



ANTERO RESOURCES CORPORATION

Location: Doddridge Co., WV
Field: Doddridge
Facility: Locke Pad

Slot: Slot J
Well: Osborne Unit 1H
Wellbore: Osborne Unit 1H PWB



Plot reference wellpath to Osborne Unit 1H PWB Rev-B.0	Grid System: NAD83 / UTM Zone 17 North, US Feet
True vertical depths are referenced to H&P 317 (2008)	North Reference: East zero
Reference azimuth measured depths are referenced to H&P 317 (2008)	Scale: True vertical
H&P 317 (2008) to Mean Sea Level: 7225.8 feet	Coordinates are in feet referenced to grid
Mean Sea Level to Second level (Slot J) - 7225.8 feet	Depth: as noted
Wellbore RGA are referenced to north polarity output MDI source	Created by: addison on 2/23/25 at 09:00:00 AM, 6/4/2025, 6/4/2025

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Locke Pad	1887522.330	14226577.530	39°10'38.800"N	80°50'1.589"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot J	234.11	220.07	1887742.310	14226811.550	39°10'41.000"N
Comment	Osborne Unit 1H				
H&P 317 (RKB) to Ground level (At Slot: Slot J)	29.5 ft				
Mean Sea Level to Ground level (At Slot: Slot J)	-1100 ft				
H&P 317 (RKB) to Mean Sea Level	1125.5 ft				

Well Data			
Slot	Well	Wellbore	Wellpath
Slot J	Osborne Unit 1H	Osborne Unit 1H AWP	Osborne Unit 1H AWP Proj. 20084
Slot J	Osborne Unit 1H	Osborne Unit 1H PWB	Osborne Unit 1H PWB Rev-B.0

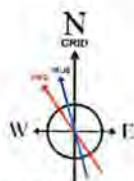
Gyrodatta MS Gyro <17-1/2"> (100'-400') : 0.26" Inc, 100.00ft MD, 100.00ft TVD, -0.16ft VS

Gyrodatta MS Gyro <12-1/4"> (400')(500'-538') : 0.41" Inc, 500.00ft MD, 499.99ft TVD, -0.94ft VS
APS EM <12-1/4"> (538')(570'-2874') : 0.33" Inc, 570.00ft MD, 569.99ft TVD, -0.93ft VS

Well Profile Data

Design Comment	MD (ft)	Inc (")	Az (")	TVD (ft)	Local N (ft)	Local E (ft)	DLS ("/100ft)	VS (ft)
Tie On	2674.00	0.570	293.670	2870.82	-73.11	17.62	0.08	-74.22
Proj. to Bottom	2949.00	0.570	293.670	2945.82	-72.82	16.84	0.00	-73.68
KOP 1	3029.00	0.570	293.670	3025.82	-72.50	16.21	0.00	-73.10
End of 3D Arc	4038.89	25.601	242.543	4001.90	-172.71	-185.28	2.50	-87.29
Curve KOP	6047.44	25.601	242.543	5813.31	-572.89	-955.42	0.00	-157.31
POE	7016.31	73.921	337.170	6491.00	-178.29	-1390.20	8.00	375.07
Landing Pt.	7222.30	90.400	337.170	6519.00	9.14	-1469.10	8.00	578.43
RHL	19979.47	90.400	337.170	6429.94	11766.67	-6419.64	0.00	13335.29

APS EM <8-3/4"> (2874')(2946'-5890') : 1.42" Inc, 2946.00ft MD, 2942.81ft TVD, -73.46ft VS



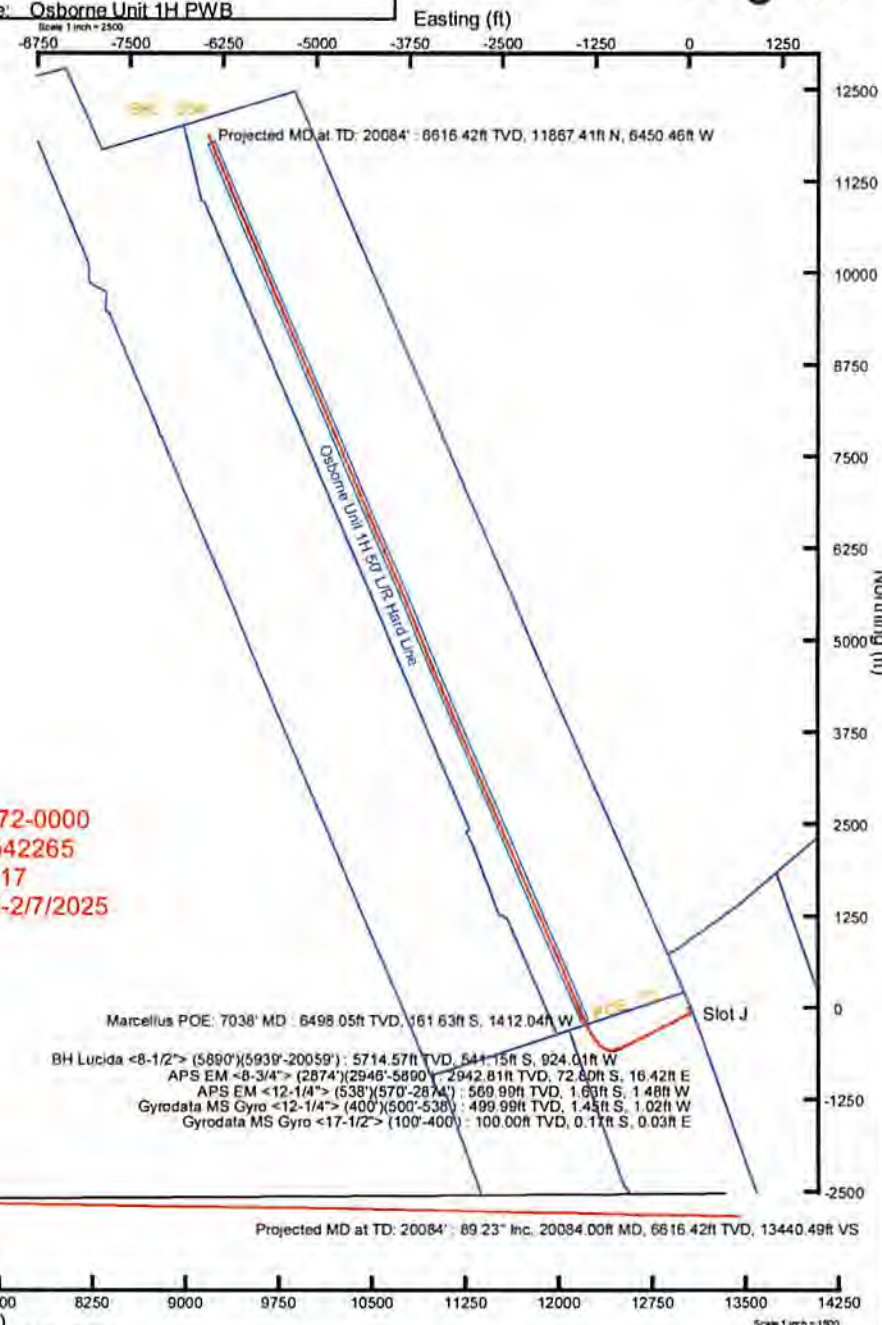
User specified (HOGM) Dip: 65.86° Field: 51156 nT
Magnetic North is 7.45 degrees West of True North (at 12/31/2024)
Grid North is 0.11 degrees East of True North
To correct azimuth from True to Grid subtract 0.11 degrees
To correct azimuth from Magnetic to Grid subtract 7.56 degrees

BH Lucida <8-1/2"> (5890')(5939'-20059') : 24.06" Inc, 5939.00ft MD, 5714.57ft TVD, -140.24ft VS

Marcellus POE: 7038' MD : 76.40" Inc, 7038.00ft MD, 6498.05ft TVD, 398.90ft VS

API: 47-017-06972-0000
BH Job #: 112542265
Rig: H&P 317
Duration: 2/3/2025-2/7/2025

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Actual Wellpath Report

Osborne Unit 1H AWP Proj: 20084'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Osborne Unit 1H
Field	Doddridge	API	47-017-06972-0000
Facility	Locke Pad	Wellbore	Osborne Unit 1H AWB
Slot	Slot J		

REPORT SETUP INFORMATION

Projection System	NAD27 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Edsaryar
Scale	0.999603	Report Generated	2/18/2025 at 2:29:49 AM
Convergence at slot	0.11° 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	234.11	220.07	1687742.31	14226811.55	39°10'41.0000"N	80°49'58.8000"W
Facility Reference Pt			1687522.33	14226577.53	39°10'38.6900"N	80°50'1.5999"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 317 (RKB) to Facility Vertical Datum	1125.50ft
Horizontal Reference Pt	Slot	H&P 317 (RKB) to Mean Sea Level	1125.50ft
Vertical Reference Pt	H&P 317 (RKB)	H&P 317 (RKB) to Ground Level at Slot (Slot J)	25.50ft
MD Reference Pt	H&P 317 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	337.17°

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WELLPATH DATA (217 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	170.670	0.00	0.00	0.00	0.00	1687742.31	14226811.55	39°10'41.0000"N	80°49'58.8000"W	0.00	0.000	0.00	0.00	0.00	
25.50	0.000	170.670	25.50	0.00	0.00	0.00	1687742.31	14226811.55	39°10'41.0000"N	80°49'58.8000"W	0.00	0.000	0.00	0.00	0.00	
100.00	0.260	170.670	100.00	-0.16	-0.17	0.03	1687742.34	14226811.38	39°10'40.9983"N	80°49'58.7996"W	0.17	170.670	0.35	0.35	0.00	Gyrodata MS Gyro <17-1/2"> (100'-400')
200.00	0.280	173.650	200.00	-0.62	-0.63	0.09	1687742.40	14226810.92	39°10'40.9937"N	80°49'58.7988"W	0.64	171.807	0.02	0.02	2.98	
300.00	0.250	234.680	300.00	-0.90	-1.00	-0.06	1687742.25	14226810.55	39°10'40.9901"N	80°49'58.8008"W	1.00	183.412	0.27	-0.03	81.03	
400.00	0.280	250.100	400.00	-0.94	-1.21	-0.47	1687741.84	14226810.34	39°10'40.9880"N	80°49'58.8060"W	1.30	201.097	0.08	0.03	15.42	
500.00	0.410	245.140	499.99	-0.94	-1.45	-1.02	1687741.29	14226810.11	39°10'40.9857"N	80°49'58.8130"W	1.77	215.261	0.13	0.13	-4.98	Gyrodata MS Gyro <12-1/4"> (400')(500'-538')
538.00	0.430	248.470	537.99	-0.94	-1.55	-1.28	1687741.03	14226810.00	39°10'40.9846"N	80°49'58.8163"W	2.01	219.416	0.08	0.05	8.76	
570.00	0.330	251.110	569.99	-0.93	-1.63	-1.48	1687740.83	14226809.92	39°10'40.9839"N	80°49'58.8188"W	2.20	222.199	0.32	-0.31	8.25	APS EM <12-1/4"> (538')(570'-2874')
660.00	1.130	103.240	659.99	-1.71	-2.60	-1.77	1687740.54	14226808.95	39°10'40.9743"N	80°49'58.8226"W	3.15	214.292	1.17	0.89	-75.41	
750.00	3.800	166.600	749.90	-5.45	-6.39	-1.13	1687741.18	14226805.17	39°10'40.9369"N	80°49'58.8145"W	6.49	190.043	3.04	2.97	-18.49	
842.00	5.440	185.020	841.59	-12.78	-13.57	0.70	1687743.01	14226797.99	39°10'40.8659"N	80°49'58.7914"W	13.58	177.034	1.79	1.78	-1.72	
932.00	5.630	162.750	931.17	-21.40	-21.90	3.11	1687745.42	14226789.66	39°10'40.7834"N	80°49'58.7610"W	22.12	171.907	0.32	0.21	-2.52	
1022.00	5.550	163.330	1020.75	-30.12	-30.29	5.67	1687747.98	14226781.27	39°10'40.7005"N	80°49'58.7287"W	30.81	189.393	0.11	-0.09	0.64	
1117.00	5.590	162.680	1115.30	-39.29	-39.11	8.37	1687750.67	14226772.46	39°10'40.6133"N	80°49'58.6947"W	39.99	187.923	0.08	0.04	-0.68	
1212.00	5.280	162.820	1209.87	-48.24	-47.70	11.04	1687753.34	14226763.87	39°10'40.5283"N	80°49'58.6610"W	48.96	166.973	0.33	-0.33	0.15	
1306.00	5.260	162.500	1303.47	-56.84	-55.94	13.61	1687755.91	14226755.63	39°10'40.4468"N	80°49'58.6285"W	57.57	166.327	0.04	-0.02	-0.34	
1401.00	4.050	161.950	1398.16	-64.52	-63.28	15.96	1687758.26	14226748.29	39°10'40.3742"N	80°49'58.5988"W	65.26	165.847	1.27	-1.27	-0.58	
1496.00	2.330	154.420	1493.01	-69.79	-68.22	17.83	1687760.13	14226743.36	39°10'40.3254"N	80°49'58.5752"W	70.51	165.351	1.86	-1.81	-7.93	
1590.00	1.300	136.770	1586.96	-72.70	-70.72	19.39	1687761.69	14226740.66	39°10'40.3007"N	80°49'58.5555"W	73.33	164.669	1.23	-1.10	-18.78	
1685.00	1.180	135.690	1681.94	-74.62	-72.20	20.81	1687763.11	14226739.38	39°10'40.2860"N	80°49'58.5374"W	75.14	163.923	0.13	-0.13	-1.14	
1780.00	1.080	145.480	1776.92	-76.41	-73.64	22.00	1687764.30	14226737.94	39°10'40.2717"N	80°49'58.5224"W	76.85	163.367	0.23	-0.11	10.31	
1874.00	0.930	136.370	1870.90	-77.99	-74.92	23.03	1687765.33	14226736.66	39°10'40.2590"N	80°49'58.5093"W	78.38	162.915	0.23	-0.16	-9.69	
1969.00	0.930	141.420	1965.89	-79.45	-76.08	24.04	1687766.34	14226735.50	39°10'40.2475"N	80°49'58.4965"W	79.79	162.464	0.09	0.00	5.32	
2064.00	0.810	143.190	2060.88	-80.84	-77.22	24.92	1687767.22	14226734.36	39°10'40.2363"N	80°49'58.4853"W	81.14	162.112	0.13	-0.13	1.86	
2158.00	0.400	295.430	2154.88	-81.24	-77.61	25.03	1687767.33	14226733.97	39°10'40.2324"N	80°49'58.4840"W	81.54	162.126	1.26	-0.44	163.02	
2253.00	0.870	318.220	2249.87	-80.31	-76.92	24.25	1687766.55	14226734.66	39°10'40.2392"N	80°49'58.4939"W	80.65	162.502	0.55	0.49	22.94	
2347.00	0.750	295.970	2343.86	-79.17	-76.12	23.22	1687765.52	14226735.46	39°10'40.2472"N	80°49'58.5069"W	79.58	163.035	0.36	-0.13	-23.87	
2442.00	0.840	301.350	2438.85	-76.14	-75.49	22.07	1687764.37	14226736.09	39°10'40.2535"N	80°49'58.5215"W	78.65	163.704	0.12	0.09	5.66	
2536.00	0.600	302.250	2532.84	-77.04	-74.78	20.92	1687763.23	14226736.80	39°10'40.2605"N	80°49'58.5360"W	77.65	164.367	0.04	-0.04	0.96	

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Actual Wellpath Report

Osborne Unit 1H AWP Proj: 20084'
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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Osborne Unit 1H
Field	Doddridge	API	47-017-06972-0000
Facility	Locke Pad	Wellbore	Osborne Unit 1H AWP
Slot	Slot J		

WELLPATH DATA (217 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
2631.00	0.650	297.740	2627.84	-76.08	-74.17	19.89	1687762.19	14226737.41	39°10'40.2665"N	80°49'58.5492"W	76.79	164.991	0.17	-0.16	-4.75	
2725.00	0.560	297.680	2721.83	-75.31	-73.71	19.01	1687761.31	14226737.87	39°10'40.2711"N	80°49'58.5603"W	76.12	165.540	0.10	-0.10	-0.06	
2820.00	0.600	290.510	2816.83	-74.61	-73.32	18.13	1687760.43	14226738.26	39°10'40.2749"N	80°49'58.5715"W	75.53	166.110	0.09	0.04	-7.55	
2874.00	0.570	293.670	2870.82	-74.22	-73.11	17.62	1687759.92	14226738.46	39°10'40.2770"N	80°49'58.5780"W	75.21	166.450	0.08	-0.06	5.85	
2948.00	1.420	281.210	2942.81	-73.46	-72.80	16.42	1687758.72	14226738.78	39°10'40.2801"N	80°49'58.5932"W	74.63	167.291	1.21	1.18	-17.31	APS EM <8-3/4"> (2874/2948-5890)
3041.00	2.160	245.930	3037.77	-72.84	-73.30	13.63	1687755.93	14226738.28	39°10'40.2752"N	80°49'58.6287"W	74.55	169.468	1.36	0.78	-37.14	
3135.00	5.110	234.710	3131.57	-73.79	-76.44	8.59	1687750.90	14226735.14	39°10'40.2443"N	80°49'58.6927"W	76.92	173.587	3.21	3.14	-11.94	
3230.00	7.700	238.560	3225.97	-76.65	-82.21	-0.29	1687742.02	14226729.38	39°10'40.1875"N	80°49'58.8056"W	82.21	180.204	2.76	2.73	4.08	
3325.00	7.650	241.000	3320.12	-77.28	-88.59	-11.25	1687731.06	14226722.99	39°10'40.1246"N	80°49'58.9450"W	89.30	187.239	0.35	-0.05	2.57	
3419.00	9.110	236.330	3413.11	-79.36	-95.75	-22.92	1687719.40	14226715.84	39°10'40.0540"N	80°49'59.0933"W	98.45	193.461	1.71	1.58	-4.97	
3515.00	11.620	241.040	3507.54	-81.82	-104.65	-37.71	1687704.62	14226706.95	39°10'39.9663"N	80°49'59.2812"W	111.23	199.815	2.76	2.61	4.91	
3610.00	14.970	243.420	3599.96	-83.64	-114.77	-57.06	1687685.28	14226696.82	39°10'39.8666"N	80°49'59.5272"W	128.17	206.433	3.57	3.53	2.51	
3705.00	16.680	242.680	3691.38	-85.51	-126.52	-80.14	1687662.20	14226685.08	39°10'39.7509"N	80°49'59.8206"W	149.77	212.352	1.81	1.80	-0.76	
3800.00	17.290	244.110	3782.23	-87.33	-138.94	-104.96	1687637.39	14226672.66	39°10'39.6286"N	80°50'0.1360"W	174.13	217.088	0.78	0.64	1.51	
3895.00	18.780	242.880	3872.57	-89.29	-152.13	-131.24	1687611.12	14226659.48	39°10'39.4987"N	80°50'0.4701"W	200.92	220.784	1.64	1.57	-1.53	
3990.00	21.050	245.110	3961.88	-91.11	-166.34	-160.31	1687582.07	14226645.28	39°10'39.3588"N	80°50'0.8395"W	231.01	223.943	2.55	2.39	2.58	
4085.00	23.850	243.960	4049.74	-92.79	-181.88	-192.91	1687549.48	14226629.74	39°10'39.2057"N	80°50'1.2539"W	265.13	226.685	2.78	2.74	-1.21	
4180.00	26.470	244.760	4135.78	-94.74	-199.28	-229.19	1687513.21	14226612.35	39°10'39.0345"N	80°50'1.7149"W	303.71	228.993	2.99	2.97	0.84	
4275.00	25.970	242.460	4221.01	-97.34	-217.93	-266.78	1687475.63	14226593.71	39°10'38.8508"N	80°50'2.1928"W	344.48	230.756	1.19	-0.53	-2.42	
4369.00	24.540	239.010	4306.03	-101.80	-237.50	-301.77	1687440.66	14226574.15	39°10'38.6581"N	80°50'2.6375"W	384.02	231.797	2.18	-1.52	-3.67	
4464.00	24.430	241.060	4392.49	-106.70	-257.16	-335.88	1687406.57	14226554.49	39°10'38.4643"N	80°50'3.0710"W	423.02	232.561	0.90	-0.12	2.16	
4559.00	25.210	241.500	4478.71	-110.79	-276.32	-370.85	1687371.61	14226535.34	39°10'38.2756"N	80°50'3.5156"W	462.47	233.310	0.84	0.82	0.46	
4653.00	26.680	246.910	4563.26	-112.86	-294.15	-407.85	1687334.62	14226517.52	39°10'38.1000"N	80°50'3.9858"W	502.85	234.200	2.95	1.54	5.76	
4748.00	27.690	246.110	4647.77	-113.36	-311.44	-447.64	1687294.85	14226500.23	39°10'37.9298"N	80°50'4.4915"W	545.32	235.172	1.15	1.08	-0.84	
4843.00	26.810	244.430	4732.22	-114.80	-329.63	-487.15	1687255.36	14226482.05	39°10'37.7507"N	80°50'4.9936"W	588.19	235.915	1.23	-0.93	-1.77	
4937.00	26.920	242.490	4816.08	-117.55	-348.61	-525.14	1687217.38	14226463.08	39°10'37.5638"N	80°50'5.4765"W	630.32	236.422	0.94	0.12	-2.06	
5035.00	27.870	244.400	4903.09	-120.46	-368.76	-565.48	1687177.06	14226442.94	39°10'37.3655"N	80°50'5.9891"W	675.09	236.891	1.32	0.97	1.95	
5130.00	26.920	242.880	4987.44	-123.15	-388.15	-604.64	1687137.91	14226423.55	39°10'37.1744"N	80°50'6.4869"W	718.51	237.301	1.24	-1.00	-1.60	
5225.00	27.560	242.940	5071.90	-126.38	-407.96	-643.36	1687099.21	14226403.76	39°10'36.9794"N	80°50'6.9790"W	761.80	237.621	0.67	0.67	0.06	
5320.00	27.480	244.730	5158.15	-128.93	-427.31	-682.76	1687059.83	14226384.41	39°10'36.7888"N	80°50'7.4797"W	805.45	237.959	0.87	-0.07	1.88	

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Facility	Locke Pad	Wellbore	Osborne Unit 1H AWP
Slot	Slot J		

WELLPATH DATA (217 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 [ft/100ft]	Build Rate [ft/100ft]	Turn Rate [ft/100ft]	Comments
5415.00	26.300	243.370	5240.87	-131.26	-446.11	-721.40	1687021.20	14226365.62	39°10'36.6037"N	80°50'7.9708"W	848.19	238.268	1.41	-1.25	-1.43	
5510.00	25.400	244.860	5326.37	-133.47	-464.20	-758.68	1686983.96	14226347.54	39°10'36.4256"N	80°50'8.4444"W	889.40	238.539	1.17	-0.95	-1.57	
5605.00	26.030	243.480	5411.96	-135.64	-482.16	-795.75	1686946.87	14226329.58	39°10'36.2487"N	80°50'8.9158"W	930.43	238.788	0.91	0.86	-1.45	
5700.00	26.080	241.950	5497.31	-138.88	-501.29	-832.84	1686909.81	14226310.46	39°10'36.0603"N	80°50'9.3871"W	972.05	238.996	0.71	0.05	-1.61	
5795.00	24.530	247.090	5583.20	-140.81	-518.79	-869.44	1686873.22	14226292.97	39°10'35.8880"N	80°50'9.8523"W	1012.45	239.176	2.83	-1.63	-5.41	
5890.00	23.990	248.480	5669.61	-140.39	-533.55	-905.57	1686837.10	14226278.21	39°10'35.7427"N	80°50'10.3115"W	1051.06	239.494	0.83	-0.57	-1.48	
5939.00	24.060	246.740	5714.57	-140.24	-541.15	-924.01	1686818.67	14226270.62	39°10'35.6680"N	80°50'10.5458"W	1070.81	239.645	1.45	0.14	-3.55	BH Lucida <8-1/2"> (5890') (5939'-20069')
6002.00	24.640	248.740	5771.96	-139.98	-550.98	-948.05	1686794.64	14226260.79	39°10'35.5712"N	80°50'10.8513"W	1096.53	239.836	1.60	0.92	3.17	
6097.00	25.150	253.000	5858.14	-137.38	-564.07	-985.81	1686756.69	14226247.71	39°10'35.4426"N	80°50'11.3311"W	1135.78	240.223	1.96	0.54	4.48	
6192.00	25.200	263.520	5944.16	-129.63	-572.25	-1025.23	1686717.48	14226230.52	39°10'35.3623"N	80°50'11.8319"W	1174.13	240.831	4.71	0.05	-11.07	
6287.00	26.240	278.430	6029.10	-112.25	-571.24	-1067.62	1686675.12	14226240.54	39°10'35.3731"N	80°50'12.3701"W	1210.84	241.851	7.72	3.20	15.69	
6381.00	31.560	292.340	6110.68	-83.23	-558.61	-1112.44	1686630.32	14226253.16	39°10'35.4987"N	80°50'12.9389"W	1244.02	243.336	8.16	3.53	14.80	
6399.00†	32.304	295.106	6125.96	-76.31	-554.78	-1121.15	1686621.61	14226256.99	39°10'35.5367"N	80°50'13.0494"W	1250.90	243.672	9.12	4.13	15.37	Sycamore: 6399' MD
6476.00	36.090	305.650	6189.69	-41.66	-632.80	-1158.26	1686584.51	14226278.96	39°10'35.7546"N	80°50'13.5201"W	1274.83	245.297	9.12	4.92	13.89	
6571.00	40.660	314.920	6264.21	10.91	-494.59	-1202.97	1686539.82	14226317.16	39°10'36.1331"N	80°50'14.0670"W	1300.88	247.650	7.73	4.81	9.76	
6635.00†	45.701	319.645	6310.87	52.11	-462.33	-1232.53	1686510.27	14226349.40	39°10'36.4524"N	80°50'14.4616"W	1316.39	249.438	9.47	7.88	7.69	Middlesex: 6635' MD
6666.00	48.210	321.930	6332.03	73.85	-444.75	-1246.81	1686495.99	14226366.97	39°10'36.6265"N	80°50'14.6426"W	1323.78	250.368	9.47	8.08	6.73	
6760.00	55.750	326.660	6389.91	145.99	-384.60	-1289.85	1686452.97	14226427.10	39°10'37.2218"N	80°50'15.1877"W	1345.07	253.397	8.94	8.02	5.03	
6828.00†	61.645	329.413	6425.23	203.33	-335.31	-1320.55	1686422.28	14226476.37	39°10'37.7094"N	80°50'15.5785"W	1362.46	255.753	9.33	8.87	4.05	Burkett: 6828' MD
6855.00	64.000	330.420	6437.56	227.15	-314.53	-1332.59	1686410.25	14226497.14	39°10'37.9151"N	80°50'15.7288"W	1369.21	256.720	9.33	8.72	3.73	
6943.00†	70.816	333.144	6471.35	307.99	-242.97	-1370.94	1686371.92	14226568.68	39°10'38.6231"N	80°50'16.2141"W	1392.30	259.950	8.25	7.75	3.10	Tully: 6943' MD
6950.00	71.360	333.350	6473.62	314.59	-237.06	-1373.92	1686368.94	14226574.59	39°10'38.6816"N	80°50'16.2519"W	1394.22	260.211	8.25	7.77	2.94	
7038.00†	76.397	333.022	6498.05	398.90	-161.63	-1412.04	1686330.83	14226649.98	39°10'39.4277"N	80°50'16.7343"W	1421.26	263.470	5.73	5.72	-0.37	Marcellus POE: 7038' MD
7044.00	76.740	333.000	6499.44	404.72	-156.43	-1414.69	1686328.18	14226655.18	39°10'39.4792"N	80°50'16.7678"W	1423.32	263.690	5.73	5.72	-0.36	
7139.00	83.060	338.590	6516.11	498.14	-71.19	-1452.96	1686289.93	14226740.39	39°10'40.3224"N	80°50'17.2518"W	1454.71	267.155	8.82	6.65	5.86	
7234.00	87.510	338.760	6523.92	592.76	16.99	-1497.38	1686255.52	14226828.53	39°10'41.1945"N	80°50'17.6889"W	1487.48	270.654	4.69	4.68	0.18	
7329.00	90.280	339.090	6525.75	687.69	105.61	-1521.54	1686221.38	14226917.12	39°10'42.0710"N	80°50'18.1186"W	1525.20	273.970	2.94	2.92	0.35	
7423.00	90.400	339.110	6525.19	781.63	193.42	-1555.07	1686187.86	14227004.89	39°10'42.9396"N	80°50'18.5424"W	1567.05	277.090	0.13	0.13	0.02	
7518.00	90.280	339.240	6524.63	876.57	282.21	-1588.84	1686154.10	14227093.65	39°10'43.8178"N	80°50'18.9693"W	1613.71	280.072	0.19	-0.13	0.14	
7613.00	91.450	340.450	6523.19	971.45	371.38	-1621.57	1686121.39	14227182.78	39°10'44.6997"N	80°50'19.3820"W	1663.55	282.900	1.77	-1.23	1.27	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Osborne Unit 1H
Field	Doddridge	API	47-017-05972-0000
Facility	Locke Pad	Wellbore	Osborne Unit 1H AWB
Slot	Slot J		

WELLPATH DATA (217 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
7707.00	90.710	339.410	8521.42	1065.33	459.66	-1653.82	1686089.15	14227271.02	39°10'45.5727"N	80°50'19.7904"W	1716.51	285.533	1.36	-0.79	-1.11	
7802.00	90.620	336.800	8520.32	1160.30	547.79	-1689.24	1686053.74	14227359.12	39°10'46.4445"N	80°50'20.2382"W	1775.84	287.967	2.75	-0.09	-2.75	
7897.00	90.620	337.010	8519.29	1255.29	635.17	-1726.50	1686016.50	14227446.47	39°10'47.3088"N	80°50'20.7094"W	1839.54	290.198	0.22	0.00	0.22	
7992.00	90.430	336.570	8518.42	1350.29	722.48	-1763.94	1685979.07	14227533.74	39°10'48.1724"N	80°50'21.1829"W	1906.17	292.273	0.50	-0.20	-0.46	
8086.00	90.430	336.530	8517.71	1444.28	808.71	-1801.35	1685941.68	14227619.94	39°10'49.0254"N	80°50'21.6560"W	1974.56	294.178	0.04	0.00	-0.04	
8181.00	90.920	336.630	8516.59	1539.27	895.88	-1839.11	1685903.94	14227707.07	39°10'49.8876"N	80°50'22.1335"W	2045.71	295.972	0.53	0.52	0.11	
8276.00	90.310	336.790	8515.57	1634.26	983.13	-1876.66	1685866.40	14227794.29	39°10'50.7506"N	80°50'22.6085"W	2118.59	297.649	0.66	-0.64	0.17	
8370.00	91.080	339.750	8514.43	1728.22	1070.44	-1911.46	1685831.61	14227881.56	39°10'51.6141"N	80°50'23.0484"W	2190.78	299.249	3.25	0.82	3.15	
8465.00	90.490	336.870	8513.13	1823.18	1158.69	-1946.56	1685796.52	14227969.78	39°10'52.4871"N	80°50'23.4922"W	2265.32	300.763	3.09	-0.62	-3.03	
8560.00	90.370	336.660	8512.42	1918.18	1245.99	-1984.04	1685759.06	14228057.04	39°10'53.3505"N	80°50'23.9661"W	2342.84	302.129	0.25	-0.13	-0.22	
8654.00	90.740	336.760	8511.51	2012.17	1332.32	-2021.20	1685721.91	14228143.34	39°10'54.2045"N	80°50'24.4361"W	2420.82	303.392	0.41	0.39	0.11	
8749.00	90.620	336.730	8510.38	2107.16	1419.60	-2058.71	1685684.42	14228230.58	39°10'55.0678"N	80°50'24.9105"W	2500.71	304.588	0.13	-0.13	-0.03	
8844.00	90.550	336.750	8509.41	2202.15	1506.87	-2096.22	1685646.92	14228317.82	39°10'55.9310"N	80°50'25.3849"W	2581.63	305.710	0.08	-0.07	0.02	
8939.00	90.400	336.900	8508.62	2297.15	1594.20	-2133.61	1685609.55	14228405.12	39°10'56.7949"N	80°50'25.8577"W	2663.41	306.767	0.22	-0.16	0.16	
9033.00	90.460	337.120	8507.92	2391.16	1680.73	-2170.32	1685572.66	14228491.61	39°10'57.6508"N	80°50'26.3220"W	2745.03	307.755	0.24	0.06	0.23	
9128.00	91.350	337.280	8506.42	2486.13	1768.30	-2207.13	1685536.06	14228579.14	39°10'58.5169"N	80°50'26.7875"W	2828.13	308.701	0.95	0.94	0.17	
9223.00	90.090	335.680	8505.22	2581.11	1855.39	-2245.04	1685498.17	14228666.20	39°10'59.3784"N	80°50'27.2669"W	2912.50	309.572	2.14	-1.33	-1.68	
9317.00	90.650	337.040	8504.62	2675.10	1941.50	-2282.73	1685460.49	14228752.28	39°11'0.2301"N	80°50'27.7437"W	2996.71	310.382	1.56	0.60	1.45	
9412.00	90.490	336.540	8503.67	2770.09	2028.81	-2320.17	1685423.07	14228839.55	39°11'1.0937"N	80°50'28.2172"W	3082.08	311.167	0.55	-0.17	-0.53	
9507.00	90.280	336.150	8503.03	2865.08	2115.82	-2358.28	1685384.07	14228926.53	39°11'1.9544"N	80°50'28.6993"W	3168.31	311.898	0.47	-0.22	-0.41	
9602.00	90.180	335.690	8502.65	2960.06	2202.56	-2397.04	1685346.22	14229013.23	39°11'2.8123"N	80°50'29.1896"W	3255.31	312.579	0.50	-0.11	-0.48	
9696.00	91.290	336.990	8501.45	3054.04	2288.65	-2434.78	1685308.52	14229099.28	39°11'3.6639"N	80°50'29.6667"W	3341.55	313.228	1.82	1.18	1.39	
9791.00	90.620	337.120	8499.86	3149.02	2376.12	-2471.79	1685271.51	14229186.72	39°11'4.5291"N	80°50'30.1350"W	3428.66	313.869	0.72	-0.71	0.14	
9886.00	90.490	337.010	8498.94	3244.02	2463.60	-2508.81	1685234.50	14229274.17	39°11'5.3944"N	80°50'30.6032"W	3516.17	314.479	0.18	-0.14	-0.12	
10075.00	90.770	337.250	8496.86	3333.01	2537.73	-2582.26	1685195.08	14229361.23	39°11'7.1168"N	80°50'31.5321"W	3601.30	315.609	0.20	0.15	0.13	
10264.00	90.620	337.010	8494.57	3621.99	2811.86	-2655.71	1685087.66	14229448.29	39°11'8.8391"N	80°50'32.4610"W	3687.73	316.636	0.15	-0.08	-0.13	
10359.00	90.430	337.230	8493.70	3716.99	2899.38	-2692.64	1685050.74	14229535.78	39°11'9.7048"N	80°50'32.9281"W	3774.86	317.117	0.31	-0.20	0.23	
10454.00	90.340	337.220	8493.06	3811.99	2986.98	-2729.42	1685013.98	14229623.33	39°11'10.5712"N	80°50'33.3933"W	4046.20	317.580	0.10	-0.09	-0.01	
10643.00	90.560	337.040	8491.55	4000.98	3161.11	-2802.87	1684940.56	14229711.40	39°11'12.2936"N	80°50'34.3222"W	4224.77	318.438	0.16	0.13	-0.10	
10833.00	88.680	336.990	8491.10	4190.98	3336.03	-2877.06	1684896.40	14230146.24	39°11'14.0237"N	80°50'35.2606"W	4405.29	319.225	0.47	-0.47	-0.03	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	ANTERO RESOURCES CORPORATION	Well	Osborne Unit 1H
Field	Doddridge	API	47-017-06972-0000
Facility	Locke Pad	Wellbore	Osborne Unit 1H AWB
Slot	Slot J		

WELLPATH DATA (217 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
10927.00	90.370	337.190	8491.05	4284.97	3422.61	-2913.65	1684829.82	14230232.79	39°11'14.8801"N	80°50'35.7234"W	4494.84	319.592	0.75	0.72	0.21	
11022.00	90.220	337.100	8490.56	4379.97	3510.15	-2950.55	1684782.94	14230320.30	39°11'15.7460"N	80°50'36.1901"W	4585.51	319.950	0.18	-0.16	-0.05	
11212.00	90.310	337.080	8489.68	4589.97	3665.16	-3024.51	1684719.01	14230495.24	39°11'17.4770"N	80°50'37.1256"W	4767.40	320.623	0.05	0.05	-0.01	
11306.00	89.630	336.580	8489.73	4663.97	3771.58	-3061.50	1684682.04	14230581.62	39°11'18.3318"N	80°50'37.5935"W	4857.73	320.933	0.00	-0.72	-0.53	
11401.00	89.380	336.370	8490.55	4758.96	3868.08	-3098.42	1684644.13	14230668.69	39°11'19.1933"N	80°50'38.0731"W	4949.32	321.227	0.34	-0.26	-0.22	
11496.00	89.850	337.230	8491.19	4853.95	3945.99	-3136.84	1684606.72	14230755.97	39°11'20.0570"N	80°50'38.5465"W	5040.90	321.517	1.03	0.49	0.91	
11590.00	89.750	337.170	8491.52	4947.95	4032.65	-3173.26	1684570.31	14230842.59	39°11'20.9141"N	80°50'39.0072"W	5131.48	321.801	0.12	-0.11	-0.06	
11685.00	89.820	337.140	8491.87	5042.95	4120.20	-3210.15	1684533.45	14230930.10	39°11'21.7800"N	80°50'39.4737"W	5223.13	322.077	0.08	0.07	-0.03	
11780.00	89.690	336.980	8492.28	5137.95	4207.68	-3247.17	1684496.43	14231017.55	39°11'22.6453"N	80°50'39.9421"W	5314.95	322.342	0.22	-0.14	-0.17	
11875.00	89.780	337.500	8492.72	5232.95	4295.20	-3283.93	1684459.69	14231105.12	39°11'23.5118"N	80°50'40.4070"W	5406.81	322.601	0.56	0.09	0.55	
11970.00	89.630	337.190	8493.21	5327.95	4382.95	-3320.52	1684423.12	14231192.75	39°11'24.3789"N	80°50'40.8898"W	5498.74	322.852	0.36	-0.16	-0.33	
12064.00	89.860	337.160	8493.61	5421.95	4469.59	-3356.98	1684386.67	14231279.35	39°11'25.2358"N	80°50'41.3310"W	5589.66	323.091	0.27	0.27	-0.03	
12159.00	89.750	336.780	8493.92	5516.95	4557.02	-3394.15	1684349.52	14231366.75	39°11'26.1006"N	80°50'41.8011"W	5682.13	323.321	0.42	-0.14	-0.40	
12253.00	89.910	337.420	8494.20	5610.94	4643.61	-3430.72	1684312.96	14231453.30	39°11'26.9571"N	80°50'42.2638"W	5773.47	323.543	0.70	0.17	0.68	
12348.00	89.940	337.500	8494.32	5705.94	4731.35	-3467.14	1684276.55	14231541.01	39°11'27.8249"N	80°50'42.7244"W	5865.73	323.766	0.09	0.03	0.08	
12443.00	89.780	337.480	8494.55	5800.94	4819.11	-3503.51	1684240.20	14231628.74	39°11'28.6930"N	80°50'43.1844"W	5958.06	323.983	0.17	-0.17	-0.02	
12538.00	91.200	340.210	8493.74	5895.89	4907.70	-3537.79	1684205.93	14231717.29	39°11'29.5691"N	80°50'43.6179"W	6049.91	324.213	3.24	1.49	2.87	
12632.00	90.000	337.160	8492.76	5989.83	4995.25	-3571.95	1684171.78	14231804.81	39°11'30.4350"N	80°50'44.0499"W	6140.96	324.433	3.49	-1.28	-3.24	
12727.00	89.690	337.260	8493.01	6084.83	5082.83	-3608.75	1684135.00	14231892.35	39°11'31.3013"N	80°50'44.5154"W	6233.64	324.626	0.34	-0.33	0.11	
12822.00	89.780	337.150	8493.45	6179.83	5170.41	-3645.55	1684098.21	14231979.90	39°11'32.1676"N	80°50'44.9809"W	6326.39	324.813	0.15	0.09	-0.12	
12916.00	89.410	337.260	8494.12	6273.83	5257.07	-3681.98	1684061.81	14232066.52	39°11'33.0247"N	80°50'45.4416"W	6418.23	324.993	0.41	-0.39	0.12	
13011.00	89.450	337.410	8495.06	6368.83	5344.73	-3718.58	1684025.21	14232154.14	39°11'33.8917"N	80°50'45.9047"W	6511.06	325.172	0.16	0.04	0.16	
13105.00	89.050	337.370	8496.29	6462.82	5431.50	-3754.72	1683989.09	14232240.88	39°11'34.7499"N	80°50'46.3617"W	6602.96	325.344	0.43	-0.43	-0.04	
13200.00	90.430	339.000	8496.72	6557.80	5519.69	-3790.02	1683953.81	14232329.03	39°11'35.6222"N	80°50'46.8082"W	6695.61	325.525	2.25	1.45	1.72	
13294.00	89.350	337.490	8496.90	6651.77	5606.99	-3824.86	1683918.98	14232416.30	39°11'36.4856"N	80°50'47.2488"W	6787.33	325.700	1.97	-1.15	-1.61	
13389.00	89.420	337.480	8497.92	6746.77	5694.74	-3861.23	1683882.62	14232504.02	39°11'37.3538"N	80°50'47.7089"W	6880.35	325.861	0.07	0.07	-0.01	
13484.00	89.290	338.210	8498.99	6841.75	5782.72	-3897.05	1683846.81	14232591.86	39°11'38.2238"N	80°50'48.1620"W	6973.30	326.023	0.78	-0.14	0.77	
13578.00	88.860	337.060	8500.51	6935.74	5869.64	-3932.82	1683811.06	14232678.94	39°11'39.0834"N	80°50'48.6144"W	7065.39	326.177	1.31	-0.46	-1.22	
13673.00	88.920	337.250	8502.35	7030.72	5957.17	-3969.69	1683774.20	14232766.34	39°11'39.9492"N	80°50'49.0809"W	7158.65	326.322	0.21	0.06	0.20	
13768.00	89.170	337.310	8503.93	7125.71	6044.79	-4006.38	1683737.53	14232853.92	39°11'40.8158"N	80°50'49.5450"W	7251.93	326.464	0.27	0.26	0.06	

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Actual Wellpath Report

Osborne Unit 1H AWP Proj: 20084'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Osborne Unit 1H
Field	Doddridge	API	47-017-06972-0000
Facility	Locke Pad	Wellbore	Osborne Unit 1H AWP
Slot	Slot J		

WELLPATH DATA (217 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (°/100ft)	Comments
13862.00	89.140	337.460	8505.32	7219.69	6131.55	-4042.52	1683701.40	14232940.85	39°11'41.8739"N	80°50'50.0022"W	7344.24	326.603	0.16	-0.03	0.16	
13957.00	89.050	337.350	8506.82	7314.68	6218.25	-4079.02	1683664.92	14233028.31	39°11'42.5413"N	80°50'50.4638"W	7437.57	326.740	0.15	-0.09	-0.12	
14052.00	88.950	337.320	8508.48	7409.67	6306.90	-4115.62	1683628.33	14233115.93	39°11'43.4083"N	80°50'50.9268"W	7530.95	326.873	0.11	-0.11	-0.03	
14146.00	88.860	337.190	8510.27	7503.65	6393.57	-4151.96	1683592.01	14233202.57	39°11'44.2658"N	80°50'51.3868"W	7623.42	327.000	0.17	-0.10	-0.14	
14241.00	89.010	337.400	8512.04	7598.83	6481.19	-4188.82	1683555.36	14233290.15	39°11'45.1322"N	80°50'51.8504"W	7716.89	327.127	0.27	0.16	0.22	
14336.00	88.860	337.220	8513.81	7693.62	6568.82	-4225.26	1683518.74	14233377.75	39°11'45.0990"N	80°50'52.3139"W	7810.39	327.250	0.25	-0.16	-0.19	
14430.00	88.920	336.700	8515.63	7787.60	6655.31	-4262.04	1683481.97	14233464.20	39°11'46.8544"N	80°50'52.7792"W	7903.05	327.365	0.56	0.06	-0.55	
14525.00	89.020	336.930	8517.33	7882.58	6742.62	-4299.44	1683444.59	14233551.48	39°11'47.7180"N	80°50'53.2523"W	7996.76	327.476	0.26	0.11	0.24	
14620.00	89.780	337.270	8518.33	7977.57	6830.13	-4336.40	1683407.64	14233638.95	39°11'48.5835"N	80°50'53.7200"W	8090.43	327.589	0.88	0.80	0.30	
14715.00	89.050	337.220	8519.30	8072.57	6917.73	-4373.14	1683370.91	14233726.52	39°11'49.4500"N	80°50'54.1848"W	8184.09	327.700	0.77	-0.77	-0.09	
14809.00	88.860	337.130	8521.01	8166.55	7004.36	-4409.60	1683334.47	14233813.11	39°11'50.3068"N	80°50'54.6461"W	8276.81	327.807	0.22	-0.20	-0.10	
14904.00	89.050	337.200	8522.75	8261.54	7091.90	-4446.46	1683297.82	14233900.61	39°11'51.1726"N	80°50'55.1124"W	8370.54	327.913	0.21	0.20	0.07	
14999.00	89.010	337.290	8524.35	8356.52	7179.49	-4483.20	1683260.90	14233988.17	39°11'52.0390"N	80°50'55.5772"W	8464.29	328.017	0.10	-0.04	0.09	
15093.00	88.830	337.320	8526.13	8450.51	7266.20	-4519.46	1683224.55	14234074.84	39°11'52.8966"N	80°50'56.0360"W	8557.05	328.119	0.19	-0.19	0.03	
15188.00	88.710	336.950	8528.17	8545.48	7353.71	-4556.37	1683187.76	14234162.32	39°11'53.7622"N	80°50'56.5029"W	8650.87	328.218	0.41	-0.15	-0.39	
15283.00	88.920	337.310	8530.13	8640.46	7441.22	-4593.28	1683150.86	14234249.80	39°11'54.6277"N	80°50'56.9699"W	8744.71	328.314	0.44	0.22	0.38	
15378.00	90.000	336.640	8531.03	8735.46	7528.65	-4630.44	1683113.72	14234337.19	39°11'55.4924"N	80°50'57.4400"W	8838.64	328.407	1.34	1.14	-0.71	
15472.00	89.780	337.220	8531.21	8829.46	7615.13	-4667.27	1683076.90	14234423.64	39°11'56.3478"N	80°50'57.9061"W	8931.61	328.496	0.66	-0.23	0.62	
15567.00	89.050	337.730	8532.18	8924.45	7702.88	-4703.66	1683040.53	14234511.35	39°11'57.2157"N	80°50'58.3665"W	9025.45	328.590	0.94	-0.77	0.54	
15662.00	90.090	336.190	8532.89	9019.44	7790.93	-4739.31	1683004.89	14234599.37	39°11'58.0866"N	80°50'58.8174"W	9119.19	328.687	1.20	1.06	0.48	
15756.00	88.920	337.330	8533.70	9113.42	7877.93	-4774.88	1682969.33	14234686.34	39°11'58.9471"N	80°50'59.2675"W	9212.02	328.780	1.54	-1.24	-0.91	
15851.00	89.290	337.610	8535.19	9208.41	7965.67	-4811.28	1682932.95	14234774.04	39°11'59.8149"N	80°50'59.7279"W	9305.93	328.868	0.49	0.39	0.29	
16041.00	89.170	336.940	8537.74	9398.39	8140.91	-4884.67	1682859.59	14234861.20	39°12'01.5481"N	80°51'00.6565"W	9490.91	329.036	0.36	-0.06	-0.35	
16135.00	89.230	336.970	8539.05	9492.38	8227.40	-4921.47	1682822.81	14235035.66	39°12'02.4035"N	80°51'01.1220"W	9587.02	329.113	0.07	0.06	0.03	
16230.00	89.080	336.930	8540.45	9587.37	8314.80	-4958.66	1682785.63	14235123.03	39°12'03.2680"N	80°51'01.5926"W	9681.13	329.190	0.16	-0.16	-0.04	
16325.00	89.260	337.050	8541.63	9682.36	8402.23	-4995.79	1682748.52	14235210.43	39°12'04.1328"N	80°51'02.0625"W	9775.25	329.265	0.23	0.19	0.13	
16419.00	89.260	337.380	8543.04	9776.35	8488.89	-5032.19	1682712.13	14235297.05	39°12'04.9899"N	80°51'02.5230"W	9868.34	329.341	0.35	0.00	0.35	
16514.00	89.170	337.060	8544.34	9871.34	8576.47	-5068.97	1682675.37	14235384.60	39°12'05.8562"N	80°51'02.9884"W	9962.45	329.418	0.35	-0.08	-0.34	
16609.00	89.170	337.070	8545.72	9966.33	8663.95	-5105.99	1682638.36	14235472.04	39°12'06.7214"N	80°51'03.4568"W	10056.60	329.488	0.01	0.00	0.01	
16704.00	89.260	337.300	8547.02	10061.32	8751.51	-5142.82	1682601.55	14235559.67	39°12'07.5874"N	80°51'03.9228"W	10150.74	329.559	0.26	0.09	0.24	

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Actual Wellpath Report

Osborne Unit 1H AWP Proj: 20084'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Osborne Unit 1H
Field	Doddridge	API	47-017-06972-0000
Facility	Locke Pad	Wellbore	Osborne Unit 1H AWP
Slot	Slot J		

WELLPATH DATA (217 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
16798.00	89.170	337.170	6548.31	10155.32	8838.18	-5179.19	1682565.19	14235646.20	39°12'8.4447"N	80°51'4.3830"W	10243.90	329.630	0.17	-0.10	-0.14	
16893.00	89.230	337.390	6549.64	10250.31	8925.80	-5215.88	1682528.52	14235733.79	39°12'9.3113"N	80°51'4.8472"W	10338.05	329.700	0.24	0.06	0.23	
16988.00	88.030	337.270	6551.91	10345.28	9013.44	-5252.48	1682491.93	14235821.39	39°12'10.1780"N	80°51'5.3104"W	10432.19	329.789	1.27	-1.26	-0.13	
17082.00	88.860	337.340	6554.46	10439.24	9100.12	-5268.73	1682455.69	14235908.04	39°12'11.0354"N	80°51'5.7691"W	10525.35	329.836	0.89	0.88	0.07	
17177.00	88.860	337.490	6556.35	10534.22	9187.82	-5325.21	1682419.22	14235995.70	39°12'11.9028"N	80°51'6.2306"W	10619.51	329.904	0.16	0.00	0.16	
17272.00	88.950	337.460	6558.16	10629.20	9275.56	-5361.60	1682382.85	14236083.40	39°12'12.7706"N	80°51'6.6910"W	10713.67	329.971	0.10	0.09	-0.03	
17367.00	88.920	337.430	6559.93	10724.19	9363.28	-5398.03	1682346.43	14236171.09	39°12'13.0382"N	80°51'7.1520"W	10807.85	330.036	0.04	-0.03	-0.03	
17461.00	88.770	337.570	6561.82	10818.16	9450.10	-5434.00	1682310.48	14236257.88	39°12'14.4969"N	80°51'7.6071"W	10901.04	330.100	0.22	-0.16	0.15	
17556.00	88.830	337.380	6563.81	10913.14	9537.84	-5470.38	1682274.11	14236345.58	39°12'15.3647"N	80°51'8.0675"W	10995.25	330.164	0.21	0.06	-0.20	
17651.00	88.830	337.380	6565.75	11008.12	9625.51	-5505.91	1682237.60	14236433.22	39°12'16.2318"N	80°51'8.5297"W	11089.48	330.225	0.00	0.00	0.00	
17745.00	88.740	337.230	6567.75	11102.10	9712.21	-5543.17	1682201.35	14236519.88	39°12'17.0893"N	80°51'8.9885"W	11182.75	330.285	0.19	-0.10	-0.16	
17840.00	88.280	336.570	6570.22	11197.07	9799.57	-5580.43	1682164.11	14236607.20	39°12'17.9533"N	80°51'9.4600"W	11277.09	330.340	0.85	-0.48	-0.69	
17935.00	88.860	337.250	6572.59	11292.04	9886.93	-5617.68	1682126.88	14236694.53	39°12'18.8174"N	80°51'9.9314"W	11371.44	330.395	0.94	0.61	0.72	
18029.00	87.350	336.840	6575.70	11385.98	9973.43	-5654.32	1682090.25	14236781.00	39°12'19.6730"N	80°51'10.3950"W	11464.76	330.449	1.66	-1.61	-0.44	
18124.00	88.860	337.400	6578.04	11480.93	10060.91	-5691.23	1682053.35	14236868.44	39°12'20.5382"N	80°51'10.8622"W	11559.07	330.504	1.70	1.59	0.59	
18219.00	89.260	337.420	6580.40	11575.91	10146.61	-5727.72	1682016.88	14236956.10	39°12'21.4056"N	80°51'11.3239"W	11653.37	330.560	0.42	0.42	0.02	
18313.00	87.870	336.830	6582.75	11669.88	10235.19	-5764.25	1681980.37	14237042.65	39°12'22.2619"N	80°51'11.7861"W	11746.73	330.613	1.61	-1.48	-0.63	
18408.00	89.200	337.240	6585.18	11764.85	10322.63	-5801.30	1681943.33	14237130.05	39°12'23.1267"N	80°51'12.2550"W	11841.10	330.664	1.46	1.40	0.43	
18502.00	88.950	337.130	6586.70	11858.83	10409.26	-5837.74	1681906.90	14237216.65	39°12'23.9836"N	80°51'12.7162"W	11934.48	330.715	0.29	-0.27	-0.12	
18597.00	89.350	337.420	6588.11	11953.82	10496.88	-5874.44	1681870.22	14237304.23	39°12'24.8501"N	80°51'13.1806"W	12028.86	330.767	0.52	0.42	0.31	
18692.00	89.350	337.290	6589.18	12048.82	10584.55	-5911.01	1681833.66	14237391.87	39°12'25.7172"N	80°51'13.6434"W	12123.23	330.819	0.14	0.00	-0.14	
18787.00	88.520	337.430	6590.95	12143.80	10672.21	-5947.57	1681797.11	14237479.50	39°12'26.5843"N	80°51'14.1061"W	12217.60	330.869	0.89	-0.87	0.15	
18881.00	89.290	337.190	6592.74	12237.78	10758.92	-5983.83	1681760.87	14237566.17	39°12'27.4419"N	80°51'14.5648"W	12310.99	330.918	0.86	0.82	-0.26	
18976.00	87.540	336.510	6595.37	12332.74	10846.23	-6021.16	1681723.55	14237653.45	39°12'28.3055"N	80°51'15.0373"W	12405.45	330.964	1.98	-1.84	-0.72	
19071.00	88.240	337.370	6598.87	12427.87	10933.58	-6058.35	1681686.38	14237740.78	39°12'29.1694"N	80°51'15.5079"W	12499.87	331.009	1.17	0.74	0.91	
19165.00	89.230	337.260	6600.95	12521.65	11020.29	-6094.59	1681650.16	14237827.43	39°12'30.0269"N	80°51'15.9666"W	12593.28	331.056	1.06	1.05	-0.12	
19260.00	89.420	337.510	6602.06	12616.64	11107.97	-6131.12	1681613.64	14237915.09	39°12'30.8942"N	80°51'16.4288"W	12687.70	331.103	0.33	0.20	0.26	
19355.00	89.320	337.150	6603.11	12711.63	11195.63	-6167.73	1681577.04	14238002.71	39°12'31.7612"N	80°51'16.8922"W	12782.14	331.149	0.39	-0.11	-0.36	
19449.00	89.350	337.430	6604.20	12805.63	11282.34	-6204.02	1681540.77	14238089.38	39°12'32.6188"N	80°51'17.3514"W	12875.59	331.194	0.30	0.03	0.30	
19544.00	88.890	337.310	6605.66	12900.61	11370.01	-6240.57	1681504.24	14238177.02	39°12'33.4859"N	80°51'17.8140"W	12970.04	331.239	0.60	-0.48	-0.13	

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Actual Wellpath Report

Osborne Unit 1H AWP Proj: 20084'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Osborne Unit 1H
Field	Doddridge	API	47-017-06972-0000
Facility	Locke Pad	Wellbore	Osborne Unit 1H AWB
Slot	Slot J		

WELLPATH DATA (217 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
19639.00	89.010	337.400	6607.40	12995.60	11457.67	-6277.14	1681467.68	14238264.65	39°12'34.3529"N	80°51'18.2768"W	13064.48	331.284	0.16	0.13	0.08	
19733.00	88.060	336.370	6609.80	13089.56	11544.10	-6314.03	1681430.81	14238351.03	39°12'35.2077"N	80°51'18.7437"W	13158.00	331.324	1.49	-1.01	-1.10	
19828.00	88.740	337.180	6612.46	13184.52	11631.36	-6351.47	1681393.37	14238438.27	39°12'36.0708"N	80°51'19.2176"W	13252.54	331.363	1.11	0.72	0.85	
19923.00	89.140	337.260	6614.21	13279.51	11718.94	-6388.25	1681356.61	14238525.81	39°12'36.9370"N	80°51'19.6831"W	13347.03	331.404	0.43	0.42	0.08	
20017.00	89.260	337.160	6615.53	13373.50	11805.59	-6424.66	1681320.22	14238612.42	39°12'37.7940"N	80°51'20.1438"W	13440.54	331.445	0.17	0.13	-0.11	
20059.00	89.230	337.430	6616.08	13415.49	11844.33	-6440.87	1681304.01	14238651.15	39°12'38.1772"N	80°51'20.3490"W	13482.32	331.463	0.65	-0.07	0.64	
20084.00†	89.230	337.430	6616.42	13440.49	11867.41	-6450.46	1681294.42	14238674.22	39°12'38.4055"N	80°51'20.4704"W	13507.18	331.474	0.00	0.00	0.00	Projected MD at TD: 20084'

DIRECTIONAL DIFFICULTY INDEX

Directional Difficulty Index @ TD = 7.04				Reference: IADC/SPE 59196			
Values	Wellpath characterized as:			Values	Wellpath characterized as:		
< 6.0	Relatively short or simple profiles with low tortuosity			6.4-6.8	Longer with relatively tortuous well paths		
< 6.0-6.4	Shorter with high tortuosity or longer with lower tortuosity			> 6.8	Long tortuous profiles, high degree of difficulty		

HOLE & CASING SECTIONS - Ref Wellbore: Osborne Unit 1H AWB Ref Wellpath: Osborne Unit 1H AWP Proj: 20084'

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	25.50	125.50	100.00	25.50	125.50	0.00	0.00	-0.28	0.05
17.5in Open Hole	125.50	461.00	335.50	125.50	461.00	-0.28	0.05	-1.34	-0.78
13.375in Casing Surface	25.50	441.00	415.50	25.50	441.00	0.00	0.00	-1.29	-0.67
12.25in Open Hole	461.00	2949.00	2488.00	461.00	2945.81	-1.34	-0.78	-72.78	16.34
9.625in Casing Intermediate	25.50	2919.00	2893.50	25.50	2915.82	0.00	0.00	-72.92	17.00
8.75in Open Hole	2949.00	5966.00	3017.00	2945.81	5739.20	-72.78	16.34	-545.44	-934.21
8.5in Open Hole	5966.00	20084.00	14118.00	5739.20	6616.42	-545.44	-934.21	11867.41	-6450.46
5.5in Casing Production	25.50	20064.00	20038.50	25.50	6616.15	0.00	0.00	11848.95	-6442.79

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Actual Wellpath Report

Osborne Unit 1H AWP Proj: 20084'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Osborne Unit 1H
Field	Doddridge	API	47-017-06972-0000
Facility	Locke Pad	Wellbore	Osborne Unit 1H AWB
Slot	Slot J		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Osborne Unit 1H BHL Rev-3	6429.94	11766.67	-6418.64	1681326.23	14238573.52	39°12'37.4092"N	80°51'20.0682"W	point
Osborne Unit 1H POE Rev-3	6491.00	-178.29	-1390.20	1686352.67	14226633.33	39°10'39.2627"N	80°50'16.4572"W	point
Osborne Unit 1H LP Rev-3	6519.00	9.14	-1469.10	1686273.80	14226820.69	39°10'41.1166"N	80°50'17.4549"W	point
Osborne Unit 1H 50' L/R Hard Line	6750.00	5794.19	-3904.42	1683839.45	14232603.43	39°11'38.3372"N	80°50'48.2553"W	rectangle
2D Rectangle 12960.2 x 100.								

WELLPATH COMPOSITION - Ref Wellbore: Osborne Unit 1H AWB Ref Wellpath: Osborne Unit 1H AWP Proj: 20084'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.50	400.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata MS Gyro <17-1/2"> (100'-400')	Osborne Unit 1H AWB	1/14/2025
400.00	538.00	Gyrodata 2015 - GC+WIR+DPIPE	02 Gyrodata MS Gyro <12-1/4"> (400')(500'-538')	Osborne Unit 1H AWB	1/15/2025
538.00	2874.00	BH NaviTrak (2019) (Axial Corr+HRGM)	03 APS EM <12-1/4"> (538')(570'-2874')	Osborne Unit 1H AWB	1/14/2025
2874.00	5890.00	BH NaviTrak (2019) (Axial Corr+HRGM)	04 APS EM <8-3/4"> (2874')(2946'-5890')	Osborne Unit 1H AWB	2/2/2025
5890.00	20084.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	05 BH Lucida <8-1/2"> (5890')(5939'-20059')	Osborne Unit 1H AWB	2/2/2025

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Actual Wellpath Report

Osborne Unit 1H AWP Proj: 20084'

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REFERENCE WELLPATH IDENTIFICATION

Operator	ANTERO RESOURCES CORPORATION	Well	Osborne Unit 1H
Field	Doddridge	API	47-017-06972-0000
Facility	Locke Pad	Wellbore	Osborne Unit 1H AWB
Slot	Slot J		

COMMENTS

Wellpath general comments

API: 47-017-06972-0000

BH Job #: 112542265

Rig: H&P 317

Duration: 2/3/2025-2/7/2025

Gyrodata MS Gyro <17-1/2"> (100'-400')

Gyrodata MS Gyro <12-1/4"> (400')(500'-538')

APS EM <12-1/4"> (538')(570'-2874')

APS EM <8-3/4"> (2874')(2946'-5890')

BH Lucida <8-1/2"> (5890')(5939'-20059')

Sycamore: 6399' MD

Middlesex: 6635' MD

Burkett: 6828' MD

Tully: 6943' MD

Marcellus POE: 7038' MD

Projected MD at TD: 20084'

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