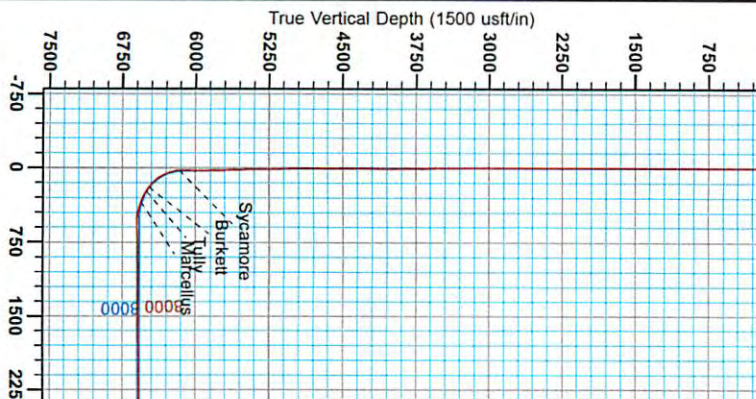




Antero Resources
 Silas Unit 1H
 Tyler County WV
 Northing: 14306177.04
 Easting: 1713806.69
 As Drilled



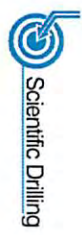
WELL DETAILS: Silas Unit 1H

+N/S	+E/W	Northing	Easting	Latitude	Longitude	Size
0.0	0.0	14306177.04	1713806.69	39° 23' 45.128" N	60° 44' 24.800" W	6 1/2"

REFERENCE INFORMATION
 Coordinate: NAD 1983
 Vertical (TVD) Reference: State Unit 1H, DC 249 + 1628.25 @ 774.0m
 Measured Depth Reference: State Unit 1H, DC 249 + 1628.25 @ 774.0m
 Canadian Method: British Columbia

PROJECT DETAILS: Tyler County WV
 Geologic System: Universal Transverse Mercator (US Survey Feet)
 Datum: NAD 1983 (NADCON CONUS)
 Epoch: Data 1986
 Zone: Zone 17N (60 W to 78 W)
 System Datum: Mean Sea Level

Genie Lightfoot
 14:22, September 24 2014
 Scientific Drilling
 421 South Eagle Lane
 Oklahoma City, OK



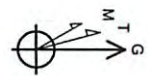
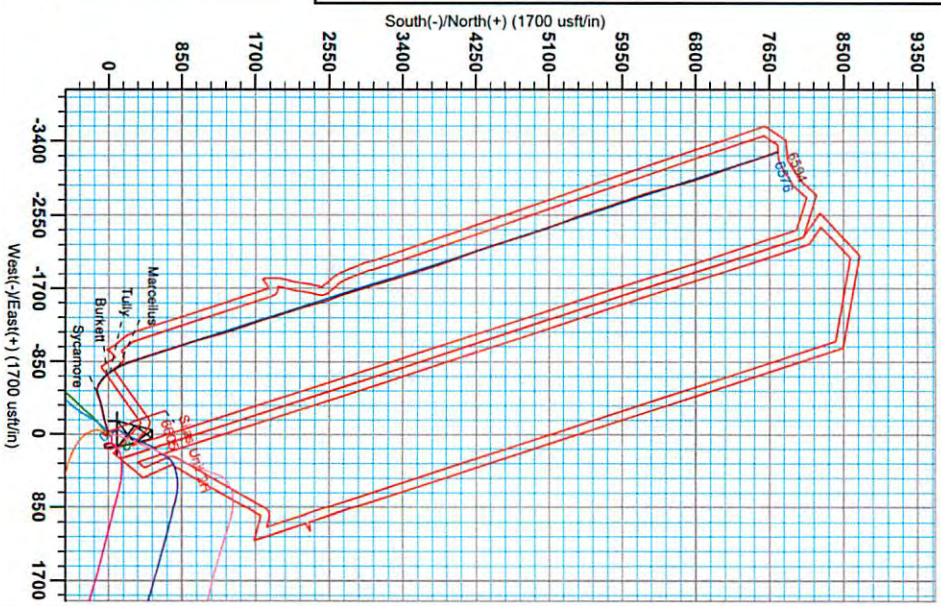
LEGEND

- ✕ Thoroldson Unit 1H, Original Wellpath, As Drilled VO
- Ed Arnold Unit 1H, Original Wellpath, As Drilled VO
- △ Sweeney Unit 2H, Original Wellpath, As Drilled VO
- ⊕ Thoroldson Unit 2H, Original Wellpath, As Drilled VO
- Ed Arnold Unit 2H, Original Wellpath, As Drilled VO
- ✖ Silas Unit 2H, Original Wellpath, As Drilled VO
- ◇ Sweeney Unit 1H, Original Wellpath, As Drilled VO
- Silas Unit 1H, Original Path, Plan 7 VO
- As Drilled

DESIGN TARGET DETAILS

Name	TVD	+N/S	+E/W	Northing	Easting	Latitude	Longitude
ShL Silas Unit 1H	0.0	0.0	0.0	0.014306177.04	171.3806689.23	45° 12' 44.24800" N	101° 24' 24.800" W
Actual BHL Silas Unit 1H	6593.8	7739.6	-3278.014313916.60	171.052864.39	29° 1' 7.44" N	80° 45' 6.300" W	

Vertical Section at 342.04° (1500 usf/in)



To convert Magnetic North to True North Subtract 8.73°
 To convert True North to Grid North Subtract 0.16°

Magnetic Field
 Strength: 52322.7nT
 Dip Angle: 66.83°
 Date: 4/17/2014
 Model: B0GM013

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Antero Resources

Tyler County WV
Ed Arnold/Sweeney/Thorkildosn/Glover/Silas Pad
Silas Unit 1H
Original Path

Design: As Drilled

EOW Completion Report

24 September, 2014



Scientific Drilling

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Environmental Protection
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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Silas Unit 1H
Project:	Tyler County WV	TVD Reference:	Silas Unit 1H GL 749 + RKB 25 @ 774.0usft
Site:	Ed Arnold/Sweeney/Thorkildosn/Glover/Silas Pac	MD Reference:	Silas Unit 1H GL 749 + RKB 25 @ 774.0usft
Well:	Silas Unit 1H	North Reference:	Grid
Wellbore:	Original Path	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

Project	Tyler County WV, Tyler Co West Virginia		
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	Ed Arnold/Sweeney/Thorkildosn/Glover/Silas Pad				
Site Position:	Northing:	14,306,188.32 usft	Latitude:	39° 23' 45.240 N	
From: Map	Easting:	1,713,823.50 usft	Longitude:	80° 44' 24.585 W	
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.16 °

Well	Silas Unit 1H, Marcellus					
Well Position	+N/-S	0.0 usft	Northing:	14,306,177.04 usft	Latitude:	39° 23' 45.129 N
	+E/-W	0.0 usft	Easting:	1,713,806.69 usft	Longitude:	80° 44' 24.800 W
Position Uncertainty	2.0 usft	Wellhead Elevation:	774.0 usft	Ground Level:	749.0 usft	

Wellbore	Original Path				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	4/17/2014	-8.57	66.93	52,323

Design	As Drilled							
Audit Notes:	Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0		
Vertical Section:	Depth From (TVD) (usft)	0.0	+N/-S (usft)	0.0	+E/-W (usft)	0.0	Direction (°)	342.04

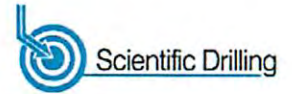
Survey Program	Date	9/24/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
114.0	5,995.0	Survey #9 Final Gyro (Original Path)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper	
6,130.0	14,846.0	Survey #10 MWD (Original Path)	MWD SDI	MWD - Standard ver 1.0.1	

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
114.0	0.35	185.01	114.0	-0.3	0.0	-0.3	0.31
214.0	0.34	197.10	214.0	-0.9	-0.1	-0.8	0.07
314.0	0.31	197.26	314.0	-1.5	-0.3	-1.3	0.03
414.0	0.27	192.42	414.0	-2.0	-0.4	-1.7	0.05
514.0	0.20	210.63	514.0	-2.3	-0.6	-2.1	0.00
614.0	0.20	207.28	614.0	-2.7	-0.8	-2.3	0.01
714.0	0.22	205.17	714.0	-3.0	-0.9	-2.6	0.02
814.0	0.20	229.66	814.0	-3.3	-1.1	-2.9	0.09
914.0	0.19	241.38	914.0	-3.5	-1.4	-2.9	0.04
1,014.0	0.13	272.56	1,014.0	-3.5	-1.7	-2.9	0.10

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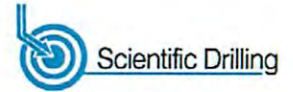
Company:	Antero Resources	Local Co-ordinate Reference:	Well Silas Unit 1H
Project:	Tyler County WV	TVD Reference:	Silas Unit 1H GL 749 + RKB 25 @ 774.0usft
Site:	Ed Arnold/Sweeney/Thorkildosn/Glover/Silas Pac	MD Reference:	Silas Unit 1H GL 749 + RKB 25 @ 774.0usft
Well:	Silas Unit 1H	North Reference:	Grid
Wellbore:	Original Path	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)		
1,114.0	0.09	268.67	1,114.0	-3.5	-1.9	-2.8	0.04		
1,214.0	0.12	271.45	1,214.0	-3.5	-2.0	-2.7	0.03		
1,314.0	0.14	256.84	1,314.0	-3.6	-2.3	-2.7	0.04		
1,414.0	0.18	272.80	1,414.0	-3.6	-2.5	-2.6	0.06		
1,514.0	0.25	276.37	1,514.0	-3.5	-2.9	-2.5	0.07		
1,614.0	0.15	263.76	1,614.0	-3.5	-3.3	-2.4	0.11		
1,714.0	0.29	281.86	1,714.0	-3.5	-3.6	-2.2	0.15		
1,814.0	0.31	292.09	1,814.0	-3.3	-4.1	-1.9	0.06		
1,914.0	0.17	285.46	1,914.0	-3.2	-4.5	-1.6	0.14		
2,014.0	0.23	293.81	2,014.0	-3.1	-4.9	-1.4	0.07		
2,114.0	0.24	291.10	2,114.0	-2.9	-5.2	-1.2	0.01		
2,214.0	0.25	292.84	2,214.0	-2.8	-5.6	-0.9	0.01		
2,314.0	0.18	282.10	2,314.0	-2.6	-6.0	-0.7	0.08		
2,414.0	0.23	274.21	2,414.0	-2.6	-6.3	-0.5	0.06		
2,514.0	0.30	279.36	2,514.0	-2.5	-6.8	-0.3	0.07		
2,614.0	0.25	254.01	2,614.0	-2.6	-7.3	-0.2	0.13		
2,714.0	0.36	271.84	2,714.0	-2.6	-7.8	-0.1	0.14		
2,814.0	0.53	268.89	2,814.0	-2.6	-8.6	0.2	0.17		
2,914.0	0.61	266.72	2,914.0	-2.6	-9.6	0.4	0.08		
3,014.0	0.55	266.06	3,014.0	-2.7	-10.6	0.7	0.06		
3,114.0	0.58	274.21	3,114.0	-2.7	-11.6	1.0	0.09		
3,214.0	0.58	280.85	3,214.0	-2.6	-12.6	1.4	0.07		
3,314.0	0.70	280.18	3,313.9	-2.4	-13.7	2.0	0.12		
3,414.0	0.71	283.04	3,413.9	-2.1	-14.9	2.6	0.04		
3,514.0	0.63	274.02	3,513.9	-1.9	-16.0	3.1	0.13		
3,614.0	1.79	270.05	3,613.9	-1.9	-18.1	3.8	1.16		
3,714.0	4.78	267.42	3,713.7	-2.1	-23.8	5.4	2.99		
3,814.0	5.97	265.23	3,813.3	-2.7	-33.2	7.7	1.21		
3,914.0	5.71	260.64	3,912.8	-4.0	-43.3	9.6	0.53		
4,014.0	5.53	247.90	4,012.3	-6.6	-52.7	10.0	1.26		
4,114.0	4.92	240.15	4,111.9	-10.5	-60.8	8.8	0.93		
4,214.0	5.08	244.32	4,211.5	-14.6	-68.5	7.3	0.40		
4,314.0	5.74	250.10	4,311.1	-18.2	-77.2	6.5	0.86		
4,414.0	5.91	253.56	4,410.5	-21.4	-86.9	6.5	0.39		
4,514.0	6.14	252.89	4,510.0	-24.4	-96.9	6.7	0.24		
4,614.0	5.58	249.51	4,609.5	-27.7	-106.6	6.6	0.66		
4,714.0	4.97	251.59	4,709.0	-30.7	-115.3	6.3	0.64		
4,814.0	4.87	250.34	4,808.7	-33.5	-123.4	6.1	0.15		
4,914.0	5.32	259.00	4,908.3	-35.8	-131.9	6.6	0.89		
5,014.0	5.49	264.11	5,007.8	-37.2	-141.2	8.0	0.51		
5,114.0	5.62	262.37	5,107.4	-38.4	-150.8	11.1	0.21		
5,214.0	9.07	253.50	5,206.5	-41.2	-163.3	12.0	3.62		
5,314.0	12.33	255.53	5,304.8	-46.2	-181.2	13.9	3.28		
5,414.0	14.32	258.03	5,402.1	-51.4	-203.6		2.07		

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Silas Unit 1H
Project:	Tyler County WV	TVD Reference:	Silas Unit 1H GL 749 + RKB 25 @ 774.0usft
Site:	Ed Arnold/Sweeney/Thorkildosn/Glover/Silas Pac	MD Reference:	Silas Unit 1H GL 749 + RKB 25 @ 774.0usft
Well:	Silas Unit 1H	North Reference:	Grid
Wellbore:	Original Path	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)	
5,514.0	16.57	257.91	5,498.5	-56.9	-229.6	16.6	2.25	
5,614.0	19.21	257.03	5,593.6	-63.6	-259.6	19.5	2.65	
5,714.0	20.55	258.12	5,687.7	-70.9	-292.8	22.8	1.39	
5,814.0	22.29	256.37	5,780.8	-79.0	-328.4	26.1	1.85	
5,914.0	24.71	255.49	5,872.5	-88.7	-367.1	28.8	2.45	
5,995.0	24.69	251.96	5,946.1	-98.2	-399.6	29.8	1.82	
6,130.0	23.27	244.02	6,069.4	-118.6	-450.4	26.0	2.61	
6,164.0	22.65	242.67	6,100.7	-124.6	-462.2	24.0	2.39	
6,196.0	22.66	251.84	6,130.3	-129.3	-473.6	23.0	11.03	
6,228.0	24.49	261.68	6,159.6	-132.2	-486.0	24.1	13.54	
6,236.0	24.85	263.82	6,166.9	-132.6	-489.3	24.7	12.07	
Sycamore								
6,260.0	26.12	269.88	6,188.5	-133.2	-499.6	27.4	12.07	
6,293.0	27.44	276.65	6,218.0	-132.3	-514.4	32.8	10.07	
6,325.0	29.08	283.16	6,246.2	-129.7	-529.3	39.9	10.90	
6,357.0	31.13	288.96	6,273.9	-125.2	-544.7	48.8	11.12	
6,389.0	33.27	294.05	6,301.0	-119.0	-560.6	59.7	10.79	
6,421.0	35.53	298.64	6,327.4	-110.9	-576.8	72.3	10.75	
6,453.0	37.42	302.31	6,353.1	-101.3	-593.1	86.6	9.02	
6,485.0	40.52	305.93	6,378.0	-90.0	-609.8	102.4	12.02	
6,517.0	44.40	308.77	6,401.6	-76.8	-626.9	120.2	13.52	
6,549.0	47.90	310.79	6,423.8	-62.1	-644.6	139.7	11.85	
6,582.0	51.12	313.11	6,445.2	-45.3	-663.3	161.4	11.13	
6,614.0	53.36	317.13	6,464.8	-27.4	-681.1	184.0	12.15	
6,629.0	54.26	319.13	6,473.7	-18.3	-689.2	195.1	12.32	
Burkett								
6,646.0	55.32	321.34	6,483.5	-7.7	-698.1	208.0	12.32	
6,678.0	57.65	324.66	6,501.1	13.6	-714.1	233.2	11.31	
6,680.0	57.84	324.80	6,502.2	15.0	-715.1	234.8	11.07	
Tully								
6,710.0	60.67	326.82	6,517.5	36.3	-729.6	259.5	11.07	
6,742.0	63.79	328.50	6,532.4	60.3	-744.7	287.0	10.80	
6,774.0	66.96	329.58	6,545.8	85.2	-759.7	315.3	10.37	
6,804.0	69.67	331.03	6,556.9	109.4	-773.5	342.6	10.09	
Marcellus								
6,806.0	69.85	331.13	6,557.5	111.1	-774.4	344.4	10.09	
6,838.0	71.92	332.46	6,568.0	137.7	-788.7	374.2	7.57	
6,871.0	73.68	334.14	6,577.8	165.9	-802.9	405.4	7.22	
6,903.0	76.06	335.71	6,586.1	193.8	-815.9	436.0	8.82	
6,935.0	80.41	337.14	6,592.7	222.6	-828.5	467.2	14.25	
6,987.0	85.59	339.19	6,599.0	270.4	-847.7	518.6	10.70	
7,042.0	92.08	343.49	6,600.1	322.5	-865.2	573.6	14.15	
7,093.0	92.72	343.28	6,598.0	371.3	-879.8	624.5	14.32	
7,189.0	89.87	339.89	6,595.8	462.4	-910.1	720.9	4.61	
7,286.0	90.67	341.05	6,595.4	553.8	-942.5	817.4		

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Silas Unit 1H
Project:	Tyler County WV	TVD Reference:	Silas Unit 1H GL 749 + RKB 25 @ 774.0usft
Site:	Ed Arnold/Sweeney/Thorkildosn/Glover/Silas Pac	MD Reference:	Silas Unit 1H GL 749 + RKB 25 @ 774.0usft
Well:	Silas Unit 1H	North Reference:	Grid
Wellbore:	Original Path	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)
7,382.0	90.47	343.53	6,594.4	645.2	-971.7	913.4	2.59
7,478.0	90.91	343.07	6,593.2	737.2	-999.3	1,009.4	0.66
7,575.0	90.94	341.77	6,591.7	829.6	-1,028.6	1,106.4	1.34
7,671.0	90.07	342.43	6,590.8	921.0	-1,058.1	1,202.4	1.14
7,768.0	89.56	342.97	6,591.1	1,013.6	-1,087.0	1,299.4	0.77
7,864.0	90.22	343.80	6,591.3	1,105.6	-1,114.4	1,395.3	1.10
7,961.0	90.24	345.07	6,590.9	1,199.0	-1,140.4	1,492.2	1.31
8,057.0	92.46	345.30	6,588.7	1,291.8	-1,165.0	1,588.1	2.32
8,154.0	90.13	341.59	6,586.5	1,384.7	-1,192.6	1,685.0	4.52
8,250.0	90.13	341.46	6,586.3	1,475.8	-1,223.0	1,781.0	0.14
8,346.0	90.03	340.50	6,586.1	1,566.5	-1,254.3	1,877.0	1.01
8,442.0	90.77	340.68	6,585.5	1,657.1	-1,286.2	1,972.9	0.79
8,539.0	90.97	341.81	6,584.0	1,748.9	-1,317.4	2,069.9	1.18
8,635.0	90.34	343.05	6,582.9	1,840.4	-1,346.4	2,165.9	1.45
8,731.0	91.11	343.38	6,581.7	1,932.3	-1,374.1	2,261.9	0.87
8,822.0	88.86	341.11	6,581.7	2,019.0	-1,401.8	2,352.9	3.51
8,913.0	89.19	341.75	6,583.2	2,105.2	-1,430.8	2,443.8	0.79
9,003.0	89.23	340.98	6,584.5	2,190.5	-1,459.6	2,533.8	0.86
9,094.0	91.18	344.33	6,584.2	2,277.3	-1,486.7	2,624.8	4.26
9,185.0	90.57	345.25	6,582.8	2,365.1	-1,510.6	2,715.7	1.21
9,275.0	90.97	345.34	6,581.6	2,452.2	-1,533.4	2,805.5	0.46
9,366.0	89.97	340.60	6,580.8	2,539.2	-1,560.1	2,896.5	5.32
9,457.0	89.33	338.16	6,581.4	2,624.3	-1,592.1	2,987.4	2.77
9,547.0	89.87	341.71	6,582.0	2,708.9	-1,623.0	3,077.3	3.99
9,638.0	90.77	342.81	6,581.5	2,795.5	-1,650.7	3,168.3	1.56
9,729.0	90.87	343.14	6,580.2	2,882.5	-1,677.3	3,259.3	0.38
9,820.0	89.30	339.58	6,580.1	2,968.7	-1,706.4	3,350.3	4.28
9,916.0	88.46	343.53	6,581.9	3,059.8	-1,736.8	3,446.2	4.21
10,013.0	89.29	342.12	6,583.8	3,152.4	-1,765.4	3,543.2	1.69
10,109.0	91.38	342.80	6,583.3	3,244.0	-1,794.3	3,639.2	2.29
10,205.0	90.91	342.80	6,581.4	3,335.6	-1,822.7	3,735.1	0.49
10,302.0	91.44	342.63	6,579.4	3,428.2	-1,851.5	3,832.1	0.57
10,398.0	91.58	341.75	6,576.8	3,519.6	-1,880.9	3,928.1	0.93
10,495.0	90.44	341.68	6,575.1	3,611.7	-1,911.3	4,025.1	1.18
10,591.0	90.40	340.91	6,574.4	3,702.6	-1,942.1	4,121.1	0.80
10,688.0	90.03	340.61	6,574.1	3,794.2	-1,974.1	4,218.0	0.49
10,784.0	90.34	341.12	6,573.7	3,884.9	-2,005.5	4,314.0	0.62
10,880.0	90.13	339.84	6,573.4	3,975.4	-2,037.6	4,410.0	1.35
10,976.0	90.24	340.81	6,573.0	4,065.8	-2,069.9	4,505.9	1.02
11,072.0	89.29	337.56	6,573.4	4,155.5	-2,104.0	4,601.8	3.53
11,168.0	89.36	340.46	6,574.6	4,245.1	-2,138.4	4,697.6	3.02
11,265.0	89.56	342.32	6,575.5	4,337.0	-2,169.4	4,794.6	1.93
11,361.0	90.07	342.97	6,575.8	4,428.7	-2,198.0	4,890.6	0.86
11,458.0	88.99	343.48	6,576.6	4,521.5	-2,226.0	4,987.6	1.23

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Silas Unit 1H
Project:	Tyler County WV	TVD Reference:	Silas Unit 1H GL 749 + RKB 25 @ 774.0usft
Site:	Ed Arnold/Sweeney/Thorkildosn/Glover/Silas Pac	MD Reference:	Silas Unit 1H GL 749 + RKB 25 @ 774.0usft
Well:	Silas Unit 1H	North Reference:	Grid
Wellbore:	Original Path	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)	
11,554.0	89.36	343.80	6,578.0	4,613.6	-2,253.1	5,083.5	0.51	
11,650.0	90.67	342.37	6,577.9	4,705.5	-2,281.0	5,179.5	2.02	
11,746.0	90.00	340.88	6,577.4	4,796.6	-2,311.2	5,275.5	1.70	
11,842.0	90.74	343.06	6,576.8	4,887.8	-2,341.0	5,371.5	2.40	
11,939.0	90.07	343.20	6,576.1	4,980.7	-2,369.1	5,468.5	0.71	
12,035.0	89.39	340.44	6,576.5	5,071.9	-2,399.0	5,564.5	2.96	
12,131.0	89.80	339.65	6,577.2	5,162.1	-2,431.8	5,660.4	0.93	
12,228.0	90.10	340.12	6,577.3	5,253.2	-2,465.2	5,757.3	0.57	
12,324.0	89.93	340.19	6,577.3	5,343.5	-2,497.8	5,853.3	0.19	
12,420.0	90.03	338.98	6,577.3	5,433.4	-2,531.2	5,949.2	1.26	
12,516.0	90.07	340.31	6,577.2	5,523.5	-2,564.6	6,045.1	1.39	
12,612.0	90.07	343.46	6,577.1	5,614.7	-2,594.5	6,141.1	3.28	
12,709.0	90.03	343.60	6,577.0	5,707.7	-2,622.0	6,238.1	0.15	
12,805.0	88.69	340.92	6,578.1	5,799.1	-2,651.2	6,334.1	3.12	
12,901.0	88.79	340.90	6,580.2	5,889.8	-2,682.6	6,430.0	0.11	
12,998.0	89.36	342.57	6,581.8	5,981.9	-2,713.0	6,527.0	1.82	
13,094.0	89.29	339.62	6,582.9	6,072.7	-2,744.1	6,623.0	3.07	
13,190.0	89.97	342.31	6,583.5	6,163.5	-2,775.4	6,718.9	2.89	
13,287.0	88.76	342.34	6,584.6	6,255.9	-2,804.9	6,815.9	1.25	
13,383.0	89.53	346.20	6,586.0	6,348.3	-2,830.9	6,911.8	4.10	
13,479.0	88.96	345.75	6,587.3	6,441.4	-2,854.1	7,007.6	0.76	
13,576.0	89.19	345.32	6,588.9	6,535.3	-2,878.4	7,104.4	0.50	
13,671.0	89.56	345.42	6,589.9	6,627.2	-2,902.4	7,199.2	0.40	
13,767.0	89.39	346.05	6,590.8	6,720.2	-2,926.0	7,295.0	0.68	
13,864.0	87.11	341.71	6,593.7	6,813.4	-2,952.9	7,391.9	5.05	
13,960.0	88.08	340.90	6,597.8	6,904.2	-2,983.7	7,487.8	1.32	
14,056.0	88.96	340.01	6,600.2	6,994.6	-3,015.8	7,583.7	1.30	
14,153.0	89.09	340.46	6,601.9	7,085.9	-3,048.6	7,680.7	0.48	
14,249.0	90.40	340.35	6,602.3	7,176.4	-3,080.8	7,776.6	1.37	
14,345.0	90.61	342.13	6,601.5	7,267.2	-3,111.6	7,872.6	1.87	
14,442.0	90.81	342.74	6,600.3	7,359.7	-3,140.9	7,969.6	0.66	
14,538.0	90.74	341.41	6,599.0	7,451.0	-3,170.5	8,065.6	1.39	
14,634.0	90.48	339.49	6,598.0	7,541.5	-3,202.6	8,161.5	2.02	
14,731.0	90.66	338.78	6,597.0	7,632.1	-3,237.1	8,258.4	0.76	
14,788.0	91.88	339.27	6,595.7	7,685.3	-3,257.5	8,315.3	2.31	
14,846.0	91.88	339.27	6,593.8	7,739.6	-3,278.0	8,373.2	0.00	

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Site:	Ed Arnold/Sweeney/Thorkildosn/Glover/Silas Pac	MD Reference:	Silas Unit 1H GL 749 + RKB 25 @ 774.0usft
Well:	Silas Unit 1H	North Reference:	Grid
Wellbore:	Original Path	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)	
6,236.0	6,166.9	-132.6	-489.3	Sycamore
6,629.0	6,473.7	-18.3	-689.2	Burkett
6,680.0	6,502.2	15.0	-715.1	Tully
6,804.0	6,556.9	109.4	-773.5	Marcellus

Checked By: _____ Approved By: _____ Date: _____

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