

APPROVED

WR-35
Rev. 8/23/13

Page ___ of ___

NAME: Chad Flinn

DATE: 7/13/16

State of West Virginia

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



API 47-017-06614 County Doddridge District Central
 Quad West Union 7.5' Pad Name Diane Davis Pad Field/Pool Name -----
 Farm name Davis, Jonathan L., et al Well Number Hiley Unit 2H
 Operator (as registered with the OOG) Antero Resources Corporation
 Address 1615 Wynkoop Street City Denver State CO Zip 80202

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
 Top hole Northing 4350539m Easting 515287m
 Landing Point of Curve Northing 4350731.92m Easting 515577.88m
 Bottom Hole Northing 4352658m Easting 514782m

Elevation (ft) 824' 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 10/31/2014 Date drilling commenced 11/1/2014 Date drilling ceased 3/10/2015
 Date completion activities began 1/25/2016 Date completion activities ceased 3/23/2016
 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 77' Open mine(s) (Y/N) depths _____
 Salt water depth(s) ft 1367' Void(s) encountered (Y/N) depths _____
 Coal depth(s) ft None Identified Cavern(s) encountered (Y/N) depths _____
 Is coal being mined in area (Y/N) No

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AX08/22/2016

API 47-017 - 06614 Farm name Davis, Jonathan L., et al Well number Hiley Unit 2H

| CASING STRINGS | Hole Size | Casing Size | Depth | New or Used | Grade w/ft | Basket Depth(s) | Did cement circulate (Y/ N) * Provide details below* |
|---------------------------|---------------|-------------|--------|-------------|------------|-----------------|---|
| Conductor | 30" | 20" | 40' | New | 94# H-40 | N/A | Y |
| Surface | 17-1/2" | 13-3/8" | 372' | New | 48# H-40 | N/A | Y |
| Coal | | | | | | | |
| Intermediate 1 | 12-1/4" | 9-5/8" | 2526' | New | 36# J-55 | N/A | Y |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | 8-3/4"/8-1/2" | 5-1/2" | 13817' | New | 20# P-110 | N/A | Y |
| Tubing | | 2-3/8" | 6678' | | 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 | 111 sx | 15.6 | 1.18 | 38 | 0' | 8 Hrs. |
| Surface | Class A | 655 sx | 15.6 | 1.18 | 258 | 0' | 8 Hrs. |
| Coal | | | | | | | |
| Intermediate 1 | Class A | 935 sx | 15.6 | 1.18 | 791 | 0' | 8 Hrs. |
| Intermediate 2 | | | | | | | |
| Intermediate 3 | | | | | | | |
| Production | Class H | 888 sx (Lead) 1164 sx (Tail) | 13.5 (Lead), 15.2 (Tail) | 1.44 (Lead), 1.81 (Tail) | 2701 | -500' into Intermediate Casing | 8 Hrs. |
| Tubing | | | | | | | |

Drillers TD (ft) 13817' MD, 6361' TVD (BHL); 6395' TVD (Deepest Point Drilled) Loggers TD (ft) 13768' MD
 Deepest formation penetrated Marcellus Plug back to (ft) N/A
 Plug back procedure N/A

Kick off depth (ft) 6072'

** This is a subsequent well. Antero only runs wireline logs on one well on a multi-well pad (Shearer Unit 2H API #47-017-06359). Please reference the wireline logs submitted with Form WR-35 for Shearer Unit 2H. A Cement Bond Log has been included with this submittal.

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 _____

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API 47- 017 - 06614 Farm name Davis, Jonathan L., et al Well number Hiley Unit 2H

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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| PRODUCING FORMATION(S) | DEPTHS | | |
|------------------------|--------------------|------------|------------------------------|
| <u>Marcellus</u> | <u>6335' (TOP)</u> | <u>TVD</u> | <u>6734' (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 3000 psi Bottom Hole --- psi DURATION OF TEST --- hrs

OPEN FLOW Gas 12740 mcfpd Oil 5 bpd NGL --- bpd Water 825 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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Please insert additional pages as applicable.

Drilling Contractor Patterson - UTI Drilling Company, LLC
Address 207 Carlton Dr. City Eighty Four State PA Zip 15330

Logging Company Rush Wellsite Services
Address 600 Alpha Drive City Canonsburg State PA Zip 15317

Cementing Company Allied Oil & Gas Services, LLC
Address 1036 East Main Street City Bridgeport State WV Zip 26330

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

Please insert additional pages as applicable.

Completed by Kara Quackenbush Telephone 303-357-7233
Signature [Signature] Title Permitting Agent Date 6/16/2016

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

07/22/2016

EXHIBIT 1

| Stage No. | Perforation Date | Perforated from MD ft. | Perforated to MD ft. | Number of Perforations | Formations |
|-----------|------------------|------------------------|----------------------|------------------------|------------|
| 1 | 25-Jan-16 | 13,554 | 13,722 | 60 | Marcellus |
| 2 | 6-Feb-16 | 13,355 | 13,523 | 60 | Marcellus |
| 3 | 6-Feb-16 | 13,156 | 13,324 | 60 | Marcellus |
| 4 | 6-Feb-16 | 12,957 | 13,125 | 60 | Marcellus |
| 5 | 7-Feb-16 | 12,757 | 12,925 | 60 | Marcellus |
| 6 | 7-Feb-16 | 12,558 | 12,726 | 60 | Marcellus |
| 7 | 7-Feb-16 | 12,359 | 12,527 | 60 | Marcellus |
| 8 | 8-Feb-16 | 12,160 | 12,328 | 60 | Marcellus |
| 9 | 8-Feb-16 | 11,960 | 12,128 | 60 | Marcellus |
| 10 | 8-Feb-16 | 11,761 | 11,929 | 60 | Marcellus |
| 11 | 8-Feb-16 | 11,562 | 11,730 | 60 | Marcellus |
| 12 | 9-Feb-16 | 11,362 | 11,531 | 60 | Marcellus |
| 13 | 9-Feb-16 | 11,163 | 11,331 | 60 | Marcellus |
| 14 | 9-Feb-16 | 10,964 | 11,132 | 60 | Marcellus |
| 15 | 10-Feb-16 | 10,765 | 10,933 | 60 | Marcellus |
| 16 | 10-Feb-16 | 10,565 | 10,734 | 60 | Marcellus |
| 17 | 10-Feb-16 | 10,366 | 10,534 | 60 | Marcellus |
| 18 | 10-Feb-16 | 10,167 | 10,335 | 60 | Marcellus |
| 19 | 11-Feb-16 | 9,968 | 10,136 | 60 | Marcellus |
| 20 | 11-Feb-16 | 9,768 | 9,936 | 60 | Marcellus |
| 21 | 11-Feb-16 | 9,569 | 9,737 | 60 | Marcellus |
| 22 | 12-Feb-16 | 9,370 | 9,538 | 60 | Marcellus |
| 23 | 12-Feb-16 | 9,171 | 9,339 | 60 | Marcellus |
| 24 | 12-Feb-16 | 8,971 | 9,139 | 60 | Marcellus |
| 25 | 12-Feb-16 | 8,772 | 8,940 | 60 | Marcellus |
| 26 | 13-Feb-16 | 8,573 | 8,741 | 60 | Marcellus |
| 27 | 13-Feb-16 | 8,374 | 8,542 | 60 | Marcellus |
| 28 | 13-Feb-16 | 8,174 | 8,342 | 60 | Marcellus |
| 29 | 14-Feb-16 | 7,975 | 8,143 | 60 | Marcellus |
| 30 | 14-Feb-16 | 7,776 | 7,944 | 60 | Marcellus |
| 31 | 14-Feb-16 | 7,577 | 7,745 | 60 | Marcellus |
| 32 | 15-Feb-16 | 7,377 | 7,545 | 60 | Marcellus |
| 33 | 15-Feb-16 | 7,178 | 7,346 | 60 | Marcellus |
| 34 | 15-Feb-16 | 6,979 | 7,147 | 60 | Marcellus |
| 35 | 15-Feb-16 | 6,780 | 6,948 | 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 | 5-Feb-16 | 72.1 | 6,980 | 5,279 | 5,274 | 320,670 | 7,779 | N/A |
| 2 | 6-Feb-16 | 72.3 | 6,997 | 5,571 | 5,215 | 320,680 | 7,765 | N/A |
| 3 | 6-Feb-16 | 71.0 | 7,025 | 5,382 | 5,317 | 320,520 | 7,737 | N/A |
| 4 | 6-Feb-16 | 72.4 | 7,041 | 5,827 | 5,412 | 320,907 | 7,727 | N/A |
| 5 | 7-Feb-16 | 72.0 | 6,986 | 5,236 | 4,665 | 321,210 | 7,708 | N/A |
| 6 | 7-Feb-16 | 73.0 | 7,059 | 5,623 | 4,926 | 320,870 | 7,707 | N/A |
| 7 | 7-Feb-16 | 72.1 | 6,948 | 5,476 | 5,220 | 320,876 | 7,686 | N/A |
| 8 | 8-Feb-16 | 73.0 | 6,864 | 5,428 | 4,883 | 320,770 | 7,665 | N/A |
| 9 | 8-Feb-16 | 73.0 | 6,954 | 5,719 | 4,676 | 321,260 | 7,659 | N/A |
| 10 | 8-Feb-16 | 72.2 | 6,715 | 5,264 | 5,143 | 320,689 | 7,632 | N/A |
| 11 | 8-Feb-16 | 72.4 | 6,811 | 5,522 | 4,647 | 320,288 | 7,623 | N/A |
| 12 | 9-Feb-16 | 73.0 | 6,846 | 5,933 | 5,598 | 324,260 | 7,604 | N/A |
| 13 | 9-Feb-16 | 71.0 | 6,730 | 5,558 | 5,328 | 323,660 | 7,583 | N/A |
| 14 | 9-Feb-16 | 72.4 | 6,909 | 5,408 | 5,750 | 322,870 | 7,583 | N/A |
| 15 | 10-Feb-16 | 72.1 | 6,617 | 5,220 | 5,222 | 323,198 | 7,575 | N/A |
| 16 | 10-Feb-16 | 73.0 | 6,692 | 5,451 | 5,311 | 323,030 | 7,553 | N/A |
| 17 | 10-Feb-16 | 73.0 | 6,664 | 5,362 | 4,275 | 322,560 | 7,534 | N/A |
| 18 | 10-Feb-16 | 72.3 | 6,685 | 5,294 | 5,409 | 323,095 | 7,528 | N/A |
| 19 | 11-Feb-16 | 72.2 | 6,546 | 5,273 | 5,301 | 322,865 | 7,512 | N/A |
| 20 | 11-Feb-16 | 71.0 | 6,679 | 5,279 | 5,337 | 321,910 | 7,503 | N/A |
| 21 | 11-Feb-16 | 71.0 | 6,677 | 5,408 | 5,589 | 320,860 | 7,492 | N/A |
| 22 | 12-Feb-16 | 72.3 | 6,769 | 5,284 | 5,191 | 320,885 | 7,483 | N/A |
| 23 | 12-Feb-16 | 68.0 | 6,298 | 5,311 | 4,979 | 288,970 | 8,569 | N/A |
| 24 | 12-Feb-16 | 71.0 | 6,432 | 5,473 | 5,553 | 322,540 | 7,467 | N/A |
| 25 | 12-Feb-16 | 72.3 | 6,398 | 5,296 | 5,264 | 321,027 | 7,437 | N/A |
| 26 | 13-Feb-16 | 73.0 | 6,313 | 5,259 | 3,859 | 322,880 | 7,459 | N/A |
| 27 | 13-Feb-16 | 70.5 | 6,201 | 5,264 | 4,976 | 321,650 | 7,406 | N/A |
| 28 | 13-Feb-16 | 71.1 | 6,221 | 5,423 | 5,339 | 320,943 | 7,395 | N/A |
| 29 | 14-Feb-16 | 72.7 | 6,463 | 5,525 | 4,770 | 321,420 | 7,357 | N/A |
| 30 | 14-Feb-16 | 72.9 | 6,468 | 5,573 | 5,444 | 321,063 | 7,374 | N/A |
| 31 | 14-Feb-16 | 72.4 | 6,276 | 5,550 | 5,214 | 320,975 | 7,355 | N/A |
| 32 | 15-Feb-16 | 72.5 | 6,323 | 5,448 | 5,143 | 322,600 | 7,346 | N/A |
| 33 | 15-Feb-16 | 71.2 | 6,355 | 5,471 | 5,283 | 319,400 | 7,325 | N/A |
| 34 | 15-Feb-16 | 70.4 | 6,235 | 5,490 | 5,379 | 321,050 | 7,321 | N/A |
| 35 | 15-Feb-16 | 72.0 | 6,157 | 5,942 | 3,997 | 323,100 | 7,370 | N/A |
| AVG= | | 72.0 | 6,638 | 5,452 | 5,111 | 11,225,551 | 7,566 | TOTAL |

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EXHIBIT 3

| LITHOLOGY/ FORMATION | TOP DEPTH (TVD) From Surface | BOTTOM DEPTH (TVD) From Surface | TOP DEPTH (MD) From Surface | BOTTOM DEPTH (MD) From Surface |
|------------------------|---------------------------------|------------------------------------|--------------------------------|-----------------------------------|
| Fresh Water | 77' | N/A | 77' | N/A |
| Sandstone/ Shale | 0 | 407 | 0 | 407 |
| Sand Shale/ Trace Coal | est. 407 | 457 | est. 407 | 457 |
| Sandstone/ Limestone | est. 457 | 567 | est. 457 | 567 |
| Sandstone | est. 567 | 667 | est. 567 | 667 |
| Sandstone/ Limestone | est. 667 | 707 | est. 667 | 707 |
| Sandstone/ Siltstone | est. 707 | 807 | est. 707 | 807 |
| Sandstone/ Limestone | est. 807 | 927 | est. 807 | 927 |
| Shale | est. 927 | 947 | est. 927 | 947 |
| Sandstone/ Shale | est. 947 | 1147 | est. 947 | 1147 |
| Sandstone/ Trace Coal | est. 1147 | 1507 | est. 1147 | 1507 |
| Sandstone/ Siltstone | est. 1507 | 1567 | est. 1507 | 1567 |
| Sandstone/ Trace Coal | est. 1567 | 1587 | est. 1567 | 1587 |
| Sandstone/ Siltstone | est. 1587 | 1730 | est. 1587 | 1732 |
| Big Lime | 1730 | 2387 | 1732 | 2389 |
| Fifty Foot Sandstone | 2387 | 2474 | 2389 | 2475 |
| Gordon | 2474 | 2757 | 2475 | 2758 |
| Fifth Sandstone | 2757 | 2811 | 2758 | 2813 |
| Bayard | 2811 | 3590 | 2813 | 3592 |
| Speechley | 3590 | 3881 | 3592 | 3885 |
| Baltown | 3881 | 4318 | 3885 | 4335 |
| Bradford | 4318 | 4751 | 4335 | 4810 |
| Benson | 4751 | 5011 | 4810 | 5104 |
| Alexander | 5011 | 5972 | 5104 | 6182 |
| Sycamore | 5972 | 6142 | 6182 | 6384 |
| Middlesex | 6142 | 6267 | 6384 | 6574 |
| Burkett | 6267 | 6297 | 6574 | 6634 |
| Tully | 6297 | 6335 | 6634 | 6734 |
| Marcellus | 6335 | NA | 6734 | 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: | 2/5/2016 |
| Job End Date: | 2/15/2016 |
| State: | West Virginia |
| County: | Doddridge |
| API Number: | 47-017-06614-00-00 |
| Operator Name: | Antero Resources Corporation |
| Well Name and Number: | Hiley 2H |
| Longitude: | -80.82269700 |
| Latitude: | 39.30410300 |
| Datum: | NAD83 |
| Federal/Tribal Well: | NO |
| True Vertical Depth: | 6,395 |
| Total Base Water Volume (gal): | 11,540,842 |
| 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 | Base Fluid | | | | | |
| | | | Water | 7732-18-5 | 100.00000 | 89.25273 | |
| Sand | U.S. Well Services, LLC | Proppant | | | | | |
| | | | Crystalline Silica, quartz | 14808-60-7 | 100.00000 | 10.40940 | |
| HCL Acid (12.6%-18.0%) | U.S. Well Services, LLC | Bulk Acid | | | | | |
| | | | Water | 7732-18-5 | 87.50000 | 0.14196 | |
| | | | Hydrogen Chloride | 7647-01-0 | 18.00000 | 0.03391 | |
| LGC-15 | U.S. Well Services | Gelling Agents | | | | | |
| | | | Guar Gum | 9000-30-0 | 50.00000 | 0.03418 | |
| | | | Petroleum Distillates | 64742-47-8 | 60.00000 | 0.03237 | |
| | | | Suspending agent (solid) | 14808-60-7 | 3.00000 | 0.00523 | |
| | | | Surfactant | 68439-51-0 | 3.00000 | 0.00205 | |
| WFRA-405 | U.S. Well Services | Friction Reducer | | | | | |
| | | | Water | 7732-18-5 | 60.00000 | 0.03124 | |
| | | | 2-Propenoic acid, polymer with 2-propenamide | 29003-06-9 | 30.00000 | 0.01562 | |
| | | | Hydrated light distillate (petroleum) | 64742-47-8 | 30.00000 | 0.01257 | |
| | | | Ethoxylated alcohol blend | 68002-97-1 | 4.00000 | 0.00208 | |

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| SI-1100 | U.S. Well Services | Scale Inhibitor | | | | |
| | | | Water | 7732-18-5 | 80.00000 | 0.01001 |
| | | | Ethylene Glycol | 107-21-1 | 25.00000 | 0.00353 |
| | | | Copolymer of Maleic and Acrylic acid | 52255-49-9 | 10.00000 | 0.00148 |
| | | | Potassium salt of diethylene triamine penta (methylene phosphonic acid) | 15827-60-8 | 7.50000 | 0.00127 |
| | | | Phosphino carboxylic acid polymer | 71050-62-9 | 5.00000 | 0.00081 |
| | | | Hexamethylene tramine penta (methylene phosphonic acid) | 34690-00-1 | 5.00000 | 0.00081 |
| | | | Hexamethylene diamine penta (methylene phosphonic acid) | 23605-74-5 | 2.00000 | 0.00033 |
| K-BAC 1020 | U.S. Well Services | Anti-Bacterial Agent | | | | |
| | | | 2,2-dibromo-3-nitrilopropionamide | 10222-01-2 | 20.00000 | 0.00422 |
| | | | Deionized Water | 7732-18-5 | 28.00000 | 0.00241 |
| AP One | U.S. Well Services | Gel Breakers | | | | |
| | | | Ammonium Persulfate | 7727-54-0 | 100.00000 | 0.00143 |
| AI-302 | U.S. Well Services | Acid Corrosion Inhibitors | | | | |
| | | | Water | 7732-18-5 | 95.00000 | 0.00031 |
| | | | 2-Propyn-1-olcompound with methyloxirane | 38172-91-7 | 15.00000 | 0.00005 |
| 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. | | | | | | |

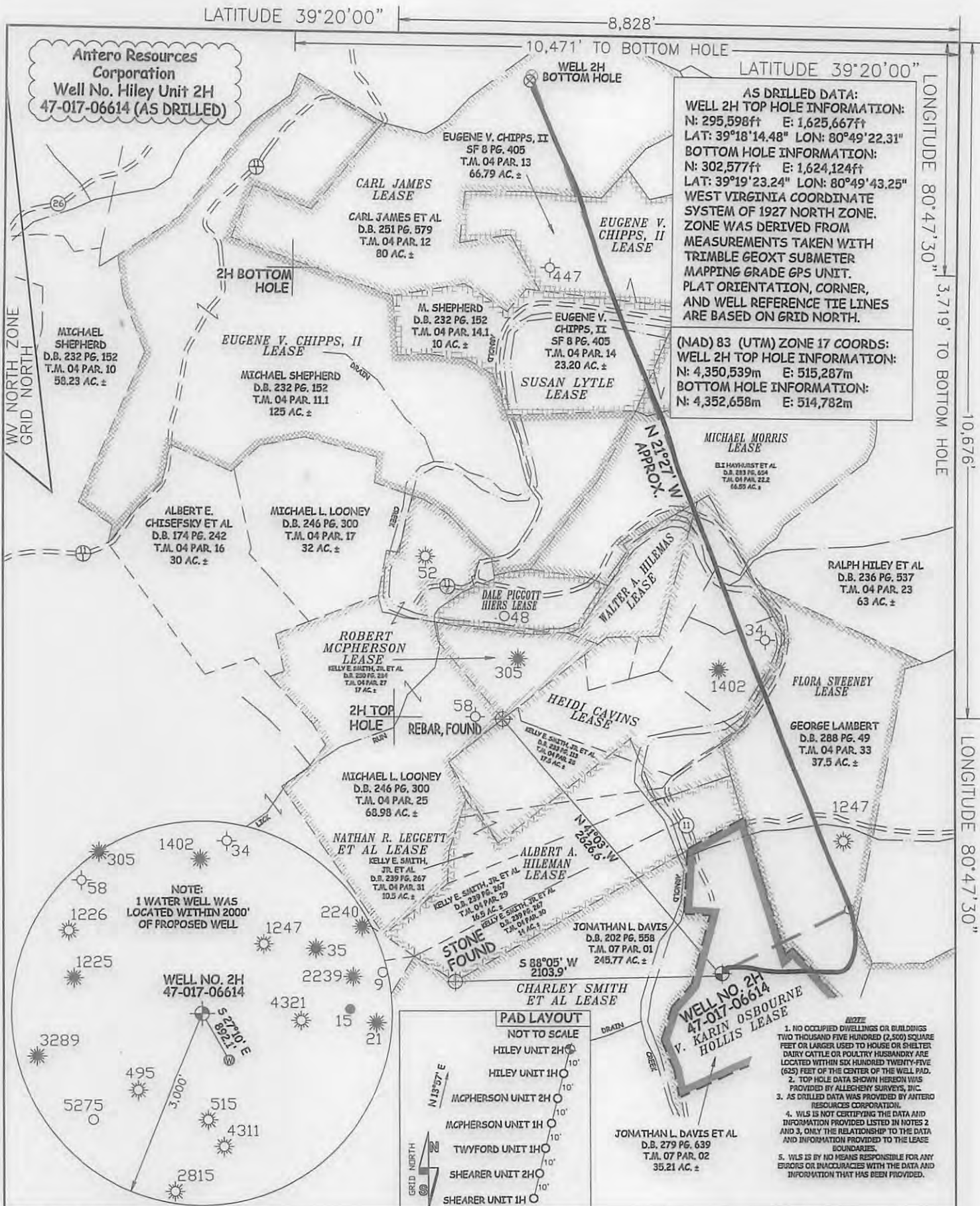
* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** 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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JOB # 14-037WA
DRAWING # HILEY2HAD
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

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

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

LOCATION: ELEVATION 829' ORIGINAL - 824' AS-DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK
QUADRANGLE WEST UNION 7.5' DISTRICT CENTRAL COUNTY DODDRIFF

SURFACE OWNER JONATHAN L. DAVIS ET AL ACREAGE 35.21 ACRES +/-
OIL & GAS ROYALTY OWNER V. KARIN OSBOURNE HOLLIS; FLORA SWEENEY; HEIDI CAVINS; LEASE ACREAGE 79.09 ACRES±; 103ACRES±; 86 ACRES±;
WALTER A. HILEMAS; MICHAEL MORRIS; SUSAN LYTLE; CARL JAMES; EUGENE V. CHIPPS II 9 ACRES±; 60.55 ACRES±; 35 ACRES±; 80 ACRES±; 120 ACRES±

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) (X) AS DRILLED

TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,360' TVD 13,817' MD

WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC
P.O. BOX 17
PENNSBORO, WV 26415

DATE 05/21/15
OPERATOR'S WELL# HILEY UNIT #2H
API WELL # 47 - 017 - 06614
STATE COUNTY PERMIT

07/22/2016

LEGEND
 - - - Surface Owner Boundary Lines +/-
 - - - Interior Surface Tracts +/-
 X Existing Fence
 Found monument, as noted
 O Proposed Well Path
 O As Drilled Well Path

DATE 05/21/15
OPERATOR'S WELL# HILEY UNIT #2H
API WELL # 47 - 017 - 06614
STATE COUNTY PERMIT

07/22/2016

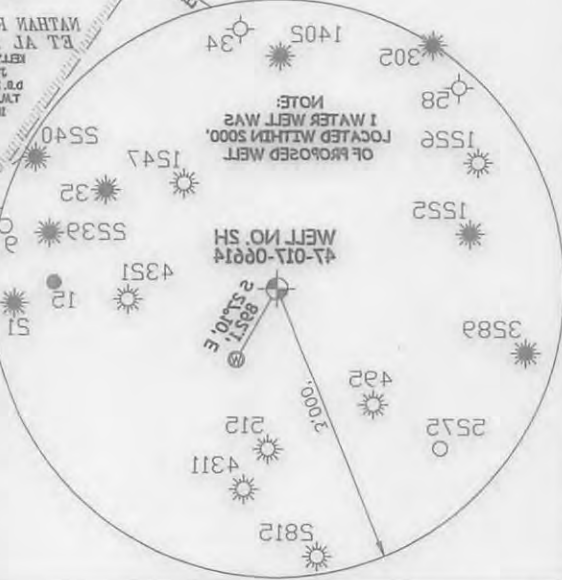
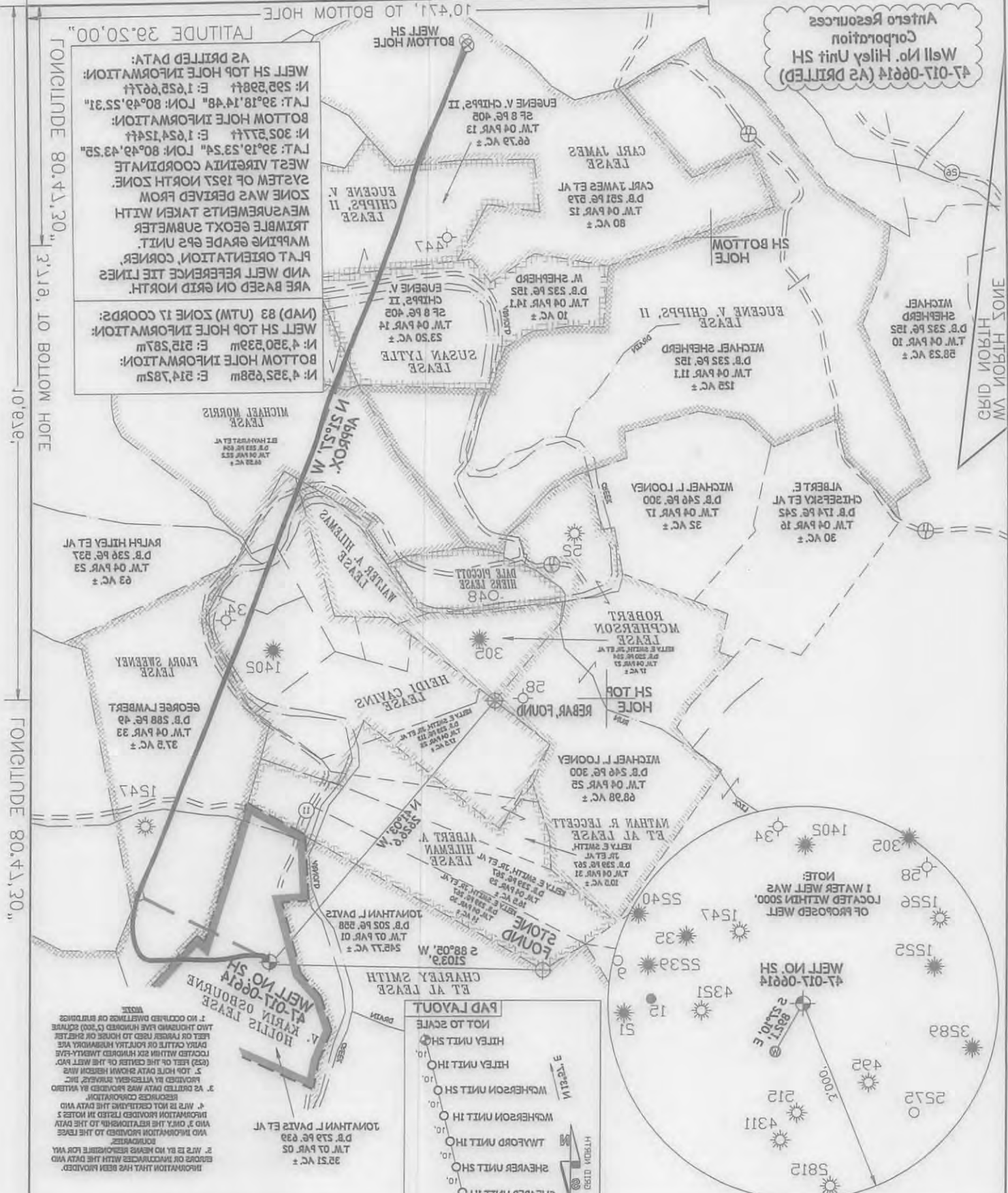
LATITUDE 39°20'00"

8,828'

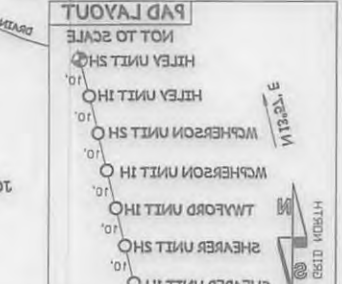
AS DRILLED DATA:
 WELL SH TOP HOLE INFORMATION:
 N: 2952887 E: 1625267
 L.A.T: 39°18'14.48" L.O.N: 80°49'55.31"
 BOTTOM HOLE INFORMATION:
 N: 3052777 E: 1624124
 L.A.T: 39°19'23.24" L.O.N: 80°49'43.25"
 WEST VIRGINIA COORDINATE
 SYSTEM OF 1927 NORTH ZONE
 ZONE WAS DERIVED FROM
 MEASUREMENTS TAKEN WITH
 TRIMBLE GEOXT SUBMETER
 MAPPING GRADE 625 UNIT.
 PLAT ORIENTATION, CORNER,
 AND WELL REFERENCE THE LINES
 ARE BASED ON GRID NORTH.

(NAD 83 UTM) ZONE 17 COORDS:
 WELL SH TOP HOLE INFORMATION:
 N: 4350239 E: 2125277
 BOTTOM HOLE INFORMATION:
 N: 4325688 E: 2147852

Antero Resources Corporation
 Well No. Hiley Unit SH
 47-017-08814 (AS DRILLED)



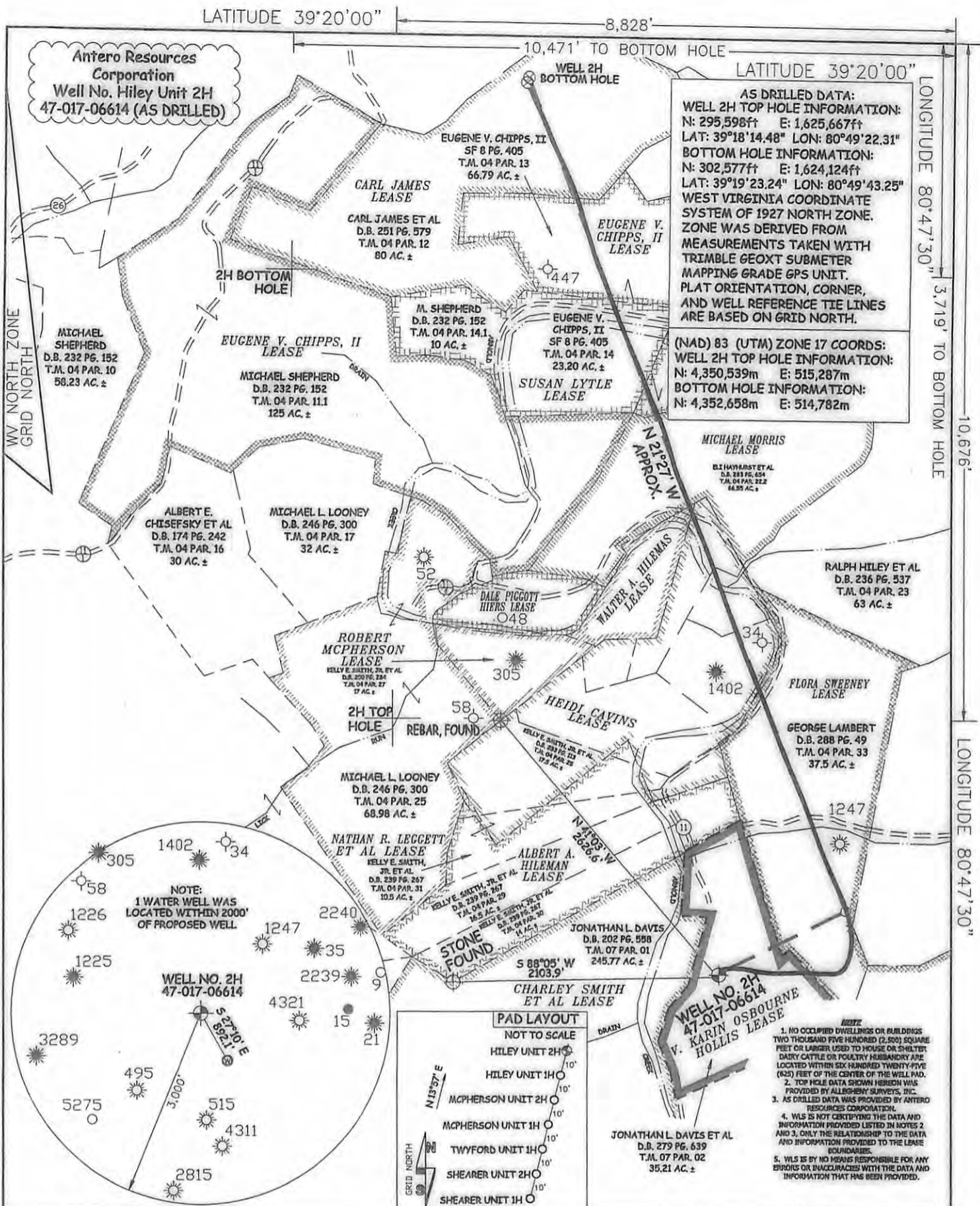
1. NO OCCUPIED DWELLINGS OR BUILDINGS
 AND THIRTY-FIVE HUNDRED (3500) SQUARE
 FEET OR LARGER USED TO HOUSE OR SHED
 DRILL CATTLE OR HORSE OR HERD
 LOCATED WITHIN ONE HUNDRED THIRTY-FIVE
 (135) FEET OF THE CENTER OF THE WELL PAD.
 2. TOP HOLE DATA SHOWN HEREBY WAS
 PROVIDED BY WILKINS SURVEYING, INC.
 3. AS DRILLED DATA WAS PROVIDED BY WILKINS
 SURVEYING, INC.
 4. THIS IS NOT CERTIFYING THE DATA AND
 INFORMATION PROVIDED LISTED IN NOTES 2
 AND 3 ONLY. THE RELIABILITY OF THE DATA
 AND INFORMATION PROVIDED TO THE LESSEE
 IS BY NO MEANS RESPONSIBLE FOR ANY
 ERRORS OR MISADVENTURES WITH THE DATA AND
 INFORMATION THAT HAS BEEN PROVIDED.



| | | | | | | |
|---|--|--|--|--|--|--|
| <p>FORM WW-8 DENVER, CO 80202 1815 WYKHOOP STREET ANTERO RESOURCES CORP. DESIGNATED AGENT</p> | <p>WELL OPERATOR 5400 D BIG TYLER ROAD CT CORPORATION SYSTEM DIANNA STAMPER</p> | <p>CHARLESTON, WV 25313 ADDRESS</p> | <p>WELL NO. 47 API WELL # 47-017-08814 COUNTY PERMIT</p> | <p>STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS</p> | <p>STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS</p> | <p>PROVEN SOURCE OF ELEV. ACCURACY SUBMETER MINIMUM DEGREE OF SCALE 1" = 1000' DRAWING # HILYSHAD JOB # 14-037WA</p> |
| <p>WATER SOURCE OF ELEV. ACCURACY SUBMETER MINIMUM DEGREE OF SCALE 1" = 1000' DRAWING # HILYSHAD JOB # 14-037WA</p> | <p>STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS</p> | <p>STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS</p> | <p>STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS</p> | <p>STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS</p> | <p>STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS</p> | <p>STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY DIVISION OF OIL AND GAS</p> |
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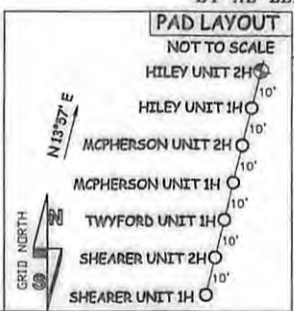
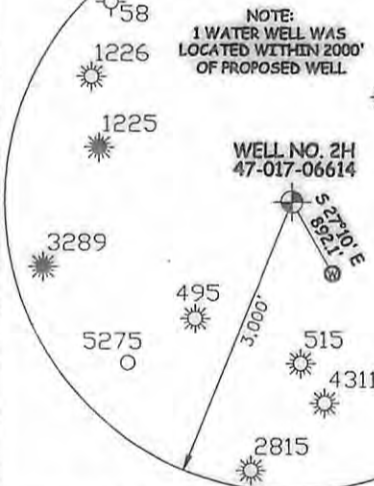


07/22/2016



AS DRILLED DATA:
WELL 2H TOP HOLE INFORMATION:
 N: 295,598ft E: 1,625,667ft
 LAT: 39°18'14.48" LON: 80°49'22.31"
BOTTOM HOLE INFORMATION:
 N: 302,577ft E: 1,624,124ft
 LAT: 39°19'23.24" LON: 80°49'43.25"
 WEST VIRGINIA COORDINATE SYSTEM OF 1927 NORTH ZONE. ZONE WAS DERIVED FROM MEASUREMENTS TAKEN WITH TRIMBLE GEOXT SUBMETER MAPPING GRADE GPS UNIT. PLAT ORIENTATION, CORNER, AND WELL REFERENCE TIE LINES ARE BASED ON GRID NORTH.

(NAD) 83 (UTM) ZONE 17 COORDS:
WELL 2H TOP HOLE INFORMATION:
 N: 4,350,539m E: 515,287m
BOTTOM HOLE INFORMATION:
 N: 4,352,658m E: 514,782m



- NOTE**
1. NO OCCUPIED DWELLINGS OR BUILDINGS TWO THOUSAND FIVE HUNDRED (2,500) SQUARE FEET OR LARGER USED TO HOUSE OR SHELTER DAIRY CATTLE OR POULTRY HUSBANDRY ARE LOCATED WITHIN SIX HUNDRED TWENTY-FIVE (625) FEET OF THE CENTER OF THE WELL PAD.
 2. TOP HOLE DATA SHOWN HEREON WAS PROVIDED BY ALLEGHENY SURVEYS, INC.
 3. AS DRILLED DATA WAS PROVIDED BY ANTERO RESOURCES CORPORATION.
 4. WLS IS NOT CERTIFYING THE DATA AND INFORMATION PROVIDED LISTED IN NOTES 2 AND 3, ONLY THE RELATIONSHIP TO THE DATA AND INFORMATION PROVIDED TO THE LEASE BOUNDARIES.
 5. WLS IS BY NO MEANS RESPONSIBLE FOR ANY ERRORS OR INACCURACIES WITH THE DATA AND INFORMATION THAT HAS BEEN PROVIDED.

JOB # 14-037WA
 DRAWING # HILEY2HAD
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS



STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WILLOW LAND SURVEYING PLLC
 P.O. BOX 17
 PENNSBORO, WV 26415

LEGEND

- Surface Owner Boundary Lines +/-
- Interior Surface Tracts +/-
- Existing Fence
- Found monument, as noted
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DATE 05/21/15
 OPERATOR'S WELL# HILEY UNIT #2H
 API WELL # 47 - 017 - 06614
 STATE COUNTY PERMIT

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

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

LOCATION: ELEVATION 829' ORIGINAL - 824' AS-DRILLED WATERSHED HEADWATERS MIDDLE ISLAND CREEK
 QUADRANGLE WEST UNION 7.5' DISTRICT CENTRAL COUNTY DODDRIDGE

SURFACE OWNER JONATHAN L. DAVIS ET AL ACREAGE 35.21 ACRES +/-

OIL & GAS ROYALTY OWNER V. KARIN OSBOURNE HOLLIS; FLORA SWEENEY; HEIDI CAVINS; LEASE ACREAGE 79.09 ACRES +/-; 103 ACRES +/-; 66 ACRES +/-; WALTER A. HILEMAS; MICHAEL MORRIS; SUSAN LYTLE; CARL JAMES; EUGENE V. CHIPPS II 9 ACRES +/-; 60.55 ACRES +/-; 35 ACRES +/-; 80 ACRES +/-; 120 ACRES +/-

PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___
 PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) AS DRILLED PLUG & ABANDON ___ CLEAN OUT & REPLUG ___

TARGET FORMATION MARCELLUS ESTIMATED DEPTH 6,360' TVD 13,817' MD

WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT DIANNA STAMPER
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

07/22/2016

COUNTY NAME PERMIT