



**ANTERO RESOURCES CORPORATION**  
 Location: Tyler County, WV  
 Field: Tyler  
 Facility: Estlack Pad  
 Slot #10  
 Well: Jubilee Unit 2H  
 Wellbore: Jubilee Unit 2H PWB

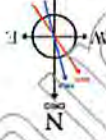


Location Information	
Facility Name	Estlack Pad
Gnd East (US m)	1674604.620
Gnd North (US m)	14312832.650
Longitude	39°24'51.751"N
Latitude	80°52'41.682"W
Slot	Slot #10
Local N (ft)	43.59
Local E (ft)	24.58
Gnd East (US m)	1674629.190
Gnd North (US m)	14312789.080
Longitude	39°24'51.320"N
Latitude	80°52'41.370"W
Comment	Jubilee Unit 2H
Frontier 32 (KB) to Mud line (At Slot; Slot #10)	32h
Mean Sea Level to Mud line (At Slot; Slot #10)	-1141ft
Frontier 32 (KB) to Mean Sea Level	1173ft

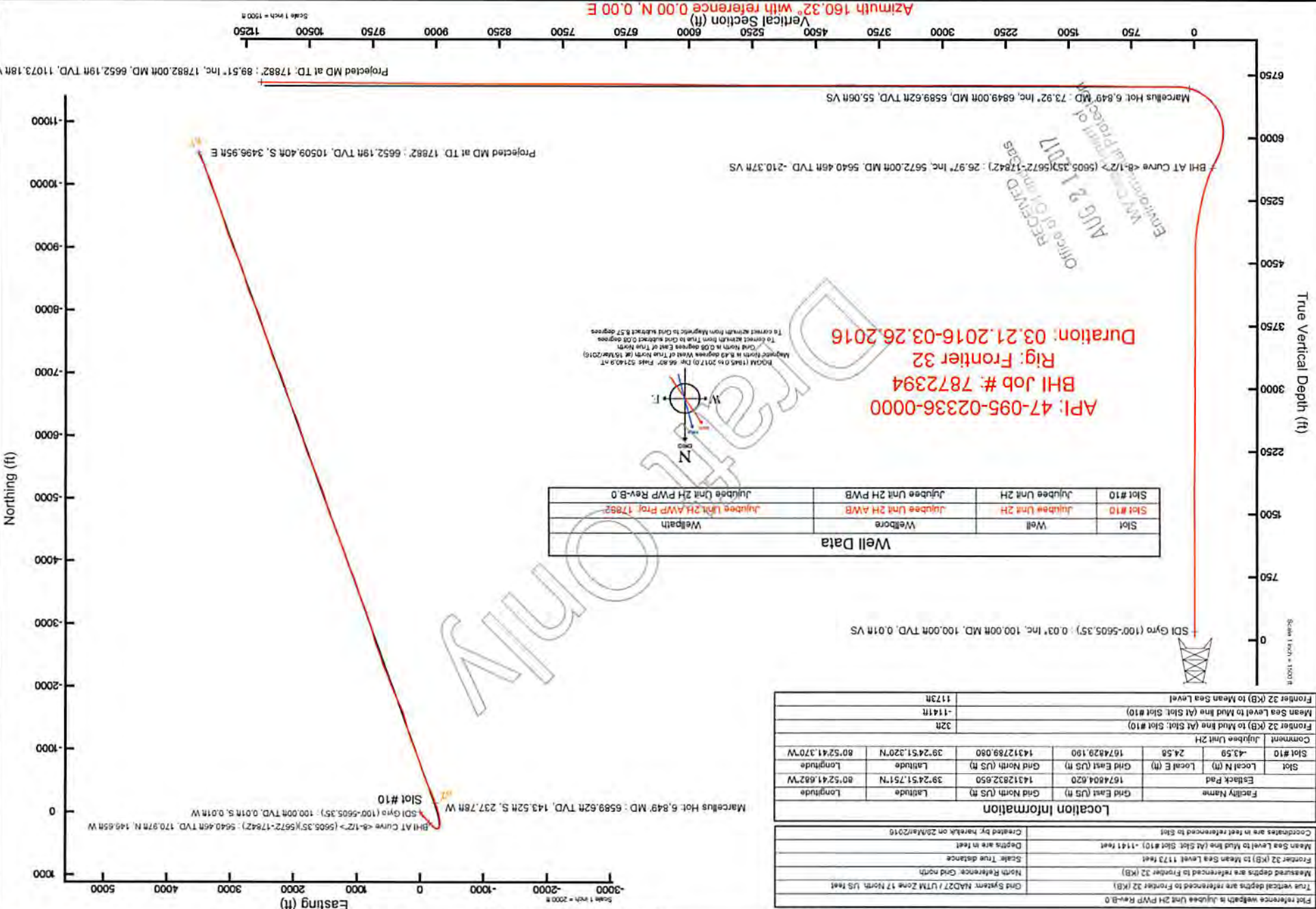
Coordinates are in feet referenced to Slot	Created by: harelk on 25/Mar/2016
Mean Sea Level to Mud line (At Slot; Slot #10) = 1141 feet	Depths are in feet
Scale: True distance	
Frontier 32 (KB) to Mean Sea Level: 1173 feet	
Measured depths are referenced to Frontier 32 (KB)	North Reference: Gnd north
True vertical depths are referenced to Frontier 32 (KB)	Gnd System: NAD27 / UTM Zone 17 North, US Feet

Well Data	
Slot	Well
Slot #10	Wellbore
Slot #10	Jubilee Unit 2H AWP
Slot #10	Jubilee Unit 2H PWB
Slot #10	Jubilee Unit 2H PWP Rev-B



BDGM (1983 to 2012) Proj. 66.67° True 27342.6-AT  
 Magnetic North is 8.83 degrees West of True North (at 10/16/2016)  
 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 8.57 degrees

**API: 47-095-02336-0000**  
**BHI Job #: 7872394**  
**Rig: Frontier 32**  
**Duration: 03.21.2016-03.26.2016**



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# Actual Wellpath Report

Jujubee Unit 2H AWP Proj: 17882'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #10
Area	Tyler County, WV	Well	Jujubee Unit 2H
Field	Tyler	Wellbore	Jujubee Unit 2H AWB
Facility	Estlack Pad		

REPORT SETUP INFORMATION			
Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 4.0.1
North Reference	Grid	User	Hareluk
Scale	0.999601	Report Generated	29/Mar/2016 at 11:45
Convergence at slot	0.08° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Jujubee_Unit_2H_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-43.59	24.58	1674829.19	14312789.08	39°24'51.320"N	80°52'41.370"W
Facility Reference Pt			1674804.62	14312832.65	39°24'51.751"N	80°52'41.682"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.301"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Frontier 32 (KB) to Facility Vertical Datum	32.00ft
Horizontal Reference Pt	Slot	Frontier 32 (KB) to Mean Sea Level	1173.00ft
Vertical Reference Pt	Frontier 32 (KB)	Frontier 32 (KB) to Mud Line at Slot (Slot #10)	32.00ft
MD Reference Pt	Frontier 32 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	160.32°

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# Actual Wellpath Report

Juybee Unit 2H AWP Proj: 17882

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Eslick Pad
Well	Juybee Unit 2H
Slot	Slot #10
Wellbore	Juybee Unit 2H AWB

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	DLS	Comments
(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)	(ft)	(ft)	(ft)	(ft)	(ft)
0.001	0.000	232.810	0.000	0.00	0.00	0.00	1674829.19	14312789.08	39°24'51.320"N	80°52'41.370"W	0.00	0.00	
32.00	0.000	232.810	32.00	0.00	0.00	0.00	1674829.19	14312789.08	39°24'51.320"N	80°52'41.370"W	0.00	0.00	
125.00	0.030	232.810	125.00	-0.01	-0.01	0.01	1674829.18	14312789.07	39°24'51.320"N	80°52'41.370"W	0.02	0.04	SDI Gyro (100-5605.35)
150.00	0.090	230.780	150.00	-0.04	-0.04	0.04	1674829.18	14312789.04	39°24'51.320"N	80°52'41.370"W	0.04	0.04	
175.00	0.110	220.080	175.00	-0.07	-0.04	0.06	1674829.15	14312789.01	39°24'51.319"N	80°52'41.371"W	0.08	0.11	
200.00	0.080	30.570	200.00	-0.08	-0.05	0.06	1674829.14	14312789.00	39°24'51.319"N	80°52'41.371"W	0.09	0.09	
225.00	0.090	305.360	225.00	-0.05	-0.05	0.03	1674829.14	14312789.03	39°24'51.319"N	80°52'41.371"W	0.07	0.07	
250.00	0.050	350.200	250.00	-0.03	-0.07	0.00	1674829.12	14312789.05	39°24'51.320"N	80°52'41.371"W	0.08	0.26	
275.00	0.070	100.720	275.00	-0.02	-0.06	0.00	1674829.13	14312789.06	39°24'51.320"N	80°52'41.371"W	0.06	0.40	
300.00	0.070	100.510	300.00	-0.03	-0.03	0.02	1674829.16	14312789.05	39°24'51.320"N	80°52'41.370"W	0.04	0.00	
325.00	0.160	147.920	325.00	-0.06	0.01	0.06	1674829.20	14312789.02	39°24'51.319"N	80°52'41.370"W	0.06	0.50	
350.00	0.100	159.100	350.00	-0.11	0.03	0.11	1674829.22	14312788.97	39°24'51.319"N	80°52'41.370"W	0.11	0.26	
375.00	0.090	140.220	375.00	-0.14	0.05	0.15	1674829.24	14312788.94	39°24'51.319"N	80°52'41.369"W	0.15	0.13	
400.00	0.090	130.240	400.00	-0.17	0.08	0.19	1674829.27	14312788.91	39°24'51.318"N	80°52'41.369"W	0.19	0.06	
425.00	0.060	169.030	425.00	-0.20	0.10	0.22	1674829.29	14312788.88	39°24'51.318"N	80°52'41.369"W	0.22	0.23	
450.00	0.090	171.190	450.00	-0.23	0.10	0.25	1674829.29	14312788.85	39°24'51.318"N	80°52'41.369"W	0.25	0.12	
475.00	0.210	226.090	475.00	-0.28	0.07	0.29	1674829.26	14312788.80	39°24'51.317"N	80°52'41.369"W	0.29	0.70	
500.00	0.360	238.890	500.00	-0.35	-0.03	0.32	1674829.16	14312788.73	39°24'51.316"N	80°52'41.370"W	0.35	0.65	
525.00	0.390	241.920	525.00	-0.43	-0.17	0.35	1674829.02	14312788.66	39°24'51.316"N	80°52'41.372"W	0.47	0.14	
550.00	0.500	241.410	550.00	-0.53	-0.34	0.38	1674828.85	14312788.55	39°24'51.315"N	80°52'41.374"W	0.63	0.44	
575.00	0.560	235.780	575.00	-0.65	-0.54	0.43	1674828.65	14312788.43	39°24'51.314"N	80°52'41.377"W	0.84	0.32	
600.00	0.570	237.080	600.00	-0.78	-0.74	0.49	1674828.45	14312788.30	39°24'51.312"N	80°52'41.380"W	1.08	0.07	
625.00	0.770	241.250	624.99	-0.93	-0.99	0.54	1674828.20	14312788.15	39°24'51.311"N	80°52'41.383"W	1.36	0.82	
650.00	0.950	241.290	649.99	-1.11	-1.32	0.60	1674827.87	14312787.97	39°24'51.309"N	80°52'41.387"W	1.73	0.72	
675.00	0.970	240.170	674.99	-1.32	-1.69	0.67	1674827.50	14312787.76	39°24'51.307"N	80°52'41.392"W	2.14	0.11	
700.00	1.030	238.490	699.98	-1.54	-2.06	0.75	1674827.13	14312787.54	39°24'51.305"N	80°52'41.396"W	2.57	0.27	
725.00	1.050	239.640	724.98	-1.77	-2.45	0.84	1674826.74	14312787.31	39°24'51.302"N	80°52'41.401"W	3.03	0.12	
750.00	1.060	239.920	749.98	-2.00	-2.85	0.93	1674826.34	14312787.08	39°24'51.300"N	80°52'41.406"W	3.48	0.05	
775.00	0.990	236.620	774.97	-2.24	-3.23	1.02	1674825.96	14312786.84	39°24'51.298"N	80°52'41.411"W	3.93	0.37	

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# Actual Wellpath Report

Juybee Unit 2H AWP Proj: 17882

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Estlack Pad
Well	Juybee Unit 2H
Wellbore	Juybee Unit 2H AWB
Slot	Slot #10

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dst	Closure Dst	DLS	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(ft)	(/1000ft)	
800.00	0.850	227.820	799.97	1.14	-2.48	-3.55	1674825.64	14312786.60	39°24'51.295"N	80°52'41.415"W	4.33	235.026	0.79	
825.00	0.810	223.240	824.97	1.29	-2.74	-3.81	1674825.38	14312786.35	39°24'51.293"N	80°52'41.419"W	4.69	234.301	0.31	
850.00	0.780	225.160	849.96	1.45	-2.98	-4.05	1674825.14	14312786.10	39°24'51.291"N	80°52'41.422"W	5.03	233.607	0.16	
875.00	0.720	225.290	874.96	1.59	-3.21	-4.28	1674824.91	14312785.87	39°24'51.288"N	80°52'41.425"W	5.35	233.096	0.24	
900.00	0.650	229.780	899.96	1.70	-3.42	-4.50	1674824.69	14312785.66	39°24'51.286"N	80°52'41.427"W	5.65	232.797	0.35	
925.00	0.570	233.330	924.96	1.79	-3.58	-4.71	1674824.48	14312785.50	39°24'51.285"N	80°52'41.430"W	5.92	232.736	0.35	
950.00	0.480	231.560	949.96	1.86	-3.72	-4.89	1674824.30	14312785.36	39°24'51.283"N	80°52'41.432"W	6.15	232.728	0.37	
975.00	0.390	236.650	974.96	1.91	-3.83	-5.04	1674824.15	14312785.25	39°24'51.282"N	80°52'41.434"W	6.34	232.761	0.39	
1000.00	0.320	246.170	999.96	1.94	-3.91	-5.18	1674824.01	14312785.17	39°24'51.281"N	80°52'41.436"W	6.49	232.955	0.37	
1025.00	0.310	244.500	1024.96	1.95	-3.97	-5.30	1674823.89	14312785.12	39°24'51.281"N	80°52'41.438"W	6.62	233.210	0.05	
1050.00	0.260	237.750	1049.95	1.97	-4.03	-5.41	1674823.78	14312785.06	39°24'51.280"N	80°52'41.439"W	6.75	233.361	0.24	
1075.00	0.240	247.400	1074.95	1.98	-4.08	-5.51	1674823.68	14312785.01	39°24'51.280"N	80°52'41.440"W	6.85	233.503	0.19	
1100.00	0.260	252.570	1099.95	1.98	-4.11	-5.61	1674823.58	14312784.97	39°24'51.279"N	80°52'41.442"W	6.96	233.759	0.12	
1125.00	0.300	249.410	1124.95	1.98	-4.15	-5.73	1674823.47	14312784.93	39°24'51.279"N	80°52'41.443"W	7.07	234.050	0.17	
1150.00	0.350	261.800	1149.95	1.97	-4.19	-5.86	1674823.33	14312784.89	39°24'51.279"N	80°52'41.445"W	7.21	234.471	0.34	
1175.00	0.270	266.130	1174.95	1.94	-4.20	-6.00	1674823.19	14312784.88	39°24'51.278"N	80°52'41.447"W	7.32	234.987	0.33	
1200.00	0.180	256.740	1199.95	1.92	-4.22	-6.10	1674823.10	14312784.87	39°24'51.278"N	80°52'41.448"W	7.41	235.335	0.39	
1225.00	0.110	255.870	1224.95	1.91	-4.23	-6.16	1674823.04	14312784.85	39°24'51.278"N	80°52'41.449"W	7.47	235.510	0.28	
1250.00	0.080	190.320	1249.95	1.92	-4.25	-6.18	1674823.01	14312784.83	39°24'51.278"N	80°52'41.449"W	7.50	235.479	0.42	
1275.00	0.160	174.900	1274.95	1.97	-4.30	-6.18	1674823.07	14312784.78	39°24'51.277"N	80°52'41.449"W	7.53	235.153	0.34	
1300.00	0.180	150.000	1299.95	2.04	-4.37	-6.16	1674823.03	14312784.71	39°24'51.277"N	80°52'41.449"W	7.56	234.627	0.30	
1325.00	0.350	116.680	1324.95	2.14	-4.44	-6.07	1674823.12	14312784.64	39°24'51.276"N	80°52'41.448"W	7.52	233.815	0.89	
1350.00	0.470	113.340	1349.95	2.26	-4.52	-5.91	1674823.28	14312784.56	39°24'51.275"N	80°52'41.445"W	7.44	232.611	0.49	
1375.00	0.540	109.450	1374.95	2.41	-4.60	-5.70	1674823.49	14312784.49	39°24'51.275"N	80°52'41.443"W	7.33	231.140	0.31	
1400.00	0.690	102.570	1399.95	2.56	-4.67	-5.45	1674823.75	14312784.41	39°24'51.274"N	80°52'41.440"W	7.17	229.400	0.67	
1425.00	0.940	98.970	1424.95	2.74	-4.73	-5.10	1674824.09	14312784.35	39°24'51.273"N	80°52'41.435"W	6.96	227.121	1.02	
1450.00	1.180	95.160	1449.94	2.95	-4.79	-4.64	1674824.55	14312784.29	39°24'51.273"N	80°52'41.429"W	6.67	224.088	1.00	
1475.00	1.410	88.720	1474.94	3.15	-4.80	-4.07	1674825.12	14312784.28	39°24'51.273"N	80°52'41.422"W	6.30	220.299	1.09	
1500.00	1.560	82.700	1499.93	3.32	-4.75	-3.43	1674825.76	14312784.33	39°24'51.273"N	80°52'41.414"W	5.86	215.803	0.86	
1525.00	1.660	78.400	1524.92	3.45	-4.64	-2.74	1674826.45	14312784.44	39°24'51.274"N	80°52'41.405"W	5.39	210.546	0.63	

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# Actual Wellpath Report

Juybee Unit 2H AWP Proj: 17882

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Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Estlack Pad
Slot	Slot #10
Well	Juybee Unit 2H
Wellbore	Juybee Unit 2H AWB

## REFERENCE WELLPATH IDENTIFICATION

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	DLS	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)	(N)	(W)	(ft)	(ft/100ft)	
1550.00	1.740	1549.91	78.560	3.55	-4.49	-2.01	1674827.18	14312784.59	39°24'51.276"N	80°52'41.396"W	4.92	204.120	0.32
1575.00	1.800	1574.90	79.590	3.67	-4.34	-1.25	1674827.94	14312784.74	39°24'51.277"N	80°52'41.386"W	4.52	196.082	0.27
1600.00	1.930	1599.88	78.710	3.79	-4.19	-0.45	1674828.74	14312784.89	39°24'51.279"N	80°52'41.376"W	4.22	186.175	0.53
1625.00	2.070	1624.87	76.920	3.91	-4.01	0.40	1674829.59	14312785.08	39°24'51.280"N	80°52'41.365"W	4.03	174.310	0.61
1650.00	2.110	1649.85	74.420	3.99	-3.78	-1.28	1674830.47	14312785.30	39°24'51.283"N	80°52'41.354"W	3.99	161.265	0.40
1675.00	1.930	1674.83	67.740	4.01	-3.50	2.12	1674831.30	14312785.58	39°24'51.285"N	80°52'41.343"W	4.09	148.836	1.18
1700.00	1.690	1699.82	56.760	3.90	-3.14	2.81	1674832.00	14312785.95	39°24'51.289"N	80°52'41.334"W	4.21	138.106	1.68
1725.00	1.490	1724.81	48.410	3.69	-2.72	3.36	1674832.55	14312786.36	39°24'51.293"N	80°52'41.327"W	4.33	128.934	1.22
1750.00	1.240	1749.81	43.290	3.45	-2.31	3.79	1674832.98	14312786.78	39°24'51.297"N	80°52'41.322"W	4.44	121.292	1.11
1775.00	0.860	1774.80	21.820	3.18	-1.93	4.05	1674833.24	14312787.15	39°24'51.301"N	80°52'41.319"W	4.49	115.540	2.16
1800.00	0.720	1799.80	333.030	2.89	-1.62	4.05	1674833.24	14312787.46	39°24'51.304"N	80°52'41.319"W	4.36	111.820	2.66
1825.00	0.950	1824.80	305.430	2.56	-1.36	3.81	1674833.00	14312787.72	39°24'51.306"N	80°52'41.322"W	4.04	109.661	1.83
1850.00	1.140	1849.79	297.110	2.21	-1.13	3.42	1674832.61	14312787.95	39°24'51.309"N	80°52'41.327"W	3.60	108.251	0.97
1875.00	1.210	1874.79	292.090	1.85	-0.91	2.95	1674832.14	14312788.17	39°24'51.311"N	80°52'41.332"W	3.09	107.212	0.50
1900.00	1.260	1899.78	289.330	1.51	-0.72	2.45	1674831.64	14312788.36	39°24'51.313"N	80°52'41.339"W	2.55	106.480	0.31
1925.00	1.260	1924.78	286.380	1.17	-0.56	1.92	1674831.11	14312788.52	39°24'51.314"N	80°52'41.346"W	2.00	106.103	0.26
1950.00	0.990	1949.77	286.530	0.88	-0.42	1.45	1674830.64	14312788.66	39°24'51.316"N	80°52'41.352"W	1.51	105.991	1.08
1975.00	0.570	1974.77	279.050	0.69	-0.34	1.12	1674830.34	14312788.74	39°24'51.317"N	80°52'41.356"W	1.17	106.627	1.73
2000.00	0.290	1999.77	261.070	0.62	-0.33	0.94	1674830.13	14312788.75	39°24'51.317"N	80°52'41.358"W	0.99	109.150	1.23
2025.00	0.280	2024.77	246.810	0.61	-0.36	0.82	1674830.07	14312788.72	39°24'51.316"N	80°52'41.360"W	0.89	113.698	0.29
2050.00	0.340	2049.77	222.700	0.65	-0.44	0.71	1674829.90	14312788.64	39°24'51.316"N	80°52'41.361"W	0.84	121.583	0.57
2100.00	0.310	2099.77	199.190	0.84	-0.69	0.58	1674829.77	14312788.39	39°24'51.314"N	80°52'41.362"W	0.84	131.445	0.41
2150.00	0.270	2124.77	203.340	0.94	-0.80	0.53	1674829.72	14312788.28	39°24'51.312"N	80°52'41.363"W	0.97	146.469	0.18
2175.00	0.310	2149.77	208.750	1.03	-0.92	0.48	1674829.67	14312788.16	39°24'51.311"N	80°52'41.364"W	1.03	152.526	0.19
2200.00	0.380	2199.76	195.320	1.25	-1.20	0.35	1674829.54	14312787.88	39°24'51.308"N	80°52'41.366"W	1.25	163.833	0.33
2225.00	0.340	2224.76	181.030	1.38	-1.35	0.32	1674829.51	14312787.73	39°24'51.307"N	80°52'41.366"W	1.39	166.518	0.39
2250.00	0.350	2249.76	185.270	1.52	-1.50	0.32	1674829.51	14312787.58	39°24'51.305"N	80°52'41.366"W	1.54	168.125	0.11
2275.00	0.340	2274.76	191.510	1.66	-1.65	0.29	1674829.48	14312787.43	39°24'51.304"N	80°52'41.366"W	1.68	169.898	0.16

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# Actual Wellpath Report

Juybee Unit 2H AWP Proj: 17882

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Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Estlack Pad
Slot	Juybee Unit 2H
Slot #10	Juybee Unit 2H AWB

## REFERENCE WELLPATH IDENTIFICATION

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)	(US ft)	(ft)	(ft)	(°)	(ft/100ft)	
2300.00	0.280	190.340	2299.76	1.77	-1.79	0.27	1674829.46	14312787.29	39°24'51.302"N	80°52'41.367"W	1.81	171.441	0.24	
2325.00	0.300	190.430	2324.76	1.88	-1.91	0.25	1674829.44	14312787.17	39°24'51.301"N	80°52'41.367"W	1.93	172.663	0.08	
2350.00	0.280	199.360	2349.76	1.99	-2.03	0.21	1674829.40	14312787.05	39°24'51.300"N	80°52'41.367"W	2.04	173.993	0.20	
2375.00	0.310	196.980	2374.76	2.09	-2.15	0.17	1674829.36	14312786.93	39°24'51.299"N	80°52'41.368"W	2.16	175.386	0.13	
2400.00	0.250	207.150	2399.76	2.18	-2.27	0.13	1674829.32	14312786.81	39°24'51.298"N	80°52'41.368"W	2.27	176.738	0.31	
2425.00	0.230	236.090	2424.76	2.23	-2.34	0.06	1674829.25	14312786.74	39°24'51.297"N	80°52'41.369"W	2.35	178.468	0.49	
2450.00	0.250	252.290	2449.76	2.24	-2.39	0.03	1674829.16	14312786.69	39°24'51.296"N	80°52'41.370"W	2.39	180.740	0.28	
2475.00	0.270	276.700	2474.76	2.21	-2.40	-0.14	1674829.05	14312786.68	39°24'51.296"N	80°52'41.372"W	2.40	183.372	0.45	
2500.00	0.320	246.960	2499.76	2.19	-2.42	-0.26	1674828.93	14312786.66	39°24'51.296"N	80°52'41.373"W	2.43	186.229	0.64	
2525.00	0.360	254.400	2524.76	2.19	-2.47	-0.40	1674828.79	14312786.61	39°24'51.296"N	80°52'41.375"W	2.50	189.296	0.24	
2550.00	0.430	264.950	2549.76	2.16	-2.50	-0.57	1674828.62	14312786.58	39°24'51.295"N	80°52'41.377"W	2.56	192.924	0.40	
2575.00	0.720	271.980	2574.76	2.08	-2.50	-0.82	1674828.37	14312786.58	39°24'51.295"N	80°52'41.381"W	2.63	198.231	1.19	
2600.00	0.830	274.490	2599.76	1.94	-2.48	-1.16	1674828.03	14312786.60	39°24'51.295"N	80°52'41.385"W	2.74	205.082	0.46	
2625.00	0.950	278.240	2624.75	1.77	-2.44	-1.55	1674827.64	14312786.64	39°24'51.290"W	80°52'41.390"W	2.89	212.405	0.53	
2650.00	1.050	284.660	2649.75	1.55	-2.35	-1.97	1674827.22	14312786.73	39°24'51.297"N	80°52'41.395"W	3.07	220.033	0.60	
2675.00	1.030	283.990	2674.74	1.29	-2.24	-2.41	1674826.78	14312786.84	39°24'51.298"N	80°52'41.401"W	3.29	227.172	0.09	
2700.00	1.060	284.070	2699.74	1.04	-2.13	-2.86	1674826.34	14312786.95	39°24'51.299"N	80°52'41.406"W	3.56	233.328	0.12	
2725.00	1.050	285.400	2724.74	0.78	-2.01	-3.30	1674825.89	14312787.07	39°24'51.300"N	80°52'41.412"W	3.86	238.670	0.11	
2750.00	1.060	287.110	2749.73	0.51	-1.88	-3.74	1674825.45	14312787.20	39°24'51.301"N	80°52'41.418"W	4.19	243.348	0.17	
2775.00	1.070	288.020	2774.73	0.22	-1.74	-4.18	1674825.01	14312787.35	39°24'51.303"N	80°52'41.423"W	4.53	247.473	0.05	
2800.00	1.170	280.900	2799.72	-0.05	-1.61	-4.66	1674824.64	14312787.47	39°24'51.304"N	80°52'41.429"W	4.93	250.873	0.68	
2825.00	0.730	290.640	2824.72	-0.28	-1.51	-5.06	1674824.14	14312787.57	39°24'51.305"N	80°52'41.435"W	5.28	253.367	1.87	
2850.00	0.050	79.300	2849.72	-0.38	-1.45	-5.19	1674824.00	14312787.63	39°24'51.306"N	80°52'41.436"W	5.39	254.380	3.09	
2875.00	0.330	60.370	2874.72	-0.39	-1.41	-5.12	1674824.07	14312787.67	39°24'51.306"N	80°52'41.435"W	5.31	254.558	1.13	
2900.00	0.350	63.440	2899.72	-0.41	-1.34	-4.99	1674824.20	14312787.74	39°24'51.307"N	80°52'41.434"W	5.17	254.916	0.11	
2925.00	0.350	87.440	2924.72	-0.40	-1.31	-4.85	1674824.35	14312787.77	39°24'51.307"N	80°52'41.432"W	5.02	254.901	0.58	
2950.00	0.300	86.680	2949.72	-0.36	-1.30	-4.70	1674824.49	14312787.78	39°24'51.307"N	80°52'41.430"W	4.88	254.549	0.20	
2975.00	0.330	81.090	2974.72	-0.33	-1.28	-4.56	1674824.63	14312787.80	39°24'51.307"N	80°52'41.428"W	4.74	254.278	0.24	
3000.00	0.250	72.980	2999.72	-0.31	-1.26	-4.44	1674824.76	14312787.82	39°24'51.308"N	80°52'41.427"W	4.61	254.181	0.43	
3025.00	0.290	76.190	3024.72	-0.30	-1.23	-4.32	1674824.87	14312787.85	39°24'51.308"N	80°52'41.425"W	4.49	254.167	0.17	

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# Actual Wellpath Report

Juybee Unit 2H AWP Proj: 17882

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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Estlack Pad

MD	Inclination	Azimuth	TVD	Vert Sec	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(N)	(W)	(ft)	(°)	(ft)	(/1000)
5300.00	13.680	316.070	5291.11	-93.97	77.24	-63.08	1674766.13	14312866.29	39°24'52.08"N	80°52'42.17"W	99.73	320.762	1.67	
5325.00	14.280	317.660	5315.37	-99.51	81.64	-67.23	1674761.99	14312870.68	39°24'52.128"N	80°52'42.225"W	105.75	320.529	2.66	
5350.00	15.170	318.480	5339.55	-105.38	86.35	-71.49	1674757.73	14312875.39	39°24'52.174"N	80°52'42.279"W	112.10	320.379	3.77	
5375.00	15.930	319.190	5363.63	-111.62	91.40	-75.90	1674753.32	14312880.44	39°24'52.224"N	80°52'42.336"W	118.80	320.292	3.13	
5400.00	16.940	320.050	5387.61	-118.23	96.78	-80.48	1674748.74	14312885.83	39°24'52.278"N	80°52'42.394"W	125.87	320.255	4.16	
5425.00	18.090	319.620	5411.45	-125.28	102.53	-85.33	1674743.89	14312891.57	39°24'52.334"N	80°52'42.456"W	133.40	320.231	4.63	
5450.00	18.900	319.420	5435.16	-132.69	108.57	-90.48	1674738.74	14312897.60	39°24'52.394"N	80°52'42.521"W	141.38	320.191	3.25	
5475.00	19.320	318.150	5458.78	-140.31	114.72	-95.87	1674733.35	14312903.76	39°24'52.455"N	80°52'42.590"W	149.51	320.114	2.36	
5500.00	20.030	317.570	5482.32	-148.09	120.96	-101.52	1674727.71	14312909.99	39°24'52.517"N	80°52'42.661"W	157.92	319.994	2.95	
5525.00	20.590	317.220	5505.77	-156.08	127.35	-107.40	1674721.84	14312916.38	39°24'52.580"N	80°52'42.736"W	166.59	319.858	2.29	
5550.00	21.520	317.230	5529.10	-164.34	133.94	-113.50	1674715.74	14312922.97	39°24'52.645"N	80°52'42.814"W	175.56	319.723	3.72	
5575.00	22.610	317.260	5552.27	-172.98	140.84	-119.87	1674709.37	14312929.86	39°24'52.714"N	80°52'42.895"W	184.94	319.598	4.36	
5600.00	23.370	317.640	5575.28	-181.98	148.03	-126.47	1674702.77	14312937.05	39°24'52.785"N	80°52'42.979"W	194.70	319.490	3.10	
5605.35	23.530	317.730	5580.19	-183.94	149.60	-127.91	1674701.33	14312938.62	39°24'52.800"N	80°52'42.997"W	196.83	319.471	3.06	
5622.00	26.970	319.650	5640.46	-210.37	170.97	-146.65	1674682.60	14312959.99	39°24'53.012"N	80°52'43.236"W	225.25	319.380	5.30	BH AT Curve <8-1/2 > (5605.35) (5672-17842)
5714.00	29.630	319.670	5677.44	-229.00	186.15	-159.54	1674669.72	14312975.16	39°24'53.162"N	80°52'43.400"W	243.16	319.403	6.33	
5764.00	29.440	319.820	5720.94	-252.08	204.96	-175.46	1674653.80	14312993.86	39°24'53.348"N	80°52'43.602"W	269.81	319.434	0.41	
5810.00	27.090	304.750	5761.46	-272.03	220.83	-190.34	1674638.93	14313009.82	39°24'53.505"N	80°52'43.791"W	291.54	319.241	8.15	
5858.00	23.940	304.750	5804.79	-289.73	233.94	-206.26	1674623.01	14313022.92	39°24'53.635"N	80°52'43.994"W	311.88	318.598	10.32	
5904.00	21.370	299.410	5847.25	-303.66	243.37	-221.23	1674608.05	14313032.06	39°24'53.728"N	80°52'44.185"W	328.90	317.728	7.15	
5955.00	18.370	296.100	5895.21	-316.45	251.47	-236.55	1674592.74	14313040.43	39°24'53.809"N	80°52'44.380"W	345.25	316.752	6.28	
5999.00	16.370	293.150	5937.20	-325.63	256.96	-248.48	1674580.81	14313045.94	39°24'53.863"N	80°52'44.532"W	357.45	315.962	4.97	
6046.00	14.750	285.730	5982.48	-333.60	261.19	-260.33	1674568.92	14313050.17	39°24'53.905"N	80°52'44.682"W	368.77	315.095	5.45	
6095.00	13.820	271.440	6029.98	-339.33	263.03	-272.19	1674557.11	14313052.00	39°24'53.923"N	80°52'44.834"W	378.51	314.020	7.42	
6142.00	13.910	249.620	6075.64	-341.28	261.20	-283.10	1674546.20	14313050.18	39°24'53.905"N	80°52'44.973"W	385.19	312.696	11.06	
6190.00	14.570	231.060	6122.19	-339.22	255.39	-293.21	1674536.10	14313044.37	39°24'53.848"N	80°52'45.102"W	388.84	311.057	9.57	
6198.00	14.807	228.249	6179.93	-338.50	254.08	-294.76	1674534.55	14313043.06	39°24'53.835"N	80°52'45.121"W	389.15	310.761	9.39	Drilling Marker: 6198
6237.00	16.400	215.960	6167.50	-333.52	246.30	-301.71	1674527.60	14313035.29	39°24'53.758"N	80°52'45.210"W	389.48	309.227	9.39	
6285.00	18.880	206.060	6213.25	-324.27	233.84	-309.10	1674520.21	14313022.82	39°24'53.635"N	80°52'45.304"W	387.59	307.108	8.09	
6329.00	22.486	193.843	6254.43	-312.28	219.26	-314.25	1674515.07	14313008.25	39°24'53.491"N	80°52'45.370"W	383.18	304.905	12.74	Sycamore: 6.329 MD

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Environmental Protection

Operator	Area	Field	Facility
ANTERO RESOURCES CORPORATION	Tyler County, WV	Tyler	Estack Pad
	Juybee Unit 2H	Well	Juybee Unit 2H AWB
	Slot #10	Wellbore	

WELLPATH DATA (375 stations) † = Interpolated/extrapolated station													
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	
6332.00	22.760	193.150	6257.19	-311.32	218.14	-314.52	1674514.80	14313007.13	39°24'53.48"N	80°52'45.37"W	382.76	174	
6380.00	27.050	182.420	6300.74	-293.38	198.17	-317.09	1674512.22	14312987.17	39°24'53.283"N	80°52'45.407"W	373.93	175	
6427.00	31.710	176.210	6341.70	-271.59	175.15	-316.73	1674512.59	14312964.16	39°24'53.055"N	80°52'45.403"W	361.93	176	
6475.00	36.360	174.350	6381.46	-245.63	148.39	-314.49	1674514.82	14312937.41	39°24'52.791"N	80°52'45.375"W	347.74	177	
6522.00	41.390	171.640	6418.05	-216.86	119.13	-310.86	1674518.46	14312908.16	39°24'52.502"N	80°52'45.329"W	332.91	178	
6529.00†	42.055	171.278	6423.27	-212.29	114.53	-310.17	1674519.15	14312903.56	39°24'52.456"N	80°52'45.320"W	330.64	179	
6570.00	45.970	169.330	6452.75	-184.24	86.46	-305.35	1674523.96	14312875.50	39°24'52.178"N	80°52'45.259"W	317.36	180	
6621.00	51.470	168.350	6486.39	-146.35	48.87	-297.93	1674531.38	14312837.93	39°24'51.807"N	80°52'45.165"W	301.91	181	
6664.00	56.040	164.840	6511.81	-111.89	15.16	-289.86	1674539.45	14312804.24	39°24'51.474"N	80°52'45.063"W	290.26	182	
6692.00†	59.033	163.653	6526.83	-88.33	-7.57	-283.44	1674545.86	14312781.51	39°24'51.249"N	80°52'44.982"W	283.54	183	
6711.00	61.080	162.890	6536.32	-71.88	-23.34	-278.70	1674550.60	14312765.75	39°24'51.093"N	80°52'44.921"W	279.68	184	
6757.00†	64.894	161.546	6557.21	-30.93	-62.35	-266.18	1674563.11	14312726.76	39°24'50.707"N	80°52'44.763"W	273.39	185	
6759.00	65.060	161.490	6558.05	-29.12	-64.07	-265.61	1674563.69	14312725.04	39°24'50.690"N	80°52'44.755"W	273.23	186	
6806.00	69.600	160.520	6576.16	-105.06	-251.49	1674577.80	14312684.06	14312684.06	39°24'50.285"N	80°52'44.576"W	272.55	187	
6849.00†	73.918	160.251	6589.62	-55.06	-143.52	-237.78	1674591.50	14312645.62	39°24'49.905"N	80°52'44.402"W	277.74	188	
6854.00	74.420	160.220	6590.98	59.87	-148.05	-236.16	1674593.13	14312641.00	39°24'49.860"N	80°52'44.381"W	278.73	189	
6901.00	78.980	159.610	6601.79	105.60	-190.99	-220.45	1674608.83	14312598.16	39°24'49.455"N	80°52'44.182"W	291.68	190	
6949.00	84.210	159.560	6608.81	153.06	-235.48	-203.89	1674625.38	14312553.69	39°24'48.995"N	80°52'43.972"W	311.49	191	
7004.00	89.980	157.470	6611.59	207.94	-286.57	-183.78	1674645.48	14312502.63	39°24'48.490"N	80°52'43.717"W	340.44	192	
7044.00	90.420	155.660	6611.45	247.85	-323.25	-167.84	1674661.41	14312465.96	39°24'48.127"N	80°52'43.514"W	364.23	193	
7139.00	89.996	156.420	6611.11	342.57	-410.03	-129.19	1674700.05	14312379.21	39°24'47.269"N	80°52'43.023"W	429.90	194	
7234.00	89.590	157.690	6611.46	437.42	-497.51	-92.15	1674737.07	14312291.77	39°24'46.404"N	80°52'42.553"W	505.97	195	
7290.00	89.800	159.790	6611.97	532.37	-586.04	-57.71	1674771.50	14312203.27	39°24'45.529"N	80°52'42.115"W	588.87	196	
7424.00	90.360	161.760	6611.84	627.37	-675.74	-26.43	1674832.56	14312113.61	39°24'44.642"N	80°52'41.718"W	676.25	197	
7519.00	89.100	161.670	6612.28	722.33	-765.94	3.38	1674832.56	14312023.45	39°24'43.750"N	80°52'41.340"W	765.95	198	
7612.00	89.040	160.640	6613.79	815.31	-853.94	33.41	1674862.59	14311935.48	39°24'42.880"N	80°52'40.959"W	854.59	199	
7707.00	88.970	159.130	6615.44	910.29	-943.13	66.08	1674895.24	14311846.33	39°24'41.998"N	80°52'40.544"W	945.44	200	
7802.00	89.040	159.050	6617.09	1005.26	-1031.86	99.98	1674929.13	14311757.63	39°24'41.120"N	80°52'40.114"W	1036.69	201	
7895.00	89.000	159.130	6618.68	1098.22	-1118.72	133.16	1674962.30	14311670.81	39°24'40.261"N	80°52'39.693"W	1126.62	202	
7989.00	88.820	161.530	6620.47	1192.20	-1207.21	164.80	1674993.92	14311582.35	39°24'39.386"N	80°52'39.291"W	1218.41	203	
												2.56	204





# Actual Wellpath Report

Juyubee Unit 2H AWP Proj: 17882

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Operator	Area	Field	Facility
ANTERO RESOURCES CORPORATION	Tyler County, WV	Tyler	Estack Pad
Slot #10	Well	Juyubee Unit 2H	Juyubee Unit 2H AWB

## REFERENCE WELL PATH IDENTIFICATION

MD	Inclination	Azimuth	TVP	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
8084.00	89.680	162.490	6621.71	1287.15	-1297.56	194.13	1675023.25	14311492.04	39°24'38.493"N	80°52'38.919"W	1312.00	171.491	1.36	
8179.00	89.680	164.690	6622.25	1381.98	-1388.68	220.97	1675050.07	14311400.95	39°24'37.592"N	80°52'38.579"W	1406.15	170.959	2.32	
8273.00	90.050	167.170	6622.47	1475.53	-1479.86	243.82	1675072.91	14311309.82	39°24'36.691"N	80°52'38.289"W	1499.81	170.644	2.67	
8367.00	89.530	161.660	6622.81	1569.25	-1570.36	269.07	1675098.15	14311219.35	39°24'35.296"N	80°52'37.969"W	1593.25	170.277	5.89	
8463.00	89.650	154.950	6623.50	1665.13	-1659.51	304.53	1675133.60	14311130.23	39°24'34.914"N	80°52'37.519"W	1687.22	169.602	6.99	
8558.00	89.590	154.130	6624.13	1759.65	-1745.28	345.37	1675174.42	14311044.50	39°24'34.066"N	80°52'37.000"W	1779.13	168.807	0.87	
8652.00	90.450	157.160	6624.10	1853.32	-1830.91	384.13	1675213.17	14310958.91	39°24'33.219"N	80°52'36.508"W	1870.77	168.151	3.35	
8747.00	90.270	157.210	6623.50	1948.18	-1918.47	420.97	1675249.99	14310871.38	39°24'32.353"N	80°52'36.040"W	1964.11	167.624	0.20	
8842.00	89.310	157.070	6623.85	2043.03	-2006.01	457.87	1675286.88	14310783.88	39°24'31.487"N	80°52'35.571"W	2057.60	167.143	1.02	
8937.00	90.390	161.620	6624.10	2137.99	-2094.88	491.37	1675320.36	14310695.04	39°24'30.609"N	80°52'35.146"W	2151.73	166.799	4.92	
9032.00	89.860	158.640	6623.89	2232.98	-2184.21	523.66	1675352.64	14310605.74	39°24'29.725"N	80°52'34.736"W	2246.11	166.518	3.19	
9127.00	89.930	155.300	6624.06	2327.80	-2271.63	560.82	1675389.78	14310518.36	39°24'28.861"N	80°52'34.264"W	2339.83	166.132	3.52	
9222.00	87.990	160.810	6625.79	2422.67	-2359.69	596.30	1675425.25	14310430.34	39°24'27.990"N	80°52'33.814"W	2433.87	165.818	6.15	
9317.00	90.480	163.520	6627.06	2517.60	-2450.10	625.39	1675454.33	14310339.96	39°24'27.096"N	80°52'33.445"W	2528.66	165.681	3.87	
9411.00	89.340	159.580	6627.21	2611.55	-2539.25	655.13	1675484.06	14310250.85	39°24'26.214"N	80°52'33.097"W	2622.40	165.533	4.36	
9505.00	90.020	159.220	6627.73	2705.54	-2627.24	688.20	1675517.42	14310162.89	39°24'25.344"N	80°52'32.648"W	2715.88	165.321	0.82	
9599.00	90.940	163.060	6626.94	2799.51	-2716.17	718.58	1675547.48	14310074.00	39°24'24.465"N	80°52'32.262"W	2809.62	165.181	4.20	
9694.00	90.480	167.700	6625.76	2894.10	-2808.06	742.55	1675571.44	14309982.14	39°24'23.556"N	80°52'31.958"W	2904.58	165.188	4.91	
9789.00	90.420	164.420	6625.02	2988.61	-2900.25	765.43	1675594.32	14309889.99	39°24'22.645"N	80°52'31.669"W	2999.56	165.216	3.45	
9884.00	91.190	161.380	6623.68	3083.49	-2991.03	793.36	1675622.23	14309799.25	39°24'21.747"N	80°52'31.314"W	3094.46	165.145	3.30	
9979.00	89.830	162.080	6622.84	3178.46	-3081.23	823.14	1675652.00	14309709.08	39°24'20.855"N	80°52'30.937"W	3189.29	165.043	1.61	
10073.00	90.020	161.270	6622.96	3272.43	-3170.47	852.70	1675681.84	14309619.88	39°24'19.973"N	80°52'30.562"W	3283.13	164.947	0.89	
10168.00	90.140	158.740	6622.83	3367.42	-3259.73	885.18	1675714.01	14309530.65	39°24'19.090"N	80°52'30.149"W	3377.78	164.808	2.67	
10263.00	89.650	159.120	6623.00	3462.39	-3348.38	919.33	1675748.15	14309442.04	39°24'18.214"N	80°52'29.716"W	3472.29	164.647	0.65	
10358.00	89.860	160.000	6623.41	3557.38	-3437.40	952.57	1675781.31	14309353.06	39°24'17.334"N	80°52'29.295"W	3566.93	164.512	0.95	
10453.00	89.800	160.420	6623.69	3652.38	-3526.79	984.67	1675813.47	14309263.71	39°24'16.450"N	80°52'28.887"W	3661.66	164.400	0.45	
10547.00	89.950	163.970	6623.90	3746.32	-3616.27	1013.41	1675842.19	14309174.26	39°24'15.565"N	80°52'28.522"W	3755.58	164.345	3.78	
10642.00	89.550	159.170	6624.31	3841.27	-3706.37	1043.43	1675872.20	14309084.20	39°24'14.674"N	80°52'28.141"W	3850.44	164.277	5.07	
10736.00	89.550	157.400	6625.05	3935.20	-3793.69	1078.21	1675906.97	14308996.91	39°24'13.810"N	80°52'27.700"W	3943.94	164.134	1.88	
10831.00	89.310	155.630	6625.99	4029.98	-3880.81	1116.06	1675944.81	14308909.82	39°24'12.949"N	80°52'27.219"W	4038.11	163.956	1.88	

## WELLPATH DATA (375 stations)

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Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Estlack Pad
Well	Juybee Unit 2H
Wellbore	Juybee Unit 2H AWB
Slot	Slot #10

WELLPATH DATA (375 stations)												
MD	Inclination	Azimuth	TVD	Vent Sect	North	East	Crid East	Crid North	Latitude	Longitude	Comments	
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	
10925.00	90.230	159.500	6626.37	4123.85	-3967.68	1579980.66	14308822.99	39°24'12.09"N	80°52'26.76"W	4131.52	163.810	4.23
11020.00	90.170	161.550	6626.04	4218.85	-4057.24	1183.60	1676012.32	39°24'11.20"N	80°52'26.36"W	4226.36	163.737	2.16
11115.00	90.510	162.500	6625.48	4313.80	-4147.60	1676041.62	14308643.14	39°24'10.311"N	80°52'25.990"W	4321.32	163.699	1.06
11209.00	90.440	161.600	6624.70	4407.76	-4237.02	1241.89	1676070.58	39°24'09.426"N	80°52'25.623"W	4415.27	163.664	0.96
11303.00	90.040	161.700	6624.30	4501.73	-4326.24	1271.48	1676100.16	39°24'08.544"N	80°52'25.247"W	4509.22	163.622	0.44
11392.00	89.980	160.550	6624.29	4595.72	-4415.19	1301.89	1676130.56	39°24'07.665"N	80°52'24.861"W	4603.13	163.571	1.23
11492.00	89.950	157.900	6624.34	4690.69	-4504.00	1335.58	1676164.24	39°24'06.780"N	80°52'24.434"W	4697.85	163.483	2.79
11586.00	90.140	158.080	6624.27	4784.61	-4591.15	1370.81	1676199.45	39°24'05.925"N	80°52'23.987"W	4791.43	163.376	0.28
11679.00	90.070	158.540	6624.10	4877.56	-4677.56	1405.18	1676233.81	39°24'05.070"N	80°52'23.550"W	4884.07	163.279	0.50
11774.00	90.200	161.060	6623.88	4972.55	-4766.71	1437.98	1676266.59	39°24'04.188"N	80°52'23.134"W	4978.89	163.213	2.66
11869.00	90.100	164.720	6623.63	5067.43	-4857.49	1465.93	1676294.53	39°24'03.291"N	80°52'22.780"W	5073.87	163.207	3.85
11964.00	89.610	164.760	6623.87	5162.15	-4949.14	1490.93	1676319.52	39°24'02.385"N	80°52'22.463"W	5168.84	163.235	0.52
12059.00	89.400	162.590	6624.69	5256.98	-5040.30	1517.63	1676346.21	39°24'01.483"N	80°52'22.124"W	5263.83	163.243	2.29
12153.00	89.520	159.440	6625.58	5350.96	-5129.18	1548.20	1676376.77	39°24'00.605"N	80°52'21.736"W	5357.74	163.204	3.35
12249.00	89.460	158.950	6626.43	5446.93	-5218.91	1582.30	1676410.86	39°23'59.717"N	80°52'21.304"W	5453.51	163.133	0.51
12343.00	89.520	159.440	6627.27	5540.91	-5306.78	1615.69	1676444.23	39°23'58.848"N	80°52'20.880"W	5547.28	163.067	0.53
12438.00	89.460	157.520	6628.11	5635.85	-5395.15	1650.53	1676479.06	39°23'57.974"N	80°52'20.438"W	5641.98	162.990	2.02
12534.00	89.430	158.270	6629.04	5731.76	-5484.09	1686.66	1676515.17	39°23'57.095"N	80°52'19.979"W	5737.60	162.904	0.78
12628.00	89.210	157.300	6630.16	5825.66	-5571.10	1722.19	1676550.69	39°23'56.234"N	80°52'19.528"W	5831.22	162.822	1.06
12722.00	89.300	156.690	6631.38	5919.50	-5657.62	1758.93	1676587.41	39°23'55.379"N	80°52'19.062"W	5924.74	162.730	0.66
12816.00	89.400	159.760	6632.45	6013.42	-5744.90	1793.79	1676622.26	39°23'54.516"N	80°52'18.619"W	6018.43	162.660	3.27
12911.00	89.580	163.470	6633.29	6108.37	-5835.03	1823.75	1676652.21	39°23'53.624"N	80°52'18.239"W	6113.40	162.643	3.91
13006.00	89.490	165.530	6634.06	6203.11	-5926.57	1849.13	1676677.58	39°23'52.719"N	80°52'17.917"W	6208.34	162.672	2.17
13102.00	89.790	162.580	6634.67	6298.89	-6018.86	1875.50	1676703.94	39°23'51.807"N	80°52'17.583"W	6304.30	162.693	3.09
13196.00	89.980	163.150	6634.86	6392.80	-6108.69	1903.20	1676731.62	39°23'50.919"N	80°52'17.232"W	6398.30	162.695	0.54
13291.00	89.550	162.090	6635.25	6487.72	-6199.35	1931.57	1676759.99	39°23'50.022"N	80°52'16.872"W	6493.30	162.694	1.20
13387.00	89.640	157.820	6635.92	6583.69	-6289.51	1964.47	1676792.87	39°23'49.131"N	80°52'16.455"W	6589.16	162.654	4.45
13482.00	90.100	156.510	6636.14	6678.55	-6377.06	2001.34	1676829.72	39°23'48.265"N	80°52'15.987"W	6683.73	162.576	1.46
13577.00	90.010	158.440	6636.05	6773.43	-6464.81	2037.13	1676866.10	39°23'47.397"N	80°52'15.525"W	6778.35	162.505	2.03
13672.00	90.040	160.970	6636.01	6868.41	-6553.90	2070.68	1676899.04	39°23'46.516"N	80°52'15.107"W	6873.24	162.466	2.66

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# Actual Wellpath Report

Juybee Unit 2H AWP Proj: 17882

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Operator	Area	Field	Facility
ANTERO RESOURCES CORPORATION	Tyler County, WV	Tyler	Eslick Pad
Slot #10	Well	Juybee Unit 2H	Juybee Unit 2H AWB

## REFERENCE WELLPATH IDENTIFICATION

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Comments
(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
13766.00	90.010	163.130	6635.97	6962.36	-6643.32	2099.64	1676927.99	14306148.42	39°23'45.632"N	80°52'14.710"W	6967.23	162.461	2.30	
13861.00	89.920	162.670	6636.02	7057.27	-6734.12	2127.58	1676955.91	14306057.65	39°23'44.734"N	80°52'14.385"W	7062.22	162.467	0.49	
13956.00	90.010	163.290	6636.08	7152.17	-6824.96	2155.38	1676983.71	14305966.85	39°23'43.836"N	80°52'14.033"W	7157.22	162.473	0.66	
14051.00	90.010	160.540	6636.07	7247.12	-6915.26	2184.87	1677013.19	14305876.59	39°23'42.943"N	80°52'13.659"W	7252.21	162.466	2.89	
14145.00	89.980	164.620	6636.07	7340.97	-7002.12	2220.71	1677049.01	14305789.77	39°23'42.084"N	80°52'13.204"W	7345.83	162.404	6.30	
14240.00	89.790	154.570	6636.26	7435.50	-7087.93	2261.46	1677089.75	14305703.99	39°23'41.235"N	80°52'12.686"W	7439.96	162.304	0.21	
14335.00	89.890	156.900	6636.53	7530.19	-7174.53	2300.50	1677128.77	14305617.42	39°23'40.379"N	80°52'12.191"W	7534.33	162.222	2.45	
14430.00	90.010	160.800	6636.61	7625.14	-7263.11	2334.77	1677163.03	14305528.88	39°23'39.503"N	80°52'11.756"W	7629.15	162.180	4.11	
14524.00	89.820	163.190	6636.75	7719.09	-7352.50	2363.82	1677192.07	14305439.52	39°23'38.619"N	80°52'11.387"W	7723.15	162.177	2.55	
14618.00	90.010	161.230	6636.89	7813.03	-7442.01	2392.54	1677220.77	14305350.06	39°23'37.734"N	80°52'11.023"W	7817.14	162.178	2.09	
14713.00	89.980	161.390	6636.90	7908.02	-7532.00	2422.99	1677251.20	14305260.10	39°23'36.844"N	80°52'10.637"W	7912.13	162.167	0.17	
14808.00	90.010	161.760	6636.91	8003.00	-7622.13	2453.01	1677281.22	14305170.01	39°23'35.933"N	80°52'10.256"W	8007.13	162.160	0.39	
14902.00	90.100	162.820	6636.82	8096.94	-7711.67	2481.61	1677309.80	14305080.50	39°23'35.067"N	80°52'09.894"W	8101.12	162.162	1.13	
14998.00	89.850	162.550	6636.86	8192.86	-7803.32	2510.18	1677338.36	14304988.89	39°23'34.161"N	80°52'09.532"W	8197.12	162.168	0.38	
15093.00	89.980	160.390	6637.00	8287.83	-7893.39	2540.37	1677368.54	14304898.85	39°23'33.270"N	80°52'09.149"W	8292.11	162.160	2.28	
15188.00	89.950	159.130	6637.06	8382.83	-7982.52	2573.23	1677401.39	14304809.76	39°23'32.389"N	80°52'08.732"W	8387.02	162.133	1.33	
15283.00	89.920	155.040	6637.17	8477.65	-8070.00	2610.21	1677438.36	14304722.31	39°23'31.524"N	80°52'08.262"W	8481.64	162.076	4.31	
15377.00	89.890	154.590	6637.32	8571.22	-8155.07	2650.21	1677478.34	14304637.28	39°23'30.682"N	80°52'07.754"W	8574.89	161.997	0.48	
15471.00	89.610	158.690	6637.73	8665.01	-8241.34	2687.48	1677515.69	14304551.04	39°23'29.829"N	80°52'07.281"W	8668.47	161.939	4.37	
15565.00	89.550	159.020	6638.42	8758.97	-8329.01	2721.39	1677549.49	14304463.40	39°23'28.962"N	80°52'06.851"W	8762.33	161.906	0.36	
15661.00	89.890	162.930	6638.69	8854.95	-8419.75	2752.67	1677580.76	14304372.70	39°23'28.065"N	80°52'06.454"W	8858.30	161.896	4.09	
15756.00	89.640	167.650	6639.28	8949.56	-8511.61	2776.79	1677604.87	14304280.88	39°23'27.157"N	80°52'06.149"W	8953.10	161.932	4.98	
15851.00	89.730	164.490	6639.80	9044.07	-8603.80	2799.66	1677627.72	14304188.72	39°23'26.245"N	80°52'05.859"W	9047.84	161.975	3.33	
15946.00	89.760	160.550	6640.23	9138.98	-8694.40	2828.19	1677656.24	14304098.17	39°23'25.349"N	80°52'05.498"W	9142.82	161.981	4.15	
16041.00	89.640	156.000	6640.72	9233.89	-8782.62	2863.34	1677691.38	14304009.97	39°23'24.477"N	80°52'05.052"W	9237.60	161.943	4.79	
16136.00	89.580	155.460	6641.37	9328.59	-8869.23	2902.39	1677730.41	14303923.41	39°23'23.620"N	80°52'04.556"W	9332.04	161.880	0.57	
16230.00	89.610	156.060	6642.03	9422.29	-8954.94	2940.98	1677768.99	14303837.73	39°23'22.773"N	80°52'04.066"W	9425.51	161.819	0.64	
16325.00	89.520	160.230	6642.76	9517.19	-9043.09	2976.33	1677804.33	14303749.62	39°23'21.901"N	80°52'03.617"W	9520.29	161.782	4.39	
16420.00	89.610	160.320	6643.48	9612.19	-9132.51	3008.40	1677836.38	14303660.23	39°23'21.017"N	80°52'03.211"W	9615.26	161.767	0.13	
16515.00	89.580	159.830	6644.15	9707.19	-9221.82	3040.77	1677868.74	14303570.95	39°23'20.134"N	80°52'02.800"W	9710.21	161.751	0.52	

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REFERENCE WELLPATH IDENTIFICATION	
Operator	ANTERO RESOURCES CORPORATION
Area	Tyler County, WV
Field	Tyler
Facility	Estlack Pad
Slot #10	Jujubee Unit 2H
Well	Jujubee Unit 2H AWB
Wellbore	

WELLPATH DATA (375 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 [1/1000ft]	Comments
16609.00	89.610	162.740	6644.81	9801.16	-9310.84	3070.93	167898.89	14303481.97	39°23'19.253"N	80°52'02.417"W	9804.20	161.746	3.10	
16704.00	89.730	164.520	6645.36	9896.00	-9401.98	3097.70	167925.65	14303390.86	39°23'18.352"N	80°52'02.078"W	9899.14	161.764	1.88	
16799.00	89.790	163.570	6645.76	9990.79	-9493.32	3123.81	167951.75	14303299.56	39°23'17.449"N	80°52'01.747"W	9994.07	161.786	1.00	
16893.00	89.760	161.440	6646.13	10084.72	-9582.97	3152.07	167980.00	14303209.95	39°23'16.563"N	80°52'01.389"W	10088.05	161.793	2.27	
16988.00	89.670	159.850	6646.60	10179.71	-9672.59	3183.55	167801.47	14303120.36	39°23'15.676"N	80°52'00.990"W	10183.03	161.782	1.68	
17082.00	89.730	160.610	6647.09	10273.71	-9761.05	3215.35	167843.25	14303031.94	39°23'14.802"N	80°52'00.586"W	10276.99	161.768	0.81	
17176.00	89.580	162.020	6647.66	10367.69	-9850.09	3245.46	167807.35	14302942.93	39°23'13.921"N	80°52'00.205"W	10370.99	161.764	1.51	
17272.00	89.670	162.200	6648.29	10463.64	-9941.45	3274.95	1678102.83	14302851.61	39°23'13.018"N	80°51'59.831"W	10466.98	161.767	0.21	
17367.00	89.580	159.880	6648.91	10558.63	-10031.29	3305.82	1678133.68	14302761.81	39°23'12.129"N	80°51'59.439"W	10561.97	161.760	2.44	
17462.00	89.670	156.870	6649.53	10653.56	-10119.59	3340.82	1678168.67	14302673.55	39°23'11.256"N	80°51'58.995"W	10656.79	161.730	3.17	
17557.00	89.640	158.750	6650.10	10748.46	-10207.55	3376.70	1678204.54	14302585.62	39°23'10.386"N	80°51'58.540"W	10751.56	161.696	1.98	
17652.00	89.700	157.900	6650.65	10843.40	-10295.83	3411.78	1678239.61	14302497.38	39°23'09.513"N	80°51'58.095"W	10846.40	161.666	0.90	
17747.00	89.670	156.430	6651.17	10938.26	-10383.38	3448.65	1678276.46	14302409.86	39°23'08.647"N	80°51'57.627"W	10941.10	161.627	1.55	
17842.00	89.510	160.440	6651.85	11033.18	-10471.71	3483.56	1678311.35	14302321.57	39°23'07.774"N	80°51'57.184"W	11035.93	161.600	4.22	
17882.00	89.510	160.440	6652.19	11073.18	-10509.40	3496.95	1678324.74	14302283.89	39°23'07.401"N	80°51'57.014"W	11073.93	161.595	0.00	Projected MD at TD: 17882'

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# Actual Wellpath Report

Jujubee Unit 2H AWP Proj: 17882'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #10
Area	Tyler County, WV	Well	Jujubee Unit 2H
Field	Tyler	Wellbore	Jujubee Unit 2H AWB
Facility	Estlack Pad		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US-ft]	Latitude	Longitude	Shape
Jujubee Unit 2H POE Rev-1		6588.00	-127.79	-227.40	1674601.88	14312661.34	39°24'50.060"N	80°52'44.270"W	point
Jujubee Unit 2H BHL Rev-1		6612.00	-10473.12	3473.66	1678301.46	14302320.16	39°23'07.760"N	80°51'57.310"W	point
Jujubee Unit 2H LP Rev-1		6612.00	-282.29	-172.13	1674657.13	14312506.90	39°24'48.532"N	80°52'43.568"W	point
Jujubee Unit 2H DC		6650.00	0.00	0.00	1674829.19	14312789.08	39°24'51.320"N	80°52'41.370"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: Jujubee Unit 2H AWB Ref Wellpath: Jujubee Unit 2H AWP Proj: 17882'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	
32.00	5605.35	Generic gyro - northseeking (Standard)	02_SDI Gyro (100'-5605.35')	Jujubee Unit 2H AWB	
5605.35	17842.00	Navitrac w/ Surcon: (MagCAD, Short spacing)	03_BHLAT Curve <8-1/2"> (5605.35')(5672'-17842')	Jujubee Unit 2H AWB	
17842.00	17882.00	Blind Drilling (std)	Projection to bit	Jujubee Unit 2H AWB	

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# Actual Wellpath Report

Jujubee Unit 2H AWP Proj: 17882'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Slot	Slot #10
Area	Tyler County, WV	Well	Jujubee Unit 2H
Field	Tyler	Wellbore	Jujubee Unit 2H AWB
Facility	Estlack Pad		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]		Comment
100.00	0.030	232.810	100.00		SDI Gyro (100'-5605.35')
5672.00	26.970	319.650	5640.46		BHI AT Curve <8-1/2"> (5605.35')(5672'-17842')
6198.00	14.807	228.249	6129.93		Drilling Marker: 6198'
6329.00	22.486	193.843	6254.43		Sycamore: 6,329' MD
6529.00	42.055	171.278	6423.27		Middlesex: 6,529' MD
6692.00	59.039	163.653	6526.83		Burkett: 6,692' MD
6757.00	64.894	161.546	6557.21		Tully: 6,757' MD
6849.00	73.918	160.251	6589.62		Marcellus Hot: 6,849' MD
17882.00	89.510	160.440	6652.19		Projected MD at TD: 17882'

COMMENTS
<p>Wellpath general comments            API: 47-095-02336-0000            BHI Job #: 7872394            Rig: Frontier 32            Duration: 03.21.2016-03.26.2016            SDI Gyro (100'-5605.35')            BHI AT Curve &lt;8-1/2"&gt; (5605.35')(5672'-17842')            Sycamore: 6,329' MD            Middlesex: 6,529' MD            Burkett: 6,692' MD            Tully: 6,757' MD            Marcellus Hot: 6,849' MD            Drilling Marker: 6198'            Projected MD at TD: 17882'</p>

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