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WV GEOLOGICAL SURVEY
MORGANTOWN, WV



Hudkins Unit 2H
Dodridge County WV
Northing: 14261468.18
Easting: 1673583.36
As Drilled



Azimuths to Grid North
True North: 0.07°
Magnetic North: -8.48°
Magnetic Field
Strength: 52263.89T
Dip Angle: 66.97°
Date: 7/15/2014
Model: BGGM2014

To convert Magnetic North to Grid, Subtract 8.48°
To convert True North to Grid, Subtract 0.07°

SITE DETAILS: Hudkins/Leason/Pad
Site Center: Hudkins 2H
Site Centre Northing: 14261468.18
Easting: 1673583.36
Positional Uncertainty: 2.0
Convergence: 0.07
Local North: Grid

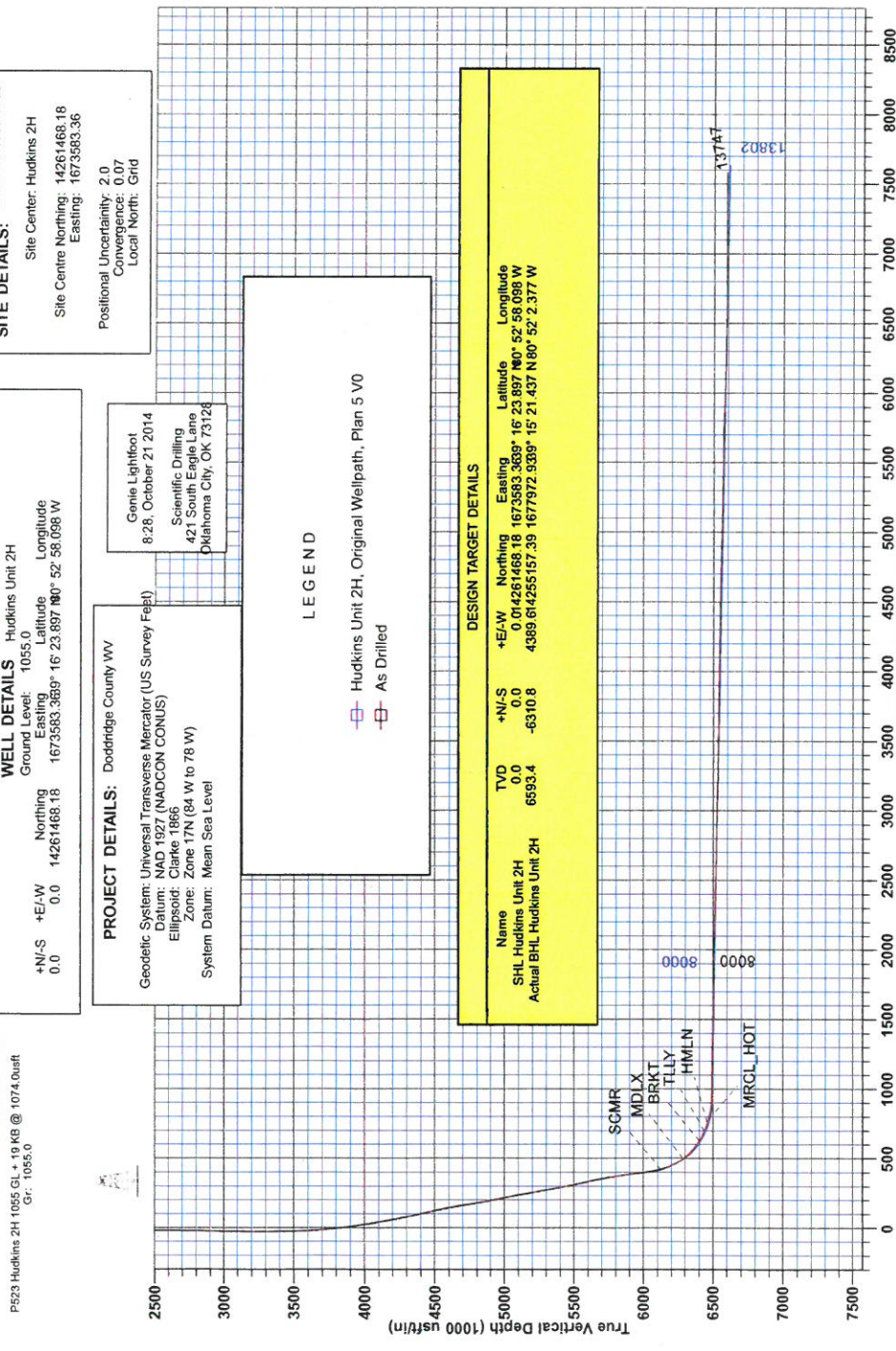
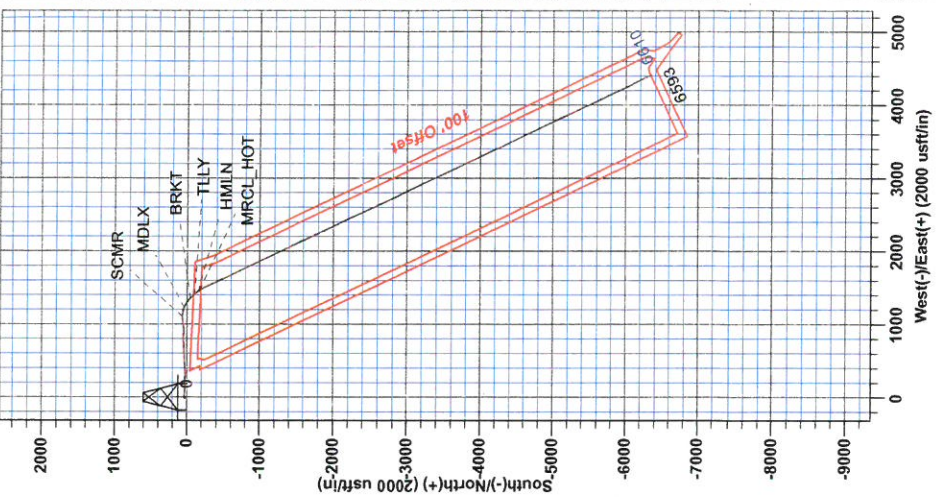
WELL DETAILS Hudkins Unit 2H
Ground Level: 1055.0
Northing: 14261468.18
Easting: 1673583.36
Latitude: 38° 52' 58.098" W
Longitude: 80° 52' 58.098" W

PROJECT DETAILS: Dodridge County WV
Geoidetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 83 (NAD83 CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 17N (84 W to 78 W)
System Datum: Mean Sea Level
Genie Lightfoot
8-28, October 21 2014
Scientific Drilling
421 South Eagle Lane
Oklahoma City, OK 73128

LEGEND
Hudkins Unit 2H, Original Wellpath, Plan 5 V0
As Drilled

DESIGN TARGET DETAILS

Name	+N-S	+E-W	Northing	Easting	Latitude	Longitude
SHL Hudkins Unit 2H	0.0	0.0	0.01426146818	1673583.3639	16° 23' 897" N	52° 58' 098" W
Actual BHL Hudkins Unit 2H	6993.4	-6310.8	4389.61425515739	1677972.9389	15° 21' 437" N	80° 52' 2.377" W





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MORGANTOWN, WV

Antero Resources

Doddridge County WV
Hudkins/Leason/Pad
Hudkins Unit 2H
Original Wellpath

Design: As Drilled

EOW Completion Report

20 October, 2014



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EOW Completion Report



Company: Antero Resources	Local Co-ordinate Reference: Well Hudkins Unit 2H
Project: Doddridge County WV	TVD Reference: P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Site: Hudkins/Leason/Pad	MD Reference: P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Well: Hudkins 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	Hudkins/Leason/Pad				
Site Position:		Northing:	14,261,468.18 usft	Latitude:	39° 16' 23.897 N
From:	Map	Easting:	1,673,583.36 usft	Longitude:	80° 52' 58.098 W
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.07 °

Well	Hudkins Unit 2H, Marcellus					
Well Position	+N/-S	0.0 usft	Northing:	14,261,468.18 usft	Latitude:	39° 16' 23.897 N
	+E/-W	0.0 usft	Easting:	1,673,583.36 usft	Longitude:	80° 52' 58.098 W
Position Uncertainty	2.0 usft		Wellhead Elevation:	1,074.0 usft	Ground Level:	1,055.0 usft

Wellbore	Original Wellpath				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	7/15/2014	-8.41	66.87	52,253

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	154.54

Survey Program	Date	10/20/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
106.0	6,051.0	Survey #3 Gyro to KOP (Original Wellpath)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper	
6,093.0	13,747.0	Survey #4 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
106.0	0.70	323.73	106.0	0.5	-0.4	-0.6	0.66
131.0	0.72	323.20	131.0	0.8	-0.6	-0.9	0.08
156.0	0.64	331.49	156.0	1.0	-0.7	-1.2	0.51
181.0	0.72	320.77	181.0	1.3	-0.9	-1.5	0.60
206.0	0.71	324.86	206.0	1.5	-1.1	-1.8	0.21
231.0	0.77	320.88	231.0	1.8	-1.3	-2.1	0.32
256.0	0.69	321.44	256.0	2.0	-1.5	-2.5	0.32
281.0	0.61	324.73	281.0	2.2	-1.6	-2.7	0.35
306.0	0.42	353.71	306.0	2.4	-1.7	-3.0	1.27
331.0	0.49	326.45	331.0	2.6	-1.8	-3.1	0.90

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EOW Completion Report



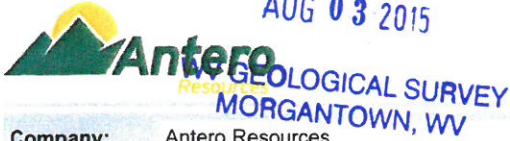
Company:	Antero Resources	Local Co-ordinate Reference:	Well Hudkins Unit 2H
Project:	Doddridge County WV	TVD Reference:	P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Site:	Hudkins/Leason/Pad	MD Reference:	P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Well:	Hudkins Unit 2H	North Reference:	Grid
Wellbore:	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)
356.0	0.39	341.80	356.0	2.8	-1.9	-3.3	0.61
381.0	0.37	357.12	381.0	3.0	-1.9	-3.5	0.41
406.0	0.39	353.74	406.0	3.1	-1.9	-3.6	0.12
431.0	0.37	344.35	431.0	3.3	-2.0	-3.8	0.26
456.0	0.37	342.06	456.0	3.4	-2.0	-4.0	0.06
481.0	0.35	355.76	481.0	3.6	-2.0	-4.1	0.35
506.0	0.32	342.85	506.0	3.7	-2.1	-4.3	0.32
531.0	0.32	347.26	531.0	3.9	-2.1	-4.4	0.10
556.0	0.30	342.95	556.0	4.0	-2.1	-4.5	0.12
581.0	0.32	358.24	581.0	4.1	-2.2	-4.7	0.34
606.0	0.28	358.72	606.0	4.3	-2.2	-4.8	0.16
631.0	0.31	352.59	631.0	4.4	-2.2	-4.9	0.17
656.0	0.36	348.29	656.0	4.5	-2.2	-5.0	0.22
681.0	0.31	347.68	681.0	4.7	-2.2	-5.2	0.20
706.0	0.30	354.38	706.0	4.8	-2.2	-5.3	0.15
731.0	0.30	351.96	731.0	4.9	-2.3	-5.4	0.05
756.0	0.31	350.31	756.0	5.1	-2.3	-5.6	0.05
781.0	0.28	344.15	781.0	5.2	-2.3	-5.7	0.17
806.0	0.34	352.27	806.0	5.3	-2.3	-5.8	0.30
831.0	0.35	353.22	831.0	5.5	-2.4	-6.0	0.05
856.0	0.37	341.37	856.0	5.6	-2.4	-6.1	0.31
881.0	0.37	348.28	881.0	5.8	-2.4	-6.3	0.18
906.0	0.39	348.69	906.0	5.9	-2.5	-6.4	0.08
931.0	0.38	347.69	931.0	6.1	-2.5	-6.6	0.05
956.0	0.44	347.20	956.0	6.3	-2.5	-6.8	0.24
981.0	0.41	343.92	981.0	6.5	-2.6	-7.0	0.15
1,006.0	0.45	341.12	1,006.0	6.6	-2.6	-7.1	0.18
1,031.0	0.45	345.91	1,031.0	6.8	-2.7	-7.3	0.15
1,056.0	0.49	339.62	1,056.0	7.0	-2.8	-7.5	0.26
1,081.0	0.47	341.72	1,081.0	7.2	-2.8	-7.7	0.11
1,106.0	0.55	334.65	1,106.0	7.4	-2.9	-8.0	0.41
1,131.0	0.49	340.34	1,131.0	7.6	-3.0	-8.2	0.32
1,156.0	0.52	338.63	1,156.0	7.8	-3.1	-8.4	0.13
1,181.0	0.63	321.27	1,181.0	8.1	-3.2	-8.7	0.82
1,206.0	0.60	324.38	1,206.0	8.3	-3.4	-8.9	0.18
1,231.0	0.57	332.35	1,231.0	8.5	-3.5	-9.2	0.35
1,256.0	0.73	316.23	1,256.0	8.7	-3.7	-9.4	0.97
1,281.0	0.70	317.55	1,281.0	8.9	-3.9	-9.7	0.14
1,306.0	0.60	329.90	1,306.0	9.2	-4.1	-10.0	0.69
1,331.0	0.73	314.31	1,331.0	9.4	-4.2	-10.3	0.89
1,356.0	0.64	320.89	1,356.0	9.6	-4.4	-10.6	0.48
1,381.0	0.64	322.71	1,381.0	9.8	-4.6	-10.9	0.08
1,406.0	0.69	323.81	1,405.9	10.1	-4.8	-11.1	0.21
1,431.0	0.69	320.85	1,430.9	10.3	-5.0	-11.4	0.14

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EOW Completion Report



Company: Antero Resources
Project: Doddridge County WV
Site: Hudkins/Leason/Pad
Well: Hudkins Unit 2H
Wellbore: Original Wellpath
Design: As Drilled

Local Co-ordinate Reference: Well Hudkins Unit 2H
TVD Reference: P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
MD Reference: P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
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)
1,456.0	0.66	327.04	1,455.9	10.5	-5.1	-11.7	0.32
1,481.0	0.70	321.44	1,480.9	10.8	-5.3	-12.0	0.31
1,506.0	0.73	322.21	1,505.9	11.0	-5.5	-12.3	0.13
1,531.0	0.69	328.24	1,530.9	11.3	-5.7	-12.6	0.34
1,556.0	0.67	325.45	1,555.9	11.5	-5.8	-12.9	0.15
1,581.0	0.66	329.23	1,580.9	11.8	-6.0	-13.2	0.18
1,606.0	0.62	325.55	1,605.9	12.0	-6.2	-13.5	0.23
1,631.0	0.75	315.51	1,630.9	12.2	-6.3	-13.8	0.71
1,656.0	0.66	316.20	1,655.9	12.5	-6.6	-14.1	0.36
1,681.0	0.64	313.21	1,680.9	12.7	-6.8	-14.3	0.16
1,706.0	0.67	312.01	1,705.9	12.8	-7.0	-14.6	0.13
1,731.0	0.66	313.09	1,730.9	13.0	-7.2	-14.9	0.06
1,756.0	0.71	306.59	1,755.9	13.2	-7.4	-15.1	0.37
1,781.0	0.73	306.97	1,780.9	13.4	-7.7	-15.4	0.08
1,806.0	0.55	312.58	1,805.9	13.6	-7.9	-15.7	0.76
1,831.0	0.66	305.89	1,830.9	13.8	-8.1	-15.9	0.52
1,856.0	0.49	321.35	1,855.9	13.9	-8.3	-16.1	0.91
1,881.0	0.51	313.83	1,880.9	14.1	-8.4	-16.3	0.27
1,906.0	0.36	310.25	1,905.9	14.2	-8.6	-16.5	0.61
1,931.0	0.33	316.00	1,930.9	14.3	-8.7	-16.7	0.18
1,956.0	0.40	314.32	1,955.9	14.4	-8.8	-16.8	0.28
1,981.0	0.42	315.56	1,980.9	14.6	-8.9	-17.0	0.09
2,006.0	0.30	326.58	2,005.9	14.7	-9.0	-17.1	0.55
2,031.0	0.37	329.26	2,030.9	14.8	-9.1	-17.3	0.29
2,056.0	0.41	321.73	2,055.9	14.9	-9.2	-17.4	0.26
2,081.0	0.46	311.18	2,080.9	15.1	-9.3	-17.6	0.38
2,106.0	0.40	311.89	2,105.9	15.2	-9.4	-17.8	0.24
2,131.0	0.46	299.35	2,130.9	15.3	-9.6	-18.0	0.45
2,156.0	0.31	314.74	2,155.9	15.4	-9.7	-18.1	0.72
2,181.0	0.40	305.45	2,180.9	15.5	-9.9	-18.2	0.43
2,206.0	0.45	299.26	2,205.9	15.6	-10.0	-18.4	0.27
2,231.0	0.37	298.08	2,230.9	15.7	-10.2	-18.5	0.32
2,256.0	0.48	304.06	2,255.9	15.8	-10.3	-18.7	0.47
2,281.0	0.40	298.33	2,280.9	15.9	-10.5	-18.9	0.36
2,306.0	0.43	300.30	2,305.9	16.0	-10.6	-19.0	0.13
2,331.0	0.46	299.33	2,330.9	16.1	-10.8	-19.2	0.12
2,356.0	0.38	309.83	2,355.9	16.2	-11.0	-19.3	0.44
2,381.0	0.34	306.58	2,380.9	16.3	-11.1	-19.5	0.18
2,406.0	0.41	318.45	2,405.9	16.4	-11.2	-19.6	0.42
2,431.0	0.40	305.64	2,430.9	16.5	-11.3	-19.8	0.36
2,456.0	0.37	310.76	2,455.9	16.6	-11.5	-19.9	0.18
2,481.0	0.44	307.73	2,480.9	16.7	-11.6	-20.1	0.29
2,506.0	0.40	320.65	2,505.9	16.8	-11.7	-20.3	0.41
2,531.0	0.31	313.89	2,530.9	17.0	-11.8	-20.4	0.40
2,556.0	0.52	302.32	2,555.9	17.1	-12.0	-20.6	0.90

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Hudkins Unit 2H
Project:	Doddridge County WV	TVD Reference:	P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Site:	Hudkins/Leason/Pad	MD Reference:	P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Well:	Hudkins 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)
2,581.0	0.45	310.96	2,580.9	17.2	-12.2	-20.8	0.40
2,606.0	0.43	315.76	2,605.9	17.3	-12.3	-20.9	0.17
2,631.0	0.53	311.40	2,630.9	17.5	-12.5	-21.1	0.43
2,656.0	0.64	314.21	2,655.9	17.6	-12.6	-21.4	0.45
2,681.0	0.59	305.72	2,680.9	17.8	-12.8	-21.6	0.42
2,706.0	0.58	306.14	2,705.9	18.0	-13.0	-21.8	0.04
2,731.0	0.58	305.19	2,730.9	18.1	-13.3	-22.1	0.04
2,756.0	0.65	308.26	2,755.9	18.3	-13.5	-22.3	0.31
2,781.0	0.54	309.97	2,780.9	18.4	-13.7	-22.5	0.45
2,806.0	0.68	301.93	2,805.9	18.6	-13.9	-22.8	0.66
2,831.0	0.67	301.79	2,830.9	18.7	-14.1	-23.0	0.04
2,856.0	0.56	307.36	2,855.9	18.9	-14.4	-23.2	0.50
2,881.0	0.62	302.83	2,880.9	19.0	-14.6	-23.5	0.30
2,906.0	0.70	299.48	2,905.9	19.2	-14.8	-23.7	0.36
2,931.0	0.67	300.60	2,930.9	19.3	-15.1	-23.9	0.13
2,956.0	0.65	294.81	2,955.9	19.5	-15.3	-24.2	0.28
2,981.0	0.64	305.86	2,980.9	19.6	-15.6	-24.4	0.50
3,006.0	0.56	325.14	3,005.9	19.8	-15.8	-24.7	0.86
3,031.0	0.64	315.85	3,030.9	20.0	-15.9	-24.9	0.50
3,056.0	0.60	313.44	3,055.9	20.2	-16.1	-25.2	0.19
3,081.0	0.54	318.63	3,080.9	20.4	-16.3	-25.4	0.32
3,106.0	0.59	326.55	3,105.9	20.6	-16.4	-25.6	0.37
3,131.0	0.41	345.37	3,130.9	20.8	-16.5	-25.8	0.97
3,156.0	0.53	311.24	3,155.9	20.9	-16.6	-26.0	1.19
3,181.0	0.62	305.11	3,180.9	21.1	-16.8	-26.3	0.44
3,206.0	0.61	306.35	3,205.9	21.2	-17.1	-26.5	0.07
3,231.0	0.55	312.47	3,230.9	21.4	-17.2	-26.7	0.34
3,256.0	0.52	314.54	3,255.9	21.6	-17.4	-26.9	0.14
3,281.0	0.50	4.44	3,280.9	21.7	-17.5	-27.1	1.72
3,306.0	1.28	50.54	3,305.9	22.0	-17.3	-27.3	4.00
3,331.0	2.45	65.06	3,330.8	22.4	-16.6	-27.4	5.01
3,356.0	3.58	67.26	3,355.8	23.0	-15.4	-27.3	4.54
3,381.0	4.97	65.41	3,380.7	23.7	-13.7	-27.3	5.59
3,406.0	6.43	69.17	3,405.6	24.7	-11.4	-27.1	6.02
3,431.0	7.70	72.34	3,430.4	25.7	-8.5	-26.8	5.31
3,456.0	8.10	72.77	3,455.2	26.7	-5.2	-26.3	1.62
3,481.0	7.97	72.20	3,479.9	27.7	-1.9	-25.8	0.61
3,506.0	8.13	72.67	3,504.7	28.8	1.5	-25.4	0.69
3,531.0	7.89	73.88	3,529.5	29.8	4.8	-24.8	1.17
3,556.0	7.81	76.23	3,554.2	30.7	8.1	-24.2	1.32
3,581.0	7.72	80.59	3,579.0	31.4	11.4	-23.4	2.38
3,606.0	7.78	87.87	3,603.8	31.7	14.8	-22.3	3.93
3,631.0	8.16	92.77	3,628.5	31.7	18.2	-20.8	3.11
3,656.0	8.33	93.77	3,653.3	31.5	21.8	-19.0	0.89

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GEOLOGICAL SURVEY
MORGANTOWN, WV

EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Hudkins Unit 2H
Project:	Doddridge County WV	TVD Reference:	P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Site:	Hudkins/Leason/Pad	MD Reference:	P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Well:	Hudkins 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)
3,681.0	8.55	94.42	3,678.0	31.2	25.5	-17.2	0.96
3,706.0	8.86	96.47	3,702.7	30.9	29.2	-15.3	1.75
3,731.0	9.54	97.94	3,727.4	30.3	33.2	-13.1	2.88
3,756.0	10.22	99.29	3,752.0	29.7	37.4	-10.7	2.87
3,781.0	10.87	99.39	3,776.6	29.0	42.0	-8.1	2.60
3,806.0	11.39	98.59	3,801.1	28.2	46.7	-5.4	2.17
3,831.0	12.11	96.97	3,825.6	27.5	51.8	-2.6	3.17
3,856.0	12.93	96.22	3,850.0	26.9	57.2	0.3	3.34
3,881.0	14.02	96.39	3,874.3	26.3	62.9	3.3	4.36
3,906.0	14.72	96.25	3,898.5	25.6	69.1	6.6	2.80
3,931.0	15.66	96.04	3,922.7	24.9	75.6	10.0	3.77
3,956.0	16.69	95.85	3,946.7	24.2	82.6	13.7	4.13
3,981.0	17.55	96.15	3,970.6	23.4	89.9	17.5	3.46
4,006.0	18.60	95.33	3,994.3	22.6	97.6	21.5	4.32
4,031.0	19.23	94.72	4,018.0	21.9	105.7	25.6	2.64
4,056.0	19.67	94.14	4,041.5	21.3	114.0	29.8	1.92
4,081.0	20.11	93.32	4,065.1	20.7	122.5	33.9	2.08
4,106.0	20.94	92.70	4,088.5	20.2	131.2	38.1	3.43
4,131.0	21.37	91.89	4,111.8	19.9	140.2	42.3	2.08
4,156.0	22.25	91.09	4,135.0	19.6	149.5	46.5	3.72
4,181.0	22.93	90.13	4,158.1	19.5	159.1	50.7	3.09
4,206.0	23.56	88.10	4,181.0	19.7	169.0	54.8	4.08
4,231.0	24.37	85.89	4,203.9	20.2	179.1	58.7	4.84
4,256.0	24.78	85.24	4,226.6	21.0	189.5	62.5	1.96
4,281.0	24.99	85.35	4,249.3	21.9	200.0	66.2	0.86
4,306.0	25.23	85.99	4,271.9	22.7	210.5	70.0	1.45
4,331.0	25.01	88.71	4,294.6	23.2	221.1	74.1	4.70
4,356.0	24.92	91.49	4,317.2	23.2	231.7	78.7	4.71
4,381.0	25.27	93.44	4,339.9	22.7	242.3	83.6	3.59
4,406.0	25.56	94.37	4,362.5	22.0	253.0	88.9	1.97
4,431.0	25.93	94.49	4,385.0	21.2	263.8	94.3	1.49
4,456.0	26.15	94.44	4,407.4	20.3	274.7	99.8	0.88
4,481.0	26.26	93.70	4,429.9	19.5	285.8	105.2	1.38
4,506.0	26.53	93.49	4,452.3	18.8	296.9	110.6	1.14
4,531.0	26.81	92.67	4,474.6	18.2	308.1	116.0	1.85
4,556.0	27.22	91.22	4,496.9	17.8	319.4	121.2	3.10
4,581.0	27.41	89.88	4,519.1	17.7	330.9	126.2	2.57
4,606.0	27.52	89.25	4,541.3	17.8	342.4	131.1	1.24
4,631.0	27.53	88.18	4,563.4	18.1	354.0	135.8	1.98
4,656.0	27.30	87.29	4,585.6	18.5	365.5	140.4	1.88
4,681.0	27.65	86.71	4,607.8	19.1	377.0	144.8	1.76
4,706.0	27.14	86.02	4,630.0	19.9	388.5	149.1	2.40
4,731.0	26.65	84.65	4,652.3	20.8	399.7	153.1	3.16
4,756.0	26.59	83.90	4,674.7	21.9	410.9	156.9	1.37

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Hudkins Unit 2H
Project:	Doddridge County WV	TVD Reference:	P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Site:	Hudkins/Leason/Pad	MD Reference:	P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Well:	Hudkins 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)
4,781.0	26.51	83.42	4,697.0	23.1	422.0	160.5	0.92
4,806.0	26.34	83.10	4,719.4	24.4	433.0	164.1	0.89
4,831.0	25.75	83.18	4,741.9	25.7	443.9	167.6	2.36
4,856.0	25.63	83.48	4,764.4	27.0	454.7	171.1	0.71
4,881.0	25.39	84.70	4,787.0	28.1	465.4	174.7	2.31
4,906.0	25.44	85.91	4,809.5	29.0	476.1	178.5	2.09
4,931.0	25.61	86.81	4,832.1	29.7	486.8	182.5	1.69
4,956.0	25.74	87.25	4,854.6	30.2	497.7	186.6	0.92
4,981.0	26.02	87.32	4,877.1	30.7	508.6	190.9	1.13
5,006.0	26.19	87.75	4,899.6	31.2	519.5	195.2	1.02
5,031.0	26.56	88.31	4,922.0	31.6	530.6	199.6	1.78
5,056.0	27.11	88.90	4,944.3	31.9	541.9	204.2	2.44
5,081.0	27.57	88.76	4,966.5	32.1	553.4	208.9	1.86
5,106.0	27.61	88.85	4,988.7	32.4	565.0	213.7	0.23
5,131.0	27.29	87.95	5,010.8	32.7	576.5	218.3	2.10
5,156.0	26.78	86.83	5,033.1	33.2	587.9	222.7	2.88
5,181.0	26.09	85.75	5,055.5	33.9	599.0	226.9	3.36
5,206.0	25.76	85.37	5,078.0	34.8	609.9	230.8	1.48
5,231.0	25.72	85.89	5,100.5	35.6	620.7	234.7	0.92
5,256.0	25.51	86.56	5,123.0	36.3	631.5	238.7	1.43
5,281.0	25.71	87.07	5,145.6	36.9	642.3	242.8	1.19
5,306.0	26.02	86.96	5,168.1	37.5	653.2	247.0	1.25
5,331.0	26.01	86.79	5,190.5	38.1	664.1	251.1	0.30
5,356.0	25.56	86.53	5,213.1	38.7	675.0	255.2	1.86
5,381.0	25.35	86.47	5,235.6	39.3	685.7	259.2	0.85
5,406.0	25.33	86.90	5,258.2	40.0	696.4	263.3	0.74
5,431.0	25.75	87.69	5,280.8	40.5	707.1	267.4	2.16
5,456.0	25.82	88.04	5,303.3	40.9	718.0	271.7	0.67
5,481.0	25.23	87.65	5,325.9	41.3	728.8	276.0	2.45
5,506.0	25.03	87.16	5,348.5	41.8	739.4	280.1	1.15
5,531.0	25.09	87.18	5,371.1	42.3	749.9	284.2	0.24
5,556.0	25.20	87.08	5,393.8	42.8	760.6	288.3	0.47
5,581.0	25.51	87.02	5,416.4	43.4	771.2	292.4	1.24
5,606.0	25.93	88.28	5,438.9	43.8	782.1	296.6	2.76
5,631.0	25.98	89.54	5,461.4	44.0	793.0	301.2	2.21
5,656.0	25.70	90.45	5,483.9	44.0	803.9	305.8	1.94
5,681.0	25.16	90.74	5,506.4	43.9	814.7	310.6	2.22
5,706.0	25.10	91.78	5,529.1	43.7	825.3	315.3	1.78
5,731.0	25.48	92.21	5,551.7	43.3	835.9	320.2	1.69
5,756.0	26.16	92.51	5,574.2	42.9	846.8	325.3	2.77
5,781.0	26.57	92.37	5,596.6	42.4	857.9	330.5	1.66
5,806.0	26.45	92.10	5,618.9	42.0	869.1	335.7	0.68
5,831.0	25.47	91.44	5,641.4	41.6	880.0	340.7	4.09
5,856.0	24.64	90.82	5,664.1	41.4	890.6	345.5	3.48

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WV GEOLOGICAL SURVEY
MORGANTOWN, WV

EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well Hudkins Unit 2H
Project:	Doddridge County WV	TVD Reference:	P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Site:	Hudkins/Leason/Pad	MD Reference:	P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Well:	Hudkins 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)	EW (usft)	V. Sec (usft)	DLeg (°/100usft)	
5,881.0	24.27	90.47	5,686.8	41.3	900.9	350.0	1.59	
5,906.0	23.44	89.61	5,709.7	41.3	911.0	354.4	3.60	
5,931.0	23.06	88.92	5,732.7	41.4	920.9	358.5	1.87	
5,956.0	22.86	88.27	5,755.7	41.6	930.7	362.5	1.29	
5,981.0	23.36	87.58	5,778.7	42.0	940.5	366.4	2.27	
6,006.0	23.51	87.07	5,801.6	42.5	950.4	370.2	1.01	
6,031.0	23.85	84.80	5,824.5	43.2	960.4	373.9	3.89	
6,051.0	24.45	83.20	5,842.8	44.0	968.5	376.6	4.44	
6,093.0	24.61	80.96	5,881.0	46.4	985.8	381.9	2.25	
6,138.0	24.45	80.60	5,921.9	49.4	1,004.3	387.1	0.49	
6,168.0	24.82	80.83	5,949.2	51.4	1,016.6	390.6	1.27	
6,198.0	24.25	79.90	5,976.5	53.5	1,028.9	394.0	2.29	
6,227.0	23.99	79.94	6,002.9	55.6	1,040.5	397.1	0.90	
6,257.0	23.83	79.50	6,030.4	57.8	1,052.5	400.3	0.80	
6,287.0	24.05	80.13	6,057.8	59.9	1,064.5	403.5	1.12	
6,316.0	26.42	83.99	6,084.0	61.6	1,076.7	407.2	9.95	
6,347.0	29.52	88.87	6,111.4	62.5	1,091.2	412.7	12.42	
6,368.0	32.11	91.55	6,129.4	62.4	1,102.0	417.3	13.94	
SCMR								
6,377.0	33.23	92.58	6,137.0	62.3	1,106.8	419.6	13.94	
6,406.0	36.36	96.24	6,160.8	61.0	1,123.3	427.8	12.97	
6,436.0	38.94	98.23	6,184.6	58.7	1,141.5	437.7	9.51	
6,466.0	38.93	98.30	6,207.9	55.9	1,160.2	448.2	0.15	
6,495.0	39.65	101.50	6,230.4	52.8	1,178.2	458.8	7.41	
6,525.0	41.24	106.39	6,253.2	48.1	1,197.1	471.2	11.82	
6,555.0	43.60	111.51	6,275.3	41.5	1,216.2	485.4	13.94	
6,574.0	45.52	114.52	6,288.9	36.3	1,228.5	495.3	15.00	
MDLX								
6,585.0	46.66	116.17	6,296.5	32.9	1,235.7	501.5	15.00	
6,615.0	48.63	119.65	6,316.7	22.5	1,255.2	519.3	10.80	
6,645.0	51.19	122.56	6,336.0	10.6	1,274.9	538.4	11.31	
6,674.0	53.54	125.52	6,353.8	-2.2	1,293.9	558.2	11.44	
6,704.0	55.19	127.88	6,371.2	-16.8	1,313.4	579.8	8.43	
6,734.0	57.09	129.61	6,387.9	-32.4	1,332.9	602.2	7.94	
6,764.0	59.79	131.92	6,403.6	-49.1	1,352.2	625.6	11.14	
BRKT								
6,794.0	63.67	134.17	6,417.9	-67.1	1,371.5	650.2	14.52	
6,824.0	66.81	136.68	6,430.4	-86.5	1,390.6	675.9	12.93	
6,845.0	68.82	138.10	6,438.4	-100.8	1,403.8	694.5	11.44	
TLLY								
6,853.0	69.59	138.63	6,441.2	-106.4	1,408.8	701.7	11.44	
6,883.0	71.73	140.70	6,451.1	-128.0	1,427.1	729.0	9.66	
6,913.0	72.64	143.20	6,460.3	-150.5	1,444.7	756.9	8.49	
6,915.0	72.77	143.34	6,460.9	-152.0	1,445.8	758.8	9.40	
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EOW Completion Report



WV GEOLOGICAL SURVEY
MORGANTOWN, WV

Company: Antero Resources
Project: Doddridge County WV
Site: Hudkins/Leason/Pad
Well: Hudkins Unit 2H
Wellbore: Original Wellpath
Design: As Drilled

Local Co-ordinate Reference: Well Hudkins Unit 2H
TVD Reference: P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
MD Reference: P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
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)
6,937.0	74.25	144.85	6,467.1	-169.1	1,458.2	779.5	9.40
MRCL_HOT							
6,943.0	74.65	145.26	6,468.8	-173.8	1,461.5	785.2	9.40
6,973.0	76.77	147.33	6,476.2	-198.0	1,477.6	814.0	9.73
7,003.0	79.37	149.31	6,482.4	-223.0	1,493.0	843.2	10.81
7,031.0	82.70	151.35	6,486.7	-247.0	1,506.7	870.7	13.90
7,062.0	87.68	154.32	6,489.3	-274.5	1,520.8	901.6	18.69
7,152.0	89.23	155.03	6,491.8	-355.8	1,559.3	991.6	1.89
7,241.0	89.53	155.32	6,492.7	-436.6	1,596.7	1,080.6	0.47
7,331.0	89.87	155.37	6,493.2	-518.4	1,634.2	1,170.6	0.38
7,421.0	88.93	155.33	6,494.1	-600.2	1,671.7	1,260.5	1.05
7,510.0	88.22	155.80	6,496.3	-681.2	1,708.5	1,349.5	0.96
7,600.0	88.39	154.28	6,499.0	-762.7	1,746.5	1,439.5	1.70
7,695.0	90.37	155.35	6,500.0	-848.7	1,786.9	1,534.4	2.37
7,789.0	89.60	154.49	6,500.1	-933.8	1,826.8	1,628.4	1.23
7,884.0	89.39	154.14	6,500.9	-1,019.4	1,868.0	1,723.4	0.43
7,979.0	89.46	154.37	6,501.8	-1,105.0	1,909.2	1,818.4	0.25
8,074.0	89.29	153.13	6,502.9	-1,190.2	1,951.2	1,913.4	1.32
8,169.0	88.15	155.17	6,505.0	-1,275.7	1,992.6	2,008.4	2.46
8,263.0	87.75	154.48	6,508.4	-1,360.7	2,032.6	2,102.3	0.85
8,358.0	88.69	154.89	6,511.3	-1,446.5	2,073.2	2,197.3	1.08
8,453.0	89.13	154.70	6,513.1	-1,532.5	2,113.6	2,292.2	0.50
8,548.0	88.39	155.20	6,515.2	-1,618.5	2,153.9	2,387.2	0.94
8,642.0	88.25	154.04	6,517.9	-1,703.4	2,194.1	2,481.2	1.24
8,736.0	88.56	153.84	6,520.6	-1,787.8	2,235.4	2,575.1	0.39
8,825.0	88.89	153.84	6,522.5	-1,867.7	2,274.6	2,664.1	0.37
8,915.0	89.33	153.97	6,523.9	-1,948.5	2,314.2	2,754.1	0.51
9,004.0	89.02	154.05	6,525.2	-2,028.5	2,353.2	2,843.1	0.36
9,094.0	88.86	154.57	6,526.9	-2,109.6	2,392.2	2,933.1	0.60
9,183.0	88.63	154.53	6,528.8	-2,189.9	2,430.5	3,022.0	0.26
9,273.0	88.15	154.43	6,531.4	-2,271.1	2,469.2	3,112.0	0.54
9,363.0	88.08	154.32	6,534.3	-2,352.2	2,508.1	3,202.0	0.14
9,452.0	90.03	155.35	6,535.8	-2,432.7	2,546.0	3,290.9	2.48
9,542.0	90.17	155.41	6,535.6	-2,514.6	2,583.5	3,380.9	0.17
9,631.0	89.46	155.60	6,535.9	-2,595.5	2,620.4	3,469.9	0.83
9,721.0	89.66	154.18	6,536.6	-2,677.0	2,658.5	3,559.9	1.59
9,810.0	89.53	153.92	6,537.2	-2,757.1	2,697.5	3,648.9	0.33
9,900.0	89.40	153.65	6,538.1	-2,837.8	2,737.2	3,738.9	0.33
9,989.0	89.36	153.74	6,539.0	-2,917.6	2,776.7	3,827.9	0.11
10,079.0	88.81	154.91	6,540.5	-2,998.7	2,815.7	3,917.9	1.44
10,169.0	88.79	155.01	6,542.4	-3,080.2	2,853.8	4,007.8	0.11
10,258.0	88.72	154.76	6,544.3	-3,160.8	2,891.5	4,096.8	0.29
10,348.0	89.19	154.81	6,545.9	-3,242.2	2,929.9	4,186.8	0.53
10,437.0	89.16	154.93	6,547.2	-3,322.7	2,967.6	4,275.8	0.14



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GEOLOGICAL SURVEY
MORGANTOWN, WV

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Wellbore: Original Wellpath
Design: As Drilled

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Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
10,527.0	89.23	155.25	6,548.5	-3,404.4	3,005.6	4,365.8	0.36
10,616.0	89.26	155.43	6,549.7	-3,485.2	3,042.7	4,454.8	0.21
10,706.0	89.40	154.01	6,550.7	-3,566.6	3,081.1	4,544.8	1.59
10,796.0	89.26	153.54	6,551.8	-3,647.3	3,120.9	4,634.7	0.54
10,885.0	88.99	153.26	6,553.1	-3,726.9	3,160.7	4,723.7	0.44
10,975.0	89.06	154.17	6,554.6	-3,807.6	3,200.6	4,813.7	1.01
11,064.0	88.76	153.57	6,556.3	-3,887.5	3,239.8	4,902.7	0.75
11,154.0	88.25	154.24	6,558.7	-3,968.3	3,279.3	4,992.6	0.94
11,244.0	88.56	154.55	6,561.2	-4,049.4	3,318.2	5,082.6	0.49
11,333.0	88.62	154.39	6,563.4	-4,129.7	3,356.6	5,171.6	0.19
11,423.0	89.70	155.24	6,564.7	-4,211.1	3,394.9	5,261.6	1.53
11,512.0	89.53	155.05	6,565.3	-4,291.9	3,432.3	5,350.5	0.29
11,602.0	89.40	155.38	6,566.1	-4,373.6	3,470.0	5,440.5	0.39
11,691.0	88.99	154.96	6,567.4	-4,454.4	3,507.4	5,529.5	0.66
11,781.0	89.34	155.00	6,568.7	-4,535.9	3,545.4	5,619.5	0.39
11,870.0	89.26	154.32	6,569.8	-4,616.3	3,583.5	5,708.5	0.77
11,960.0	86.95	153.29	6,572.8	-4,697.0	3,623.2	5,798.4	2.81
12,050.0	87.78	154.64	6,576.9	-4,777.8	3,662.7	5,888.3	1.76
12,139.0	87.51	154.31	6,580.6	-4,858.1	3,701.0	5,977.3	0.48
12,229.0	89.13	155.14	6,583.2	-4,939.4	3,739.4	6,067.2	2.02
12,319.0	89.03	153.99	6,584.6	-5,020.7	3,778.0	6,157.2	1.28
12,408.0	88.99	153.18	6,586.2	-5,100.4	3,817.6	6,246.2	0.91
12,498.0	88.55	154.73	6,588.1	-5,181.2	3,857.1	6,336.1	1.79
12,587.0	88.56	155.91	6,590.4	-5,262.1	3,894.3	6,425.1	1.33
12,677.0	89.87	156.41	6,591.6	-5,344.4	3,930.7	6,515.1	1.56
12,767.0	90.24	156.41	6,591.5	-5,426.8	3,966.7	6,605.0	0.41
12,856.0	89.66	154.61	6,591.6	-5,507.8	4,003.6	6,694.0	2.12
12,946.0	89.90	154.37	6,591.9	-5,589.1	4,042.3	6,784.0	0.38
13,035.0	89.39	155.14	6,592.5	-5,669.6	4,080.3	6,873.0	1.04
13,125.0	89.40	154.71	6,593.4	-5,751.1	4,118.4	6,963.0	0.48
13,215.0	90.50	155.09	6,593.5	-5,832.6	4,156.6	7,053.0	1.29
13,304.0	89.80	153.87	6,593.3	-5,912.9	4,194.9	7,142.0	1.58
13,393.0	89.73	153.41	6,593.6	-5,992.6	4,234.5	7,231.0	0.52
13,483.0	90.03	152.69	6,593.8	-6,072.9	4,275.3	7,320.9	0.87
13,573.0	89.80	154.05	6,594.0	-6,153.3	4,315.6	7,410.9	1.53
13,662.0	90.27	154.84	6,593.9	-6,233.6	4,354.0	7,499.9	1.03
13,690.0	90.34	155.11	6,593.8	-6,259.0	4,365.8	7,527.9	1.00
13,747.0	90.48	155.66	6,593.4	-6,310.8	4,389.6	7,584.9	1.00



Company:	Antero Resources	Local Co-ordinate Reference:	Well Hudkins Unit 2H
Project:	Doddridge County WV	TVD Reference:	P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Site:	Hudkins/Leason/Pad	MD Reference:	P523 Hudkins 2H 1055 GL + 19 KB @ 1074.0usft
Well:	Hudkins Unit 2H	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)	
6,368.0	6,129.4	62.4	1,102.0	SCMR
6,574.0	6,288.9	36.3	1,228.5	MDLX
6,764.0	6,403.6	-49.1	1,352.2	BRKT
6,845.0	6,438.4	-100.8	1,403.8	TLLY
6,915.0	6,460.9	-152.0	1,445.8	HMLN
6,937.0	6,467.1	-169.1	1,458.2	MRCL_HOT

Checked By: _____ Approved By: _____ Date: _____

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 WV GEOLOGICAL SURVEY
 MORGANTOWN, WV