

JUN 23 2015

WV GEOLOGICAL SURVEY
MORGANTOWN, WV



Antero Resources
Stussar Unit 1H
Harrison County West Virginia
Northing: 14231178.59
Easting: 1778712.24
Sidetrack #1

Genie Lightfoot
Scientific Drilling
421 South Eagle Lane
Oklahoma City Oklahoma
405-787-3663



REFERENCE INFORMATION

Coordinates (NE) Reference: Well Stussar Unit 1H, Grid North.
Section (NS) Reference: SHL 0.0N, 0.0E.
Measurement Reference: Stussar Unit 1H, GCS, 120° 12' 12" N 0° 0' 0" W @ 1300.0usft
Measurement Method: Survey Control

WELL DETAILS: Stussar Unit 1H

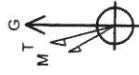
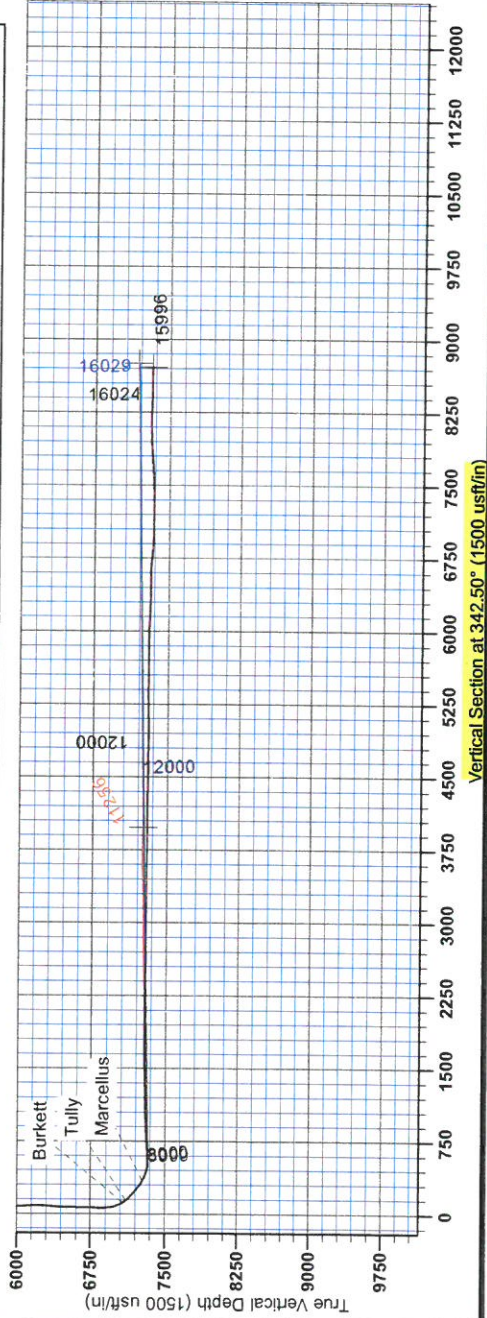
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Spot
0.0	0.0	14231178.59	1778712.24	11° 20' 53" 18.0"	30° 42' 8.4" W	

LEGEND

- Stussar Unit 1H, Original Wellpath, As Drilled VO
- Stussar Unit 1H, Original Wellpath, Plan 5 VO
- Stussar Unit 1H, Sidetrack #1, Sidetrack Plan 1 VO
- Sidetrack #1

DESIGN TARGET DETAILS

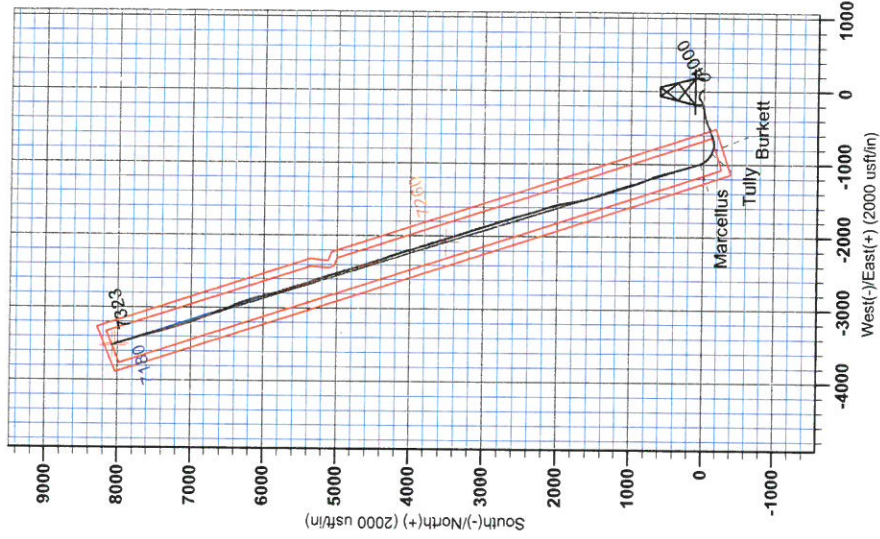
Name	+N/-S	TVD	+E/-W	Northing	Easting	Latitude	Longitude
SHL Stussar Unit 1H	0.0	0.0	0.0	14231178.59	1778712.24	11° 20' 53" 18.0"	30° 42' 8.4" W
Actual BHL Stussar Unit 1H 0860.3	3518.7		-2085.0	14234697.31	1776627.20	11° 55' 83.3" N 80° 31' 9" 147 W	
Actual BHL Stussar Unit 1H 5823.1	8032.9		-3501.1	14239211.53	1775211.17	12° 40' 54.1" N 80° 31' 26" 839 W	



To convert Magnetic North to Grid, Subtract 8.93°
To convert True North to Grid, Subtract 0.31°

Azimuths to Grid North
True North: -0.31°
Magnetic North: -8.93°

Magnetic Field
Strength: 52.27 uT/m
Dip Angle: 66.75°
Date: 11/21/2013
Model: IGRF2010





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MORGANTOWN, WV

Antero Resources

**Harrison County West Virginia
Myer/Thaddeus/Everett/Courtney Pad/Slussar
Slussar Unit 1H
Sidetrack #1**

Design: Sidetrack #1

EOW Completion Report

10 December, 2013



JUN 23 2015



GEOLOGICAL SURVEY
MORGANTOWN, WV

EOW Completion Report



Company: Antero Resources	Local Co-ordinate Reference: Well Slussar Unit 1H
Project: Harrison County West Virginia	TVD Reference: Slussar Unit 1H GL 1358' +22' RKB @ 1380.0usft
Site: Myer/Thaddeus/Everett/Courtney Pad/Slussar	MD Reference: Slussar Unit 1H GL 1358' +22' RKB @ 1380.0usft
Well: Slussar Unit 1H	North Reference: Grid
Wellbore: Sidetrack #1	Survey Calculation Method: Minimum Curvature
Design: Sidetrack #1	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 Myer/Thaddeus/Everett/Courtney Pad/Slussar, SHL of Thaddeus Unit 2H			
Site Position:		Northing: 14,231,176.62 usft	Latitude: 39° 11' 20.911 N
From: Map		Easting: 1,778,722.04 usft	Longitude: 80° 30' 42.769 W
Position Uncertainty: 0.0 usft		Slot Radius: 13-3/16"	Grid Convergence: 0.31 °

Well Slussar Unit 1H			
Well Position	+N/-S 0.0 usft	Northing: 14,231,178.59 usft	Latitude: 39° 11' 20.931 N
	+E/-W 0.0 usft	Easting: 1,778,712.24 usft	Longitude: 80° 30' 42.894 W
Position Uncertainty 2.0 usft		Wellhead Elevation: 1,380.0 usft	Ground Level: 1,358.0 usft

Wellbore Sidetrack #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/21/2013	-8.62	66.75	52,279

Design Sidetrack #1					
Audit Notes:					
Version: 1.0		Phase: ACTUAL		Tie On Depth: 9,125.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	342.50	

Survey Program Date 12/10/2013					
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.0	6,332.4	Survey #2 Def Gyro (Original Wellpath)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper	
6,332.4	9,125.0	Survey #4 MWD (Original Wellpath)	SDI MWD	Scientific Drilling Intl. MWD - Standard ver 1.0.1	
9,222.0	15,996.0	Survey #1SDI MWD (Sidetrack #1)	SDI MWD	Scientific Drilling Intl. MWD - Standard ver 1.0.1	

Survey									
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	0.0	0.0	0.00
100.0	0.31	6.00	100.0	0.3	0.0	0.2	0.2	0.31	
200.0	0.26	7.38	200.0	0.8	0.1	0.7	0.7	0.05	
300.0	0.27	25.78	300.0	1.2	0.2	1.1	1.1	0.09	
400.0	0.29	15.78	400.0	1.7	0.4	1.5	1.5	0.05	
500.0	0.39	39.97	500.0	2.2	0.7	1.9	1.9	0.17	
600.0	0.34	60.56	600.0	2.6	1.2	2.1	2.1	0.14	
700.0	0.43	76.99	700.0	2.8	1.8	2.1	2.1	0.14	
800.0	0.39	72.51	800.0	3.0	2.5	2.1	2.1	0.05	
900.0	0.35	66.27	900.0	3.2	3.1	2.1	2.1	0.06	

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EOW Completion Report



Company: Antero Resources
Project: Harrison County West Virginia
Site: Myer/Thaddeus/Everett/Courtney Pad/Slussar
Well: Slussar Unit 1H
Wellbore: Sidetrack #1
Design: Sidetrack #1

Local Co-ordinate Reference: Well Slussar Unit 1H
TVD Reference: Slussar Unit 1H GL 1358' +22' RKB @ 1380.0usft
MD Reference: Slussar Unit 1H GL 1358' +22' RKB @ 1380.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,000.0	0.22	63.59	1,000.0	3.4	3.5	2.2	0.13
1,100.0	0.23	102.24	1,100.0	3.5	3.9	2.1	0.15
1,200.0	0.42	93.17	1,200.0	3.4	4.5	1.9	0.20
1,300.0	0.39	81.98	1,300.0	3.4	5.2	1.7	0.08
1,400.0	0.36	65.80	1,400.0	3.6	5.8	1.7	0.11
1,500.0	0.31	95.78	1,500.0	3.7	6.3	1.6	0.18
1,600.0	0.52	93.24	1,600.0	3.6	7.1	1.4	0.21
1,700.0	0.48	93.65	1,700.0	3.6	7.9	1.0	0.04
1,800.0	0.51	79.44	1,800.0	3.7	8.8	0.8	0.13
1,900.0	0.51	68.84	1,900.0	3.9	9.6	0.8	0.09
2,000.0	0.31	88.78	2,000.0	4.1	10.3	0.8	0.24
2,100.0	0.50	88.81	2,100.0	4.1	11.0	0.6	0.19
2,200.0	0.46	80.38	2,200.0	4.2	11.9	0.4	0.08
2,300.0	0.44	84.65	2,299.9	4.3	12.6	0.3	0.04
2,400.0	0.40	99.09	2,399.9	4.2	13.4	0.0	0.11
2,500.0	0.41	91.44	2,499.9	4.2	14.1	-0.3	0.05
2,600.0	0.48	97.85	2,599.9	4.1	14.8	-0.5	0.09
2,700.0	0.66	104.02	2,699.9	3.9	15.8	-1.0	0.19
2,800.0	0.78	112.94	2,799.9	3.5	17.0	-1.8	0.16
2,900.0	0.79	119.49	2,899.9	2.9	18.2	-2.7	0.09
3,000.0	0.83	118.13	2,999.9	2.2	19.5	-3.7	0.04
3,100.0	0.68	116.45	3,099.9	1.6	20.6	-4.7	0.15
3,200.0	0.62	121.74	3,199.9	1.1	21.6	-5.5	0.08
3,300.0	0.70	124.66	3,299.9	0.4	22.6	-6.4	0.09
3,400.0	0.57	132.05	3,399.9	-0.2	23.5	-7.3	0.15
3,500.0	0.51	111.48	3,499.9	-0.7	24.2	-8.0	0.20
3,600.0	0.58	138.25	3,599.9	-1.3	25.0	-8.7	0.26
3,700.0	0.48	122.21	3,699.9	-1.9	25.7	-9.5	0.18
3,800.0	0.47	133.36	3,799.9	-2.4	26.3	-10.2	0.09
3,900.0	0.56	135.19	3,899.9	-3.0	27.0	-11.0	0.09
4,000.0	0.52	150.09	3,999.9	-3.8	27.6	-11.9	0.15
4,100.0	0.65	141.85	4,099.9	-4.6	28.1	-12.8	0.15
4,200.0	0.45	126.53	4,199.8	-5.3	28.8	-13.7	0.25
4,300.0	0.56	179.96	4,299.8	-6.0	29.1	-14.5	0.46
4,400.0	0.61	165.39	4,399.8	-7.0	29.2	-15.5	0.16
4,500.0	2.30	346.66	4,499.8	-5.6	28.9	-14.0	2.91
4,600.0	6.99	339.41	4,599.5	2.1	26.3	-5.9	4.72
4,700.0	8.67	328.83	4,698.5	14.2	20.3	7.5	2.21
4,800.0	8.79	328.59	4,797.4	27.2	12.4	22.2	0.13
4,900.0	9.39	312.60	4,896.1	39.2	2.4	36.7	2.59
5,000.0	9.57	306.74	4,994.8	49.7	-10.3	50.5	0.98
5,100.0	10.70	289.11	5,093.2	57.8	-25.7	62.8	3.29
5,200.0	13.28	283.50	5,191.0	63.5	-45.6	74.3	2.83
5,300.0	14.07	266.61	5,288.2	65.4	-69.0	83.1	4.06
5,400.0	11.69	245.08	5,385.8	60.4	-90.3	84.8	5.32

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Project: Harrison County West Virginia	TVD Reference: Slussar Unit 1H GL 1358' +22' RKB @ 1380.0usft
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Wellbore: Sidetrack #1	Survey Calculation Method: Minimum Curvature
Design: Sidetrack #1	Database: Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,500.0	12.78	228.93	5,483.5	48.9	-107.8	79.1	3.58
5,600.0	14.80	239.68	5,580.7	35.2	-127.2	71.8	3.25
5,700.0	18.33	248.66	5,676.5	23.0	-152.9	67.9	4.35
5,800.0	23.68	256.59	5,769.9	12.6	-187.1	68.3	6.05
5,900.0	27.73	256.02	5,859.9	2.3	-229.2	71.2	4.06
6,000.0	25.92	254.98	5,949.2	-8.9	-272.9	73.5	1.87
6,100.0	26.92	255.53	6,038.7	-20.3	-315.9	75.7	1.03
6,200.0	26.16	261.98	6,128.2	-29.0	-359.7	80.5	2.98
6,300.0	23.67	252.11	6,218.9	-38.2	-400.7	84.0	4.84
6,332.4	24.96	249.24	6,248.4	-42.7	-413.2	83.6	5.40
6,435.0	26.91	241.66	6,340.8	-61.4	-453.9	78.0	3.74
6,531.0	24.80	243.77	6,427.1	-80.6	-491.1	70.8	2.40
6,628.0	23.30	251.76	6,515.7	-95.6	-527.6	67.5	3.69
6,724.0	23.04	251.24	6,604.0	-107.6	-563.4	66.8	0.34
6,820.0	24.62	249.30	6,691.8	-120.7	-599.9	65.3	1.84
6,917.0	22.07	245.08	6,780.9	-135.5	-635.3	61.8	3.14
6,949.0	21.02	245.44	6,810.6	-140.4	-646.0	60.3	3.31
6,981.0	21.46	249.21	6,840.5	-144.9	-656.7	59.3	4.48
7,013.0	23.65	254.40	6,870.0	-148.7	-668.4	59.2	9.24
7,045.0	26.56	259.67	6,899.0	-151.7	-681.6	60.3	11.46
7,078.0	29.63	263.80	6,928.1	-153.9	-697.0	62.8	11.01
7,110.0	32.27	268.29	6,955.5	-155.0	-713.4	66.7	10.96
7,142.0	34.38	274.70	6,982.3	-154.5	-730.9	72.4	12.82
7,174.0	36.76	280.94	7,008.3	-152.0	-749.3	80.4	13.56
7,206.0	40.01	284.20	7,033.4	-147.6	-768.7	90.4	11.96
7,238.0	44.76	285.87	7,057.0	-142.0	-789.5	102.0	15.25
7,270.0	48.28	288.41	7,079.1	-135.2	-811.7	115.2	12.41
7,303.0	51.18	292.54	7,100.4	-126.3	-835.3	130.7	12.97
7,335.0	53.29	296.59	7,120.0	-115.8	-858.3	147.6	11.98
7,367.0	54.17	302.30	7,138.9	-103.1	-880.7	166.5	14.64
7,399.0	54.17	308.19	7,157.7	-88.2	-901.9	187.1	14.92
7,431.0	52.94	313.64	7,176.7	-71.3	-921.3	209.0	14.23
7,463.0	52.06	319.70	7,196.2	-52.9	-938.8	231.8	15.27
7,495.0	51.97	324.80	7,215.9	-33.0	-954.2	255.5	12.56
7,528.0	53.38	330.60	7,235.9	-10.8	-968.2	280.9	14.61
7,560.0	55.93	334.38	7,254.4	12.4	-980.2	306.6	12.50
7,592.0	59.53	336.31	7,271.5	36.9	-991.5	333.4	12.35
7,624.0	63.75	338.95	7,286.7	63.0	-1,002.2	361.4	15.05
7,656.0	67.27	341.06	7,300.0	90.3	-1,012.2	390.5	12.53
7,688.0	71.23	342.82	7,311.3	118.8	-1,021.4	420.4	13.40
7,720.0	75.01	344.49	7,320.6	148.2	-1,030.0	451.1	12.82
7,752.0	80.02	345.02	7,327.5	178.3	-1,038.3	482.3	15.74
7,785.0	85.38	344.84	7,331.7	209.9	-1,046.8	515.0	16.25
7,817.0	91.34	345.08	7,332.6	240.8	-1,055.1	546.9	18.64

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EOW Completion Report



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Well: Slussar Unit 1H
Wellbore: Sidetrack #1
Design: Sidetrack #1

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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
7,849.0	94.09	344.39	7,331.1	271.6	-1,063.5	578.8	8.86
7,881.0	94.19	344.70	7,328.8	302.4	-1,072.0	610.7	1.02
7,913.0	94.15	344.98	7,326.5	333.2	-1,080.3	642.6	0.88
7,945.0	94.54	344.18	7,324.0	363.9	-1,088.8	674.5	2.77
7,978.0	93.91	344.63	7,321.6	395.6	-1,097.7	707.4	2.34
8,010.0	94.28	344.23	7,319.3	426.4	-1,106.2	739.3	1.70
8,066.0	93.56	343.79	7,315.5	480.1	-1,121.6	795.1	1.51
8,162.0	92.95	343.52	7,310.0	572.1	-1,148.6	891.0	0.69
8,258.0	92.59	339.57	7,305.4	663.0	-1,178.9	986.8	4.13
8,355.0	90.31	338.60	7,303.0	753.6	-1,213.5	1,083.6	2.55
8,451.0	91.54	338.95	7,301.4	843.0	-1,248.3	1,179.4	1.33
8,548.0	91.10	339.39	7,299.2	933.7	-1,282.8	1,276.2	0.64
8,644.0	91.71	341.41	7,296.8	1,024.1	-1,315.0	1,372.1	2.20
8,740.0	91.36	343.35	7,294.2	1,115.5	-1,344.0	1,468.1	2.05
8,836.0	90.66	343.79	7,292.5	1,207.6	-1,371.2	1,564.0	0.86
8,932.0	90.57	342.55	7,291.5	1,299.5	-1,399.0	1,660.0	1.29
9,029.0	90.40	342.12	7,290.7	1,391.9	-1,428.4	1,757.0	0.48
9,125.0	90.22	343.87	7,290.2	1,483.7	-1,456.5	1,853.0	1.83
9,222.0	90.04	343.43	7,290.0	1,576.8	-1,483.8	1,950.0	0.49
9,254.0	87.93	344.84	7,290.5	1,607.6	-1,492.5	1,982.0	7.93
9,286.0	87.95	348.56	7,291.7	1,638.7	-1,499.9	2,013.9	11.62
9,318.0	89.52	350.03	7,292.4	1,670.1	-1,505.8	2,045.6	6.72
9,415.0	90.04	348.71	7,292.8	1,765.4	-1,523.7	2,141.9	1.46
9,511.0	90.04	348.88	7,292.7	1,859.6	-1,542.4	2,237.3	0.18
9,607.0	89.43	349.06	7,293.1	1,953.8	-1,560.7	2,332.7	0.66
9,704.0	88.29	344.14	7,295.1	2,048.1	-1,583.2	2,429.4	5.21
9,800.0	88.55	342.64	7,297.7	2,140.1	-1,610.6	2,525.4	1.59
9,897.0	87.85	341.24	7,300.8	2,232.3	-1,640.7	2,622.3	1.61
9,991.0	92.33	346.51	7,300.6	2,322.5	-1,666.8	2,716.2	7.36
10,087.0	91.71	344.75	7,297.2	2,415.5	-1,690.6	2,812.0	1.94
10,183.0	89.52	342.73	7,296.2	2,507.6	-1,717.5	2,908.0	3.10
10,279.0	88.64	342.38	7,297.7	2,599.2	-1,746.2	3,004.0	0.99
10,376.0	90.13	341.85	7,298.8	2,691.5	-1,776.0	3,101.0	1.63
10,472.0	89.34	342.03	7,299.2	2,782.7	-1,805.8	3,197.0	0.84
10,563.0	89.43	342.12	7,300.2	2,869.3	-1,833.8	3,288.0	0.14
10,654.0	90.48	343.79	7,300.3	2,956.3	-1,860.5	3,378.9	2.17
10,745.0	89.43	342.29	7,300.3	3,043.4	-1,887.0	3,469.9	2.01
10,836.0	89.78	342.20	7,301.0	3,130.0	-1,914.8	3,560.9	0.40
10,927.0	89.08	342.38	7,301.9	3,216.7	-1,942.4	3,651.9	0.79
11,018.0	88.72	341.76	7,303.6	3,303.3	-1,970.4	3,742.9	0.79
11,109.0	90.13	338.42	7,304.5	3,388.8	-2,001.4	3,833.8	3.98
11,200.0	90.10	341.97	7,304.4	3,474.4	-2,032.3	3,924.7	3.90
11,291.0	89.78	340.71	7,304.4	3,560.6	-2,061.4	4,015.7	1.43
11,382.0	90.22	342.82	7,304.4	3,647.1	-2,089.8	4,106.7	2.37

JUN 23 2015



EOW Completion Report



Company: Antero Resources
Project: Harrison County West Virginia
Site: Myer/Thaddeus/Everett/Courtney Pad/Slussar
Well: Slussar Unit 1H
Wellbore: Sidetrack #1
Design: Sidetrack #1

Local Co-ordinate Reference: Well Slussar Unit 1H
TVD Reference: Slussar Unit 1H GL 1358' +22' RKB @ 1380.0usft
MD Reference: Slussar Unit 1H GL 1358' +22' RKB @ 1380.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
11,474.0	89.96	342.47	7,304.3	3,734.9	-2,117.3	4,198.7	0.47
11,565.0	88.72	343.52	7,305.4	3,821.9	-2,143.9	4,289.7	1.79
11,660.0	90.50	343.78	7,306.0	3,913.0	-2,170.6	4,384.7	1.89
11,756.0	88.55	345.28	7,306.8	4,005.5	-2,196.2	4,480.6	2.56
11,853.0	90.40	342.99	7,307.7	4,098.8	-2,222.8	4,577.5	3.03
11,949.0	89.08	342.20	7,308.1	4,190.4	-2,251.5	4,673.5	1.60
12,046.0	89.78	339.57	7,309.1	4,282.1	-2,283.2	4,770.5	2.81
12,141.0	90.48	339.21	7,308.9	4,371.0	-2,316.7	4,865.3	0.83
12,238.0	88.55	338.16	7,309.7	4,461.4	-2,351.9	4,962.1	2.27
12,334.0	90.40	340.71	7,310.6	4,551.2	-2,385.6	5,058.0	3.28
12,429.0	90.92	342.91	7,309.5	4,641.5	-2,415.3	5,152.9	2.38
12,525.0	91.80	346.69	7,307.2	4,734.1	-2,440.5	5,248.8	4.04
12,622.0	90.22	344.75	7,305.5	4,828.0	-2,464.4	5,345.6	2.58
12,718.0	88.81	343.43	7,306.3	4,920.4	-2,490.7	5,441.6	2.01
12,815.0	87.58	340.88	7,309.4	5,012.6	-2,520.4	5,538.5	2.92
12,911.0	90.92	342.64	7,310.6	5,103.8	-2,550.4	5,634.5	3.93
13,006.0	90.70	341.39	7,309.3	5,194.1	-2,579.8	5,729.5	1.34
13,102.0	89.96	342.20	7,308.7	5,285.3	-2,609.8	5,825.5	1.14
13,198.0	90.40	341.50	7,308.4	5,376.5	-2,639.7	5,921.5	0.86
13,294.0	88.46	340.80	7,309.4	5,467.4	-2,670.7	6,017.4	2.15
13,390.0	87.41	340.45	7,312.8	5,557.9	-2,702.5	6,113.3	1.15
13,486.0	89.08	340.80	7,315.8	5,648.4	-2,734.3	6,209.2	1.78
13,582.0	87.67	342.73	7,318.5	5,739.5	-2,764.4	6,305.2	2.49
13,679.0	89.60	345.54	7,320.8	5,832.8	-2,790.9	6,402.1	3.51
13,775.0	90.04	345.89	7,321.1	5,925.8	-2,814.5	6,497.9	0.59
13,872.0	89.34	345.37	7,321.6	6,019.8	-2,838.6	6,594.8	0.90
13,968.0	85.65	345.54	7,325.8	6,112.6	-2,862.7	6,690.5	3.85
14,064.0	84.59	340.88	7,334.0	6,204.2	-2,890.3	6,786.2	4.96
14,160.0	85.82	338.86	7,342.0	6,294.0	-2,923.2	6,881.7	2.46
14,256.0	89.25	339.83	7,346.1	6,383.7	-2,957.1	6,977.5	3.71
14,353.0	89.96	337.63	7,346.8	6,474.1	-2,992.3	7,074.2	2.38
14,450.0	89.87	335.79	7,347.0	6,563.2	-3,030.6	7,170.7	1.90
14,546.0	90.40	336.05	7,346.7	6,650.8	-3,069.8	7,266.1	0.61
14,642.0	90.31	337.81	7,346.1	6,739.2	-3,107.4	7,361.7	1.84
14,738.0	90.57	340.62	7,345.4	6,828.9	-3,141.5	7,457.5	2.94
14,834.0	91.89	340.97	7,343.3	6,919.5	-3,173.0	7,553.4	1.42
14,931.0	94.35	340.88	7,338.1	7,011.1	-3,204.7	7,650.2	2.54
15,027.0	94.62	341.94	7,330.6	7,101.8	-3,235.2	7,745.9	1.14
15,124.0	93.91	343.70	7,323.3	7,194.2	-3,263.8	7,842.6	1.95
15,219.0	92.33	343.96	7,318.2	7,285.3	-3,290.2	7,937.5	1.69
15,314.0	90.40	344.93	7,315.9	7,376.8	-3,315.6	8,032.4	2.27
15,410.0	90.92	344.14	7,314.8	7,469.3	-3,341.2	8,128.3	0.99
15,506.0	89.52	345.02	7,314.4	7,561.8	-3,366.8	8,224.2	1.72
15,602.0	87.93	343.87	7,316.6	7,654.3	-3,392.5	8,320.2	2.04



Company:	Antero Resources	Local Co-ordinate Reference:	Well Slussar Unit 1H
Project:	Harrison County West Virginia	TVD Reference:	Slussar Unit 1H GL 1358' +22' RKB @ 1380.0usft
Site:	Myer/Thaddeus/Everett/Courtney Pad/Slussar	MD Reference:	Slussar Unit 1H GL 1358' +22' RKB @ 1380.0usft
Well:	Slussar Unit 1H	North Reference:	Grid
Wellbore:	Sidetrack #1	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack #1	Database:	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
15,697.0	88.49	343.58	7,319.5	7,745.4	-3,419.1	8,415.1	0.66
15,793.0	89.69	344.49	7,321.1	7,837.7	-3,445.5	8,511.0	1.57
15,889.0	89.60	344.14	7,321.7	7,930.1	-3,471.5	8,607.0	0.38
15,942.0	89.23	344.04	7,322.2	7,981.1	-3,486.0	8,660.0	0.72
15,996.0	88.85	343.50	7,323.1	8,032.9	-3,501.1	8,714.0	1.22

Checked By: _____ Approved By: _____ Date: _____

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