

WR-35
Rev. 8/23/13

State of West Virginia

Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work*Julie W
7/9/18*

API 47-017-06630 County Doddridge District West Union
 Quad West Union 7.5' Pad Name Yvonne Pad Field/Pool Name -----
 Farm name Yvonne Foster Well Number Burlington 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 4355508m Easting 519871m
 Landing Point of Curve Northing 4355402.14m Easting 520245.22m
 Bottom Hole Northing 4353095m Easting 521190m

Elevation (ft) 1229' 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 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

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Date permit issued 12/16/2014 Date drilling commenced 6/29/2016 Date drilling ceased 11/4/2016
 Date completion activities began 10/10/2017 Date completion activities ceased 3/7/2018
 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 225' Open mine(s) (Y/N) depths No
 Salt water depth(s) ft 1400' 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

Reviewed by:

07/20/2018

API 47-017 - 06630 Farm name Yvonne Foster Well number Burlington 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" | 65' | New | 94#, H-40 | N/A | Y |
| Surface | 17-1/2" | 13-3/8" | 584' | New | 48#, H-40 | N/A | Y |
| Coal | | | | | | | |
| Intermediate 1 | 12-1/4" | 9-5/8" | 2545' | New | 36#, J-55 | N/A | Y |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 8-3/4"/8-1/2" | 5-1/2" | 15942' | New | 23#, P-110 | N/A | Y |
| Tubing | | 2-3/8" | 7204' | | 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 | 102 sx | 15.6 | 1.18 | 120 | 0' | 8 Hrs. |
| Surface | Class A | 700 sx | 15.6 | 1.19 | 833 | 0' | 8 Hrs. |
| Coal | | | | | | | |
| Intermediate 1 | Class A | 983 sx | 15.6 | 1.18 | 1160 | 0' | 8 Hrs. |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | Class H | 890 sx (Lead) 1215 sx (Tail) | 13.5 (Lead), 15.2 (Tail) | 1.44 (Lead), 1.87 (Tail) | 3554 | -500' into Intermediate Casing | 8 Hrs. |
| Tubing | | | | | | | |

Drillers TD (ft) 15942' MD, 7028' TVD (BHL), 7042' (Deepest Point Drilled) Loggers TD (ft) 15942' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6453'

Check all wireline logs run caliper density deviated/directional 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

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API 47- 017 - 06630 Farm name Yvonne Foster Well number Burlington Unit 2H

| <u>PRODUCING FORMATION(S)</u> | <u>DEPTHS</u> | | |
|-------------------------------|---------------|-----|----------------|
| Marcellus | 6888' (TOP) | TVD | 7215' (TOP) MD |
| | | | |
| | | | |

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 3550 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 12658.56 mcfpd Oil 82.06 bpd NGL --- bpd Water 1488.70 bpd GAS MEASURED BY Estimated Orifice Pilot

| LITHOLOGY/ FORMATION | TOP | BOTTOM | TOP | BOTTOM | DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, 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**

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| | | | | | |

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 Kodiak Services Int'l
Address 2219 Sawdust Road, Unit 1604-1605 City The Woodlands State TX Zip 77380

Cementing Company BJ Services
Address 1036 East Main Street City Bridgeport State WV Zip 26330

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 Karin Cox Telephone 303-357-6820
Signature  Title Permitting Agent Date 7/3/2018

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

07/20/2018

API 47-017-06630 Farm Name Yvonne Foster Well Number Burlington Unit 2H

EXHIBIT 1

| Stage No. | Perforation Date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formations |
|-----------|------------------|------------------------|----------------------|------------------------|------------|
| 1 | 10/10/2017 | 15674 | 15839 | 48 | Marcellus |
| 2 | 11/3/2017 | 15478 | 15643 | 48 | Marcellus |
| 3 | 11/3/2017 | 15282 | 15447 | 48 | Marcellus |
| 4 | 11/3/2017 | 15087 | 15252 | 48 | Marcellus |
| 5 | 11/4/2017 | 14891 | 15056 | 48 | Marcellus |
| 6 | 11/4/2017 | 14695 | 14860 | 48 | Marcellus |
| 7 | 11/5/2017 | 14500 | 14665 | 48 | Marcellus |
| 8 | 11/5/2017 | 14304 | 14469 | 48 | Marcellus |
| 9 | 11/5/2017 | 14108 | 14273 | 48 | Marcellus |
| 10 | 11/6/2017 | 13913 | 14078 | 48 | Marcellus |
| 11 | 11/7/2017 | 13717 | 13882 | 48 | Marcellus |
| 12 | 11/7/2017 | 13521 | 13686 | 48 | Marcellus |
| 13 | 11/8/2017 | 13326 | 13491 | 48 | Marcellus |
| 14 | 11/8/2017 | 13130 | 13295 | 48 | Marcellus |
| 15 | 11/9/2017 | 12934 | 13099 | 48 | Marcellus |
| 16 | 11/9/2017 | 12739 | 12904 | 48 | Marcellus |
| 17 | 11/9/2017 | 12543 | 12708 | 48 | Marcellus |
| 18 | 11/10/2017 | 12347 | 12512 | 48 | Marcellus |
| 19 | 11/10/2017 | 12152 | 12317 | 48 | Marcellus |
| 20 | 11/10/2017 | 11956 | 12121 | 48 | Marcellus |
| 21 | 11/11/2017 | 11760 | 11925 | 48 | Marcellus |
| 22 | 11/11/2017 | 11565 | 11730 | 48 | Marcellus |
| 23 | 11/12/2017 | 11369 | 11534 | 48 | Marcellus |
| 24 | 11/12/2017 | 11173 | 11338 | 48 | Marcellus |
| 25 | 11/13/2017 | 10978 | 11143 | 48 | Marcellus |
| 26 | 11/13/2017 | 10782 | 10947 | 48 | Marcellus |
| 27 | 11/13/2017 | 10586 | 10751 | 48 | Marcellus |
| 28 | 11/14/2017 | 10391 | 10556 | 48 | Marcellus |
| 29 | 11/14/2017 | 10195 | 10360 | 48 | Marcellus |
| 30 | 11/15/2017 | 9999 | 10164 | 48 | Marcellus |
| 31 | 11/15/2017 | 9804 | 9969 | 48 | Marcellus |
| 32 | 11/15/2017 | 9608 | 9773 | 48 | Marcellus |
| 33 | 11/16/2017 | 9412 | 9577 | 48 | Marcellus |
| 34 | 11/16/2017 | 9217 | 9382 | 48 | Marcellus |
| 35 | 11/16/2017 | 9021 | 9186 | 48 | Marcellus |
| 36 | 11/17/2017 | 8825 | 8990 | 48 | Marcellus |
| 37 | 11/17/2017 | 8630 | 8795 | 48 | Marcellus |
| 38 | 11/17/2017 | 8434 | 8599 | 48 | Marcellus |
| 39 | 11/18/2017 | 8238 | 8403 | 48 | Marcellus |
| 40 | 11/18/2017 | 8043 | 8208 | 48 | Marcellus |
| 41 | 11/19/2017 | 7847 | 8012 | 48 | Marcellus |
| 42 | 11/19/2017 | 7651 | 7816 | 48 | Marcellus |
| 43 | 11/20/2017 | 7456 | 7621 | 48 | Marcellus |
| 44 | 11/20/2017 | 7260 | 7425 | 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 (bbls) | Amount of Nitrogen/ other (units) |
|-----------|-------------------|---------------|------------------------------|------------------------------|------------|--------------------------|------------------------|-----------------------------------|
| 1 | 10/10/2017 | 65.4875 | 8251.359 | 6016 | 4797 | 427,030 | 13753 | N/A |
| 2 | 11/3/2017 | 70.3222 | 8160.291 | 5959 | 5566 | 501,540 | 10918.62 | N/A |
| 3 | 11/3/2017 | 71.3669 | 7864.318 | 5699 | 5562 | 503,350 | 10109.31 | N/A |
| 4 | 11/3/2017 | 70.2551 | 7948.329 | 5826 | 5199 | 504,740 | 10110 | N/A |
| 5 | 11/4/2017 | 73.6403 | 7847.763 | 5816 | 5452 | 501,050 | 10072.64 | N/A |
| 6 | 11/4/2017 | 70.861 | 7721.223 | 5628 | 5206 | 502,710 | 10013 | N/A |
| 7 | 11/5/2017 | 72.1455 | 7847.636 | 5565 | 5163 | 501,950 | 10022 | N/A |
| 8 | 11/5/2017 | 69.763 | 7858.842 | 5781 | 3886 | 501,250 | 9951.429 | N/A |
| 9 | 11/5/2017 | 70.5001 | 7896.812 | 5471 | 3782 | 502,070 | 11599 | N/A |
| 10 | 11/6/2017 | 74.0457 | 7953.083 | 5535 | 5680 | 502,120 | 10015.57 | N/A |
| 11 | 11/7/2017 | 63.7712 | 7516.184 | 5659 | 5339 | 468,900 | 11473 | N/A |
| 12 | 11/7/2017 | 70.9691 | 7430.203 | 5731 | 4382 | 499,700 | 11276.02 | N/A |
| 13 | 11/8/2017 | 64.4848 | 7860.15 | 5625 | 5187 | 502,480 | 11206.88 | N/A |
| 14 | 11/8/2017 | 74.3675 | 7635.629 | 5849 | 4906 | 500,740 | 11187 | N/A |
| 15 | 11/9/2017 | 71.6351 | 7946.207 | 5597 | 5398 | 501,470 | 9939 | N/A |
| 16 | 11/9/2017 | 72.104 | 7845.271 | 5851 | 5365 | 502,730 | 9919.5 | N/A |
| 17 | 11/9/2017 | 71.4733 | 7840.665 | 5363 | 4929 | 501,670 | 10064 | N/A |
| 18 | 11/10/2017 | 67.4912 | 7683.167 | 5443 | 4268 | 500,820 | 9840.429 | N/A |
| 19 | 11/10/2017 | 72.7244 | 7940.393 | 5266 | 4277 | 502,030 | 10100.05 | N/A |
| 20 | 11/10/2017 | 74.7881 | 7579.088 | 5131 | 4831 | 500,850 | 10140 | N/A |
| 21 | 11/11/2017 | 74.1204 | 7778.627 | 5024 | 6019 | 484,090 | 9558.714 | N/A |
| 22 | 11/11/2017 | 74.6851 | 7594.478 | 5535 | 4920 | 516,780 | 12001.07 | N/A |
| 23 | 11/12/2017 | 73.8385 | 7746.355 | 5444 | 5254 | 502,580 | 10763.9 | N/A |
| 24 | 11/12/2017 | 74.8668 | 7504.234 | 5126 | 5702 | 500,660 | 9989.048 | N/A |
| 25 | 11/13/2017 | 74.7954 | 7602.697 | 5187 | 5141 | 502,680 | 11956 | N/A |
| 26 | 11/13/2017 | 70.2092 | 7406.243 | 5773 | 4456 | 503,060 | 10792 | N/A |
| 27 | 11/13/2017 | 75.0499 | 7288.968 | 5848 | 5372 | 502,510 | 9972 | N/A |
| 28 | 11/14/2017 | 77.2626 | 7537.834 | 5701 | 4659 | 503,250 | 9701 | N/A |
| 29 | 11/14/2017 | 79.0237 | 7447.465 | 5720 | 4838 | 500,540 | 9816 | N/A |
| 30 | 11/15/2017 | 80.1945 | 7405.003 | 5590 | 5446 | 502,210 | 10096 | N/A |
| 31 | 11/15/2017 | 76.7001 | 7393.917 | 5618 | 3782 | 502,340 | 9699 | N/A |
| 32 | 11/15/2017 | 76.86 | 7458.964 | 5908 | 4954 | 502,200 | 9909 | N/A |
| 33 | 11/16/2017 | 75.129 | 7297.58 | 5534 | 5053 | 501,890 | 9943 | N/A |
| 34 | 11/16/2017 | 76.5078 | 7317.461 | 5861 | 5233 | 500,940 | 9576 | N/A |
| 35 | 11/16/2017 | 75.7352 | 7282.065 | 5847 | 4844 | 501,110 | 9939 | N/A |
| 36 | 11/17/2017 | 75.8525 | 7349.926 | 5453 | 4928 | 502,860 | 9892 | N/A |
| 37 | 11/17/2017 | 76.6396 | 7404.349 | 5514 | 5244 | 499,810 | 9613 | N/A |
| 38 | 11/17/2017 | 79.9863 | 7146.954 | 5814 | 4438 | 500,100 | 10150 | N/A |
| 39 | 11/18/2017 | 79.3912 | 7409.601 | 5448 | 4807 | 501,790 | 9772 | N/A |
| 40 | 11/18/2017 | 72.8613 | 6988.635 | 5560 | 4165 | 499,610 | 10028 | N/A |
| 41 | 11/19/2017 | 74.5858 | 7315.019 | 4937 | 4320 | 501,440 | 9785 | N/A |
| 42 | 11/19/2017 | 79.0357 | 7365.138 | 6150 | 5085 | 501,960 | 9812 | N/A |
| 43 | 11/20/2017 | 74.5236 | 7234.851 | 5148 | 4527 | 502,470 | 9713 | N/A |
| 44 | 11/20/2017 | 73.9087 | 7471.463 | 5814 | 3756 | 502,900 | 9591 | N/A |
| AVG= | | 73.5 | 7,599 | 5,599 | 4,912 | 21,958,980 | 453,549 | TOTAL |

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 | 225' | N/A | 225' | N/A |
| Siltstone/Sandstone | 0 | 147 | 0 | 87 |
| Silty shale | est. 147 | 205 | est. 87 | 227 |
| Sandstone/Siltstone/Shale | est. 205 | 327 | est. 227 | 347 |
| Silty shale | est. 327 | 447 | est. 347 | 565 |
| Siltstone | est. 447 | 547 | est. 565 | 607 |
| Silty shale | est. 547 | 607 | est. 607 | 1,127 |
| Shale | est. 607 | 687 | est. 1127 | 1,387 |
| Silty sandstone | est. 687 | 727 | est. 1387 | 1,507 |
| Silty shale | est. 727 | 767 | est. 1507 | 1,727 |
| Sandstone tr coal | est. 767 | 787 | est. 1727 | 1,767 |
| Sandy shale | est. 787 | 907 | est. 1767 | 1,807 |
| Silty shale | est. 907 | 1,147 | est. 1807 | 1,847 |
| Silty sandstone | est. 1147 | 2,172 | est. 1847 | 2,173 |
| Big Lime | 2,172 | 2,829 | 2,173 | 2,830 |
| Fifty Foot Sandstone | 2,829 | 2,914 | 2,830 | 2,915 |
| Gordon | 2,914 | 3,192 | 2,915 | 3,195 |
| Fifth Sandstone | 3,192 | 3,211 | 3,195 | 3,215 |
| Bayard | 3,211 | 3,999 | 3,215 | 4,034 |
| Speechley | 3,999 | 4,304 | 4,034 | 4,351 |
| Balltown | 4,304 | 4,780 | 4,351 | 4,850 |
| Bradford | 4,780 | 5,208 | 4,850 | 5,297 |
| Benson | 5,208 | 5,473 | 5,297 | 5,573 |
| Alexander | 5,473 | 6,502 | 5,573 | 6,653 |
| Sycamore | 6,502 | 6,675 | 6,653 | 6,852 |
| Middlesex | 6,675 | 6,810 | 6,852 | 7,050 |
| Burkett | 6,810 | 6,839 | 7,050 | 7,106 |
| Tully | 6,839 | 6,888 | 7,106 | 7,215 |
| Marcellus | 6,888 | NA | 7,215 | 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.

Hydraulic Fracturing Fluid Product Component Information Disclosure

| | |
|--------------------------------|------------------------------|
| Job Start Date: | 11/2/2017 |
| Job End Date: | 11/20/2017 |
| State: | West Virginia |
| County: | Doddridge |
| API Number: | 47-017-06630-00-00 |
| Operator Name: | Antero Resources Corporation |
| Well Name and Number: | Burlington 2H |
| Latitude: | 39.34870600 |
| Longitude: | -80.76955600 |
| Datum: | NAD83 |
| Federal Well: | NO |
| Indian Well: | NO |
| True Vertical Depth: | 7,042 |
| Total Base Water Volume (gal): | 19,641,348 |
| 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 | 87.97399 | |
| Sand | U.S. Well Services, LLC | Proppant | Crystalline Silica, quartz | 14808-60-7 | 100.00000 | 11.79850 | |
| HCL Acid (12.6%-17.5%) | U.S. Well Services, LLC | Bulk Acid | Water | 7732-18-5 | 87.40000 | 0.10168 | |
| | | | Hydrogen Chloride | 7647-01-0 | 17.50000 | 0.02364 | |
| LGC-15 | U.S. Well Services, LLC | Gelling Agents | Guar Gum | 9000-30-0 | 50.00000 | 0.02899 | |
| | | | Petroleum Distillates | 64742-47-8 | 60.00000 | 0.02746 | |
| | | | Suspending agent (solid) | 14808-60-7 | 3.00000 | 0.00443 | |
| | | | Surfactant | 68439-51-0 | 3.00000 | 0.00174 | |
| WFRA-405 | U.S. Well Services, LLC | Friction Reducer | 2-Propenoic acid, polymer with 2 propenamide | 9003-06-9 | 30.00000 | 0.01693 | |
| | | | Hydrated light distillate (petroleum) | 64742-47-8 | 30.00000 | 0.01363 | |

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|---------------|-------------------------|---------------------------|--|-------------|-----------|---------|--|
| Bioclear 2000 | U.S. Well Services, LLC | Anti-Bacterial Agent | | | | | |
| | | | 2,2-dibromo-3-nitrilopropionamide | 10222-01-2 | 20.00000 | 0.00421 | |
| | | | Deionized Water | 7732-18-5 | 28.00000 | 0.00241 | |
| SI-1200s | U.S. Well Services, LLC | Scale Inhibitor | | | | | |
| | | | Proprietary Scale Inhibitor | Proprietary | 10.00000 | 0.00128 | |
| AP One | U.S. Well Services, LLC | Gel Breakers | | | | | |
| | | | Ammonium Persulfate | 7727-54-0 | 100.00000 | 0.00102 | |
| AI-303 | U.S. Well Services, LLC | Acid Corrosion Inhibitors | | | | | |
| | | | Ethylene glycol | 107-21-1 | 40.00000 | 0.00004 | |
| | | | Cinnamaldehyde | 104-55-2 | 20.00000 | 0.00001 | |
| | | | Formic acid | 64-18-6 | 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)

For
WV Management of
JUL 06 2018
- 01 OH and Cus
FIELD

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 DIVISION OF OIL AND GAS
 API WELL # 47-017-06630

WV Department of Environmental Protection
 Office of Oil and Gas

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PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 (SPECIFY) AS DRILLED PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL
 PLUG OFF OLD FORMATION CLEAN OUT & REPLUG
 TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH 7,028' TVD 15,942' MD
 DESIGNATED AGENT CT CORPORATION SYSTEM-DJANNA STAMPER
 WELL OPERATOR ANTERO RESOURCES CORP
 ADDRESS 1615 WYNKOOP STREET DENVER, CO 80202

LEASE ACREAGE: 28 AC, 100 AC, 50 AC, 428.5 AC, 96 AC
 SURFACE OWNER YVONNE R. FOSTER
 QUADRANGLE WEST UNION 7.5
 DISTRICT WEST UNION COUNTY DODDRIDGE
 LOCATION: ELEVATION 1,229' AS DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK
 (IF "GAS") PRODUCTION X STORAGE DEEP WASTE DISPOSAL
 WELL TYPE: OIL GAS X LIQUID INJECTION

PERMIT COUNTY STATE COUNTY PERMIT
 06630 47 017 06630

NOTICE: 1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO FEET OR MORE FROM 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. THIS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND BOUNDARIES.
 5. THIS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

COUNTY NAME PERMIT



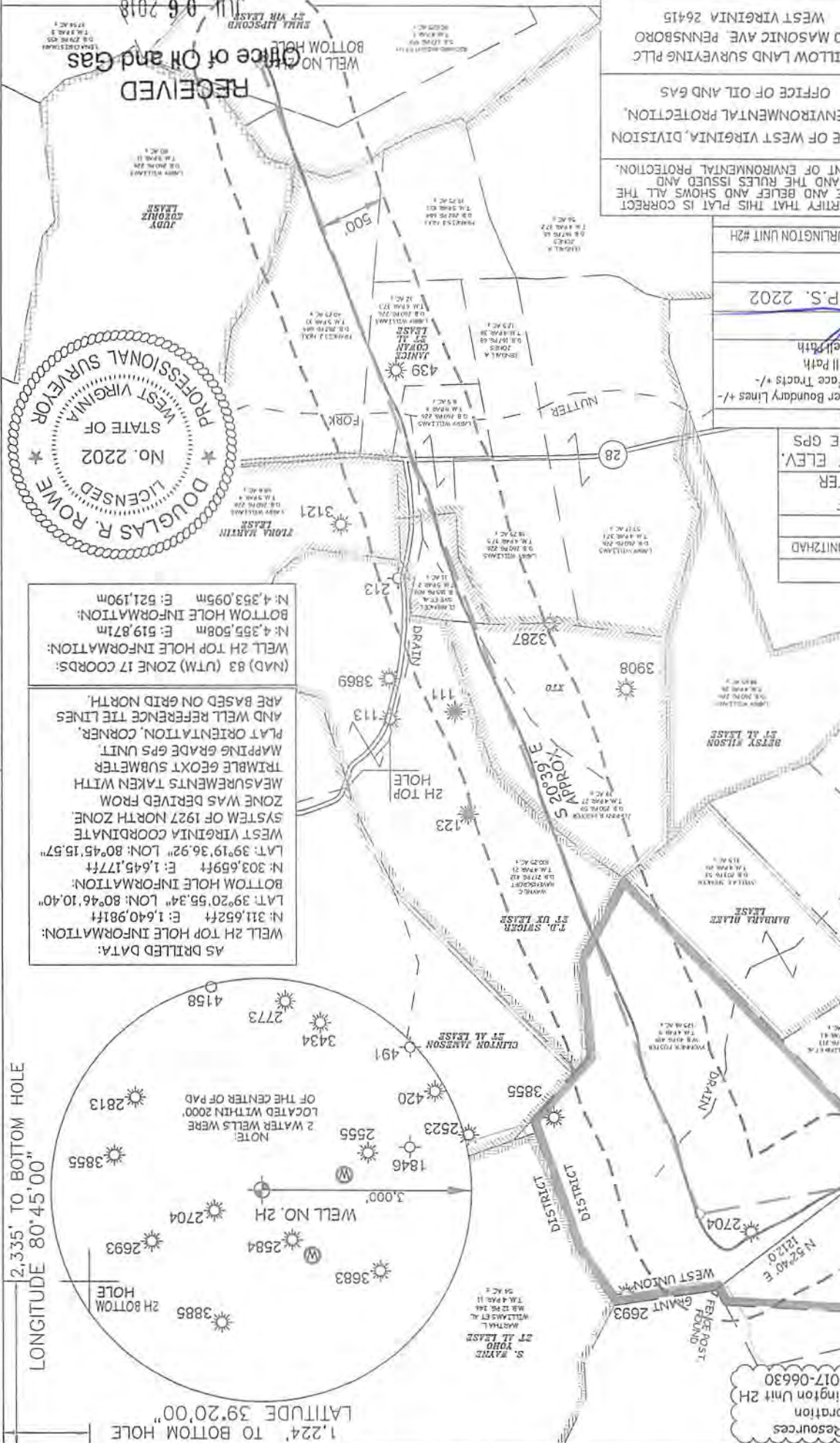
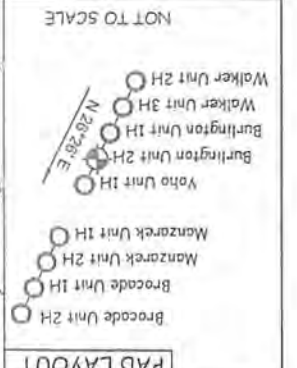
STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WILLOW LAND SURVEYING PLLC
 220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

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

OPERATOR'S WELL # BURLINGTON UNIT #2H
 DATE 05/01/18
 DOUGLAS R. ROWE P.S. 2202

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

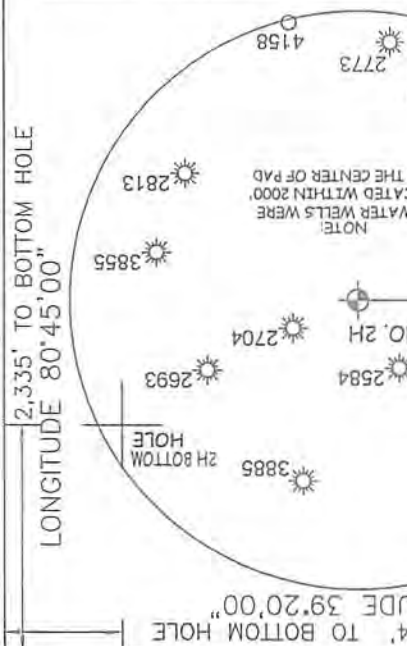
JOB # 14-033WA
 DRAWING # BURLINGTONUNIT2HAD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY
 PROVEN SOURCE OF ELEV. SUBMETER
 SUBMETER MAPPING GRADE GPS



AS DRILLED DATA:
 WELL 2H TOP HOLE INFORMATION:
 N: 1.640,981ft E: 1.640,981ft
 LAT: 39°20'55.34" LON: 80°46'10.40"
 BOTTOM HOLE INFORMATION:
 N: 303,659ft E: 1,645,177ft
 LAT: 39°19'36.92" LON: 80°45'15.57"
 (NAD) 83 (UTM) ZONE 17 COORDS:
 WELL 2H TOP HOLE INFORMATION:
 N: 4,355,508m E: 519,871m
 BOTTOM HOLE INFORMATION:
 N: 4,353,095m E: 521,190m

MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

ZONE WAS DERIVED FROM SYSTEM OF 1927 NORTH ZONE WEST VIRGINIA COORDINATE MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT.



LONGITUDE 80°45'00"
 LONGITUDE 80°45'00"
 LONGITUDE 80°45'00"
 LONGITUDE 80°45'00"

LATITUDE 39°22'30" 5,530'
 LATITUDE 39°20'00" 1,224' TO BOTTOM HOLE
 9,578' 2,335' TO BOTTOM HOLE

07/20/2018

Antero Resources Corporation
 Well No. Burlington Unit 2H
 A.P.I. 47-017-06630

LATITUDE 39°22'30"

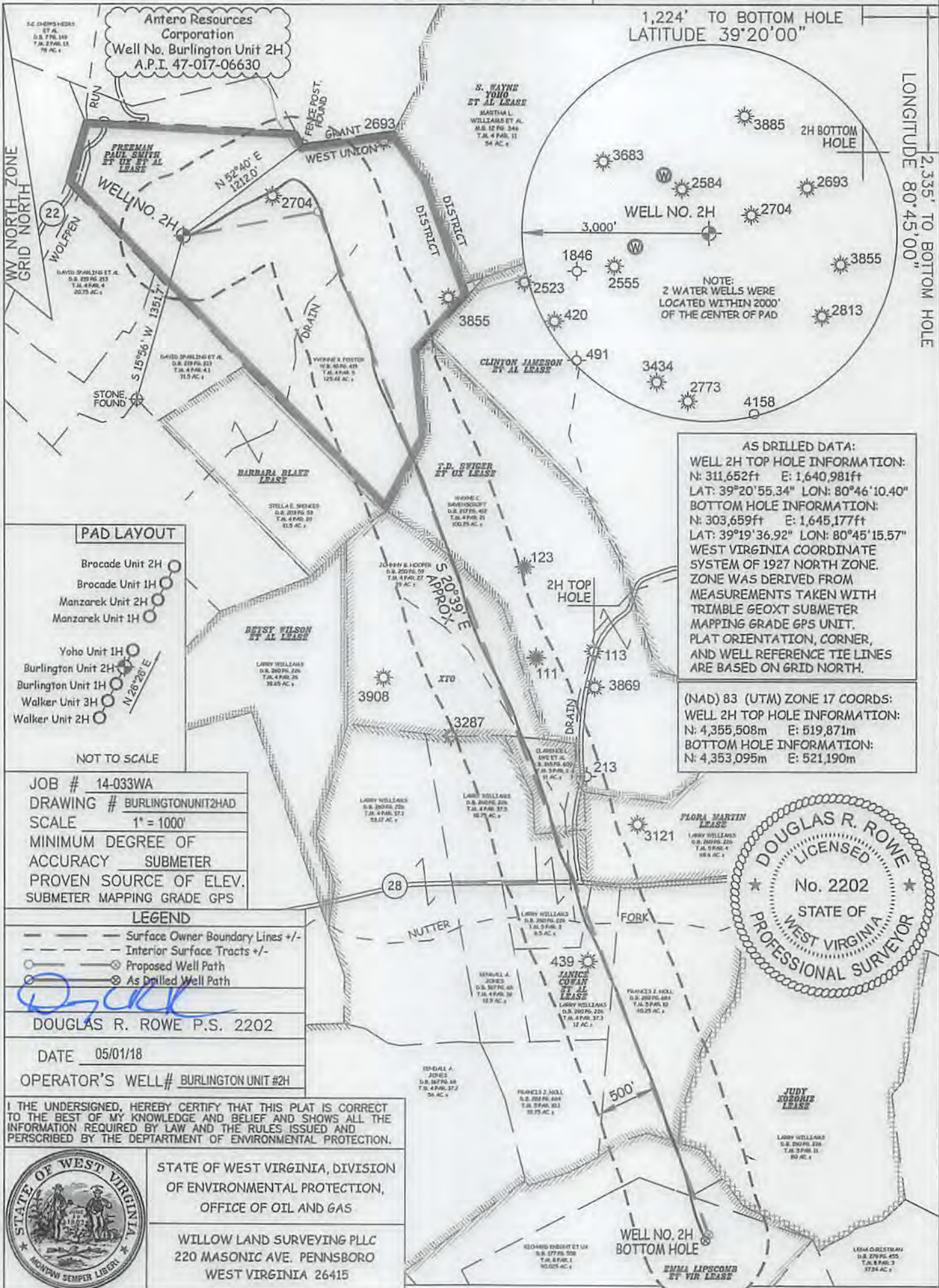
5,530'

1,224' TO BOTTOM HOLE
LATITUDE 39°20'00"

LONGITUDE 80°45'00"

9,578'

LONGITUDE 80°45'00"



Antero Resources Corporation
Well No. Burlington Unit 2H
A.P.I. 47-017-06630

AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
N: 311,652ft E: 1,640,981ft
LAT: 39°20'55.34" LON: 80°46'10.40"
BOTTOM HOLE INFORMATION:
N: 303,659ft E: 1,645,177ft
LAT: 39°19'36.92" LON: 80°45'15.57"
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: 4,355,508m E: 519,871m
BOTTOM HOLE INFORMATION:
N: 4,353,095m E: 521,190m



PAD LAYOUT

- Brocade Unit 2H
- Brocade Unit 1H
- Manzarek Unit 2H
- Manzarek Unit 1H
- Yoho Unit 1H
- Burlington Unit 2H
- Burlington Unit 1H
- Walker Unit 3H
- Walker Unit 2H

NOT TO SCALE

JOB # 14-033WA
DRAWING # BURLINGTONUNIT2HAD
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 05/01/18

OPERATOR'S WELL # BURLINGTON UNIT #2H

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 RULES 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

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

API WELL # 47 - 017 - 06630

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL

(IF "GAS") PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 1,229' AS DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK

QUADRANGLE WEST UNION 7.5 DISTRICT WEST UNION COUNTY DODDRIDGE

SURFACE OWNER YVONNE R. FOSTER ACREAGE 125.48 ACRES +/-

OIL & GAS ROYALTY OWNER FREEMAN PAUL SMITH ET UX ET AL; T.D. SWIGER ET UX; XTO; JANICE COWAN ET AL; EMMA LIPSCOMB ET VIR

LEASE ACREAGE 125 AC±; 100 AC±; 50 AC±; 428.5 AC±; 96 AC±

- 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 ABOVE AND ONLY THE RELATIONSHIP TO THE CERTAIN 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.

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

TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,028' TVD 15,942' 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

COUNTY NAME

PERMIT

04/20/2018