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WR-35
Rev. 8/23/13

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

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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 47-017-06243 County Doddridge District New Milton
Quad New Milton 7.5' Pad Name Stewart Pad Field/Pool Name _____
Farm name Stewart, Randall Well Number Dorothy 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 4,337,768m Easting 529,250m
Landing Point of Curve Northing 4,337,850.68m Easting 528,667.51m
Bottom Hole Northing 4,339,945m Easting 528,030m

Elevation (ft) 1,334' 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 06/05/2013 Date drilling commenced 09/13/2013 Date drilling ceased 01/31/2014
Date completion activities began 04/07/2014 Date completion activities ceased 07/26/2014
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 372' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 962', 1217' Void(s) encountered (Y/N) depths None
Coal depth(s) ft None Identified Cavern(s) encountered (Y/N) depths None
Is coal being mined in area (Y/N) No

Reviewed by: _____

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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#; J-55	N/A	Yes
Surface	17 1/2"	13 3/8"	442'	New	48#; H-40	N/A	Yes
Coal							
Intermediate 1	12 1/4"	9 5/8"	2,579'	New	36#; J-55	N/A	Yes
Intermediate 2							
Intermediate 3							
Production	8 3/4" & 8 1/2"	5 1/2"	15,236'	New	20#; P-110	N/A	Yes
Tubing		2 3/8"	7,751'		4.7#; N-80	N/A	
Packer type and depth set		N/A					

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ²)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	112 sx	16	1.18	38	0'	8 Hrs.
Surface	Class A	526 sx	15.6	1.18	307	0'	8 Hrs.
Coal							
Intermediate 1	Class A	1,004 sx	15.6	1.18	808	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1,231 sx (Lead); 1,169 sx (Tail)	14.5 (Lead); 15.2 (Tail)	1.3 (Lead); 1.86 (Tail)	3,014	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 15,236' MD, 7,352' TVD (BHL & Deepest Point Drilled) Loggers TD (ft) 15,193'
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 7,373'

**This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Cross Unit 1H, API #47-017-06238). Please reference the wireline logs submitted with Form WR-35 for the Cross Unit 1H. 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 _____

API 47-017-06243 Farm Name Stewart, Randall Well Number Dorothy Unit 1H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	7-Apr-14	14,980	15,151	60	Marcellus
2	13-Jun-14	14,778	14,949	60	Marcellus
3	19-Jun-14	14,576	14,746	60	Marcellus
4	20-Jun-14	14,373	14,544	60	Marcellus
5	21-Jun-14	14,171	14,341	60	Marcellus
6	21-Jun-14	13,968	14,139	60	Marcellus
7	21-Jun-14	13,766	13,937	60	Marcellus
8	21-Jun-14	13,563	13,734	60	Marcellus
9	22-Jun-14	13,361	13,532	60	Marcellus
10	22-Jun-14	13,159	13,329	60	Marcellus
11	22-Jun-14	12,956	13,127	60	Marcellus
12	22-Jun-14	12,754	12,924	60	Marcellus
13	23-Jun-14	12,551	12,722	60	Marcellus
14	23-Jun-14	12,349	12,520	60	Marcellus
15	23-Jun-14	12,147	12,317	60	Marcellus
16	23-Jun-14	11,944	12,115	60	Marcellus
17	24-Jun-14	11,742	11,912	60	Marcellus
18	24-Jun-14	11,539	11,710	60	Marcellus
19	24-Jun-14	11,337	11,508	60	Marcellus
20	24-Jun-14	11,135	11,305	60	Marcellus
21	25-Jun-14	10,932	11,103	60	Marcellus
22	25-Jun-14	10,730	10,900	60	Marcellus
23	25-Jun-14	10,527	10,698	60	Marcellus
24	25-Jun-14	10,325	10,496	60	Marcellus
25	26-Jun-14	10,122	10,293	60	Marcellus
26	26-Jun-14	9,920	10,091	60	Marcellus
27	26-Jun-14	9,718	9,888	60	Marcellus
28	27-Jun-14	9,515	9,686	60	Marcellus
29	28-Jun-14	9,313	9,484	60	Marcellus
30	28-Jun-14	9,110	9,281	60	Marcellus
31	28-Jun-14	8,908	9,079	60	Marcellus
32	28-Jun-14	8,706	8,876	60	Marcellus
33	28-Jun-14	8,503	8,674	60	Marcellus
34	29-Jun-14	8,301	8,471	60	Marcellus
35	29-Jun-14	8,098	8,269	60	Marcellus
36	29-Jun-14	7,896	8,067	60	Marcellus

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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	13-Jun-14	68.0	7,119	N/A	5,001	237,143	6,233	N/A
2	14-Jun-14	60.0	7,749	7,411	9,570	12,330	2,669	N/A
3	20-Jun-14	66.7	7,207	6,220	4,093	204,208	6,340	N/A
4	20-Jun-14	69.7	7,459	5,772	5,346	167,736	6,476	N/A
5	21-Jun-14	66.2	7,503	5,778	4,906	236,457	6,184	N/A
6	21-Jun-14	61.0	7,013	6,173	5,251	57,917	6,727	N/A
7	21-Jun-14	63.4	7,025	6,035	5,113	98,205	6,616	N/A
8	21-Jun-14	71.2	7,400	5,879	5,398	204,161	6,616	N/A
9	22-Jun-14	66.3	7,428	6,004	5,532	166,764	6,486	N/A
10	22-Jun-14	57.1	7,719	5,900	5,130	13,493	6,108	N/A
11	22-Jun-14	55.6	7,295	6,004	4,468	44,444	6,109	N/A
12	23-Jun-14	69.6	7,319	6,201	5,415	209,384	6,603	N/A
13	23-Jun-14	67.2	7,257	5,743	4,744	230,344	6,603	N/A
14	23-Jun-14	57.4	7,527	5,907	5,211	72,339	6,401	N/A
15	23-Jun-14	72.2	7,099	6,154	4,958	236,495	6,058	N/A
16	23-Jun-14	70.4	7,119	6,323	4,436	204,966	6,528	N/A
17	24-Jun-14	78.2	7,249	5,887	5,433	239,481	6,113	N/A
18	24-Jun-14	71.6	7,056	6,087	5,096	193,044	6,522	N/A
19	24-Jun-14	69.6	7,132	6,154	4,862	128,308	6,499	N/A
20	24-Jun-14	76.1	7,257	6,101	5,385	223,652	6,011	N/A
21	25-Jun-14	77.6	7,440	5,719	5,282	184,845	5,950	N/A
22	25-Jun-14	74.5	7,089	5,898	5,034	253,622	6,312	N/A
23	25-Jun-14	70.4	6,842	6,175	5,284	198,869	6,448	N/A
24	25-Jun-14	75.0	7,106	6,024	4,886	220,616	6,055	N/A
25	26-Jun-14	73.8	7,054	5,785	5,707	225,092	6,128	N/A
26	26-Jun-14	69.0	6,867	6,258	4,964	165,384	6,430	N/A
27	26-Jun-14	71.2	6,830	5,867	5,101	136,228	5,823	N/A
28	27-Jun-14	67.7	7,147	6,471	5,213	100,217	5,984	N/A
29	28-Jun-14	73.8	7,102	7,024	4,897	202,715	5,715	N/A
30	28-Jun-14	72.2	6,830	6,279	5,147	213,404	5,864	N/A
31	28-Jun-14	77.1	6,767	6,123	4,921	229,787	5,852	N/A
32	28-Jun-14	72.4	7,065	5,712	4,929	122,505	5,486	N/A
33	29-Jun-14	74.6	6,999	6,294	4,690	212,220	5,800	N/A
34	29-Jun-14	74.7	6,962	6,533	5,154	237,925	6,214	N/A
35	29-Jun-14	76.3	6,797	6,507	4,912	181,125	6,281	N/A
36	30-Jun-14	72.9	6,822	6,187	4,432	237,622	5,888	N/A
	AVG=	69.7	7,157	6,131	5,164	6,303,047	220,132	TOTAL

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EXHIBIT 3

LITHOLOGY/ FORMATION	TOP DEPTH (TVD)	BOTTOM DEPTH (TVD)	TOP DEPTH (MD)	BOTTOM DEPTH (MD)
	From Surface	From Surface	From Surface	From Surface
Fresh Water	372'	NA	372'	NA
Shale/Siltstone	0	447	0	447
Sandstone	Est. 447	467	Est. 447	467
Shale/Siltstone	Est. 467	687	Est. 467	687
Sandstone	Est. 687	727	Est. 687	727
Shale	Est. 727	827	Est. 727	827
Sandstone	Est. 827	887	Est. 827	887
Shale	Est. 887	1,127	Est. 887	1,127
Sandstone	Est. 1127	1,207	Est. 1127	1,207
Shale	Est. 1207	1,787	Est. 1207	1,787
Sandstone/Siltstone	Est. 1787	1,907	Est. 1787	1,907
Sandstone/Siltstone with trace coal	Est. 1907	1,967	Est. 1907	1,967
Shale	Est. 1967	2,398	Est. 1967	2,398
Big Lime	2,398	2,487	2,398	2,487
Big Injun	2,487	2,700	2,487	2,700
Gantz Sand	2,700	2,856	2,700	2,856
Fifty Foot Sandstone	2,856	3,060	2,856	3,060
Gordon	3,060	3,411	3,060	3,411
Fifth Sandstone	3,411	3,480	3,411	3,480
Bayard	3,480	3,744	3,480	3,749
Warren	3,744	4,050	3,749	4,074
Speechley	4,050	4,238	4,074	4,277
Baltown	4,238	4,878	4,277	4,979
Bradford	4,878	5,335	4,979	5,478
Benson	5,335	5,595	5,478	5,769
Alexander	5,595	5,819	5,769	6,023
Elk	5,819	6,323	6,023	6,594
Rhinestreet	6,323	6,855	6,594	7,199
Sycamore	6,855	7,025	7,199	7,392
Middlesex	7,025	7,168	7,392	7,576
Burkett	7,168	7,199	7,576	7,625
Tully	7,199	7,299	7,625	7,853
Marcellus	7,299	NA	7,853	NA

*Please note Antero determines 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.

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	6/12/2014
Job End Date:	6/30/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06243-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Dorothy Unit 1H
Longitude:	-80.66149200
Latitude:	39.18855300
Datum:	NAD27
Federal/Tribal Well:	NO
True Vertical Depth:	7,351
Total Base Water Volume (gal):	9,245,502
Total Base Non Water Volume:	0



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
Freshwater	Republic Energy	Frac Base	Water	7732-18-5	100.00000	92.06360	None
40/70 White Sand	US Silica	Proppant	Sand	14808-60-7	100.00000	4.46226	None
20/40 White Sand	US Silica	Proppant	Sand	14808-60-7	100.00000	2.48695	None
100 Mesh	US Silica	Proppant	Sand	14808-60-7	100.00000	0.57247	None
Plexslick 953	Chemplex	Friction Reducer	Water	7732-18-5	35.00000	0.02274	None
			Polyacrylamide-co-acrylic acid	Proprietary	32.00000	0.02079	None
			Hydrotreated Petroleum Distillate	64742-47-8	30.00000	0.01949	None
			Alcohol Ethoxylate Surfactants	Proprietary	8.00000	0.00520	None
SOS 1545	Ultrablend	Guar Gel	Hydrocarbons	64741-85-1	70.00000	0.05974	None
HCl Acid 10-15%	GoFrac	Acid	Hydrochloric Acid	7647-01-0	15.00000	0.03436	None
Plexaid 673	Chemplex	Scale Inhibitor	Water	7732-18-5	85.00000	0.01170	None

				Methyl Alcohol	67-56-1	25.00000	0.00344	None
				Sodium Salt of Phosphonodimethylated Diamine	Proprietary	5.00000	0.00069	None
Plexicide 15G	Chemplex	Biocide		Water	7732-18-5	90.00000	0.01062	None
				Glutaraldehyde	111-30-8	14.00000	0.00165	None
				Didecyl Dimethyl Ammonium Chloride	7173-51-5	3.00000	0.00035	None
				Ethanol	64-17-5	3.00000	0.00035	None
				Alkyl Dimethyl Benzyl Ammonium Chloride	68424-85-1	3.00000	0.00035	None
Sodium Persulfate	Chemplex	Active Breaker		Sodium Persulfate	7775-27-1	100.00000	0.00143	None
Greenflush	Chemplex	Cleaner		Alcohol Ethoxylate Surfactants	Proprietary	10.00000	0.00070	None
Ferriflex 66	Chemplex	Iron Control		Acetic Acid	64-19-7	50.00000	0.00029	None
				Water	7732-18-5	35.00000	0.00018	None
				Citric Acid	77-92-9	30.00000	0.00015	None
Plexhib 256	Chemplex	Corrosion Inhibitor		Methyl Alcohol	67-56-1	70.00000	0.00026	None
				Alcohol Ethoxylate Surfactants	Proprietary	30.00000	0.00011	None
				Thiourea-formaldehyde copolymer	68527-49-1	30.00000	0.00011	None
				n-olefins	Proprietary	10.00000	0.00004	None
				Propargyl Alcohol	107-19-7	8.00000	0.00003	None
Plexbreak 145	Chemplex	Non-Emulsifier		Water	7732-18-5	66.00000	0.00027	None
				Methyl Alcohol	67-56-1	15.00000	0.00006	None
				Ethylene Glycol Monobutyl Ether	111-76-2	15.00000	0.00006	None
				Cocamide Diethanolamine Salt	68603-42-9	10.00000	0.00004	None
				Diethanolamine	111-42-2	5.00000	0.00002	None

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.

* 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)

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