

# RECEIVED

AUG 03 2015

WV GEOLOGICAL SURVEY  
MORGANTOWN, WV



**Ahouse Unit 1H**  
**Doddridge County WV**  
**Northing: 14249870.09**  
**Easting: 1682112.06**  
**As Drilled**



**WELL DETAILS: Ahouse / Callie Pad**  
Site Center: Ahouse Unit 1H  
Site Centre Northing: 14249870.09  
Easting: 1682112.06  
Positional Uncertainty: 2.0  
Convergence: 0.09  
Local North: Grid

**WELL DETAILS: Ahouse Unit 1H**  
Ground Level: 1005.0  
Northing: 14249870.09  
Easting: 1682112.0689  
Latitude: 39° 14' 29.095 N  
Longitude: 80° 51' 9.848 W

**LEGEND**

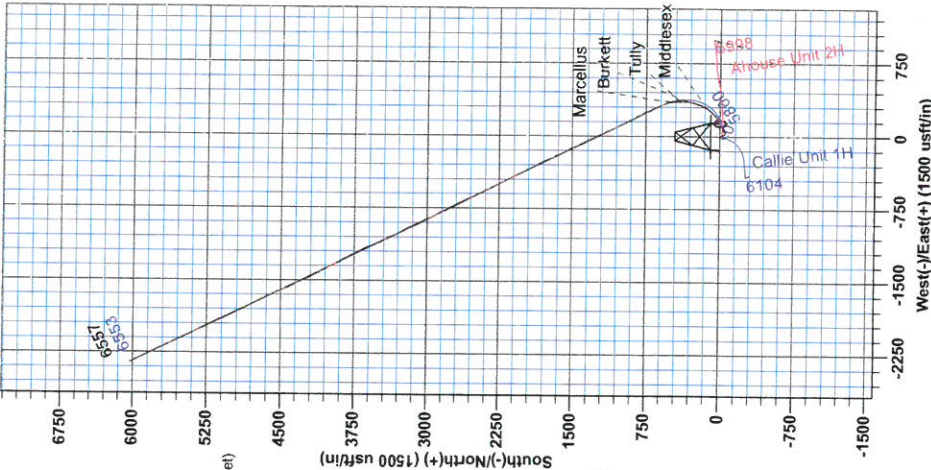
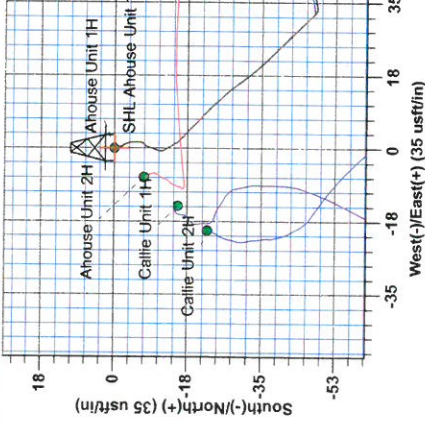
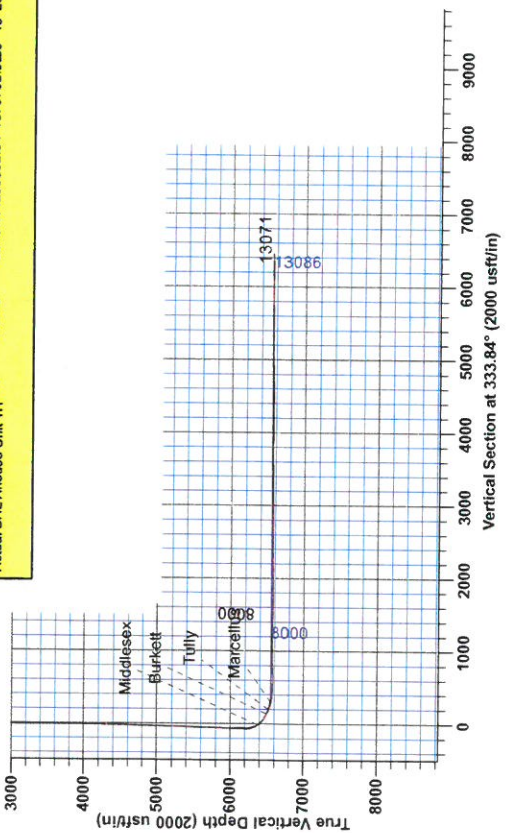
- △ Callie Unit 2H, Original Wellpath, As Drilled V0
- † Callie Unit 1H, Original Wellpath, As Drilled V0
- Ahouse Unit 2H, Original Wellpath, As Drilled V0
- Ahouse Unit 1H, Original Wellpath, Plan 4 V0
- ▣ As Drilled

**PROJECT DETAILS: Doddridge County WV**  
Geoidetic System: Universal Transverse Mercator (US Survey Feet)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: Zone 17N (84 W to 76 W)  
System Datum: Mean Sea Level

Precision 522 GL 1005 + 18' RBK @ 1023.00m Gr. 1005.0

Name	TVD	+N/S	+E/W	Northing	Easting	Latitude	Longitude
SHL Ahouse Unit 1H	0.0	6021.9	0.0	14249870.09	1682112.0639	39° 14' 29.095 N	80° 51' 9.848 W
Actual BHL Ahouse Unit 1H	657.2	6021.9	-2345	14255682.04	1679762.9839	39° 15' 28.675 N	80° 51' 39.599 W

Genie Lightfoot  
16:05, April 10 2014  
Scientific Drilling  
421 South Eagle Lane  
Oklahoma City, OK 73128



Azimuths to Grid North  
True North: -0.09°  
Magnetic North: -8.47°  
Magnetic Field  
Strength: 52385.3srT  
Dip Angle: 66.87°  
Date: 8/2/2013  
Model: IGRF2010



To convert Magnetic North to Grid, Subtract 8.47°  
To convert True North to Grid, Subtract 0.09°



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MORGANTOWN, WV

## **Antero Resources**

**Doddridge County WV  
Ahouse / Callie Pad  
Ahouse Unit 1H  
Original Wellpath**

**Design: As Drilled**

## **EOW Completion Report**

**10 April, 2014**





<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well Ahouse Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Precision 522 GL 1005 + 18' RKB @ 1023.0usft
<b>Site:</b>	Ahouse / Callie Pad	<b>MD Reference:</b>	Precision 522 GL 1005 + 18' RKB @ 1023.0usft
<b>Well:</b>	Ahouse Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

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

<b>Site</b>	Ahouse / Callie Pad		
<b>Site Position:</b>		<b>Northing:</b>	14,249,870.09 usft
<b>From:</b>	Map	<b>Easting:</b>	1,682,112.06 usft
<b>Position Uncertainty:</b>	2.0 usft	<b>Slot Radius:</b>	13-3/16"
		<b>Latitude:</b>	39° 14' 29.095 N
		<b>Longitude:</b>	80° 51' 9.848 W
		<b>Grid Convergence:</b>	0.09 °

<b>Well</b>	Ahouse Unit 1H, Marcellus		
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b> 14,249,870.09 usft
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b> 1,682,112.06 usft
<b>Position Uncertainty</b>	2.0 usft	<b>Wellhead Elevation:</b>	1,023.0 usft
		<b>Ground Level:</b>	1,005.0 usft

<b>Wellbore</b>	Original Wellpath		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/2/2013	-8.38	66.87	52,385

<b>Design</b>	As Drilled		
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<b>Audit Notes:</b>				
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b> 0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	333.84

Survey Program	From (usft)	To (usft)	Date	Survey (Wellbore)	Tool Name	Description
	105.0	5,851.0	4/10/2014	Survey #1 Final Gyro (Original Wellpath)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper
	5,851.0	13,071.0		Survey #2 SDI 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
	105.0	0.57	168.27	105.0	-0.5	0.1	-0.5	0.54
	205.0	0.24	164.78	205.0	-1.2	0.3	-1.2	0.33
	305.0	0.13	141.71	305.0	-1.5	0.4	-1.5	0.13
	405.0	0.18	163.67	405.0	-1.7	0.5	-1.8	0.08
	505.0	0.12	135.49	505.0	-2.0	0.6	-2.0	0.09
	605.0	0.20	144.88	605.0	-2.2	0.8	-2.3	0.08
	705.0	0.19	164.50	705.0	-2.5	0.9	-2.6	0.07
	805.0	0.13	156.24	805.0	-2.7	1.0	-2.9	0.06
	905.0	0.15	152.62	905.0	-3.0	1.1	-3.2	0.02
	1,005.0	0.17	168.25	1,005.0	-3.2	1.2	-3.4	0.05



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well Ahouse Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Precision 522 GL 1005 + 18' RKB @ 1023.0usft
<b>Site:</b>	Ahouse / Callie Pad	<b>MD Reference:</b>	Precision 522 GL 1005 + 18' RKB @ 1023.0usft
<b>Well:</b>	Ahouse Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,105.0	0.15	162.57	1,105.0	-3.5	1.3	-3.7	0.03
1,205.0	0.19	182.77	1,205.0	-3.8	1.3	-4.0	0.07
1,305.0	0.19	168.96	1,305.0	-4.1	1.3	-4.3	0.05
1,405.0	0.19	171.75	1,405.0	-4.4	1.4	-4.6	0.01
1,505.0	0.18	163.42	1,505.0	-4.8	1.5	-4.9	0.03
1,605.0	0.20	200.68	1,605.0	-5.1	1.5	-5.2	0.12
1,705.0	0.36	167.35	1,705.0	-5.5	1.5	-5.6	0.22
1,805.0	0.29	197.22	1,805.0	-6.1	1.5	-6.1	0.18
1,905.0	0.36	199.66	1,905.0	-6.6	1.3	-6.5	0.07
2,005.0	0.31	248.76	2,005.0	-7.0	0.9	-6.7	0.28
2,105.0	0.31	208.16	2,105.0	-7.4	0.5	-6.8	0.22
2,205.0	0.26	195.82	2,205.0	-7.8	0.3	-7.2	0.08
2,305.0	0.35	200.53	2,305.0	-8.3	0.2	-7.5	0.09
2,405.0	0.25	203.63	2,405.0	-8.8	0.0	-7.9	0.10
2,505.0	0.27	184.47	2,505.0	-9.2	-0.1	-8.2	0.09
2,605.0	0.26	219.14	2,605.0	-9.6	-0.3	-8.5	0.16
2,705.0	0.24	189.03	2,705.0	-10.0	-0.5	-8.8	0.13
2,805.0	0.25	190.78	2,805.0	-10.4	-0.5	-9.1	0.01
2,905.0	0.19	198.18	2,905.0	-10.8	-0.6	-9.4	0.07
3,005.0	0.17	173.94	3,005.0	-11.1	-0.7	-9.7	0.08
3,105.0	0.23	165.50	3,105.0	-11.5	-0.6	-10.0	0.07
3,205.0	0.19	145.11	3,205.0	-11.8	-0.4	-10.4	0.08
3,305.0	0.23	148.17	3,305.0	-12.1	-0.2	-10.8	0.04
3,405.0	0.32	152.52	3,405.0	-12.5	0.0	-11.2	0.09
3,505.0	0.28	150.90	3,505.0	-13.0	0.2	-11.8	0.04
3,605.0	0.21	146.59	3,605.0	-13.4	0.5	-12.2	0.07
3,705.0	0.23	144.81	3,705.0	-13.7	0.7	-12.6	0.02
3,805.0	0.32	149.98	3,805.0	-14.1	0.9	-13.0	0.09
3,905.0	0.29	153.38	3,905.0	-14.5	1.2	-13.6	0.04
4,005.0	0.28	140.25	4,005.0	-15.0	1.4	-14.1	0.07
4,105.0	0.64	133.46	4,105.0	-15.5	2.0	-14.8	0.36
4,205.0	0.87	135.63	4,205.0	-16.5	2.9	-16.1	0.23
4,305.0	1.08	132.87	4,304.9	-17.6	4.2	-17.7	0.22
4,405.0	1.32	134.23	4,404.9	-19.1	5.7	-19.6	0.24
4,505.0	1.39	133.42	4,504.9	-20.7	7.4	-21.9	0.07
4,605.0	1.50	136.40	4,604.9	-22.5	9.2	-24.2	0.13
4,705.0	1.58	136.12	4,704.8	-24.4	11.0	-26.8	0.08
4,805.0	1.71	137.28	4,804.8	-26.5	13.0	-29.5	0.13
4,905.0	1.57	140.42	4,904.7	-28.7	14.9	-32.3	0.17
5,005.0	1.63	141.36	5,004.7	-30.9	16.6	-35.0	0.07
5,105.0	1.59	141.61	5,104.7	-33.0	18.4	-37.8	0.04
5,205.0	1.58	137.08	5,204.6	-35.1	20.2	-40.5	0.13
5,305.0	1.67	134.17	5,304.6	-37.2	22.2	-43.1	0.12
5,405.0	1.67	135.33	5,404.5	-39.2	24.2	-45.9	0.03

AUG 03 2015



**HYDROGEOLOGICAL SURVEY**  
MORGANTOWN, WV

EOW Completion Report



<b>Company:</b>	Antero Resources	<b>Local Co-ordinate Reference:</b>	Well Ahouse Unit 1H
<b>Project:</b>	Doddridge County WV	<b>TVD Reference:</b>	Precision 522 GL 1005 + 18' RKB @ 1023.0usft
<b>Site:</b>	Ahouse / Callie Pad	<b>MD Reference:</b>	Precision 522 GL 1005 + 18' RKB @ 1023.0usft
<b>Well:</b>	Ahouse Unit 1H	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	Original Wellpath	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	As Drilled	<b>Database:</b>	Oklahoma District

**Survey**

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,505.0	1.64	134.71	5,504.5	-41.3	26.3	-48.6	0.03
5,605.0	1.40	135.58	5,604.5	-43.1	28.2	-51.1	0.24
5,705.0	1.39	135.27	5,704.4	-44.9	29.9	-53.5	0.01
5,805.0	1.22	135.38	5,804.4	-46.5	31.5	-55.6	0.17
5,851.0	1.26	136.22	5,850.4	-47.2	32.2	-56.6	0.10
5,875.0	1.40	136.09	5,874.4	-47.6	32.6	-57.1	0.58
5,906.0	2.09	101.14	5,905.4	-48.0	33.4	-57.8	3.99
5,937.0	5.85	74.98	5,936.3	-47.7	35.5	-58.4	13.16
5,968.0	10.41	67.76	5,967.0	-46.2	39.6	-58.9	15.05
5,999.0	15.00	64.83	5,997.2	-43.5	45.8	-59.2	14.95
6,030.0	18.83	61.30	6,026.9	-39.3	53.8	-59.0	12.79
6,060.0	22.28	60.08	6,054.9	-34.2	63.0	-58.5	11.59
6,091.0	25.36	59.39	6,083.3	-27.9	73.8	-57.6	9.98
6,122.0	28.36	60.16	6,111.0	-20.8	85.9	-56.6	9.74
6,153.0	31.30	65.39	6,137.9	-13.8	99.6	-56.3	12.66
6,184.0	34.02	67.84	6,163.9	-7.2	115.0	-57.1	9.75
6,215.0	38.26	67.42	6,189.0	-0.2	131.9	-58.3	13.70
6,246.0	41.26	65.21	6,212.8	7.8	150.0	-59.2	10.70
6,277.0	43.07	59.94	6,235.8	17.3	168.5	-58.7	12.81
6,307.0	46.85	56.32	6,257.0	28.5	186.5	-56.6	15.21
6,338.0	49.72	53.51	6,277.6	41.9	205.4	-53.0	11.47
6,369.0	50.91	49.54	6,297.4	56.7	224.0	-47.9	10.58
6,400.0	50.44	45.45	6,317.1	72.9	241.7	-41.1	10.32
6,431.0	49.11	40.57	6,337.1	90.2	257.9	-32.7	12.76
6,462.0	49.01	36.10	6,357.4	108.5	272.4	-22.7	10.90
6,489.0	50.64	32.26	6,374.9	125.6	284.0	-12.4	12.44
<b>Middlesex</b>							
6,492.0	50.83	31.84	6,376.8	127.6	285.2	-11.2	12.44
6,523.0	53.38	28.97	6,395.8	148.7	297.6	2.3	11.00
6,554.0	55.97	26.23	6,413.7	171.1	309.3	17.2	11.04
6,585.0	58.63	22.80	6,430.5	194.8	320.1	33.8	12.66
6,616.0	61.34	19.66	6,446.0	219.8	329.8	51.9	12.38
6,647.0	63.05	16.18	6,460.5	245.9	338.2	71.6	11.36
6,678.0	64.44	12.61	6,474.2	272.8	345.1	92.7	11.26
6,708.0	65.89	9.72	6,486.8	299.6	350.4	114.4	9.99
6,739.0	67.25	6.59	6,499.1	327.7	354.4	137.9	10.25
<b>Burkett</b>							
6,770.0	68.58	2.90	6,510.8	356.3	356.8	162.5	11.83
6,801.0	70.17	359.88	6,521.7	385.3	357.5	188.2	10.46
6,813.0	70.84	358.95	6,525.7	396.6	357.4	198.5	9.16
<b>Tully</b>							
6,832.0	71.90	357.50	6,531.8	414.6	356.8	214.8	9.16
6,863.0	73.28	354.68	6,541.0	444.1	354.8	242.2	9.75
6,894.0	75.29	352.19	6,549.4	473.8	351.4	270.3	10.09



**Company:** Antero Resources  
**Project:** Doddridge County WV  
**Site:** Ahouse / Callie Pad  
**Well:** Ahouse Unit 1H  
**Wellbore:** Original Wellpath  
**Design:** As Drilled

**Local Co-ordinate Reference:** Well Ahouse Unit 1H  
**TVD Reference:** Precision 522 GL 1005 + 18' RKB @ 1023.0usft  
**MD Reference:** Precision 522 GL 1005 + 18' RKB @ 1023.0usft  
**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)
6,919.0	76.63	349.90	6,555.5	497.7	347.6	293.5	10.38
<b>Marcellus</b>							
6,925.0	76.95	349.35	6,556.9	503.5	346.6	299.1	10.38
6,955.0	78.57	344.86	6,563.2	532.1	340.0	327.6	15.59
6,986.0	80.11	340.55	6,569.0	561.1	331.0	357.7	14.54
7,017.0	82.93	336.33	6,573.5	589.6	319.7	388.3	16.25
7,047.0	86.61	333.87	6,576.3	616.7	307.1	418.2	14.74
7,078.0	88.55	332.64	6,577.6	644.4	293.2	449.1	7.41
7,109.0	88.90	332.37	6,578.3	671.9	278.9	480.1	1.43
7,201.0	89.34	334.13	6,579.7	754.0	237.5	572.1	1.97
7,294.0	91.88	334.28	6,578.7	837.7	197.0	665.1	2.74
7,387.0	91.45	333.60	6,576.0	921.2	156.2	758.0	0.86
7,479.0	91.36	333.95	6,573.7	1,003.7	115.5	850.0	0.39
7,572.0	89.52	333.69	6,573.0	1,087.2	74.5	943.0	2.00
7,665.0	91.28	333.08	6,572.4	1,170.3	32.8	1,036.0	2.00
7,757.0	91.98	333.25	6,569.8	1,252.4	-8.7	1,127.9	0.78
7,850.0	89.16	334.13	6,568.8	1,335.8	-49.9	1,220.9	3.18
7,943.0	89.08	334.57	6,570.3	1,419.6	-90.2	1,313.9	0.48
8,037.0	88.72	334.04	6,572.1	1,504.3	-130.9	1,407.9	0.68
8,132.0	88.72	333.87	6,574.2	1,589.6	-172.6	1,502.9	0.18
8,227.0	89.96	334.57	6,575.3	1,675.1	-213.9	1,597.9	1.50
8,322.0	89.60	335.10	6,575.6	1,761.1	-254.3	1,692.8	0.67
8,416.0	89.78	332.46	6,576.2	1,845.4	-295.8	1,786.8	2.81
8,511.0	90.92	333.60	6,575.6	1,930.1	-338.9	1,881.8	1.70
8,606.0	90.75	333.34	6,574.2	2,015.1	-381.4	1,976.8	0.33
8,700.0	91.01	333.34	6,572.7	2,099.1	-423.5	2,070.8	0.28
8,794.0	90.40	333.51	6,571.6	2,183.1	-465.6	2,164.8	0.67
8,889.0	89.78	333.87	6,571.4	2,268.3	-507.7	2,259.8	0.75
8,983.0	90.04	333.60	6,571.6	2,352.6	-549.3	2,353.8	0.40
9,078.0	90.75	333.78	6,570.9	2,437.8	-591.4	2,448.8	0.77
9,170.0	90.66	332.99	6,569.8	2,520.0	-632.6	2,540.8	0.86
9,263.0	89.78	333.51	6,569.4	2,603.0	-674.5	2,633.8	1.10
9,356.0	88.90	333.78	6,570.5	2,686.4	-715.7	2,726.8	0.99
9,448.0	90.92	334.48	6,570.7	2,769.1	-755.9	2,818.7	2.32
9,541.0	90.57	334.57	6,569.5	2,853.1	-795.9	2,911.7	0.39
9,634.0	90.57	332.99	6,568.5	2,936.5	-837.0	3,004.7	1.70
9,726.0	90.66	333.60	6,567.5	3,018.7	-878.3	3,096.7	0.67
9,819.0	90.84	334.31	6,566.3	3,102.3	-919.1	3,189.7	0.79
9,911.0	89.78	333.08	6,565.8	3,184.7	-959.9	3,281.7	1.76
10,004.0	89.08	334.83	6,566.7	3,268.3	-1,000.7	3,374.7	2.03
10,097.0	89.43	333.87	6,568.0	3,352.1	-1,041.0	3,467.7	1.10
10,189.0	91.19	336.68	6,567.5	3,435.7	-1,079.5	3,559.6	3.60
10,282.0	90.57	336.77	6,566.0	3,521.1	-1,116.2	3,652.5	0.67
10,375.0	91.19	335.45	6,564.6	3,606.1	-1,153.9	3,745.4	1.57
10,467.0	88.90	332.99	6,564.5	3,688.9	-1,193.9	3,837.4	3.65

AUG 03 2015



EOW Completion Report



<b>Company:</b> Antero Resources	<b>Local Co-ordinate Reference:</b> Well Ahouse Unit 1H
<b>Project:</b> Doddridge County WV	<b>TVD Reference:</b> Precision 522 GL 1005 + 18' RKB @ 1023.0usft
<b>Site:</b> Ahouse / Callie Pad	<b>MD Reference:</b> Precision 522 GL 1005 + 18' RKB @ 1023.0usft
<b>Well:</b> Ahouse Unit 1H	<b>North Reference:</b> Grid
<b>Wellbore:</b> Original Wellpath	<b>Survey Calculation Method:</b> Minimum Curvature
<b>Design:</b> As Drilled	<b>Database:</b> Oklahoma District

**Survey**

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
10,560.0	88.99	333.08	6,566.2	3,771.8	-1,236.0	3,930.4	0.14
10,653.0	89.52	332.37	6,567.5	3,854.5	-1,278.6	4,023.4	0.95
10,745.0	90.04	332.46	6,567.8	3,936.0	-1,321.2	4,115.3	0.57
10,838.0	89.16	330.88	6,568.5	4,017.8	-1,365.4	4,208.2	1.94
10,930.0	89.87	332.64	6,569.2	4,098.9	-1,408.9	4,300.2	2.06
11,023.0	90.13	332.55	6,569.2	4,181.5	-1,451.7	4,393.2	0.30
11,116.0	91.54	333.43	6,567.9	4,264.3	-1,493.9	4,486.1	1.79
11,208.0	91.19	334.92	6,565.7	4,347.1	-1,534.0	4,578.1	1.66
11,301.0	91.28	335.45	6,563.7	4,431.5	-1,573.0	4,671.1	0.58
11,393.0	90.75	336.68	6,562.1	4,515.6	-1,610.3	4,763.0	1.46
11,486.0	90.40	334.31	6,561.1	4,600.2	-1,648.9	4,855.9	2.58
11,579.0	90.31	333.60	6,560.5	4,683.7	-1,689.7	4,948.9	0.77
11,671.0	91.31	333.19	6,559.2	4,766.0	-1,730.9	5,040.9	1.17
11,764.0	89.96	333.43	6,558.2	4,849.0	-1,772.7	5,133.9	1.47
11,856.0	89.69	332.28	6,558.5	4,930.9	-1,814.7	5,225.9	1.28
11,949.0	88.90	333.25	6,559.6	5,013.6	-1,857.2	5,318.9	1.35
12,041.0	90.04	334.31	6,560.5	5,096.1	-1,897.9	5,410.8	1.69
12,134.0	90.84	334.04	6,559.8	5,179.8	-1,938.4	5,503.8	0.91
12,226.0	91.36	333.87	6,558.0	5,262.5	-1,978.8	5,595.8	0.59
12,319.0	89.78	334.66	6,557.1	5,346.2	-2,019.2	5,688.8	1.90
12,411.0	90.40	333.43	6,556.9	5,429.0	-2,059.4	5,780.8	1.50
12,504.0	90.75	333.87	6,556.0	5,512.3	-2,100.7	5,873.8	0.60
12,597.0	88.99	334.57	6,556.2	5,596.0	-2,141.1	5,966.8	2.04
12,689.0	89.60	334.13	6,557.3	5,679.0	-2,181.0	6,058.8	0.82
12,782.0	89.34	334.31	6,558.2	5,762.7	-2,221.4	6,151.8	0.34
12,874.0	89.66	333.51	6,559.0	5,845.3	-2,261.9	6,243.8	0.94
12,967.0	90.84	333.78	6,558.6	5,928.7	-2,303.2	6,336.8	1.30
13,011.0	90.74	333.78	6,558.0	5,968.1	-2,322.6	6,380.8	0.23
13,071.0	90.74	333.78	6,557.2	6,021.9	-2,349.1	6,440.8	0.00

**Design Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,489.0	6,374.9	125.6	284.0	Middlesex
6,739.0	6,499.1	327.7	354.4	Burkett
6,813.0	6,525.7	396.6	357.4	Tully
6,919.0	6,555.5	497.7	347.6	Marcellus

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_