

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

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Office of Oil and Gas

Department of
Environmental Protection

API 47-095-02523 County Tyler District Ellsworth
Quad Paden City 7.5' Pad Name Reel Pad Field/Pool Name ----
Farm name John E. Roberts Well Number Abu Unit 4H
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 4376743.682m Easting 510067.999m
Landing Point of Curve Northing 4376760.47m Easting 5009910.68m
Bottom Hole Northing 4380980.273m Easting 508534.934m

Elevation (ft) 849' GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine

Mud Type(s) and Additive(s)
Air - Foam & 4% KCL
Mud - Polymer

Date permit issued 10/16/2018 Date drilling commenced 11/1/2018 Date drilling ceased 12/23/2018
Date completion activities began 1/15/2019 Date completion activities ceased 3/2/2019
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 38' Open mine(s) (Y/N) depths No
Salt water depth(s) ft 1427', 1494', 1827' Void(s) encountered (Y/N) depths No
Coal depth(s) ft 87' Cavern(s) encountered (Y/N) depths No
Is coal being mined in area (Y/N) No

Reviewed by:

11/12/2021

API 47-095 - 02523 Farm name John E. Roberts Well number Abu Unit 4H

| 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" | 30' | New | 94#, H-40 | N/A | Y |
| Surface | 17-1/2" | 13-3/8" | 30' | New | 48#, H-40 | N/A | Y |
| Coal | | | | | | | |
| Intermediate 1 | 12-1/4" | 9-5/8" | 30' | New | 36#, J-55 | N/A | Y |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 8-3/4"/8-1/2" | 5-1/2" | 30' | New | 23#, P-110 | N/A | Y |
| Tubing | | 2-3/8" | 6417' | | 4.7#, N-80 | | |
| Packer type and depth set | | N/A | | | | | |

Comment Details _____

| CEMENT DATA | Class/Type of Cement | Number of Sacks | Slurry wt (ppg) | Yield (ft ³ /sks) | Volume (ft ³) | Cement Top (MD) | WOC (hrs) |
|----------------|----------------------|------------------------------|--------------------------|------------------------------|---------------------------|--------------------------------|-----------|
| Conductor | Class A | 514 sx | 15.6 | 1.18 | 120 | 0' | 8 Hrs. |
| Surface | Class A | 361 sx | 15.6 | 1.18 | 826 | 0' | 8 Hrs. |
| Coal | | | | | | | |
| Intermediate 1 | Class A | n/a sx | 15.6 | 1.18 | 1181 | 0' | 8 Hrs. |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | Class H | 169 sx (Lead) 2489 sx (Tail) | 13.5 (Lead), 15.2 (Tail) | 1.53 (Lead), 1.83 (Tail) | | -500' into Intermediate Casing | 8 Hrs. |
| Tubing | | | | | | | |

Drillers TD (ft) 21334' MD, 6113' TVD (BHL), 6228' (Deepest Point Drilled) Loggers TD (ft) 21334' MD

Deepest formation penetrated Marcellus Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 5900'

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

11/12/2021

API 47-095 - 02523 Farm name John E. Roberts Well number Abu Unit 4H

PERFORATION RECORD

| Stage No. | Perforation date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formation(s) |
|---------------------------------------|------------------|------------------------|----------------------|------------------------|--------------|
| *PLEASE SEE ATTACHED EXHIBIT 1 | | | | | |
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Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

| Stage No. | Stimulations Date | Ave Pump Rate (BPM) | Ave Treatment Pressure (PSI) | Max Breakdown Pressure (PSI) | ISIP (PSI) | Amount of Proppant (lbs) | Amount of Water (bbls) | Amount of Nitrogen/other (units) |
|---------------------------------------|-------------------|---------------------|------------------------------|------------------------------|------------|--------------------------|------------------------|----------------------------------|
| *PLEASE SEE ATTACHED EXHIBIT 2 | | | | | | | | |
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Please insert additional pages as applicable.

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API 47- 095 - 02523 Farm name John E. Roberts Well number Abu Unit 4H

| <u>PRODUCING FORMATION(S)</u> | <u>DEPTHS</u> | | |
|-------------------------------|---------------|-----|----------------|
| Marcellus | 6067' (TOP) | TVD | 6484' (TOP) MD |
| | | | |
| | | | |

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 2800 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 7700 mcfpd Oil 438 bpd NGL --- bpd Water 8 bpd GAS MEASURED BY Estimated Orifice Pilot

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

***PLEASE SEE ATTACHED EXHIBIT 3**

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WV Dept of Environmental Protection

Please insert additional pages as applicable.

Drilling Contractor Frontier Drilling LLC
Address 562 Spring Run Road City Pennsboro State WV Zip 26415

Logging Company Allied Horizontal Wireline Services
Address 381 Colonial Manor Road City North Huntington State PA Zip 15642

Cementing Company C&J Energy Services
Address 1650 Hackers Creek City Jane Lew State WV Zip 26378

Stimulating Company Baker Hughes
Address 837 Philippi Pike City Clarksburg State WV Zip 26301

Please insert additional pages as applicable.

Completed by Megan Griffith Telephone 303-357-7223
Signature  Title Permitting Agent Date 1/13/2020

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

11/12/2021

95-02523
WR-35

| API 47-095-02493 Farm Name John E. Roberts Well Number Abu Unit 4H | | | | | |
|--|------------------|------------------------|----------------------|------------------------|------------|
| EXHIBIT 1 | | | | | |
| Stage No. | Perforation Date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formations |
| 1 | 2/3/2019 | 21042.375 | 21210 | 60 | Marcellus |
| 2 | 2/3/2019 | 20843.625 | 21011.25 | 60 | Marcellus |
| 3 | 2/4/2019 | 20644.875 | 20812.5 | 60 | Marcellus |
| 4 | 2/4/2019 | 20446.125 | 20613.75 | 60 | Marcellus |
| 5 | 2/4/2019 | 20247.375 | 20415 | 60 | Marcellus |
| 6 | 2/4/2019 | 20048.625 | 20216.25 | 60 | Marcellus |
| 7 | 2/5/2019 | 19849.875 | 20017.5 | 60 | Marcellus |
| 8 | 2/5/2019 | 19651.125 | 19818.75 | 60 | Marcellus |
| 9 | 2/5/2019 | 19452.375 | 19620 | 60 | Marcellus |
| 10 | 2/5/2019 | 19253.625 | 19421.25 | 60 | Marcellus |
| 11 | 2/6/2019 | 19054.875 | 19222.5 | 60 | Marcellus |
| 12 | 2/6/2019 | 18856.125 | 19023.75 | 60 | Marcellus |
| 13 | 2/6/2019 | 18657.375 | 18825 | 60 | Marcellus |
| 14 | 2/7/2019 | 18458.625 | 18626.25 | 60 | Marcellus |
| 15 | 2/7/2019 | 18259.875 | 18427.5 | 60 | Marcellus |
| 16 | 2/7/2019 | 18061.125 | 18228.75 | 60 | Marcellus |
| 17 | 2/7/2019 | 17862.375 | 18030 | 60 | Marcellus |
| 18 | 2/8/2019 | 17663.625 | 17831.25 | 60 | Marcellus |
| 19 | 2/8/2019 | 17464.875 | 17632.5 | 60 | Marcellus |
| 20 | 2/8/2019 | 17266.125 | 17433.75 | 60 | Marcellus |
| 21 | 2/8/2019 | 17067.375 | 17235 | 60 | Marcellus |
| 22 | 2/8/2019 | 16868.625 | 17036.25 | 60 | Marcellus |
| 23 | 2/9/2019 | 16669.875 | 16837.5 | 60 | Marcellus |
| 24 | 2/9/2019 | 16471.125 | 16638.75 | 60 | Marcellus |
| 25 | 2/9/2019 | 16272.375 | 16440 | 60 | Marcellus |
| 26 | 2/9/2019 | 16073.625 | 16241.25 | 60 | Marcellus |
| 27 | 2/10/2019 | 15874.875 | 16042.5 | 60 | Marcellus |
| 28 | 2/10/2019 | 15676.125 | 15843.75 | 60 | Marcellus |
| 29 | 2/10/2019 | 15477.375 | 15645 | 60 | Marcellus |
| 30 | 2/10/2019 | 15278.625 | 15446.25 | 60 | Marcellus |
| 31 | 2/10/2019 | 15079.875 | 15247.5 | 60 | Marcellus |
| 32 | 2/11/2019 | 14881.125 | 15048.75 | 60 | Marcellus |
| 33 | 2/11/2019 | 14682.375 | 14850 | 60 | Marcellus |
| 34 | 2/11/2019 | 14483.625 | 14651.25 | 60 | Marcellus |
| 35 | 2/11/2019 | 14284.875 | 14452.5 | 60 | Marcellus |
| 36 | 2/11/2019 | 14086.125 | 14253.75 | 60 | Marcellus |
| 37 | 2/12/2019 | 13887.375 | 14055 | 60 | Marcellus |
| 38 | 2/12/2019 | 13688.625 | 13856.25 | 60 | Marcellus |
| 39 | 2/12/2019 | 13489.875 | 13657.5 | 60 | Marcellus |
| 40 | 2/12/2019 | 13291.125 | 13458.75 | 60 | Marcellus |
| 41 | 2/12/2019 | 13092.375 | 13260 | 60 | Marcellus |
| 42 | 2/12/2019 | 12893.625 | 13061.25 | 60 | Marcellus |
| 43 | 2/13/2019 | 12694.875 | 12862.5 | 60 | Marcellus |
| 44 | 2/13/2019 | 12496.125 | 12663.75 | 60 | Marcellus |
| 45 | 2/13/2019 | 12297.375 | 12465 | 60 | Marcellus |
| 46 | 2/13/2019 | 12098.625 | 12266.25 | 60 | Marcellus |
| 47 | 2/13/2019 | 11899.875 | 12067.5 | 60 | Marcellus |
| 48 | 2/13/2019 | 11701.125 | 11868.75 | 60 | Marcellus |
| 49 | 2/14/2019 | 11502.375 | 11670 | 60 | Marcellus |
| 50 | 2/14/2019 | 11303.625 | 11471.25 | 60 | Marcellus |
| 51 | 2/14/2019 | 11104.875 | 11272.5 | 60 | Marcellus |
| 52 | 2/14/2019 | 10906.125 | 11073.75 | 60 | Marcellus |
| 53 | 2/14/2019 | 10707.375 | 10875 | 60 | Marcellus |
| 54 | 2/14/2019 | 10508.625 | 10676.25 | 60 | Marcellus |
| 55 | 2/14/2019 | 10309.875 | 10477.5 | 60 | Marcellus |
| 56 | 2/15/2019 | 10111.125 | 10278.75 | 60 | Marcellus |
| 57 | 2/15/2019 | 9912.375 | 10080 | 60 | Marcellus |
| 58 | 2/15/2019 | 9713.625 | 9881.25 | 60 | Marcellus |
| 59 | 2/15/2019 | 9514.875 | 9682.5 | 60 | Marcellus |
| 60 | 2/15/2019 | 9316.125 | 9483.75 | 60 | Marcellus |
| 61 | 2/15/2019 | 9117.375 | 9285 | 60 | Marcellus |
| 62 | 2/16/2019 | 8918.625 | 9086.25 | 60 | Marcellus |
| 63 | 2/16/2019 | 8719.875 | 8887.5 | 60 | Marcellus |
| 64 | 2/16/2019 | 8521.125 | 8688.75 | 60 | Marcellus |
| 65 | 2/16/2019 | 8322.375 | 8490 | 60 | Marcellus |
| 66 | 2/16/2019 | 8123.625 | 8291.25 | 60 | Marcellus |
| 67 | 2/16/2019 | 7924.875 | 8092.5 | 60 | Marcellus |
| 68 | 2/17/2019 | 7726.125 | 7893.75 | 60 | Marcellus |
| 69 | 2/17/2019 | 7527.375 | 7695 | 60 | Marcellus |
| 70 | 2/17/2019 | 7328.625 | 7496.25 | 60 | Marcellus |
| 71 | 2/17/2019 | 7129.875 | 7297.5 | 60 | Marcellus |
| 72 | 2/17/2019 | 6931.125 | 7098.75 | 60 | Marcellus |
| 73 | 2/17/2019 | 6732.375 | 6900 | 60 | Marcellus |
| 74 | 2/18/2019 | 6533.625 | 6701.25 | 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 | 2/3/2019 | 77.4 | 9297 | 5136 | 3870 | 502760 | 10086 | N/A |
| 2 | 2/3/2019 | 77.7832 | 9039.808 | 5957 | 4501 | 512860 | 12395 | N/A |
| 3 | 2/4/2019 | 77.2767 | 8597.2 | 5495 | 5848 | 504680 | 10365 | N/A |
| 4 | 2/4/2019 | 77.8525 | 8500.148 | 5319 | 4610 | 503420 | 10130 | N/A |
| 5 | 2/4/2019 | 74.9049 | 8272.255 | 5578 | 5020 | 508180 | 9689 | N/A |
| 6 | 2/4/2019 | 75.8502 | 8210.797 | 5657 | 4723 | 508140 | 10040 | N/A |
| 7 | 2/5/2019 | 77.1959 | 8443.737 | 5820 | 4580 | 510780 | 10252 | N/A |
| 8 | 2/5/2019 | 76.9612 | 8671.165 | 5688 | 4979 | 501560 | 9574 | N/A |
| 9 | 2/5/2019 | 77.5854 | 8100.55 | 5578 | 4600 | 500580 | 9512 | N/A |
| 10 | 2/5/2019 | 77.2302 | 8647.147 | 6182 | 5336 | 509360 | 9730 | N/A |
| 11 | 2/6/2019 | 77.6651 | 8370.591 | 5414 | 4842 | 507140 | 9700 | N/A |
| 12 | 2/6/2019 | 78.3282 | 8268.213 | 5494 | 4800 | 506540 | 9719 | N/A |
| 13 | 2/6/2019 | 76.7921 | 7923.247 | 5556 | 5100 | 505940 | 9160 | N/A |
| 14 | 2/7/2019 | 77.2652 | 8116.044 | 6097 | 4600 | 501680 | 9332 | N/A |
| 15 | 2/7/2019 | 76.4625 | 7909.371 | 5598 | 4900 | 500340 | 10378 | N/A |
| 16 | 2/7/2019 | 77.5721 | 7994.194 | 5960 | 5185 | 505100 | 9654 | N/A |
| 17 | 2/7/2019 | 77.7865 | 7762.31 | 5619 | 4868 | 501420 | 9601 | N/A |
| 18 | 2/8/2019 | 77.0799 | 8019.945 | 5769 | 4933 | 501900 | 9518 | N/A |
| 19 | 2/8/2019 | 75.3317 | 7721.586 | 5705 | 4900 | 502860 | 10366 | N/A |
| 20 | 2/8/2019 | 76.5242 | 8110.835 | 5526 | 5000 | 503620 | 9036 | N/A |
| 21 | 2/8/2019 | 76.7675 | 8239.745 | 5702 | 4450 | 504680 | 9021 | N/A |
| 22 | 2/8/2019 | 76.024 | 8061.96 | 5926 | 4889 | 508940 | 9393 | N/A |
| 23 | 2/9/2019 | 73.2873 | 7683.662 | 5591 | 5167 | 503740 | 11092 | N/A |
| 24 | 2/9/2019 | 76.2696 | 7848.896 | 5289 | 5100 | 500260 | 9181 | N/A |
| 25 | 2/9/2019 | 76.3771 | 7887.069 | 6026 | 4900 | 503220 | 8989 | N/A |
| 26 | 2/9/2019 | 75.1567 | 7900.419 | 5770 | 4097 | 501600 | 9219 | N/A |
| 27 | 2/10/2019 | 72.3876 | 8419.781 | 5836 | 4850 | 507180 | 12052 | N/A |
| 28 | 2/10/2019 | 77.4656 | 7879.037 | 5908 | 4700 | 502950 | 8921 | N/A |
| 29 | 2/10/2019 | 80.2432 | 7949.734 | 5528 | 5337 | 502170 | 9035 | N/A |
| 30 | 2/10/2019 | 77.4928 | 7908.32 | 5797 | 4800 | 504080 | 8877 | N/A |
| 31 | 2/10/2019 | 74.5832 | 7632.707 | 5769 | 4508 | 493500 | 8761 | N/A |
| 32 | 2/11/2019 | 75.809 | 7749.039 | 5734 | 4967 | 504680 | 10095 | N/A |
| 33 | 2/11/2019 | 76.2565 | 7713.744 | 5624 | 4900 | 501800 | 8955 | N/A |
| 34 | 2/11/2019 | 75.1318 | 7587.181 | 5758 | 5200 | 503600 | 8887 | N/A |
| 35 | 2/11/2019 | 77.5239 | 7655.133 | 5638 | 5400 | 501360 | 8872 | N/A |
| 36 | 2/11/2019 | 75.2229 | 7689.59 | 5776 | 4543 | 505120 | 9025 | N/A |
| 37 | 2/12/2019 | 74.5001 | 7624.81 | 5874 | 4256 | 501420 | 9118 | N/A |
| 38 | 2/12/2019 | 74.8944 | 7600.209 | 6076 | 4800 | 503440 | 8894 | N/A |
| 39 | 2/12/2019 | 77.829 | 7587.682 | 5620 | 4300 | 500760 | 8826 | N/A |
| 40 | 2/12/2019 | 78.0291 | 7536.257 | 5325 | 4700 | 503400 | 8835 | N/A |
| 41 | 2/12/2019 | 77.9 | 7471 | 2868 | 4435 | 506800 | 8845 | N/A |
| 42 | 2/12/2019 | 77.727 | 7748.585 | 5692 | 4802 | 503560 | 9816 | N/A |
| 43 | 2/13/2019 | 80.2432 | 7863.231 | 5513 | 4700 | 500740 | 8864 | N/A |
| 44 | 2/13/2019 | 79.9992 | 7651.239 | 4922 | 5000 | 501040 | 8807 | N/A |
| 45 | 2/13/2019 | 80.3013 | 7736.239 | 18 | 4400 | 500840 | 8703 | N/A |
| 46 | 2/13/2019 | 80.1884 | 7848.109 | 5100 | 4900 | 503960 | 8912 | N/A |
| 47 | 2/13/2019 | 78.4137 | 7839.437 | 5640 | 4644 | 500980 | 8795 | N/A |
| 48 | 2/13/2019 | 79.7486 | 7869.149 | 5678 | 4144 | 507160 | 8827 | N/A |
| 49 | 2/14/2019 | 78.5791 | 7963.86 | 5564 | 5428 | 502260 | 8819 | N/A |
| 50 | 2/14/2019 | 77.244 | 7785.547 | 5619 | 4475 | 504740 | 8805 | N/A |
| 51 | 2/14/2019 | 80.3973 | 7815.891 | 5809 | 4700 | 501240 | 8704 | N/A |
| 52 | 2/14/2019 | 77.8703 | 7756.952 | 5913 | 4100 | 502800 | 8762 | N/A |
| 53 | 2/14/2019 | 76.0351 | 7851.178 | 5779 | 4100 | 501600 | 8836 | N/A |
| 54 | 2/14/2019 | 77.4269 | 8266.162 | 5314 | 4499 | 501960 | 8772 | N/A |
| 55 | 2/14/2019 | 79.892 | 7940.954 | 4929 | 3619 | 502460 | 8764 | N/A |
| 56 | 2/15/2019 | 79.5822 | 7400.844 | 3730 | 4505 | 503140 | 8752 | N/A |
| 57 | 2/15/2019 | 78.3222 | 6796.699 | 5252 | 4500 | 504280 | 8652 | N/A |
| 58 | 2/15/2019 | 76.7983 | 6876.686 | 5124 | 5000 | 503380 | 8604 | N/A |
| 59 | 2/15/2019 | 78.2565 | 6692.201 | 5011 | 3700 | 501880 | 8601 | N/A |
| 60 | 2/15/2019 | 80.1312 | 7104.773 | 5928 | 4320 | 503060 | 8722 | N/A |
| 61 | 2/15/2019 | 80.0451 | 6953.817 | 6543 | 5247 | 504200 | 8715 | N/A |
| 62 | 2/16/2019 | 80.3467 | 6959.26 | 4731 | 4969 | 504920 | 8705 | N/A |
| 63 | 2/16/2019 | 80.1932 | 6806.068 | 4797 | 4253 | 505700 | 8698 | N/A |
| 64 | 2/16/2019 | 79.8808 | 6861.27 | 5607 | 4600 | 503100 | 8607 | N/A |
| 65 | 2/16/2019 | 80.35 | 6798.128 | 4749 | 4800 | 502640 | 8663 | N/A |
| 66 | 2/16/2019 | 80.2141 | 6630.123 | 4691 | 4700 | 503780 | 8574 | N/A |
| 67 | 2/16/2019 | 80.146 | 6726.747 | 4288 | 5192 | 501140 | 8663 | N/A |
| 68 | 2/17/2019 | 80.0333 | 6588.595 | 5574 | 4463 | 502400 | 8653 | N/A |
| 69 | 2/17/2019 | 80.4799 | 6759.1 | 6253 | 4700 | 498300 | 8423 | N/A |
| 70 | 2/17/2019 | 80.8299 | 6636.547 | 5535 | 4650 | 505020 | 8673 | N/A |
| 71 | 2/17/2019 | 80.7759 | 6528.113 | 4260 | 4000 | 505580 | 8619 | N/A |
| 72 | 2/17/2019 | 80.5544 | 6575.212 | 6301 | 4700 | 500540 | 8572 | N/A |
| 73 | 2/17/2019 | 79.4246 | 6849.191 | 5066 | 5006 | 500170 | 9440 | N/A |
| 74 | 2/18/2019 | 79.9936 | 6661.542 | 6189 | 4047 | 504170 | 10455 | N/A |
| | AVG. | 76.9 | 8,013 | 5,483 | 4,809 | 22,669,740 | 429,320 | 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 |
| Silty Siltstone | 120 | 210 | 120 | 210 |
| Silty Shale | 210 | 360 | 210 | 360 |
| Sandstone | 360 | 420 | 360 | 420 |
| Silty Shale | 420 | 990 | 420 | 990 |
| Sandstone | 990 | 1,050 | 990 | 1,050 |
| Shaly sandstone | 1,050 | 1,080 | 1,050 | 1,080 |
| Silty SHale | 1,080 | 980 | 1,080 | 980 |
| Silty Sandstone | 980 | 1,110 | 980 | 1,110 |
| Shale | 1,110 | 1,200 | 1,110 | 1,200 |
| Sandstone | 1,200 | 1,480 | 1,200 | 1,480 |
| Sandy Siltstone | 1,480 | 1,320 | 1,480 | 1,320 |
| Silty SHale | 1,320 | 1,440 | 1,320 | 1,440 |
| Sandy shale | 1,440 | 1,601 | 1,440 | 1,631 |
| Big Lime | 1,631 | 2,205 | 1,601 | 2,205 |
| Fifty Foot Sandstone | 2,205 | 2,479 | 2,175 | 2,479 |
| Gordon | 2,479 | 2,745 | 2,449 | 2,746 |
| Fifth Sandstone | 2,745 | 2,822 | 2,716 | 2,822 |
| Bayard | 2,822 | 3,682 | 2,792 | 3,694 |
| Speechley | 3,682 | 3,809 | 3,664 | 3,829 |
| Balltown | 3,809 | 4,355 | 3,799 | 4,392 |
| Bradford | 4,355 | 4,623 | 4,362 | 4,668 |
| Benson | 4,623 | 5,005 | 4,638 | 5,061 |
| Alexander | 5,005 | 6,013 | 5,031 | 6,141 |
| Sycamore | 5,917 | 5,983 | 6,022 | 6,111 |
| Middlesex | 5,983 | 6,036 | 6,111 | 6,195 |
| Burkett | 6,036 | 6,047 | 6,195 | 6,383 |
| Tully | 6,047 | 6,067 | 6,383 | 6,484 |
| Marcellus | 6,067 | NA | 6,484 | 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: | 2/3/2019 |
| Job End Date: | 2/17/2019 |
| State: | West Virginia |
| County: | Tyler |
| API Number: | 47-095-02523-00-00 |
| Operator Name: | Antero Resources Corporation |
| Well Name and Number: | Abu 4H |
| Latitude: | 39.54022220 |
| Longitude: | -80.88300555 |
| Datum: | NAD83 |
| Federal Well: | NO |
| Indian Well: | NO |
| True Vertical Depth: | 6,228 |
| Total Base Water Volume (gal): | 30,083,416 |
| 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 | 86.87167 | |
| Sand | J.S. Well Services, LLC | Proppant | Crystalline Silica, quartz | 14808-60-7 | 100.00000 | 12.89985 | |
| HCL Acid (12.6%-17.5%) | J.S. Well Services, LLC | Bulk Acid | Water | 7732-18-5 | 87.40000 | 0.10337 | |
| LGC-15 | J.S. Well Services, LLC | Gelling Agents | Hydrogen Chloride | 7647-01-0 | 17.50000 | 0.02403 | |
| WFRA-405 | J.S. Well Services, LLC | Friction Reducer | Guar Gum | 9000-30-0 | 50.00000 | 0.02121 | |
| | | | Petroleum Distillates | 64742-47-8 | 60.00000 | 0.02009 | |
| | | | Suspending agent (solid) | 14808-60-7 | 3.00000 | 0.00324 | |
| | | | Surfactant | 68439-51-0 | 3.00000 | 0.00127 | |
| | | | 2-Propanoic acid, polymer with 29003-06-9 propanamide | 29003-06-9 | 30.00000 | 0.01685 | |
| | | | Hydrated light distillate (petroleum) | 64742-47-8 | 30.00000 | 0.01357 | |

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| SI-1200 | U.S. Well Services, LLC | Scale Inhibitor | | | | | | |
|---------------|-------------------------|---------------------------|---|------------|--|----------|---------|--|
| | | | Water | 7732-18-5 | | 80.00000 | 0.00950 | |
| | | | Ethylene Glycol | 107-21-1 | | 40.00000 | 0.00679 | |
| | | | Sodium Salt of Diethylenetriaminepenta(methylene phosphonic acid) | 68155-78-2 | | 10.00000 | 0.00119 | |
| | | | Sodium Chloride | 7647-14-5 | | 10.00000 | 0.00119 | |
| Bioclear 2000 | U.S. Well Services, LLC | Anti-Bacterial Agent | | | | | | |
| | | | 2,2-dibromo-3-nitropropionamide | 10222-01-2 | | 20.00000 | 0.00386 | |
| | | | Deionized Water | 7732-18-5 | | 28.00000 | 0.00221 | |
| AI-303 | U.S. Well Services, LLC | Acid Corrosion Inhibitors | | | | | | |
| | | | Ethylene glycol | 107-21-1 | | 40.00000 | 0.00004 | |
| | | | Formic acid | 64-18-6 | | 20.00000 | 0.00001 | |
| | | | Cinnamaldehyde | 104-55-2 | | 20.00000 | 0.00001 | |
| | | | Butyl cellosolve | 111-76-2 | | 20.00000 | 0.00001 | |
| | | | Polyether | 60828-78-6 | | 10.00000 | 0.00001 | |
| | | | Acetophenone, thiourea, formaldehyde polymer | 68527-49-1 | | 5.00000 | 0.00000 | |

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

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

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided. Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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WV Department of
Environmental Protection



| Bearing | Dist. | Desc. |
|---------------|----------|----------|
| L1 S 57°34' E | 1,285.2' | Rod/Cap |
| L2 S 44°08' E | 289.7' | 3-way FC |
| L3 N 70°02' W | 595.0' | Stone |
| L4 N 68°04' E | 1,831.5' | Ab. Well |

FILE NO: 32-54-E-16
 DRAWING NO: Abu 4H Well Plat As-Drilled
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

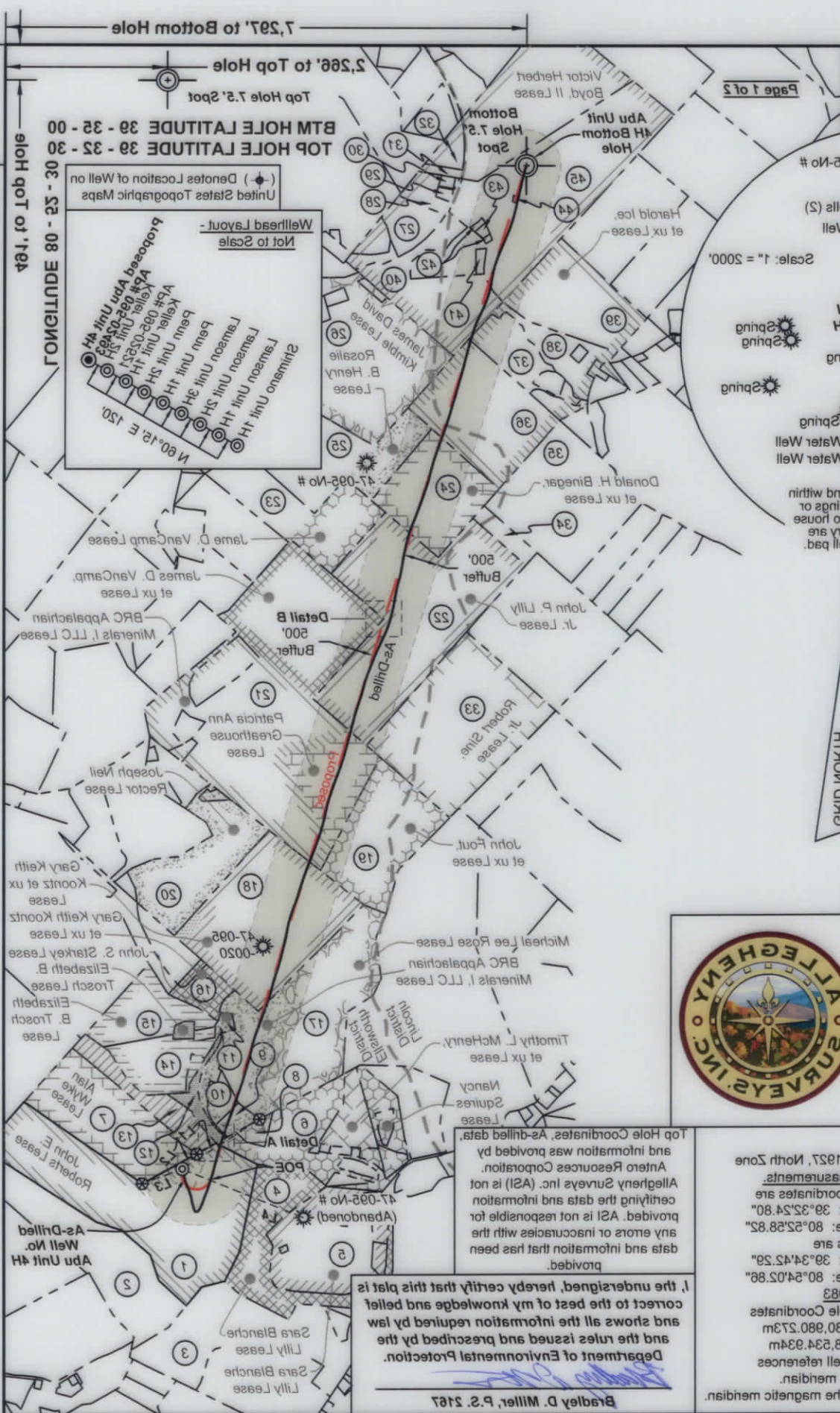
STATE OF WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS DIVISION

DATE: November 20, 20 19
 OPERATOR'S WELL NO. Abu Unit 4H
 API WELL NO. WR-35
 47 - 095 - 02523
 STATE COUNTY PERMIT

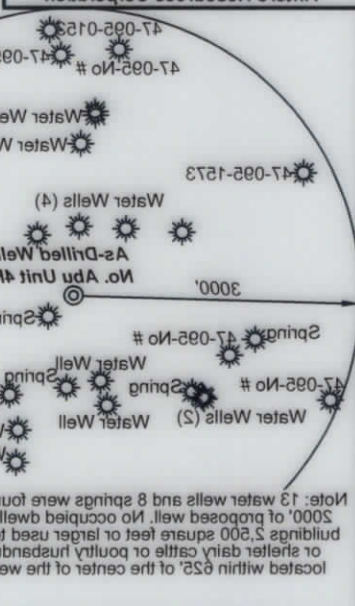
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW

LOCATION: ELEVATION: As-Drilled Grade - 849' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Paden City
 DISTRICT: Ellsworth & Lincoln John P. Lilly Jr.; Victor Herbert Boyd, II; COUNTY: Tyler 208; 2; 35.66;
 SURFACE OWNER: John E. Roberts Patricia Ann Greathouse; Gary Keith Koontz et ux; Harold Ice, et ux; ACREAGE: 100 77.3125; 101.8;
 ROYALTY OWNER: John E. Roberts; Nancy Squires; Michael Lee Rose; LEASE NO: ACREAGE: 65.5; 50; 40;
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 6,113' TVD
 21,334' 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



Antero Resources Corporation
 As-Drilled Plat
 Well No. Abu Unit 4H



| Dist. | Bearing | Desc. |
|-------------------------|---------|----------|
| L.1 S 57°34' E 1,285.2' | | Rod/Gap |
| L.2 S 44°08' E 289.7' | | 3-way FC |
| L.3 N 70°02' W 285.0' | | Stone |
| L.4 N 68°04' E 1,831.5' | | Ap Well |

Legend

- Proposed gas well
- Found corner, as noted
- Existing Well, as noted
- Creek or Drain
- Existing Road
- Subface boundary (approx.)
- Interior subface tracts (approx.)



Notes:
 West Virginia Coordinate System of 1927, North Zone
 based upon Differential GPS Measurements.
 Well No. Abu Unit 4H Top Hole coordinates are
 N: 381,873.33' Latitude: 39°32'24.80"
 E: 1,609,974.38' Longitude: 80°52'28.82"
 Bottom Hole coordinates are
 N: 392,859.68' Latitude: 39°34'42.29"
 E: 1,602,175.34' Longitude: 80°54'02.86"
 UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,376,743.882m N: 4,380,980.23m
 E: 510,067.999m E: 508,534.934m
 Plat orientation and corner and well references
 are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

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, P.S. 2167

DATE: November 20, 19
 OPERATORS WELL NO. Abu Unit 4H
 API WELL NO. 02493
 STATE COUNTY PERMIT

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

DESIGNATED AGENT: Dianas Stamper - CT Corporation System
 ADDRESS: 2400 D Big Tyler Road
 Charleston, WV 25313

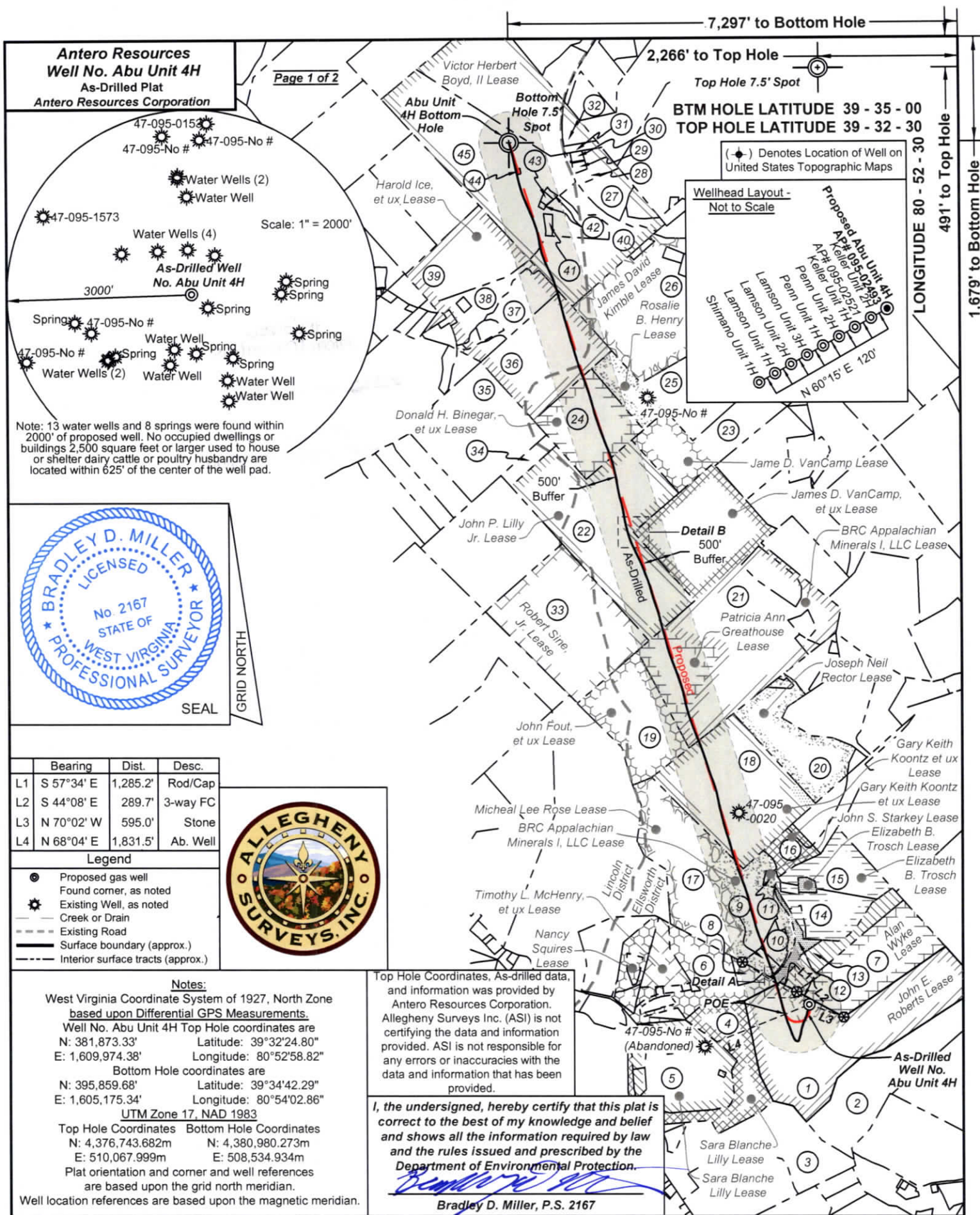
FILE NO: 32-54-E-16
 DRAWING NO: Abu 4H Well Plat As-Drilled
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: Submeter
 PROVEN SOURCE OF ELEVATION: WVDOT, Harrisville, WV

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

LOCATION: ELEVATION: As-Drilled Grade - 849' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Padon City

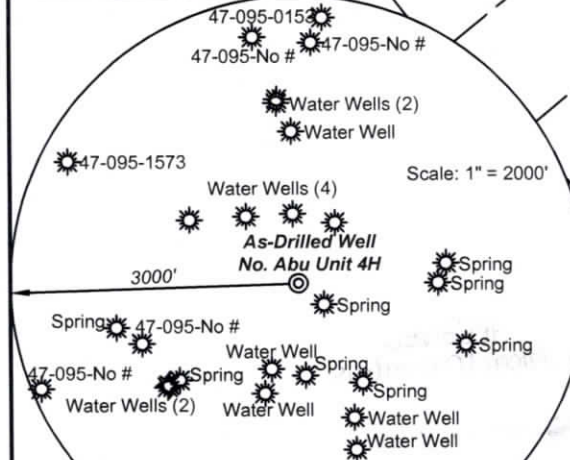
DISTRICT: Lincoln & Lincoln
 SURFACE OWNER: John E. Roberts
 ROYALTY OWNER: John E. Roberts; Nancy Spinners; Michael Lee Rose

PROPOSED WORK: PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 2,134' MD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 2,134' MD



Antero Resources
Well No. Abu Unit 4H
 As-Drilled Plat
 Antero Resources Corporation

Page 1 of 2



Note: 13 water wells and 8 springs were found within 2000' of proposed well. No occupied dwellings or buildings 2,500 square feet or larger used to house or shelter dairy cattle or poultry husbandry are located within 625' of the center of the well pad.



| Bearing | Dist. | Desc. |
|---------------|----------|----------|
| L1 S 57°34' E | 1,285.2' | Rod/Cap |
| L2 S 44°08' E | 289.7' | 3-way FC |
| L3 N 70°02' W | 595.0' | Stone |
| L4 N 68°04' E | 1,831.5' | Ab. Well |

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



Notes:
 West Virginia Coordinate System of 1927, North Zone based upon Differential GPS Measurements.
 Well No. Abu Unit 4H Top Hole coordinates are
 N: 381,873.33' Latitude: 39°32'24.80"
 E: 1,609,974.38' Longitude: 80°52'58.82"
 Bottom Hole coordinates are
 N: 395,859.68' Latitude: 39°34'42.29"
 E: 1,605,175.34' Longitude: 80°54'02.86"
UTM Zone 17, NAD 1983
 Top Hole Coordinates Bottom Hole Coordinates
 N: 4,376,743.682m N: 4,380,980.273m
 E: 510,067.999m E: 508,534.934m
 Plat orientation and corner and well references are based upon the grid north meridian.
 Well location references are based upon the magnetic meridian.

Top Hole Coordinates, 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.

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, P.S. 2167

FILE NO: 32-54-E-16
 DRAWING NO: Abu 4H Well Plat As-Drilled
 SCALE: 1" = 2000'
 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: November 20, 20 19
 OPERATOR'S WELL NO. Abu Unit 4H
 API WELL NO
 47 - 095 - 02523
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: As-Drilled Grade - 849' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Paden City 126.54;
 DISTRICT: Ellsworth & Lincoln John P. Lilly Jr.; Victor Herbert Boyd, II; COUNTY: Tyler 109.1; 35.66;
 SURFACE OWNER: John E. Roberts Patricia Ann Greathouse; Gary Keith Koontz et ux; Harold Ice, et ux; ACREAGE: 100 77.3125; 101.8;
 ROYALTY OWNER: John E. Roberts; Nancy Squires; Michael Lee Rose; LEASE NO: ACREAGE: 65.5; 50; 40;
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled 6,113' TVD
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 21,334' MD

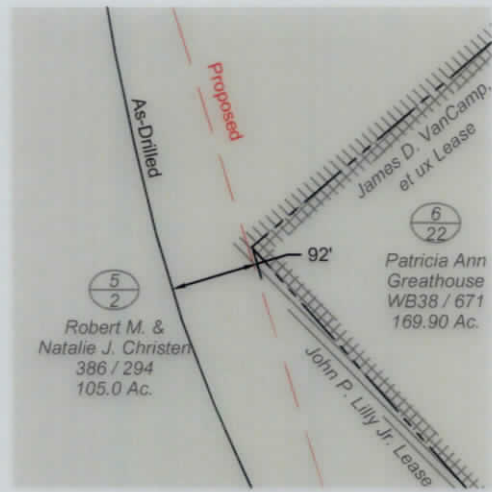
WELL OPERATOR: Antero Resources Corporation DESIGNATED AGENT: Dianna Stamper - CT Corporation System
 ADDRESS: 1615 Wynkoop Street ADDRESS: 5400 D Big Tyler Road
 Denver, CO 80202 Charleston, WV 25313

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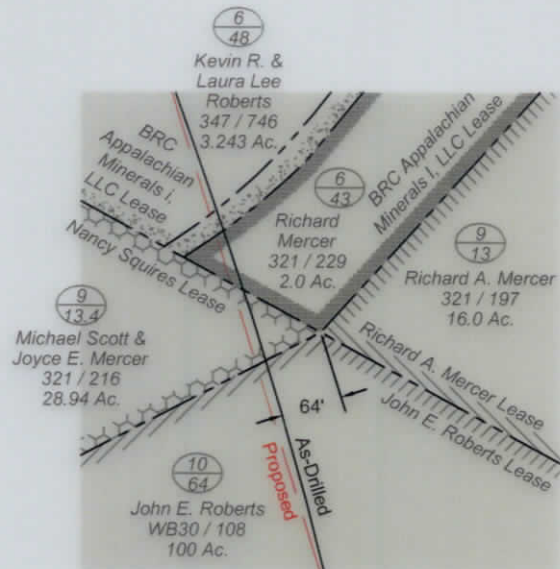
U.S. Department of
Environmental Protection

11/12/2021



Detail B - Scale 1" = 100'

| No. | TM-Par. | Bk. / Pg. | Ac. | Owner(s) |
|-----|---------|------------|--------|--|
| 45 | 5-63 | WB35 / 174 | 94.23 | James D. Kimble |
| 44 | 5-63.6 | 320 / 248 | 0.124 | Friendly Public Service District |
| 43 | 5-63.5 | 256 / 121 | 0.544 | Roger Lee & Sadonna Lee Kimble |
| 42 | 5-63.7 | 353 / 496 | 1.177 | Roger Lee & Sadonna Lee Kimble |
| 41 | 5-63.8 | 353 / 500 | 1.00 | James C. & Amanda Kimble |
| 40 | 5-63.2 | 343 / 812 | 33.97 | Jesse Dale King & Melinda A. King |
| 39 | 5-60 | WB18 / 102 | 36.79 | Susan Paden |
| 38 | 5-55 | WB18 / 102 | 12.79 | Susan Paden |
| 37 | 5-61 | 446 / 238 | 13.85 | James A. Cochran, Jr. |
| 36 | 5-62 | 344 / 254 | 50.02 | James A. Cochran |
| 35 | 5-51 | 270 / 460 | 60.0 | Charles A. Daugherty |
| 34 | 9-9 | 270 / 460 | 5.53 | Charles A. Daugherty |
| 33 | 9-11 | 201 / 424 | 83.14 | Ralph D. & Mary Jo Koontz |
| 32 | 2-3 | WB20 / 436 | 3.46 | Garnett C. Myers |
| 31 | 2-3.1 | 328 / 701 | 1.58 | Dawn Marie & Howard F. Myers, Jr. |
| 30 | 2-4.1 | 219 / 186 | 0.73 | Brenda K. & James David Kimble |
| 29 | 2-4.3 | 364 / 161 | 0.79 | Larry H. Kimble c/o Larry Daniel Kimble |
| 28 | 2-4.2 | WB36 / 539 | 5.87 | Larry H. Kimble |
| 27 | 2-5 | 309 / 025 | 9.52 | Cindy L. & Charles T. White, Jr. |
| 26 | 2-8 | 186 / 170 | 70.93 | Jonathan & Mary Belle Pittman |
| 25 | 2-11 | WB35 / 616 | 61.54 | Rosalie B. Henry |
| 24 | 2-10 | WB35 / 616 | 35.66 | Rosalie B. Henry |
| 23 | 5-1 | WB38 / 144 | 39.0 | James D. VanCamp, et al |
| 22 | 5-2 | 386 / 294 | 105.0 | Robert M. & Natalie J. Christen |
| 21 | 6-22 | WB38 / 671 | 169.90 | Patricia Ann Greathouse |
| 20 | 6-23 | 362 / 134 | 42.125 | Floyd W. Dennis |
| 19 | 5-3 | 206 / 457 | 50.25 | Ralph D. & Mary Jo Koontz |
| 18 | 5-4 | 301 / 409 | 77.0 | Gary K. & Tracy J. Koontz |
| 17 | 5-5 | 176 / 198 | 80.56 | Ralph D. & Mary Jo Koontz |
| 16 | 6-33 | 295 / 334 | 7.62 | Gary K. & Tracy J. Koontz |
| 15 | 6-39 | 242 / 39 | 30.0 | Donald E. Forrester |
| 14 | 6-41 | 125 / 421 | 20.05 | Donald E. Forrester |
| 13 | 9-13 | 321 / 197 | 16.0 | Richard A. Mercer |
| 12 | 6-43 | 321 / 229 | 2.0 | Richard Mercer |
| 11 | 6-42 | 176 / 289 | 1.0 | John S. Starkey |
| 10 | 6-48.1 | 402 / 286 | 4.286 | Shawna L. Staley & Steve Fletcher |
| 9 | 6-48 | 347 / 746 | 3.243 | Kevin R. & Laura Lee Roberts |
| 8 | 10-71 | 322 / 54 | 2.78 | Millie Conrad |
| 7 | 6-40 | WB40 / 195 | 42.25 | Alan D. Wyke |
| 6 | 9-13.4 | 321 / 216 | 28.94 | Michael Scott & Joyce E. Mercer |
| 5 | 9-17 | 562 / 565 | 47.30 | Daniel J. & Rebecca B. Stillwagoner |
| 4 | 9-19 | 185 / 263 | 22.67 | John E. Roberts |
| 3 | 10-28 | WB30 / 142 | 38.99 | John E. Roberts |
| 2 | 10-1 | 150 / 15 | 48.50 | Patricia Ann Heintzman |
| 1 | 10-64 | WB30 / 108 | 100 | John E. Roberts |
| No. | TM-Par. | Bk. / Pg. | Ac. | Owner(s) |



Detail A - Scale 1" = 100'

FILE NO: 32-54-E-16
 DRAWING NO: Abu 4H Well Plat As-Drilled
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY:
 Submeter
 PROVEN SOURCE OF ELEVATION:
 WVDOT, Harrisville, WV

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

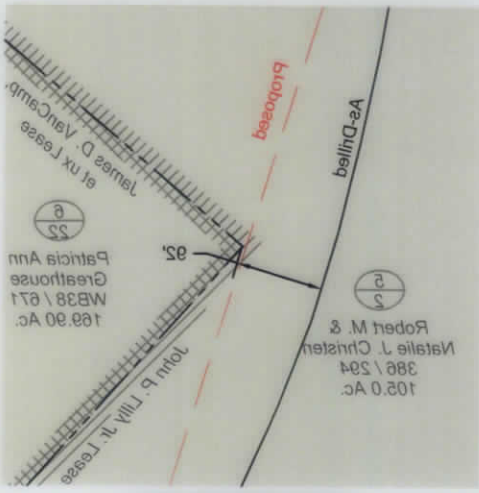
DATE: November 19, 20 19
 OPERATOR'S WELL NO. Abu Unit 4H
 API WELL NO
 47 - 095 - 02523
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: As-Drilled Grade - 849' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Paden City
 DISTRICT: Ellsworth & Lincoln John P. Lilly Jr.; Victor Herbert Boyd, II; COUNTY: Tyler
 SURFACE OWNER: John E. Roberts Patricia Ann Greathouse; Gary Keith Koontz et ux; Harold Ice, et ux; ACREAGE: 100
 ROYALTY OWNER: John E. Roberts; Nancy Squires; Michael Lee Rose; LEASE NO: ACREAGE: 65.5; 80.57;

PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 21,334' 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

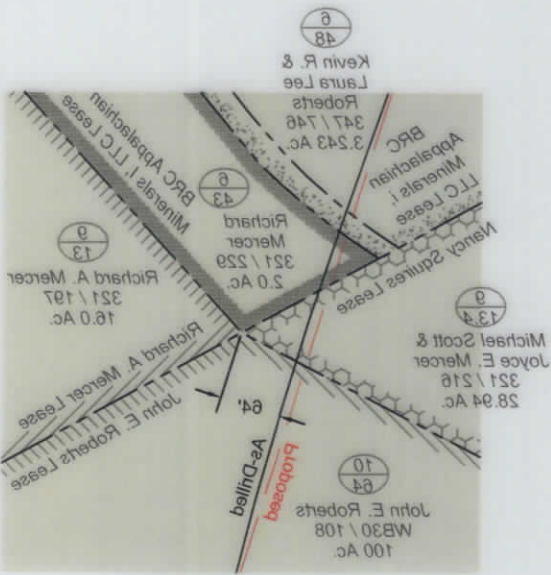


Detail B - Scale 1" = 100'

| No. | Tract | Ac. | Owner(s) |
|-----|------------|------------|------------------------|
| 1 | WB30 \ 108 | 100 | John E. Roberts |
| 2 | 10 \ 15 | 48.50 | Patricia Ann Heintzman |
| 3 | WB30 \ 142 | 38.99 | John E. Roberts |
| 4 | 9 \ 19 | 185 \ 283 | 22.87 |
| 5 | 9 \ 17 | 562 \ 565 | 47.30 |
| 6 | 9 \ 13A | 321 \ 216 | 28.94 |
| 7 | 6 \ 40 | WB40 \ 195 | 42.25 |
| 8 | 10 \ 71 | 322 \ 54 | 2.78 |
| 9 | 6 \ 48 | 347 \ 746 | 3.243 |
| 10 | 6 \ 48.1 | 402 \ 286 | 4.266 |
| 11 | 6 \ 42 | 176 \ 289 | 1.0 |
| 12 | 6 \ 43 | 321 \ 229 | 2.0 |
| 13 | 9 \ 13 | 321 \ 197 | 16.0 |
| 14 | 6 \ 41 | 125 \ 421 | 20.05 |
| 15 | 6 \ 39 | 242 \ 39 | 30.0 |
| 16 | 6 \ 33 | 295 \ 334 | 7.82 |
| 17 | 5 \ 5 | 176 \ 198 | 80.86 |
| 18 | 5 \ 4 | 301 \ 409 | 77.0 |
| 19 | 5 \ 3 | 206 \ 457 | 60.25 |
| 20 | 6 \ 23 | 362 \ 134 | 42.125 |
| 21 | 6 \ 22 | WB38 \ 671 | 169.90 |
| 22 | 5 \ 2 | 386 \ 294 | 105.0 |
| 23 | 5 \ 1 | WB38 \ 144 | 39.0 |
| 24 | 5 \ 10 | WB35 \ 616 | 35.66 |
| 25 | 2 \ 11 | WB35 \ 616 | 61.24 |
| 26 | 2 \ 8 | 186 \ 170 | 70.93 |
| 27 | 2 \ 5 | 309 \ 025 | 9.22 |
| 28 | 2 \ 4.2 | WB36 \ 539 | 5.87 |
| 29 | 2 \ 4.3 | 364 \ 161 | 0.79 |
| 30 | 2 \ 4.1 | 219 \ 186 | 0.73 |
| 31 | 2 \ 3.1 | 328 \ 701 | 1.58 |
| 32 | 2 \ 3 | WB20 \ 436 | 3.46 |
| 33 | 9 \ 11 | 201 \ 424 | 83.14 |
| 34 | 9 \ 9 | 270 \ 460 | 5.23 |
| 35 | 5 \ 1 | 270 \ 460 | 60.0 |
| 36 | 5 \ 62 | 344 \ 254 | 60.02 |
| 37 | 5 \ 61 | 446 \ 238 | 13.86 |
| 38 | 5 \ 55 | WB18 \ 102 | 12.79 |
| 39 | 5 \ 60 | WB18 \ 102 | 36.79 |
| 40 | 5 \ 63.2 | 343 \ 812 | 33.97 |
| 41 | 5 \ 63.8 | 353 \ 500 | 1.00 |
| 42 | 5 \ 63.7 | 353 \ 496 | 1.177 |
| 43 | 5 \ 63.5 | 256 \ 121 | 0.244 |
| 44 | 5 \ 63.6 | 320 \ 248 | 0.124 |
| 45 | 5 \ 63 | WB35 \ 174 | 94.23 |

Lincoln District

Elleworth District



Detail A - Scale 1" = 100'

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

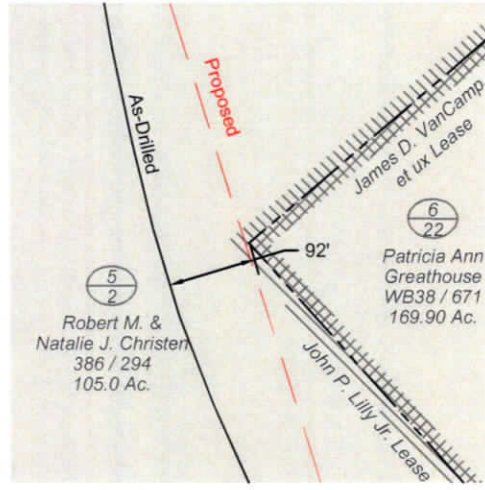
FILE NO.: 35-64-E-16
DRAWING NO.: Abu 4H Well Plat As-Drilled
SCALE: 1" = 200'
MINIMUM DEGREE OF ACCURACY:
Submeter
PROVEN SOURCE OF ELEVATION:
WVDOT, Harrisville, WV

DATE: November 19, 20 19
OPERATOR'S WELL NO.: Abu Unit 4H
API WELL NO.: 02493
STATE COUNTY PERMIT

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

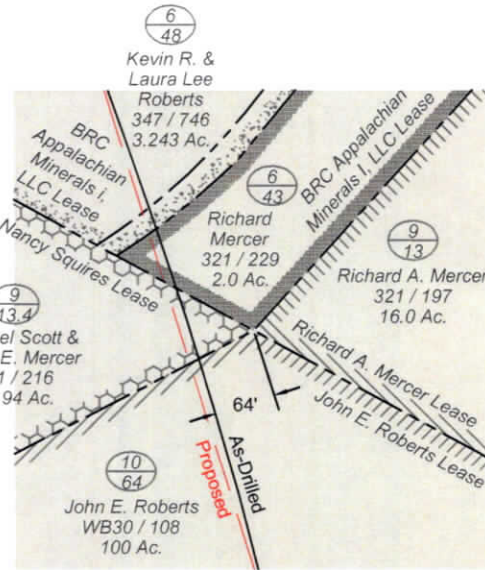
LOCATION: ELEVATION: As-Drilled Grade - 849' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Paden City
DISTRICT: Lincoln

SURFACE OWNER: John E. Roberts BRC Appalachia Minerals I, LLC (S); Donald H. Binigar, et ux;
ROYALTY OWNER: John E. Roberts; Nancy Squires; Michael Lee Rose;
PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 2,134' MD
DESIGNATED AGENT: Danna Stampfer - CT Corporation System
ADDRESS: 1615 Wynkoop Street
ADDRESS: 2400 D Big Tyler Road
Denver, CO 80202 Charleston, WV 25313



Detail B - Scale 1" = 100'

| No. | TM-Par. | Bk. / Pg. | Ac. | Owner(s) |
|-----|---------|------------|--------|--|
| 45 | 5-63 | WB35 / 174 | 94.23 | James D. Kimble |
| 44 | 5-63.6 | 320 / 248 | 0.124 | Friendly Public Service District |
| 43 | 5-63.5 | 256 / 121 | 0.544 | Roger Lee & Sadonna Lee Kimble |
| 42 | 5-63.7 | 353 / 496 | 1.177 | Roger Lee & Sadonna Lee Kimble |
| 41 | 5-63.8 | 353 / 500 | 1.00 | James C. & Amanda Kimble |
| 40 | 5-63.2 | 343 / 812 | 33.97 | Jesse Dale King & Melinda A. King |
| 39 | 5-60 | WB18 / 102 | 36.79 | Susan Paden |
| 38 | 5-55 | WB18 / 102 | 12.79 | Susan Paden |
| 37 | 5-61 | 446 / 238 | 13.85 | James A. Cochran, Jr. |
| 36 | 5-62 | 344 / 254 | 50.02 | James A. Cochran |
| 35 | 5-51 | 270 / 460 | 60.0 | Charles A. Daugherty |
| 34 | 9-9 | 270 / 460 | 5.53 | Charles A. Daugherty |
| 33 | 9-11 | 201 / 424 | 83.14 | Ralph D. & Mary Jo Koontz |
| 32 | 2-3 | WB20 / 436 | 3.46 | Garnett C. Myers |
| 31 | 2-3.1 | 328 / 701 | 1.58 | Dawn Marie & Howard F. Myers, Jr. |
| 30 | 2-4.1 | 219 / 186 | 0.73 | Brenda K. & James David Kimble |
| 29 | 2-4.3 | 364 / 161 | 0.79 | Larry H. Kimble c/o Larry Daniel Kimble |
| 28 | 2-4.2 | WB36 / 539 | 5.87 | Larry H. Kimble |
| 27 | 2-5 | 309 / 025 | 9.52 | Cindy L. & Charles T. White, Jr. |
| 26 | 2-8 | 186 / 170 | 70.93 | Jonathan & Mary Belle Pittman |
| 25 | 2-11 | WB35 / 616 | 61.54 | Rosalie B. Henry |
| 24 | 2-10 | WB35 / 616 | 35.66 | Rosalie B. Henry |
| 23 | 5-1 | WB38 / 144 | 39.0 | James D. VanCamp, et al |
| 22 | 5-2 | 386 / 294 | 105.0 | Robert M. & Natalie J. Christen |
| 21 | 6-22 | WB38 / 671 | 169.90 | Patricia Ann Greathouse |
| 20 | 6-23 | 362 / 134 | 42.125 | Floyd W. Dennis |
| 19 | 5-3 | 206 / 457 | 50.25 | Ralph D. & Mary Jo Koontz |
| 18 | 5-4 | 301 / 409 | 77.0 | Gary K. & Tracy J. Koontz |
| 17 | 5-5 | 176 / 198 | 80.56 | Ralph D. & Mary Jo Koontz |
| 16 | 6-33 | 295 / 334 | 7.62 | Gary K. & Tracy J. Koontz |
| 15 | 6-39 | 242 / 39 | 30.0 | Donald E. Forrester |
| 14 | 6-41 | 125 / 421 | 20.05 | Donald E. Forrester |
| 13 | 9-13 | 321 / 197 | 16.0 | Richard A. Mercer |
| 12 | 6-43 | 321 / 229 | 2.0 | Richard Mercer |
| 11 | 6-42 | 176 / 289 | 1.0 | John S. Starkey |
| 10 | 6-48.1 | 402 / 286 | 4.286 | Shawna L. Staley & Steve Fletcher |
| 9 | 6-48 | 347 / 746 | 3.243 | Kevin R. & Laura Lee Roberts |
| 8 | 10-71 | 322 / 54 | 2.78 | Millie Conrad |
| 7 | 6-40 | WB40 / 195 | 42.25 | Alan D. Wyke |
| 6 | 9-13.4 | 321 / 216 | 28.94 | Michael Scott & Joyce E. Mercer |
| 5 | 9-17 | 562 / 565 | 47.30 | Daniel J. & Rebecca B. Stillwagoner |
| 4 | 9-19 | 185 / 263 | 22.67 | John E. Roberts |
| 3 | 10-28 | WB30 / 142 | 38.99 | John E. Roberts |
| 2 | 10-1 | 150 / 15 | 48.50 | Patricia Ann Heintzman |
| 1 | 10-64 | WB30 / 108 | 100 | John E. Roberts |
| No. | TM-Par. | Bk. / Pg. | Ac. | Owner(s) |



Detail A - Scale 1" = 100'

FILE NO: 32-54-E-16
 DRAWING NO: Abu 4H Well Plat As-Drilled
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY:
 Submeter
 PROVEN SOURCE OF ELEVATION:
 WVDOT, Harrisville, WV



DATE: November 19, 20 19
 OPERATOR'S WELL NO. Abu Unit 4H
 API WELL NO
 47 - 095 - C2523
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF GAS) PRODUCTION: STORAGE DEEP SHALLOW
 LOCATION: ELEVATION: As-Drilled Grade - 849' WATERSHED: Outlet Middle Island Creek QUADRANGLE: Paden City
 DISTRICT: Ellsworth & Lincoln John P. Lilly Jr.; Victor Herbert Boyd, II; COUNTY: Tyler 126.54;
 SURFACE OWNER: John E. Roberts Patricia Ann Greathouse; Gary Keith Koontz et ux; Harold Ice, et ux; ACREAGE: 100 77.3125; 101.8;
 ROYALTY OWNER: John E. Roberts; Nancy Squires; Michael Lee Rose; LEASE NO: ACREAGE: 65.5; 80.57;
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER FRACTURE OR STIMULATE PLUG OFF OLD FORMATION
 PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) As-Drilled
 PLUG AND ABANDON CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus Shale ESTIMATED DEPTH: 21,334' MD 6,113' TVD

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

RECEIVED
Office of Oil and Gas

JAN 14 2021

U.S. Department of
Environmental Protection

11/12/2021