



API 47-017 - 06232 Farm name Walter V. Davidson & Leonard J. Davidson Well number Irons Unit 2H

| CASING STRINGS            | Hole Size     | Casing Size | Depth  | New or Used | Grade wt/ft  | Basket Depth(s) | Did cement circulate (Y/N)<br>* Provide details below* |
|---------------------------|---------------|-------------|--------|-------------|--------------|-----------------|--------------------------------------------------------|
| Conductor                 | 24"           | 20"         | 40'    | New         | 106.5#, J-55 | N/A             | Y                                                      |
| Surface                   | 17-1/2"       | 13-3/8"     | 361'   | New         | 48#, H-40    | N/A             | Y                                                      |
| Coal                      |               |             |        |             |              |                 |                                                        |
| Intermediate 1            | 12-1/4"       | 9-5/8"      | 2608'  | New         | 36#, J-55    | N/A             | Y                                                      |
| Intermediate 2            |               |             |        |             |              |                 |                                                        |
| Intermediate 3            |               |             |        |             |              |                 |                                                        |
| Production                | 8-3/4"/8-1/2" | 5-1/2"      | 17014' | New         | 23#, P-110   | N/A             | Y                                                      |
| Tubing                    |               | 2-3/8"      | 7620'  |             | 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 <sup>3</sup> /sks) | Volume (ft <sup>3</sup> ) | Cement Top (MD)                | WOC (hrs) |
|----------------|----------------------|-------------------------------|--------------------------|------------------------------|---------------------------|--------------------------------|-----------|
| Conductor      | Class A              | 198 sx                        | 15.6                     | 1.18                         | 234                       | 0'                             | 8 Hrs.    |
| Surface        | Class A              | 426 sx                        | 15.6                     | 1.18                         | 503                       | 0'                             | 8 Hrs.    |
| Coal           |                      |                               |                          |                              |                           |                                |           |
| Intermediate 1 | Class A              | 960 sx                        | 15.6                     | 1.18                         | 1133                      | 0'                             | 8 Hrs.    |
| Intermediate 2 |                      |                               |                          |                              |                           |                                |           |
| Intermediate 3 |                      |                               |                          |                              |                           |                                |           |
| Production     | Class H              | 1153 sx (Lead) 1543 sx (Tail) | 14.5 (Lead), 15.2 (Tail) | 1.30 (Lead), 1.86 (Tail)     | 4369                      | -500' into Intermediate Casing | 8 Hrs.    |
| Tubing         |                      |                               |                          |                              |                           |                                |           |

Drillers TD (ft) 17014' MD, 7421' TVD (BHL) & 7519' TVD (Deepest Point Drilled) Loggers TD (ft) 16962' MD  
 Deepest formation penetrated Marcellus Plug back to (ft) N/A  
 Plug back procedure N/A

Kick off depth (ft) 6729'

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 (Rikk Unit 1H API #47-017-06228). Please reference the wireline logs submitted with Form WR-35 for Rikk Unit 1H. A Cement Bond Log has been included with this submittal.

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API 47- 017 - 06232 Farm name Walter V. Davidson & Leonard J. Davidson Well number Irons Unit 2H

| <u>PRODUCING FORMATION(S)</u> | <u>DEPTHS</u>      |            |                              |
|-------------------------------|--------------------|------------|------------------------------|
| <u>Marcellus</u>              | <u>7409' (TOP)</u> | <u>TVD</u> | <u>7822' (TOP)</u> <u>MD</u> |
| _____                         | _____              | _____      | _____                        |
| _____                         | _____              | _____      | _____                        |

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

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

OPEN FLOW Gas 3523 mcfpd Oil --- bpd NGL --- bpd Water 158 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

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

**\*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 Rush Wellsite Services  
Address 600 Alpha Drive City Canonsburg State PA Zip 15317

Cementing Company Nabors Completion & Production Services, Co.  
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company US Well Services  
Address 533 Industrial Park Drive City Jane Lew State WV Zip 26378

Please insert additional pages as applicable.

Completed by Samantha Klaas Telephone 303-357-6759  
Signature *Samantha Klaas* Title Permitting Agent Date 09/08/2017

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

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**EXHIBIT 1**

| Stage No. | Perforation Date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formations |
|-----------|------------------|------------------------|----------------------|------------------------|------------|
| 1         | 4/18/2017        | 16924                  | 16758                | 60                     | Marcellus  |
| 2         | 5/2/2017         | 16727                  | 16562                | 60                     | Marcellus  |
| 3         | 5/2/2017         | 16531                  | 16366                | 60                     | Marcellus  |
| 4         | 5/3/2017         | 16335                  | 16170                | 60                     | Marcellus  |
| 5         | 5/3/2017         | 16139                  | 15974                | 60                     | Marcellus  |
| 6         | 5/3/2017         | 15943                  | 15778                | 60                     | Marcellus  |
| 7         | 5/3/2017         | 15747                  | 15582                | 60                     | Marcellus  |
| 8         | 5/3/2017         | 15551                  | 15386                | 60                     | Marcellus  |
| 9         | 5/4/2017         | 15355                  | 15190                | 60                     | Marcellus  |
| 10        | 5/4/2017         | 15159                  | 14994                | 60                     | Marcellus  |
| 11        | 5/4/2017         | 14963                  | 14798                | 60                     | Marcellus  |
| 12        | 5/5/2017         | 14767                  | 14602                | 60                     | Marcellus  |
| 13        | 5/5/2017         | 14571                  | 14406                | 60                     | Marcellus  |
| 14        | 5/5/2017         | 14375                  | 14210                | 60                     | Marcellus  |
| 15        | 5/5/2017         | 14179                  | 14014                | 60                     | Marcellus  |
| 16        | 5/5/2017         | 13983                  | 13818                | 60                     | Marcellus  |
| 17        | 5/6/2017         | 13787                  | 13622                | 60                     | Marcellus  |
| 18        | 5/6/2017         | 13591                  | 13425                | 60                     | Marcellus  |
| 19        | 5/6/2017         | 13395                  | 13229                | 60                     | Marcellus  |
| 20        | 5/6/2017         | 13199                  | 13033                | 60                     | Marcellus  |
| 21        | 5/6/2017         | 12745                  | 12583                | 60                     | Marcellus  |
| 22        | 5/7/2017         | 12553                  | 12391                | 60                     | Marcellus  |
| 23        | 5/7/2017         | 12361                  | 12198                | 60                     | Marcellus  |
| 24        | 5/7/2017         | 12168                  | 12006                | 60                     | Marcellus  |
| 25        | 5/7/2017         | 11976                  | 11814                | 60                     | Marcellus  |
| 26        | 5/7/2017         | 11784                  | 11622                | 60                     | Marcellus  |
| 27        | 5/7/2017         | 11362                  | 11197                | 60                     | Marcellus  |
| 28        | 5/8/2017         | 11166                  | 11001                | 60                     | Marcellus  |
| 29        | 5/8/2017         | 10970                  | 10805                | 60                     | Marcellus  |
| 30        | 5/8/2017         | 10774                  | 10609                | 60                     | Marcellus  |
| 31        | 5/8/2017         | 10578                  | 10413                | 60                     | Marcellus  |
| 32        | 5/8/2017         | 10382                  | 10217                | 60                     | Marcellus  |
| 33        | 5/9/2017         | 10186                  | 10021                | 60                     | Marcellus  |
| 34        | 5/9/2017         | 9990                   | 9825                 | 60                     | Marcellus  |
| 35        | 5/9/2017         | 9794                   | 9629                 | 60                     | Marcellus  |
| 36        | 5/9/2017         | 9598                   | 9433                 | 60                     | Marcellus  |
| 37        | 5/9/2017         | 9402                   | 9237                 | 60                     | Marcellus  |
| 38        | 5/10/2017        | 9206                   | 9041                 | 60                     | Marcellus  |
| 39        | 5/10/2017        | 9010                   | 8845                 | 60                     | Marcellus  |
| 40        | 5/10/2017        | 8814                   | 8649                 | 60                     | Marcellus  |
| 41        | 5/10/2017        | 8618                   | 8453                 | 60                     | Marcellus  |
| 42        | 5/10/2017        | 8422                   | 8257                 | 60                     | Marcellus  |
| 43        | 5/11/2017        | 8226                   | 8061                 | 60                     | Marcellus  |
| 44        | 5/11/2017        | 8030                   | 7865                 | 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         | 4/26/2017         | 73.2          | 8466                         | 6055                         | 7997       | 398400                   | 9205                   | N/A                               |
| 2         | 5/2/2017          | 24.2          | 8989                         | 9162                         | 5765       | 1500                     | 3365                   | N/A                               |
| 3         | 5/2/2017          | 75.5          | 8442                         | 6763                         | 4617       | 398200                   | 8820                   | N/A                               |
| 4         | 5/3/2017          | 72.7          | 8273                         | 7242                         | 5339       | 397200                   | 8938                   | N/A                               |
| 5         | 5/3/2017          | 78.3          | 8504                         | 6602                         | 4957       | 398900                   | 8884                   | N/A                               |
| 6         | 5/3/2017          | 80.2          | 8429                         | 5543                         | 4853       | 398500                   | 8780                   | N/A                               |
| 7         | 5/3/2017          | 79.6          | 8309                         | 6473                         | 4917       | 399300                   | 8688                   | N/A                               |
| 8         | 5/3/2017          | 78.6          | 8404                         | 6777                         | 5118       | 398300                   | 8724                   | N/A                               |
| 9         | 5/4/2017          | 80.9          | 8506                         | 6770                         | 5168       | 399400                   | 8709                   | N/A                               |
| 10        | 5/4/2017          | 79.3          | 8544                         | 6691                         | 5368       | 397400                   | 8676                   | N/A                               |
| 11        | 5/4/2017          | 80.2          | 8408                         | 6602                         | 5372       | 398700                   | 8229                   | N/A                               |
| 12        | 5/5/2017          | 79.9          | 8325                         | 6605                         | 5043       | 398600                   | 7823                   | N/A                               |
| 13        | 5/5/2017          | 77.4          | 8627                         | 6269                         | 5318       | 400600                   | 9048                   | N/A                               |
| 14        | 5/5/2017          | 79.7          | 8226                         | 6706                         | 4846       | 402200                   | 7769                   | N/A                               |
| 15        | 5/5/2017          | 80.2          | 8206                         | 6713                         | 5432       | 401000                   | 7778                   | N/A                               |
| 16        | 5/5/2017          | 81.5          | 8137                         | 6284                         | 5615       | 402200                   | 7512                   | N/A                               |
| 17        | 5/6/2017          | 78.5          | 8858                         | 6899                         | 5107       | 401300                   | 9888                   | N/A                               |
| 18        | 5/6/2017          | 80.2          | 8253                         | 6205                         | 4885       | 403400                   | 7329                   | N/A                               |
| 19        | 5/6/2017          | 79.9          | 7929                         | 6548                         | 5218       | 400400                   | 7205                   | N/A                               |
| 20        | 5/6/2017          | 75.7          | 7884                         | 6709                         | 5182       | 401400                   | 7178                   | N/A                               |
| 21        | 5/6/2017          | 76.5          | 7597                         | 5704                         | 4821       | 399900                   | 7167                   | N/A                               |
| 22        | 5/7/2017          | 74.3          | 7502                         | 6280                         | 5089       | 400800                   | 7139                   | N/A                               |
| 23        | 5/7/2017          | 72.5          | 7500                         | 6505                         | 5568       | 402500                   | 7168                   | N/A                               |
| 24        | 5/7/2017          | 80.2          | 7793                         | 6248                         | 5715       | 401600                   | 7160                   | N/A                               |
| 25        | 5/7/2017          | 74.3          | 7602                         | 6384                         | 5060       | 401000                   | 7047                   | N/A                               |
| 26        | 5/7/2017          | 73.0          | 7750                         | 5238                         | 5118       | 400900                   | 7087                   | N/A                               |
| 27        | 5/7/2017          | 73.5          | 7822                         | 6491                         | 5568       | 399000                   | 7065                   | N/A                               |
| 28        | 5/8/2017          | 74.0          | 7616                         | 6795                         | 5826       | 400800                   | 7079                   | N/A                               |
| 29        | 5/8/2017          | 74.5          | 7518                         | 6355                         | 5218       | 401000                   | 6942                   | N/A                               |
| 30        | 5/8/2017          | 73.8          | 7261                         | 6262                         | 5368       | 402100                   | 6951                   | N/A                               |
| 31        | 5/8/2017          | 74.0          | 7270                         | 6584                         | 5357       | 400500                   | 6939                   | N/A                               |
| 32        | 5/8/2017          | 73.7          | 7598                         | 6716                         | 5751       | 402900                   | 6916                   | N/A                               |
| 33        | 5/9/2017          | 74.3          | 7284                         | 6652                         | 5322       | 403300                   | 6956                   | N/A                               |
| 34        | 5/9/2017          | 74.1          | 7408                         | 6956                         | 5128       | 403100                   | 6914                   | N/A                               |
| 35        | 5/9/2017          | 74.3          | 7359                         | 6509                         | 5250       | 403300                   | 6903                   | N/A                               |
| 36        | 5/9/2017          | 74.2          | 7270                         | 6437                         | 5443       | 402700                   | 6880                   | N/A                               |
| 37        | 5/9/2017          | 71.4          | 7818                         | 6258                         | 5783       | 404100                   | 8254                   | N/A                               |
| 38        | 5/10/2017         | 74.8          | 7534                         | 6284                         | 5472       | 403600                   | 6904                   | N/A                               |
| 39        | 5/10/2017         | 73.1          | 7353                         | 3909                         | 5114       | 402800                   | 6908                   | N/A                               |
| 40        | 5/10/2017         | 72.9          | 7677                         | 7228                         | 5457       | 401500                   | 8246                   | N/A                               |
| 41        | 5/10/2017         | 73.2          | 7446                         | 6366                         | 5472       | 401440                   | 8222                   | N/A                               |
| 42        | 5/10/2017         | 73.4          | 7284                         | 6537                         | 5625       | 401700                   | 6840                   | N/A                               |
| 43        | 5/11/2017         | 73.8          | 7251                         | 5947                         | 5160       | 402900                   | 6881                   | N/A                               |
| 44        | 5/11/2017         | 73.4          | 7402                         | 6713                         | 5440       | 405390                   | 7666                   | N/A                               |
| AVG=      |                   | 74.8          | 7901                         | 6477                         | 5346       | 17,245,730               | 334,782                | 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          | 27'             | N/A                | 27'            | N/A               |
| Fresh Water          | 107'            | N/A                | 107'           | N/A               |
| Fresh Water          | 212'            | N/A                | 212'           | N/A               |
| Siltstone            | 0               | 217                | 0              | 217               |
| Sand                 | est. 217        | 457                | est. 217       | 457               |
| Siltstone            | est. 457        | 497                | est. 457       | 497               |
| Sandstone            | est. 497        | 517                | est. 497       | 517               |
| Coal                 | est. 517        | 657                | est. 517       | 657               |
| Siltstone            | est. 657        | 697                | est. 657       | 697               |
| Sandstone            | est. 697        | 857                | est. 697       | 857               |
| Siltstone            | est. 857        | 927                | est. 857       | 927               |
| Limestone            | est. 927        | 1057               | est. 927       | 1057              |
| Sandstone/ Silt      | est. 1057       | 1077               | est. 1057      | 1077              |
| Coal                 | est. 1077       | 1477               | est. 1077      | 1477              |
| Limestone/Silt       | est. 1477       | 1577               | est. 1477      | 1577              |
| Siltstone            | est. 1577       | 1737               | est. 1577      | 1737              |
| Sandstone/ Limestone | est. 1737       | 2004               | est. 1737      | 2004              |
| Sandstone/ Silt      | est. 2004       | 2013               | est. 2004      | 2013              |
| Coal                 | est. 2013       | 2317               | est. 2013      | 2317              |
| Sandstone/ Silt      | est. 2317       | 2398               | est. 2317      | 2401              |
| Big Lime             | 2398            | 2506               | 2401           | 2509              |
| Big Injun            | 2506            | 2836               | 2509           | 2840              |
| Gantz Sand           | 2836            | 2969               | 2840           | 2972              |
| Fifty Foot Sandstone | 2969            | 3128               | 2972           | 3131              |
| Gordon               | 3128            | 3398               | 3131           | 3401              |
| Fifth Sandstone      | 3398            | 3473               | 3401           | 3477              |
| Bayard               | 3473            | 3742               | 3477           | 3745              |
| Warren               | 3742            | 3978               | 3745           | 3981              |
| Speechley            | 3978            | 4294               | 3981           | 4297              |
| Baltown              | 4294            | 4752               | 4297           | 4755              |
| Bradford             | 4752            | 5357               | 4755           | 5360              |
| Benson               | 5357            | 5606               | 5360           | 5609              |
| Alexander            | 5606            | 5836               | 5609           | 5840              |
| Elk                  | 5836            | 6396               | 5840           | 6400              |
| Rhinstreet           | 6396            | 6896               | 6400           | 6878              |
| Sycamore             | 6873            | 7084               | 6855           | 7155              |
| Middlesex            | 7084            | 7237               | 7155           | 7400              |
| Burkett              | 7237            | 7273               | 7400           | 7468              |
| Tully                | 7273            | 7409               | 7468           | 7822              |
| Marcellus            | 7409            | NA                 | 7822           | 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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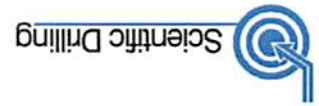
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**Irons Unit 2H**  
 Doddridge County WV  
 Northing: 14258780.68  
 Easting: 1754584.94  
 As Drilled

**WELL DETAILS** Irons Unit 2H

|               |        |           |              |                  |            |
|---------------|--------|-----------|--------------|------------------|------------|
| +N/-S         | 0.0    | +E/-W     | 0.0          | 14258780.68      | 1754584.94 |
| North         | 0.0    | West      | 0.0          | 14258780.68      | 1754584.94 |
| Latitude      | 1318.0 | Longitude | 15 55 02.1 N | 80° 35' 47.872 W |            |
| Ground Level: | 1318.0 |           |              |                  |            |



Gene Lightfoot  
 10/25, May 08 2014  
 Scientific Drilling  
 421 South Eagle Lane  
 Oklahoma City, OK 73128

**LEGEND**

- As Drilled
- Irons Unit 2H, Original Wellpath, Plan 4 V0
- Rikk Unit 2H, Original Wellpath, As Drilled V0
- Rikk Unit 1H, Original Wellpath, As Drilled V0

**PROJECT DETAILS:** Doddridge County WV

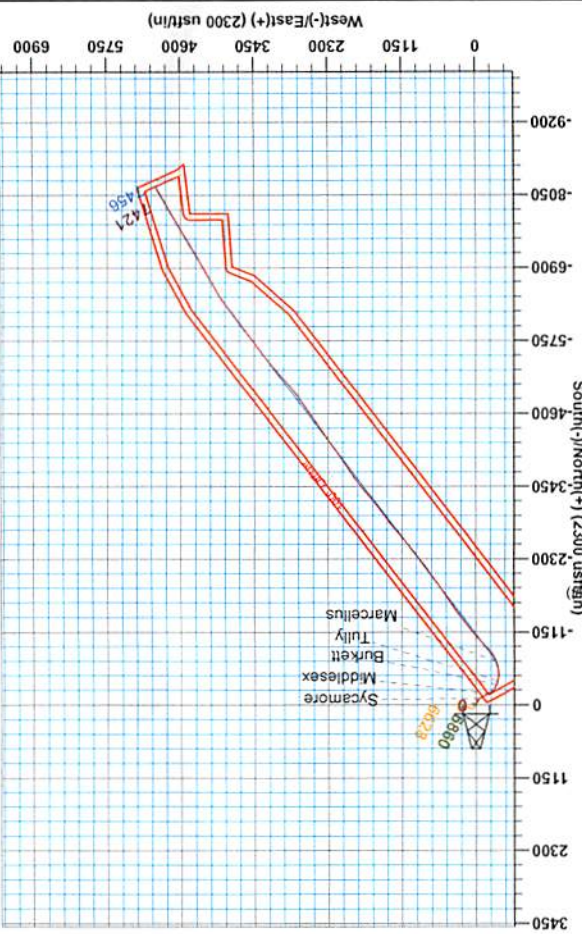
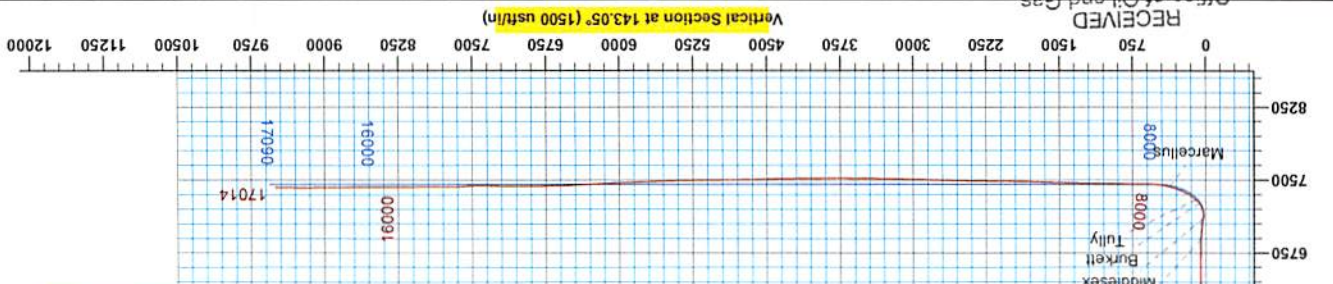
Geodetic System: Universal Transverse Mercator (US Survey Feet)  
 Datum: NAD 1927 (NADCON CONUS)  
 Ellipsoid: Clarke 1866  
 Zone: 17N (84 W to 78 W)  
 System Datum: Mean Sea Level

**SITE DETAILS:** Rikk/Pratt/Blackwood/Irons

Site Center Rikk Unit 1H  
 Site Centre Northing: 14258782.29  
 Easting: 1754594.81  
 Positional Uncertainty: 2  
 Convergence: 0.26  
 Local North: Grid

**DESIGN TARGET DETAILS**

|                   |                              |
|-------------------|------------------------------|
| Name              | SH1 Irons Unit 2H            |
| TVD               | 7421.4                       |
| +N/-S             | 0.0                          |
| +E/-W             | -8155.9                      |
| Latitude          | 0 014258780.67               |
| Longitude         | 15 55 02.1 N                 |
| 014258780.67      | 80° 35' 47.873 W             |
| 4966.914250624.76 | 1759551.8809° 14° 34' 15.5 N |
| 014258780.67      | 80° 34' 45.181 W             |



Azimuths to Grid North  
 True North: -0.25°  
 Magnetic North: -8.84°  
 Magnetic Field Strength: 52312.6nT  
 Dip Angle: 66.81°  
 Date: 1/6/2014  
 Model: IGRF2010

To convert True North to Grid, Subtract 8.84°





|                  |                            |                                     |                                               |
|------------------|----------------------------|-------------------------------------|-----------------------------------------------|
| <b>Company:</b>  | Antero Resources           | <b>Local Co-ordinate Reference:</b> | Well Irons Unit 2H                            |
| <b>Project:</b>  | Doddridge County WV        | <b>TVD Reference:</b>               | PATT 317: Irons 2H 1318 GL + 22.5 KB @ 1340.5 |
| <b>Site:</b>     | Rikk/Pratt/Blackwood/Irons | <b>MD Reference:</b>                | PATT 317: Irons 2H 1318 GL + 22.5 KB @ 1340.5 |
| <b>Well:</b>     | Irons Unit 2H              | <b>North Reference:</b>             | Grid                                          |
| <b>Wellbore:</b> | Original Wellpath          | <b>Survey Calculation Method:</b>   | Minimum Curvature                             |
| <b>Design:</b>   | As Drilled                 | <b>Database:</b>                    | Oklahoma District                             |

|                    |                                                |                      |                |
|--------------------|------------------------------------------------|----------------------|----------------|
| <b>Project</b>     | Doddridge County WV, McClellan District        |                      |                |
| <b>Map System:</b> | Universal Transverse Mercator (US Survey Feet) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)                        |                      |                |
| <b>Map Zone:</b>   | Zone 17N (84 W to 78 W)                        |                      |                |

|                              |                            |                     |                    |                          |                  |
|------------------------------|----------------------------|---------------------|--------------------|--------------------------|------------------|
| <b>Site</b>                  | Rikk/Pratt/Blackwood/Irons |                     |                    |                          |                  |
| <b>Site Position:</b>        |                            | <b>Northing:</b>    | 14,258,782.29 usft | <b>Latitude:</b>         | 39° 15' 55.036 N |
| <b>From:</b>                 | Map                        | <b>Easting:</b>     | 1,754,594.81 usft  | <b>Longitude:</b>        | 80° 35' 47.747 W |
| <b>Position Uncertainty:</b> | 2.8 usft                   | <b>Slot Radius:</b> | 13-3/16"           | <b>Grid Convergence:</b> | 0.26 °           |

|                             |               |          |                            |                    |                      |                  |
|-----------------------------|---------------|----------|----------------------------|--------------------|----------------------|------------------|
| <b>Well</b>                 | Irons Unit 2H |          |                            |                    |                      |                  |
| <b>Well Position</b>        | <b>+N/-S</b>  | 0.0 usft | <b>Northing:</b>           | 14,258,780.68 usft | <b>Latitude:</b>     | 39° 15' 55.021 N |
|                             | <b>+E/-W</b>  | 0.0 usft | <b>Easting:</b>            | 1,754,584.94 usft  | <b>Longitude:</b>    | 80° 35' 47.872 W |
| <b>Position Uncertainty</b> |               | 2.8 usft | <b>Wellhead Elevation:</b> | 1,340.5 usft       | <b>Ground Level:</b> | 1,318.0 usft     |

|                 |                   |
|-----------------|-------------------|
| <b>Wellbore</b> | Original Wellpath |
|-----------------|-------------------|

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|-----------|------------|-------------|-----------------|---------------|---------------------|
|           | IGRF2010   | 1/6/2014    | -8.58           | 66.81         | 52,313              |

|               |            |
|---------------|------------|
| <b>Design</b> | As Drilled |
|---------------|------------|

|                          |                                |                     |                     |                      |     |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|-----|
| <b>Audit Notes:</b>      |                                |                     |                     |                      |     |
| <b>Version:</b>          | 1.0                            | <b>Phase:</b>       | ACTUAL              | <b>Tie On Depth:</b> | 0.0 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Direction (°)</b> |     |
|                          | 0.0                            | 0.0                 | 0.0                 | 143.05               |     |

|                       |                  |                                            |                     |                                                    |  |
|-----------------------|------------------|--------------------------------------------|---------------------|----------------------------------------------------|--|
| <b>Survey Program</b> | Date 5/8/2014    |                                            |                     |                                                    |  |
| <b>From (usft)</b>    | <b>To (usft)</b> | <b>Survey (Wellbore)</b>                   | <b>Tool Name</b>    | <b>Description</b>                                 |  |
| 109.5                 | 6,637.5          | Survey #4 Full Gyro to KOP (Original Well) | SDI Standard Keeper | Scientific Drilling Intl. Standard Wireline Keeper |  |
| 6,697.0               | 17,014.0         | Survey #5 MWD (Original Wellpath)          | MWD SDI             | MWD - Standard ver 1.0.1                           |  |

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| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | V. Sec (usft) | DLeg (°/100usft) |
|-----------|---------|-------------------|------------|------------|------------|---------------|------------------|
| 0.0       | 0.00    | 0.00              | 0.0        | 0.0        | 0.0        | 0.0           | 0.00             |
| 109.5     | 1.74    | 137.22            | 109.5      | -1.2       | 1.1        | 1.7           | 1.59             |
| 209.5     | 0.66    | 135.71            | 209.5      | -2.7       | 2.6        | 3.7           | 1.08             |
| 309.5     | 0.34    | 144.17            | 309.5      | -3.4       | 3.1        | 4.6           | 0.33             |
| 409.5     | 0.32    | 136.05            | 409.5      | -3.8       | 3.5        | 5.2           | 0.05             |
| 509.5     | 0.28    | 152.26            | 509.5      | -4.3       | 3.8        | 5.7           | 0.09             |
| 609.5     | 0.13    | 118.81            | 609.5      | -4.5       | 4.0        | 6.0           | 0.19             |
| 709.5     | 0.15    | 67.12             | 709.5      | -4.5       | 4.2        | 6.2           | 0.12             |
| 809.5     | 0.06    | 154.42            | 809.5      | -4.5       | 4.4        | 6.3           | 0.16             |
| 909.5     | 0.05    | 163.62            | 909.5      | -4.6       | 4.4        | 6.4           | 0.01             |
| 1,009.5   | 0.23    | 188.24            | 1,009.5    | -4.9       | 4.4        | 6.5           | 0.19             |



|                  |                            |                                     |                                               |
|------------------|----------------------------|-------------------------------------|-----------------------------------------------|
| <b>Company:</b>  | Antero Resources           | <b>Local Co-ordinate Reference:</b> | Well Irons Unit 2H                            |
| <b>Project:</b>  | Doddridge County WV        | <b>TVD Reference:</b>               | PATT 317: Irons 2H 1318 GL + 22.5 KB @ 1340.5 |
| <b>Site:</b>     | Rikk/Pratt/Blackwood/Irons | <b>MD Reference:</b>                | PATT 317: Irons 2H 1318 GL + 22.5 KB @ 1340.5 |
| <b>Well:</b>     | Irons Unit 2H              | <b>North Reference:</b>             | Grid                                          |
| <b>Wellbore:</b> | Original Wellpath          | <b>Survey Calculation Method:</b>   | Minimum Curvature                             |
| <b>Design:</b>   | As Drilled                 | <b>Database:</b>                    | Oklahoma District                             |

| Survey    |         |                   |            |            |            |               |                  |  |
|-----------|---------|-------------------|------------|------------|------------|---------------|------------------|--|
| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | V. Sec (usft) | DLeg (°/100usft) |  |
| 1,109.5   | 0.38    | 206.62            | 1,109.4    | -5.4       | 4.2        | 6.8           | 0.18             |  |
| 1,209.5   | 2.07    | 197.54            | 1,209.4    | -7.4       | 3.5        | 8.0           | 1.70             |  |
| 1,309.5   | 4.74    | 200.32            | 1,309.2    | -13.0      | 1.6        | 11.3          | 2.67             |  |
| 1,409.5   | 5.78    | 210.00            | 1,408.8    | -21.2      | -2.4       | 15.5          | 1.36             |  |
| 1,509.5   | 6.64    | 215.21            | 1,508.2    | -30.3      | -8.2       | 19.3          | 1.03             |  |
| 1,609.5   | 5.84    | 215.21            | 1,607.6    | -39.2      | -14.5      | 22.6          | 0.80             |  |
| 1,709.5   | 5.61    | 224.50            | 1,707.1    | -46.8      | -20.9      | 24.9          | 0.95             |  |
| 1,809.5   | 4.23    | 228.45            | 1,806.8    | -52.7      | -27.1      | 25.9          | 1.42             |  |
| 1,909.5   | 3.06    | 228.68            | 1,906.6    | -57.0      | -31.8      | 26.4          | 1.17             |  |
| 2,009.5   | 1.99    | 226.97            | 2,006.5    | -59.9      | -35.1      | 26.8          | 1.07             |  |
| 2,109.5   | 1.27    | 223.20            | 2,106.4    | -61.9      | -37.1      | 27.1          | 0.73             |  |
| 2,209.5   | 0.63    | 214.77            | 2,206.4    | -63.2      | -38.2      | 27.5          | 0.65             |  |
| 2,309.5   | 0.20    | 198.51            | 2,306.4    | -63.8      | -38.6      | 27.8          | 0.44             |  |
| 2,409.5   | 0.21    | 195.01            | 2,406.4    | -64.1      | -38.7      | 28.0          | 0.02             |  |
| 2,509.5   | 0.14    | 203.56            | 2,506.4    | -64.4      | -38.8      | 28.2          | 0.07             |  |
| 2,609.5   | 0.19    | 149.18            | 2,606.4    | -64.7      | -38.7      | 28.4          | 0.16             |  |
| 2,709.5   | 0.21    | 134.01            | 2,706.4    | -64.9      | -38.5      | 28.7          | 0.06             |  |
| 2,809.5   | 0.16    | 125.47            | 2,806.4    | -65.1      | -38.3      | 29.1          | 0.06             |  |
| 2,909.5   | 0.19    | 113.04            | 2,906.4    | -65.3      | -38.0      | 29.3          | 0.05             |  |
| 3,009.5   | 0.14    | 109.14            | 3,006.4    | -65.4      | -37.7      | 29.6          | 0.05             |  |
| 3,109.5   | 0.06    | 175.61            | 3,106.4    | -65.5      | -37.6      | 29.7          | 0.13             |  |
| 3,209.5   | 0.13    | 348.45            | 3,206.4    | -65.4      | -37.6      | 29.7          | 0.19             |  |
| 3,309.5   | 0.13    | 140.10            | 3,306.4    | -65.4      | -37.6      | 29.7          | 0.25             |  |
| 3,409.5   | 0.16    | 153.00            | 3,406.4    | -65.6      | -37.4      | 29.9          | 0.04             |  |
| 3,509.5   | 0.17    | 65.70             | 3,506.4    | -65.7      | -37.2      | 30.1          | 0.23             |  |
| 3,609.5   | 0.31    | 58.82             | 3,606.4    | -65.5      | -36.9      | 30.2          | 0.14             |  |
| 3,709.5   | 0.29    | 70.53             | 3,706.4    | -65.2      | -36.4      | 30.3          | 0.06             |  |
| 3,809.5   | 0.21    | 70.61             | 3,806.4    | -65.1      | -36.0      | 30.4          | 0.08             |  |
| 3,909.5   | 0.17    | 64.81             | 3,906.4    | -65.0      | -35.7      | 30.5          | 0.04             |  |
| 4,009.5   | 0.13    | 76.08             | 4,006.4    | -64.9      | -35.4      | 30.5          | 0.05             |  |
| 4,109.5   | 0.13    | 98.37             | 4,106.4    | -64.9      | -35.2      | 30.7          | 0.05             |  |
| 4,209.5   | 0.12    | 105.34            | 4,206.4    | -64.9      | -35.0      | 30.8          | 0.02             |  |
| 4,309.5   | 0.24    | 116.32            | 4,306.4    | -65.0      | -34.7      | 31.1          | 0.12             |  |
| 4,409.5   | 0.30    | 107.21            | 4,406.4    | -65.2      | -34.3      | 31.5          | 0.07             |  |
| 4,509.5   | 0.43    | 109.74            | 4,506.4    | -65.4      | -33.7      | 32.0          | 0.13             |  |
| 4,609.5   | 0.67    | 102.35            | 4,606.4    | -65.7      | -32.8      | 32.8          | 0.25             |  |
| 4,709.5   | 0.70    | 90.74             | 4,706.4    | -65.8      | -31.6      | 33.6          | 0.14             |  |
| 4,809.5   | 0.66    | 86.38             | 4,806.4    | -65.8      | -30.4      | 34.3          | 0.07             |  |
| 4,909.5   | 0.68    | 107.77            | 4,906.4    | -65.9      | -29.2      | 35.1          | 0.25             |  |
| 5,009.5   | 0.81    | 100.25            | 5,006.4    | -66.2      | -28.0      | 36.1          | 0.16             |  |
| 5,109.5   | 0.71    | 100.94            | 5,106.4    | -66.5      | -26.7      | 37.1          | 0.10             |  |
| 5,209.5   | 0.72    | 99.25             | 5,206.3    | -66.7      | -25.5      | 38.0          | 0.02             |  |
| 5,309.5   | 0.68    | 95.02             | 5,306.3    | -66.8      | -24.2      | 38.8          | 0.07             |  |
| 5,409.5   | 0.69    | 91.05             | 5,406.3    | -66.9      |            | 39.6          | 0.05             |  |

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|------------------|----------------------------|-------------------------------------|-----------------------------------------------|
| <b>Company:</b>  | Antero Resources           | <b>Local Co-ordinate Reference:</b> | Well Irons Unit 2H                            |
| <b>Project:</b>  | Doddridge County WV        | <b>TVD Reference:</b>               | PATT 317: Irons 2H 1318 GL + 22.5 KB @ 1340.5 |
| <b>Site:</b>     | Rikk/Pratt/Blackwood/Irons | <b>MD Reference:</b>                | PATT 317: Irons 2H 1318 GL + 22.5 KB @ 1340.5 |
| <b>Well:</b>     | Irons Unit 2H              | <b>North Reference:</b>             | Grid                                          |
| <b>Wellbore:</b> | Original Wellpath          | <b>Survey Calculation Method:</b>   | Minimum Curvature                             |
| <b>Design:</b>   | As Drilled                 | <b>Database:</b>                    | Oklahoma District                             |

| Survey           |         |                   |            |            |            |               |                  |  |
|------------------|---------|-------------------|------------|------------|------------|---------------|------------------|--|
| MD (usft)        | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | V. Sec (usft) | DLeg (°/100usft) |  |
| 5,509.5          | 0.69    | 85.57             | 5,506.3    | -66.9      | -21.9      | 40.3          | 0.07             |  |
| 5,609.5          | 0.81    | 83.92             | 5,606.3    | -66.7      | -20.5      | 41.0          | 0.12             |  |
| 5,709.5          | 0.78    | 82.10             | 5,706.3    | -66.6      | -19.2      | 41.7          | 0.04             |  |
| 5,809.5          | 0.89    | 88.88             | 5,806.3    | -66.5      | -17.7      | 42.5          | 0.15             |  |
| 5,909.5          | 0.93    | 94.79             | 5,906.3    | -66.5      | -16.1      | 43.5          | 0.10             |  |
| 6,009.5          | 0.80    | 97.01             | 6,006.3    | -66.7      | -14.6      | 44.5          | 0.13             |  |
| 6,109.5          | 0.82    | 96.88             | 6,106.3    | -66.8      | -13.2      | 45.5          | 0.02             |  |
| 6,209.5          | 0.95    | 97.59             | 6,206.2    | -67.0      | -11.7      | 46.5          | 0.13             |  |
| 6,309.5          | 0.74    | 114.75            | 6,306.2    | -67.4      | -10.3      | 47.7          | 0.33             |  |
| 6,409.5          | 0.61    | 106.25            | 6,406.2    | -67.8      | -9.2       | 48.7          | 0.16             |  |
| 6,509.5          | 0.63    | 114.16            | 6,506.2    | -68.2      | -8.2       | 49.6          | 0.09             |  |
| 6,609.5          | 0.59    | 125.31            | 6,606.2    | -68.7      | -7.3       | 50.6          | 0.13             |  |
| 6,637.5          | 0.73    | 115.23            | 6,634.2    | -68.9      | -7.0       | 50.9          | 0.65             |  |
| 6,697.0          | 2.34    | 225.58            | 6,693.7    | -69.9      | -7.5       | 51.4          | 4.51             |  |
| 6,729.0          | 6.95    | 238.40            | 6,725.6    | -71.4      | -9.6       | 51.3          | 14.68            |  |
| 6,760.0          | 12.49   | 239.28            | 6,756.1    | -74.1      | -14.1      | 50.7          | 17.88            |  |
| 6,792.0          | 16.08   | 239.57            | 6,787.1    | -78.1      | -20.9      | 49.8          | 11.22            |  |
| 6,823.0          | 18.03   | 237.69            | 6,816.8    | -82.8      | -28.7      | 49.0          | 6.54             |  |
| 6,854.0          | 20.66   | 238.40            | 6,846.0    | -88.3      | -37.4      | 48.1          | 8.52             |  |
| 6,886.0          | 24.28   | 237.64            | 6,875.6    | -94.7      | -47.7      | 47.0          | 11.35            |  |
| 6,902.0          | 25.54   | 236.91            | 6,890.1    | -98.4      | -53.4      | 46.5          | 8.12             |  |
| <b>Sycamore</b>  |         |                   |            |            |            |               |                  |  |
| 6,917.0          | 26.73   | 236.29            | 6,903.6    | -102.0     | -58.9      | 46.1          | 8.12             |  |
| 6,948.0          | 29.23   | 237.83            | 6,930.9    | -109.9     | -71.1      | 45.1          | 8.39             |  |
| 6,979.0          | 31.74   | 239.89            | 6,957.7    | -118.0     | -84.6      | 43.5          | 8.77             |  |
| 7,011.0          | 34.47   | 241.30            | 6,984.5    | -126.6     | -99.8      | 41.2          | 8.86             |  |
| 7,040.0          | 36.84   | 242.70            | 7,008.0    | -134.5     | -114.8     | 38.5          | 8.64             |  |
| 7,074.0          | 40.04   | 242.88            | 7,034.6    | -144.2     | -133.5     | 35.0          | 9.42             |  |
| 7,106.0          | 43.26   | 242.09            | 7,058.6    | -154.0     | -152.4     | 31.5          | 10.20            |  |
| 7,137.0          | 47.66   | 240.33            | 7,080.3    | -164.7     | -171.8     | 28.4          | 14.76            |  |
| 7,169.0          | 49.18   | 240.55            | 7,101.5    | -176.5     | -192.6     | 25.3          | 4.78             |  |
| 7,178.0          | 49.19   | 239.49            | 7,107.4    | -179.9     | -198.5     | 24.5          | 8.89             |  |
| <b>Middlesex</b> |         |                   |            |            |            |               |                  |  |
| 7,200.0          | 49.26   | 236.91            | 7,121.8    | -188.7     | -212.6     | 23.0          | 8.89             |  |
| 7,232.0          | 50.12   | 232.95            | 7,142.5    | -202.7     | -232.6     | 22.2          | 9.81             |  |
| 7,264.0          | 50.83   | 227.59            | 7,162.9    | -218.5     | -251.6     | 23.4          | 13.11            |  |
| 7,295.0          | 51.79   | 222.66            | 7,182.2    | -235.5     | -268.7     | 26.7          | 12.79            |  |
| 7,327.0          | 51.97   | 216.34            | 7,202.0    | -254.9     | -284.7     | 32.6          | 15.54            |  |
| 7,358.0          | 52.23   | 211.94            | 7,221.1    | -275.2     | -298.4     | 40.5          | 11.23            |  |
| 7,390.0          | 52.99   | 208.24            | 7,240.5    | -297.2     | -311.2     | 50.5          | 9.49             |  |
| 7,422.0          | 54.52   | 203.86            | 7,259.4    | -320.4     | -322.5     | 62.2          | 12.03            |  |
| 7,423.0          | 54.61   | 203.73            | 7,260.0    | -321.1     | -322.8     | 62.6          | 13.95            |  |
| <b>Burkett</b>   |         |                   |            |            |            |               |                  |  |
| 7,453.0          | 57.42   | 199.99            | 7,276.8    | -344.2     | -332.0     | 75.5          | 13.95            |  |
| 7,485.0          | 60.06   | 196.12            | 7,293.4    | -370.2     | -340.0     | 91.2          | 13.22            |  |

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|------------------|----------------------------|-------------------------------------|-----------------------------------------------|
| <b>Company:</b>  | Antero Resources           | <b>Local Co-ordinate Reference:</b> | Well Irons Unit 2H                            |
| <b>Project:</b>  | Doddridge County WV        | <b>TVD Reference:</b>               | PATT 317: Irons 2H 1318 GL + 22.5 KB @ 1340.5 |
| <b>Site:</b>     | Rikk/Pratt/Blackwood/Irons | <b>MD Reference:</b>                | PATT 317: Irons 2H 1318 GL + 22.5 KB @ 1340.5 |
| <b>Well:</b>     | Irons Unit 2H              | <b>North Reference:</b>             | Grid                                          |
| <b>Wellbore:</b> | Original Wellpath          | <b>Survey Calculation Method:</b>   | Minimum Curvature                             |
| <b>Design:</b>   | As Drilled                 | <b>Database:</b>                    | Oklahoma District                             |

Survey

| MD (usft)        | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | V. Sec (usft) | DLeg (°/100usft) |
|------------------|---------|-------------------|------------|------------|------------|---------------|------------------|
| 7,491.0          | 60.49   | 195.29            | 7,296.4    | -375.2     | -341.9     | 94.3          | 13.94            |
| <b>Tully</b>     |         |                   |            |            |            |               |                  |
| 7,516.0          | 62.34   | 191.93            | 7,308.3    | -396.5     | -347.1     | 108.3         | 13.94            |
| 7,548.0          | 63.22   | 188.47            | 7,323.0    | -424.5     | -352.1     | 127.6         | 10.00            |
| 7,580.0          | 63.66   | 184.52            | 7,337.3    | -453.0     | -355.3     | 148.4         | 11.13            |
| 7,611.0          | 64.37   | 182.06            | 7,350.9    | -480.8     | -356.9     | 169.7         | 7.49             |
| 7,643.0          | 66.21   | 177.58            | 7,364.2    | -509.8     | -356.8     | 192.9         | 13.96            |
| 7,674.0          | 68.15   | 174.59            | 7,376.3    | -538.3     | -354.9     | 216.9         | 10.87            |
| 7,706.0          | 70.00   | 171.51            | 7,387.7    | -568.0     | -351.3     | 242.8         | 10.69            |
| 7,738.0          | 70.26   | 168.96            | 7,398.6    | -597.7     | -346.2     | 269.5         | 7.54             |
| 7,769.0          | 70.16   | 166.59            | 7,409.1    | -626.2     | -340.0     | 296.0         | 7.20             |
| 7,801.0          | 71.40   | 163.60            | 7,419.6    | -655.4     | -332.2     | 324.0         | 9.64             |
| 7,833.0          | 74.23   | 160.73            | 7,429.1    | -684.5     | -322.8     | 352.9         | 12.31            |
| 7,845.0          | 75.31   | 159.59            | 7,432.2    | -695.3     | -318.9     | 364.0         | 12.86            |
| <b>Marcellus</b> |         |                   |            |            |            |               |                  |
| 7,864.0          | 77.03   | 157.80            | 7,436.8    | -712.5     | -312.2     | 381.7         | 12.86            |
| 7,896.0          | 80.68   | 154.40            | 7,442.9    | -741.2     | -299.5     | 412.3         | 15.45            |
| 7,928.0          | 82.31   | 149.80            | 7,447.7    | -769.2     | -284.7     | 443.6         | 15.10            |
| 7,959.0          | 83.40   | 146.91            | 7,451.5    | -795.4     | -268.6     | 474.2         | 9.90             |
| 7,991.0          | 84.59   | 144.70            | 7,454.9    | -821.7     | -250.7     | 506.0         | 7.81             |
| 8,022.0          | 85.82   | 141.63            | 7,457.5    | -846.4     | -232.1     | 536.9         | 10.64            |
| 8,079.0          | 89.87   | 135.74            | 7,459.6    | -889.2     | -194.6     | 593.6         | 12.53            |
| 8,174.0          | 90.48   | 136.53            | 7,459.3    | -957.7     | -128.7     | 687.9         | 1.05             |
| 8,269.0          | 88.99   | 137.59            | 7,459.8    | -1,027.2   | -64.0      | 782.4         | 1.92             |
| 8,364.0          | 89.25   | 139.34            | 7,461.2    | -1,098.3   | -1.0       | 877.1         | 1.86             |
| 8,459.0          | 88.81   | 140.66            | 7,462.8    | -1,171.1   | 60.0       | 971.9         | 1.46             |
| 8,554.0          | 89.43   | 141.10            | 7,464.3    | -1,244.8   | 119.9      | 1,066.9       | 0.80             |
| 8,649.0          | 89.25   | 143.74            | 7,465.4    | -1,320.0   | 177.9      | 1,161.8       | 2.79             |
| 8,744.0          | 88.72   | 144.53            | 7,467.1    | -1,397.0   | 233.5      | 1,256.8       | 1.00             |
| 8,839.0          | 88.46   | 144.09            | 7,469.4    | -1,474.1   | 288.9      | 1,351.8       | 0.54             |
| 8,933.0          | 89.03   | 144.79            | 7,471.5    | -1,550.6   | 343.6      | 1,445.7       | 0.96             |
| 9,028.0          | 89.08   | 147.25            | 7,473.0    | -1,629.3   | 396.7      | 1,540.6       | 2.59             |
| 9,123.0          | 87.67   | 146.90            | 7,475.7    | -1,709.1   | 448.3      | 1,635.3       | 1.53             |
| 9,218.0          | 87.32   | 146.99            | 7,479.9    | -1,788.6   | 500.1      | 1,730.0       | 0.38             |
| 9,313.0          | 88.11   | 144.70            | 7,483.7    | -1,867.1   | 553.3      | 1,824.8       | 2.55             |
| 9,407.0          | 88.64   | 144.62            | 7,486.3    | -1,943.8   | 607.7      | 1,918.7       | 0.57             |
| 9,502.0          | 89.16   | 144.00            | 7,488.2    | -2,020.9   | 663.1      | 2,013.7       | 0.85             |
| 9,597.0          | 89.78   | 142.86            | 7,489.0    | -2,097.2   | 719.7      | 2,108.6       | 1.37             |
| 9,692.0          | 90.57   | 143.74            | 7,488.7    | -2,173.4   | 776.5      | 2,203.6       | 1.24             |
| 9,787.0          | 89.52   | 142.51            | 7,488.7    | -2,249.4   | 833.5      | 2,298.6       | 1.70             |
| 9,882.0          | 88.29   | 141.63            | 7,490.5    | -2,324.3   | 891.9      | 2,393.6       | 1.59             |
| 9,976.0          | 88.42   | 141.65            | 7,493.2    | -2,398.0   | 950.2      | 2,487.5       | 0.14             |
| 10,071.0         | 89.34   | 141.01            | 7,495.0    | -2,472.1   | 1,009.5    | 2,582.5       | 1.18             |
| 10,166.0         | 88.37   | 140.84            | 7,496.9    | -2,545.9   | 1,069.4    | 2,677.4       | 1.04             |
| 10,261.0         | 87.41   | 140.84            | 7,500.4    | -2,619.5   | 1,129.3    | 2,772.3       | 1.01             |

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|                  |                            |                                     |                                               |
|------------------|----------------------------|-------------------------------------|-----------------------------------------------|
| <b>Company:</b>  | Antero Resources           | <b>Local Co-ordinate Reference:</b> | Well Irons Unit 2H                            |
| <b>Project:</b>  | Doddridge County WV        | <b>TVD Reference:</b>               | PATT 317: Irons 2H 1318 GL + 22.5 KB @ 1340.5 |
| <b>Site:</b>     | Rikk/Pratt/Blackwood/Irons | <b>MD Reference:</b>                | PATT 317: Irons 2H 1318 GL + 22.5 KB @ 1340.5 |
| <b>Well:</b>     | Irons Unit 2H              | <b>North Reference:</b>             | Grid                                          |
| <b>Wellbore:</b> | Original Wellpath          | <b>Survey Calculation Method:</b>   | Minimum Curvature                             |
| <b>Design:</b>   | As Drilled                 | <b>Database:</b>                    | Oklahoma District                             |

| Survey    |         |                   |            |            |            |               |                  |
|-----------|---------|-------------------|------------|------------|------------|---------------|------------------|
| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | V. Sec (usft) | DLeg (°/100usft) |
| 10,356.0  | 88.29   | 141.37            | 7,504.0    | -2,693.4   | 1,188.9    | 2,867.1       | 1.08             |
| 10,450.0  | 89.34   | 142.16            | 7,505.9    | -2,767.2   | 1,247.1    | 2,961.1       | 1.40             |
| 10,545.0  | 89.16   | 141.19            | 7,507.2    | -2,841.7   | 1,306.0    | 3,056.1       | 1.04             |
| 10,640.0  | 88.72   | 141.89            | 7,508.9    | -2,916.1   | 1,365.1    | 3,151.0       | 0.87             |
| 10,735.0  | 88.55   | 144.44            | 7,511.2    | -2,992.1   | 1,422.0    | 3,246.0       | 2.69             |
| 10,830.0  | 88.99   | 145.14            | 7,513.2    | -3,069.7   | 1,476.8    | 3,340.9       | 0.87             |
| 10,925.0  | 89.25   | 142.42            | 7,514.7    | -3,146.3   | 1,532.9    | 3,435.9       | 2.88             |
| 11,017.0  | 89.60   | 140.57            | 7,515.6    | -3,218.3   | 1,590.2    | 3,527.8       | 2.05             |
| 11,108.0  | 89.87   | 139.96            | 7,516.1    | -3,288.3   | 1,648.4    | 3,618.7       | 0.73             |
| 11,199.0  | 89.60   | 140.49            | 7,516.5    | -3,358.2   | 1,706.6    | 3,709.6       | 0.65             |
| 11,291.0  | 89.34   | 140.57            | 7,517.3    | -3,429.2   | 1,765.0    | 3,801.5       | 0.30             |
| 11,382.0  | 88.99   | 141.54            | 7,518.7    | -3,500.0   | 1,822.2    | 3,892.4       | 1.13             |
| 11,473.0  | 90.57   | 144.19            | 7,519.0    | -3,572.5   | 1,877.2    | 3,983.4       | 3.39             |
| 11,565.0  | 91.98   | 144.97            | 7,517.0    | -3,647.5   | 1,930.5    | 4,075.4       | 1.75             |
| 11,656.0  | 90.40   | 147.08            | 7,515.1    | -3,722.9   | 1,981.3    | 4,166.2       | 2.90             |
| 11,747.0  | 90.84   | 147.43            | 7,514.1    | -3,799.5   | 2,030.5    | 4,257.0       | 0.62             |
| 11,838.0  | 91.45   | 146.81            | 7,512.3    | -3,875.9   | 2,079.9    | 4,347.7       | 0.96             |
| 11,929.0  | 91.80   | 145.14            | 7,509.7    | -3,951.3   | 2,130.8    | 4,438.6       | 1.87             |
| 12,020.0  | 91.61   | 143.93            | 7,507.0    | -4,025.3   | 2,183.6    | 4,529.5       | 1.35             |
| 12,115.0  | 91.89   | 145.32            | 7,504.1    | -4,102.8   | 2,238.6    | 4,624.4       | 1.49             |
| 12,210.0  | 90.75   | 144.35            | 7,501.9    | -4,180.4   | 2,293.3    | 4,719.3       | 1.58             |
| 12,305.0  | 91.19   | 144.27            | 7,500.3    | -4,257.6   | 2,348.7    | 4,814.3       | 0.47             |
| 12,399.0  | 91.31   | 145.94            | 7,498.2    | -4,334.6   | 2,402.4    | 4,908.2       | 1.78             |
| 12,494.0  | 91.10   | 146.46            | 7,496.2    | -4,413.6   | 2,455.3    | 5,003.1       | 0.59             |
| 12,589.0  | 91.63   | 147.78            | 7,494.0    | -4,493.3   | 2,506.8    | 5,097.8       | 1.50             |
| 12,684.0  | 89.52   | 145.58            | 7,493.0    | -4,572.7   | 2,559.0    | 5,192.6       | 3.21             |
| 12,779.0  | 89.60   | 144.79            | 7,493.7    | -4,650.7   | 2,613.2    | 5,287.5       | 0.84             |
| 12,873.0  | 91.61   | 144.26            | 7,492.7    | -4,727.2   | 2,667.8    | 5,381.5       | 2.21             |
| 12,968.0  | 92.59   | 143.47            | 7,489.3    | -4,803.9   | 2,723.8    | 5,476.4       | 1.32             |
| 13,063.0  | 93.56   | 144.70            | 7,484.2    | -4,880.7   | 2,779.4    | 5,571.2       | 1.65             |
| 13,158.0  | 92.07   | 141.89            | 7,479.5    | -4,956.8   | 2,836.1    | 5,666.1       | 3.34             |
| 13,253.0  | 91.54   | 141.63            | 7,476.5    | -5,031.4   | 2,894.9    | 5,761.0       | 0.62             |
| 13,348.0  | 91.28   | 138.99            | 7,474.2    | -5,104.4   | 2,955.5    | 5,855.9       | 2.79             |
| 13,443.0  | 91.80   | 138.82            | 7,471.6    | -5,176.0   | 3,018.0    | 5,950.6       | 0.58             |
| 13,537.0  | 93.03   | 137.59            | 7,467.7    | -5,246.0   | 3,080.6    | 6,044.2       | 1.85             |
| 13,632.0  | 93.74   | 139.43            | 7,462.0    | -5,317.1   | 3,143.4    | 6,138.7       | 2.07             |
| 13,727.0  | 92.24   | 141.89            | 7,457.1    | -5,390.4   | 3,203.5    | 6,233.5       | 3.03             |
| 13,822.0  | 92.51   | 143.21            | 7,453.2    | -5,465.8   | 3,261.2    | 6,328.4       | 1.42             |
| 13,917.0  | 92.86   | 141.45            | 7,448.7    | -5,540.9   | 3,319.2    | 6,423.3       | 1.89             |
| 14,012.0  | 91.89   | 143.03            | 7,444.8    | -5,615.9   | 3,377.3    | 6,518.2       | 1.95             |
| 14,107.0  | 92.15   | 142.07            | 7,441.4    | -5,691.3   | 3,435.1    | 6,613.1       | 1.05             |
| 14,202.0  | 91.71   | 144.35            | 7,438.2    | -5,767.3   | 3,491.9    | 6,708.1       | 2.44             |
| 14,297.0  | 92.07   | 144.79            | 7,435.1    | -5,844.7   | 3,547.0    | 6,803.0       | 0.60             |
| 14,392.0  | 90.40   | 144.44            | 7,433.0    | -5,922.1   | 3,602.0    | 6,897.9       | 1.80             |

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|                  |                            |                                     |                                               |
|------------------|----------------------------|-------------------------------------|-----------------------------------------------|
| <b>Company:</b>  | Antero Resources           | <b>Local Co-ordinate Reference:</b> | Well Irons Unit 2H                            |
| <b>Project:</b>  | Doddridge County WV        | <b>TVD Reference:</b>               | PATT 317: Irons 2H 1318 GL + 22.5 KB @ 1340.5 |
| <b>Site:</b>     | Rikk/Pratt/Blackwood/Irons | <b>MD Reference:</b>                | PATT 317: Irons 2H 1318 GL + 22.5 KB @ 1340.5 |
| <b>Well:</b>     | Irons Unit 2H              | <b>North Reference:</b>             | Grid                                          |
| <b>Wellbore:</b> | Original Wellpath          | <b>Survey Calculation Method:</b>   | Minimum Curvature                             |
| <b>Design:</b>   | As Drilled                 | <b>Database:</b>                    | Oklahoma District                             |

| MD (usft) | Inc (°) | Azi (azimuth) (°) | TVD (usft) | N/S (usft) | E/W (usft) | V. Sec (usft) | DLeg (°/100usft) |
|-----------|---------|-------------------|------------|------------|------------|---------------|------------------|
| 14,487.0  | 89.25   | 143.65            | 7,433.3    | -5,999.0   | 3,657.7    | 6,992.9       | 1.47             |
| 14,582.0  | 89.52   | 144.18            | 7,434.3    | -6,075.8   | 3,713.7    | 7,087.9       | 0.63             |
| 14,676.0  | 88.55   | 142.07            | 7,435.9    | -6,151.0   | 3,770.1    | 7,181.9       | 2.47             |
| 14,771.0  | 88.55   | 141.80            | 7,438.3    | -6,225.7   | 3,828.6    | 7,276.8       | 0.28             |
| 14,866.0  | 90.13   | 142.77            | 7,439.4    | -6,300.9   | 3,886.7    | 7,371.8       | 1.95             |
| 14,962.0  | 91.54   | 144.27            | 7,438.0    | -6,378.1   | 3,943.8    | 7,467.8       | 2.14             |
| 15,057.0  | 93.03   | 148.75            | 7,434.2    | -6,457.2   | 3,996.2    | 7,562.5       | 4.97             |
| 15,152.0  | 92.86   | 150.33            | 7,429.4    | -6,539.0   | 4,044.3    | 7,656.8       | 1.67             |
| 15,247.0  | 91.36   | 151.03            | 7,425.9    | -6,621.7   | 4,090.8    | 7,750.9       | 1.74             |
| 15,342.0  | 89.26   | 150.49            | 7,425.3    | -6,704.6   | 4,137.2    | 7,845.0       | 2.28             |
| 15,437.0  | 89.60   | 150.42            | 7,426.3    | -6,787.3   | 4,184.0    | 7,939.2       | 0.37             |
| 15,532.0  | 89.69   | 149.63            | 7,426.9    | -6,869.6   | 4,231.5    | 8,033.5       | 0.84             |
| 15,627.0  | 90.40   | 149.89            | 7,426.8    | -6,951.6   | 4,279.3    | 8,127.8       | 0.80             |
| 15,722.0  | 91.36   | 149.89            | 7,425.3    | -7,033.8   | 4,327.0    | 8,222.2       | 1.01             |
| 15,817.0  | 89.69   | 150.59            | 7,424.5    | -7,116.3   | 4,374.1    | 8,316.4       | 1.91             |
| 15,912.0  | 90.04   | 150.77            | 7,424.7    | -7,199.1   | 4,420.6    | 8,410.6       | 0.41             |
| 16,007.0  | 90.13   | 149.71            | 7,424.6    | -7,281.6   | 4,467.8    | 8,504.8       | 1.12             |
| 16,102.0  | 90.13   | 149.89            | 7,424.3    | -7,363.7   | 4,515.6    | 8,599.2       | 0.19             |
| 16,197.0  | 91.01   | 148.31            | 7,423.4    | -7,445.2   | 4,564.4    | 8,693.6       | 1.90             |
| 16,292.0  | 91.32   | 149.80            | 7,421.5    | -7,526.6   | 4,613.2    | 8,788.1       | 1.60             |
| 16,386.0  | 90.57   | 150.68            | 7,419.9    | -7,608.2   | 4,659.8    | 8,881.3       | 1.23             |
| 16,481.0  | 89.43   | 151.80            | 7,419.9    | -7,691.5   | 4,705.6    | 8,975.3       | 1.68             |
| 16,576.0  | 90.22   | 151.56            | 7,420.2    | -7,775.1   | 4,750.6    | 9,069.3       | 0.87             |
| 16,671.0  | 90.84   | 150.86            | 7,419.3    | -7,858.4   | 4,796.4    | 9,163.3       | 0.98             |
| 16,766.0  | 89.08   | 151.12            | 7,419.4    | -7,941.5   | 4,842.4    | 9,257.4       | 1.87             |
| 16,861.0  | 89.52   | 150.24            | 7,420.6    | -8,024.3   | 4,889.0    | 9,351.5       | 1.04             |
| 16,953.0  | 89.78   | 149.36            | 7,421.1    | -8,103.8   | 4,935.2    | 9,442.9       | 1.00             |
| 17,014.0  | 89.78   | 148.00            | 7,421.4    | -8,155.9   | 4,966.9    | 9,503.6       | 2.23             |

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment   |
|-----------------------|-----------------------|-------------------|--------------|-----------|
|                       |                       | +N/-S (usft)      | +E/-W (usft) |           |
| 6,902.0               | 6,890.1               | -98.4             | -53.4        | Sycamore  |
| 7,178.0               | 7,107.4               | -179.9            | -198.5       | Middlesex |
| 7,423.0               | 7,260.0               | -321.1            | -322.8       | Burkett   |
| 7,491.0               | 7,296.4               | -375.2            | -341.9       | Tully     |
| 7,845.0               | 7,432.2               | -695.3            | -318.9       | Marcellus |

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

|                                |                              |
|--------------------------------|------------------------------|
| Job Start Date:                | 4/26/2017                    |
| Job End Date:                  | 5/11/2017                    |
| State:                         | West Virginia                |
| County:                        | Doddridge                    |
| API Number:                    | 47-017-06232-00-00           |
| Operator Name:                 | Antero Resources Corporation |
| Well Name and Number:          | Irons 2H                     |
| Latitude:                      | 39.26528333                  |
| Longitude:                     | -80.59663056                 |
| Datum:                         | NAD83                        |
| Federal Well:                  | NO                           |
| Indian Well:                   | NO                           |
| True Vertical Depth:           | 7,517                        |
| Total Base Water Volume (gal): | 14,539,382                   |
| 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                                                  | 87.25076                                                   |          |
| Sand                   | U.S. Well Services, LLC | Proppant           | Crystalline Silica, quartz                   | 14808-60-7                               | 100.00000                                                  | 12.40906                                                   |          |
| HCL Acid (12.6%-17.5%) | U.S. Well Services, LLC | Bulk Acid          | Water                                        | 7732-18-5                                | 87.40000                                                   | 0.24102                                                    |          |
|                        |                         |                    | Hydrogen Chloride                            | 7647-01-0                                | 17.50000                                                   | 0.05604                                                    |          |
| WFRA-500               | U.S. Well Services, LLC | Friction Reducer   | 2-Propenoic acid, polymer with 2-propenamide | 29003-06-9                               | 30.00000                                                   | 0.01493                                                    |          |
|                        |                         |                    | Hydrated light distillate (petroleum)        | 64742-47-8                               | 30.00000                                                   | 0.01202                                                    |          |
| LGC-15                 | U.S. Well Services, LLC | Gelling Agents     | Guar Gum                                     | 9000-30-0                                | 50.00000                                                   | 0.00398                                                    |          |
|                        |                         |                    | Petroleum Distillates                        | 64742-47-8                               | 60.00000                                                   | 0.00377                                                    |          |
|                        |                         |                    | Suspending agent (solid)                     | 14808-60-7                               | 3.00000                                                    | 0.00061                                                    |          |
|                        |                         |                    | Surfactant                                   | 68439-51-0                               | 3.00000                                                    | 0.00024                                                    |          |

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|               |                         |                           |                                              |             |           |         |  |
|---------------|-------------------------|---------------------------|----------------------------------------------|-------------|-----------|---------|--|
| Bioclear 2000 | U.S. Well Services, LLC | Anti-Bacterial Agent      |                                              |             |           |         |  |
|               |                         |                           | 2,2-dibromo-3-nitrilopropionamide            | 10222-01-2  | 20.00000  | 0.00414 |  |
|               |                         |                           | Deionized Water                              | 7732-18-5   | 28.00000  | 0.00237 |  |
| 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  | 0.00008 |  |
|               |                         |                           | Cinnamaldehyde                               | 104-55-2    | 20.00000  | 0.00003 |  |
|               |                         |                           | Formic acid                                  | 64-18-6     | 20.00000  | 0.00003 |  |
|               |                         |                           | Butyl cellosolve                             | 111-76-2    | 20.00000  | 0.00003 |  |
|               |                         |                           | Polyether                                    | 60828-78-6  | 10.00000  | 0.00001 |  |
|               |                         |                           | Acetophenone, thiourea, formaldehyde polymer | 68527-49-1  | 5.00000   | 0.00001 |  |
| AP One        | U.S. Well Services, LLC | Gel Breakers              |                                              |             |           |         |  |
|               |                         |                           | Ammonium Persulfate                          | 7727-54-0   | 100.00000 | 0.00017 |  |

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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Office of Oil and Gas  
SEP 11 2017  
WV Department of  
Environmental Protection



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

FILE NO: 44-30-GR-13  
 DRAWING NO: Irons 2H Well Plat As-Drilled  
 SCALE: 1" = 1200'  
 MINIMUM DEGREE OF ACCURACY: Submeter  
 PROVEN SOURCE OF ELEVATION: WVDOT, Bridgeport, WV

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

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 WATERSHED: Headwaters Middle Island Creek  
 QUADRANGLE: Salem & Big Isaac  
 DISTRICT: Greenbrier  
 LOCATION: ELEVATION: 1320'  
 SURFACE OWNER: Walter V. Davidson & M.T. Williams, et ux, et al; Rikk H. Randle, et ux; Charles J. Dennison, Trustee for the C.O. Dennison Estate, et al  
 ROYALTY OWNER: Charles J. Dennison, Trustee for the C.O. Dennison Estate, et al  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  CLEAN OUT AND REPLUG  PLUG AND ABANDON

DATE: July 13 2017  
 OPERATORS WELL NO. Irons Unit 2H  
 API WELL NO  
 STATE: 47  
 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 rules issued and prescribed by the Department of Environmental Protection.  
 Kenneth J. Plum, P.S. 2216

Top Hole coordinates verified by survey grade GPS. 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.

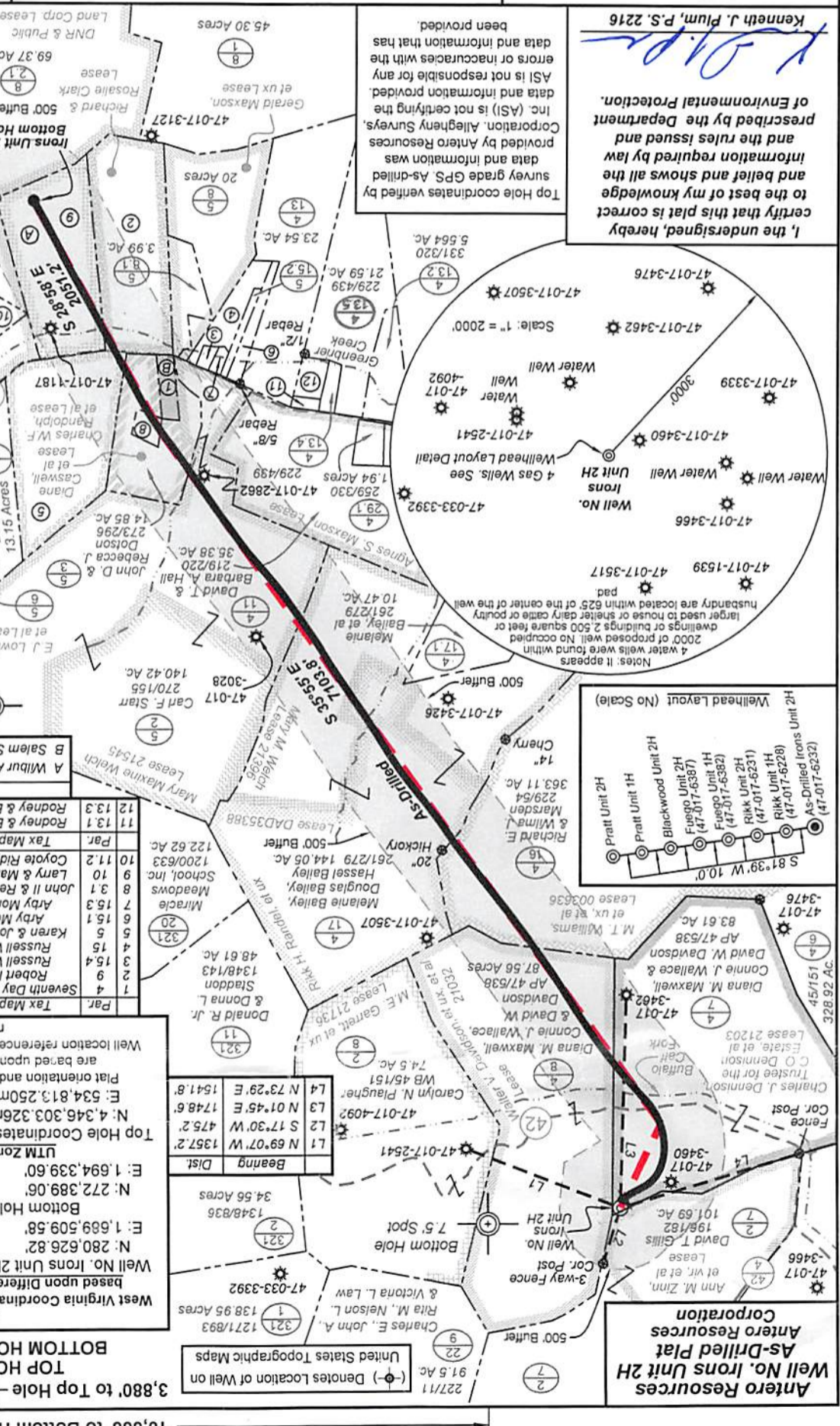
Legend  
 Proposed gas well  
 Found corner, as noted  
 Creek or Drain  
 Existing Road  
 Surface boundary (approx)  
 Interior surface tracts (approx)



GRID NORTH  
 9,563' to Top Hole  
 2,486' to Bottom Hole

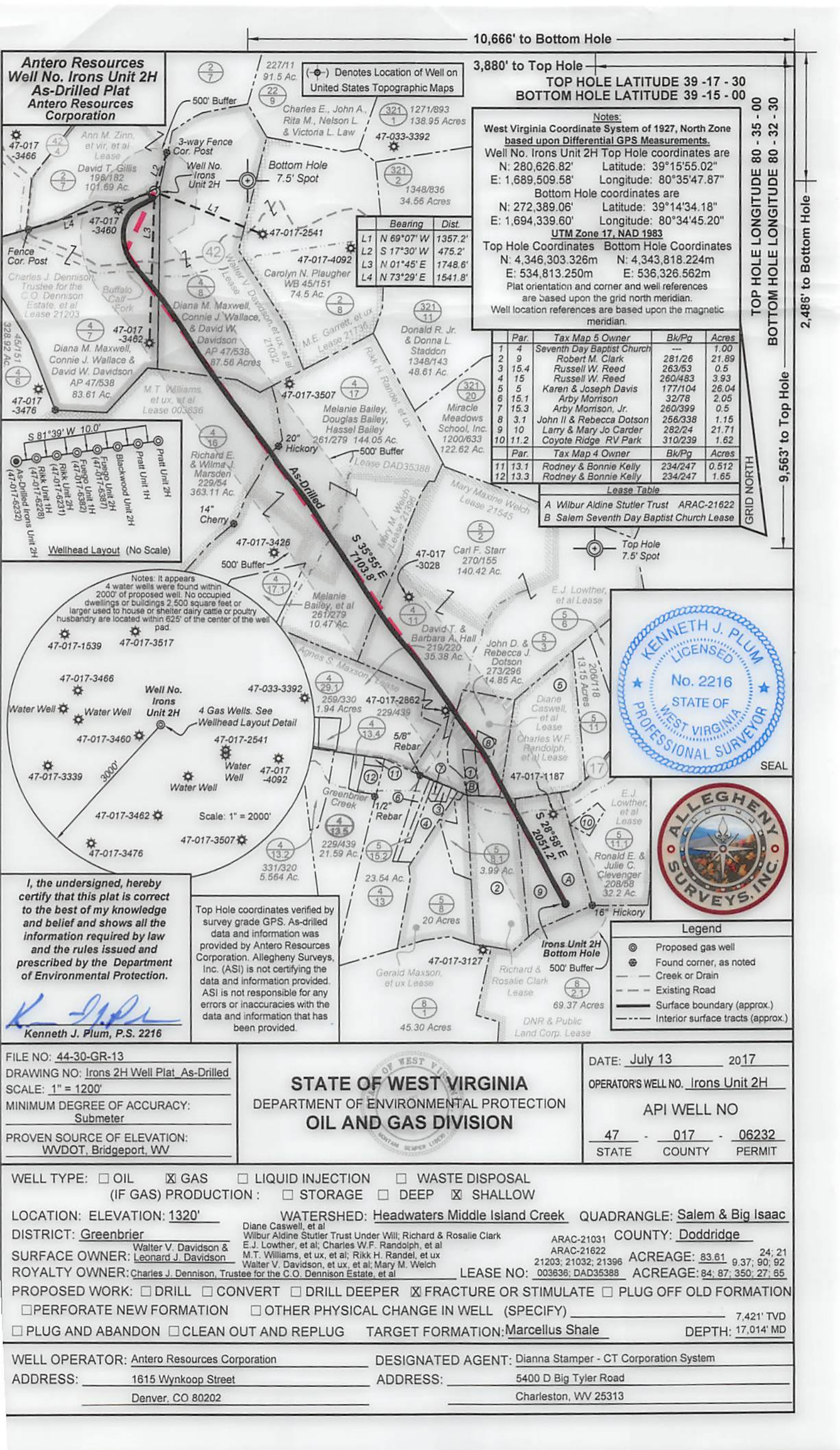
| Parcel | Acres | Bk/Pg   | Owner                    |
|--------|-------|---------|--------------------------|
| 1      | 1.00  | 281/26  | Robert M. Clark          |
| 2      | 21.89 | 263/53  | Russell W. Reed          |
| 3      | 2.05  | 260/399 | Russell W. Reed          |
| 4      | 2.05  | 177/104 | Karen & Joseph Davis     |
| 5      | 2.05  | 260/399 | Arby Morrison, Jr.       |
| 6      | 2.05  | 260/399 | Arby Morrison, Jr.       |
| 7      | 15.3  | 260/399 | Arby Morrison, Jr.       |
| 8      | 3.1   | 260/399 | John II & Rebecca Dotson |
| 9      | 10    | 282/4   | Larry & Mary Jo Carder   |
| 10     | 11.2  | 310/239 | Coyote Ridge RV Park     |
| 11     | 13.3  | 234/247 | Rodney & Bonnie Kelly    |
| 12     | 13.3  | 234/247 | Rodney & Bonnie Kelly    |
| 13     | 1.65  | 234/247 | Rodney & Bonnie Kelly    |

TOP HOLE LATITUDE 39 -17 - 30  
 BOTTOM HOLE LATITUDE 39 -15 - 00  
 TOP HOLE LONGITUDE 80 - 35 - 00  
 BOTTOM HOLE LONGITUDE 80 - 32 - 30



Well No. Irons Unit 2H  
 Wellhead Layout (No Scale)  
 Well No. Irons Unit 2H  
 Wellhead Layout (No Scale)

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



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

10,666' to Bottom Hole

3,880' to Top Hole

TOP HOLE LATITUDE 39 -17 - 30  
BOTTOM HOLE LATITUDE 39 -15 - 00

TOP HOLE LONGITUDE 80 - 35 - 00  
BOTTOM HOLE LONGITUDE 80 - 32 - 30

2,485' to Bottom Hole

9,563' to Top Hole

GRID NORTH

**Notes:**  
West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.  
Well No. Irons Unit 2H Top Hole coordinates are  
N: 280,626.82' Latitude: 39°15'55.02"  
E: 1,689,509.58' Longitude: 80°35'47.87"  
Bottom Hole coordinates are  
N: 272,389.06' Latitude: 39°14'34.18"  
E: 1,694,339.60' Longitude: 80°34'45.20"  
UTM Zone 17, NAD 1983  
Top Hole Coordinates Bottom Hole Coordinates  
N: 4,346,303.326m N: 4,343,818.224m  
E: 534,813.250m E: 536,326.562m  
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 N 69°07' W | 1357.2' |
| L2 S 17°30' W | 475.2'  |
| L3 N 01°45' E | 1748.6' |
| L4 N 73°29' E | 1541.8' |

| Par. | Tax Map 5 Owner              | Bk/Pg   | Acres |
|------|------------------------------|---------|-------|
| 1    | 4 Seventh Day Baptist Church | ---     | 1.00  |
| 2    | 9 Robert M. Clark            | 281/26  | 21.89 |
| 3    | 15.4 Russell W. Reed         | 263/53  | 0.5   |
| 4    | 15 Russell W. Reed           | 260/483 | 3.93  |
| 5    | 5 Karen & Joseph Davis       | 177/104 | 26.04 |
| 6    | 15.1 Arby Morrison           | 32/78   | 2.05  |
| 7    | 15.3 Arby Morrison, Jr.      | 260/399 | 0.5   |
| 8    | 3.1 John II & Rebecca Dotson | 256/338 | 1.15  |
| 9    | 10 Larry & Mary Jo Carder    | 282/24  | 21.71 |
| 10   | 11.2 Coyote Ridge RV Park    | 310/239 | 1.62  |

| Par. | Tax Map 4 Owner            | Bk/Pg   | Acres |
|------|----------------------------|---------|-------|
| 11   | 13.1 Rodney & Bonnie Kelly | 234/247 | 0.512 |
| 12   | 13.3 Rodney & Bonnie Kelly | 234/247 | 1.65  |

**Lease Table**  
A Wilbur Aldine Stutler Trust ARAC-21622  
B Salem Seventh Day Baptist Church Lease



**Legend**

- ⊙ Proposed gas well
- ⊕ Found corner, as noted
- Creek or Drain
- Existing Road
- Surface boundary (approx.)
- Interior surface tracts (approx.)



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*Kenneth J. Plum*  
Kenneth J. Plum, P.S. 2216

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PROVEN SOURCE OF ELEVATION: WVDOT, Bridgeport, WV

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

DATE: July 13 2017  
OPERATOR'S WELL NO. Irons Unit 2H  
API WELL NO  
47 - 017 - 06232  
STATE COUNTY PERMIT

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

LOCATION: ELEVATION: 1320'  
DISTRICT: Greenbrier  
SURFACE OWNER: Walter V. Davidson & Leonard J. Davidson  
ROYALTY OWNER: Charles J. Dennison, Trustee for the C.O. Dennison Estate, et al

WATERSHED: Headwaters Middle Island Creek  
QUADRANGLE: Salem & Big Isaac  
COUNTY: Doddridge

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_ 7,421' TVD  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale DEPTH: 17,014' MD

WELL OPERATOR: Antero Resources Corporation  
ADDRESS: 1615 Wynkoop Street Denver, CO 80202

DESIGNATED AGENT: Dianna Stamper - CT Corporation System  
ADDRESS: 5400 D Big Tyler Road Charleston, WV 25313