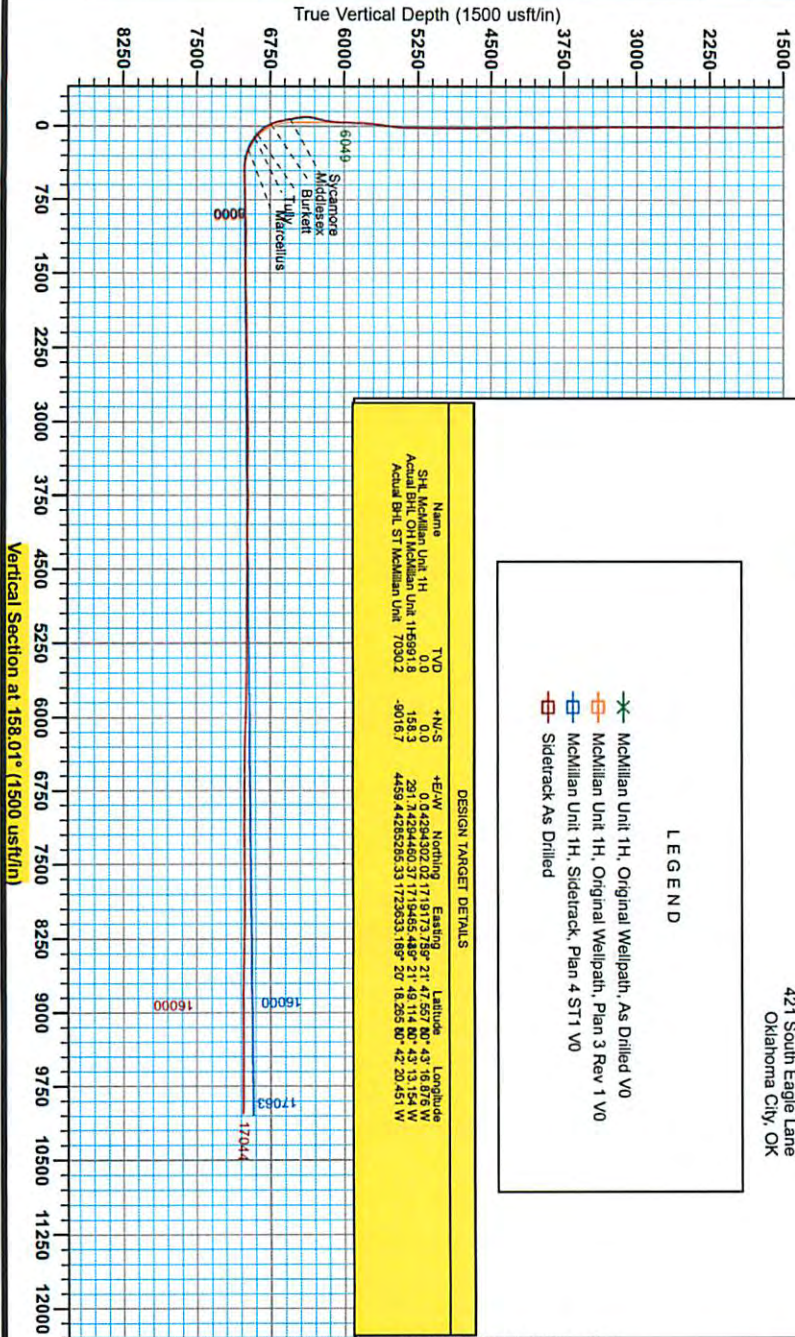




Antero Resources
 McMillian Unit 1H
 Doddridge County WV
 Northing: 14294302.02
 Easting: 1719173.75
 Sidetrack As Drilled



WELL DETAILS: McMillian Unit 1H			
+N-S	+E/W	Notching	Ground Level
0.0	0.0	14294302.02	1115.0
		Easting	Latitude
		1719173.75	39° 21' 47.557" N
		Longitude	Sea
		80° 43' 18.870" W	

PROJECT DETAILS: Doddridge County, WV			
Geoid System: Universal Transverse Mercator (US Survey Feet)			
Datum: NAD 1983 (NAD83 CONUS)			
Ellipsoid: Clarke 1866			
Zone: Zone 17N (84 W to 78 W)			
Span: Datum: Mean Sea Level			

REFERENCE INFORMATION			
Co-ordinate (N/E) Reference: Well McMillian Unit 1H, Gas Well, 1140.0 feet			
Station (N/E) Reference: East (10.00, 0.00)			
Station (N/E) Reference: West (10.00, 0.00)			
Station (N/E) Reference: North (10.00, 0.00)			
Station (N/E) Reference: South (10.00, 0.00)			
Station (N/E) Reference: East (10.00, 0.00)			
Station (N/E) Reference: West (10.00, 0.00)			
Station (N/E) Reference: North (10.00, 0.00)			
Station (N/E) Reference: South (10.00, 0.00)			

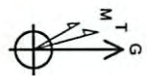
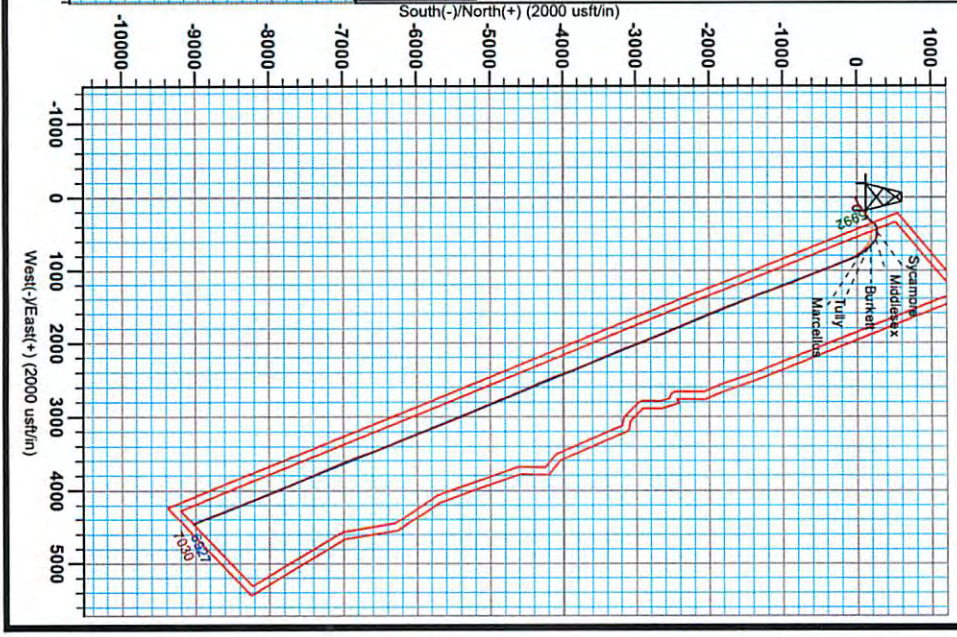
Scientific Drilling

Genie Lightool
 10:40, June 23 2014
 Scientific Drilling
 421 South Eagle Lane
 Oklahoma City, OK

LEGEND

- ✳ McMillian Unit 1H, Original Wellpath, As Drilled VO
- ✳ McMillian Unit 1H, Original Wellpath, Plan 3 Rev 1 VO
- ✳ McMillian Unit 1H, Sidetrack, Plan 4 ST1 VO
- ☐ Sidetrack As Drilled

DESIGN TARGET DETAILS					
Name	TVD	+N-S	+E/W	Notching	Longitude
Stk. McMillian Unit 1H	0.0	0.0	0.0	0.0	0.0
Actual BHL, OH McMillian Unit 1H5991.8	158.3	251.3	4459.4	428525.53	1723833.189° 20' 18.285" 80° 42' 20.451" W
Actual BHL, ST McMillian Unit 7030.2	-9016.7	4459.4	428525.53	1723833.189° 20' 18.285" 80° 42' 20.451" W	



To convert Magnetic North to Grid North
 To convert True North to Grid North
 Subtract 8.71°

Antero Resources
 11 Magnetic Field
 Spheroid: S2295 8a17
 Date: 5/23/2014
 Dip Angle: 66.827°
 Model: BOGSD2014

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Antero Resources

Doddridge County WV
Mishka/McMillan/Hoskinson Pad
McMillan Unit 1H
Sidetrack

Design: Sidetrack As Drilled

EOW Completion Report

23 June, 2014

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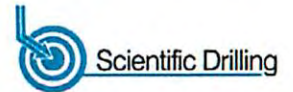


Scientific Drilling

08//14/2015



EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well McMillan Unit 1H
Project:	Doddridge County WV	TVD Reference:	Frontier 22: GL 1115 + 25' RKB @ 1140.0usft
Site:	Mishka/McMillan/Hoskinson Pad	MD Reference:	Frontier 22: GL 1115 + 25' RKB @ 1140.0usft
Well:	McMillan Unit 1H	North Reference:	Grid
Wellbore:	Sidetrack	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack As Drilled	Database:	Oklahoma District

Project	Doddridge County WV, McClellan District		
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	Mishka/McMillan/Hoskinson Pad, Site Center: Mishka Unit 2H				
Site Position:	Northing:	14,294,295.71 usft	Latitude:	39° 21' 47.496 N	
From: Map	Easting:	1,719,154.86 usft	Longitude:	80° 43' 17.117 W	
Position Uncertainty:	2.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.18 °

Well	McMillan Unit 1H, Marcellus				
Well Position	+N/-S	0.0 usft	Northing:	14,294,302.02 usft	
	+E/-W	0.0 usft	Easting:	1,719,173.75 usft	
Position Uncertainty	2.0 usft	Wellhead Elevation:	1,140.0 usft	Ground Level:	1,115.0 usft

Wellbore	Sidetrack				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	5/23/2014	-8.53	66.92	52,296

Design	Sidetrack As Drilled				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	6,012.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	158.01	

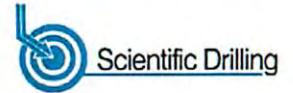
Survey Program	Date 6/23/2014				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
112.0	6,012.0	Survey #6 Def Gyro to KOP (Original Well)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper	
6,012.0	17,044.0	Survey #1 MWD (Sidetrack)	SDI MWD	Scientific Drilling Intl. 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	0.45	342.46	112.0	0.4	-0.1	-0.4	0.40		
212.0	0.42	347.54	212.0	1.2	-0.3	-0.5	0.05		
312.0	0.19	331.65	312.0	1.7	-0.5	-1.7	0.24		
412.0	0.14	193.33	412.0	1.7	-0.6	-1.8	0.51		
512.0	0.21	167.51	512.0	1.4	-0.6	-1.5	0.10		
612.0	0.39	144.68	612.0	0.9	-0.3	-1.0	0.21		
712.0	0.43	138.56	712.0	0.4	0.1	-0.3	0.06		
812.0	0.44	114.66	812.0	-0.1	0.7	0.3	0.19		
912.0	0.35	121.57	912.0	-0.4	1.3	0.9	0.10		
1,012.0	0.27	105.36	1,012.0	-0.6	1.8	1.2	0.12		

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well McMillan Unit 1H
Project:	Doddridge County WV	TVD Reference:	Frontier 22: GL 1115 + 25' RKB @ 1140.0usft
Site:	Mishka/McMillan/Hoskinson Pad	MD Reference:	Frontier 22: GL 1115 + 25' RKB @ 1140.0usft
Well:	McMillan Unit 1H	North Reference:	Grid
Wellbore:	Sidetrack	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack 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	0.12	147.77	1,112.0	-0.8	2.1	1.5	0.20		
1,212.0	0.35	161.67	1,212.0	-1.1	2.2	1.9	0.24		
1,312.0	0.46	97.48	1,312.0	-1.5	2.7	2.4	0.44		
1,412.0	0.15	140.06	1,412.0	-1.6	3.2	2.7	0.36		
1,512.0	0.36	131.94	1,512.0	-1.9	3.5	3.1	0.21		
1,612.0	0.21	109.12	1,612.0	-2.2	3.9	3.5	0.19		
1,712.0	0.08	216.72	1,712.0	-2.3	4.1	3.7	0.25		
1,812.0	0.36	105.96	1,812.0	-2.5	4.3	3.9	0.40		
1,912.0	0.30	55.62	1,912.0	-2.4	4.8	4.1	0.29		
2,012.0	0.12	195.91	2,012.0	-2.4	5.0	4.1	0.40		
2,112.0	0.29	85.61	2,112.0	-2.5	5.2	4.2	0.35		
2,212.0	0.10	0.45	2,212.0	-2.3	5.5	4.2	0.30		
2,312.0	0.09	123.62	2,312.0	-2.3	5.6	4.2	0.17		
2,412.0	0.19	152.48	2,412.0	-2.5	5.7	4.4	0.12		
2,512.0	0.22	172.58	2,512.0	-2.8	5.8	4.8	0.08		
2,612.0	0.23	165.02	2,612.0	-3.2	5.9	5.2	0.03		
2,712.0	0.21	150.69	2,712.0	-3.6	6.0	5.6	0.06		
2,812.0	0.21	161.97	2,812.0	-3.9	6.2	5.9	0.04		
2,912.0	0.25	172.16	2,912.0	-4.3	6.3	6.3	0.06		
3,012.0	0.20	156.45	3,012.0	-4.7	6.4	6.7	0.08		
3,112.0	0.26	172.30	3,112.0	-5.1	6.5	7.1	0.09		
3,212.0	0.14	153.19	3,212.0	-5.4	6.5	7.4	0.14		
3,312.0	0.35	176.94	3,312.0	-5.8	6.6	7.9	0.23		
3,412.0	0.37	165.15	3,412.0	-6.4	6.7	8.5	0.08		
3,512.0	0.36	177.31	3,512.0	-7.0	6.8	9.1	0.08		
3,612.0	0.39	184.15	3,612.0	-7.7	6.8	9.7	0.05		
3,712.0	0.41	180.67	3,712.0	-8.4	6.8	10.3	0.03		
3,812.0	0.40	175.74	3,812.0	-9.1	6.8	11.0	0.04		
3,912.0	0.21	176.46	3,912.0	-9.6	6.8	11.5	0.19		
4,012.0	0.39	170.85	4,012.0	-10.1	6.9	12.0	0.18		
4,112.0	0.41	161.97	4,111.9	-10.8	7.1	12.7	0.07		
4,212.0	0.54	140.51	4,211.9	-11.5	7.5	13.5	0.22		
4,312.0	0.61	145.82	4,311.9	-12.3	8.1	14.5	0.09		
4,412.0	0.65	137.44	4,411.9	-13.2	8.8	15.5	0.09		
4,512.0	0.61	142.50	4,511.9	-14.0	9.5	16.6	0.07		
4,612.0	0.61	139.52	4,611.9	-14.9	10.1	17.6	0.03		
4,712.0	0.68	142.13	4,711.9	-15.7	10.8	18.6	0.08		
4,812.0	0.73	145.30	4,811.9	-16.7	11.6	19.8	0.06		
4,912.0	0.65	127.33	4,911.9	-17.6	12.2	20.9	0.23		
5,012.0	6.02	58.37	5,011.7	-15.2	17.3	20.6	5.82		
5,112.0	12.37	59.24	5,110.4	-6.9	31.0	18.0	6.35		
5,212.0	15.85	68.61	5,207.4	3.5	52.9	16.6	4.15		
5,312.0	19.97	68.23	5,302.5	14.8	81.5	16.8	4.12		
5,412.0	21.60	59.88	5,396.0	30.4	113.3	14.2	3.38		

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Company:	Antero Resources	Local Co-ordinate Reference:	Well McMillan Unit 1H
Project:	Doddridge County WV	TVD Reference:	Frontier 22: GL 1115 + 25' RKB @ 1140.0usft
Site:	Mishka/McMillan/Hoskinson Pad	MD Reference:	Frontier 22: GL 1115 + 25' RKB @ 1140.0usft
Well:	McMillan Unit 1H	North Reference:	Grid
Wellbore:	Sidetrack	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack As Drilled	Database:	Oklahoma District

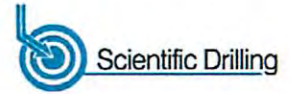
Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
5,512.0	24.63	51.96	5,488.0	52.5	145.6	5.9	4.34	
5,612.0	24.45	47.01	5,579.0	79.5	177.2	-7.3	2.06	
5,712.0	22.91	49.74	5,670.5	106.1	207.2	-20.8	1.89	
5,812.0	19.93	59.87	5,763.7	127.3	236.8	-29.4	4.74	
5,912.0	16.38	58.41	5,858.7	143.2	263.6	-34.1	3.58	
6,012.0	12.03	64.04	5,955.6	155.2	285.0	-37.2	4.56	
6,032.0	11.57	64.99	5,975.2	157.0	288.6	-37.5	2.50	
6,068.0	13.15	63.62	6,010.3	160.3	295.6	-38.0	4.46	
6,100.0	15.12	61.42	6,041.4	163.9	302.5	-38.7	6.38	
6,131.0	16.29	55.46	6,071.2	168.3	309.6	-40.1	6.42	
6,163.0	18.29	49.14	6,101.8	174.1	317.1	-42.7	8.57	
6,195.0	20.70	44.53	6,131.9	181.5	324.9	-46.6	8.93	
6,227.0	22.14	40.01	6,161.7	190.1	332.7	-51.7	6.84	
6,260.0	23.08	34.47	6,192.2	200.2	340.4	-58.2	7.05	
6,292.0	24.32	30.89	6,221.5	211.0	347.3	-65.6	5.93	
6,324.0	24.63	28.43	6,250.6	222.6	353.9	-73.8	3.33	
6,356.0	24.61	32.33	6,279.7	234.0	360.6	-82.0	5.08	
6,388.0	24.16	43.68	6,308.9	244.4	368.7	-88.6	14.69	
6,420.0	24.23	53.65	6,338.1	253.1	378.5	-92.9	12.76	
6,452.0	24.39	59.10	6,367.2	260.3	389.5	-95.6	7.03	
6,484.0	25.31	69.43	6,396.3	266.1	401.6	-96.4	13.85	
6,517.0	26.75	79.43	6,425.9	270.0	415.5	-94.8	13.98	
6,549.0	27.73	85.25	6,454.4	271.9	430.0	-91.1	8.87	
6,581.0	27.36	85.97	6,482.8	273.1	444.8	-86.7	1.56	
6,613.0	26.86	91.46	6,511.3	273.4	459.3	-81.5	7.97	
6,645.0	26.73	92.85	6,539.8	272.8	473.7	-75.6	2.00	
6,653.0	26.62	92.65	6,547.0	272.7	477.3	-74.1	1.72	
Sycamore								
6,677.0	26.31	92.05	6,568.5	272.2	488.0	-69.7	1.72	
6,709.0	26.05	90.46	6,597.2	271.9	502.1	-64.1	2.34	
6,742.0	25.76	92.07	6,626.9	271.6	516.5	-58.4	2.31	
6,774.0	26.20	100.61	6,655.6	270.1	530.4	-51.8	11.76	
6,806.0	27.61	108.13	6,684.2	266.4	544.4	-43.2	11.50	
6,838.0	29.20	113.51	6,712.3	261.0	558.6	-32.9	9.41	
6,870.0	31.93	118.34	6,739.9	253.9	573.2	-20.8	11.47	
6,873.0	32.18	118.92	6,742.4	253.1	574.6	-19.5	13.12	
Middlesex								
6,902.0	34.69	124.11	6,766.6	244.8	588.2	-6.7	13.12	
6,934.0	37.05	128.76	6,792.6	233.6	603.3	9.3	11.26	
6,967.0	40.63	130.62	6,818.3	220.4	619.2	27.5	10.31	
6,999.0	43.78	132.08	6,842.0	206.2	635.3	46.7	10.31	
7,031.0	47.37	134.16	6,864.4	190.6	652.0	67.4	12.14	
7,052.0	50.03	135.56	6,878.2	179.4	663.2	82.0	13.62	
Burkett								
7,063.0	51.43	136.25	6,885.2	173.3	669.1	89.8	13.62	

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well McMillan Unit 1H
Project:	Doddridge County WV	TVD Reference:	Frontier 22: GL 1115 + 25' RKB @ 1140.0usft
Site:	Mishka/McMillan/Hoskinson Pad	MD Reference:	Frontier 22: GL 1115 + 25' RKB @ 1140.0usft
Well:	McMillan Unit 1H	North Reference:	Grid
Wellbore:	Sidetrack	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack As Drilled	Database:	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
7,095.0	55.42	138.61	6,904.3	154.4	686.5	113.9	13.80
7,098.0	55.66	138.76	6,906.0	152.5	688.1	116.2	9.12
Tully							
7,127.0	58.03	140.17	6,921.8	134.1	703.9	139.2	9.12
7,159.0	61.16	142.26	6,938.0	112.6	721.2	165.7	11.29
7,191.0	65.29	144.29	6,952.4	89.7	738.2	193.3	14.09
7,224.0	68.03	145.18	6,965.5	64.9	755.7	222.8	8.66
7,235.0	68.48	145.43	6,969.6	56.5	761.5	232.7	4.63
Marcellus							
7,256.0	69.35	145.90	6,977.1	40.3	772.6	251.9	4.63
7,288.0	72.85	148.10	6,987.5	15.0	789.1	281.6	12.72
7,320.0	76.83	150.56	6,995.9	-11.6	804.8	312.1	14.48
7,352.0	80.99	153.22	7,002.0	-39.3	819.6	343.3	15.35
7,384.0	84.03	152.84	7,006.2	-67.6	834.0	374.9	9.57
7,410.0	85.91	153.28	7,008.5	-90.7	845.7	400.7	7.42
7,486.0	90.84	157.01	7,010.6	-159.6	877.6	476.6	8.13
7,581.0	91.88	158.65	7,008.4	-247.5	913.5	571.5	2.04
7,677.0	91.65	157.28	7,005.4	-336.5	949.5	667.5	1.45
7,774.0	92.25	158.29	7,002.1	-426.2	986.1	764.4	1.21
7,870.0	91.48	159.27	6,999.0	-515.6	1,020.9	860.4	1.30
7,966.0	92.08	158.34	6,996.0	-605.1	1,055.5	956.3	1.15
8,063.0	90.44	156.56	6,993.9	-694.7	1,092.7	1,053.3	2.49
8,159.0	89.43	154.08	6,994.0	-781.9	1,132.8	1,149.2	2.79
8,256.0	88.63	156.95	6,995.6	-870.1	1,173.0	1,246.1	3.07
8,352.0	88.63	159.28	6,997.9	-959.2	1,208.8	1,342.0	2.43
8,449.0	89.53	159.74	6,999.5	-1,050.0	1,242.7	1,439.0	1.04
8,545.0	91.78	160.90	6,998.4	-1,140.4	1,275.1	1,534.9	2.64
8,641.0	91.95	160.93	6,995.2	-1,231.1	1,306.4	1,630.7	0.18
8,738.0	90.77	158.47	6,992.9	-1,322.0	1,340.1	1,727.6	2.81
8,834.0	91.45	157.41	6,991.1	-1,411.0	1,376.1	1,823.6	1.31
8,930.0	91.24	157.59	6,988.8	-1,499.7	1,412.8	1,919.6	0.29
9,026.0	90.67	158.97	6,987.2	-1,588.8	1,448.4	2,015.6	1.56
9,123.0	90.67	158.58	6,986.1	-1,679.2	1,483.5	2,112.5	6.40
9,218.0	90.00	158.49	6,985.5	-1,767.6	1,518.2	2,207.5	0.71
9,314.0	91.24	158.70	6,984.5	-1,857.0	1,553.3	2,303.5	1.31
9,410.0	90.40	157.56	6,983.1	-1,946.1	1,589.0	2,399.5	1.37
9,506.0	89.60	156.71	6,983.1	-2,034.5	1,626.3	2,495.5	1.22
9,603.0	91.78	157.93	6,982.0	-2,124.0	1,663.7	2,592.5	2.58
9,699.0	91.27	156.89	6,979.4	-2,212.6	1,700.6	2,688.4	1.21
9,795.0	91.01	156.80	6,977.5	-2,300.9	1,738.3	2,784.4	0.29
9,891.0	91.58	157.45	6,975.3	-2,389.3	1,775.6	2,880.4	0.90
9,987.0	90.54	157.13	6,973.5	-2,477.9	1,812.7	2,976.3	1.13
10,084.0	90.17	156.10	6,972.9	-2,566.9	1,851.2	3,073.3	1.13
10,180.0	89.40	157.84	6,973.3	-2,655.2	1,888.7	3,169.3	1.98
10,277.0	89.63	156.71	6,974.1	-2,744.7	1,926.2	3,266.3	1.19

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EOW Completion Report



Company:	Antero Resources	Local Co-ordinate Reference:	Well McMillan Unit 1H
Project:	Doddridge County WV	TVD Reference:	Frontier 22: GL 1115 + 25' RKB @ 1140.0usft
Site:	Mishka/McMillan/Hoskinson Pad	MD Reference:	Frontier 22: GL 1115 + 25' RKB @ 1140.0usft
Well:	McMillan Unit 1H	North Reference:	Grid
Wellbore:	Sidetrack	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack As Drilled	Database:	Oklahoma District

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	
10,367.0	89.43	160.08	6,974.9	-2,828.4	1,959.4	3,356.3	3.75	
10,458.0	88.99	160.03	6,976.1	-2,913.9	1,990.4	3,447.2	0.49	
10,548.0	90.20	159.83	6,976.8	-2,998.4	2,021.3	3,537.1	1.36	
10,638.0	90.81	160.69	6,976.0	-3,083.1	2,051.7	3,627.1	1.17	
10,728.0	91.44	160.22	6,974.2	-3,167.9	2,081.8	3,717.0	0.87	
10,820.0	90.37	155.85	6,972.7	-3,253.2	2,116.2	3,808.9	4.89	
10,910.0	88.35	155.72	6,973.7	-3,335.3	2,153.1	3,898.8	2.25	
11,001.0	88.56	157.86	6,976.2	-3,418.9	2,188.9	3,989.8	2.36	
11,092.0	89.63	158.12	6,977.6	-3,503.2	2,223.0	4,080.8	1.21	
11,183.0	89.66	157.43	6,978.2	-3,587.5	2,257.4	4,171.8	0.76	
11,274.0	89.80	156.54	6,978.6	-3,671.2	2,293.0	4,262.8	0.99	
11,364.0	88.76	157.09	6,979.8	-3,754.0	2,328.5	4,352.7	1.31	
11,461.0	89.40	160.28	6,981.3	-3,844.3	2,363.7	4,449.7	3.35	
11,557.0	89.90	161.12	6,981.9	-3,934.9	2,395.4	4,545.6	1.02	
11,654.0	89.29	159.53	6,982.6	-4,026.2	2,428.1	4,642.5	1.76	
11,750.0	89.10	158.45	6,983.9	-4,115.8	2,462.5	4,738.5	1.14	
11,846.0	89.40	158.57	6,985.2	-4,205.2	2,497.7	4,834.5	0.34	
11,943.0	89.70	158.70	6,986.0	-4,295.5	2,533.0	4,931.5	0.34	
12,039.0	89.30	155.79	6,986.8	-4,384.0	2,570.1	5,027.4	3.06	
12,136.0	89.66	156.14	6,987.7	-4,472.6	2,609.6	5,124.4	0.52	
12,232.0	89.73	156.04	6,988.2	-4,560.3	2,648.5	5,220.3	0.13	
12,328.0	88.39	158.50	6,989.8	-4,648.9	2,685.6	5,316.3	2.92	
12,425.0	89.60	159.12	6,991.5	-4,739.3	2,720.7	5,413.3	1.40	
12,521.0	89.50	158.16	6,992.2	-4,828.7	2,755.7	5,509.2	1.01	
12,618.0	89.80	157.25	6,992.8	-4,918.4	2,792.5	5,606.2	0.99	
12,714.0	89.03	156.76	6,993.8	-5,006.8	2,830.0	5,702.2	0.95	
12,811.0	89.26	157.73	6,995.2	-5,096.2	2,867.5	5,799.2	1.03	
12,907.0	88.29	156.33	6,997.3	-5,184.6	2,904.9	5,895.2	1.77	
13,003.0	88.39	155.03	7,000.1	-5,272.1	2,944.4	5,991.0	1.36	
13,100.0	88.66	157.02	7,002.6	-5,360.7	2,983.8	6,087.9	2.07	
13,196.0	88.25	158.12	7,005.2	-5,449.4	3,020.5	6,183.9	1.22	
13,292.0	89.73	158.12	7,006.9	-5,538.4	3,056.2	6,279.9	1.54	
13,389.0	89.53	157.82	7,007.5	-5,628.3	3,092.6	6,376.9	0.37	
13,485.0	89.53	158.24	7,008.3	-5,717.4	3,128.5	6,472.9	0.44	
13,582.0	89.20	157.22	7,009.3	-5,807.1	3,165.3	6,569.9	1.11	
13,678.0	89.06	159.65	7,010.8	-5,896.4	3,200.6	6,665.8	1.54	
13,774.0	89.97	159.35	7,011.6	-5,986.3	3,234.2	6,761.8	1.00	
13,871.0	90.23	158.20	7,011.4	-6,076.7	3,269.3	6,858.8	1.22	
13,967.0	88.73	155.61	7,012.3	-6,165.0	3,306.9	6,954.8	3.12	
14,064.0	88.92	158.82	7,014.3	-6,254.4	3,344.5	7,051.7	3.31	
14,160.0	90.91	159.41	7,014.4	-6,344.1	3,378.7	7,147.7	2.16	
14,255.0	90.90	157.87	7,012.9	-6,432.6	3,413.3	7,242.7	1.92	
14,352.0	89.70	158.21	7,012.4	-6,522.5	3,449.6	7,339.7	1.29	
14,448.0	90.60	160.62	7,012.2	-6,612.4	3,483.3	7,435.6	2.68	

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Company:	Antero Resources	Local Co-ordinate Reference:	Well McMillan Unit 1H
Project:	Doddridge County WV	TVD Reference:	Frontier 22: GL 1115 + 25' RKB @ 1140.0usft
Site:	Mishka/McMillan/Hoskinson Pad	MD Reference:	Frontier 22: GL 1115 + 25' RKB @ 1140.0usft
Well:	McMillan Unit 1H	North Reference:	Grid
Wellbore:	Sidetrack	Survey Calculation Method:	Minimum Curvature
Design:	Sidetrack As Drilled	Database:	Oklahoma District

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
14,544.0	91.31	161.00	7,010.6	-6,703.0	3,514.9	7,531.5	0.84
14,641.0	90.67	159.83	7,008.9	-6,794.4	3,547.4	7,628.4	1.37
14,736.0	89.36	158.92	7,008.9	-6,883.3	3,580.9	7,723.4	1.68
14,833.0	89.60	157.60	7,009.8	-6,973.4	3,616.8	7,820.4	1.38
14,928.0	88.32	158.25	7,011.5	-7,061.4	3,652.5	7,915.4	1.51
15,024.0	88.86	156.36	7,013.9	-7,150.0	3,689.5	8,011.3	2.05
15,120.0	89.83	157.07	7,014.9	-7,238.1	3,727.5	8,107.3	1.25
15,216.0	88.83	156.04	7,016.1	-7,326.2	3,765.6	8,203.2	1.50
15,313.0	89.36	155.76	7,017.6	-7,414.7	3,805.2	8,300.2	0.62
15,409.0	89.77	156.47	7,018.3	-7,502.5	3,844.1	8,396.1	0.85
15,505.0	89.36	157.33	7,019.1	-7,590.8	3,881.8	8,492.1	0.99
15,602.0	89.77	156.58	7,019.8	-7,680.1	3,919.7	8,589.1	0.88
15,698.0	88.59	157.52	7,021.2	-7,768.5	3,957.2	8,685.0	1.57
15,794.0	88.42	157.85	7,023.7	-7,857.2	3,993.6	8,781.0	0.39
15,890.0	89.40	158.20	7,025.5	-7,946.2	4,029.5	8,877.0	1.08
15,986.0	90.47	158.64	7,025.6	-8,035.5	4,064.8	8,973.0	1.21
16,082.0	91.18	159.26	7,024.2	-8,125.1	4,099.3	9,069.0	0.98
16,177.0	90.07	159.72	7,023.2	-8,214.1	4,132.6	9,163.9	1.26
16,273.0	89.30	158.48	7,023.7	-8,303.8	4,166.8	9,259.9	1.52
16,369.0	90.23	160.03	7,024.1	-8,393.5	4,200.8	9,355.9	1.88
16,466.0	89.09	157.53	7,024.7	-8,483.9	4,236.0	9,452.9	2.83
16,562.0	90.44	157.94	7,025.1	-8,572.8	4,272.3	9,548.8	1.47
16,659.0	89.90	158.83	7,024.8	-8,663.0	4,308.1	9,645.8	1.07
16,757.0	90.37	158.79	7,024.6	-8,754.3	4,343.5	9,743.8	0.48
16,854.0	89.29	156.74	7,024.9	-8,844.1	4,380.2	9,840.8	2.39
16,951.0	88.19	154.87	7,027.0	-8,932.6	4,419.9	9,937.7	2.24
16,987.0	87.95	154.85	7,028.2	-8,965.1	4,435.2	9,973.6	0.67
17,044.0	87.95	154.85	7,030.2	-9,016.7	4,459.4	10,030.5	0.00

Design Annotations					Comment
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)		
6,653.0	6,547.0	272.7	477.3	Sycamore	
6,873.0	6,742.4	253.1	574.6	Middlesex	
7,052.0	6,878.2	179.4	663.2	Burkett	
7,098.0	6,906.0	152.5	688.1	Tully	
7,235.0	6,969.6	56.5	761.5	Marcellus	

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