

Actual Wellpath Report

SHL-22B-HS AWP Proj: 15214'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot B
Area	Marshall County, WV	Well	SHL-22B-HS
Field	Marshall	Wellbore	SHL-22B-HS AWB
Facility	SHL-22 Pad		

REPORT SETUP INFORMATION

Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 4.0.1
North Reference	Grid	User	Edsaryar
Scale	0.999963	Report Generated	06/Jul/2015 at 14:48
Convergence at slot	0.69° West	Database/Source file	WellArchitectEasternDB/SHL-22B-HS_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	14.09	14.16	1698327.00	552072.52	40°00'38.755"N	80°34'37.138"W
Facility Reference Pt			1698312.84	552058.43	40°00'38.614"N	80°34'37.318"W
Field Reference Pt			609601.22	0.00	38°23'48.753"N	84°21'09.765"W

WELLPATH DATUM

Calculation method	Minimum curvature		1342.05ft
Horizontal Reference Pt	Slot	Precision 584 (RKB) to Facility Vertical Datum	1342.05ft
Vertical Reference Pt	Precision 584 (RKB)	Precision 584 (RKB) to Mean Sea Level	19.40ft
MD Reference Pt	Precision 584 (RKB)	Precision 584 (RKB) to Mud Line at Slot (Slot B)	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Origin	145.00°
		Section Azimuth	



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WELLPATH DATA (212 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	72.140	0.00	0.00	0.00	0.00	1698327.00	552072.52	40°00'38.755"N	80°34'37.138"W	0.00	0.000	0.00	0.00	0.00
19.40	0.000	72.140	19.40	0.00	0.00	0.00	1698327.00	552072.52	40°00'38.755"N	80°34'37.138"W	0.00	0.000	0.00	0.00	0.00
107.40	0.230	72.140	107.40	0.05	0.05	0.17	1698327.17	552072.57	40°00'38.756"N	80°34'37.136"W	0.18	72.140	0.26	0.26	0.00
207.40	0.420	55.170	207.40	0.11	0.33	0.66	1698327.66	552072.85	40°00'38.759"N	80°34'37.130"W	0.74	63.779	0.21	0.19	-16.97
307.40	0.300	47.210	307.40	0.08	0.71	1.15	1698328.15	552073.23	40°00'38.762"N	80°34'37.124"W	1.36	58.295	0.13	-0.12	-7.96
407.40	0.480	357.810	407.39	-0.31	1.31	1.33	1698328.33	552073.83	40°00'38.768"N	80°34'37.122"W	1.87	45.444	0.36	0.18	-49.40
507.40	0.420	354.270	507.39	-0.98	2.09	1.28	1698328.28	552074.61	40°00'38.776"N	80°34'37.122"W	2.45	31.392	0.07	-0.06	-3.54
607.40	0.580	355.620	607.39	-1.74	2.96	1.20	1698328.20	552075.48	40°00'38.785"N	80°34'37.123"W	3.20	22.080	0.16	0.16	1.35
707.40	0.550	40.880	707.38	-2.29	3.83	1.48	1698328.48	552076.35	40°00'38.793"N	80°34'37.120"W	4.10	21.091	0.44	-0.03	45.26
807.40	0.340	21.320	807.38	-2.57	4.47	1.90	1698328.90	552076.99	40°00'38.800"N	80°34'37.115"W	4.85	23.023	0.26	-0.21	-19.56
907.40	0.490	355.980	907.38	-3.10	5.17	1.98	1698328.98	552077.69	40°00'38.807"N	80°34'37.114"W	5.54	20.919	0.23	0.15	-25.34
1007.40	0.450	33.190	1007.37	-3.61	5.93	2.16	1698329.16	552078.45	40°00'38.814"N	80°34'37.112"W	6.31	20.040	0.30	-0.04	37.21
1107.40	0.170	38.260	1107.37	-3.80	6.37	2.47	1698329.47	552078.89	40°00'38.818"N	80°34'37.108"W	6.83	21.178	0.28	-0.28	5.07
1207.40	0.290	26.250	1207.37	-3.97	6.71	2.67	1698329.67	552079.23	40°00'38.822"N	80°34'37.105"W	7.23	21.701	0.13	0.12	-12.01
1307.40	0.620	62.250	1307.37	-4.02	7.19	3.26	1698330.26	552079.71	40°00'38.827"N	80°34'37.098"W	7.90	24.399	0.42	0.33	36.00
1407.40	0.760	69.750	1407.36	-3.78	7.68	4.36	1698331.36	552080.19	40°00'38.832"N	80°34'37.084"W	8.83	29.622	0.17	0.14	7.50
1507.40	0.600	73.010	1507.35	-3.45	8.06	5.49	1698332.49	552080.58	40°00'38.836"N	80°34'37.069"W	9.75	34.253	0.16	-0.16	3.26
1607.40	0.600	40.480	1607.35	-3.42	8.61	6.33	1698333.33	552081.13	40°00'38.841"N	80°34'37.058"W	10.68	36.316	0.34	0.00	-32.53
1707.40	0.630	47.890	1707.34	-3.62	9.38	7.08	1698334.08	552081.90	40°00'38.849"N	80°34'37.049"W	11.75	37.040	0.08	0.03	7.41
1807.40	0.630	64.070	1807.34	-3.60	9.98	7.98	1698334.98	552082.50	40°00'38.855"N	80°34'37.037"W	12.78	38.624	0.18	0.00	16.18
1907.40	0.570	63.560	1907.33	-3.44	10.45	8.92	1698335.92	552082.97	40°00'38.860"N	80°34'37.025"W	13.74	40.484	0.06	-0.06	-0.51
2007.40	0.450	71.200	2007.33	-3.26	10.79	9.73	1698336.73	552083.31	40°00'38.863"N	80°34'37.015"W	14.54	42.044	0.14	-0.12	7.64
2107.40	0.410	71.690	2107.32	-3.05	11.03	10.45	1698337.45	552083.55	40°00'38.865"N	80°34'37.006"W	15.19	43.433	0.04	-0.04	0.49
2207.40	0.210	356.070	2207.32	-3.10	11.33	10.77	1698337.77	552083.85	40°00'38.868"N	80°34'37.002"W	15.63	43.559	0.41	-0.20	-75.62
2307.40	0.470	296.060	2307.32	-3.62	11.69	10.39	1698337.39	552084.21	40°00'38.872"N	80°34'37.007"W	15.64	41.631	0.41	0.26	-60.01
2407.40	0.360	276.380	2407.32	-4.18	11.91	9.71	1698336.71	552084.43	40°00'38.874"N	80°34'37.015"W	15.37	39.201	0.18	-0.11	-19.68
2507.40	0.620	266.490	2507.32	-4.67	11.91	8.86	1698335.86	552084.43	40°00'38.874"N	80°34'37.026"W	14.84	36.646	0.27	0.26	-9.89
2607.40	0.640	278.540	2607.31	-5.34	11.96	7.77	1698334.77	552084.48	40°00'38.874"N	80°34'37.040"W	14.26	33.003	0.13	0.02	12.05
2707.40	0.530	275.640	2707.30	-6.03	12.09	6.75	1698333.75	552084.61	40°00'38.875"N	80°34'37.054"W	13.85	29.197	0.11	-0.11	-2.90
2807.40	0.450	249.550	2807.30	-6.43	12.00	5.93	1698332.93	552084.51	40°00'38.874"N	80°34'37.064"W	13.38	26.291	0.23	-0.08	-26.09

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Field	Marshall	Wellbore	SHL-22B-HS AWB
Facility	SHL-22 Pad		

WELLPATH DATA (212 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]
2907.40	0.510	252.350	2907.30	-6.66	11.72	5.13	1698332.13	552084.24	40°00'38.872"N	80°34'37.074"W	12.80	23.650	0.06	0.06	2.80
3007.40	0.680	269.160	3007.29	-7.12	11.58	4.12	1698331.12	552084.10	40°00'38.870"N	80°34'37.087"W	12.29	19.571	0.24	0.17	16.81
3102.40	0.860	266.120	3102.28	-7.81	11.52	2.84	1698329.84	552084.04	40°00'38.869"N	80°34'37.104"W	11.87	13.853	0.19	0.16	-3.20
3200.40	1.020	260.010	3200.27	-8.56	11.32	1.25	1698328.25	552083.84	40°00'38.867"N	80°34'37.124"W	11.39	6.294	0.19	0.16	-6.23
3230.40	1.260	259.710	3230.26	-8.81	11.22	0.66	1698327.66	552083.74	40°00'38.866"N	80°34'37.132"W	11.24	3.374	0.80	0.80	-1.00
3261.40	1.280	270.950	3261.26	-9.15	11.16	-0.02	1698326.98	552083.68	40°00'38.866"N	80°34'37.140"W	11.16	359.896	0.80	0.06	36.26
3292.40	1.170	273.920	3292.25	-9.56	11.19	-0.68	1698326.32	552083.71	40°00'38.866"N	80°34'37.149"W	11.21	356.511	0.41	-0.35	9.58
3322.40	0.200	338.860	3322.25	-9.80	11.26	-1.01	1698325.99	552083.78	40°00'38.866"N	80°34'37.153"W	11.30	354.891	3.67	-3.23	216.47
3352.40	0.500	19.040	3352.25	-9.93	11.43	-0.98	1698326.02	552083.95	40°00'38.868"N	80°34'37.153"W	11.47	355.086	1.23	1.00	133.93
3382.40	0.520	58.840	3382.25	-10.00	11.63	-0.82	1698326.18	552084.15	40°00'38.870"N	80°34'37.151"W	11.65	355.947	1.16	0.07	132.67
3412.40	0.640	34.510	3412.24	-10.05	11.83	-0.61	1698326.39	552084.35	40°00'38.872"N	80°34'37.148"W	11.85	357.038	0.90	0.40	-81.10
3442.40	0.720	41.740	3442.24	-10.15	12.11	-0.39	1698326.61	552084.63	40°00'38.875"N	80°34'37.145"W	12.12	358.147	0.39	0.27	24.10
3474.40	0.570	31.920	3474.24	-10.26	12.40	-0.17	1698326.83	552084.92	40°00'38.878"N	80°34'37.143"W	12.40	359.197	0.58	-0.47	-30.69
3505.40	0.400	66.010	3505.24	-10.30	12.57	0.01	1698327.01	552085.09	40°00'38.879"N	80°34'37.140"W	12.57	0.030	1.06	-0.55	109.97
3535.40	0.240	32.710	3535.24	-10.34	12.67	0.14	1698327.14	552085.19	40°00'38.880"N	80°34'37.139"W	12.67	0.616	0.80	-0.53	-111.00
3565.40	0.370	41.980	3565.24	-10.34	12.79	0.23	1698327.23	552085.31	40°00'38.882"N	80°34'37.137"W	12.80	1.052	0.46	0.43	30.90
3595.40	0.480	59.250	3595.24	-10.36	12.93	0.41	1698327.41	552085.45	40°00'38.883"N	80°34'37.135"W	12.94	1.806	0.56	0.37	57.57
3626.40	0.560	53.520	3626.24	-10.35	13.09	0.64	1698327.64	552085.61	40°00'38.885"N	80°34'37.132"W	13.10	2.805	0.31	0.26	-18.48
3656.40	0.580	54.760	3656.23	-10.36	13.26	0.88	1698327.88	552085.78	40°00'38.886"N	80°34'37.129"W	13.29	3.810	0.08	0.07	4.13
3686.40	0.360	39.730	3686.23	-10.38	13.42	1.07	1698328.07	552085.94	40°00'38.888"N	80°34'37.127"W	13.46	4.547	0.83	-0.73	-50.10
3716.40	0.350	28.050	3716.23	-10.45	13.57	1.17	1698328.17	552086.09	40°00'38.890"N	80°34'37.126"W	13.62	4.929	0.24	-0.03	-38.93
3747.40	0.240	354.620	3747.23	-10.55	13.72	1.21	1698328.21	552086.24	40°00'38.891"N	80°34'37.125"W	13.78	5.035	0.64	-0.35	-107.84
3777.40	0.340	289.310	3777.23	-10.67	13.81	1.12	1698328.12	552086.33	40°00'38.892"N	80°34'37.126"W	13.86	4.632	1.08	0.33	-217.70
3807.40	0.700	256.140	3807.23	-10.81	13.80	0.86	1698328.86	552086.32	40°00'38.892"N	80°34'37.130"W	13.83	3.555	1.52	1.20	-110.57
3838.40	0.770	257.000	3838.23	-10.96	13.71	0.47	1698327.47	552086.23	40°00'38.891"N	80°34'37.135"W	13.72	1.966	0.23	0.23	2.77
3868.40	0.910	273.830	3868.23	-11.18	13.68	0.04	1698327.04	552086.20	40°00'38.890"N	80°34'37.140"W	13.68	0.152	0.94	0.47	56.10
3898.40	0.880	251.850	3898.22	-11.40	13.62	-0.42	1698326.58	552086.14	40°00'38.890"N	80°34'37.146"W	13.63	358.233	1.14	-0.10	-73.27
3928.40	0.890	264.860	3928.22	-11.58	13.53	-0.87	1698326.13	552086.05	40°00'38.889"N	80°34'37.152"W	13.56	356.315	0.67	0.03	43.37
3959.40	0.940	259.950	3959.21	-11.81	13.46	-1.36	1698325.64	552085.98	40°00'38.888"N	80°34'37.158"W	13.53	354.226	0.30	0.16	-15.84
3989.40	2.440	252.480	3989.20	-12.11	13.23	-2.21	1698324.79	552085.75	40°00'38.886"N	80°34'37.169"W	13.41	350.504	5.04	5.00	-24.90

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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]
4019.40	3.510	254.160	4019.16	-12.60	12.79	-3.71	1698323.29	552085.30	40°00'38.881"N	80°34'37.188"W	13.31	343.838	3.58	3.57	5.60
4049.40	3.900	258.000	4049.10	-13.30	12.32	-5.59	1698321.41	552084.84	40°00'38.876"N	80°34'37.212"W	13.53	335.612	1.54	1.30	12.80
4080.40	3.900	253.740	4080.03	-14.05	11.81	-7.63	1698319.37	552084.33	40°00'38.871"N	80°34'37.238"W	14.06	327.132	0.93	0.00	-13.74
4110.40	5.120	254.950	4109.93	-14.83	11.18	-9.90	1698317.10	552083.69	40°00'38.864"N	80°34'37.267"W	14.93	318.456	4.08	4.07	4.03
4140.40	6.380	259.160	4139.78	-15.97	10.51	-12.83	1698314.17	552083.03	40°00'38.858"N	80°34'37.305"W	16.59	309.329	4.43	4.20	14.03
4173.40	6.460	258.240	4172.57	-17.46	9.79	-16.45	1698310.55	552082.31	40°00'38.850"N	80°34'37.351"W	19.14	300.760	0.39	0.24	-2.79
4203.40	6.340	258.220	4202.39	-18.77	9.11	-19.72	1698307.28	552081.63	40°00'38.843"N	80°34'37.393"W	21.73	294.788	0.40	-0.40	-0.07
4234.40	6.280	256.560	4233.20	-20.07	8.37	-23.05	1698303.95	552080.88	40°00'38.835"N	80°34'37.436"W	24.52	289.947	0.62	-0.19	-5.35
4264.40	7.430	257.380	4262.98	-21.41	7.56	-26.54	1698300.46	552080.08	40°00'38.827"N	80°34'37.481"W	27.59	285.901	3.85	3.83	2.73
4294.40	8.600	256.560	4292.69	-22.98	6.61	-30.61	1698296.39	552079.13	40°00'38.817"N	80°34'37.533"W	31.32	282.193	3.92	3.90	-2.73
4324.40	8.890	254.750	4322.34	-24.58	5.48	-35.03	1698291.97	552078.00	40°00'38.805"N	80°34'37.589"W	35.46	278.897	1.33	0.97	-6.03
4355.40	10.300	253.020	4352.91	-26.25	4.04	-39.99	1698287.01	552076.56	40°00'38.790"N	80°34'37.653"W	40.20	275.774	4.64	4.55	-5.38
4385.40	11.920	255.190	4382.34	-28.15	2.47	-45.55	1698281.45	552074.99	40°00'38.774"N	80°34'37.724"W	45.62	273.102	5.58	5.40	7.23
4415.40	12.340	253.000	4411.67	-30.21	0.74	-51.61	1698275.39	552073.26	40°00'38.756"N	80°34'37.802"W	51.62	270.821	2.08	1.40	-7.30
4445.40	13.600	255.690	4440.91	-32.45	-1.07	-58.10	1698268.90	552071.45	40°00'38.738"N	80°34'37.885"W	58.11	268.945	4.66	4.20	8.97
4475.40	14.560	256.540	4470.01	-35.08	-2.82	-65.18	1698261.82	552069.70	40°00'38.720"N	80°34'37.976"W	65.24	267.524	3.27	3.20	2.83
4506.40	14.580	256.670	4500.01	-37.95	-4.63	-72.77	1698254.23	552067.89	40°00'38.701"N	80°34'38.073"W	72.92	266.363	0.12	0.06	0.42
4536.40	15.710	259.480	4528.97	-41.03	-6.24	-80.44	1698246.57	552066.28	40°00'38.684"N	80°34'38.171"W	80.68	265.566	4.49	3.77	9.37
4566.40	16.500	261.260	4557.79	-44.59	-7.63	-88.64	1698238.36	552064.89	40°00'38.669"N	80°34'38.276"W	88.97	265.082	3.11	2.63	5.93
4596.40	16.280	260.820	4586.57	-48.31	-8.94	-97.00	1698230.00	552063.58	40°00'38.655"N	80°34'38.384"W	97.41	264.731	0.84	-0.73	-1.47
4627.40	17.330	264.780	4616.25	-52.50	-10.06	-105.89	1698221.11	552062.46	40°00'38.643"N	80°34'38.498"W	106.37	264.574	5.01	3.39	12.77
4657.40	17.860	267.060	4644.84	-57.16	-10.70	-114.93	1698212.07	552061.82	40°00'38.636"N	80°34'38.614"W	115.43	264.681	2.90	1.77	7.60
4690.40	17.650	266.730	4676.27	-62.48	-11.25	-124.98	1698202.02	552061.27	40°00'38.629"N	80°34'38.743"W	125.49	264.859	0.71	-0.64	-1.00
4720.40	18.830	269.070	4704.77	-67.58	-11.58	-134.37	1698192.64	552060.94	40°00'38.625"N	80°34'38.863"W	134.86	265.073	4.63	3.93	7.80
4751.40	19.370	269.900	4734.06	-73.32	-11.67	-144.51	1698182.50	552060.85	40°00'38.623"N	80°34'38.994"W	144.98	265.381	1.95	1.74	2.68
4781.40	20.560	270.570	4762.26	-79.23	-11.63	-154.75	1698172.25	552060.89	40°00'38.622"N	80°34'39.125"W	155.19	265.702	4.04	3.97	2.23
4811.40	21.320	270.910	4790.27	-85.50	-11.49	-165.47	1698161.53	552061.03	40°00'38.622"N	80°34'39.263"W	165.87	266.027	2.57	2.53	1.13
4842.40	22.520	271.230	4819.03	-92.31	-11.27	-177.04	1698149.96	552061.25	40°00'38.623"N	80°34'39.412"W	177.40	266.356	3.89	3.87	1.03
4872.40	22.980	270.530	4846.70	-99.11	-11.10	-188.64	1698138.37	552061.42	40°00'38.623"N	80°34'39.561"W	188.97	266.634	1.78	1.53	-2.33
4902.40	24.230	270.280	4874.19	-106.07	-11.01	-200.65	1698126.35	552061.51	40°00'38.623"N	80°34'39.715"W	200.96	266.859	4.18	4.17	-0.83

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot B
Area	Marshall County, WV	Well	SHL-22B-HS
Field	Marshall	Wellbore	SHL-22B-HS AWB
Facility	SHL-22 Pad		

WELLPATH DATA (212 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]
4933.40	24.660	268.180	4902.41	-113.28	-11.19	-213.48	1698113.53	552061.33	40°00'38.619"N	80°34'39.880"W	213.77	267.000	3.13	1.39	-6.77
4963.40	25.520	265.030	4929.58	-119.94	-11.95	-226.17	1698100.83	552060.58	40°00'38.610"N	80°34'40.043"W	226.49	266.977	5.29	2.87	-10.50
4993.40	26.740	262.970	4956.51	-126.34	-13.33	-239.31	1698087.70	552059.25	40°00'38.595"N	80°34'40.212"W	239.68	266.811	5.07	4.07	-6.87
5023.40	28.060	260.920	4983.15	-132.59	-15.27	-252.98	1698074.03	552057.25	40°00'38.574"N	80°34'40.387"W	253.44	266.546	5.41	4.40	-6.83
5054.40	29.020	258.000	5010.38	-138.72	-17.99	-267.53	1698059.48	552054.54	40°00'38.546"N	80°34'40.574"W	268.14	266.154	5.46	3.10	-9.42
5084.40	30.150	255.720	5036.47	-144.23	-21.36	-281.95	1698045.06	552051.16	40°00'38.511"N	80°34'40.758"W	282.76	265.668	5.32	3.77	-7.60
5161.00	31.820	254.580	5102.14	-157.80	-31.47	-320.07	1698006.95	552041.05	40°00'38.406"N	80°34'41.247"W	321.61	264.384	2.31	2.18	-1.49
5228.00	29.370	254.040	5159.81	-169.08	-40.69	-352.89	1697974.12	552031.83	40°00'38.311"N	80°34'41.667"W	355.23	263.423	3.68	-3.66	-0.81
5317.00	29.570	256.610	5237.29	-184.29	-51.77	-395.24	1697931.77	552020.75	40°00'38.197"N	80°34'42.210"W	398.62	262.537	1.44	0.22	2.89
5407.00	30.040	259.250	5315.39	-201.72	-61.12	-438.98	1697888.04	552011.40	40°00'38.099"N	80°34'42.770"W	443.22	262.074	1.55	0.52	2.93
5496.00	30.030	261.060	5392.44	-220.66	-68.74	-482.87	1697844.15	552003.79	40°00'38.019"N	80°34'43.333"W	487.73	261.898	1.02	-0.01	2.03
5586.00	30.030	260.000	5470.36	-240.07	-76.15	-527.29	1697799.73	551996.38	40°00'37.940"N	80°34'43.903"W	532.76	261.783	0.59	0.00	-1.18
5676.00	29.810	259.050	5548.37	-258.70	-84.31	-571.43	1697755.59	551988.22	40°00'37.854"N	80°34'44.469"W	577.62	261.607	0.58	-0.24	-1.06
5765.00	29.810	257.930	5625.59	-276.34	-93.13	-614.79	1697712.24	551979.39	40°00'37.762"N	80°34'45.024"W	621.80	261.386	0.63	0.00	-1.26
5855.00	29.970	256.960	5703.62	-293.46	-102.88	-658.56	1697668.46	551969.64	40°00'37.660"N	80°34'45.585"W	666.55	261.121	0.57	0.18	-1.08
5944.00	30.030	257.470	5780.70	-310.28	-112.73	-701.96	1697625.07	551959.79	40°00'37.558"N	80°34'46.142"W	710.95	260.876	0.29	0.07	0.57
6034.00	29.460	258.110	5858.84	-327.58	-122.18	-745.60	1697581.43	551950.35	40°00'37.459"N	80°34'46.701"W	755.55	260.694	0.72	-0.63	0.71
6123.00	30.150	256.900	5936.07	-344.50	-131.75	-788.79	1697538.24	551940.77	40°00'37.360"N	80°34'47.254"W	799.72	260.517	1.03	0.78	-1.36
6213.00	30.060	240.280	6014.06	-355.03	-148.08	-830.45	1697496.58	551924.45	40°00'37.193"N	80°34'47.787"W	843.55	259.890	9.24	-0.10	-18.47
6303.00	30.060	223.730	6092.09	-352.69	-175.59	-865.67	1697461.36	551896.94	40°00'36.917"N	80°34'48.236"W	883.30	258.534	6.52	0.00	-18.39
6392.00	30.100	212.140	6169.17	-339.66	-210.62	-892.97	1697434.06	551861.90	40°00'36.568"N	80°34'48.581"W	917.48	256.728	6.19	0.04	-13.02
6482.00	34.490	195.320	6245.39	-314.55	-254.42	-911.76	1697415.28	551818.11	40°00'36.133"N	80°34'48.816"W	946.59	254.409	11.07	4.88	-18.69
6571.00	37.310	182.100	6317.58	-276.89	-305.77	-919.42	1697407.62	551766.77	40°00'35.625"N	80°34'48.906"W	968.93	251.605	9.25	3.17	-14.85
6661.00	43.600	172.730	6386.10	-227.57	-363.92	-916.48	1697410.55	551708.61	40°00'35.050"N	80°34'48.859"W	986.09	248.343	9.70	6.99	-10.41
6751.00	51.350	168.210	6446.90	-167.69	-429.22	-905.36	1697421.68	551643.31	40°00'34.406"N	80°34'48.706"W	1001.95	244.635	9.37	8.61	-5.02
6840.00	58.460	164.290	6498.05	-99.85	-499.86	-887.96	1697439.07	551572.68	40°00'33.710"N	80°34'48.472"W	1018.99	240.623	8.76	7.99	-4.40
6930.00	67.260	160.640	6539.07	-23.51	-576.11	-863.76	1697463.27	551496.43	40°00'32.960"N	80°34'48.149"W	1038.26	236.298	10.42	9.78	-4.06
7019.00	72.430	157.130	6569.74	57.56	-653.99	-833.64	1697493.39	551418.55	40°00'32.194"N	80°34'47.750"W	1059.56	231.886	6.89	5.81	-3.94
7109.00	77.720	153.630	6592.92	143.06	-732.99	-797.40	1697529.63	551339.56	40°00'31.417"N	80°34'47.272"W	1083.11	227.410	6.98	5.88	-3.89
7198.00	84.610	148.780	6606.59	230.41	-809.98	-755.05	1697571.98	551262.58	40°00'30.662"N	80°34'46.716"W	1107.32	222.990	9.43	7.74	-5.45

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot B
Area	Marshall County, WV	Well	SHL-22B-HS
Field	Marshall	Wellbore	SHL-22B-HS AWB
Facility	SHL-22 Pad		

WELLPATH DATA (212 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]
7288.00	89.320	145.940	6611.35	320.18	-885.62	-706.59	1697620.44	551186.93	40°00'29.920"N	80°34'46.082"W	1132.96	218.584	6.11	5.23	-3.16
7378.00	88.890	143.280	6612.76	410.16	-958.98	-654.48	1697672.55	551113.58	40°00'29.201"N	80°34'45.401"W	1161.03	214.313	2.99	-0.48	-2.96
7467.00	90.030	143.500	6613.60	499.12	-1030.42	-601.41	1697725.62	551042.14	40°00'28.502"N	80°34'44.708"W	1193.08	210.270	1.30	1.28	0.25
7557.00	88.800	145.150	6614.51	589.10	-1103.52	-548.92	1697778.10	550969.04	40°00'27.785"N	80°34'44.022"W	1232.51	206.447	2.29	-1.37	1.83
7646.00	89.380	144.570	6615.93	678.09	-1176.29	-497.70	1697829.31	550896.28	40°00'27.072"N	80°34'43.353"W	1277.25	202.934	0.92	0.65	-0.65
7736.00	89.480	141.760	6616.82	768.03	-1248.31	-443.76	1697883.26	550824.26	40°00'26.367"N	80°34'42.648"W	1324.84	199.570	3.12	0.11	-3.12
7826.00	89.020	137.980	6618.00	857.64	-1317.11	-385.77	1697941.25	550755.47	40°00'25.694"N	80°34'41.893"W	1372.44	196.325	4.23	-0.51	-4.20
7915.00	89.050	138.150	6619.50	945.98	-1383.30	-326.30	1698000.72	550689.27	40°00'25.047"N	80°34'41.118"W	1421.27	193.272	0.19	0.03	0.19
8005.00	88.740	143.310	6621.24	1035.68	-1452.94	-269.36	1698057.65	550619.63	40°00'24.366"N	80°34'40.376"W	1477.70	190.503	5.74	-0.34	5.73
8095.00	89.110	145.750	6622.97	1125.66	-1526.22	-217.15	1698109.86	550546.36	40°00'23.648"N	80°34'39.694"W	1541.59	188.098	2.74	0.41	2.71
8184.00	89.540	146.580	6623.97	1214.63	-1600.14	-167.60	1698159.41	550472.44	40°00'22.923"N	80°34'39.045"W	1608.90	185.979	1.05	0.48	0.93
8274.00	89.750	147.800	6624.53	1304.56	-1675.78	-118.83	1698208.17	550396.80	40°00'22.181"N	80°34'38.407"W	1679.99	184.056	1.38	0.23	1.36
8363.00	89.660	148.430	6624.99	1393.43	-1751.35	-71.82	1698255.18	550321.24	40°00'21.440"N	80°34'37.792"W	1752.82	182.348	0.72	-0.10	0.71
8453.00	89.780	147.710	6625.43	1483.30	-1827.73	-24.22	1698302.78	550244.86	40°00'20.691"N	80°34'37.168"W	1827.89	180.759	0.81	0.13	-0.80
8543.00	89.750	147.440	6625.80	1573.21	-1903.70	24.04	1698351.04	550168.89	40°00'19.946"N	80°34'36.536"W	1903.85	179.277	0.30	-0.03	-0.30
8632.00	89.910	146.740	6626.06	1662.15	-1978.42	72.39	1698399.39	550094.18	40°00'19.214"N	80°34'35.904"W	1979.74	177.904	0.81	0.18	-0.79
8722.00	89.510	145.100	6626.52	1752.13	-2052.96	122.82	1698449.82	550019.64	40°00'18.483"N	80°34'35.244"W	2056.63	176.576	1.88	-0.44	-1.82
8812.00	89.450	143.940	6627.34	1842.12	-2126.24	175.05	1698502.05	549946.36	40°00'17.765"N	80°34'34.562"W	2133.43	175.293	1.29	-0.07	-1.29
8901.00	89.540	145.890	6628.12	1931.11	-2199.06	226.21	1698553.20	549873.54	40°00'17.051"N	80°34'33.893"W	2210.67	174.127	2.19	0.10	2.19
8991.00	89.420	146.660	6628.94	2021.09	-2273.91	276.17	1698603.16	549798.69	40°00'16.318"N	80°34'33.240"W	2290.62	173.075	0.87	-0.13	0.86
9081.00	89.940	146.090	6629.44	2111.06	-2348.85	326.01	1698653.00	549723.76	40°00'15.583"N	80°34'32.588"W	2371.37	172.098	0.86	0.58	-0.63
9170.00	89.910	145.030	6629.56	2200.05	-2422.25	376.34	1698703.33	549650.36	40°00'14.864"N	80°34'31.930"W	2451.31	171.169	1.19	-0.03	-1.19
9260.00	89.510	144.510	6630.01	2290.05	-2495.77	428.26	1698755.24	549576.85	40°00'14.143"N	80°34'31.251"W	2532.24	170.263	0.73	-0.44	-0.58
9349.00	89.480	146.730	6630.80	2379.04	-2569.21	478.51	1698805.49	549503.41	40°00'13.423"N	80°34'30.594"W	2613.39	169.450	2.49	-0.03	2.49
9439.00	89.540	146.020	6631.57	2469.01	-2644.15	528.35	1698855.33	549428.47	40°00'12.689"N	80°34'29.942"W	2696.42	168.700	0.79	0.07	-0.79
9529.00	89.350	144.460	6632.44	2559.00	-2718.08	579.65	1698906.63	549354.54	40°00'11.964"N	80°34'29.272"W	2779.20	167.962	1.75	-0.21	-1.73
9618.00	89.880	143.710	6633.04	2647.99	-2790.16	631.86	1698958.83	549282.47	40°00'11.258"N	80°34'28.590"W	2860.81	167.240	1.03	0.60	-0.84
9708.00	89.820	143.660	6633.27	2737.96	-2862.68	685.16	1699012.13	549209.95	40°00'10.548"N	80°34'27.894"W	2943.53	166.540	0.09	-0.07	-0.06
9797.00	89.850	141.490	6633.53	2826.88	-2933.35	739.24	1699066.21	549139.28	40°00'09.856"N	80°34'27.188"W	3025.07	165.855	2.44	0.03	-2.44
9887.00	89.880	140.930	6633.74	2916.68	-3003.50	795.62	1699122.59	549069.13	40°00'09.169"N	80°34'26.453"W	3107.10	165.163	0.62	0.03	-0.62

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot B
Area	Marshall County, WV	Well	SHL-22B-HS
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WELLPATH DATA (212 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]
9976.00	89.880	142.300	6633.93	3005.52	-3073.27	850.89	1699177.85	548999.37	40°00'08.487"N	80°34'25.732"W	3188.88	164.524	1.54	0.00	1.54
10066.00	89.450	143.490	6634.45	3095.46	-3145.04	905.18	1699232.14	548927.60	40°00'07.784"N	80°34'25.024"W	3272.71	163.944	1.41	-0.48	1.32
10156.00	89.380	145.870	6635.37	3185.44	-3218.47	957.21	1699284.17	548854.18	40°00'07.064"N	80°34'24.344"W	3357.79	163.437	2.65	-0.08	2.64
10245.00	89.570	145.940	6636.19	3274.43	-3292.16	1007.09	1699334.06	548780.48	40°00'06.342"N	80°34'23.691"W	3442.76	162.991	0.23	0.21	0.08
10335.00	89.540	146.880	6636.89	3364.40	-3367.13	1056.88	1699383.84	548705.52	40°00'05.607"N	80°34'23.040"W	3529.11	162.574	1.04	-0.03	1.04
10424.00	89.780	147.470	6637.41	3453.33	-3441.92	1105.13	1699432.09	548630.73	40°00'04.874"N	80°34'22.409"W	3614.99	162.199	0.72	0.27	0.66
10514.00	89.850	147.580	6637.71	3543.24	-3517.85	1153.45	1699480.41	548554.81	40°00'04.129"N	80°34'21.776"W	3702.12	161.846	0.14	0.08	0.12
10603.00	89.970	149.160	6637.85	3632.09	-3593.62	1200.12	1699527.08	548479.04	40°00'03.386"N	80°34'21.165"W	3788.72	161.533	1.78	0.13	1.78
10693.00	89.850	149.020	6637.99	3721.86	-3670.84	1246.36	1699573.31	548401.82	40°00'02.628"N	80°34'20.559"W	3876.66	161.246	0.20	-0.13	-0.16
10782.00	90.030	147.310	6638.08	3810.72	-3746.45	1293.30	1699620.25	548326.21	40°00'01.886"N	80°34'19.944"W	3963.40	160.955	1.93	0.20	-1.92
10872.00	90.220	144.360	6637.88	3900.70	-3820.91	1343.84	1699670.78	548251.76	40°00'01.157"N	80°34'19.284"W	4050.34	160.623	3.28	0.21	-3.28
10962.00	90.150	144.150	6637.59	3990.69	-3893.96	1396.41	1699723.36	548178.72	40°00'00.441"N	80°34'18.597"W	4136.77	160.272	0.25	-0.08	-0.23
11051.00	89.850	145.180	6637.59	4079.69	-3966.56	1447.89	1699774.83	548106.11	39°59'59.730"N	80°34'17.924"W	4222.55	159.947	1.21	-0.34	1.16
11141.00	89.820	149.170	6637.85	4169.60	-4042.17	1496.66	1699823.60	548030.50	39°59'58.988"N	80°34'17.286"W	4310.36	159.682	4.43	-0.03	4.43
11230.00	90.430	147.070	6637.66	4258.47	-4117.74	1543.66	1699870.60	547954.94	39°59'58.247"N	80°34'16.671"W	4397.58	159.450	2.46	0.69	-2.36
11320.00	89.480	139.910	6637.73	4348.38	-4190.03	1597.17	1699924.11	547882.65	39°59'57.539"N	80°34'15.972"W	4484.12	159.134	8.03	-1.06	-7.96
11409.00	89.480	136.510	6638.54	4436.74	-4256.38	1656.47	1699983.41	547816.31	39°59'56.890"N	80°34'15.200"W	4567.35	158.735	3.82	0.00	-3.82
11499.00	89.230	140.630	6639.55	4526.14	-4323.84	1716.01	1700042.94	547748.85	39°59'56.231"N	80°34'14.425"W	4651.91	158.353	4.59	-0.28	4.58
11589.00	89.290	142.950	6640.71	4615.99	-4394.55	1771.67	1700098.60	547678.14	39°59'55.539"N	80°34'13.699"W	4738.23	158.043	2.58	0.07	2.58
11678.00	88.980	143.860	6642.06	4704.94	-4465.99	1824.72	1700151.65	547606.70	39°59'54.839"N	80°34'13.006"W	4824.39	157.776	1.08	-0.35	1.02
11768.00	89.350	145.530	6643.37	4794.93	-4539.43	1876.73	1700203.66	547533.27	39°59'54.119"N	80°34'12.327"W	4912.08	157.538	1.90	0.41	1.86
11857.00	89.320	146.960	6644.40	4883.90	-4613.42	1926.18	1700253.10	547459.28	39°59'53.394"N	80°34'11.680"W	4999.38	157.339	1.61	-0.03	1.61
11947.00	89.380	146.850	6645.42	4973.84	-4688.81	1975.31	1700302.24	547383.89	39°59'52.655"N	80°34'11.037"W	5087.91	157.155	0.14	0.07	-0.12
12037.00	89.570	145.900	6646.25	5063.81	-4763.75	2025.15	1700352.07	547308.95	39°59'51.920"N	80°34'10.386"W	5176.35	156.969	1.08	0.21	-1.06
12126.00	89.940	145.110	6646.63	5152.81	-4837.10	2075.55	1700402.47	547235.61	39°59'51.201"N	80°34'09.727"W	5263.60	156.776	0.98	0.42	-0.89
12216.00	89.630	144.290	6646.96	5242.81	-4910.55	2127.56	1700454.48	547162.16	39°59'50.481"N	80°34'09.047"W	5351.64	156.575	0.97	-0.34	-0.91
2305.00	89.910	144.860	6647.32	5331.80	-4983.07	2179.15	1700506.06	547089.64	39°59'49.771"N	80°34'08.374"W	5438.72	156.380	0.71	0.31	0.64
2395.00	90.400	147.010	6647.08	5421.78	-5057.63	2229.56	1700556.47	547015.09	39°59'49.040"N	80°34'07.715"W	5527.25	156.211	2.45	0.54	2.39
2484.00	90.400	148.200	6646.46	5510.69	-5132.77	2277.24	1700604.15	546939.95	39°59'48.303"N	80°34'07.090"W	5615.26	156.075	1.34	0.00	1.34
2574.00	90.060	147.010	6646.10	5600.59	-5208.76	2325.45	1700652.36	546863.96	39°59'47.558"N	80°34'06.459"W	5704.29	155.942	1.38	-0.38	-1.32

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Actual Wellpath Report

SHL-22B-HS AWP Proj: 15214'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot B
Area	Marshall County, WV	Well	SHL-22B-HS
Field	Marshall	Wellbore	SHL-22B-HS AWB
Facility	SHL-22 Pad		

WELLPATH DATA (212 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]
12664.00	89.880	146.060	6646.14	5690.56	-5283.84	2375.08	1700701.99	546788.88	39°59'46.822"N	80°34'05.810"W	5793.10	155.796	1.07	-0.20	-1.06
12753.00	89.850	145.850	6646.35	5779.55	-5357.59	2424.91	1700751.81	546715.14	39°59'46.099"N	80°34'05.159"W	5880.81	155.648	0.24	-0.03	-0.24
12843.00	89.820	145.430	6646.61	5869.54	-5431.88	2475.70	1700802.60	546640.85	39°59'45.371"N	80°34'04.495"W	5969.46	155.498	0.47	-0.03	-0.47
12932.00	89.450	143.000	6647.18	5958.52	-5504.07	2527.74	1700854.64	546568.66	39°59'44.663"N	80°34'03.815"W	6056.76	155.333	2.76	-0.42	-2.73
13022.00	89.480	140.500	6648.02	6048.37	-5574.74	2583.45	1700910.35	546497.99	39°59'43.971"N	80°34'03.089"W	6144.26	155.136	2.78	0.03	-2.78
13111.00	89.480	141.140	6648.83	6137.13	-5643.73	2639.67	1700966.57	546429.01	39°59'43.296"N	80°34'02.356"W	6230.54	154.934	0.72	0.00	0.72
13201.00	89.480	144.500	6649.64	6227.05	-5715.42	2694.05	1701020.95	546357.32	39°59'42.594"N	80°34'01.646"W	6318.54	154.762	3.73	0.00	3.73
13291.00	89.480	148.220	6650.46	6317.00	-5790.34	2743.90	1701070.79	546282.41	39°59'41.860"N	80°34'00.994"W	6407.57	154.645	4.13	0.00	4.13
13380.00	89.450	148.390	6651.29	6405.85	-5866.06	2790.66	1701117.55	546206.69	39°59'41.117"N	80°34'00.382"W	6496.03	154.558	0.19	-0.03	0.19
13470.00	89.450	146.060	6652.16	6495.77	-5941.72	2839.37	1701166.26	546131.03	39°59'40.375"N	80°33'59.745"W	6585.29	154.458	2.59	0.00	-2.59
13559.00	89.420	144.270	6653.03	6584.76	-6014.77	2890.21	1701217.09	546057.99	39°59'39.659"N	80°33'59.081"W	6673.13	154.335	2.01	-0.03	-2.01
13649.00	89.480	143.590	6653.90	6674.74	-6087.51	2943.19	1701270.08	545985.25	39°59'38.947"N	80°33'58.389"W	6761.67	154.197	0.76	0.07	-0.76
13738.00	89.720	143.000	6654.52	6763.70	-6158.86	2996.39	1701323.27	545913.90	39°59'38.248"N	80°33'57.694"W	6849.08	154.056	0.72	0.27	-0.66
13828.00	89.750	142.770	6654.94	6853.64	-6230.63	3050.69	1701377.57	545842.13	39°59'37.545"N	80°33'56.986"W	6937.40	153.912	0.26	0.03	-0.26
13918.00	89.600	143.530	6655.45	6943.59	-6302.65	3104.67	1701431.55	545770.12	39°59'36.840"N	80°33'56.281"W	7025.83	153.775	0.86	-0.17	0.84
14007.00	89.850	144.190	6655.87	7032.57	-6374.52	3157.15	1701484.03	545698.25	39°59'36.136"N	80°33'55.596"W	7113.52	153.652	0.79	0.28	0.74
14097.00	89.690	146.350	6656.23	7122.56	-6448.48	3208.42	1701535.30	545624.29	39°59'35.411"N	80°33'54.926"W	7202.56	153.547	2.41	-0.18	2.40
14187.00	89.690	147.200	6656.72	7212.52	-6523.77	3257.74	1701584.61	545549.01	39°59'34.672"N	80°33'54.281"W	7291.94	153.464	0.94	0.00	0.94
14276.00	89.540	146.570	6657.32	7301.47	-6598.31	3306.36	1701633.23	545474.47	39°59'33.942"N	80°33'53.645"W	7380.36	153.385	0.73	-0.17	-0.71
14366.00	89.380	147.060	6658.17	7391.42	-6673.63	3355.62	1701682.49	545399.15	39°59'33.203"N	80°33'53.001"W	7469.77	153.306	0.57	-0.18	0.54
14455.00	89.540	147.130	6659.01	7480.35	-6748.34	3403.96	1701730.83	545324.44	39°59'32.470"N	80°33'52.368"W	7558.25	153.233	0.20	0.18	0.08
14545.00	89.450	145.430	6659.80	7570.32	-6823.20	3453.92	1701780.79	545249.59	39°59'31.737"N	80°33'51.715"W	7647.59	153.151	1.89	-0.10	-1.89
14635.00	89.140	143.440	6660.91	7660.31	-6896.40	3506.26	1701833.13	545176.39	39°59'31.019"N	80°33'51.032"W	7736.55	153.050	2.24	-0.34	-2.21
14724.00	89.140	143.180	6662.24	7749.26	-6967.76	3559.43	1701886.29	545105.03	39°59'30.320"N	80°33'50.338"W	7824.27	152.940	0.29	0.00	-0.29
14814.00	88.920	142.390	6663.77	7839.18	-7039.42	3613.86	1701940.72	545033.37	39°59'29.619"N	80°33'49.628"W	7912.86	152.825	0.91	-0.24	-0.88
14903.00	88.890	142.050	6665.47	7928.06	-7109.75	3668.37	1701995.23	544963.04	39°59'28.930"N	80°33'48.917"W	8000.34	152.708	0.38	-0.03	-0.38
4993.00	88.520	143.200	6667.50	8017.96	-7181.25	3722.99	1702049.84	544891.55	39°59'28.230"N	80°33'48.204"W	8088.94	152.596	1.34	-0.41	1.28
5045.00	89.350	145.670	6668.47	8069.94	-7223.54	3753.22	1702080.08	544849.26	39°59'27.815"N	80°33'47.809"W	8140.41	152.544	5.01	1.60	4.75
5082.00	89.940	145.830	6668.70	8106.94	-7254.12	3774.05	1702100.90	544818.68	39°59'27.516"N	80°33'47.537"W	8177.15	152.514	1.65	1.59	0.43
5172.00	89.750	145.850	6668.94	8196.93	-7328.60	3824.58	1702151.44	544744.21	39°59'26.786"N	80°33'46.877"W	8266.54	152.441	0.21	-0.21	0.02

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Actual Wellpath Report

SHL-22B-HS AWP Proj: 15214'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot B
Area	Marshall County, WV	Well	SHL-22B-HS
Field	Marshall	Wellbore	SHL-22B-HS AWB
Facility	SHL-22 Pad		

WELLPATH DATA (212 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]
15189.00	89.910	145.940	6668.99	8213.92	-7342.67	3834.12	1702160.97	544730.13	39°59'26.648"N	80°33'46.752"W	8283.43	152.428	1.08	0.94	0.53
15214.00	89.910	145.940	6669.03	8238.92	-7363.38	3848.12	1702174.97	544709.42	39°59'26.445"N	80°33'46.569"W	8308.27	152.408	0.00	0.00	0.00

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SHL-22B-HS LP Rev-3		6609.00	-843.02	-726.41	1697600.62	551229.53	40°00'30.339"N	80°34'46.343"W	point
SHL-22B-HS BHL Rev-3		6678.51	-7368.04	3842.36	1702169.21	544704.77	39°59'26.398"N	80°33'46.642"W	point
SHL-22 Pad LL		7002.05	-14.09	-14.16	1698312.84	552058.43	40°00'38.614"N	80°34'37.318"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: SHL-22B-HS AWB Ref Wellpath: SHL-22B-HS AWP Proj: 15214'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.40	3102.40	Generic gyro - northseeking (Standard)	01_MS Gyro <12-1/4"> (100'-3095')	SHL-22B-HS AWB
3102.40	5084.40	ISWASA MWD, Rev. 2 (Standard)	02_SDI MWD <8-3/4"> (3095')(3193'-5077')	SHL-22B-HS AWB
5084.40	15189.00	NaviTrak (AT Curve Short Spaced)	03_BHI AT Curve <8-1/2"> (5084.4')(5161'-15189')	SHL-22B-HS AWB
15189.00	15214.00	Blind Drilling (std)	Projection to bit	SHL-22B-HS AWB



Actual Wellpath Report

SHL-22B-HS AWP Proj: 15214'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot B
Area	Marshall County, WV	Well	SHL-22B-HS
Field	Marshall	Wellbore	SHL-22B-HS AWB
Facility	SHL-22 Pad		

COMMENTS

Wellpath general comments
 API: 47-051-01807-0000
 BHI Job #: 7346216
 Rig: Precision 584
 Duration: 6/30/2015-7/7/2015
 MS Gyro <12-1/4"> (100'-3095')
 SDI MWD <8-3/4"> (3095')(3193'-5077')
 BHI AT Curve <8-1/2"> (5084.4')(5161'-15189')
 Projected MD at TD: 15214'

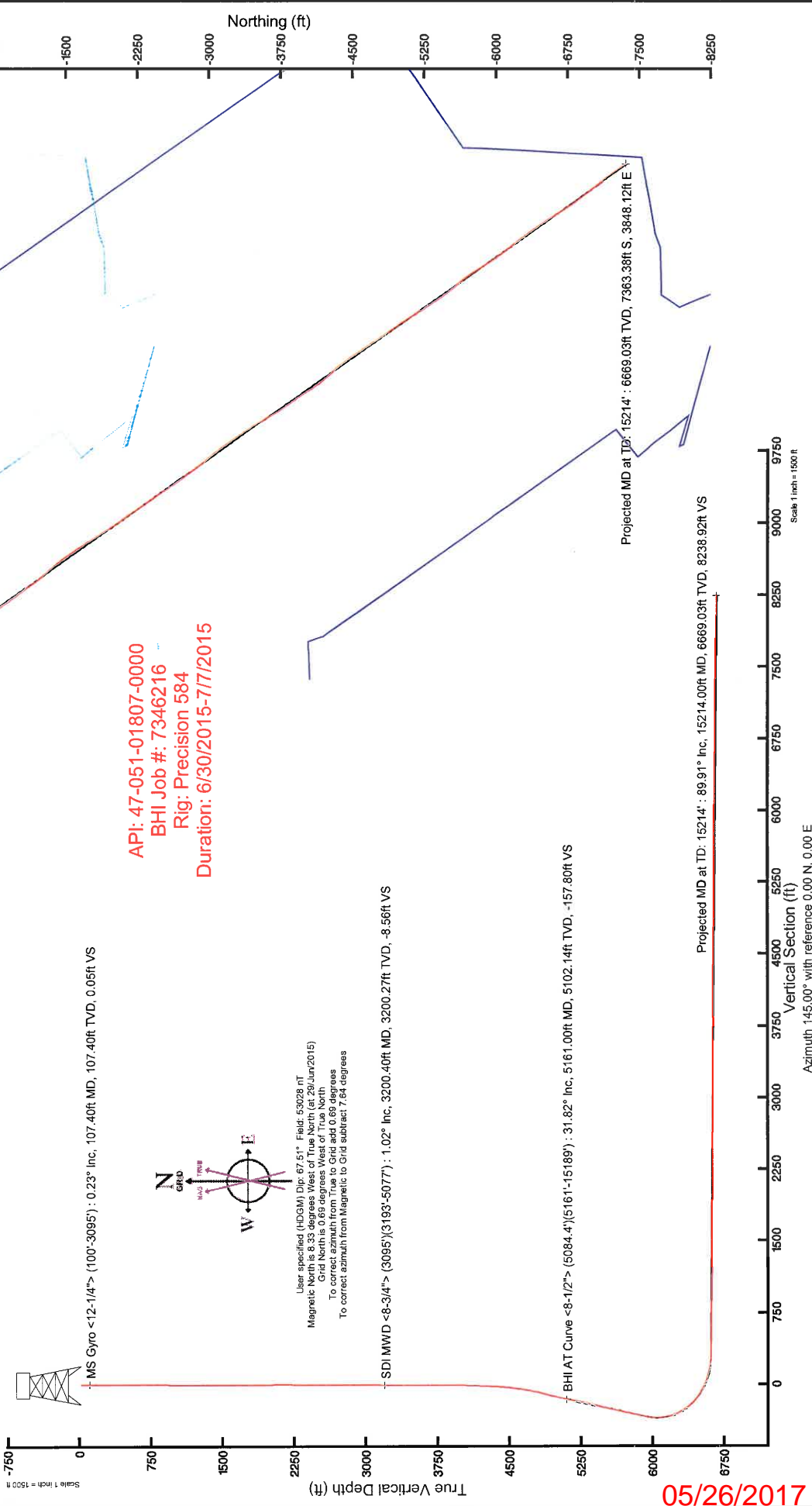
05/26/2017

Location: Marshall County, WV
 Field: Marshall
 Facility: SHL-22 Pad

Slot: Slot B
 Well: SHL-22B-HS
 Wellbore: SHL-22B-HS-PWB

Field reference wellpath is SHL-22B-HS PWB Rev-8.0
 True vertical depths are referenced to Precision 584 (RKB)
 Measured depths are referenced to Precision 584 (RKB)
 Precision 584 (RKB) to Mean Sea Level: 1342.05 feet
 Mean Sea Level to Mud line (At Slot B): -1322.65 feet
 Coordinates are in feet referenced to Slot B
 Created by: csharps on 06/06/2015

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
SHL-22 Pad	1698312.840	552058.430	80°34'37.318"W
Slot	Local N (ft)	Grid North (US ft)	Longitude
Slot B	14.09	552072.520	80°34'37.188"W
Precision 584 (RKB) to Mud line (At Slot B)			
Mean Sea Level to Mud line (At Slot B)			
Precision 584 (RKB) to Mean Sea Level			
1342.05ft			



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