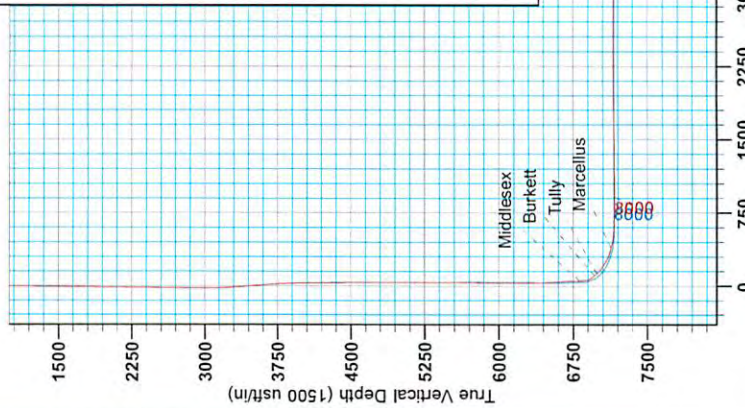




Antero Resources
Caswell Unit 2H
Doddrige County WV
Northing: 14251299.31
Easting: 1762631.00
As Drilled



06/05/2015

WELL DETAILS: Caswell Unit 2H

+N/S	+E/W	Northing	Ground Level	1050.0	Slot
0.0	0.0	14251299.31	Easting	1762631.00	30° 14' 40.62" N
			Longitude	80° 34' 5.969" W	

PROJECT DETAILS: Doddrige County WV

Caswell Unit 2H, Grid North
 Vertical (TVD) Reference: Caswell 2H 1050 GL + 25 KB @ 1075 Outfit
 Section (VS) Reference: Slot - (0 ON, 0 OE)
 Measured Depth Reference: Caswell 2H 1050 GL + 25 KB @ 1075 Outfit
 Calculation Method: Minimum Curvature

Scientific Drilling
 10-11, March 26 2014
 Scientific Drilling
 421 South Eagle Lane
 Oklahoma City, OK

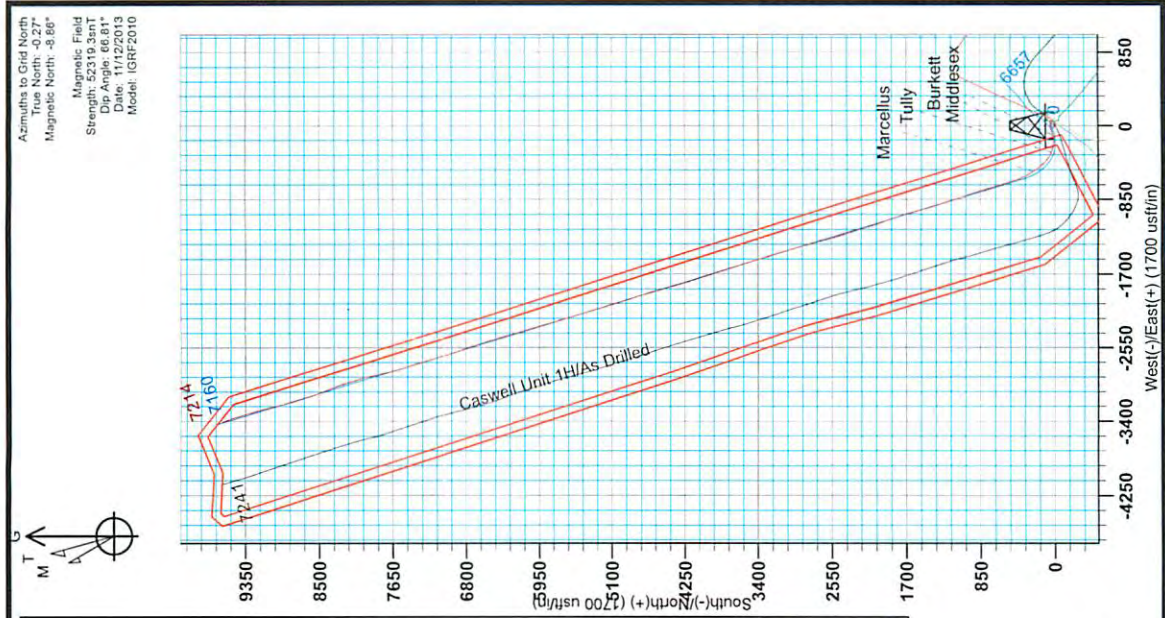
LEGEND

- Arters Unit 2H, Original Wellpath, As Drilled V0
- Oneacre Unit 2H, Original Wellpath, As Drilled V0
- ◇ Walter Unit 3H, Original Wellpath, As Drilled V0
- ◇ Walter Unit 1H, Original Wellpath, As Drilled V0
- ◇ Caswell Unit 1H, Original Wellpath, As Drilled V0
- ◇ Ruth Unit 1H, Original Wellpath, As Drilled V0
- ◇ Walter Unit 2H, Original Wellpath, As Drilled V0
- ◇ Caswell Unit 2H, Original Wellpath, Plan 4 V0
- ◇ As Drilled

DESIGN TARGET DETAILS

Name	TVD	+N/S	+E/W	Northing	Easting	Latitude	Longitude
SHL Caswell Unit 2H	0.0	0.0	0.0	14251299.30	1762631.0069	14° 40.662' N	80° 34' 5.969' W
Actual BHL Caswell Unit 2H 4.2	9612.5	9612.5	-3408.0	14260911.77	1759222.9539	16° 15.883' N	80° 34' 48.757' W

Vertical Section at 343.15" (1500 usft/m)



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Doddridge County WV
Ruth/Walter/Caswell/Arters
Caswell Unit 2H
Original Wellpath

Design: As Drilled

EOW Completion Report

26 March, 2014

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Environmental Protection



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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Caswell Unit 2H
Project:	Doddridge County WV	TVD Reference:	Caswell 2H 1050 GL + 25 KB @ 1075.0usft
Site:	Ruth/Walter/Caswell/Arters	MD Reference:	Caswell 2H 1050 GL + 25 KB @ 1075.0usft
Well:	Caswell Unit 2H	North Reference:	Grid
Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

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)		

Site	Ruth/Walter/Caswell/Arters, Center is Ruth Unit 1				
Site Position:	Northing:	14,251,337.29usft	Latitude:	39° 14' 41.054 N	
From: Map	Easting:	1,762,689.77usft	Longitude:	80° 34' 5.240 W	
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.27 °

Well	Caswell Unit 2H					
Well Position	+N/-S	0.0 usft	Northing:	14,251,299.31 usft	Latitude:	39° 14' 40.682 N
	+E/-W	0.0 usft	Easting:	1,762,631.00 usft	Longitude:	80° 34' 5.989 W
Position Uncertainty	2.0 usft	Wellhead Elevation:	1,075.0 usft	Ground Level:	1,050.0 usft	

Wellbore	Original Wellpath				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/12/2013	-8.59	66.81	52,319

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	343.15

Survey Program	Date	3/26/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
112.0	6,357.0	Survey #6 Final Gyro (Original Wellpath)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper	
6,429.0	17,280.0	Survey #7 MWD (Original Wellpath)	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	0.00
	112.0	0.21	136.48	112.0	-0.1	0.1	-0.2	0.19
	212.0	0.11	107.68	212.0	-0.3	0.4	-0.4	0.13
	312.0	0.21	129.10	312.0	-0.5	0.6	-0.6	0.11
	412.0	0.22	113.65	412.0	-0.6	0.9	-0.9	0.06
	512.0	0.37	138.28	512.0	-1.0	1.3	-1.3	0.19
	612.0	0.32	142.71	612.0	-1.4	1.7	-1.9	0.06
	712.0	0.42	129.26	712.0	-1.9	2.1	-2.4	0.13
	812.0	0.41	126.20	812.0	-2.3	2.7	-3.0	0.02
	912.0	0.36	114.60	912.0	-2.7	3.3	-3.5	0.09
	1,012.0	0.44	124.33	1,012.0	-3.0	3.9	-4.0	0.10

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Caswell Unit 2H
Project:	Doddridge County WV	TVD Reference:	Caswell 2H 1050 GL + 25 KB @ 1075.0usft
Site:	Ruth/Walter/Caswell/Arters	MD Reference:	Caswell 2H 1050 GL + 25 KB @ 1075.0usft
Well:	Caswell 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)
1,112.0	0.55	108.72	1,112.0	-3.4	4.7	-4.6	0.17
1,212.0	0.60	116.10	1,212.0	-3.8	5.6	-5.2	0.09
1,312.0	0.62	120.67	1,312.0	-4.3	6.5	-6.0	0.05
1,412.0	0.74	127.44	1,412.0	-4.9	7.5	-6.9	0.14
1,512.0	0.74	125.90	1,512.0	-5.7	8.5	-7.9	0.02
1,612.0	0.73	124.49	1,611.9	-6.5	9.6	-9.0	0.02
1,712.0	0.89	130.61	1,711.9	-7.3	10.7	-10.1	0.18
1,812.0	0.81	123.05	1,811.9	-8.2	11.9	-11.3	0.14
1,912.0	0.94	124.90	1,911.9	-9.1	13.1	-12.5	0.13
2,012.0	0.91	123.00	2,011.9	-10.0	14.5	-13.7	0.04
2,112.0	0.97	118.47	2,111.9	-10.8	15.9	-14.9	0.10
2,212.0	0.80	131.50	2,211.9	-11.7	17.2	-16.1	0.26
2,312.0	0.85	124.63	2,311.9	-12.6	18.3	-17.3	0.11
2,412.0	1.09	142.35	2,411.9	-13.7	19.5	-18.8	0.38
2,512.0	0.78	154.72	2,511.8	-15.1	20.4	-20.4	0.37
2,612.0	0.83	154.10	2,611.8	-16.4	21.0	-21.7	0.05
2,712.0	0.42	156.35	2,711.8	-17.4	21.4	-22.8	0.41
2,812.0	0.33	175.82	2,811.8	-18.0	21.6	-23.5	0.15
2,912.0	0.33	151.65	2,911.8	-18.5	21.8	-24.0	0.14
3,012.0	0.24	136.90	3,011.8	-18.9	22.0	-24.5	0.12
3,112.0	1.48	8.34	3,111.8	-17.8	22.4	-23.5	1.64
3,212.0	2.99	6.58	3,211.7	-13.9	22.8	-20.0	1.51
3,312.0	4.62	6.72	3,311.5	-7.3	23.6	-13.9	1.63
3,412.0	5.66	0.86	3,411.1	1.6	24.2	-5.5	1.16
3,512.0	5.44	357.64	3,510.6	11.3	24.0	3.8	0.38
3,612.0	5.22	357.83	3,610.2	20.5	23.7	12.8	0.22
3,712.0	3.33	9.62	3,709.9	28.0	24.0	19.8	2.07
3,812.0	2.51	12.51	3,809.8	33.0	24.9	24.3	0.83
3,912.0	1.73	13.68	3,909.7	36.6	25.8	27.5	0.78
4,012.0	1.26	22.02	4,009.7	39.0	26.5	29.7	0.52
4,112.0	1.12	28.35	4,109.7	40.9	27.4	31.2	0.19
4,212.0	1.03	37.51	4,209.6	42.5	28.4	32.4	0.19
4,312.0	0.89	43.61	4,309.6	43.8	29.5	33.3	0.17
4,412.0	0.95	48.85	4,409.6	44.9	30.7	34.1	0.10
4,512.0	0.84	50.66	4,509.6	45.9	31.9	34.7	0.11
4,612.0	0.72	55.61	4,609.6	46.7	33.0	35.1	0.14
4,712.0	0.77	62.24	4,709.6	47.4	34.1	35.5	0.10
4,812.0	0.75	62.68	4,809.6	48.0	35.2	35.7	0.02
4,912.0	0.66	63.24	4,909.6	48.5	36.3	35.9	0.09
5,012.0	0.66	68.74	5,009.6	49.0	37.4	36.1	0.06
5,112.0	0.73	69.17	5,109.6	49.5	38.5	36.2	0.07
5,212.0	0.68	66.59	5,209.6	49.9	39.6	36.3	0.06
5,312.0	0.58	60.73	5,309.5	50.4	40.6	36.5	0.12
5,412.0	0.53	57.23	5,409.5	50.8	41.6	36.7	0.06

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Company:	Antero Resources	Local Co-ordinate Reference:	Well Caswell Unit 2H
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Site:	Ruth/Walter/Caswell/Arters	MD Reference:	Caswell 2H 1050 GL + 25 KB @ 1075.0usft
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Wellbore:	Original Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	As Drilled	Database:	Oklahoma District

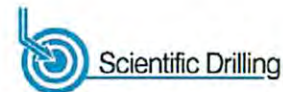
Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,512.0	0.43	65.85	5,509.5	51.3	42.2	36.9	0.12
5,612.0	0.46	74.38	5,609.5	51.6	42.9	36.9	0.07
5,712.0	0.40	74.54	5,709.5	51.8	43.7	36.9	0.06
5,812.0	0.31	94.76	5,809.5	51.8	44.3	36.8	0.15
5,912.0	0.24	120.17	5,909.5	51.7	44.7	36.5	0.14
6,012.0	0.24	142.99	6,009.5	51.4	45.0	36.2	0.09
6,112.0	0.36	143.31	6,109.5	51.0	45.3	35.7	0.12
6,212.0	0.37	148.99	6,209.5	50.5	45.7	35.1	0.04
6,312.0	0.68	134.86	6,309.5	49.8	46.3	34.2	0.33
6,357.0	0.61	136.78	6,354.5	49.4	46.6	33.8	0.16
6,429.0	0.06	106.74	6,426.5	49.1	46.9	33.4	0.78
6,461.0	2.45	256.87	6,458.5	49.0	46.3	33.5	7.81
6,492.0	7.07	267.61	6,489.4	48.7	43.7	34.0	15.11
6,524.0	11.56	273.34	6,521.0	48.9	38.6	35.6	14.31
6,555.0	14.90	276.03	6,551.1	49.5	31.5	38.2	10.95
6,587.0	16.94	269.88	6,581.9	49.9	22.7	41.1	8.26
6,618.0	20.82	264.90	6,611.2	49.4	12.7	43.6	13.54
6,649.0	24.75	261.23	6,639.8	47.9	0.8	45.6	13.48
6,681.0	27.73	259.96	6,668.5	45.6	-13.1	47.4	9.48
6,712.0	29.98	259.92	6,695.7	43.0	-27.9	49.2	7.26
6,743.0	33.07	257.33	6,722.1	39.7	-43.7	50.7	10.88
6,775.0	36.27	255.04	6,748.4	35.4	-61.4	51.7	10.80
6,806.0	36.00	254.50	6,773.4	30.6	-79.1	52.2	1.35
6,837.0	37.10	255.55	6,798.3	25.8	-96.9	52.8	4.08
6,860.0	39.34	256.49	6,816.4	22.4	-110.7	53.5	10.07
Middlesex							
6,869.0	40.22	256.84	6,823.3	21.1	-116.3	53.9	10.07
6,900.0	44.03	257.35	6,846.3	16.4	-136.6	55.3	12.34
6,931.0	46.61	262.04	6,868.1	12.5	-158.2	57.8	13.60
6,963.0	47.43	269.45	6,889.9	10.8	-181.6	62.9	17.13
6,994.0	49.28	274.37	6,910.6	11.6	-204.7	70.4	13.27
7,025.0	52.64	279.42	6,930.1	14.5	-228.6	80.1	16.66
7,056.0	55.36	283.73	6,948.3	19.5	-253.1	92.1	14.26
7,084.0	56.47	286.57	6,964.0	25.6	-275.5	104.3	9.28
Burkett							
7,087.0	56.59	286.87	6,965.7	26.3	-277.9	105.7	9.28
7,119.0	56.41	290.06	6,983.3	34.8	-303.2	121.1	8.33
7,129.0	56.43	291.92	6,988.9	37.7	-311.0	126.3	15.50
Tully							
7,150.0	56.56	295.82	7,000.5	44.8	-327.0	137.7	15.50
7,181.0	56.97	300.92	7,017.4	57.1	-349.8	156.1	13.82
7,213.0	59.42	306.06	7,034.3	72.1	-372.5	177.0	15.65
7,244.0	60.33	309.03	7,049.9	88.5	-393.7	198.8	8.79
7,276.0	62.64	312.69	7,065.2	106.9	-413.0	222.6	12.37
7,307.0	64.88	316.88	7,078.9	126.5	-434.7	247.0	14.11

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Caswell Unit 2H
Project:	Doddridge County WV	TVD Reference:	Caswell 2H 1050 GL + 25 KB @ 1075.0usft
Site:	Ruth/Walter/Caswell/Arters	MD Reference:	Caswell 2H 1050 GL + 25 KB @ 1075.0usft
Well:	Caswell 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)	
7,338.0	67.09	318.79	7,091.5	147.5	-453.7	272.6	9.08	
7,370.0	67.60	319.95	7,103.8	169.9	-472.9	299.7	3.71	
7,401.0	70.51	321.75	7,114.9	192.3	-491.2	326.4	10.84	
7,432.0	74.35	324.41	7,124.3	215.9	-508.9	354.2	14.84	
7,464.0	77.22	327.05	7,132.1	241.6	-526.4	383.8	12.02	
7,469.0	77.33	327.13	7,133.2	245.7	-529.0	388.5	2.71	
Marcellus								
7,495.0	77.89	327.57	7,138.8	267.1	-542.7	412.9	2.71	
7,527.0	79.27	330.06	7,145.1	293.9	-559.0	443.3	8.76	
7,558.0	80.81	332.30	7,150.5	320.6	-573.7	473.2	8.68	
7,589.0	82.36	335.05	7,155.0	348.1	-587.3	503.4	10.10	
7,621.0	84.01	337.63	7,158.8	377.2	-600.0	535.0	9.52	
7,652.0	84.92	338.76	7,161.8	405.9	-611.5	565.7	4.67	
7,666.0	85.74	339.45	7,163.0	418.9	-616.5	579.6	7.64	
7,697.0	86.58	340.02	7,165.0	447.9	-627.2	610.5	3.27	
7,729.0	86.57	340.10	7,166.9	477.9	-638.1	642.4	0.25	
7,760.0	88.56	341.50	7,168.3	507.2	-648.3	673.3	7.85	
7,791.0	91.07	342.90	7,168.4	536.7	-657.7	704.3	9.27	
7,886.0	88.73	343.62	7,168.5	627.7	-685.1	799.3	2.58	
7,980.0	90.27	343.59	7,169.3	717.8	-711.6	893.3	1.64	
8,074.0	90.84	344.09	7,168.4	808.1	-737.8	987.3	0.81	
8,168.0	90.74	341.01	7,167.1	897.8	-766.0	1,081.3	3.28	
8,262.0	90.27	340.37	7,166.3	986.5	-797.1	1,175.2	0.84	
8,356.0	90.67	339.88	7,165.5	1,074.9	-829.0	1,269.0	0.67	
8,449.0	91.04	344.39	7,164.2	1,163.4	-857.5	1,362.0	4.87	
8,544.0	90.97	343.40	7,162.5	1,254.6	-883.9	1,457.0	1.04	
8,638.0	89.53	341.25	7,162.1	1,344.2	-912.4	1,550.9	2.75	
8,732.0	91.14	344.09	7,161.5	1,433.9	-940.4	1,644.9	3.47	
8,826.0	91.17	344.49	7,159.6	1,524.4	-965.9	1,738.9	0.43	
8,921.0	89.40	343.70	7,159.2	1,615.7	-991.9	1,833.9	2.04	
9,015.0	90.40	344.83	7,159.3	1,706.2	-1,017.4	1,927.9	1.61	
9,109.0	89.43	342.09	7,159.5	1,796.3	-1,044.1	2,021.8	3.09	
9,203.0	91.34	339.81	7,158.8	1,885.1	-1,074.8	2,115.8	3.16	
9,297.0	90.77	339.84	7,157.1	1,973.4	-1,107.2	2,209.6	0.61	
9,391.0	89.06	340.09	7,157.2	2,061.7	-1,139.4	2,303.4	1.84	
9,486.0	89.50	343.47	7,158.4	2,151.9	-1,169.1	2,398.4	3.59	
9,580.0	90.67	343.44	7,158.3	2,242.0	-1,195.9	2,492.4	1.25	
9,674.0	89.36	342.23	7,158.3	2,331.8	-1,223.6	2,586.4	1.90	
9,768.0	89.87	343.43	7,158.9	2,421.6	-1,251.4	2,680.4	1.39	
9,862.0	89.97	343.46	7,159.0	2,511.7	-1,278.2	2,774.4	0.11	
9,957.0	90.37	345.16	7,158.8	2,603.2	-1,303.9	2,869.3	1.84	
10,051.0	90.13	344.36	7,158.3	2,693.9	-1,328.9	2,963.3	0.89	
10,145.0	91.17	345.17	7,157.3	2,784.5	-1,354.0	3,057.3	1.40	
10,238.0	91.14	345.15	7,155.4	2,874.4	-1,377.1	3,150.2	0.04	

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Caswell Unit 2H
Project:	Doddridge County WV	TVD Reference:	Caswell 2H 1050 GL + 25 KB @ 1075.0usft
Site:	Ruth/Walter/Caswell/Arters	MD Reference:	Caswell 2H 1050 GL + 25 KB @ 1075.0usft
Well:	Caswell 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)
10,330.0	91.24	345.03	7,153.5	2,963.3	-1,400.7	3,242.1	0.17
10,423.0	91.31	342.43	7,151.4	3,052.6	-1,426.8	3,335.1	2.80
10,516.0	88.93	342.78	7,151.2	3,141.3	-1,454.6	3,428.1	2.59
10,608.0	88.19	342.65	7,153.5	3,229.1	-1,481.9	3,520.0	0.82
10,701.0	88.09	342.54	7,156.6	3,317.8	-1,509.7	3,613.0	0.16
10,793.0	90.77	342.87	7,157.5	3,405.6	-1,537.1	3,705.0	2.94
10,885.0	90.54	342.87	7,156.4	3,493.5	-1,564.2	3,797.0	0.25
10,978.0	89.90	342.56	7,156.1	3,582.3	-1,591.8	3,890.0	0.76
11,071.0	90.40	342.03	7,155.8	3,670.9	-1,620.1	3,982.9	0.78
11,165.0	90.97	342.71	7,154.7	3,760.5	-1,648.6	4,076.9	0.94
11,259.0	90.07	342.61	7,153.8	3,850.2	-1,676.6	4,170.9	0.96
11,354.0	88.22	340.25	7,155.3	3,940.3	-1,706.8	4,265.9	3.16
11,448.0	88.52	342.93	7,157.9	4,029.4	-1,736.5	4,359.8	2.87
11,542.0	90.37	343.37	7,158.8	4,119.4	-1,763.7	4,453.8	2.02
11,637.0	91.64	343.91	7,157.2	4,210.5	-1,790.5	4,548.7	1.45
11,731.0	91.75	343.22	7,154.4	4,300.6	-1,817.1	4,642.7	0.74
11,826.0	90.03	345.35	7,152.9	4,392.1	-1,842.8	4,737.7	2.88
11,920.0	89.33	344.64	7,153.4	4,482.9	-1,867.1	4,831.6	1.06
12,014.0	88.49	342.78	7,155.2	4,573.1	-1,893.5	4,925.6	2.17
12,109.0	88.39	343.81	7,157.8	4,664.0	-1,920.8	5,020.5	1.09
12,203.0	91.24	343.83	7,158.1	4,754.3	-1,947.0	5,114.5	3.03
12,297.0	88.52	341.23	7,158.3	4,843.9	-1,975.2	5,208.5	4.00
12,391.0	89.80	342.93	7,159.7	4,933.4	-2,004.1	5,302.5	2.26
12,486.0	88.93	342.97	7,160.8	5,024.2	-2,032.0	5,397.5	0.92
12,580.0	89.13	344.75	7,162.3	5,114.5	-2,058.1	5,491.4	1.91
12,674.0	88.32	342.84	7,164.4	5,204.7	-2,084.3	5,585.4	2.21
12,768.0	90.03	343.00	7,165.8	5,294.5	-2,111.9	5,679.4	1.83
12,862.0	89.83	342.89	7,165.9	5,384.4	-2,139.5	5,773.4	0.24
12,956.0	88.42	344.30	7,167.3	5,474.6	-2,166.0	5,867.4	2.12
13,051.0	88.69	344.35	7,169.7	5,566.0	-2,191.7	5,962.3	0.29
13,145.0	88.26	344.65	7,172.2	5,656.5	-2,216.8	6,056.3	0.56
13,239.0	88.26	344.08	7,175.1	5,747.0	-2,242.1	6,150.2	0.61
13,333.0	88.09	343.88	7,178.1	5,837.3	-2,268.1	6,244.1	0.28
13,353.0	88.02	344.08	7,178.8	5,856.5	-2,273.6	6,264.1	1.06
13,428.0	88.56	343.32	7,181.0	5,928.5	-2,294.6	6,339.1	1.24
13,521.0	88.32	342.02	7,183.5	6,017.2	-2,322.3	6,432.1	1.42
13,615.0	90.10	344.43	7,184.8	6,107.2	-2,349.4	6,526.0	3.19
13,709.0	89.83	345.08	7,184.9	6,197.9	-2,374.1	6,620.0	0.75
13,804.0	89.66	345.23	7,185.3	6,289.7	-2,398.5	6,714.9	0.24
13,898.0	90.00	344.12	7,185.6	6,380.4	-2,423.3	6,808.9	1.23
13,992.0	89.23	341.38	7,186.2	6,470.1	-2,451.2	6,902.9	3.03
14,086.0	89.26	342.72	7,187.5	6,559.6	-2,480.2	6,996.9	1.43
14,181.0	89.93	342.06	7,188.1	6,650.0	-2,508.9	7,091.8	0.99
14,275.0	90.30	341.48	7,187.9	6,739.4	-2,538.3	7,185.8	0.73
14,369.0	88.79	339.46	7,188.7	6,828.0	-2,567.7	7,279.7	2.68

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Company:	Antero Resources	Local Co-ordinate Reference:	Well Caswell Unit 2H
Project:	Doddridge County WV	TVD Reference:	Caswell 2H 1050 GL + 25 KB @ 1075.0usft
Site:	Ruth/Walter/Caswell/Arters	MD Reference:	Caswell 2H 1050 GL + 25 KB @ 1075.0usft
Well:	Caswell 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)
14,463.0	89.50	342.19	7,190.1	6,916.7	-2,600.6	7,373.6	3.00
14,557.0	89.93	344.28	7,190.6	7,006.7	-2,627.7	7,467.6	2.27
14,652.0	89.30	343.60	7,191.2	7,098.0	-2,654.0	7,562.6	0.98
14,746.0	89.40	344.07	7,192.3	7,188.3	-2,680.2	7,656.6	0.51
14,840.0	90.00	344.02	7,192.8	7,278.7	-2,706.0	7,750.6	0.64
14,934.0	89.30	341.53	7,193.3	7,368.5	-2,733.8	7,844.6	2.75
14,968.0	88.86	340.44	7,193.9	7,400.6	-2,744.9	7,878.5	3.46
15,122.0	90.54	342.96	7,194.7	7,546.8	-2,793.2	8,032.5	1.97
15,217.0	90.23	344.71	7,194.0	7,638.0	-2,819.7	8,127.4	1.87
15,311.0	88.99	346.76	7,194.7	7,729.1	-2,842.9	8,221.3	2.55
15,405.0	89.50	348.66	7,195.9	7,821.0	-2,862.9	8,315.0	2.09
15,499.0	90.70	346.64	7,195.8	7,912.8	-2,883.0	8,408.7	2.50
15,593.0	89.16	342.70	7,195.9	8,003.4	-2,907.8	8,502.7	4.50
15,687.0	89.87	343.85	7,196.7	8,093.4	-2,934.9	8,596.7	1.44
15,781.0	88.79	342.90	7,197.8	8,183.5	-2,961.8	8,690.7	1.53
15,876.0	88.99	339.39	7,199.6	8,273.4	-2,992.4	8,785.6	3.70
15,970.0	88.99	339.91	7,201.3	8,361.5	-3,025.1	8,879.4	0.55
16,064.0	88.99	338.23	7,202.9	8,449.3	-3,058.7	8,973.1	1.79
16,158.0	88.46	338.63	7,205.0	8,536.7	-3,093.2	9,066.8	0.71
16,253.0	90.64	342.24	7,205.8	8,626.1	-3,125.1	9,161.6	4.44
16,284.0	90.27	341.46	7,205.5	8,655.6	-3,134.7	9,192.6	2.78
16,347.0	90.44	342.31	7,205.1	8,715.5	-3,154.3	9,255.6	1.38
16,441.0	89.56	345.31	7,205.1	8,805.7	-3,180.5	9,349.6	3.33
16,535.0	89.46	346.15	7,205.9	8,896.8	-3,203.7	9,443.5	0.90
16,630.0	89.46	347.56	7,206.8	8,989.3	-3,225.3	9,538.3	1.48
16,724.0	88.86	346.81	7,208.2	9,081.0	-3,246.1	9,632.1	1.02
16,819.0	88.62	343.04	7,210.3	9,172.7	-3,270.8	9,727.0	3.98
16,913.0	89.60	345.40	7,211.8	9,263.1	-3,296.4	9,820.9	2.72
17,008.0	90.17	343.28	7,211.9	9,354.6	-3,322.0	9,915.9	2.31
17,103.0	90.27	343.52	7,211.6	9,445.6	-3,349.2	10,010.9	0.27
17,197.0	88.66	339.49	7,212.5	9,534.7	-3,379.0	10,104.8	4.62
17,226.0	88.86	339.49	7,213.1	9,561.9	-3,389.1	10,133.8	0.69
17,280.0	88.86	339.49	7,214.2	9,612.5	-3,408.0	10,187.7	0.00

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Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,860.0	6,816.4	22.4	-110.7	Middlesex
7,084.0	6,964.0	25.6	-275.5	Burkett
7,129.0	6,988.9	37.7	-311.0	Tully
7,469.0	7,133.2	245.7	-529.0	Marcellus

Checked By: _____ Approved By: _____ Date: _____