



# Actual Wellpath Report

Alpine East Unit 1H AWP Proj: 22146'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Alpine East Unit 1H
Field	Tyler	API	47-095-02596-0000
Facility	Sine Pad	Wellbore	Alpine East Unit 1H AWB
Slot	Slot #03		

## REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Delaset
Scale	0.999600	Report Generated	6/29/2020 at 12:41:08 PM
Convergence at slot	0.03° East	Database	WA_MPL_EasternUS_Defn

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	11.04	-189.15	1652464.79	14313072.12	39°24'54.3200"N	80°57'26.4300"W
Facility Reference Pt			1652653.87	14313061.08	39°24'54.2100"N	80°57'24.0200"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.3013"W

## WELLPATH DATUM

Calculation method	Minimum curvature	H&P 519 (RKB) to Facility Vertical Datum	30.00ft
Horizontal Reference Pt	Slot	H&P 519 (RKB) to Mean Sea Level	829.00ft
Vertical Reference Pt	H&P 519 (RKB)	H&P 519 (RKB) to Ground Level at Slot (Slot #03)	30.00ft
MD Reference Pt	H&P 519 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	340.12°

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WELLPATH DATA (244 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†	0.000	3.780	0.00	0.00	0.00	0.00	1652464.79	14313072.11	39°24'54.3200"N	80°57'26.4300"W	0.00	0.000	0.00	0.00	0.00	
30.00	0.000	3.780	30.00	0.00	0.00	0.00	1652464.79	14313072.11	39°24'54.3200"N	80°57'26.4300"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.570	3.780	100.00	0.32	0.35	0.02	1652464.81	14313072.46	39°24'54.3234"N	80°57'26.4297"W	0.35	3.780	0.81	0.81	0.00	Gyrodata MS Gyro <17-1/2">(100'-295')
200.00	0.160	21.610	200.00	0.88	0.97	0.11	1652464.90	14313073.09	39°24'54.3296"N	80°57'26.4286"W	0.98	6.282	0.42	-0.41	17.83	
295.00	0.080	46.090	295.00	1.01	1.14	0.20	1652464.99	14313073.26	39°24'54.3313"N	80°57'26.4274"W	1.16	10.111	0.10	-0.08	25.77	
350.00	0.000	45.000	350.00	1.02	1.17	0.23	1652465.02	14313073.28	39°24'54.3316"N	80°57'26.4270"W	1.19	11.195	0.15	-0.15	0.00	APS EM <12-1/4">(295')(350'-2536')
414.00	0.640	225.080	414.00	0.87	0.92	-0.02	1652464.77	14313073.03	39°24'54.3291"N	80°57'26.4303"W	0.92	358.649	1.00	1.00	0.00	
506.00	2.170	189.220	505.97	-0.87	-1.17	-0.66	1652464.13	14313070.95	39°24'54.3085"N	80°57'26.4385"W	1.34	209.701	1.84	1.66	-38.98	
597.00	5.230	183.680	596.77	-6.18	-7.01	-1.21	1652463.58	14313065.11	39°24'54.2508"N	80°57'26.4454"W	7.11	189.775	3.38	3.36	-6.09	
688.00	6.470	177.410	687.29	-14.88	-16.27	-1.24	1652463.55	14313055.85	39°24'54.1592"N	80°57'26.4459"W	16.31	184.364	1.53	1.36	-6.89	
779.00	7.020	172.820	777.66	-25.20	-26.91	-0.31	1652464.48	14313045.22	39°24'54.0541"N	80°57'26.4342"W	26.91	180.670	0.85	0.60	-5.04	
869.00	6.070	161.420	867.08	-35.32	-36.87	1.89	1652466.68	14313035.26	39°24'53.9555"N	80°57'26.4062"W	36.92	177.067	1.78	-1.06	-12.67	
960.00	4.910	142.480	957.67	-43.84	-44.52	5.79	1652470.58	14313027.61	39°24'53.8799"N	80°57'26.3564"W	44.90	172.585	2.35	-1.27	-20.81	
1050.00	3.210	133.280	1047.44	-49.76	-49.31	9.97	1652474.76	14313022.83	39°24'53.8326"N	80°57'26.3032"W	50.31	168.563	2.02	-1.89	-10.22	
1144.00	3.000	109.070	1141.30	-53.66	-51.92	14.22	1652479.00	14313020.22	39°24'53.8068"N	80°57'26.2492"W	53.83	164.686	1.40	-0.22	-25.76	
1239.00	1.580	93.220	1236.23	-55.73	-52.80	17.87	1652482.66	14313019.34	39°24'53.7981"N	80°57'26.2026"W	55.74	161.299	1.62	-1.49	-16.68	
1333.00	0.850	322.740	1330.22	-55.58	-52.32	18.75	1652483.53	14313019.82	39°24'53.8028"N	80°57'26.1915"W	55.58	160.288	2.37	-0.78	-138.81	
1428.00	1.840	302.320	1425.19	-53.70	-50.94	17.03	1652481.81	14313021.19	39°24'53.8164"N	80°57'26.2133"W	53.71	161.516	1.14	1.04	-21.49	
1522.00	1.280	305.160	1519.15	-51.64	-49.53	14.90	1652479.68	14313022.60	39°24'53.8304"N	80°57'26.2405"W	51.72	163.262	0.60	-0.60	3.02	
1616.00	0.920	285.640	1613.14	-50.35	-48.72	13.31	1652478.10	14313023.41	39°24'53.8384"N	80°57'26.2607"W	50.51	164.720	0.55	-0.38	-20.77	
1711.00	0.950	279.050	1708.12	-49.52	-48.39	11.80	1652476.58	14313023.74	39°24'53.8416"N	80°57'26.2800"W	49.81	166.298	0.12	0.03	-6.94	
1805.00	1.190	272.660	1802.11	-48.77	-48.23	10.05	1652474.84	14313023.91	39°24'53.8433"N	80°57'26.3022"W	49.26	168.224	0.28	0.26	-6.80	
1899.00	1.340	270.740	1896.08	-48.01	-48.17	7.98	1652472.77	14313023.97	39°24'53.8439"N	80°57'26.3286"W	48.82	170.593	0.17	0.16	-2.04	
1994.00	2.450	273.210	1991.03	-46.82	-48.04	4.84	1652469.63	14313024.10	39°24'53.8452"N	80°57'26.3686"W	48.28	174.245	1.17	1.17	2.60	
2089.00	1.790	265.730	2085.97	-45.63	-48.03	1.33	1652466.12	14313024.10	39°24'53.8452"N	80°57'26.4133"W	48.05	178.408	0.75	-0.69	-7.87	
2183.00	1.150	241.750	2179.93	-45.37	-48.59	-0.96	1652463.83	14313023.54	39°24'53.8398"N	80°57'26.4425"W	48.60	181.132	0.93	-0.68	-25.51	
2278.00	1.090	236.520	2274.92	-45.72	-49.54	-2.55	1652462.24	14313022.59	39°24'53.8304"N	80°57'26.4628"W	49.61	182.951	0.12	-0.06	-5.51	
2372.00	0.940	242.830	2368.90	-46.03	-50.39	-3.99	1652460.81	14313021.75	39°24'53.8220"N	80°57'26.4811"W	50.54	184.522	0.20	-0.16	6.71	
2467.00	0.760	259.540	2463.89	-46.02	-50.86	-5.30	1652459.49	14313021.28	39°24'53.8174"N	80°57'26.4978"W	51.13	185.948	0.32	-0.19	17.59	
2536.00	1.160	258.910	2532.88	-45.84	-51.07	-6.43	1652458.36	14313021.06	39°24'53.8152"N	80°57'26.5123"W	51.48	187.180	0.58	0.58	-0.91	

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Field	Tyler		API	47-095-02596-0000
Facility	Sine Pad		Wellbore	Alpine East Unit 1H AWB
Slot	Slot #03			

WELLPATH DATA (244 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
2660.00	0.640	248.390	2656.87	-45.67	-51.57	-8.31	1652456.48	14313020.57	39°24'53.8103"N	80°57'26.5362"W	52.23	189.153	0.44	-0.42	-8.48	APS EM <8-3/4">(2536')(2660'-5118')
2754.00	2.660	179.310	2750.83	-47.75	-53.94	-8.77	1652456.02	14313018.19	39°24'53.7869"N	80°57'26.5421"W	54.65	189.235	2.66	2.15	-73.49	
2849.00	2.960	178.360	2845.71	-52.16	-58.60	-8.67	1652456.12	14313013.54	39°24'53.7409"N	80°57'26.5409"W	59.24	188.420	0.32	0.32	-1.00	
2943.00	3.730	165.430	2939.55	-57.51	-63.99	-7.84	1652456.96	14313008.15	39°24'53.6876"N	80°57'26.5302"W	64.46	186.982	1.14	0.82	-13.76	
3038.00	4.890	157.360	3034.28	-64.63	-70.71	-5.50	1652459.29	14313001.43	39°24'53.6211"N	80°57'26.5005"W	70.93	184.447	1.37	1.22	-8.49	
3135.00	6.060	159.630	3130.84	-73.88	-79.33	-2.13	1652462.66	14312992.82	39°24'53.5359"N	80°57'26.4576"W	79.36	181.535	1.23	1.21	2.34	
3229.00	7.990	163.110	3224.13	-85.37	-90.23	1.50	1652466.29	14312981.92	39°24'53.4282"N	80°57'26.4114"W	90.25	179.048	2.10	2.05	3.70	
3323.00	9.970	175.320	3316.98	-99.75	-104.60	4.06	1652468.85	14312967.56	39°24'53.2862"N	80°57'26.3789"W	104.68	177.776	2.91	2.11	12.99	
3418.00	10.910	176.610	3410.41	-116.30	-121.77	5.26	1652470.05	14312950.39	39°24'53.1165"N	80°57'26.3637"W	121.88	177.524	1.02	0.99	1.36	
3513.00	11.510	172.660	3503.60	-134.18	-140.14	7.01	1652471.79	14312932.03	39°24'52.9348"N	80°57'26.3416"W	140.32	177.138	1.03	0.63	-4.16	
3607.00	9.490	166.890	3596.02	-151.03	-157.00	9.96	1652474.75	14312915.18	39°24'52.7683"N	80°57'26.3040"W	157.31	176.369	2.42	-2.15	-6.14	
3702.00	9.870	164.000	3689.67	-166.93	-172.45	13.98	1652478.77	14312899.73	39°24'52.6155"N	80°57'26.2529"W	173.02	175.364	0.65	0.40	-3.04	
3796.00	11.340	156.640	3782.06	-184.19	-188.68	19.87	1652484.65	14312883.51	39°24'52.4551"N	80°57'26.1780"W	189.72	173.988	2.12	1.56	-7.83	
3891.00	9.960	148.560	3875.43	-201.57	-204.27	27.86	1652492.64	14312867.93	39°24'52.3010"N	80°57'26.0763"W	206.16	172.233	2.14	-1.45	-8.51	
3985.00	10.520	155.740	3967.94	-218.09	-219.03	35.63	1652500.40	14312853.18	39°24'52.1551"N	80°57'25.9774"W	221.90	170.761	1.48	0.60	7.64	
4080.00	11.670	165.470	4061.17	-236.30	-236.23	41.60	1652506.37	14312835.98	39°24'51.9850"N	80°57'25.9014"W	239.87	170.013	2.31	1.21	10.24	
4175.00	11.920	171.360	4154.17	-255.49	-255.24	45.48	1652510.26	14312816.98	39°24'51.7972"N	80°57'25.8520"W	259.26	169.896	1.29	0.26	6.20	
4269.00	9.390	161.920	4246.54	-272.68	-272.13	49.32	1652514.09	14312800.10	39°24'51.6302"N	80°57'25.8032"W	276.56	169.726	3.26	-2.69	-10.04	
4364.00	10.030	161.700	4340.18	-288.70	-287.35	54.33	1652519.09	14312784.88	39°24'51.4797"N	80°57'25.7395"W	292.44	169.294	0.67	0.67	-0.23	
4458.00	11.790	162.780	4432.48	-306.48	-304.29	59.74	1652524.51	14312767.94	39°24'51.3122"N	80°57'25.6707"W	310.10	168.893	1.88	1.87	1.15	
4553.00	9.620	150.990	4525.83	-324.01	-320.51	66.46	1652531.23	14312751.73	39°24'51.1519"N	80°57'25.5851"W	327.33	168.285	3.23	-2.28	-12.41	
4647.00	8.580	158.590	4618.65	-338.78	-333.91	72.83	1652537.59	14312738.34	39°24'51.0195"N	80°57'25.5040"W	341.76	167.695	1.69	-1.11	8.09	
4742.00	10.330	164.490	4712.36	-354.36	-348.71	77.70	1652542.46	14312723.54	39°24'50.8731"N	80°57'25.4421"W	357.27	167.439	2.10	1.84	6.21	
4836.00	11.280	162.570	4804.69	-371.94	-365.61	82.71	1652547.46	14312706.65	39°24'50.7061"N	80°57'25.3784"W	374.85	167.253	1.08	1.01	-2.04	
4931.00	10.740	155.630	4897.95	-390.05	-382.54	89.14	1652553.90	14312689.73	39°24'50.5388"N	80°57'25.2965"W	392.79	166.882	1.51	-0.57	-7.31	
5026.00	10.830	153.650	4991.27	-407.75	-398.60	96.76	1652561.51	14312673.68	39°24'50.3800"N	80°57'25.1996"W	410.17	166.356	0.40	0.09	-2.08	
5118.00	10.010	148.120	5081.75	-424.16	-413.13	104.82	1652569.56	14312659.15	39°24'50.2363"N	80°57'25.0970"W	426.22	165.764	1.40	-0.89	-6.01	
5239.00	9.420	148.730	5201.02	-444.15	-430.53	115.51	1652580.25	14312641.76	39°24'50.0644"N	80°57'24.9609"W	445.75	164.981	0.49	-0.49	0.50	BH AT Curve <8-1/2">(5118')(5239'-22121')
5334.00	2.810	131.500	5295.43	-453.83	-438.72	121.30	1652586.04	14312633.57	39°24'49.9833"N	80°57'24.8872"W	455.18	164.545	7.14	-6.96	-18.14	
5428.00	4.760	355.020	5389.33	-452.08	-436.36	122.68	1652587.43	14312635.93	39°24'50.0066"N	80°57'24.8695"W	453.28	164.296	7.52	2.07	-145.19	

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5523.00	11.330	4.810	5483.35	-439.77	-423.12	123.13	1652587.87	14312649.16	39°24'50.1375"N	80°57'24.8638"W	440.67	163.775	7.04	6.92	10.31	
5618.00	19.110	5.280	5574.95	-417.19	-398.30	125.34	1652590.08	14312673.98	39°24'50.3828"N	80°57'24.8354"W	417.56	162.531	8.19	8.19	0.49	
5712.00	26.280	8.320	5661.61	-384.88	-362.34	129.78	1652594.51	14312709.92	39°24'50.7382"N	80°57'24.7787"W	384.88	160.294	7.73	7.63	3.23	
5807.00	33.090	1.260	5744.12	-342.09	-315.53	133.39	1652598.13	14312756.71	39°24'51.2008"N	80°57'24.7323"W	342.57	157.083	8.05	7.17	-7.43	
5902.00	41.460	355.960	5819.67	-287.54	-258.12	131.75	1652596.48	14312814.10	39°24'51.7683"N	80°57'24.7530"W	289.80	152.960	9.43	8.81	-5.58	
5948.00	44.890	355.900	5853.21	-257.26	-226.73	129.51	1652594.25	14312845.48	39°24'52.0785"N	80°57'24.7812"W	261.11	150.264	7.46	7.46	-0.13	
5996.00	46.490	356.290	5886.74	-224.24	-192.46	127.17	1652591.91	14312879.73	39°24'52.4172"N	80°57'24.8108"W	230.68	146.544	3.38	3.33	0.81	
6037.00†	49.192	356.150	5914.26	-195.04	-162.14	125.17	1652589.91	14312910.04	39°24'52.7169"N	80°57'24.8362"W	204.83	142.332	6.60	6.59	-0.34	Middlesex: 6037' MD
6040.00	49.390	356.140	5916.21	-192.85	-159.87	125.02	1652589.76	14312912.31	39°24'52.7394"N	80°57'24.8381"W	202.95	141.975	6.60	6.59	-0.33	
6091.00	54.470	356.600	5947.65	-154.32	-119.81	122.48	1652587.22	14312952.35	39°24'53.1353"N	80°57'24.8702"W	171.34	134.369	9.99	9.96	0.90	
6185.00	65.120	355.210	5994.88	-76.25	-38.90	116.64	1652581.38	14313033.23	39°24'53.9349"N	80°57'24.9442"W	122.95	108.446	11.40	11.33	-1.48	
6199.00†	66.123	355.304	6000.66	-63.94	-26.20	115.58	1652580.32	14313045.93	39°24'54.0605"N	80°57'24.9575"W	118.51	102.770	7.19	7.17	0.67	Burkett: 6199' MD
6280.00	71.930	355.820	6029.64	8.93	49.18	109.74	1652574.48	14313121.27	39°24'54.8055"N	80°57'25.0315"W	120.25	65.861	7.19	7.17	0.64	
6284.00†	72.198	355.927	6030.87	12.59	52.97	109.46	1652574.21	14313125.07	39°24'54.8431"N	80°57'25.0350"W	121.61	64.176	7.18	6.71	2.67	Marcellus POE: 6284' MD
6374.00	78.250	358.260	6053.81	95.77	139.84	105.08	1652569.83	14313211.90	39°24'55.7016"N	80°57'25.0903"W	174.92	36.922	7.18	6.72	2.59	
6469.00	87.230	357.920	6065.81	185.32	233.93	101.94	1652566.69	14313305.95	39°24'56.6316"N	80°57'25.1298"W	255.17	23.546	9.46	9.45	-0.36	
6516.00	90.250	357.730	6066.84	230.08	280.88	100.15	1652564.90	14313352.88	39°24'57.0956"N	80°57'25.1522"W	298.20	19.625	6.44	6.43	-0.40	
6564.00	90.550	356.550	6066.50	275.98	328.82	97.76	1652562.51	14313400.80	39°24'57.5694"N	80°57'25.1824"W	343.04	16.558	2.54	0.62	-2.46	
6658.00	90.800	352.060	6065.40	367.08	422.32	88.43	1652553.19	14313494.27	39°24'58.4936"N	80°57'25.3007"W	431.48	11.827	4.78	0.27	-4.78	
6753.00	91.750	348.070	6063.28	460.61	515.85	72.05	1652536.81	14313587.76	39°24'59.4181"N	80°57'25.5088"W	520.86	7.951	4.32	1.00	-4.20	
6847.00	91.020	341.060	6061.01	554.24	606.38	47.06	1652511.83	14313678.25	39°25'0.3129"N	80°57'25.8268"W	608.20	4.437	7.50	-0.78	-7.46	
6942.00	90.370	339.400	6059.85	649.23	695.77	14.93	1652479.71	14313767.61	39°25'1.1966"N	80°57'26.2356"W	695.93	1.229	1.88	-0.68	-1.75	
7036.00	90.400	337.880	6059.22	743.20	783.31	-19.31	1652445.49	14313855.11	39°25'2.0619"N	80°57'26.6713"W	783.55	358.588	1.62	0.03	-1.62	
7131.00	90.460	336.860	6058.51	838.08	870.99	-55.86	1652408.95	14313942.76	39°25'2.9287"N	80°57'27.1365"W	872.78	356.330	1.08	0.06	-1.07	
7225.00	90.490	336.740	6057.73	931.92	957.39	-92.89	1652371.94	14314029.12	39°25'3.7828"N	80°57'27.6078"W	961.88	354.458	0.13	0.03	-0.13	
7320.00	90.310	336.770	6057.07	1026.75	1044.67	-130.38	1652334.46	14314116.37	39°25'4.6456"N	80°57'28.0850"W	1052.78	352.886	0.19	-0.19	0.03	
7414.00	90.430	335.330	6056.46	1120.51	1130.58	-168.54	1652296.32	14314202.24	39°25'5.4948"N	80°57'28.5707"W	1143.07	351.521	1.54	0.13	-1.53	
7508.00	90.400	337.230	6055.78	1214.30	1216.63	-206.35	1652258.52	14314288.25	39°25'6.3455"N	80°57'29.0519"W	1234.00	350.374	2.02	-0.03	2.02	
7603.00	90.250	337.630	6055.24	1309.19	1304.35	-242.81	1652222.08	14314375.94	39°25'7.2127"N	80°57'29.5160"W	1326.76	349.455	0.45	-0.16	0.42	
7698.00	90.400	337.060	6054.70	1404.08	1392.02	-279.40	1652185.50	14314483.58	39°25'8.0793"N	80°57'29.9817"W	1419.78	348.651	0.62	0.16	-0.60	

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# Actual Wellpath Report

Alpine East Unit 1H AWP Proj: 22146'  
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Alpine East Unit 1H
Field	Tyler		API	47-095-02596-0000
Facility	Sine Pad		Wellbore	Alpine East Unit 1H AWB
Slot	Slot #03			

WELLPATH DATA (244 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
7792.00	90.120	338.560	6054.28	1498.00	1479.05	-314.90	1652150.01	14314550.57	39°25'8.9397"N	80°57'30.4336"W	1512.21	347.981	1.62	-0.30	1.60	
7887.00	90.340	338.160	6053.89	1592.95	1567.36	-349.94	1652115.00	14314638.84	39°25'9.8126"N	80°57'30.8794"W	1605.95	347.414	0.48	0.23	-0.42	
7981.00	90.580	340.170	6053.14	1686.93	1655.20	-383.37	1652081.58	14314726.65	39°25'10.6810"N	80°57'31.3049"W	1699.02	346.960	2.15	0.26	2.14	
8076.00	90.710	343.880	6052.07	1781.85	1745.54	-412.68	1652052.28	14314816.96	39°25'11.5740"N	80°57'31.6779"W	1793.66	346.699	3.91	0.14	3.91	
8170.00	90.620	347.070	6050.98	1875.42	1836.52	-436.25	1652028.72	14314907.90	39°25'12.4733"N	80°57'31.9777"W	1887.62	346.638	3.39	-0.10	3.39	
8265.00	90.890	345.600	6049.73	1969.86	1928.82	-458.69	1652006.29	14315000.16	39°25'13.3856"N	80°57'32.2631"W	1982.61	346.623	1.57	0.28	-1.55	
8359.00	91.050	342.910	6048.13	2063.59	2019.27	-484.19	1651980.80	14315090.58	39°25'14.2797"N	80°57'32.5875"W	2076.51	346.516	2.87	0.17	-2.86	
8454.00	90.860	338.960	6046.55	2158.55	2109.03	-515.21	1651949.79	14315180.30	39°25'15.1670"N	80°57'32.9823"W	2171.05	346.272	4.16	-0.20	-4.18	
8548.00	90.620	335.710	6045.34	2252.42	2195.76	-551.42	1651913.59	14315266.99	39°25'16.0243"N	80°57'33.4432"W	2263.94	345.903	3.47	-0.26	-3.46	
8642.00	90.650	334.110	6044.29	2346.02	2280.88	-591.28	1651873.75	14315352.08	39°25'16.8657"N	80°57'33.9506"W	2356.27	345.467	1.70	0.03	-1.70	
8737.00	90.550	333.020	6043.30	2440.39	2365.94	-633.57	1651831.47	14315437.10	39°25'17.7066"N	80°57'34.4890"W	2449.30	345.009	1.15	-0.11	-1.15	
8831.00	90.650	333.620	6042.31	2533.72	2449.92	-675.77	1651789.29	14315521.06	39°25'18.5369"N	80°57'35.0263"W	2541.42	344.579	0.65	0.11	0.64	
8926.00	90.520	333.810	6041.35	2628.13	2535.10	-717.84	1651747.24	14315606.19	39°25'19.3789"N	80°57'35.5618"W	2634.77	344.190	0.24	-0.14	0.20	
9020.00	90.580	333.480	6040.44	2721.52	2619.32	-759.57	1651705.53	14315690.39	39°25'20.2115"N	80°57'36.0931"W	2727.23	343.829	0.36	0.06	-0.35	
9115.00	90.650	337.680	6039.42	2816.20	2705.80	-798.83	1651666.28	14315776.83	39°25'21.0664"N	80°57'36.5929"W	2821.26	343.552	4.42	0.07	4.42	
9209.00	90.580	340.650	6038.41	2910.17	2793.64	-832.26	1651632.86	14315864.63	39°25'21.9347"N	80°57'37.0184"W	2914.97	343.411	3.16	-0.07	3.16	
9304.00	90.650	343.680	6037.39	3005.09	2884.06	-861.35	1651603.78	14315955.01	39°25'22.8285"N	80°57'37.3886"W	3009.94	343.371	3.19	0.07	3.19	
9398.00	90.520	345.540	6036.43	3098.79	2974.68	-886.30	1651578.85	14316045.60	39°25'23.7242"N	80°57'37.7059"W	3103.91	343.409	1.98	-0.14	1.98	
9492.00	90.680	347.690	6035.45	3192.18	3066.11	-908.05	1651557.10	14316137.00	39°25'24.6280"N	80°57'37.9827"W	3197.75	343.503	2.29	0.17	2.29	
9587.00	90.770	347.470	6034.25	3286.37	3158.88	-928.48	1651536.68	14316229.73	39°25'25.5450"N	80°57'38.2425"W	3292.51	343.620	0.25	0.09	-0.23	
9681.00	90.710	346.870	6033.03	3379.65	3250.53	-949.36	1651515.82	14316321.34	39°25'26.4509"N	80°57'38.5080"W	3386.33	343.719	0.64	-0.06	-0.64	
9776.00	90.860	346.470	6031.73	3474.02	3342.96	-971.26	1651493.92	14316413.73	39°25'27.3645"N	80°57'38.7865"W	3481.20	343.799	0.45	0.16	-0.42	
9871.00	90.520	344.040	6030.59	3568.62	3434.82	-995.43	1651469.76	14316505.55	39°25'28.2725"N	80°57'39.0941"W	3576.15	343.838	2.58	-0.36	-2.56	
9965.00	90.550	341.040	6029.71	3662.53	3524.47	-1023.63	1651441.57	14316595.17	39°25'29.1587"N	80°57'39.4529"W	3670.11	343.805	3.19	0.03	-3.19	
10060.00	90.520	337.270	6028.82	3757.49	3613.23	-1057.43	1651407.79	14316683.90	39°25'30.0361"N	80°57'39.8831"W	3764.79	343.688	3.97	-0.03	-3.97	
10165.00	90.650	336.360	6027.85	3852.33	3700.56	-1094.83	1651370.40	14316771.19	39°25'30.8993"N	80°57'40.3592"W	3859.12	343.519	0.97	0.14	-0.96	
10249.00	90.550	337.880	6026.87	3946.19	3787.15	-1131.37	1651333.87	14316857.75	39°25'31.7554"N	80°57'40.8244"W	3952.54	343.367	1.62	-0.11	1.62	
10344.00	90.490	339.260	6026.01	4041.15	3875.58	-1166.08	1651299.18	14316946.14	39°25'32.6295"N	80°57'41.2662"W	4047.20	343.255	1.45	-0.06	1.45	
10438.00	90.460	340.230	6025.23	4135.14	3963.76	-1198.62	1651266.65	14317034.29	39°25'33.5012"N	80°57'41.6804"W	4141.03	343.175	1.03	-0.03	1.03	
10533.00	90.460	338.930	6024.46	4230.13	4052.79	-1231.77	1651233.52	14317123.28	39°25'34.3812"N	80°57'42.1023"W	4235.84	343.094	1.37	0.00	-1.37	

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# Actual Wellpath Report

Alpine East Unit 1H AWP Proj: 22146'  
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Alpine East Unit 1H
Field	Tyler		API	47-095-02596-0000
Facility	Sine Pad		Wellbore	Alpine East Unit 1H AWB
Slot	Slot #03			

WELLPATH DATA (244 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
10627.00	90.340	336.430	6023.81	4324.04	4139.74	-1267.46	1651197.84	14317210.19	39°25'35.2407"N	80°57'42.5567"W	4329.42	342.977	2.66	-0.13	-2.66	
10722.00	90.520	334.060	6023.09	4418.69	4226.00	-1307.24	1651158.08	14317296.42	39°25'36.0934"N	80°57'43.0631"W	4423.57	342.811	2.50	0.19	-2.49	
10817.00	90.550	333.520	6022.21	4513.10	4311.23	-1349.19	1651116.14	14317381.61	39°25'36.9359"N	80°57'43.5973"W	4517.41	342.623	0.57	0.03	-0.57	
10911.00	90.650	335.730	6021.22	4606.66	4396.15	-1389.47	1651075.88	14317466.50	39°25'37.7754"N	80°57'44.1102"W	4610.50	342.460	2.35	0.11	2.35	
11006.00	90.710	338.990	6020.09	4701.53	4483.81	-1426.03	1651039.33	14317554.12	39°25'38.6420"N	80°57'44.5756"W	4705.12	342.357	3.43	0.06	3.43	
11100.00	90.580	340.570	6019.04	4795.52	4572.01	-1458.52	1651006.86	14317642.29	39°25'39.5138"N	80°57'44.9892"W	4799.01	342.307	1.69	-0.14	1.68	
11195.00	90.150	339.730	6018.43	4890.52	4661.36	-1490.78	1650974.61	14317731.60	39°25'40.3971"N	80°57'45.3997"W	4893.94	342.265	0.99	-0.45	-0.88	
11289.00	89.940	338.700	6018.36	4984.50	4749.24	-1524.13	1650941.27	14317819.45	39°25'41.2658"N	80°57'45.8244"W	4987.81	342.207	1.12	-0.22	-1.10	
11384.00	90.250	340.250	6018.20	5079.49	4838.21	-1557.44	1650907.98	14317908.38	39°25'42.1452"N	80°57'46.2484"W	5082.70	342.156	1.66	0.33	1.63	
11478.00	90.280	340.850	6017.77	5173.49	4926.84	-1588.74	1650876.69	14317996.98	39°25'43.0214"N	80°57'46.6468"W	5176.67	342.127	0.64	0.03	0.64	
11572.00	90.150	342.030	6017.41	5267.46	5015.95	-1618.66	1650846.78	14318086.05	39°25'43.9022"N	80°57'47.0276"W	5270.66	342.115	1.26	-0.14	1.26	
11667.00	90.150	342.680	6017.16	5362.39	5106.48	-1647.45	1650818.00	14318176.54	39°25'44.7971"N	80°57'47.3941"W	5365.66	342.119	0.68	0.00	0.68	
11762.00	90.150	342.250	6016.92	5457.31	5197.07	-1676.08	1650789.39	14318267.09	39°25'45.6925"N	80°57'47.7584"W	5460.65	342.125	0.45	0.00	-0.45	
11856.00	90.180	340.480	6016.64	5551.28	5286.13	-1706.11	1650759.36	14318356.13	39°25'46.5729"N	80°57'48.1407"W	5554.64	342.112	1.88	0.03	-1.88	
11950.00	90.250	338.900	6016.29	5645.28	5374.29	-1738.74	1650726.75	14318444.24	39°25'47.4443"N	80°57'48.5560"W	5648.55	342.072	1.68	0.07	-1.68	
12045.00	90.340	337.570	6015.80	5740.22	5462.51	-1773.96	1650691.54	14318532.43	39°25'48.3164"N	80°57'49.0045"W	5743.34	342.009	1.40	0.09	-1.40	
12139.00	89.910	336.570	6015.60	5834.09	5549.08	-1810.59	1650654.93	14318618.97	39°25'49.1721"N	80°57'49.4707"W	5837.00	341.929	1.16	-0.46	-1.06	
12234.00	89.690	335.090	6015.93	5928.82	5635.75	-1849.48	1650616.05	14318705.60	39°25'50.0289"N	80°57'49.9660"W	5931.46	341.832	1.58	-0.23	-1.56	
12328.00	89.750	335.320	6016.39	6022.47	5721.08	-1888.90	1650576.65	14318790.90	39°25'50.8724"N	80°57'50.4679"W	6024.84	341.729	0.25	0.06	0.24	
12423.00	89.820	337.580	6016.74	6117.27	5808.17	-1926.86	1650538.71	14318877.95	39°25'51.7332"N	80°57'50.9512"W	6119.44	341.647	2.38	0.07	2.38	
12518.00	89.420	341.690	6017.38	6212.24	5897.21	-1959.91	1650505.67	14318966.95	39°25'52.6134"N	80°57'51.3719"W	6214.36	341.616	4.35	-0.42	4.33	
12613.00	89.450	344.250	6018.31	6307.11	5988.03	-1987.73	1650477.86	14319057.74	39°25'53.5112"N	80°57'51.7260"W	6309.32	341.636	2.69	0.03	2.69	
12708.00	89.420	345.890	6019.25	6401.75	6079.81	-2012.20	1650453.40	14319149.49	39°25'54.4184"N	80°57'52.0375"W	6404.15	341.687	1.73	-0.03	1.73	
12803.00	89.290	347.090	6020.32	6496.16	6172.18	-2034.39	1650431.21	14319241.81	39°25'55.3314"N	80°57'52.3198"W	6498.81	341.757	1.27	-0.14	1.26	
12897.00	89.480	347.050	6021.33	6589.46	6263.79	-2055.43	1650410.19	14319333.39	39°25'56.2369"N	80°57'52.5874"W	6592.41	341.833	0.21	0.20	-0.04	
12992.00	89.420	346.110	6022.24	6683.85	6356.19	-2077.47	1650388.15	14319425.75	39°25'57.1502"N	80°57'52.8679"W	6687.08	341.900	0.99	-0.06	-0.99	
13087.00	89.750	344.490	6022.93	6778.46	6448.07	-2101.58	1650364.06	14319517.60	39°25'58.0585"N	80°57'53.1747"W	6781.91	341.948	1.74	0.35	-1.71	
13181.00	89.720	341.650	6023.36	6872.32	6537.99	-2128.95	1650336.70	14319607.48	39°25'58.9472"N	80°57'53.5230"W	6875.88	341.963	3.02	-0.03	-3.02	
13276.00	89.660	339.710	6023.88	6967.31	6627.64	-2160.38	1650305.28	14319697.09	39°25'59.8334"N	80°57'53.9231"W	6970.85	341.946	2.04	-0.06	-2.04	
13371.00	89.600	338.960	6024.49	7062.30	6716.52	-2193.90	1650271.77	14319785.94	39°26'0.7120"N	80°57'54.3500"W	7065.75	341.911	0.79	-0.06	-0.79	

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# Actual Wellpath Report

Alpine East Unit 1H AWP Proj: 22146'  
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Alpine East Unit 1H
Field	Tyler		API	47-095-02596-0000
Facility	Sine Pad		Wellbore	Alpine East Unit 1H AWB
Slot	Slot #03			

WELLPATH DATA (244 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
13465.00	89.660	338.720	6025.10	7156.28	6804.18	-2227.83	1650237.85	14319873.56	39°26'1.5785"N	80°57'54.7820"W	7159.62	341.870	0.26	0.06	-0.26	
13560.00	89.910	339.140	6025.45	7251.25	6892.83	-2261.98	1650203.71	14319962.17	39°26'2.4548"N	80°57'55.2168"W	7254.49	341.832	0.51	0.26	0.44	
13654.00	89.690	338.620	6025.78	7345.23	6980.51	-2295.85	1650169.86	14320049.82	39°26'3.3215"N	80°57'55.6480"W	7348.37	341.794	0.60	-0.23	-0.55	
13749.00	89.720	337.910	6026.27	7440.18	7068.76	-2331.03	1650134.69	14320138.03	39°26'4.1938"N	80°57'56.0960"W	7443.19	341.749	0.75	0.03	-0.75	
13843.00	89.720	338.220	6026.73	7534.12	7155.95	-2366.15	1650099.59	14320225.19	39°26'5.0557"N	80°57'56.5430"W	7537.00	341.703	0.33	0.00	0.33	
13938.00	89.720	341.060	6027.19	7629.10	7245.01	-2399.20	1650066.56	14320314.21	39°26'5.9360"N	80°57'56.9638"W	7631.92	341.678	2.99	0.00	2.99	
14032.00	89.720	342.760	6027.65	7723.05	7334.36	-2428.38	1650037.38	14320403.52	39°26'6.8192"N	80°57'57.3354"W	7725.92	341.680	1.81	0.00	1.81	
14127.00	89.720	342.440	6028.12	7817.96	7425.01	-2456.79	1650008.99	14320494.14	39°26'7.7153"N	80°57'57.6970"W	7820.90	341.692	0.34	0.00	-0.34	
14221.00	89.750	342.380	6028.55	7911.89	7514.61	-2485.20	1649980.59	14320583.71	39°26'8.6010"N	80°57'58.0586"W	7914.90	341.700	0.07	0.03	-0.06	
14316.00	89.820	342.660	6028.91	8006.80	7605.22	-2513.73	1649952.07	14320674.28	39°26'9.4967"N	80°57'58.4219"W	8009.89	341.710	0.30	0.07	0.29	
14410.00	89.880	342.470	6029.16	8100.72	7694.90	-2541.90	1649923.91	14320763.93	39°26'10.3831"N	80°57'58.7804"W	8103.88	341.720	0.21	0.06	-0.20	
14505.00	89.910	341.740	6029.33	8195.66	7785.31	-2571.09	1649894.73	14320854.29	39°26'11.2767"N	80°57'59.1520"W	8198.87	341.724	0.77	0.03	-0.77	
14599.00	89.940	338.560	6029.45	8289.65	7873.71	-2603.00	1649862.83	14320942.66	39°26'12.1506"N	80°57'59.5583"W	8292.83	341.706	3.38	0.03	-3.38	
14693.00	89.880	335.130	6029.60	8383.48	7960.13	-2639.96	1649825.89	14321029.04	39°26'13.0048"N	80°58'0.0290"W	8386.48	341.652	3.65	-0.06	-3.65	
14788.00	90.030	334.820	6029.67	8478.10	8046.21	-2680.15	1649785.72	14321115.09	39°26'13.8557"N	80°58'0.5407"W	8480.84	341.577	0.36	0.16	-0.33	
14882.00	90.090	334.750	6029.58	8571.69	8131.25	-2720.19	1649745.69	14321200.10	39°26'14.6964"N	80°58'1.0507"W	8574.19	341.503	0.10	0.06	-0.07	
14976.00	89.780	337.480	6029.68	8665.45	8217.19	-2758.25	1649707.65	14321286.01	39°26'15.5459"N	80°58'1.5354"W	8667.77	341.445	2.92	-0.33	2.90	
15071.00	89.750	341.600	6030.07	8760.42	8306.18	-2791.45	1649674.46	14321374.96	39°26'16.4256"N	80°58'1.9581"W	8762.69	341.424	4.34	-0.03	4.34	
15165.00	89.750	343.620	6030.48	8854.33	8395.88	-2819.54	1649646.38	14321464.62	39°26'17.3122"N	80°58'2.3157"W	8856.67	341.437	2.15	0.00	2.15	
15260.00	89.660	345.370	6030.97	8949.05	8487.42	-2844.94	1649621.00	14321556.12	39°26'18.2170"N	80°58'2.6390"W	8951.53	341.469	1.84	-0.09	1.84	
15354.00	89.720	346.090	6031.48	9042.60	8578.51	-2868.11	1649597.84	14321647.18	39°26'19.1174"N	80°58'2.9339"W	9045.27	341.513	0.77	0.06	0.77	
15449.00	89.510	345.420	6032.12	9137.13	8670.59	-2891.48	1649574.47	14321739.22	39°26'20.0275"N	80°58'3.2314"W	9140.01	341.557	0.74	-0.22	-0.71	
15543.00	89.570	344.820	6032.87	9230.77	8761.43	-2915.62	1649550.34	14321830.03	39°26'20.9255"N	80°58'3.5386"W	9233.83	341.594	0.64	0.06	-0.64	
15638.00	89.660	343.100	6033.51	9325.55	8852.73	-2941.87	1649524.11	14321921.29	39°26'21.8279"N	80°58'3.8728"W	9328.74	341.618	1.81	0.09	-1.81	
15732.00	90.710	341.910	6033.21	9419.47	8942.38	-2970.12	1649495.86	14322010.90	39°26'22.7140"N	80°58'4.2325"W	9422.73	341.627	1.69	1.12	-1.27	
15827.00	90.580	341.070	6032.14	9514.43	9032.46	-3000.28	1649465.71	14322100.94	39°26'23.6044"N	80°58'4.6165"W	9517.72	341.625	0.89	-0.14	-0.88	
15921.00	89.600	338.450	6031.99	9608.42	9120.64	-3032.80	1649433.21	14322189.09	39°26'24.4761"N	80°58'5.0305"W	9611.66	341.607	2.98	-1.04	-2.79	
16016.00	89.820	335.690	6032.47	9703.28	9208.13	-3069.81	1649396.22	14322276.54	39°26'25.3409"N	80°58'5.5018"W	9706.35	341.563	2.91	0.23	-2.91	
16110.00	89.780	334.310	6032.80	9796.90	9293.32	-3109.53	1649356.51	14322361.70	39°26'26.1830"N	80°58'6.0078"W	9799.74	341.500	1.47	-0.04	-1.47	
16204.00	89.690	335.580	6033.24	9890.51	9378.47	-3149.34	1649316.72	14322446.82	39°26'27.0248"N	80°58'6.5148"W	9893.13	341.438	1.35	-0.10	1.35	

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# Actual Wellpath Report

Alpine East Unit 1H AWP Proj: 22146'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Alpine East Unit 1H
Field	Tyler	API	47-095-02596-0000
Facility	Sine Pad	Wellbore	Alpine East Unit 1H AWB
Slot	Slot #03		

WELLPATH DATA (244 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
16299.00	88.920	336.740	6034.39	9985.28	9465.36	-3187.73	1649278.34	14322533.67	39°26'27.8836"N	80°58'7.0038"W	9987.72	341.388	1.47	-0.81	1.22	
16393.00	88.950	339.110	6036.14	10079.19	9552.44	-3223.05	1649243.03	14322620.72	39°26'28.7445"N	80°58'7.4535"W	10081.53	341.355	2.52	0.03	2.52	
16487.00	88.920	339.840	6037.88	10173.16	9640.46	-3256.00	1649210.10	14322708.70	39°26'29.6145"N	80°58'7.8732"W	10175.46	341.338	0.78	-0.03	0.78	
16582.00	89.020	341.860	6039.59	10268.14	9730.18	-3287.16	1649178.95	14322798.39	39°26'30.5014"N	80°58'8.2699"W	10270.44	341.333	2.13	0.11	2.13	
16676.00	88.890	343.530	6041.30	10362.02	9819.91	-3315.12	1649151.01	14322888.08	39°26'31.3883"N	80°58'8.6258"W	10364.39	341.346	1.78	-0.14	1.78	
16771.00	88.250	342.210	6043.68	10456.88	9910.67	-3343.09	1649123.05	14322978.80	39°26'32.2854"N	80°58'8.9820"W	10459.33	341.360	1.54	-0.67	-1.39	
16865.00	88.210	341.540	6046.58	10550.79	9999.96	-3372.32	1649093.83	14323068.06	39°26'33.1680"N	80°58'9.3541"W	10553.28	341.364	0.71	-0.04	-0.71	
16960.00	89.820	339.310	6048.21	10645.77	10089.45	-3404.14	1649062.02	14323157.51	39°26'34.0525"N	80°58'9.7594"W	10648.24	341.356	2.89	1.69	-2.35	
17054.00	89.720	336.520	6048.59	10739.69	10176.54	-3439.48	1649026.70	14323244.57	39°26'34.9134"N	80°58'10.2094"W	10742.06	341.326	2.97	-0.11	-2.97	
17148.00	89.660	336.410	6049.10	10833.49	10262.72	-3477.01	1648989.18	14323330.71	39°26'35.7653"N	80°58'10.6875"W	10835.73	341.284	0.13	-0.06	-0.12	
17243.00	89.690	335.140	6049.64	10928.22	10349.35	-3515.99	1648950.21	14323417.31	39°26'36.6217"N	80°58'11.1839"W	10930.29	341.236	1.34	0.03	-1.34	
17338.00	90.060	336.400	6049.84	11022.94	10435.98	-3554.98	1648911.24	14323503.90	39°26'37.4780"N	80°58'11.6805"W	11024.86	341.189	1.38	0.39	1.33	
17432.00	89.970	337.680	6049.82	11116.80	10522.53	-3591.64	1648874.59	14323590.42	39°26'38.3335"N	80°58'12.1475"W	11118.61	341.154	1.37	-0.10	1.36	
17527.00	89.970	337.940	6049.87	11211.73	10610.49	-3627.52	1648838.72	14323678.35	39°26'39.2030"N	80°58'12.6045"W	11213.45	341.125	0.27	0.00	0.27	
17621.00	90.120	337.590	6049.80	11305.65	10697.50	-3663.09	1648803.17	14323765.32	39°26'40.0631"N	80°58'13.0575"W	11307.29	341.098	0.41	0.16	-0.37	
17716.00	90.120	338.910	6049.60	11400.59	10785.74	-3698.30	1648767.98	14323853.52	39°26'40.9353"N	80°58'13.5059"W	11402.17	341.074	1.39	0.00	1.39	
17810.00	90.250	340.420	6049.29	11494.59	10873.88	-3730.96	1648735.33	14323941.62	39°26'41.8065"N	80°58'13.9219"W	11496.14	341.062	1.61	0.14	1.61	
17904.00	90.150	342.390	6048.97	11588.56	10962.97	-3760.93	1648705.37	14324030.68	39°26'42.6871"N	80°58'14.3036"W	11590.14	341.065	2.10	-0.11	2.10	
17999.00	90.150	343.210	6048.72	11683.45	11053.72	-3789.02	1648677.29	14324121.39	39°26'43.5841"N	80°58'14.6613"W	11685.09	341.079	0.86	0.00	0.86	
18093.00	90.220	343.620	6048.41	11777.30	11143.81	-3815.86	1648650.47	14324211.44	39°26'44.4746"N	80°58'15.0029"W	11779.01	341.098	0.44	0.07	0.44	
18188.00	90.280	343.040	6048.00	11872.15	11234.81	-3843.11	1648623.23	14324302.41	39°26'45.3741"N	80°58'15.3499"W	11873.94	341.116	0.61	0.06	-0.61	
18282.00	90.340	343.180	6047.49	11966.02	11324.76	-3870.42	1648595.93	14324392.32	39°26'46.2632"N	80°58'15.6976"W	11967.88	341.131	0.16	0.06	0.15	
18376.00	89.970	342.870	6047.24	12059.90	11414.66	-3897.86	1648568.50	14324482.19	39°26'47.1518"N	80°58'16.0471"W	12061.83	341.146	0.51	-0.39	-0.33	
18471.00	90.370	343.240	6046.95	12154.77	11505.53	-3925.55	1648540.82	14324573.03	39°26'48.0501"N	80°58'16.3997"W	12156.78	341.161	0.57	0.42	0.39	
18565.00	90.490	344.290	6046.25	12248.58	11595.78	-3951.83	1648514.55	14324663.24	39°26'48.9421"N	80°58'16.7343"W	12250.68	341.181	1.12	0.13	1.12	
18660.00	90.370	343.350	6045.54	12343.38	11687.02	-3978.30	1648488.09	14324754.43	39°26'49.8439"N	80°58'17.0713"W	12345.57	341.201	1.00	-0.13	-0.99	
18755.00	90.430	342.330	6044.87	12438.26	11777.78	-4006.33	1648460.07	14324845.17	39°26'50.7411"N	80°58'17.4282"W	12440.53	341.214	1.08	0.06	-1.07	
18849.00	90.400	338.930	6044.19	12532.24	11866.45	-4037.50	1648428.91	14324933.79	39°26'51.6175"N	80°58'17.8252"W	12534.51	341.209	3.62	-0.03	-3.62	
18944.00	89.970	338.310	6043.88	12627.21	11954.91	-4072.13	1648394.30	14325022.22	39°26'52.4919"N	80°58'18.2663"W	12629.41	341.190	0.79	-0.45	-0.65	
19039.00	90.220	338.120	6043.73	12722.16	12043.12	-4107.39	1648359.05	14325110.40	39°26'53.3639"N	80°58'18.7154"W	12724.29	341.168	0.33	0.26	-0.20	

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# Actual Wellpath Report

Alpine East Unit 1H AWP Proj: 22146'  
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Alpine East Unit 1H
Field	Tyler		API	47-095-02596-0000
Facility	Sine Pad		Wellbore	Alpine East Unit 1H AWB
Slot	Slot #03			

WELLPATH DATA (244 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
19133.00	90.060	336.740	6043.50	12816.05	12129.92	-4143.46	1648322.99	14325197.16	39°26'54.2219"N	80°58'19.1750"W	12818.08	341.140	1.48	-0.17	-1.47	
19227.00	90.060	335.810	6043.40	12909.84	12215.98	-4181.28	1648285.19	14325283.18	39°26'55.0725"N	80°58'19.6567"W	12911.75	341.105	0.99	0.00	-0.99	
19322.00	90.060	337.150	6043.30	13004.65	12303.08	-4219.19	1648247.29	14325370.25	39°26'55.9335"N	80°58'20.1397"W	13006.44	341.071	1.41	0.00	1.41	
19417.00	90.030	338.100	6043.22	13099.55	12390.93	-4255.36	1648211.14	14325458.06	39°26'56.8018"N	80°58'20.6003"W	13101.27	341.046	1.00	-0.03	1.00	
19512.00	90.220	338.470	6043.02	13194.51	12479.19	-4290.51	1648176.01	14325546.29	39°26'57.6742"N	80°58'21.0480"W	13196.16	341.026	0.44	0.20	0.39	
19606.00	90.150	340.480	6042.71	13288.49	12567.21	-4323.46	1648143.06	14325634.28	39°26'58.5444"N	80°58'21.4678"W	13290.12	341.015	2.14	-0.07	2.14	
19701.00	90.250	342.900	6042.38	13383.45	12657.40	-4353.31	1648113.23	14325724.43	39°26'59.4358"N	80°58'21.8479"W	13385.10	341.020	2.55	0.11	2.55	
19796.00	90.060	342.880	6042.12	13478.34	12748.19	-4381.25	1648085.30	14325815.18	39°27'0.3332"N	80°58'22.2038"W	13480.05	341.033	0.20	-0.20	-0.02	
19891.00	90.120	341.260	6041.98	13573.28	12838.58	-4410.50	1648056.06	14325905.53	39°27'1.2266"N	80°58'22.5763"W	13575.03	341.041	1.71	0.06	-1.71	
19986.00	90.150	340.860	6041.75	13668.27	12928.43	-4441.33	1648025.24	14325995.35	39°27'2.1148"N	80°58'22.9690"W	13670.03	341.041	0.42	0.03	-0.42	
20081.00	90.120	340.530	6041.53	13763.26	13018.09	-4472.74	1647993.85	14326084.97	39°27'3.0010"N	80°58'23.3690"W	13765.03	341.038	0.35	-0.03	-0.35	
20175.00	90.250	339.410	6041.22	13857.26	13106.40	-4504.94	1647961.66	14326173.25	39°27'3.8739"N	80°58'23.7791"W	13859.01	341.031	1.20	0.14	-1.19	
20270.00	90.340	340.020	6040.74	13952.26	13195.51	-4537.87	1647928.74	14326262.32	39°27'4.7547"N	80°58'24.1986"W	13953.99	341.022	0.65	0.09	0.64	
20365.00	90.620	340.080	6039.94	14047.25	13284.80	-4570.28	1647896.34	14326351.58	39°27'5.6374"N	80°58'24.6115"W	14048.97	341.016	0.30	0.29	0.06	
20460.00	90.370	341.410	6039.12	14142.24	13374.48	-4601.61	1647865.03	14326441.23	39°27'6.5238"N	80°58'25.0105"W	14143.96	341.014	1.42	-0.26	1.40	
20554.00	90.890	345.050	6038.08	14236.08	13464.47	-4628.73	1647837.92	14326531.17	39°27'7.4132"N	80°58'25.3558"W	14237.87	341.028	3.91	0.55	3.87	
20649.00	90.310	343.460	6037.09	14330.83	13555.89	-4654.50	1647812.16	14326622.56	39°27'8.3169"N	80°58'25.6841"W	14332.71	341.050	1.78	-0.61	-1.67	
20744.00	90.430	342.170	6036.48	14425.72	13646.65	-4682.57	1647784.10	14326713.28	39°27'9.2139"N	80°58'26.0415"W	14427.66	341.061	1.36	0.13	-1.36	
20838.00	90.370	339.020	6035.82	14519.70	13735.29	-4713.80	1647752.89	14326801.89	39°27'10.0902"N	80°58'26.4393"W	14521.65	341.058	3.35	-0.06	-3.35	
20933.00	90.180	336.920	6035.36	14614.63	13823.35	-4749.43	1647717.27	14326889.91	39°27'10.9606"N	80°58'26.8932"W	14616.50	341.038	2.22	-0.20	-2.21	
21027.00	90.250	336.200	6035.01	14708.44	13909.59	-4786.82	1647679.89	14326976.12	39°27'11.8130"N	80°58'27.3696"W	14710.22	341.010	0.77	0.07	-0.77	
21121.00	90.370	336.770	6034.50	14802.25	13995.79	-4824.32	1647642.40	14327062.28	39°27'12.6650"N	80°58'27.8474"W	14803.92	340.981	0.62	0.13	0.61	
21216.00	90.680	338.880	6033.63	14897.17	14083.75	-4860.18	1647606.57	14327150.21	39°27'13.5345"N	80°58'28.3041"W	14898.77	340.961	2.24	0.33	2.22	
21310.00	90.460	340.150	6032.70	14991.15	14171.80	-4893.07	1647573.68	14327238.22	39°27'14.4048"N	80°58'28.7231"W	14992.73	340.952	1.37	-0.23	1.35	
21405.00	90.770	343.070	6031.68	15086.11	14261.93	-4923.04	1647543.73	14327328.32	39°27'15.2958"N	80°58'29.1048"W	15087.71	340.956	3.09	0.33	3.07	
21499.00	90.580	342.590	6030.57	15179.99	14351.74	-4950.78	1647515.99	14327418.09	39°27'16.1834"N	80°58'29.4583"W	15181.66	340.968	0.55	-0.20	-0.51	
21594.00	90.650	341.250	6029.55	15274.94	14442.04	-4980.27	1647486.53	14327508.35	39°27'17.0760"N	80°58'29.8338"W	15276.63	340.974	1.41	0.07	-1.41	
21688.00	90.620	339.530	6028.51	15368.93	14530.58	-5011.81	1647454.99	14327596.86	39°27'17.9511"N	80°58'30.2356"W	15370.62	340.970	1.83	-0.03	-1.83	
21782.00	90.680	338.320	6027.44	15462.90	14618.28	-5045.61	1647421.21	14327684.53	39°27'18.8181"N	80°58'30.6662"W	15464.55	340.958	1.29	0.06	-1.29	
21877.00	90.550	336.780	6026.42	15557.80	14706.08	-5081.88	1647384.95	14327772.28	39°27'19.6859"N	80°58'31.1283"W	15559.38	340.937	1.63	-0.14	-1.62	

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# Actual Wellpath Report

Alpine East Unit 1H AWP Proj: 22146'  
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REFERENCE WELLPATH IDENTIFICATION				
Operator	ANTERO RESOURCES CORPORATION		Well	Alpine East Unit 1H
Field	Tyler		API	47-095-02596-0000
Facility	Sine Pad		Wellbore	Alpine East Unit 1H AWB
Slot	Slot #03			

WELLPATH DATA (244 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
21971.00	90.950	336.590	6025.19	15651.62	14792.39	-5119.08	1647347.76	14327858.56	39°27'20.5391"N	80°58'31.6023"W	15653.11	340.911	0.47	0.43	-0.20	
22066.00	90.580	337.920	6023.92	15746.49	14880.00	-5155.81	1647311.05	14327946.13	39°27'21.4050"N	80°58'32.0702"W	15747.91	340.889	1.45	-0.39	1.40	
22121.00	90.550	338.820	6023.38	15801.46	14931.12	-5176.08	1647290.79	14327997.24	39°27'21.9103"N	80°58'32.3284"W	15802.85	340.880	1.64	-0.05	1.64	
22146.00‡	90.550	338.820	6023.14	15826.45	14954.43	-5185.11	1647281.76	14328020.54	39°27'22.1407"N	80°58'32.4435"W	15827.84	340.877	0.00	0.00	0.00	Projected MD at TD: 22146' MD

HOLE & CASING SECTIONS - Ref Wellbore: Alpine East Unit 1H AWB Ref Wellpath: Alpine East Unit 1H AWP Proj: 22146'									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	30.00	110.00	80.00	30.00	110.00	0.00	0.00	0.44	0.03
17.5in Open Hole	110.00	367.90	257.90	110.00	367.90	0.44	0.03	1.15	0.21
13.375in Casing Surface	30.00	367.90	337.90	30.00	367.90	0.00	0.00	1.15	0.21
12.25in Open Hole	367.90	2608.00	2240.10	367.90	2604.87	1.15	0.21	-51.36	-7.67
9.625in Casing Intermediate	30.00	2588.40	2558.40	30.00	2585.27	0.00	0.00	-51.28	-7.37
8.75in Open Hole	2608.00	5189.00	2581.00	2604.87	5151.71	-51.36	-7.67	-423.45	111.19
8.5in Open Hole	5189.00	22146.00	16957.00	5151.71	6023.14	-423.45	111.19	14954.43	-5185.11
5.5in Casing Production	30.00	22146.00	22116.00	30.00	6023.14	0.00	0.00	14954.43	-5185.11

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# Actual Wellpath Report

Alpine East Unit 1H AWP Proj: 22146'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Alpine East Unit 1H
Field	Tyler	API	47-095-02596-0000
Facility	Sine Pad	Wellbore	Alpine East Unit 1H AWB
Slot	Slot #03		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Alpine East Unit 1H - POE - Plat	6029.00	76.92	198.29	1652663.00	14313149.00	39°24'55.0793"N	80°57'23.9031"W	point
Alpine East Unit 1H - POE - Rev-1	6029.00	39.77	109.74	1652574.49	14313111.87	39°24'54.7126"N	80°57'25.0315"W	point
Alpine East Unit 1H - BHL - Plat	6065.00	14982.91	-5189.88	1647277.00	14328049.00	39°27'22.4222"N	80°58'32.5041"W	point
Alpine East Unit 1H - BHL - Rev-1	6065.00	15003.57	-5197.21	1647269.67	14328069.66	39°27'22.6264"N	80°58'32.5976"W	point
Alpine East Unit 1H - LP - Rev-1	6065.00	262.32	82.42	1652547.17	14313334.33	39°24'56.9123"N	80°57'25.3783"W	point

WELLPATH COMPOSITION - Ref Wellbore: Alpine East Unit 1H AWB Ref Wellpath: Alpine East Unit 1H AWP Proj: 22146'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
30.00	295.00	Gyrodatta 2015 - GC+WIR+DPIPE	01_Gyrodatta MS Gyro <17-1/2">(100'-295')	Alpine East Unit 1H AWB	4/24/2020
295.00	2536.00	BH NaviTrak (2019) (Axial)	02_APS EM <12-1/4">(295')(350'-2536')	Alpine East Unit 1H AWB	4/24/2020
2536.00	5118.00	BH NaviTrak (2019) (Axial)	03_APS EM <8-3/4">(2536')(2660'-5118')	Alpine East Unit 1H AWB	4/24/2020
5118.00	22146.00	BH AutoTrak Curve (2019) (Short spacing)	04_BH AT Curve <8-1/2">(5118')(5239'-22121')	Alpine East Unit 1H AWB	4/24/2020

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# Actual Wellpath Report

Alpine East Unit 1H AWP Proj: 22146'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Alpine East Unit 1H
Field	Tyler	API	47-095-02596-0000
Facility	Sine Pad	Wellbore	Alpine East Unit 1H AWB
Slot	Slot #03		

COMMENTS
<p><b>Wellpath general comments</b> API: 47-095-02596-0000 BHI Job #: 110392688B Rig: H&amp;P 519 Duration: 04/26/2020-06/10/2020 Gyrodata MS Gyro &lt;17-1/2"&gt;(100'-295') APS EM &lt;12-1/4"&gt;(295')(350'-2536') APS EM &lt;8-3/4"&gt;(2536')(2660'-5118') BH AT Curve &lt;8-1/2"&gt;(5118')(5239'-22121') Middlesex: 6037' MD Burkett: 6199' MD Marcellus POE: 6284' MD Projected MD at TD: 22146' MD</p>

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# ANTERO RESOURCES CORPORATION

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

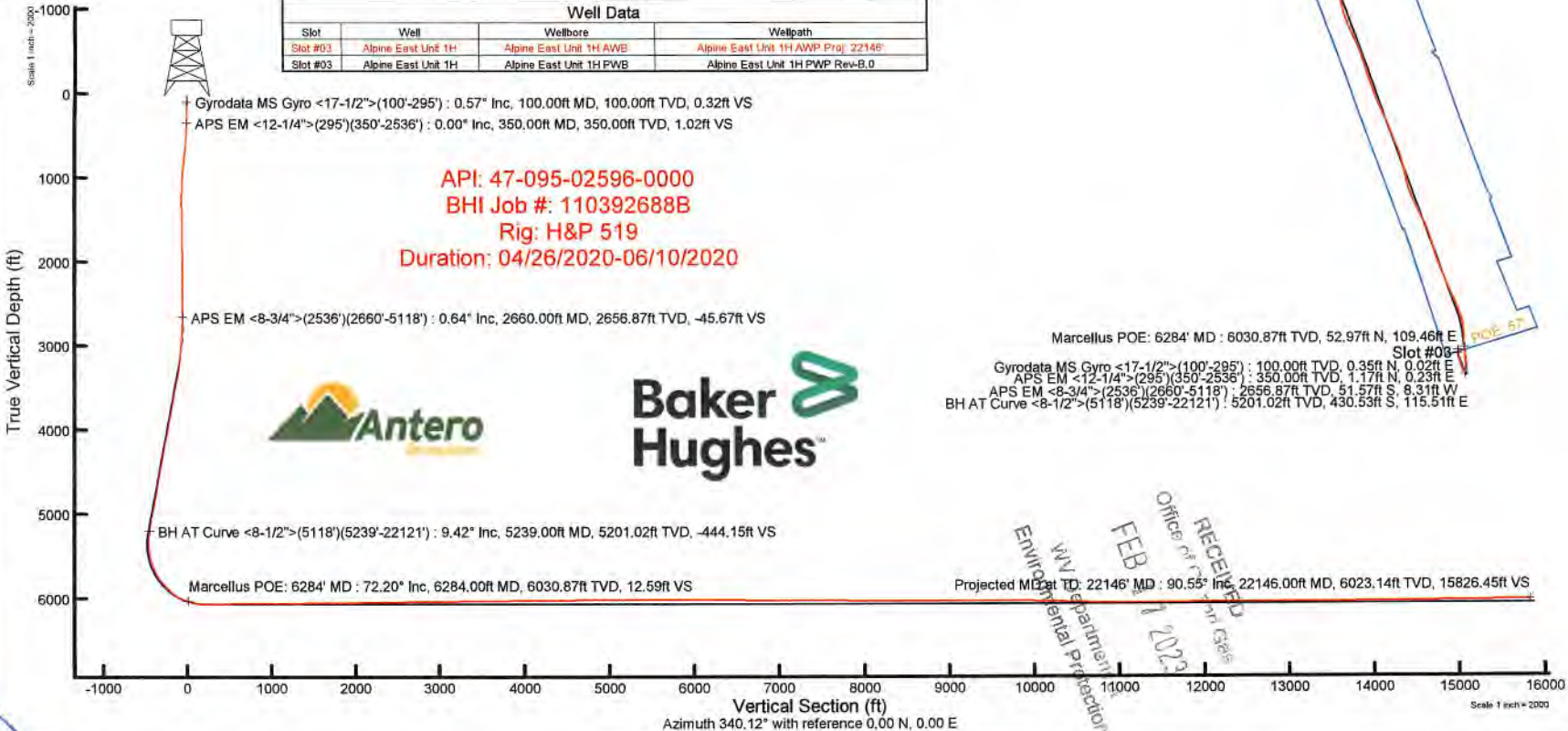
Slot: Slot #03  
 Well: Alpine East Unit 1H  
 Wellbore: Alpine East Unit 1H PWB

True vertical depths are referenced to H&P 519 (2002)	Grid System: IPAD27 / UTM Zone 17 North, US feet
Reference wellbore measured depths are referenced to H&P 519 (2002)	North Reference: Grid north
H&P 519 (2002) to Mean Sea Level: 829 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: Slot #03): -750 feet	Coordinates are in feet referenced to Slot
Offset wellbore MAs are referenced to each path's offset AFD datum	Depths are in feet
	Checked by: released on 2/20/2020 Database: WA_MF1_1/2020/US_Oth

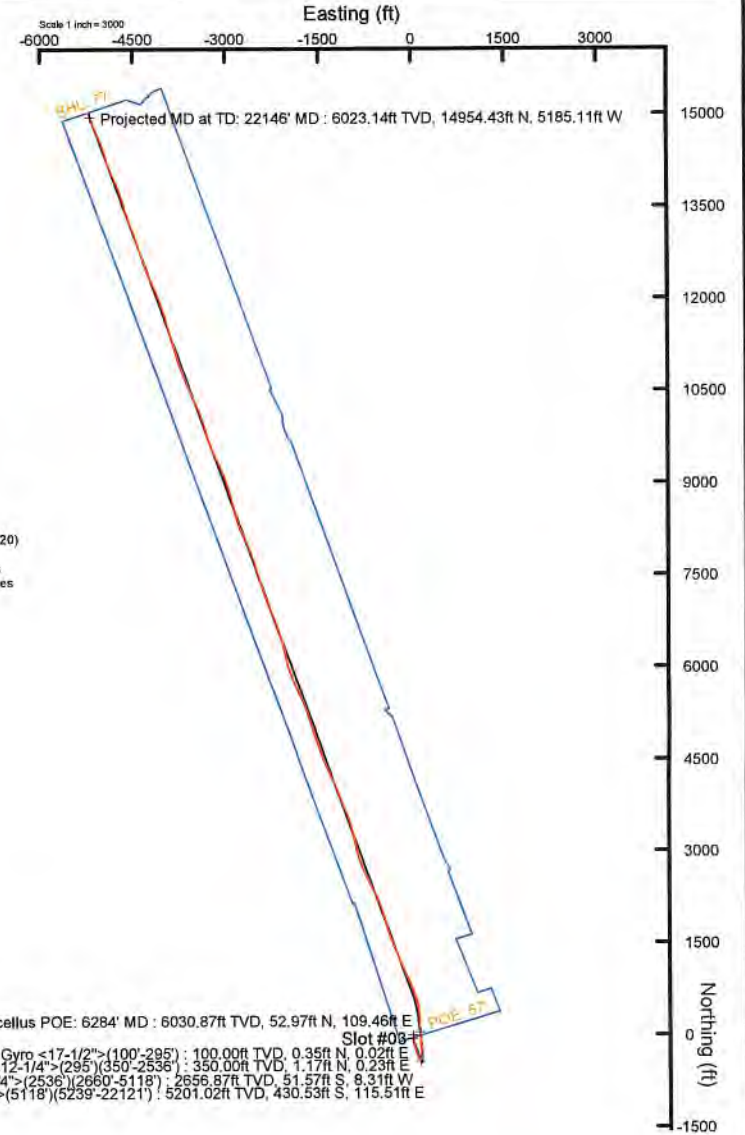
Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Sine Pad		1652653.868	14313061.090	39°24'54.2100"N	80°57'24.0200"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot #03	11.04	-189.15	1652464.790	14313072.115	39°24'54.3300"N
H&P 519 (RKB) to Ground level (At Slot: Slot #03)		30ft			
Mean Sea Level to Ground level (At Slot: Slot #03)		-750ft			
H&P 519 (RKB) to Mean Sea Level		829ft			

Well Profile Data								
Design Comment	MD (ft)	Inc. (")	Az. (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	2536.00	1.160	258.910	2532.88	-51.07	-6.43	0.58	-45.84
Proj. To Bottom	2606.00	1.160	258.910	2604.87	-51.35	-7.86	0.00	-45.62
Drill Out Csg / KOP 1	2706.00	1.160	258.910	2704.85	-51.74	-8.85	0.00	-45.31
Hold Tangent	3242.53	10.454	160.176	3239.43	-98.54	1.32	2.00	-93.11
Curve KOP	5262.17	10.454	160.176	5222.54	-443.25	125.59	0.00	-59.55
Avoid No-Gas	5761.87	30.000	0.000	5704.33	-357.47	141.62	8.00	-394.33
POE	6287.63	71.757	353.000	6029.00	39.77	109.74	8.00	0.09
Landing Pt.	6515.68	90.000	353.000	6065.00	262.32	82.42	8.00	218.68
On Azimuth	6945.04	90.000	340.119	6065.00	679.04	-17.17	3.00	844.41
BHL	22177.40	90.000	340.119	6065.00	15003.57	-5197.21	0.00	15876.78

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #03	Alpine East Unit 1H	Alpine East Unit 1H AWB	Alpine East Unit 1H AWP Proj: 22146'
Slot #03	Alpine East Unit 1H	Alpine East Unit 1H PWB	Alpine East Unit 1H PWP Rev-B.0



User specified (HDGM) Dip: 66.38° Field: 51642 nT  
 Magnetic North is 7.75 degrees West of True North (at 5/2/2020)  
 Grid North is 0.03 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.03 degrees  
 To correct azimuth from Magnetic to Grid subtract 7.78 degrees



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