



Antero Resources
Norris Unit 1H
 Harrison County West Virginia
 Northing: 14254524.03
 Easting: 1764852.54
 As Drilled

Scientific Drilling
 421 South Eagle Lane
 Oklahoma City, OK

Genie Lightfoot
 10:48, July 31 2013

WELL DETAILS: Norris Unit 1H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	14254524.03	1764852.54	39° 15' 12.460 N	80° 33' 37.543 W	

REFERENCE INFORMATION

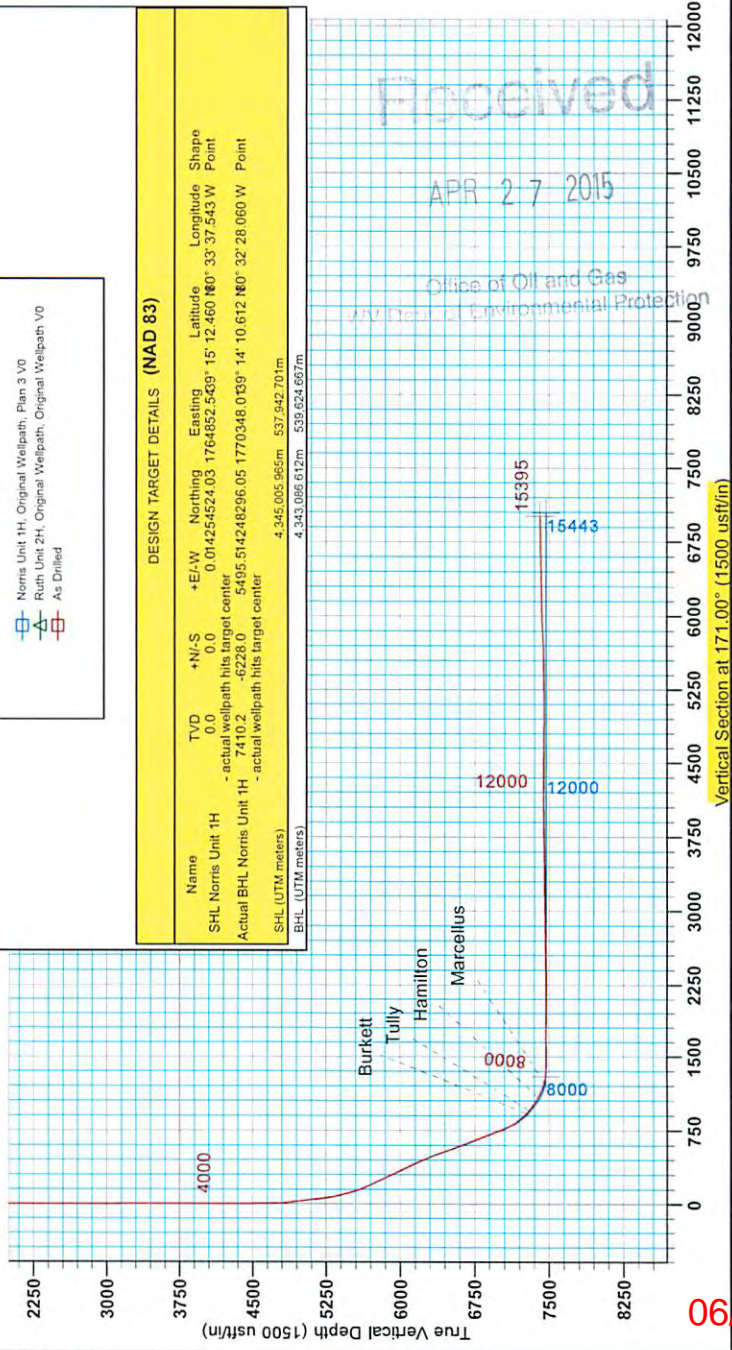
Coordinates: UTM, Zone 18Q, Datum: NAD 83, Units: Meter
 Vertical (VD) Reference: Mean Sea Level (MSL)
 Section (VS) Reference: Slope = 0.04, 0.05, 1.37% - 2.14% @ 1:000 Offset (Original Well Log)
 Measurement Method: Minimum Curvature

LEGEND

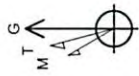
	Norris Unit 1H, Original Wellpath, Plan 3 V0
	Ruth Unit 2H, Original Wellpath, Original Wellpath V0
	As Drilled

DESIGN TARGET DETAILS (NAD 83)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shapiro
SHL Norris Unit 1H	0.0	0.0	0.0	14254524.03	1764852.5439	15° 12' 46.00"	80° 33' 37.543 W	Point
- actual wellpath hits target center								
Actual BHL Norris Unit 1H	7410.2	-5228.0	5495.514248296.05	1770348.0339	14	10.612 N00	32° 28.060 W	Point
- actual wellpath hits target center								
SHL (UTM, meters)				4,345,005.965m	537,942.701m			
BHL (UTM, meters)				4,343,086.612m	539,624.667m			



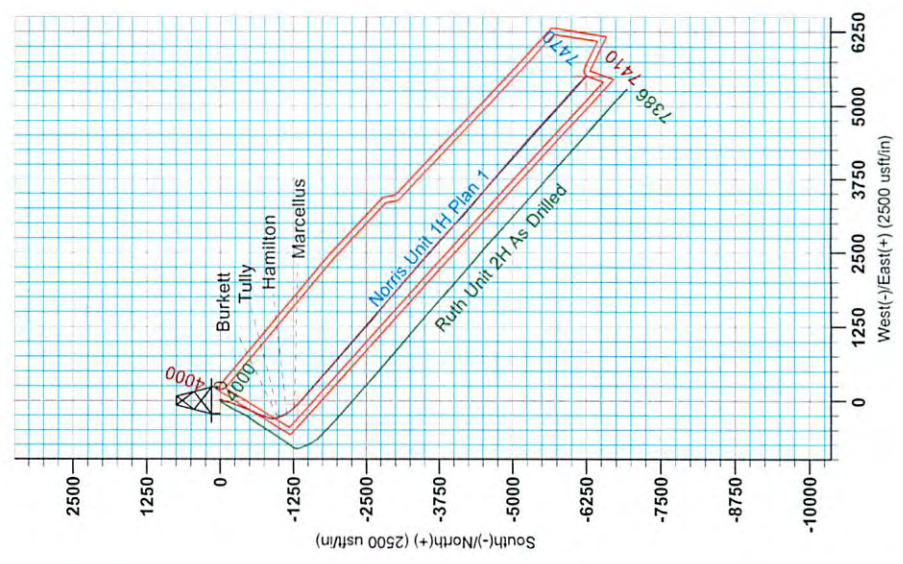
06/12/2015



To convert Magnetic North to Grid, Subtract 8.80°
 To convert True North to Grid, Subtract 0.28°

Azimuths to Grid North
 True North: -0.28°
 Magnetic North: -8.86°

Magnetic Field
 Strength: 48.00
 Declination: 8.86°
 Date: 6/20/2013
 Model: IGRF2010





Antero Resources

Harrison County West Virginia
Ruth/Norris/Nellie/Ford Pad
Norris Unit 1H
Original Wellpath

Design: As Drilled

EOW Completion Report

31 July, 2013

Received

APR 27 2015

Office of Oil and Gas
Environmental Protection



06/12/2015



Received

EOW Completion Report



APR 27 2015

Company:	Antero Resources	Local Co-ordinate Reference:	Well Norris Unit 1H
Project:	Harrison County West Virginia	TVD Reference:	Norris Unit 1H GL 1376' + 24' KB @ 1400.0usft (C
Site:	Ruth/Norris/Nellie/Ford Pad	MD Reference:	Norris Unit 1H GL 1376' + 24' KB @ 1400.0usft (C
Well:	Norris Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Project	Harrison County West Virginia, Harrison County, USA		
Map System:	Universal Transverse Mercator (US Survey Fee	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 17N (84 W to 78 W)		

Site	Ruth/Norris/Nellie/Ford Pad				
Site Position:		Northing:	14,254,530.66 usft	Latitude:	39° 15' 12.526 N
From:	Map	Easting:	1,764,845.07 usft	Longitude:	80° 33' 37.638 W
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.28 °

Well	Norris Unit 1H, Marcellus					
Well Position	+N/-S	0.0 usft	Northing:	14,254,524.03 usft	Latitude:	39° 15' 12.460 N
	+E/-W	0.0 usft	Easting:	1,764,852.54 usft	Longitude:	80° 33' 37.543 W
Position Uncertainty	2.0 usft		Wellhead Elevation:	1,400.0 usft	Ground Level:	1,376.0 usft

Wellbore	Original Wellpath				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/20/2013	-8.58	66.85	52,369

Design	As Drilled				
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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	171.00

Survey Program	Date 7/31/2013				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	6,951.2	Survey #4 Def Gyro to KOP (Original Well	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper	
7,071.0	15,395.0	Survey #5 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	0.63	45.65	100.0	0.4	0.4	-0.3	0.63
200.0	1.08	61.58	200.0	1.2	1.6	-0.9	0.50
300.0	1.61	61.28	300.0	2.3	3.7	-1.7	0.53
400.0	1.62	61.29	399.9	3.7	6.1	-2.7	0.01
500.0	0.88	66.05	499.9	4.7	8.1	-3.4	0.75
600.0	0.42	70.66	599.9	5.1	9.1	-3.6	0.46
700.0	0.25	66.48	699.9	5.3	9.7	-3.7	0.17
800.0	0.22	74.44	799.9	5.5	10.1	-3.8	0.04
900.0	0.09	104.86	899.9	5.5	10.3	-3.8	0.15
1,000.0	0.13	112.17	999.9	5.4	10.5	-3.7	0.04

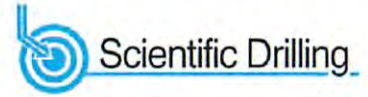


Company:	Antero Resources	Local Co-ordinate Reference:	Well Norris Unit 1H
Project:	Harrison County West Virginia	TVD Reference:	Norris Unit 1H GL 1376' + 24' KB @ 1400.0usft (C
Site:	Ruth/Norris/Nellie/Ford Pad	MD Reference:	Norris Unit 1H GL 1376' + 24' KB @ 1400.0usft (C
Well:	Norris Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

APR 27 2015
Office of Oil and Gas
WV Dept. of Environmental Protection

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,100.0	0.10	117.41	1,099.9	5.4	10.7	-3.6	0.03
1,200.0	0.11	137.02	1,199.9	5.2	10.8	-3.5	0.04
1,300.0	0.15	123.09	1,299.9	5.1	11.0	-3.3	0.05
1,400.0	0.19	150.71	1,399.9	4.9	11.2	-3.1	0.09
1,500.0	0.21	129.12	1,499.9	4.6	11.4	-2.8	0.08
1,600.0	0.11	187.60	1,599.9	4.4	11.6	-2.6	0.18
1,700.0	0.13	167.14	1,699.9	4.2	11.6	-2.3	0.05
1,800.0	0.17	203.94	1,799.9	4.0	11.5	-2.1	0.10
1,900.0	0.13	174.30	1,899.9	3.7	11.5	-1.9	0.09
2,000.0	0.17	209.88	1,999.9	3.5	11.4	-1.6	0.10
2,100.0	0.29	216.29	2,099.9	3.1	11.2	-1.3	0.12
2,200.0	0.21	183.20	2,199.9	2.8	11.0	-1.0	0.16
2,300.0	0.19	187.08	2,299.9	2.4	11.0	-0.7	0.02
2,400.0	0.09	192.67	2,399.9	2.2	11.0	-0.4	0.10
2,500.0	0.15	113.78	2,499.9	2.0	11.1	-0.3	0.16
2,600.0	0.10	194.97	2,599.9	1.9	11.2	-0.1	0.17
2,700.0	0.19	135.89	2,699.9	1.7	11.3	0.1	0.16
2,800.0	0.29	109.13	2,799.9	1.5	11.6	0.3	0.15
2,900.0	0.33	108.63	2,899.9	1.3	12.1	0.6	0.04
3,000.0	0.86	78.94	2,999.9	1.4	13.1	0.7	0.60
3,100.0	0.36	111.01	3,099.9	1.4	14.2	0.8	0.59
3,200.0	0.41	98.41	3,199.9	1.2	14.8	1.1	0.10
3,300.0	0.30	99.19	3,299.9	1.1	15.4	1.3	0.11
3,400.0	0.33	99.23	3,399.9	1.1	16.0	1.5	0.03
3,500.0	0.21	106.87	3,499.9	1.0	16.4	1.6	0.13
3,600.0	0.15	94.31	3,599.9	0.9	16.7	1.7	0.07
3,700.0	0.25	104.50	3,699.9	0.8	17.1	1.9	0.11
3,800.0	0.27	99.51	3,799.9	0.7	17.5	2.0	0.03
3,900.0	0.24	99.48	3,899.9	0.7	18.0	2.2	0.03
4,000.0	0.21	110.53	3,999.9	0.6	18.3	2.3	0.05
4,100.0	0.19	95.66	4,099.9	0.5	18.7	2.4	0.06
4,200.0	0.15	82.07	4,199.9	0.5	19.0	2.5	0.06
4,300.0	0.23	104.31	4,299.9	0.4	19.3	2.6	0.11
4,400.0	0.24	96.05	4,399.9	0.4	19.7	2.7	0.04
4,500.0	0.33	105.67	4,499.9	0.3	20.2	2.9	0.10
4,600.0	0.37	106.36	4,599.8	0.1	20.8	3.1	0.04
4,700.0	0.72	156.37	4,699.8	-0.6	21.3	3.9	0.56
4,800.0	6.52	209.01	4,799.6	-6.1	18.8	9.0	6.11
4,900.0	8.63	204.23	4,898.7	-17.9	13.0	19.7	2.20
5,000.0	8.59	202.30	4,997.6	-31.7	7.1	32.4	0.29
5,100.0	7.45	198.95	5,096.6	-44.7	2.1	44.5	1.23
5,200.0	6.25	210.16	5,195.9	-55.5	-2.7	54.4	1.79
5,300.0	12.61	203.54	5,294.5	-70.3	-9.8	67.9	6.44
5,400.0	17.32	189.19	5,391.1	-95.0	-16.5	91.2	5.96



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TVD Reference: Norris Unit 1H GL 1376' + 24' KB @ 1400.0usft (C
MD Reference: Norris Unit 1H GL 1376' + 24' KB @ 1400.0usft (C
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Oklahoma District

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WV Dept. of Environmental Protection

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,500.0	13.59	193.56	5,487.5	-121.1	-21.7	116.2	3.91
5,600.0	21.71	195.84	5,582.7	-150.4	-29.5	143.9	8.15
5,700.0	28.08	193.94	5,673.4	-191.1	-40.2	182.4	6.42
5,800.0	28.14	202.26	5,761.6	-235.7	-54.8	224.3	3.92
5,900.0	28.87	201.87	5,849.5	-280.0	-72.8	265.1	0.75
6,000.0	30.91	203.47	5,936.2	-325.9	-92.0	307.5	2.19
6,100.0	30.59	202.58	6,022.1	-373.0	-112.0	350.9	0.56
6,200.0	30.19	200.96	6,108.4	-420.0	-130.7	394.4	0.91
6,300.0	26.74	201.78	6,196.3	-464.4	-148.1	435.5	3.47
6,400.0	25.25	201.34	6,286.2	-505.1	-164.2	473.2	1.50
6,500.0	24.49	199.99	6,376.9	-544.5	-179.1	509.8	0.95
6,600.0	22.43	206.01	6,468.6	-581.1	-194.5	543.5	3.16
6,700.0	25.07	209.02	6,560.2	-616.8	-213.2	575.8	2.90
6,800.0	25.28	204.05	6,650.7	-654.8	-232.1	610.4	2.12
6,900.0	24.79	201.45	6,741.3	-693.8	-248.5	646.4	1.20
6,951.2	24.86	200.54	6,787.7	-713.9	-256.2	665.0	0.76
7,071.0	24.10	199.09	6,896.8	-760.6	-273.0	708.5	0.81
7,166.0	24.19	199.57	6,983.5	-797.3	-285.9	742.7	0.23
7,197.0	23.75	199.12	7,011.8	-809.1	-290.1	753.8	1.54
7,228.0	23.21	198.82	7,040.2	-820.8	-294.1	764.7	1.78
7,257.0	23.78	195.96	7,066.8	-831.8	-297.5	775.1	4.40
7,291.0	28.12	188.54	7,097.4	-846.4	-300.6	788.9	15.92
7,323.0	31.95	183.47	7,125.1	-862.3	-302.3	804.4	14.35
7,351.0	34.80	179.11	7,148.5	-877.7	-302.6	819.5	13.30
7,385.0	37.44	174.99	7,176.0	-897.7	-301.5	839.5	10.55
7,417.0	38.94	173.02	7,201.1	-917.4	-299.5	859.2	6.04
7,445.0	40.58	170.99	7,222.6	-935.1	-297.0	877.1	7.47
7,480.0	43.60	167.01	7,248.6	-958.1	-292.5	900.5	11.51
7,511.0	45.91	162.89	7,270.6	-979.2	-286.8	922.2	11.96
7,514.0	46.17	162.58	7,272.7	-981.2	-286.1	924.4	11.47
Burkett							
7,540.0	48.46	159.98	7,290.3	-999.3	-280.0	943.2	11.47
7,553.0	49.58	158.93	7,298.9	-1,008.5	-276.6	952.8	10.55
Tully							
7,574.0	51.41	157.31	7,312.2	-1,023.5	-270.5	968.6	10.55
7,606.0	53.26	156.21	7,331.8	-1,046.8	-260.5	993.2	6.39
7,634.0	55.10	155.90	7,348.2	-1,067.6	-251.3	1,015.1	6.63
7,668.0	58.13	154.41	7,366.9	-1,093.3	-239.4	1,042.4	9.63
7,699.0	60.89	152.95	7,382.6	-1,117.3	-227.5	1,067.9	9.78
7,716.0	62.70	151.99	7,390.6	-1,130.5	-220.6	1,082.1	11.78
Hamilton							
7,728.0	63.99	151.33	7,396.0	-1,140.0	-215.5	1,092.2	11.78
7,762.0	67.22	148.02	7,410.1	-1,166.7	-199.9	1,121.1	12.99
7,793.0	68.91	145.45	7,421.6	-1,190.7	-184.1	1,147.3	9.43
7,822.0	70.45	142.86	7,431.7	-1,212.8	-168.2	1,171.5	9.92



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7,856.0	72.69	139.75	7,442.5	-1,237.9	-148.0	1,199.5	10.89
7,887.0	75.60	138.02	7,450.9	-1,260.4	-128.4	1,224.8	10.81
7,897.0	76.47	137.76	7,453.3	-1,267.6	-121.9	1,232.9	9.06
Marcellus							
7,916.0	78.12	137.26	7,457.5	-1,281.3	-109.4	1,248.4	9.06
7,950.0	81.04	136.01	7,463.7	-1,305.6	-86.4	1,276.0	9.32
7,981.0	84.76	134.04	7,467.5	-1,327.3	-64.7	1,300.9	13.56
8,069.0	90.64	132.18	7,471.0	-1,387.4	-0.5	1,370.2	7.01
8,163.0	90.17	131.99	7,470.4	-1,450.4	69.3	1,443.4	0.54
8,257.0	89.70	131.78	7,470.5	-1,513.1	139.2	1,516.3	0.55
8,352.0	90.17	131.11	7,470.6	-1,576.0	210.4	1,589.5	0.86
8,446.0	90.00	131.30	7,470.4	-1,637.9	281.2	1,661.8	0.27
8,540.0	89.83	131.37	7,470.6	-1,700.0	351.8	1,734.1	0.20
8,634.0	89.40	130.79	7,471.2	-1,761.8	422.6	1,806.2	0.77
8,729.0	88.96	130.75	7,472.6	-1,823.8	494.5	1,878.7	0.47
8,823.0	89.87	131.36	7,473.5	-1,885.6	565.4	1,950.8	1.17
8,917.0	89.93	131.38	7,473.7	-1,947.7	636.0	2,023.2	0.07
9,011.0	90.27	132.09	7,473.5	-2,010.3	706.1	2,096.0	0.84
9,105.0	90.91	133.03	7,472.6	-2,073.8	775.3	2,169.6	1.21
9,199.0	90.30	131.60	7,471.6	-2,137.1	844.8	2,243.0	1.65
9,293.0	90.77	132.01	7,470.7	-2,199.8	914.9	2,315.8	0.66
9,387.0	91.51	132.36	7,468.8	-2,262.9	984.6	2,389.0	0.87
9,481.0	90.77	131.11	7,467.0	-2,325.4	1,054.7	2,461.8	1.55
9,575.0	90.37	130.14	7,466.0	-2,386.6	1,126.0	2,533.4	1.12
9,669.0	90.50	131.33	7,465.3	-2,448.0	1,197.2	2,605.1	1.27
9,764.0	90.60	132.59	7,464.4	-2,511.5	1,267.9	2,678.9	1.33
9,858.0	90.07	132.20	7,463.8	-2,574.9	1,337.3	2,752.4	0.70
9,952.0	90.84	130.26	7,463.1	-2,636.8	1,408.0	2,824.6	2.22
10,045.0	90.27	129.47	7,462.2	-2,696.4	1,479.4	2,894.6	1.05
10,136.0	89.90	129.38	7,462.1	-2,754.2	1,549.7	2,962.7	0.42
10,228.0	92.38	131.01	7,460.2	-2,813.6	1,619.9	3,032.3	3.23
10,319.0	91.48	130.95	7,457.2	-2,873.2	1,688.6	3,102.0	0.99
10,410.0	90.97	130.32	7,455.2	-2,932.5	1,757.6	3,171.3	0.89
10,502.0	89.90	129.68	7,454.5	-2,991.6	1,828.1	3,240.7	1.36
10,593.0	90.17	130.32	7,454.5	-3,050.1	1,897.8	3,309.4	0.76
10,684.0	89.93	131.52	7,454.4	-3,109.7	1,966.6	3,379.0	1.34
10,774.0	90.44	133.00	7,454.1	-3,170.2	2,033.2	3,449.2	1.74
10,865.0	90.17	133.35	7,453.6	-3,232.5	2,099.5	3,521.1	0.49
10,956.0	90.77	131.20	7,452.9	-3,293.7	2,166.9	3,592.1	2.45
11,046.0	91.21	130.88	7,451.3	-3,352.8	2,234.7	3,661.1	0.60
11,140.0	91.18	130.93	7,449.3	-3,414.3	2,305.8	3,733.0	0.06
11,234.0	90.77	130.04	7,447.7	-3,475.3	2,377.2	3,804.4	1.04
11,328.0	91.24	130.44	7,446.1	-3,536.0	2,449.0	3,875.6	0.66
11,422.0	91.14	131.12	7,444.1	-3,597.4	2,520.1	3,947.4	0.73



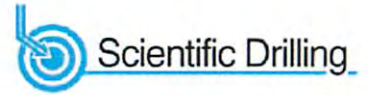
Company: Antero Resources
 Project: Harrison County West Virginia
 Site: Ruth/Norris/Nellie/Ford Pad
 Well: Norris Unit 1H
 Wellbore: Original Wellpath
 Design: As Drilled

Local Co-ordinate Reference: Well Norris Unit 1H
 TVD Reference: Norris Unit 1H GL 1376' + 24' KB @ 1400.0usft (C
 MD Reference: Norris Unit 1H GL 1376' + 24' KB @ 1400.0usft (C
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: Oklahoma District

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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
11,516.0	90.67	131.13	7,442.7	-3,659.2	2,590.9	4,019.5	0.50
11,610.0	89.09	131.59	7,442.9	-3,721.4	2,661.5	4,091.9	1.75
11,704.0	89.50	132.80	7,444.0	-3,784.5	2,731.1	4,165.1	1.36
11,798.0	88.99	132.39	7,445.3	-3,848.1	2,800.3	4,238.8	0.70
11,892.0	90.07	133.03	7,446.0	-3,911.9	2,869.4	4,312.6	1.34
11,987.0	90.13	133.60	7,445.9	-3,977.0	2,938.5	4,387.7	0.60
12,081.0	89.93	134.66	7,445.8	-4,042.5	3,006.0	4,462.9	1.15
12,175.0	89.66	133.56	7,446.1	-4,107.9	3,073.5	4,538.1	1.20
12,269.0	88.69	130.63	7,447.5	-4,170.9	3,143.2	4,611.3	3.28
12,363.0	89.76	131.00	7,448.8	-4,232.3	3,214.3	4,683.1	1.20
12,457.0	89.53	130.71	7,449.4	-4,293.8	3,285.4	4,754.9	0.39
12,552.0	89.19	130.02	7,450.4	-4,355.3	3,357.8	4,827.0	0.81
12,646.0	90.37	130.35	7,450.8	-4,416.0	3,429.6	4,898.1	1.30
12,740.0	90.34	130.37	7,450.2	-4,476.9	3,501.3	4,969.5	0.04
12,835.0	90.27	130.45	7,449.7	-4,538.5	3,573.6	5,041.6	0.11
12,929.0	89.33	128.50	7,450.0	-4,598.2	3,646.1	5,112.0	2.30
13,023.0	90.30	128.72	7,450.3	-4,656.9	3,719.6	5,181.4	1.06
13,117.0	89.46	131.41	7,450.5	-4,717.4	3,791.5	5,252.4	3.00
13,212.0	90.50	131.36	7,450.5	-4,780.2	3,862.8	5,325.6	1.10
13,306.0	89.80	129.87	7,450.3	-4,841.4	3,934.2	5,397.2	1.75
13,400.0	92.39	132.46	7,448.5	-4,903.2	4,004.9	5,469.3	3.90
13,494.0	91.51	132.36	7,445.3	-4,966.6	4,074.3	5,542.8	0.94
13,589.0	90.07	130.25	7,444.0	-5,029.3	4,145.6	5,615.9	2.69
13,683.0	91.24	129.22	7,442.9	-5,089.3	4,217.9	5,686.5	1.66
13,777.0	92.24	130.18	7,440.1	-5,149.4	4,290.2	5,757.1	1.47
13,871.0	92.42	129.21	7,436.2	-5,209.3	4,362.4	5,827.6	1.05
13,965.0	91.88	133.04	7,432.7	-5,271.1	4,433.2	5,899.7	4.11
14,059.0	91.85	132.34	7,429.7	-5,334.8	4,502.2	5,973.4	0.74
14,153.0	91.17	131.70	7,427.2	-5,397.7	4,572.1	6,046.5	0.99
14,247.0	90.97	132.24	7,425.4	-5,460.6	4,641.9	6,119.5	0.61
14,342.0	90.64	131.37	7,424.1	-5,523.9	4,712.7	6,193.1	0.98
14,436.0	90.87	131.97	7,422.9	-5,586.4	4,782.9	6,265.8	0.68
14,530.0	90.00	131.37	7,422.1	-5,648.9	4,853.2	6,338.5	1.12
14,624.0	90.84	132.55	7,421.5	-5,711.7	4,923.1	6,411.5	1.54
14,718.0	90.03	131.06	7,420.7	-5,774.4	4,993.1	6,484.4	1.80
14,812.0	91.61	132.37	7,419.4	-5,836.9	5,063.3	6,557.1	2.18
14,907.0	91.54	132.38	7,416.8	-5,900.9	5,133.4	6,631.3	0.07
15,000.0	91.10	131.85	7,414.6	-5,963.3	5,202.4	6,703.7	0.74
15,094.0	89.90	130.61	7,413.8	-6,025.2	5,273.1	6,775.9	1.84
15,189.0	91.19	132.55	7,412.9	-6,088.3	5,344.1	6,849.3	2.45
15,282.0	91.14	133.29	7,411.0	-6,151.6	5,412.2	6,922.5	0.80
15,345.0	89.96	132.38	7,410.4	-6,194.4	5,458.4	6,972.0	2.37
15,395.0	90.50	132.00	7,410.2	-6,228.0	5,495.5	7,011.0	1.32



Company:	Antero Resources	Local Co-ordinate Reference:	Well Norris Unit 1H
Project:	Harrison County West Virginia	TVD Reference:	Norris Unit 1H GL 1376' + 24' KB @ 1400.0usft (C
Site:	Ruth/Norris/Nellie/Ford Pad	MD Reference:	Norris Unit 1H GL 1376' + 24' KB @ 1400.0usft (C
Well:	Norris Unit 1H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,514.0	7,272.7	-981.2	-286.1	Burkett
7,553.0	7,298.9	-1,008.5	-276.6	Tully
7,716.0	7,390.6	-1,130.5	-220.6	Hamilton
7,897.0	7,453.3	-1,267.6	-121.9	Marcellus

Checked By: _____ Approved By: _____ Date: _____

Received

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