

RECEIVED

JUL 6 2015

WV GEOLOGICAL SURVEY
MORGANTOWN, WV



Dufflemeyer Unit 2H
Doddridge County WV
Northing: 14236747.63
Easting: 1739372.13
As Drilled



WELL DETAILS

+N/-S 0.0
+E/-W 0.0
Northing 14236747.63
Easting 1739372.13
Ground Level: 1081.0
Latitude 39° 12' 17.792" N
Longitude 80° 39' 2.444" W

Genie Lightfoot
8/36, October 02 2014
Scientific Drilling
421 South Eagle Lane
Oklahoma City, OK 73128

PROJECT DETAILS: Doddridge County WV

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 17N (84 W to 78 W)
System Datum: Mean Sea Level

SITE DETAILS: Dufflemeyer Pad

Site Center: Dufflemeyer Unit 2H
Site Centre Northing: 14236747.63
Easting: 1739372.13
Positional Uncertainty: 0.0
Convergence: 0.22
Local North: Grid

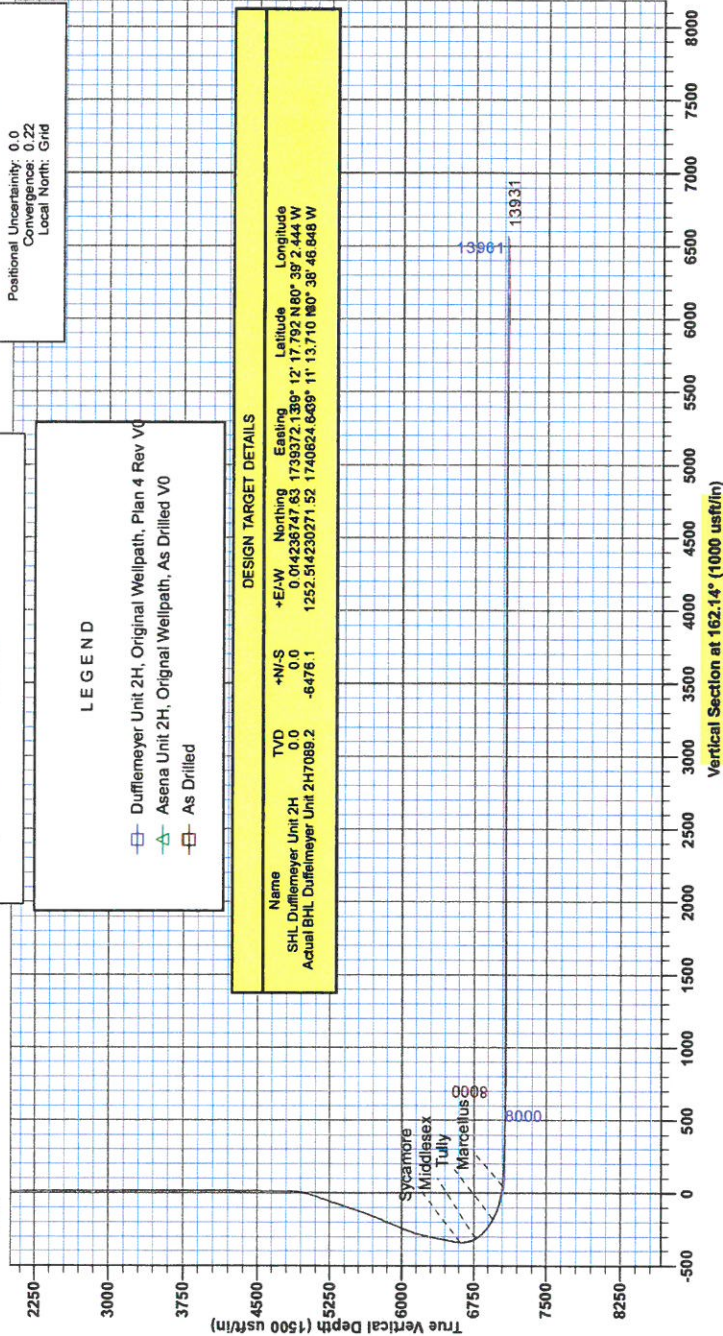
LEGEND

- Dufflemeyer Unit 2H, Original Wellpath, Plan 4 Rev V0
- △ Asena Unit 2H, Original Wellpath, As Drilled V0
- As Drilled

DESIGN TARGET DETAILS

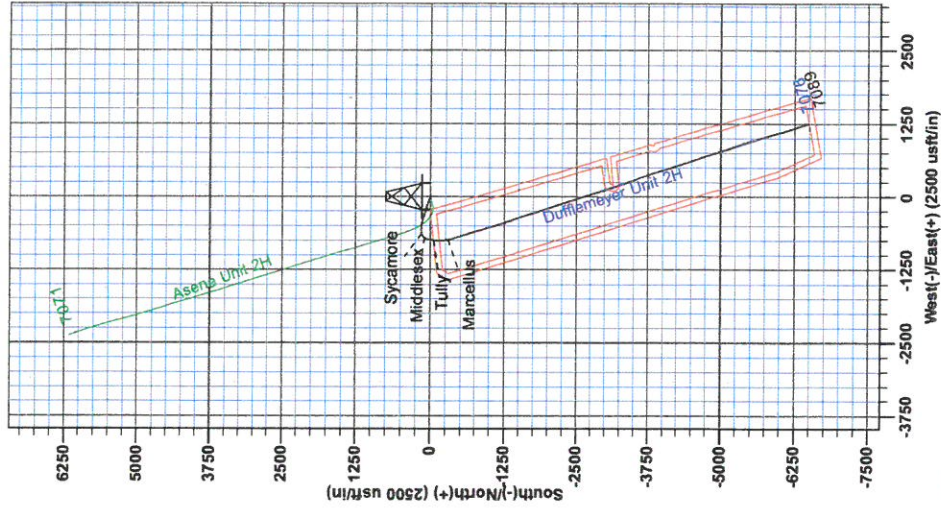
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL Dufflemeyer Unit 2H	0.0	0.0	0.0	14236747.63	1739372.13	39° 12' 17.792" N	80° 39' 2.444" W
Actual BHL Dufflemeyer Unit 2H	1089.2	-6476.1	1252.514230271	52.1740624	6.409° 11' 13.710" N	80° 38' 46.848" W	

Plot 347: Dufflemeyer 2H 1081.G1 + 25 KB @ 1108.0usft
1081.0



Northings to Grid North
True North: -0.22"
Magnetic North: -8.77"
Magnetic Field
Strength: 52194.8usT
Dip Angle: 66.78°
Date: 7/2/2014
Model: BGGM2014

To convert Magnetic North to Grid, Subtract 8.77"
To convert True North to Grid, Subtract 0.22"





RECEIVED
JUL 6 2015
WV GEOLOGICAL SURVEY
MORGANTOWN, WV

Antero Resources

**Doddridge County WV
Dufflemeyer Pad
Dufflemeyer Unit 2H
Original Wellpath**

Design: As Drilled

EOW Completion Report

02 October, 2014



JUL 6 2015



WV GEOLOGICAL SURVEY
MORGANTOWN, WV

EOW Completion Report



Company: Antero Resources	Local Co-ordinate Reference: Well Dufflemeyer Unit 2H
Project: Doddridge County WV	TVD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 11'
Site: Dufflemeyer Pad	MD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 11'
Well: Dufflemeyer 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 Dufflemeyer Pad		
Site Position:	Northing: 14,236,747.63 usft	Latitude: 39° 12' 17.792 N
From: Map	Easting: 1,739,372.13 usft	Longitude: 80° 39' 2.444 W
Position Uncertainty: 0.0 usft	Slot Radius: 13-3/16"	Grid Convergence: 0.22 °

Well Dufflemeyer Unit 2H, Marcellus			
Well Position	+N/-S 0.0 usft	Northing: 14,236,747.63 usft	Latitude: 39° 12' 17.792 N
	+E/-W 0.0 usft	Easting: 1,739,372.13 usft	Longitude: 80° 39' 2.444 W
Position Uncertainty	0.0 usft	Wellhead Elevation: 1,106.0 usft	Ground Level: 1,081.0 usft

Wellbore Original Wellpath					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	7/2/2014	-8.55	66.78	52,195

Design As Drilled				
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	162.14

Survey Program		Date 10/2/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
37.0	6,442.0	Survey #6 Def Gyro to KOP (Original Well)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper
6,442.0	13,931.0	Survey #7 MWD (Original Wellpath)	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
37.0	0.08	172.90	37.0	0.0	0.0	0.0	0.22
62.0	0.16	172.90	62.0	-0.1	0.0	0.1	0.32
87.0	0.24	172.90	87.0	-0.2	0.0	0.2	0.32
112.0	0.33	172.90	112.0	-0.3	0.0	0.3	0.36
137.0	0.37	166.70	137.0	-0.4	0.1	0.4	0.22
162.0	0.36	169.19	162.0	-0.6	0.1	0.6	0.07
187.0	0.36	165.07	187.0	-0.7	0.1	0.8	0.10
212.0	0.31	162.64	212.0	-0.9	0.2	0.9	0.21
237.0	0.27	161.48	237.0	-1.0	0.2	1.0	0.16
262.0	0.27	162.66	262.0	-1.1	0.2	1.1	0.02

RECEIVED

JUL 6 2015



EOW Completion Report



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

Local Co-ordinate Reference: Well Dufflemeyer Unit 2H
TVD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
MD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
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)
287.0	0.30	152.34	287.0	-1.2	0.3	1.3	0.24
312.0	0.32	149.82	312.0	-1.4	0.4	1.4	0.10
337.0	0.26	158.22	337.0	-1.5	0.4	1.5	0.29
362.0	0.25	161.05	362.0	-1.6	0.5	1.6	0.06
387.0	0.30	159.77	387.0	-1.7	0.5	1.8	0.20
412.0	0.31	159.33	412.0	-1.8	0.5	1.9	0.04
437.0	0.32	160.57	437.0	-1.9	0.6	2.0	0.05
462.0	0.30	164.06	462.0	-2.1	0.6	2.2	0.11
487.0	0.31	156.60	487.0	-2.2	0.7	2.3	0.16
512.0	0.32	154.29	512.0	-2.3	0.7	2.4	0.06
537.0	0.30	155.66	537.0	-2.4	0.8	2.6	0.09
562.0	0.32	156.73	562.0	-2.6	0.8	2.7	0.08
587.0	0.34	158.57	587.0	-2.7	0.9	2.8	0.09
612.0	0.35	158.98	612.0	-2.8	1.0	3.0	0.04
637.0	0.31	164.54	637.0	-3.0	1.0	3.1	0.20
662.0	0.26	164.87	662.0	-3.1	1.0	3.3	0.20
687.0	0.26	168.05	687.0	-3.2	1.1	3.4	0.06
712.0	0.31	169.29	712.0	-3.3	1.1	3.5	0.20
737.0	0.32	166.07	737.0	-3.5	1.1	3.6	0.08
762.0	0.30	167.93	762.0	-3.6	1.1	3.8	0.09
787.0	0.34	162.73	787.0	-3.7	1.2	3.9	0.20
812.0	0.37	157.83	812.0	-3.9	1.2	4.1	0.17
837.0	0.33	158.94	837.0	-4.0	1.3	4.2	0.16
862.0	0.32	157.37	862.0	-4.1	1.3	4.4	0.05
887.0	0.35	153.60	887.0	-4.3	1.4	4.5	0.15
912.0	0.40	152.08	912.0	-4.4	1.5	4.7	0.20
937.0	0.40	155.47	937.0	-4.6	1.6	4.8	0.09
962.0	0.34	160.65	962.0	-4.7	1.6	5.0	0.27
987.0	0.35	160.05	987.0	-4.9	1.7	5.1	0.04
1,012.0	0.35	160.98	1,012.0	-5.0	1.7	5.3	0.02
1,037.0	0.34	161.27	1,037.0	-5.2	1.8	5.4	0.04
1,062.0	0.34	156.91	1,062.0	-5.3	1.8	5.6	0.10
1,087.0	0.33	159.28	1,087.0	-5.4	1.9	5.7	0.07
1,112.0	0.34	159.38	1,112.0	-5.6	1.9	5.9	0.04
1,137.0	0.35	160.36	1,137.0	-5.7	2.0	6.0	0.05
1,162.0	0.36	157.83	1,162.0	-5.9	2.0	6.2	0.07
1,187.0	0.36	159.60	1,187.0	-6.0	2.1	6.3	0.04
1,212.0	0.30	163.70	1,212.0	-6.1	2.1	6.5	0.26
1,237.0	0.35	155.83	1,237.0	-6.3	2.2	6.6	0.27
1,262.0	0.39	157.90	1,262.0	-6.4	2.2	6.8	0.17
1,287.0	0.37	154.66	1,287.0	-6.6	2.3	7.0	0.12
1,312.0	0.39	149.56	1,312.0	-6.7	2.4	7.1	0.16
1,337.0	0.42	150.91	1,337.0	-6.9	2.5	7.3	0.13
1,362.0	0.43	153.72	1,362.0	-7.0	2.6	7.5	0.09

RECEIVED

JUL 6 2015



EOW Completion Report



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

Local Co-ordinate Reference: Well Dufflemeyer Unit 2H
TVD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
MD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
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)
1,387.0	0.47	153.11	1,387.0	-7.2	2.7	7.7	0.16
1,412.0	0.45	155.47	1,412.0	-7.4	2.7	7.9	0.11
1,437.0	0.44	156.83	1,437.0	-7.6	2.8	8.1	0.06
1,462.0	0.45	156.59	1,462.0	-7.7	2.9	8.3	0.04
1,487.0	0.45	155.31	1,487.0	-7.9	3.0	8.5	0.04
1,512.0	0.49	152.73	1,512.0	-8.1	3.1	8.7	0.18
1,537.0	0.51	154.93	1,537.0	-8.3	3.2	8.9	0.11
1,562.0	0.53	154.93	1,562.0	-8.5	3.3	9.1	0.08
1,587.0	0.53	157.08	1,587.0	-8.7	3.3	9.3	0.08
1,612.0	0.55	161.05	1,612.0	-8.9	3.4	9.6	0.17
1,637.0	0.55	156.62	1,637.0	-9.2	3.5	9.8	0.17
1,662.0	0.50	159.32	1,662.0	-9.4	3.6	10.0	0.22
1,687.0	0.46	160.68	1,687.0	-9.6	3.7	10.2	0.17
1,712.0	0.46	159.25	1,712.0	-9.8	3.7	10.4	0.05
1,737.0	0.47	160.88	1,737.0	-10.0	3.8	10.6	0.07
1,762.0	0.47	160.33	1,762.0	-10.1	3.9	10.8	0.02
1,787.0	0.42	165.14	1,787.0	-10.3	3.9	11.0	0.25
1,812.0	0.41	166.12	1,812.0	-10.5	4.0	11.2	0.05
1,837.0	0.44	165.69	1,837.0	-10.7	4.0	11.4	0.12
1,862.0	0.42	167.02	1,862.0	-10.9	4.1	11.6	0.09
1,887.0	0.44	170.14	1,887.0	-11.1	4.1	11.8	0.12
1,912.0	0.44	169.62	1,912.0	-11.2	4.1	12.0	0.02
1,937.0	0.43	169.81	1,937.0	-11.4	4.2	12.2	0.04
1,962.0	0.39	164.64	1,962.0	-11.6	4.2	12.3	0.22
1,987.0	0.33	161.35	1,987.0	-11.8	4.3	12.5	0.25
2,012.0	0.27	167.18	2,012.0	-11.9	4.3	12.6	0.27
2,037.0	0.28	166.68	2,037.0	-12.0	4.3	12.7	0.04
2,062.0	0.30	171.01	2,062.0	-12.1	4.4	12.9	0.12
2,087.0	0.26	172.69	2,087.0	-12.2	4.4	13.0	0.16
2,112.0	0.25	165.66	2,112.0	-12.3	4.4	13.1	0.13
2,137.0	0.24	154.35	2,137.0	-12.4	4.4	13.2	0.20
2,162.0	0.22	135.48	2,162.0	-12.5	4.5	13.3	0.31
2,187.0	0.19	145.82	2,187.0	-12.6	4.5	13.4	0.19
2,212.0	0.17	152.59	2,212.0	-12.7	4.6	13.5	0.12
2,237.0	0.15	127.20	2,237.0	-12.7	4.6	13.5	0.29
2,262.0	0.10	136.54	2,262.0	-12.8	4.7	13.6	0.22
2,287.0	0.16	195.77	2,287.0	-12.8	4.7	13.6	0.55
2,312.0	0.22	192.24	2,312.0	-12.9	4.7	13.7	0.24
2,337.0	0.23	157.00	2,337.0	-13.0	4.7	13.8	0.55
2,362.0	0.21	132.01	2,362.0	-13.1	4.7	13.9	0.39
2,387.0	0.11	136.70	2,387.0	-13.1	4.8	13.9	0.40
2,412.0	0.21	188.21	2,412.0	-13.2	4.8	14.0	0.66
2,437.0	0.30	171.17	2,437.0	-13.3	4.8	14.1	0.47
2,462.0	0.25	159.52	2,462.0	-13.4	4.8	14.2	0.30
2,487.0	0.14	176.50	2,487.0	-13.5	4.8	14.3	0.49

JUL 6 2015



EOW Completion Report



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

Local Co-ordinate Reference: Well Dufflemeyer Unit 2H
TVD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
MD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
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)
2,512.0	0.11	186.43	2,512.0	-13.5	4.8	14.4	0.15
2,537.0	0.14	193.20	2,537.0	-13.6	4.8	14.4	0.13
2,562.0	0.14	204.72	2,562.0	-13.6	4.8	14.5	0.11
2,587.0	0.13	197.43	2,587.0	-13.7	4.8	14.5	0.08
2,612.0	0.14	177.45	2,612.0	-13.8	4.8	14.6	0.19
2,637.0	0.15	171.01	2,637.0	-13.8	4.8	14.6	0.08
2,662.0	0.16	161.19	2,662.0	-13.9	4.8	14.7	0.11
2,687.0	0.14	159.08	2,687.0	-13.9	4.8	14.7	0.08
2,712.0	0.11	172.55	2,712.0	-14.0	4.8	14.8	0.17
2,737.0	0.13	193.70	2,737.0	-14.0	4.8	14.8	0.19
2,762.0	0.11	213.78	2,762.0	-14.1	4.8	14.9	0.18
2,787.0	0.10	222.29	2,787.0	-14.1	4.8	14.9	0.07
2,812.0	0.12	219.52	2,812.0	-14.2	4.7	14.9	0.08
2,837.0	0.11	208.59	2,837.0	-14.2	4.7	15.0	0.10
2,862.0	0.12	214.85	2,862.0	-14.2	4.7	15.0	0.06
2,887.0	0.10	215.98	2,887.0	-14.3	4.7	15.0	0.08
2,912.0	0.08	198.59	2,912.0	-14.3	4.6	15.1	0.13
2,937.0	0.07	211.45	2,937.0	-14.4	4.6	15.1	0.08
2,962.0	0.12	211.95	2,962.0	-14.4	4.6	15.1	0.20
2,987.0	0.11	210.18	2,987.0	-14.4	4.6	15.1	0.04
3,012.0	0.06	163.36	3,012.0	-14.5	4.6	15.2	0.33
3,037.0	0.07	159.23	3,037.0	-14.5	4.6	15.2	0.04
3,062.0	0.09	202.44	3,062.0	-14.5	4.6	15.2	0.25
3,087.0	0.12	222.12	3,087.0	-14.6	4.6	15.3	0.19
3,112.0	0.15	227.98	3,112.0	-14.6	4.5	15.3	0.13
3,137.0	0.12	221.75	3,137.0	-14.6	4.5	15.3	0.13
3,162.0	0.12	227.84	3,162.0	-14.7	4.4	15.3	0.05
3,187.0	0.12	234.44	3,187.0	-14.7	4.4	15.4	0.06
3,212.0	0.12	228.92	3,212.0	-14.7	4.4	15.4	0.05
3,237.0	0.12	234.32	3,237.0	-14.8	4.3	15.4	0.05
3,262.0	0.10	225.21	3,262.0	-14.8	4.3	15.4	0.11
3,287.0	0.11	207.16	3,287.0	-14.8	4.3	15.4	0.14
3,312.0	0.11	215.59	3,312.0	-14.9	4.2	15.5	0.06
3,337.0	0.09	220.94	3,337.0	-14.9	4.2	15.5	0.09
3,362.0	0.07	209.03	3,362.0	-14.9	4.2	15.5	0.10
3,387.0	0.06	179.54	3,387.0	-15.0	4.2	15.5	0.14
3,412.0	0.06	181.03	3,412.0	-15.0	4.2	15.6	0.01
3,437.0	0.06	180.43	3,437.0	-15.0	4.2	15.6	0.00
3,462.0	0.07	151.90	3,462.0	-15.1	4.2	15.6	0.13
3,487.0	0.07	158.73	3,487.0	-15.1	4.2	15.6	0.03
3,512.0	0.08	187.54	3,512.0	-15.1	4.2	15.7	0.15
3,537.0	0.09	214.30	3,537.0	-15.1	4.2	15.7	0.16
3,562.0	0.11	206.33	3,562.0	-15.2	4.2	15.7	0.10
3,587.0	0.08	198.22	3,587.0	-15.2	4.1	15.8	0.13

JUL 6 2015



EOW Completion Report



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

Local Co-ordinate Reference: Well Dufflemeyer Unit 2H
TVD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
MD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
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)
3,612.0	0.02	142.32	3,612.0	-15.2	4.1	15.8	0.28
3,637.0	0.05	186.00	3,637.0	-15.3	4.1	15.8	0.15
3,662.0	0.11	244.43	3,662.0	-15.3	4.1	15.8	0.38
3,687.0	0.08	232.08	3,687.0	-15.3	4.1	15.8	0.14
3,712.0	0.07	199.58	3,712.0	-15.3	4.1	15.8	0.17
3,737.0	0.08	225.98	3,737.0	-15.3	4.0	15.9	0.14
3,762.0	0.06	212.59	3,762.0	-15.4	4.0	15.9	0.10
3,787.0	0.04	185.38	3,787.0	-15.4	4.0	15.9	0.12
3,812.0	0.04	174.45	3,812.0	-15.4	4.0	15.9	0.03
3,837.0	0.07	195.13	3,837.0	-15.4	4.0	15.9	0.14
3,862.0	0.06	203.81	3,862.0	-15.5	4.0	15.9	0.06
3,887.0	0.03	239.30	3,887.0	-15.5	4.0	16.0	0.16
3,912.0	0.06	293.07	3,912.0	-15.5	4.0	15.9	0.19
3,937.0	0.06	289.86	3,937.0	-15.5	4.0	15.9	0.01
3,962.0	0.07	314.19	3,962.0	-15.4	3.9	15.9	0.12
3,987.0	0.07	336.66	3,987.0	-15.4	3.9	15.9	0.11
4,012.0	0.05	340.96	4,012.0	-15.4	3.9	15.9	0.08
4,037.0	0.09	327.17	4,037.0	-15.4	3.9	15.8	0.17
4,062.0	0.11	336.27	4,062.0	-15.3	3.9	15.8	0.10
4,087.0	0.10	345.92	4,087.0	-15.3	3.9	15.7	0.08
4,112.0	0.11	351.91	4,112.0	-15.2	3.8	15.7	0.06
4,137.0	0.14	15.31	4,137.0	-15.2	3.9	15.6	0.23
4,162.0	0.14	15.65	4,162.0	-15.1	3.9	15.6	0.00
4,187.0	0.09	6.80	4,187.0	-15.1	3.9	15.5	0.21
4,212.0	0.13	12.93	4,212.0	-15.0	3.9	15.5	0.17
4,237.0	0.16	21.19	4,237.0	-15.0	3.9	15.5	0.15
4,262.0	0.16	14.09	4,262.0	-14.9	3.9	15.4	0.08
4,287.0	0.20	354.00	4,287.0	-14.8	3.9	15.3	0.30
4,312.0	0.24	355.82	4,312.0	-14.7	3.9	15.2	0.16
4,337.0	0.34	354.13	4,337.0	-14.6	3.9	15.1	0.40
4,362.0	0.38	353.05	4,362.0	-14.5	3.9	15.0	0.16
4,387.0	0.37	356.39	4,386.9	-14.3	3.9	14.8	0.10
4,412.0	0.37	348.29	4,411.9	-14.1	3.9	14.6	0.21
4,437.0	0.31	349.03	4,436.9	-14.0	3.8	14.5	0.24
4,462.0	0.34	356.63	4,461.9	-13.8	3.8	14.3	0.21
4,487.0	0.35	353.15	4,486.9	-13.7	3.8	14.2	0.09
4,512.0	0.33	355.34	4,511.9	-13.6	3.8	14.1	0.10
4,537.0	0.39	350.52	4,536.9	-13.4	3.8	13.9	0.27
4,562.0	0.34	356.26	4,561.9	-13.2	3.7	13.7	0.25
4,587.0	0.33	12.63	4,586.9	-13.1	3.8	13.6	0.38
4,612.0	0.40	0.02	4,611.9	-12.9	3.8	13.5	0.42
4,637.0	0.46	346.35	4,636.9	-12.8	3.7	13.3	0.47
4,662.0	0.49	339.15	4,661.9	-12.6	3.7	13.1	0.27
4,687.0	0.52	330.34	4,686.9	-12.4	3.6	12.9	0.33

JUL 6 2015



EOW Completion Report



Company: Antero Resources	Local Co-ordinate Reference: Well Dufflemeyer Unit 2H
Project: Doddridge County WV	TVD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
Site: Dufflemeyer Pad	MD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
Well: Dufflemeyer 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)
4,712.0	0.53	326.53	4,711.9	-12.2	3.5	12.6	0.15
4,737.0	0.49	332.51	4,736.9	-12.0	3.4	12.4	0.27
4,762.0	0.39	346.75	4,761.9	-11.8	3.3	12.2	0.59
4,787.0	0.52	345.18	4,786.9	-11.6	3.2	12.0	0.52
4,812.0	0.53	338.44	4,811.9	-11.4	3.2	11.8	0.25
4,837.0	1.24	317.99	4,836.9	-11.1	2.9	11.4	3.06
4,862.0	3.39	314.69	4,861.9	-10.4	2.2	10.5	8.61
4,887.0	4.52	314.32	4,886.9	-9.1	1.0	9.0	4.52
4,912.0	5.93	313.06	4,911.7	-7.6	-0.6	7.0	5.66
4,937.0	7.33	310.63	4,936.6	-5.7	-2.8	4.5	5.71
4,962.0	8.85	308.94	4,961.3	-3.4	-5.5	1.6	6.15
4,987.0	10.31	307.64	4,986.0	-0.8	-8.8	-1.9	5.90
5,012.0	11.83	306.89	5,010.5	2.1	-12.6	-5.8	6.11
5,037.0	13.31	306.05	5,034.9	5.3	-17.0	-10.3	5.96
5,062.0	14.38	305.68	5,059.2	8.8	-21.8	-15.1	4.29
5,087.0	15.18	304.89	5,083.4	12.5	-27.0	-20.2	3.30
5,112.0	16.42	302.94	5,107.4	16.3	-32.7	-25.5	5.39
5,137.0	17.30	298.96	5,131.3	20.0	-38.9	-31.0	5.80
5,162.0	18.21	295.58	5,155.2	23.5	-45.7	-36.4	5.50
5,187.0	18.64	294.44	5,178.9	26.8	-52.8	-41.7	2.24
5,212.0	19.33	292.90	5,202.5	30.1	-60.3	-47.1	3.41
5,237.0	19.82	291.00	5,226.1	33.2	-68.0	-52.5	3.21
5,262.0	19.99	290.63	5,249.6	36.3	-76.0	-57.8	0.85
5,287.0	20.06	289.98	5,273.1	39.2	-84.0	-63.1	0.93
5,312.0	20.37	290.14	5,296.5	42.2	-92.1	-68.4	1.26
5,337.0	20.59	290.06	5,319.9	45.2	-100.4	-73.8	0.89
5,362.0	20.84	289.85	5,343.3	48.2	-108.7	-79.2	1.04
5,387.0	20.77	289.54	5,366.7	51.2	-117.0	-84.6	0.52
5,412.0	20.42	287.35	5,390.1	54.0	-125.4	-89.8	3.38
5,437.0	20.41	285.28	5,413.5	56.4	-133.7	-94.7	2.89
5,462.0	20.41	284.63	5,437.0	58.7	-142.2	-99.5	0.91
5,487.0	20.62	284.40	5,460.4	60.9	-150.6	-104.1	0.90
5,512.0	21.31	284.23	5,483.7	63.1	-159.3	-108.9	2.77
5,537.0	21.78	284.40	5,507.0	65.4	-168.2	-113.8	1.90
5,562.0	22.18	284.68	5,530.2	67.7	-177.3	-118.8	1.65
5,587.0	22.52	284.58	5,553.3	70.1	-186.5	-123.9	1.37
5,612.0	23.22	285.26	5,576.3	72.6	-195.8	-129.2	2.99
5,637.0	23.59	285.38	5,599.3	75.2	-205.4	-134.6	1.49
5,662.0	24.10	285.52	5,622.1	77.9	-215.2	-140.2	2.05
5,687.0	24.42	285.87	5,644.9	80.7	-225.1	-145.8	1.40
5,712.0	24.55	286.38	5,667.7	83.6	-235.0	-151.6	0.99
5,737.0	24.72	286.65	5,690.4	86.5	-245.0	-157.5	0.82
5,762.0	24.86	287.20	5,713.1	89.6	-255.0	-163.5	1.08
5,787.0	24.90	287.34	5,735.8	92.7	-265.1	-169.6	0.28

RECEIVED

JUL 6 2015



EOW Completion Report



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

Local Co-ordinate Reference: Well Dufflemeyer Unit 2H
TVD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
MD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
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)
5,812.0	25.20	287.72	5,758.4	95.9	-275.2	-175.7	1.36
5,837.0	25.40	287.88	5,781.0	99.2	-285.3	-181.9	0.85
5,862.0	25.40	288.27	5,803.6	102.5	-295.5	-188.2	0.67
5,887.0	25.19	288.61	5,826.2	105.9	-305.7	-194.5	1.02
5,912.0	25.09	288.94	5,848.8	109.3	-315.7	-200.9	0.69
5,937.0	24.62	289.08	5,871.5	112.7	-325.7	-207.2	1.89
5,962.0	24.70	288.68	5,894.2	116.1	-335.5	-213.4	0.74
5,987.0	25.21	288.25	5,916.9	119.4	-345.5	-219.7	2.17
6,012.0	25.45	288.25	5,939.5	122.8	-355.7	-226.0	0.96
6,037.0	25.60	288.25	5,962.1	126.2	-365.9	-232.3	0.60
6,062.0	25.42	287.56	5,984.6	129.5	-376.2	-238.6	1.39
6,087.0	25.39	285.50	6,007.2	132.5	-386.4	-244.7	3.54
6,112.0	25.19	284.19	6,029.8	135.3	-396.8	-250.4	2.38
6,137.0	24.90	283.83	6,052.5	137.8	-407.0	-256.0	1.31
6,162.0	24.97	282.56	6,075.1	140.2	-417.3	-261.5	2.16
6,187.0	25.35	280.65	6,097.8	142.4	-427.7	-266.7	3.59
6,212.0	25.45	279.87	6,120.3	144.3	-438.3	-271.7	1.40
6,237.0	25.16	279.22	6,142.9	146.0	-448.8	-276.7	1.61
6,262.0	24.50	277.91	6,165.6	147.6	-459.2	-281.3	3.44
6,287.0	24.17	274.82	6,188.4	148.8	-469.4	-285.6	5.26
6,312.0	24.01	274.26	6,211.2	149.6	-479.6	-289.4	1.12
6,337.0	23.53	273.70	6,234.1	150.3	-489.6	-293.2	2.12
6,362.0	23.51	273.42	6,257.0	150.9	-499.6	-296.8	0.45
6,387.0	22.91	272.79	6,280.0	151.4	-509.4	-300.4	2.60
6,412.0	22.45	272.44	6,303.1	151.9	-519.1	-303.7	1.92
6,437.0	22.02	271.40	6,326.2	152.2	-528.5	-306.9	2.33
6,442.0	21.98	271.33	6,330.9	152.2	-530.4	-307.6	0.95
6,514.0	20.53	268.90	6,398.0	152.3	-556.5	-315.6	2.36
6,608.0	21.40	271.88	6,485.7	152.5	-590.1	-326.2	1.46
6,642.0	22.02	273.12	6,517.3	153.1	-602.7	-330.5	2.27
6,672.0	21.59	273.04	6,545.2	153.7	-613.8	-334.5	1.44
6,702.0	21.12	267.81	6,573.1	153.8	-624.7	-338.0	6.54
6,732.0	21.64	258.30	6,601.1	152.4	-635.5	-340.0	11.67
6,744.0	21.81	253.99	6,612.2	151.4	-639.8	-340.3	13.36
Sycamore							
6,762.0	22.27	247.70	6,628.9	149.2	-646.2	-340.2	13.36
6,792.0	23.85	241.06	6,656.5	144.1	-656.8	-338.6	10.14
6,822.0	25.10	235.15	6,683.8	137.5	-667.3	-335.5	9.16
6,852.0	26.68	228.47	6,710.8	129.4	-677.6	-331.0	11.05
6,882.0	28.77	221.39	6,737.4	119.5	-687.4	-324.6	12.99
6,912.0	30.89	214.26	6,763.4	107.7	-696.5	-316.1	13.76
6,920.0	31.51	213.09	6,770.2	104.3	-698.8	-313.6	10.87
Middlesex							
6,942.0	33.28	210.08	6,788.8	94.2	-705.0	-305.9	10.87
6,972.0	35.51	206.88	6,813.6	79.3	-713.0	-294.2	9.57

JUL 6 2015



EOW Completion Report



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

Local Co-ordinate Reference: Well Dufflemeyer Unit 2H
TVD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
MD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
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)
7,002.0	38.21	202.29	6,837.6	63.0	-720.5	-280.9	12.85
7,032.0	41.23	198.66	6,860.7	45.0	-727.2	-265.9	12.69
7,062.0	44.71	194.46	6,882.6	25.4	-733.0	-249.0	15.02
7,092.0	47.40	190.38	6,903.4	4.3	-737.6	-230.3	13.27
7,122.0	48.95	187.87	6,923.4	-17.7	-741.2	-210.4	8.10
7,152.0	50.79	187.17	6,942.8	-40.5	-744.2	-189.7	6.39
7,166.0	52.35	185.90	6,951.5	-51.4	-745.4	-179.7	13.18
Tully							
7,182.0	54.14	184.52	6,961.1	-64.1	-746.6	-167.9	13.18
7,212.0	58.15	182.84	6,977.8	-89.0	-748.2	-144.7	14.15
7,242.0	61.45	181.73	6,992.8	-114.9	-749.2	-120.4	11.46
7,272.0	64.58	180.06	7,006.5	-141.6	-749.6	-95.1	11.55
7,302.0	68.51	178.15	7,018.4	-169.1	-749.2	-68.8	14.34
7,332.0	71.07	176.80	7,028.8	-197.3	-747.9	-41.6	9.52
7,362.0	72.30	174.53	7,038.2	-225.7	-745.8	-13.9	8.27
7,392.0	74.88	173.17	7,046.7	-254.3	-742.7	14.2	9.64
7,422.0	79.43	170.85	7,053.3	-283.2	-738.6	43.0	16.94
7,430.0	80.29	170.40	7,054.7	-291.0	-737.3	50.8	12.10
Marcellus							
7,452.0	82.67	169.19	7,058.0	-312.4	-733.5	72.4	12.10
7,482.0	84.38	166.01	7,061.4	-341.5	-727.1	102.1	11.98
7,513.0	85.60	164.25	7,064.1	-371.3	-719.1	132.9	6.89
7,543.0	86.35	163.23	7,066.2	-400.1	-710.8	162.8	4.21
7,573.0	86.88	162.09	7,068.0	-428.7	-701.8	192.8	4.18
7,603.0	87.95	161.57	7,069.3	-457.1	-692.5	222.7	3.96
7,633.0	88.12	161.33	7,070.4	-485.6	-683.0	252.7	0.98
7,664.0	88.32	161.82	7,071.3	-515.0	-673.2	283.7	1.71
7,695.0	87.62	162.80	7,072.4	-544.5	-663.7	314.7	3.88
7,726.0	87.85	162.79	7,073.6	-574.1	-654.6	345.6	0.74
7,756.0	88.06	162.41	7,074.7	-602.7	-645.6	375.6	1.45
7,785.0	87.96	162.40	7,075.7	-630.3	-636.9	404.6	0.35
7,816.0	87.82	162.08	7,076.9	-659.8	-627.4	435.6	1.13
7,845.0	87.61	162.81	7,078.0	-687.4	-618.7	464.6	2.62
7,876.0	86.87	163.70	7,079.5	-717.1	-609.7	495.5	3.73
7,907.0	87.75	164.58	7,081.0	-746.9	-601.3	526.5	4.01
7,968.0	89.40	164.65	7,082.5	-805.7	-585.1	587.4	2.71
8,060.0	89.40	164.24	7,083.4	-894.3	-560.4	679.3	0.45
8,153.0	89.70	164.03	7,084.2	-983.7	-535.0	772.2	0.39
8,254.0	89.80	163.91	7,084.6	-1,080.8	-507.1	873.2	0.15
8,338.0	89.56	161.97	7,085.1	-1,161.1	-482.5	957.2	2.33
8,430.0	90.07	160.50	7,085.4	-1,248.2	-452.9	1,049.2	1.69
8,522.0	89.63	160.26	7,085.6	-1,334.9	-422.0	1,141.1	0.54
8,614.0	90.30	162.43	7,085.7	-1,422.0	-392.6	1,233.1	2.47
8,707.0	89.56	160.96	7,085.8	-1,510.3	-363.4	1,326.1	1.77
8,798.0	90.17	162.80	7,086.0	-1,596.8	-335.1	1,417.1	2.13



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

Local Co-ordinate Reference: Well Dufflemeyer Unit 2H
TVD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
MD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
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)
8,892.0	90.47	163.18	7,085.5	-1,686.7	-307.6	1,511.1	0.52
8,986.0	89.73	162.25	7,085.3	-1,776.4	-279.6	1,605.1	1.26
9,080.0	90.00	161.28	7,085.5	-1,865.7	-250.2	1,699.1	1.07
9,174.0	90.64	161.50	7,085.0	-1,954.8	-220.2	1,793.1	0.72
9,268.0	90.70	161.69	7,083.9	-2,044.0	-190.5	1,887.1	0.21
9,363.0	91.04	161.43	7,082.5	-2,134.1	-160.5	1,982.0	0.45
9,457.0	89.97	163.10	7,081.6	-2,223.6	-131.9	2,076.0	2.11
9,551.0	90.00	161.31	7,081.7	-2,313.1	-103.1	2,170.0	1.90
9,645.0	89.77	161.24	7,081.9	-2,402.2	-73.0	2,264.0	0.26
9,739.0	89.90	162.49	7,082.1	-2,491.5	-43.7	2,358.0	1.34
9,834.0	89.83	163.26	7,082.4	-2,582.3	-15.7	2,453.0	0.81
9,928.0	90.10	164.23	7,082.4	-2,672.5	10.6	2,547.0	1.07
10,022.0	89.80	164.10	7,082.5	-2,762.9	36.2	2,640.9	0.35
10,116.0	89.36	163.67	7,083.2	-2,853.2	62.3	2,734.9	0.65
10,210.0	90.84	163.87	7,083.0	-2,943.5	88.6	2,828.8	1.59
10,304.0	90.37	161.64	7,082.0	-3,033.3	116.4	2,922.8	2.42
10,398.0	90.00	161.69	7,081.7	-3,122.5	146.0	3,016.8	0.40
10,492.0	89.77	162.03	7,081.9	-3,211.8	175.3	3,110.8	0.44
10,586.0	89.50	160.75	7,082.5	-3,300.9	205.3	3,204.8	1.39
10,680.0	89.03	160.68	7,083.7	-3,389.6	236.3	3,298.7	0.51
10,774.0	90.30	159.82	7,084.3	-3,478.1	268.1	3,392.7	1.63
10,870.0	89.90	159.26	7,084.1	-3,568.0	301.6	3,488.6	0.72
10,962.0	89.53	157.97	7,084.6	-3,653.7	335.2	3,580.4	1.46
11,057.0	90.77	160.31	7,084.3	-3,742.5	369.0	3,675.3	2.79
11,151.0	90.44	162.29	7,083.3	-3,831.5	399.1	3,769.3	2.14
11,245.0	90.40	164.14	7,082.6	-3,921.5	426.3	3,863.2	1.97
11,339.0	90.07	164.14	7,082.2	-4,011.9	452.0	3,957.2	0.35
11,433.0	89.87	164.66	7,082.3	-4,102.4	477.3	4,051.1	0.59
11,527.0	90.90	162.62	7,081.7	-4,192.6	503.7	4,145.1	2.43
11,621.0	89.19	162.43	7,081.6	-4,282.3	532.0	4,239.1	1.83
11,715.0	89.93	160.96	7,082.3	-4,371.5	561.5	4,333.0	1.75
11,809.0	90.27	161.49	7,082.1	-4,460.5	591.7	4,427.0	0.67
11,904.0	89.56	160.00	7,082.3	-4,550.2	623.1	4,522.0	1.74
11,998.0	90.54	161.37	7,082.2	-4,638.9	654.2	4,616.0	1.79
12,092.0	89.66	159.90	7,082.0	-4,727.6	685.3	4,709.9	1.82
12,186.0	89.66	161.18	7,082.6	-4,816.2	716.6	4,803.9	1.36
12,281.0	88.99	160.82	7,083.7	-4,906.0	747.6	4,898.9	0.80
12,374.0	90.57	162.11	7,084.1	-4,994.2	777.1	4,991.9	2.19
12,468.0	90.40	161.46	7,083.3	-5,083.5	806.5	5,085.8	0.71
12,562.0	88.19	159.10	7,084.4	-5,171.9	838.2	5,179.8	3.44
12,656.0	90.50	160.09	7,085.5	-5,260.0	871.0	5,273.7	2.67
12,750.0	90.34	160.27	7,084.8	-5,348.5	902.9	5,367.6	0.26
12,844.0	89.10	162.35	7,085.3	-5,437.5	933.0	5,461.6	2.58
12,938.0	88.89	164.19	7,086.9	-5,527.5	960.0	5,555.6	1.97



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

Local Co-ordinate Reference: Well Dufflemeyer Unit 2H
TVD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
MD Reference: Patt 347: Dufflemeyer 2H 1081 GL + 25 KB @ 111
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	EW (usft)	V. Sec (usft)	DLeg (°/100usft)
13,032.0	89.13	164.73	7,088.5	-5,618.1	985.2	5,649.5	0.63
13,127.0	89.16	164.39	7,090.0	-5,709.6	1,010.5	5,744.4	0.36
13,221.0	89.03	163.67	7,091.4	-5,800.0	1,036.4	5,838.3	0.78
13,315.0	89.03	163.37	7,093.0	-5,890.1	1,063.0	5,932.3	0.32
13,409.0	88.79	162.47	7,094.8	-5,979.9	1,090.6	6,026.2	0.99
13,503.0	90.44	162.92	7,095.5	-6,069.7	1,118.6	6,120.2	1.82
13,598.0	90.57	161.91	7,094.6	-6,160.2	1,147.3	6,215.2	1.07
13,692.0	90.60	161.50	7,093.7	-6,249.5	1,176.8	6,309.2	0.44
13,786.0	91.18	162.08	7,092.2	-6,338.8	1,206.2	6,403.2	0.87
13,874.0	91.21	161.04	7,090.4	-6,422.2	1,234.0	6,491.2	1.18
13,931.0	91.21	161.04	7,089.2	-6,476.1	1,252.5	6,548.2	0.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
6,744.0	6,612.2	151.4	-639.8	Sycamore
6,920.0	6,770.2	104.3	-698.8	Middlesex
7,166.0	6,951.5	-51.4	-745.4	Tully
7,430.0	7,054.7	-291.0	-737.3	Marcellus

Checked By: _____ Approved By: _____ Date: _____

RECEIVED
 JUL 6 2015
 WV GEOLOGICAL SURVEY
 MORGANTOWN, WV