



Actual Wellpath Report

SHR1AHS AWP Proj: 15972'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot A
Area	Tyler County, WV	Well	SHR1AHS
Field	Tyler	Wellbore	SHR1AHS 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	0.999948	Report Generated	2/12/2014 at 11:46:57 AM
Convergence at slot	n/a	Database/Source file	Well Architect Eastern US/SHR1AHS_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	1619639.13	336008.76	39°24'52.983"N	80°50'46.696"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 A)	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°

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Facility	SHR 1 Pad		

WELLPATH DATA (189 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	296.140	0.00	0.00	0.00	0.00	1619639.13	336008.76	39°24'52.983"N	80°50'46.696"W	0.00	0.000	0.00	0.00	0.00
18.60	0.000	296.140	18.60	0.00	0.00	0.00	1619639.13	336008.76	39°24'52.983"N	80°50'46.696"W	0.00	0.000	0.00	0.00	0.00
118.60	0.190	296.140	118.60	-0.12	0.07	-0.15	1619638.98	336008.84	39°24'52.983"N	80°50'46.698"W	0.17	296.140	0.19	0.19	0.00
218.60	0.140	243.050	218.60	-0.23	0.09	-0.41	1619638.72	336008.86	39°24'52.984"N	80°50'46.702"W	0.42	282.579	0.15	-0.05	-53.09
318.60	0.320	143.990	318.60	0.05	-0.19	-0.35	1619638.78	336008.57	39°24'52.981"N	80°50'46.701"W	0.40	241.528	0.37	0.18	-99.06
418.60	0.480	155.410	418.60	0.74	-0.80	-0.01	1619639.11	336007.96	39°24'52.975"N	80°50'46.697"W	0.80	180.923	0.18	0.16	11.42
518.60	0.100	162.050	518.59	1.25	-1.26	0.19	1619639.30	336007.50	39°24'52.970"N	80°50'46.694"W	1.28	171.506	0.38	-0.38	6.64
618.60	0.380	192.910	618.59	1.61	-1.67	0.14	1619639.25	336007.09	39°24'52.966"N	80°50'46.695"W	1.67	175.161	0.30	0.28	30.86
718.60	0.380	230.460	718.59	1.99	-2.20	-0.19	1619638.91	336006.56	39°24'52.961"N	80°50'46.699"W	2.21	184.897	0.24	0.00	37.55
818.60	0.310	261.020	818.59	2.04	-2.46	-0.71	1619638.38	336006.32	39°24'52.958"N	80°50'46.706"W	2.56	196.164	0.19	-0.07	30.56
918.60	0.100	282.740	918.59	1.94	-2.48	-1.06	1619638.03	336006.30	39°24'52.958"N	80°50'46.710"W	2.70	203.235	0.22	-0.21	21.72
1018.60	0.050	294.080	1018.59	1.86	-2.44	-1.19	1619637.90	336006.34	39°24'52.959"N	80°50'46.712"W	2.72	205.968	0.05	-0.05	11.34
1118.60	0.030	311.390	1118.59	1.80	-2.41	-1.25	1619637.85	336006.37	39°24'52.959"N	80°50'46.712"W	2.71	207.423	0.02	-0.02	17.31
1218.60	0.080	356.150	1218.59	1.71	-2.32	-1.27	1619637.82	336006.46	39°24'52.960"N	80°50'46.713"W	2.65	208.758	0.06	0.05	44.76
1318.60	0.270	8.200	1318.59	1.44	-2.02	-1.24	1619637.86	336006.76	39°24'52.963"N	80°50'46.712"W	2.37	211.671	0.19	0.19	12.05
1418.60	0.110	31.780	1418.59	1.18	-1.70	-1.16	1619637.95	336007.08	39°24'52.966"N	80°50'46.711"W	2.06	214.278	0.17	-0.16	23.58
1518.60	0.240	27.040	1518.59	0.98	-1.43	-1.01	1619638.09	336007.34	39°24'52.969"N	80°50'46.709"W	1.76	215.276	0.13	0.13	-4.74
1618.60	0.490	75.260	1618.59	0.88	-1.14	-0.51	1619638.61	336007.63	39°24'52.971"N	80°50'46.703"W	1.24	203.937	0.38	0.25	48.22
1718.60	0.230	94.050	1718.58	1.01	-1.04	0.11	1619639.22	336007.72	39°24'52.972"N	80°50'46.695"W	1.05	174.054	0.28	-0.26	18.79
1818.60	0.220	192.130	1818.58	1.26	-1.25	0.27	1619639.38	336007.51	39°24'52.970"N	80°50'46.693"W	1.27	167.830	0.34	-0.01	98.08
1918.60	0.190	222.270	1918.58	1.50	-1.56	0.12	1619639.22	336007.20	39°24'52.967"N	80°50'46.695"W	1.56	175.711	0.11	-0.03	30.14
2018.60	0.140	219.460	2018.58	1.63	-1.77	-0.07	1619639.03	336006.99	39°24'52.965"N	80°50'46.697"W	1.77	182.343	0.05	-0.05	-2.81
2118.60	0.160	208.480	2118.58	1.78	-1.99	-0.22	1619638.88	336006.77	39°24'52.963"N	80°50'46.699"W	2.00	186.218	0.03	0.02	-10.98
2218.60	0.180	181.000	2218.58	2.02	-2.27	-0.29	1619638.81	336006.50	39°24'52.960"N	80°50'46.700"W	2.29	187.185	0.08	0.02	-27.48
2318.60	0.190	177.760	2318.58	2.32	-2.59	-0.28	1619638.81	336006.17	39°24'52.957"N	80°50'46.700"W	2.61	186.216	0.01	0.01	-3.24
2361.60	0.220	173.710	2361.58	2.47	-2.75	-0.27	1619638.82	336006.02	39°24'52.956"N	80°50'46.700"W	2.76	185.627	0.08	0.07	-9.42
2569.00	0.060	336.590	2568.98	2.75	-3.04	-0.27	1619638.81	336005.72	39°24'52.953"N	80°50'46.700"W	3.05	185.073	0.13	-0.08	78.53
2659.00	3.840	252.240	2658.91	2.54	-3.92	-3.16	1619635.91	336004.89	39°24'52.944"N	80°50'46.737"W	5.03	218.887	4.26	4.20	-93.72
2749.00	5.890	251.760	2748.58	2.16	-6.28	-10.42	1619628.62	336002.63	39°24'52.921"N	80°50'46.829"W	12.16	238.904	2.28	2.28	-0.53
2838.00	7.760	251.020	2836.95	1.76	-9.67	-20.44	1619618.55	335999.40	39°24'52.887"N	80°50'46.957"W	22.61	244.685	2.10	2.10	-0.83

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Field	Tyler	Wellbore	SHR1AHS AWB
Facility	SHR 1 Pad		

WELLPATH DATA (189 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]
2928.00	10.170	245.110	2925.85	2.11	-14.99	-33.39	1619605.52	335994.28	39°24'52.835"N	80°50'47.122"W	36.60	245.827	2.86	2.68	-6.57
3017.00	12.740	244.450	3013.07	3.47	-22.53	-49.38	1619589.42	335986.98	39°24'52.760"N	80°50'47.326"W	54.27	245.474	2.89	2.89	-0.74
3107.00	14.240	251.160	3100.58	3.89	-30.38	-68.81	1619569.88	335979.41	39°24'52.682"N	80°50'47.573"W	75.22	246.175	2.41	1.67	7.46
3196.00	16.760	258.120	3186.35	1.50	-36.56	-91.73	1619546.87	335973.58	39°24'52.621"N	80°50'47.865"W	98.75	248.269	3.51	2.83	7.82
3286.00	17.230	256.740	3272.42	-2.29	-42.29	-117.40	1619521.11	335968.24	39°24'52.565"N	80°50'48.192"W	124.79	250.190	0.69	0.52	-1.53
3375.00	18.250	260.870	3357.19	-6.86	-47.53	-143.99	1619494.45	335963.40	39°24'52.513"N	80°50'48.531"W	151.63	251.734	1.82	1.15	4.64
3465.00	21.420	264.180	3441.84	-14.00	-51.43	-174.27	1619464.12	335959.95	39°24'52.474"N	80°50'48.917"W	181.70	253.558	3.74	3.52	3.68
3554.00	22.890	253.940	3524.30	-19.66	-57.87	-207.08	1619431.22	335954.00	39°24'52.411"N	80°50'49.335"W	215.01	254.387	4.64	1.65	-11.51
3644.00	22.800	249.110	3607.25	-21.12	-68.93	-240.20	1619397.94	335943.44	39°24'52.301"N	80°50'49.757"W	249.89	253.988	2.09	-0.10	-5.37
3734.00	22.690	253.500	3690.25	-22.43	-80.08	-273.13	1619364.84	335932.79	39°24'52.191"N	80°50'50.177"W	284.63	253.660	1.89	-0.12	4.88
3823.00	21.450	264.530	3772.77	-28.06	-86.51	-305.81	1619332.08	335926.85	39°24'52.128"N	80°50'50.593"W	317.81	254.205	4.85	-1.39	12.39
3913.00	22.220	256.670	3856.33	-34.65	-92.00	-338.76	1619299.05	335921.85	39°24'52.073"N	80°50'51.013"W	351.03	254.806	3.36	0.86	-8.73
4003.00	26.740	248.200	3938.24	-36.55	-103.45	-374.14	1619263.50	335910.93	39°24'51.960"N	80°50'51.463"W	388.18	254.543	6.35	5.02	-9.41
4092.00	27.910	249.330	4017.31	-36.29	-118.24	-412.22	1619225.20	335896.71	39°24'51.814"N	80°50'51.949"W	428.85	253.995	1.44	1.31	1.27
4182.00	27.610	258.730	4096.99	-39.84	-129.76	-452.40	1619184.86	335885.80	39°24'51.700"N	80°50'52.461"W	470.65	253.996	4.87	-0.33	10.44
4272.00	27.100	266.300	4176.95	-49.37	-135.16	-493.33	1619143.86	335881.01	39°24'51.647"N	80°50'52.982"W	511.51	254.678	3.90	-0.57	8.41
4362.00	27.230	267.330	4257.02	-61.84	-137.44	-534.35	1619102.81	335879.35	39°24'51.624"N	80°50'53.505"W	551.75	255.575	0.54	0.14	1.14
4451.00	25.740	266.280	4336.68	-73.89	-139.64	-573.98	1619063.15	335877.74	39°24'51.602"N	80°50'54.010"W	590.72	256.326	1.75	-1.67	-1.18
4541.00	26.730	259.500	4417.43	-83.30	-144.60	-613.39	1619023.67	335873.37	39°24'51.553"N	80°50'54.512"W	630.21	256.735	3.51	1.10	-7.53
4631.00	27.460	255.600	4497.56	-89.27	-153.45	-653.40	1618983.54	335865.12	39°24'51.466"N	80°50'55.021"W	671.17	256.783	2.13	0.81	-4.33
4720.00	28.700	253.480	4576.08	-93.20	-164.63	-693.76	1618943.02	335854.55	39°24'51.355"N	80°50'55.536"W	713.03	256.650	1.79	1.39	-2.38
4810.00	26.570	260.210	4655.83	-98.70	-174.20	-734.33	1618902.31	335845.59	39°24'51.261"N	80°50'56.053"W	754.71	256.655	4.20	-2.37	7.48
4899.00	25.130	262.650	4735.92	-106.94	-180.01	-772.69	1618863.87	335840.36	39°24'51.204"N	80°50'56.541"W	793.38	256.886	2.01	-1.62	2.74
4989.00	27.960	260.820	4816.43	-115.67	-185.82	-812.48	1618824.00	335835.15	39°24'51.146"N	80°50'57.048"W	833.46	257.118	3.27	3.14	-2.03
5134.00	28.120	260.100	4944.41	-129.05	-197.12	-879.70	1618756.62	335824.86	39°24'51.034"N	80°50'57.905"W	901.51	257.370	0.26	0.11	-0.50
5223.00	28.120	259.010	5022.90	-136.64	-204.72	-920.95	1618715.27	335817.87	39°24'50.959"N	80°50'58.430"W	943.43	257.467	0.58	0.00	-1.22
5313.00	27.740	258.760	5102.42	-143.77	-212.85	-962.32	1618673.79	335810.37	39°24'50.879"N	80°50'58.957"W	985.57	257.528	0.44	-0.42	-0.28
5402.00	27.740	259.620	5181.19	-151.00	-220.62	-1003.00	1618632.99	335803.21	39°24'50.802"N	80°50'59.476"W	1026.98	257.595	0.45	0.00	0.97
5492.00	27.390	261.440	5260.98	-159.22	-227.47	-1044.08	1618591.82	335796.97	39°24'50.734"N	80°51'00.000"W	1068.57	257.709	1.01	-0.39	2.02
5581.00	27.270	262.440	5340.04	-168.27	-233.20	-1084.54	1618551.28	335791.85	39°24'50.678"N	80°51'00.515"W	1109.32	257.865	0.53	-0.13	1.12

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Area	Tyler County, WV
Field	Tyler
Facility	SHR I Pad
Well	SHRIAHS
Slot	SHRIAHS AWB
Slot	Slot A

WELLPATH DATA (189 stations)

MID	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]	[US ft]	[ft]	[ft]	[ft]	[°]	[%/100ft]	[%/100ft]	[%/100ft]
5671.00	27.270	262.530	5420.04	-177.79	-238.59	-1125.42	1618510.32	335787.07	39°24'50.624"N	80°51'01.036"W	1150.43	258.030	0.05	0.00	0.10	
5761.00	26.730	261.400	5500.23	-186.86	-244.30	-1165.88	1618469.79	335781.97	39°24'50.568"N	80°51'01.551"W	1191.20	258.165	0.83	-0.60	-1.26	
5850.00	27.240	258.730	5579.54	-194.51	-251.28	-1205.64	1618429.92	335775.59	39°24'50.499"N	80°51'02.058"W	1231.55	258.227	1.48	0.57	-3.00	
5940.00	27.110	256.640	5659.61	-200.62	-260.04	-1245.80	1618389.65	335767.43	39°24'50.412"N	80°51'02.569"W	1272.65	258.210	1.07	-0.14	-2.32	
6029.00	26.960	256.480	5738.89	-205.84	-269.44	-1285.14	1618350.17	335758.62	39°24'50.319"N	80°51'03.071"W	1313.08	258.159	0.19	-0.17	-0.18	
6119.00	27.260	258.950	5819.00	-211.96	-278.16	-1325.21	1618309.97	335750.50	39°24'50.233"N	80°51'03.581"W	1354.09	258.146	1.29	0.33	2.74	
6208.00	27.320	260.920	5898.10	-219.60	-285.29	-1365.38	1618269.70	335743.98	39°24'50.163"N	80°51'04.093"W	1394.87	258.198	1.02	0.07	2.21	
6298.00	27.220	258.390	5978.10	-227.13	-292.69	-1405.94	1618229.04	335737.18	39°24'50.089"N	80°51'04.610"W	1436.08	258.240	1.29	-0.11	-2.81	
6342.00	27.760	250.280	6017.14	-228.95	-298.18	-1425.45	1618209.45	335731.99	39°24'50.035"N	80°51'04.858"W	1456.30	258.185	8.59	1.23	-18.43	
6387.00	29.110	240.310	6056.73	-227.48	-307.14	-1444.84	1618189.93	335723.32	39°24'49.947"N	80°51'05.105"W	1477.12	257.999	10.96	3.00	-22.16	
6432.00	30.030	229.780	6095.90	-222.06	-319.84	-1462.96	1618171.63	335710.89	39°24'49.821"N	80°51'05.336"W	1497.51	257.668	11.71	2.04	-23.40	
6477.00	30.480	221.030	6134.79	-212.94	-335.73	-1479.05	1618155.29	335695.25	39°24'49.664"N	80°51'05.541"W	1516.68	257.211	9.84	1.00	-19.44	
6522.00	31.190	212.860	6173.45	-200.67	-354.14	-1492.87	1618141.20	335677.05	39°24'49.482"N	80°51'05.717"W	1534.30	256.655	9.43	1.58	-18.16	
6570.00	32.670	207.680	6211.64	-185.73	-374.69	-1504.84	1618128.92	335656.69	39°24'49.279"N	80°51'05.870"W	1550.79	256.018	6.92	3.29	-11.51	
6614.00	36.200	201.930	6250.41	-167.13	-398.81	-1515.92	1618117.48	335632.73	39°24'49.041"N	80°51'06.011"W	1567.51	255.261	10.20	7.51	-12.23	
6656.00	40.350	197.130	6283.38	-147.30	-423.32	-1524.57	1618108.47	335608.35	39°24'48.798"N	80°51'06.121"W	1582.25	254.482	12.15	9.88	-11.43	
6701.00	44.220	191.720	6316.68	-122.58	-452.63	-1532.05	1618100.55	335579.16	39°24'48.509"N	80°51'06.216"W	1597.51	253.541	11.80	8.60	-12.02	
6746.00	47.720	187.340	6347.96	-94.67	-484.52	-1537.37	1618094.76	335547.35	39°24'48.193"N	80°51'06.284"W	1611.91	252.507	10.46	7.78	-9.73	
6791.00	51.760	184.390	6377.04	-64.00	-518.67	-1540.85	1618090.77	335513.26	39°24'47.856"N	80°51'06.328"W	1625.80	251.996	10.28	8.98	-6.56	
6835.00	55.260	183.300	6403.20	-31.86	-553.96	-1543.21	1618087.87	335478.01	39°24'47.507"N	80°51'06.358"W	1639.63	250.254	8.20	7.95	-2.48	
6880.00	58.350	181.740	6427.84	2.70	-591.58	-1544.86	1618085.66	335440.43	39°24'47.135"N	80°51'06.379"W	1654.25	249.047	7.45	6.87	-3.47	
6925.00	60.940	180.420	6450.58	38.71	-630.40	-1545.59	1618084.36	335401.63	39°24'46.752"N	80°51'06.389"W	1669.20	247.811	6.29	5.76	-2.93	
6970.00	63.860	178.090	6471.42	76.16	-670.26	-1545.06	1618084.29	335361.76	39°24'46.363"N	80°51'06.382"W	1684.18	246.548	7.95	6.49	-5.18	
7015.00	66.700	175.790	6490.24	115.07	-711.07	-1542.87	1618085.87	335320.93	39°24'45.954"N	80°51'06.354"W	1698.84	245.256	7.83	6.31	-5.11	
7059.00	70.420	172.240	6506.33	154.64	-751.79	-1538.58	1618089.54	335280.15	39°24'45.552"N	80°51'06.299"W	1712.43	243.959	11.31	8.45	-8.07	
7104.00	74.070	168.870	6520.05	196.64	-794.05	-1531.54	1618095.95	335237.80	39°24'45.134"N	80°51'06.209"W	1725.14	242.595	10.80	8.11	-7.49	
7149.00	77.530	165.770	6531.09	229.81	-836.59	-1521.96	1618104.89	335195.11	39°24'44.714"N	80°51'06.087"W	1736.73	241.203	10.18	7.69	-6.89	
7194.00	80.310	164.800	6539.74	283.71	-879.30	-1510.74	1618115.47	335152.24	39°24'44.292"N	80°51'05.944"W	1748.00	239.799	6.53	6.18	-2.16	
7238.00	82.250	163.240	6546.41	327.04	-921.11	-1498.76	1618126.81	335110.26	39°24'43.879"N	80°51'05.792"W	1759.19	238.426	5.63	4.41	-3.55	
7283.00	83.270	160.820	6552.08	371.62	-963.57	-1484.99	1618139.95	335067.61	39°24'43.459"N	80°51'05.616"W	1770.22	237.022	5.80	2.27	-5.38	

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Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

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

WELLPATH DATA (189 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US m]	Grid North [US m]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
7327.00	86.740	157.860	6555.91	415.45	-1004.57	-1469.53	1618154.79	335026.38	39°24'43.054"N	80°51'05.419"W	1780.08	235.643	10.35	7.89	-6.73
7372.00	89.570	155.320	6557.36	460.37	-1045.84	-1451.66	1618172.04	334984.85	39°24'42.646"N	80°51'05.192"W	1789.16	234.229	8.45	6.29	-5.64
7462.00	90.030	153.030	6557.68	550.03	-1126.84	-1412.46	1618210.02	334903.27	39°24'41.845"N	80°51'04.692"W	1806.88	231.418	2.60	0.51	-2.54
7551.00	90.060	150.660	6557.61	638.30	-1205.31	-1370.46	1618250.83	334824.19	39°24'41.070"N	80°51'04.157"W	1825.08	228.669	2.66	0.03	-2.66
7641.00	89.880	150.590	6557.65	727.31	-1283.73	-1326.32	1618293.80	334745.11	39°24'40.295"N	80°51'03.594"W	1845.83	225.935	0.21	-0.20	-0.08
7730.00	89.970	153.250	6557.77	815.59	-1362.25	-1284.43	1618334.50	334665.98	39°24'39.519"N	80°51'03.061"W	1872.29	223.316	2.99	0.10	2.99
7820.00	90.060	159.610	6557.75	905.45	-1444.70	-1248.46	1618369.23	334583.01	39°24'38.704"N	80°51'02.602"W	1909.40	220.832	7.07	0.10	7.07
7910.00	89.880	163.870	6557.79	995.33	-1530.15	-1220.27	1618396.14	334497.15	39°24'37.859"N	80°51'02.243"W	1957.14	218.572	4.74	-0.20	4.73
7990.00	90.030	161.600	6557.86	1084.15	-1615.13	-1193.85	1618421.27	334411.79	39°24'37.019"N	80°51'01.907"W	2008.47	216.471	2.56	0.17	-2.55
8089.00	90.000	159.680	6557.84	1174.12	-1700.04	-1164.02	1618449.83	334326.45	39°24'36.180"N	80°51'01.526"W	2060.36	214.399	2.13	-0.03	-2.13
8178.00	89.970	162.210	6557.86	1263.07	-1784.16	-1134.97	1618477.62	334241.91	39°24'35.349"N	80°51'01.156"W	2114.56	212.462	2.84	-0.03	2.84
8268.00	90.150	166.330	6557.77	1352.69	-1870.77	-1110.57	1618500.71	334154.95	39°24'34.493"N	80°51'00.845"W	2175.58	210.695	4.58	0.20	4.58
8357.00	90.090	164.690	6557.58	1441.13	-1956.93	-1088.30	1618521.68	334068.46	39°24'33.641"N	80°51'00.562"W	2239.19	209.080	1.84	-0.07	-1.84
8447.00	89.970	164.540	6557.53	1530.72	-2043.71	-1064.43	1618544.26	333981.34	39°24'32.784"N	80°51'00.257"W	2304.29	207.512	0.21	-0.13	-0.17
8536.00	90.090	162.360	6557.49	1619.46	-2129.01	-1039.08	1618568.33	333895.67	39°24'31.940"N	80°50'59.934"W	2369.05	206.015	2.45	0.13	-2.45
8626.00	89.940	157.230	6557.46	1709.43	-2213.45	-1008.00	1618598.13	333810.79	39°24'31.106"N	80°50'59.538"W	2432.16	204.484	5.70	-0.17	-5.70
8716.00	90.060	157.800	6557.46	1799.39	-2296.61	-973.58	1618631.30	333727.13	39°24'30.284"N	80°50'59.100"W	2494.45	202.973	0.65	0.13	0.63
8805.00	90.090	155.700	6557.35	1888.31	-2378.37	-938.45	1618665.20	333644.85	39°24'29.476"N	80°50'58.652"W	2556.82	201.533	2.36	0.03	-2.36
8895.00	90.180	154.350	6557.14	1978.08	-2459.96	-900.45	1618701.97	333562.71	39°24'28.670"N	80°50'58.168"W	2619.58	200.105	1.50	0.10	-1.50
8985.00	90.090	157.890	6556.92	2067.94	-2542.24	-864.02	1618737.15	333479.89	39°24'27.856"N	80°50'57.704"W	2685.05	198.771	3.93	-0.10	3.93
9074.00	90.460	157.650	6556.50	2156.91	-2624.62	-830.35	1618769.59	333397.02	39°24'27.042"N	80°50'57.275"W	2752.84	197.556	0.50	0.42	-0.27
9164.00	90.370	158.710	6555.84	2246.89	-2708.17	-796.90	1618801.78	333312.98	39°24'26.216"N	80°50'56.849"W	2822.98	196.397	1.18	-0.10	1.18
9254.00	90.370	157.120	6555.26	2336.87	-2791.56	-763.07	1618834.36	333229.10	39°24'25.322"N	80°50'56.418"W	2893.98	195.288	1.77	0.00	-1.77
9343.00	90.680	155.910	6554.45	2425.77	-2873.19	-727.60	1618868.60	333146.96	39°24'24.585"N	80°50'55.966"W	2963.88	194.211	1.40	0.35	-1.36
9433.00	90.680	158.590	6553.38	2515.71	-2956.17	-692.80	1618902.15	333063.46	39°24'23.765"N	80°50'55.523"W	3036.27	193.190	2.98	0.00	2.98
9522.00	90.490	161.340	6552.47	2604.68	-3039.77	-662.32	1618931.37	332979.42	39°24'22.939"N	80°50'55.134"W	3111.09	192.292	3.10	-0.21	3.09
9612.00	90.280	160.700	6551.87	2694.63	-3124.88	-633.05	1618959.36	332893.89	39°24'22.098"N	80°50'54.761"W	3188.35	191.452	0.75	-0.23	-0.71
9702.00	89.940	154.830	6551.69	2784.57	-3208.15	-599.00	1618992.15	332810.12	39°24'21.275"N	80°50'54.328"W	3263.59	190.576	6.53	-0.38	-6.52
9791.00	90.220	153.260	6551.57	2873.21	-3288.17	-560.05	1619029.90	332729.53	39°24'20.484"N	80°50'53.831"W	3335.52	189.666	1.79	0.31	-1.76
9881.00	90.000	151.740	6551.40	2962.61	-3368.00	-518.50	1619070.25	332649.10	39°24'19.695"N	80°50'53.302"W	3407.67	188.752	1.71	-0.24	-1.69

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Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY
Area	Tyler County, WV
Field	Tyler
Facility	SHR 1 Pad
Well	SHRIAHS
Well	SHRIAHS AWB
Well	SHRIAHS
Well	SHRIAHS AWB

WELLPATH DATA (189 stations)

MD [m]	Inclination [°]	Azimuth [°]	TVD [m]	Vert Sect [m]	North [m]	East [m]	Grid East [m]	Grid North [m]	Latitude	Longitude	Closure Dist [m]	Closure Dir [°]	DLS [°/100m]	Buidl Rate [°/100m]	Turn Rate [°/100m]
9970.00	89.910	163.920	6551.47	3051.41	-3450.26	-484.98	1619102.53	332566.34	39°24'18.882"N	80°50'52.875"W	3484.18	188.001	13.69	-0.10	13.69
10060.00	89.850	162.730	6551.65	3141.17	-3536.47	-459.15	1619127.06	332479.76	39°24'18.030"N	80°50'52.546"W	3566.16	187.398	1.32	-0.07	-1.32
10150.00	89.480	162.110	6552.18	3231.02	-3622.27	-431.97	1619152.95	332393.57	39°24'17.182"N	80°50'52.199"W	3647.93	186.801	0.80	-0.41	-0.69
10239.00	89.350	156.920	6553.09	3319.99	-3705.61	-400.84	1619182.83	332309.78	39°24'16.358"N	80°50'51.803"W	3727.22	186.174	5.83	-0.15	-5.83
10329.00	89.320	160.130	6554.13	3409.96	-3789.34	-367.89	1619214.52	332225.56	39°24'15.531"N	80°50'51.383"W	3807.16	185.545	3.57	-0.03	3.57
10419.00	89.850	163.050	6554.79	3499.87	-3874.73	-339.47	1619241.65	332139.77	39°24'14.687"N	80°50'51.021"W	3889.57	185.007	3.30	0.59	3.24
10508.00	89.940	169.560	6554.95	3588.13	-3961.15	-318.41	1619261.41	332053.04	39°24'13.833"N	80°50'50.753"W	3973.93	184.596	7.32	0.10	7.31
10597.00	90.280	170.000	6554.78	3675.59	-4048.74	-302.62	1619275.89	331965.23	39°24'12.967"N	80°50'50.552"W	4060.03	184.275	0.62	0.38	0.49
10686.00	90.680	171.250	6554.03	3762.81	-4136.54	-288.13	1619289.07	331877.23	39°24'12.099"N	80°50'50.367"W	4146.56	183.984	1.47	0.45	1.40
10776.00	90.280	163.630	6553.28	3851.80	-4224.32	-268.57	1619307.31	331789.17	39°24'11.232"N	80°50'50.118"W	4232.85	183.638	8.48	-0.44	-8.47
10865.00	90.430	162.310	6552.73	3940.59	-4309.41	-242.50	1619332.09	331703.70	39°24'10.391"N	80°50'49.786"W	4316.23	183.221	1.49	0.17	-1.48
10955.00	90.430	155.140	6552.05	4030.53	-4393.22	-209.87	1619363.46	331619.41	39°24'09.562"N	80°50'49.370"W	4398.23	182.735	7.97	0.00	-7.97
11044.00	90.180	153.370	6551.58	4119.20	-4473.38	-171.21	1619400.91	331538.69	39°24'08.770"N	80°50'48.878"W	4476.66	182.192	2.01	-0.28	-1.99
11133.00	89.540	147.920	6551.79	4207.19	-4550.93	-127.60	1619443.36	331460.50	39°24'08.004"N	80°50'48.322"W	4552.72	181.606	6.17	-0.72	-6.12
11223.00	89.970	146.460	6552.18	4295.24	-4626.57	-78.84	1619490.98	331384.15	39°24'07.256"N	80°50'47.701"W	4627.24	180.976	1.69	0.48	-1.62
11313.00	89.850	153.400	6552.32	4384.02	-4704.41	-33.77	1619534.87	331305.64	39°24'06.487"N	80°50'47.127"W	4704.53	180.411	7.71	-0.13	7.71
11402.00	89.850	151.320	6552.55	4472.40	-4783.25	7.52	1619574.97	331226.20	39°24'05.707"N	80°50'46.601"W	4783.25	179.910	2.34	0.00	-2.34
11492.00	90.120	157.720	6552.58	4562.06	-4864.45	46.21	1619612.44	331144.43	39°24'04.905"N	80°50'46.108"W	4864.67	179.456	7.12	0.30	7.11
11581.00	90.090	159.580	6552.41	4651.05	-4947.34	78.61	1619645.60	331061.07	39°24'04.088"N	80°50'45.695"W	4947.96	179.090	2.09	-0.03	2.09
11670.00	90.220	159.470	6552.17	4740.05	-5030.71	109.75	1619673.47	330977.24	39°24'03.262"N	80°50'45.298"W	5031.91	178.750	0.19	0.15	-0.12
11760.00	90.000	158.030	6552.00	4830.04	-5114.59	142.36	1619704.83	330892.89	39°24'02.433"N	80°50'44.883"W	5116.57	178.406	1.62	-0.24	-1.60
11849.00	89.880	160.340	6552.09	4919.04	-5197.78	173.99	1619735.20	330809.24	39°24'01.610"N	80°50'44.480"W	5200.69	178.083	2.60	-0.13	2.60
11939.00	89.820	163.460	6552.33	5008.92	-5283.31	201.95	1619761.87	330723.30	39°24'00.765"N	80°50'44.124"W	5287.17	177.811	3.47	-0.07	3.47
12028.00	90.120	167.340	6552.38	5097.37	-5369.42	224.38	1619783.01	330636.87	39°23'59.914"N	80°50'43.838"W	5374.11	177.607	4.37	0.34	4.36
12118.00	90.090	166.980	6552.21	5186.49	-5457.17	244.38	1619801.69	330548.84	39°23'59.047"N	80°50'43.583"W	5462.64	177.436	0.40	-0.03	-0.40
12209.00	90.950	159.810	6551.38	5277.18	-5544.32	270.36	1619826.37	330461.32	39°23'58.185"N	80°50'43.252"W	5550.90	177.208	7.94	0.95	-7.88
12297.00	90.180	157.990	6550.52	5365.17	-5626.41	302.04	1619856.81	330378.76	39°23'57.374"N	80°50'42.849"W	5634.51	176.927	2.25	-0.88	-2.07
12387.00	89.820	160.250	6550.52	5455.16	-5710.49	334.11	1619887.62	330294.21	39°23'56.543"N	80°50'42.440"W	5720.26	176.652	2.54	-0.40	2.51
12477.00	89.880	164.180	6550.75	5545.01	-5796.17	361.60	1619913.82	330208.13	39°23'55.696"N	80°50'42.090"W	5807.44	176.430	4.37	0.07	4.37
12566.00	89.910	162.830	6550.92	5633.75	-5881.51	386.87	1619937.80	330122.43	39°23'54.853"N	80°50'41.768"W	5894.22	176.237	1.52	0.03	-1.52

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Actual Wellpath Report

SHR1AHS AWP Proj: 15972'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY	Slot	Slot A
Area	Tyler County, WV	Well	SHR1AHS
Field	Tyler	Wellbore	SHR1AHS AWB
Facility	SHR 1 Pad		

WELLPATH DATA (189 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]
12655.00	89.940	159.590	6551.03	5722.68	-5965.75	415.53	1619965.20	330037.77	39°23'54.020"N	80°50'41.403"W	5980.21	176.016	3.64	0.03	-3.64
12745.00	89.970	159.630	6551.10	5812.68	-6050.12	446.89	1619995.29	329952.96	39°23'53.186"N	80°50'41.004"W	6066.60	175.776	0.06	0.03	0.04
12835.00	89.970	156.860	6551.15	5902.66	-6133.70	480.24	1620027.38	329868.89	39°23'52.360"N	80°50'40.579"W	6152.47	175.523	3.08	0.00	-3.08
12924.00	89.910	153.710	6551.24	5991.45	-6214.53	517.45	1620063.37	329787.51	39°23'51.561"N	80°50'40.105"W	6236.04	175.240	3.54	-0.07	-3.54
13014.00	89.880	155.030	6551.41	6081.13	-6295.68	556.38	1620101.08	329705.80	39°23'50.759"N	80°50'39.609"W	6320.21	174.950	1.47	-0.03	1.47
13103.00	89.880	155.570	6551.59	6169.93	-6376.53	593.57	1620137.05	329624.40	39°23'49.960"N	80°50'39.136"W	6404.10	174.682	0.61	0.00	0.61
13193.00	89.820	154.930	6551.83	6259.73	-6458.27	631.25	1620173.50	329542.11	39°23'49.152"N	80°50'38.656"W	6489.04	174.417	0.71	-0.07	-0.71
13283.00	89.850	156.000	6552.09	6349.54	-6540.14	668.62	1620209.64	329459.69	39°23'48.343"N	80°50'38.180"W	6574.23	174.163	1.19	0.03	1.19
13372.00	89.970	155.960	6552.23	6438.40	-6621.43	704.85	1620244.64	329377.87	39°23'47.540"N	80°50'37.718"W	6658.84	173.924	0.14	0.13	-0.04
13462.00	89.780	157.840	6552.43	6528.33	-6704.21	740.16	1620278.70	329294.58	39°23'46.721"N	80°50'37.268"W	6744.94	173.700	2.10	-0.21	2.09
13551.00	89.880	162.470	6552.69	6617.29	-6787.90	770.36	1620307.65	329210.45	39°23'45.894"N	80°50'36.884"W	6831.48	173.525	5.20	0.11	5.20
13641.00	89.880	162.510	6552.88	6707.14	-6873.73	797.44	1620333.44	329124.22	39°23'45.046"N	80°50'36.539"W	6919.83	173.383	0.04	0.00	0.04
13730.00	89.970	162.230	6552.99	6796.00	-6958.55	824.39	1620359.12	329039.02	39°23'44.208"N	80°50'36.196"W	7007.22	173.244	0.33	0.10	-0.31
13820.00	89.850	163.290	6553.14	6885.82	-7044.51	851.07	1620384.50	328952.67	39°23'43.358"N	80°50'35.856"W	7095.73	173.111	1.19	-0.13	1.18
13909.00	89.850	164.750	6553.37	6974.49	-7130.07	875.57	1620407.71	328866.76	39°23'42.512"N	80°50'35.544"W	7183.62	172.999	1.64	0.00	1.64
13999.00	89.880	164.280	6553.58	7064.09	-7216.80	899.60	1620430.44	328779.69	39°23'41.655"N	80°50'35.238"W	7272.65	172.895	0.52	0.03	-0.52
14089.00	89.910	159.380	6553.75	7153.97	-7302.28	927.65	1620457.21	328693.79	39°23'40.810"N	80°50'34.880"W	7360.97	172.760	5.44	0.03	-5.44
14179.00	89.910	160.330	6553.89	7243.96	-7386.78	958.65	1620486.93	328608.85	39°23'39.975"N	80°50'34.486"W	7448.72	172.606	1.06	0.00	1.06
14268.00	89.910	161.170	6554.03	7332.92	-7470.80	987.99	1620515.01	328524.40	39°23'39.145"N	80°50'34.112"W	7535.85	172.467	0.94	0.00	0.94
14358.00	89.880	160.170	6554.19	7422.89	-7555.73	1017.78	1620543.52	328439.04	39°23'38.305"N	80°50'33.733"W	7623.97	172.328	1.11	-0.03	-1.11
14447.00	89.910	159.030	6554.36	7511.89	-7639.14	1048.80	1620573.29	328355.18	39°23'37.481"N	80°50'33.337"W	7710.80	172.183	1.28	0.03	-1.28
14537.00	89.910	158.280	6554.50	7601.88	-7722.97	1081.56	1620604.79	328270.87	39°23'36.652"N	80°50'32.920"W	7798.33	172.028	0.83	0.00	-0.83
14626.00	89.880	160.200	6554.66	7690.88	-7806.19	1113.11	1620635.08	328187.20	39°23'35.830"N	80°50'32.519"W	7885.15	171.885	2.16	-0.03	2.16
14716.00	89.850	155.660	6554.87	7780.83	-7889.57	1146.92	1620667.63	328103.32	39°23'35.006"N	80°50'32.088"W	7972.50	171.729	5.04	-0.03	-5.04
14805.00	90.090	150.570	6554.92	7869.31	-7968.92	1187.15	1620706.67	328023.38	39°23'34.221"N	80°50'31.576"W	8056.86	171.527	5.73	0.27	-5.72
14895.00	90.310	154.940	6554.60	7958.73	-8048.92	1228.34	1620746.65	327942.78	39°23'33.431"N	80°50'31.051"W	8142.11	171.323	4.86	0.24	4.86
14985.00	90.090	157.750	6554.29	8048.62	-8131.35	1264.45	1620781.52	327859.82	39°23'32.616"N	80°50'30.591"W	8229.07	171.161	3.13	-0.24	3.12
15074.00	90.120	159.630	6554.13	8137.61	-8214.26	1296.79	1620812.61	327776.44	39°23'31.797"N	80°50'30.179"W	8315.99	171.029	2.11	0.03	2.11
15164.00	90.150	159.460	6553.92	8227.61	-8298.58	1328.24	1620842.80	327691.66	39°23'30.963"N	80°50'29.779"W	8404.21	170.907	0.19	0.03	-0.19
15254.00	90.090	154.290	6553.73	8317.50	-8381.32	1363.58	1620876.89	327608.40	39°23'30.145"N	80°50'29.329"W	8491.52	170.759	5.74	-0.07	-5.74

95-02109



Actual Wellpath Report

SHR1AHS AWP Proj: 15972'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot A
Area	Tyler County, WV	Well	SHR1AHS
Field	Tyler	Wellbore	SHR1AHS AWB
Facility	SHR 1 Pad		

WELLPATH DATA (189 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]
15343.00	90.090	154.480	6553.59	8406.20	-8461.58	1402.05	1620914.15	327527.59	39°23'29.352"N	80°50'28.839"W	8576.95	170.592	0.21	0.00	0.21
15433.00	90.430	155.200	6553.18	8495.94	-8543.04	1440.31	1620951.19	327445.57	39°23'28.547"N	80°50'28.351"W	8663.60	170.430	0.88	0.38	0.80
15523.00	89.880	155.770	6552.93	8585.76	-8624.92	1477.66	1620987.30	327363.13	39°23'27.738"N	80°50'27.876"W	8750.59	170.278	0.88	-0.61	0.63
15612.00	89.940	157.840	6553.07	8674.68	-8706.72	1512.71	1621021.12	327280.82	39°23'26.929"N	80°50'27.429"W	8837.16	170.144	2.33	0.07	2.33
15702.00	89.820	157.460	6553.26	8764.65	-8789.96	1546.93	1621054.09	327197.08	39°23'26.106"N	80°50'26.994"W	8925.05	170.019	0.44	-0.13	-0.42
15791.00	89.910	161.400	6553.47	8853.63	-8873.27	1578.20	1621084.10	327113.32	39°23'25.283"N	80°50'26.595"W	9012.53	169.915	4.43	0.10	4.43
15881.00	89.910	163.170	6553.61	8943.49	-8959.00	1605.58	1621110.20	327027.20	39°23'24.436"N	80°50'26.247"W	9101.73	169.840	1.97	0.00	1.97
15946.00	89.850	164.310	6553.75	9008.28	-9021.40	1623.78	1621127.46	326964.53	39°23'23.819"N	80°50'26.015"W	9166.37	169.796	1.76	-0.09	1.75
15972.00	89.850	164.310	6553.82	9034.18	-9046.43	1630.81	1621134.11	326939.40	39°23'23.572"N	80°50'25.925"W	9192.25	169.781	0.00	0.00	0.00

60120-56

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SHR1AHS BHL Rev-1		6559.00	-9052.75	1614.60	1621117.81	326933.33	39°23'23.509"N	80°50'26.132"W	point
SHR1AHS LP Rev-1		6559.00	-993.04	-1456.50	1618167.99	335037.71	39°24'43.168"N	80°51'05.253"W	point
SHR-1 LL		7000.00	12.98	15.32	1619654.64	336021.51	39°24'53.111"N	80°50'46.501"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: SHR1AHS AWB Ref Wellpath: SHR1AHS AWP Proj: 15972'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.60	2361.60	Generic gyro - northseeking (Standard)	01_VES Gyro (100'-2343')	SHR1AHS AWB
2361.60	15946.00	NaviTrak (MagCorr)	02_BHI AT Curve <8-3/4"> (2361.6')(2569'-15946')	SHR1AHS AWB
15946.00	15972.00	Blind Drilling (std)	Projection to bit	SHR1AHS AWB



Actual Wellpath Report
SHR1AHS AWP Proj: 15972'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot A
Area	Tyler County, WV	Well	SHR1AHS
Field	Tyler	Wellbore	SHR1AHS AWB
Facility	SHR 1 Pad		

COMMENTS

Wellpath general comments
API: 47-095-02109-0000
BHI Job #: 5763899
Rig: Precision 542
Duration: 1/27/2014-2/4/2014
VES Gyro (100'-2343')
BHI AT Curve <8-3/4"> (2361.6')(2569'-15946')
Projected MD at TD: 15972'

95-02109