

# ANTERO RESOURCES CORPORATION

Location: Tyler County, WV  
 Field: Tyler  
 Facility: McKim Pad  
 Slot: Slot #01  
 Well: All Unit 1H  
 Wellbore: All Unit 1H PWB

API: 47-095-02421-0000  
 BHI Job #: 8837662  
 Rig: Frontier 32  
 Duration: 11/08/2017-11/14/2017

BHI AT Curve <math>\langle -8.1/2^\circ \rangle</math> (7101°X7161'-21614'): 6342.37ft TVD, 581.72ft S, 2634.56ft W  
 Marcellus POE: 7440° MD: 6458.32ft TVD, 828.00ft S, 2584.14ft W  
 Directional ONE MWD <math>\langle -8.3/4^\circ \rangle</math> (2578°X2647'-7084'): 2592.71ft TVD, 40.69ft S, 0.15ft E  
 Directional ONE MWD <math>\langle -12.1/4^\circ \rangle</math> (504°X568'-2578'): 574.99ft TVD, 3.37ft S, 0.14ft W  
 Gyrodatta MS Gyro <math>\langle -17.1/2^\circ \rangle</math> (100°-504'): 117.00ft TVD, 0.46ft S, 0.15ft E

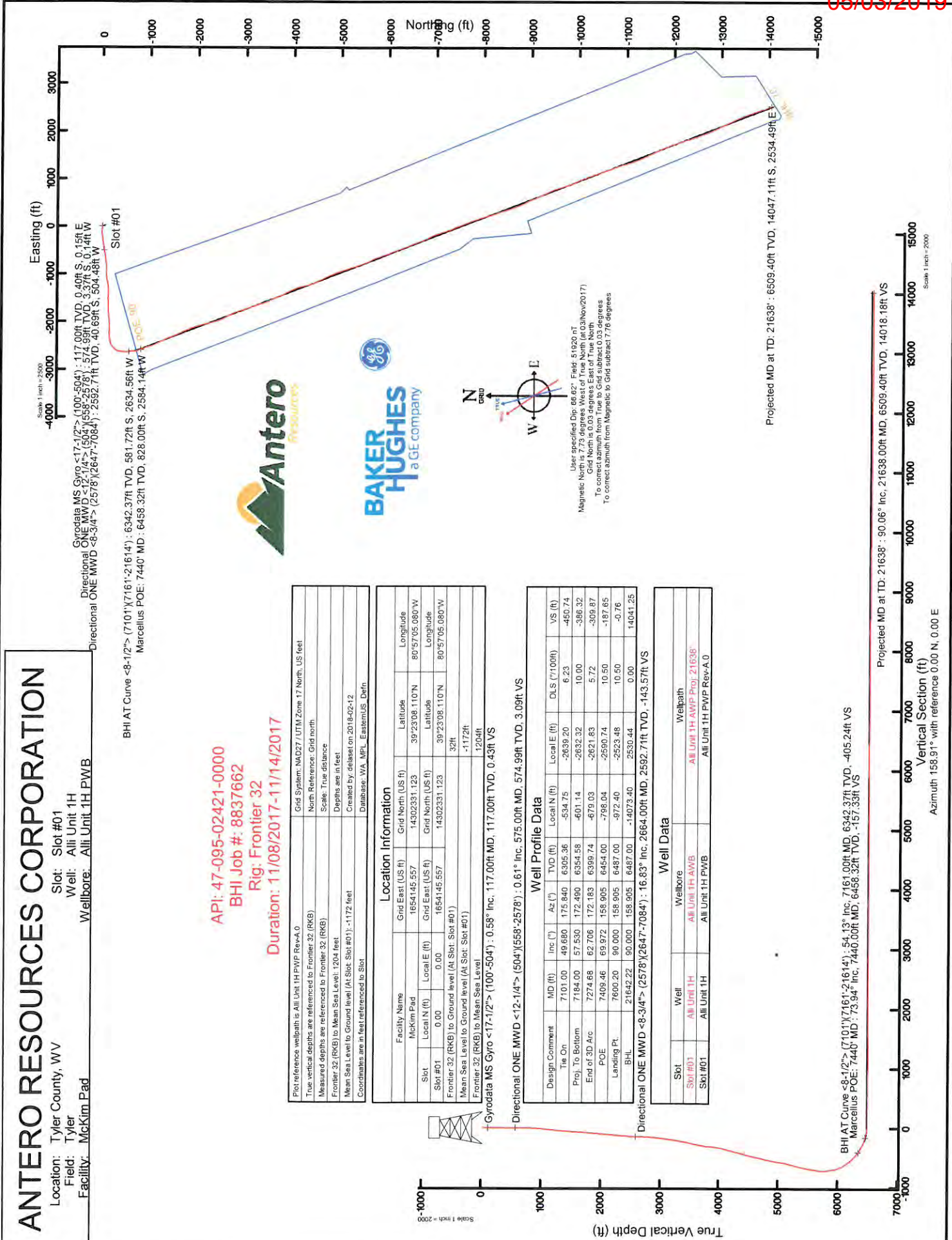
Wellbore: All Unit 1H PWB Rev-A-0

Reference wellbore is All Unit 1H PWB Rev-A-0	Grid System: NAD27 / UTM Zone 17 North, US feet
True vertical depths are referenced to Frontier 32 (RKB)	North Reference: Grid north
Measured depths are referenced to Frontier 32 (RKB)	Scale: True distance
Frontier 32 (RKB) to Mean Sea Level: 1204 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot Slot #01): -1172 feet	Created by: dslset on 2018-02-12
Coordinates are in feet referenced to Slot	Database: WA, MPL, EASTERNUS, Ddrfn

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
McKim Pad	1654145.557	14302331.123	80°57'05.080"W
Slot	Local E (ft)	Local N (ft)	Longitude
Slot #01	0.00	1654145.557	80°57'05.080"W
Frontier 32 (RKB) to Ground level (At Slot Slot #01)	32ft		
Mean Sea Level to Ground level (At Slot Slot #01)	1204ft		
Frontier 32 (RKB) to Mean Sea Level	-1172ft		

Well Profile Data			
Design Comment	MD (ft)	Az (°)	Inc (")
The On	7101.00	49.680	175.840
Proj. To Bottom	7184.00	57.530	172.490
End of 3D Arc	7274.68	62.706	172.183
POE	7408.46	69.972	158.905
Landing Pt.	7600.20	90.000	158.905
BHL	21642.22	90.000	158.905
Directional ONE MWD <math>\langle -8.3/4^\circ \rangle</math> (2578°X2647'-7084')	16.83° Inc, 2664.00ft MD, 2592.71ft TVD, -143.57ft VS		
Directional ONE MWD <math>\langle -12.1/4^\circ \rangle</math> (504°X568'-2578')	0.61° Inc, 575.00ft MD, 574.99ft TVD, 3.09ft VS		
Gyrodatta MS Gyro <math>\langle -17.1/2^\circ \rangle</math> (100°-504')	0.58° Inc, 117.00ft MD, 117.00ft TVD, 0.43ft VS		

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #01	All Unit 1H	All Unit 1H AWP	All Unit 1H AWP Prof: 21636'
Slot #01	All Unit 1H	All Unit 1H PWB	All Unit 1H PWB Rev-A-0



Projected MD at TD: 21638 : 90.06° Inc, 21638.00ft MD, 6509.40ft TVD, 14018.18ft VS  
 BHI AT Curve <math>\langle -8.1/2^\circ \rangle</math> (7101°X7161'-21614'): 54.13° Inc, 7161.00ft MD, 6342.37ft TVD, -405.24ft VS  
 Marcellus POE: 7440° MD: 73.94° Inc, 7440.00ft MD, 6458.32ft TVD, -157.33ft VS

Vertical Section (ft)  
 Azimuth 158.91° with reference 0.00 N, 0.00 E

Scale 1 inch = 2000



# Actual Wellpath Report

Alli Unit 1H AWP Proj: 21638'

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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	McKim Pad
Slot	Slot #01
Well	Alli Unit 1H
Wellbore	Alli Unit 1H AWB

REPORT SETUP INFORMATION	
Projection System	NAD27 / UTM Zone 17 North, US feet
North Reference	Grid
Scale	0.999600
Convergence at slot	0.03° East
Software System	WellArchitect® 5.1
User	Delaset
Report Generated	12/Feb/2018 at 15:54
Database/Source file	WA_MPL_EasternUS_Defn/Alli_Unit_1H_AWP_Proj_21638_.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	1654145.56	14302331.12	39°23'08.110"N	80°57'05.080"W
Facility Reference Pt			1654145.56	14302331.12	39°23'08.110"N	80°57'05.080"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM	
Calculation method	Minimum curvature
Horizontal Reference Pt	Slot
Vertical Reference Pt	Frontier 32 (RKB)
MD Reference Pt	Frontier 32 (RKB)
Field Vertical Reference	Mean Sea Level
	Frontier 32 (RKB) to Facility Vertical Datum
	Frontier 32 (RKB) to Mean Sea Level
	Frontier 32 (RKB) to Ground Level at Slot (Slot #01)
	Section Origin
	Section Azimuth
	32.00ft
	1204.00ft
	32.00ft
	N 0.00, E 0.00 ft
	158.91°





# Actual Wellpath Report

Alli Unit 1H AWP Proj: 21638'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Tyler County, WV	Well	Alli Unit 1H
Field	Tyler	Wellbore	Alli Unit 1H AWB
Facility	McKim Pad		

WELLPATH DATA (257 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]	Comments
0.00	0.00	159.820	0.00	0.00	0.00	0.00	1654145.56	14302331.12	39°23'08.110"N	80°57'05.080"W	0.00	0.00	0.00	0.00	0.00	
32.00	0.00	159.820	32.00	0.00	0.00	0.00	1654145.56	14302331.12	39°23'08.110"N	80°57'05.080"W	0.00	0.00	0.00	0.00	0.00	
117.00	0.580	159.820	117.00	0.43	-0.40	0.15	1654145.71	14302330.72	39°23'08.106"N	80°57'05.078"W	0.43	159.820	0.68	188.02	Byrodatta MS Gyro <17-1/2"> (100'-504')	
217.00	0.430	166.270	216.99	1.31	-1.24	0.41	1654145.97	14302329.88	39°23'08.098"N	80°57'05.075"W	1.31	161.664	0.16	-0.15	6.45	
317.00	0.310	210.590	316.99	1.85	-1.84	0.36	1654145.92	14302329.28	39°23'08.092"N	80°57'05.075"W	1.88	168.830	0.30	-0.12	44.32	
417.00	0.230	198.920	416.99	2.17	-2.26	0.16	1654145.72	14302328.86	39°23'08.088"N	80°57'05.078"W	2.27	175.938	0.10	-0.08	-11.67	
517.00	0.480	188.660	516.99	2.69	-2.87	0.03	1654145.59	14302328.28	39°23'08.082"N	80°57'05.080"W	2.87	179.349	0.26	0.25	-10.26	
521.00	0.460	190.280	520.99	2.72	-2.90	0.03	1654145.58	14302328.22	39°23'08.081"N	80°57'05.080"W	2.90	179.463	0.60	-0.50	40.50	
575.00	0.610	206.860	574.99	3.09	-3.37	-0.14	1654145.42	14302327.75	39°23'08.077"N	80°57'05.082"W	3.37	182.402	0.40	0.28	30.70	Directional ONE MWD <12-1/4"> (504')(668'-2578')
664.00	1.820	261.680	663.97	3.10	-4.00	-1.75	1654143.80	14302327.13	39°23'08.071"N	80°57'05.102"W	4.36	203.694	1.74	1.36	61.60	
755.00	4.590	276.330	754.82	1.10	-3.80	-6.80	1654138.76	14302327.32	39°23'08.072"N	80°57'05.167"W	7.80	240.788	3.15	3.04	16.10	
845.00	7.130	277.720	844.34	-3.25	-2.66	-15.92	1654129.64	14302328.47	39°23'08.084"N	80°57'05.283"W	16.14	260.525	2.83	2.82	1.54	
936.00	9.110	277.520	934.42	-9.42	-0.96	-28.66	1654116.91	14302330.17	39°23'08.101"N	80°57'05.445"W	28.67	268.091	2.18	2.18	-0.22	
1024.00	11.020	275.770	1021.07	-16.56	0.80	-43.94	1654101.94	14302331.93	39°23'08.118"N	80°57'05.640"W	43.94	271.046	2.20	2.17	-1.99	
1113.00	12.380	275.020	1108.21	-24.60	2.49	-61.90	1654083.68	14302333.61	39°23'08.135"N	80°57'05.868"W	61.95	272.306	1.54	1.53	-0.84	
1201.00	13.300	273.610	1194.01	-32.98	3.96	-81.40	1654064.19	14302335.08	39°23'08.150"N	80°57'06.117"W	81.50	272.782	1.10	1.05	-1.60	
1289.00	14.480	272.630	1279.44	-41.64	5.10	-102.50	1654043.10	14302336.22	39°23'08.161"N	80°57'06.385"W	102.62	272.847	1.37	1.34	-1.11	
1378.00	15.340	271.420	1365.44	-50.62	5.90	-125.38	1654020.23	14302337.02	39°23'08.169"N	80°57'06.677"W	125.52	272.694	1.03	0.97	-1.36	
1466.00	15.470	266.970	1450.28	-58.72	5.57	-148.74	1653996.88	14302336.69	39°23'08.166"N	80°57'06.974"W	148.84	272.144	1.35	0.15	-5.06	
1554.00	14.830	262.580	1535.23	-65.02	3.49	-171.63	1653974.00	14302334.61	39°23'08.145"N	80°57'07.266"W	171.66	271.166	1.49	-0.73	-4.99	
1643.00	15.190	261.620	1621.19	-70.27	0.32	-194.46	1653951.18	14302331.45	39°23'08.114"N	80°57'07.557"W	194.46	270.095	0.49	0.40	-1.08	
1731.00	16.470	262.890	1705.86	-75.82	-2.90	-218.24	1653927.40	14302328.22	39°23'08.082"N	80°57'07.860"W	218.26	269.238	1.51	1.45	1.44	
1819.00	17.830	264.940	1789.94	-82.56	-5.63	-244.04	1653901.61	14302325.49	39°23'08.056"N	80°57'08.188"W	244.11	268.677	1.69	1.55	2.33	
1907.00	17.520	263.710	1873.78	-89.66	-8.27	-270.63	1653875.04	14302322.85	39°23'08.030"N	80°57'08.527"W	270.75	268.249	0.55	-0.35	-1.40	
1995.00	17.900	260.310	1957.61	-95.72	-12.00	-297.13	1653848.55	14302319.13	39°23'07.993"N	80°57'08.864"W	297.37	267.687	1.25	0.43	-3.86	
2083.00	18.660	260.940	2041.17	-101.33	-16.49	-324.36	1653821.33	14302314.64	39°23'07.949"N	80°57'09.211"W	324.78	267.089	0.89	0.86	0.72	
2171.00	20.060	263.360	2124.20	-108.03	-20.46	-353.25	1653792.45	14302310.67	39°23'07.910"N	80°57'09.579"W	353.85	266.686	1.83	1.59	2.75	
2260.00	20.150	264.520	2207.77	-115.96	-23.69	-383.67	1653762.04	14302307.45	39°23'07.878"N	80°57'09.967"W	384.40	266.467	0.46	0.10	1.30	
2348.00	19.970	264.570	2290.43	-124.10	-26.55	-413.72	1653732.00	14302304.58	39°23'07.850"N	80°57'10.349"W	414.57	266.327	0.21	-0.20	0.06	
2436.00	16.750	263.110	2373.94	-131.26	-29.50	-441.28	1653704.66	14302301.64	39°23'07.821"N	80°57'10.700"W	442.26	266.176	3.70	-3.66	-1.66	





# Actual Wellpath Report

Alli Unit 1H AWP Proj: 21638'

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05/03/2019

## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Tyler County, WV	Well	Alli Unit 1H
Field	Tyler	Wellbore	Alli Unit 1H AWB
Facility	McKim Pad		

## WELLPATH DATA (257 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (°/100ft)	Comments
2525.00	16.070	260.390	2459.321	-136.86	-33.09	-466.16	1653679.59	14302298.04	39°23'07.785"N	80°57'11.017"W	467.33	265.939	1.15	-0.76	-3.06	
2595.00	16.210	258.660	2526.56	-140.44	-36.63	-485.29	1653660.46	14302298.51	39°23'07.750"N	80°57'11.261"W	486.67	265.683	0.72	0.20	-2.47	
2664.00	16.830	257.500	2592.71	-143.57	-40.69	-504.48	1653641.28	14302290.45	39°23'07.710"N	80°57'11.505"W	506.12	265.389	1.02	0.90	-1.68	Directional ONE MWD <8-3/4"> (2578')(2647'-7084')
2752.00	18.470	256.960	2676.57	-147.42	-46.59	-530.50	1653615.27	14302284.55	39°23'07.652"N	80°57'11.837"W	532.55	264.981	1.87	1.86	-0.61	
2840.00	20.990	256.370	2759.39	-151.42	-53.45	-559.41	1653586.38	14302277.69	39°23'07.585"N	80°57'12.205"W	561.95	264.542	2.87	2.86	-0.67	
2928.00	21.980	258.440	2841.28	-156.19	-60.47	-590.86	1653554.94	14302270.68	39°23'07.515"N	80°57'12.606"W	593.94	264.157	1.42	1.12	2.35	
3019.00	22.190	263.630	2925.61	-163.38	-65.78	-624.62	1653521.18	14302265.36	39°23'07.463"N	80°57'13.036"W	628.08	263.988	2.16	0.23	5.70	
3195.00	25.230	262.500	3087.09	-172.27	-69.26	-658.35	1653487.47	14302261.89	39°23'07.429"N	80°57'13.465"W	661.99	263.994	1.16	1.08	1.08	
3283.00	27.280	264.090	3166.01	-191.04	-77.87	-732.83	1653443.03	14302253.28	39°23'07.344"N	80°57'14.141"W	736.95	263.935	2.46	2.33	1.81	
3371.00	28.610	265.270	3243.74	-202.26	-81.68	-773.89	1653337.98	14302249.47	39°23'07.307"N	80°57'14.937"W	778.18	263.975	1.64	1.51	1.34	
3459.00	29.460	268.180	3320.69	-215.33	-84.11	-816.51	1653329.37	14302247.05	39°23'07.283"N	80°57'15.480"W	820.84	264.119	1.87	0.97	3.31	
3547.00	32.100	269.170	3396.29	-230.58	-85.14	-861.53	1653284.37	14302246.02	39°23'07.273"N	80°57'16.053"W	865.73	264.356	3.06	3.00	1.12	
3635.00	34.340	269.200	3469.90	-247.28	-85.82	-909.73	1653236.19	14302245.34	39°23'07.266"N	80°57'16.667"W	913.77	264.611	2.55	2.55	0.03	
3723.00	35.530	267.590	3542.04	-264.08	-87.24	-960.10	1653185.84	14302243.82	39°23'07.255"N	80°57'17.308"W	964.06	264.808	1.71	1.35	-1.83	
3811.00	35.370	264.820	3613.73	-279.25	-90.62	-1011.02	1653134.94	14302240.54	39°23'07.220"N	80°57'17.957"W	1015.07	264.878	1.83	-0.18	-3.15	
3900.00	34.890	261.080	3686.53	-291.68	-96.89	-1061.83	1653084.16	14302234.27	39°23'07.158"N	80°57'18.604"W	1066.24	264.786	2.48	-0.54	-4.20	
3988.00	32.370	260.820	3759.80	-301.85	-104.55	-1109.95	1653036.05	14302226.61	39°23'07.082"N	80°57'19.217"W	1114.87	264.619	2.87	-2.86	-0.30	
4076.00	31.550	258.270	3834.46	-310.46	-112.99	-1155.75	1652990.27	14302218.18	39°23'06.999"N	80°57'19.800"W	1161.26	264.416	1.79	-0.93	-2.90	
4164.00	30.940	259.280	3909.70	-318.27	-121.88	-1200.52	1652945.52	14302209.29	39°23'06.911"N	80°57'20.370"W	1206.69	264.203	0.91	-0.69	1.15	
4252.00	30.260	263.100	3985.45	-327.78	-128.75	-1244.74	1652901.29	14302202.42	39°23'06.844"N	80°57'20.934"W	1251.41	264.095	2.34	-0.77	4.34	
4340.00	37.070	270.920	4095.26	-351.00	-132.02	-1317.75	1652828.33	14302199.16	39°23'06.812"N	80°57'21.864"W	1324.35	264.279	5.99	5.15	5.37	
4428.00	36.570	269.520	4166.50	-370.38	-131.81	-1371.09	1652775.02	14302199.37	39°23'06.814"N	80°57'22.543"W	1377.41	264.509	1.10	-0.56	-1.57	
4516.00	35.910	268.670	4237.48	-388.34	-132.63	-1423.10	1652723.03	14302198.55	39°23'06.806"N	80°57'23.205"W	1429.27	264.676	0.94	-0.75	-0.97	
4604.00	37.950	272.100	4307.83	-407.72	-132.24	-1475.95	1652670.20	14302198.94	39°23'06.810"N	80°57'23.878"W	1481.87	264.880	3.29	2.32	3.90	
4737.00	37.620	269.350	4377.38	-427.76	-131.55	-1529.86	1652616.32	14302199.63	39°23'06.818"N	80°57'24.566"W	1535.50	265.085	1.95	-0.38	-3.13	
4825.00	36.090	268.150	4447.79	-445.68	-132.69	-1582.62	1652563.57	14302198.49	39°23'06.806"N	80°57'25.237"W	1588.17	265.207	1.92	-1.74	-1.36	
4913.00	35.150	268.020	4519.33	-462.51	-134.40	-1633.84	1652512.37	14302196.77	39°23'06.790"N	80°57'25.899"W	1639.36	265.297	1.07	-1.07	-0.15	
5002.00	35.690	269.330	4591.86	-479.96	-135.59	-1685.51	1652460.83	14302195.59	39°23'06.778"N	80°57'26.546"W	1690.65	265.400	1.05	0.61	1.47	





# Actual Wellpath Report

Alli Unit 1H AWP Proj: 21638'  
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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	McKim Pad
Slot	Slot #01
Well	Alli Unit 1H
Wellbore	Alli Unit 1H AWB

WELLPATH DATA (257 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)	Comments
5090.00	34.650	268.090	4663.79	-497.13	-136.73	-1736.08	1652410.17	14302194.45	39°23'06.767"N	80°57'27.191"W	1741.46	265.497	1.43	-1.18	-1.41	
5178.00	34.200	267.920	4736.38	-513.41	-138.46	-1785.80	1652360.47	14302192.72	39°23'06.750"N	80°57'27.825"W	1791.16	265.567	0.52	-0.51	-0.19	
5267.00	35.840	267.940	4809.26	-530.05	-140.30	-1836.84	1652309.46	14302190.88	39°23'06.732"N	80°57'28.475"W	1842.19	265.632	1.84	1.84	0.02	
5355.00	34.620	263.980	4881.15	-544.96	-143.85	-1887.45	1652258.86	14302187.33	39°23'06.698"N	80°57'29.119"W	1892.93	265.642	2.94	-1.39	-4.50	
5443.00	32.950	263.950	4954.29	-557.67	-148.99	-1936.12	1652210.22	14302182.19	39°23'06.647"N	80°57'29.739"W	1941.84	265.599	1.90	-1.90	-0.03	
5532.00	33.280	264.700	5029.26	-570.41	-153.74	-1983.85	1652162.50	14302177.44	39°23'06.600"N	80°57'30.347"W	1989.80	265.569	0.88	-0.75	0.84	
5620.00	33.420	265.030	5103.18	-583.54	-158.01	-2031.39	1652114.98	14302173.18	39°23'06.558"N	80°57'30.953"W	2037.53	265.552	1.31	1.30	0.37	
5708.00	33.610	269.790	5176.57	-598.95	-160.20	-2079.90	1652066.49	14302170.99	39°23'06.537"N	80°57'31.570"W	2086.06	265.596	2.99	0.22	5.41	
5796.00	34.960	272.270	5249.28	-617.63	-159.29	-2129.45	1652016.96	14302171.90	39°23'06.546"N	80°57'32.201"W	2135.40	265.722	2.21	1.53	2.82	
5885.00	34.560	271.890	5322.40	-637.59	-157.45	-2180.16	1651966.27	14302173.74	39°23'06.565"N	80°57'32.847"W	2185.84	265.869	0.51	-0.45	-0.43	
5973.00	35.490	271.440	5394.46	-657.13	-155.98	-2230.64	1651915.81	14302175.20	39°23'06.579"N	80°57'33.490"W	2236.09	266.000	1.10	1.06	-0.51	
6061.00	33.130	263.910	5467.17	-673.15	-157.89	-2280.12	1651866.35	14302173.29	39°23'06.561"N	80°57'34.120"W	2285.58	266.039	5.51	-2.68	-8.56	
6149.00	32.080	262.510	5541.31	-684.87	-163.49	-2327.21	1651819.29	14302167.70	39°23'06.505"N	80°57'34.720"W	2332.94	265.981	1.47	-1.19	-1.59	
6237.00	32.690	264.200	5615.62	-696.63	-168.94	-2374.02	1651772.49	14302162.25	39°23'06.452"N	80°57'35.316"W	2380.02	265.930	1.24	0.69	1.92	
6326.00	32.620	261.440	5690.56	-708.17	-174.94	-2421.65	1651724.88	14302156.26	39°23'06.393"N	80°57'35.923"W	2427.96	265.868	1.68	-0.08	-3.10	
6370.00	32.630	255.940	5727.62	-712.20	-179.59	-2444.89	1651701.65	14302151.61	39°23'06.347"N	80°57'36.219"W	2451.48	265.799	6.74	0.02	-12.50	
6414.00	29.530	244.880	5765.33	-712.89	-187.08	-2466.24	1651680.31	14302144.12	39°23'06.273"N	80°57'36.491"W	2473.33	265.662	14.74	-7.05	-25.14	
6458.00	27.960	236.020	5803.93	-709.82	-197.45	-2484.62	1651661.93	14302133.75	39°23'06.170"N	80°57'36.725"W	2492.46	265.456	10.31	-3.57	-20.14	
6502.00	29.560	236.310	5842.50	-705.16	-209.24	-2502.21	1651644.36	14302121.97	39°23'06.054"N	80°57'36.949"W	2510.94	265.220	3.65	3.64	0.66	
6547.00	31.490	236.490	5881.26	-700.21	-221.89	-2521.24	1651625.33	14302109.33	39°23'05.929"N	80°57'37.192"W	2530.99	264.971	4.29	4.29	0.40	
6591.00	33.080	234.660	5918.46	-694.78	-235.17	-2540.63	1651605.95	14302096.04	39°23'05.798"N	80°57'37.438"W	2551.49	264.711	4.23	3.61	-4.11	
6635.00	33.460	227.110	5955.26	-687.32	-250.38	-2559.32	1651587.27	14302080.85	39°23'05.648"N	80°57'37.677"W	2571.54	264.413	9.47	0.86	-17.20	
6679.00	35.590	219.220	5991.53	-676.47	-268.56	-2576.31	1651570.28	14302062.67	39°23'05.468"N	80°57'37.893"W	2590.27	264.049	11.25	4.84	-17.93	
6723.00	35.500	212.940	6027.34	-662.62	-289.21	-2591.36	1651555.24	14302042.03	39°23'05.264"N	80°57'38.085"W	2607.45	263.632	8.30	-0.20	-14.27	
6768.00	37.360	208.240	6063.55	-646.04	-312.21	-2604.93	1651541.68	14302019.04	39°23'05.037"N	80°57'38.258"W	2623.57	263.165	7.45	4.13	-10.44	
6812.00	39.520	202.900	6098.02	-627.26	-336.88	-2616.70	1651529.91	14301994.38	39°23'04.793"N	80°57'38.408"W	2638.29	262.664	9.00	4.91	-12.14	
6856.00	40.890	195.560	6131.65	-605.62	-363.67	-2628.01	1651520.60	14301967.60	39°23'04.528"N	80°57'38.527"W	2651.08	262.115	11.20	3.11	-16.68	
6900.00	41.900	189.910	6164.67	-581.47	-392.02	-2632.41	1651514.21	14301939.26	39°23'04.248"N	80°57'38.608"W	2661.44	261.530	8.79	2.30	-12.84	
6944.00	42.410	187.160	6197.29	-555.80	-421.22	-2636.79	1651509.83	14301910.07	39°23'03.960"N	80°57'38.664"W	2670.22	260.924	4.35	1.16	-6.25	
6988.00	45.550	184.100	6228.95	-528.51	-451.62	-2639.76	1651506.86	14301879.69	39°23'03.659"N	80°57'38.702"W	2678.11	260.292	8.62	7.14	-6.95	





# Actual Wellpath Report

Alli Unit 1H AWP Proj: 21638'  
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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	McKim Pad
Slot	Slot #01
Well	Alli Unit 1H
Wellbore	Alli Unit 1H AWB

WELLPATH DATA (257 stations) † = interpolated/extrapolated station																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert.Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (°/100ft)	Comments
7032.00	47.000	180.600	6259.36	-499.34	-483.38	-2641.05	1651505.57	14301847.94	39°23'03.345"N	80°57'38.719"W	2684.92	259.628	6.63	3.30	-7.95	
7076.00	48.420	177.050	6288.98	-468.74	-515.91	-2640.37	1651506.25	14301815.42	39°23'03.024"N	80°57'38.710"W	2690.30	258.944	6.78	3.23	-8.07	
7101.00	49.680	175.840	6305.36	-450.74	-534.75	-2639.20	1651507.42	14301796.58	39°23'02.837"N	80°57'38.696"W	2692.83	258.546	6.23	5.04	-4.84	
7141.00†	52.639	173.882	6330.45	-420.79	-565.78	-2636.40	1651510.22	14301765.57	39°23'02.531"N	80°57'38.660"W	2696.42	257.888	8.32	7.46	-4.61	Middlesex: 7141 MD
7161.00	54.130	172.980	6342.37	-405.24	-581.72	-2634.56	1651512.06	14301749.63	39°23'02.373"N	80°57'38.637"W	2698.02	257.549	8.32	7.46	-4.61	BHI AT Curve -8-1/2"> (7101')(7161'-21614)
7208.00	58.360	171.990	6368.48	-367.27	-620.45	-2629.43	1651517.18	14301710.92	39°23'01.990"N	80°57'38.572"W	2701.64	256.723	9.16	9.00	-2.06	
7256.00	63.040	172.760	6391.97	-326.57	-661.93	-2623.89	1651522.72	14301669.46	39°23'01.580"N	80°57'38.501"W	2706.09	255.841	9.85	9.75	1.60	
7303.00	67.860	171.720	6411.49	-284.98	-704.28	-2610.17	1651528.50	14301627.13	39°23'01.162"N	80°57'38.428"W	2711.18	254.944	10.45	10.26	-2.21	
7338.00†	68.568	168.856	6424.48	-253.12	-736.31	-2612.63	1651533.98	14301595.11	39°23'00.845"N	80°57'38.327"W	2715.28	254.006	7.86	2.11	-8.13	
7351.00	68.840	167.800	6429.21	-241.18	-748.17	-2610.17	1651536.43	14301583.25	39°23'00.212"N	80°57'38.327"W	2714.40	254.261	7.86	2.02	-8.18	Burkett: 7338 MD
7398.00	70.580	160.720	6445.52	-197.32	-790.56	-2598.21	1651548.39	14301540.88	39°23'00.309"N	80°57'38.175"W	2715.82	253.077	14.60	3.70	-15.06	
7409.00†	71.458	160.028	6449.10	-186.92	-800.36	-2594.72	1651551.88	14301531.09	39°22'59.939"N	80°57'37.996"W	2715.35	252.857	9.94	7.96	-6.29	Lully: 7409 MD
7440.00†	73.938	158.115	6458.32	-157.33	-828.00	-2584.14	1651562.45	14301503.46	39°22'59.886"N	80°57'37.968"W	2713.55	252.234	9.94	8.01	-6.17	Marcellus POE: 7440 MD
7446.00	74.420	157.750	6459.96	-151.56	-833.35	-2581.97	1651564.62	14301498.11	39°22'59.886"N	80°57'37.968"W	2713.13	252.112	9.94	8.04	-6.08	
7541.00	80.350	162.310	6481.80	-59.18	-919.97	-2549.87	1651596.71	14301411.52	39°22'59.030"N	80°57'37.757"W	2710.65	251.154	4.55	3.34	3.19	
7568.00	85.410	162.390	6487.62	-12.64	-964.40	-2535.74	1651610.84	14301367.11	39°22'58.591"N	80°57'37.380"W	2710.76	250.161	11.02	9.08	6.37	
7635.00	89.290	161.930	6489.79	34.22	-1009.08	-2521.36	1651625.21	14301322.44	39°22'58.149"N	80°57'37.380"W	2712.94	249.177	10.77	10.77	0.17	
7730.00	90.060	157.660	6490.33	129.19	-1098.22	-2488.55	1651658.00	14301233.35	39°22'57.268"N	80°57'36.780"W	2715.78	248.188	8.31	8.26	-0.98	
7825.00	90.030	155.960	6490.26	224.10	-1185.34	-2450.69	1651695.85	14301146.26	39°22'56.407"N	80°57'36.298"W	2722.30	244.188	2.42	-0.03	-2.42	
7921.00	89.850	155.110	6490.53	414.74	-1359.03	-2371.25	1651775.26	14300972.84	39°22'54.889"N	80°57'35.288"W	2725.74	242.170	0.32	-0.19	-0.26	
8016.00	89.880	155.850	6490.68	604.58	-1533.34	-2295.65	1651812.95	14300885.48	39°22'53.827"N	80°57'34.808"W	2733.09	240.182	1.08	0.09	1.05	
8111.00	89.880	155.850	6490.68	604.58	-1533.34	-2295.65	1651812.95	14300885.48	39°22'53.827"N	80°57'34.808"W	2733.09	240.182	1.08	0.06	1.07	
8301.00	89.630	154.990	6491.09	699.40	-1619.73	-2256.14	1651890.33	14300712.04	39°22'52.112"N	80°57'33.823"W	2777.35	234.325	0.94	-0.13	-1.35	
8397.00	89.850	155.270	6491.52	795.19	-1706.83	-2215.76	1651930.68	14300624.98	39°22'51.251"N	80°57'33.310"W	2796.94	232.393	0.37	0.29	0.29	
8491.00	89.010	156.480	6492.46	889.05	-1792.61	-2177.35	1651969.09	14300539.23	39°22'50.403"N	80°57'32.821"W	2820.33	230.535	1.57	-0.89	1.29	
8587.00	88.250	159.880	6494.76	985.00	-1881.69	-2141.68	1652004.74	14300450.19	39°22'49.523"N	80°57'32.367"W	2850.89	228.697	3.63	-0.79	3.54	
8682.00	90.150	161.920	6496.08	1079.92	-1971.44	-2110.60	1652035.81	14300360.47	39°22'48.635"N	80°57'31.972"W	2888.12	226.952	2.93	2.00	2.15	
8776.00	89.820	162.170	6496.11	1173.78	-2060.87	-2081.62	1652064.77	14300271.09	39°22'47.752"N	80°57'31.603"W	2929.22	225.287	0.44	-0.36	0.27	





# Actual Wellpath Report

Alli Unit 1H AWP Proj: 21638'  
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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	McKim Pad
Slot	Slot #01
Well	Alli Unit 1H
Wellbore	Alli Unit 1H AWB

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)	Comments
8872.00	89.320	166.850	6496.83	1269.30	-2153.35	-2055.99	1652090.39	14300178.64	39°22'46.837"N	80°57'31.277"W	2977.25	223.675	4.90	-0.82	4.88	
8967.00	90.340	166.060	6497.11	1363.47	-2245.71	-2033.74	1652112.63	14300086.32	39°22'45.924"N	80°57'30.995"W	3029.74	222.164	1.36	1.07	-0.83	
9062.00	91.020	163.660	6495.98	1457.94	-2337.39	-2008.93	1652137.43	14299994.67	39°22'45.018"N	80°57'30.679"W	3082.08	220.678	2.63	0.72	-2.53	
9157.00	92.180	160.550	6493.33	1552.75	-2427.75	-1979.76	1652166.59	14299904.35	39°22'44.125"N	80°57'30.308"W	3132.64	219.196	3.49	1.22	-3.27	
9252.00	91.170	155.750	6490.55	1647.67	-2515.86	-1944.43	1652201.91	14299816.27	39°22'43.254"N	80°57'29.856"W	3179.68	217.699	5.16	-1.06	-5.05	
9347.00	89.850	152.250	6489.70	1742.30	-2601.23	-1902.79	1652243.53	14299730.94	39°22'42.410"N	80°57'29.329"W	3222.89	216.185	3.94	-1.39	-3.68	
9443.00	89.910	154.030	6489.91	1837.81	-2686.87	-1859.42	1652286.89	14299645.34	39°22'41.563"N	80°57'28.777"W	3267.52	214.685	1.86	0.06	1.85	
9538.00	89.850	157.620	6490.10	1932.66	-2773.52	-1820.52	1652325.77	14299558.72	39°22'40.707"N	80°57'28.282"W	3317.64	213.281	3.78	-0.06	3.78	
9632.00	89.850	160.790	6490.35	2026.64	-2861.39	-1787.15	1652359.12	14299470.89	39°22'39.838"N	80°57'27.858"W	3373.64	211.988	3.37	0.00	3.37	
9727.00	90.180	161.030	6490.33	2121.58	-2951.16	-1756.08	1652390.18	14299381.15	39°22'38.951"N	80°57'27.463"W	3434.12	210.755	0.43	0.35	0.25	
9822.00	90.180	158.470	6490.03	2216.57	-3040.28	-1723.20	1652423.05	14299292.06	39°22'38.070"N	80°57'26.598"W	3494.67	209.544	2.69	0.00	-2.69	
9917.00	89.880	156.180	6489.98	2311.56	-3128.56	-1688.12	1652458.12	14299203.82	39°22'37.197"N	80°57'26.191"W	3554.95	208.350	0.44	-0.32	-0.31	
10011.00	89.880	161.940	6490.17	2405.52	-3216.91	-1656.07	1652490.16	14299115.50	39°22'36.324"N	80°57'25.831"W	3618.16	207.239	4.00	0.00	4.00	
10106.00	90.180	163.360	6490.13	2500.32	-3307.59	-1627.74	1652528.47	14299024.86	39°22'35.427"N	80°57'25.446"W	3686.42	206.203	1.53	0.32	1.49	
10201.00	90.120	159.490	6489.88	2595.21	-3397.62	-1597.48	1652568.72	14298934.87	39°22'34.597"N	80°57'25.045"W	3754.43	205.182	4.07	-0.06	-4.07	
10296.00	89.880	155.860	6489.88	2690.17	-3485.49	-1561.40	1652604.78	14298847.04	39°22'33.669"N	80°57'24.987"W	3819.24	204.131	3.83	-0.25	-3.82	
10392.00	89.820	156.650	6490.13	2786.07	-3573.36	-1522.74	1652643.42	14298759.20	39°22'32.800"N	80°57'24.495"W	3884.28	203.081	0.83	-0.06	0.82	
10486.00	90.030	157.190	6490.25	2880.01	-3659.83	-1485.89	1652680.26	14298672.76	39°22'31.945"N	80°57'24.027"W	3949.97	202.097	0.62	0.22	0.57	
10582.00	89.970	156.560	6490.25	2975.95	-3748.12	-1448.19	1652697.95	14298584.51	39°22'31.072"N	80°57'23.547"W	4018.17	201.125	0.66	-0.06	-0.66	
10676.00	90.180	154.010	6490.13	3069.75	-3833.50	-1408.89	1652737.23	14298499.16	39°22'30.228"N	80°57'23.047"W	4084.20	200.179	2.72	0.22	-2.71	
10772.00	90.120	152.400	6489.88	3165.27	-3919.19	-1365.62	1652780.49	14298413.51	39°22'29.381"N	80°57'22.497"W	4150.30	199.211	1.68	-0.06	-1.68	
10867.00	88.650	155.380	6490.90	3259.89	-4004.48	-1323.82	1652822.27	14298328.25	39°22'28.538"N	80°57'21.965"W	4217.62	198.293	3.50	-1.55	3.14	
10961.00	89.200	163.010	6492.66	3353.80	-4092.27	-1290.46	1652855.61	14298240.50	39°22'27.670"N	80°57'21.541"W	4290.92	197.502	8.14	0.59	8.12	
11056.00	89.880	165.240	6493.43	3448.40	-4183.64	-1264.48	1652881.59	14298149.17	39°22'26.767"N	80°57'21.210"W	4370.55	196.817	2.45	0.72	2.35	
11151.00	90.430	164.030	6493.17	3542.92	-4275.24	-1239.31	1652906.75	14298057.60	39°22'25.862"N	80°57'20.890"W	4451.24	196.166	1.40	0.58	-1.27	
11246.00	90.340	161.310	6492.53	3637.71	-4365.92	-1211.01	1652935.03	14297966.96	39°22'24.965"N	80°57'20.531"W	4530.76	195.503	2.86	-0.09	-2.86	
11341.00	90.980	157.620	6491.43	3732.68	-4454.86	-1177.70	1652968.33	14297878.05	39°22'24.066"N	80°57'20.107"W	4607.90	194.808	3.94	0.67	-3.88	
11437.00	89.540	154.740	6491.00	3828.56	-4542.67	-1138.93	1653007.08	14297790.28	39°22'23.218"N	80°57'19.614"W	4683.27	194.075	3.35	-1.50	-3.00	
11532.00	88.860	153.080	6492.33	3923.18	-4627.98	-1097.16	1653048.84	14297705.01	39°22'22.375"N	80°57'19.082"W	4756.25	193.337	1.89	-0.72	-1.75	
11627.00	90.090	154.670	6493.20	4017.81	-4713.26	-1055.33	1653090.65	14297619.75	39°22'21.532"N	80°57'18.550"W	4829.97	192.621	2.12	1.29	1.67	





# Actual Wellpath Report

Alli Unit 1H AWP Proj: 21638'

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05/03/2019

REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	McKim Pad
Slot	Slot #01
Well	Alli Unit 1H
Wellbore	Alli Unit 1H AWB

WELLPATH DATA (257 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)	Comments
11722.00	90.340	157.070	6492.84	4112.67	-4799.96	-1016.50	1653129.47	14297533.10	39°22'20.675"N	80°57'18.056"W	4906.41	191.957	2.54	0.26	2.53	
11817.00	90.080	158.980	6492.51	4207.65	-4888.05	-980.95	1653185.00	14297445.04	39°22'19.804"N	80°57'17.604"W	4985.51	191.348	2.03	-0.29	2.01	
11912.00	90.340	161.470	6492.18	4302.62	-4977.44	-948.81	1653197.13	14297355.68	39°22'18.920"N	80°57'17.196"W	5067.06	190.792	2.64	0.29	2.62	
12008.00	90.180	161.630	6491.74	4398.51	-5068.50	-918.43	1653227.50	14297284.66	39°22'18.020"N	80°57'16.809"W	5151.04	190.271	0.24	-0.17	0.17	
12103.00	90.400	162.100	6491.26	4493.39	-5158.78	-888.86	1653257.06	14297174.41	39°22'17.127"N	80°57'16.433"W	5234.80	189.776	0.55	0.23	0.49	
12198.00	90.280	162.100	6490.70	4588.24	-5249.18	-859.66	1653286.24	14297084.05	39°22'16.234"N	80°57'16.062"W	5319.11	189.301	0.13	-0.13	0.00	
12294.00	89.660	161.220	6490.57	4684.13	-5340.31	-829.45	1653316.44	14296992.96	39°22'15.333"N	80°57'15.678"W	5404.34	188.829	1.12	-0.65	-0.92	
12484.00	90.370	158.000	6489.81	4774.07	-5518.72	-784.20	1653381.66	14296814.62	39°22'14.447"N	80°57'15.279"W	5488.31	188.361	1.42	0.94	-1.06	
12579.00	90.310	154.490	6489.25	4968.95	-5605.65	-725.94	1653419.91	14296627.72	39°22'12.710"N	80°57'14.362"W	5571.38	187.884	2.33	-0.19	-2.33	
12674.00	89.420	152.700	6489.47	5063.53	-5680.74	-683.69	1653482.14	14296642.67	39°22'11.669"N	80°57'13.824"W	5731.66	186.851	2.10	-0.94	-3.69	
12769.00	90.580	162.560	6489.47	5158.39	-5778.48	-647.58	1653496.23	14296554.97	39°22'11.001"N	80°57'13.365"W	5814.65	186.394	10.45	1.22	10.38	
12864.00	90.280	162.430	6488.76	5253.20	-5869.08	-619.01	1653526.80	14296484.41	39°22'10.106"N	80°57'13.002"W	5901.63	186.021	0.34	-0.32	-0.14	
12958.00	89.630	160.670	6488.83	5347.10	-5958.24	-589.26	1653556.53	14296375.28	39°22'09.224"N	80°57'12.624"W	5987.31	185.648	2.00	-0.69	-1.87	
13053.00	89.350	158.960	6489.68	5442.08	-6047.40	-556.48	1653589.30	14296286.15	39°22'08.343"N	80°57'12.207"W	6072.95	185.258	1.82	-0.29	-1.80	
13148.00	89.570	158.620	6490.57	5537.08	-6135.96	-522.12	1653623.65	14296197.63	39°22'07.468"N	80°57'11.770"W	6158.13	184.864	0.43	0.23	-0.36	
13243.00	90.150	160.670	6490.80	5632.06	-6225.02	-489.07	1653656.68	14296108.60	39°22'06.587"N	80°57'11.350"W	6244.20	184.492	2.24	0.61	2.16	
13338.00	91.380	158.420	6489.53	5727.04	-6314.02	-455.88	1653689.86	14296019.64	39°22'05.707"N	80°57'10.928"W	6330.45	184.130	2.70	1.31	-2.37	
13434.00	90.280	157.610	6488.13	5823.02	-6403.02	-419.94	1653725.78	14295930.67	39°22'04.827"N	80°57'10.471"W	6416.78	183.752	1.43	-1.16	-0.84	
13529.00	90.310	158.460	6487.64	5918.00	-6491.13	-384.41	1653761.30	14295842.61	39°22'03.957"N	80°57'10.019"W	6502.50	183.389	0.90	0.03	0.89	
13623.00	90.310	159.070	6487.13	6012.00	-6578.74	-350.37	1653795.33	14295755.02	39°22'03.090"N	80°57'09.586"W	6588.06	183.049	0.65	0.00	0.65	
13719.00	90.890	159.800	6486.12	6107.99	-6668.62	-316.65	1653829.04	14295665.18	39°22'02.202"N	80°57'09.157"W	6676.13	182.719	0.97	0.60	0.76	
13814.00	90.220	157.160	6485.20	6202.97	-6756.98	-281.80	1653863.87	14295576.85	39°22'01.328"N	80°57'08.714"W	6762.86	182.388	2.87	-0.71	-2.78	
13909.00	89.380	154.190	6485.54	6297.81	-6843.54	-242.68	1653902.98	14295490.33	39°22'00.473"N	80°57'08.217"W	6847.84	182.031	3.25	-0.88	-3.13	
14003.00	89.200	155.250	6486.70	6391.55	-6928.53	-202.54	1653943.10	14295405.38	39°21'59.632"N	80°57'07.706"W	6931.49	181.674	1.14	-0.19	1.13	
14098.00	88.400	157.820	6486.69	6486.44	-7015.64	-164.72	1653980.90	14295318.30	39°21'58.771"N	80°57'07.225"W	7017.58	181.345	2.83	-0.84	2.71	
14194.00	89.940	163.900	6490.08	6582.33	-7106.28	-133.27	1654012.35	14295227.69	39°21'57.875"N	80°57'06.825"W	7107.53	181.074	6.53	1.60	6.33	
14289.00	90.090	162.870	6490.06	6677.03	-7197.32	-106.10	1654039.50	14295136.70	39°21'56.975"N	80°57'06.480"W	7198.10	180.845	1.10	0.16	-1.08	
14384.00	90.060	157.900	6489.93	6771.97	-7286.77	-74.22	1654071.37	14295049.28	39°21'56.091"N	80°57'06.075"W	7287.15	180.584	5.23	-0.03	-5.23	
14479.00	89.850	158.270	6490.01	6866.96	-7374.91	-38.76	1654106.81	14294959.18	39°21'55.220"N	80°57'05.624"W	7375.01	180.301	0.45	-0.22	0.39	





# Actual Wellpath Report

Alli Unit 1H AWP Proj: 21638'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Tyler County, WV	Well	Alli Unit 1H
Field	Tyler	Wellbore	Alli Unit 1H AWB
Facility	McKim Pad		

## WELLPATH DATA (257 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)	Comments
14575.00	89.970	158.180	6490.16	6962.96	-7454.06	-3.15	1654142.41	14294870.06	39°21'54.338"N	80°57'05.171"W	7464.06	180.024	0.16	0.13	-0.09	
14670.00	90.060	158.580	6490.13	7057.95	-7552.38	31.85	1654177.40	14294781.78	39°21'53.465"N	80°57'04.726"W	7552.44	179.758	0.43	0.09	0.09	
14765.00	89.910	158.450	6490.16	7152.95	-7640.77	66.65	1654212.18	14294693.42	39°21'52.591"N	80°57'04.284"W	7641.07	179.500	0.21	-0.16	-0.14	
14859.00	89.880	158.230	6490.33	7246.94	-7728.14	101.34	1654246.86	14294606.09	39°21'51.728"N	80°57'03.843"W	7728.80	179.249	0.24	-0.03	-0.23	
14954.00	89.880	160.860	6490.53	7341.93	-7817.14	134.54	1654280.04	14294517.12	39°21'50.848"N	80°57'03.421"W	7818.30	179.014	2.77	0.00	2.77	
15049.00	90.030	161.710	6490.60	7436.85	-7907.12	165.02	1654310.51	14294427.18	39°21'49.959"N	80°57'03.033"W	7908.84	178.804	0.91	0.16	0.89	
15145.00	89.880	163.000	6490.68	7532.67	-7998.60	194.12	1654339.60	14294335.74	39°21'49.054"N	80°57'02.663"W	8000.95	178.610	1.35	-0.16	1.34	
15240.00	90.000	163.530	6490.78	7627.40	-8089.57	221.47	1654366.94	14294244.80	39°21'48.155"N	80°57'02.316"W	8092.60	178.432	0.57	0.13	0.56	
15335.00	90.000	160.360	6490.78	7722.25	-8179.88	250.91	1654396.37	14294154.53	39°21'47.262"N	80°57'01.941"W	8183.73	178.243	3.34	0.00	-3.34	
15431.00	89.750	159.980	6490.99	7818.23	-8270.19	283.48	1654428.92	14294064.26	39°21'46.369"N	80°57'01.527"W	8275.05	178.037	0.47	-0.28	-0.40	
15525.00	89.630	162.380	6491.50	7912.15	-8359.16	313.80	1654459.23	14293975.32	39°21'45.490"N	80°57'01.142"W	8365.05	177.850	2.56	-0.13	2.55	
15620.00	89.850	163.160	6491.93	8006.93	-8449.89	341.94	1654487.36	14293884.63	39°21'44.593"N	80°57'00.784"W	8456.81	177.683	0.85	0.23	0.82	
15715.00	89.720	161.720	6492.29	8101.75	-8540.46	370.60	1654516.01	14293794.09	39°21'43.698"N	80°57'00.420"W	8548.50	177.515	1.52	-0.14	-1.52	
15810.00	89.720	160.700	6492.75	8196.67	-8630.40	401.20	1654546.59	14293704.19	39°21'42.809"N	80°57'00.031"W	8639.72	177.338	1.07	0.00	-1.07	
15905.00	89.690	157.800	6493.24	8291.65	-8719.22	434.85	1654580.23	14293615.40	39°21'41.931"N	80°56'59.603"W	8730.06	177.145	3.05	-0.03	-3.05	
16000.00	89.690	155.000	6493.75	8386.55	-8806.27	472.88	1654618.25	14293528.39	39°21'41.070"N	80°56'59.120"W	8818.96	176.926	2.95	0.00	-2.95	
16095.00	89.720	154.730	6494.24	8481.31	-8892.27	513.23	1654658.58	14293442.42	39°21'40.220"N	80°56'58.607"W	8907.07	176.697	0.29	0.03	-0.28	
16191.00	89.630	155.550	6494.79	8577.10	-8979.37	553.59	1654698.92	14293355.36	39°21'39.359"N	80°56'58.094"W	8996.42	176.472	0.86	-0.09	0.85	
16286.00	89.660	156.310	6495.38	8671.97	-9066.11	592.33	1654737.65	14293268.65	39°21'38.501"N	80°56'57.601"W	9085.44	176.262	0.80	0.03	0.80	
16381.00	89.780	155.690	6495.84	8766.85	-9152.90	630.97	1654776.28	14293181.90	39°21'37.643"N	80°56'57.110"W	9174.62	176.056	0.66	0.13	-0.65	
16477.00	89.690	155.860	6496.28	8862.70	-9240.44	670.36	1654815.65	14293094.39	39°21'36.778"N	80°56'56.609"W	9264.73	175.851	0.20	-0.09	0.18	
16571.00	89.720	154.580	6496.77	8956.51	-9325.78	709.76	1654855.03	14293009.09	39°21'35.934"N	80°56'56.108"W	9352.75	175.648	1.36	0.03	-1.36	
16666.00	89.600	156.200	6497.33	9051.32	-9412.15	749.32	1654894.58	14292922.75	39°21'35.080"N	80°56'55.605"W	9441.93	175.448	1.71	-0.13	1.71	
16761.00	89.570	160.540	6498.02	9146.29	-9500.44	784.33	1654929.57	14292834.50	39°21'34.207"N	80°56'55.160"W	9532.76	175.281	4.57	-0.03	4.57	
16856.00	90.030	163.900	6498.35	9241.12	-9590.89	813.34	1654958.57	14292744.09	39°21'33.313"N	80°56'54.791"W	9625.31	175.153	3.57	0.48	3.54	
16951.00	89.630	162.290	6498.63	9335.86	-9681.78	840.96	1654986.18	14292653.24	39°21'32.415"N	80°56'54.440"W	9718.23	175.036	1.75	-0.42	-1.59	
17046.00	89.660	160.850	6499.22	9430.76	-9771.90	870.99	1655016.20	14292563.15	39°21'31.524"N	80°56'54.058"W	9810.64	174.907	1.52	0.03	-1.52	
17141.00	89.690	158.870	6499.76	9525.74	-9861.09	903.70	1655048.89	14292474.00	39°21'30.642"N	80°56'53.643"W	9902.41	174.764	2.08	0.03	-2.08	
17236.00	89.690	155.600	6500.27	9620.68	-9948.67	940.45	1655085.63	14292386.45	39°21'29.776"N	80°56'53.175"W	9993.02	174.600	3.44	0.00	-3.44	
17331.00	89.540	155.790	6500.91	9715.53	-10035.25	979.55	1655124.72	14292299.90	39°21'28.920"N	80°56'52.678"W	10082.94	174.425	0.25	-0.16	0.20	





# Actual Wellpath Report

Alli Unit 1H AWP Proj: 21638'  
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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot #01
Operator	ANTERO RESOURCES CORPORATION	Well	Alli Unit 1H
Area	Tyler County, WV	Wellbore	Alli Unit 1H AWB
Field	Tyler		
Facility	McKim Pad		

WELLPATH DATA (257 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)	Comments
17426.00	89.510	158.480	6501.70	9810.47	-10122.77	1016.46	1655161.61	14292212.42	39°21'28.055"N	80°56'52.209"W	10173.68	174.266	2.83	-0.03	2.83	
17520.00	89.720	159.980	6502.33	9904.47	-10210.66	1049.80	1655194.93	14292124.56	39°21'27.186"N	80°56'51.785"W	10264.49	174.130	1.61	0.22	1.60	
17615.00	89.820	160.290	6502.71	9999.44	-10300.01	1082.08	1655227.20	14292035.25	39°21'26.303"N	80°56'51.375"W	10356.69	174.003	0.34	0.11	0.33	
17710.00	89.890	161.450	6503.12	10094.39	-10389.76	1113.21	1655258.32	14291945.54	39°21'25.416"N	80°56'50.979"W	10449.23	173.884	1.23	-0.14	1.22	
17805.00	89.690	162.110	6503.63	10189.26	-10479.99	1142.91	1655288.01	14291855.34	39°21'24.524"N	80°56'50.602"W	10542.13	173.776	0.69	0.00	0.69	
17900.00	89.910	158.140	6503.97	10284.22	-10569.32	1175.20	1655320.29	14291766.05	39°21'23.641"N	80°56'50.191"W	10634.45	173.655	4.19	0.23	-4.18	
17995.00	89.600	158.100	6504.37	10379.21	-10657.47	1210.60	1655355.68	14291677.93	39°21'22.769"N	80°56'49.741"W	10726.01	173.519	0.33	-0.33	-0.04	
18091.00	89.600	160.480	6505.04	10475.20	-10747.26	1244.55	1655389.61	14291588.18	39°21'21.882"N	80°56'49.310"W	10819.08	173.394	2.48	0.00	2.48	
18186.00	89.540	161.850	6505.76	10570.12	-10837.17	1275.22	1655420.26	14291498.31	39°21'20.993"N	80°56'48.920"W	10911.94	173.289	1.44	-0.06	1.44	
18281.00	89.750	161.190	6506.34	10665.02	-10927.27	1305.33	1655450.36	14291408.25	39°21'20.102"N	80°56'48.537"W	11004.96	173.188	0.73	0.22	-0.69	
18375.00	90.150	164.390	6506.43	10758.79	-11017.05	1333.14	1655478.16	14291318.50	39°21'19.215"N	80°56'47.843"W	11097.41	173.100	3.43	0.43	3.40	
18470.00	90.370	162.770	6505.99	10853.47	-11108.17	1359.99	1655505.00	14291227.42	39°21'18.314"N	80°56'47.843"W	11191.11	173.020	1.72	0.23	-1.71	
18565.00	89.910	158.860	6505.76	10948.40	-11197.87	1391.21	1655536.20	14291137.75	39°21'17.427"N	80°56'47.446"W	11283.96	172.918	4.14	-0.48	-4.12	
18659.00	90.000	155.230	6505.84	11042.34	-11284.42	1427.86	1655572.84	14291051.24	39°21'16.572"N	80°56'46.980"W	11374.39	172.788	3.86	0.10	-3.86	
18754.00	89.940	154.750	6505.89	11137.12	-11370.51	1468.02	1655612.99	14290965.18	39°21'15.720"N	80°56'46.470"W	11464.88	172.643	0.51	-0.06	-0.51	
18849.00	90.030	155.010	6505.91	11231.88	-11456.52	1508.35	1655653.30	14290879.20	39°21'14.870"N	80°56'45.957"W	11555.39	172.500	0.29	0.09	0.27	
18944.00	90.000	155.340	6505.89	11326.68	-11542.74	1548.24	1655693.17	14290793.02	39°21'14.018"N	80°56'45.450"W	11646.12	172.360	0.35	-0.03	0.35	
19039.00	90.000	156.900	6505.89	11421.56	-11629.61	1586.69	1655731.61	14290706.19	39°21'13.159"N	80°56'44.961"W	11737.35	172.231	1.64	0.00	1.64	
19135.00	90.030	157.440	6505.86	11517.52	-11718.09	1623.94	1655768.85	14290617.74	39°21'12.284"N	80°56'44.487"W	11830.08	172.110	0.56	0.03	0.56	
19229.00	89.880	158.210	6505.94	11611.50	-11805.14	1659.42	1655804.31	14290530.73	39°21'11.424"N	80°56'44.036"W	11921.20	171.998	0.83	-0.16	0.82	
19325.00	90.000	158.720	6506.04	11707.50	-11894.43	1694.66	1655839.54	14290441.47	39°21'10.541"N	80°56'43.588"W	12014.55	171.891	0.55	0.13	0.53	
19420.00	89.780	159.880	6506.22	11802.49	-11983.30	1728.24	1655873.10	14290352.64	39°21'09.662"N	80°56'43.162"W	12107.28	171.793	1.24	-0.23	1.22	
19514.00	89.750	160.810	6506.60	11896.46	-12071.82	1759.86	1655904.71	14290264.15	39°21'08.787"N	80°56'42.760"W	12199.42	171.706	0.99	-0.03	0.99	
19609.00	89.880	161.430	6506.91	11991.39	-12161.71	1790.60	1655935.43	14290174.30	39°21'07.899"N	80°56'42.369"W	12292.82	171.624	0.67	0.14	0.65	
19704.00	89.660	160.920	6507.29	12086.31	-12251.63	1821.25	1655966.08	14290084.42	39°21'07.010"N	80°56'41.980"W	12386.25	171.545	0.58	-0.23	-0.54	
19799.00	89.820	162.500	6507.72	12181.20	-12341.82	1851.06	1655995.88	14289994.26	39°21'06.118"N	80°56'41.601"W	12479.86	171.470	1.67	0.17	1.66	
19894.00	89.780	161.240	6508.05	12276.07	-12432.10	1880.62	1656025.43	14289904.01	39°21'05.226"N	80°56'41.225"W	12573.54	171.398	1.33	-0.04	-1.33	
19988.00	89.780	160.480	6508.42	12370.01	-12520.91	1911.44	1656056.23	14289815.25	39°21'04.348"N	80°56'40.834"W	12665.97	171.320	0.81	0.00	-0.81	
20081.00	89.910	159.420	6508.67	12463.00	-12608.27	1943.33	1656088.10	14289727.92	39°21'03.484"N	80°56'40.429"W	12757.15	171.238	1.15	0.14	-1.14	
20176.00	90.000	159.280	6508.74	12557.99	-12697.16	1976.83	1656121.59	14289639.06	39°21'02.605"N	80°56'40.003"W	12850.13	171.151	0.18	0.09	-0.15	





# Actual Wellpath Report

Alli Unit 1H AWP Proj: 21638'

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05/03/2019

REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	McKim Pad
Slot	Slot #01
Well	Alli Unit 1H
Wellbore	Alli Unit 1H AWB

WELLPATH DATA (257 stations)																
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)	Comments
20270.00	90.030	158.040	6508.72	12651.99	-12784.72	2011.04	1656155.78	14289551.54	39°21'01.740"N	80°56'39.568"W	12941.92	171.061	1.32	0.03	-1.32	
20365.00	90.000	155.290	6508.69	12746.91	-12871.94	2048.66	1656193.40	14289464.36	39°21'00.877"N	80°56'39.090"W	13033.95	170.957	2.89	-0.03	-2.89	
20459.00	89.910	154.580	6508.77	12840.68	-12957.09	2088.48	1656233.20	14289379.24	39°21'00.036"N	80°56'38.583"W	13124.32	170.844	0.76	-0.10	-0.76	
20553.00	90.000	155.020	6508.84	12834.44	-13042.14	2128.51	1656273.21	14289294.22	39°20'59.195"N	80°56'38.075"W	13214.69	170.731	0.48	0.10	0.47	
20647.00	89.940	155.170	6508.89	13028.23	-13127.40	2168.09	1656312.78	14289209.00	39°20'58.352"N	80°56'37.571"W	13305.23	170.622	0.17	-0.06	0.16	
20741.00	90.060	153.100	6508.89	13121.90	-13211.98	2209.10	1656353.77	14289124.45	39°20'57.516"N	80°56'37.050"W	13395.39	170.508	2.21	0.13	-2.20	
20837.00	89.850	155.030	6508.96	13217.55	-13298.30	2251.08	1656395.73	14289038.16	39°20'56.662"N	80°56'36.516"W	13487.49	170.392	2.02	-0.22	2.01	
20930.00	90.000	156.860	6509.09	13310.42	-13383.22	2288.99	1656433.63	14288953.28	39°20'55.823"N	80°56'36.035"W	13577.56	170.294	1.97	0.16	1.97	
21024.00	89.850	158.270	6509.21	13404.39	-13470.11	2324.86	1656469.48	14288866.43	39°20'54.964"N	80°56'35.579"W	13669.26	170.208	1.51	-0.16	1.50	
21118.00	90.030	159.760	6509.31	13498.39	-13557.87	2358.52	1656503.13	14288778.70	39°20'54.096"N	80°56'35.151"W	13761.49	170.132	1.60	0.19	1.59	
21212.00	89.940	160.870	6509.18	13592.36	-13646.38	2390.19	1656534.78	14288690.23	39°20'53.221"N	80°56'34.749"W	13854.12	170.065	1.18	0.10	1.18	
21400.00	89.850	161.470	6509.31	13780.21	-13824.34	2450.79	1656595.37	14288512.34	39°20'51.462"N	80°56'34.356"W	13947.95	170.004	0.41	-0.19	0.37	
21495.00	90.030	158.740	6509.40	13875.18	-13913.66	2483.12	1656627.68	14288423.05	39°20'50.579"N	80°56'33.979"W	14039.90	169.947	0.29	-0.10	0.27	
21589.00	89.940	158.990	6509.43	13969.18	-14001.34	2517.01	1656661.56	14288335.41	39°20'49.712"N	80°56'33.137"W	14133.50	169.881	2.88	0.19	-2.87	
21614.00	90.060	159.140	6509.43	13994.18	-14024.69	2525.94	1656670.49	14288312.07	39°20'49.481"N	80°56'33.024"W	14225.78	169.809	0.28	-0.10	0.27	
21638.00	90.060	159.140	6509.40	14018.18	-14047.11	2534.49	1656679.03	14288289.65	39°20'49.259"N	80°56'32.915"W	14273.93	169.772	0.00	0.00	0.00	Projected MD at TD: 21638'





# Actual Wellpath Report

Alli Unit 1H AWP Proj: 21638'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #01
ANTERO RESOURCES CORPORATION	Well	Alli Unit 1H
Area	Tyler County, WV	Alli Unit 1H AWB
Field	Tyler	
Facility	McKim Pad	

## HOLE & CASING SECTIONS - Ref Wellbore: Alli Unit 1H AWB Ref Wellpath: Alli Unit 1H AWP Proj: 21638'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]
20in Conductor	32.00	112.00	80.00	32.00	112.00	0.00	0.00	0.00	-0.36
17.5in Open Hole	112.00	550.70	438.70	112.00	550.69	-0.36	0.13	0.13	-3.15
13.375in Casing Surface	32.00	550.70	518.70	32.00	550.69	0.00	0.00	0.00	-3.15
12.25in Open Hole	550.70	2624.50	2073.80	550.69	2554.87	-3.15	-0.04	-0.04	-493.42
9.625in Casing Intermediate	32.00	2624.50	2592.50	32.00	2554.87	0.00	0.00	0.00	-493.42
8.75in Open Hole	2624.50	7184.00	4559.50	2554.87	6355.51	-38.30	-493.42	-493.42	-2632.16
8.5in Open Hole	7184.00	21638.00	14454.00	6355.51	6509.40	-600.45	-600.45	-2632.16	2534.49
5.5in Casing Production	32.00	21638.00	21606.00	32.00	6509.40	0.00	-14047.11	0.00	2534.49

## TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Alli Unit 1H POE - Rev-1	6454.00	-798.04	-2590.74	1651555.86	14301533.40	39°23'00.235"N	80°57'38.080"W	point
Alli Unit 1H BHL - Rev-1	6487.00	-14073.40	2530.44	1656674.98	14288263.38	39°20'49.000"N	80°56'32.967"W	point
Alli Unit 1H LP - Rev-1	6487.00	-972.40	-2523.48	1651623.09	14301359.11	39°22'58.511"N	80°57'37.224"W	point

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# Actual Wellpath Report

Alli Unit 1H AWP Proj: 21638'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Tyler County, WV	Well	Alli Unit 1H
Field	Tyler	Wellbore	Alli Unit 1H AWB
Facility	McKim Pad		

WELLPATH COMPOSITION - Ref Wellbore: Alli Unit 1H AWB Ref Wellpath: Alli Unit 1H AWP Proj: 21638'			
Start MD (ft)	End MD (ft)	Positional Uncertainty Model	Log Name/Comment
32.00	521.00	Gyrodata standard - Drop gyro or Multi-shot	01. Gyrodata MS Gyro <17-1/2">(100-504)
521.00	2595.00	ISCWSA MWD, Rev. 4 (Standard)	02. Directional ONE MWD <12-1/4">(604)(658'-2578')
2595.00	7101.00	ISCWSA MWD, Rev. 4 (Standard)	03. Directional ONE MWD <8-3/4">(2578)(2647'-7084')
7101.00	21614.00	BHI AutoTrak Curve (Short)	04. BH AT Curve <8-1/2">(7101)(7161'-21614')
21614.00	21638.00	Blind Drilling (std)	Projection to bit
			Alli Unit 1H AWB
			Alli Unit 1H AWB
			Alli Unit 1H AWB
			Alli Unit 1H AWB





# Actual Wellpath Report

Alli Unit 1H AWP Proj: 21638'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #01
Area	Tyler County, WV	Well	Alli Unit 1H
Field	Tyler	Wellbore	Alli Unit 1H AWB
Facility	McKim Pad		

COMMENTS
<p><b>Wellpath general comments</b>            API: 47-095-02421-0000            BHI Job #: 8837662            Rig: Frontier 32            Duration: 11/08/2017-11/14/2017            Gyrodatta MS Gyro &lt;17-1/2"&gt; (100'-504')            Directional ONE MWD &lt;12-1/4"&gt; (504')(558'-2578')            Directional ONE MWD &lt;8-3/4"&gt; (2578')(2647'-7084')            BHI AT Curve &lt;8-1/2"&gt; (7101')(7161'-21614')            Middlesex: 7141' MD            Burkett: 7338' MD            Tully: 7409' MD            Marcellus POE: 7440' MD            Projected MD at TD: 21638'</p>