



Actual Wellpath Report

SHR-3C-HS AWP Proj: 15381'
Page 1 of 9



REFERENCE WELLPATH IDENTIFICATION	
Operator	NOBLE ENERGY
Area	Tyler County, WV
Field	Tyler
Facility	SHR-3 Pad
Slot	Slot C
Well	SHR-3C-HS
Wellbore	SHR-3C-HS AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet
North Reference	Grid
Scale	0.999948
Convergence at slot	0.85° West
Software System	WellArchitect@ 4.0.1
User	Edsaryar
Report Generated	16/Apr/2015 at 08:53
Database/Source file	WellArchitectEasternDB/SHR-3C-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	-3.61	39.21	1623337.24	335739.83	39°24'50.870"N	80°49'59.530"W
Facility Reference Pt			1623298.03	335743.44	39°24'50.900"N	80°50'00.030"W
Field Reference Pt			609601.22	0.00	38°23'48.753"N	84°21'09.765"W

WELLPATH DATUM	
Calculation method	Minimum curvature
Horizontal Reference Pt	Slot
Vertical Reference Pt	Precision 542 (RKB)
MD Reference Pt	Precision 542 (RKB)
Field Vertical Reference	Mean Sea Level
	Precision 542 (RKB) to Facility Vertical Datum
	Precision 542 (RKB) to Mean Sea Level
	Precision 542 (RKB) to Mud Line at Slot (Slot C)
	Section Origin
	Section Azimuth
	770.57ft
	770.57ft
	18.50ft
	N 0.00, E 0.00 ft
	160.00°

RECEIVED
Office of Oil and Gas
JAN 17 2017

Department of
Environmental Protection
01/27/2017



Actual Wellpath Report

SHR-3C-HS AWP Proj: 15381'
Page 2 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Tyler County, WV	Well	SHR-3C-HS
Field	Tyler	Wellbore	SHR-3C-HS AWB
Facility	SHR-3 Pad		

WELLPATH DATA (172 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	0.00	4.05	0.00	0.00	0.00	0.00	1623337.24	335739.83	39°24'50.870"N	80°49'59.530"W	0.00	0.000	0.00	0.00	0.00
18.50	0.00	4.05	18.50	0.00	0.00	0.00	1623337.24	335739.83	39°24'50.870"N	80°49'59.530"W	0.00	0.000	0.00	0.00	0.00
118.50	0.12	4.05	118.50	-0.10	0.10	0.01	1623337.25	335739.93	39°24'50.871"N	80°49'59.530"W	0.10	4.050	0.12	0.12	0.00
218.50	0.27	58.500	218.50	-0.24	0.33	0.22	1623337.46	335740.16	39°24'50.873"N	80°49'59.527"W	0.40	33.008	0.22	0.15	54.45
318.50	0.23	230.220	318.50	-0.22	0.33	0.26	1623337.50	335740.16	39°24'50.873"N	80°49'59.527"W	0.42	38.763	0.50	-0.04	171.72
418.50	0.35	212.200	418.50	0.04	-0.06	-0.05	1623337.19	335739.77	39°24'50.869"N	80°49'59.531"W	0.08	222.259	0.15	0.12	-18.02
518.50	0.43	191.520	518.50	0.54	-0.69	-0.29	1623336.95	335739.14	39°24'50.863"N	80°49'59.533"W	0.75	203.074	0.16	0.08	-20.68
618.50	0.40	183.260	618.49	1.19	-1.40	-0.39	1623336.85	335738.43	39°24'50.856"N	80°49'59.535"W	1.45	195.432	0.07	-0.03	-8.26
718.50	0.22	180.070	718.49	1.69	-1.94	-0.41	1623336.83	335737.89	39°24'50.851"N	80°49'59.535"W	1.99	191.838	0.18	-0.18	-3.19
818.50	0.33	167.630	818.49	2.15	-2.42	-0.35	1623336.89	335737.43	39°24'50.846"N	80°49'59.534"W	2.41	188.144	0.12	0.11	-12.44
918.50	0.61	154.380	918.49	2.97	-3.18	-0.05	1623337.19	335736.65	39°24'50.839"N	80°49'59.530"W	3.18	180.972	0.30	0.28	-13.25
1018.50	0.53	156.650	1018.48	3.96	-4.08	0.36	1623337.60	335735.75	39°24'50.830"N	80°49'59.525"W	4.10	174.966	0.08	-0.08	2.27
1118.50	0.46	176.970	1118.48	4.80	-4.91	0.56	1623337.80	335734.92	39°24'50.822"N	80°49'59.522"W	4.94	173.443	0.19	-0.07	20.32
1218.50	0.62	189.330	1218.47	5.66	-5.84	0.50	1623337.74	335733.99	39°24'50.812"N	80°49'59.522"W	5.86	175.132	0.20	0.16	12.36
1318.50	0.42	187.170	1318.47	6.46	-6.74	0.36	1623337.60	335733.09	39°24'50.803"N	80°49'59.524"W	6.75	176.907	0.20	-0.20	-2.16
1418.50	0.31	200.060	1418.47	6.99	-7.36	0.23	1623337.47	335732.47	39°24'50.797"N	80°49'59.526"W	7.36	178.244	0.14	-0.11	12.89
1518.50	0.22	183.570	1518.47	7.40	-7.83	0.12	1623337.36	335732.00	39°24'50.793"N	80°49'59.527"W	7.83	179.128	0.10	-0.06	-16.49
1618.50	0.11	199.370	1618.47	7.71	-8.19	0.06	1623337.30	335731.64	39°24'50.789"N	80°49'59.528"W	8.19	179.605	0.10	-0.08	15.80
1718.50	0.10	211.980	1718.47	7.85	-8.39	-0.12	1623337.12	335731.44	39°24'50.787"N	80°49'59.530"W	8.39	180.792	0.12	-0.01	42.61
1818.50	0.00	219.850	1818.47	7.87	-8.46	-0.22	1623337.02	335731.37	39°24'50.786"N	80°49'59.531"W	8.46	181.503	0.18	0.14	-146.13
1918.50	0.00	218.050	1918.47	8.00	-8.58	-0.21	1623337.03	335731.25	39°24'50.785"N	80°49'59.531"W	8.59	181.380	0.14	0.12	85.20
2018.50	0.00	191.010	2018.46	7.83	-8.37	-0.09	1623337.15	335731.46	39°24'50.787"N	80°49'59.530"W	8.37	180.633	0.54	0.27	-162.04
2118.50	0.20	7.080	2118.46	7.44	-7.91	0.04	1623337.28	335731.92	39°24'50.792"N	80°49'59.528"W	7.91	179.717	0.27	-0.27	-11.93
2218.50	0.50	305.240	2132.46	7.40	-7.87	0.02	1623337.26	335731.96	39°24'50.792"N	80°49'59.528"W	7.87	179.882	1.58	0.79	-441.71
2318.50	0.30	255.500	2264.96	7.12	-7.83	-0.69	1623336.55	335732.00	39°24'50.793"N	80°49'59.537"W	7.86	185.037	0.24	0.13	-37.54
2418.50	0.50	11.160	2353.95	6.19	-6.88	-0.80	1623336.44	335732.95	39°24'50.802"N	80°49'59.539"W	6.93	186.655	1.77	1.04	129.96
2544.00	0.80	19.810	2443.89	3.49	-3.64	0.20	1623337.44	335736.19	39°24'50.834"N	80°49'59.527"W	3.65	176.930	1.84	1.81	9.61
2534.00	4.690	26.960	2533.68	-0.82	1.84	2.66	1623339.90	335741.67	39°24'50.889"N	80°49'59.496"W	3.23	55.281	1.97	1.90	7.94
2623.00	5.890	27.040	2622.30	-6.42	9.15	6.38	1623343.62	335748.98	39°24'50.961"N	80°49'59.450"W	11.16	34.892	1.35	1.35	0.09
2713.00	6.750	25.150	2711.75	-13.29	18.05	10.75	1623347.97	335757.88	39°24'51.050"N	88°49'59.397"W	21.00	30.725	0.98	0.96	-2.10

Office of the
 State Auditor
 JAN 17 2017
 Environmental Protection

01/27/2017



Actual Wellpath Report

SHR-3C-HS AWP Proj: 15381'
Page 3 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Tyler County, WV	Well	SHR-3C-HS
Field	Tyler	Wellbore	SHR-3C-HS AWB
Facility	SHR-3 Pad		

WELLPATH DATA (172 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]
2802.00	7.540	19.200	2800.06	-21.51	28.30	14.87	1623352.11	335768.13	39°24'51.152"N	80°49'59.346"W	31.97	27.722	1.22	0.89	-6.69
2892.00	7.540	22.120	2889.28	-30.46	39.35	19.04	1623356.28	335779.18	39°24'51.262"N	80°49'59.295"W	43.71	25.819	0.43	0.00	3.24
2982.00	5.710	23.650	2978.68	-38.08	48.92	23.06	1623360.30	335788.75	39°24'51.357"N	80°49'59.245"W	54.08	25.236	2.04	-2.03	1.70
3071.00	5.560	27.960	3067.25	-44.17	56.78	26.86	1623364.09	335796.61	39°24'51.435"N	80°49'59.199"W	62.81	25.311	0.50	-0.17	4.84
3161.00	4.200	21.940	3156.92	-49.55	63.69	30.13	1623367.37	335803.52	39°24'51.508"N	80°49'59.158"W	70.46	25.317	1.61	-1.51	-6.69
3251.00	3.080	18.630	3246.74	-53.89	69.04	32.14	1623369.37	335808.87	39°24'51.557"N	80°49'59.134"W	76.15	24.959	1.27	-1.24	-3.68
3341.00	2.290	13.730	3336.64	-57.27	73.08	33.33	1623370.57	335812.91	39°24'51.597"N	80°49'59.119"W	80.32	24.520	0.91	-0.88	-5.44
3430.00	3.050	15.180	3425.54	-60.69	77.09	34.38	1623371.61	335816.92	39°24'51.637"N	80°49'59.107"W	84.41	24.033	0.86	0.85	1.63
3520.00	2.590	21.730	3515.43	-64.16	81.29	35.76	1623372.99	335821.12	39°24'51.679"N	80°49'59.090"W	88.81	23.742	0.62	-0.51	7.28
3609.00	1.850	18.420	3604.37	-66.79	84.52	36.95	1623373.19	335824.35	39°24'51.711"N	80°49'59.075"W	92.25	23.616	0.84	-0.83	-3.72
3699.00	1.660	15.560	3694.32	-68.98	87.16	37.76	1623375.00	335826.98	39°24'51.737"N	80°49'59.065"W	94.99	23.426	0.23	-0.21	-3.18
3788.00	1.340	18.480	3783.29	-70.85	89.39	38.44	1623375.68	335829.21	39°24'51.759"N	80°49'59.057"W	97.30	23.269	0.37	-0.36	3.28
3878.00	0.830	20.150	3873.28	-72.17	91.00	39.00	1623376.23	335830.82	39°24'51.775"N	80°49'59.050"W	99.00	23.198	0.57	-0.57	1.86
3967.00	0.890	19.870	3962.27	-73.19	92.25	39.45	1623376.69	335832.08	39°24'51.787"N	80°49'59.045"W	100.33	23.156	0.07	0.07	-0.31
4057.00	0.540	37.530	4052.26	-73.96	93.24	39.95	1623377.19	335833.07	39°24'51.797"N	80°49'59.039"W	101.44	23.192	0.46	-0.39	19.62
4146.00	0.250	33.770	4141.26	-74.30	93.74	40.31	1623377.55	335833.56	39°24'51.802"N	80°49'59.034"W	102.04	23.271	0.33	-0.33	-4.22
4236.00	0.310	97.210	4231.26	-74.30	93.87	40.66	1623377.90	335833.70	39°24'51.804"N	80°49'59.030"W	102.30	23.422	0.33	0.07	70.49
4326.00	0.180	216.170	4321.26	-74.13	93.76	40.85	1623378.08	335833.58	39°24'51.803"N	80°49'59.027"W	102.27	23.540	0.43	-0.20	132.18
4416.00	0.220	215.990	4410.26	-73.97	93.52	40.67	1623377.91	335833.34	39°24'51.800"N	80°49'59.029"W	101.98	23.504	0.13	0.13	-0.20
4506.00	0.500	216.430	4500.26	-73.76	93.22	40.45	1623377.69	335833.04	39°24'51.797"N	80°49'59.032"W	101.61	23.458	0.02	-0.02	0.49
4596.00	0.400	224.980	4589.25	-73.55	92.89	40.16	1623377.40	335832.72	39°24'51.794"N	80°49'59.036"W	101.20	23.382	0.12	0.11	9.61
4686.00	0.300	229.380	4679.25	-73.35	92.53	39.77	1623377.01	335832.35	39°24'51.790"N	80°49'59.041"W	100.71	23.259	0.04	0.02	4.89
4776.00	0.200	205.890	4768.25	-73.02	92.06	39.42	1623376.66	335831.88	39°24'51.786"N	80°49'59.045"W	100.14	23.182	0.19	0.08	-26.39
4866.00	0.300	230.650	4858.25	-72.76	91.70	39.20	1623376.44	335831.52	39°24'51.782"N	80°49'59.048"W	99.72	23.146	0.34	-0.32	27.51
4956.00	0.660	257.670	4948.25	-72.71	91.55	38.77	1623376.00	335831.38	39°24'51.780"N	80°49'59.053"W	99.42	22.949	0.39	0.37	30.02
5046.00	0.330	239.470	5037.25	-72.76	91.31	38.13	1623375.37	335831.13	39°24'51.778"N	80°49'59.061"W	98.95	22.665	0.16	-0.03	-20.45
5136.00	0.500	244.450	5127.24	-72.66	90.95	37.45	1623374.69	335830.78	39°24'51.774"N	80°49'59.070"W	98.36	22.380	0.14	0.13	5.53
5226.00	0.430	225.960	5216.24	-72.48	90.53	36.82	1623374.06	335830.36	39°24'51.770"N	80°49'59.078"W	97.74	22.133	0.22	-0.13	-20.78
5316.00	0.340	355.580	5306.24	-72.60	90.57	36.56	1623373.80	335830.39	39°24'51.770"N	80°49'59.081"W	97.67	21.983	0.78	-0.10	144.02
5406.00	0.300	322.810	5395.24	-73.08	91.01	36.40	1623373.64	335830.84	39°24'51.775"N	80°49'59.083"W	98.02	21.798	0.21	-0.02	-35.82

Environmental Protection
JAN 17 2017

01/27/2017



Actual Wellpath Report

SHR-3C-HS AWP Proj: 15381'

Page 4 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Tyler County, WV	Well	SHR-3C-HS
Field	Tyler	Wellbore	SHR-3C-HS AWB
Facility	SHR-3 Pad		

WELLPATH DATA (172 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]
5499.00	0.550	196.600	5494.24	-72.94	90.77	36.11	1623373.34	335830.59	39°24'51.772"N	80°49'59.087"W	97.68	21.693	0.77	0.25	-127.48
5589.00	7.430	198.160	5583.96	-68.01	84.82	34.17	1623371.41	335824.64	39°24'51.713"N	80°49'59.111"W	91.44	21.942	7.64	7.64	1.73
5678.00	10.970	200.660	5671.81	-57.06	71.42	29.38	1623366.62	335811.25	39°24'51.580"N	80°49'59.169"W	77.23	22.364	4.00	3.98	2.81
5768.00	15.050	202.150	5759.48	-41.90	52.58	21.95	1623359.19	335792.40	39°24'51.393"N	80°49'59.260"W	56.98	22.664	4.55	4.53	1.66
5858.00	18.400	200.480	5845.66	-22.42	28.44	12.58	1623349.82	335768.27	39°24'51.333"N	80°49'59.375"W	31.10	23.855	3.76	3.72	-1.86
5947.00	22.230	199.060	5929.11	1.34	-0.64	2.16	1623339.40	335739.19	39°24'50.864"N	80°49'59.502"W	2.25	106.546	4.34	4.30	-1.60
6037.00	28.920	190.190	6010.27	33.42	-38.21	-7.26	1623329.98	335701.62	39°24'50.491"N	80°49'59.615"W	38.89	190.764	8.55	7.43	-9.86
6127.00	35.830	180.880	6086.28	76.92	-86.05	-11.53	1623325.71	335653.78	39°24'50.018"N	80°49'59.660"W	86.82	187.629	9.45	7.68	-10.34
6217.00	44.600	177.260	6154.95	131.82	-144.07	-10.42	1623326.82	335595.76	39°24'49.445"N	80°49'59.635"W	144.45	184.136	10.08	9.74	-4.02
6306.00	54.130	175.660	6212.85	196.53	-211.40	-6.19	1623331.06	335528.44	39°24'48.780"N	80°49'59.569"W	211.49	181.676	10.79	10.71	-1.80
6396.00	64.720	173.870	6258.57	271.37	-288.44	0.94	1623338.18	335451.40	39°24'48.020"N	80°49'59.463"W	288.44	179.813	11.89	11.77	-1.99
6485.00	73.870	171.510	6290.00	352.50	-370.92	11.57	1623348.81	335368.93	39°24'47.206"N	80°49'59.312"W	371.10	178.213	10.57	10.28	-2.65
6575.00	74.860	168.870	6314.26	437.80	-456.31	26.34	1623363.58	335283.55	39°24'46.364"N	80°49'59.108"W	457.07	176.696	3.03	1.10	-2.93
6664.00	79.260	167.690	6334.19	523.61	-541.21	43.96	1623381.20	335198.64	39°24'45.528"N	80°49'58.867"W	543.00	175.356	5.11	4.94	-1.33
6754.00	88.430	165.240	6343.85	612.42	-628.11	64.90	1623402.14	335111.76	39°24'44.672"N	80°49'58.584"W	631.45	174.101	10.54	10.19	-2.72
6844.00	91.600	161.230	6343.81	702.25	-714.25	90.85	1623428.09	335025.62	39°24'43.825"N	80°49'58.237"W	720.01	172.751	5.68	3.52	-4.46
6933.00	90.520	157.170	6342.16	791.21	-797.42	122.44	1623459.68	334942.45	39°24'43.008"N	80°49'57.819"W	806.77	171.270	4.72	-1.21	-4.56
7023.00	91.260	155.600	6340.76	881.01	-879.87	158.49	1623495.72	334860.01	39°24'42.198"N	80°49'57.345"W	894.03	169.789	1.93	0.82	-1.74
7112.00	91.230	154.070	6338.83	969.63	-960.40	196.33	1623533.55	334779.48	39°24'41.408"N	80°49'56.847"W	980.26	168.447	1.72	-0.03	-1.72
7202.00	91.630	152.240	6336.58	1059.21	-1041.71	234.84	1623572.07	334698.18	39°24'40.610"N	80°49'56.341"W	1067.35	167.296	1.37	0.44	1.30
7292.00	91.230	150.560	6334.36	1147.89	-1122.61	271.88	1623609.10	334617.28	39°24'39.816"N	80°49'55.854"W	1155.06	166.386	0.58	-0.45	0.36
7382.00	90.830	148.520	6332.74	1237.59	-1204.43	309.34	1623646.56	334535.47	39°24'39.013"N	80°49'55.362"W	1243.52	165.596	0.57	-0.44	-0.36
7472.00	89.500	146.580	6331.97	1327.26	-1286.09	347.16	1623684.38	334453.81	39°24'38.211"N	80°49'54.864"W	1332.12	164.894	0.78	-0.76	-0.21
7562.00	89.450	145.850	6331.28	1416.08	-1367.64	382.77	1623719.99	334372.26	39°24'37.410"N	80°49'54.395"W	1420.20	164.364	3.17	-0.79	3.07
7652.00	89.260	145.060	6330.30	1506.00	-1452.81	411.66	1623748.88	334287.10	39°24'36.611"N	80°49'53.911"W	1510.01	164.180	7.74	-0.21	7.73
7742.00	89.660	144.770	6334.15	1595.35	-1540.40	432.28	1623769.50	334199.52	39°24'35.710"N	80°49'53.732"W	1599.90	164.324	4.50	0.44	4.48
7832.00	89.320	144.940	6334.94	1683.16	-1627.86	448.72	1623785.93	334112.06	39°24'34.849"N	80°49'53.506"W	1688.57	164.589	1.37	-0.38	1.31
7922.00	89.780	144.430	6335.64	1772.12	-1716.10	466.37	1623803.59	334023.82	39°24'33.979"N	80°49'53.264"W	1778.34	164.799	2.84	0.51	-2.79
8012.00	90.280	143.520	6335.60	1860.69	-1802.24	488.69	1623825.90	333937.69	39°24'33.131"N	80°49'52.964"W	1867.32	164.829	4.43	0.56	-4.39
8102.00	89.230	141.070	6335.98	1950.61	-1887.97	516.06	1623853.27	333851.96	39°24'32.288"N	80°49'52.599"W	1957.23	164.712	2.96	-1.17	-2.72

01/27/2017



Actual Wellpath Report

SHR-3C-HS AWP Proj: 15381'
Page 5 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Tyler County, WV	Well	SHR-3C-HS
Field	Tyler	Wellbore	SHR-3C-HS AWB
Facility	SHR-3 Pad		

WELLPATH DATA (172 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]
8187.00	89.450	158.550	6337.01	2039.60	-1971.49	546.77	1623883.98	333768.45	39°24'31.467"N	80°49'52.192"W	2045.90	164.499	2.84	0.25	-2.83
8277.00	89.110	157.300	6338.14	2129.53	-2054.88	580.59	1623917.80	333685.06	39°24'30.648"N	80°49'51.745"W	2135.33	164.223	1.44	-0.38	-1.39
8366.00	89.020	157.660	6339.59	2218.43	-2137.08	614.67	1623951.88	333602.86	39°24'29.840"N	80°49'51.296"W	2223.72	163.954	0.42	-0.10	0.40
8456.00	89.140	160.940	6341.04	2308.40	-2221.25	646.48	1623983.68	333518.70	39°24'29.013"N	80°49'50.875"W	2313.42	163.773	3.65	0.90	3.64
8545.00	89.940	164.030	6341.75	2397.30	-2306.11	673.26	1624010.46	333433.34	39°24'28.170"N	80°49'50.518"W	2402.38	163.725	3.59	6.90	3.47
8634.00	90.430	160.980	6341.46	2486.21	-2390.98	700.01	1624037.21	333348.98	39°24'27.344"N	80°49'50.161"W	2491.35	163.681	3.47	0.55	-3.43
8724.00	90.650	157.990	6340.62	2576.19	-2475.26	731.55	1624068.75	333264.70	39°24'26.516"N	80°49'49.743"W	2581.10	163.535	3.33	0.24	-3.32
8813.00	90.370	154.780	6339.82	2665.00	-2556.80	767.19	1624104.39	333183.17	39°24'25.715"N	80°49'49.274"W	2669.42	163.298	3.62	-0.31	-3.61
8903.00	89.570	155.090	6339.87	2754.65	-2638.32	805.32	1624142.52	333101.65	39°24'24.915"N	80°49'48.773"W	2758.49	163.026	0.95	-0.89	0.34
8993.00	89.170	157.280	6340.86	2844.44	-2720.55	841.66	1624178.85	333019.33	39°24'24.107"N	80°49'48.204"W	2847.86	162.810	2.47	-1.44	2.43
9082.00	89.350	159.120	6342.01	2933.38	-2803.27	874.71	1624211.90	332936.71	39°24'23.295"N	80°49'47.858"W	2936.57	162.670	2.08	0.20	2.07
9171.00	89.350	161.340	6343.02	3022.37	-2887.01	904.81	1624242.00	332852.97	39°24'22.472"N	80°49'47.458"W	3025.48	162.599	2.49	0.00	2.49
9261.00	89.080	161.400	6344.25	3112.33	-2972.29	933.55	1624270.74	332767.70	39°24'21.633"N	80°49'47.076"W	3115.45	162.563	0.31	-0.30	0.07
9350.00	89.750	157.980	6345.16	3201.31	-3055.74	964.44	1624301.63	332684.26	39°24'20.813"N	80°49'46.667"W	3204.32	162.483	3.92	0.75	-3.84
9440.00	90.890	155.810	6344.66	3291.17	-3138.51	999.75	1624336.94	332601.49	39°24'20.000"N	80°49'46.202"W	3293.40	162.331	2.72	1.27	-2.41
9529.00	89.690	153.080	6344.21	3379.74	-3218.80	1038.14	1624375.32	332521.21	39°24'19.213"N	80°49'45.697"W	3382.07	162.124	3.35	-1.35	-3.07
9619.00	88.710	156.030	6345.46	3469.32	-3300.05	1076.80	1624413.98	332439.96	39°24'18.415"N	80°49'45.190"W	3471.28	161.929	3.45	-1.09	3.28
9708.00	88.950	158.910	6347.28	3558.20	-3382.23	1110.89	1624448.07	332357.78	39°24'17.608"N	80°49'44.740"W	3559.99	161.817	3.25	0.27	3.24
9798.00	89.230	160.470	6348.71	3648.19	-3466.62	1142.13	1624479.30	332273.40	39°24'16.779"N	80°49'44.326"W	3649.92	161.765	1.76	0.31	1.73
9888.00	90.030	162.510	6349.29	3738.15	-3551.96	1170.70	1624507.87	332188.07	39°24'15.959"N	80°49'43.946"W	3739.91	161.758	2.45	0.39	2.27
9977.00	90.330	163.140	6349.03	3827.04	-3636.99	1196.98	1624534.15	332103.04	39°24'15.103"N	80°49'43.595"W	3828.90	161.783	0.77	0.31	0.71
10067.00	90.520	163.070	6348.38	3916.91	-3723.10	1223.13	1624560.30	332016.93	39°24'14.256"N	80°49'43.246"W	3918.87	161.813	0.25	0.23	-0.08
10157.00	90.630	164.220	6347.46	4006.72	-3809.45	1248.47	1624585.64	331930.58	39°24'13.406"N	80°49'42.907"W	4008.82	161.854	1.29	0.14	1.28
10247.00	90.630	164.500	6346.43	4095.46	-3895.15	1272.46	1624609.64	331844.89	39°24'12.563"N	80°49'42.585"W	4097.73	161.909	0.32	0.03	0.31
10337.00	90.400	164.700	6345.54	4184.16	-3980.93	1296.10	1624633.27	331759.09	39°24'11.718"N	80°49'42.268"W	4186.63	161.966	0.33	0.25	0.22
10427.00	90.300	161.000	6344.77	4274.03	-4066.93	1322.63	1624659.80	331673.12	39°24'10.874"N	80°49'41.914"W	4276.60	161.985	4.11	0.07	-4.11
10517.00	90.330	158.140	6344.34	4364.02	-4151.26	1354.04	1624691.21	331588.79	39°24'10.042"N	80°49'41.498"W	4366.51	161.938	3.22	-0.54	-3.18
10607.00	90.350	156.040	6344.20	4452.90	-4233.24	1388.69	1624725.85	331506.82	39°24'09.239"N	80°49'41.041"W	4455.19	161.838	2.36	0.13	-2.36
10697.00	90.260	151.200	6343.91	4542.32	-4313.84	1428.66	1624765.83	331426.22	39°24'08.448"N	80°49'40.517"W	4544.26	161.676	5.38	0.08	-5.38
10787.00	90.220	147.620	6343.57	4629.79	-4390.44	1473.95	1624811.11	331349.65	39°24'07.677"N	80°49'39.926"W	4631.25	161.442	4.02	0.00	-4.02

Office of Oil and Gas
 Environmental Protection
 JAN 17 2017



Actual Wellpath Report

SHR-3C-HS AWP Proj: 15381'
Page 6 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Tyler County, WV	Well	SHR-3C-HS
Field	Tyler	Wellbore	SHR-3C-HS AWB
Facility	SHR-3 Pad		

WELLPATH DATA (172 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]
10873.00	89.820	153.890	6343.53	4718.57	-4468.93	1517.90	1624855.05	331271.14	39°24'06.928"N	80°49'39.351"W	4719.68	161.240	6.98	-0.44	6.97
10963.00	89.630	160.550	6343.97	4808.41	-4551.86	1552.72	1624889.88	331188.22	39°24'06.114"N	80°49'38.892"W	4809.41	161.165	7.40	-0.21	7.40
11052.00	90.490	162.780	6343.87	4897.37	-4636.34	1580.72	1624917.87	331103.74	39°24'05.283"N	80°49'38.519"W	4898.40	161.174	2.69	0.97	2.51
11142.00	91.260	159.550	6342.50	4987.33	-4721.50	1609.77	1624946.92	331018.59	39°24'04.446"N	80°49'38.133"W	4988.37	161.174	3.69	0.86	-3.59
11232.00	91.850	157.670	6340.06	5077.26	-4805.26	1642.58	1624979.73	330984.83	39°24'03.623"N	80°49'37.700"W	5078.25	161.128	2.19	0.66	-2.09
11321.00	89.660	157.190	6338.88	5166.16	-4887.43	1676.73	1625013.88	330852.66	39°24'02.816"N	80°49'37.249"W	5167.05	161.064	2.52	-2.46	-0.54
11411.00	89.720	158.480	6339.37	5256.09	-4970.78	1710.68	1625047.83	330769.32	39°24'01.997"N	80°49'36.801"W	5256.91	161.009	1.43	0.07	1.43
11500.00	89.450	161.490	6340.02	5345.08	-5054.39	1741.14	1625078.29	330685.71	39°24'01.175"N	80°49'36.397"W	5345.88	160.992	3.40	-0.30	3.38
11590.00	89.600	166.000	6340.76	5434.86	-5140.77	1766.33	1625103.47	330599.34	39°24'00.325"N	80°49'36.060"W	5435.75	161.038	5.01	0.17	5.01
11680.00	90.000	167.780	6341.08	5524.21	-5228.42	1786.74	1625123.88	330511.69	39°23'59.462"N	80°49'35.784"W	5525.29	161.133	2.03	0.44	1.98
11769.00	90.220	168.840	6340.91	5612.27	-5315.57	1804.77	1625141.91	330424.55	39°23'58.603"N	80°49'35.538"W	5613.60	161.246	1.22	0.25	1.19
11859.00	90.180	166.220	6340.59	5701.49	-5403.44	1824.20	1625161.34	330336.68	39°23'57.738"N	80°49'35.274"W	5703.06	161.345	2.91	-0.04	-2.91
11948.00	91.420	164.700	6339.35	5790.07	-5489.58	1846.54	1625183.68	330250.55	39°23'56.890"N	80°49'34.973"W	5791.82	161.408	2.20	1.39	-1.71
12038.00	90.000	159.950	6338.23	5879.96	-5575.30	1873.86	1625211.00	330164.84	39°23'56.047"N	80°49'34.609"W	5881.78	161.422	5.51	-1.58	-5.28
12127.00	89.450	158.720	6338.66	5968.95	-5658.57	1905.27	1625242.40	330081.57	39°23'55.228"N	80°49'34.193"W	5970.71	161.391	1.51	0.62	-1.38
12217.00	89.230	160.360	6339.70	6058.94	-5742.88	1936.72	1625273.86	329997.26	39°23'54.400"N	80°49'33.777"W	6060.66	161.364	1.84	-0.24	1.82
12307.00	89.230	160.260	6340.91	6148.93	-5827.61	1967.04	1625304.18	329912.54	39°23'53.567"N	80°49'33.375"W	6150.64	161.348	0.11	0.00	-0.11
12397.00	89.690	160.640	6341.75	6238.92	-5912.42	1997.16	1625334.29	329827.73	39°23'52.733"N	80°49'32.975"W	6240.62	161.336	0.66	0.51	0.42
12487.00	91.020	158.850	6341.20	6327.92	-5995.91	2027.97	1625365.10	329744.25	39°23'51.912"N	80°49'32.567"W	6329.58	161.313	2.51	1.49	-2.01
12577.00	89.290	155.610	6340.96	6417.80	-6078.88	2062.80	1625395.92	329661.28	39°23'51.098"N	80°49'32.108"W	6419.34	161.256	4.08	1.92	3.60
12667.00	89.480	156.570	6341.91	6506.58	-6160.24	2098.86	1625435.99	329579.93	39°23'50.299"N	80°49'31.633"W	6507.98	161.185	1.10	0.21	1.08
12757.00	89.420	159.800	6342.78	6596.52	-6243.78	2132.30	1625469.43	329496.39	39°23'49.478"N	80°49'31.191"W	6597.84	161.145	3.59	-0.07	3.59
12847.00	89.420	164.460	6343.68	6685.51	-6327.73	2161.82	1625498.94	329412.44	39°23'48.653"N	80°49'30.800"W	6686.83	161.138	1.87	0.00	1.87
12937.00	89.940	160.340	6344.18	6775.48	-6413.03	2190.53	1625527.65	329327.15	39°23'47.814"N	80°49'30.418"W	6776.82	161.141	0.59	0.58	-0.13
13027.00	90.460	160.540	6343.87	6864.45	-6497.40	2218.85	1625555.97	329242.78	39°23'46.984"N	80°49'30.041"W	6865.82	161.145	0.63	0.58	0.22
13117.00	90.520	160.480	6343.10	6954.42	-6582.75	2247.39	1625584.51	329157.44	39°23'46.145"N	80°49'29.662"W	6955.82	161.150	0.09	0.07	-0.07
13207.00	90.630	160.610	6342.19	7043.38	-6667.17	2275.57	1625612.68	329073.02	39°23'45.315"N	80°49'29.287"W	7044.81	161.155	0.21	0.15	0.15
13297.00	90.700	160.870	6341.08	7133.35	-6752.38	2304.51	1625641.62	328987.82	39°23'44.477"N	80°49'28.903"W	7134.80	161.156	0.83	0.13	-0.82
13387.00	90.250	160.040	6340.28	7223.34	-6837.19	2334.62	1625671.73	328903.01	39°23'43.643"N	80°49'28.503"W	7224.79	161.147	1.09	-0.58	-0.92
13477.00	90.150	159.410	6339.99	7312.34	-6920.67	2365.46	1625702.57	328819.55	39°23'42.823"N	80°49'28.095"W	7313.76	161.130	0.72	-0.15	-0.71

Office of Oil and Gas
JAN 17 2017
01/27/2017



Actual Wellpath Report

SHR-3C-HS AWP Proj: 15381'
Page 7 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Tyler County, WV	Well	SHR-3C-HS
Field	Tyler	Wellbore	SHR-3C-HS AWB
Facility	SHR-3 Pad		

WELLPATH DATA (172 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]
13561.00	90.180	158.490	6339.75	7402.32	-7004.67	2397.78	1625734.89	328735.54	39°23'41.997"N	80°49'27.667"W	7403.70	161.103	1.02	0.07	-1.02
13650.00	89.510	158.380	6339.99	7491.29	-7087.44	2430.50	1625767.60	328652.78	39°23'41.184"N	80°49'27.235"W	7492.60	161.072	0.76	-0.75	-0.12
13740.00	89.540	158.920	6340.74	7581.26	-7171.26	2463.26	1625800.37	328568.96	39°23'40.361"N	80°49'26.802"W	7582.52	161.043	0.60	0.03	0.60
13830.00	89.850	160.530	6341.22	7671.26	-7255.68	2494.45	1625831.55	328484.55	39°23'39.531"N	80°49'26.389"W	7672.49	161.027	1.82	0.34	1.79
13919.00	89.940	161.700	6341.38	7760.24	-7339.88	2523.25	1625860.35	328400.35	39°23'38.703"N	80°49'26.006"W	7761.49	161.028	1.32	0.10	1.31
14009.00	90.150	163.880	6341.31	7850.13	-7425.85	2549.88	1625886.98	328314.39	39°23'37.857"N	80°49'25.651"W	7851.44	161.049	2.43	0.23	2.42
14098.00	90.370	164.250	6340.91	7938.90	-7511.43	2574.31	1625911.41	328228.81	39°23'37.015"N	80°49'25.324"W	7940.32	161.082	0.48	0.25	0.42
14188.00	90.250	163.490	6340.42	8028.69	-7597.88	2599.32	1625936.42	328142.36	39°23'36.164"N	80°49'24.989"W	8030.21	161.114	0.85	-0.13	-0.84
14278.00	90.370	161.710	6339.93	8118.60	-7683.76	2626.23	1625963.33	328056.49	39°23'35.319"N	80°49'24.630"W	8120.18	161.130	1.98	0.13	-1.98
14367.00	90.090	158.530	6339.58	8207.58	-7767.45	2656.49	1625993.38	327972.81	39°23'34.497"N	80°49'24.229"W	8209.15	161.119	3.56	-0.51	-3.57
14457.00	90.060	155.860	6339.46	8297.47	-7850.40	2691.37	1626028.46	327889.86	39°23'33.682"N	80°49'23.769"W	8298.93	161.077	2.97	-0.03	-2.97
14546.00	90.030	154.690	6339.39	8386.16	-7931.24	2728.59	1626065.69	327809.02	39°23'32.889"N	80°49'23.280"W	8387.48	161.015	1.32	-0.03	-1.31
14636.00	90.030	156.450	6339.34	8475.89	-8013.18	2765.82	1626102.90	327727.09	39°23'32.084"N	80°49'22.791"W	8477.07	160.957	1.96	0.00	1.96
14726.00	90.090	156.570	6339.25	8565.72	-8095.72	2801.69	1626138.78	327644.55	39°23'31.274"N	80°49'22.318"W	8566.81	160.911	0.15	0.07	0.13
14815.00	89.820	157.780	6339.32	8654.61	-8177.75	2836.21	1626173.90	327562.52	39°23'30.468"N	80°49'21.863"W	8655.62	160.872	1.39	-0.30	1.36
14905.00	90.000	158.950	6339.46	8744.58	-8261.41	2869.39	1626206.48	327478.87	39°23'29.646"N	80°49'21.425"W	8745.53	160.847	1.32	0.20	1.30
14994.00	89.970	161.490	6339.48	8833.57	-8345.15	2899.51	1626236.59	327395.13	39°23'28.823"N	80°49'21.026"W	8834.52	160.840	2.85	-0.03	2.85
15084.00	90.120	163.300	6339.41	8923.49	-8430.93	2926.73	1626263.81	327309.36	39°23'27.979"N	80°49'20.663"W	8924.48	160.856	2.02	0.17	2.01
15174.00	90.030	163.380	6339.30	9012.33	-8516.20	2952.25	1626289.32	327224.10	39°23'27.140"N	80°49'20.322"W	9013.40	160.880	0.14	-0.10	0.09
15264.00	90.220	162.180	6339.10	9102.23	-8602.16	2978.89	1626315.97	327138.14	39°23'26.295"N	80°49'19.967"W	9103.35	160.899	1.35	0.21	-1.33
15354.00	90.060	159.580	6338.87	9195.21	-8690.02	3009.35	1626346.42	327050.28	39°23'25.431"N	80°49'19.562"W	9196.34	160.899	2.80	-0.17	-2.80
15444.00	90.060	159.580	6338.85	9220.21	-8713.45	3018.07	1626355.15	327026.85	39°23'25.201"N	80°49'19.447"W	9221.33	160.895	0.00	0.00	0.00

RECEIVED
Office of Oil and Gas

JAN 17 2017

WV Department of
Environmental Protection
01/27/2017



Actual Wellpath Report

SHR-3C-HS AWP Proj: 15381'

Page 8 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Tyler County, WV	Well	SHR-3C-HS
Field	Tyler	Wellbore	SHR-3C-HS AWB
Facility	SHR-3 Pad		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SHR-3C-HS BHL Rev-1	6332.90	6332.90	-8712.72	3020.98	1626358.06	327027.58	39°23'25.208"N	80°49'19.410"W	point
SHR-3C-HS LP Plat	6339.00	6339.00	-550.00	49.99	1623387.23	335189.86	39°24'45.442"N	80°49'58.789"W	point
SHR-3C-HS LP Rev-1	6348.00	6348.00	-584.40	62.51	1623399.75	335155.46	39°24'45.104"N	80°49'58.623"W	point

WELLPATH COMPOSITION - Ref Wellbore: SHR-3C-HS AWB Ref Wellpath: SHR-3C-HS AWP Proj: 15381'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.50	2132.50	Generic gyro - northseeking (Standard)	01_MS Gyro <12-1/4"> (100'-2114')	SHR-3C-HS AWB
2132.50	5400.00	NaviTrak (MagCorr)	02_BHL MWD <8-3/4"> (2132.5')(2265'-5400')	SHR-3C-HS AWB
5400.00	6127.00	NaviTrak (MagCorr)	03_BHL AT Curve (MagCorr) <8-3/4"> (5400')(5499'-6127')	SHR-3C-HS AWB
6127.00	15356.00	NaviTrak (AT Curve Short Spaced)	04_BHL AT Curve (SS) <8-3/4"> (6127')(6217'-15356')	SHR-3C-HS AWB
15356.00	15381.00	Blind Drilling (std)	Projection to bit	SHR-3C-HS AWB

RECEIVED
Office of Oil and Gas
JAN 17 2017
WV Department of
Environmental Protection

01/27/2017



Actual Wellpath Report

SHR-3C-HS AWP Proj: 15381'
Page 9 of 9



REFERENCE WELL PATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Tyler County, WV	Well	SHR-3C-HS
Field	Tyler	Wellbore	SHR-3C-HS AWB
Facility	SHR-3 Pad		

COMMENTS

Wellpath general comments
 API: 47-095-02194-0000
 BHI Job #: 7024699
 Rig: Precision 542
 Duration: 4/3/2015-4/9/2015
 MS Gyro <12-1/4"> (100'-2114')
 BHI MWD <8-3/4"> (2132.5')(2265'-5400')
 BHI AT Curve (MagCorr) <8-3/4"> (5400')(5499'-6127')
 BHI AT Curve (SS) <8-3/4"> (6127')(6217'-15356')
 Projected MD at TD: 15381'

RECEIVED
 Office of Oil and Gas
 JAN 17 2017
 WV Department of
 Environmental Protection
 01/27/2017



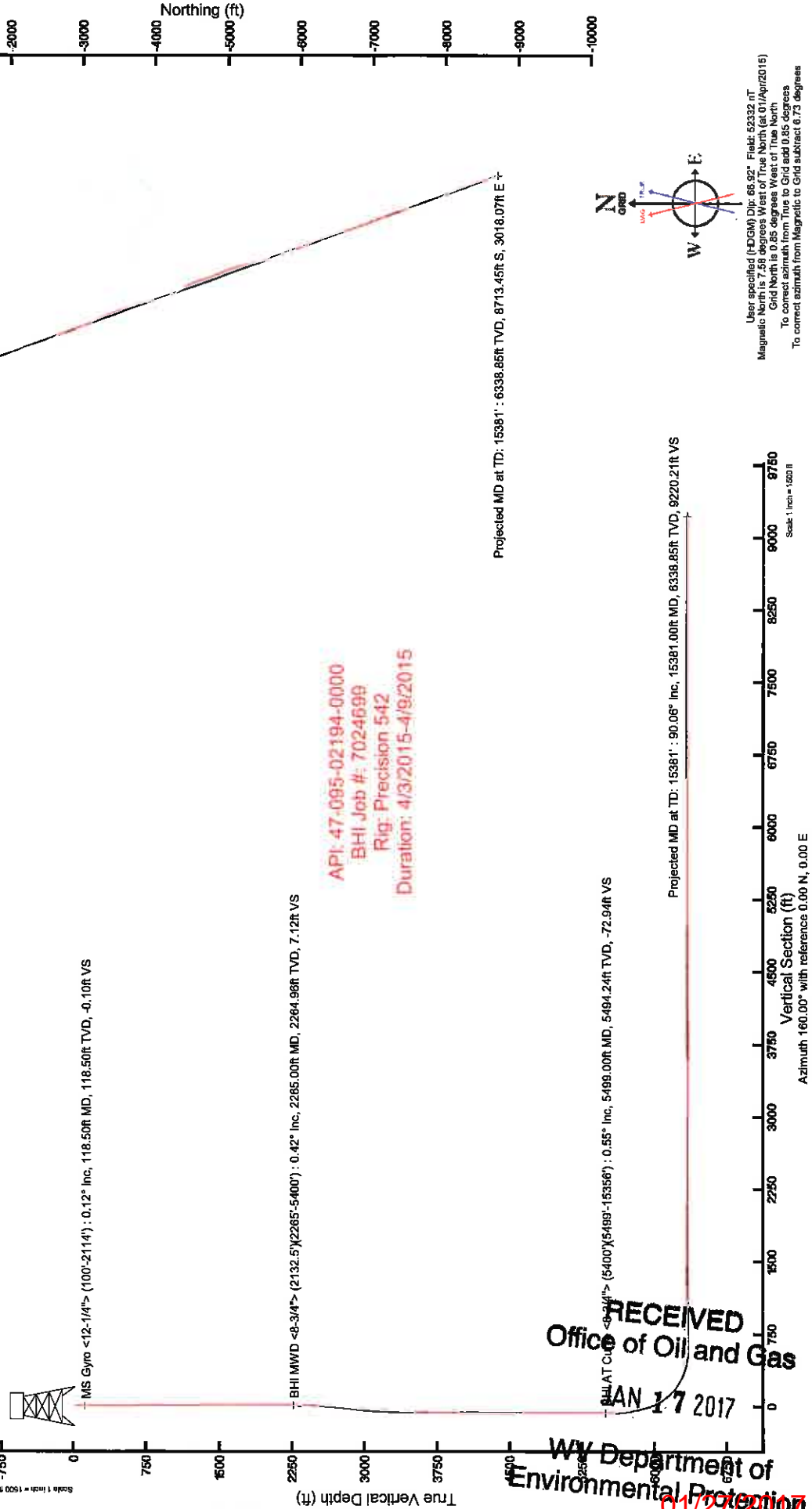
NOBLE ENERGY

Location: Tyler County, WV
Field: Tyler
Facility: SHR-3 Pad

Slot: Slot C
Well: SHR-3C-HS
Wellbore: SHR-3C-HS PWB



Grid System: NAD83 Lambert West Virginia SF, Northern Zone (R751), US feet North Reference: Grid North Scale: True distance Distances are in feet Created by: cadswg on 10/14/2015				
Point reference wellbore is SHR-3C-HS PWB Rev A.0 True vertical depths are referenced to Precision 542 (RKB) Measured depths are referenced to Precision 542 (RKB) Precision 542 (RKB) to Mean Sea Level: 770.57 ft Mean Sea Level to Mud Line (At Slot: Slot C): -752.07 ft Coordinates are in feet referenced to Slot C				
Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SHR-3 Pad	1823288.030	335743.440	38°24'50.000"N	80°50'00.030"W
Slot	Local E (ft)	Grid North (US ft)	Latitude	Longitude
Slot C	-3.61	335739.830	38°24'50.000"N	80°49'59.530"W
Precision 542 (RKB) to Mud Line (At Slot: Slot C)			18.5 ft	
Main Sea Level to Mud Line (At Slot: Slot C)			-752.07 ft	
Precision 542 (RKB) to Mean Sea Level			770.57 ft	



RECEIVED
Office of Oil and Gas
JAN 17 2017
WV Department of Environmental Protection
01/27/2017

Users specified (NAD83) Dir: 88.00° Field: 52332.0T
Magellanic North is 7.58 degrees West of True North (at 01-Apr-2015)
Grid North is 0.85 degrees West of True North
To correct azimuth from True to Grid add 0.85 degrees
To correct azimuth from Magellanic to Grid subtract 6.73 degrees