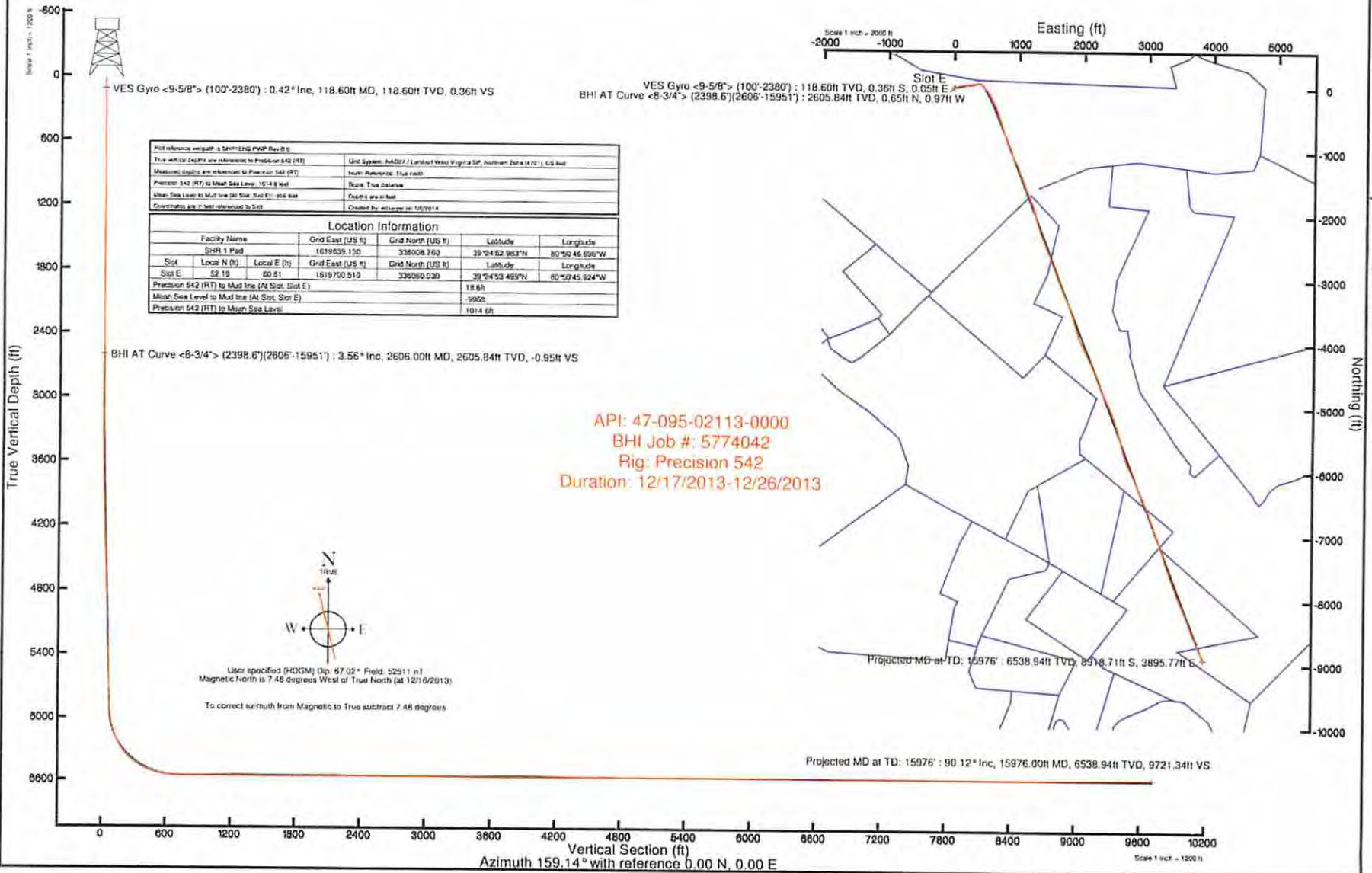


NOBLE ENERGY

Location: Tyler County, WV
 Field: Tyler
 Facility: SHR 1 Pad

Slot: Slot E
 Well: SHR1EHS
 Wellbore: SHR1EHS PWB





Actual Wellpath Report

SHR1EHS AWP Proj: 15976'

Page 1 of 10



95-02113

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY	Slot	Slot E
Area	Tyler County, WV	Well	SHR1EHS
Field	Tyler	Wellbore	SHR1EHS AWB
Facility	SHR 1 Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 4.0.1
North Reference	True	User	Edsaryar
Scale	0.999947	Report Generated	1/2/2014 at 3:53:46 PM
Convergence at slot	n/a	Database/Source file	Well Architect Eastern US/SHR1EHS_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	52.19	60.61	1619700.51	336060.03	39°24'53.499"N	80°50'45.924"W
Facility Reference Pt			1619639.13	336008.76	39°24'52.983"N	80°50'46.696"W
Field Reference Pt			0.00	0.00	38°17'12.460"N	86°28'23.077"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Precision 542 (RT) to Facility Vertical Datum	18.60ft
Horizontal Reference Pt	Slot	Precision 542 (RT) to Mean Sea Level	1014.60ft
Vertical Reference Pt	Precision 542 (RT)	Precision 542 (RT) to Mud Line at Slot (Slot E)	18.60ft
MD Reference Pt	Precision 542 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	159.14°



Actual Wellpath Report

SHRIEHS AWP Proj: 15976
Page 2 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY
Area	Tyler County, WV
Field	Tyler
Facility	SHR 1 Pad
	Wellbore
	SHRIEHS
	SHRIEHS AWB
	Slot E

WELLPATH DATA (193 stations) † = interpolated/extrapolated station

MD [m]	Inclination [°]	Azimuth [°]	TVD [m]	Vert Sect [m]	North [m]	East [m]	Grid East [m]	Grid North [m]	Latitude	Longitude	Closure Dist [m]	DLS [°]	Closure Dir [°]	Build Rate [°/100m]	Turn Rate [°/100m]
0.00†	0.00	172.140	0.00	0.00	0.00	0.00	1619700.51	336060.03	39°24'53.499"N	80°50'45.924"W	0.00	0.00	0.00	0.00	0.00
18.60	0.000	172.140	18.60	0.00	0.00	0.00	1619700.51	336060.03	39°24'53.499"N	80°50'45.924"W	0.00	0.00	0.00	0.00	0.00
218.60	0.420	172.140	118.60	0.36	-0.36	0.05	1619700.55	336059.67	39°24'53.495"N	80°50'45.924"W	0.37	0.42	0.42	0.00	0.00
318.60	0.360	159.410	318.60	1.43	-1.38	0.40	1619700.89	336059.12	39°24'53.490"N	80°50'45.922"W	0.92	0.22	0.22	0.00	0.00
418.60	0.140	164.060	418.60	1.86	-1.79	0.54	1619701.03	336058.24	39°24'53.481"N	80°50'45.919"W	1.43	0.13	0.13	0.00	0.00
518.60	0.180	169.950	518.59	2.14	-2.06	0.60	1619701.08	336057.96	39°24'53.478"N	80°50'45.917"W	1.87	0.22	0.22	0.04	0.04
618.60	0.220	150.020	618.59	2.48	-2.38	0.73	1619701.20	336057.64	39°24'53.475"N	80°50'45.915"W	2.15	0.04	0.04	0.04	0.04
718.60	0.520	108.330	718.59	2.96	-2.69	1.25	1619701.72	336057.32	39°24'53.472"N	80°50'45.908"W	2.97	0.38	0.38	0.04	0.04
818.60	0.360	90.510	818.59	3.36	-2.83	2.00	1619702.47	336057.17	39°24'53.471"N	80°50'45.899"W	3.47	0.21	0.21	0.30	0.30
918.60	0.300	65.980	918.59	3.46	-2.73	2.55	1619703.02	336057.26	39°24'53.472"N	80°50'45.892"W	3.74	0.15	0.15	0.16	0.16
1018.60	0.210	53.030	1018.59	3.39	-2.51	2.94	1619703.41	336057.47	39°24'53.474"N	80°50'45.887"W	3.87	0.11	0.11	0.06	0.06
1118.60	0.130	24.840	1118.59	3.26	-2.30	3.13	1619703.61	336057.68	39°24'53.476"N	80°50'45.884"W	3.89	0.11	0.11	-0.09	-0.09
1218.60	0.180	351.700	1218.59	3.03	-2.04	3.16	1619703.63	336057.94	39°24'53.477"N	80°50'45.884"W	3.76	0.10	0.10	-0.08	-0.08
1318.60	0.350	329.850	1318.58	2.58	-1.62	2.98	1619703.46	336058.36	39°24'53.482"N	80°50'45.886"W	3.39	0.19	0.19	-0.05	-0.05
1418.60	0.310	1418.58	1418.58	2.03	-1.17	2.64	1619703.13	336058.82	39°24'53.487"N	80°50'45.891"W	2.88	0.09	0.09	-0.04	-0.04
1518.60	0.260	345.840	1518.58	1.56	-0.75	2.33	1619703.04	336059.24	39°24'53.491"N	80°50'45.894"W	2.51	0.16	0.16	-0.05	-0.05
1618.60	0.240	71.170	1618.58	1.34	-0.47	2.53	1619703.04	336059.53	39°24'53.494"N	80°50'45.892"W	2.58	0.34	0.34	-0.02	-0.02
1718.60	0.200	108.900	1718.58	1.46	-0.46	2.90	1619703.40	336059.53	39°24'53.494"N	80°50'45.887"W	2.93	0.15	0.15	-0.04	-0.04
1818.60	0.470	145.810	1818.58	1.97	-0.85	3.29	1619703.79	336059.13	39°24'53.490"N	80°50'45.882"W	3.40	0.33	0.33	0.04	0.04
1918.60	0.020	176.240	1918.58	2.38	-1.21	3.52	1619704.01	336058.77	39°24'53.487"N	80°50'45.879"W	3.72	0.45	0.45	-0.45	-0.45
2018.60	0.150	74.680	2018.58	2.41	-1.19	3.65	1619704.14	336058.78	39°24'53.487"N	80°50'45.878"W	3.84	0.16	0.16	0.13	0.13
2118.60	0.190	78.430	2118.58	2.45	-1.00	4.34	1619704.83	336058.96	39°24'53.487"N	80°50'45.874"W	4.10	0.04	0.04	0.04	0.04
2218.60	0.290	69.910	2218.58	2.48	-1.00	4.34	1619704.83	336058.96	39°24'53.487"N	80°50'45.874"W	4.10	0.04	0.04	0.04	0.04
2318.60	0.280	92.780	2318.57	2.58	-0.93	4.82	1619705.32	336059.03	39°24'53.489"N	80°50'45.863"W	4.45	0.11	0.11	0.10	0.10
2398.60	0.100	102.160	2398.57	2.70	-0.95	5.08	1619705.38	336059.00	39°24'53.489"N	80°50'45.859"W	4.91	0.11	0.11	-0.01	-0.01
2606.00	3.560	284.710	2605.84	-0.95	0.65	-0.97	1619699.55	336060.69	39°24'53.505"N	80°50'45.937"W	5.17	1.76	1.76	11.72	11.72
2696.00	1.600	272.410	2695.75	-3.07	1.41	-4.93	1619695.61	336061.51	39°24'53.512"N	80°50'45.987"W	5.12	2.25	2.25	-13.67	-13.67
2785.00	0.060	186.570	2784.74	-3.52	1.41	-6.17	1619694.36	336061.54	39°24'53.512"N	80°50'46.003"W	6.33	1.79	1.79	-96.45	-96.45
2875.00	0.090	344.600	2874.74	-3.55	1.44	-6.20	1619694.33	336061.56	39°24'53.513"N	80°50'46.003"W	6.36	0.16	0.16	175.59	175.59

95.02.113



Actual Wellpath Report

SHRIEHS AWP Proj: 15976
Page 3 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY
Area	Tyler County, WV
Field	Tyler
Facility	SHR I Pad
Well	SHRIEHS
Wellbore	SHRIEHS AWB
Slot	Wellbore
Slot	Slot E

WELLPATH DATA (193 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	East [ft]	Grid East [ft]	Grid North [ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
2964.00	0.250	72.600	2963.74	-3.61	1.56	-6.03	1619694.50	336061.68	39°24'53.514"N	80°50'46.001"W	6.23	284.508	0.30	0.18	98.88	
3009.00	1.460	73.380	3008.73	-3.56	1.75	-5.39	1619695.15	336061.86	39°24'53.516"N	80°50'45.993"W	5.67	288.032	2.69	2.64	1.73	
3054.00	2.650	75.800	3053.70	-3.39	2.17	-3.83	1619696.71	336062.26	39°24'53.520"N	80°50'45.973"W	4.40	299.570	2.65	2.64	5.38	
3103.00	4.510	73.900	3102.60	-3.10	2.99	-0.88	1619699.67	336063.03	39°24'53.528"N	80°50'45.935"W	3.11	343.562	3.80	3.80	-3.88	
3143.00	4.870	71.590	3142.47	-2.90	3.96	2.24	1619702.81	336063.95	39°24'53.538"N	80°50'45.896"W	4.55	29.523	1.02	0.90	-5.78	
3188.00	6.120	72.580	3187.26	-2.67	5.28	6.34	1619706.93	336065.21	39°24'53.551"N	80°50'45.843"W	8.25	50.228	2.79	2.78	2.20	
3233.00	7.090	73.530	3231.96	-2.32	6.78	11.29	1619711.90	336066.64	39°24'53.566"N	80°50'45.780"W	13.18	59.007	2.17	2.16	2.11	
3278.00	8.020	74.560	3276.57	-1.81	8.41	16.98	1619717.62	336068.18	39°24'53.582"N	80°50'45.708"W	18.95	63.662	2.09	2.07	2.29	
3322.00	8.160	77.130	3320.13	-1.09	9.92	22.99	1619723.64	336069.60	39°24'53.597"N	80°50'45.631"W	25.04	66.656	0.88	0.32	5.84	
3412.00	8.200	83.540	3409.22	1.40	12.07	35.59	1619736.28	336071.56	39°24'53.618"N	80°50'45.471"W	37.58	71.273	1.01	0.04	7.12	
3501.00	8.300	81.780	3497.30	4.38	13.70	48.26	1619748.96	336073.00	39°24'53.634"N	80°50'45.309"W	50.16	74.153	0.31	0.11	-1.98	
3591.00	8.330	76.300	3586.36	6.62	16.17	61.02	1619761.76	336075.28	39°24'53.658"N	80°50'45.147"W	76.14	75.157	0.88	0.03	-6.09	
3681.00	8.300	73.220	3675.41	7.89	19.59	73.57	1619774.36	336078.51	39°24'53.692"N	80°50'44.987"W	88.84	75.289	1.07	-0.03	-3.42	
3770.00	8.150	79.800	3763.50	9.52	22.56	85.93	1619786.77	336081.30	39°24'53.722"N	80°50'44.829"W	88.84	75.289	1.07	-0.17	7.39	
3860.00	8.180	79.870	3852.58	11.89	24.82	98.51	1619799.38	336083.37	39°24'53.744"N	80°50'44.669"W	101.59	75.860	0.04	0.03	0.08	
3949.00	8.150	76.930	3940.68	13.92	27.36	110.89	1619811.79	336085.72	39°24'53.769"N	80°50'44.511"W	114.22	76.141	0.47	-0.03	-3.30	
4039.00	8.120	82.070	4029.78	16.21	29.68	123.40	1619824.34	336087.85	39°24'53.792"N	80°50'44.352"W	126.92	76.477	0.81	-0.03	5.71	
4129.00	8.230	83.650	4118.86	19.25	31.27	136.10	1619837.05	336089.25	39°24'53.808"N	80°50'44.190"W	139.64	77.062	0.28	0.12	1.76	
4218.00	8.120	75.780	4206.96	21.57	33.52	148.52	1619849.51	336091.31	39°24'53.830"N	80°50'44.032"W	152.26	77.284	1.26	-0.12	-8.84	
4308.00	8.050	82.720	4296.07	23.78	35.88	160.94	1619861.96	336093.49	39°24'53.853"N	80°50'43.874"W	164.89	77.433	1.09	-0.08	7.71	
4398.00	8.210	90.970	4385.17	27.65	36.57	173.61	1619874.64	336093.99	39°24'53.860"N	80°50'43.712"W	177.42	78.106	1.31	0.18	9.17	
4488.00	8.250	85.350	4474.24	31.84	36.98	186.47	1619887.51	336094.21	39°24'53.864"N	80°50'43.548"W	190.10	78.783	0.89	0.04	-6.24	
4577.00	8.190	76.900	4562.33	34.48	38.93	199.01	1619900.07	336095.98	39°24'53.883"N	80°50'43.389"W	202.79	78.931	1.36	-0.07	-9.49	
4667.00	7.740	75.030	4651.46	35.97	41.95	211.11	1619912.21	336098.81	39°24'53.913"N	80°50'43.234"W	215.24	78.760	0.58	-0.50	-2.08	
4757.00	7.830	81.080	4740.63	37.86	44.47	223.02	1619924.16	336101.15	39°24'53.938"N	80°50'43.083"W	227.41	78.723	0.92	0.10	6.72	
4846.00	7.850	86.330	4828.80	40.91	45.80	235.08	1619936.23	336102.30	39°24'53.951"N	80°50'42.929"W	239.50	78.976	0.80	0.02	5.90	
4936.00	7.100	74.880	4918.04	43.28	47.64	246.58	1619947.76	336103.97	39°24'53.969"N	80°50'42.782"W	251.14	79.064	1.85	-0.83	-12.72	
5025.00	7.760	79.910	5006.30	44.96	50.13	257.81	1619959.02	336106.29	39°24'53.994"N	80°50'42.639"W	262.64	78.996	1.04	0.74	5.65	
5115.00	7.970	79.900	5095.45	47.26	52.29	269.93	1619971.18	336108.27	39°24'54.015"N	80°50'42.485"W	274.95	79.037	0.23	0.23	-0.01	
5204.00	8.030	73.420	5183.59	48.87	55.14	281.96	1619983.25	336110.94	39°24'54.044"N	80°50'42.332"W	287.31	78.934	1.02	0.07	-7.28	

95-02113



Actual Wellpath Report

SHRIEHS AWP Proj: 15976

Page 4 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY
Area	Tyler County, WV
Field	Tyler
Facility	SHR I Pad
Wellbore	SHRIEHS AWB
Well	SHRIEHS
Slot	Slot E

WELLPATH DATA (193 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	North [ft]	East [ft]	Vert Sect [ft]	North [ft]	East [ft]	Gtd East [ft]	Gtd East [ft]	Gtd North [ft]	Latitude [ft]	Longitude [ft]	Closure Dist [ft]	Dire [ft]	DLS [ft]	Build Rate [ft/100ft]	Turn Rate [ft/100ft]
5294.00	7.930	82.400	5272.72	50.77	57.76	294.14	1619995.47	336113.37	39°24'54.069"N	80°50'42.176"W	299.76	302.94	78.890	1.39	78.890	1.40	0.11	9.98
5317.00	8.010	84.650	5295.50	51.56	58.12	297.31	1619998.64	336113.68	39°24'54.073"N	80°50'42.136"W	302.94	315.14	79.268	0.86	79.268	1.40	0.35	9.78
5406.00	7.930	90.140	5383.64	55.42	58.68	309.62	1620010.96	336114.06	39°24'54.078"N	80°50'41.979"W	315.14	327.30	79.639	0.32	79.639	1.40	-0.09	6.17
5496.00	7.830	88.180	5472.79	59.64	58.66	321.96	1620023.30	336114.06	39°24'54.084"N	80°50'41.822"W	327.30	339.35	79.949	0.10	79.949	1.40	-0.11	9.78
5585.00	7.910	88.380	5560.95	63.64	59.23	334.14	1620035.48	336114.24	39°24'54.088"N	80°50'41.667"W	339.35	351.63	80.228	0.15	80.228	1.40	0.09	6.17
5675.00	7.920	87.400	5650.09	67.62	59.68	346.53	1620047.87	336114.51	39°24'54.098"N	80°50'41.509"W	351.63	363.92	80.402	0.63	80.402	1.40	0.09	6.17
5765.00	7.850	83.320	5739.24	71.07	60.68	358.82	1620060.18	336115.32	39°24'54.113"N	80°50'41.352"W	363.92	376.05	80.487	0.09	80.487	1.40	-0.02	6.17
5854.00	7.830	82.750	5827.41	73.99	62.15	370.88	1620072.25	336116.61	39°24'54.125"N	80°50'41.199"W	376.05	388.28	80.597	0.37	80.597	1.40	-0.08	6.17
5944.00	7.830	85.200	5916.57	77.12	63.44	383.07	1620084.46	336117.72	39°24'54.125"N	80°50'41.044"W	388.28	400.92	81.422	7.00	81.422	1.40	0.00	2.72
6033.00	10.890	119.520	6004.44	85.28	59.80	396.44	1620097.78	336113.88	39°24'54.090"N	80°50'40.873"W	400.92	407.50	82.349	8.75	82.349	1.40	3.44	38.56
6077.00	13.600	132.520	6047.44	93.11	54.25	403.87	1620105.12	336108.22	39°24'54.035"N	80°50'40.778"W	407.50	414.74	83.686	8.75	414.74	1.40	6.16	29.55
6123.00	16.740	138.780	6091.84	104.16	45.61	412.22	1620113.35	336099.46	39°24'54.949"N	80°50'40.672"W	414.74	422.58	85.202	7.69	422.58	1.40	6.83	13.61
6167.00	19.190	139.490	6133.69	116.92	35.35	421.10	1620122.07	336089.06	39°24'53.848"N	80°50'40.559"W	422.58	432.13	86.864	5.41	432.13	1.40	5.57	1.61
6212.00	21.520	137.450	6175.88	131.55	23.64	431.48	1620132.28	336077.20	39°24'53.732"N	80°50'40.427"W	432.13	443.83	88.638	8.63	443.83	1.40	5.18	-4.53
6257.00	25.390	136.580	6217.15	148.14	10.55	443.70	1620144.29	336063.93	39°24'53.603"N	80°50'40.271"W	443.83	457.83	88.638	8.63	457.83	1.40	8.60	-1.93
6302.00	30.010	138.460	6256.99	167.59	-4.89	457.80	1620158.16	336048.28	39°24'53.450"N	80°50'40.091"W	457.83	473.54	92.763	10.83	473.54	1.40	10.43	5.48
6346.00	34.600	140.870	6294.17	189.76	-22.83	472.99	1620173.08	336030.12	39°24'53.273"N	80°50'39.898"W	473.54	491.56	95.140	10.04	491.56	1.40	9.64	4.67
6391.00	38.940	142.970	6330.21	215.48	-44.04	489.58	1620189.35	336008.66	39°24'53.063"N	80°50'39.686"W	491.56	511.43	97.674	12.04	511.43	1.40	11.20	6.67
6436.00	43.980	145.970	6363.92	244.30	-68.29	506.85	1620206.26	335988.15	39°24'52.823"N	80°50'39.466"W	511.43	533.27	100.343	12.23	533.27	1.40	11.71	4.84
6481.00	49.250	148.150	6394.82	276.27	-95.74	524.60	1620223.59	335956.44	39°24'52.552"N	80°50'39.240"W	533.27	557.14	103.084	11.98	557.14	1.40	11.38	4.78
6526.00	54.370	150.300	6422.64	311.10	-126.13	542.67	1620241.20	335925.79	39°24'52.252"N	80°50'39.010"W	557.14	582.76	105.807	7.49	582.76	1.40	7.00	3.22
6571.00	57.520	151.750	6447.84	348.00	-158.74	560.72	1620258.76	335892.91	39°24'51.930"N	80°50'38.780"W	582.76	610.09	108.440	8.18	610.09	1.40	8.00	2.00
6616.00	61.120	152.650	6470.79	386.42	-192.97	578.77	1620276.29	335858.42	39°24'51.591"N	80°50'38.550"W	610.09	638.44	110.932	9.80	638.44	1.40	9.25	3.61
6660.00	65.190	154.240	6490.66	425.47	-228.09	596.30	1620293.30	335823.05	39°24'51.244"N	80°50'38.327"W	638.44	668.98	113.400	10.17	668.98	1.40	9.87	2.67
6705.00	69.630	155.440	6507.94	466.89	-265.68	613.96	1620310.38	335785.19	39°24'50.873"N	80°50'38.102"W	668.98	701.01	115.761	8.94	701.01	1.40	8.67	2.33
6750.00	73.530	156.490	6522.16	509.51	-304.67	631.34	1620327.18	335745.95	39°24'50.487"N	80°50'37.880"W	701.01	734.07	118.028	10.28	734.07	1.40	9.24	4.64
6795.00	77.690	158.580	6533.34	553.07	-344.94	647.98	1620343.22	335705.44	39°24'50.089"N	80°50'37.668"W	734.07	767.10	120.158	7.96	767.10	1.40	7.32	3.18
6839.00	80.910	159.980	6541.51	596.30	-385.38	663.27	1620357.90	335664.78	39°24'49.690"N	80°50'37.473"W	767.10	803.11	122.322	9.38	803.11	1.40	8.85	3.13
6888.00	85.070	161.450	6547.24	642.92	-429.40	678.67	1620372.64	335620.54	39°24'49.254"N	80°50'37.277"W	803.11	836.75	124.178	2.19	836.75	1.40	2.14	0.47
6929.00	85.990	161.650	6550.60	685.75	-470.06	692.24	1620385.59	335579.67	39°24'48.853"N	80°50'37.104"W	836.75							

95-02113



Actual Wellpath Report

SHRIEHS AWP Proj: 15976
Page 5 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY
Area	Tyler County, WV
Field	Tyler
Facility	SHR 1 Pad
Well	SHRIEHS
Slot	Slot E

WELLPATH DATA (193 stations)

MID	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closeure Dist	Closeure Dir	DLS	Build Rate	Turn Rate
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	[%/100ft]	[%/100ft]	[%/100ft]
6973.00	88.150	162.270	6552.84	729.63	-511.84	705.85	1620398.57	335537.70	39°24'48.440"N	80°50'36.931"W	871.90	125.948	5.11	4.91	1.41
7109.00	89.850	163.320	6553.65	775.53	-555.78	719.45	1620411.51	335493.57	39°24'48.005"N	80°50'36.758"W	909.12	127.686	4.34	3.70	2.28
7198.00	89.450	162.580	6553.76	954.18	-726.67	772.70	1620462.19	335321.91	39°24'46.316"N	80°50'36.079"W	983.19	130.677	1.10	0.48	-0.99
7287.00	89.600	162.020	6554.50	1043.05	-811.45	799.76	1620487.97	335236.73	39°24'45.478"N	80°50'35.735"W	1060.71	133.242	0.94	-0.92	0.16
7376.00	89.660	159.560	6555.07	1132.00	-895.49	829.04	1620515.99	335152.27	39°24'44.648"N	80°50'35.362"W	1139.33	135.416	0.65	0.17	-0.63
7466.00	89.200	157.710	6555.97	1221.99	-979.30	861.82	1620547.52	335067.99	39°24'43.819"N	80°50'34.944"W	1304.51	138.651	2.12	-0.51	-2.06
7555.00	89.570	155.260	6556.92	1310.88	-1060.89	897.33	1620581.79	334985.87	39°24'43.013"N	80°50'34.492"W	1389.49	139.775	2.78	0.42	-2.75
7645.00	89.570	155.060	6557.60	1400.66	-1142.56	935.13	1620618.37	334903.65	39°24'42.206"N	80°50'34.010"W	1476.46	140.701	0.22	0.00	-0.22
7734.00	89.910	156.250	6558.00	1489.49	-1223.65	971.82	1620653.84	334822.03	39°24'41.404"N	80°50'33.543"W	1562.61	141.433	1.39	0.38	1.34
7824.00	89.820	158.100	6558.21	1579.44	-1306.60	1006.73	1620687.50	334738.57	39°24'40.585"W	80°50'33.098"W	1649.46	142.386	2.06	-0.10	2.06
7914.00	90.370	159.020	6558.06	1669.43	-1390.37	1039.63	1620719.13	334654.32	39°24'39.757"N	80°50'32.679"W	1736.07	143.976	0.17	0.61	1.02
8003.00	90.520	159.040	6557.37	1758.43	-1473.47	1071.48	1620749.73	334570.75	39°24'38.935"N	80°50'32.273"W	1821.86	143.976	0.17	0.17	0.02
8093.00	90.370	158.630	6556.67	1848.42	-1557.40	1103.97	1620780.96	334486.35	39°24'38.106"N	80°50'31.859"W	1908.99	144.669	0.49	-0.17	-0.46
8182.00	90.490	157.230	6556.01	1937.40	-1639.87	1137.41	1620813.16	334403.39	39°24'37.291"N	80°50'31.433"W	1995.72	145.255	1.58	0.13	-1.57
8272.00	90.550	158.810	6555.19	2027.38	-1723.32	1171.09	1620845.59	334319.45	39°24'36.466"N	80°50'31.004"W	2083.58	145.802	1.76	0.07	1.76
8361.00	90.250	161.670	6554.57	2116.35	-1807.07	1201.18	1620874.42	334235.26	39°24'35.638"N	80°50'30.621"W	2169.87	146.388	3.23	-0.34	3.21
8451.00	90.400	164.680	6554.06	2206.11	-1893.21	1227.23	1620899.17	334148.75	39°24'34.787"N	80°50'30.289"W	2256.17	147.048	3.35	0.17	3.34
8540.00	90.150	164.770	6553.63	2294.69	-1979.06	1250.67	1620921.32	334062.56	39°24'33.938"N	80°50'29.990"W	2341.13	147.709	0.30	-0.28	0.10
8630.00	89.940	163.570	6553.56	2384.34	-2065.65	1275.22	1620944.57	333975.62	39°24'33.082"N	80°50'29.678"W	2427.57	148.311	1.35	-0.23	-1.33
8720.00	90.090	162.170	6553.54	2474.10	-2151.85	1301.09	1620969.14	333889.04	39°24'32.230"N	80°50'29.348"W	2514.62	148.841	0.62	0.17	-0.60
8809.00	89.600	162.170	6553.78	2562.94	-2236.94	1327.70	1620994.48	333803.73	39°24'31.391"N	80°50'29.009"W	2601.15	149.308	1.11	-0.55	-0.97
8899.00	90.120	158.230	6554.00	2652.91	-2321.44	1358.18	1621023.68	333718.63	39°24'30.554"N	80°50'28.621"W	2689.56	149.670	4.42	0.58	-4.38
8989.00	89.940	156.950	6553.95	2742.87	-2404.64	1392.49	1621056.74	333634.93	39°24'29.732"N	80°50'28.284"W	2778.73	149.926	1.44	-0.20	-1.42
9078.00	90.150	158.280	6553.88	2831.84	-2486.93	1426.38	1621089.40	333552.14	39°24'28.918"N	80°50'27.752"W	2866.95	150.164	1.51	0.24	1.49
9168.00	90.060	158.540	6553.71	2921.83	-2570.62	1459.50	1621121.25	333467.97	39°24'28.091"N	80°50'27.330"W	2956.05	150.414	0.31	-0.10	0.29
9258.00	90.220	159.040	6553.49	3011.83	-2654.52	1492.06	1621152.55	333383.60	39°24'27.262"N	80°50'26.916"W	3045.12	150.660	0.58	0.18	0.56
9347.00	89.660	158.710	6553.59	3100.83	-2737.54	1524.14	1621183.38	333300.11	39°24'26.442"N	80°50'26.507"W	3133.23	150.893	0.73	-0.63	-0.37
9437.00	89.720	158.940	6554.07	3190.82	-2821.46	1556.65	1621214.62	333215.72	39°24'25.612"N	80°50'26.093"W	3222.39	151.114	0.26	0.07	0.26
9527.00	89.690	159.900	6554.54	3280.82	-2905.72	1588.28	1621244.99	333131.00	39°24'24.779"N	80°50'25.690"W	3311.47	151.339	1.07	-0.03	1.07

95.02113



Actual Wellpath Report

SHR1EHS AWP Proj: 15976'

Page 6 of 10



95-02113

REFERENCE WELLPATH IDENTIFICATION					
Operator	NOBLE ENERGY			Slot	Slot E
Area	Tyler County, WV			Well	SHR1EHS
Field	Tyler			Wellbore	SHR1EHS AWB
Facility	SHR 1 Pad				

WELLPATH DATA (193 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]
9616.00	89.510	160.340	6555.16	3369.80	-2989.41	1618.54	1621274.00	333046.87	39°24'23.952"N	80°50'25.304"W	3399.45	151.568	0.53	-0.20	0.49
9706.00	89.510	158.490	6555.93	3459.80	-3073.66	1650.19	1621304.37	332962.16	39°24'23.119"N	80°50'24.901"W	3488.62	151.770	2.06	0.00	-2.06
9796.00	89.850	157.490	6556.43	3549.78	-3157.09	1683.91	1621336.84	332878.23	39°24'22.295"N	80°50'24.472"W	3578.10	151.926	1.17	0.38	-1.11
9885.00	89.880	156.670	6556.64	3638.72	-3239.07	1718.57	1621370.27	332795.75	39°24'21.485"N	80°50'24.030"W	3666.75	152.051	0.92	0.03	-0.92
9974.00	90.180	156.740	6556.60	3727.64	-3320.81	1753.77	1621404.23	332713.50	39°24'20.677"N	80°50'23.582"W	3755.46	152.161	0.35	0.34	0.08
10064.00	89.910	158.670	6556.52	3817.60	-3404.08	1787.91	1621437.12	332629.73	39°24'19.854"N	80°50'23.147"W	3845.05	152.290	2.17	-0.30	2.14
10154.00	89.970	161.260	6556.62	3907.59	-3488.63	1818.74	1621466.68	332544.74	39°24'19.018"N	80°50'22.754"W	3934.25	152.465	2.88	0.07	2.88
10243.00	90.370	163.060	6556.35	3996.46	-3573.34	1846.01	1621492.67	332459.63	39°24'18.181"N	80°50'22.407"W	4022.00	152.679	2.07	0.45	2.02
10333.00	90.180	164.550	6555.92	4086.16	-3659.77	1871.11	1621516.48	332372.84	39°24'17.326"N	80°50'22.087"W	4110.35	152.921	1.67	-0.21	1.66
10423.00	90.120	165.120	6555.69	4175.71	-3746.63	1894.65	1621538.71	332285.64	39°24'16.468"N	80°50'21.788"W	4198.45	153.175	0.64	-0.07	0.63
10512.00	91.850	164.020	6554.16	4264.29	-3832.41	1918.33	1621561.10	332199.52	39°24'15.620"N	80°50'21.486"W	4285.71	153.410	2.30	1.94	-1.24
10601.00	90.740	157.750	6552.14	4353.19	-3916.44	1947.45	1621588.96	332115.07	39°24'14.790"N	80°50'21.115"W	4373.90	153.561	7.15	-1.25	-7.04
10690.00	90.620	155.630	6551.09	4442.09	-3998.16	1982.66	1621622.94	332032.83	39°24'13.982"N	80°50'20.667"W	4462.76	153.623	2.39	-0.13	-2.38
10780.00	90.180	155.520	6550.46	4531.92	-4080.10	2019.88	1621658.92	331950.34	39°24'13.172"N	80°50'20.193"W	4552.71	153.662	0.50	-0.49	-0.12
10869.00	90.400	154.640	6550.01	4620.69	-4160.82	2057.38	1621695.21	331869.08	39°24'12.374"N	80°50'19.715"W	4641.68	153.689	1.02	0.25	-0.99
10959.00	89.780	154.870	6549.87	4710.43	-4242.22	2095.76	1621732.36	331787.12	39°24'11.570"N	80°50'19.226"W	4731.66	153.709	0.73	-0.69	0.26
11048.00	89.940	156.450	6550.08	4799.26	-4323.31	2132.44	1621767.82	331705.50	39°24'10.768"N	80°50'18.759"W	4820.61	153.745	1.78	0.18	1.78
11137.00	89.720	158.030	6550.35	4888.21	-4405.37	2166.87	1621801.02	331622.93	39°24'09.957"N	80°50'18.320"W	4909.44	153.809	1.79	-0.25	1.78
11227.00	89.940	159.690	6550.62	4978.20	-4489.31	2199.33	1621832.21	331538.52	39°24'09.127"N	80°50'17.907"W	4999.10	153.900	1.86	0.24	1.84
11317.00	90.150	159.990	6550.55	5068.20	-4573.80	2230.35	1621861.96	331453.58	39°24'08.292"N	80°50'17.512"W	5088.62	154.004	0.41	0.23	0.33
11406.00	90.250	157.840	6550.23	5157.19	-4656.83	2262.36	1621892.72	331370.08	39°24'07.472"N	80°50'17.104"W	5177.30	154.089	2.42	0.11	-2.42
11496.00	90.120	155.530	6549.94	5247.10	-4739.48	2297.98	1621927.10	331286.91	39°24'06.655"N	80°50'16.651"W	5267.20	154.133	2.57	-0.14	-2.57
11585.00	90.220	153.940	6549.68	5335.83	-4819.96	2335.96	1621963.87	331205.87	39°24'05.859"N	80°50'16.167"W	5356.19	154.143	1.79	0.11	-1.79
11674.00	90.180	153.020	6549.37	5424.40	-4899.60	2375.70	1622002.41	331125.66	39°24'05.072"N	80°50'15.661"W	5445.18	154.132	1.03	-0.04	-1.03
11764.00	90.220	155.270	6549.05	5514.05	-4980.58	2414.95	1622040.44	331044.10	39°24'04.272"N	80°50'15.161"W	5535.18	154.133	2.50	0.04	2.50
11853.00	90.030	158.820	6548.86	5602.98	-5062.52	2449.65	1622073.91	330961.65	39°24'03.462"N	80°50'14.719"W	5624.05	154.179	3.99	-0.21	3.99
11943.00	90.030	160.340	6548.81	5692.97	-5146.86	2481.05	1622104.04	330876.85	39°24'02.628"N	80°50'14.319"W	5713.65	154.264	1.69	0.00	1.69
12032.00	90.370	161.660	6548.50	5781.92	-5231.01	2510.03	1622131.75	330792.28	39°24'01.797"N	80°50'13.950"W	5802.04	154.367	1.53	0.38	1.48
12122.00	90.060	162.270	6548.17	5871.81	-5316.59	2537.89	1622158.32	330706.30	39°24'00.951"N	80°50'13.595"W	5891.27	154.482	0.76	-0.34	0.68
12212.00	90.000	163.570	6548.12	5961.61	-5402.62	2564.33	1622183.46	330619.89	39°24'00.100"N	80°50'13.259"W	5980.30	154.609	1.45	-0.07	1.44



Actual Wellpath Report

SHRIEHS AWP Proj: 15976'

Page 7 of 10



95-02113

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY	Slot	Slot E
Area	Tyler County, WV	Well	SHRIEHS
Field	Tyler	Wellbore	SHRIEHS AWB
Facility	SHR 1 Pad		

WELLPATH DATA (193 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]
12301.00	90.120	165.460	6548.02	6050.22	-5488.38	2588.09	1622205.94	330533.79	39°23'59.253"N	80°50'12.956"W	6067.99	154.753	2.13	0.13	2.12
12391.00	90.060	165.820	6547.88	6139.64	-5575.57	2610.41	1622226.95	330446.28	39°23'58.391"N	80°50'12.672"W	6156.40	154.912	0.41	-0.07	0.40
12481.00	90.120	163.910	6547.74	6229.19	-5662.44	2633.90	1622249.14	330359.07	39°23'57.532"N	80°50'12.373"W	6245.06	155.054	2.12	0.07	-2.12
12570.00	90.310	162.270	6547.41	6317.97	-5747.59	2659.79	1622273.75	330273.55	39°23'56.691"N	80°50'12.043"W	6333.19	155.167	1.86	0.21	-1.84
12659.00	90.150	159.700	6547.05	6406.92	-5831.73	2688.79	1622301.47	330188.99	39°23'55.859"N	80°50'11.674"W	6421.73	155.247	2.89	-0.18	-2.89
12749.00	90.180	155.090	6546.79	6496.85	-5914.79	2723.37	1622334.81	330105.42	39°23'55.038"N	80°50'11.233"W	6511.64	155.277	5.12	0.03	-5.12
12839.00	89.660	153.820	6546.92	6586.55	-5995.99	2762.18	1622372.39	330023.65	39°23'54.236"N	80°50'10.739"W	6601.63	155.266	1.52	-0.58	-1.41
12928.00	89.720	155.000	6547.40	6675.24	-6076.26	2800.62	1622409.63	329942.82	39°23'53.442"N	80°50'10.249"W	6690.62	155.254	1.33	0.07	1.33
13018.00	89.630	156.070	6547.91	6765.06	-6158.18	2837.89	1622445.66	329860.36	39°23'52.633"N	80°50'09.775"W	6780.62	155.258	1.19	-0.10	1.19
13107.00	89.600	157.500	6548.51	6853.98	-6239.97	2872.97	1622479.51	329778.06	39°23'51.824"N	80°50'09.328"W	6869.58	155.278	1.61	-0.03	1.61
13197.00	89.660	157.050	6549.09	6943.93	-6322.98	2907.74	1622513.03	329694.54	39°23'51.004"N	80°50'08.885"W	6959.52	155.304	0.50	0.07	-0.50
13287.00	90.120	157.200	6549.26	7033.87	-6405.90	2942.72	1622546.77	329611.11	39°23'50.184"N	80°50'08.440"W	7049.48	155.327	0.54	0.51	0.17
13376.00	89.850	158.280	6549.28	7122.85	-6488.26	2976.44	1622579.24	329528.25	39°23'49.370"N	80°50'08.011"W	7138.40	155.357	1.25	-0.30	1.21
13466.00	89.970	159.220	6549.43	7212.84	-6572.14	3009.06	1622610.60	329443.90	39°23'48.541"N	80°50'07.595"W	7228.24	155.399	1.05	0.13	1.04
13555.00	90.000	160.560	6549.45	7301.83	-6655.72	3039.66	1622639.94	329359.88	39°23'47.715"N	80°50'07.205"W	7316.97	155.454	1.51	0.03	1.51
13645.00	90.150	159.840	6549.33	7391.82	-6740.40	3070.14	1622669.15	329274.76	39°23'46.878"N	80°50'06.817"W	7406.67	155.512	0.82	0.17	-0.80
13734.00	90.030	158.910	6549.19	7480.82	-6823.69	3101.49	1622699.25	329191.01	39°23'46.055"N	80°50'06.418"W	7495.46	155.557	1.05	-0.13	-1.04
13824.00	90.090	159.220	6549.10	7570.82	-6907.75	3133.65	1622730.14	329106.48	39°23'45.224"N	80°50'06.009"W	7585.30	155.599	0.35	0.07	0.34
13913.00	89.910	160.660	6549.10	7659.80	-6991.35	3164.18	1622759.41	329022.44	39°23'44.397"N	80°50'05.620"W	7674.04	155.649	1.63	-0.20	1.62
14003.00	90.000	160.660	6549.17	7749.77	-7076.27	3193.98	1622787.94	328937.09	39°23'43.558"N	80°50'05.240"W	7763.70	155.707	0.10	0.10	0.00
14093.00	90.120	161.460	6549.07	7839.72	-7161.39	3223.19	1622815.87	328851.54	39°23'42.717"N	80°50'04.868"W	7853.31	155.768	0.90	0.13	0.89
14183.00	89.970	161.870	6549.00	7929.63	-7246.83	3251.50	1622842.90	328765.70	39°23'41.872"N	80°50'04.508"W	7942.84	155.835	0.49	-0.17	0.46
14272.00	90.120	161.880	6548.93	8018.53	-7331.41	3279.19	1622869.31	328680.71	39°23'41.036"N	80°50'04.155"W	8031.35	155.902	0.17	0.17	0.01
14362.00	89.970	163.060	6548.86	8108.38	-7417.23	3306.30	1622895.13	328594.50	39°23'40.188"N	80°50'03.810"W	8120.77	155.975	1.32	-0.17	1.31
14451.00	89.910	162.270	6548.96	8197.21	-7502.18	3332.82	1622920.37	328509.16	39°23'39.348"N	80°50'03.473"W	8209.17	156.047	0.89	-0.07	-0.89
14541.00	89.970	159.720	6549.05	8287.16	-7587.27	3362.12	1622948.40	328423.65	39°23'38.507"N	80°50'03.099"W	8298.83	156.101	2.83	0.07	-2.83
14631.00	90.000	159.290	6549.07	8377.15	-7671.57	3393.63	1622978.64	328338.89	39°23'37.674"N	80°50'02.698"W	8388.67	156.137	0.48	0.03	-0.48
14720.00	90.000	160.180	6549.07	8466.15	-7755.06	3424.46	1623008.21	328254.95	39°23'36.849"N	80°50'02.306"W	8477.50	156.175	1.00	0.00	1.00
14810.00	90.030	160.270	6549.05	8556.13	-7839.76	3454.91	1623037.39	328169.82	39°23'36.012"N	80°50'01.918"W	8567.27	156.217	0.11	0.03	0.10
14900.00	90.370	158.480	6548.74	8646.13	-7923.98	3486.61	1623067.82	328085.13	39°23'35.179"N	80°50'01.514"W	8657.14	156.250	2.02	0.38	-1.99



Actual Wellpath Report

SHR1EHS AWP Proj: 15976'
Page 8 of 10



95-02113

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY	Slot	Slot E
Area	Tyler County, WV	Well	SHR1EHS
Field	Tyler	Wellbore	SHR1EHS AWB
Facility	SHR 1 Pad		

WELLPATH DATA (193 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]	
14989.00	90.220	156.180	6548.28	8735.07	-8006.10	3520.91	1623100.88	328002.51	39°23'34.368"N	80°50'01.078"W	8746.11	156.261	2.59	-0.17	-2.58	
15079.00	90.340	155.360	6547.84	8824.92	-8088.17	3557.85	1623136.58	327919.90	39°23'33.556"N	80°50'00.607"W	8836.11	156.256	0.92	0.13	-0.91	
15168.00	90.650	156.710	6547.07	8913.78	-8169.49	3593.99	1623171.51	327838.05	39°23'32.753"N	80°50'00.147"W	8925.10	156.254	1.56	0.35	1.52	
15258.00	90.520	159.380	6546.15	9003.75	-8252.96	3627.64	1623203.90	327754.10	39°23'31.928"N	80°49'59.719"W	9015.04	156.272	2.97	-0.14	2.97	
15347.00	90.950	160.640	6545.01	9092.73	-8336.58	3658.06	1623233.06	327670.03	39°23'31.101"N	80°49'59.331"W	9103.85	156.308	1.50	0.48	1.42	
15437.00	90.950	159.540	6543.52	9182.71	-8421.19	3688.70	1623262.43	327584.98	39°23'30.265"N	80°49'58.941"W	9193.64	156.345	1.22	0.00	-1.22	
15526.00	90.860	158.500	6542.11	9271.69	-8504.28	3720.57	1623293.04	327501.42	39°23'29.444"N	80°49'58.536"W	9282.53	156.371	1.17	-0.10	-1.17	
15616.00	91.050	157.770	6540.61	9361.67	-8587.79	3754.08	1623325.30	327417.42	39°23'28.618"N	80°49'58.109"W	9372.48	156.388	0.84	0.21	-0.81	
15706.00	90.090	155.980	6539.71	9451.59	-8670.55	3789.42	1623359.40	327334.15	39°23'27.800"N	80°49'57.659"W	9462.46	156.393	2.26	-1.07	-1.99	
15795.00	90.250	156.140	6539.45	9540.46	-8751.90	3825.54	1623394.28	327252.28	39°23'26.996"N	80°49'57.199"W	9551.46	156.389	0.25	0.18	0.18	
15872.00	90.150	157.210	6539.18	9617.39	-8822.60	3856.02	1623423.71	327181.13	39°23'26.297"N	80°49'56.811"W	9628.46	156.392	1.40	-0.13	1.39	
15951.00	90.120	157.730	6539.00	9696.35	-8895.57	3886.29	1623452.88	327107.71	39°23'25.576"N	80°49'56.425"W	9707.45	156.400	0.66	-0.04	0.66	
15976.00	90.120	157.730	6538.94	9721.34	-8918.71	3895.77	1623462.01	327084.44	39°23'25.347"N	80°49'56.305"W	9732.44	156.404	0.00	0.00	0.00	



Actual Wellpath Report

SHR1EHS AWP Proj: 15976'
Page 9 of 10



95-02113

REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY	Slot	Slot E
Area	Tyler County, WV	Well	SHR1EHS
Field	Tyler	Wellbore	SHR1EHS AWB
Facility	SHR 1 Pad		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SHR1EHS BHL Rev-2		6550.00	-8919.43	3893.92	1623460.15	327083.75	39°23'25.340"N	80°49'56.328"W	point
SHR1EHS LP Rev-2		6550.00	-499.94	685.74	1620378.65	335549.90	39°24'48.557"N	80°50'37.187"W	point

WELLPATH COMPOSITION - Ref Wellbore: SHR1EHS AWB Ref Wellpath: SHR1EHS AWP Proj: 15976'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.60	2398.60	Generic gyro - northseeking (Standard)	01_VES Gyro <9-5/8"> (100'-2380')	SHR1EHS AWB
2398.60	15951.00	NaviTrak (MagCorr)	02_BHI AT Curve <8-3/4"> (2398.6')(2606'-15951')	SHR1EHS AWB
15951.00	15976.00	Blind Drilling (std)	Projection to bit	SHR1EHS AWB



Actual Wellpath Report

SHR1EHS AWP Proj: 15976'

Page 10 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot E
Area	Tyler County, WV	Well	SHR1EHS
Field	Tyler	Wellbore	SHR1EHS AWB
Facility	SHR 1 Pad		

COMMENTS

Wellpath general comments

API: 47-095-02113-0000

BHI Job #: 5774042

Rig: Precision 542

Duration: 12/17/2013-12/26/2013

VES Gyro <9-5/8"> (100'-2380')

BHI AT Curve <8-3/4"> (2398.6')(2606'-15951')

Projected MD at TD: 15976'

95-02113