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WR-35
Rev. 8/23/13

Page ___ of ___

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

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

API 47 - 017 - 06212 County Doddridge District Central
Quad West Union 7.5' Pad Name McGill Pad Field/Pool Name ---
Farm name Brown, Mary F. Well Number Nero Unit 2H
Operator (as registered with the OOG) Antero Resources Corportion
Address 1615 Wynkoop St. 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 4347272m Easting 513048m
Landing Point of Curve Northing 4347198.96m Easting 513431.40m
Bottom Hole Northing 4344239m Easting 514818m

Elevation (ft) 1166' 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 3/28/2013 Date drilling commenced 6/11/2013 Date drilling ceased 5/30/2014
Date completion activities began 8/2/2014 Date completion activities ceased 9/13/2014
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 200' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1835' Void(s) encountered (Y/N) depths No
Coal depth(s) ft None Identified Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

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JUN 08 2015

WR-35 WV GEOLOGICAL SURVEY
Rev. 8/23/13 MORGANTOWN, WV

Page ___ of ___

API 47-017 - 06212 Farm name Brown, Mary F. Well number Nero 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	26"	20"	40'	New	94# H-40	N/A	Y
Surface	17- 1/2"	13- 3/8"	402'	New	48# H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2611'	New	36# J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	18111'	New	23# P-110	N/A	Y
Tubing		2-3/8"	6976'		4.7# N-80	N/A	
Packer type and depth set		N/A					

Comment Details Set cement plug from 570' - 897' using 165 sacks of Class A cement. Inspector Doug Newlon was notified on 4/30/2014 of intent to plug back at 656'.

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	16.6	1.18	38	0'	8 Hrs.
Surface	Class A	466 sx	15.6	1.18	279	0'	8 Hrs.
Coal							
Intermediate 1	Class A	959 sx	15.6	1.18	818	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	1034 sx (Lead) 1714 sx (Tail)	14.5 Lead 15.2 Tail	1.30 Lead 1.86 Tail	3666	~500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 18111' MD, 6740' TVD (BHL); 6821' TVD (Deepest point drilled) Loggers TD (ft) 18111'
Deepest formation penetrated Marcellus Plug back to (ft) N/A
Plug back procedure N/A

Kick off depth (ft) 6524'

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 _____

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Nero Unit 1H API#47-017-06211). Please reference the wireline logs submitted with Form WR-35 for Nero Unit 1H. A Cement Bond Log has been included with this submittal.

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JUN 08 2015

WR-35
Rev. 8/23/13

Page ___ of ___

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

API 47- 017 - 06212

Farm name Brown, Mary F.

Well number Nero Unit 2H

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
*PLEASE SEE 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 EXHIBIT 2								

Please insert additional pages as applicable.

JUN 08 2015

WR-35 WV GEOLOGICAL SURVEY
Rev. 8/23/13 MORGANTOWN, WV

API 47- 017 - 06212 Farm name Brown, Mary F. Well number Nero Unit 2H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>			
<u>Marcellus</u>	<u>6673' (TOP)</u>	<u>TVD</u>	<u>7041' (TOP)</u>	<u>MD</u>
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 3600 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 5064 mcfpd Oil 11 bpd NGL --- bpd Water 203 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME 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 ₂ S, ETC)
	0		0		

*PLEASE SEE EXHIBIT 3

Please insert additional pages as applicable.

Drilling Contractor Frontier Drilling LLC
Address 562 Spring Run Rd. City Pennsboro State WV Zip 26415

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 Haliburton
Address 121 Champion Way, Suite 200 City Canonsburg State PA Zip 15317

Please insert additional pages as applicable.

Completed by Kara Quackenbush Telephone 303-357-7233
Signature Kara Quackenbush Title Permit Representative Date 5/26/2015

API 47-017-06212 Farm Name Brown, Mary F. Well Number Nero Unit 2H					
EXHIBIT 1					
Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	2-Aug-14	17,851	18,019	60	Marcellus
2	2-Aug-14	17,651	17,820	60	Marcellus
3	2-Aug-14	17,452	17,620	60	Marcellus
4	3-Aug-14	17,253	17,421	60	Marcellus
5	3-Aug-14	17,053	17,221	60	Marcellus
6	3-Aug-14	16,854	17,022	60	Marcellus
7	3-Aug-14	16,654	16,823	60	Marcellus
8	4-Aug-14	16,455	16,623	60	Marcellus
9	4-Aug-14	16,256	16,424	60	Marcellus
10	4-Aug-14	16,056	16,224	60	Marcellus
11	5-Aug-14	15,857	16,025	60	Marcellus
12	5-Aug-14	15,657	15,826	60	Marcellus
13	5-Aug-14	15,458	15,626	60	Marcellus
14	6-Aug-14	15,259	15,427	60	Marcellus
15	6-Aug-14	15,059	15,227	60	Marcellus
16	6-Aug-14	14,860	1,528	60	Marcellus
17	6-Aug-14	14,660	14,829	60	Marcellus
18	7-Aug-14	14,461	14,629	60	Marcellus
19	7-Aug-14	14,262	14,430	60	Marcellus
20	7-Aug-14	14,062	14,230	60	Marcellus
21	7-Aug-14	13,863	14,031	60	Marcellus
22	8-Aug-14	13,663	13,832	60	Marcellus
23	8-Aug-14	13,464	13,632	60	Marcellus
24	8-Aug-14	13,265	13,433	60	Marcellus
25	9-Aug-14	13,065	13,233	60	Marcellus
26	9-Aug-14	12,866	13,034	60	Marcellus
27	9-Aug-14	12,666	12,834	60	Marcellus
28	10-Aug-14	12,467	12,635	60	Marcellus
29	10-Aug-14	12,268	12,436	60	Marcellus
30	10-Aug-14	12,068	12,236	60	Marcellus
31	10-Aug-14	11,869	12,037	60	Marcellus
32	11-Aug-14	11,669	11,837	60	Marcellus
33	11-Aug-14	11,470	11,638	60	Marcellus
34	11-Aug-14	11,270	11,439	60	Marcellus
35	11-Aug-14	11,071	11,239	60	Marcellus
36	12-Aug-14	10,872	11,040	60	Marcellus
37	12-Aug-14	10,672	10,840	60	Marcellus
38	12-Aug-14	10,473	10,641	60	Marcellus
39	12-Aug-14	10,273	10,442	60	Marcellus
40	13-Aug-14	10,074	10,242	60	Marcellus
41	13-Aug-14	9,875	10,043	60	Marcellus
42	13-Aug-14	9,675	9,843	60	Marcellus
43	14-Aug-14	9,476	9,644	60	Marcellus
44	14-Aug-14	9,276	9,445	60	Marcellus
45	14-Aug-14	9,077	9,245	60	Marcellus
46	14-Aug-14	8,878	9,046	60	Marcellus
47	14-Aug-14	8,678	8,846	60	Marcellus
48	15-Aug-14	8,479	8,647	60	Marcellus
49	15-Aug-14	8,279	8,448	60	Marcellus
50	15-Aug-14	8,080	8,248	60	Marcellus
51	15-Aug-14	7,881	8,049	60	Marcellus
52	15-Aug-14	7,681	7,849	60	Marcellus
53	16-Aug-14	7,482	7,650	60	Marcellus
54	16-Aug-14	7,282	7,451	60	Marcellus
55	16-Aug-14	7,083	7,215	60	Marcellus

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 MORGANTOWN, WV

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WV GEOLOGICAL SURVEY
MORGANTOWN, WV

API 47-017-06212 Farm Name Brown, Mary F. Well Number Nero Unit 2H

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-Jul-14	57.6	7,997	5,363	5,332	2,817	6,415	N/A
2	2-Aug-14	62.6	8,301	7,370	4,936	32,710	6,666	N/A
3	3-Aug-14	69.7	7,983	6,054	3,316	161,125	6,889	N/A
4	3-Aug-14	71.1	9,008	6,117	4,546	198,386	7,034	N/A
5	3-Aug-14	67.5	7,980	5,949	4,074	123,343	6,511	N/A
6	3-Aug-14	73.0	8,152	6,010	3,050	188,536	7,076	N/A
7	4-Aug-14	70.8	8,048	5,960	4,056	108,103	6,846	N/A
8	4-Aug-14	69.2	7,724	5,899	4,118	82,616	6,446	N/A
9	4-Aug-14	79.6	7,874	5,624	4,590	137,609	6,536	N/A
10	5-Aug-14	77.7	7,793	5,471	4,227	236,797	6,432	N/A
11	5-Aug-14	69.2	7,697	5,769	3,978	115,277	6,856	N/A
12	5-Aug-14	75.6	7,787	6,161	4,634	133,920	6,504	N/A
13	6-Aug-14	74.0	7,849	5,503	4,790	127,740	6,189	N/A
14	6-Aug-14	76.7	7,521	5,735	4,876	218,842	6,551	N/A
15	6-Aug-14	73.4	7,552	5,304	3,996	250,469	6,421	N/A
16	6-Aug-14	77.3	7,725	5,837	4,262	133,430	6,532	N/A
17	7-Aug-14	77.4	7,543	5,981	4,682	244,890	6,421	N/A
18	7-Aug-14	79.9	7,515	5,527	4,837	221,926	6,623	N/A
19	7-Aug-14	77.2	7,306	5,155	4,922	248,274	6,423	N/A
20	7-Aug-14	78.2	7,366	5,890	4,727	249,430	6,494	N/A
21	8-Aug-14	78.3	7,497	5,501	4,335	185,580	6,451	N/A
22	8-Aug-14	79.0	7,259	6,032	3,997	254,305	6,454	N/A
23	8-Aug-14	74.5	7,630	6,622	3,785	179,170	6,323	N/A
24	8-Aug-14	79.3	7,344	5,524	3,759	243,180	6,300	N/A
25	9-Aug-14	73.7	7,044	5,644	5,060	158,317	6,804	N/A
26	9-Aug-14	78.3	7,516	6,161	5,186	255,200	6,276	N/A
27	10-Aug-14	79.9	7,310	5,653	4,814	214,646	6,620	N/A
28	10-Aug-14	77.7	7,460	6,444	4,873	145,296	6,520	N/A
29	10-Aug-14	74.3	7,288	5,446	4,599	224,929	6,835	N/A
30	10-Aug-14	77.8	7,171	5,582	5,008	220,954	6,164	N/A
31	11-Aug-14	78.3	6,954	5,346	5,224	186,945	6,548	N/A
32	11-Aug-14	77.7	6,901	5,489	4,748	249,212	6,249	N/A
33	11-Aug-14	77.6	7,054	5,832	4,774	250,403	6,266	N/A
34	11-Aug-14	80.1	6,956	5,597	5,382	197,507	6,454	N/A
35	12-Aug-14	78.0	6,726	5,920	5,099	253,170	6,292	N/A
36	12-Aug-14	82.2	6,894	6,051	5,402	248,086	6,150	N/A
37	12-Aug-14	78.8	6,639	5,414	5,201	250,150	6,090	N/A
38	12-Aug-14	79.8	6,610	5,483	5,262	255,262	6,210	N/A
39	12-Aug-14	78.9	6,617	5,526	5,252	251,106	6,091	N/A
40	13-Aug-14	80.1	6,510	5,216	5,106	250,669	6,161	N/A
41	13-Aug-14	81.8	6,586	5,362	5,219	251,623	6,184	N/A
42	13-Aug-14	78.3	6,913	5,815	5,106	252,004	6,120	N/A
43	14-Aug-14	81.3	6,640	5,255	5,306	250,337	6,059	N/A
44	14-Aug-14	80.6	6,461	5,397	5,174	251,863	6,141	N/A
45	14-Aug-14	77.2	6,481	5,190	5,328	253,323	6,183	N/A
46	14-Aug-14	78.6	6,535	5,431	5,043	253,981	6,146	N/A
47	15-Aug-14	78.3	6,642	5,746	4,612	250,687	6,120	N/A
48	15-Aug-14	76.9	6,586	6,203	5,269	249,607	6,189	N/A
49	15-Aug-14	81.3	6,654	5,563	4,871	251,600	6,166	N/A
50	15-Aug-14	80.4	6,565	5,815	5,092	254,140	6,036	N/A
51	15-Aug-14	78.7	6,448	5,520	5,351	253,557	6,064	N/A
52	16-Aug-14	80.4	6,560	5,825	5,398	253,094	6,020	N/A
53	16-Aug-14	81.7	6,546	5,827	5,375	251,118	6,088	N/A
54	16-Aug-14	81.6	6,578	5,368	5,316	251,707	6,007	N/A
55	16-Aug-14	79.5	6,750	5,531	4,955	251,312	5,966	N/A
AVG =		76.7	7,219	5,727	4,768	11,470,280	350,612	TOTAL

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JUN 08 2015

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

API 47-017-06212 Farm Name Brown, Mary F. Well Number Nero Unit 2H

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	220'	N/A	220'	N/A
Shale/ Sandstone	0	205	0	205
Sandstone	est. 205	655	est. 205	655
Siltstone	est. 655	715	est. 655	715
Sandstone	est. 715	835	est. 715	835
Sandstone/ Limestone	est. 835	875	est. 835	875
Sandstone	est. 875	1,035	est. 875	1,035
Siltstone/ Limestone	est. 1035	1145	est. 1035	1145
Sandstone	est. 1145	1195	est. 1145	1195
Sandstone/ Trace Coal	est. 1195	1235	est. 1195	1235
Siltstone/ Limestone	est. 1235	1318	est. 1235	1318
Shale/Siltstone	est. 1318	1325	est. 1318	1325
Sandstone	est. 1325	1355	est. 1325	1355
Sandsotne/ Trace Coal	est. 1355	1435	est. 1355	1435
Sandstone/ Siltstone	est. 1435	2005	est. 1435	2005
Sandsotne/ Trace Coal	est. 2005	2035	est. 2005	2035
Sandstone	est. 2035	2102	est. 2035	2103
Big Lime	2102	2208	2103	2209
Big Injun	2208	2633	2209	2634
Gantz Sand	2633	2751	2634	2752
Fifty Foot Sandstone	2751	2831	2752	2833
Gordon	2831	3154	2833	3156
Fifth Sandstone	3154	3174	3156	3176
Bayard	3174	3572	3176	3574
Warren	3572	3932	3574	3934
Speechley	3932	4212	3934	4214
Baltown	4212	4668	4214	4677
Bradford	4668	5081	4677	5116
Benson	5081	5364	5116	5426
Alexander	5364	5,514	5426	5,594
Elk	5514	5,977	5594	6,108
Rhinestreet	5977	6,318	6108	6,496
Sycamore	6318	6,487	6496	6,696
Middlesex	6487	6,608	6696	6,877
Burkett	6608	6,638	6877	6,940
Tully	6638	6,673	6940	7041
Marcellus	6673	N/A	7041	N/A

*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 (Please reference Wireline Logs submitted for the Nero Unit 1H API# 47-017-06211). The measured depth (MD) data on subsequent wells may be slightly different due to the well's unique departure.

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JUN 08 2015

WV GEOLOGICAL SURVEY
MORGANTOWN, WV

Hydraulic Fracturing Fluid Product Component Information Disclosure



Frac Focus
Chemical Disclosure Registry



Job Start Date:	7/31/2014
Job End Date:	8/16/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06212-08-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Nero Unit 2H
Longitude:	-80.84873100
Latitude:	39.27470000
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,821
Total Base Water Volume (gal):	3,777,848
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
Fresh Water	Operator	Base Fluid	Fresh Water	7732-18-5	100.00000	72.40163	Density = 8.330
SAND - PREMIUM WHITE	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00000	24.58884	
SAND - PREMIUM - 100 MESH, BULK, SK (100003676)H	Halliburton	Proppant	Crystalline silica, quartz	14808-60-7	100.00000	1.80092	
WG-36 GELLING AGENT	Halliburton	Gelling Agent	Guar gum	9000-30-0	100.00000	0.20116	
HYDROCHLORIC ACID 10-30%	Halliburton	Solvent	Hydrochloric acid	7647-01-0	30.00000	0.19146	
FR-66	Halliburton	Friction Reducer	Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.08562	
SP BREAKER	Halliburton	Breaker	Sodium persulfate	7775-27-1	100.00000	0.00627	
Scalechek® LP-65 Scale Inhibitor	Halliburton	Scale Inhibitor	Ammonium chloride	12125-02-9	10.00000	0.00489	

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 JUN 08 2015
 WV GEOLOGICAL SURVEY
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BE-9	Halliburton	Biocide	Tributyl tetradecyl phosphonium chloride	81741-28-8	10.00000	0.00276		
	Halliburton	Corrosion Inhibitor	Methanol	67-56-1	60.00000	0.00063		
			Propargyl alcohol	107-19-7	10.00000	0.00011		
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 Ingredient(s)	Water	7732-18-5		0.86637		
		Other Ingredient(s)	Polyacrylamide copolymer	Confidential		0.08562		
		Other Ingredient(s)	Organic phosphonate	Confidential		0.02937		
		Other Ingredient(s)	Ammonium chloride	12125-02-9		0.01427		
		Other Ingredient(s)	Fatty acid tall oil amide	Confidential		0.01427		Denise Tuck, Halliburton 3000 N. Sam Houston Pkwy E., Houston, TX 77032 281-871-6226
		Other Ingredient(s)	Alcohols, C12-16, ethoxylated	68551-12-2		0.01427		
		Other Ingredient(s)	Sodium chloride	7647-14-5		0.01427		
		Other Ingredient(s)	Bentonite, benzyl(hydrogenated tallow alkyl) dimethylammonium stearate complex	121888-68-4		0.01006		
		Other Ingredient(s)	Sorbitan monooleate polyoxyethylene derivative	9005-65-6		0.00285		
		Other Ingredient(s)	Sorbitan, mono-9-octadecenoate, (Z)	1338-43-8		0.00285		
		Other Ingredient(s)	Surfactant mixture	Confidential		0.00201		
		Other Ingredient(s)	Surfactant mixture	Confidential		0.00201		
		Other Ingredient(s)	Silica gel	112926-00-8		0.00201		
		Other Ingredient(s)	Formaldehyde	50-00-0		0.00049		
		Other Ingredient(s)	Fatty acids, tall oil	Confidential		0.00032		
		Other Ingredient(s)	Alcohols, C14-C15, ethoxylated	68951-67-7		0.00032		

	Other Ingredient(s)	Reaction product of acetophenone, formaldehyde, thiourea and oleic acid in dimethyl formamide	68527-49-1		0.00032
	Other Ingredient(s)	Crystalline Silica, Quartz	14808-60-7		0.00020
	Other Ingredient(s)	Olefins	Confidential		0.00005
	Other Ingredient(s)	Olefins	Confidential		0.00005
	Other Ingredient(s)	Olefins	Confidential		0.00001
	Other Ingredient(s)	Olefins	Confidential		0.00001
	Other Ingredient(s)	Sodium sulfate	7757-82-6		0.00001

* 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)

RECEIVED
 JUN 08 2015
 WV GEOLOGICAL SURVEY
 MORGANTOWN, WV

LATITUDE 39°17'30"

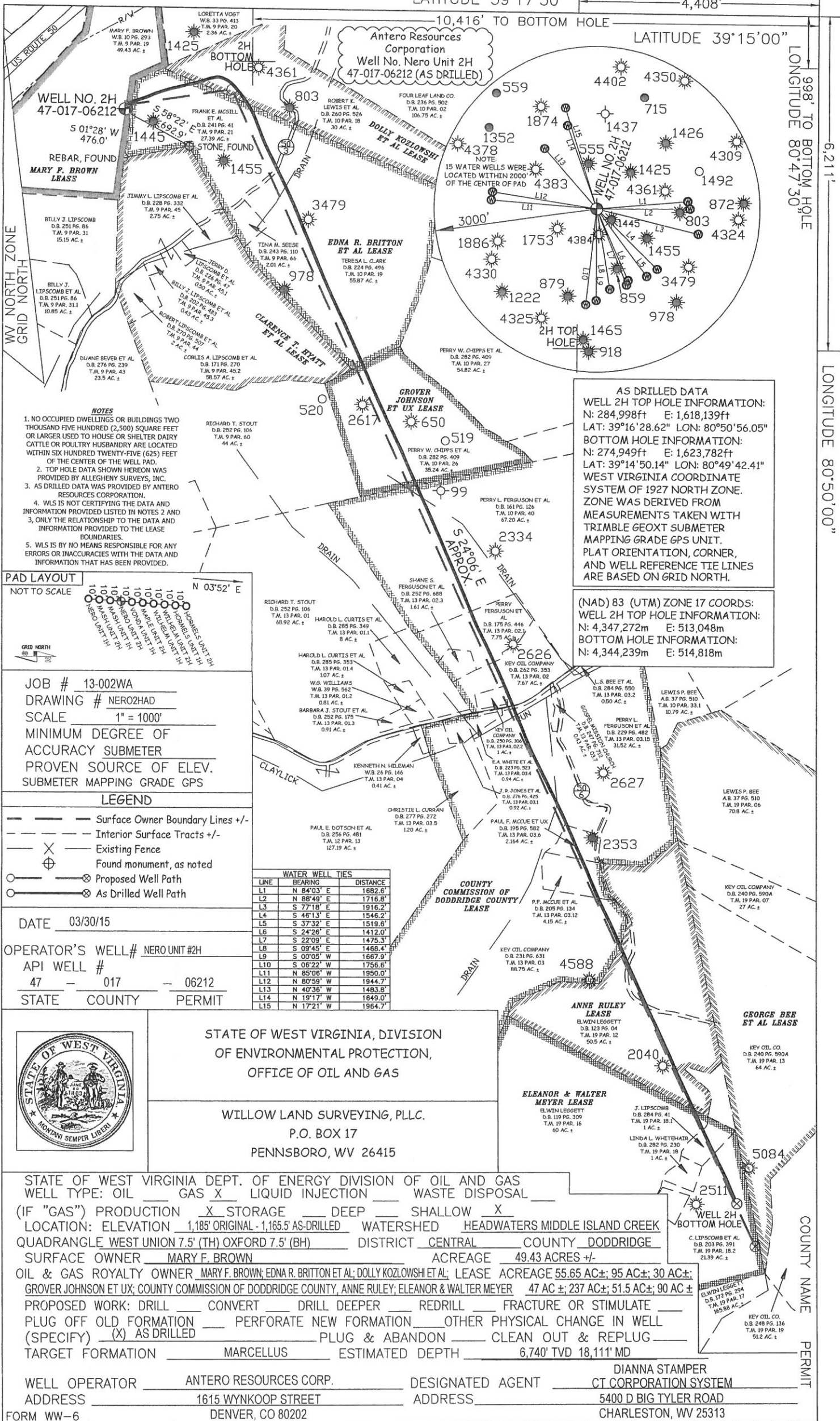
4,408'

LATITUDE 39°15'00"

998' TO BOTTOM HOLE
LONGITUDE 80°47'30"

6,211'

LONGITUDE 80°50'00"



Antero Resources Corporation
Well No. Nero Unit 2H
47-017-06212 (AS DRILLED)

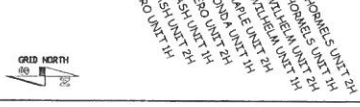
WELL NO. 2H
47-017-06212
S 01°28' W
476.0'

REBAR, FOUND
MARY F. BROWN
LEASES

- NOTES**
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.

PAD LAYOUT

NOT TO SCALE



JOB # 13-002WA
DRAWING # NERO2HAD
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 03/30/15
OPERATOR'S WELL# NERO UNIT #2H
API WELL # 47 - 017 - 06212
STATE COUNTY PERMIT

LINE	BEARING	DISTANCE
L1	N 84°03' E	1682.6'
L2	N 88°49' E	1716.8'
L3	S 77°18' E	1916.2'
L4	S 46°13' E	1546.2'
L5	S 37°32' E	1519.6'
L6	S 24°26' E	1412.0'
L7	S 22°09' E	1475.3'
L8	S 09°45' E	1458.4'
L9	S 00°05' W	1667.9'
L10	S 06°22' W	1756.6'
L11	N 85°06' W	1950.0'
L12	N 80°59' W	1944.7'
L13	N 40°36' W	1483.8'
L14	N 19°17' W	1649.0'
L15	N 17°21' W	1964.7'

AS DRILLED DATA
WELL 2H TOP HOLE INFORMATION:
N: 284,998ft E: 1,618,139ft
LAT: 39°16'28.62" LON: 80°50'56.05"
BOTTOM HOLE INFORMATION:
N: 274,949ft E: 1,623,782ft
LAT: 39°14'50.14" LON: 80°49'42.41"
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: 4,347,272m E: 513,048m
BOTTOM HOLE INFORMATION:
N: 4,344,239m E: 514,818m



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING, PLLC.
P.O. BOX 17
PENNSBORO, WV 26415

STATE OF WEST VIRGINIA DEPT. OF ENERGY DIVISION OF OIL AND GAS
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 1,185' ORIGINAL - 1,165.5' AS-DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK
QUADRANGLE WEST UNION 7.5' (TH) OXFORD 7.5' (BH) DISTRICT CENTRAL COUNTY DODDRIDGE
SURFACE OWNER MARY F. BROWN ACREAGE 49.43 ACRES +/-
OIL & GAS ROYALTY OWNER MARY F. BROWN; EDNA R. BRITTON ET AL; DOLLY KOZLOWSKI ET AL; LEASE ACREAGE 55.65 AC +/-; 95 AC +/-; 30 AC +/-
GROVER JOHNSON ET UX; COUNTY COMMISSION OF DODDRIDGE COUNTY, ANNE RULEY; ELEANOR & WALTER MEYER 47 AC +/-; 237 AC +/-; 51.5 AC +/-; 90 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 6,740' TVD 18,111' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313