



Antero Resources  
 Mash Unit 1H  
 Doddridge County WV  
 Northing: 14261950.18  
 Easting: 1683175.22  
 As Drilled

**WELL DETAILS:** Mash Unit 1H

+N/-S	+E/-W	Northing	Ground Level	1164.0	Latitude	Longitude	Slot
0.0	0.0	14261950.18	1683175.22	39° 16' 28.522 N	80° 50' 56.073 W		

**PROJECT DETAILS:** Doddridge County WV

Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 Datum: NAD 1927 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone: Zone 17N (84 W to 78 W)  
 System Datum: Mean Sea Level

REFERENCE INFORMATION

Co-ordinate (NE) Reference: Well Mash Unit 1H, Grid North  
 Vertical (TVD) Reference: Mash Unit 1H GL 1164 +25' RKB @ 1189' Outh  
 Section (VS) Reference: Slot - (D) 0.0 (D) 0.0  
 Measured Depth Reference: Mash Unit 1H GL 1164 +25' RKB @ 1189' Outh  
 Calculation Method: Minimum Curvature



Genie Lightfoot  
 13:17, November 04 2013

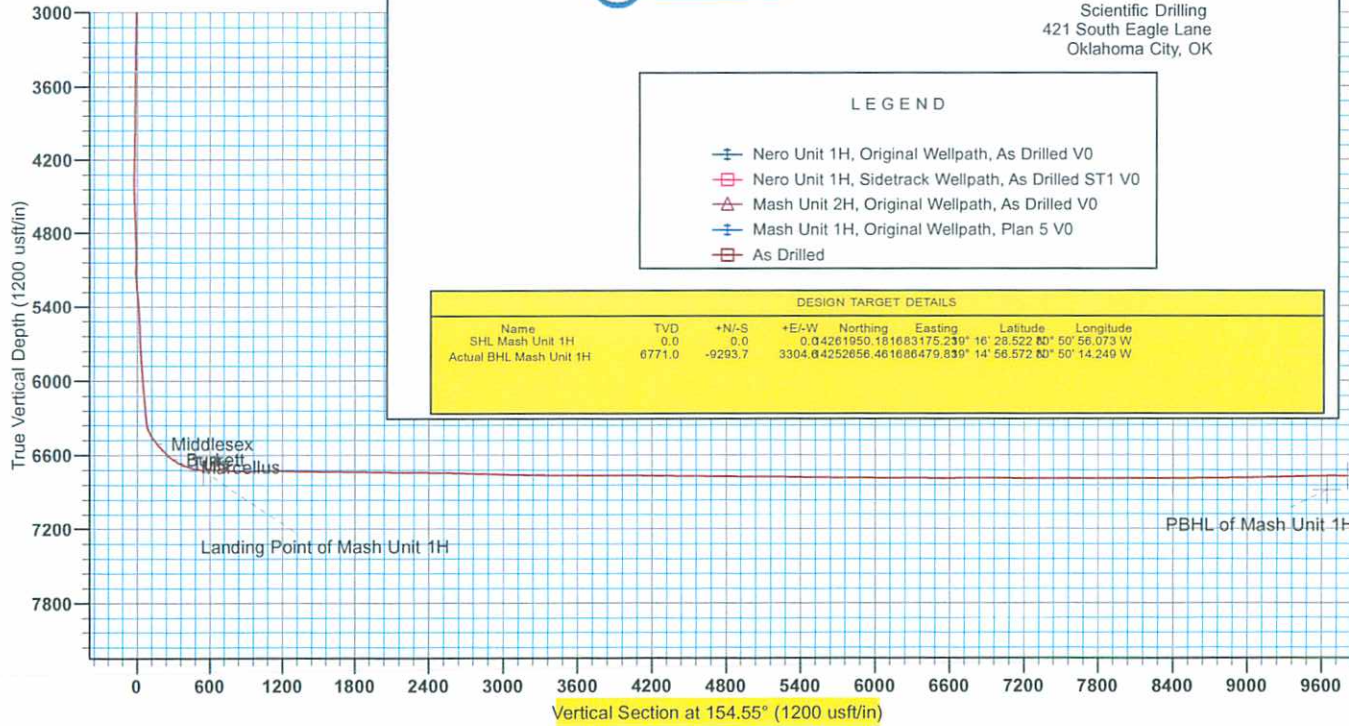
Scientific Drilling  
 421 South Eagle Lane  
 Oklahoma City, OK

LEGEND

- Nero Unit 1H, Original Wellpath, As Drilled V0
- Nero Unit 1H, Sidetrack Wellpath, As Drilled ST1 V0
- Mash Unit 2H, Original Wellpath, As Drilled V0
- Mash Unit 1H, Original Wellpath, Plan 5 V0
- As Drilled

DESIGN TARGET DETAILS

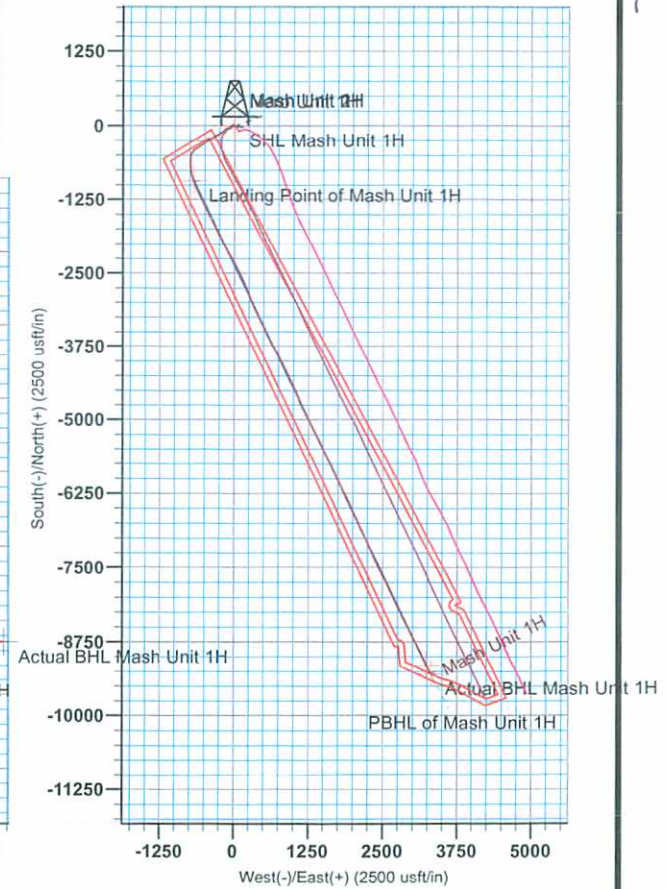
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL Mash Unit 1H	0.0	0.0	0.0	14261950.18	1683175.22	39° 16' 28.522 N	80° 50' 56.073 W
Actual BHL Mash Unit 1H	6771.0	-9293.7	3304.6	4252656.46	1686479.83	14° 58.572 N	80° 50' 14.249 W



To convert Magnetic North to Grid, Subtract 8.48°  
 To convert True North to Grid, Subtract 0.10°

Azimuths to Grid North  
 True North: -0.10°  
 Magnetic North: -8.48°

Magnetic Field  
 Strength: 52398.4nT  
 Dip Angle: 66.89°  
 Date: 9/8/2013  
 Model: IGRF2010



17.06272

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## **Antero Resources**

**Doddridge County WV**

**Nero Pad**

**Mash Unit 1H**

**Original Wellpath**

**Design: As Drilled**

## **EOW Completion Report**

**04 November, 2013**



**05/06/2022**





17-06272

EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well Mash Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Site:</b>	Nero Pad	<b>MD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Well:</b>	Mash Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

<b>Project</b>	Doddridge County WV, McClellan District		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Fee	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Zone 17N (84 W to 78 W)		

<b>Site</b>	Nero Pad		
<b>Site Position:</b>		<b>Northing:</b>	14,261,930.17 usft
<b>From:</b>	Map	<b>Easting:</b>	1,683,174.55 usft
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16"
		<b>Latitude:</b>	39° 16' 28.324 N
		<b>Longitude:</b>	80° 50' 56.082 W
		<b>Grid Convergence:</b>	0.10 °

<b>Well</b>	Mash Unit 1H, Marcellus		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b> 14,261,950.18 usft
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b> 1,683,175.22 usft
<b>Position Uncertainty</b>	2.0 usft	<b>Wellhead Elevation:</b>	1,189.0 usft
		<b>Ground Level:</b>	1,164.0 usft

<b>Wellbore</b>	Original Wellpath		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/8/2013	-8.39	66.89	52,398

<b>Design</b>	As Drilled		
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<b>Audit Notes:</b>				
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b> 0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	154.55

Survey Program	Date	From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
	11/4/2013	100.0	2,471.2	Survey #2 Def Gyro to Int (Original Wellpa	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper
		2,663.0	16,488.0	Survey #3 MWD (Original Wellpath)	SDI MWD	Scientific Drilling Intl. MWD - Standard ver 1.0.1

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00
100.0	0.29	342.72	100.0	0.2	-0.1	-0.3	0.29
200.0	0.19	4.64	200.0	0.6	-0.1	-0.6	0.13
300.0	0.37	349.37	300.0	1.1	-0.2	-1.1	0.19
400.0	0.49	359.25	400.0	1.9	-0.2	-1.8	0.14
500.0	0.36	2.91	500.0	2.6	-0.2	-2.5	0.13
600.0	0.25	359.01	600.0	3.1	-0.2	-2.9	0.11
700.0	0.14	358.61	700.0	3.5	-0.2	-3.3	0.11
800.0	0.18	337.63	800.0	3.8	-0.3	-3.5	0.07
900.0	0.21	328.41	900.0	4.1	-0.5	-3.9	0.04
1,000.0	0.09	354.46	1,000.0	4.3	-0.6	-4.1	0.14

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EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well Mash Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Site:</b>	Nero Pad	<b>MD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Well:</b>	Mash Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)		
1,100.0	0.05	125.91	1,100.0	4.3	-0.5	-4.1	0.13		
1,200.0	0.05	138.08	1,200.0	4.3	-0.5	-4.1	0.01		
1,300.0	0.04	253.43	1,300.0	4.2	-0.5	-4.0	0.08		
1,400.0	0.10	144.63	1,400.0	4.2	-0.4	-4.0	0.12		
1,500.0	0.08	245.39	1,500.0	4.1	-0.5	-3.9	0.14		
1,600.0	0.12	139.67	1,600.0	4.0	-0.5	-3.8	0.16		
1,700.0	0.08	119.84	1,700.0	3.8	-0.3	-3.6	0.05		
1,800.0	0.07	307.33	1,800.0	3.8	-0.3	-3.6	0.15		
1,900.0	0.04	31.18	1,900.0	3.9	-0.3	-3.7	0.08		
2,000.0	0.07	299.23	2,000.0	4.0	-0.4	-3.7	0.08		
2,100.0	0.02	200.88	2,100.0	4.0	-0.4	-3.8	0.08		
2,200.0	0.12	135.21	2,200.0	3.9	-0.4	-3.7	0.11		
2,300.0	0.12	326.31	2,300.0	3.9	-0.4	-3.7	0.24		
2,400.0	0.19	296.59	2,400.0	4.1	-0.6	-3.9	0.10		
2,471.2	0.12	233.70	2,471.2	4.1	-0.7	-4.0	0.24		
2,663.0	0.49	329.90	2,663.0	4.7	-1.3	-4.8	0.27		
3,045.0	0.72	315.03	3,045.0	7.8	-3.8	-8.7	0.07		
3,329.0	0.66	328.79	3,328.9	10.4	-5.9	-12.0	0.06		
3,614.0	0.59	316.33	3,613.9	12.9	-7.8	-15.0	0.05		
3,908.0	0.76	301.59	3,907.9	15.0	-10.5	-18.1	0.08		
4,090.0	0.62	310.43	4,089.9	16.3	-12.3	-20.0	0.10		
4,147.0	1.75	299.17	4,146.9	16.9	-13.3	-21.0	2.01		
4,242.0	3.42	272.79	4,241.8	17.8	-17.4	-23.5	2.11		
4,337.0	4.88	256.09	4,336.5	16.9	-24.1	-25.6	1.98		
4,432.0	6.48	242.07	4,431.1	13.4	-32.8	-26.2	2.22		
4,528.0	8.10	229.28	4,526.3	6.5	-42.7	-24.2	2.38		
4,623.0	9.60	224.79	4,620.2	-3.5	-53.3	-19.8	1.74		
4,718.0	11.03	229.29	4,713.6	-15.0	-65.8	-14.7	1.73		
4,813.0	9.52	237.71	4,807.1	-25.2	-79.4	-11.4	2.24		
4,908.0	10.53	241.02	4,900.7	-33.6	-93.6	-9.9	1.22		
5,003.0	11.64	247.18	4,993.9	-41.5	-110.0	-9.8	1.71		
5,099.0	15.00	248.66	5,087.3	-49.8	-130.5	-11.1	3.52		
5,137.0	16.80	244.48	5,123.8	-53.9	-140.1	-11.5	5.61		
5,200.0	18.99	234.20	5,183.8	-63.9	-156.6	-9.6	6.09		
5,232.0	19.70	227.26	5,214.0	-70.6	-164.8	-7.1	7.51		
5,264.0	20.39	223.82	5,244.1	-78.2	-172.6	-3.5	4.27		
5,295.0	20.43	223.82	5,273.1	-86.0	-180.1	0.3	0.13		
5,327.0	20.40	226.29	5,303.1	-93.9	-188.0	4.0	2.69		
5,359.0	19.87	232.27	5,333.2	-101.1	-196.3	6.9	6.64		
5,391.0	20.31	236.49	5,363.2	-107.5	-205.2	8.9	4.73		
5,422.0	21.28	234.20	5,392.2	-113.8	-214.3	10.6	4.08		
5,454.0	22.42	233.06	5,421.9	-120.8	-223.9	12.9	3.80		
5,486.0	23.57	234.20	5,451.3	-128.2	-234.0	15.3	3.85		
5,518.0	23.92	239.56	5,480.6	-135.3	-244.7	17.0	6.83		



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EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well Mash Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Site:</b>	Nero Pad	<b>MD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Well:</b>	Mash Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
5,549.0	24.59	239.74	5,508.9	-141.7	-255.7	18.1	2.17	
5,581.0	25.67	239.55	5,537.9	-148.6	-267.5	19.2	3.38	
5,613.0	26.47	240.62	5,566.6	-155.6	-279.6	20.3	2.90	
5,644.0	27.35	240.26	5,594.3	-162.5	-291.8	21.3	2.89	
5,676.0	28.57	240.00	5,622.5	-170.0	-304.9	22.5	3.83	
5,708.0	28.75	238.68	5,650.6	-177.8	-318.1	23.9	2.06	
5,740.0	27.35	239.47	5,678.8	-185.5	-331.0	25.3	4.53	
5,803.0	27.52	238.86	5,734.8	-200.4	-355.9	28.0	0.52	
5,835.0	27.70	238.16	5,763.1	-208.2	-368.5	29.6	1.16	
5,867.0	27.26	237.63	5,791.5	-216.0	-381.0	31.3	1.57	
5,898.0	27.70	238.33	5,819.0	-223.6	-393.2	32.9	1.76	
5,930.0	28.67	240.00	5,847.2	-231.3	-406.1	34.4	3.91	
5,962.0	29.99	239.83	5,875.1	-239.2	-419.7	35.6	4.13	
5,994.0	31.22	236.92	5,902.7	-247.7	-433.6	37.4	6.02	
6,025.0	32.27	236.75	5,929.0	-256.7	-447.2	39.6	3.40	
6,057.0	31.57	234.64	5,956.2	-266.2	-461.2	42.2	4.12	
6,089.0	30.69	234.82	5,983.6	-275.8	-474.7	45.0	2.77	
6,120.0	30.43	236.40	6,010.3	-284.7	-487.7	47.5	2.72	
6,184.0	29.81	237.36	6,065.6	-302.2	-514.6	51.7	1.23	
6,216.0	30.51	236.92	6,093.3	-310.9	-528.1	53.8	2.29	
6,247.0	30.89	235.92	6,119.9	-319.7	-541.3	56.1	2.05	
6,279.0	31.48	236.40	6,147.3	-328.9	-555.1	58.5	2.00	
6,343.0	32.10	236.66	6,201.7	-347.5	-583.2	63.2	0.99	
6,374.0	32.80	236.75	6,227.9	-356.6	-597.1	65.4	2.26	
6,406.0	32.01	237.36	6,254.9	-366.0	-611.5	67.7	2.67	
6,437.0	32.54	237.54	6,281.1	-374.9	-625.4	69.7	1.74	
6,469.0	34.56	237.45	6,307.8	-384.4	-640.3	71.9	6.31	
6,501.0	36.68	236.31	6,333.8	-394.6	-656.0	74.4	6.94	
6,532.0	39.32	230.47	6,358.2	-405.9	-671.2	78.1	14.38	
6,564.0	41.59	222.86	6,382.6	-420.2	-686.3	84.5	16.97	
6,596.0	42.87	215.51	6,406.3	-436.9	-699.8	93.7	15.94	
6,628.0	43.00	209.85	6,429.7	-455.2	-711.6	105.2	12.05	
6,659.0	43.44	205.20	6,452.3	-474.0	-721.4	118.0	10.37	
6,691.0	44.49	198.50	6,475.4	-494.6	-729.7	133.1	14.90	
6,723.0	45.81	193.50	6,497.9	-516.4	-735.9	150.1	11.82	
6,740.0	46.35	189.96	6,509.7	-528.4	-738.4	159.8	15.34	
<b>Middlesex</b>								
6,754.0	46.87	187.09	6,519.4	-538.4	-739.9	168.2	15.34	
6,786.0	46.87	184.01	6,541.2	-561.7	-742.1	188.3	7.02	
6,818.0	47.13	180.29	6,563.1	-585.1	-743.0	209.0	8.54	
6,850.0	48.98	178.04	6,584.5	-608.9	-742.7	230.6	7.80	
6,881.0	51.62	178.30	6,604.3	-632.7	-741.9	252.5	8.54	
6,913.0	54.78	181.11	6,623.4	-658.3	-741.8	275.7	12.12	
6,929.0	56.36	180.35	6,632.5	-671.5	-742.0	287.5	10.64	

**Burkett**

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EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well Mash Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Site:</b>	Nero Pad	<b>MD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Well:</b>	Mash Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
6,945.0	57.95	179.62	6,641.1	-684.9	-742.0	299.6	10.64
6,976.0	62.37	176.38	6,656.6	-711.8	-741.0	324.3	16.89
6,989.0	64.02	175.18	6,662.4	-723.4	-740.1	335.1	15.17
<b>Tully</b>							
7,008.0	66.46	173.48	6,670.4	-740.5	-738.4	351.4	15.17
7,040.0	68.59	170.92	6,682.6	-769.8	-734.4	379.5	9.95
7,072.0	71.05	168.99	6,693.7	-799.4	-729.2	408.5	9.55
7,074.0	71.22	168.85	6,694.3	-801.3	-728.8	410.3	10.77
<b>Marcellus</b>							
7,103.0	73.73	166.90	6,703.0	-828.3	-723.0	437.2	10.77
7,135.0	75.80	165.21	6,711.5	-858.3	-715.6	467.5	8.23
7,167.0	80.05	163.01	6,718.1	-888.3	-707.0	498.3	14.89
7,182.0	83.10	161.60	6,720.3	-902.5	-702.5	513.0	22.36
7,214.0	88.29	159.93	6,722.7	-932.6	-692.0	544.7	17.03
7,245.0	89.83	160.11	6,723.3	-961.7	-681.4	575.6	5.00
7,309.0	90.13	159.49	6,723.3	-1,021.8	-659.3	639.3	1.08
7,372.0	89.06	156.46	6,723.7	-1,080.2	-635.7	702.2	5.10
7,404.0	88.72	155.19	6,724.3	-1,109.4	-622.6	734.2	4.11
7,436.0	88.59	155.23	6,725.1	-1,138.4	-609.1	766.2	0.43
7,499.0	87.67	152.81	6,727.1	-1,195.0	-581.6	829.1	4.11
7,562.0	87.67	152.02	6,729.7	-1,250.8	-552.4	892.0	1.25
7,594.0	90.13	154.92	6,730.3	-1,279.4	-538.1	924.0	11.88
7,658.0	92.07	155.71	6,729.1	-1,337.6	-511.4	988.0	3.27
7,689.0	90.66	154.48	6,728.4	-1,365.7	-498.4	1,019.0	6.03
7,753.0	89.93	153.90	6,728.0	-1,423.3	-470.5	1,083.0	1.46
7,784.0	89.60	153.69	6,728.2	-1,451.1	-456.8	1,114.0	1.26
7,848.0	89.34	152.64	6,728.7	-1,508.2	-427.9	1,178.0	1.69
7,879.0	89.08	153.17	6,729.2	-1,535.8	-413.8	1,208.9	1.90
7,943.0	88.55	152.81	6,730.5	-1,592.8	-384.7	1,272.9	1.00
7,975.0	88.29	152.81	6,731.4	-1,621.3	-370.1	1,304.9	0.81
8,038.0	89.26	153.21	6,732.7	-1,677.4	-341.5	1,367.8	1.67
8,070.0	89.78	153.34	6,733.0	-1,706.0	-327.1	1,399.8	1.68
8,133.0	89.60	153.43	6,733.3	-1,762.3	-298.9	1,462.8	0.32
8,165.0	89.43	153.60	6,733.6	-1,790.9	-284.6	1,494.8	0.75
8,228.0	89.09	153.20	6,734.4	-1,847.3	-256.4	1,557.8	0.83
8,260.0	88.90	153.34	6,735.0	-1,875.8	-242.1	1,589.8	0.74
8,323.0	88.79	154.67	6,736.2	-1,932.4	-214.4	1,652.8	2.12
8,355.0	88.46	154.40	6,737.0	-1,961.3	-200.7	1,684.8	1.33
8,419.0	89.60	151.90	6,738.1	-2,018.4	-171.8	1,748.7	4.29
8,450.0	89.96	150.70	6,738.2	-2,045.6	-156.9	1,779.7	4.04
8,482.0	89.50	150.31	6,738.4	-2,073.5	-141.2	1,811.6	1.88
8,545.0	88.99	150.53	6,739.2	-2,128.2	-110.1	1,874.4	0.88
8,609.0	88.91	151.05	6,740.4	-2,184.1	-78.8	1,938.3	0.82
8,641.0	89.16	151.41	6,740.9	-2,212.1	-63.4	1,970.2	1.37



17-06272



## EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well Mash Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Site:</b>	Nero Pad	<b>MD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Well:</b>	Mash Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
8,672.0	89.60	151.83	6,741.2	-2,239.4	-48.7	2,001.2	1.96	
8,736.0	89.34	149.65	6,741.8	-2,295.2	-17.4	2,065.0	3.43	
8,799.0	89.60	151.76	6,742.4	-2,350.2	13.4	2,127.9	3.37	
8,831.0	89.87	152.81	6,742.6	-2,378.5	28.3	2,159.9	3.39	
8,894.0	88.11	152.46	6,743.7	-2,434.4	57.2	2,222.8	2.85	
8,926.0	88.81	153.52	6,744.5	-2,462.9	71.8	2,254.8	3.97	
8,990.0	90.22	155.71	6,745.1	-2,520.8	99.2	2,318.8	4.07	
9,021.0	90.48	155.54	6,744.9	-2,549.0	112.0	2,349.8	1.00	
9,085.0	89.08	156.15	6,745.1	-2,607.4	138.2	2,413.7	2.39	
9,117.0	89.34	157.12	6,745.6	-2,636.8	150.9	2,445.7	3.14	
9,180.0	89.34	157.65	6,746.3	-2,694.9	175.1	2,508.6	0.84	
9,212.0	89.16	158.00	6,746.7	-2,724.5	187.2	2,540.6	1.23	
9,275.0	88.86	157.74	6,747.8	-2,782.9	210.9	2,603.5	0.63	
9,307.0	88.81	157.65	6,748.5	-2,812.5	223.0	2,635.4	0.32	
9,371.0	90.07	160.03	6,749.1	-2,872.2	246.1	2,699.2	4.21	
9,402.0	88.72	160.72	6,749.4	-2,901.4	256.6	2,730.1	4.89	
9,466.0	87.38	157.61	6,751.6	-2,961.1	279.3	2,793.8	5.29	
9,497.0	88.20	156.94	6,752.8	-2,989.7	291.3	2,824.8	3.41	
9,529.0	87.67	155.89	6,753.9	-3,019.0	304.1	2,856.7	3.67	
9,593.0	88.46	155.10	6,756.1	-3,077.2	330.6	2,920.7	1.75	
9,656.0	88.37	154.04	6,757.8	-3,134.1	357.6	2,983.6	1.69	
9,688.0	88.02	154.13	6,758.9	-3,162.9	371.6	3,015.6	1.13	
9,751.0	88.81	154.31	6,760.6	-3,219.6	399.0	3,078.6	1.29	
9,783.0	88.72	155.45	6,761.3	-3,248.5	412.6	3,110.6	3.57	
9,847.0	88.64	155.27	6,762.8	-3,306.7	439.3	3,174.6	0.31	
9,878.0	88.37	155.01	6,763.6	-3,334.8	452.3	3,205.6	1.21	
9,942.0	89.08	156.07	6,765.0	-3,393.0	478.8	3,269.5	1.99	
9,973.0	89.16	157.21	6,765.5	-3,421.5	491.1	3,300.5	3.69	
10,037.0	89.43	156.50	6,766.3	-3,480.3	516.2	3,364.4	1.19	
10,069.0	89.08	155.19	6,766.7	-3,509.5	529.3	3,396.4	4.24	
10,132.0	88.90	153.25	6,767.8	-3,566.3	556.7	3,459.4	3.09	
10,164.0	89.16	152.90	6,768.3	-3,594.8	571.2	3,491.4	1.36	
10,196.0	90.48	153.34	6,768.4	-3,623.3	585.7	3,523.4	4.35	
10,259.0	90.84	152.02	6,767.7	-3,679.3	614.6	3,586.4	2.17	
10,322.0	90.04	151.06	6,767.2	-3,734.7	644.6	3,649.3	1.98	
10,354.0	89.69	150.62	6,767.3	-3,762.6	660.2	3,681.2	1.76	
10,418.0	89.60	150.88	6,767.7	-3,818.5	691.5	3,745.1	0.43	
10,450.0	89.60	150.35	6,767.9	-3,846.3	707.2	3,777.0	1.66	
10,513.0	90.04	152.90	6,768.1	-3,901.8	737.1	3,839.9	4.11	
10,545.0	89.96	152.20	6,768.1	-3,930.2	751.9	3,871.9	2.20	
10,608.0	90.40	152.55	6,767.9	-3,986.0	781.1	3,934.8	0.89	
10,640.0	90.40	153.78	6,767.7	-4,014.5	795.5	3,966.8	3.84	
10,672.0	90.22	154.22	6,767.5	-4,043.3	809.5	3,998.8	1.49	
10,735.0	89.43	152.90	6,767.7	-4,099.7	837.6	4,061.8	2.44	
10,799.0	89.69	153.43	6,768.2	-4,156.8	866.5	4,125.8	0.92	

17.06272



## EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well Mash Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Site:</b>	Nero Pad	<b>MD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Well:</b>	Mash Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

## Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
10,830.0	89.60	154.40	6,768.4	-4,184.7	880.1	4,156.8	3.14
10,894.0	89.78	155.98	6,768.7	-4,242.7	907.0	4,220.8	2.48
10,926.0	89.60	156.68	6,768.9	-4,272.0	919.8	4,252.8	2.26
10,989.0	89.87	156.07	6,769.2	-4,329.8	945.1	4,315.7	1.06
11,021.0	89.78	155.36	6,769.3	-4,358.9	958.2	4,347.7	2.24
11,084.0	89.52	153.17	6,769.7	-4,415.7	985.6	4,410.7	3.50
11,148.0	89.25	155.54	6,770.4	-4,473.4	1,013.3	4,474.7	3.73
11,211.0	89.78	158.09	6,770.9	-4,531.3	1,038.1	4,537.6	4.13
11,275.0	89.52	160.72	6,771.3	-4,591.2	1,060.6	4,601.4	4.13
11,338.0	89.52	160.99	6,771.8	-4,650.7	1,081.2	4,664.0	0.43
11,370.0	89.52	160.72	6,772.1	-4,680.9	1,091.7	4,695.8	0.84
11,402.0	89.08	159.41	6,772.5	-4,711.0	1,102.6	4,727.7	4.32
11,433.0	88.46	156.15	6,773.2	-4,739.7	1,114.4	4,758.6	10.70
11,497.0	89.08	152.20	6,774.5	-4,797.3	1,142.2	4,822.6	6.25
11,560.0	89.52	153.25	6,775.3	-4,853.3	1,171.1	4,885.6	1.81
11,592.0	89.69	153.60	6,775.5	-4,881.9	1,185.4	4,917.5	1.22
11,655.0	89.69	153.25	6,775.9	-4,938.2	1,213.6	4,980.5	0.56
11,687.0	89.60	152.90	6,776.1	-4,966.8	1,228.1	5,012.5	1.13
11,750.0	89.16	153.17	6,776.7	-5,022.9	1,256.6	5,075.5	0.82
11,782.0	89.16	152.55	6,777.2	-5,051.4	1,271.2	5,107.5	1.94
11,845.0	89.43	152.73	6,778.0	-5,107.3	1,300.2	5,170.4	0.52
11,877.0	89.52	152.99	6,778.3	-5,135.8	1,314.8	5,202.4	0.86
11,941.0	89.87	153.34	6,778.6	-5,192.9	1,343.7	5,266.4	0.77
11,972.0	89.43	153.25	6,778.8	-5,220.6	1,357.6	5,297.4	1.45
12,036.0	89.50	153.44	6,779.4	-5,277.8	1,386.3	5,361.4	0.32
12,067.0	89.43	153.34	6,779.7	-5,305.5	1,400.2	5,392.4	0.39
12,131.0	89.43	153.96	6,780.3	-5,362.9	1,428.6	5,456.4	0.97
12,163.0	89.43	153.78	6,780.6	-5,391.6	1,442.7	5,488.4	0.56
12,226.0	89.52	154.66	6,781.2	-5,448.3	1,470.1	5,551.3	1.40
12,258.0	90.04	155.19	6,781.3	-5,477.3	1,483.7	5,583.3	2.32
12,321.0	88.90	155.71	6,781.9	-5,534.6	1,509.8	5,646.3	1.99
12,353.0	88.72	156.42	6,782.6	-5,563.8	1,522.8	5,678.3	2.29
12,417.0	88.99	154.75	6,783.9	-5,622.1	1,549.3	5,742.3	2.64
12,448.0	88.99	154.13	6,784.4	-5,650.1	1,562.6	5,773.3	2.00
12,512.0	88.90	155.27	6,785.6	-5,707.9	1,590.0	5,837.3	1.79
12,575.0	89.69	153.08	6,786.4	-5,764.6	1,617.4	5,900.3	3.70
12,639.0	90.13	152.55	6,786.5	-5,821.5	1,646.7	5,964.2	1.08
12,702.0	90.22	153.69	6,786.3	-5,877.7	1,675.1	6,027.2	1.82
12,734.0	89.87	153.34	6,786.3	-5,906.4	1,689.4	6,059.2	1.55
12,797.0	89.43	155.36	6,786.6	-5,963.2	1,716.7	6,122.2	3.28
12,829.0	89.43	154.75	6,787.0	-5,992.2	1,730.2	6,154.2	1.91
12,892.0	89.96	154.83	6,787.3	-6,049.2	1,757.0	6,217.2	0.85
12,924.0	89.43	155.19	6,787.5	-6,078.2	1,770.5	6,249.2	2.00
12,984.0	89.16	154.83	6,788.2	-6,132.6	1,795.9	6,309.2	0.75



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well Mash Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Site:</b>	Nero Pad	<b>MD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Well:</b>	Mash Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
13,015.0	89.96	154.66	6,788.4	-6,160.6	1,809.1	6,340.2	2.64	
13,074.0	89.69	153.43	6,788.6	-6,213.6	1,834.9	6,399.2	2.13	
13,105.0	89.52	152.37	6,788.8	-6,241.2	1,849.1	6,430.2	3.46	
13,166.0	89.96	152.46	6,789.1	-6,295.3	1,877.3	6,491.1	0.74	
13,195.0	89.34	153.08	6,789.3	-6,321.1	1,890.6	6,520.1	3.02	
13,255.0	89.96	153.08	6,789.7	-6,374.6	1,917.7	6,580.1	1.03	
13,285.0	91.01	154.66	6,789.4	-6,401.5	1,930.9	6,610.1	6.32	
13,345.0	91.01	157.03	6,788.3	-6,456.3	1,955.5	6,670.1	3.95	
13,375.0	91.01	156.33	6,787.8	-6,483.8	1,967.4	6,700.0	2.33	
13,435.0	90.66	156.15	6,786.9	-6,538.7	1,991.5	6,760.0	0.66	
13,465.0	90.31	155.71	6,786.7	-6,566.1	2,003.8	6,790.0	1.87	
13,526.0	89.60	154.83	6,786.7	-6,621.5	2,029.3	6,851.0	1.85	
13,556.0	89.87	155.80	6,786.9	-6,648.8	2,041.8	6,881.0	3.36	
13,616.0	89.87	155.54	6,787.0	-6,703.4	2,066.5	6,941.0	0.43	
13,647.0	89.52	155.36	6,787.2	-6,731.6	2,079.4	6,972.0	1.27	
13,676.0	89.69	155.01	6,787.4	-6,757.9	2,091.6	7,001.0	1.34	
13,737.0	88.99	153.96	6,788.1	-6,813.0	2,117.9	7,062.0	2.07	
13,797.0	89.60	154.22	6,788.8	-6,867.0	2,144.1	7,122.0	1.11	
13,826.0	89.69	153.96	6,789.0	-6,893.0	2,156.7	7,150.9	0.95	
13,886.0	89.69	154.92	6,789.3	-6,947.2	2,182.6	7,210.9	1.60	
13,916.0	89.60	154.92	6,789.5	-6,974.3	2,195.3	7,240.9	0.30	
13,946.0	89.43	155.36	6,789.8	-7,001.6	2,208.0	7,270.9	1.57	
14,006.0	89.69	155.86	6,790.2	-7,056.2	2,232.7	7,330.9	0.94	
14,038.0	89.25	156.15	6,790.5	-7,085.4	2,245.7	7,362.9	1.65	
14,102.0	90.75	156.24	6,790.5	-7,144.0	2,271.6	7,426.9	2.35	
14,165.0	90.66	156.59	6,789.7	-7,201.7	2,296.8	7,489.9	0.57	
14,197.0	90.40	156.59	6,789.4	-7,231.1	2,309.5	7,521.8	0.81	
14,260.0	89.96	156.42	6,789.2	-7,288.9	2,334.6	7,584.8	0.75	
14,292.0	89.52	156.15	6,789.4	-7,318.2	2,347.5	7,616.8	1.61	
14,324.0	89.28	156.68	6,789.7	-7,347.5	2,360.3	7,648.8	1.82	
14,387.0	89.08	155.27	6,790.6	-7,405.0	2,385.9	7,711.7	2.26	
14,451.0	89.69	154.48	6,791.3	-7,463.0	2,413.1	7,775.7	1.56	
14,482.0	89.78	155.45	6,791.5	-7,491.0	2,426.2	7,806.7	3.14	
14,546.0	89.69	152.46	6,791.8	-7,548.5	2,454.3	7,870.7	4.67	
14,578.0	89.60	152.29	6,792.0	-7,576.9	2,469.2	7,902.7	0.60	
14,609.0	89.69	152.64	6,792.1	-7,604.4	2,483.5	7,933.7	1.17	
14,673.0	90.22	153.08	6,792.2	-7,661.3	2,512.7	7,997.6	1.08	
14,736.0	90.75	153.43	6,791.7	-7,717.6	2,541.0	8,060.6	1.01	
14,800.0	90.57	154.48	6,790.9	-7,775.1	2,569.1	8,124.6	1.66	
14,863.0	90.66	155.98	6,790.2	-7,832.3	2,595.5	8,187.6	2.39	
14,895.0	90.84	156.42	6,789.8	-7,861.6	2,608.4	8,219.6	1.49	
14,958.0	90.48	156.24	6,789.1	-7,919.3	2,633.7	8,282.6	0.64	
14,990.0	90.13	156.15	6,788.9	-7,948.5	2,646.6	8,314.5	1.13	
15,054.0	90.40	155.98	6,788.6	-8,007.0	2,672.6	8,378.5	0.50	

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EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well Mash Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Site:</b>	Nero Pad	<b>MD Reference:</b>	Mash Unit 1H GL 1164 +25' RKB @ 1189.0usft
<b>Well:</b>	Mash Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
15,117.0	90.48	155.27	6,788.2	-8,064.4	2,698.6	8,441.5	1.13	
15,149.0	90.31	155.01	6,787.9	-8,093.4	2,712.1	8,473.5	0.97	
15,212.0	89.78	154.40	6,787.9	-8,150.4	2,739.0	8,536.5	1.28	
15,244.0	90.84	154.83	6,787.7	-8,179.3	2,752.7	8,568.5	3.57	
15,307.0	90.48	153.69	6,787.0	-8,236.1	2,780.1	8,631.5	1.90	
15,339.0	89.96	152.81	6,786.9	-8,264.6	2,794.5	8,663.5	3.19	
15,402.0	90.31	152.11	6,786.7	-8,320.5	2,823.6	8,726.4	1.24	
15,434.0	89.96	151.85	6,786.6	-8,348.7	2,838.6	8,758.4	1.36	
15,497.0	90.84	153.96	6,786.2	-8,404.8	2,867.3	8,821.4	3.63	
15,528.0	90.57	153.87	6,785.8	-8,432.7	2,880.9	8,852.4	0.92	
15,592.0	90.13	154.66	6,785.4	-8,490.3	2,908.7	8,916.4	1.41	
15,655.0	91.01	154.22	6,784.8	-8,547.1	2,935.9	8,979.4	1.56	
15,718.0	90.84	151.76	6,783.8	-8,603.3	2,964.5	9,042.3	3.91	
15,750.0	90.84	151.76	6,783.3	-8,631.5	2,979.7	9,074.3	0.00	
15,812.0	91.63	153.08	6,782.0	-8,686.4	3,008.4	9,136.2	2.48	
15,875.0	91.71	152.81	6,780.1	-8,742.5	3,037.0	9,199.2	0.45	
15,907.0	91.63	152.73	6,779.2	-8,770.9	3,051.6	9,231.1	0.35	
15,970.0	91.63	153.34	6,777.4	-8,827.0	3,080.2	9,294.1	0.97	
16,001.0	91.36	153.52	6,776.6	-8,854.8	3,094.0	9,325.1	1.05	
16,065.0	90.84	153.43	6,775.4	-8,912.0	3,122.6	9,389.1	0.82	
16,096.0	90.48	152.99	6,775.0	-8,939.7	3,136.6	9,420.1	1.83	
16,159.0	91.45	154.13	6,774.0	-8,996.1	3,164.6	9,483.0	2.38	
16,222.0	91.71	154.75	6,772.2	-9,052.9	3,191.8	9,546.0	1.07	
16,286.0	91.45	157.21	6,770.5	-9,111.3	3,217.9	9,610.0	3.86	
16,349.0	89.16	154.48	6,770.1	-9,168.8	3,243.6	9,672.9	5.66	
16,436.0	89.78	153.86	6,770.9	-9,247.1	3,281.5	9,759.9	1.01	
16,488.0	90.15	153.49	6,771.0	-9,293.7	3,304.6	9,811.9	1.01	

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
6,740.0	6,509.7	-528.4	-738.4	Middlesex	
6,929.0	6,632.5	-671.5	-742.0	Burkett	
6,989.0	6,662.4	-723.4	-740.1	Tully	
7,074.0	6,694.3	-801.3	-728.8	Marcellus	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_