

APPROVED

WR-35
Rev. 8/23/13

Page ___ of ___

NAME: Julian

DATE: 11/8/17

State of West Virginia

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

API 47-017-06555 County Doddridge District Central
 Quad West Union 7.5' Pad Name McGill Pad Field/Pool Name -----
 Farm name Mary F. Brown Well Number Hormels 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 4347287m Easting 513048m
 Landing Point of Curve Northing 4347584.380m Easting 513259.032m
 Bottom Hole Northing 4350343m Easting 512362m

Elevation (ft) 1165' 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 09/26/2014 Date drilling commenced 11/06/2014 Date drilling ceased 05/01/2016
 Date completion activities began 03/28/2017 Date completion activities ceased 06/13/2017
 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 1195', 1355', 2005' Cavern(s) encountered (Y/N) depths No
 Is coal being mined in area (Y/N) No

Reviewed by: _____

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API 47-017 - 06555 Farm name Mary F. Brown Well number Hormels 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	30"	20"	59'	New	94#, J-55	N/A	Y
Surface	17-1/2"	13-3/8"	325'	New	48#, H-40	N/A	Y
Coal							
Intermediate 1	12-1/4"	9-5/8"	2529'	New	36#, J-55	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4"/8-1/2"	5-1/2"	16881'	New	23#, P-110	N/A	Y
Tubing		2-3/8"	6980'		4.7#, N-80		
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 ³)	Cement Top (MD)	WOC (hrs)
Conductor	Class A	150 sx	15.6	1.18	177	0'	8 Hrs.
Surface	Class A	480 sx	15.6	1.19	571	0'	8 Hrs.
Coal							
Intermediate 1	Class A	927 sx	15.6	1.18	1094	0'	8 Hrs.
Intermediate 2							
Intermediate 3							
Production	Class H	976 sx (Lead) 1604 sx (Tail)	14.5 (Lead), 15.2 (Tail)	1.31 (Lead), 1.83 (Tail)	4214	-500' into Intermediate Casing	8 Hrs.
Tubing							

Drillers TD (ft) 16881' MD, 6638' TVD (BHL); 6700' TVD (Deepest Point Drilled) Loggers TD (ft) 16832' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6485'

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 N/A

** 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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API 47- 017 - 06555 Farm name Mary F. Brown Well number Hormels Unit 1H

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
<u>Marcellus</u>	<u>6669' (TOP)</u> TVD	<u>7103' (TOP)</u> MD
_____	_____	_____
_____	_____	_____
_____	_____	_____

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 1956 mcfpd Oil 3 bpd NGL --- bpd Water 7 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP		BOTTOM		DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	

***PLEASE SEE ATTACHED EXHIBIT 3**

Please insert additional pages as applicable.

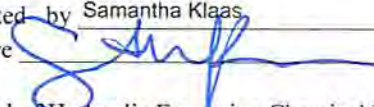
Drilling Contractor Precision Drilling Company, LP
Address 2640 Reach Road City Williamsport State PA Zip 17701

Logging Company Clutch Energy Services LLC
Address 2154 Greensburg Road City New Kensington State PA Zip 15068

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 Dr. City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Samantha Klaas Telephone 303-357-6759
Signature  Title Permitting Agent Date 11/01/2017

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

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API 47-017-06555 Farm Name Mary F. Brown Well Number Hormels Unit 1H

EXHIBIT 1

Stage No.	Perforation Date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formations
1	3/28/2017	16609	16779	48	Marcellus
2	4/16/2017	16408	16577	48	Marcellus
3	4/16/2017	16206	16376	48	Marcellus
4	4/17/2017	16005	16175	48	Marcellus
5	4/17/2017	15803	15973	48	Marcellus
6	4/21/2017	15602	15772	48	Marcellus
7	4/21/2017	15400	15570	48	Marcellus
8	4/22/2017	15199	15369	48	Marcellus
9	4/22/2017	14998	15167	48	Marcellus
10	4/23/2017	14796	14966	48	Marcellus
11	4/27/2017	14595	14765	48	Marcellus
12	4/27/2017	14393	14563	48	Marcellus
13	4/27/2017	14192	14362	48	Marcellus
14	4/28/2017	13990	14160	48	Marcellus
15	4/28/2017	13789	13959	48	Marcellus
16	4/28/2017	13588	13758	48	Marcellus
17	4/29/2017	13386	13556	48	Marcellus
18	4/29/2017	13185	13355	48	Marcellus
19	4/30/2017	12983	13153	48	Marcellus
20	4/30/2017	12782	12952	48	Marcellus
21	4/30/2017	12581	12750	48	Marcellus
22	5/1/2017	12379	12549	48	Marcellus
23	5/1/2017	12178	12348	48	Marcellus
24	5/1/2017	11976	12146	48	Marcellus
25	5/2/2017	11775	11945	48	Marcellus
26	5/2/2017	11573	11743	48	Marcellus
27	5/2/2017	11372	11542	48	Marcellus
28	5/3/2017	11171	11340	48	Marcellus
29	5/3/2017	10969	11139	48	Marcellus
30	5/3/2017	10768	10938	48	Marcellus
31	5/4/2017	10566	10736	48	Marcellus
32	5/4/2017	10365	10535	48	Marcellus
33	5/4/2017	10164	10333	48	Marcellus
34	5/5/2017	9962	10132	48	Marcellus
35	5/5/2017	9761	9931	48	Marcellus
36	5/5/2017	9559	9729	48	Marcellus
37	5/6/2017	9358	9528	48	Marcellus
38	5/6/2017	9156	9326	48	Marcellus
39	5/6/2017	8955	9125	48	Marcellus
40	5/7/2017	8754	8923	48	Marcellus
41	5/7/2017	8552	8722	48	Marcellus
42	5/7/2017	8351	8521	48	Marcellus
43	5/7/2017	8149	8319	48	Marcellus
44	5/7/2017	7948	8118	48	Marcellus
45	5/8/2017	7746	7916	48	Marcellus
46	5/8/2017	7545	7715	48	Marcellus
47	5/8/2017	7344	7513	48	Marcellus
48	5/8/2017	7142	7312	48	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 (bbbls)	Amount of Nitrogen/ other (units)
1	4/15/2017	71.4	7686	7235	4138	394480	8453	N/A
2	4/16/2017	70.0	7455	5339	4109	396100	8448	N/A
3	4/16/2017	74.9	7677	5289	4292	394650	8458	N/A
4	4/17/2017	73.1	7818	5690	3709	394100	9447	N/A
5	4/17/2017	72.9	7592	5524	4728	374360	8673	N/A
6	4/21/2017	79.6	7913	5679	4642	391600	8304	N/A
7	4/21/2017	75.4	7869	5336	5200	393400	9434	N/A
8	4/22/2017	70.2	7429	5296	4989	395100	8217	N/A
9	4/22/2017	73.0	7505	5207	4735	395750	8401	N/A
10	4/23/2017	75.0	7497	5193	4585	395000	8340	N/A
11	4/27/2017	79.5	7942	5339	4617	396100	8326	N/A
12	4/27/2017	76.7	7805	5282	4985	394920	8895	N/A
13	4/27/2017	79.3	7645	5386	4106	396100	8304	N/A
14	4/28/2017	70.7	7275	5193	4306	385200	8250	N/A
15	4/28/2017	69.9	7395	5511	3741	394900	10347	N/A
16	4/28/2017	77.3	7394	5264	4942	395900	8288	N/A
17	4/29/2017	78.5	7348	5286	4488	393380	8284	N/A
18	4/29/2017	77.9	7351	5322	4267	396050	8356	N/A
19	4/30/2017	70.8	7412	5347	4020	397200	10041	N/A
20	4/30/2017	74.3	7434	5368	4030	357280	10938	N/A
21	4/30/2017	78.3	7323	5329	4606	396300	8237	N/A
22	5/1/2017	74.6	7166	5336	4631	395950	9224	N/A
23	5/1/2017	78.9	7177	5239	4964	394980	8189	N/A
24	5/1/2017	78.7	7218	5375	5100	397500	8209	N/A
25	5/2/2017	73.5	6889	5372	4188	395950	8150	N/A
26	5/2/2017	69.4	7080	5711	3687	394330	9406	N/A
27	5/2/2017	78.8	7103	5529	5032	395850	8183	N/A
28	5/3/2017	78.8	7012	5440	4849	395400	8181	N/A
29	5/3/2017	79.1	6946	5357	4753	393860	8144	N/A
30	5/3/2017	78.9	6974	5357	4803	395650	8150	N/A
31	5/4/2017	77.4	7170	5947	4245	397450	8153	N/A
32	5/4/2017	78.8	7152	5654	4356	395020	8069	N/A
33	5/4/2017	80.2	6975	5604	5032	391000	8136	N/A
34	5/5/2017	80.4	6982	5808	4209	395850	8137	N/A
35	5/5/2017	80.5	6965	6198	3945	393010	8119	N/A
36	5/5/2017	80.2	7238	6019	4349	396700	9370	N/A
37	5/6/2017	80.5	7008	5765	4174	396100	8092	N/A
38	5/6/2017	80.2	6897	5876	4957	395010	8062	N/A
39	5/6/2017	80.8	6788	5901	4574	395750	8096	N/A
40	5/7/2017	80.9	6708	6065	4148	395750	8066	N/A
41	5/7/2017	72.5	6442	6241	3819	395090	7934	N/A
42	5/7/2017	75.6	6655	6094	3805	395490	8040	N/A
43	5/7/2017	74.7	6531	5344	4781	397590	8024	N/A
44	5/7/2017	77.2	6616	6362	4370	396800	8582	N/A
45	5/8/2017	80.8	6710	6515	3734	395290	8031	N/A
46	5/8/2017	81.0	6502	6823	3827	395920	7931	N/A
47	5/8/2017	80.6	6627	6598	4302	394480	8956	N/A
48	5/8/2017	67.8	6155	6243	3980	394300	7988	N/A
AVG=		76.4	7,176	5,671	4,414	18,903,940	408,063	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	200'	N/A	200'	N/A
Shale/ Sandstone	est. 0	205	est. 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	1035	est. 875	1035
Siltstone/ Limestone	est. 035	1145	est. 035	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
Sandstone/ Trace Coal	est. 1355	1435	est. 1355	1435
Sandstone/ Siltstone	est. 1435	2005	est. 1435	2005
Sandstone/ Trace Coal	est. 2005	2035	est. 2005	2035
Sandstone	est. 2035	2124	est. 2035	2132
Big Lime	2124	2230	2132	2239
Big Injun	2230	2626	2239	2635
Gantz Sand	2626	2778	2635	2787
Fifty Foot Sandstone	2778	2867	2787	2876
Gordon	2867	3183	2876	3192
Fifth Sandstone	3183	3215	3192	3224
Bayard	3215	3595	3224	3604
Warren	3595	3954	3604	3963
Speechley	3954	4241	3963	4250
Baltown	4241	4692	4250	4701
Bradford	4692	5110	4701	5119
Benson	5110	5394	5119	5403
Alexander	5394	5543	5403	5552
Elk	5543	6039	5552	6048
Rhinestreet	6039	6326	6048	6511
Sycamore	6326	6491	6511	6725
Middlesex	6491	6609	6725	6931
Burkett	6609	6638	6931	6999
Tully	6638	6669	6999	7103
Marcellus	6669	NA	7103	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:	4/15/2017
Job End Date:	5/8/2017
State:	West Virginia
County:	Doddridge
API Number:	47-017-06555-00-00
Operator Name:	Antero Resources Corporation
Well Name and Number:	Hormels 1H
Latitude:	39.16291100
Longitude:	-80.50560300
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,710
Total Base Water Volume (gal):	17,651,602
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
Water	Antero Resources	Carrier/Base Fluid	Water	7732-18-5	100.00000	88.38183	
Sand	U.S. Well Services, LLC	Proppant	Crystalline Silica, quartz	14808-60-7	100.00000	11.34920	
HCL Acid (12.6%-17.5%)	U.S. Well Services, LLC	Bulk Acid	Water	7732-18-5	87.40000	0.12022	
			Hydrogen Chloride	7647-01-0	17.50000	0.02795	
LGC-15	U.S. Well Services, LLC	Gelling Agents	Guar Gum	9000-30-0	50.00000	0.03790	
			Petroleum Distillates	64742-47-8	60.00000	0.03589	
			Suspending agent (solid)	14808-60-7	3.00000	0.00580	
			Surfactant	68439-51-0	3.00000	0.00227	
WFRA-500	U.S. Well Services, LLC	Friction Reducer	2-Propenoic acid, polymer with 29 propenamide	9003-06-9	30.00000	0.01670	
			Hydrated light distillate (petroleum)	64742-47-8	30.00000	0.01345	

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Bioclear 2000	U.S. Well Services, LLC	Anti-Bacterial Agent					
			2,2-dibromo-3-nitrilopropionamide	10222-01-2	20.00000	0.00417	
			Deionized Water	7732-18-5	28.00000	0.00238	
AP One	U.S. Well Services, LLC	Gel Breakers					
			Ammonium Persulfate	7727-54-0	100.00000	0.00143	
SI-1200s	U.S. Well Services, LLC	Scale Inhibitor					
			Alkyl Phosphonic Acid	Proprietary	5.00000	0.00063	
			Ammonia	7664-41-7	0.50000	0.00010	
AI-303	U.S. Well Services, LLC	Acid Corrosion Inhibitors					
			Ethylene glycol	107-21-1	40.00000	0.00004	
			Formic acid	64-18-6	20.00000	0.00001	
			Cinnamaldehyde	104-55-2	20.00000	0.00001	
			Butyl cellosolve	111-76-2	20.00000	0.00001	
			Polyether	60828-78-6	10.00000	0.00001	
			Acetophenone,thiourea,formaldehyde polymer	68527-49-1	5.00000	0.00000	

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%

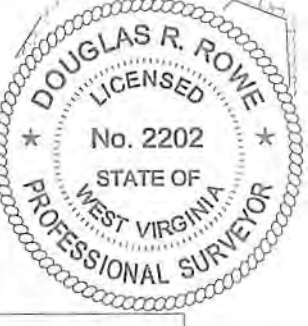
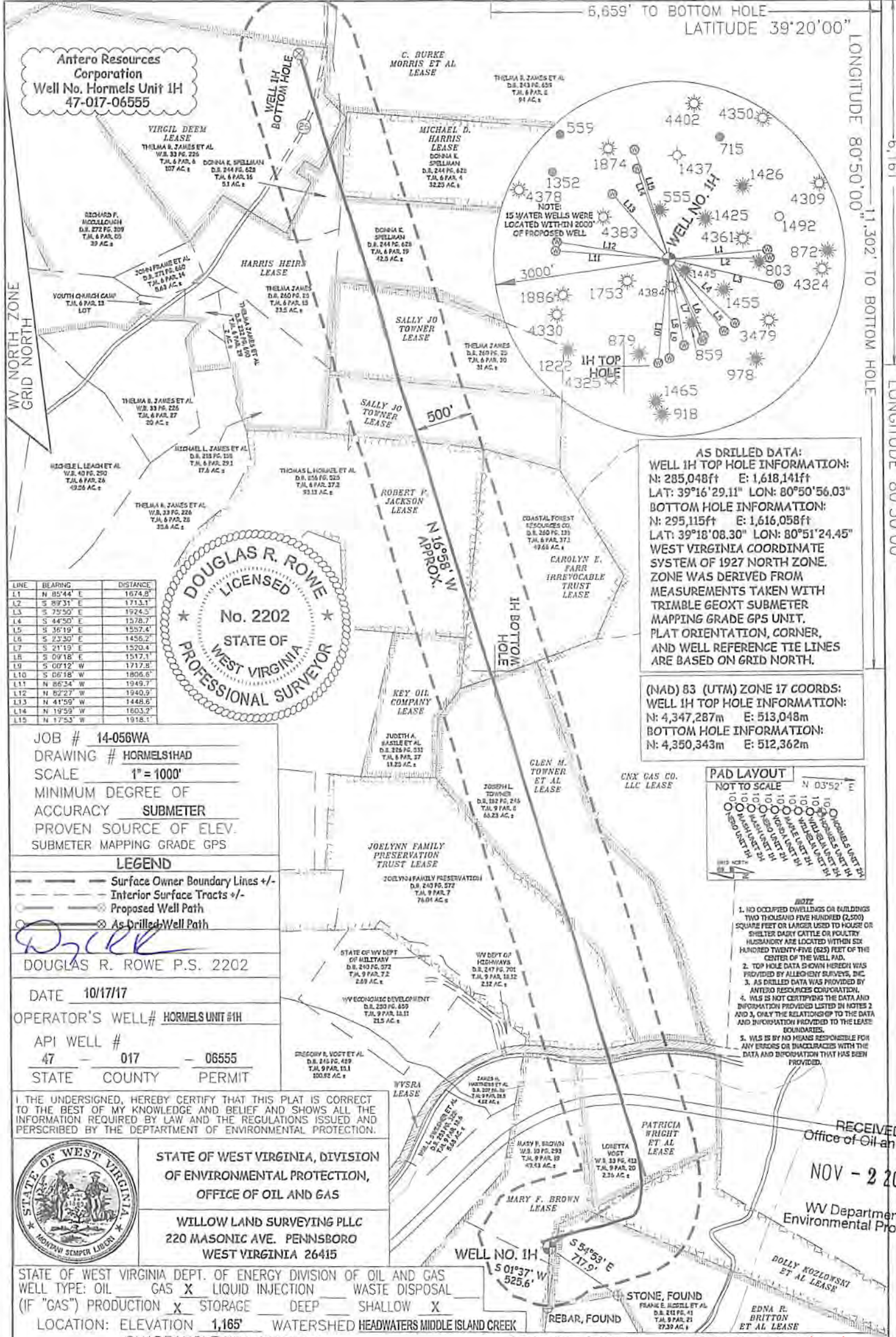
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

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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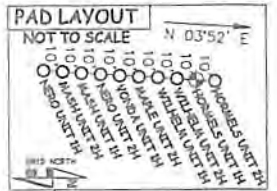
LATITUDE 39°17'30" 4,406'
6,659' TO BOTTOM HOLE
LATITUDE 39°20'00" LONGITUDE 80°50'00" 11,302' TO BOTTOM HOLE
LONGITUDE 80°50'00" 6,161' LONGITUDE 80°50'00"

Antero Resources Corporation
Well No. Hormels Unit 1H
47-017-06555



AS DRILLED DATA:
WELL 1H TOP HOLE INFORMATION:
N: 285,048ft E: 1,618,141ft
LAT: 39°16' 29.11" LON: 80°50' 56.03"
BOTTOM HOLE INFORMATION:
N: 295,115ft E: 1,616,058ft
LAT: 39°18' 08.30" LON: 80°51' 24.45"
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: 4,347,287m E: 513,048m
BOTTOM HOLE INFORMATION:
N: 4,350,343m E: 512,362m



- NOTE
- 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.
 - TOP HOLE DATA IS SHOWN HEREIN WAS PROVIDED BY ALLEGHENY SURVEYS, INC.
 - AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
 - 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 LEASEE BOUNDARIES.
 - WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

JOB # 14-056WA
DRAWING # HORMELS1HAD
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND
 - - - Surface Owner Boundary Lines +/-
 - - - Interior Surface Tracts +/-
 - - - Proposed Well Path
 - - - As Drilled Well Path

DOUGLAS R. ROWE P.S. 2202

DATE 10/17/17
OPERATOR'S WELL# HORMELS UNIT #1H
API WELL # 47 - 017 - 06555
STATE COUNTY PERMIT

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

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 DEPT. OF ENERGY DIVISION OF OIL AND GAS
WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
(IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
LOCATION: ELEVATION 1,165' WATERSHED HEADWATERS MIDDLE ISLAND CREEK
QUADRANGLE WEST UNION 7.5' DISTRICT CENTRAL COUNTY DODD

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.; PATRICIA WRIGHT ET AL.; WYSRA; LEASE ACREAGE 55.65 AC.; 95 AC.; 31.75 AC.; 31.5 ACRES.; 301.19 AC.; JOELYNN FAMILY PRESERVATION TRUST; GLEN M. TOWNER ET AL.; CAROLYN E. FARR IRREVOCABLE TRUST; ROBERT F. JACKSON; SALLY JO TOWNER; SALLY JO TOWNER; HARRIS HEIRS; MICHAEL D. HARRIS; VIRGIL DEEM 76.04 AC.; 68.29 AC.; 40.81 AC.; 94 AC.; 12.8 AC.; 51 AC.; 217 AC.; 38.5 AC.; 71 AC.; PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED PLUG & ABANDON CLEAN OUT & REPLUG
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,638' TVD 16,881' MD

WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS CT CORPORATION SYSTEM
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

RECEIVED
Office of Oil and Gas
NOV - 2 2017
WV Department of Environmental Protection

01/05/2018

LATITUDE 39°17'30"

4,406'

6,659' TO BOTTOM HOLE

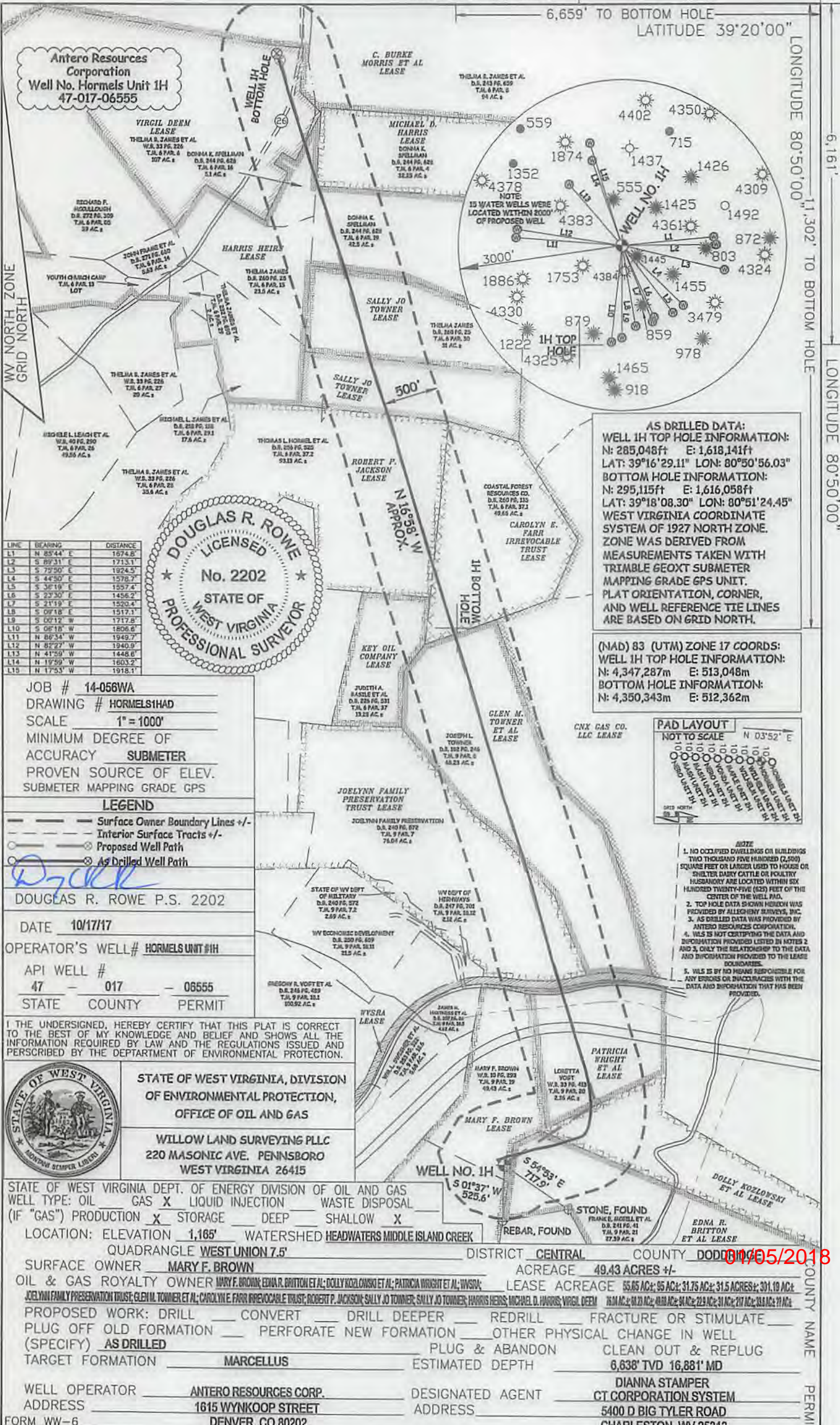
LATITUDE 39°20'00"

LONGITUDE 80°50'00"

6,161'

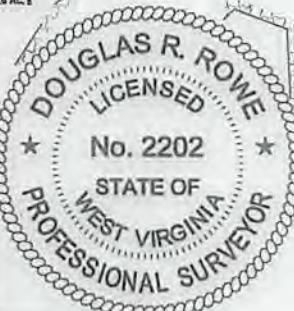
1,302' TO BOTTOM HOLE

LONGITUDE 80°50'00"



Antero Resources Corporation
Well No. Hormels Unit 1H
47-017-06555

LINE	BEARING	DISTANCE
L1	N 89°44' E	1674.6'
L2	S 89°31' E	1713.1'
L3	S 79°30' E	1974.5'
L4	S 44°50' E	1578.7'
L5	S 36°19' E	1857.4'
L6	S 27°30' E	1456.2'
L7	S 21°19' E	1520.4'
L8	S 09°18' E	1517.1'
L9	S 00°12' W	1717.6'
L10	S 06°18' W	1806.6'
L11	N 86°34' W	1949.7'
L12	N 85°27' W	1940.9'
L13	N 41°50' W	1448.8'
L14	N 17°59' W	1803.2'
L15	N 17°53' W	1918.1'



AS DRILLED DATA:
WELL 1H TOP HOLE INFORMATION:
 N: 285,048ft E: 1,618,141ft
 LAT: 39°16'29.11" LON: 80°50'56.03"
BOTTOM HOLE INFORMATION:
 N: 295,115ft E: 1,616,058ft
 LAT: 39°18'08.30" LON: 80°51'24.45"
 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: 4,347,287m E: 513,048m
BOTTOM HOLE INFORMATION:
 N: 4,350,343m E: 512,362m



- 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.

JOB # 14-056WA
 DRAWING # HORMELS1HAD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND
 --- Surface Owner Boundary Lines +/-
 - - - Interior Surface Tracts +/-
 --- Proposed Well Path
 --- As Drilled Well Path

DOUGLAS R. ROWE P.S. 2202

DATE 10/17/17

OPERATOR'S WELL # HORMELS UNIT #1H

API WELL # 47 - 017 - 06555

STATE COUNTY PERMIT

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

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 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
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01/05/2018

COUNTY NAME PERMIT