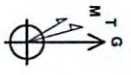




Mishka Unit 2H
 Doddridge County WV
 Northing: 14294295.71
 Easting: 1719154.86
 As Drilled



WELL DETAILS Mishka Unit 2H

Ground Level:	1115.0
+N/S	0.0
+E/W	0.0
Northing	14294295.71
Easting	1719154.86
Longitude	1719154.86
Latitude	42.7486 N
Longitude	43.17117 W

Frontier 22, 1115' + 28' RKB @ 1140' Outh
 Gr: 1115.0

LEGEND

- Mishka Unit 2H, Original Wellpath, Plan 4 V0
- ◇ As Drilled

DESIGN TARGET DETAILS

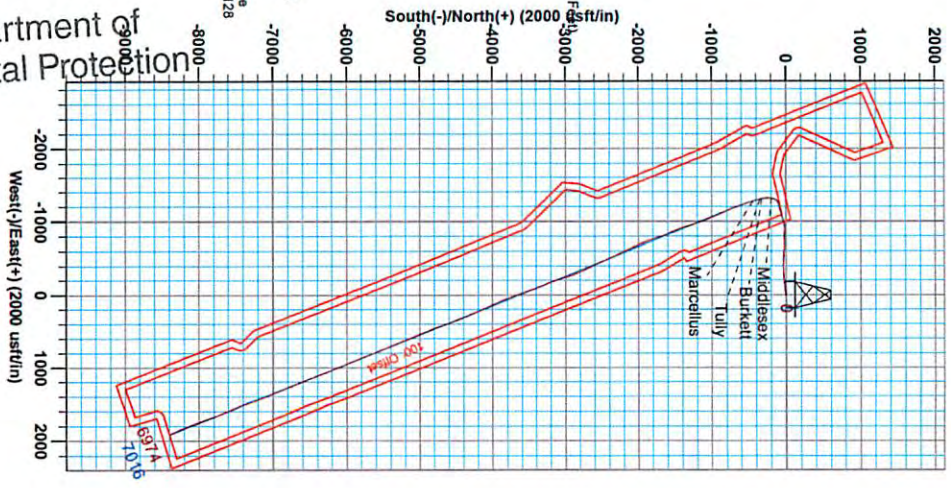
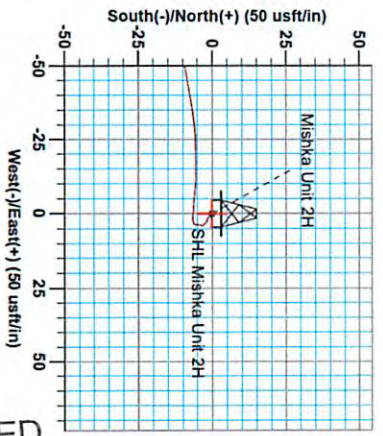
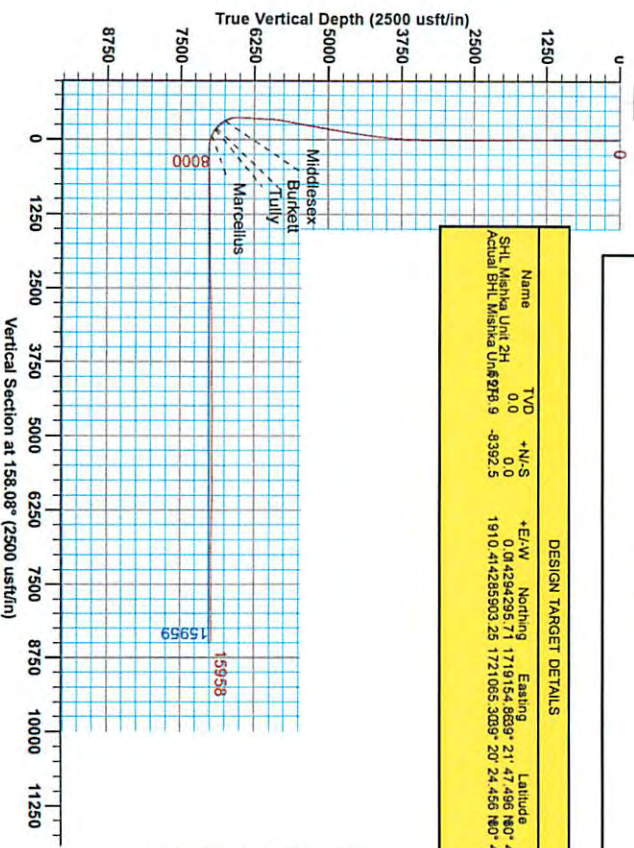
Name	TVD	+N/S	+E/W	Northing	Easting	Latitude	Longitude
SHL Mishka Unit 2H	0.0	0.0	0.0	14294295.71	1719154.86	42.7486 N	43.17117 W
Actual BHL Mishka Unit 2H	9	-392.5	1910.4	14295903.25	1721065.30	42.7486 N	42.53121 W

SITE DETAILS: Mishka/McMillan/Hoskinson Pad

Site Center:	Mishka Unit 2H
Site Center:	McMillan / Hoskinson
Site Centre Northing:	14294295.71
Site Centre Easting:	1719154.86
Positional Uncertainty:	2.8
Convergence:	0.18
Local North:	Grid

PROJECT DETAILS: Doddridge County WV

Geoidetic System:	Universal Transverse Mercator (US Survey Feet)
Datum:	NAD 1983 (NAD83 CONUS)
Ellipsoid:	Clarke 1866
Zone:	Zone 17N (84 W to 78 W)
System Datum:	Mean Sea Level



Azimuth to Grid North: 0.18°
 True North: -0.18°
 Magnetic North: -8.65°
 To convert Magnetic North to Grid, Subtract 8.65°
 To convert True North to Grid, Subtract 0.18°

Magnetic Field
 Strength: 52370 Gauss
 Dip Angle: 66.90°
 Date: 11/12/2014
 Model: IGRF2010

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WV Department of
 Environmental Protection

Gene Lightfoot
 1345, May 09 2014
 Scientific Drilling
 421 South Eagle Lane
 Oklahoma City, OK 73128

08/14/2015



Antero Resources

Doddridge County WV
Mishka/McMillan/Hoskinson Pad
Mishka Unit 2H
Original Wellpath

Design: As Drilled

EOW Completion Report

05 May, 2014

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Environmental Protection



Scientific Drilling

08/14/2015



Company: Antero Resources	Local Co-ordinate Reference: Well Mishka Unit 2H
Project: Doddridge County WV	TVD Reference: Frontier 22: 1115' + 25' RKB @ 1140.0usft
Site: Mishka/McMillan/Hoskinson Pad	MD Reference: Frontier 22: 1115' + 25' RKB @ 1140.0usft
Well: Mishka Unit 2H	North Reference: Grid
Wellbore: Original Wellpath	Survey Calculation Method: Minimum Curvature
Design: As Drilled	Database: Oklahoma District

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

JUL 13 2015

Site Mishka/McMillan/Hoskinson Pad, Site Center: Mishka Unit 2H
Site Position: Northing: 14,294,295.71 usft Latitude: 39° 21' 47.496 N
From: Map Easting: 1,719,154.86 usft Longitude: 80° 43' 17.117 W
Position Uncertainty: 2.8 usft Slot Radius: 13-3/16" Grid Convergence: 0.18 °

WV Department of
Environmental Protection

Well Mishka Unit 2H, Marcellus
Well Position +N/-S 0.0 usft Northing: 14,294,295.71 usft Latitude: 39° 21' 47.496 N
+E/-W 0.0 usft Easting: 1,719,154.86 usft Longitude: 80° 43' 17.117 W
Position Uncertainty 2.8 usft Wellhead Elevation: 1,140.0 usft Ground Level: 1,115.0 usft

Wellbore Original Wellpath

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/13/2014	-8.52	66.90	52,377

Design As Drilled

Audit Notes:
Version: 1.0 Phase: ACTUAL Tie On Depth: 0.0
Vertical Section:
Depth From (TVD) (usft) +N/-S (usft) +E/-W (usft) Direction (°)
0.0 0.0 0.0 158.08

Survey Program Date 5/5/2014
From (usft) To (usft) Survey (Wellbore) Tool Name Description
12.0 5,944.0 Survey #3 Def Gyro to KOP (Original Well) SDI Standard Keeper Scientific Drilling Intl. Standard Wireline Keeper
6,041.0 15,958.0 Survey #4 MWD (Original Wellpath) MWD SDI 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
12.0	0.00	0.00	12.0	0.0	0.0	0.0	0.00
112.0	0.07	108.11	112.0	0.0	0.1	0.0	0.07
212.0	0.10	125.20	212.0	-0.1	0.2	0.2	0.04
312.0	0.04	355.21	312.0	-0.1	0.3	0.2	0.13
412.0	0.09	161.64	412.0	-0.1	0.3	0.2	0.13
512.0	0.12	116.74	512.0	-0.3	0.4	0.4	0.08
612.0	0.17	146.23	612.0	-0.4	0.6	0.6	0.09
712.0	0.24	141.78	712.0	-0.7	0.8	1.0	0.07
812.0	0.20	136.12	812.0	-1.0	1.0	1.3	0.05
912.0	0.20	136.14	912.0	-1.3	1.3	1.7	0.00



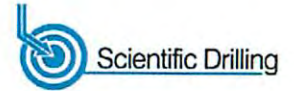
Company:	Antero Resources	Local Co-ordinate Reference:	Well Mishka Unit 2H
Project:	Doddridge County WV	TVD Reference:	Frontier 22: 1115' + 25' RKB @ 1140.0usft
Site:	Mishka/McMillan/Hoskinson Pad	MD Reference:	Frontier 22: 1115' + 25' RKB @ 1140.0usft
Well:	Mishka Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)		
1,012.0	0.16	112.63	1,012.0	-1.4	1.5	1.9	0.08		
1,112.0	0.10	103.84	1,112.0	-1.5	1.7	2.1	0.06		
1,212.0	0.17	96.39	1,212.0	-1.6	2.0	2.2	0.07		
1,312.0	0.18	109.71	1,312.0	-1.6	2.3	2.4	0.04		
1,412.0	0.19	111.65	1,412.0	-1.7	2.6	2.6	0.01		
1,512.0	0.22	145.72	1,512.0	-2.0	2.8	2.9	0.12		
1,612.0	0.18	127.53	1,612.0	-2.2	3.1	3.2	0.07		
1,712.0	0.16	140.52	1,712.0	-2.4	3.3	3.5	0.04		
1,812.0	0.27	135.17	1,812.0	-2.7	3.5	3.8	0.11		
1,912.0	0.15	139.06	1,912.0	-3.0	3.8	4.2	0.12		
2,012.0	0.14	125.16	2,012.0	-3.1	4.0	4.4	0.04		
2,112.0	0.08	178.03	2,112.0	-3.3	4.1	4.6	0.11		
2,212.0	0.03	149.61	2,212.0	-3.4	4.1	4.6	0.06		
2,312.0	0.07	190.47	2,312.0	-3.4	4.1	4.7	0.05		
2,412.0	0.03	257.27	2,412.0	-3.5	4.1	4.8	0.06		
2,512.0	0.12	222.79	2,512.0	-3.6	4.0	4.8	0.10		
2,612.0	0.24	192.23	2,612.0	-3.9	3.8	5.0	0.15		
2,712.0	0.22	183.12	2,712.0	-4.3	3.8	5.4	0.04		
2,812.0	0.22	189.05	2,812.0	-4.7	3.7	5.7	0.02		
2,912.0	0.19	188.88	2,912.0	-5.0	3.7	6.0	0.03		
3,012.0	0.17	183.21	3,012.0	-5.3	3.7	6.3	0.03		
3,112.0	0.24	192.41	3,112.0	-5.7	3.6	6.6	0.08		
3,212.0	0.31	198.25	3,212.0	-6.1	3.5	7.0	0.08		
3,312.0	1.42	264.41	3,312.0	-6.5	2.2	6.8	1.33		
3,412.0	3.91	276.69	3,411.9	-6.2	-2.5	4.9	2.54		
3,512.0	6.22	273.80	3,511.5	-5.5	-11.3	0.9	2.32		
3,612.0	8.96	266.87	3,610.6	-5.5	-24.4	-4.0	2.88		
3,712.0	12.04	259.59	3,708.9	-7.9	-42.5	-8.6	3.35		
3,812.0	15.28	262.83	3,806.1	-11.4	-65.8	-14.0	3.33		
3,912.0	18.41	265.42	3,901.8	-14.3	-94.6	-22.1	3.22		
4,012.0	22.07	265.95	3,995.6	-16.9	-129.1	-32.5	3.66		
4,112.0	24.17	263.33	4,087.5	-20.6	-168.2	-43.7	2.34		
4,212.0	24.47	263.42	4,178.7	-25.3	-209.1	-54.6	0.30		
4,312.0	24.23	264.13	4,269.8	-29.8	-250.1	-65.7	0.38		
4,412.0	23.12	267.01	4,361.4	-32.9	-290.1	-77.8	1.60		
4,512.0	23.30	267.48	4,453.3	-34.8	-329.5	-90.7	0.26		
4,612.0	23.96	270.68	4,544.9	-35.5	-369.6	-105.1	1.44		
4,712.0	23.08	269.31	4,636.6	-35.4	-409.5	-120.0	1.04		
4,812.0	22.79	269.25	4,728.7	-35.9	-448.4	-134.1	0.29		
4,912.0	22.53	272.15	4,821.0	-35.5	-488.3	-148.9	1.15		
5,012.0	22.23	275.15	4,913.4	-33.1	-524.9	-165.3	1.18		
5,112.0	22.81	275.88	5,005.8	-29.4	-563.0	-182.9	0.64		
5,212.0	22.65	273.00	5,098.0	-26.4	-601.6	-200.1	1.12		
5,312.0	22.47	269.85	5,190.4	-25.4	-639.9	-215.3	1.22		

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EOW Completion Report



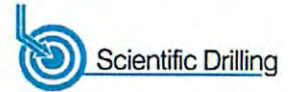
Company: Antero Resources	Local Co-ordinate Reference: Well Mishka Unit 2H
Project: Doddridge County WV	TVD Reference: Frontier 22: 1115' + 25' RKB @ 1140.0usft
Site: Mishka/McMillan/Hoskinson Pad	MD Reference: Frontier 22: 1115' + 25' RKB @ 1140.0usft
Well: Mishka Unit 2H	North Reference: Grid
Wellbore: Original Wellpath	Survey Calculation Method: Minimum Curvature
Design: As Drilled	Database: Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
5,412.0	22.87	270.62	5,282.7	-25.3	-678.4	-229.8	0.50	
5,512.0	22.73	271.54	5,374.8	-24.5	-717.2	-245.0	0.38	
5,612.0	24.06	271.50	5,466.6	-23.5	-756.9	-260.8	1.33	
5,712.0	25.25	273.68	5,557.5	-21.6	-798.5	-278.1	1.50	
5,812.0	25.77	273.46	5,647.8	-18.9	-841.5	-296.6	0.53	
5,912.0	25.24	271.41	5,738.0	-17.1	-884.5	-314.4	1.03	
5,944.0	25.15	270.24	5,767.0	-16.9	-898.2	-319.7	1.58	
6,041.0	24.63	265.50	5,855.0	-18.4	-938.9	-333.5	2.13	
6,137.0	26.42	254.88	5,941.6	-25.5	-979.5	-342.0	5.11	
6,233.0	25.95	254.17	6,027.8	-36.8	-1,020.3	-346.8	0.59	
6,330.0	24.92	252.62	6,115.4	-48.7	-1,060.3	-350.6	1.26	
6,426.0	25.42	256.94	6,202.3	-59.4	-1,099.6	-355.4	1.98	
6,522.0	24.15	252.69	6,289.4	-69.9	-1,138.5	-360.2	2.28	
6,619.0	23.55	255.30	6,378.2	-80.7	-1,176.1	-364.2	1.25	
6,715.0	24.56	256.28	6,465.8	-90.3	-1,214.1	-369.4	1.13	
6,742.0	24.08	256.03	6,490.4	-93.0	-1,224.9	-371.0	1.82	
6,774.0	24.23	252.50	6,519.6	-96.5	-1,237.5	-372.4	4.54	
6,806.0	25.56	242.64	6,548.7	-101.7	-1,249.9	-372.3	13.60	
6,838.0	27.33	234.19	6,577.3	-109.2	-1,262.0	-369.8	12.98	
6,870.0	28.79	226.43	6,605.6	-118.8	-1,273.5	-365.2	12.28	
6,902.0	30.69	219.18	6,633.4	-130.4	-1,284.3	-358.4	12.70	
6,935.0	31.97	210.60	6,661.6	-144.5	-1,294.0	-349.1	14.05	
6,967.0	33.21	204.43	6,688.5	-159.7	-1,302.0	-337.8	11.08	
6,999.0	34.79	199.04	6,715.1	-176.4	-1,308.6	-324.9	10.63	
7,031.0	36.04	192.99	6,741.1	-194.2	-1,313.7	-310.3	11.63	
7,035.0	36.19	192.36	6,744.4	-196.5	-1,314.2	-308.3	9.97	
Middlesex								
7,063.0	37.34	188.11	6,766.8	-212.9	-1,317.2	-294.2	9.97	
7,095.0	39.17	184.70	6,791.9	-232.6	-1,319.4	-276.7	8.73	
7,128.0	41.04	179.95	6,817.2	-253.9	-1,320.2	-257.3	10.86	
7,160.0	43.44	173.26	6,840.9	-275.3	-1,318.9	-237.0	15.92	
7,192.0	45.43	169.19	6,863.7	-297.4	-1,315.5	-215.1	10.86	
7,224.0	47.90	167.49	6,885.7	-320.2	-1,310.8	-192.2	8.63	
7,230.0	48.58	167.11	6,889.7	-324.6	-1,309.8	-187.8	12.35	
Burkett								
7,256.0	51.56	165.53	6,906.4	-344.0	-1,305.0	-168.1	12.35	
7,262.0	52.08	165.31	6,910.1	-348.5	-1,303.9	-163.4	9.14	
Tully								
7,288.0	54.34	164.39	6,925.7	-368.6	-1,298.4	-142.7	9.14	
7,320.0	56.42	163.40	6,943.8	-393.9	-1,291.1	-116.5	6.98	
7,352.0	60.70	163.25	6,960.5	-420.1	-1,283.3	-89.4	13.38	
7,377.0	63.90	163.10	6,972.1	-441.2	-1,276.9	-67.3	12.83	
Marcellus								
7,385.0	64.93	163.06	6,975.6	-448.2	-1,274.8	-60.9	12.83	
7,417.0	69.58	162.37	6,988.0	-476.3	-1,266.0	-30.7	14.67	

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Mishka Unit 2H
Project:	Doddridge County WV	TVD Reference:	Frontier 22: 1115' + 25' RKB @ 1140.0usft
Site:	Mishka/McMillan/Hoskinson Pad	MD Reference:	Frontier 22: 1115' + 25' RKB @ 1140.0usft
Well:	Mishka Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

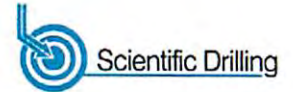
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
7,449.0	74.43	161.04	6,997.9	-505.2	-1,256.4	-0.4	15.66
7,481.0	78.88	159.31	7,005.2	-534.5	-1,245.9	30.7	14.87
7,513.0	82.93	160.09	7,010.3	-564.1	-1,234.9	62.3	12.88
7,584.0	90.13	161.21	7,014.6	-630.9	-1,211.5	133.1	10.26
7,680.0	90.40	156.86	7,014.1	-720.6	-1,177.1	229.0	4.54
7,777.0	90.87	154.60	7,013.1	-809.0	-1,137.3	325.9	2.38
7,873.0	89.77	154.64	7,012.5	-895.7	-1,096.1	421.8	1.15
7,970.0	91.24	159.02	7,011.7	-984.9	-1,058.0	518.7	4.76
8,065.0	90.64	157.34	7,010.1	-1,073.0	-1,022.7	613.7	1.88
8,162.0	92.65	162.52	7,007.3	-1,164.1	-989.4	710.6	5.73
8,258.0	91.65	163.24	7,003.7	-1,255.8	-961.2	806.2	1.28
8,355.0	92.02	163.59	7,000.6	-1,348.7	-933.5	902.7	0.52
8,451.0	89.33	158.69	6,999.5	-1,439.5	-902.5	998.5	5.82
8,548.0	88.79	155.65	7,001.1	-1,528.8	-864.8	1,095.5	3.18
8,644.0	89.46	158.76	7,002.6	-1,617.3	-827.7	1,191.4	3.31
8,740.0	90.81	160.58	7,002.3	-1,707.3	-794.3	1,287.4	2.36
8,837.0	93.39	163.74	6,998.8	-1,799.6	-764.6	1,384.1	4.20
8,933.0	90.77	158.64	6,995.3	-1,890.4	-733.7	1,479.8	5.97
9,030.0	89.43	154.91	6,995.1	-1,979.5	-695.4	1,576.8	4.09
9,126.0	90.20	155.51	6,995.4	-2,066.6	-655.2	1,672.6	1.02
9,222.0	90.87	153.17	6,994.5	-2,153.2	-613.6	1,768.4	2.54
9,313.0	89.70	155.70	6,994.1	-2,235.2	-574.4	1,859.2	3.06
9,404.0	90.03	156.34	6,994.3	-2,318.4	-537.4	1,950.2	0.79
9,494.0	90.13	154.77	6,994.2	-2,400.3	-500.1	2,040.1	1.75
9,583.0	91.21	157.66	6,993.1	-2,481.7	-464.2	2,129.0	3.47
9,674.0	90.57	152.78	6,991.7	-2,564.3	-426.1	2,219.9	5.41
9,764.0	91.55	154.71	6,990.0	-2,645.0	-386.3	2,309.6	2.40
9,856.0	91.41	155.23	6,987.7	-2,728.4	-347.4	2,401.4	0.59
9,946.0	91.07	154.89	6,985.7	-2,809.9	-309.5	2,491.3	0.53
10,037.0	93.16	159.82	6,982.4	-2,893.8	-274.5	2,582.2	5.88
10,128.0	93.23	165.54	6,977.3	-2,980.5	-247.4	2,672.7	6.28
10,218.0	90.64	163.02	6,974.2	-3,067.1	-223.1	2,762.1	4.01
10,310.0	90.47	160.29	6,973.4	-3,154.4	-194.1	2,853.9	2.97
10,406.0	90.91	155.84	6,972.2	-3,243.5	-158.3	2,949.9	4.66
10,503.0	91.01	156.50	6,970.6	-3,332.2	-119.1	3,046.8	0.69
10,599.0	91.48	161.72	6,968.5	-3,421.8	-84.9	3,142.8	5.46
10,695.0	90.10	161.30	6,967.2	-3,512.8	-54.4	3,238.6	1.50
10,792.0	90.34	161.53	6,966.8	-3,604.8	-23.5	3,335.4	0.34
10,888.0	89.83	159.03	6,966.6	-3,695.1	8.9	3,431.3	2.66
10,985.0	90.20	157.77	6,966.6	-3,785.3	44.6	3,528.3	0.35
11,081.0	91.31	157.93	6,965.4	-3,874.2	80.8	3,624.3	1.17
11,178.0	91.31	158.22	6,963.1	-3,964.2	117.0	3,721.3	0.30
11,274.0	89.73	154.90	6,962.3	-4,052.3	155.2	3,817.2	3.83
11,371.0	89.73	154.60	6,962.7	-4,140.0	196.6	3,914.1	0.31

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EOW Completion Report

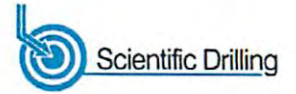


Company:	Antero Resources	Local Co-ordinate Reference:	Well Mishka Unit 2H
Project:	Doddridge County WV	TVD Reference:	Frontier 22: 1115' + 25' RKB @ 1140.0usft
Site:	Mishka/McMillan/Hoskinson Pad	MD Reference:	Frontier 22: 1115' + 25' RKB @ 1140.0usft
Well:	Mishka Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
11,467.0	90.03	153.23	6,962.9	-4,226.2	238.8	4,009.8	1.46
11,564.0	91.07	157.92	6,962.0	-4,314.5	278.9	4,106.7	4.95
11,660.0	89.93	159.91	6,961.2	-4,404.1	313.4	4,202.7	2.39
11,756.0	90.81	159.66	6,960.5	-4,494.1	346.6	4,298.6	0.95
11,853.0	89.87	160.31	6,960.0	-4,585.3	379.8	4,395.6	1.18
11,949.0	91.04	161.23	6,959.2	-4,675.9	411.4	4,491.4	1.55
12,045.0	89.26	157.93	6,958.9	-4,765.9	444.9	4,587.4	3.91
12,141.0	90.34	157.85	6,959.3	-4,854.8	481.0	4,683.4	1.13
12,238.0	90.77	157.60	6,958.3	-4,944.6	517.8	4,780.4	0.51
12,334.0	89.26	157.50	6,958.3	-5,033.3	554.4	4,876.4	1.58
12,431.0	90.37	158.13	6,958.6	-5,123.1	591.1	4,973.4	1.32
12,527.0	88.72	157.83	6,959.4	-5,212.1	627.0	5,069.4	1.75
12,622.0	88.73	157.73	6,961.5	-5,300.0	663.0	5,164.3	0.11
12,718.0	89.90	157.11	6,962.7	-5,388.6	699.8	5,260.3	1.38
12,815.0	90.34	156.19	6,962.5	-5,477.7	738.3	5,357.3	1.05
12,911.0	91.08	158.81	6,961.3	-5,566.4	775.0	5,453.3	2.84
13,007.0	90.34	157.86	6,960.1	-5,655.6	810.4	5,549.3	1.25
13,103.0	91.68	158.91	6,958.4	-5,744.8	845.8	5,645.2	1.77
13,199.0	89.63	157.98	6,957.3	-5,834.1	881.1	5,741.2	2.34
13,296.0	90.34	156.56	6,957.3	-5,923.6	918.5	5,838.2	1.64
13,392.0	90.60	157.23	6,956.5	-6,011.9	956.2	5,934.2	0.75
13,488.0	89.20	156.73	6,956.7	-6,100.2	993.7	6,030.2	1.55
13,584.0	88.82	158.57	6,958.3	-6,189.0	1,030.2	6,126.2	1.96
13,681.0	88.86	158.08	6,960.3	-6,279.1	1,066.1	6,223.1	0.51
13,777.0	89.23	158.92	6,961.9	-6,368.4	1,101.2	6,319.1	0.96
13,873.0	88.52	158.76	6,963.8	-6,457.9	1,135.9	6,415.1	0.76
13,969.0	88.83	157.65	6,966.0	-6,547.0	1,171.5	6,511.1	1.20
14,066.0	88.22	156.29	6,968.5	-6,636.3	1,209.5	6,608.0	1.54
14,161.0	88.35	158.01	6,971.4	-6,723.8	1,246.3	6,703.0	1.81
14,258.0	89.87	157.57	6,972.9	-6,813.6	1,283.0	6,799.9	1.63
14,354.0	89.46	158.02	6,973.4	-6,902.4	1,319.3	6,895.9	0.63
14,450.0	88.49	158.48	6,975.1	-6,991.6	1,354.8	6,991.9	1.12
14,547.0	89.26	156.75	6,977.0	-7,081.3	1,391.8	7,088.9	1.95
14,643.0	89.80	157.59	6,977.8	-7,169.7	1,429.0	7,184.9	1.04
14,740.0	89.26	157.76	6,978.6	-7,259.5	1,465.9	7,281.9	0.58
14,836.0	91.07	159.89	6,978.4	-7,349.0	1,500.5	7,377.8	2.91
14,932.0	91.98	159.20	6,975.8	-7,438.9	1,534.1	7,473.8	1.19
15,029.0	89.87	158.62	6,974.2	-7,529.4	1,569.0	7,570.8	2.26
15,124.0	90.23	157.28	6,974.2	-7,617.4	1,604.6	7,665.7	1.46
15,221.0	91.34	159.70	6,972.8	-7,707.6	1,640.2	7,762.7	2.74
15,317.0	89.97	160.46	6,971.7	-7,797.9	1,672.9	7,858.7	1.63
15,414.0	90.20	160.85	6,971.6	-7,889.4	1,705.0	7,955.6	0.97
15,510.0	91.17	160.11	6,970.4	-7,979.9	1,737.1	8,051.5	1.27
15,606.0	90.30	160.67	6,969.2	-8,070.3	1,769.3	8,147.4	1.08
15,703.0	88.66	158.25	6,970.1	-8,161.1	1,803.3	8,244.3	3.01

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Company:	Antero Resources	Local Co-ordinate Reference:	Well Mishka Unit 2H
Project:	Doddridge County WV	TVD Reference:	Frontier 22: 1115' + 25' RKB @ 1140.0usft
Site:	Mishka/McMillan/Hoskinson Pad	MD Reference:	Frontier 22: 1115' + 25' RKB @ 1140.0usft
Well:	Mishka Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
15,799.0	88.62	154.44	6,972.4	-8,249.0	1,841.8	8,340.3	3.97
15,898.0	89.83	154.44	6,973.7	-8,338.3	1,884.6	8,439.0	1.22
15,958.0	89.83	154.44	6,973.9	-8,392.5	1,910.4	8,498.9	0.00

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,035.0	6,744.4	-196.5	-1,314.2	Middlesex
7,230.0	6,889.7	-324.6	-1,309.8	Burkett
7,262.0	6,910.1	-348.5	-1,303.9	Tully
7,377.0	6,972.1	-441.2	-1,276.9	Marcellus

Checked By: _____ Approved By: _____ Date: _____

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