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State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 017 - 06375 County Doddridge District Grant
Quad Smithburg 7.5' Pad Name Misery Pad Field/Pool Name ----------
Farm name Spencer, Denzil C. et al Well Number Hardin Unit 1H
Operator (as registered with the OOG) Antero Resources Corporation
Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,356,833m Easting 521,638m
Landing Point of Curve Northing 4,356,737.03m Easting 521,760.80m
Bottom Hole Northing 4,354,558m Easting 522,645m

Elevation (ft) 1,001' GL Type of Well ■New □ Existing Type of Report □Interim ■Final

Permit Type □ Deviated □ Horizontal ■ Horizontal 6A □ Vertical Depth Type □ Deep ■ Shallow

Type of Operation □ Convert □ Deepen ■ Drill □ Plug Back □ Redrilling □ Rework ■ Stimulate

Well Type □ Brine Disposal □ CBM ■ Gas ■ Oil □ Secondary Recovery □ Solution Mining □ Storage □ Other _____

Type of Completion ■ Single □ Multiple Fluids Produced □ Brine ■Gas □ NGL ■ Oil □ Other _____
Drilled with □ Cable ■ Rotary

Drilling Media Surface hole ■ Air □ Mud □Fresh Water Intermediate hole ■ Air □ Mud □ Fresh Water □ Brine
Production hole □ Air ■ Mud □ Fresh Water □ Brine

Mud Type(s) and Additive(s)
Air- Foam & 4% KCL
Mud- Polymer

Date permit issued 11/20/2013 Date drilling commenced 05/08/2014 Date drilling ceased 09/27/2014
Date completion activities began 10/28/2014 Date completion activities ceased 02/07/2015
Verbal plugging (Y/N) N/A Date permission granted N/A Granted by N/A

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft 475'
Salt water depth(s) ft 1,477; 1,675'
Coal depth(s) ft None Identified
Is coal being mined in area (Y/N) No

Open mine(s) (Y/N) depths No
Void(s) encountered (Y/N) depths None
Cavern(s) encountered (Y/N) depths None

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API 47- 017 - 06375 Farm name Spencer, Denzil C. et al Well number Hardin Unit 1H

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24"	20"	40'	New	94#; H-40	N/A	Yes
Surface	17 1/2"	13 3/8"	581'	New	48#; H-40	N/A	Yes
Coal							
Intermediate 1	12 1/4"	9 5/8"	2,504'	New	36#; J-55	N/A	Yes
Intermediate 2							
Intermediate 3							
Production	8 3/4" & 8 1/2"	5 1/2"	14,837'	New	23#; P-110	N/A	Yes
Tubing		2 3/8"	6,898'		4.7#; N-80	N/A	
Packer type and depth set		N/A					

Comment Details SIDETRACK: Sidetrack was performed at 2,620'.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ^{3}/sks)	Volume (ft ^{3})	Cement Top (MD)	WOC (hrs)
Conductor	Class A	100 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	691 sx	15.6	1.18	404	0'	8 Hrs.
Coal							
Intermediate 1	Class A	703 sx	15.6	1.18	784	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	960 sx (Lead); 1,266 sx (Tail)	13.5 (Lead); 15.2 (Tail)	1.4 (Lead); 1.8 (Tail)	2,940	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 14,819' MD; 6,815' TVD (BHL); 6,852' TVD (Deepest Point Drilled) Loggers TD (ft) 14,770'

Deepest formation penetrated Marcellus Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 6,048'

**This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Anno Unit 2H, API #47-017-06374). Please reference the wireline logs submitted with Form WR-35 for the Anno Unit 2H. A Cement Bond Log has been included with this submittal.

Check all wireline logs run ** ☐ caliper ☐ density ☐ deviated/directional ☐ induction ☐ neutron ☐ resistivity ☐ gamma ray ☐ temperature ☐ sonic

Well cored ☐ Yes ■ No Conventional Sidewall Were cuttings collected ☐ Yes ■ No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

Conductor- 0

Surface- 1 above guide shoe, 1 above insert float, 1 every 4th joint to surface

Intermediate- 1 above float joint, 1 above float collar, 1 every 4th joint to surface

Production- 1 above float joint, 1 below float collar, 1 every 3rd joint to top of cement

WAS WELL COMPLETED AS SHOT HOLE ☐ Yes ■ No DETAILS

WAS WELL COMPLETED OPEN HOLE? ☐ Yes ■ No DETAILS

WERE TRACERS USED ☐ Yes ■ No TYPE OF TRACER(S) USED

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PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)

*** PLEASE SEE ATTACHED EXHIBIT 1**

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)

*** PLEASE SEE ATTACHED EXHIBIT 2**

Please insert additional pages as applicable.

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PRODUCING FORMATION(S)	DEPTHS		
Marcellus	6,753' (top) TVD	6,880' (top) MD	

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ■ Open Flow OIL TEST ■ Flow ☐ Pump

SHUT-IN PRESSURE Surface 3,550 psi Bottom Hole ---------- psi DURATION OF TEST ---------- hrs

OPEN FLOW Gas 13,939 mcfpd Oil 26 bpd NGL ---------- bpd Water ---------- bpd GAS MEASURED BY ☐ Estimated ■ Orifice ☐ Pilot

LITHOLOGY/ FORMATION NAME	TOP DEPTH IN FT TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H_2S, ETC)
	0		0		

*** PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

Drilling Contractor Precision Drilling Company, LP
Address 2640 Reach Road City Williamsport State PA Zip 17701

Logging Company STRC
Address 1560 Good Hope Pike City Clarksburg State WV Zip 26301

Cementing Company Allied Oil & Gas Services, LLC
Address 1036 East Main Street City Bridgeport State WV Zip 26330

Stimulating Company Nabors Completion & Production Services, Co.
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378
Please insert additional pages as applicable.

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Completed by Megan Darling Telephone 303-357-7230
Signature Megan C. Darling Title Permitting Agent Date 08/21/2015

Submittal of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

10/23/2015

API 47-017-06375 Farm Name Spencer, Denzil C. et al Well Number Hardin Unit 1H					
EXHIBIT 1					
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	28-Oct-14	14,574	14,743	60	Marcellus
2	21-Nov-14	14,372	14,542	60	Marcellus
3	22-Nov-14	14,171	14,341	60	Marcellus
4	22-Nov-14	13,969	14,139	60	Marcellus
5	22-Nov-14	13,768	13,938	60	Marcellus
6	23-Nov-14	13,566	13,736	60	Marcellus
7	23-Nov-14	13,365	13,535	60	Marcellus
8	24-Nov-14	13,163	13,333	60	Marcellus
9	24-Nov-14	12,962	13,132	60	Marcellus
10	24-Nov-14	12,760	12,930	60	Marcellus
11	24-Nov-14	12,559	12,729	60	Marcellus
12	25-Nov-14	12,358	12,527	60	Marcellus
13	25-Nov-14	12,156	12,326	60	Marcellus
14	25-Nov-14	11,955	12,125	60	Marcellus
15	26-Nov-14	11,753	11,923	60	Marcellus
16	26-Nov-14	11,552	11,722	60	Marcellus
17	26-Nov-14	11,350	11,520	60	Marcellus
18	26-Nov-14	11,149	11,319	60	Marcellus
19	27-Nov-14	10,947	11,117	60	Marcellus
20	27-Nov-14	10,746	10,916	60	Marcellus
21	28-Nov-14	10,545	10,714	60	Marcellus
22	28-Nov-14	10,343	10,513	60	Marcellus
23	28-Nov-14	10,142	10,311	60	Marcellus
24	29-Nov-14	9,940	10,110	60	Marcellus
25	29-Nov-14	9,739	9,909	60	Marcellus
26	30-Nov-14	9,537	9,707	60	Marcellus
27	30-Nov-14	9,336	9,506	60	Marcellus
28	30-Nov-14	9,134	9,304	60	Marcellus
29	30-Nov-14	8,933	9,103	60	Marcellus
30	30-Nov-14	8,731	8,901	60	Marcellus
31	1-Dec-14	8,530	8,700	60	Marcellus
32	1-Dec-14	8,329	8,498	60	Marcellus
33	1-Dec-14	8,127	8,297	60	Marcellus
34	2-Dec-14	7,926	8,096	60	Marcellus
35	2-Dec-14	7,724	7,894	60	Marcellus
36	2-Dec-14	7,523	7,693	60	Marcellus
37	2-Dec-14	7,321	7,491	60	Marcellus
38	2-Dec-14	7,120	7,290	60	Marcellus
39	3-Dec-14	6,918	7,088	60	Marcellus

API 47-017-06375 Farm Name Spencer, Denzil C. et al Well Number Hardin Unit 1H

EXHIBIT 2

Stage No.	Stimulations Date	Avg Pump Rate	Avg Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/ other (units)
1	21-Nov-14	63.9	7,008	5,160	4,220	251,500	6,804	N/A
2	21-Nov-14	64.2	7,495	5,953	4,153	254,600	6,757	N/A
3	22-Nov-14	63.2	7,322	5,684	4,480	252,800	6,673	N/A
4	22-Nov-14	64.7	7,324	5,822	4,687	248,900	6,708	N/A
5	22-Nov-14	64.3	7,167	5,911	4,453	252,900	6,699	N/A
6	23-Nov-14	64.2	7,519	5,971	4,512	232,100	6,718	N/A
7	23-Nov-14	64.7	7,439	5,522	4,191	198,300	7,212	N/A
8	24-Nov-14	65.1	7,153	5,588	5,068	247,100	7,149	N/A
9	24-Nov-14	62.9	7,343	5,882	5,450	250,400	6,597	N/A
10	24-Nov-14	64.9	6,869	5,485	4,878	189,100	6,594	N/A
11	24-Nov-14	64.3	7,271	5,669	5,046	250,300	6,037	N/A
12	25-Nov-14	63.6	6,793	5,601	5,139	235,000	6,626	N/A
13	25-Nov-14	63.6	6,994	5,646	4,997	247,900	6,873	N/A
14	25-Nov-14	63.4	6,937	5,938	4,797	251,800	6,424	N/A
15	26-Nov-14	64.5	6,864	5,625	5,024	243,200	6,473	N/A
16	26-Nov-14	63.9	6,992	5,677	4,986	246,500	6,431	N/A
17	26-Nov-14	65.4	6,740	5,836	4,598	245,900	6,429	N/A
18	26-Nov-14	64.4	6,850	5,675	4,371	246,100	6,549	N/A
19	27-Nov-14	64.8	7,176	5,955	4,735	254,500	6,638	N/A
20	27-Nov-14	64.2	6,927	5,830	4,807	251,100	6,385	N/A
21	28-Nov-14	65.1	6,834	5,515	5,463	234,900	6,820	N/A
22	28-Nov-14	64.3	6,721	5,859	4,965	253,300	6,396	N/A
23	28-Nov-14	64.3	6,408	5,355	5,391	249,900	6,387	N/A
24	29-Nov-14	64.5	6,392	5,215	4,505	252,600	6,389	N/A
25	29-Nov-14	64.1	6,249	5,277	5,107	249,300	6,355	N/A
26	30-Nov-14	63.9	6,496	5,442	4,875	237,600	6,951	N/A
27	30-Nov-14	65.1	6,598	5,457	4,957	249,300	6,255	N/A
28	30-Nov-14	65.9	6,502	5,281	4,907	246,400	6,264	N/A
29	30-Nov-14	65.0	6,285	5,376	5,077	222,700	6,220	N/A
30	30-Nov-14	64.8	6,771	5,441	4,974	246,300	6,743	N/A
31	1-Dec-14	66.1	6,200	5,309	4,716	250,700	6,220	N/A
32	1-Dec-14	65.9	5,966	5,142	5,544	243,900	6,205	N/A
33	1-Dec-14	64.4	5,969	5,024	5,297	250,500	6,147	N/A
34	2-Dec-14	64.3	5,992	5,379	4,980	251,200	6,149	N/A
35	2-Dec-14	63.1	6,011	5,191	4,876	247,400	6,165	N/A
36	2-Dec-14	64.1	6,310	5,757	4,629	252,200	5,997	N/A
37	2-Dec-14	64.9	5,942	5,424	5,266	247,500	6,066	N/A
38	2-Dec-14	63.9	6,169	5,580	5,602	255,400	6,081	N/A
39	3-Dec-14	64.3	5,947	5,347	4,651	156,800	6,098	N/A
	AVG=	64.4	6,717	5,559	4,881	9,447,900	252,684	TOTAL

API 47-017-06375 Farm Name Spencer, Denzil C. et al Well Number Hardin Unit 1H				
EXHIBIT 3				
LITHOLOGY/ FORMATION	**TOP DEPTH (TVD) From Surface**	**BOTTOM DEPTH (TVD) From Surface**	**TOP DEPTH (MD) From Surface**	**BOTTOM DEPTH (MD) From Surface**
Fresh Water	475'	N/A	475'	N/A
Shale/ Siltstone	0	177	0	177
Shale/ Trace Coal	est. 177	207	est. 177	207
Shale/ Siltstone	est. 207	257	est. 207	257
Shale/ Trace Coal	est. 257	277	est. 257	277
Shale/ Sandstone	est. 277	657	est. 277	657
Limestone/ Siltstone	est. 657	967	est. 657	967
Sandstone	est. 967	987	est. 967	987
Shale/ Limestone/ Siltstone	est. 987	1,117	est. 987	1,117
Siltstone/ Sandstone	est. 1117	1,177	est. 1117	1,177
Shale/ Siltstone	est. 1177	1,237	est. 1177	1,237
Sandstone	est. 1237	1,257	est. 1237	1,257
Shale/ Siltstone	est. 1257	1,397	est. 1257	1,397
Sandstone/ Siltstone	est. 1397	1,542	est. 1397	1,542
Sandstone/ Coal	est. 1542	1,602	est. 1542	1,602
Siltstone/ Shale	est. 1602	1,997	est. 1602	1,997
Big Lime	1,997	2,115	1,997	2,115
Big Injun	2,115	2,545	2,115	2,545
Gantz Sand	2,545	2,685	2,545	2,685
Fifty Foot Sandstone	2,685	2,748	2,685	2,748
Gordon	2,748	3,111	2,748	3,112
Fifth Sandstone	3,111	3,141	3,112	3,142
Bayard	3,141	3,503	3,142	3,504
Warren	3,503	3,882	3,504	3,883
Speechley	3,882	4,121	3,883	4,122
Baltown	4,121	4,604	4,122	4,606
Bradford	4,604	5,101	4,606	5,103
Benson	5,101	5,363	5,103	5,365
Alexander	5,363	5,554	5,365	5,556
Elk	5,554	6,069	5,556	6,071
Rhinestreet	6,069	6,352	6,071	6,366
Sycamore	6,352	6,532	6,366	6,562
Middlesex	6,532	6,670	6,562	6,732
Burkett	6,670	6,697	6,732	6,773
Tully	6,697	6,753	6,773	6,880
Marcellus	6,753	NA	6,880	NA

*Please note Antero determines shallow formation tops based on mud logs that are only run on one well on a multi-well pad. The measured depth (MD) data on subsequent wells may be slightly different due to the well's unique departure.

Antero Resources

Antero Resources
Hardin Unit 1H
Doddridge County WV
Northing: 14293325.86
Easting: 1711360.64
As Drilled

WELL DETAILS: Hardin Unit 1H
Ground Level: 1001.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	14293325.86	1711360.64	39° 21' 38.132 N	80° 44' 56.424 W	

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Hardin Unit 1H, Grid North
Vertical (TVD) Reference: Pr522 Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: Pr522 Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Calculation Method: Minimum Curvature

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

Scientific Drilling

Genie Lightfoot
14:46, October 06 2014

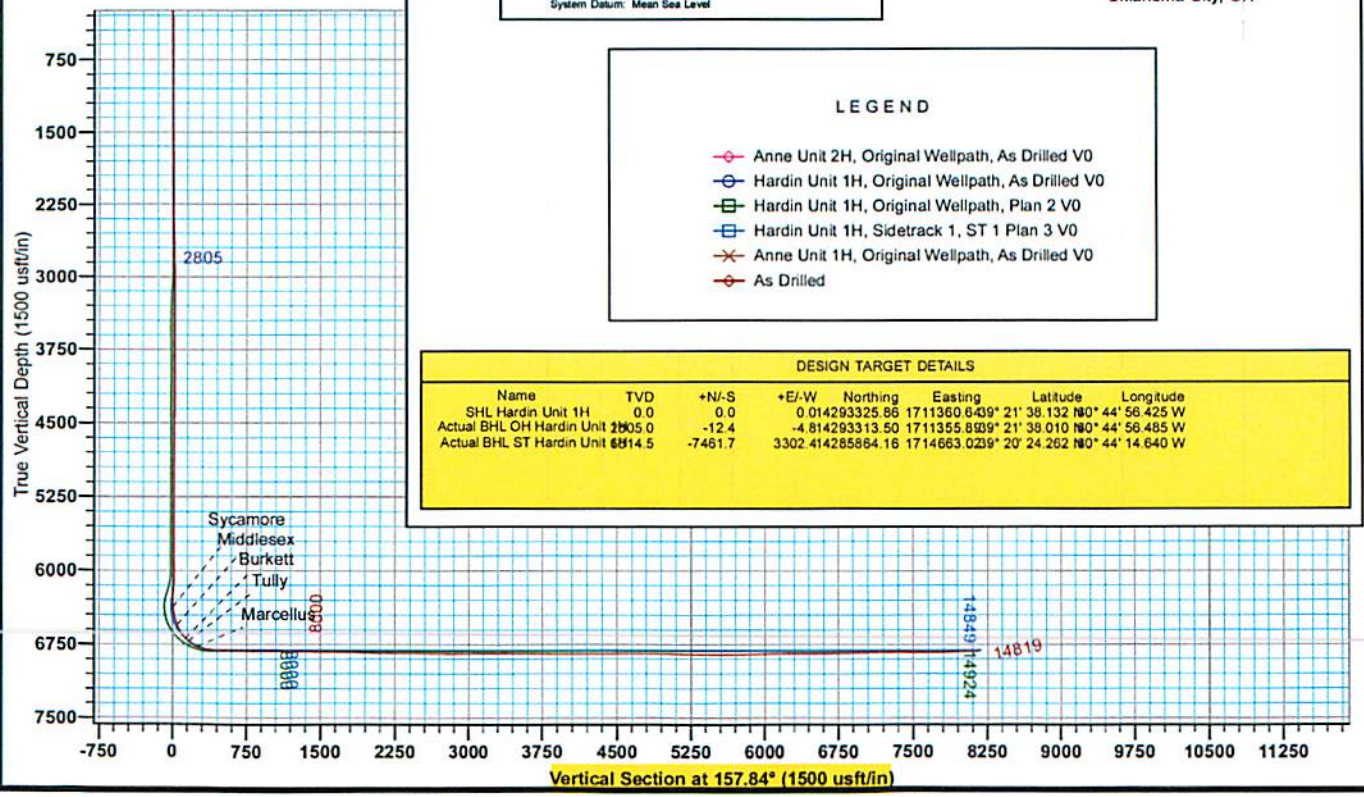
Scientific Drilling
421 South Eagle Lane
Oklahoma City, OK

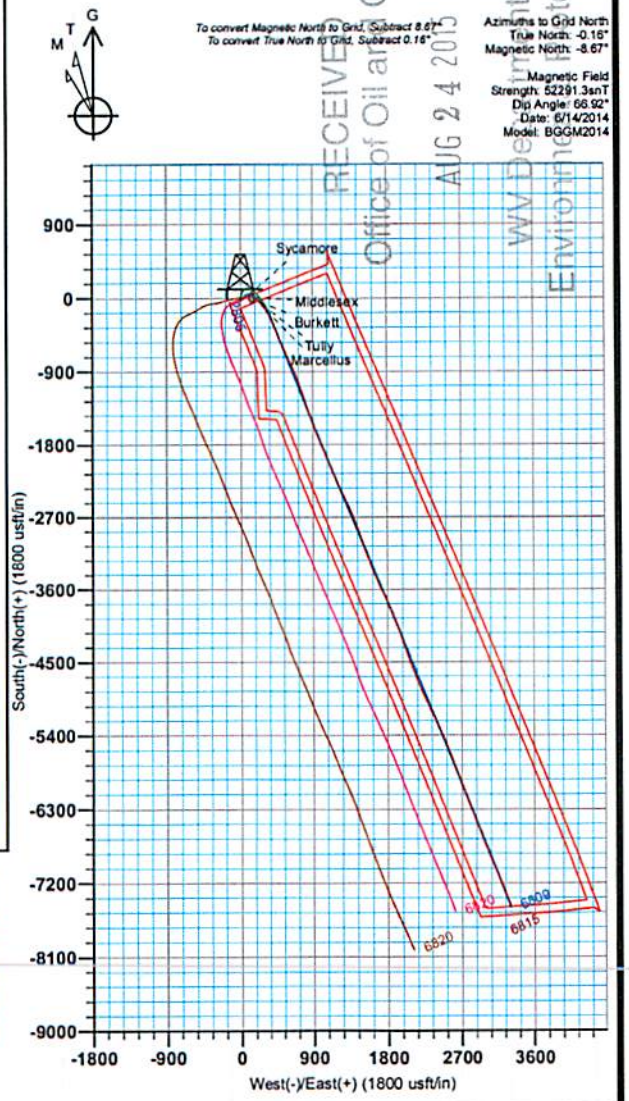
LEGEND

- Anne Unit 2H, Original Wellpath, As Drilled V0
- Hardin Unit 1H, Original Wellpath, As Drilled V0
- Hardin Unit 1H, Original Wellpath, Plan 2 V0
- Hardin Unit 1H, Sidetrack 1, ST 1 Plan 3 V0
- Anne Unit 1H, Original Wellpath, As Drilled V0
- As Drilled

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL Hardin Unit 1H	0.0	0.0	0.0	14293325.86	1711360.64	39° 21' 38.132 N	80° 44' 56.425 W
Actual BHL OH Hardin Unit 1H	6805.0	-12.4	-4.8	14293313.50	1711355.85	39° 21' 38.010 N	80° 44' 56.485 W
Actual BHL ST Hardin Unit 1H	6814.5	-7461.7	3302.4	14285864.16	1714663.02	39° 20' 24.262 N	80° 44' 14.640 W





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Antero Resources

Doddridge County WV
Anne / Hardin Pad
Hardin Unit 1H
Sidetrack 1

Design: As Drilled

EOW Completion Report

06 October, 2014

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Antero Resources

EOW Completion Report

Scientific Drilling

Company:	Antero Resources	**Local Co-ordinate Reference:**	Well Hardin Unit 1H
Project:	Doddridge County WV	**TVD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Site:	Anne / Hardin Pad	**MD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Well:	Hardin Unit 1H	**North Reference:**	Grid
Wellbore:	Sidetrack 1	**Survey Calculation Method:**	Minimum Curvature
Design:	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 Anne / Hardin Pad

Site Position:		**Northing:**	14,293,344.77 usft	**Latitude:**	39° 21' 38.319 N
From:	Map	**Easting:**	1,711,355.33 usft	**Longitude:**	80° 44' 56.491 W
Position Uncertainty:	2.0 usft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	0.16 °

Well Hardin Unit 1H, Marcellus

Well Position	**+N/-S**	0.0 usft	**Northing:**	14,293,325.86 usft	**Latitude:**	39° 21' 38.132 N
	+E/-W	0.0 usft	**Easting:**	1,711,360.64 usft	**Longitude:**	80° 44' 56.424 W
Position Uncertainty		2.0 usft	**Wellhead Elevation:**	1,019.0 usft	**Ground Level:**	1,001.0 usft

Wellbore Sidetrack 1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	6/14/2014	-8.51	66.92	52,291

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	157.84

Survey Program **Date** 10/6/2014

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
105.0	5,959.0	Survey #2 Final Gyro (Sidetrack 1)	SDI Standard Keeper	Scientific Drilling Intl. Standard Wireline Keeper
5,986.0	14,819.0	Survey #3 SDI MWD (Sidetrack 1)	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	0.32	188.14	105.0	-0.3	0.0	0.3	0.30
130.0	0.27	152.79	130.0	-0.4	0.0	0.4	0.74
155.0	0.30	189.45	155.0	-0.5	0.0	0.5	0.73
180.0	0.32	174.56	180.0	-0.7	0.0	0.6	0.33
205.0	0.29	198.52	205.0	-0.8	0.0	0.7	0.52
230.0	0.23	192.57	230.0	-0.9	-0.1	0.8	0.26
255.0	0.28	213.32	255.0	-1.0	-0.1	0.9	0.42
280.0	0.23	198.04	280.0	-1.1	-0.2	1.0	0.34
305.0	0.23	205.14	305.0	-1.2	-0.2	1.0	0.11
330.0	0.17	206.25	330.0	-1.3	-0.2	1.1	0.24

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Antero Resources

EOW Completion Report

Scientific Drilling

Company:	Antero Resources	**Local Co-ordinate Reference:**	Well Hardin Unit 1H
Project:	Doddridge County WV	**TVD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Site:	Anne / Hardin Pad	**MD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Well:	Hardin Unit 1H	**North Reference:**	Grid
Wellbore:	Sidetrack 1	**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)
355.0	0.16	213.63	355.0	-1.3	-0.3	1.1	0.09
380.0	0.24	227.78	380.0	-1.4	-0.3	1.2	0.37
405.0	0.22	217.77	405.0	-1.5	-0.4	1.2	0.18
430.0	0.28	228.76	430.0	-1.5	-0.5	1.3	0.31
455.0	0.20	219.77	455.0	-1.6	-0.5	1.3	0.35
480.0	0.14	187.46	480.0	-1.7	-0.6	1.3	0.44
505.0	0.21	211.28	505.0	-1.8	-0.6	1.4	0.40
530.0	0.26	217.99	530.0	-1.8	-0.7	1.5	0.23
555.0	0.15	208.94	555.0	-1.9	-0.7	1.5	0.46
580.0	0.20	217.43	580.0	-2.0	-0.7	1.5	0.22
605.0	0.13	204.05	605.0	-2.0	-0.8	1.6	0.32
630.0	0.24	229.63	630.0	-2.1	-0.8	1.6	0.54
655.0	0.24	228.71	655.0	-2.2	-0.9	1.7	0.02
680.0	0.19	219.26	680.0	-2.2	-1.0	1.7	0.24
705.0	0.20	211.41	705.0	-2.3	-1.0	1.7	0.11
730.0	0.21	215.98	730.0	-2.4	-1.1	1.8	0.08
755.0	0.22	221.01	755.0	-2.4	-1.1	1.8	0.09
780.0	0.27	220.48	780.0	-2.5	-1.2	1.9	0.20
805.0	0.20	206.71	805.0	-2.6	-1.3	1.9	0.36
830.0	0.22	199.57	830.0	-2.7	-1.3	2.0	0.13
855.0	0.24	211.48	855.0	-2.8	-1.3	2.1	0.21
880.0	0.20	204.95	880.0	-2.9	-1.4	2.1	0.19
905.0	0.16	191.05	905.0	-2.9	-1.4	2.2	0.24
930.0	0.21	203.79	930.0	-3.0	-1.4	2.3	0.26
955.0	0.12	223.43	955.0	-3.1	-1.5	2.3	0.42
980.0	0.14	200.93	980.0	-3.1	-1.5	2.3	0.22
1,005.0	0.22	211.43	1,005.0	-3.2	-1.5	2.4	0.34
1,030.0	0.25	221.71	1,030.0	-3.3	-1.6	2.4	0.21
1,055.0	0.28	216.62	1,055.0	-3.4	-1.7	2.5	0.15
1,080.0	0.22	229.24	1,080.0	-3.5	-1.7	2.5	0.32
1,105.0	0.33	226.96	1,105.0	-3.5	-1.8	2.6	0.44
1,130.0	0.30	215.15	1,130.0	-3.6	-1.9	2.6	0.29
1,155.0	0.24	206.68	1,155.0	-3.7	-2.0	2.7	0.29
1,180.0	0.18	196.42	1,180.0	-3.8	-2.0	2.8	0.28
1,205.0	0.19	211.23	1,205.0	-3.9	-2.1	2.8	0.19
1,230.0	0.26	217.18	1,230.0	-4.0	-2.1	2.9	0.29
1,255.0	0.20	217.29	1,255.0	-4.1	-2.2	2.9	0.24
1,280.0	0.23	213.74	1,280.0	-4.1	-2.2	3.0	0.13
1,305.0	0.19	207.83	1,305.0	-4.2	-2.3	3.0	0.18
1,330.0	0.14	185.39	1,330.0	-4.3	-2.3	3.1	0.32
1,355.0	0.24	218.27	1,355.0	-4.3	-2.3	3.1	0.58
1,380.0	0.22	219.26	1,380.0	-4.4	-2.4	3.2	0.08
1,405.0	0.23	209.59	1,405.0	-4.5	-2.5	3.2	0.16
1,430.0	0.27	228.18	1,430.0	-4.6	-2.5	3.3	0.36

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Antero Resources

EOW Completion Report

Scientific Drilling

Company:	Antero Resources	**Local Co-ordinate Reference:**	Well Hardin Unit 1H
Project:	Doddridge County WV	**TVD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Site:	Anne / Hardin Pad	**MD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Well:	Hardin Unit 1H	**North Reference:**	Grid
Wellbore:	Sidetrack 1	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
1,455.0	0.30	222.58	1,455.0	-4.7	-2.6	3.3	0.16
1,480.0	0.25	226.10	1,480.0	-4.8	-2.7	3.4	0.21
1,505.0	0.24	212.66	1,505.0	-4.8	-2.8	3.4	0.23
1,530.0	0.19	202.79	1,530.0	-4.9	-2.8	3.5	0.25
1,555.0	0.24	212.96	1,555.0	-5.0	-2.8	3.6	0.25
1,580.0	0.21	213.78	1,580.0	-5.1	-2.9	3.6	0.12
1,605.0	0.35	225.34	1,605.0	-5.2	-3.0	3.7	0.60
1,630.0	0.21	195.26	1,630.0	-5.3	-3.0	3.7	0.79
1,655.0	0.27	173.91	1,655.0	-5.4	-3.1	3.8	0.43
1,680.0	0.30	163.74	1,680.0	-5.5	-3.0	4.0	0.23
1,705.0	0.31	160.44	1,705.0	-5.6	-3.0	4.1	0.08
1,730.0	0.33	161.43	1,730.0	-5.8	-2.9	4.2	0.08
1,755.0	0.34	168.78	1,755.0	-5.9	-2.9	4.4	0.18
1,780.0	0.35	181.06	1,780.0	-6.1	-2.9	4.5	0.30
1,805.0	0.42	184.42	1,805.0	-6.2	-2.9	4.7	0.29
1,830.0	0.35	179.67	1,830.0	-6.4	-2.9	4.8	0.31
1,855.0	0.38	172.22	1,855.0	-6.5	-2.9	5.0	0.22
1,880.0	0.41	170.94	1,880.0	-6.7	-2.9	5.1	0.13
1,905.0	0.37	168.85	1,905.0	-6.9	-2.8	5.3	0.17
1,930.0	0.37	164.09	1,930.0	-7.0	-2.8	5.5	0.12
1,955.0	0.42	167.07	1,955.0	-7.2	-2.8	5.6	0.22
1,980.0	0.41	182.96	1,980.0	-7.4	-2.7	5.8	0.46
2,005.0	0.41	172.07	2,005.0	-7.6	-2.7	6.0	0.31
2,030.0	0.39	172.93	2,030.0	-7.7	-2.7	6.1	0.08
2,055.0	0.43	174.56	2,055.0	-7.9	-2.7	6.3	0.17
2,080.0	0.41	174.95	2,080.0	-8.1	-2.7	6.5	0.08
2,105.0	0.41	168.63	2,105.0	-8.3	-2.7	6.7	0.18
2,130.0	0.43	174.78	2,130.0	-8.5	-2.6	6.8	0.20
2,155.0	0.40	171.70	2,155.0	-8.6	-2.6	7.0	0.15
2,180.0	0.44	172.85	2,180.0	-8.8	-2.6	7.2	0.16
2,205.0	0.38	175.23	2,205.0	-9.0	-2.6	7.4	0.25
2,230.0	0.45	201.58	2,230.0	-9.2	-2.6	7.5	0.80
2,255.0	0.43	189.10	2,255.0	-9.4	-2.6	7.7	0.39
2,280.0	0.46	199.73	2,280.0	-9.5	-2.7	7.8	0.35
2,305.0	0.41	187.03	2,305.0	-9.7	-2.7	8.0	0.43
2,330.0	0.47	194.20	2,330.0	-9.9	-2.8	8.1	0.33
2,355.0	0.51	195.93	2,355.0	-10.1	-2.8	8.3	0.17
2,380.0	0.47	194.39	2,380.0	-10.3	-2.9	8.5	0.17
2,405.0	0.44	187.61	2,405.0	-10.5	-2.9	8.6	0.25
2,430.0	0.36	185.52	2,430.0	-10.7	-2.9	8.8	0.33
2,455.0	0.54	198.26	2,455.0	-10.9	-3.0	9.0	0.82
2,480.0	0.30	211.87	2,480.0	-11.1	-3.1	9.1	1.03
2,505.0	0.33	206.81	2,505.0	-11.2	-3.1	9.2	0.16
2,530.0	0.32	203.54	2,530.0	-11.3	-3.2	9.3	0.08
2,555.0	0.31	201.34	2,555.0	-11.4	-3.2	9.4	0.06

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Antero Resources

EOW Completion Report

Scientific Drilling

Company:	Antero Resources	**Local Co-ordinate Reference:**	Well Hardin Unit 1H
Project:	Doddridge County WV	**TVD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Site:	Anne / Hardin Pad	**MD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Well:	Hardin Unit 1H	**North Reference:**	Grid
Wellbore:	Sidetrack 1	**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)
2,580.0	0.31	199.25	2,580.0	-11.6	-3.3	9.5	0.05
2,605.0	0.31	171.74	2,605.0	-11.7	-3.3	9.6	0.59
2,630.0	1.24	105.56	2,630.0	-11.8	-3.0	9.8	4.60
2,655.0	2.68	94.57	2,654.9	-11.9	-2.2	10.2	5.93
2,680.0	3.84	91.91	2,679.9	-12.0	-0.8	10.8	4.68
2,705.0	5.01	87.75	2,704.8	-12.0	1.2	11.6	4.85
2,730.0	6.13	83.92	2,729.7	-11.8	3.6	12.3	4.72
2,755.0	6.32	83.97	2,754.6	-11.5	6.3	13.0	0.76
2,780.0	6.27	84.38	2,779.4	-11.3	9.0	13.8	0.27
2,805.0	5.78	84.66	2,804.3	-11.0	11.6	14.6	1.96
2,830.0	5.56	83.78	2,829.2	-10.8	14.1	15.3	0.95
2,855.0	5.75	83.81	2,854.0	-10.5	16.5	15.9	0.76
2,880.0	5.54	83.99	2,878.9	-10.2	19.0	16.6	0.84
2,905.0	5.37	86.23	2,903.8	-10.0	21.3	17.3	1.09
2,930.0	5.06	92.38	2,928.7	-10.0	23.6	18.2	2.56
2,955.0	4.65	94.43	2,953.6	-10.1	25.7	19.1	1.78
2,980.0	3.18	95.56	2,978.5	-10.3	27.4	19.8	5.89
3,005.0	0.92	76.11	3,003.5	-10.3	28.3	20.2	9.33
3,030.0	0.59	58.50	3,028.5	-10.2	28.6	20.2	1.60
3,055.0	0.53	54.96	3,053.5	-10.0	28.8	20.2	0.28
3,080.0	0.69	59.92	3,078.5	-9.9	29.0	20.1	0.67
3,105.0	0.48	55.12	3,103.5	-9.8	29.3	20.1	0.86
3,130.0	0.35	49.24	3,128.5	-9.6	29.4	20.0	0.55
3,155.0	0.34	42.66	3,153.5	-9.5	29.5	20.0	0.16
3,180.0	0.26	41.97	3,178.5	-9.4	29.6	19.9	0.32
3,205.0	0.22	24.79	3,203.5	-9.4	29.6	19.8	0.33
3,230.0	0.20	31.05	3,228.5	-9.3	29.7	19.8	0.12
3,255.0	0.22	27.93	3,253.5	-9.2	29.7	19.7	0.09
3,280.0	0.16	330.64	3,278.5	-9.1	29.7	19.7	0.76
3,305.0	0.20	305.67	3,303.5	-9.1	29.7	19.6	0.35
3,330.0	0.16	337.96	3,328.5	-9.0	29.6	19.5	0.43
3,355.0	0.16	341.58	3,353.5	-8.9	29.6	19.5	0.04
3,380.0	0.13	310.05	3,378.5	-8.9	29.6	19.4	0.34
3,405.0	0.12	312.47	3,403.5	-8.9	29.5	19.3	0.05
3,430.0	0.12	335.55	3,428.5	-8.8	29.5	19.3	0.19
3,455.0	0.11	16.38	3,453.5	-8.8	29.5	19.3	0.32
3,480.0	0.23	313.07	3,478.5	-8.7	29.5	19.2	0.82
3,505.0	0.19	316.20	3,503.5	-8.6	29.4	19.1	0.17
3,530.0	0.17	329.66	3,528.5	-8.6	29.4	19.0	0.19
3,555.0	0.30	300.22	3,553.5	-8.5	29.3	18.9	0.69
3,580.0	0.31	312.37	3,578.5	-8.4	29.2	18.8	0.26
3,605.0	0.29	295.99	3,603.5	-8.4	29.1	18.7	0.35
3,630.0	0.27	287.02	3,628.5	-8.3	29.0	18.6	0.19
3,655.0	0.33	282.32	3,653.5	-8.3	28.8	18.6	0.26

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Antero Resources

EOW Completion Report

Scientific Drilling

Company:	Antero Resources	**Local Co-ordinate Reference:**	Well Hardin Unit 1H
Project:	Doddridge County WV	**TVD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Site:	Anne / Hardin Pad	**MD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Well:	Hardin Unit 1H	**North Reference:**	Grid
Wellbore:	Sidetrack 1	**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)
3,680.0	0.24	283.94	3,678.5	-8.3	28.7	18.5	0.36
3,705.0	0.29	270.63	3,703.5	-8.3	28.6	18.4	0.32
3,730.0	0.24	283.08	3,728.5	-8.2	28.5	18.4	0.30
3,755.0	0.32	271.78	3,753.5	-8.2	28.4	18.3	0.39
3,780.0	0.25	293.55	3,778.5	-8.2	28.2	18.2	0.51
3,805.0	0.34	276.35	3,803.5	-8.2	28.1	18.2	0.50
3,830.0	0.32	289.83	3,828.5	-8.1	28.0	18.1	0.32
3,855.0	0.45	274.18	3,853.5	-8.1	27.8	18.0	0.66
3,880.0	0.42	276.31	3,878.5	-8.1	27.6	17.9	0.14
3,905.0	0.49	270.68	3,903.5	-8.1	27.4	17.8	0.33
3,930.0	0.47	266.57	3,928.5	-8.1	27.2	17.8	0.16
3,955.0	0.38	265.02	3,953.5	-8.1	27.0	17.7	0.36
3,980.0	0.47	266.49	3,978.5	-8.1	26.9	17.6	0.36
4,005.0	0.42	270.86	4,003.5	-8.1	26.7	17.6	0.24
4,030.0	0.46	270.29	4,028.5	-8.1	26.5	17.5	0.16
4,055.0	0.46	269.70	4,053.5	-8.1	26.3	17.4	0.02
4,080.0	0.55	268.70	4,078.5	-8.1	26.0	17.3	0.36
4,105.0	0.53	269.51	4,103.5	-8.1	25.8	17.3	0.09
4,130.0	0.55	260.29	4,128.5	-8.1	25.6	17.2	0.36
4,155.0	0.45	260.03	4,153.5	-8.2	25.4	17.1	0.40
4,180.0	0.54	262.79	4,178.5	-8.2	25.2	17.1	0.37
4,205.0	0.51	264.03	4,203.5	-8.2	24.9	17.0	0.13
4,230.0	0.47	267.38	4,228.5	-8.3	24.7	17.0	0.20
4,255.0	0.52	270.99	4,253.5	-8.3	24.5	16.9	0.24
4,280.0	0.56	268.60	4,278.5	-8.3	24.3	16.8	0.18
4,305.0	0.49	268.26	4,303.5	-8.3	24.0	16.7	0.28
4,330.0	0.51	262.82	4,328.5	-8.3	23.8	16.7	0.21
4,355.0	0.49	269.29	4,353.5	-8.3	23.6	16.6	0.24
4,380.0	0.55	263.11	4,378.5	-8.3	23.4	16.5	0.33
4,405.0	0.44	261.23	4,403.5	-8.3	23.2	16.5	0.44
4,430.0	0.41	258.80	4,428.5	-8.4	23.0	16.4	0.14
4,455.0	0.46	252.78	4,453.5	-8.4	22.8	16.4	0.27
4,480.0	0.48	255.71	4,478.5	-8.5	22.6	16.4	0.13
4,505.0	0.39	257.20	4,503.5	-8.5	22.4	16.3	0.36
4,530.0	0.38	256.56	4,528.5	-8.6	22.2	16.3	0.04
4,555.0	0.40	261.72	4,553.5	-8.6	22.1	16.3	0.16
4,580.0	0.41	270.37	4,578.5	-8.6	21.9	16.2	0.25
4,605.0	0.40	264.56	4,603.5	-8.6	21.7	16.2	0.17
4,630.0	0.39	268.02	4,628.5	-8.6	21.6	16.1	0.10
4,655.0	0.52	268.33	4,653.5	-8.6	21.4	16.0	0.52
4,680.0	0.38	261.28	4,678.5	-8.6	21.2	16.0	0.60
4,705.0	0.40	266.74	4,703.5	-8.7	21.0	15.9	0.17
4,730.0	0.45	264.56	4,728.5	-8.7	20.8	15.9	0.21
4,755.0	0.45	263.15	4,753.5	-8.7	20.6	15.8	0.04

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Antero Resources

EOW Completion Report

Scientific Drilling

Company:	Antero Resources	**Local Co-ordinate Reference:**	Well Hardin Unit 1H
Project:	Doddridge County WV	**TVD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Site:	Anne / Hardin Pad	**MD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Well:	Hardin Unit 1H	**North Reference:**	Grid
Wellbore:	Sidetrack 1	**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)
4,780.0	0.30	271.13	4,778.5	-8.7	20.4	15.8	0.63
4,805.0	0.35	271.79	4,803.5	-8.7	20.3	15.7	0.20
4,830.0	0.41	280.61	4,828.5	-8.7	20.1	15.6	0.33
4,855.0	0.47	272.93	4,853.5	-8.7	20.0	15.5	0.34
4,880.0	0.35	278.21	4,878.5	-8.6	19.8	15.5	0.50
4,905.0	0.44	278.97	4,903.5	-8.6	19.6	15.4	0.36
4,930.0	0.34	271.46	4,928.5	-8.6	19.4	15.3	0.45
4,955.0	0.44	265.52	4,953.5	-8.6	19.3	15.2	0.43
4,980.0	0.29	280.01	4,978.5	-8.6	19.1	15.2	0.70
5,005.0	0.22	286.34	5,003.5	-8.6	19.0	15.1	0.30
5,030.0	0.30	291.24	5,028.5	-8.5	18.9	15.0	0.33
5,055.0	0.36	280.25	5,053.5	-8.5	18.8	14.9	0.35
5,080.0	0.38	277.54	5,078.5	-8.5	18.6	14.9	0.11
5,105.0	0.31	281.09	5,103.5	-8.5	18.4	14.8	0.29
5,130.0	0.47	268.75	5,128.5	-8.4	18.3	14.7	0.72
5,155.0	0.43	275.47	5,153.5	-8.4	18.1	14.6	0.26
5,180.0	0.44	275.51	5,178.5	-8.4	17.9	14.5	0.04
5,205.0	0.36	274.25	5,203.5	-8.4	17.7	14.5	0.32
5,230.0	0.49	267.73	5,228.5	-8.4	17.5	14.4	0.55
5,255.0	0.35	268.50	5,253.5	-8.4	17.3	14.3	0.56
5,280.0	0.17	269.88	5,278.5	-8.4	17.2	14.3	0.72
5,305.0	0.39	272.34	5,303.5	-8.4	17.1	14.2	0.88
5,330.0	0.32	280.33	5,328.5	-8.4	17.0	14.2	0.34
5,355.0	0.47	275.59	5,353.5	-8.4	16.8	14.1	0.61
5,380.0	0.40	271.29	5,378.5	-8.4	16.6	14.0	0.31
5,405.0	0.47	269.61	5,403.5	-8.4	16.4	13.9	0.28
5,430.0	0.29	265.81	5,428.5	-8.4	16.2	13.9	0.73
5,455.0	0.39	265.96	5,453.5	-8.4	16.1	13.8	0.40
5,480.0	0.26	269.56	5,478.5	-8.4	16.0	13.8	0.53
5,505.0	0.24	284.78	5,503.5	-8.4	15.8	13.7	0.28
5,530.0	0.31	264.79	5,528.5	-8.4	15.7	13.7	0.47
5,555.0	0.22	273.05	5,553.5	-8.4	15.6	13.6	0.39
5,580.0	0.36	257.07	5,578.5	-8.4	15.5	13.6	0.64
5,605.0	0.23	231.72	5,603.5	-8.4	15.4	13.6	0.72
5,630.0	0.21	247.60	5,628.5	-8.5	15.3	13.6	0.26
5,655.0	0.19	220.58	5,653.5	-8.5	15.2	13.6	0.38
5,680.0	0.23	238.66	5,678.5	-8.6	15.2	13.7	0.31
5,705.0	0.27	244.98	5,703.5	-8.6	15.1	13.7	0.19
5,730.0	0.19	195.67	5,728.5	-8.7	15.0	13.7	0.82
5,755.0	0.28	229.19	5,753.5	-8.8	14.9	13.8	0.64
5,780.0	0.25	227.37	5,778.5	-8.9	14.8	13.8	0.12
5,805.0	0.16	200.10	5,803.5	-8.9	14.8	13.8	0.52
5,830.0	0.24	218.29	5,828.5	-9.0	14.8	13.9	0.40
5,855.0	0.32	228.28	5,853.5	-9.1	14.7	13.9	0.37

10/23/2015

17-06375

Antero Resources

EOW Completion Report

Scientific Drilling

Company:	Antero Resources	**Local Co-ordinate Reference:**	Well Hardin Unit 1H
Project:	Doddridge County WV	**TVD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Site:	Anne / Hardin Pad	**MD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Well:	Hardin Unit 1H	**North Reference:**	Grid
Wellbore:	Sidetrack 1	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
5,880.0	0.27	260.82	5,878.5	-9.1	14.6	14.0	0.69
5,905.0	0.33	207.45	5,903.5	-9.2	14.5	14.0	1.10
5,930.0	0.23	215.72	5,928.5	-9.3	14.4	14.1	0.43
5,955.0	0.37	220.55	5,953.5	-9.4	14.3	14.1	0.57
5,959.0	0.39	220.99	5,957.5	-9.4	14.3	14.1	0.51
5,986.0	0.42	255.32	5,984.5	-9.5	14.1	14.2	0.89
6,017.0	0.48	232.48	6,015.5	-9.6	13.9	14.2	0.61
6,048.0	1.58	56.63	6,046.5	-9.5	14.2	14.1	6.64
6,079.0	4.57	51.34	6,077.4	-8.5	15.5	13.7	9.68
6,110.0	9.06	46.00	6,108.2	-6.0	18.2	12.4	14.61
6,141.0	12.67	43.62	6,138.6	-1.9	22.3	10.1	11.73
6,172.0	14.97	45.47	6,168.7	3.4	27.5	7.2	7.55
6,203.0	16.90	45.72	6,198.5	9.4	33.6	4.0	6.23
6,233.0	16.53	56.11	6,227.3	14.8	40.3	1.5	10.02
6,264.0	15.77	69.87	6,257.1	18.7	47.9	0.7	12.56
6,295.0	17.85	72.63	6,286.7	21.6	56.4	1.3	7.18
6,326.0	20.02	77.82	6,316.1	24.1	66.1	2.6	8.85
6,357.0	22.11	75.78	6,345.0	26.7	77.0	4.3	7.14
6,384.0	24.71	76.29	6,369.8	29.3	87.4	5.9	9.67
Sycamore							
6,388.0	25.10	76.36	6,373.4	29.6	89.0	6.1	9.67
6,419.0	24.45	85.90	6,401.5	31.7	101.8	9.1	13.05
6,449.0	22.40	95.09	6,429.1	31.6	113.7	13.6	13.95
6,480.0	20.40	107.51	6,458.0	29.4	124.7	19.8	15.94
6,511.0	21.19	112.36	6,486.9	25.7	135.1	27.2	6.11
6,542.0	23.62	112.47	6,515.6	21.2	146.0	35.4	7.84
6,573.0	26.14	116.66	6,543.7	15.7	157.8	45.0	9.92
6,580.0	26.84	117.62	6,550.0	14.3	160.6	47.3	11.71
Middlesex							
6,604.0	29.28	120.59	6,571.2	8.8	170.5	56.1	11.71
6,635.0	31.72	125.14	6,597.9	0.3	183.7	69.0	10.83
6,666.0	34.91	128.44	6,623.8	-9.9	197.3	83.6	11.83
6,696.0	38.95	130.64	6,647.8	-21.4	211.2	99.5	14.17
6,727.0	42.99	132.68	6,671.2	-34.9	226.3	117.7	13.73
6,750.0	45.77	135.03	6,687.6	-46.1	237.9	132.4	14.04
Burkett							
6,758.0	46.75	135.79	6,693.1	-50.2	242.0	137.8	14.04
6,789.0	50.39	139.07	6,713.6	-67.3	257.7	159.5	14.17
6,791.0	50.65	139.24	6,714.9	-68.5	258.7	161.0	14.40
Tully							
6,820.0	54.38	141.60	6,732.6	-86.2	273.3	183.0	14.40
6,851.0	58.82	142.73	6,749.6	-106.7	289.2	207.9	14.64
6,882.0	63.42	144.47	6,764.6	-128.5	305.3	234.2	15.63
6,898.0	65.81	145.65	6,771.4	-140.4	313.6	248.3	16.32
Marcellus							

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Antero Resources

EOW Completion Report

Scientific Drilling

Company:	Antero Resources	**Local Co-ordinate Reference:**	Well Hardin Unit 1H
Project:	Doddridge County WV	**TVD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Site:	Anne / Hardin Pad	**MD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Well:	Hardin Unit 1H	**North Reference:**	Grid
Wellbore:	Sidetrack 1	**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)
6,912.0	67.90	146.64	6,777.0	-151.1	320.8	260.9	16.32
6,943.0	72.11	150.14	6,787.6	-175.9	336.0	289.6	17.23
6,974.0	75.53	153.05	6,796.2	-202.0	350.2	319.2	14.25
7,005.0	78.36	153.98	6,803.2	-229.1	363.6	349.3	9.59
7,036.0	81.34	154.72	6,808.7	-256.6	376.8	379.8	9.90
7,067.0	86.35	155.69	6,812.0	-284.6	389.7	410.5	16.46
7,098.0	89.52	156.56	6,813.1	-312.9	402.3	441.5	10.60
7,108.0	89.53	156.20	6,813.2	-322.0	406.3	451.5	3.60
7,200.0	90.13	157.62	6,813.5	-406.7	442.4	543.5	1.68
7,293.0	88.64	154.28	6,814.5	-491.6	480.3	636.4	3.93
7,385.0	89.25	154.98	6,816.1	-574.7	519.7	728.2	1.01
7,478.0	89.87	154.37	6,816.9	-658.7	559.5	821.1	0.94
7,570.0	89.60	154.98	6,817.3	-741.9	598.8	913.0	0.73
7,663.0	88.72	154.45	6,818.6	-826.0	638.5	1,005.8	1.10
7,756.0	88.81	156.74	6,820.7	-910.6	676.9	1,098.7	2.46
7,848.0	90.57	160.26	6,821.2	-996.2	710.6	1,190.7	4.28
7,941.0	89.08	159.99	6,821.4	-1,083.7	742.3	1,283.6	1.63
8,034.0	89.96	160.87	6,822.2	-1,171.3	773.4	1,376.5	1.34
8,126.0	88.64	160.87	6,823.3	-1,258.2	803.6	1,468.4	1.43
8,219.0	90.13	162.54	6,824.3	-1,346.5	832.8	1,561.1	2.41
8,312.0	88.29	160.43	6,825.6	-1,434.7	862.3	1,653.9	3.01
8,404.0	89.23	160.91	6,827.6	-1,521.5	892.7	1,745.8	1.15
8,497.0	88.64	159.38	6,829.3	-1,608.9	924.3	1,838.7	1.76
8,590.0	87.58	156.92	6,832.4	-1,695.2	958.9	1,931.7	2.88
8,682.0	87.05	155.60	6,836.7	-1,779.3	995.9	2,023.5	1.54
8,775.0	89.25	157.09	6,839.7	-1,864.4	1,033.2	2,116.4	2.86
8,867.0	91.19	157.88	6,839.4	-1,949.4	1,068.4	2,208.4	2.28
8,961.0	88.64	156.92	6,839.5	-2,036.2	1,104.5	2,302.4	2.90
9,056.0	89.43	157.53	6,841.1	-2,123.8	1,141.3	2,397.4	1.05
9,150.0	89.96	158.41	6,841.6	-2,210.9	1,176.6	2,491.4	1.09
9,245.0	88.90	155.51	6,842.5	-2,298.3	1,213.7	2,586.4	3.25
9,338.0	89.60	154.98	6,843.8	-2,382.8	1,252.7	2,679.3	0.94
9,433.0	89.69	155.60	6,844.4	-2,469.1	1,292.4	2,774.2	0.66
9,527.0	90.48	154.37	6,844.2	-2,554.2	1,332.1	2,868.0	1.56
9,622.0	91.36	158.67	6,842.7	-2,641.3	1,370.0	2,963.0	4.62
9,716.0	91.10	158.23	6,840.7	-2,728.8	1,404.5	3,056.9	0.54
9,810.0	90.48	161.22	6,839.4	-2,816.9	1,437.0	3,150.9	3.25
9,902.0	90.22	162.63	6,838.8	-2,904.4	1,465.6	3,242.6	1.56
9,995.0	89.25	160.78	6,839.2	-2,992.7	1,494.8	3,335.4	2.25
10,088.0	88.90	160.17	6,840.7	-3,080.3	1,525.9	3,428.3	0.76
10,180.0	88.64	160.34	6,842.7	-3,166.9	1,556.9	3,520.2	0.34
10,273.0	90.57	159.99	6,843.4	-3,254.3	1,588.5	3,613.1	2.11
10,366.0	89.25	158.15	6,843.5	-3,341.2	1,621.7	3,706.1	2.43
10,458.0	89.87	158.41	6,844.2	-3,426.7	1,655.8	3,798.1	0.73

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Antero Resources

EOW Completion Report

Scientific Drilling

Company:	Antero Resources	**Local Co-ordinate Reference:**	Well Hardin Unit 1H
Project:	Doddridge County WV	**TVD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Site:	Anne / Hardin Pad	**MD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Well:	Hardin Unit 1H	**North Reference:**	Grid
Wellbore:	Sidetrack 1	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
10,551.0	90.04	157.36	6,844.3	-3,512.8	1,690.8	3,891.1	1.14
10,643.0	90.13	154.37	6,844.1	-3,596.8	1,728.4	3,983.0	3.25
10,736.0	89.96	155.33	6,844.1	-3,681.0	1,767.9	4,075.9	1.05
10,828.0	89.69	155.07	6,844.4	-3,764.5	1,806.5	4,167.8	0.41
10,921.0	89.43	158.32	6,845.1	-3,849.9	1,843.3	4,260.8	3.51
11,014.0	90.31	159.29	6,845.3	-3,936.6	1,876.9	4,353.8	1.41
11,106.0	90.92	160.08	6,844.3	-4,022.8	1,908.8	4,445.7	1.08
11,199.0	89.87	160.87	6,843.7	-4,110.5	1,939.9	4,538.6	1.41
11,292.0	90.75	160.87	6,843.2	-4,198.4	1,970.4	4,631.5	0.95
11,384.0	89.43	160.70	6,843.0	-4,285.2	2,000.7	4,723.3	1.45
11,477.0	89.78	159.99	6,843.6	-4,372.8	2,032.0	4,816.2	0.85
11,570.0	90.22	161.22	6,843.6	-4,460.5	2,062.8	4,909.1	1.40
11,662.0	89.78	159.73	6,843.6	-4,547.2	2,093.6	5,001.0	1.69
11,755.0	88.72	158.24	6,844.9	-4,634.0	2,126.9	5,094.0	1.97
11,847.0	89.34	158.15	6,846.4	-4,719.4	2,161.1	5,186.0	0.68
11,940.0	88.37	156.30	6,848.3	-4,805.2	2,197.1	5,279.0	2.25
12,033.0	88.72	155.69	6,850.6	-4,890.1	2,234.9	5,371.9	0.76
12,125.0	89.50	154.71	6,852.1	-4,973.6	2,273.5	5,463.8	1.36
12,218.0	91.01	156.04	6,851.7	-5,058.1	2,312.2	5,556.7	2.16
12,311.0	90.40	154.10	6,850.5	-5,142.5	2,351.4	5,649.6	2.19
12,403.0	89.87	153.22	6,850.3	-5,224.9	2,392.3	5,741.3	1.12
12,496.0	92.33	156.74	6,848.5	-5,309.1	2,431.6	5,834.2	4.62
12,588.0	90.84	156.04	6,846.0	-5,393.4	2,468.4	5,926.1	1.79
12,681.0	90.40	157.97	6,845.0	-5,479.0	2,504.7	6,019.1	2.13
12,774.0	90.92	157.18	6,843.9	-5,565.0	2,540.2	6,112.1	1.02
12,866.0	90.75	158.85	6,842.5	-5,650.3	2,574.6	6,204.0	1.82
12,959.0	91.68	159.14	6,840.6	-5,737.1	2,608.0	6,297.0	1.05
13,052.0	90.66	158.67	6,838.7	-5,823.8	2,641.4	6,390.0	1.21
13,144.0	89.78	158.50	6,838.3	-5,909.5	2,675.0	6,482.0	0.97
13,237.0	91.19	160.17	6,837.5	-5,996.5	2,707.8	6,574.9	2.35
13,329.0	89.78	158.59	6,836.8	-6,082.6	2,740.2	6,666.9	2.30
13,422.0	89.43	158.67	6,837.4	-6,169.2	2,774.1	6,759.9	0.39
13,514.0	91.80	159.46	6,836.4	-6,255.1	2,807.0	6,851.8	2.72
13,607.0	92.33	159.03	6,833.1	-6,342.0	2,839.9	6,944.7	0.73
13,700.0	90.22	157.18	6,831.0	-6,428.3	2,874.6	7,037.7	3.02
13,792.0	92.15	158.76	6,829.1	-6,513.5	2,909.1	7,129.7	2.71
13,885.0	91.80	158.32	6,825.9	-6,600.0	2,943.1	7,222.6	0.60
13,977.0	89.69	158.50	6,824.7	-6,685.6	2,977.0	7,314.6	2.30
14,070.0	89.69	158.32	6,825.2	-6,772.0	3,011.2	7,407.6	0.19
14,163.0	89.96	159.03	6,825.5	-6,858.7	3,045.0	7,500.6	0.82
14,255.0	88.02	156.56	6,827.1	-6,943.8	3,079.8	7,592.6	3.41
14,348.0	90.31	155.77	6,828.5	-7,028.9	3,117.3	7,685.5	2.60
14,440.0	92.59	157.44	6,826.1	-7,113.3	3,153.8	7,777.4	3.07
14,533.0	92.68	156.65	6,821.8	-7,198.8	3,190.1	7,870.3	0.85

10/23/2015

17-06375

Antero Resources

EOW Completion Report

Scientific Drilling

Company:	Antero Resources	**Local Co-ordinate Reference:**	Well Hardin Unit 1H
Project:	Doddridge County WV	**TVD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Site:	Anne / Hardin Pad	**MD Reference:**	Pr522: Hardin 1H 1001 GL + 18 KB @ 1019.0usft
Well:	Hardin Unit 1H	**North Reference:**	Grid
Wellbore:	Sidetrack 1	**Survey Calculation Method:**	Minimum Curvature
Design:	As Drilled	**Database:**	Oklahoma District

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)
14,626.0	91.89	157.62	6,818.1	-7,284.4	3,226.2	7,963.3	1.34
14,718.0	90.92	157.00	6,815.9	-7,369.3	3,261.7	8,055.2	1.25
14,759.0	90.74	156.02	6,815.3	-7,406.9	3,278.0	8,096.2	2.43
14,819.0	90.74	156.02	6,814.5	-7,461.7	3,302.4	8,156.2	0.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
6,384.0	6,369.8	29.3	87.4	Sycamore
6,580.0	6,550.0	14.3	160.6	Middlesex
6,750.0	6,687.6	-46.1	237.9	Burkett
6,791.0	6,714.9	-68.5	258.7	Tully
6,898.0	6,771.4	-140.4	313.6	Marcellus

Checked By: _____ Approved By: _____ Date: _____

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	11/21/2014
Job End Date:	12/3/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06375-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Hardin Unit 1H
Longitude:	-80.74883600
Latitude:	39.36067200
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,852
Total Base Water Volume (gal):	10,612,728
Total Base Non Water Volume:	0

FracFocus Chemical Disclosure Registry

GROUNDWATER PROTECTION COUNCIL

Interstate Oil & Gas Compact Commission

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	ANTERO RESOURCES	Water					
			Water	7732-18-5	100.00000	89.90298	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	5.45108	
			Aluminum Oxide	1344-28-1	1.10000	0.06002	
			Titanium Oxide	13463-67-7	0.10000	0.00546	
			Iron Oxide	1309-37-1	0.10000	0.00546	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	3.42215	
			Aluminum Oxide	1344-28-1	1.10000	0.03768	
			Iron Oxide	1309-37-1	0.10000	0.00343	
			Titanium Oxide	13463-67-7	0.10000	0.00343	
Sand	Nabors Completion and Production Services	Sand - Bulk - West Virginia					
			Crystalline Silica, quartz	14808-60-7	99.90000	0.80407	
			Aluminum Oxide	1344-28-1	1.10000	0.00885	

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			Titanium Oxide	13463-67-7	0.10000	0.00081	
			Iron Oxide	1309-37-1	0.10000	0.00081	
HCl Acid (12.5-18.0%), 22 Baume	Nabors Completion and Production Services	Bulk Acid					
			Water	7732-18-5	87.50000	0.17901	
			Hydrochloric Acid	7647-01-0	18.00000	0.03682	
WFR-6W	Nabors Completion and Production Services	Friction Reducer					
			Anionic Water-Soluble Polymer Emulsion	Proprietary	100.00000	0.06871	
LSG-100L	Nabors Completion and Production Services	Gelling Agents					
			Petroleum Distillates	64742-47-8	70.00000	0.06475	
Super TSC-LT	Nabors Completion and Production Services	Paraffin & Scale Additives					
			100% Non-Hazardous Mixture	Proprietary	100.00000	0.01536	
AQUCAR DB 20	Nabors Completion and Production Services	Biocides					
			Polyethylene glycol	25322-68-3	54.50000	0.00884	
			2,2-Dibromo-3-nitrilo-propionamide (DBNPA)	10222-01-2	20.00000	0.00324	
			Sodium bromide	7647-15-6	4.00000	0.00065	
			Dibromoacetonitrile	3252-43-5	3.00000	0.00049	
Super GREEN SOLV-M	Nabors Completion and Production Services	Paraffin & Scale Additives					
			Aliphatic Hydrocarbons	Proprietary	95.00000	0.00600	
			Dodecane	Proprietary	14.00000	0.00088	
			tetradecane	Proprietary	11.00000	0.00069	
			Tridecane	Proprietary	9.00000	0.00057	
			Undecane	Proprietary	8.00000	0.00051	
Calcium Chloride (CaCl2)	Nabors Completion and Production Services	Cement Accelerators					
			Calcium Chloride	10043-52-4	100.00000	0.00427	
OB-2 LT	Nabors Completion and Production Services	Gel Breakers					
			Ammonium Persulfate	7727-54-0	85.00000	0.00111	
			Crystalline Silica (in the form of quartz)	14808-60-7	10.00000	0.00013	
Acid Inhibitor 2 (AI-2)	Nabors Completion and Production Services	Acid Corrosion Inhibitors					
			Propargyl Alcohol	107-19-7	40.00000	0.00015	
			Isopropyl Alcohol	67-63-0	40.00000	0.00015	
			Glycol Ethers	111-46-6	40.00000	0.00015	

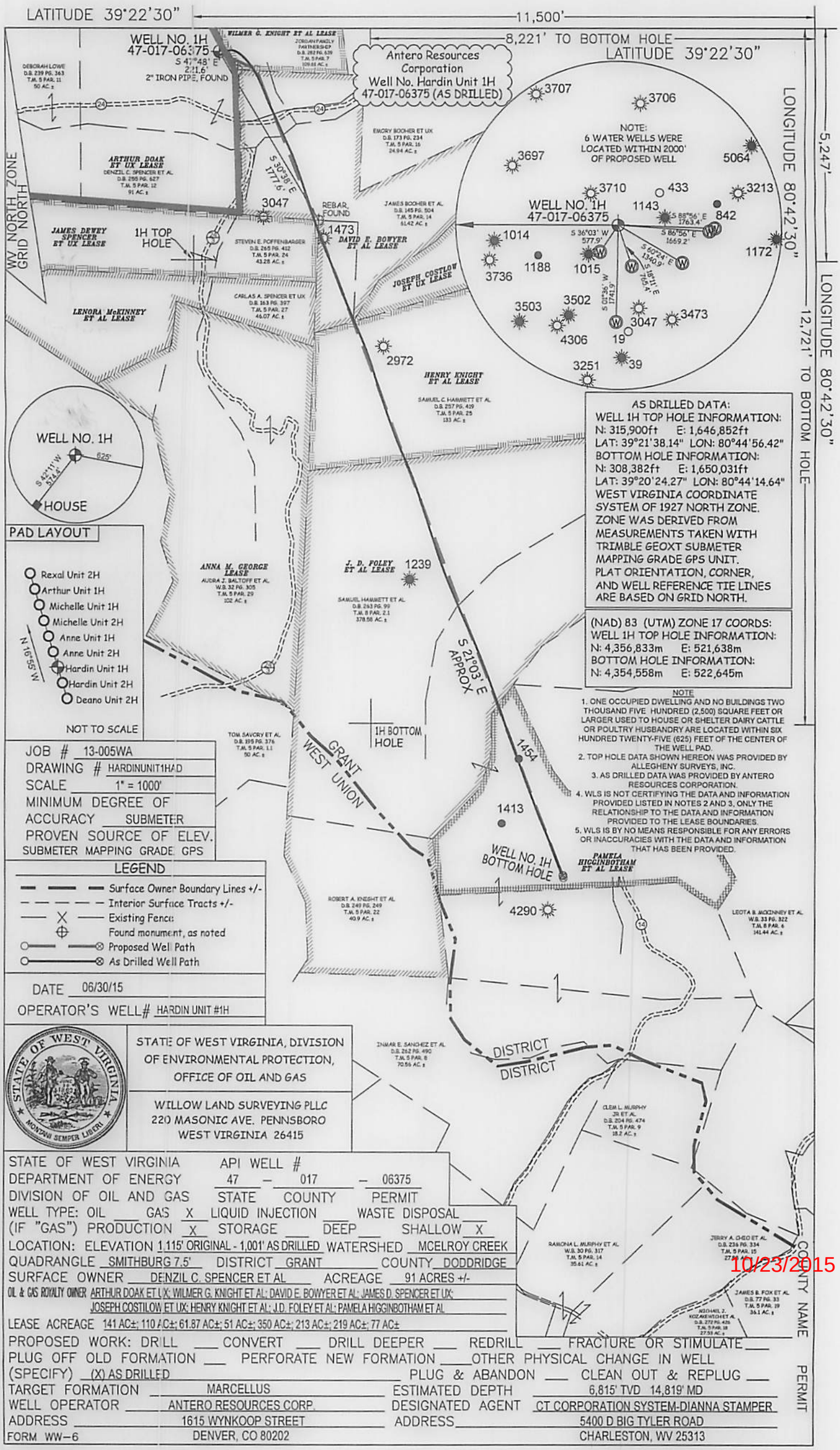
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	10.00000	0.00004	
EB-4L	Nabors Completion and Production Services	Gel Breakers					
			Ethylene Glycol	107-21-1	40.00000	0.00016	
Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.							
Other Ingredients	Nabors Completion and Production Services	Other Ingredients					
			Copolymer	Proprietary	100.00000	0.06871	
			guar gum	9000-30-0	50.00000	0.04625	
			Water	7732-18-5	40.00000	0.02749	
			Isoparaffinic Solvent	64742-47-8	26.00000	0.01787	
			Water	7732-18-5	60.00000	0.00921	
			Proprietary	Proprietary	50.00000	0.00768	
			Water	7732-18-5	32.00000	0.00519	
			Ethoxylated alcohols	Proprietary	4.00000	0.00275	
			Ethylene Glycol	107-21-1	4.00000	0.00275	
			Proprietary	Proprietary	15.00000	0.00230	
			Proprietary	Proprietary	15.00000	0.00230	
			Proprietary	Proprietary	15.00000	0.00230	
			Surfactant Blend	Proprietary	3.00000	0.00206	
			Surfactant	68439-51-0	2.00000	0.00185	
			Crystalline Silica (in the form of quartz)	14808-60-7	2.00000	0.00185	
			Sugar	57-50-1	100.00000	0.00040	
			Proprietary	Proprietary	100.00000	0.00040	
			Potassium Chloride	7447-40-7	5.00000	0.00021	
			Sodium Chloride	7647-14-5	5.00000	0.00021	
			Water	7732-18-5	100.00000	0.00020	
			Alkali Chloride salt	Proprietary	15.00000	0.00020	
			Water	7732-18-5	48.00000	0.00019	
			Monobromo-3-nitrilopropionamide	1113-55-9	1.00000	0.00016	
			2,2-Dibromomalonamide	73003-80-2	1.00000	0.00016	
			2-Propenamide as residual	79-06-1	0.10000	0.00007	
			2-Butoxyethanol	111-76-2	13.00000	0.00005	
			Water	7732-18-5	1.00000	0.00004	
			Proprietary	Proprietary	10.00000	0.00004	
			Proprietary	Proprietary	1.00000	0.00000	
			Proprietary	Proprietary	0.99000	0.00000	
			Proprietary	Proprietary	1.00000	0.00000	
			Proprietary	Proprietary	1.00000	0.00000	
			Proprietary	Proprietary	1.00000	0.00000	
			Proprietary	Proprietary	0.02000		
			Organophylic Clay	68953-58-2			

17-062375

17.06375

* Total Water Volume sources may include fresh water, produced water, and/or recycled water
** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS).


LATITUDE 39°22'30"
11,500'
8,221' TO BOTTOM HOLE
LATITUDE 39°22'30"
LONGITUDE 80°42'30"
5,247'
12,721' TO BOTTOM HOLE
LONGITUDE 80°42'30"
WV NORTH ZONE GRID NORTH
WELL NO. 1H
47-017-06375
S 47°48' E
2211.6'
2" IRON PIPE, FOUND
Antero Resources Corporation
Well No. Hardin Unit 1H
47-017-06375 (AS DRILLED)
NOTE:
6 WATER WELLS WERE LOCATED WITHIN 2000' OF PROPOSED WELL
WELL NO. 1H
47-017-06375
1H TOP HOLE
1H BOTTOM HOLE
WELL NO. 1H BOTTOM HOLE
REBAR FOUND
S 30°38' E
1771.6'
S 21°03' E APPROX
S 36°03' W
577.9'
S 88°56' E
1763.4'
S 88°56' E
1669.2'
S 60°24' E
1340.9'
S 15°11' E
765.4'
S 01°36' W
1743'
ARTHUR DOAK ET UX LEASE
DENZIL C. SPENCER ET AL.
D.B. 255 PG. 627
T.M. 5 PAR. 12
91 AC. ±
JAMES DEWEY SPENCER ET UX LEASE
STEVEN E. POFFENBARGER
D.B. 265 PG. 412
T.M. 5 PAR. 24
43.28 AC. ±
CARLAS A. SPENCER ET UX
D.B. 163 PG. 397
T.M. 5 PAR. 27
46.07 AC. ±
LENORA McKINNEY ET AL LEASE
WILMER G. KNIGHT ET AL LEASE
JORDAN FAMILY PARTNERSHIP
D.B. 282 PG. 639
T.M. 5 PAR. 7
109.66 AC. ±
DEBORAH LOWE
D.B. 239 PG. 363
T.M. 5 PAR. 11
50 AC. ±
EMORY BOOHER ET UX
D.B. 173 PG. 234
T.M. 5 PAR. 16
24.94 AC. ±
JAMES BOOHER ET AL.
D.B. 145 PG. 504
T.M. 5 PAR. 14
51.42 AC. ±
DAVID E. BOWYER ET AL LEASE
JOSEPH COSTLOW ET UX LEASE
HENRY KNIGHT ET AL LEASE
SAMUEL C. HAMMETT ET AL.
D.B. 257 PG. 419
T.M. 5 PAR. 25
133 AC. ±
ANNA M. GEORGE LEASE
AUDRA J. BALTOFF ET AL.
W.B. 32 PG. 305
T.M. 5 PAR. 29
102 AC. ±
J. D. FOLEY ET AL LEASE
SAMUEL HAMMETT ET AL.
D.B. 263 PG. 99
T.M. 8 PAR. 2.1
378.58 AC. ±
TOM SAVORY ET AL.
D.B. 195 PG. 376
T.M. 5 PAR. 11
50 AC. ±
ROBERT A. KNIGHT ET AL
D.B. 249 PG. 249
T.M. 5 PAR. 22
40.9 AC. ±
PAMELA HIGGINBOTHAM ET AL LEASE
LEOTA B. McKINNEY ET AL.
W.B. 33 PG. 322
T.M. 8 PAR. 6
141.44 AC. ±
INMAR E. SANCHEZ ET AL.
D.B. 262 PG. 490
T.M. 5 PAR. 8
70.56 AC. ±
CLEM L. MURPHY JR ET AL.
D.B. 204 PG. 474
T.M. 5 PAR. 9
18.2 AC. ±
RAMONA L. MURPHY ET AL.
W.B. 30 PG. 317
T.M. 5 PAR. 14
35.61 AC. ±
JERRY A. CHEO ET AL.
D.B. 236 PG. 334
T.M. 5 PAR. 15
27.75 AC. ±
JAMES B. FOX ET AL.
D.B. 77 PG. 33
T.M. 5 PAR. 19
36.1 AC. ±
MICHAEL J. KOZAKIEWICH ET AL.
D.B. 272 PG. 426
T.M. 5 PAR. 18
27.53 AC. ±
GRANT
WEST UNION
DISTRICT
DISTRICT
COUNTY NAME
PERMIT
3707
3706
3697
5064
3710
433
3213
1143
842
1014
1172
3736
1188
1015
3503
3502
3473
3047
4306
19
3251
39
2972
1473
3047
1239
1454
1413
4290
WELL NO. 1H
625'
S 42°11' W
574.8'
HOUSE
PAD LAYOUT
Rexal Unit 2H
Arthur Unit 1H
Michelle Unit 1H
Michelle Unit 2H
Anne Unit 1H
Anne Unit 2H
Hardin Unit 1H
Hardin Unit 2H
Deano Unit 2H
N 16°55' W
NOT TO SCALE
AS DRILLED DATA:
WELL 1H TOP HOLE INFORMATION:
N: 315,900ft E: 1,646,852ft
LAT: 39°21'38.14" LON: 80°44'56.42"
BOTTOM HOLE INFORMATION:
N: 308,382ft E: 1,650,031ft
LAT: 39°20'24.27" LON: 80°44'14.64"
WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.
(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 1H TOP HOLE INFORMATION:
N: 4,356,833m E: 521,638m
BOTTOM HOLE INFORMATION:
N: 4,354,558m E: 522,645m
NOTE
1. ONE OCCUPIED DWELLING AND NO BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALLEGHENY SURVEYS, INC.
3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.
JOB # 13-005WA
DRAWING # HARDINUNIT1HAD
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS
LEGEND
Surface Owner Boundary Lines +/-
Interior Surface Tracts +/-
Existing Fence
Found monument, as noted
Proposed Well Path
As Drilled Well Path
DATE 06/30/15
OPERATOR'S WELL# HARDIN UNIT #1H
STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO
WEST VIRGINIA 26415
STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS
API WELL # 47 – 017 – 06375
STATE COUNTY PERMIT
WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 1,115' ORIGINAL - 1,001' AS DRILLED WATERSHED MCELROY CREEK
QUADRANGLE SMITHBURG 7.5' DISTRICT GRANT COUNTY DODDRIDGE
SURFACE OWNER DENZIL C. SPENCER ET AL ACREAGE 91 ACRES +/-
OIL & GAS ROYALTY OWNER ARTHUR DOAK ET UX; WILMER G. KNIGHT ET AL; DAVID E. BOWYER ET AL; JAMES D. SPENCER ET UX; JOSEPH COSTILOW ET UX; HENRY KNIGHT ET AL; J.D. FOLEY ET AL; PAMELA HIGGINBOTHAM ET AL
LEASE ACREAGE 141 AC±; 110 AC±; 61.87 AC±; 51 AC±; 350 AC±; 213 AC±; 219 AC±; 77 AC±
PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___
PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) (X) AS DRILLED PLUG & ABANDON ___ CLEAN OUT & REPLUG ___
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,815' TVD 14,819' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313
10/23/2015