

Reviewed

Paul A. ...
6/6/18

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

API 47-017-06535 County Doddridge District Grant
Quad West Union 7.5' Pad Name Melody Pad Field/Pool Name _____
Farm name Melody Brown, et al Well Number Bradford 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 4356587m Easting 520756m
Landing Point of Curve Northing 4356682.15m Easting 520350.16m
Bottom Hole Northing 4358329m Easting 519691m

Elevation (ft) 1135' 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 5/20/2014 Date drilling commenced 4/13/2016 Date drilling ceased 7/21/2016
Date completion activities began 10/14/2017 Date completion activities ceased 11/20/2017
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 31', 36', 45', 46' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 865', 1410', 1528' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 1821' 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 - 06535 Farm name Melody Brown, et al Well number Bradford 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#, H-40 | N/A | Y |
| Surface | 17-1/2" | 13-3/8" | 502' | New | 48#, H-40 | N/A | Y |
| Coal | | | | | | | |
| Intermediate 1 | 12-1/4" | 9-5/8" | 2574' | New | 36#, J-55 | N/A | Y |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 8-3/4"/8-1/2" | 5-1/2" | 13857' | New | 23#, P-110 | N/A | Y |
| Tubing | | 2-3/8" | | | 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 | ? sx | 15.6 | 1.18 | | 0' | 8 Hrs. |
| Surface | Class A | 670 sx | 15.6 | 1.19 | | 0' | 8 Hrs. |
| Coal | | | | | | | |
| Intermediate 1 | Class A | 940 sx | 15.6 | 1.18 | | 0' | 8 Hrs. |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | Class H | 1068 sx (Lead) 1113 sx (Tail) | 14.50 (Lead), 15.21 (Tail) | (Lead), (Tail) | | -500' into Intermediate Casing | 8 Hrs. |
| Tubing | | | | | | | |

Drillers TD (ft) 15000' MD, 7200' TVD (BHL), 6879' (Deepest Point Drilled) Loggers TD (ft) 15000' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

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Kick off depth (ft) 6328'

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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

API 47-017-06535 Farm Name Melody Brown et al Well Number Bradford Unit 2H

EXHIBIT 1

| Stage No. | Perforation Date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formations |
|-----------|------------------|------------------------|----------------------|------------------------|------------|
| 1 | 10/14/2017 | 13564 | 13730 | 60 | Marcellus |
| 2 | 10/15/2017 | 13368 | 13533 | 60 | Marcellus |
| 3 | 10/15/2017 | 13171 | 13337 | 60 | Marcellus |
| 4 | 10/15/2017 | 12974 | 13140 | 60 | Marcellus |
| 5 | 10/15/2017 | 12778 | 12944 | 60 | Marcellus |
| 6 | 10/16/2017 | 12581 | 12747 | 60 | Marcellus |
| 7 | 10/16/2017 | 12385 | 12551 | 60 | Marcellus |
| 8 | 10/16/2017 | 12188 | 12354 | 60 | Marcellus |
| 9 | 10/16/2017 | 11992 | 12158 | 60 | Marcellus |
| 10 | 10/16/2017 | 11795 | 11961 | 60 | Marcellus |
| 11 | 10/16/2017 | 11599 | 11764 | 60 | Marcellus |
| 12 | 10/17/2017 | 11402 | 11568 | 60 | Marcellus |
| 13 | 10/17/2017 | 11206 | 11371 | 60 | Marcellus |
| 14 | 10/17/2017 | 11009 | 11175 | 60 | Marcellus |
| 15 | 10/17/2017 | 10812 | 10978 | 60 | Marcellus |
| 16 | 10/17/2017 | 10616 | 10782 | 60 | Marcellus |
| 17 | 10/18/2017 | 10419 | 10585 | 60 | Marcellus |
| 18 | 10/18/2017 | 10223 | 10389 | 60 | Marcellus |
| 19 | 10/18/2017 | 10026 | 10192 | 60 | Marcellus |
| 20 | 10/18/2017 | 9830 | 9995 | 60 | Marcellus |
| 21 | 10/18/2017 | 9633 | 9799 | 60 | Marcellus |
| 22 | 10/19/2017 | 9437 | 9602 | 60 | Marcellus |
| 23 | 10/19/2017 | 9240 | 9406 | 60 | Marcellus |
| 24 | 10/19/2017 | 9044 | 9209 | 60 | Marcellus |
| 25 | 10/19/2017 | 8847 | 9013 | 60 | Marcellus |
| 26 | 10/19/2017 | 8650 | 8816 | 60 | Marcellus |
| 27 | 10/19/2017 | 8454 | 8620 | 60 | Marcellus |
| 28 | 10/20/2017 | 8257 | 8423 | 60 | Marcellus |
| 29 | 10/20/2017 | 8061 | 8227 | 60 | Marcellus |
| 30 | 10/20/2017 | 7864 | 8030 | 60 | Marcellus |
| 31 | 10/20/2017 | 7668 | 7833 | 60 | Marcellus |
| 32 | 10/20/2017 | 7471 | 7637 | 60 | Marcellus |
| 33 | 10/20/2017 | 7275 | 7440 | 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 | 10/14/2017 | 75.4 | 7891 | 5854 | 3989 | 409350 | 10322 | N/A |
| 2 | 10/15/2017 | 77 | 8062 | 6413 | 4147 | 410500 | 8306.286 | N/A |
| 3 | 10/15/2017 | 75.5374 | 7972.491 | 6267 | 4197 | 409500 | 8330 | N/A |
| 4 | 10/15/2017 | 75.933 | 7786.515 | 6177 | 3900 | 409850 | 8296 | N/A |
| 5 | 10/15/2017 | 75.9 | 8048 | 6056 | 4161 | 411100 | 8273.19 | N/A |
| 6 | 10/16/2017 | 76.6 | 8395 | 6142 | 3995 | 410900 | 8257.024 | N/A |
| 7 | 10/16/2017 | 78.357 | 8144.445 | 6254 | 4902 | 410870 | 8410.333 | N/A |
| 8 | 10/16/2017 | 80.1366 | 8001.909 | 4865 | 4583 | 410360 | 8565 | N/A |
| 9 | 10/16/2017 | 79.4779 | 7859.019 | 5961 | 4532 | 411880 | 8587 | N/A |
| 10 | 10/16/2017 | 76.4802 | 8293.405 | 5815 | 4667 | 410940 | 8219.357 | N/A |
| 11 | 10/16/2017 | 77.8112 | 8444.365 | 5884 | 4746 | 409800 | 8130.381 | N/A |
| 12 | 10/17/2017 | 79.4206 | 8337.49 | 6000 | 4606 | 411550 | 8129.024 | N/A |
| 13 | 10/17/2017 | 78.2916 | 8069.518 | 5802 | 4379 | 409760 | 8229 | N/A |
| 14 | 10/17/2017 | 79.4354 | 8163.245 | 5860 | 4120 | 411820 | 8558 | N/A |
| 15 | 10/17/2017 | 78.1195 | 8769.374 | 5971 | 5608 | 410990 | 8115 | N/A |
| 16 | 10/17/2017 | 75.2639 | 8519.84 | 6047 | 4409 | 410340 | 8111.381 | N/A |
| 17 | 10/18/2017 | 77.0697 | 8211.147 | 5656 | 4916 | 409560 | 8070.381 | N/A |
| 18 | 10/18/2017 | 80.3407 | 8038.679 | 6076 | 4823 | 411890 | 8656.643 | N/A |
| 19 | 10/18/2017 | 80.3041 | 7992.775 | 6014 | 4618 | 410500 | 8548 | N/A |
| 20 | 10/18/2017 | 80.0609 | 8076.826 | 6123 | 4623 | 410720 | 8640 | N/A |
| 21 | 10/18/2017 | 77.8322 | 8590.802 | 5943 | 4486 | 410330 | 7966.381 | N/A |
| 22 | 10/19/2017 | 80.8619 | 8519.333 | 6100 | 4769 | 409900 | 7974.048 | N/A |
| 23 | 10/19/2017 | 81.6348 | 7979.023 | 5649 | 4617 | 412220 | 7969.381 | N/A |
| 24 | 10/19/2017 | 79.5222 | 7983.507 | 5920 | 4893 | 409680 | 8136 | N/A |
| 25 | 10/19/2017 | 76.8537 | 7936.86 | 6107 | 4435 | 411330 | 8086 | N/A |
| 26 | 10/19/2017 | 78.0229 | 8253.617 | 6103 | 4541 | 409770 | 7986.476 | N/A |
| 27 | 10/19/2017 | 77.2258 | 8374.73 | 6197 | 4737 | 410910 | 7992.381 | N/A |
| 28 | 10/20/2017 | 74.9644 | 8273.626 | 6033 | 5113 | 410500 | 8954.405 | N/A |
| 29 | 10/20/2017 | 79.7293 | 7602.246 | 5829 | 4452 | 409900 | 8279 | N/A |
| 30 | 10/20/2017 | 80.6528 | 8020.276 | 6336 | 4488 | 409850 | 8242 | N/A |
| 31 | 10/20/2017 | 80.1451 | 8208.138 | 6119 | 4710 | 410500 | 8152 | N/A |
| 32 | 10/20/2017 | 74.7728 | 8447.592 | 6257 | 4820 | 409890 | 7962.381 | N/A |
| 33 | 10/20/2017 | 72.2754 | 8488.068 | 6030 | 4355 | 410030 | 7896.381 | N/A |
| | AVG= | 78.1 | 8,165 | 5,995 | 4,562 | 13,136,960 | 266,454 | 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 | 31' | N/A | N/A | N/A |
| Fresh Water | 36' | N/A | N/A | N/A |
| Fresh Water | 45' | N/A | N/A | N/A |
| Fresh Water | 46' | N/A | N/A | N/A |
| Silt | 0 | 100 | 0 | 100 |
| Sandstone | 100 | 300 | 100 | 300 |
| Siltstone (tr coal) | 300 | 420 | 300 | 420 |
| Silty Sandstone | 420 | 600 | 420 | 600 |
| Sandy siltstone | 600 | 780 | 600 | 780 |
| Limestone | 780 | 800 | 780 | 800 |
| Sandy siltstone | 800 | 880 | 800 | 880 |
| Limey Siltstone | 880 | 980 | 880 | 980 |
| Sandy shale | 980 | 1,300 | 980 | 1,300 |
| Sandstone | 1,300 | 1,420 | 1,300 | 1,420 |
| Sandy shale | 1,420 | 1,580 | 1,420 | 1,580 |
| Silty Sandstone (tr coal) | 1,580 | 1,780 | 1,580 | 1,780 |
| Sandstone | 1,780 | 1,840 | 1,780 | 1,840 |
| Coal | 1,840 | 2,020 | 1,840 | 2,020 |
| Limey Siltstone | 2,020 | 2,080 | 2,020 | 2,083 |
| Big Lime | 2,080 | 2,628 | 2,083 | 2,632 |
| Gantz Sand | 2,628 | 2,749 | 2,632 | 2,753 |
| Fifty Foot Sandstone | 2,749 | 2,838 | 2,753 | 2,842 |
| Gordon | 2,838 | 3,133 | 2,842 | 3,140 |
| Fifth Sandstone | 3,133 | 3,151 | 3,140 | 3,159 |
| Bayard | 3,151 | 3,957 | 3,159 | 3,989 |
| Speechley | 3,957 | 4,187 | 3,989 | 4,225 |
| Baltown | 4,187 | 4,692 | 4,225 | 4,747 |
| Bradford | 4,692 | 5,155 | 4,747 | 5,225 |
| Benson | 5,155 | 5,426 | 5,225 | 5,504 |
| Alexander | 5,426 | 5,583 | 5,504 | 5,666 |
| Elk | 5,583 | 6,100 | 5,666 | 6,199 |
| Rhinestreet | 6,100 | 6,457 | 6,199 | 6,468 |
| Sycamore | 6,455 | 6,628 | 6,595 | 6,839 |
| Middlesex | 6,628 | 6,761 | 6,839 | 7,067 |
| Burkett | 6,761 | 6,790 | 7,067 | 7,123 |
| Tully | 6,790 | 6,841 | 7,123 | 7,255 |
| Marcellus | 6,841 | NA | 7,255 | 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 ~~formation~~ ^{formation} departure.

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Hydraulic Fracturing Fluid Product Component Information Disclosure

| | |
|--------------------------------|------------------------------|
| Job Start Date: | 10/14/2017 |
| Job End Date: | 10/20/2017 |
| State: | West Virginia |
| County: | Doddridge |
| API Number: | 47-017-06535-00-00 |
| Operator Name: | Antero Resources Corporation |
| Well Name and Number: | Bradford 2H |
| Latitude: | 39.35840000 |
| Longitude: | -80.75925556 |
| Datum: | NAD83 |
| Federal Well: | NO |
| Indian Well: | NO |
| True Vertical Depth: | 6,879 |
| Total Base Water Volume (gal): | 11,815,867 |
| Total Base Non Water Volume: | 0 |



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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 | 87.74173 | |
| Sand | U.S. Well Services, LLC | Proppant | Crystalline Silica, quartz | 14808-60-7 | 100.00000 | 12.06195 | |
| HCL Acid (12.6%-17.5%) | U.S. Well Services, LLC | Bulk Acid | Water | 7732-18-5 | 87.40000 | 0.11346 | |
| | | | Hydrogen Chloride | 7647-01-0 | 17.50000 | 0.02638 | |
| WFRA-405 | U.S. Well Services, LLC | Friction Reducer | 2-Propenoic acid, polymer with 2-propenamide | 29003-06-9 | 30.00000 | 0.01660 | |
| | | | Hydrated light distillate (petroleum) | 64742-47-8 | 30.00000 | 0.01336 | |
| LGC-15 | U.S. Well Services, LLC | Gelling Agents | Guar Gum | 9000-30-0 | 50.00000 | 0.00554 | |
| | | | Petroleum Distillates | 64742-47-8 | 60.00000 | 0.00525 | |
| | | | Suspending agent (solid) | 14808-60-7 | 3.00000 | 0.00085 | |
| | | | Surfactant | 68439-51-0 | 3.00000 | 0.00033 | |

| | | | | | | | |
|---------------|-------------------------|---------------------------|--|-------------|-----------|---------|--|
| SI-1200 | U.S. Well Services, LLC | Scale Inhibitor | | | | | |
| | | | Ethylene Glycol | 107-21-1 | 40.00000 | 0.00601 | |
| | | | Proprietary Scale Inhibitor | Proprietary | 10.00000 | 0.00161 | |
| Bioclear 2000 | U.S. Well Services, LLC | Anti-Bacterial Agent | | | | | |
| | | | 2,2-dibromo-3-nitrilopropionamide | 10222-01-2 | 20.00000 | 0.00413 | |
| | | | Deionized Water | 7732-18-5 | 28.00000 | 0.00236 | |
| SI-1200s | U.S. Well Services, LLC | Scale Inhibitor | | | | | |
| | | | Proprietary Scale Inhibitor | Proprietary | 10.00000 | 0.00021 | |
| AP One | U.S. Well Services, LLC | Gel Breakers | | | | | |
| | | | Ammonium Persulfate | 7727-54-0 | 100.00000 | 0.00014 | |
| 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 | 0.00002 | |
| | | | Formic acid | 64-18-6 | 20.00000 | 0.00002 | |
| | | | 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°22'30" 2,618'

6,130' TO BOTTOM HOLE

LATITUDE 39°22'30"

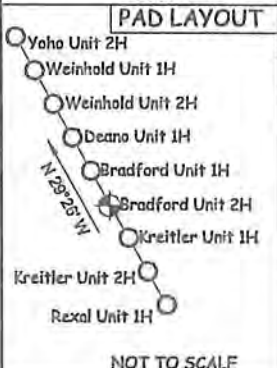
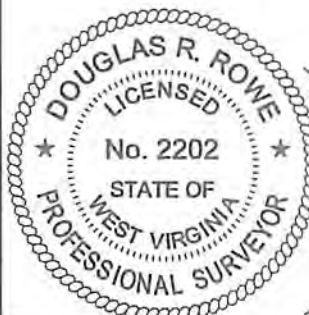
320' TO BOTTOM HOLE
LONGITUDE 80°45'00"

6,046'

LONGITUDE 80°45'00"

Antero Resources Corporation
Well No. Bradford Unit 2H
A.P.I. 47-017-06535

- 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.



JOB # 13-033WA
DRAWING # BRADFORDUNIT2HAD
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 04/03/18
OPERATOR'S WELL# BRADFORD 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.



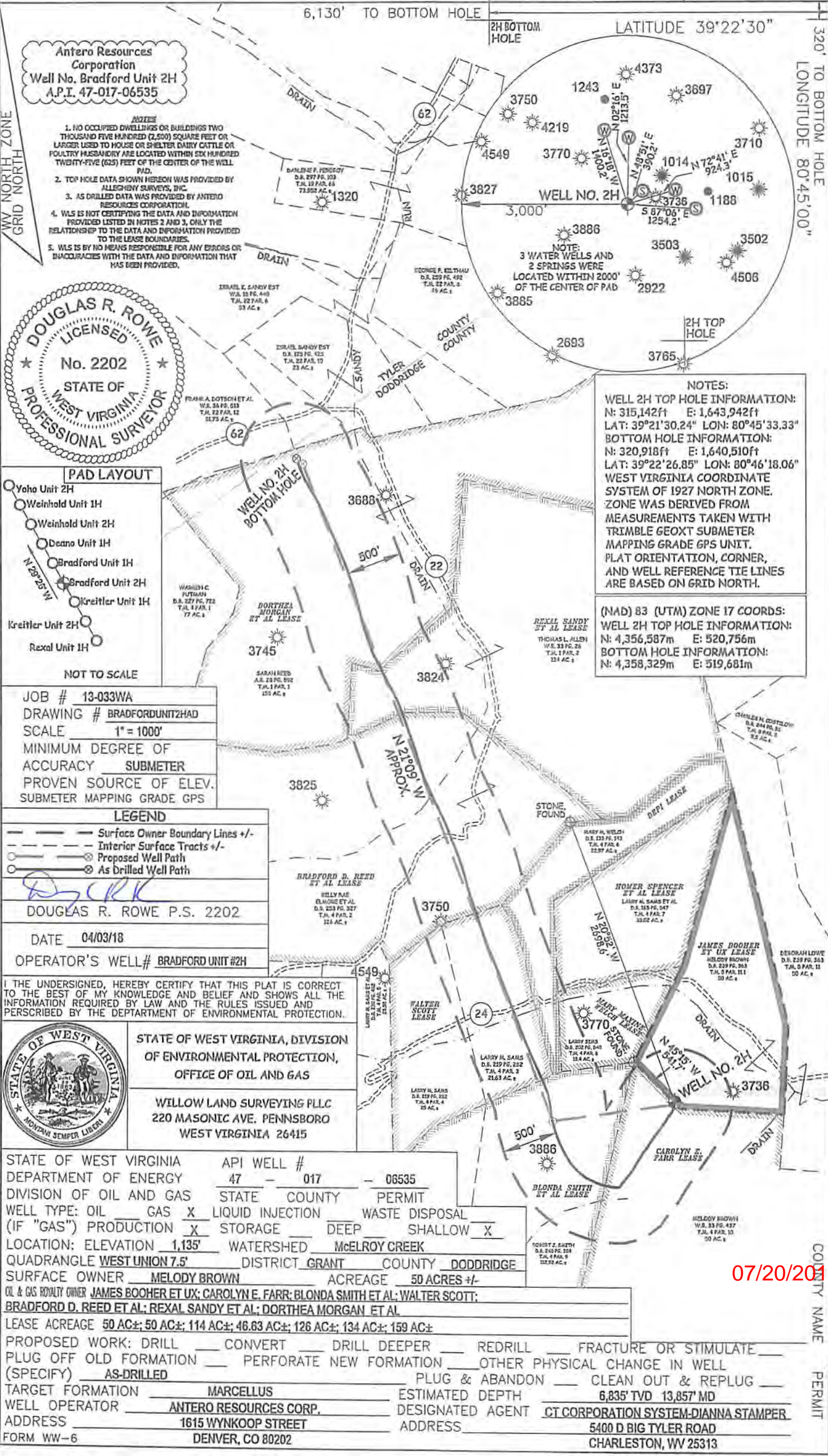
STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY
DIVISION OF OIL AND GAS
WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS") PRODUCTION X STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 1,135' WATERSHED McELROY CREEK
QUADRANGLE WEST UNION 7.5' DISTRICT GRANT COUNTY DODDRIDGE
SURFACE OWNER MELODY BROWN ACREAGE 50 ACRES +/-
OIL & GAS ROYALTY OWNER JAMES BOOHER ET UX; CAROLYN E. FARR; BLONDA SMITH ET AL; WALTER SCOTT;
BRADFORD D. REED ET AL; REXAL SANDY ET AL; DORTHEA MORGAN ET AL

LEASE ACREAGE 50 AC±; 50 AC±; 114 AC±; 46.63 AC±; 126 AC±; 134 AC±; 159 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 6,835' TVD 13,857' 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

NOTES:
WELL 2H TOP HOLE INFORMATION:
N: 315,142ft E: 1,643,942ft
LAT: 39°21'30.24" LON: 80°45'33.33"
BOTTOM HOLE INFORMATION:
N: 320,918ft E: 1,640,510ft
LAT: 39°22'26.85" LON: 80°46'18.06"
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: 4,356,587m E: 520,756m
BOTTOM HOLE INFORMATION:
N: 4,358,329m E: 519,681m



07/20/2018

COUNTY NAME PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 DIVISION OF OIL AND GAS
 WELLS TYPE: OIL GAS X LIQUID INJECTION
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
 LOCATION: ELEVATION 1,135' WATERSHED MCELROY CREEK
 QUADRANGLE WEST UNION 7.5 DISTRICT GRANT COUNTY DODDRIDGE
 SURFACE OWNER MELODY BROWN ACREAGE 50 ACRES +/-
 BRADFORD D. REED ET AL: REXAL SANDY ET AL: DORTHEA MORGAN ET AL
 LEASE ACREAGE 50 AC; 50 AC; 114 AC; 46.63 AC; 126 AC; 134 AC; 169 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
 TARGET FORMATION MARCELLUS
 WELL OPERATOR ANTERO RESOURCES CORP.
 ADDRESS 1615 WYNKOOP STREET DENVER, CO 80202
 DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER
 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

FORM WV-6
 PERMIT COUNTY NAME
 47 - 017 - 06535
 API WELL #
 STATE COUNTY PERMIT
 WASTE DISPOSAL DEEP SHALLOW X
 WELLS TYPE: OIL GAS X LIQUID INJECTION
 (IF "GAS") PRODUCTION X STORAGE DEEP SHALLOW X
 LOCATION: ELEVATION 1,135' WATERSHED MCELROY CREEK
 QUADRANGLE WEST UNION 7.5 DISTRICT GRANT COUNTY DODDRIDGE
 SURFACE OWNER MELODY BROWN ACREAGE 50 ACRES +/-
 BRADFORD D. REED ET AL: REXAL SANDY ET AL: DORTHEA MORGAN ET AL
 LEASE ACREAGE 50 AC; 50 AC; 114 AC; 46.63 AC; 126 AC; 134 AC; 169 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
 TARGET FORMATION MARCELLUS
 WELL OPERATOR ANTERO RESOURCES CORP.
 ADDRESS 1615 WYNKOOP STREET DENVER, CO 80202
 DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER
 5400 D BIG TYLER ROAD CHARLESTON, WV 25313

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS
 WILLOW LAND SURVEYING P.L.C.
 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
 PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.
 STATE OF WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS
 WILLOW LAND SURVEYING P.L.C.
 220 MASONIC AVE. PENNSBORO
 WEST VIRGINIA 26415
 DATE 04/03/18
 OPERATOR'S WELL # BRADFORD UNIT 2H
 DOUGLAS R. ROWE P.S. 2202
 LEGEND
 Surface Owner Boundary Lines +/-
 Interior Surface Tracts +/-
 Proposed Well Path
 As Drilled Well Path

JOB # 13-033WA
 DRAWING # BRADFORDUNIT2HAD
 SCALE 1" = 100'
 MINIMUM DEGREE OF ACCURACY
 PROVEN SOURCE OF ELEV. SUBMETER
 SUBMETER MAPPING GRADE GPS
 NOT TO SCALE
 PAD LAYOUT
 Yoho Unit 2H
 Weithold Unit 1H
 Weithold Unit 2H
 Demo Unit 1H
 Bradford Unit 1H
 Bradford Unit 2H
 Ketcher Unit 1H
 Ketcher Unit 2H
 N 2625 W
 8102/00470

NOTES:
 WELL 2H TOP HOLE INFORMATION: N: 315.142ft E: 1,643.942ft LAT: 39°21'30.24" LON: 80°45'33.33"
 BOTTOM HOLE INFORMATION: N: 320.918ft E: 1,640.510ft LAT: 39°22'26.85" LON: 80°46'18.06"
 WELL 2H TOP HOLE INFORMATION: N: 4,356.587m E: 520.756m
 BOTTOM HOLE INFORMATION: N: 4,358.329m E: 519.681m
 (NAD) 83 (UTM) ZONE 17 COORDS:
 MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.
 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.
 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.

PROFESSIONAL SURVEYOR
 STATE OF WEST VIRGINIA
 LICENSED
 NO. 2202
 DOUGLAS R. ROWE
 1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR STABLE DAIRY CATTLE OR HORSES USED TO HOUSE OR STABLE DAIRY CATTLE OR HORSES WITHIN 250 FEET OF THE CENTER OF THE WELL.
 2. TOP HOLE DATA SHOWING HEIGHTS WAS PROVIDED BY ALTERNATE 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 INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
 5. THIS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR DISCREPANCIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

ANTERO RESOURCES CORPORATION
 Well No. Bradford Unit 2H
 A.P.I. 47-017-06535
 6.130' TO BOTTOM HOLE
 LATITUDE 39°22'30"
 2.618'
 320' TO BOTTOM HOLE
 LONGITUDE 80°45'00"
 6.046'
 LONGITUDE 80°45'00"
 320' TO BOTTOM HOLE
 LATITUDE 39°22'30"
 2.618'

