1751446.28	14606705.59	40°13'8.1529"N	80°36'8.1546"W	27.96	115.960	2.01	1.98	-2.70
1075.00	9.970	107.450	1072.55	-31.32	-17.64	39.03	1751460.16	14606700.19	40°13'8.0989"N	80°36'7.9761"W	42.83	114.325	2.53	2.11	-8.94
1171.00	12.000	99.800	1166.79	-42.04	-21.83	56.79	1751477.92	14606696.00	40°13'8.0567"N	80°36'7.7473"W	60.84	111.029	2.60	2.11	-7.97
1267.00	13.030	96.440	1260.51	-52.67	-24.75	77.38	1751498.50	14606693.08	40°13'8.0270"N	80°36'7.4821"W	81.24	107.734	1.31	1.07	-3.50
1363.00	13.910	94.630	1353.87	-63.23	-26.89	99.63	1751520.75	14606690.94	40°13'8.0049"N	80°36'7.1953"W	103.20	105.104	1.02	0.92	-1.89
1459.00	14.410	95.630	1446.96	-74.19	-28.99	123.02	1751544.13	14606688.84	40°13'7.9830"N	80°36'6.8939"W	126.39	103.261	0.58	0.52	1.04
1555.00	13.810	99.960	1540.06	-86.03	-32.15	146.20	1751567.29	14606685.68	40°13'7.9508"N	80°36'6.5954"W	149.69	102.402	1.26	-0.63	4.51
1574.00	13.290	102.180	1558.53	-88.50	-33.00	150.57	1751571.66	14606684.83	40°13'7.9422"N	80°36'6.5391"W	154.14	102.362	3.87	-2.74	11.68
1711.00	13.780	99.500	1691.73	-106.19	-39.02	182.05	1751603.13	14606678.82	40°13'7.8814"N	80°36'6.1336"W	186.18	102.096	0.58	0.36	-1.96
1807.00	14.250	97.100	1784.87	-118.15	-42.36	205.05	1751626.12	14606675.47	40°13'7.8473"N	80°36'5.8373"W	209.38	101.673	0.78	0.49	-2.50
1903.00	14.850	94.010	1877.79	-129.55	-44.68	229.05	1751650.11	14606673.15	40°13'7.8233"N	80°36'5.5281"W	233.37	101.039	1.02	0.63	-3.22
1999.00	17.630	95.770	1969.95	-142.00	-47.01	255.79	1751676.84	14606670.83	40°13'7.7991"N	80°36'5.1835"W	260.07	100.413	2.94	2.90	1.83
2095.00	15.920	95.610	2061.87	-155.17	-49.76	283.36	1751704.40	14606668.08	40°13'7.7708"N	80°36'4.8283"W	287.70	99.959	1.78	-1.78	-0.17
2191.00	18.870	97.000	2153.47	-169.10	-52.94	311.88	1751732.91	14606664.91	40°13'7.7381"N	80°36'4.4608"W	316.34	99.633	3.10	3.07	1.45
2287.00	22.280	92.720	2243.33	-184.60	-55.69	345.48	1751766.49	14606662.15	40°13'7.7093"N	80°36'4.0279"W	349.94	99.157	3.88	3.55	-4.46
2383.00	24.820	91.190	2331.33	-200.56	-56.97	383.81	1751804.81	14606660.87	40°13'7.6950"N	80°36'3.5339"W	388.01	98.444	2.72	2.65	-1.59

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Slot	Slot 205H			

WELLPATH DATA (263 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)
2479.00	27.780	90.320	2417.39	-217.46	-57.52	426.33	1751847.32	14606660.32	40°13'7.6877"N	80°36'2.9857"W	430.19	97.684	3.11	3.08	-0.91
2576.00	29.120	90.660	2502.67	-235.64	-57.92	472.54	1751893.50	14606659.93	40°13'7.6817"N	80°36'2.3901"W	476.07	96.987	1.39	1.38	0.35
2672.00	28.600	93.230	2586.75	-254.94	-59.48	518.84	1751939.79	14606658.36	40°13'7.6642"N	80°36'1.7933"W	522.24	96.540	1.40	-0.54	2.68
2768.00	28.660	89.730	2671.02	-273.75	-60.67	564.80	1751985.73	14606657.18	40°13'7.6504"N	80°36'1.2009"W	568.05	96.131	1.75	0.06	-3.65
2864.00	27.520	90.750	2755.71	-291.35	-60.85	610.00	1752030.92	14606657.00	40°13'7.6466"N	80°36'0.6182"W	613.03	95.696	1.29	-1.19	1.06
2960.00	26.660	93.760	2841.18	-309.76	-62.55	653.67	1752074.57	14606655.29	40°13'7.6279"N	80°36'0.0554"W	656.66	95.466	1.69	-0.90	3.14
3056.00	26.480	95.370	2927.04	-329.41	-65.97	696.47	1752117.35	14606651.88	40°13'7.5922"N	80°35'59.5039"W	699.59	95.411	0.77	-0.19	1.68
3152.00	26.490	95.010	3012.97	-349.43	-69.84	739.11	1752159.97	14606648.01	40°13'7.5520"N	80°35'58.9545"W	742.40	95.398	0.17	0.01	-0.38
3249.00	26.890	95.810	3099.63	-369.94	-73.95	782.48	1752203.33	14606643.90	40°13'7.5095"N	80°35'58.3956"W	785.97	95.399	0.55	0.41	0.82
3345.00	28.130	95.970	3184.78	-391.09	-78.43	826.60	1752247.43	14606639.42	40°13'7.4632"N	80°35'57.8272"W	830.31	95.420	1.29	1.23	-0.02
3441.00	28.660	93.620	3269.23	-412.08	-82.17	872.09	1752292.90	14606635.69	40°13'7.4243"N	80°35'57.2410"W	875.95	95.382	1.21	0.55	-2.26
3537.00	29.010	92.790	3353.33	-432.29	-84.75	918.32	1752339.11	14606633.10	40°13'7.3967"N	80°35'56.6452"W	922.22	95.273	0.55	0.36	-0.86
3633.00	27.660	87.440	3437.84	-449.97	-84.89	963.84	1752384.61	14606632.96	40°13'7.3933"N	80°35'56.0584"W	967.57	95.033	2.99	-1.41	-5.57
3729.00	26.750	88.400	3523.21	-465.40	-83.29	1007.70	1752428.46	14606634.56	40°13'7.4071"N	80°35'55.4930"W	1011.13	94.725	1.05	-0.95	1.00
3826.00	26.190	90.130	3610.05	-481.55	-82.73	1050.92	1752471.67	14606635.12	40°13'7.4107"N	80°35'54.9357"W	1054.18	94.501	0.98	-0.58	1.78
3922.00	26.410	91.120	3696.11	-498.38	-83.20	1093.45	1752514.18	14606634.66	40°13'7.4042"N	80°35'54.3875"W	1096.62	94.351	0.51	0.23	1.03
3940.00	26.560	91.530	3712.22	-501.65	-83.38	1101.48	1752522.20	14606634.47	40°13'7.4020"N	80°35'54.2841"W	1104.63	94.329	1.31	0.83	2.28
4030.00	28.010	93.200	3792.21	-519.12	-85.10	1142.70	1752563.40	14606632.75	40°13'7.3832"N	80°35'53.7528"W	1145.86	94.259	1.82	1.61	1.86
4126.00	28.230	93.430	3876.87	-538.96	-87.72	1187.87	1752608.56	14606630.14	40°13'7.3553"N	80°35'53.1707"W	1191.10	94.223	0.26	0.23	0.24
4222.00	28.160	90.970	3961.49	-558.04	-89.46	1233.18	1752653.85	14606628.40	40°13'7.3361"N	80°35'52.5867"W	1236.42	94.149	1.21	-0.07	-2.56
4318.00	27.370	91.570	4046.43	-576.19	-90.45	1277.89	1752698.55	14606627.41	40°13'7.3243"N	80°35'52.0104"W	1281.09	94.048	0.87	-0.82	0.63
4414.00	28.250	91.280	4131.34	-594.48	-91.56	1322.67	1752743.30	14606626.30	40°13'7.3113"N	80°35'51.4333"W	1325.83	93.960	0.93	0.92	-0.30
4510.00	26.650	91.430	4216.53	-612.50	-92.60	1366.91	1752787.53	14606625.25	40°13'7.2990"N	80°35'50.8631"W	1370.04	93.876	1.67	-1.67	0.16
4607.00	28.030	91.410	4302.70	-630.69	-93.71	1411.44	1752832.04	14606624.15	40°13'7.2861"N	80°35'50.2891"W	1414.55	93.798	1.42	1.42	-0.02
4703.00	28.690	91.490	4387.17	-649.33	-94.86	1457.03	1752877.61	14606623.00	40°13'7.2727"N	80°35'49.7015"W	1460.11	93.725	0.69	0.69	0.08
4799.00	28.700	91.700	4471.38	-668.28	-96.14	1503.10	1752923.67	14606621.71	40°13'7.2579"N	80°35'49.1076"W	1506.17	93.660	0.11	0.01	0.22
4894.00	26.020	91.460	4555.75	-686.22	-97.35	1546.74	1752967.29	14606620.51	40°13'7.2440"N	80°35'48.5451"W	1549.80	93.601	2.82	-2.82	-0.25
4990.00	29.400	91.660	4640.73	-704.55	-98.57	1591.36	1753011.89	14606619.29	40°13'7.2300"N	80°35'47.9701"W	1594.41	93.544	3.52	3.52	0.21
5086.00	29.210	91.700	4724.44	-723.93	-99.95	1638.33	1753058.84	14606617.91	40°13'7.2142"N	80°35'47.3647"W	1641.37	93.491	0.20	-0.20	0.04
5182.00	29.450	91.710	4808.14	-743.35	-101.35	1685.33	1753105.83	14606616.51	40°13'7.1983"N	80°35'46.7589"W	1688.37	93.441	0.25	0.25	0.01

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5278.00	29.500	91.660	4891.71	-762.83	-102.74	1732.55	1753153.02	14606615.12	40°13'7.1824"N	80°35'46.1503"W	1735.59	93.394	0.06	0.05	-0.05
5375.00	29.780	91.510	4976.02	-782.55	-104.06	1780.50	1753200.96	14606613.80	40°13'7.1672"N	80°35'45.5322"W	1783.54	93.345	0.30	0.29	-0.15
5471.00	29.840	90.890	5059.31	-801.87	-105.06	1828.21	1753248.65	14606612.80	40°13'7.1552"N	80°35'44.9172"W	1831.23	93.289	0.33	0.05	-0.65
5567.00	29.510	75.640	5142.84	-814.86	-99.56	1875.06	1753295.49	14606618.30	40°13'7.2074"N	80°35'44.3129"W	1877.71	93.039	7.85	-0.34	-15.89
5663.00	29.800	63.770	5226.34	-816.80	-83.14	1919.41	1753339.81	14606634.71	40°13'7.3677"N	80°35'43.7404"W	1921.21	92.480	6.12	0.30	-12.36
5759.00	30.010	48.550	5309.68	-807.59	-56.67	1958.86	1753379.25	14606661.18	40°13'7.6275"N	80°35'43.2303"W	1959.68	91.657	7.89	0.22	-15.85
5855.00	32.510	37.840	5391.80	-787.15	-20.37	1992.71	1753413.09	14606697.46	40°13'7.9847"N	80°35'42.7918"W	1992.81	90.586	6.34	2.60	-11.16
5950.00	34.780	27.980	5470.94	-757.38	23.76	2021.11	1753441.47	14606741.57	40°13'8.4195"N	80°35'42.4231"W	2021.25	89.326	6.22	2.39	-10.38
6046.00	39.500	16.720	5547.54	-716.36	77.27	2042.77	1753463.13	14606795.06	40°13'8.9473"N	80°35'42.1406"W	2044.23	87.834	8.60	4.92	-11.73
6142.00	43.720	8.270	5619.36	-664.25	139.42	2056.35	1753476.70	14606857.19	40°13'9.5608"N	80°35'41.9620"W	2061.07	86.121	7.31	4.40	-8.80
6238.00	49.060	3.840	5685.57	-603.30	208.50	2063.55	1753483.90	14606926.24	40°13'10.2431"N	80°35'41.8651"W	2074.06	84.231	6.49	5.56	-4.61
6334.00	55.900	356.470	5744.05	-533.16	284.50	2063.53	1753483.88	14607002.21	40°13'10.9942"N	80°35'41.8608"W	2083.05	82.150	9.36	7.12	-7.68
6430.00	64.620	353.900	5791.63	-453.89	367.47	2056.46	1753476.82	14607085.14	40°13'11.8143"N	80°35'41.9471"W	2089.04	79.869	9.37	9.08	-2.68
6527.00	71.330	347.810	5828.02	-366.54	456.12	2042.08	1753462.44	14607173.77	40°13'12.6911"N	80°35'42.1273"W	2092.40	77.409	9.04	6.92	-6.28
6623.00	78.380	348.120	5853.08	-275.53	546.70	2022.77	1753443.14	14607264.30	40°13'13.5870"N	80°35'42.3709"W	2095.35	74.876	7.35	7.34	0.32
6719.00	85.410	344.050	5866.61	-181.67	638.86	1999.91	1753420.28	14607356.43	40°13'14.4988"N	80°35'42.6602"W	2099.47	72.284	8.44	7.32	-4.24
6815.00	90.740	343.840	5869.84	-86.40	731.03	1973.38	1753393.77	14607448.57	40°13'15.4108"N	80°35'42.9967"W	2104.43	69.673	5.56	5.55	-0.22
6911.00	90.280	340.890	5868.98	9.21	822.51	1944.30	1753364.70	14607540.01	40°13'16.3160"N	80°35'43.3662"W	2111.12	67.070	3.11	-0.48	-3.07
7007.00	90.400	340.780	5868.41	105.03	913.18	1912.79	1753333.20	14607630.65	40°13'17.2135"N	80°35'43.7671"W	2119.59	64.480	0.17	0.12	-0.11
7103.00	90.280	339.620	5867.84	200.91	1003.51	1880.27	1753300.69	14607720.94	40°13'18.1075"N	80°35'44.1810"W	2131.30	61.911	1.21	-0.12	-1.21
7199.00	91.200	343.590	5866.60	296.61	1094.57	1849.98	1753270.42	14607811.97	40°13'19.0088"N	80°35'44.5661"W	2149.54	59.389	4.24	0.96	4.14
7295.00	88.680	340.400	5866.70	392.27	1185.85	1820.32	1753240.76	14607903.21	40°13'19.9121"N	80°35'44.9432"W	2172.51	56.918	4.23	-2.62	-3.32
7391.00	92.620	345.820	5865.61	487.72	1277.65	1792.44	1753212.90	14607994.98	40°13'20.8205"N	80°35'45.2972"W	2201.19	54.519	6.98	4.10	5.65
7487.00	92.120	341.750	5861.64	583.01	1369.74	1765.66	1753186.13	14608087.02	40°13'21.7317"N	80°35'45.6370"W	2234.67	52.197	4.27	-0.52	-4.24
7583.00	92.030	340.340	5858.17	678.74	1460.47	1734.50	1753154.98	14608177.72	40°13'22.6297"N	80°35'46.0334"W	2267.48	49.902	1.47	-0.09	-1.47
7679.00	89.880	338.530	5856.57	774.65	1550.33	1700.79	1753121.28	14608267.55	40°13'23.5192"N	80°35'46.4627"W	2301.35	47.650	2.93	-2.24	-1.89
7775.00	91.480	339.650	5855.43	870.59	1640.00	1666.53	1753087.03	14608357.18	40°13'24.4068"N	80°35'46.8991"W	2338.14	45.460	2.03	1.67	1.17
7871.00	90.090	340.230	5854.11	966.48	1730.16	1633.60	1753054.12	14608447.31	40°13'25.2993"N	80°35'47.3183"W	2379.52	43.356	1.57	-1.45	0.60
7967.00	89.350	339.210	5854.58	1062.39	1820.21	1600.33	1753020.86	14608537.32	40°13'26.1906"N	80°35'47.7420"W	2423.68	41.322	1.31	-0.77	-1.06
8063.00	90.060	339.210	5855.08	1158.34	1909.95	1566.26	1752986.80	14608627.03	40°13'27.0790"N	80°35'48.1760"W	2470.04	39.353	0.74	0.74	0.00

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Robert Bone BRK 205H
Field	Brooke	API/Legal	
Facility	Robert Bone BRK Pad	Wellbore	Robert Bone BRK 205H AWB
Slot	Slot 205H		

WELLPATH DATA (263 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)	(US ft)	(US ft)			(ft)	(°)	(%/100ft)	(%/100ft)	(°/100ft)
8159.00	90.980	339.980	5854.20	1254.26	1999.93	1532.79	1752953.34	14608716.97	40°13'27.9696"N	80°35'48.6022"W	2519.75	37.467	1.25	0.96	0.80
8255.00	89.600	339.570	5853.72	1350.17	2090.00	1499.60	1752920.17	14608807.01	40°13'28.8612"N	80°35'49.0247"W	2572.34	35.660	1.50	-1.44	-0.43
8351.00	90.340	337.560	5853.77	1446.14	2179.36	1464.52	1752885.10	14608896.33	40°13'29.7458"N	80°35'49.4718"W	2625.72	33.901	2.23	0.77	-2.09
8447.00	90.830	339.720	5852.79	1542.10	2268.75	1429.56	1752850.15	14608985.69	40°13'30.6307"N	80°35'49.9172"W	2681.58	32.215	2.31	0.51	2.25
8543.00	91.170	339.270	5851.11	1638.02	2358.66	1395.94	1752816.54	14609075.56	40°13'31.5206"N	80°35'50.3454"W	2740.78	30.619	0.59	0.35	-0.47
8639.00	91.110	339.290	5849.20	1733.94	2448.43	1361.98	1752782.60	14609165.30	40°13'32.4093"N	80°35'50.7780"W	2801.75	29.086	0.07	-0.06	0.02
8735.00	90.460	339.290	5847.89	1829.88	2538.22	1328.03	1752748.67	14609255.05	40°13'33.2981"N	80°35'51.2104"W	2864.65	27.619	0.68	-0.68	0.00
8831.00	89.780	338.450	5847.69	1925.84	2627.76	1293.43	1752714.07	14609344.56	40°13'34.1845"N	80°35'51.6513"W	2928.84	26.207	1.13	-0.71	-0.88
8927.00	91.480	339.550	5846.63	2021.79	2717.37	1259.03	1752679.69	14609434.14	40°13'35.0716"N	80°35'52.0895"W	2994.87	24.859	2.11	1.77	1.15
9023.00	91.450	339.920	5844.18	2117.67	2807.40	1225.79	1752646.46	14609524.13	40°13'35.9627"N	80°35'52.5128"W	3063.34	23.587	0.39	-0.03	0.39
9119.00	91.230	340.260	5841.93	2213.53	2897.64	1193.10	1752613.79	14609614.34	40°13'36.8559"N	80°35'52.9289"W	3133.66	22.379	0.42	-0.23	0.35
9215.00	90.180	339.320	5840.75	2309.43	2987.72	1159.94	1752580.64	14609704.38	40°13'37.7475"N	80°35'53.3511"W	3204.99	21.218	1.47	-1.09	-0.98
9311.00	90.950	338.720	5839.80	2405.39	3077.35	1125.57	1752546.29	14609793.98	40°13'38.6348"N	80°35'53.7890"W	3276.74	20.090	1.02	0.80	-0.62
9407.00	91.290	339.380	5837.93	2501.32	3166.99	1091.25	1752511.98	14609883.58	40°13'39.5221"N	80°35'54.2262"W	3349.72	19.012	0.77	0.35	0.69
9503.00	91.170	339.950	5835.87	2597.22	3256.98	1057.90	1752478.64	14609973.54	40°13'40.4129"N	80°35'54.6510"W	3424.48	17.994	0.61	-0.13	0.59
9599.00	90.920	339.780	5834.12	2693.11	3347.10	1024.86	1752445.61	14610063.62	40°13'41.3049"N	80°35'55.0717"W	3500.49	17.024	0.31	-0.26	-0.18
9695.00	90.950	340.090	5832.55	2789.00	3437.26	991.93	1752412.69	14610153.75	40°13'42.1973"N	80°35'55.4910"W	3577.53	16.097	0.32	0.03	0.32
9792.00	90.150	338.290	5831.62	2885.94	3527.92	957.47	1752378.25	14610244.38	40°13'43.0948"N	80°35'55.3525"W	3655.54	15.184	2.03	-0.82	-1.86
9888.00	92.770	341.250	5829.17	2981.80	3617.96	924.29	1752345.08	14610334.37	40°13'43.9859"N	80°35'55.3525"W	3734.15	14.331	4.12	2.73	3.08
9984.00	90.340	336.310	5826.57	3077.69	3707.38	889.57	1752310.37	14610423.76	40°13'44.8711"N	80°35'56.7950"W	3812.61	13.493	5.73	-2.53	-5.15
10080.00	90.370	340.680	5825.97	3173.65	3796.67	854.38	1752275.20	14610513.02	40°13'45.7551"N	80°35'57.2434"W	3891.62	12.682	4.55	0.03	4.55
10176.00	91.540	337.950	5824.37	3269.57	3886.46	820.48	1752241.31	14610602.77	40°13'46.6439"N	80°35'57.6752"W	3972.12	11.921	3.09	1.22	-2.84
10272.00	90.310	340.240	5822.82	3365.50	3976.12	786.24	1752207.08	14610692.40	40°13'47.5314"N	80°35'58.1115"W	4053.11	11.185	2.71	-1.28	2.39
10368.00	89.940	339.780	5822.61	3461.39	4066.34	753.42	1752174.28	14610782.58	40°13'48.4244"N	80°35'58.5294"W	4135.55	10.497	0.61	-0.39	-0.48
10464.00	90.280	339.560	5822.43	3557.31	4156.36	720.06	1752140.94	14610872.56	40°13'49.3154"N	80°35'58.9542"W	4218.27	9.829	0.42	0.35	-0.23
10560.00	90.620	339.770	5821.67	3653.23	4246.37	686.71	1752107.59	14610962.54	40°13'50.2064"N	80°35'59.3791"W	4301.54	9.186	0.42	0.35	0.22
10656.00	91.020	340.800	5820.30	3749.09	4336.73	654.32	1752075.22	14611052.87	40°13'51.1008"N	80°35'59.7913"W	4385.82	8.580	1.15	0.42	1.07
10752.00	90.800	341.690	5818.77	3844.85	4427.62	623.46	1752044.37	14611143.73	40°13'52.0004"N	80°36'0.1839"W	4471.30	8.015	0.95	-0.23	0.93
10848.00	91.020	341.370	5817.25	3940.58	4518.67	593.05	1752013.97	14611234.73	40°13'52.9014"N	80°36'0.5707"W	4557.42	7.477	0.40	0.23	-0.33
10944.00	90.550	341.080	5815.93	4036.35	4609.55	562.16	1751983.09	14611325.58	40°13'53.8008"N	80°36'0.9637"W	4643.70	6.953	0.58	-0.49	-0.30

REFERENCE WELLPATH IDENTIFICATION

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Field	Brooke	API/Legal	
Facility	Robert Bone BRK Pad	Wellbore	Robert Bone BRK 205H AWB
Slot	Slot 205H		

WELLPATH DATA (263 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)	(US ft)	(US ft)			(ft)	(°)	(°/100ft)	(%/100ft)	(°/100ft)
11040.00	90.280	341.060	5815.24	4132.14	4700.36	531.01	1751951.96	14611416.35	40°13'54.6996"N	80°36'1.3600"W	4730.26	6.446	0.28	-0.28	-0.02
11136.00	90.280	340.650	5814.77	4227.95	4791.04	499.53	1751920.49	14611507.01	40°13'55.5971"N	80°36'1.7607"W	4817.02	5.952	0.43	0.00	-0.43
11233.00	90.890	341.320	5813.78	4324.75	4882.75	467.93	1751888.90	14611598.67	40°13'56.5047"N	80°36'2.1628"W	4905.12	5.474	0.93	0.63	0.69
11329.00	91.050	341.510	5812.15	4420.49	4973.73	437.34	1751858.32	14611689.62	40°13'57.4051"N	80°36'2.5519"W	4992.92	5.025	0.26	0.17	0.20
11425.00	90.860	341.130	5810.55	4516.24	5064.66	406.59	1751827.59	14611780.51	40°13'58.3051"N	80°36'2.9430"W	5080.95	4.590	0.44	-0.20	-0.40
11521.00	90.400	340.850	5809.50	4612.04	5155.41	375.33	1751796.33	14611871.23	40°13'59.2033"N	80°36'3.3409"W	5169.06	4.164	0.56	-0.48	-0.29
11617.00	90.550	340.990	5808.70	4707.85	5246.14	343.95	1751764.96	14611961.92	40°14'0.1012"N	80°36'3.7403"W	5257.40	3.751	0.21	0.16	0.15
11713.00	90.550	340.880	5807.78	4803.55	5336.87	312.59	1751733.62	14612052.62	40°14'0.9992"N	80°36'4.1393"W	5346.01	3.352	0.11	0.00	-0.11
11809.00	90.370	340.080	5807.01	4899.50	5427.35	280.51	1751701.56	14612143.06	40°14'1.8947"N	80°36'4.5476"W	5434.59	2.959	0.85	-0.19	-0.83
11905.00	91.540	340.940	5805.63	4995.34	5517.83	248.49	1751669.54	14612233.51	40°14'2.7903"N	80°36'4.9553"W	5523.42	2.579	1.51	1.22	0.90
12001.00	90.580	340.770	5803.63	5091.14	5608.50	217.01	1751638.08	14612324.15	40°14'3.6877"N	80°36'5.3559"W	5612.70	2.216	1.02	-1.00	-0.18
12098.00	90.920	341.920	5802.36	5187.89	5700.40	185.99	1751607.06	14612416.01	40°14'4.5974"N	80°36'5.7506"W	5703.43	1.869	1.24	0.35	1.19
12194.00	91.020	340.910	5800.74	5283.63	5791.38	155.40	1751576.49	14612506.95	40°14'5.4975"N	80°36'6.1398"W	5793.46	1.537	1.06	0.10	-1.05
12290.00	91.320	340.560	5798.78	5379.44	5881.98	123.73	1751544.83	14612597.52	40°14'6.3943"N	80°36'6.5429"W	5883.28	1.205	0.48	0.31	-0.36
12386.00	90.860	338.350	5796.95	5475.35	5971.86	90.05	1751511.16	14612687.36	40°14'7.2899"N	80°36'6.9719"W	5972.53	0.864	2.35	-0.48	-2.30
12482.00	91.510	336.200	5794.97	5571.32	6060.38	52.97	1751474.10	14612775.85	40°14'8.1603"N	80°36'7.4449"W	6060.61	0.501	2.34	0.68	-2.24
12578.00	90.710	333.500	5793.11	5667.20	6147.25	12.18	1751433.33	14612862.69	40°14'9.0206"N	80°36'7.9658"W	6147.26	0.114	2.93	-0.83	-2.81
12674.00	90.280	330.640	5792.28	5762.79	6232.06	-32.78	1751388.39	14612947.46	40°14'9.8606"N	80°36'8.5406"W	6232.14	359.699	3.01	-0.45	-2.98
12770.00	90.520	330.530	5791.61	5858.12	6315.68	-79.92	1751341.26	14613031.05	40°14'10.6890"N	80°36'9.1436"W	6316.19	359.275	0.28	0.25	-0.11
12866.00	90.710	331.120	5790.58	5953.50	6399.50	-126.72	1751294.48	14613114.83	40°14'11.5194"N	80°36'9.7422"W	6400.75	358.866	0.65	0.20	0.61
12962.00	90.710	331.280	5789.39	6048.95	6483.61	-172.96	1751248.25	14613198.92	40°14'12.3526"N	80°36'10.3336"W	6485.92	358.472	0.17	0.00	0.17
13058.00	90.710	331.030	5788.20	6144.38	6567.70	-219.27	1751201.96	14613282.97	40°14'13.1856"N	80°36'10.9259"W	6571.36	358.088	0.26	0.00	-0.26
13154.00	91.050	330.940	5786.72	6239.79	6651.64	-265.83	1751155.42	14613366.88	40°14'14.0171"N	80°36'11.5214"W	6656.95	357.711	0.37	0.35	-0.09
13250.00	90.770	330.970	5785.20	6335.18	6735.55	-312.43	1751108.84	14613450.76	40°14'14.8484"N	80°36'12.1174"W	6742.80	357.344	0.29	-0.29	0.03
13346.00	90.920	330.950	5783.78	6430.58	6819.48	-359.03	1751062.26	14613534.65	40°14'15.6798"N	80°36'12.7134"W	6828.92	356.986	0.16	0.16	-0.02
13442.00	90.890	330.930	5782.27	6525.97	6903.38	-405.65	1751015.65	14613618.52	40°14'16.5110"N	80°36'13.3098"W	6915.29	356.637	0.04	-0.03	-0.02
13539.00	91.020	331.280	5780.65	6622.39	6988.29	-452.52	1750968.81	14613703.40	40°14'17.3521"N	80°36'13.9092"W	7002.93	356.295	0.38	0.13	0.36
13635.00	91.020	331.280	5778.94	6717.84	7072.47	-498.64	1750922.70	14613787.55	40°14'18.1860"N	80°36'14.4991"W	7090.03	355.967	0.00	0.00	0.00
13731.00	90.890	331.040	5777.34	6813.28	7156.55	-544.94	1750876.42	14613871.59	40°14'19.0189"N	80°36'15.0912"W	7177.27	355.646	0.28	-0.14	-0.23
13827.00	91.110	331.180	5775.67	6908.70	7240.59	-591.31	1750830.06	14613955.60	40°14'19.8514"N	80°36'15.6844"W	7264.70	355.331	0.27	0.23	0.15



Actual Wellpath Report

Robert Bone BRK 205H AWB Prog: 24581'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Robert Bone BRK 205H
Field	Brooke	API/Legal	
Facility	Robert Bone BRK Pad	Wellbore	Robert Bone BRK 205H AWB
Slot	Slot 205H		

WELLPATH DATA (263 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)
13923.00	90.860	331.190	5774.02	7004.13	7324.69	-637.58	1750783.82	14614039.67	40°14'20.6845"N	80°36'16.2761"W	7352.39	355.025	0.26	-0.26	0.01
14019.00	90.980	331.000	5772.47	7099.55	7408.72	-683.97	1750737.44	14614123.67	40°14'21.5169"N	80°36'16.8695"W	7440.23	354.725	0.23	0.12	-0.20
14115.00	90.920	330.830	5770.88	7194.94	7492.60	-730.63	1750690.80	14614207.52	40°14'22.3479"N	80°36'17.4664"W	7528.14	354.430	0.19	-0.06	-0.18
14212.00	91.020	331.100	5769.24	7291.33	7577.40	-777.71	1750643.75	14614292.28	40°14'23.1879"N	80°36'18.0685"W	7617.21	354.140	0.30	0.10	0.28
14308.00	91.170	330.910	5767.41	7386.73	7661.35	-824.23	1750597.24	14614376.20	40°14'24.0196"N	80°36'18.6636"W	7705.56	353.860	0.25	0.16	-0.20
14404.00	91.050	331.230	5765.55	7482.14	7745.36	-870.66	1750550.83	14614460.17	40°14'24.8517"N	80°36'19.2575"W	7794.14	353.586	0.36	-0.12	0.33
14500.00	90.620	330.320	5764.15	7577.51	7829.13	-917.53	1750503.98	14614543.91	40°14'25.6816"N	80°36'19.8570"W	7882.71	353.316	1.05	-0.45	-0.95
14596.00	90.740	330.770	5763.01	7672.83	7912.71	-964.73	1750456.79	14614627.46	40°14'26.5096"N	80°36'20.4609"W	7971.31	353.049	0.49	0.12	0.47
14692.00	90.830	331.670	5761.69	7768.28	7996.85	-1010.95	1750410.60	14614711.56	40°14'27.3431"N	80°36'21.0520"W	8060.49	352.795	0.94	0.09	0.94
14788.00	90.460	331.130	5760.61	7863.76	8081.13	-1056.90	1750364.66	14614795.81	40°14'28.1779"N	80°36'21.6397"W	8149.95	352.549	0.68	-0.39	-0.56
14884.00	90.550	333.720	5759.77	7959.40	8166.21	-1101.33	1750320.25	14614880.86	40°14'29.0207"N	80°36'22.2078"W	8240.14	352.319	2.70	0.09	2.70
14980.00	90.580	335.980	5758.82	8055.30	8253.10	-1142.13	1750279.47	14614967.72	40°14'29.8811"N	80°36'22.7289"W	8331.75	352.121	2.35	0.03	2.35
15076.00	91.350	337.150	5757.20	8151.27	8341.17	-1180.30	1750241.31	14615055.75	40°14'30.7530"N	80°36'23.2161"W	8424.26	351.946	1.46	0.80	1.22
15172.00	91.600	336.980	5754.73	8247.24	8429.55	-1217.70	1750203.93	14615144.10	40°14'31.6280"N	80°36'23.6933"W	8517.05	351.780	0.31	0.26	-0.18
15268.00	90.400	336.580	5753.06	8343.22	8517.76	-1255.54	1750166.10	14615232.27	40°14'32.5013"N	80°36'24.1762"W	8608.79	351.615	1.32	-1.25	-0.42
15364.00	90.860	336.350	5752.00	8439.20	8605.76	-1293.87	1750127.78	14615320.25	40°14'33.3727"N	80°36'24.6655"W	8702.49	351.450	0.54	0.48	-0.24
15460.00	90.980	336.940	5750.46	8535.18	8693.89	-1331.92	1750089.74	14615408.34	40°14'34.2452"N	80°36'25.1511"W	8795.32	351.290	0.63	0.12	0.61
15557.00	90.920	336.650	5748.85	8632.16	8783.03	-1370.14	1750051.54	14615497.44	40°14'35.1277"N	80°36'25.6388"W	8889.26	351.133	0.31	-0.06	-0.30
15653.00	91.780	337.130	5746.59	8728.13	8871.30	-1407.81	1750013.89	14615585.68	40°14'36.0016"N	80°36'26.1195"W	8982.31	350.983	1.03	0.90	0.50
15749.00	90.920	336.650	5744.33	8824.10	8959.57	-1445.47	1749976.24	14615673.91	40°14'36.8756"N	80°36'26.6003"W	9075.42	350.835	1.03	-0.90	-0.50
15845.00	90.650	337.120	5743.01	8920.09	9047.85	-1483.16	1749938.57	14615762.16	40°14'37.7496"N	80°36'27.0812"W	9168.61	350.691	0.56	-0.28	0.49
15941.00	90.710	336.860	5741.87	9016.08	9136.21	-1520.68	1749901.06	14615850.49	40°14'38.6244"N	80°36'27.5600"W	9261.90	350.550	0.28	0.06	-0.27
16037.00	90.650	337.250	5740.73	9112.07	9224.61	-1558.10	1749863.65	14615938.85	40°14'39.4995"N	80°36'28.0375"W	9355.27	350.413	0.41	-0.06	0.41
16133.00	90.770	337.170	5739.54	9208.07	9313.11	-1595.29	1749826.48	14616027.31	40°14'40.3757"N	80°36'28.5120"W	9448.75	350.280	0.15	0.12	-0.08
16229.00	90.060	336.140	5738.85	9304.06	9401.24	-1633.33	1749788.46	14616115.42	40°14'41.2483"N	80°36'28.9975"W	9542.07	350.144	1.30	-0.74	-1.07
16325.00	89.630	335.340	5739.11	9400.02	9488.76	-1672.77	1749749.03	14616202.90	40°14'42.1149"N	80°36'29.5012"W	9635.08	350.002	0.95	-0.45	-0.83
16421.00	90.080	336.610	5738.85	9495.99	9576.45	-1711.85	1749709.97	14616290.55	40°14'42.9831"N	80°36'30.0001"W	9728.25	349.865	1.72	1.09	1.33
16517.00	91.080	337.020	5737.37	9591.97	9664.68	-1749.64	1749672.19	14616378.75	40°14'43.8567"N	80°36'30.4824"W	9821.78	349.739	0.58	0.42	0.41
16613.00	90.860	336.910	5735.75	9687.96	9753.01	-1787.20	1749634.64	14616467.05	40°14'44.7311"N	80°36'30.9618"W	9915.41	349.616	0.25	-0.23	-0.10
16709.00	90.860	336.830	5734.31	9783.94	9841.29	-1824.91	1749596.95	14616555.29	40°14'45.6051"N	80°36'31.4431"W	10009.06	349.495	0.08	0.00	-0.08

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Robert Bone BRK 205H
Field	Brooke	API/Legal	
Facility	Robert Bone BRK Pad	Wellbore	Robert Bone BRK 205H AWB
Slot	Slot 205H		

WELLPATH DATA (263 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)
16805.00	90.090	336.170	5733.51	9879.93	9929.32	-1863.19	1749558.68	14616643.29	40°14'46.4767"N	80°36'31.9317"W	10102.62	349.372	1.06	-0.80	-0.69
16901.00	89.970	334.760	5733.46	9975.88	10016.65	-1903.05	1749518.84	14616730.58	40°14'47.3414"N	80°36'32.4408"W	10195.83	349.243	1.47	-0.13	-1.47
16997.00	90.620	335.320	5732.97	10071.80	10103.68	-1943.56	1749478.34	14616817.58	40°14'48.2032"N	80°36'32.9583"W	10288.92	349.111	0.89	0.68	0.58
17093.00	91.750	334.250	5730.98	10167.68	10190.51	-1984.45	1749437.47	14616904.38	40°14'49.0630"N	80°36'33.4806"W	10381.94	348.980	1.62	1.18	-1.11
17189.00	91.020	336.710	5728.66	10263.59	10277.82	-2024.27	1749397.66	14616991.66	40°14'49.9275"N	80°36'33.9893"W	10475.27	348.858	2.67	-0.76	2.56
17285.00	90.710	337.950	5727.21	10359.58	10366.39	-2061.27	1749360.68	14617080.19	40°14'50.8044"N	80°36'34.4613"W	10569.34	348.754	1.33	-0.32	1.29
17382.00	90.860	337.770	5725.88	10456.57	10456.23	-2097.82	1749324.14	14617170.00	40°14'51.6938"N	80°36'34.9276"W	10664.60	348.655	0.24	0.15	-0.19
17478.00	90.060	337.830	5725.11	10552.56	10545.11	-2134.09	1749287.88	14617258.84	40°14'52.5736"N	80°36'35.3904"W	10758.89	348.559	0.84	-0.83	0.06
17574.00	90.490	337.980	5724.65	10648.55	10634.06	-2170.20	1749251.79	14617347.76	40°14'53.4542"N	80°36'35.8510"W	10853.25	348.465	0.47	0.45	0.16
17670.00	90.400	338.250	5723.91	10744.54	10723.14	-2205.99	1749216.02	14617436.80	40°14'54.3360"N	80°36'36.3074"W	10947.70	348.375	0.30	-0.09	0.28
17766.00	90.490	338.090	5723.16	10840.53	10812.25	-2241.68	1749180.34	14617525.88	40°14'55.2181"N	80°36'36.7627"W	11042.19	348.287	0.19	0.09	-0.17
17862.00	90.400	338.080	5722.41	10936.52	10901.31	-2277.51	1749144.52	14617614.91	40°14'56.0998"N	80°36'37.2197"W	11136.68	348.199	0.09	-0.09	-0.01
17958.00	90.250	337.710	5721.87	11032.51	10990.26	-2313.64	1749108.41	14617703.81	40°14'56.9802"N	80°36'37.6806"W	11231.15	348.112	0.42	-0.16	-0.39
18054.00	90.310	337.980	5721.40	11128.51	11079.17	-2349.84	1749072.22	14617792.69	40°14'57.8604"N	80°36'38.1424"W	11325.62	348.025	0.29	0.06	0.28
18151.00	90.120	338.130	5721.04	11225.50	11169.14	-2386.09	1749035.99	14617882.63	40°14'58.7511"N	80°36'38.6048"W	11421.17	347.941	0.25	-0.20	0.15
18247.00	90.340	337.730	5720.65	11321.49	11258.10	-2422.16	1748999.93	14617971.56	40°14'59.6318"N	80°36'39.0650"W	11515.72	347.858	0.48	0.23	-0.42
18343.00	90.370	337.910	5720.06	11417.48	11347.00	-2458.40	1748963.70	14618060.42	40°15'0.5118"N	80°36'39.5273"W	11610.26	347.775	0.19	0.03	0.19
18439.00	90.710	338.230	5719.15	11513.47	11436.05	-2494.25	1748927.87	14618149.43	40°15'1.3933"N	80°36'39.9847"W	11704.89	347.696	0.49	0.35	0.33
18535.00	90.000	337.240	5718.56	11609.47	11524.89	-2530.62	1748891.51	14618238.23	40°15'2.2728"N	80°36'40.4487"W	11799.45	347.616	1.27	-0.74	-1.03
18631.00	90.370	337.860	5718.25	11705.46	11613.61	-2567.28	1748854.86	14618326.92	40°15'3.1511"N	80°36'40.9165"W	11893.98	347.535	0.75	0.39	0.65
18727.00	90.370	338.310	5717.63	11801.45	11702.67	-2603.11	1748819.05	14618415.95	40°15'4.0327"N	80°36'41.3736"W	11988.69	347.459	0.47	0.00	0.47
18823.00	90.400	337.810	5716.98	11897.44	11791.71	-2638.98	1748783.19	14618504.96	40°15'4.9142"N	80°36'41.8311"W	12083.41	347.385	0.52	0.03	-0.52
18919.00	90.220	337.970	5716.46	11993.44	11880.65	-2675.11	1748747.07	14618593.86	40°15'5.7946"N	80°36'42.2921"W	12178.10	347.311	0.25	-0.19	0.17
19015.00	90.460	337.490	5715.89	12089.43	11969.49	-2711.49	1748710.71	14618682.67	40°15'6.6741"N	80°36'42.7563"W	12272.77	347.236	0.56	0.25	-0.50
19111.00	90.400	338.050	5715.17	12185.43	12058.35	-2747.81	1748674.40	14618771.49	40°15'7.5538"N	80°36'43.2197"W	12367.47	347.163	0.59	-0.06	0.58
19207.00	90.400	337.790	5714.50	12281.42	12147.31	-2783.90	1748638.33	14618860.42	40°15'8.4344"N	80°36'43.6800"W	12462.23	347.092	0.27	0.00	-0.27
19303.00	90.250	338.070	5713.96	12377.41	12236.27	-2819.97	1748602.28	14618949.35	40°15'9.3151"N	80°36'44.1402"W	12557.01	347.022	0.33	-0.16	0.29
19400.00	90.220	337.810	5713.56	12474.40	12326.17	-2856.40	1748565.86	14619039.21	40°15'10.2050"N	80°36'44.6050"W	12652.81	346.953	0.27	-0.03	-0.27
19496.00	90.650	338.050	5712.83	12570.40	12415.13	-2892.47	1748529.80	14619128.14	40°15'11.0857"N	80°36'45.0652"W	12747.62	346.885	0.51	0.45	0.25
19592.00	90.740	338.270	5711.67	12666.38	12504.24	-2928.18	1748494.11	14619217.01	40°15'11.9677"N	80°36'45.5207"W	12842.51	346.820	0.25	0.09	0.23

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Robert Bone BRK 205H
Field	Brooke	API/Legal	
Facility	Robert Bone BRK Pad	Wellbore	Robert Bone BRK 205H AWB
Slot	Slot 205H		

WELLPATH DATA (263 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)
19688.00	90.430	337.940	5710.69	12762.36	12593.31	-2963.98	1748458.32	14619306.24	40°15'12.8494"N	80°36'45.9774"W	12937.41	346.756	0.47	-0.32	-0.34
19784.00	90.740	338.160	5709.71	12858.35	12682.34	-2999.86	1748422.45	14619395.24	40°15'13.7308"N	80°36'46.4352"W	13032.31	346.692	0.40	0.32	0.23
19880.00	90.180	338.170	5708.94	12954.34	12771.45	-3035.56	1748386.76	14619484.32	40°15'14.6129"N	80°36'46.8907"W	13127.25	346.630	0.58	-0.58	0.01
19976.00	90.520	337.980	5708.35	13050.33	12860.51	-3071.41	1748350.93	14619573.34	40°15'15.4945"N	80°36'47.3480"W	13222.19	346.568	0.41	0.35	-0.20
20072.00	90.580	337.740	5707.43	13146.32	12949.43	-3107.59	1748314.77	14619662.22	40°15'16.3747"N	80°36'47.8096"W	13317.08	346.505	0.26	0.06	-0.25
20168.00	90.460	337.330	5706.56	13242.31	13038.14	-3144.27	1748278.10	14619750.90	40°15'17.2529"N	80°36'48.2777"W	13411.91	346.441	0.44	-0.13	-0.43
20265.00	90.220	337.760	5705.98	13339.31	13127.78	-3181.33	1748241.06	14619840.50	40°15'18.1403"N	80°36'48.7506"W	13507.75	346.378	0.50	-0.25	0.43
20361.00	90.150	337.860	5705.67	13435.31	13216.66	-3217.59	1748204.81	14619929.36	40°15'19.0203"N	80°36'49.2133"W	13602.69	346.318	0.14	-0.07	0.11
20457.00	90.580	337.900	5705.06	13531.30	13305.60	-3253.74	1748168.67	14620018.25	40°15'19.9006"N	80°36'49.6746"W	13697.65	346.259	0.45	0.45	0.04
20553.00	90.560	337.850	5704.11	13627.29	13394.52	-3289.89	1748132.53	14620107.15	40°15'20.7809"N	80°36'50.1359"W	13792.63	346.200	0.06	-0.03	-0.05
20649.00	90.370	338.780	5703.34	13723.27	13483.72	-3325.36	1748097.08	14620196.31	40°15'21.6639"N	80°36'50.5884"W	13887.72	346.146	0.99	-0.19	0.97
20745.00	90.280	338.130	5702.80	13819.25	13573.01	-3360.62	1748061.84	14620285.57	40°15'22.5478"N	80°36'51.0380"W	13982.86	346.093	0.68	-0.09	-0.68
20841.00	90.030	336.940	5702.54	13915.25	13661.73	-3397.30	1748025.17	14620374.25	40°15'23.4260"N	80°36'51.5062"W	14077.80	346.035	1.27	-0.26	-1.24
20937.00	90.090	336.390	5702.44	14011.24	13749.88	-3435.33	1747987.16	14620462.36	40°15'24.2987"N	80°36'51.9917"W	14172.53	345.972	0.58	0.06	-0.57
21033.00	89.880	336.340	5702.46	14107.23	13837.82	-3473.81	1747948.68	14620550.27	40°15'25.1694"N	80°36'52.4832"W	14267.19	345.908	0.22	-0.22	-0.05
21129.00	89.750	336.630	5702.77	14203.22	13925.85	-3512.12	1747910.40	14620638.27	40°15'26.0409"N	80°36'52.9723"W	14361.90	345.845	0.33	-0.14	0.30
21225.00	89.720	336.550	5703.22	14299.21	14013.95	-3550.26	1747872.27	14620726.33	40°15'26.9131"N	80°36'53.4593"W	14456.86	345.784	0.09	-0.03	-0.08
21321.00	89.910	336.700	5703.53	14395.20	14102.07	-3588.34	1747834.20	14620814.42	40°15'27.7856"N	80°36'53.9456"W	14551.44	345.724	0.25	0.20	0.16
21417.00	89.850	336.550	5703.73	14491.19	14190.19	-3626.43	1747796.12	14620902.50	40°15'28.6580"N	80°36'54.4319"W	14646.24	345.664	0.17	-0.06	-0.16
21513.00	90.030	336.740	5703.83	14587.19	14278.32	-3664.49	1747758.08	14620990.60	40°15'29.5305"N	80°36'54.9179"W	14741.06	345.606	0.27	0.19	0.20
21610.00	90.030	336.680	5703.78	14684.18	14367.42	-3702.84	1747719.74	14621079.66	40°15'30.4126"N	80°36'55.4076"W	14836.90	345.548	0.06	0.00	-0.06
21706.00	89.850	336.360	5703.88	14780.17	14455.47	-3741.09	1747681.51	14621167.68	40°15'31.2844"N	80°36'55.8960"W	14931.72	345.490	0.38	-0.19	-0.33
21802.00	90.460	336.910	5703.62	14876.16	14543.60	-3779.16	1747643.45	14621255.77	40°15'32.1568"N	80°36'56.3821"W	15026.58	345.434	0.86	0.64	0.57
21898.00	90.220	337.180	5703.05	14972.16	14631.99	-3816.60	1747606.03	14621344.14	40°15'33.0320"N	80°36'56.8601"W	15121.56	345.381	0.38	-0.25	0.28
21994.00	90.250	337.140	5702.65	15068.16	14720.46	-3853.87	1747568.78	14621432.57	40°15'33.9078"N	80°36'57.3358"W	15216.58	345.329	0.05	0.03	-0.04
22091.00	90.650	336.880	5701.89	15165.15	14809.76	-3891.75	1747530.91	14621521.83	40°15'34.7918"N	80°36'57.8194"W	15312.56	345.277	0.49	0.41	-0.27
22187.00	90.490	336.780	5700.94	15261.15	14898.01	-3929.52	1747493.15	14621610.05	40°15'35.6655"N	80°36'58.3017"W	15407.52	345.224	0.20	-0.17	-0.10
22283.00	90.400	336.440	5700.19	15357.14	14986.12	-3967.63	1747455.06	14621698.18	40°15'36.5378"N	80°36'58.7883"W	15502.44	345.171	0.37	-0.09	-0.35
22379.00	90.460	336.730	5699.47	15453.13	15074.21	-4005.78	1747416.93	14621786.18	40°15'37.4100"N	80°36'59.2755"W	15597.37	345.118	0.31	0.06	0.30
22475.00	90.370	336.750	5698.78	15549.12	15162.40	-4043.69	1747379.03	14621874.34	40°15'38.2831"N	80°36'59.7595"W	15692.35	345.067	0.10	-0.09	0.02

Actual Wellpath Report

Robert Bone BRK 205H AWB Prog: 24581'
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REFERENCE WELLPATH IDENTIFICATION	
Operator	SWN PRODUCTION COMPANY, LLC
Field	Brooke
Facility	Robert Bone BRK Pad
Slot	Slot 205H
	Well
	API/Legal
	Wellbore
	Robert Bone BRK 205H AWB

WELLPATH DATA (263 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)	Buid Rate (°/100ft)	Turn Rate (°/100ft)
22571.00	90.430	336.450	5698.11	15645.11	15250.51	-4081.81	1747340.92	14621962.41	40°15'39.1553"N	80°37'0.2464"W	15787.31	345.016	0.32	0.06	-0.31
22667.00	90.620	336.560	5697.23	15741.09	15338.54	-4120.08	1747302.67	14622050.41	40°15'40.0269"N	80°37'0.7351"W	15882.25	344.965	0.23	0.20	0.11
22764.00	90.310	336.830	5696.44	15838.08	15427.63	-4158.46	1747264.31	14622139.46	40°15'40.9089"N	80°37'1.2252"W	15978.25	344.915	0.42	-0.32	0.28
22860.00	90.430	336.740	5695.82	15934.08	15515.85	-4196.30	1747226.48	14622227.65	40°15'41.7823"N	80°37'1.7083"W	16073.29	344.866	0.16	0.12	-0.09
22956.00	90.520	336.800	5695.02	16030.07	15604.07	-4234.16	1747188.63	14622315.83	40°15'42.6566"N	80°37'2.1918"W	16168.33	344.818	0.11	0.09	0.06
23052.00	90.430	336.820	5694.23	16126.06	15692.31	-4271.96	1747150.84	14622404.04	40°15'43.5292"N	80°37'2.6745"W	16263.40	344.771	0.10	-0.03	0.02
23148.00	90.180	336.710	5693.72	16222.06	15780.52	-4309.83	1747112.99	14622492.22	40°15'44.4025"N	80°37'3.1581"W	16358.47	344.724	0.28	-0.26	-0.11
23245.00	90.310	336.930	5693.30	16319.05	15869.69	-4348.02	1747074.82	14622581.35	40°15'45.2853"N	80°37'3.6456"W	16454.55	344.678	0.26	0.13	0.23
23341.00	90.460	336.840	5692.66	16415.05	15957.98	-4385.70	1747037.15	14622669.61	40°15'46.1594"N	80°37'4.1269"W	16549.67	344.633	0.18	0.16	-0.09
23437.00	90.280	336.980	5692.04	16511.04	16046.29	-4423.35	1746999.52	14622757.88	40°15'47.0336"N	80°37'4.6076"W	16644.80	344.588	0.24	-0.19	0.15
23533.00	90.180	336.830	5691.65	16607.04	16134.59	-4461.01	1746961.87	14622846.15	40°15'47.9079"N	80°37'5.0884"W	16739.94	344.545	0.19	-0.10	-0.16
23629.00	90.280	336.980	5691.27	16703.04	16222.90	-4498.66	1746924.23	14622934.42	40°15'48.7821"N	80°37'5.5692"W	16835.09	344.501	0.19	0.10	0.16
23725.00	90.280	336.710	5690.80	16799.03	16311.16	-4536.41	1746886.50	14623022.66	40°15'49.6559"N	80°37'6.0513"W	16930.24	344.458	0.28	0.00	-0.28
23822.00	90.340	336.650	5690.27	16896.03	16400.24	-4574.81	1746848.11	14623111.70	40°15'50.5377"N	80°37'6.5416"W	17026.35	344.414	0.09	0.06	-0.06
23918.00	90.710	336.870	5689.39	16992.02	16488.44	-4612.69	1746810.25	14623199.87	40°15'51.4110"N	80°37'7.0253"W	17121.50	344.371	0.45	0.39	0.23
24014.00	90.800	336.730	5688.13	17088.00	16576.67	-4650.50	1746772.45	14623288.06	40°15'52.2845"N	80°37'7.5082"W	17216.66	344.329	0.17	0.09	-0.15
24110.00	90.620	336.790	5686.94	17183.99	16664.88	-4688.38	1746734.59	14623376.23	40°15'53.1577"N	80°37'7.9919"W	17311.82	344.287	0.20	-0.19	0.06
24206.00	90.800	336.920	5685.75	17279.98	16753.14	-4726.11	1746696.87	14623464.46	40°15'54.0315"N	80°37'8.4738"W	17407.01	344.246	0.23	0.19	0.14
24302.00	90.890	336.980	5684.33	17375.97	16841.47	-4763.69	1746659.30	14623552.76	40°15'54.9059"N	80°37'8.9537"W	17502.22	344.206	0.11	0.09	0.06
24398.00	90.770	336.760	5682.94	17471.96	16929.74	-4801.40	1746621.61	14623641.00	40°15'55.7798"N	80°37'9.4352"W	17597.43	344.166	0.26	-0.12	-0.23
24494.00	90.860	336.850	5681.58	17567.94	17017.97	-4839.21	1746583.82	14623729.19	40°15'56.6533"N	80°37'9.9180"W	17692.64	344.126	0.13	0.09	0.09
24590.00	90.830	337.020	5680.66	17629.93	17075.01	-4863.50	1746559.54	14623817.48	40°15'57.5270"N	80°37'10.4011"W	17754.14	344.101	0.28	-0.05	0.27
24581.00†	90.830	337.020	5680.30	17654.93	17098.03	-4873.25	1746549.79	14623809.21	40°15'57.4458"N	80°37'10.3527"W	17778.95	344.091	0.00	0.00	0.00

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Robert Bone BRK 205H
Field	Brooke	API/Legal	
Facility	Robert Bone BRK Pad	Wellbore	Robert Bone BRK 205H AWB
Slot	Slot 205H		

HOLE & CASING SECTIONS - Ref Wellbore: Robert Bone BRK 205H AWB Ref Wellpath: Robert Bone BRK 205H AWB Prog: 24581'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]
20in Conductor	0.00	126.00	126.00	0.00	126.00	0.00	0.00	0.00	-0.12
17.5in Open Hole	126.00	456.00	330.00	126.00	455.99	0.18	0.18	-0.12	2.01
13.375in Casing Surface	26.00	426.00	400.00	26.00	425.99	0.00	0.00	0.00	1.90
12.25in Open Hole	456.00	1663.00	1207.00	455.99	1645.09	2.01	2.01	0.64	-37.05
9.625in Casing Intermediate	26.00	1633.00	1607.00	26.00	1615.93	0.00	0.00	0.00	-35.75
8.75in Open Hole	1663.00	3922.00	2259.00	1645.09	3696.11	-37.05	-37.05	170.86	1093.45
8.5in Open Hole	3922.00	24581.00	20659.00	3696.11	5680.30	-83.20	-83.20	1093.45	-4873.25

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Robert Bone BRK 205H BHL Rev-5	5670.10	17096.40	-4878.07	1746544.98	14623807.59	40°15'57.4300"N	80°37'10.4149"W	point
Robert Bone BRK 205H LP Rev-6	5863.00	671.15	1985.91	1753406.29	14607388.71	40°13'14.8185"N	80°35'42.8388"W	point

WELLPATH COMPOSITION - Ref Wellbore: Robert Bone BRK 205H AWB Ref Wellpath: Robert Bone BRK 205H AWB Prog: 24581'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	386.00	OWSG MWD rev2 + HRGM	01 Premier MWD (OWSG MWD REV.2+HGRM) <17'-1/2"> (126'-386')	Robert Bone BRK 205H AWB	8/3/2021
386.00	1574.00	OWSG MWD rev2 + HRGM	02 Premier MWD (OWSG MWD REV.2+HGRM) <12'-1/4"> (496'-1574')	Robert Bone BRK 205H AWB	8/3/2021
1574.00	3922.00	OWSG MWD rev2 + HRGM	03 Premier MWD (OWSG MWD REV.2+HGRM) <8'-3/4"> (1711'-3922')	Robert Bone BRK 205H AWB	8/3/2021
3922.00	24581.00	BH AutoTrak Curve (2019) (Short spacing)	04 BH AT Curve (Short Spacing) <8'-1/2"> (3940'-24556')	Robert Bone BRK 205H AWB	8/11/2021

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Robert Bone BRK 205H
Field	Brooke	API/Legal	
Facility	Robert Bone BRK Pad	Wellbore	Robert Bone BRK 205H AWB
Slot	Slot 205H		

COMMENTS

Wellpath general comments
API: 47009002880000
BH Job#: 110934637
Rig: SDC40
Duration: 08.11.2021-08.18.2021