

JUN 08 2015

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 47-017-06358 County Doddridge District New Milton  
Quad New Milton 7.5' Pad Name Richard Garry Pad Field/Pool Name \_\_\_\_\_  
Farm name Robinson, Richard G. Well Number Grimsdale Unit 2H  
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 4,337,864m Easting 524,683m  
Landing Point of Curve Northing 4,338,142.14m Easting 525,003.56m  
Bottom Hole Northing 4,339,830m Easting 524,476m

Elevation (ft) 1,158' 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 10/21/2013 Date drilling commenced 11/28/2013 Date drilling ceased 12/31/2013  
Date completion activities began 01/18/2014 Date completion activities ceased 02/25/2014  
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 187' Open mine(s) (Y/N) depths No  
Salt water depth(s) ft None Available Void(s) encountered (Y/N) depths None  
Coal depth(s) ft 237', 1817' Cavern(s) encountered (Y/N) depths None  
Is coal being mined in area (Y/N) No

Reviewed by:

\_\_\_\_\_

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API 47-017 - 06358 Farm name Robinson, Richard G. Well number Grimsdale Unit 2H

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"	380'	New	48#; H-40	N/A	Yes
Coal							
Intermediate 1	12 1/4"	9 5/8"	2,571'	New	36#; J-55	N/A	Yes
Intermediate 2							
Intermediate 3							
Production	8 3/4" & 8 1/2"	5 1/2"	13,475'	New	20#; P-110	N/A	Yes
Tubing		2 3/8"	7,331'		5.95#; 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 <sup>3</sup> /sks)	Volume (ft <sup>2</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	Class A	161 sx	15.6	1.18	38	0'	8 Hrs.
Surface	Class A	459 sx	15.6	1.18	264	0'	8 Hrs.
Coal							
Intermediate 1	Class A	887 sx	15.6	1.18	805	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1,092 sx (Lead); 1,545 sx (Tail)	14.5 (Lead); 15.2 (Tail)	1.3 (Lead); 1.86 (Tail)	2,613	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 13,475' MD, 7,042' TVD (BHL); 7,073' TVD (Deepest Point Drilled) Loggers TD (ft) 13,425'  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6,880'

\*\*This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Johnson Unit 1H, API #47-017-06156). Please reference the wireline logs submitted with Form WR-35 for the Johnson 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 \_\_\_\_\_

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API 47- 017 - 06358 Farm name Robinson, Richard G. Well number Grimsdale Unit 2H

### PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
<b>* PLEASE SEE ATTACHED EXHIBIT 1</b>					

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)
<b>* PLEASE SEE ATTACHED EXHIBIT 2</b>								

Please insert additional pages as applicable.

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<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>		
Marcellus	7,027' (top)	TVD	7,452' (top) MD
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 3,950 psi Bottom Hole \_\_\_\_\_ psi DURATION OF TEST \_\_\_\_\_ hrs

OPEN FLOW Gas 6,032 mcfpd Oil \_\_\_\_\_ bpd NGL \_\_\_\_\_ bpd Water 1,017 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	0		0		
<b>* PLEASE SEE ATTACHED EXHIBIT 3</b>					

Please insert additional pages as applicable.

Drilling Contractor Patterson - UTI Drilling Company, LLC  
Address 207 Carlton Drive City Eighty Four State PA Zip 15330

Logging Company Rush Wellsite Services  
Address 600 Alpha Drive City Canonsburg State PA Zip 15317

Cementing Company Nabors Completion & Production Services, Co.  
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company US Well Services  
Address 533 Industrial Park Drive City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Megan Darling Telephone 303-357-7230  
Signature *Megan C. Darling* Title Permitting Agent Date 06/05/2015

API 47-017-06358 Farm Name Robinson, Richard G. Well Number Grimsdale Unit 2H

**EXHIBIT 1**

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	18-Jan-14	13,225	13,391	60	Marcellus
2	31-Jan-14	13,027	13,194	60	Marcellus
3	1-Feb-14	12,830	12,996	60	Marcellus
4	1-Feb-14	12,632	12,799	60	Marcellus
5	1-Feb-14	12,434	12,601	60	Marcellus
6	1-Feb-14	12,237	12,404	60	Marcellus
7	2-Feb-14	12,039	12,206	60	Marcellus
8	2-Feb-14	11,842	12,008	60	Marcellus
9	2-Feb-14	11,644	11,811	60	Marcellus
10	3-Feb-14	11,447	11,613	60	Marcellus
11	3-Feb-14	11,249	11,416	60	Marcellus
12	3-Feb-14	11,051	11,218	60	Marcellus
13	3-Feb-14	10,854	11,020	60	Marcellus
14	4-Feb-14	10,656	10,823	60	Marcellus
15	4-Feb-14	10,459	10,625	60	Marcellus
16	4-Feb-14	10,261	10,428	60	Marcellus
17	4-Feb-14	10,063	10,230	60	Marcellus
18	5-Feb-14	9,866	10,033	60	Marcellus
19	5-Feb-14	9,668	9,835	60	Marcellus
20	5-Feb-14	9,471	9,637	60	Marcellus
21	5-Feb-14	9,273	9,440	60	Marcellus
22	5-Feb-14	9,076	9,242	60	Marcellus
23	6-Feb-14	8,878	9,045	60	Marcellus
24	6-Feb-14	8,680	8,847	60	Marcellus
25	6-Feb-14	8,483	8,649	60	Marcellus
26	6-Feb-14	8,285	8,452	60	Marcellus
27	6-Feb-14	8,088	8,254	60	Marcellus
28	7-Feb-14	7,890	8,057	60	Marcellus
29	7-Feb-14	7,693	7,859	60	Marcellus
30	7-Feb-14	7,495	7,662	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	31-Jan-14	71.0	7,699	5,863	5,343	230,400	6,303	N/A
2	31-Jan-14	70.0	7,610	6,340	4,703	220,700	6,068	N/A
3	1-Feb-14	73.3	7,780	5,668	4,954	239,640	6,122	N/A
4	1-Feb-14	73.2	7,873	5,724	4,842	238,300	6,054	N/A
5	1-Feb-14	70.0	7,536	5,726	5,228	191,000	5,654	N/A
6	1-Feb-14	71.0	7,392	5,599	5,052	144,000	5,990	N/A
7	2-Feb-14	73.2	7,677	5,439	4,708	247,240	6,017	N/A
8	2-Feb-14	71.8	7,664	5,672	4,755	233,105	6,019	N/A
9	2-Feb-14	72.0	7,760	5,625	4,751	224,300	5,891	N/A
10	3-Feb-14	66.8	7,905	6,426	5,180	150,850	6,427	N/A
11	3-Feb-14	74.4	7,533	5,655	5,139	230,550	6,001	N/A
12	3-Feb-14	75.1	7,621	5,420	5,071	230,750	5,810	N/A
13	3-Feb-14	74.0	7,330	5,476	4,335	230,200	5,955	N/A
14	4-Feb-14	71.0	6,983	5,588	5,163	98,000	5,826	N/A
15	4-Feb-14	76.2	7,161	5,383	4,872	230,900	5,814	N/A
16	4-Feb-14	80.0	7,315	5,683	4,710	230,180	5,595	N/A
17	4-Feb-14	79.0	7,279	5,748	4,755	230,180	5,769	N/A
18	5-Feb-14	78.0	7,098	5,508	4,958	221,100	6,009	N/A
19	5-Feb-14	77.4	7,157	5,578	4,877	231,950	5,842	N/A
20	5-Feb-14	77.3	7,131	5,757	4,888	229,750	5,798	N/A
21	5-Feb-14	80.0	7,165	5,652	4,745	231,420	5,741	N/A
22	5-Feb-14	79.0	7,089	5,477	5,011	231,040	5,695	N/A
23	6-Feb-14	79.0	7,218	5,786	4,676	230,300	5,720	N/A
24	6-Feb-14	78.0	7,148	5,727	5,266	232,300	5,728	N/A
25	6-Feb-14	77.6	7,187	5,404	5,371	232,800	5,691	N/A
26	6-Feb-14	80.0	7,130	5,784	4,691	229,460	5,649	N/A
27	6-Feb-14	81.0	7,276	5,735	4,831	227,480	5,641	N/A
28	7-Feb-14	80.0	6,935	5,578	4,991	235,155	5,621	N/A
29	7-Feb-14	77.2	7,024	5,895	5,160	232,730	5,623	N/A
30	7-Feb-14	76.1	6,811	6,107	4,838	203,267	5,161	N/A
	AVG=	75.4	7,350	5,701	4,929	6,569,047	175,234	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	187'	N/A	187'	N/A
Shale	0	97	0	97
Sandy shale	Est. 97	237	Est. 97	237
Coal	Est. 237	277	Est. 237	277
Silty Shale	Est. 277	377	Est. 277	377
Sandstone	Est. 377	457	Est. 377	457
Shale	Est. 457	597	Est. 457	597
Silty Sandstone	Est. 597	777	Est. 597	777
Coal / Shale	Est. 777	817	Est. 777	817
Sandstone	Est. 817	1,057	Est. 817	1,057
Sandy Shale	Est. 1057	1,457	Est. 1057	1,457
Silty Limestone	Est. 1457	1,657	Est. 1457	1,657
Sandy Siltstone	Est. 1657	1,817	Est. 1657	1,817
Coal	Est. 1817	1,837	Est. 1817	1,837
Sandstone	Est. 1837	1,917	Est. 1837	1,917
Shale	Est. 1917	1,957	Est. 1917	1,957
Sandy siltstone	Est. 1957	2,160	Est. 1957	2,160
Big Lime	2,160	2,242	2,160	2,242
Big Injun	2,242	2,574	2,242	2,574
Gantz Sand	2,574	2,671	2,574	2,671
Fifty Foot Sandstone	2,671	2,885	2,671	2,885
Gordon	2,885	3,199	2,885	3,201
Fifth Sandstone	3,199	3,255	3,201	3,256
Bayard	3,255	3,562	3,256	3,565
Warren	3,562	3,884	3,565	3,894
Speechley	3,884	4,073	3,894	4,092
Baltown	4,073	4,698	4,092	4,755
Bradford	4,698	5,160	4,755	5,242
Benson	5,160	5,406	5,242	5,498
Alexander	5,406	5,623	5,498	5,730
Elk	5,623	6,121	5,730	6,254
Rhinstreet	6,121	6,621	6,254	6,800
Sycamore	6,621	6,780	6,800	6,998
Middlesex	6,780	6,916	6,998	7,189
Burkett	6,916	6,952	7,189	7,252
Tully	6,952	7,027	7,252	7,452
Marcellus	7,027	NA	7,452	NA

\*Please note Antero determines shallow formation tops based on mud and/or wireline 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:	1/31/2014
Job End Date:	2/7/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06358-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Grimsdale Unit 2H
Longitude:	-80.71418600
Latitude:	39.18967200
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	7,074
Total Base Water Volume (gal):	7,391,874
Total Base Non Water Volume:	329,927

## 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	Base Fluid	Water	7732-18-5	100.00000	90.07706	
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	9.59834	
HCL Acid (12.6%-18.0%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.50000	0.10119	
GC-15	U.S. Well Services, LLC	Gelling Agents	Hydrogen Chloride	7641-01-1	18.00000	0.02417	
			Guar Gum	9000-30-0	50.00000	0.04899	
			Petroleum Distillates	64742-47-8	60.00000	0.04639	
			Suspending agent (solid)	14808-60-7	3.00000	0.00749	
			Surfactant	66439-51-0	3.00000	0.00294	
WFR-405	U.S. Well Services, LLC	Friction Reducer	Anionic Polyacrylamide	Proprietary		0.02391	
			Water	7732-18-5	40.00000	0.02391	
			Petroleum Distillates	64742-47-8	22.00000	0.01926	
			Ethoxylated alcohol blend	Proprietary	5.00000	0.00299	



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SI-1000	U.S. Well Services, LLC	Scale Inhibitor	Crystalline Salt	12125-02-9	5.00000	0.00299
			Anionic Copolymer	Proprietary		0.00407
			Ethylene Glycol	107-21-1	20.00000	0.00368
			Water	7732-18-5	30.00000	0.00307
K-BAC 1020	U.S. Well Services, LLC	Anti-Bacterial Agent				
			2,2-dibromo-3-nitropropionamide	10222-01-2	20.00000	0.00477
			Deionized Water	7732-18-5	28.00000	0.00273
AP One	U.S. Well Services, LLC	Gel Breakers				
			Ammonium Persulfate	7727-54-0	100.00000	0.00144
AI-300	U.S. Well Services, LLC	Acid Corrosion Inhibitor				
			Ethylene Glycol	107-21-1	31.00000	0.00026
			N,N-Dimethylformamide	68-12-2	15.00000	0.00008
			Cinnamaldehyde	104-55-2	5.00000	0.00007
			Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	13.00000	0.00007
			2-Butoxyethanol	111-76-2	7.00000	0.00006
			Poly(oxy-1,2-ethanediyl), alpha-(4-nolylphenyl)-omega-hydroxy, branched	7732-18-5	20.00000	0.00002
			1-Decanol	68412-54-4	5.00000	0.00002
			1-Octanol	78-40-0	3.00000	0.00001
			isopropyl Alcohol	67-63-0	3.00000	0.00001

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.

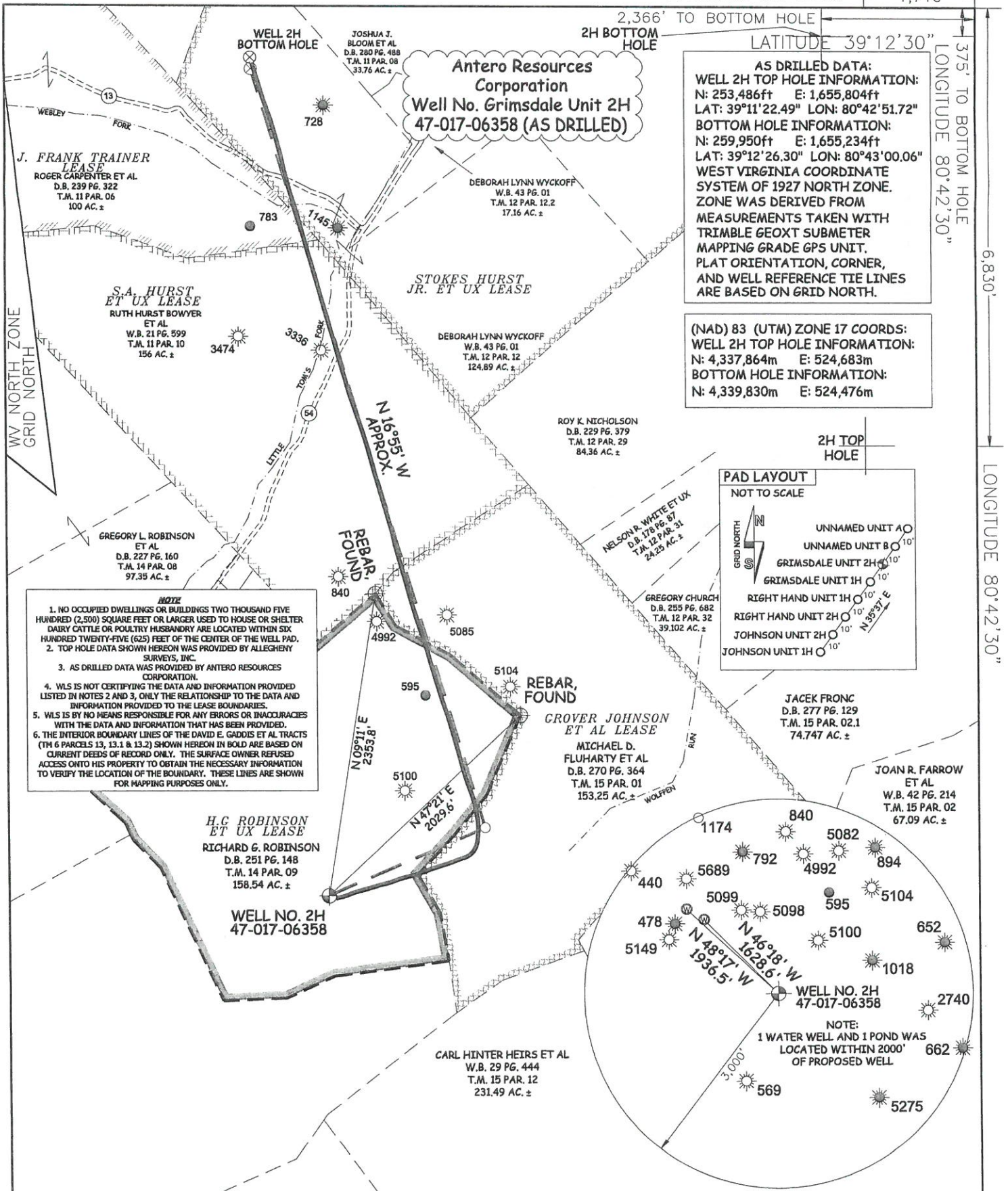
Ingredient Information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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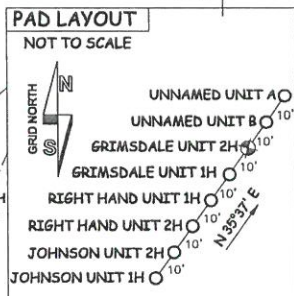
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LATITUDE 39°12'30" LONGITUDE 80°42'30"

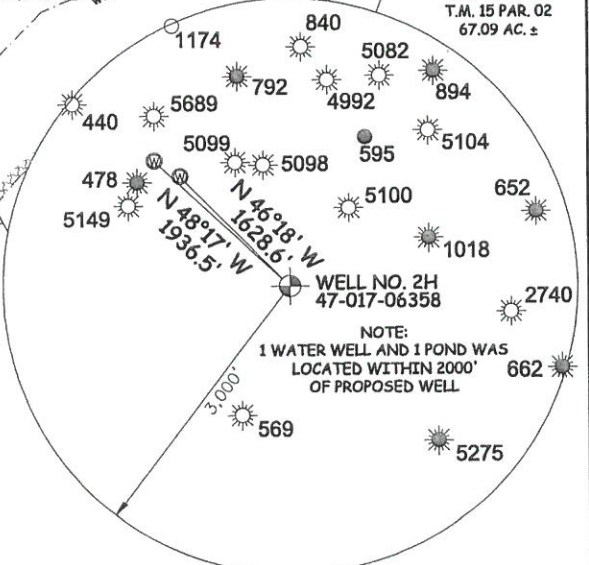


**AS DRILLED DATA:**  
**WELL 2H TOP HOLE INFORMATION:**  
 N: 253,486ft E: 1,655,804ft  
 LAT: 39°11'22.49" LON: 80°42'51.72"  
**BOTTOM HOLE INFORMATION:**  
 N: 259,950ft E: 1,655,234ft  
 LAT: 39°12'26.30" LON: 80°43'00.06"  
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM 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 2H TOP HOLE INFORMATION:**  
 N: 4,337,864m E: 524,683m  
**BOTTOM HOLE INFORMATION:**  
 N: 4,339,830m E: 524,476m



- NOTE**
1. NO OCCUPIED DWELLINGS OR 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.
  6. THE INTERIOR BOUNDARY LINES OF THE DAVID E. GADDIS ET AL TRACTS (TM 6 PARCELS 13, 13.1 & 13.2) SHOWN HEREON IN BOLD ARE BASED ON CURRENT DEEDS OF RECORD ONLY. THE SURFACE OWNER REFUSED ACCESS ONTO HIS PROPERTY TO OBTAIN THE NECESSARY INFORMATION TO VERIFY THE LOCATION OF THE BOUNDARY. THESE LINES ARE SHOWN FOR MAPPING PURPOSES ONLY.



JOB # **13-070WA**  
 DRAWING # **GRIMS DALE2HAD**  
 SCALE **1" = 1000'**  
 MINIMUM DEGREE OF ACCURACY **SUBMETER**  
 PROVEN SOURCE OF ELEV. **SUBMETER MAPPING GRADE GPS**



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS  
 WILLOW LAND SURVEYING PLLC  
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

**LEGEND**

- Surface Owner Boundary Lines +/-
- Interior Surface Tracts +/-
- Existing Fence
- Found monument, as noted
- Proposed Well Path
- As Drilled Well Path

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS

WELL TYPE: OIL \_\_\_ GAS  LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS") PRODUCTION  STORAGE \_\_\_ DEEP \_\_\_ SHALLOW

LOCATION: ELEVATION **1,171' ORIGINAL - 1,158' AS DRILLED** WATERSHED **HEADWATERS MIDDLE ISLAND CREEK**  
 QUADRANGLE **NEW MILTON 7.5'** DISTRICT **NEW MILTON** COUNTY **DODDRIDGE**

SURFACE OWNER **RICHARD G. ROBINSON** ACREAGE **158.54 ACRES +/-**  
 OIL & GAS ROYALTY OWNER **H.G. ROBINSON ET UX; GROVER JOHNSON ET AL;** LEASE ACREAGE **169.8 ACRES±; 153.25 ACRES±;**  
**S.A. HURST ET UX; J. FRANK TRAINER; STOKES HURST JR. ET UX** **156 ACRES±; 102 ACRES±; 211 ACRES±**

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 **7,042' TVD 13,475' MD**

WELL OPERATOR **ANTERO RESOURCES CORP.** DESIGNATED AGENT **DIANNA STAMPER**  
 ADDRESS **1615 WYNKOOP STREET** ADDRESS **5400 D BIG TYLER ROAD**  
**DENVER, CO 80202** **CHARLESTON, WV 25313**

DATE **04/01/15**  
 OPERATOR'S WELL# **GRIMS DALE UNIT #2H**  
 API WELL # **47 - 017 - 06358**  
 STATE COUNTY PERMIT

COUNTY NAME PERMIT