

SOUTHWESTERN ENERGY

Location: Brooke County, WV Slot: Slot 10H
 Field: Brooke Well: James Seabright BRK 10H
 Facility: James Seabright BRK Pad Wellbore: James Seabright BRK 10H PWB

Plot reference wellpath is James Seabright BRK 10H PWB Rev-B 0 Grid System: NAD83 / UTM Zone 17 North, US feet
 True vertical depths are referenced to SDC-46 (RKB) * = Wellpath was transformed from a different geodetic datum
 Measured depths are referenced to SDC-46 (RKB) North Reference: Grid north
 SDC-46 (RKB) to Mean Sea Level: 1157 feet Scale: True distance
 Mean Sea Level to Ground level (At Slot: Slot 10H): -1131 feet Depths are in feet
 Coordinates are in feet referenced to Slot Created by: amarcar on 2017-07-05
 Database: WA_MPL_EASTERNUS_Defn

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
James Seabright BRK Pad	1771209.700	14607351.720	40°13'13.587"N	80°31'53.248"W		
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot 10H	13.65	14.62	1771224.310	14607365.360	40°13'13.721"N	80°31'53.058"W

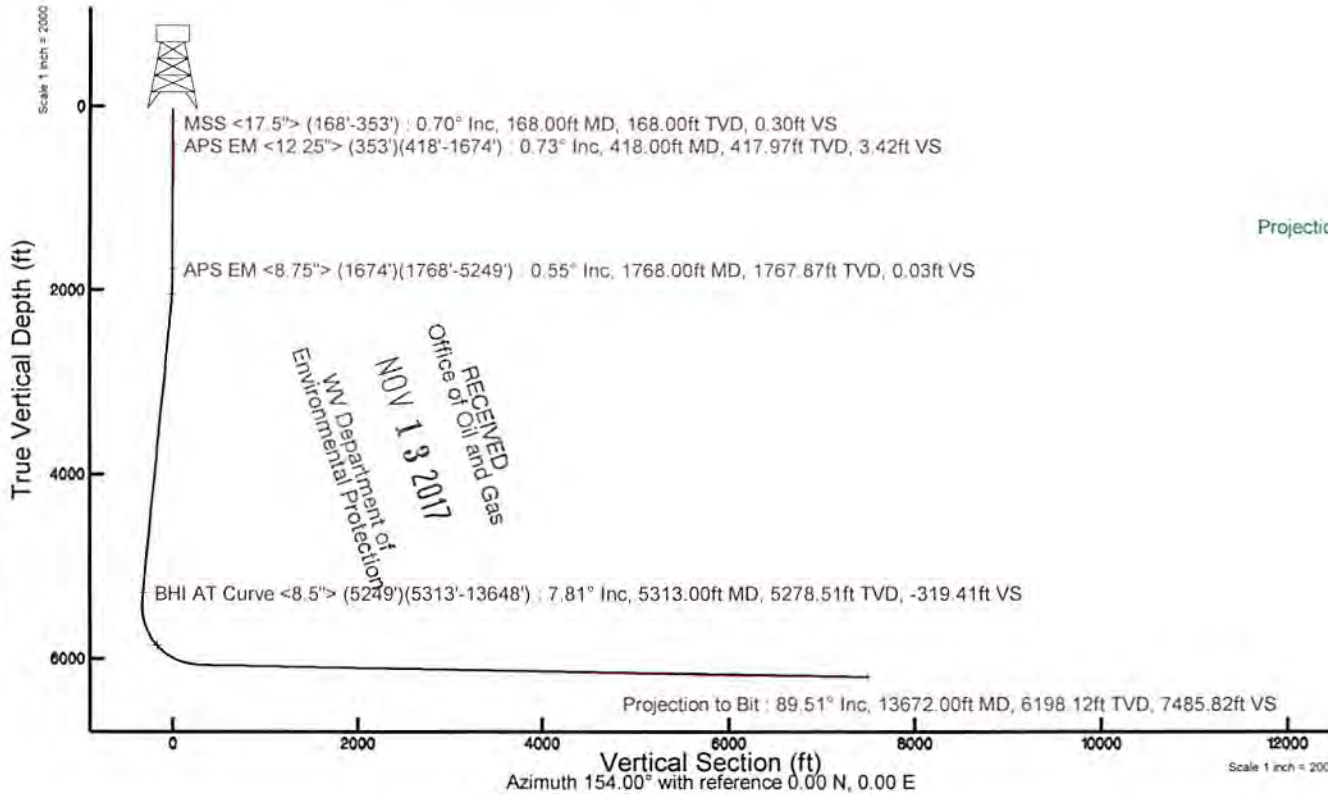
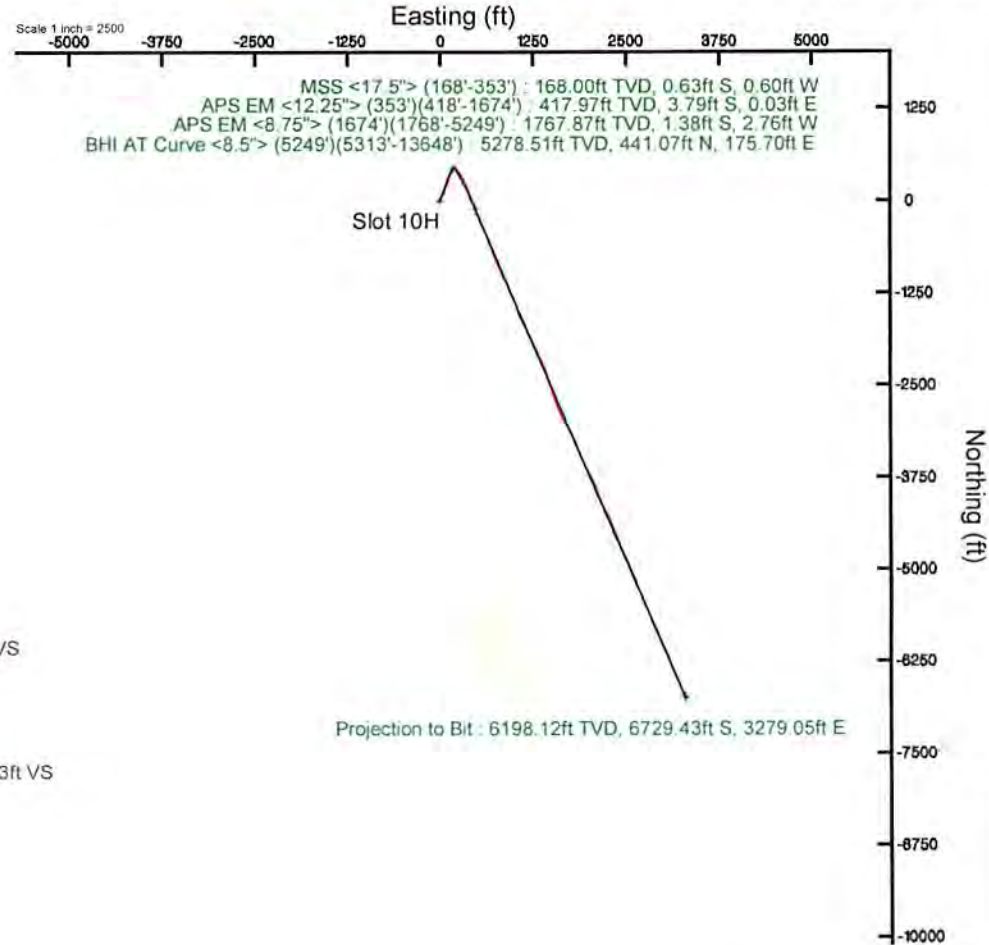
Comment	10H
SDC-46 (RKB) to Ground level (At Slot: Slot 10H)	26ft
Mean Sea Level to Ground level (At Slot: Slot 10H)	-1131ft
SDC-46 (RKB) to Mean Sea Level	1157ft

Well Profile Data

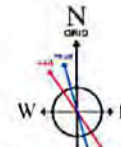
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.000	20.233	26.00	0.00	0.00	0.00	0.00
Start Build	1850.00	0.000	20.233	1850.00	0.00	0.00	0.00	0.00
End Build	2258.11	8.162	20.233	2256.73	27.23	10.04	2.00	-20.07
Start Build/Turn	5404.12	8.162	20.233	5370.87	446.33	164.51	0.00	-329.04
Landing Point	6459.04	89.001	157.000	6070.00	-100.00	469.74	9.00	295.80
Total Depth	13684.63	89.001	157.000	6196.00	-6750.17	3292.57	0.00	7510.38



API: 47-009-00175-0000
 Job#: 8609970
 Rig: SDC-46
 Duration: 06/23/17 - 06/30/17



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User specified Dip: 67.77° Field: 52772 nT
 Magnetic North is 8.47 degrees West of True North (at 19/Jun/2017)
 Grid North is 0.30 degrees East of True North
 To correct azimuth from True to Grid subtract 0.30 degrees
 To correct azimuth from Magnetic to Grid subtract 8.77 degrees



Actual Wellpath Report

James Seabright BRK 10H AWP Proj: 13672'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 10H
Area	Brooke County, WV	Well	James Seabright BRK 10H
Field	Brooke	Wellbore	James Seabright BRK 10H AWB
Facility	James Seabright BRK Pad		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Amarcar
Scale	0.999620	Report Generated	05/Jul/2017 at 09:20
Convergence at slot	0.31° East	Database/Source file	WA_MPL_EASTERNUS_Defn/James_Seabright_BRK_10H_AWP_Proj_13672_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	13.65	14.62	1771224.31	14607365.36	40°13'13.721"N	80°31'53.058"W
Facility Reference Pt			1771209.70	14607351.72	40°13'13.587"N	80°31'53.248"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.478"W

WELLPATH DATUM			
Calculation method	Minimum curvature	SDC-46 (RKB) to Facility Vertical Datum	1157.00ft
Horizontal Reference Pt	Slot	SDC-46 (RKB) to Mean Sea Level	1157.00ft
Vertical Reference Pt	SDC-46 (RKB)	SDC-46 (RKB) to Ground Level at Slot (Slot 10H)	26.00ft
MD Reference Pt	SDC-46 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	154.00°

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 10H
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Field	Brooke	Wellbore	James Seabright BRK 10H AWB
Facility	James Seabright BRK Pad		

WELLPATH DATA (162 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	223.900	0.00	0.00	0.00	0.00	1771224.31	14607365.36	40°13'13.721"N	80°31'53.058"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	223.900	26.00	0.00	0.00	0.00	1771224.31	14607365.36	40°13'13.721"N	80°31'53.058"W	0.00	0.000	0.00	0.00	0.00
168.00	0.700	223.900	168.00	0.30	-0.63	-0.60	1771223.71	14607364.74	40°13'13.715"N	80°31'53.066"W	0.87	223.900	0.49	0.49	-95.85
261.00	0.800	169.600	260.99	1.12	-1.67	-0.88	1771223.43	14607363.69	40°13'13.704"N	80°31'53.070"W	1.89	207.697	0.74	0.11	-58.39
353.00	1.000	162.200	352.98	2.53	-3.07	-0.52	1771223.79	14607362.29	40°13'13.690"N	80°31'53.065"W	3.11	189.559	0.25	0.22	-8.04
418.00	0.730	116.100	417.97	3.42	-3.79	0.03	1771224.34	14607361.57	40°13'13.683"N	80°31'53.058"W	3.79	179.571	1.11	-0.42	-70.92
511.00	1.360	112.000	510.96	4.71	-4.47	1.58	1771225.89	14607360.90	40°13'13.677"N	80°31'53.038"W	4.74	160.472	0.68	0.68	-4.41
604.00	0.340	116.830	603.94	5.75	-5.00	2.85	1771227.16	14607360.36	40°13'13.671"N	80°31'53.022"W	5.76	150.305	1.10	-1.10	5.19
696.00	0.670	338.030	695.94	5.43	-4.63	2.90	1771227.20	14607360.73	40°13'13.675"N	80°31'53.021"W	5.46	147.965	1.04	0.36	-150.87
789.00	0.960	356.200	788.93	4.16	-3.35	2.64	1771226.95	14607362.02	40°13'13.688"N	80°31'53.025"W	4.26	141.721	0.41	0.31	19.54
882.00	1.530	324.540	881.91	2.22	-1.56	1.87	1771226.18	14607363.80	40°13'13.705"N	80°31'53.035"W	2.43	129.809	0.94	0.61	-34.04
975.00	0.710	308.140	974.89	0.48	-0.19	0.70	1771225.00	14607365.17	40°13'13.719"N	80°31'53.050"W	0.72	105.303	0.94	-0.88	-17.63
1068.00	0.710	297.030	1067.89	-0.50	0.43	-0.27	1771224.04	14607365.79	40°13'13.725"N	80°31'53.062"W	0.51	327.600	0.15	0.00	-11.95
1161.00	0.390	241.590	1160.88	-0.95	0.54	-1.06	1771223.25	14607365.90	40°13'13.726"N	80°31'53.072"W	1.19	296.879	0.63	-0.34	-59.61
1253.00	0.480	306.980	1252.88	-1.28	0.62	-1.65	1771222.66	14607365.98	40°13'13.727"N	80°31'53.080"W	1.76	290.687	0.52	0.10	71.08
1346.00	0.440	255.950	1345.88	-1.70	0.77	-2.30	1771222.01	14607366.13	40°13'13.728"N	80°31'53.088"W	2.43	288.465	0.43	-0.04	-54.87
1439.00	0.540	219.250	1438.87	-1.59	0.34	-2.93	1771221.38	14607365.70	40°13'13.724"N	80°31'53.096"W	2.95	276.686	0.35	0.11	-39.46
1532.00	0.370	220.170	1531.87	-1.29	-0.23	-3.40	1771220.91	14607365.13	40°13'13.719"N	80°31'53.102"W	3.41	266.202	0.18	-0.18	0.99
1625.00	0.360	117.930	1624.87	-0.93	-0.59	-3.33	1771220.98	14607364.77	40°13'13.715"N	80°31'53.102"W	3.39	259.932	0.61	-0.01	-109.94
1674.00	0.330	134.930	1673.87	-0.67	-0.76	-3.10	1771221.21	14607364.60	40°13'13.713"N	80°31'53.098"W	3.19	256.153	0.22	-0.06	34.69
1768.00	0.550	160.550	1767.87	0.03	-1.38	-2.76	1771221.55	14607363.98	40°13'13.707"N	80°31'53.094"W	3.08	243.399	0.31	0.23	27.26
1815.00	0.540	157.740	1814.86	0.48	-1.80	-2.60	1771221.71	14607363.56	40°13'13.703"N	80°31'53.092"W	3.16	235.307	0.06	-0.02	-5.98
1908.00	4.430	26.730	1907.78	-1.26	1.01	-0.81	1771223.50	14607366.37	40°13'13.731"N	80°31'53.069"W	1.29	320.997	5.16	4.18	-140.87
2000.00	5.780	27.090	1999.41	-6.20	8.30	2.89	1771227.20	14607373.66	40°13'13.803"N	80°31'53.021"W	8.79	19.209	1.47	1.47	0.39
2093.00	6.940	26.400	2091.84	-12.44	17.51	7.52	1771231.83	14607382.86	40°13'13.893"N	80°31'52.960"W	19.05	23.258	1.25	1.25	-0.74
2186.00	7.220	24.340	2184.13	-19.59	27.86	12.43	1771236.74	14607393.21	40°13'13.995"N	80°31'52.896"W	30.51	24.044	0.41	0.30	-2.22
2279.00	7.650	19.900	2276.35	-27.63	39.01	16.95	1771241.25	14607404.35	40°13'14.105"N	80°31'52.837"W	42.53	23.482	0.77	0.46	-4.77
2371.00	7.790	18.010	2367.51	-36.38	50.70	20.96	1771245.26	14607416.04	40°13'14.221"N	80°31'52.785"W	54.86	22.461	0.32	0.15	-2.05
2464.00	7.700	16.120	2459.66	-45.53	62.68	24.64	1771248.94	14607428.01	40°13'14.339"N	80°31'52.737"W	67.34	21.460	0.29	-0.10	-2.03
2557.00	7.340	25.670	2551.87	-53.84	74.02	28.94	1771253.24	14607439.35	40°13'14.451"N	80°31'52.680"W	79.47	21.356	1.40	-0.39	10.27

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Operator	SOUTHWESTERN ENERGY
Area	Brooke County, WV
Field	Brooke
Facility	James Seabright BRK Pad
Slot	Slot 10H
	Well
	James Seabright BRK 10H
	Wellbore
	James Seabright BRK 10H AWB

WELLPATH DATA (162 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]
2650.00	7.370	2644.10	26.660	-61.14	84.70	34.19	1771258.49	14607450.03	40°13'14.556"N	80°31'52.612"W	91.34	21.982	0.14	0.03	1.06
2743.00	6.670	2736.41	25.790	-68.10	94.89	39.22	1771263.51	14607460.22	40°13'14.656"N	80°31'52.546"W	102.68	22.454	0.76	-0.75	-0.94
2836.00	6.020	2828.84	22.750	-74.66	104.26	43.45	1771267.75	14607469.58	40°13'14.749"N	80°31'52.491"W	112.95	22.626	0.79	-0.70	-3.27
2929.00	6.970	2921.24	18.240	-81.91	114.11	47.11	1771271.40	14607479.43	40°13'14.846"N	80°31'52.443"W	123.45	22.431	1.16	1.02	-4.85
3022.00	8.640	3013.37	-91.18	126.20	50.75	1771275.04	14607491.51	40°13'14.965"N	80°31'52.396"W	136.02	21.907	1.84	1.80	-2.83	
3115.00	9.580	3105.20	-102.41	140.47	54.38	1771278.67	14607505.77	40°13'15.106"N	80°31'52.348"W	150.63	21.165	1.10	1.01	-2.70	
3208.00	8.830	3197.00	-114.09	155.00	57.55	1771281.83	14607520.30	40°13'15.249"N	80°31'52.306"W	165.34	20.368	0.86	-0.81	-1.86	
3300.00	8.830	3287.91	-125.35	168.86	60.27	1771284.56	14607534.15	40°13'15.386"N	80°31'52.270"W	179.29	19.643	0.08	0.00	-0.53	
3393.00	8.150	3379.89	-136.46	182.38	62.64	1771288.93	14607547.67	40°13'15.520"N	80°31'52.239"W	192.84	18.957	0.79	-0.73	-2.08	
3486.00	8.100	3471.96	-146.78	195.21	65.41	1771289.69	14607560.49	40°13'15.646"N	80°31'52.202"W	205.88	18.524	0.98	-0.05	6.92	
3582.00	8.520	3566.96	-155.70	207.81	70.90	1771295.18	14607573.09	40°13'15.771"N	80°31'52.130"W	219.57	18.837	2.42	0.44	16.54	
3675.00	7.980	3659.00	-162.94	219.23	77.80	1771302.08	14607584.51	40°13'15.883"N	80°31'52.041"W	232.62	19.539	0.58	-0.58	-0.25	
3768.00	7.450	3751.16	-170.00	230.09	83.95	1771308.23	14607595.36	40°13'15.990"N	80°31'51.961"W	244.92	20.046	0.72	-0.57	-3.33	
3861.00	7.110	3843.41	-176.79	240.41	89.63	1771313.91	14607605.68	40°13'16.092"N	80°31'51.887"W	256.58	20.447	0.44	-0.37	1.90	
3954.00	8.280	3935.58	-184.80	251.76	94.62	1771318.90	14607617.02	40°13'16.204"N	80°31'51.822"W	268.95	20.599	2.03	1.26	-11.91	
4047.00	8.880	4027.54	-194.80	264.96	98.88	1771323.16	14607630.22	40°13'16.334"N	80°31'51.766"W	282.81	20.465	0.69	0.65	-1.56	
4140.00	8.500	4119.47	-205.21	278.45	102.80	1771327.07	14607643.71	40°13'16.467"N	80°31'51.714"W	296.82	20.263	0.53	-0.41	-2.18	
4233.00	8.770	4211.41	-215.37	291.78	106.94	1771331.21	14607657.02	40°13'16.598"N	80°31'51.660"W	310.76	20.128	0.73	-0.29	4.46	
4325.00	8.840	4302.33	-225.51	305.18	111.27	1771335.54	14607670.42	40°13'16.731"N	80°31'51.603"W	324.83	20.032	0.47	0.08	-3.01	
4418.00	8.770	4394.23	-235.93	318.79	115.43	1771339.69	14607684.03	40°13'16.865"N	80°31'51.549"W	339.04	19.905	0.17	-0.08	1.00	
4508.00	9.730	4483.07	-245.25	331.98	121.19	1771345.46	14607697.21	40°13'16.995"N	80°31'51.474"W	353.41	20.055	2.34	1.07	13.00	
4600.00	9.990	4573.71	-254.27	345.75	128.85	1771353.11	14607710.98	40°13'17.131"N	80°31'51.374"W	368.98	20.438	0.29	0.28	-0.22	
4693.00	9.970	4665.31	-264.18	360.21	135.90	1771360.16	14607725.44	40°13'17.273"N	80°31'51.282"W	385.00	20.671	1.10	-0.02	-6.35	
4786.00	10.160	4756.88	-274.66	375.08	142.48	1771366.73	14607740.29	40°13'17.420"N	80°31'51.196"W	401.23	20.800	0.37	0.20	1.73	
4879.00	9.260	4848.54	-284.09	389.04	149.60	1771373.85	14607754.25	40°13'17.557"N	80°31'51.104"W	416.81	21.033	1.32	-0.97	5.30	
4972.00	9.130	4940.35	-292.29	401.84	157.14	1771381.39	14607767.05	40°13'17.683"N	80°31'51.005"W	431.47	21.358	0.35	-0.14	1.98	
5064.00	7.350	5031.40	-299.21	412.98	164.19	1771388.43	14607778.18	40°13'17.793"N	80°31'50.914"W	444.42	21.681	1.96	-1.93	2.16	
5157.00	6.400	5123.73	-305.53	422.66	169.61	1771393.86	14607787.86	40°13'17.889"N	80°31'50.843"W	455.43	21.866	1.53	-1.02	-9.56	
5249.00	7.330	5215.07	-313.11	432.95	173.42	1771397.67	14607798.15	40°13'17.990"N	80°31'50.793"W	466.39	21.829	1.44	1.01	-8.56	
5313.00	7.810	5278.51	-319.41	441.07	175.70	1771399.94	14607808.26	40°13'18.070"N	80°31'50.764"W	474.77	21.720	0.85	0.75	-3.02	

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Actual Wellpath Report

James Seabright BRK 10H AWP Proj: 13672



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Field	Brooke
Facility	James Seabright BRK Pad
Slot	Slot 10H
Well	James Seabright BRK 10H
Wellbore	James Seabright BRK 10H AWB

WELLPATH DATA (162 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)	(°)	(ft/100ft)	(ft/100ft)	(°/100ft)
5406.00	7.610	29.300	5370.68	-327.71	452.55	180.32	1771404.56	14607817.74	40°13'18.183"N	80°31'50.703"W	487.15	21.724	2.11	-0.22	15.69
5452.00	6.710	59.320	5416.34	-329.66	456.58	184.12	1771408.36	14607821.77	40°13'18.223"N	80°31'50.654"W	492.31	21.962	8.26	-1.96	65.26
5499.00	7.230	89.390	5463.01	-328.61	458.01	189.44	1771413.68	14607823.20	40°13'18.237"N	80°31'50.585"W	495.64	22.471	7.75	1.11	63.98
5545.00	8.180	114.090	5508.60	-324.86	456.71	195.32	1771419.56	14607821.89	40°13'18.224"N	80°31'50.509"W	496.72	23.155	7.42	2.07	53.70
5592.00	10.030	137.380	5555.02	-318.37	452.33	201.15	1771425.38	14607817.52	40°13'18.180"N	80°31'50.435"W	495.04	23.975	8.69	3.94	49.56
5638.00	13.760	147.060	5600.03	-309.10	444.79	206.84	1771431.07	14607809.98	40°13'18.105"N	80°31'50.362"W	490.53	24.940	9.17	8.11	21.04
5684.00	17.530	150.110	5644.32	-296.75	434.19	213.27	1771437.50	14607799.38	40°13'18.000"N	80°31'50.280"W	483.74	26.160	8.39	8.20	6.63
5731.00	21.890	148.850	5688.56	-280.96	420.54	221.33	1771445.56	14607785.74	40°13'17.865"N	80°31'50.177"W	475.23	27.758	9.32	9.28	-2.68
5777.00	26.630	146.370	5730.48	-262.19	404.61	231.48	1771455.71	14607769.82	40°13'17.707"N	80°31'50.047"W	466.15	29.774	10.54	10.30	-5.39
5823.00	30.500	146.160	5770.88	-240.40	386.33	243.70	1771467.92	14607751.54	40°13'17.526"N	80°31'49.891"W	456.77	32.244	8.42	8.41	-0.46
5870.00	36.020	147.020	5810.16	-214.84	364.81	257.87	1771482.09	14607730.03	40°13'17.312"N	80°31'49.709"W	446.75	35.255	11.79	11.74	1.83
5916.00	41.240	149.670	5846.09	-186.28	340.35	272.89	1771497.10	14607746.58	40°13'17.070"N	80°31'49.517"W	436.24	38.722	11.93	11.35	5.89
5963.00	44.280	151.660	5880.59	-154.43	312.52	288.49	1771512.69	14607767.76	40°13'16.794"N	80°31'49.318"W	425.32	42.710	7.04	6.47	4.11
6009.00	47.440	153.310	5912.62	-121.43	283.25	303.73	1771527.92	14607648.50	40°13'16.504"N	80°31'49.124"W	415.31	46.999	7.34	6.87	3.59
6055.00	52.830	154.100	5942.10	-86.14	251.60	319.36	1771543.54	14607616.86	40°13'16.190"N	80°31'48.925"W	406.56	51.768	11.79	11.72	1.72
6102.00	58.710	154.590	5968.53	-47.30	216.58	336.17	1771560.35	14607581.86	40°13'15.843"N	80°31'48.710"W	399.90	57.207	12.54	12.51	1.04
6148.00	62.830	156.140	5990.99	-7.18	180.10	352.89	1771577.06	14607545.39	40°13'15.482"N	80°31'48.497"W	396.19	62.962	9.43	8.96	3.37
6195.00	67.750	156.170	6010.63	35.48	141.06	370.14	1771594.31	14607506.37	40°13'15.095"N	80°31'48.277"W	396.11	69.138	10.47	10.47	0.06
6241.00	72.360	157.000	6026.31	78.66	101.39	387.32	1771611.48	14607460.71	40°13'14.702"N	80°31'48.059"W	400.37	75.931	10.16	10.02	1.80
6287.00	75.880	157.970	6028.90	122.81	60.52	404.25	1771628.41	14607425.86	40°13'14.298"N	80°31'47.843"W	408.76	81.485	7.92	7.65	2.11
6334.00	78.600	158.580	6049.28	168.52	17.94	421.22	1771645.36	14607383.30	40°13'13.876"N	80°31'47.627"W	421.60	87.561	5.92	5.79	1.30
6380.00	80.010	159.240	6057.82	213.56	-24.23	437.48	1771661.62	14607344.14	40°13'13.458"N	80°31'47.421"W	438.15	93.170	3.37	3.07	1.43
6426.00	82.250	159.180	6064.91	258.81	-66.72	453.61	1771677.75	14607298.67	40°13'13.038"N	80°31'47.216"W	458.49	98.367	4.87	4.87	-0.13
6519.00	89.080	158.700	6071.93	351.15	-153.20	486.92	1771711.04	14607212.21	40°13'12.181"N	80°31'46.792"W	510.45	107.466	7.36	7.34	-0.52
6562.00	89.140	157.210	6073.38	443.91	-239.38	521.82	1771745.93	14607126.06	40°13'11.328"N	80°31'46.348"W	574.11	114.644	1.80	0.06	-1.60
6705.00	89.110	156.360	6074.80	538.79	-324.85	558.47	1771782.57	14607040.63	40°13'10.481"N	80°31'45.881"W	646.08	120.186	0.91	-0.03	-0.91
6798.00	89.230	155.440	6076.15	629.73	-409.74	596.44	1771820.52	14606955.78	40°13'09.641"N	80°31'45.398"W	723.62	124.488	1.00	0.13	-0.99
6890.00	89.140	157.620	6077.45	721.63	-494.11	633.08	1771857.14	14606871.44	40°13'08.805"N	80°31'44.931"W	803.08	127.972	2.37	-0.10	2.37
6983.00	89.080	159.270	6078.90	814.33	-580.59	667.24	1771891.29	14606784.99	40°13'07.949"N	80°31'44.497"W	884.48	131.028	1.78	-0.06	1.77
7076.00	88.950	158.670	6080.50	906.97	-657.89	700.61	1771924.65	14606698.23	40°13'07.089"N	80°31'44.073"W	967.60	133.609	0.66	-0.14	-0.65

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Southwestern Energy

Actual Wellpath Report

James Seabright BRK 10H AWP Proj: 13672



REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY
Area	Brooke County, WV
Field	Brooke
Facility	James Seabright BRK Pad
Slot	Slot 10H
	James Seabright BRK 10H
	James Seabright BRK 10H AWB

WELLPATH DATA (162 stations)

MD	Inclination	Azimuth	TVD	Vent 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)	(°)	(ft)	(ft/100ft)	(°/100ft)
7169.00	88.890	158.700	6082.25	999.64	-754.01	734.41	1771958.44	14606611.64	40°13'06.23"N	80°31'43.64"W	1052.56	135.55	0.07	-0.06	0.03
7261.00	89.110	158.300	6083.86	1091.34	-839.59	768.12	1771992.14	14606526.09	40°13'05.384"N	80°31'43.214"W	1137.95	137.546	0.50	0.24	-0.43
7354.00	89.020	156.630	6085.37	1184.16	-925.48	803.76	1772027.76	14606440.24	40°13'04.533"N	80°31'42.761"W	1225.78	139.026	1.80	-0.10	-1.80
7447.00	88.890	155.510	6087.07	1277.08	-1010.47	841.47	1772065.46	14606355.28	40°13'03.691"N	80°31'42.280"W	1314.96	140.214	1.21	-0.14	-1.20
7540.00	89.080	153.750	6088.72	1370.06	-1094.48	881.31	1772105.28	14606271.30	40°13'02.859"N	80°31'41.773"W	1405.21	141.158	1.90	0.20	-1.89
7632.00	89.080	153.780	6090.19	1462.04	-1177.00	921.97	1772145.93	14606188.81	40°13'02.042"N	80°31'41.254"W	1495.11	141.927	0.03	0.00	0.03
7725.00	88.980	156.010	6091.77	1555.01	-1261.19	961.42	1772185.37	14606104.65	40°13'01.208"N	80°31'40.751"W	1585.86	142.681	2.40	-0.11	2.40
7818.00	89.050	159.920	6093.37	1647.76	-1347.37	996.30	1772220.23	14606018.51	40°13'00.354"N	80°31'40.308"W	1675.72	143.519	4.20	0.08	4.20
7911.00	89.170	162.000	6094.81	1740.06	-1435.27	1026.64	1772250.55	14605930.64	40°12'59.484"N	80°31'39.923"W	1764.65	144.424	2.24	0.13	2.24
8003.00	88.980	158.390	6096.30	1831.49	-1521.80	1057.80	1772281.70	14605844.14	40°12'58.627"N	80°31'39.527"W	1853.32	145.197	3.93	-0.21	-3.92
8096.00	89.080	155.740	6097.87	1924.34	-1607.43	1094.03	1772317.92	14605758.55	40°12'57.779"N	80°31'39.066"W	1944.41	145.760	2.85	0.11	-2.85
8189.00	89.170	164.330	6099.29	2017.31	-1691.73	1133.28	1772350.75	14605674.28	40°12'56.944"N	80°31'38.566"W	2036.24	146.182	1.52	0.10	-1.52
8282.00	88.980	161.000	6100.80	2110.27	-1774.52	1175.60	1772399.46	14605591.52	40°12'56.124"N	80°31'38.026"W	2128.60	146.476	3.03	-0.20	-3.02
8374.00	89.140	153.580	6102.30	2202.23	-1856.14	1218.00	1772441.84	14605509.93	40°12'55.315"N	80°31'37.485"W	2220.09	146.727	2.25	-0.17	2.24
8467.00	89.080	154.910	6103.75	2295.21	-1939.89	1258.40	1772482.23	14605426.21	40°12'54.485"N	80°31'36.970"W	2312.31	147.029	1.43	-0.06	1.43
8559.00	88.890	155.220	6105.38	2387.18	-2023.30	1297.18	1772521.00	14605342.83	40°12'53.659"N	80°31'36.476"W	2403.42	147.335	0.40	-0.21	0.34
8652.00	88.610	157.460	6107.41	2480.07	-2108.46	1334.49	1772558.29	14605257.71	40°12'52.815"N	80°31'36.001"W	2495.29	147.669	2.43	-0.30	2.41
8745.00	88.680	156.400	6109.61	2572.93	-2194.00	1370.93	1772594.71	14605172.20	40°12'51.968"N	80°31'35.537"W	2587.10	148.001	1.14	0.08	-1.14
8838.00	88.610	157.930	6111.81	2665.75	-2279.68	1407.00	1772630.77	14605086.55	40°12'51.120"N	80°31'35.078"W	2678.92	148.318	1.66	-0.08	1.66
8930.00	88.800	160.510	6113.89	2757.34	-2365.67	1439.62	1772663.38	14605000.59	40°12'50.268"N	80°31'34.663"W	2769.28	148.678	2.80	0.21	2.79
9023.00	88.800	161.390	6115.83	2849.64	-2453.56	1469.97	1772693.72	14604912.74	40°12'49.398"N	80°31'34.278"W	2860.20	149.073	0.95	0.00	0.95
9116.00	88.830	164.230	6117.76	2941.51	-2542.38	1497.44	1772721.18	14604823.95	40°12'48.519"N	80°31'33.930"W	2950.60	149.502	3.05	0.03	3.05
9209.00	88.950	163.970	6119.56	3033.05	-2631.80	1522.92	1772746.65	14604734.56	40°12'47.634"N	80°31'33.608"W	3040.67	149.944	0.31	0.13	-0.28
9302.00	88.610	159.800	6121.54	3125.13	-2720.15	1551.82	1772775.54	14604646.25	40°12'46.759"N	80°31'33.241"W	3131.67	150.296	4.50	-0.37	-4.48
9394.00	88.680	156.750	6123.72	3216.84	-2805.58	1585.86	1772809.57	14604566.85	40°12'45.913"N	80°31'32.808"W	3222.77	150.523	3.32	0.08	-3.32
9487.00	88.890	155.430	6125.69	3309.75	-2890.61	1623.49	1772847.18	14604475.86	40°12'45.071"N	80°31'32.329"W	3315.32	150.680	1.35	0.23	-1.33
9580.00	88.740	152.430	6127.61	3402.72	-2974.15	1664.28	1772887.96	14604392.35	40°12'44.243"N	80°31'31.809"W	3408.14	150.769	3.32	-0.16	-3.31
9672.00	89.320	150.730	6129.17	3494.62	-3055.05	1708.06	1772931.72	14604311.48	40°12'43.442"N	80°31'31.251"W	3500.11	150.791	1.95	0.63	-1.85
9765.00	88.860	153.210	6130.65	3587.54	-3137.12	1751.76	1772975.40	14604229.44	40°12'42.628"N	80°31'30.693"W	3593.07	150.821	2.71	-0.49	2.67
9858.00	88.680	155.810	6132.64	3680.51	-3221.04	1791.77	1773015.39	14604145.55	40°12'41.797"N	80°31'30.183"W	3685.86	150.914	2.80	-0.19	2.80

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Actual Wellpath Report

James Seabright BRK 10H AWP Proj: 13672'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 10H
Area	Brooke County, WV	Well	James Seabright BRK 10H
Field	Brooke	Wellbore	James Seabright BRK 10H AWP
Facility	James Seabright BRK Pad		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
168.00	0.700	223.900	168.00	MSS <17.5"> (168'-353')
418.00	0.730	116.100	417.97	APS EM <12.25"> (353')(418'-1674')
1768.00	0.550	160.550	1767.87	APS EM <8.75"> (1674')(1768'-5249')
5313.00	7.810	14.710	5278.51	BHI AT Curve <8.5"> (5249')(5313'-13648')
13672.00	89.510	157.170	6198.12	Projection to Bit

COMMENTS
<p>Wellpath general comments API: 47-009-00175-0000 Job#: 8609970 Rig: SDC-46 Duration: 06/23/17 - 06/30/17</p>

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