



ANTERO RESOURCES CORPORATION



Location: Tyler County, WV
Field: Tyler
Facility: Nalley Pad

Slot: Slot #06
Well: Greenwood Unit 1H ST01
Wellbore: Greenwood Unit 1H ST01 PWB

Plot reference wellpath is Greenwood Unit 1H ST01 PWP Rev-1	
True vertical depths are referenced to H&P 519 (RKB)	Grid System: NAD83 / UTM Zone 17 North, US feet
Reference wellpath measured depths are referenced to H&P 519 (RKB)	North Reference: Grid north
H&P 519 (RKB) to Mean Sea Level: 1002 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: Slot #06): -972 feet	Coordinates are in feet referenced to Slot
Offset wellpath MDs are referenced to each path's default MD datum	Depths are in feet
	Created by: edhayanar on 2022-04-20; Database: WA_MPL_EASTERNUS_Deit

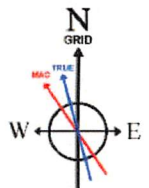
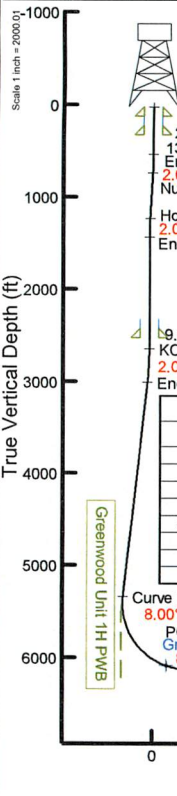
Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Nalley Pad	1653163.370	14360203.730	39°32'40.3242"N	80°57'17.2242"W	
Slot #06	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
	-58.40	-47.79	1653115.600	14360145.350	39°32'39.7472"N
Comment: Greenwood Unit 1H					
H&P 519 (RKB) to Ground level (At Slot: Slot #06): 30ft					
Mean Sea Level to Ground level (At Slot: Slot #06): -972ft					
H&P 519 (RKB) to Mean Sea Level: 1002ft					

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (*/100ft)	VS (ft)
Tie On	30.00	0.00	200.000	30.00	0.00	0.00	0.00	0.00
End of Tangent	540.00	0.00	200.000	540.00	0.00	0.00	0.00	0.00
Nudge	740.00	4.00	200.000	739.84	-6.56	-2.39	2.00	-5.43
Hold	1240.00	4.00	200.000	1238.62	-39.33	-14.32	0.00	-32.56
End of Drop	1440.00	0.00	189.267	1438.46	-45.89	-16.70	2.00	-37.99
KOP 1	2651.54	0.00	189.267	2650.00	-45.89	-16.70	0.00	-37.99
End of Build	3011.47	7.199	189.267	3008.98	-68.18	-20.34	2.00	-57.89
Curve KOP	5358.39	7.199	189.267	5337.40	-358.43	-67.70	0.00	-317.08
POE	6317.80	70.761	335.000	6087.00	56.75	-305.45	8.00	152.78
Landing Pt.	6558.30	90.000	335.000	6127.00	270.64	-405.19	8.00	387.45
On AZI	6861.86	90.000	341.071	6127.00	552.04	-518.68	2.00	690.45
BHL	20958.85	90.000	341.071	6127.00	13886.71	-5091.65	0.00	14787.45

- Do not cross (any limiting boundary); red, bold, solid
- Lease boundary, advisory; black, bold, solid
- Regulatory boundary, advisory; black, bold, dashed
- Geologic boundary, advisory; blue, bold, dashed
- Geologic target boundary, advisory; blue, normal, solid
- Driller's target boundary, advisory; green, normal, solid
- Other type of boundary, advisory; green, bold, dashed

Survey Program					
Lat MD (ft)	End MD (ft)	Tool	Name	Log Name/Comment	Wellbore
1676	17476	SURV 2011-10-10-0800-0800	GRIPROBE 2011-10-10-0800-0800	GRIPROBE 2011-10-10-0800-0800	Greenwood Unit 1H ST01 PWB
17476	17500	BM (Tie) (RKB 0211)	BM (Tie) (RKB 0211)	BM (Tie) (RKB 0211)	Greenwood Unit 1H ST01 PWB
17500	17518	BM (New) (RKB 0211)	BM (New) (RKB 0211)	BM (New) (RKB 0211)	Greenwood Unit 1H ST01 PWB
17518	17518	BM (New) (RKB 0211)	BM (New) (RKB 0211)	BM (New) (RKB 0211)	Greenwood Unit 1H ST01 PWB
17518	17518	BM (New) (RKB 0211)	BM (New) (RKB 0211)	BM (New) (RKB 0211)	Greenwood Unit 1H ST01 PWB

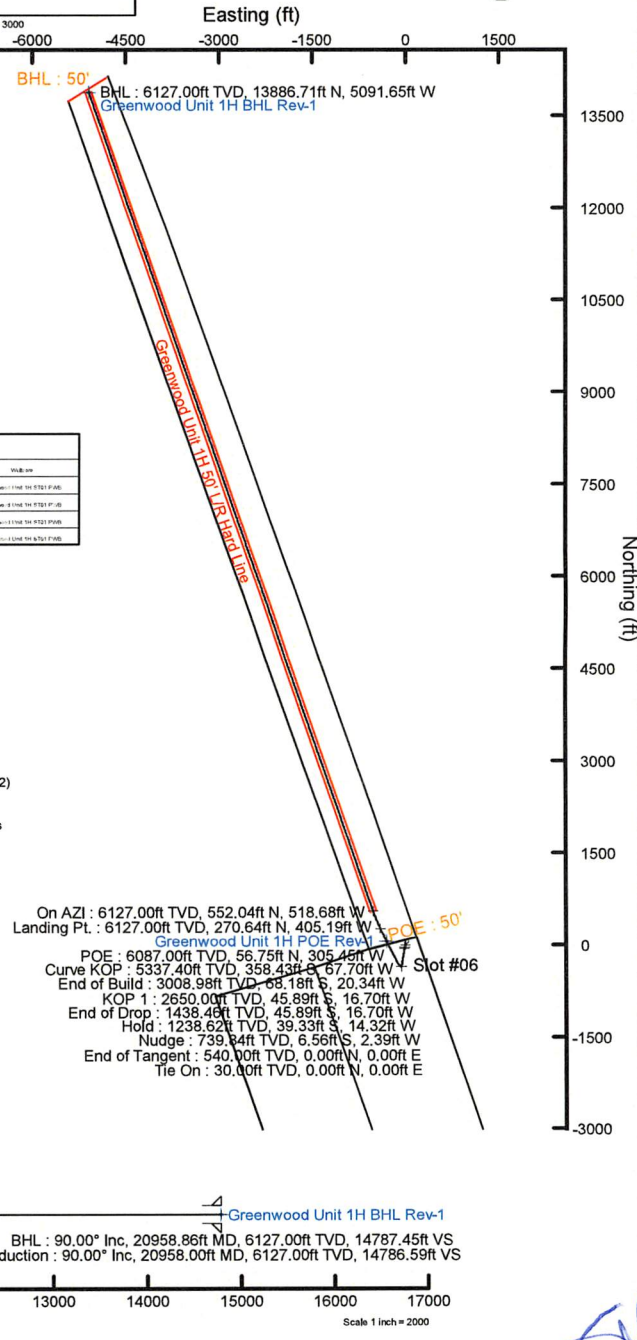
Targets						
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Greenwood Unit 1H POE Rev-1	6317.80	6087.00	56.75	-305.45	1653203.22	14360202.08
Greenwood Unit 1H BHL Rev-1	20958.85	6127.00	13886.71	-5091.65	1648206.00	14374026.48
Greenwood Unit 1H 50' UR Hard Line	N/A	6000.00	7219.37	-2895.16	1650311.07	14367361.82



User specified (HDGM) Dip: 66.27° Field: 51458 nT
Magnetic North is 7.43 degrees West of True North (at 4/28/2022)
Grid North is 0.03 degrees East of True North
To correct azimuth from True to Grid subtract 0.03 degrees
To correct azimuth from Magnetic to Grid subtract 7.46 degrees

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Hole and Casing Sections										
Name	Start MD (ft)	End MD (ft)	Interval (ft)	Start TVD (ft)	End TVD (ft)	Start Local N (ft)	End Local N (ft)	Start Local E (ft)	End Local E (ft)	Wellbore
20in Conductor	30.00	130.00	100.00	30.00	130.00	0.00	0.00	0.00	0.00	Greenwood Unit 1H ST01 PWB
17.5in Open Hole	130.00	330.00	200.00	130.00	330.00	0.00	0.00	0.00	0.00	Greenwood Unit 1H ST01 PWB
13.375in Casing Surface	30.00	330.00	300.00	30.00	330.00	0.00	0.00	0.00	0.00	Greenwood Unit 1H ST01 PWB
12.25in Open Hole	330.00	2531.54	2201.54	330.00	2530.00	0.00	0.00	-45.89	-16.70	Greenwood Unit 1H ST01 PWB
9.625in Casing Intermediate	30.00	2531.54	2501.54	30.00	2530.00	0.00	0.00	-45.89	-16.70	Greenwood Unit 1H ST01 PWB
8.75in Open Hole	2531.54	5358.39	2826.86	2530.00	5337.00	-45.89	-16.70	-358.39	-67.89	Greenwood Unit 1H ST01 PWB
8.5in Open Hole	5358.39	20958.86	15600.86	5337.00	6127.00	-358.39	-67.89	13886.71	-5091.64	Greenwood Unit 1H ST01 PWB
5.5in Casing Production	30.00	20958.86	20928.86	30.00	6127.00	0.00	0.00	13886.89	-5091.37	Greenwood Unit 1H ST01 PWB



Vertical Section (ft)
Azimuth 341.07° with reference 0.00 N, 0.00 E

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Greenwood Unit 1H ST01 PWP Rev-A.0
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Greenwood Unit 1H ST01
Field	Tyler	API	47-095-02777-0000
Facility	Nalley Pad	Wellbore	Greenwood Unit 1H ST01 PWB
Slot	Slot #06		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999600	Report Generated	4/29/2022 at 12:56:38 AM
Convergence at slot	0.03° East	Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-58.40	-47.79	1653115.60	14360145.35	39°32'39.7472"N	80°57'17.8346"W
Facility Reference Pt			1653163.37	14360203.73	39°32'40.3242"N	80°57'17.2242"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.3013"W

WELLPATH DATUM			
Calculation method	Minimum curvature	H&P 519 (RKB) to Facility Vertical Datum	1002.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	1002.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot #06)	30.00ft
MD Reference Pt	H&P 519 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	341.07°

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REFERENCE WELLPATH IDENTIFICATION			
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Field	Tyler	API	47-095-02777-0000
Facility	Nalley Pad	Wellbore	Greenwood Unit 1H ST01 PWB
Slot	Slot #06		

WELLPATH DATA (222 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	200.000	0.00	0.00	0.00	0.00	1653115.60	14360145.35	39°32'39.7472"N	80°57'17.8346"W	0.00	0.000	0.00	0.00	0.00
30.00	0.000	200.000	30.00	0.00	0.00	0.00	1653115.60	14360145.35	39°32'39.7472"N	80°57'17.8346"W	0.00	0.000	0.00	0.00	0.00
130.00†	0.000	200.000	130.00	0.00	0.00	0.00	1653115.60	14360145.35	39°32'39.7472"N	80°57'17.8346"W	0.00	0.000	0.00	0.00	0.00
230.00†	0.000	200.000	230.00	0.00	0.00	0.00	1653115.60	14360145.35	39°32'39.7472"N	80°57'17.8346"W	0.00	0.000	0.00	0.00	0.00
330.00†	0.000	200.000	330.00	0.00	0.00	0.00	1653115.60	14360145.35	39°32'39.7472"N	80°57'17.8346"W	0.00	0.000	0.00	0.00	0.00
430.00†	0.000	200.000	430.00	0.00	0.00	0.00	1653115.60	14360145.35	39°32'39.7472"N	80°57'17.8346"W	0.00	0.000	0.00	0.00	0.00
530.00†	0.000	200.000	530.00	0.00	0.00	0.00	1653115.60	14360145.35	39°32'39.7472"N	80°57'17.8346"W	0.00	0.000	0.00	0.00	0.00
540.00	0.000	200.000	540.00	0.00	0.00	0.00	1653115.60	14360145.35	39°32'39.7472"N	80°57'17.8346"W	0.00	0.000	0.00	0.00	0.00
630.00†	1.800	200.000	629.99	-1.10	-1.33	-0.48	1653115.12	14360144.02	39°32'39.7341"N	80°57'17.8408"W	1.41	200.000	2.00	2.00	0.00
730.00†	3.800	200.000	729.86	-4.90	-5.92	-2.15	1653113.45	14360139.43	39°32'39.6888"N	80°57'17.8621"W	6.30	200.000	2.00	2.00	0.00
740.00	4.000	200.000	739.84	-5.43	-6.56	-2.39	1653113.21	14360138.80	39°32'39.6824"N	80°57'17.8651"W	6.98	200.000	2.00	2.00	0.00
830.00†	4.000	200.000	829.62	-10.31	-12.46	-4.53	1653111.07	14360132.90	39°32'39.6241"N	80°57'17.8926"W	13.26	200.000	0.00	0.00	0.00
930.00†	4.000	200.000	929.37	-15.74	-19.01	-6.92	1653108.68	14360126.35	39°32'39.5594"N	80°57'17.9230"W	20.23	200.000	0.00	0.00	0.00
1030.00†	4.000	200.000	1029.13	-21.17	-25.57	-9.31	1653106.30	14360119.79	39°32'39.4946"N	80°57'17.9535"W	27.21	200.000	0.00	0.00	0.00
1130.00†	4.000	200.000	1128.89	-26.59	-32.12	-11.69	1653103.91	14360113.24	39°32'39.4298"N	80°57'17.9840"W	34.18	200.000	0.00	0.00	0.00
1230.00†	4.000	200.000	1228.64	-32.02	-38.68	-14.08	1653101.53	14360106.69	39°32'39.3651"N	80°57'18.0145"W	41.16	200.000	0.00	0.00	0.00
1240.00	4.000	200.000	1238.62	-32.56	-39.33	-14.32	1653101.29	14360106.03	39°32'39.3586"N	80°57'18.0176"W	41.86	200.000	0.00	0.00	0.00
1330.00†	2.200	200.000	1328.48	-36.35	-43.91	-15.98	1653099.63	14360101.46	39°32'39.3134"N	80°57'18.0389"W	46.72	200.000	2.00	-2.00	0.00
1430.00†	0.200	200.000	1428.46	-37.98	-45.87	-16.70	1653098.91	14360099.49	39°32'39.2939"N	80°57'18.0480"W	48.82	200.000	2.00	-2.00	0.00
1440.00	0.000	189.267	1438.46	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	2.00	-2.00	0.00
1530.00†	0.000	189.267	1528.46	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	0.00	0.00	0.00
1630.00†	0.000	189.267	1628.46	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	0.00	0.00	0.00
1730.00†	0.000	189.267	1728.46	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	0.00	0.00	0.00
1830.00†	0.000	189.267	1828.46	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	0.00	0.00	0.00
1930.00†	0.000	189.267	1928.46	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	0.00	0.00	0.00
2030.00†	0.000	189.267	2028.46	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	0.00	0.00	0.00
2130.00†	0.000	189.267	2128.46	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	0.00	0.00	0.00
2230.00†	0.000	189.267	2228.46	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	0.00	0.00	0.00
2330.00†	0.000	189.267	2328.46	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	0.00	0.00	0.00
2430.00†	0.000	189.267	2428.46	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	0.00	0.00	0.00

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Greenwood Unit 1H ST01
Field	Tyler	API	47-095-02777-0000
Facility	Nalley Pad	Wellbore	Greenwood Unit 1H ST01 PWB
Slot	Slot #06		

WELLPATH DATA (222 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]
2530.00†	0.000	189.267	2528.46	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	0.00	0.00	0.00
2630.00†	0.000	189.267	2628.46	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	0.00	0.00	0.00
2651.54	0.000	189.267	2650.00	-37.99	-45.89	-16.70	1653098.90	14360099.48	39°32'39.2938"N	80°57'18.0481"W	48.84	200.000	0.00	0.00	0.00
2730.00†	1.569	189.267	2728.45	-38.94	-46.95	-16.88	1653098.73	14360098.42	39°32'39.2833"N	80°57'18.0503"W	49.89	199.770	2.00	2.00	0.00
2830.00†	3.569	189.267	2828.34	-42.89	-51.37	-17.60	1653098.01	14360094.00	39°32'39.2396"N	80°57'18.0596"W	54.30	198.908	2.00	2.00	0.00
2930.00†	5.569	189.267	2928.02	-49.91	-59.24	-18.88	1653096.73	14360086.14	39°32'39.1619"N	80°57'18.0760"W	62.17	197.679	2.00	2.00	0.00
3011.47	7.199	189.267	3008.98	-57.89	-68.18	-20.34	1653095.27	14360077.20	39°32'39.0735"N	80°57'18.0947"W	71.15	196.611	2.00	2.00	0.00
3030.00†	7.199	189.267	3027.36	-59.94	-70.47	-20.71	1653094.90	14360074.91	39°32'39.0509"N	80°57'18.0994"W	73.45	196.380	0.00	0.00	0.00
3130.00†	7.199	189.267	3126.58	-70.98	-82.84	-22.73	1653092.88	14360062.55	39°32'38.9287"N	80°57'18.1253"W	85.90	195.345	0.00	0.00	0.00
3230.00†	7.199	189.267	3225.79	-82.02	-95.20	-24.75	1653090.86	14360050.19	39°32'38.8065"N	80°57'18.1511"W	98.37	194.572	0.00	0.00	0.00
3330.00†	7.199	189.267	3325.00	-93.07	-107.57	-26.77	1653088.84	14360037.82	39°32'38.6842"N	80°57'18.1770"W	110.85	193.973	0.00	0.00	0.00
3430.00†	7.199	189.267	3424.21	-104.11	-119.94	-28.78	1653086.83	14360025.46	39°32'38.5620"N	80°57'18.2028"W	123.34	193.495	0.00	0.00	0.00
3530.00†	7.199	189.267	3523.42	-115.16	-132.30	-30.80	1653084.81	14360013.10	39°32'38.4398"N	80°57'18.2286"W	135.84	193.106	0.00	0.00	0.00
3630.00†	7.199	189.267	3622.64	-126.20	-144.67	-32.82	1653082.79	14360000.74	39°32'38.3176"N	80°57'18.2545"W	148.35	192.782	0.00	0.00	0.00
3730.00†	7.199	189.267	3721.85	-137.24	-157.04	-34.84	1653080.78	14359988.37	39°32'38.1953"N	80°57'18.2803"W	160.86	192.508	0.00	0.00	0.00
3830.00†	7.199	189.267	3821.06	-148.29	-169.41	-36.86	1653078.76	14359976.01	39°32'38.0731"N	80°57'18.3061"W	173.37	192.274	0.00	0.00	0.00
3930.00†	7.199	189.267	3920.27	-159.33	-181.77	-38.87	1653076.74	14359963.65	39°32'37.9509"N	80°57'18.3320"W	185.88	192.071	0.00	0.00	0.00
4030.00†	7.199	189.267	4019.48	-170.38	-194.14	-40.89	1653074.73	14359951.29	39°32'37.8287"N	80°57'18.3578"W	198.40	191.894	0.00	0.00	0.00
4130.00†	7.199	189.267	4118.69	-181.42	-206.51	-42.91	1653072.71	14359938.92	39°32'37.7065"N	80°57'18.3836"W	210.92	191.738	0.00	0.00	0.00
4230.00†	7.199	189.267	4217.91	-192.46	-218.88	-44.93	1653070.69	14359926.56	39°32'37.5842"N	80°57'18.4095"W	223.44	191.600	0.00	0.00	0.00
4330.00†	7.199	189.267	4317.12	-203.51	-231.24	-46.94	1653068.67	14359914.20	39°32'37.4620"N	80°57'18.4353"W	235.96	191.476	0.00	0.00	0.00
4430.00†	7.199	189.267	4416.33	-214.55	-243.61	-48.96	1653066.66	14359901.84	39°32'37.3398"N	80°57'18.4612"W	248.48	191.364	0.00	0.00	0.00
4530.00†	7.199	189.267	4515.54	-225.60	-255.98	-50.98	1653064.64	14359889.47	39°32'37.2176"N	80°57'18.4870"W	261.01	191.264	0.00	0.00	0.00
4630.00†	7.199	189.267	4614.75	-236.64	-268.35	-53.00	1653062.62	14359877.11	39°32'37.0954"N	80°57'18.5128"W	273.53	191.172	0.00	0.00	0.00
4730.00†	7.199	189.267	4713.97	-247.68	-280.71	-55.02	1653060.61	14359864.75	39°32'36.9731"N	80°57'18.5387"W	286.05	191.089	0.00	0.00	0.00
4830.00†	7.199	189.267	4813.18	-258.73	-293.08	-57.03	1653058.59	14359852.39	39°32'36.8509"N	80°57'18.5645"W	298.58	191.012	0.00	0.00	0.00
4930.00†	7.199	189.267	4912.39	-269.77	-305.45	-59.05	1653056.57	14359840.02	39°32'36.7287"N	80°57'18.5903"W	311.10	190.942	0.00	0.00	0.00
5030.00†	7.199	189.267	5011.60	-280.81	-317.82	-61.07	1653054.55	14359827.66	39°32'36.6065"N	80°57'18.6162"W	323.63	190.877	0.00	0.00	0.00
5130.00†	7.199	189.267	5110.81	-291.86	-330.18	-63.09	1653052.54	14359815.30	39°32'36.4843"N	80°57'18.6420"W	336.16	190.817	0.00	0.00	0.00
5230.00†	7.199	189.267	5210.02	-302.90	-342.55	-65.11	1653050.52	14359802.94	39°32'36.3620"N	80°57'18.6678"W	348.68	190.761	0.00	0.00	0.00

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Greenwood Unit 1H ST01
Field	Tyler	API	47-095-02777-0000
Facility	Nalley Pad	Wellbore	Greenwood Unit 1H ST01 PWB
Slot	Slot #06		

WELLPATH DATA (222 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]
5330.00†	7.199	189.267	5309.24	-313.95	-354.92	-67.12	1653048.50	14359790.57	39°32'36.2398"N	80°57'18.6937"W	361.21	190.710	0.00	0.00	0.00
5358.39	7.199	189.267	5337.40	-317.08	-358.43	-67.70	1653047.93	14359787.07	39°32'36.2051"N	80°57'18.7010"W	364.77	190.695	0.00	0.00	0.00
5430.00†	3.936	241.839	5408.70	-321.43	-364.02	-70.59	1653045.04	14359781.47	39°32'36.1499"N	80°57'18.7380"W	370.80	190.974	8.00	-4.56	73.41
5530.00†	8.627	309.492	5508.18	-315.59	-360.87	-79.42	1653036.21	14359784.63	39°32'36.1811"N	80°57'18.8506"W	369.50	192.411	8.00	4.69	67.65
5630.00†	16.160	322.679	5605.80	-295.96	-345.00	-93.67	1653021.97	14359800.48	39°32'36.3379"N	80°57'19.0324"W	357.49	195.189	8.00	7.53	13.19
5730.00†	23.993	327.506	5699.66	-262.93	-316.74	-113.06	1653002.59	14359828.74	39°32'36.6173"N	80°57'19.2798"W	336.31	199.643	8.00	7.83	4.83
5830.00†	31.906	330.046	5787.93	-217.16	-276.63	-137.21	1652978.44	14359868.83	39°32'37.0139"N	80°57'19.5878"W	308.79	206.382	8.00	7.91	2.54
5930.00†	39.851	331.658	5868.89	-159.52	-225.45	-165.66	1652950.00	14359919.99	39°32'37.5198"N	80°57'19.9507"W	279.77	216.309	8.00	7.94	1.61
6030.00†	47.811	332.807	5940.97	-91.13	-164.20	-197.86	1652917.82	14359981.21	39°32'38.1254"N	80°57'20.3612"W	257.12	230.311	8.00	7.96	1.15
6130.00†	55.781	333.698	6002.77	-13.34	-94.07	-233.16	1652882.53	14360051.32	39°32'38.8186"N	80°57'20.8115"W	251.43	248.028	8.00	7.97	0.89
6230.00†	63.756	334.434	6053.08	72.34	-16.43	-270.90	1652844.81	14360128.93	39°32'39.5862"N	80°57'21.2927"W	271.40	266.530	8.00	7.97	0.74
6317.80	70.761	335.000	6087.00†	152.78	56.75	-305.45	1652810.27	14360202.08	39°32'40.3096"N	80°57'21.7333"W	310.68	280.525	8.00	7.98	0.64
6330.00†	71.736	335.000	6090.92	164.26	67.22	-310.33	1652805.39	14360212.54	39°32'40.4131"N	80°57'21.7955"W	317.53	282.222	8.00	8.00	0.00
6430.00†	79.736	335.000	6115.54	260.55	154.98	-351.26	1652764.48	14360300.27	39°32'41.2807"N	80°57'22.3174"W	383.93	293.808	8.00	8.00	0.00
6530.00†	87.736	335.000	6126.44	359.32	245.00	-393.23	1652722.52	14360390.25	39°32'42.1706"N	80°57'22.8527"W	463.31	301.925	8.00	8.00	0.00
6558.30	90.000	335.000	6127.00	387.45	270.64	-405.19	1652710.57	14360415.88	39°32'42.4240"N	80°57'23.0051"W	487.26	303.740	8.00	8.00	0.00
6630.00†	90.000	336.434	6127.00	458.84	336.00	-434.68	1652681.10	14360481.21	39°32'43.0701"N	80°57'23.3811"W	549.40	307.703	2.00	0.00	2.00
6730.00†	90.000	338.434	6127.00	558.63	428.34	-473.05	1652642.74	14360573.51	39°32'43.9829"N	80°57'23.8704"W	638.16	312.160	2.00	0.00	2.00
6830.00†	90.000	340.434	6127.00	658.59	521.96	-508.18	1652607.63	14360667.10	39°32'44.9084"N	80°57'24.3182"W	728.48	315.767	2.00	0.00	2.00
6861.86	90.000	341.071	6127.00	690.45	552.04	-518.68	1652597.13	14360697.16	39°32'45.2057"N	80°57'24.4521"W	757.48	316.784	2.00	0.00	2.00
6930.00†	90.000	341.071	6127.00	758.59	616.49	-540.78	1652575.03	14360761.59	39°32'45.8428"N	80°57'24.7338"W	820.07	318.743	0.00	0.00	0.00
7030.00†	90.000	341.071	6127.00	858.59	711.08	-573.22	1652542.61	14360856.15	39°32'46.7779"N	80°57'25.1474"W	913.36	321.127	0.00	0.00	0.00
7130.00†	90.000	341.071	6127.00	958.59	805.68	-605.66	1652510.18	14360950.70	39°32'47.7129"N	80°57'25.5609"W	1007.94	323.066	0.00	0.00	0.00
7230.00†	90.000	341.071	6127.00	1058.59	900.27	-638.10	1652477.76	14361045.26	39°32'48.6479"N	80°57'25.9744"W	1103.47	324.671	0.00	0.00	0.00
7330.00†	90.000	341.071	6127.00	1158.59	994.86	-670.54	1652445.33	14361139.81	39°32'49.5830"N	80°57'26.3879"W	1199.74	326.020	0.00	0.00	0.00
7430.00†	90.000	341.071	6127.00	1258.59	1089.45	-702.98	1652412.90	14361234.37	39°32'50.5180"N	80°57'26.8015"W	1296.57	327.168	0.00	0.00	0.00
7530.00†	90.000	341.071	6127.00	1358.59	1184.05	-735.42	1652380.48	14361328.92	39°32'51.4530"N	80°57'27.2150"W	1393.85	328.155	0.00	0.00	0.00
7630.00†	90.000	341.071	6127.00	1458.59	1278.64	-767.86	1652348.05	14361423.47	39°32'52.3881"N	80°57'27.6285"W	1491.48	329.014	0.00	0.00	0.00
7730.00†	90.000	341.071	6127.00	1558.59	1373.23	-800.30	1652315.62	14361518.03	39°32'53.3231"N	80°57'28.0421"W	1589.41	329.767	0.00	0.00	0.00
7830.00†	90.000	341.071	6127.00	1658.59	1467.82	-832.74	1652283.20	14361612.58	39°32'54.2581"N	80°57'28.4556"W	1687.59	330.433	0.00	0.00	0.00

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Field	Tyler	API	47-095-02777-0000
Facility	Nalley Pad	Wellbore	Greenwood Unit 1H ST01 PWB
Slot	Slot #06		

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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
7930.00†	90.000	341.071	6127.00	1758.59	1562.41	-865.18	1652250.77	14361707.14	39°32'55.1932"N	80°57'28.8691"W	1785.96	331.025	0.00	0.00	0.00
8030.00†	90.000	341.071	6127.00	1858.59	1657.01	-897.61	1652218.35	14361801.69	39°32'56.1282"N	80°57'29.2827"W	1884.51	331.555	0.00	0.00	0.00
8130.00†	90.000	341.071	6127.00	1958.59	1751.60	-930.05	1652185.92	14361896.25	39°32'57.0632"N	80°57'29.6962"W	1983.20	332.033	0.00	0.00	0.00
8230.00†	90.000	341.071	6127.00	2058.59	1846.19	-962.49	1652153.49	14361990.80	39°32'57.9982"N	80°57'30.1098"W	2082.02	332.465	0.00	0.00	0.00
8330.00†	90.000	341.071	6127.00	2158.59	1940.78	-994.93	1652121.07	14362085.35	39°32'58.9333"N	80°57'30.5234"W	2180.95	332.858	0.00	0.00	0.00
8430.00†	90.000	341.071	6127.00	2258.59	2035.38	-1027.37	1652088.64	14362179.91	39°32'59.8683"N	80°57'30.9369"W	2279.97	333.217	0.00	0.00	0.00
8530.00†	90.000	341.071	6127.00	2358.59	2129.97	-1059.81	1652056.21	14362274.46	39°33'0.8033"N	80°57'31.3505"W	2379.07	333.546	0.00	0.00	0.00
8630.00†	90.000	341.071	6127.00	2458.59	2224.56	-1092.25	1652023.79	14362369.02	39°33'1.7384"N	80°57'31.7640"W	2478.24	333.849	0.00	0.00	0.00
8730.00†	90.000	341.071	6127.00	2558.59	2319.15	-1124.69	1651991.36	14362463.57	39°33'2.6734"N	80°57'32.1776"W	2577.48	334.129	0.00	0.00	0.00
8830.00†	90.000	341.071	6127.00	2658.59	2413.75	-1157.13	1651958.94	14362558.13	39°33'3.6084"N	80°57'32.5912"W	2676.77	334.387	0.00	0.00	0.00
8930.00†	90.000	341.071	6127.00	2758.59	2508.34	-1189.57	1651926.51	14362652.68	39°33'4.5434"N	80°57'33.0048"W	2776.12	334.628	0.00	0.00	0.00
9030.00†	90.000	341.071	6127.00	2858.59	2602.93	-1222.01	1651894.08	14362747.23	39°33'5.4785"N	80°57'33.4183"W	2875.51	334.851	0.00	0.00	0.00
9130.00†	90.000	341.071	6127.00	2958.59	2697.52	-1254.45	1651861.66	14362841.79	39°33'6.4135"N	80°57'33.8319"W	2974.94	335.060	0.00	0.00	0.00
9230.00†	90.000	341.071	6127.00	3058.59	2792.11	-1286.89	1651829.23	14362936.34	39°33'7.3485"N	80°57'34.2455"W	3074.41	335.255	0.00	0.00	0.00
9330.00†	90.000	341.071	6127.00	3158.59	2886.71	-1319.33	1651796.80	14363030.90	39°33'8.2835"N	80°57'34.6591"W	3173.91	335.438	0.00	0.00	0.00
9430.00†	90.000	341.071	6127.00	3258.59	2981.30	-1351.76	1651764.38	14363125.45	39°33'9.2186"N	80°57'35.0727"W	3273.44	335.610	0.00	0.00	0.00
9530.00†	90.000	341.071	6127.00	3358.59	3075.89	-1384.20	1651731.95	14363220.00	39°33'10.1536"N	80°57'35.4863"W	3373.00	335.771	0.00	0.00	0.00
9630.00†	90.000	341.071	6127.00	3458.59	3170.48	-1416.64	1651699.53	14363314.56	39°33'11.0886"N	80°57'35.8999"W	3472.58	335.924	0.00	0.00	0.00
9730.00†	90.000	341.071	6127.00	3558.59	3265.08	-1449.08	1651667.10	14363409.11	39°33'12.0236"N	80°57'36.3135"W	3572.19	336.068	0.00	0.00	0.00
9830.00†	90.000	341.071	6127.00	3658.59	3359.67	-1481.52	1651634.67	14363503.67	39°33'12.9587"N	80°57'36.7271"W	3671.82	336.204	0.00	0.00	0.00
9930.00†	90.000	341.071	6127.00	3758.59	3454.26	-1513.96	1651602.25	14363598.22	39°33'13.8937"N	80°57'37.1407"W	3771.47	336.333	0.00	0.00	0.00
10030.00†	90.000	341.071	6127.00	3858.59	3548.85	-1546.40	1651569.82	14363692.78	39°33'14.8287"N	80°57'37.5543"W	3871.14	336.455	0.00	0.00	0.00
10130.00†	90.000	341.071	6127.00	3958.59	3643.44	-1578.84	1651537.39	14363787.33	39°33'15.7637"N	80°57'37.9679"W	3970.82	336.571	0.00	0.00	0.00
10230.00†	90.000	341.071	6127.00	4058.59	3738.04	-1611.28	1651504.97	14363881.88	39°33'16.6987"N	80°57'38.3815"W	4070.52	336.682	0.00	0.00	0.00
10330.00†	90.000	341.071	6127.00	4158.59	3832.63	-1643.72	1651472.54	14363976.44	39°33'17.6338"N	80°57'38.7951"W	4170.23	336.787	0.00	0.00	0.00
10430.00†	90.000	341.071	6127.00	4258.59	3927.22	-1676.16	1651440.12	14364070.99	39°33'18.5688"N	80°57'39.2087"W	4269.96	336.887	0.00	0.00	0.00
10530.00†	90.000	341.071	6127.00	4358.59	4021.81	-1708.60	1651407.69	14364165.55	39°33'19.5038"N	80°57'39.6224"W	4369.70	336.983	0.00	0.00	0.00
10630.00†	90.000	341.071	6127.00	4458.59	4116.41	-1741.04	1651375.26	14364260.10	39°33'20.4388"N	80°57'40.0360"W	4469.45	337.074	0.00	0.00	0.00
10730.00†	90.000	341.071	6127.00	4558.59	4211.00	-1773.48	1651342.84	14364354.66	39°33'21.3738"N	80°57'40.4496"W	4569.21	337.161	0.00	0.00	0.00
10830.00†	90.000	341.071	6127.00	4658.59	4305.59	-1805.91	1651310.41	14364449.21	39°33'22.3089"N	80°57'40.8633"W	4668.99	337.245	0.00	0.00	0.00

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Facility	Nalley Pad	Wellbore	Greenwood Unit 1H ST01 PWB
Slot	Slot #06		

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MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
10930.00†	90.000	341.071	6127.00	4758.59	4400.18	-1838.35	1651277.98	14364543.76	39°33'23.2439"N	80°57'41.2769"W	4768.77	337.325	0.00	0.00	0.00
11030.00†	90.000	341.071	6127.00	4858.59	4494.77	-1870.79	1651245.56	14364638.32	39°33'24.1789"N	80°57'41.6905"W	4868.56	337.402	0.00	0.00	0.00
11130.00†	90.000	341.071	6127.00	4958.59	4589.37	-1903.23	1651213.13	14364732.87	39°33'25.1139"N	80°57'42.1042"W	4968.36	337.476	0.00	0.00	0.00
11230.00†	90.000	341.071	6127.00	5058.59	4683.96	-1935.67	1651180.71	14364827.43	39°33'26.0489"N	80°57'42.5178"W	5068.17	337.547	0.00	0.00	0.00
11330.00†	90.000	341.071	6127.00	5158.59	4778.55	-1968.11	1651148.28	14364921.98	39°33'26.9839"N	80°57'42.9315"W	5167.98	337.615	0.00	0.00	0.00
11430.00†	90.000	341.071	6127.00	5258.59	4873.14	-2000.55	1651115.85	14365016.54	39°33'27.9190"N	80°57'43.3451"W	5267.80	337.681	0.00	0.00	0.00
11530.00†	90.000	341.071	6127.00	5358.59	4967.74	-2032.99	1651083.43	14365111.09	39°33'28.8540"N	80°57'43.7588"W	5367.63	337.744	0.00	0.00	0.00
11630.00†	90.000	341.071	6127.00	5458.59	5062.33	-2065.43	1651051.00	14365205.64	39°33'29.7890"N	80°57'44.1724"W	5467.46	337.805	0.00	0.00	0.00
11730.00†	90.000	341.071	6127.00	5558.59	5156.92	-2097.87	1651018.57	14365300.20	39°33'30.7240"N	80°57'44.5861"W	5567.30	337.863	0.00	0.00	0.00
11830.00†	90.000	341.071	6127.00	5658.59	5251.51	-2130.31	1650986.15	14365394.75	39°33'31.6590"N	80°57'44.9998"W	5667.15	337.920	0.00	0.00	0.00
11930.00†	90.000	341.071	6127.00	5758.59	5346.10	-2162.75	1650953.72	14365489.31	39°33'32.5940"N	80°57'45.4134"W	5767.00	337.974	0.00	0.00	0.00
12030.00†	90.000	341.071	6127.00	5858.59	5440.70	-2195.19	1650921.30	14365583.86	39°33'33.5290"N	80°57'45.8271"W	5866.86	338.027	0.00	0.00	0.00
12130.00†	90.000	341.071	6127.00	5958.59	5535.29	-2227.63	1650888.87	14365678.42	39°33'34.4641"N	80°57'46.2408"W	5966.72	338.078	0.00	0.00	0.00
12230.00†	90.000	341.071	6127.00	6058.59	5629.88	-2260.06	1650856.44	14365772.97	39°33'35.3991"N	80°57'46.6544"W	6066.59	338.127	0.00	0.00	0.00
12330.00†	90.000	341.071	6127.00	6158.59	5724.47	-2292.50	1650824.02	14365867.52	39°33'36.3341"N	80°57'47.0681"W	6166.46	338.175	0.00	0.00	0.00
12430.00†	90.000	341.071	6127.00	6258.59	5819.07	-2324.94	1650791.59	14365962.08	39°33'37.2691"N	80°57'47.4818"W	6266.33	338.221	0.00	0.00	0.00
12530.00†	90.000	341.071	6127.00	6358.59	5913.66	-2357.38	1650759.16	14366056.63	39°33'38.2041"N	80°57'47.8955"W	6366.21	338.266	0.00	0.00	0.00
12630.00†	90.000	341.071	6127.00	6458.59	6008.25	-2389.82	1650726.74	14366151.19	39°33'39.1391"N	80°57'48.3092"W	6466.09	338.309	0.00	0.00	0.00
12730.00†	90.000	341.071	6127.00	6558.59	6102.84	-2422.26	1650694.31	14366245.74	39°33'40.0741"N	80°57'48.7229"W	6565.98	338.352	0.00	0.00	0.00
12830.00†	90.000	341.071	6127.00	6658.59	6197.43	-2454.70	1650661.89	14366340.29	39°33'41.0091"N	80°57'49.1366"W	6665.86	338.392	0.00	0.00	0.00
12930.00†	90.000	341.071	6127.00	6758.59	6292.03	-2487.14	1650629.46	14366434.85	39°33'41.9441"N	80°57'49.5503"W	6765.76	338.432	0.00	0.00	0.00
13030.00†	90.000	341.071	6127.00	6858.59	6386.62	-2519.58	1650597.03	14366529.40	39°33'42.8791"N	80°57'49.9640"W	6865.65	338.470	0.00	0.00	0.00
13130.00†	90.000	341.071	6127.00	6958.59	6481.21	-2552.02	1650564.61	14366623.96	39°33'43.8142"N	80°57'50.3777"W	6965.55	338.508	0.00	0.00	0.00
13230.00†	90.000	341.071	6127.00	7058.59	6575.80	-2584.46	1650532.18	14366718.51	39°33'44.7492"N	80°57'50.7914"W	7065.45	338.544	0.00	0.00	0.00
13330.00†	90.000	341.071	6127.00	7158.59	6670.40	-2616.90	1650499.75	14366813.07	39°33'45.6842"N	80°57'51.2051"W	7165.36	338.579	0.00	0.00	0.00
13430.00†	90.000	341.071	6127.00	7258.59	6764.99	-2649.34	1650467.33	14366907.62	39°33'46.6192"N	80°57'51.6188"W	7265.26	338.613	0.00	0.00	0.00
13530.00†	90.000	341.071	6127.00	7358.59	6859.58	-2681.78	1650434.90	14367002.17	39°33'47.5542"N	80°57'52.0325"W	7365.17	338.647	0.00	0.00	0.00
13630.00†	90.000	341.071	6127.00	7458.59	6954.17	-2714.21	1650402.48	14367096.73	39°33'48.4892"N	80°57'52.4462"W	7465.08	338.679	0.00	0.00	0.00
13730.00†	90.000	341.071	6127.00	7558.59	7048.77	-2746.65	1650370.05	14367191.28	39°33'49.4242"N	80°57'52.8600"W	7565.00	338.711	0.00	0.00	0.00
13830.00†	90.000	341.071	6127.00	7658.59	7143.36	-2779.09	1650337.62	14367285.84	39°33'50.3592"N	80°57'53.2737"W	7664.91	338.742	0.00	0.00	0.00

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Greenwood Unit 1H ST01
Field	Tyler	API	47-095-02777-0000
Facility	Nalley Pad	Wellbore	Greenwood Unit 1H ST01 PWB
Slot	Slot #06		

WELLPATH DATA (222 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]
13930.00†	90.000	341.071	6127.00	7758.59	7237.95	-2811.53	1650305.20	14367380.39	39°33'51.2942"N	80°57'53.6874"W	7764.83	338.772	0.00	0.00	0.00
14030.00†	90.000	341.071	6127.00	7858.59	7332.54	-2843.97	1650272.77	14367474.95	39°33'52.2292"N	80°57'54.1011"W	7864.75	338.801	0.00	0.00	0.00
14130.00†	90.000	341.071	6127.00	7958.59	7427.13	-2876.41	1650240.34	14367569.50	39°33'53.1642"N	80°57'54.5149"W	7964.68	338.829	0.00	0.00	0.00
14230.00†	90.000	341.071	6127.00	8058.59	7521.73	-2908.85	1650207.92	14367664.05	39°33'54.0992"N	80°57'54.9286"W	8064.60	338.857	0.00	0.00	0.00
14330.00†	90.000	341.071	6127.00	8158.59	7616.32	-2941.29	1650175.49	14367758.61	39°33'55.0342"N	80°57'55.3424"W	8164.53	338.884	0.00	0.00	0.00
14430.00†	90.000	341.071	6127.00	8258.59	7710.91	-2973.73	1650143.07	14367853.16	39°33'55.9692"N	80°57'55.7561"W	8264.45	338.911	0.00	0.00	0.00
14530.00†	90.000	341.071	6127.00	8358.59	7805.50	-3006.17	1650110.64	14367947.72	39°33'56.9042"N	80°57'56.1698"W	8364.38	338.937	0.00	0.00	0.00
14630.00†	90.000	341.071	6127.00	8458.59	7900.10	-3038.61	1650078.21	14368042.27	39°33'57.8392"N	80°57'56.5836"W	8464.32	338.962	0.00	0.00	0.00
14730.00†	90.000	341.071	6127.00	8558.59	7994.69	-3071.05	1650045.79	14368136.83	39°33'58.7742"N	80°57'56.9974"W	8564.25	338.986	0.00	0.00	0.00
14830.00†	90.000	341.071	6127.00	8658.59	8089.28	-3103.49	1650013.36	14368231.38	39°33'59.7092"N	80°57'57.4111"W	8664.18	339.010	0.00	0.00	0.00
14930.00†	90.000	341.071	6127.00	8758.59	8183.87	-3135.93	1649980.93	14368325.93	39°34'0.6442"N	80°57'57.8249"W	8764.12	339.034	0.00	0.00	0.00
15030.00†	90.000	341.071	6127.00	8858.59	8278.46	-3168.36	1649948.51	14368420.49	39°34'1.5792"N	80°57'58.2386"W	8864.06	339.057	0.00	0.00	0.00
15130.00†	90.000	341.071	6127.00	8958.59	8373.06	-3200.80	1649916.08	14368515.04	39°34'2.5142"N	80°57'58.6524"W	8964.00	339.079	0.00	0.00	0.00
15230.00†	90.000	341.071	6127.00	9058.59	8467.65	-3233.24	1649883.66	14368609.60	39°34'3.4492"N	80°57'59.0662"W	9063.94	339.101	0.00	0.00	0.00
15330.00†	90.000	341.071	6127.00	9158.59	8562.24	-3265.68	1649851.23	14368704.15	39°34'4.3842"N	80°57'59.4799"W	9163.88	339.123	0.00	0.00	0.00
15430.00†	90.000	341.071	6127.00	9258.59	8656.83	-3298.12	1649818.80	14368798.70	39°34'5.3192"N	80°57'59.8937"W	9263.82	339.144	0.00	0.00	0.00
15530.00†	90.000	341.071	6127.00	9358.59	8751.43	-3330.56	1649786.38	14368893.26	39°34'6.2542"N	80°58'0.3075"W	9363.76	339.164	0.00	0.00	0.00
15630.00†	90.000	341.071	6127.00	9458.59	8846.02	-3363.00	1649753.95	14368987.81	39°34'7.1892"N	80°58'0.7213"W	9463.71	339.185	0.00	0.00	0.00
15730.00†	90.000	341.071	6127.00	9558.59	8940.61	-3395.44	1649721.52	14369082.37	39°34'8.1242"N	80°58'1.1351"W	9563.66	339.204	0.00	0.00	0.00
15830.00†	90.000	341.071	6127.00	9658.59	9035.20	-3427.88	1649689.10	14369176.92	39°34'9.0592"N	80°58'1.5488"W	9663.60	339.224	0.00	0.00	0.00
15930.00†	90.000	341.071	6127.00	9758.59	9129.79	-3460.32	1649656.67	14369271.48	39°34'9.9942"N	80°58'1.9626"W	9763.55	339.243	0.00	0.00	0.00
16030.00†	90.000	341.071	6127.00	9858.59	9224.39	-3492.76	1649624.25	14369366.03	39°34'10.9292"N	80°58'2.3764"W	9863.50	339.261	0.00	0.00	0.00
16130.00†	90.000	341.071	6127.00	9958.59	9318.98	-3525.20	1649591.82	14369460.58	39°34'11.8642"N	80°58'2.7902"W	9963.45	339.279	0.00	0.00	0.00
16230.00†	90.000	341.071	6127.00	10058.59	9413.57	-3557.64	1649559.39	14369555.14	39°34'12.7992"N	80°58'3.2040"W	10063.40	339.297	0.00	0.00	0.00
16330.00†	90.000	341.071	6127.00	10158.59	9508.16	-3590.08	1649526.97	14369649.69	39°34'13.7342"N	80°58'3.6178"W	10163.36	339.315	0.00	0.00	0.00
16430.00†	90.000	341.071	6127.00	10258.59	9602.76	-3622.51	1649494.54	14369744.25	39°34'14.6692"N	80°58'4.0316"W	10263.31	339.332	0.00	0.00	0.00
16530.00†	90.000	341.071	6127.00	10358.59	9697.35	-3654.95	1649462.11	14369838.80	39°34'15.6041"N	80°58'4.4454"W	10363.26	339.348	0.00	0.00	0.00
16630.00†	90.000	341.071	6127.00	10458.59	9791.94	-3687.39	1649429.69	14369933.36	39°34'16.5391"N	80°58'4.8593"W	10463.22	339.365	0.00	0.00	0.00
16730.00†	90.000	341.071	6127.00	10558.59	9886.53	-3719.83	1649397.26	14370027.91	39°34'17.4741"N	80°58'5.2731"W	10563.18	339.381	0.00	0.00	0.00
16830.00†	90.000	341.071	6127.00	10658.59	9981.12	-3752.27	1649364.84	14370122.46	39°34'18.4091"N	80°58'5.6869"W	10663.13	339.397	0.00	0.00	0.00



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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Greenwood Unit 1H ST01
Field	Tyler	API	47-095-02777-0000
Facility	Nalley Pad	Wellbore	Greenwood Unit 1H ST01 PWB
Slot	Slot #06		

WELLPATH DATA (222 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]
16930.00†	90.000	341.071	6127.00	10758.59	10075.72	-3784.71	1649332.41	14370217.02	39°34'19.3441"N	80°58'6.1007"W	10763.09	339.412	0.00	0.00	0.00
17030.00†	90.000	341.071	6127.00	10858.59	10170.31	-3817.15	1649299.98	14370311.57	39°34'20.2791"N	80°58'6.5145"W	10863.05	339.428	0.00	0.00	0.00
17130.00†	90.000	341.071	6127.00	10958.59	10264.90	-3849.59	1649267.56	14370406.13	39°34'21.2141"N	80°58'6.9284"W	10963.01	339.443	0.00	0.00	0.00
17230.00†	90.000	341.071	6127.00	11058.59	10359.49	-3882.03	1649235.13	14370500.68	39°34'22.1491"N	80°58'7.3422"W	11062.97	339.457	0.00	0.00	0.00
17330.00†	90.000	341.071	6127.00	11158.59	10454.09	-3914.47	1649202.70	14370595.24	39°34'23.0841"N	80°58'7.7560"W	11162.93	339.472	0.00	0.00	0.00
17430.00†	90.000	341.071	6127.00	11258.59	10548.68	-3946.91	1649170.28	14370689.79	39°34'24.0191"N	80°58'8.1699"W	11262.89	339.486	0.00	0.00	0.00
17530.00†	90.000	341.071	6127.00	11358.59	10643.27	-3979.35	1649137.85	14370784.34	39°34'24.9540"N	80°58'8.5837"W	11362.85	339.500	0.00	0.00	0.00
17630.00†	90.000	341.071	6127.00	11458.59	10737.86	-4011.79	1649105.43	14370878.90	39°34'25.8890"N	80°58'8.9975"W	11462.81	339.514	0.00	0.00	0.00
17730.00†	90.000	341.071	6127.00	11558.59	10832.45	-4044.23	1649073.00	14370973.45	39°34'26.8240"N	80°58'9.4114"W	11562.78	339.527	0.00	0.00	0.00
17830.00†	90.000	341.071	6127.00	11658.59	10927.05	-4076.66	1649040.57	14371068.01	39°34'27.7590"N	80°58'9.8252"W	11662.74	339.540	0.00	0.00	0.00
17930.00†	90.000	341.071	6127.00	11758.59	11021.64	-4109.10	1649008.15	14371162.56	39°34'28.6940"N	80°58'10.2391"W	11762.71	339.553	0.00	0.00	0.00
18030.00†	90.000	341.071	6127.00	11858.59	11116.23	-4141.54	1648975.72	14371257.12	39°34'29.6290"N	80°58'10.6529"W	11862.67	339.566	0.00	0.00	0.00
18130.00†	90.000	341.071	6127.00	11958.59	11210.82	-4173.98	1648943.29	14371351.67	39°34'30.5640"N	80°58'11.0668"W	11962.64	339.579	0.00	0.00	0.00
18230.00†	90.000	341.071	6127.00	12058.59	11305.42	-4206.42	1648910.87	14371446.22	39°34'31.4989"N	80°58'11.4807"W	12062.60	339.591	0.00	0.00	0.00
18330.00†	90.000	341.071	6127.00	12158.59	11400.01	-4238.86	1648878.44	14371540.78	39°34'32.4339"N	80°58'11.8945"W	12162.57	339.603	0.00	0.00	0.00
18430.00†	90.000	341.071	6127.00	12258.59	11494.60	-4271.30	1648846.02	14371635.33	39°34'33.3689"N	80°58'12.3084"W	12262.54	339.615	0.00	0.00	0.00
18530.00†	90.000	341.071	6127.00	12358.59	11589.19	-4303.74	1648813.59	14371729.89	39°34'34.3039"N	80°58'12.7223"W	12362.51	339.627	0.00	0.00	0.00
18630.00†	90.000	341.071	6127.00	12458.59	11683.79	-4336.18	1648781.16	14371824.44	39°34'35.2389"N	80°58'13.1361"W	12462.48	339.639	0.00	0.00	0.00
18730.00†	90.000	341.071	6127.00	12558.59	11778.38	-4368.62	1648748.74	14371918.99	39°34'36.1739"N	80°58'13.5500"W	12562.44	339.650	0.00	0.00	0.00
18830.00†	90.000	341.071	6127.00	12658.59	11872.97	-4401.06	1648716.31	14372013.55	39°34'37.1088"N	80°58'13.9639"W	12662.41	339.661	0.00	0.00	0.00
18930.00†	90.000	341.071	6127.00	12758.59	11967.56	-4433.50	1648683.88	14372108.10	39°34'38.0438"N	80°58'14.3778"W	12762.38	339.672	0.00	0.00	0.00
19030.00†	90.000	341.071	6127.00	12858.59	12062.15	-4465.94	1648651.46	14372202.66	39°34'38.9788"N	80°58'14.7917"W	12862.35	339.683	0.00	0.00	0.00
19130.00†	90.000	341.071	6127.00	12958.59	12156.75	-4498.38	1648619.03	14372297.21	39°34'39.9138"N	80°58'15.2056"W	12962.32	339.694	0.00	0.00	0.00
19230.00†	90.000	341.071	6127.00	13058.59	12251.34	-4530.81	1648586.61	14372391.77	39°34'40.8488"N	80°58'15.6194"W	13062.30	339.704	0.00	0.00	0.00
19330.00†	90.000	341.071	6127.00	13158.59	12345.93	-4563.25	1648554.18	14372486.32	39°34'41.7838"N	80°58'16.0333"W	13162.27	339.715	0.00	0.00	0.00
19430.00†	90.000	341.071	6127.00	13258.59	12440.52	-4595.69	1648521.75	14372580.87	39°34'42.7187"N	80°58'16.4472"W	13262.24	339.725	0.00	0.00	0.00
19530.00†	90.000	341.071	6127.00	13358.59	12535.12	-4628.13	1648489.33	14372675.43	39°34'43.6537"N	80°58'16.8611"W	13362.21	339.735	0.00	0.00	0.00
19630.00†	90.000	341.071	6127.00	13458.59	12629.71	-4660.57	1648456.90	14372769.98	39°34'44.5887"N	80°58'17.2750"W	13462.19	339.745	0.00	0.00	0.00
19730.00†	90.000	341.071	6127.00	13558.59	12724.30	-4693.01	1648424.47	14372864.54	39°34'45.5237"N	80°58'17.6890"W	13562.16	339.755	0.00	0.00	0.00
19830.00†	90.000	341.071	6127.00	13658.59	12818.89	-4725.45	1648392.05	14372959.09	39°34'46.4586"N	80°58'18.1029"W	13662.13	339.765	0.00	0.00	0.00

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Greenwood Unit 1H ST01
Field	Tyler	API	47-095-02777-0000
Facility	Nalley Pad	Wellbore	Greenwood Unit 1H ST01 PWB
Slot	Slot #06		

WELLPATH DATA (222 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]
19930.00†	90.000	341.071	6127.00	13758.59	12913.48	-4757.89	1648359.62	14373053.65	39°34'47.3936"N	80°58'18.5168"W	13762.11	339.774	0.00	0.00	0.00
20030.00†	90.000	341.071	6127.00	13858.59	13008.08	-4790.33	1648327.20	14373148.20	39°34'48.3286"N	80°58'18.9307"W	13862.08	339.783	0.00	0.00	0.00
20130.00†	90.000	341.071	6127.00	13958.59	13102.67	-4822.77	1648294.77	14373242.75	39°34'49.2636"N	80°58'19.3446"W	13962.06	339.793	0.00	0.00	0.00
20230.00†	90.000	341.071	6127.00	14058.59	13197.26	-4855.21	1648262.34	14373337.31	39°34'50.1985"N	80°58'19.7585"W	14062.03	339.802	0.00	0.00	0.00
20330.00†	90.000	341.071	6127.00	14158.59	13291.85	-4887.65	1648229.92	14373431.86	39°34'51.1335"N	80°58'20.1725"W	14162.01	339.811	0.00	0.00	0.00
20430.00†	90.000	341.071	6127.00	14258.59	13386.45	-4920.09	1648197.49	14373526.42	39°34'52.0685"N	80°58'20.5864"W	14261.98	339.819	0.00	0.00	0.00
20530.00†	90.000	341.071	6127.00	14358.59	13481.04	-4952.53	1648165.06	14373620.97	39°34'53.0035"N	80°58'21.0003"W	14361.96	339.828	0.00	0.00	0.00
20630.00†	90.000	341.071	6127.00	14458.59	13575.63	-4984.96	1648132.64	14373715.53	39°34'53.9384"N	80°58'21.4143"W	14461.94	339.837	0.00	0.00	0.00
20730.00†	90.000	341.071	6127.00	14558.59	13670.22	-5017.40	1648100.21	14373810.08	39°34'54.8734"N	80°58'21.8282"W	14561.91	339.845	0.00	0.00	0.00
20830.00†	90.000	341.071	6127.00	14658.59	13764.81	-5049.84	1648067.79	14373904.63	39°34'55.8084"N	80°58'22.2421"W	14661.89	339.854	0.00	0.00	0.00
20930.00†	90.000	341.071	6127.00	14758.59	13859.41	-5082.28	1648035.36	14373999.19	39°34'56.7434"N	80°58'22.6561"W	14761.87	339.862	0.00	0.00	0.00
20958.86	90.000	341.071	6127.00‡	14787.45	13886.71	-5091.65	1648026.00	14374026.48	39°34'57.0132"N	80°58'22.7756"W	14790.73	339.864	0.00	0.00	0.00

DIRECTIONAL DIFFICULTY INDEX			
Directional Difficulty Index @ TD = 6.79		Reference: IADC/SPE 59196	
Values	Wellpath characterized as:	Values	Wellpath characterized as:
< 6.0	Relatively short or simple profiles with low tortuosity	6.4-6.8	Longer with relatively tortuous well paths
< 6.0-6.4	Shorter with high tortuosity or longer with lower tortuosity	> 6.8	Long tortuous profiles, high degree of difficulty



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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Greenwood Unit 1H ST01
Field	Tyler	API	47-095-02777-0000
Facility	Nalley Pad	Wellbore	Greenwood Unit 1H ST01 PWB
Slot	Slot #06		

HOLE & CASING SECTIONS - Ref Wellbore: Greenwood Unit 1H ST01 PWB Ref Wellpath: Greenwood Unit 1H ST01 PWP Rev-A.0									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	30.00	130.00	100.00	30.00	130.00	0.00	0.00	0.00	0.00
17.5in Open Hole	130.00	330.00	200.00	130.00	330.00	0.00	0.00	0.00	0.00
13.375in Casing Surface	30.00	330.00	300.00	30.00	330.00	0.00	0.00	0.00	0.00
12.25in Open Hole	330.00	2531.54	2201.54	330.00	2530.00	0.00	0.00	-45.89	-16.70
9.625in Casing Intermediate	30.00	2531.54	2501.54	30.00	2530.00	0.00	0.00	-45.89	-16.70
8.75in Open Hole	2531.54	5358.00	2826.46	2530.00	5337.02	-45.89	-16.70	-358.38	-67.69
8.5in Open Hole	5358.00	20958.86	15600.86	5337.02	6127.00	-358.38	-67.69	13886.71	-5091.64
5.5in Casing Production	30.00	20958.00	20928.00	30.00	6127.00	0.00	0.00	13885.89	-5091.37

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) Greenwood Unit 1H POE Rev-1	6317.80	6087.00	56.75	-305.45	1652810.27	14360202.08	39°32'40.3096"N	80°57'21.7333"W	point
2) Greenwood Unit 1H BHL Rev-1	20958.86	6127.00	13886.71	-5091.65	1648026.00	14374026.48	39°34'57.0132"N	80°58'22.7756"W	point
Greenwood Unit 1H 50' L/R Hard Line	N/A	6500.00	7219.37	-2805.16	1650311.57	14367361.82	39°33'51.1106"N	80°57'53.6062"W	rectangle
2D Rectangle 14097 x 100.									

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Greenwood Unit 1H ST01
Field	Tyler	API	47-095-02777-0000
Facility	Nalley Pad	Wellbore	Greenwood Unit 1H ST01 PWB
Slot	Slot #06		

SURVEY PROGRAM - Ref Wellbore: Greenwood Unit 1H ST01 PWB Ref Wellpath: Greenwood Unit 1H ST01 PWP Rev-A.0				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
30.00	300.00	Gyrodata 2015 - GC+WR+DPIPE	Gyrodata MS Gyro <17-1/2">	Greenwood Unit 1H ST01 PWB
300.00	2500.00	BH NaviTrak (2019) (Axial Corr+HRGM)	APS EM <12-1/4">	Greenwood Unit 1H ST01 PWB
2500.00	5350.00	BH NaviTrak (2019) (Axial Corr+HRGM)	APS EM <8-3/4">	Greenwood Unit 1H ST01 PWB
5350.00	20958.86	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	BH AT Curve <8-1/2">	Greenwood Unit 1H ST01 PWB

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