

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

API 47-017-06776 County Doddridge District West Union
Quad West Union 7.5' Pad Name Yvonne Pad Field/Pool Name -----
Farm name Yvonne Foster Well Number Manzarek 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 4355519.396m Easting 519876.439m
Landing Point of Curve Northing 4355568.60m Easting 519884.86m
Bottom Hole Northing 4357652.436m Easting 519070.001m

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 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

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Date permit issued 9/9/2016 Date drilling commenced 9/11/2016 Date drilling ceased 11/18/2016
Date completion activities began 10/11/2017 Date completion activities ceased 2/26/2018
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 - 06776 Farm name Yvonne Foster Well number Manzarek 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" | 587' | New | 48#, H-40 | N/A | Y |
| Coal | | | | | | | |
| Intermediate 1 | 12-1/4" | 9-5/8" | 2653' | New | 36#, J-55 | N/A | Y |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 8-3/4"/8-1/2" | 5-1/2" | 14790' | New | 23#, P-110 | N/A | Y |
| Tubing | | 2-3/8" | 7052' | | 4.7#, P-110 | | |
| 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 | 721 sx | 15.5 | 1.20 | 865 | 0' | 8 Hrs. |
| Coal | | | | | | | |
| Intermediate 1 | Class A | 984 sx | 15.6 | 1.18 | 1161 | 0' | 8 Hrs. |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | Class H | 900 sx (Lead) 1325 sx (Tail) | 13.5 (Lead), 15.2 (Tail) | 1.44 (Lead), 1.87 (Tail) | 3774 | -500' into Intermediate Casing | 8 Hrs. |
| Tubing | | | | | | | |

Drillers TD (ft) 14790' MD, 6898' TVD (BHL), 6932' (Deepest Point Drilled) Loggers TD (ft) 14790' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

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Kick off depth (ft) 6311'

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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

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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 47-017-06776 Farm Name Yvonne Foster Well Number Manzarek Unit 2H

EXHIBIT 1

| Stage No. | Perforation Date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formations |
|-----------|------------------|------------------------|----------------------|------------------------|------------|
| 1 | 10/11/2017 | 14520 | 14689 | 48 | Marcellus |
| 2 | 12/15/2017 | 14320 | 14489 | 48 | Marcellus |
| 3 | 12/15/2017 | 14120 | 14289 | 48 | Marcellus |
| 4 | 12/16/2017 | 13921 | 14089 | 48 | Marcellus |
| 5 | 12/16/2017 | 13721 | 13889 | 48 | Marcellus |
| 6 | 12/16/2017 | 13521 | 13689 | 48 | Marcellus |
| 7 | 12/16/2017 | 13321 | 13490 | 48 | Marcellus |
| 8 | 12/17/2017 | 13121 | 13290 | 48 | Marcellus |
| 9 | 12/17/2017 | 12921 | 13090 | 48 | Marcellus |
| 10 | 12/17/2017 | 12722 | 12890 | 48 | Marcellus |
| 11 | 12/18/2017 | 12522 | 12690 | 48 | Marcellus |
| 12 | 12/18/2017 | 12322 | 12490 | 48 | Marcellus |
| 13 | 12/18/2017 | 12122 | 12291 | 48 | Marcellus |
| 14 | 12/19/2017 | 11922 | 12091 | 48 | Marcellus |
| 15 | 12/19/2017 | 11722 | 11891 | 48 | Marcellus |
| 16 | 12/19/2017 | 11523 | 11691 | 48 | Marcellus |
| 17 | 12/20/2017 | 11323 | 11491 | 48 | Marcellus |
| 18 | 12/20/2017 | 11123 | 11291 | 48 | Marcellus |
| 19 | 12/21/2017 | 10923 | 11092 | 48 | Marcellus |
| 20 | 12/21/2017 | 10723 | 10892 | 48 | Marcellus |
| 21 | 12/21/2017 | 10523 | 10692 | 48 | Marcellus |
| 22 | 12/22/2017 | 10323 | 10492 | 48 | Marcellus |
| 23 | 12/22/2017 | 10124 | 10292 | 48 | Marcellus |
| 24 | 12/22/2017 | 9924 | 10092 | 48 | Marcellus |
| 25 | 12/23/2017 | 9724 | 9892 | 48 | Marcellus |
| 26 | 12/23/2017 | 9524 | 9693 | 48 | Marcellus |
| 27 | 12/24/2017 | 9324 | 9493 | 48 | Marcellus |
| 28 | 12/24/2017 | 9124 | 9293 | 48 | Marcellus |
| 29 | 12/26/2017 | 8925 | 9093 | 48 | Marcellus |
| 30 | 12/28/2017 | 8725 | 8893 | 48 | Marcellus |
| 31 | 12/28/2017 | 8525 | 8693 | 48 | Marcellus |
| 32 | 12/28/2017 | 8325 | 8494 | 48 | Marcellus |
| 33 | 12/29/2017 | 8125 | 8294 | 48 | Marcellus |
| 34 | 12/29/2017 | 7925 | 8094 | 48 | Marcellus |
| 35 | 12/29/2017 | 7726 | 7894 | 48 | Marcellus |
| 36 | 12/30/2017 | 7526 | 7694 | 48 | Marcellus |
| 37 | 12/30/2017 | 7326 | 7494 | 48 | Marcellus |
| 38 | 12/30/2017 | 7126 | 7295 | 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 | 10/11/2017 | 60.819 | 8008.403 | 5645 | 4462 | 415,660 | 10720 | N/A |
| 2 | 12/15/2017 | 66.0476 | 7364.565 | 5443 | 5027 | 417,055 | 9043 | N/A |
| 3 | 12/15/2017 | 67.3027 | 7319.978 | 5903 | 4226 | 415,740 | 8967.81 | N/A |
| 4 | 12/16/2017 | 66.8383 | 7683.273 | 6062 | 4662 | 416,580 | 8877 | N/A |
| 5 | 12/16/2017 | 69.9026 | 7657.541 | 5674 | 4894 | 419,370 | 8717.786 | N/A |
| 6 | 12/16/2017 | 65.398 | 7314.495 | 5386 | 3986 | 416,660 | 8573.429 | N/A |
| 7 | 12/16/2017 | 71.2386 | 7432.148 | 5429 | 3977 | 415,490 | 8773 | N/A |
| 8 | 12/17/2017 | 68.6456 | 7376.089 | 5389 | 4488 | 417,330 | 8579.619 | N/A |
| 9 | 12/17/2017 | 71.5965 | 7476.733 | 5295 | 4027 | 417,435 | 8579.548 | N/A |
| 10 | 12/17/2017 | 72.1599 | 7359.635 | 5257 | 3897 | 415,930 | 8745 | N/A |
| 11 | 12/18/2017 | 70.2577 | 6976.764 | 5494 | 4127 | 416,270 | 8645 | N/A |
| 12 | 12/18/2017 | 77.221 | 7302.556 | 5349 | 5168 | 416,560 | 8534.476 | N/A |
| 13 | 12/18/2017 | 73.5 | 7378 | 5247 | 4720 | 417,350 | 8501.5 | N/A |
| 14 | 12/19/2017 | 74.3173 | 7361.629 | 5321 | 4517 | 415,735 | 8727.619 | N/A |
| 15 | 12/19/2017 | 72.2758 | 7347.122 | 5401 | 4729 | 415,015 | 10779.93 | N/A |
| 16 | 12/19/2017 | 74.2126 | 7319.422 | 5368 | 4677 | 417,100 | 8736.524 | N/A |
| 17 | 12/20/2017 | 74.9776 | 7252.557 | 5224 | 4293 | 417,260 | 8480.81 | N/A |
| 18 | 12/20/2017 | 74.9371 | 7070.982 | 5613 | 4786 | 417,525 | 8688.333 | N/A |
| 19 | 12/21/2017 | 72.5172 | 7384.63 | 5300 | 4513 | 335,090 | 9601.762 | N/A |
| 20 | 12/21/2017 | 76.6001 | 7365.587 | 5828 | 4181 | 416,330 | 10969.81 | N/A |
| 21 | 12/21/2017 | 74.5348 | 7018.259 | 5146 | 4891 | 415,075 | 8529.143 | N/A |
| 22 | 12/22/2017 | 73.9701 | 7160.898 | 5301 | 4732 | 416,060 | 8453.476 | N/A |
| 23 | 12/22/2017 | 72.594 | 7060.669 | 5954 | 4477 | 416,050 | 8378.095 | N/A |
| 24 | 12/22/2017 | 75.2102 | 7044.676 | 6362 | 3958 | 415,225 | 8621.095 | N/A |
| 25 | 12/23/2017 | 72.8541 | 6921.009 | 5525 | 5137 | 415,980 | 9618.381 | N/A |
| 26 | 12/23/2017 | 67.613 | 7073.377 | 5577 | 4363 | 416,290 | 9559.286 | N/A |
| 27 | 12/24/2017 | 75.3929 | 7267.556 | 5529 | 4250 | 416,275 | 8662.571 | N/A |
| 28 | 12/24/2017 | 75.6035 | 7283.075 | 5573 | 7630 | 376,750 | 9668.81 | N/A |
| 29 | 12/26/2017 | 71.0988 | 7579.775 | 5275 | 4536 | 415,025 | 10622.48 | N/A |
| 30 | 12/28/2017 | 67.7 | 6948 | 5545 | 4346 | 416,200 | 10146.05 | N/A |
| 31 | 12/28/2017 | 71.5354 | 7834.994 | 5443 | 4817 | 336,000 | 10099 | N/A |
| 32 | 12/28/2017 | 73.9 | 7129.4 | 5171 | 4480 | 414,525 | 9964.905 | N/A |
| 33 | 12/29/2017 | 74.2743 | 7068.531 | 5359 | 4216 | 414,300 | 8424 | N/A |
| 34 | 12/29/2017 | 74.8506 | 7157.7 | 5383 | 4355 | 414,850 | 8564 | N/A |
| 35 | 12/29/2017 | 74.4003 | 7108.5 | 5597 | 4120 | 415,325 | 8549.095 | N/A |
| 36 | 12/30/2017 | 73.1259 | 6911.112 | 5866 | 4901 | 415,300 | 8788.595 | N/A |
| 37 | 12/30/2017 | 74.4125 | 6947.404 | 5197 | 5047 | 414,880 | 8318.69 | N/A |
| 38 | 12/30/2017 | 74.6718 | 6804.86 | 5468 | 3933 | 415,620 | 8529 | N/A |
| AVG= | | 72.1 | 7,265 | 5,497 | 4,567 | 15,611,215 | 344,739 | 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 | 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 | 2,147 | est. 1847 | 2,148 |
| Big Lime | 2,147 | 2,826 | 2,148 | 2,827 |
| Fifty Foot Sandstone | 2,826 | 2,910 | 2,827 | 2,911 |
| Gordon | 2,910 | 3,197 | 2,911 | 3,200 |
| Fifth Sandstone | 3,197 | 3,224 | 3,200 | 3,227 |
| Bayard | 3,224 | 4,014 | 3,227 | 4,036 |
| Speechley | 4,014 | 4,256 | 4,036 | 4,285 |
| Balltown | 4,256 | 4,774 | 4,285 | 4,820 |
| Bradford | 4,774 | 5,191 | 4,820 | 5,248 |
| Benson | 5,191 | 5,458 | 5,248 | 5,521 |
| Alexander | 5,458 | 6,493 | 5,521 | 6,602 |
| Sycamore | 6,493 | 6,659 | 6,602 | 6,793 |
| Middlesex | 6,659 | 6,788 | 6,793 | 6,977 |
| Burkett | 6,788 | 6,815 | 6,977 | 7,023 |
| Tully | 6,815 | 6,864 | 7,023 | 7,128 |
| Marcellus | 6,864 | NA | 7,128 | 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: | 12/14/2017 |
| Job End Date: | 12/30/2017 |
| State: | West Virginia |
| County: | Doddridge |
| API Number: | 47-017-06776-00-00 |
| Operator Name: | Antero Resources Corporation |
| Well Name and Number: | Manzarek 2H |
| Latitude: | 39.34880556 |
| Longitude: | -80.76948889 |
| Datum: | NAD83 |
| Federal Well: | NO |
| Indian Well: | NO |
| True Vertical Depth: | 6,944 |
| Total Base Water Volume (gal): | 14,842,166 |
| 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 | 88.56831 | |
| Sand | U.S. Well Services, LLC | Proppant | Crystalline Silica, quartz | 14808-60-7 | 100.00000 | 11.16996 | |
| HCL Acid (12.6%-17.5%) | U.S. Well Services, LLC | Bulk Acid | Water | 7732-18-5 | 87.40000 | 0.11723 | |
| | | | Hydrogen Chloride | 7647-01-0 | 17.50000 | 0.02726 | |
| LGC-15 | U.S. Well Services, LLC | Gelling Agents | Guar Gum | 9000-30-0 | 50.00000 | 0.03567 | |
| | | | Petroleum Distillates | 64742-47-8 | 60.00000 | 0.03378 | |
| | | | Suspending agent (solid) | 14808-60-7 | 3.00000 | 0.00546 | |
| | | | Surfactant | 68439-51-0 | 3.00000 | 0.00214 | |
| WFRA-405 | U.S. Well Services, LLC | Friction Reducer | 2-Propenoic acid, polymer with 2-propenamide | 9003-06-9 | 30.00000 | 0.01721 | |
| | | | Hydrated light distillate (petroleum) | 64742-47-8 | 30.00000 | 0.01385 | |

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| | | | | | | | |
|---------------|-------------------------|---------------------------|--|-------------|-----------|---------|--|
| Bioclear 2000 | U.S. Well Services, LLC | Anti-Bacterial Agent | | | | | |
| | | | 2,2-dibromo-3-nitrilopropionamide | 10222-01-2 | 20.00000 | 0.00427 | |
| | | | Deionized Water | 7732-18-5 | 28.00000 | 0.00244 | |
| SI-1200s | U.S. Well Services, LLC | Scale Inhibitor | | | | | |
| | | | Proprietary Scale Inhibitor | Proprietary | 10.00000 | 0.00129 | |
| AP One | U.S. Well Services, LLC | Gel Breakers | | | | | |
| | | | Ammonium Persulfate | 7727-54-0 | 100.00000 | 0.00103 | |
| 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 | 0.00002 | |
| | | | Cinnamaldehyde | 104-55-2 | 20.00000 | 0.00002 | |
| | | | Butyl cellosolve | 111-76-2 | 20.00000 | 0.00001 | |
| | | | Polyether | 50828-78-6 | 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.

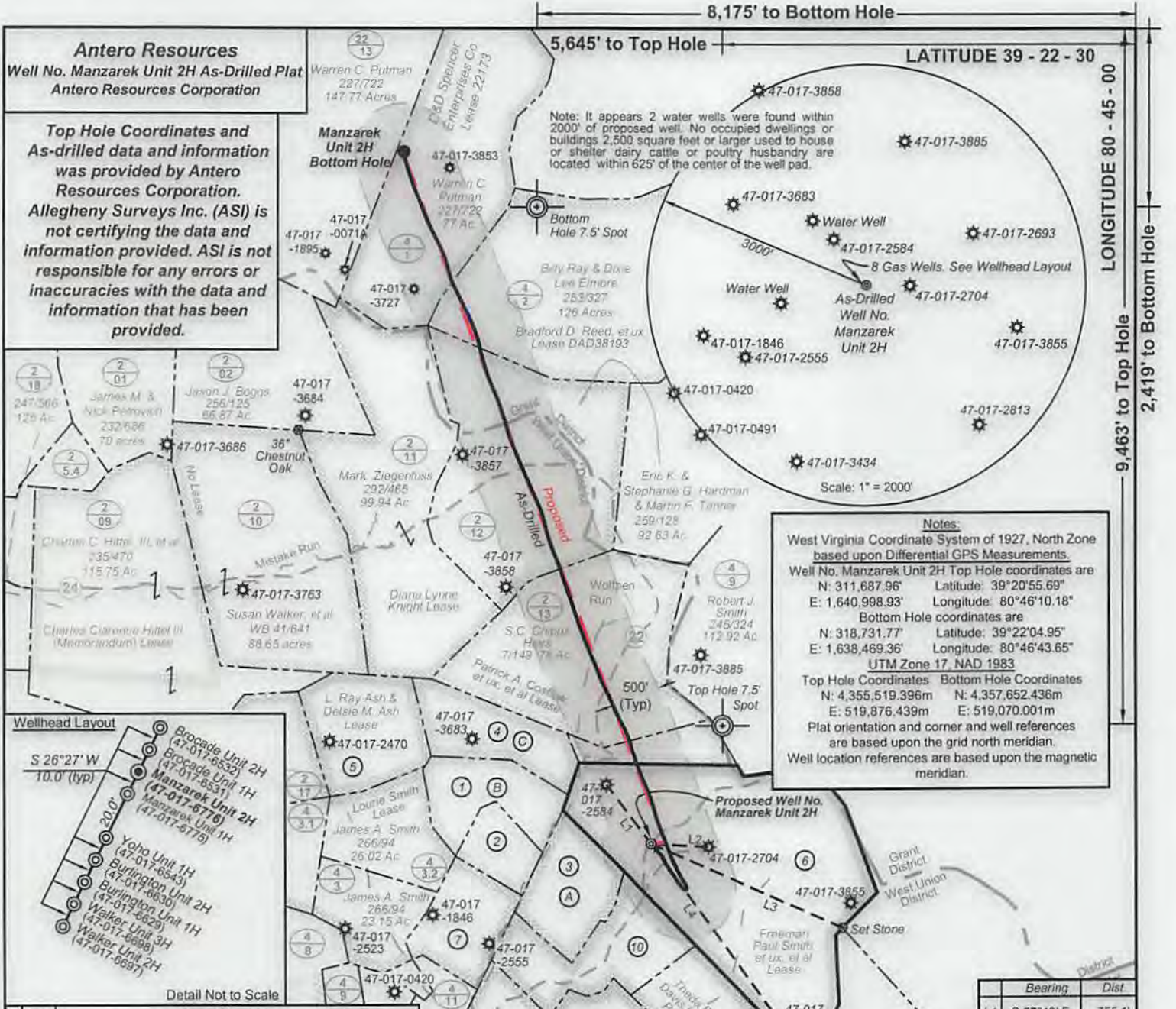
* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** 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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Antero Resources
Well No. Manzarek Unit 2H As-Drilled Plat
Antero Resources Corporation

Top Hole Coordinates and As-drilled data and information was provided by Antero Resources Corporation. Allegheny Surveys Inc. (ASI) is not certifying the data and information provided. ASI is not responsible for any errors or inaccuracies with the data and information that has been provided.

Wellhead Layout

S 26°27' W
10.0' (Typ)

Brocade Unit 2H (47-017-6532)
Brocade Unit 1H (47-017-6531)
Manzarek Unit 2H (47-017-6776)
Manzarek Unit 1H (47-017-6775)

Yoho Unit 1H (47-017-6543)
Burlington Unit 2H (47-017-6630)
Burlington Unit 1H (47-017-6629)
Walker Unit 3H (47-017-6698)
Walker Unit 2H (47-017-6697)

Detail Not to Scale

| ID | Mineral Owners |
|----|--|
| A | Ed Broome Inc, Memorandum of Oil & Gas Lease |
| B | Ed Broome Inc, Memorandum of Oil & Gas Lease |
| C | Joseph C. Moffatt, et al Lease |

| ID | TM/Par | Owner | Bk / Pg | Acres |
|----|--------|-----------------------------------|-----------|--------|
| 1 | 2/16 | David & Lucy Mae Sparling | 219/213 | 20.95 |
| 2 | 4/4.2 | David & Lucy Mae Sparling | 219/213 | 10.69 |
| 3 | 4/4 | David & Lucy Mae Sparling | 219/213 | 20.75 |
| 4 | 2/15 | Ronnie D. Smith, et al | 253/696 | 23.07 |
| 5 | 2/14 | Ronnie D. Smith & Thomas G. Smith | 259/232 | 31.00 |
| 6 | 4/5 | Yvonne Foster | WB 40/419 | 125.48 |
| 7 | 4/3.3 | James A. Smith | 266/94 | 20.00 |
| 8 | 4/19 | Naomi Beagle, et al | AP 19/594 | 33.25 |
| 9 | 4/20 | Stella E. Spencer, et al | 103/53 | 31.50 |
| 10 | 4/4.1 | David & Lucy Mae Sparling | 219/213 | 31.50 |



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 prescribed by the Department of Environmental Protection.

Bradley D. Miller
Bradley D. Miller, P.S. 2167



FILE NO: 264-30(54)-M(G)-14
DRAWING NO: Manzarek 2H Well As Drilled Plat
SCALE: 1" = 1500'
MINIMUM DEGREE OF ACCURACY: Submeter
PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: May 10 20 18
OPERATOR'S WELL NO. Manzarek Unit 2H
API WELL NO
47 - 017 - 06776
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1229' As-Drilled WATERSHED: Headwaters Middle Island Creek QUADRANGLE: West Union
DISTRICT: West Union COUNTY: Doddridge

SURFACE OWNER: Yvonne Foster Diana Lynne Knight ACREAGE: 125.48 283; 73
ROYALTY OWNER: Freeman Paul Smith, et ux, et al; Bradford D. Reed, et ux LEASE NO: 22173; DAD38193 ACREAGE: 125; 126; 78.973

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 6,909' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 14,790' MD

WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
Denver, CO 80202 Charleston, WV 25313

Notes:
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
Well No. Manzarek Unit 2H Top Hole coordinates are
N: 311,687.96' Latitude: 39°20'55.69"
E: 1,640,998.93' Longitude: 80°46'10.18"
Bottom Hole coordinates are
N: 318,731.77' Latitude: 39°22'04.95"
E: 1,638,469.36' Longitude: 80°46'43.65"
UTM Zone 17, NAD 1983
Top Hole Coordinates Bottom Hole Coordinates
N: 4,355,519.396m N: 4,357,652.436m
E: 519,876.439m E: 519,070.001m
Plat orientation and corner and well references are based upon the grid north meridian.
Well location references are based upon the magnetic meridian.

| Bearing | Dist. |
|---------------|----------|
| L1 S 37°19' E | 755.1' |
| L2 N 86°37' W | 587.0' |
| L3 N 66°20' W | 2,143.9' |
| L4 N 35°59' W | 2,755.0' |

(•) Denotes Location of Well on United States Topographic Maps