



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

July 17, 2014

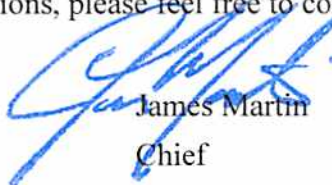
WELL WORK PERMIT
Horizontal 6A Well

This permit, API Well Number: 47-1706534, issued to ANTERO RESOURCES CORPORATION, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: BRADFORD UNIT 1H
Farm Name: BROWN, MELODY
API Well Number: 47-1706534
Permit Type: Horizontal 6A Well
Date Issued: 07/17/2014

Promoting a healthy environment.

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACE). Through this permit, you are hereby being advised to consult with USACE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.
9. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

47 - 1706534

WW-6B
(9/13)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Antero Resources Corporation

494488557	017-Doddridge	Grant	West Union 7.5'
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Operator ID County District Quadrangle

2) Operator's Well Number: Bradford Unit 1H Well Pad Name: Melody Pad

3) Farm Name/Surface Owner: Melody Brown Public Road Access: CR 24

4) Elevation, current ground: ~1165' Elevation, proposed post-construction: 1135'

5) Well Type (a) Gas Oil Underground Storage
Other

(b) If Gas Shallow Deep
Horizontal

*DCN
6-19-2014*

6) Existing Pad: Yes or No No

7) Proposed Target Formation(s), Depth(s), Anticipated Thickness and Associated Pressure(s):
Marcellus Shale: 7200' TVD, Anticipated Thickness- 55 feet, Associated Pressure- 2950#

8) Proposed Total Vertical Depth: 7200' TVD

9) Formation at Total Vertical Depth: Marcellus Shale

10) Proposed Total Measured Depth: 16,200' MD

11) Proposed Horizontal Leg Length: 6287'

12) Approximate Fresh Water Strata Depths: 216', 291', 407'

13) Method to Determine Fresh Water Depths: Offset well records. Depths have been adjusted according to surface elevations.

14) Approximate Saltwater Depths: 802', 906', 1805'

15) Approximate Coal Seam Depths: 802'

16) Approximate Depth to Possible Void (coal mine, karst, other): None anticipated

17) Does Proposed well location contain coal seams directly overlying or adjacent to an active mine? Yes No

(a) If Yes, provide Mine Info: Name: _____
Depth: _____
Seam: _____
Owner: _____

WW-6B
(9/13)

18)

CASING AND TUBING PROGRAM

TYPE	Size	New or Used	Grade	Weight per ft. (lb/ft)	FOOTAGE: For Drilling	INTERVALS: Left in Well	CEMENT: Fill-up (Cu. Ft.)
Conductor	20"	New	H-40	94#	40'	40'	CTS, 38 Cu. Ft.
Fresh Water	13-3/8"	New	J-55/H-40	54.5#/ 48#	465'	465' *see #19	CTS, 646 Cu. Ft.
Coal	9-5/8"	New	J-55	36#	2460'	2460'	CTS, 1002 Cu. Ft.
Intermediate							
Production	5-1/2"	New	P-110	20#	16,200'	16,200'	4059 Cu. Ft.
Tubing	2-3/8"	New	N-80	4.7#		7100'	
Liners							

*DCN
6-19-2014*

TYPE	Size	Wellbore Diameter	Wall Thickness	Burst Pressure	Cement Type	Cement Yield (cu. ft./k)
Conductor	20"	24"	0.438"	1530	Class A	1.18
Fresh Water	13-3/8"	17-1/2"	0.38"/0.33"	2730/1730	Class A	1.18
Coal	9-5/8"	12-1/4"	0.352"	3520	Class A	1.18
Intermediate						
Production	5-1/2"	8-3/4" & 8-1/2"	0.361"	12630	Lead-H/POZ & Tail - H	H/POZ-1.44 & H-1.8
Tubing	2-3/8"	4.778"	0.19"	11200		
Liners						

PACKERS

Kind:	N/A			
Sizes:	N/A			
Depths Set:	N/A			

WW-6B
(9/13)

19) Describe proposed well work, including the drilling and plugging back of any pilot hole:

Drill, perforate, fracture a new horizontal shallow well and complete Marcellus Shale.
*Antero will be air drilling the fresh water string which makes it difficult to determine when freshwater is encountered, therefore we have built in a buffer for the casing setting depth which helps to ensure that all fresh water zones are covered.

20) Describe fracturing/stimulating methods in detail, including anticipated max pressure and max rate:

Antero plans to pump Slickwater into the Marcellus Shale formation in order to ready the well for production. The fluid will be comprised of approximately 99 percent water and sand, with less than 1 percent special-purpose additives as shown in the attached "List of Anticipated Additives Used for Fracturing or Stimulating Well."

21) Total Area to be disturbed, including roads, stockpile area, pits, etc., (acres): 3.09 acres

22) Area to be disturbed for well pad only, less access road (acres): 3.09 acres

23) Describe centralizer placement for each casing string:

Conductor: no centralizers

Surface Casing: one centralizer 10' above the float shoe, one on the insert float collar and one every 4th joint spaced up the hole to surface.

Intermediate Casing: one centralizer above float joint, one centralizer 5' above float collar and one every 4th collar to surface.

Production Casing: one centralizer at shoe joint and one every 3 joints to top of cement in intermediate casing.

24) Describe all cement additives associated with each cement type:

Conductor: no additives, Class A cement.

Surface: Class A cement with 2-3% CaCl₂ and 1/4 lb of flake

Intermediate: Class A cement with 1/4 lb of flake, 5 gallons of clay treat

Production: Lead cement- 50/50 Class H/Poz + 1.5% salt + 1% C-45 + 0.5% C-16a + 0.2% C-12 + 0.45% C-20 + 0.05% C-51

Production: Tail cement- Class H + 45 PPS Calcium Carbonate + 1.0% FL-160 + 0.2% ACGB-47 + 0.05% ACSA-51 + 0.2% ACR-20

25) Proposed borehole conditioning procedures:

Conductor: blowhole clean with air, run casing, 10 bbls fresh water.

Surface: blowhole clean with air, trip to conductor shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate pipe capacity + 40 bbls fresh water followed by 25 bbls bentonite mud, 10 bbls fresh water spacer.

Intermediate: blowhole clean with air, trip to surface casing shoe, trip to bottom, blowhole clean with air, trip out, run casing, circulate 40 bbls brine water followed by 10 bbls fresh water and 25 bbls bentonite mud, pump 10 bbls fresh water.

Production: circulate with 14 lb/gal NaCl mud, trip to middle of lateral, circulate, pump high viscosity sweep, trip to base of curve, pump high viscosity sweep, trip to top of curve, trip to bottom, circulate, pump high viscosity sweep, trip out, run casing, circulate 10 bbls fresh water, pump 48 bbls barite pill, pump 10 bbls fresh water followed by 48 bbls mud flush and 10 bbls water.

*Note: Attach additional sheets as needed.

WW-9
(9/13)

API Number 47 - 017 - _____
Operator's Well No. Bradford Unit 1H

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Antero Resources Corporation OP Code 494488557

Watershed (HUC 10) Tributary of Little Flint Run Quadrangle West Union 7.5'

Elevation 1135' County Doddridge District Grant

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No

Will a pit be used? Yes No

If so, please describe anticipated pit waste: No pit will be used at this site (Drilling and Flowback Fluids will be stored in tanks. Cuttings will be tanked and hauled off site.)

Will a synthetic liner be used in the pit? Yes No If so, what ml.? N/A

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____ Future permitted well locations when applicable. API# will be provided on Form WR-34)
- Off Site Disposal (Supply form WW-9 for disposal location) (Meadowfill Landfill Permit #SWF-1032-98)
- Other (Explain _____)

*DCW
6-19-2014*

Will closed loop system be used? If so, describe: Yes

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Surface - Air/Freshwater, Intermediate - Dust/Stiff Foam, Production - Water Based Mud

-If oil based, what type? Synthetic, petroleum, etc. N/A

Additives to be used in drilling medium? Please See Attachment

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Stored in tanks, removed offsite and taken to landfill.

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) N/A

-Landfill or offsite name/permit number? Meadowfill Landfill (Permit #SWF-1032-98)

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *Cole Kilstrom*

Company Official (Typed Name) Cole Kilstrom

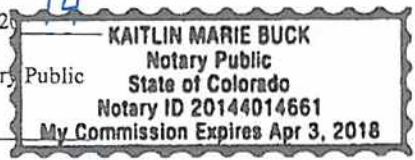
Company Official Title Environmental Specialist

Subscribed and sworn before me this 21st day of MAY, 2014

Kaitlin Buck

Notary Public

My commission expires 4/3/2018



Form WW-9

Operator's Well No. Bradford Unit 1H

Antero Resources Corporation

Proposed Revegetation Treatment: Acres Disturbed 3.09 Prevegetation pH _____

Lime 2-3 Tons/acre or to correct to pH 6.5

Fertilizer type Hay or straw or Wood Fiber (will be used where needed)

Fertilizer amount 500 lbs/acre

Mulch 2-3 Tons/acre

*Please note that this location is sharing the Access Roads "A" & "B" (13.27), Staging Areas "A" & "B" (3.73), Centralized Impoundment (5.96), Truck Turnaround (1.06), Production Equipment (51) and Excess/Topsoil Materials Stockpiles (13.62) with the proposed Melody Centralized Impoundment. The Melody Pad will consist of 3.09 total acres of disturbance which is referenced as "Staging Area B" (3.09) on the Melody Centralized Impoundment design.

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Ryegrass	40	Crownvetch	10-15

*See attached Table 3 for additional seed type (Melody Pad Design Page 14)

*See attached Table 3 for additional seed type (Melody Pad Design Page 14)

*or type of grass seed requested by surface owner

*or type of grass seed requested by surface owner

NOTE: No Fescue or Timothy Grass shall be used

Attach:

Drawing(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided)

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: Douglas A. ...

Comments: Preserve & Mulch install & maintain ERS to wo Dep regulations

Title: Oil & Gas Inspector Date: 6-19-2014

Field Reviewed? Yes No

Form WW-9 Additives Attachment**SURFACE INTERVAL**

1. Fresh Water
2. Soap –Foamer AC
3. Air

INTERMEDIATE INTERVAL***STIFF FOAM RECIPE:***

- 1) 1 ppb Soda Ash / Sodium Carbonate-Alkalinity Control Agent
- 2) 1 ppb Conqor 404 (11.76 ppg) / Corrosion Inhibitor
- 3) 4 ppb KLA-Gard (9.17 ppg) / Amine Acid Complex-Shale Stabilizer
- 4) 1ppb Mil Pac R / Sodium Carboxymethylcellulose-Filtration Control Agent
- 5) 12 ppb KCL / Potassium Chloride-inorganic Salt
- 6) Fresh Water 80 bbls
- 7) Air

PRODUCTION INTERVAL

1. Alpha 1655
Salt Inhibitor
2. Mil-Carb
Calcium Carbonate
3. Cottonseed Hulls
Cellulose-Cottonseed Pellets – LCM
4. Mil-Seal
Vegetable, Cotton & Cellulose-Based Fiber Blend – LCM
5. Clay-Trol
Amine Acid Complex – Shale Stabilizer
6. Xan-Plex
Viscosifier For Water Based Muds
7. Mil-Pac (All Grades)
Sodium Carboxymethylcellulose – Filtration Control Agent
8. New Drill
Anionic Polyacrylamide Copolymer Emulsion – Shale Stabilizer
9. Caustic Soda
Sodium Hydroxide – Alkalinity Control
10. Mil-Lime
Calcium Hydroxide – Lime
11. LD-9
Polyether Polyol – Drilling Fluid Defoamer
12. Mil Mica
Hydro-Biotite Mica – LCM

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Environmental Protection

13. Escaid 110
Drilling Fluid Solvent – Aliphatic Hydrocarbon
14. Ligco
Highly Oxidized Leonardite – Filtration Control Agent
15. Super Sweep
Polypropylene – Hole Cleaning Agent
16. Sulfatrol K
Drilling Fluid Additive – Sulfonated Asphalt Residuum
17. Sodium Chloride, Anhydrous
Inorganic Salt
18. D-D
Drilling Detergent – Surfactant
19. Terra-Rate
Organic Surfactant Blend
20. W.O. Defoam
Alcohol-Based Defoamer
21. Perma-Lose HT
Fluid Loss Reducer For Water-Based Muds
22. Xan-Plex D
Polysaccharide Polymer – Drilling Fluid Viscosifier
23. Walnut Shells
Ground Cellulosic Material – Ground Walnut Shells – LCM
24. Mil-Graphite
Natural Graphite – LCM
25. Mil Bar
Barite – Weighting Agent
26. X-Cide 102
Biocide
27. Soda Ash
Sodium Carbonate – Alkalinity Control Agent
28. Clay Trol
Amine Acid complex – Shale Stabilizer
29. Sulfatrol
Sulfonated Asphalt – Shale Control Additive
30. Xanvis
Viscosifier For Water-Based Muds
31. Milstarch
Starch – Fluid Loss Reducer For Water Based Muds
32. Mil-Lube
Drilling Fluid Lubricant

47 - 1706534

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Well Site Safety Plan

Antero Resources

Well Name: Rexal Unit 1H, Kreitler Unit 1H, Kreitler Unit 2H, Bradford Unit 1H, Bradford Unit 2H, Deano Unit 1H, Weinhold Unit 1H, Weinhold Unit 2H and Yoho Unt 2H

Pad Location: MELODY PAD
Doddridge County/ Grant District

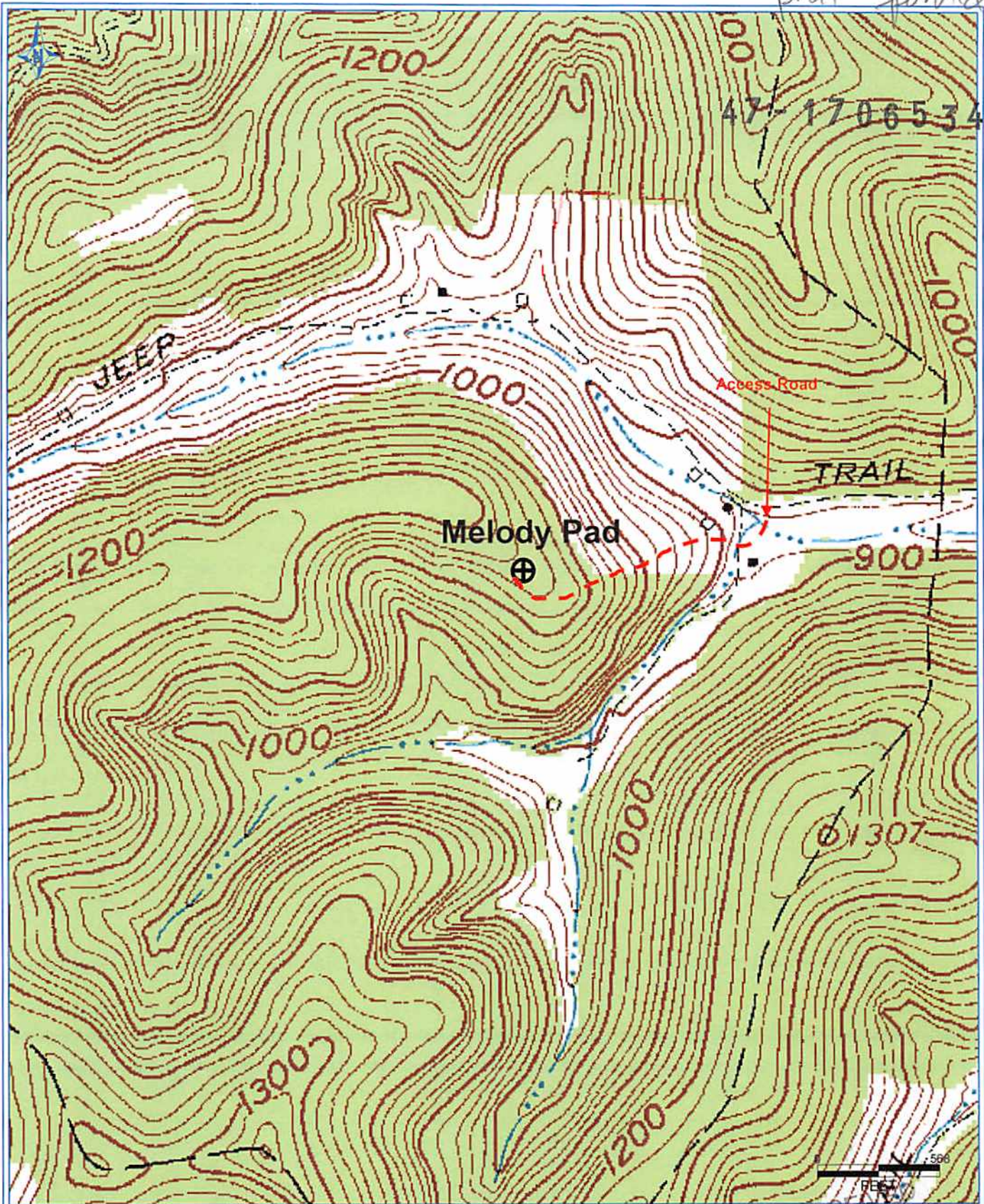
GPS Coordinates: Lat 39°21'30.41"/Long 80°45'33.04" (NAD83)

Driving Directions:

From the intersection of US-50 and WV Rt 18 head North on WV 18 for .6 miles. Turn right onto Davis Street/Old US 50 East. Continue for 1 mile then turn left onto Co route 5/Rock Run Rd. Continue for 2.8 miles then turn left onto Co route 28/Nutter Fork. Continue for 1.8 miles then turn right onto Bulltown Rd. Continue for 1 mile then continue onto Knights Fork. Continue on Knights fork for 1.2 miles then take a slight left onto Co RT 24/Camp Mistake Rd. Continue for 0.4 miles. Access Rd on Left.

4-25-2014
DCW

Print Spotted ✓



DETRA 3/19/2014 1:30:24 PM

Antero Resources Corporation
Appalachian Basin
Bradford Unit 1H
Doddridge County
Quadrangle: Smithburg & West Union
Watershed: Wolfpen Run & Little Flint Run
District: Grant
Date: 3-19-2014

Office of Oil and Gas
JUN 03 2014
West Virginia Department of Environmental Protection

LATITUDE 39°22'30"

2,622'

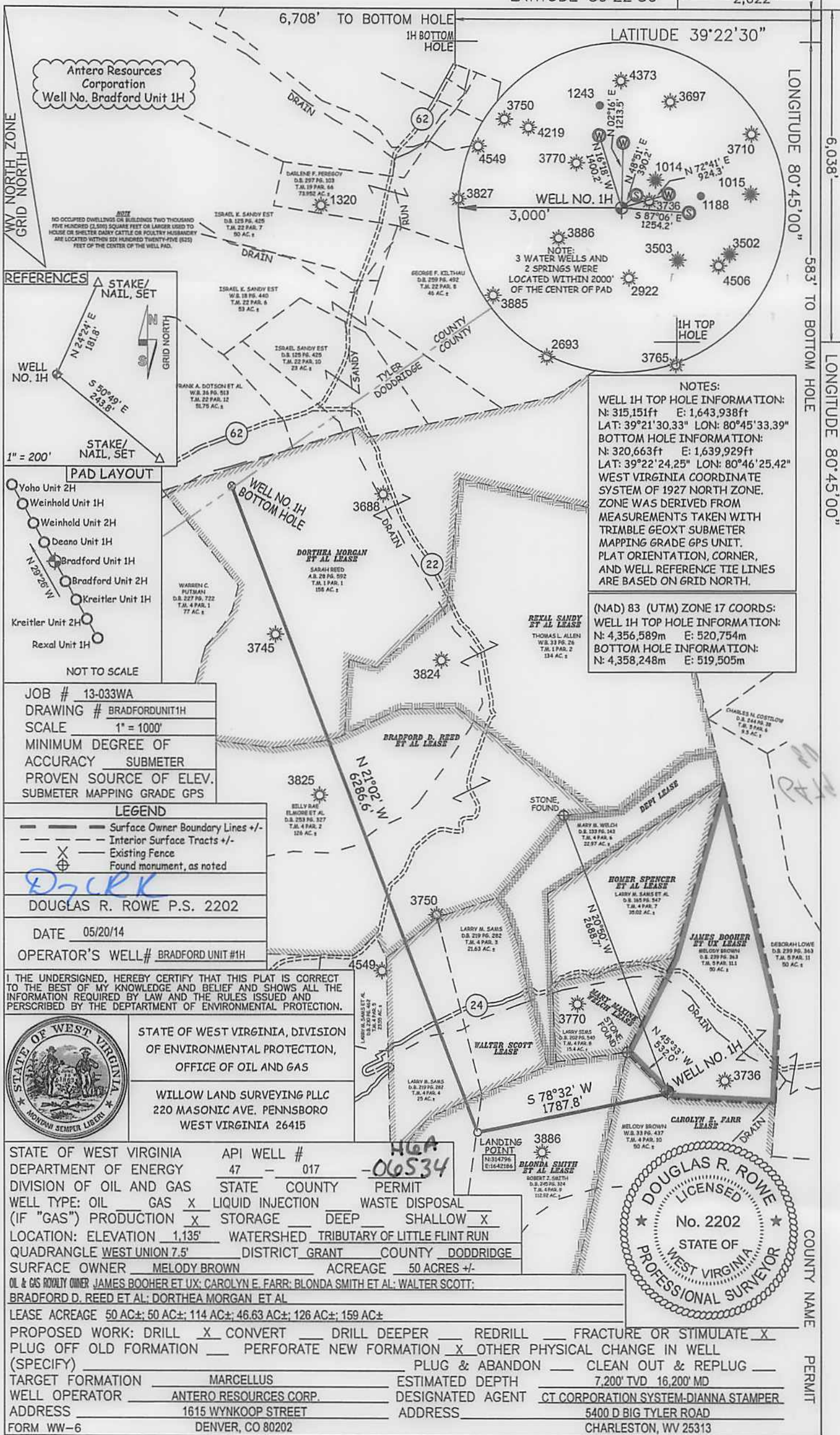
LATITUDE 39°22'30"

LONGITUDE 80°45'00"

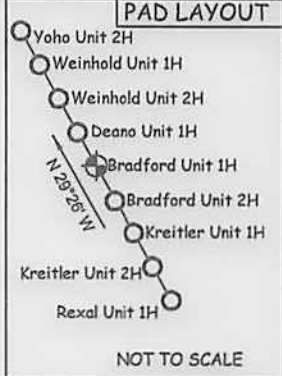
6,038'

583' TO BOTTOM HOLE

LONGITUDE 80°45'00"



Antero Resources Corporation
Well No. Bradford Unit 1H



JOB # 13-033WA
 DRAWING # BRADFORDUNIT1H
 SCALE 1" = 1000'
 MINIMUM DEGREE OF ACCURACY SUBMETER
 PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND

- Surface Owner Boundary Lines +/-
- Interior Surface Tracts +/-
- Existing Fence
- Found monument, as noted

DOUGLAS R. ROWE P.S. 2202
 DATE 05/20/14
 OPERATOR'S WELL# BRADFORD UNIT #1H

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



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

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

API WELL # 47 - 017 - **HGA 06534**

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

LOCATION: ELEVATION 1,135' WATERSHED TRIBUTARY OF LITTLE FLINT RUN
 QUADRANGLE WEST UNION 7.5' DISTRICT GRANT COUNTY DODDRIDGE

SURFACE OWNER MELODY BROWN ACREAGE 50 ACRES +/-

LANDING POINT N-314796 E-1642186

BLONDA SMITH ET AL LEASE ROBERT Z. SMITH D.B. 2015 PG. 304 T.M. 4 PAR. 9 112.92 AC +/-

DOUGLAS R. ROWE LICENSED PROFESSIONAL SURVEYOR No. 2202 STATE OF WEST VIRGINIA

LEASE ACREAGE 50 AC±; 50 AC±; 114 AC±; 46.63 AC±; 126 AC±; 159 AC±

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

TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,200' TVD 16,200' MD
 WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER
 ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD
 FORM WW-6 DENVER, CO 80202 CHARLESTON, WV 25313

NOTES:
 WELL 1H TOP HOLE INFORMATION:
 N: 315,151ft E: 1,643,938ft
 LAT: 39°21'30.33" LON: 80°45'33.39"
 BOTTOM HOLE INFORMATION:
 N: 320,663ft E: 1,639,929ft
 LAT: 39°22'24.25" LON: 80°46'25.42"
 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 1H TOP HOLE INFORMATION:
 N: 4,356,589m E: 520,754m
 BOTTOM HOLE INFORMATION:
 N: 4,358,248m E: 519,505m

APPROVED
WVDEP OOG
SAY 6/23/2014

MELODY WELL PAD

SITE DESIGN & CONSTRUCTION PLAN, EROSION & SEDIMENT CONTROL PLANS

GRANT DISTRICT, DODDRIDGE COUNTY, WEST VIRGINIA
WOLFFEN RUN & LITTLE FLINT RUN WATERSHEDS
USGS 7.5 SMITHBURG AND WEST UNION QUAD MAPS

LOCATION COORDINATES
ACCESS ROAD ENTRANCE
LATITUDE: 39.359164 LONGITUDE: -80.755057 (NAD 83)
N 4356663.66 E 521102.41 (UTM NAD83, ZONE 17 METERS)

CENTROID OF WELL PAD
LATITUDE: 39.350448 LONGITUDE: -80.759177 (NAD 83)
N 4356582.87 E 520747.70 (UTM NAD83, ZONE 17 METERS)

GENERAL DESCRIPTION
THE WELL PAD AND ACCESS ROAD(S) ARE BEING CONSTRUCTED TO AID IN THE DEVELOPMENT OF INDIVIDUAL MARCELLUS SHALE GAS WELLS.

FLOODPLAIN NOTE
THE PROPOSED SITE IS LOCATED IN FLOODZONE "X" PER FEMA FLOOD MAP #54017C0110C.

MISS UTILITY STATEMENT
ANTERO RESOURCES CORPORATION WILL NOTIFY MISS UTILITY OF WEST VIRGINIA FOR THE LOCATING OF UTILITIES PRIOR TO THIS PROJECT DESIGN TICKET #1310523787. IN ADDITION, MISS UTILITY WILL BE CONTACTED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION FOR THIS PROJECT.

ENTRANCE PERMIT
ANTERO RESOURCES CORPORATION WILL OBTAIN AN ENCROACHMENT PERMIT (FORM MM-100) FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

GEOTECHNICAL NOTE
A SUBSURFACE INVESTIGATION OF THE PROPOSED SITE WAS PERFORMED BY TERRA TESTING, INC. UNDER THE TECHNICAL SUPERVISION OF KLEINFELDER ON JULY 31, 2013-AUGUST 7, 2013 AND JANUARY 17, 2014-FEBRUARY 01, 2014. THIS REPORT PREPARED BY KLEINFELDER DATED FEBRUARY 28, 2014, REFLECTS THE RESULTS OF THE SUBSURFACE INVESTIGATION. THE INFORMATION AND RECOMMENDATIONS CONTAINED IN THEIR REPORT WAS USED IN THE PREPARATION OF THESE PLANS. HOWEVER, ADDITIONAL IS NECESSARY TO CONFIRM THE ESTIMATED TOE KEY DEPTHS. PLEASE REFER TO THE SUBSURFACE INVESTIGATION REPORT BY KLEINFELDER FOR ADDITIONAL INFORMATION, AS NEEDED.

ENVIRONMENTAL NOTES
WETLAND DELINEATIONS WERE PERFORMED FEBRUARY & JUNE, 2013 BY ALLSTAR ECOLOGY, LLC TO REVIEW THE SITE FOR WATERS AND WETLANDS THAT ARE MOST LIKELY WITHIN THE REGULATORY PURVIEW OF THE U.S. ARMY CORPS OF ENGINEERS (USACE) AND/OR THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION (WVDEP). THE JUNE 29, 2013 STREAM AND WETLAND DELINEATION INDEX MAP WAS PREPARED BY ALLSTAR ECOLOGY, LLC AND SUMMARIZES THE RESULTS OF THE FIELD DELINEATION. THE MAP DOES NOT, IN ANY WAY, REPRESENT A JURISDICTIONAL DETERMINATION OF THE LANDWARD LIMITS OF WATERS AND WETLANDS WHICH MAY BE REGULATED BY THE USACE OR THE WVDEP. IT IS STRONGLY RECOMMENDED THAT THE AFORESAID AGENCIES BE CONSULTED IN AN EFFORT TO GAIN WRITTEN CONFIRMATION OF THE DELINEATION SHOWN ON THIS EXHIBIT PRIOR TO ENGAGING CONSTRUCTION ON THE PROPERTY DESCRIBED HEREIN. THE DEVELOPER SHALL OBTAIN THE APPROPRIATE PERMITS FROM THE FEDERAL AND/OR STATE REGULATORY AGENCIES PRIOR TO ANY PROPOSED IMPACTS TO WATERS OF THE U.S., INCLUDING WETLAND FILLS AND STREAM CROSSINGS.

MELODY PERENNIAL STREAM IMPACT (LINEAR FEET)			
Stream and Impact Cause	Culvert (LF)	Inlets/Outlets Structures (LF)	Total Impact (LF)
RPW/Perennial Stream 3 (Access Rd. "A")	46	0	46

PROJECT CONTACTS

OPERATOR:
ANTERO RESOURCES CORPORATION
505 WHITE OAKS BLVD
BRIDGEPORT, WV 26330
PHONE (304) 842-4100
FAX (304) 842-4112

API#1706477
API#1706479
API#1706480

ELI WAGNER - ENVIRONMENTAL ENGINEER
OFFICE: (304) 842-4068 CELL: (304) 476-9770

JOHN KAWCAK - OPERATIONS SUPERINTENDENT
CELL: (817) 368-1553

AARON KUNZLER - CONSTRUCTION SUPERVISOR
CELL: (405) 227-8344

ANTHONY SMITH - FIELD ENGINEER
OFFICE: (304) 842-4208 CELL: (304) 673-6196

RIGER DUNLAP - SURVEYING COORDINATOR
CELL: (304) 651-5088

RANDAL RANDOLPH - LAND AGENT
CELL: (405) 816-5956

ENGINEER/SURVEYOR:
NAVITUS ENGINEERING, INC.
CYRUS S. KUMP, PE - PROJECT MANAGER/ENGINEER
OFFICE: (888) 662-4185 CELL: (540) 606-6747

ENVIRONMENTAL:
ALLSTAR ECOLOGY, LLC
RYAN L. WARD - ENVIRONMENTAL SCIENTIST
OFFICE: (866) 213-2666 CELL: (304) 692-7477

RESTRICTIONS NOTES:

1. THERE ARE NO WETLANDS, LAKES, PONDS, OR RESERVOIRS WITHIN 100 FEET OF THE WELL PAD AND LOD. THERE IS A PERENNIAL STREAM IMPACT THAT WILL NEED TO BE PERMITTED BY THE APPROPRIATE AGENCIES.
2. THERE ARE NO NATURALLY PRODUCING TROUT STREAMS WITHIN 300 FEET OF THE WELL PAD AND LOD.
3. THERE ARE NO GROUNDWATER INTAKE OR PUBLIC WATER SUPPLY FACILITIES WITHIN 1000 FEET OF THE WELL PAD AND LOD.
4. THERE ARE NO APPARENT EXISTING WATER WELLS OR DEVELOPED SPRINGS WITHIN 250 FEET OF THE WELL(S) BEING DRILLED.
5. THERE ARE NO OCCUPIED DWELLING STRUCTURES WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.
6. THERE ARE NO AGRICULTURAL BUILDINGS LARGER THAN 2,500 SQUARE FEET WITHIN 625 FEET OF THE CENTER OF THE WELL PAD.



Electronic Version of These Plans May Be Viewed at: Q:\OIL GAS\SAY FILES\REVIEWS
WEST VIRGINIA COUNTY MAP WVDOR COUNTY ROAD MAP



DESIGN CERTIFICATION
THE DRAWINGS, CONSTRUCTION NOTES, AND REFERENCE DIAGRAMS ATTACHED HERETO HAVE BEEN PREPARED IN ACCORDANCE WITH THE WEST VIRGINIA CODE OF STATE RULES, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS CRS 35-8.

SITE PLAN/CONSTRUCTION STAGING NOTE
THE MELODY WELL PAD AS SHOWN IN THIS SITE PLAN IS ALSO SHOWN AS STAGING AREA "B" IN THE MELODY CENTRALIZED FRESHWATER IMPONDEMENT SITE PLAN. REFER TO THE MELODY CENTRALIZED FRESHWATER IMPONDEMENT SITE PLAN (STAGING AREA "B") FOR ALL CONSTRUCTION QUANTITIES ASSOCIATED WITH THE CONSTRUCTION OF THE MELODY WELL PAD SITE. THE PROPOSED LIMITS OF DISTURBANCE ACREAGE, AS SHOWN IN THIS PLAN IS REPETITIVE TO THE ACREAGE PREVIOUSLY SHOWN IN THE MELODY CENTRALIZED FRESHWATER IMPONDEMENT SITE PLAN.

MISS Utility of West Virginia
1-800-245-1848
West Virginia State Law
(Section XIV: Chapter 24-C)
Requires that you call two business days before you dig in the state of West Virginia.
IT'S THE LAW!!

WEST VIRGINIA STATE PLANE COORDINATE SYSTEM
ELEVATION BASED ON NAVD83
ESTABLISHED BY SURVEY GRADE GPS & OPUS
POST-PROCESSING

SHEET INDEX

- 01 - COVER SHEET
- 02 - CONSTRUCTION AND E&S CONTROL NOTES
- 03 - EXISTING CONDITIONS
- 04 - OVERALL PLAN SHEET INDEX & VOLUMES
- 05 - ACCESS ROAD, STAGING AREA & WELL PAD PLAN
- 06 - ACCESS ROAD PROFILES
- 07 - ACCESS ROAD SECTIONS
- 08 - WELL PAD DETAILS
- 09 - STREAM CROSSING DETAILS
- 10-14 - CONSTRUCTION DETAILS
- 15 ACCESS ROAD, STAGING AREA, & WELL PAD RECLAMATION PLAN
- 16 FIRM EXHIBIT
- GES01-GES04 GEOTECHNICAL DETAILS

MELODY LIMITS OF DISTURBANCE AREA (AC)	
Total Site	
Well Pad	3.09
Total Affected Area	3.09
Total Wooded Acres Disturbed	2.93
Impacts to Melody Brown & Deborah Lowe TM 5-11.1	
Well Pad	1.62
Total Affected Area	1.62
Total Wooded Acres Disturbed	1.62
Impacts to Melody Brown & Deborah Lowe TM 4-10	
Well Pad	1.47
Total Affected Area	1.47
Total Wooded Acres Disturbed	1.31

Proposed Well Name	WV North NAD 27	WV North NAD 83	UTM (METERS) Zone 17	NAD 83 Lat & Long
Yoho	N 215185.86	N 215221.20	N 4356599.84	LAT 39-21-30.9650
Unit 2H	E 1643816.58	E 1612477.35	E 520748.14	LONG -80-45-33.0160
Wellhold	N 315176.95	N 315212.50	N 4356597.22	LAT 39-21-30.8796
Unit 1H	E 1643023.49	E 1612482.26	E 520749.68	LONG -80-45-32.9517
Wellhold	N 315168.24	N 315203.79	N 4356594.59	LAT 39-21-30.7942
Unit 2H	E 1643928.41	E 1612487.18	E 520751.22	LONG -80-45-32.8476
Deamo	N 315159.53	N 315193.08	N 4356591.98	LAT 39-21-30.7089
Unit 1H	E 1643933.33	E 1612482.10	E 520752.76	LONG -80-45-32.8235
Bradford	N 315150.83	N 315186.37	N 4356589.33	LAT 39-21-30.6234
Unit 1H	E 1643938.24	E 1612487.01	E 520754.30	LONG -80-45-32.7394
Bradford	N 315142.12	N 315177.66	N 4356588.70	LAT 39-21-30.5380
Unit 2H	E 1643943.18	E 1612501.93	E 520755.85	LONG -80-45-32.6952
Kreidler	N 315133.41	N 315168.95	N 4356584.08	LAT 39-21-30.4527
Unit 1H	E 1643948.07	E 1612506.84	E 520757.39	LONG -80-45-32.6311
Kreidler	N 315124.70	N 315160.25	N 4356581.45	LAT 39-21-30.3673
Unit 2H	E 1643952.99	E 1612511.76	E 520758.93	LONG -80-45-32.5670
Royal	N 315115.99	N 315151.54	N 4356578.82	LAT 39-21-30.2819
Unit 1H	E 1643957.90	E 1612516.67	E 520760.47	LONG -80-45-32.5028
Well Pad Elevation	1,135.0			

REVISION

DATE

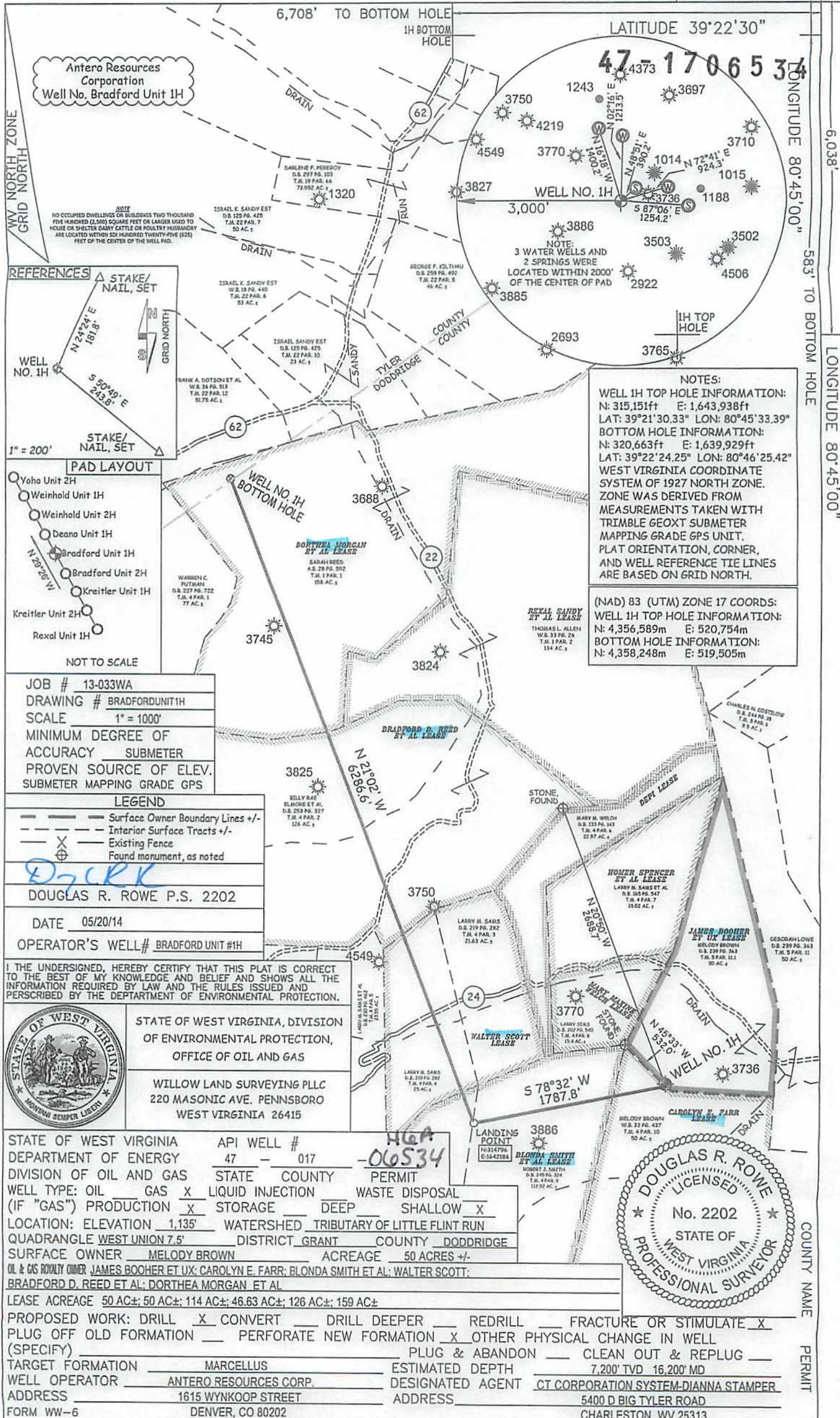


THIS DOCUMENT WAS PREPARED FOR ANTERO RESOURCES CORPORATION

COVER SHEET
MELODY WELL PAD
GRANT DISTRICT
DODDRIDGE COUNTY, WEST VIRGINIA

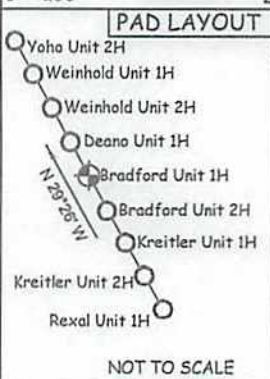


DATE: 03/04/2014
SCALE: AS SHOWN
SHEET 1 OF 16



Antero Resources Corporation
Well No. Bradford Unit 1H

NOTE:
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.



JOB # 13-033WA
DRAWING # BRADFORDUNIT1H
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY SUBMETER
PROVEN SOURCE OF ELEV. SUBMETER MAPPING GRADE GPS

LEGEND
 - - - Surface Owner Boundary Lines +/-
 - - - Interior Surface Tracts +/-
 X Existing Fence
 ⊕ Found monument, as noted

DOUGLAS R. ROWE P.S. 2202

DATE 05/20/14
OPERATOR'S WELL # BRADFORD UNIT #1H

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PERSCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.



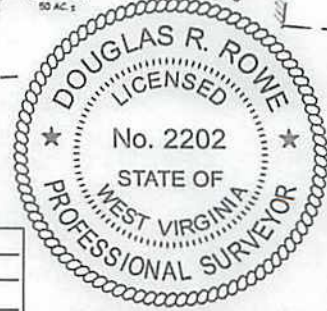
STATE OF WEST VIRGINIA, DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WILLOW LAND SURVEYING PLLC
220 MASONIC AVE. PENNSBORO WEST VIRGINIA 26415

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

LEASE ACREAGE 50 AC±; 50 AC±; 114 AC±; 46.63 AC±; 126 AC±; 159 AC±
PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE X
PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION X OTHER PHYSICAL CHANGE IN WELL (SPECIFY) ___
TARGET FORMATION MARCELLUS ESTIMATED DEPTH 7,200' TVD 16,200' MD
WELL OPERATOR ANTERO RESOURCES CORP. DESIGNATED AGENT CT CORPORATION SYSTEM-DIANNA STAMPER
ADDRESS 1615 WYNKOOP STREET ADDRESS 5400 D BIG TYLER ROAD CHARLESTON, WV 25313
FORM WW-6 DENVER, CO 80202

NOTES:
WELL 1H TOP HOLE INFORMATION:
N: 315,151ft E: 1,643,938ft
LAT: 39°21'30.33" LON: 80°45'33.39"
BOTTOM HOLE INFORMATION:
N: 320,663ft E: 1,639,929ft
LAT: 39°22'24.25" LON: 80°46'25.42"
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 1H TOP HOLE INFORMATION:
N: 4,356,589m E: 520,754m
BOTTOM HOLE INFORMATION:
N: 4,358,248m E: 519,505m



COUNTY NAME PERMIT

Operator's Well Number Bradford Unit 1H

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, lessor, etc.	Grantee, lessee, etc.	Royalty	Book/Page
James Booher et ux Lease			
James Booher, et ux	Jack E. Webber, et ux	1/8	0093/0298
Dorothea Webber as executrix for the estate of Jack E. Webber, et al	Aries Petroleum Corporation	Assignment	0122/0259
Aries Petroleum Corporation	Chesterfield Energy Corporation	Assignment	0134/0748
Chesterfield Energy Corporation	Dominion Appalachian Development, Inc.	Merger	Unrecorded Document
Dominion Appalachian Development, Inc.	Dominion Appalachian Development, LLC	Certificate of Conversion	Exhibit 2
Dominion Appalachian Development, LLC, DEPI, & DTI	Antero Resources Appalachian Corporation	*Partial Assignment of Oil and Gas Leases	0230/0113
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
Carolyn E. Farr Lease			
Carolyn E. Farr	Clarence W. Mutschelknaus	1/8	0155/0456
Clarence W. Mutschelknaus	Stonewall Gas Company	Assignment	0157/0229
Stonewall Gas Company	Dominion Appalachian Development, Inc.	Merger	Exhibit 3
Dominion Appalachian Development, Inc.	Dominion Appalachian Development, LLC	Certificate of Conversion	Exhibit 2
Dominion Appalachian Development, LLC, DEPI, & DTI	Antero Resources Appalachian Corporation	*Partial Assignment of Oil and Gas Leases	0230/0113
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
Blonda Smith et al Lease			
Blonda Smith	Drilling Appalachian Corporation	1/8	0163/0194
Drilling Appalachian Corporation	Antero Resources Appalachian Corporation	Memorandum of Agreement	0282/0407
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1
Walter Scott Lease			
Walter R. Scott	Antero Resources Corporation	1/8	0308/0677
Bradford D. Reed et al Lease			
Bradford D. Reed, et al	Bojacque Inc.	1/8	0153/0203
Bojacque Inc.	Stonewall Gas Company	Assignment and Agreement	0155/0592
Stonewall Gas Company	Dominion Appalachian Development, Inc.	Certificate of Withdrawal	Exhibit 3
Dominion Appalachian Development, Inc.	Dominion Appalachian Development, LLC,	Certificate of Conversion	Exhibit 2
Dominion Appalachian Development, LLC, DEPI, & DTI	Antero Resources Appalachian Corporation	*Partial Assignment of Oil and Gas Leases	0230/0113
Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1

*Partial Assignments to Antero Resources Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

CONTINUED ON NEXT PAGE

RECEIVED
Office of Oil and Gas
JUN 02 2014
WV Department of
Environmental Protection

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6A, Section 5(a)(5)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Lease Name or Number	Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
<u>Dorthea Morgan et al Lease</u>	Dorothea I. Morgan, et vir	Bojacque Inc.	1/8	0153/0223
	Bojacque Inc.	Stonewall Gas Company	Assignment and Agreement	0155/0592
	Stonewall Gas Company	Dominion Appalachian Development, Inc.	Certificate of Withdrawal	Exhibit 3
	Dominion Appalachian Development, Inc.	Dominion Appalachian Development, LLC	Certificate of Conversion	Exhibit 2
	Dominion Appalachian Development, LLC, DEPI, & DTI	Antero Resources Appalachian Corporation	*Partial Assignment of Oil and Gas Leases	0230/0113
	Antero Resources Appalachian Corporation	Antero Resources Corporation	Name Change	Exhibit 1

*Partial Assignments to Antero Resources Corporation include 100% rights to extract, produce and market the oil and gas from the Marcellus and any other formations completed with this well.

**Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Antero Resources Corporation
 By: Kevin Kilstrom
 Its: Vice President of Production



May 22, 2014

Antero Resources
1615 Wynkoop Street
Denver, CO 80202
Office 303.357.7310
Fax 303.357.7315

West Virginia Department of Environmental Protection
Office of Oil and Gas
Attn: Ms. Laura Cooper
601 57th Street
Charleston, WV 25304

Ms. Laura Cooper:

Antero Resources Corporation (Antero) would like to submit the following applications for new well work permits to explore for Marcellus Shale potential. Our **Canton** project is located in Doddridge County, WV. On the **new Melody Pad** consists **three new horizontal** shallow wells (Yoho Unit 2H and Bradford Unit 1H and 2H) that we are requesting approval to drill.

Attached you will find the following:

- Permit Application packages
- CD with copy of permit applications

If you have any questions please feel free to contact me at (303) 357-7323.

Thank you in advance for your consideration.

Sincerely,

A handwritten signature in blue ink that reads "Ashlie Mihalcin".

Ashlie Mihalcin
Permit Representative
Antero Resources Corporation

Enclosures

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JUN 02 2014
WV Department of
Environmental Protection

FORM WW-6A1
EXHIBIT 1

47-1706534

FILED

JUN 10 2013



Penney Barker, Manager
Corporations Division
IN THE OFFICE OF
SECRETARY OF STATE
Tel: (304)558-8000
Fax: (304)558-8381
Website: www.wvsof.com
E-mail: business@wvsof.com

Natalje E. Tennant
Secretary of State
1900 Kanawha Blvd E
Bldg 1, Suite 157-K
Charleston, WV 25305

APPLICATION FOR
AMENDED CERTIFICATE
OF AUTHORITY

Office Hours: Monday - Friday
8:30 a.m. - 5:00 p.m. ET

FILE ONE ORIGINAL
(Two if you want a filed
stamped copy returned to you)
FEE: \$25.00

**** In accordance with the provisions of the West Virginia Code, the undersigned corporation hereby ****
applies for an Amended Certificate of Authority and submits the following statement:

- Name under which the corporation was authorized to transact business in WV: Antero Resources Appalachian Corporation
- Date Certificate of Authority was issued in West Virginia: 6/25/2008
- Corporate name has been changed to: Antero Resources Corporation
(Attach one Certified Copy of Name Change as filed in home State of incorporation.)
- Name the corporation elects to use in WV: Antero Resources Corporation
(due to home state name not being available)
- Other amendments: _____
(attach additional pages if necessary)

6. Name and phone number of contact person. (This is optional, however, if there is a problem with the filing, listing a contact person and phone number may avoid having to return or reject the document.)

Alvyn A. Schopp (303) 357-7310
Contact Name Phone Number

7. Signature information (See below **Important Legal Notice Regarding Signature**):

Print Name of Signer: Alvyn A. Schopp Title/Capacity: Authorized Person

Signature: *Alvyn A. Schopp* Date: June 10, 2013

Important Legal Notice Regarding Signature For West Virginia Code §31D-1-129. Penalty for signing false document. Any person who signs a document he or she knows is false in any material respect and knows that the document is to be delivered to the secretary of state for filing is guilty of a misdemeanor and, upon conviction thereof, shall be fined not more than one thousand dollars or confined in the county or regional jail not more than one year, or both.

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Gas

JUN 02 2014

WV Department of
Environmental Protection

AC

State of West Virginia



Certificate

I, Betty Ireland, Secretary of State of the State of West Virginia, hereby certify that

DOMINION APPALACHIAN DEVELOPMENT, INC.
(a Virginia corporation)

filed an application for Conversion in my office as required by the provisions of the West Virginia Code and was found to conform to law.

Therefore, I issue this

CERTIFICATE OF CONVERSION

converting the corporation to

DOMINION APPALACHIAN DEVELOPMENT, LLC
(a Virginia Limited Liability Company)



Given under my hand and the Great Seal of the State of West Virginia on

RECEIVED February 23, 2006
Office of Oil and Gas

JUN 09 2014
Betty Ireland
WV Department of Environmental Protection
Secretary of State

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION
Clerk of the Commission
P. O. Box 1197, 1300 East Main Street
Richmond, VA 23209

ARTICLES OF MERGER
DOMINION APPALACHIAN DEVELOPMENT, INC. *Dan*
a Virginia corporation
STONEWALL GAS COMPANY
a Virginia corporation

The undersigned corporations, pursuant to Title 13.1, Chapter 9, Article 12 of the Code of Virginia, hereby execute the following Articles of Merger and set forth:

ARTICLE I

The Plan of Merger (the "Plan") made and entered into as of the 31st day of August, 1998 by and between the undersigned corporations and attached hereto as Exhibit A provides for the merger of Stonewall Gas Company into Dominion Appalachian Development, Inc. The Plan constitutes the "Plan of Merger" for the purposes of Article 12 of the Virginia State Corporation Act.

ARTICLE II

The Plan was adopted by the written consent of the sole shareholder of Stonewall Gas Company.

ARTICLE III

The Plan was adopted by the written consent of the sole shareholder of Dominion Appalachian Development, Inc.

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Office of Oil and Gas
JUN 02 2014

ARTICLE IV

WV Department of
Environmental Protection

These Articles of Merger shall become effective on September 30, 1998.

IN WITNESS WHEREOF, Dominion Appalachian Development, Inc. and Stonewall Gas Company have caused these Articles of Merger to be executed as of the 31st day of August, 1998..

DOMINION APPALACHIAN
DEVELOPMENT, INC.,
a Virginia corporation

By: Thomas N. Channing
Name: Thomas N. Channing
Its: Vice President

STONEWALL GAS COMPANY,
a Virginia corporation

By: G. E. Lake, Jr.
Name: G. E. Lake, Jr.
Its: Sr. Vice President



Antero Resources
1615 Wynkoop Street
Denver, CO 80202
Office 303.357.7310
Fax 303.357.7315

May 21, 2014

West Virginia Department of Environmental Protection
Chief, Office of Oil and Gas
Attn: Mr. James Martin
601 57th Street SE
Charleston, WV 25304

RE: Bradford Unit 1H
Quadrangle: West Union 7.5'
Doddridge County/Grant District, West Virginia

Mr. Martin:

Antero Resources Corporation (Antero) is submitting the following application for a new well work permit for the Bradford Unit 1H horizontal shallow well. As an authorized representative, I certify that Antero has the right to extract, produce or market the oil or gas for all leases through which the Bradford Unit 1H horizontal lateral will drill through including any and all roads crossed under as identified on the attached survey plat.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Hurst", is written over a light blue horizontal line.

Jared Hurst
Senior Landman

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Office of Oil and Gas

JUN 02 2014

WV Department of
Environmental Protection

**Horizontal Natural Gas Well Work Permit
Application Notice By Publication**

Notice is hereby given:

Pursuant to West Virginia Code 22-6A-10(e) prior to filing an application for a permit for a horizontal well the applicant shall publish in the county in which the well is located or is proposed to be located a Class II legal advertisement.

Paper: The Herald Record

Public Notice Date: 1/14/2014 & 1/21/2014 ✓

The following applicant intends to apply for a horizontal natural well work permit which disturbs three acres or more of surface excluding pipelines, gathering lines and roads or utilizes more than two hundred ten thousand gallons of water in any thirty day period.

Applicant: Antero Resources Corporation **Well Number:** Bradford Unit 1H ✓

Address: 1615 Wynkoop Street
Denver, CO 80202

Business Conducted: Natural gas production.

Location –

State: West Virginia County: Doddridge
District: Grant Quadrangle: West Union 7.5'
UTM Coordinate NAD83 Northing: 4,356,589m ✓
UTM coordinate NAD83 Easting: 520,754m
Watershed: Tributary of Little Flint Run

Coordinate Conversion:

To convert the coordinates above into longitude and latitude, visit: http://tagis.dep.wv.gov/convert/llutm_conus.php

Electronic notification:

To receive an email when applications have been received or issued by the Office of Oil and Gas, visit <http://www.dep.wv.gov/insidedep/Pages/DEPMailingLists.aspx> to sign up.

Reviewing Applications:

Copies of the proposed permit application may be reviewed at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE Charleston, WV 25304 (304-926-0450). Full copies or scans of the proposed permit application will cost \$15, whether mailed or obtained at DEP headquarters. Copies may be requested by calling the office or by sending an email to DEP.oog@wv.gov.

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Office of Oil and Gas
JUN 02 2014
WV Department of Environmental Protection

Submitting Comments:

Comments may be submitted online at <https://apps.dep.wv.gov/oog/comments/comments.cfm>, or by letter to Permit Review, Office of Oil and Gas, 601 57th Street, SE Charleston, WV 25304. Please reference the county, well number, and operator when using this option.

Regardless of format for comment submissions, they must be received no later than thirty days after the permit application is received by the Office of Oil and Gas.

For information related to horizontal drilling visit: www.dep.wv.gov/oil-and-gas/pages/default.aspx

PROOF OF CLASS II LEGAL ADVERTISEMENT,
PURSUANT TO WV CODE SECTION 22-6A-10(e)

STATE OF WEST VIRGINIA,
COUNTY OF DODDRIDGE 7 TO 17 0 6 5 3 4

I, Virginia Nicholson, Editor of THE
HERALD RECORD, a weekly newspaper
published regularly, in Doddridge County,
West Virginia, Do Hereby Certify Upon
Oath That the Accompanying Legal Notice
Entitled:

*Application for Natural Gas
Horizontal Well Drilling
Permit - Bradford Unit 1H*

was published in said paper for *2*

successive weeks beginning with the issue
of *January 14th* 2014 and
ending with the issue of

January 21st 2014 and
that said notice contains *378*

WORD SPACE at *115* cents a word
amounts to the sum of \$ *43.49*

FOR FIRST PUBLICATION, SECOND
PUBLICATION IS 75% OF THE FIRST
PUBLICATION

\$ *32.61*
and each publication thereafter

\$ *76.08* TOTAL

EDITOR

Virginia Nicholson

SWORN TO AND SUBSCRIBED

RECEIVED
BEFORE ME THIS THE *27th* DAY
OF *January* 2014

NOTARY PUBLIC

Laura J Adams

PUBLIC NOTICE OF APPLICATION FOR
NATURAL GAS HORIZONTAL WELL DRILLING
PERMIT, pursuant to West Virginia Code Section
22-6A-10(e).

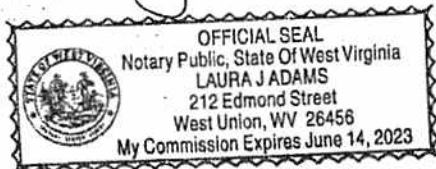
Antero Resources Corporation, 1625 17th Street, Denver,
CO 80202, is applying for a permit for a natural gas
horizontal well, Bradford Unit 1H, located at
approximately UTM NAD 83 Easting 520753.82m, UTM
NAD 83 Northing 4356585.53m in McElroy Creek
Watershed, West Union Quadrangle, Grant District,
Doddridge County, WV which disturbs three acres or
more of surface excluding pipelines, gathering lines and
roads or utilizes more than two hundred ten thousand
gallons of water in any thirty day period. To convert the
coordinates above into longitude and latitude, visit:
http://tagis.dep.wv.gov/convert/utm_conv.php. To
receive an email when applications have been received or
issued by the Office of Oil and Gas, visit
<http://www.dep.wv.gov/intidep/Pages/DEPMailingList.aspx> to sign up.

Any interested person may submit written comments or
request a copy of the proposed permit application.
Regardless of format for comment submissions, they must
be received no later than thirty days after the permit
application is received by the Office of Oil and Gas.

Comments may be submitted online at:
<https://apps.dep.wv.gov/oog/comments/comments.cfm>, or
by letter to Permit Review, Office of Oil and Gas, 601 57th
Street, SE, Charleston, WV 25304, or calling 304-926-
0450. Emailed or written comments must reference the
county, well number, and operator and be received within
30 days of the date of the last publication. Copies of the
proposed permit application may be reviewed at the WV
Department of Environmental Protection headquarters,
located at 601 57th Street, SE, Charleston, WV 25304 (304-
926-0450). Full copies or scans of the proposed permit
application will cost \$15.00, whether mailed or obtained
at DEP headquarters.

For information relating to horizontal drilling, and all
horizontal well applications filed in this state, visit:
www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx

Antero Resources Corporation
1-14-21b



STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE CERTIFICATION

Date of Notice Certification: 05/21/2014

API No. 47- 017 - _____

Operator's Well No. Bradford Unit 1H

Well Pad Name: Melody Pad

Notice has been given:

Pursuant to the provisions in West Virginia Code § 22-6A, the Operator has provided the required parties with the Notice Forms listed below for the tract of land as follows:

State:	<u>West Virginia</u>	UTM NAD 83	Easting:	<u>520,754m</u>
County:	<u>Doddridge</u>		Northing:	<u>4,356,589m</u>
District:	<u>Grant</u>	Public Road Access:		<u>CR 24</u>
Quadrangle:	<u>West Union 7.5'</u>	Generally used farm name:		<u>Brown, Melody</u>
Watershed:	<u>Tributary of Little Flint Run</u>			

Pursuant to West Virginia Code § 22-6A-7(b), every permit application filed under this section shall be on a form as may be prescribed by the secretary, shall be verified and shall contain the following information: (14) A certification from the operator that (i) it has provided the owners of the surface described in subdivisions (1), (2) and (4), subsection (b), section ten of this article, the information required by subsections (b) and (c), section sixteen of this article; (ii) that the requirement was deemed satisfied as a result of giving the surface owner notice of entry to survey pursuant to subsection (a), section ten of this article six-a; or (iii) the notice requirements of subsection (b), section sixteen of this article were waived in writing by the surface owner; and Pursuant to West Virginia Code § 22-6A-11(b), the applicant shall tender proof of and certify to the secretary that the notice requirements of section ten of this article have been completed by the applicant.

<p>Pursuant to West Virginia Code § 22-6A, the Operator has attached proof to this Notice Certification that the Operator has properly served the required parties with the following:</p> <p>*PLEASE CHECK ALL THAT APPLY</p> <p><input type="checkbox"/> 1. NOTICE OF SEISMIC ACTIVITY or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NO SEISMIC ACTIVITY WAS CONDUCTED</p> <p><input checked="" type="checkbox"/> 2. NOTICE OF ENTRY FOR PLAT SURVEY or <input type="checkbox"/> NO PLAT SURVEY WAS CONDUCTED</p> <p><input type="checkbox"/> 3. NOTICE OF INTENT TO DRILL or <input checked="" type="checkbox"/> NOTICE NOT REQUIRED BECAUSE NOTICE OF ENTRY FOR PLAT SURVEY WAS CONDUCTED or</p> <p><input type="checkbox"/> WRITTEN WAIVER BY SURFACE OWNER (PLEASE ATTACH)</p> <p><input checked="" type="checkbox"/> 4. NOTICE OF PLANNED OPERATION</p> <p><input checked="" type="checkbox"/> 5. PUBLIC NOTICE</p> <p><input checked="" type="checkbox"/> 6. NOTICE OF APPLICATION</p>	<p>OOG OFFICE USE ONLY</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED/ NOT REQUIRED</p> <p><input checked="" type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p><input type="checkbox"/> RECEIVED</p> <p>RECEIVED Office of Oil and Gas JUN 2 2014 WV Department of Environmental Protection</p>
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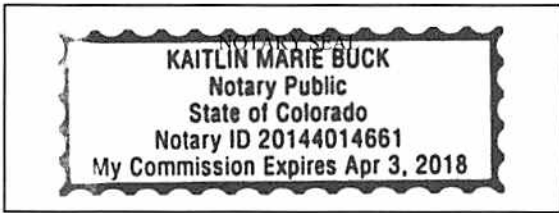
Required Attachments:

The Operator shall attach to this Notice Certification Form all Notice Forms and Certifications of Notice that have been provided to the required parties and/or any associated written waivers. For the Public Notice, the operator shall attach a copy of the Class II Legal Advertisement with publication date verification or the associated Affidavit of Publication. The attached Notice Forms and Certifications of Notice shall serve as proof that the required parties have been noticed as required under West Virginia Code § 22-6A. Pursuant to West Virginia Code § 22-6A-11(b), the Certification of Notice to the person may be made by affidavit of personal service, the return receipt card or other postal receipt for certified mailing.

Certification of Notice is hereby given:

THEREFORE, I Kevin Kilstrom, have read and understand the notice requirements within West Virginia Code § 22-6A. I certify that as required under West Virginia Code § 22-6A, I have served the attached copies of the Notice Forms, identified above, to the required parties through personal service, by registered mail or by any method of delivery that requires a receipt or signature confirmation. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this Notice Certification and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator:	<u>Antero Resources Corporation</u>	Address:	<u>1615 Wynkoop Street</u>
By:	<u>Kevin Kilstrom</u> <i>[Signature]</i>		<u>Denver, CO 80202</u>
Its:	<u>Vice President of Production</u>	Facsimile:	<u>303-357-7315</u>
Telephone:	<u>(303) 357-7310</u>	Email:	<u>amihalcin@anteroresources.com</u>



Subscribed and sworn before me this 21st day of May, 2014.
Kaitlin Buck Notary Public
 My Commission Expires 4/3/2018

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at deprivacyofficer@wv.gov.

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 WV Department of
 Environmental Protection

**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION**

Notice Time Requirement: notice shall be provided no later than the filing date of permit application.

Date of Notice: 5/23/2014 **Date Permit Application Filed:** 5/23/2014

Notice of:

- PERMIT FOR ANY WELL WORK
- CERTIFICATE OF APPROVAL FOR THE CONSTRUCTION OF AN IMPOUNDMENT OR PIT

Delivery method pursuant to West Virginia Code § 22-6A-10(b)

- PERSONAL SERVICE
- REGISTERED MAIL
- METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to W. Va. Code § 22-6A-10(b) no later than the filing date of the application, the applicant for a permit for any well work or for a certificate of approval for the construction of an impoundment or pit as required by this article shall deliver, by personal service or by registered mail or by any method of delivery that requires a receipt or signature confirmation, copies of the application, the erosion and sediment control plan required by section seven of this article, and the well plat to each of the following persons: (1) The owners of record of the surface of the tract on which the well is or is proposed to be located; (2) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for roads or other land disturbance as described in the erosion and sediment control plan submitted pursuant to subsection (c), section seven of this article; (3) The coal owner, operator or lessee, in the event the tract of land on which the well proposed to be drilled is located [sic] is known to be underlain by one or more coal seams; (4) The owners of record of the surface tract or tracts overlying the oil and gas leasehold being developed by the proposed well work, if the surface tract is to be used for the placement, construction, enlargement, alteration, repair, removal or abandonment of any impoundment or pit as described in section nine of this article; (5) Any surface owner or water purveyor who is known to the applicant to have a water well, spring or water supply source located within one thousand five hundred feet of the center of the well pad which is used to provide water for consumption by humans or domestic animals; and (6) The operator of any natural gas storage field within which the proposed well work activity is to take place. (c)(1) If more than three tenants in common or other co-owners of interests described in subsection (b) of this section hold interests in the lands, the applicant may serve the documents required upon the person described in the records of the sheriff required to be maintained pursuant to section eight, article one, chapter eleven-a of this code. (2) Notwithstanding any provision of this article to the contrary, notice to a lien holder is not notice to a landowner, unless the lien holder is the landowner. W. Va. Code R. § 35-8-5.7.a requires, in part, that the operator shall also provide the Well Site Safety Plan ("WSSP") to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Application Notice WSSP Notice E&S Plan Notice Well Plat Notice is hereby provided to:

SURFACE OWNER(s)
 Name: Antero Resources Corporation *Property was purchased by Antero Resources Corporation in April 2014
 Address: 1615 Wynkoop Street
Denver, Colorado 80202

Name: _____
 Address: _____

SURFACE OWNER(s) (Road and/or Other Disturbance)
 Name: _____
 Address: _____

Name: _____
 Address: _____

SURFACE OWNER(s) (Impoundments or Pits)
 Name: _____
 Address: _____

COAL OWNER OR LESSEE
 Name: NO DECLARATIONS ON RECORD WITH COUNTY
 Address: _____

COAL OPERATOR
 Name: NO DECLARATIONS ON RECORD WITH COUNTY
 Address: _____

WATER PURVEYOR(s)/OWNER(s) OF WATER WELL, SPRING OR OTHER WATER SUPPLY SOURCE
 Name: PLEASE SEE ATTACHMENT
 Address: Department of Environmental Protection

OPERATOR OF ANY NATURAL GAS STORAGE FIELD
 Name: _____
 Address: _____

*Please attach additional forms if necessary

RECEIVED
 Office of Oil and Gas
 JUN 02 2014
 Department of Environmental Protection

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(b), notice is hereby given that the undersigned well operator has applied for a permit for well work or for a certificate of approval for the construction of an impoundment or pit.

This Notice Shall Include:

Pursuant to W. Va. Code § 22-6A-10(b), this notice shall include: (1) copies of the application; (2) the erosion and sediment control plan required by section seven of this article; and (3) the well plat.

Pursuant to W. Va. Code § 22-6A-10(f), this notice shall include: (1) a statement of the time limits for filing written comments; (2) who may file written comments; (3) the name and address of the secretary for the purpose of filing the comments and obtaining additional information; and (4) a statement that the persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

Pursuant to W. Va. Code R. § 35-8-5.7.a, the operator shall provide the Well Site Safety Plan to the surface owner and any water purveyor or surface owner subject to notice and water testing as provided in section 15 of this rule.

Pursuant to W. Va. Code R. § 35-8-15.2.c, this notice shall: (1) contain a statement of the surface owner's and water purveyor's right to request sampling and analysis; (2) advise the surface owner and water purveyor of the rebuttable presumption for contamination or deprivation of a fresh water source or supply; advise the surface owner and water purveyor that refusal to allow the operator to conduct a pre-drilling water well test constitutes a method to rebut the presumption of liability; (3) advise the surface owner and water purveyor of his or her independent right to sample and analyze any water supply at his or her own expense; advise the surface owner and water purveyor whether or not the operator will utilize an independent laboratory to analyze any sample; and (4) advise the surface owner and or water purveyor that he or she can obtain from the Chief a list of water testing laboratories in the subject area capable of and qualified to test water supplies in accordance with standard acceptable methods.

Additional information related to horizontal drilling may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450) or by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Well Location Restrictions

Pursuant to W. Va. Code § 22-6A-12, Wells may not be drilled within two hundred fifty feet measured horizontally from any existing water well or developed spring used for human or domestic animal consumption. The center of well pads may not be located within six hundred twenty-five feet of an occupied dwelling structure, or a building two thousand five hundred square feet or larger used to house or shelter dairy cattle or poultry husbandry. This limitation is applicable to those wells, developed springs, dwellings or agricultural buildings that existed on the date a notice to the surface owner of planned entry for surveying or staking as provided in section ten of this article or a notice of intent to drill a horizontal well as provided in subsection (b), section sixteen of this article was provided, whichever occurs first, and to any dwelling under construction prior to that date. This limitation may be waived by written consent of the surface owner transmitted to the department and recorded in the real property records maintained by the clerk of the county commission for the county in which such property is located. Furthermore, the well operator may be granted a variance by the secretary from these distance restrictions upon submission of a plan which identifies the sufficient measures, facilities or practices to be employed during well site construction, drilling and operations. The variance, if granted, shall include terms and conditions the department requires to ensure the safety and protection of affected persons and property. The terms and conditions may include insurance, bonding and indemnification, as well as technical requirements. (b) No well pad may be prepared or well drilled within one hundred feet measured horizontally from any perennial stream, natural or artificial lake, pond or reservoir, or a wetland, or within three hundred feet of a naturally reproducing trout stream. No well pad may be located within one thousand feet of a surface or ground water intake of a public water supply. The distance from the public water supply as identified by the department shall be measured as follows: (1) For a surface water intake on a lake or reservoir, the distance shall be measured from the boundary of the lake or reservoir. (2) For a surface water intake on a flowing stream, the distance shall be measured from a semicircular radius extending upstream of the surface water intake. (3) For a groundwater source, the distance shall be measured from the wellhead or spring. The department may, in its discretion, waive these distance restrictions upon submission of a plan identifying sufficient measures, facilities or practices to be employed during well site construction, drilling and operations to protect the waters of the state. A waiver, if granted, shall impose any permit conditions as the secretary considers necessary. (c) Notwithstanding the foregoing provisions of this section, nothing contained in this section prevents an operator from conducting the activities permitted or authorized by a Clean Water Act Section 404 permit or other approval from the United States Army Corps of Engineers within any waters of the state or within the restricted areas referenced in this section. (d) The well location restrictions set forth in this section shall not apply to any well on a multiple well pad if at least one of the wells was permitted prior to the effective date of this article. (e) The secretary shall, by December 31, 2012, report to the Legislature on the noise, light, dust and volatile organic compounds generated by the drilling of horizontal wells as they relate to the well location restrictions regarding occupied dwelling structures pursuant to this section. Upon a finding, if any, by the secretary that the well location restrictions regarding occupied dwelling structures are inadequate or otherwise require alteration to address the items

examined in the study required by this subsection, the secretary shall have the authority to propose for promulgation legislative rules establishing guidelines and procedures regarding reasonable levels of noise, light, dust and volatile organic compounds relating to drilling horizontal wells, including reasonable means of mitigating such factors, if necessary.

Water Well Testing:

Pursuant to West Virginia Code § 22-6A-10(d), notification shall be made, with respect to surface landowners identified in subsection (b) or water purveyors identified in subdivision (5), subsection (b) of this section, of the opportunity for testing their water well. The operator shall provide an analysis to such surface landowner or water purveyor at their request.

Water Testing Laboratories:

Pursuant to West Virginia Code § 22-6A-10(i), persons entitled to notice pursuant to subsection (b) of this section may contact the department to ascertain the names and locations of water testing laboratories in the subject area capable and qualified to test water supplies in accordance with standard accepted methods. In compiling that list of names the department shall consult with the state Bureau for Public Health and local health departments. A surface owner and water purveyor has an independent right to sample and analyze any water supply at his or her own expense. The laboratory utilized by the operator shall be approved by the agency as being certified and capable of performing sample analyses in accordance with this section.

Rebuttable Presumption for Contamination or Deprivation of a Fresh Water Source or Supply:

W. Va. Code § 22-6A-18 requires that (b) unless rebutted by one of the defenses established in subsection (c) of this section, in any action for contamination or deprivation of a fresh water source or supply within one thousand five hundred feet of the center of the well pad for horizontal well, there is a rebuttable presumption that the drilling and the oil or gas well or either was the proximate cause of the contamination or deprivation of the fresh water source or supply. (c) In order to rebut the presumption of liability established in subsection (b) of this section, the operator must prove by a preponderance of the evidence one of the following defenses: (1) The pollution existed prior to the drilling or alteration activity as determined by a predrilling or prealteration water well test. (2) The landowner or water purveyor refused to allow the operator access to the property to conduct a predrilling or prealteration water well test. (3) The water supply is not within one thousand five hundred feet of the well. (4) The pollution occurred more than six months after completion of drilling or alteration activities. (5) The pollution occurred as the result of some cause other than the drilling or alteration activity. (d) Any operator electing to preserve its defenses under subdivision (1), subsection (c) of this section shall retain the services of an independent certified laboratory to conduct the predrilling or prealteration water well test. A copy of the results of the test shall be submitted to the department and the surface owner or water purveyor in a manner prescribed by the secretary. (e) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of that owner's supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source with a comparable water supply where the secretary determines that the water supply has been affected by contamination, diminution or interruption proximately caused by the oil or gas operation, unless waived in writing by that owner. (f) The secretary may order the operator conducting the oil or gas operation to: (1) Provide an emergency drinking water supply within twenty-four hours; (2) Provide temporary water supply within seventy-two hours; (3) Within thirty days begin activities to establish a permanent water supply or submit a proposal to the secretary outlining the measures and timetables to be used in establishing a permanent supply. The total time in providing a permanent water supply may not exceed two years. If the operator demonstrates that providing a permanent replacement water supply cannot be completed within two years, the secretary may extend the time frame on case-by-case basis; and (4) Pay all reasonable costs incurred by the real property owner in securing a water supply. (g) A person as described in subsection (b) of this section aggrieved under the provisions of subsections (b), (e) or (f) of this section may seek relief in court. (i) Notwithstanding the denial of the operator of responsibility for the damage to the real property owner's water supply or the status of an appeal on determination of liability for the damage to the real property owner's water supply, the operator may not discontinue providing the required water service until authorized to do so by the secretary or a court of competent jurisdiction.

Written Comment:

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary. All persons described in West Virginia Code § 22-6A-11(b) may file written comments as to the location or construction of the applicant's proposed well work to the Secretary at:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water. **NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.**

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Office of Oil and Gas
JUN 03 2014
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Time Limits and Methods for Filing Comments.

The law requires these materials to be served on or before the date the operator files its Application. You have **THIRTY (30) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Pursuant to West Virginia Code § 22-6A-11(c)(2), Any objections of the affected coal operators and coal seam owners and lessees shall be addressed through the processes and procedures that exist under sections fifteen, seventeen and forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article. The written comments filed by the parties entitled to notice under subdivisions (1), (2), (4), (5) and (6), subsection (b), section ten of this article shall be considered by the secretary in the permit issuance process, but the parties are not entitled to participate in the processes and proceedings that exist under sections fifteen, seventeen or forty, article six of this chapter, as applicable and as incorporated into this article by section five of this article.

Comment Requirements

Your comments must be in writing and include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

Disclaimer: All comments received will be placed on our web site <http://www.dep.wv.gov/oil-and-gas/Horizontal-Permits/Pages/default.aspx> and the applicant will automatically be forwarded an email notice that such comments have been submitted. The applicant will be expected to provide a response to comments submitted by any surface owner, water purveyor or natural gas storage operator noticed within the application.

Permit Denial or Condition

The Chief has the power to deny or condition a well work permit. Pursuant to West Virginia Code § 22-6A-8(d), the permit may not be issued or be conditioned, including conditions with respect to the location of the well and access roads prior to issuance if the director determines that:

- (1) The proposed well work will constitute a hazard to the safety of persons;
- (2) The plan for soil erosion and sediment control is not adequate or effective;
- (3) Damage would occur to publicly owned lands or resources; or
- (4) The proposed well work fails to protect fresh water sources or supplies.

A permit may also be denied under West Virginia Code § 22-6A-7(k), the secretary shall deny the issuance of a permit if the secretary determines that the applicant has committed a substantial violation of a previously issued permit for a horizontal well, including the applicable erosion and sediment control plan associated with the previously issued permit, or a substantial violation of one or more of the rules promulgated under this article, and in each instance has failed to abate or seek review of the violation within the time prescribed by the secretary pursuant to the provisions of subdivisions (1) and (2), subsection (a), section five of this article and the rules promulgated hereunder, which time may not be unreasonable.

Pursuant to West Virginia Code § 22-6A-10(g), any person entitled to submit written comments to the secretary pursuant to subsection (a), section eleven of this article, shall also be entitled to receive from the secretary a copy of the permit as issued or a copy of the order modifying or denying the permit if the person requests receipt of them as a part of the written comments submitted concerning the permit application. Such persons may request, at the time of submitting written comments, notice of the permit decision and a list of persons qualified to test water.

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Office of Oil and Gas
JUN 02 2014
WV Department of
Environmental Protection

WW-6A
(8-13)

API NO. 47-017 -
OPERATOR WELL NO. Bradford Unit 1H
Well Pad Name: Melody Pad **47-1706534**

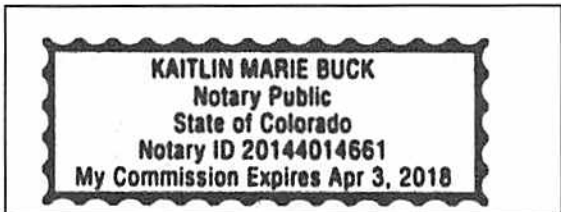
Notice is hereby given by:

Well Operator: Antero Resources Corporation
Telephone: (303) 357-7310
Email: amihalcin@anteroresources.com

Address: 1615 Wynkoop Street
Denver, CO 80202
Facsimile: 303-357-7315

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use or your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.



Subscribed and sworn before me this 21st day of May, 2014.
Kaitlin Buck Notary Public
My Commission Expires 4/3/2014

RECEIVED
Office of Oil and Gas
JUN 02 2014
WV Department of
Environmental Protection

WW-6A Notice of Application Attachment:

Water Source Owners:

2 Water Wells Located on TM 4/PCL 7 & 8

Owner: Larry M. & Carolyn Sams ✓
Address: 1540 Knights Fork Road
West Union, WV 26456

1 Spring Located on TM 5 /PCL 11

Owner: Deborah Johnston (FKA Deborah Lowe)
Address: RR 2 Box 249 ✓
Salem, WV 26426

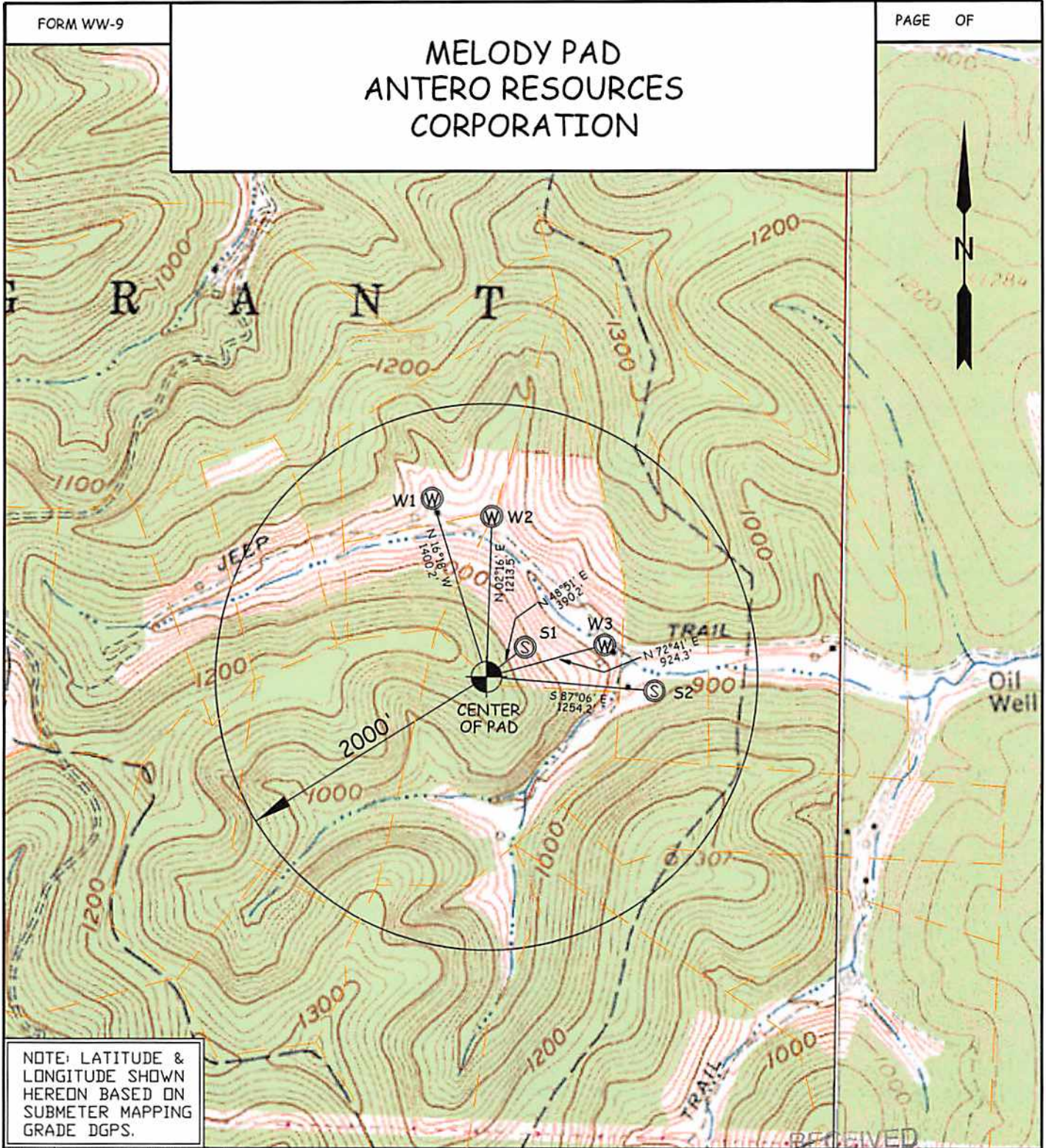
1 Water Well and 1 Spring Located on TM 5 /PCL 11.1

Owner: Antero Resources Corporation
Address: 1615 Wynkoop Street
Denver, CO 80202

*Property was purchased by Antero Resources Corporation in April 2014

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WV Department
Environmental Protection

MELODY PAD
ANTERO RESOURCES
CORPORATION



NOTE: LATITUDE & LONGITUDE SHOWN HEREON BASED ON SUBMETER MAPPING GRADE DGPS.

WELL	SURFACE OWNER	ADDRESS	DISTRICT-TAX MAP-PARCEL	WELL LATITUDE	WELL LONGITUDE
W1	LARRY M. SAMS ET AL	1540 KNIGHTS FORK RD. WEST UNION, WV 26456	3-4-7	39° 21' 43.64"	80° 45' 38.28"
W2	LARRY M. SAMS	1540 KNIGHTS FORK RD. WEST UNION, WV 26456	3-4-8	39° 21' 42.40"	80° 45' 32.64"
W3	Antero Resources Corporation	1615 Wynkoop St. Denver, CO 80202	3-5-11.1	39° 21' 33.25"	80° 45' 21.85"
S1	Antero Resources Corporation	1615 Wynkoop St. Denver, CO 80202	3-5-11.1	39° 21' 32.99"	80° 45' 29.34"
S2	DEBORAH LOWE ET AL	RT 2 BOX 249 SALEM, WV 26426	3-5-11	39° 21' 29.96"	80° 45' 17.08"

WILLOW LAND SURVEYING, PLLC
P.O. BOX 17, PENNSBORO, WV 26415
(304) 659-1717

TOPO SECTION(S) OF:
WEST UNION 7.5' QUAD.
& SMITHBURG 7.5' QUAD.

JOB #: 13-025WA

FILE: MELODYPADWATERMAP

SCALE: 1 INCH = 1000 FEET

0' 1000' 2000' 3000'



DATE: 03/20/14

DRAWN BY: C.A.S.

**CERTIFIED MAIL RECEIPT
BRADFORD UNIT 1H & 2H
WW-6A NOTICE OF APPLICATION
TO WATER SOURCE OWNER
(2 Water Wells)**

Cut on dotted line.

Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. **DO NOT PHOTO COPY OR ALTER LABEL.**
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, **DO NOT TAPE OVER BARCODE.** Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.
6. For information on insurance claims, click on "My Account" at the top of any Click-N-Ship web page and then the "How to File a Claim" link.

Click-N-Ship® Label Record

**Signature Confirmation™ / Insurance Number:
9407 8036 9930 0008 4663 25**

Trans. #:	299606890	Priority Mail® Postage:	\$5.25
Print Date:	05/22/2014	Insurance Fee:	\$0.00
Ship Date:	05/23/2014	Signature Confirmation:	\$2.35
Expected		(Electronic Rate)	
Delivery Date:	05/27/2014	Total:	\$7.60
Insured Value:	\$15.00		

From: KAITLIN BUCK
ANTERO RESOURCES
1615 WYNKOOP ST
DENVER CO 80202-1106

To: LARRY M. & CAROLYN SAMS ✓
1540 KNIGHTS FORK RD
WEST UNION WV 26456-8304

* Commercial Base Pricing Priority Mail rates apply. There is no fee for USPS Tracking™ service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

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47-1706534

CERTIFIED MAIL RECEIPT
BRADFORD UNIT 1H & 2H
WW-6A NOTICE OF APPLICATION
TO WATER SOURCE OWNER
(1 Developed Spring)

Cut on dotted line.

Instructions

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5. Mail your package on the "Ship Date" you selected when creating this label.
6. For information on insurance claims, click on "My Account" at the top of any Click-N-Ship web page and then the "How to File a Claim" link.

Click-N-Ship® Label Record

Signature Confirmation™ / Insurance Number:
9407 8036 9930 0008 4663 18

Trans. #:	299606890	Priority Mail® Postage:	\$5.25
Print Date:	05/22/2014	Insurance Fee:	\$0.00
Ship Date:	05/23/2014	Signature Confirmation:	\$2.35
Expected Delivery Date:	05/27/2014	(Electronic Rate)	
Insured Value:	\$15.00	Total:	\$7.60

From: KAITLIN BUCK
ANTERO RESOURCES
1615 WYNKOOP ST
DENVER CO 80202-1106

To: DEBORAH JOHNSTON (FKA DEBORAH LOWE)
RR 2 BOX 249
SALEM WV 26426-9429

* Commercial Base Pricing Priority Mail rates apply. There is no fee for USPS Tracking™ service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.

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STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF ENTRY FOR PLAT SURVEY

Notice Time Requirement: Notice shall be provided at least **SEVEN (7)** days but no more than **FORTY-FIVE (45)** days prior to entry

Date of Notice: 3/7/2013 **Date of Planned Entry:** 3/18/2013

Delivery method pursuant to West Virginia Code § 22-6A-10a

- PERSONAL SERVICE REGISTERED MAIL METHOD OF DELIVERY THAT REQUIRES A RECEIPT OR SIGNATURE CONFIRMATION

Pursuant to West Virginia Code § 22-6A-10(a), Prior to filing a permit application, the operator shall provide notice of planned entry on to the surface tract to conduct any plat surveys required pursuant to this article. Such notice shall be provided at least seven days but no more than forty-five days prior to such entry to: (1) The surface owner of such tract; (2) to any owner or lessee of coal seams beneath such tract that has filed a declaration pursuant to section thirty-six, article six, chapter twenty-two of this code; and (3) any owner of minerals underlying such tract in the county tax records. The notice shall include a statement that copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, which statement shall include contact information, including the address for a web page on the Secretary's web site, to enable the surface owner to obtain copies from the secretary.

Notice is hereby provided to:

SURFACE OWNER(s)

Name: Melody Brown and Deborah Lowe *Property was sold to Antero Resources Corporation in April 2014
Address: Rt. 2 Box 294 ✓
West Union, WV 26456

Name: _____
Address: _____
Name: _____
Address: _____

COAL OWNER OR LESSEE

Name: NO DECLARATION ON RECORD WITH COUNTY
Address: _____

MINERAL OWNER(s)

Name: Melody Brown and Deborah Lowe James Booher ✓
Address: Rt. 2 Box 294 ✓ Rt. 2 Box 294B ✓
West Union, WV 26456 West Union, WV 26456

*please attach additional forms if necessary

Notice is hereby given:

Pursuant to West Virginia Code § 22-6A-10(a), notice is hereby given that the undersigned well operator is planning entry to conduct a plat survey on the tract of land as follows:

State: West Virginia Approx. Latitude & Longitude: 39.358472, -80.759105
County: Doddridge Public Road Access: CR 24
District: Grant Watershed: Tributary of Little Flint Run
Quadrangle: West Union 7.5' Generally used farm name: Brown, Melody

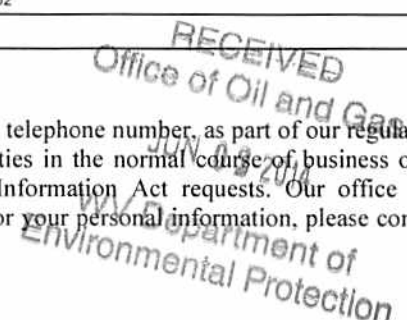
Copies of the state Erosion and Sediment Control Manual and the statutes and rules related to oil and gas exploration and production may be obtained from the Secretary, at the WV Department of Environmental Protection headquarters, located at 601 57th Street, SE, Charleston, WV 25304 (304-926-0450). Copies of such documents or additional information related to horizontal drilling may be obtained from the Secretary by visiting www.dep.wv.gov/oil-and-gas/pages/default.aspx.

Notice is hereby given by:

Well Operator: Antero Resources Corporation Address: 1625 17th Street
Telephone: (303) 357-7310 Denver, CO 80202
Email: amihalcin@anteroresources.com Facsimile: 303-357-7315

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.



WW-6A3 Notice of Entry For Plat Survey Attachment:

47 - 1706534

Mineral Owners:

Owner: James Booher ✓
Address: Rt. 2 Box 294B
West Union, WV 26456

Owner: Melody Brown and Deborah Lowe ✓
Address: Rt. 2 Box 294
West Union, WV 26456

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Environmental Protection

**CERTIFIED MAIL RECEIPT
BRADFORD UNIT 1H & 2H
(MELODY PAD)
WW-6A3 NOTICE OF ENTRY FOR PLAT SURVEY
TO SURFACE OWNER**

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

Postage	\$.46
Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$6.11

Postmark Here
MAR 07 2013
MT-CLARE WV

Melody Brown and Deborah Brown
Rt. 2 Box 294
West Union, WV 26456

PS Form 3800, August 2005 See Reverse for Instructions

**CERTIFIED MAIL RECEIPT
BRADFORD UNIT 1H & 2H
(MELODY PAD)
WW-6A3 NOTICE OF ENTRY FOR PLAT SURVEY
TO MINERAL OWNER**

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

Postage	\$.46
Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$6.11

Postmark Here
MAR 07 : : :
MT-CLARE WV

James Booher
Rt. 2 Box 294B
West Union, WV 26456

PS Form 3800, August 2005 See Reverse for Instructions

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com

Postage	\$.46
Certified Fee	3.10
Return Receipt Fee (Endorsement Required)	2.55
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$6.11

Postmark Here
MAR 07 2013
MT-CLARE WV

Melody Brown and Deborah Brown
Rt. 2 Box 294
West Union, WV 26456

PS Form 3800, August 2005 See Reverse for Instructions

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
VOLUNTARY STATEMENT OF NO OBJECTION

Instructions to Persons Named on Page WW-6A

The well operator named on page WW-6A is applying for a permit from the State of West Virginia to conduct oil or gas well work. Well work permits are valid for twenty-four (24) months. Please contact the listed well operator and the Office of Oil and Gas if you do not own an interest in the listed surface tract.

Comment and Waiver Provisions

Pursuant to West Virginia Code § 22-6A-11(a), all persons described in subsection (b), section ten of this article may file written comments with the secretary as to the location or construction of the applicant's proposed well work within thirty days after the application is filed with the secretary.

Pursuant to West Virginia Code § 22-6A-8(b) No permit may be issued less than thirty days after the filing date of the application for any well work except plugging or replugging; and no permit for plugging or replugging may be issued less than five days after the filing date of the application except a permit for plugging or replugging a dry hole: *Provided*, That if the applicant certifies that all persons entitled to notice of the application under the provisions of subsection (b), section ten of this article have been served in person or by certified mail, return receipt requested, with a copy of the well work application, including the erosion and sediment control plan, if required, and the well plat, and further files written statements of no objection by all such persons, the secretary may issue the well work permit at any time.

VOLUNTARY STATEMENT OF NO OBJECTION

I, _____, hereby state that I have read the Instructions to Persons Named on Page WW-6A and the associated provisions listed above, and that I have received copies of a Notice of Application, an Application for a Well Work Permit on Form WW-6A and attachments consisting of pages one (1) through _____, including the erosion and sediment control plan, if required, and the well plat, all for proposed well work on the tract of land as follows:

State: <u>West Virginia</u>	UTM NAD 83 Easting: <u>520,754m</u>
County: <u>Doddridge</u>	UTM NAD 83 Northing: <u>4,356,589m</u>
District: <u>Grant</u>	Public Road Access: <u>CR 24</u>
Quadrangle: <u>West Union 7.5'</u>	Generally used farm name: <u>Brown, Melody</u>
Watershed: <u>Tributary of Little Flint Run</u>	

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

- *Please check the box that applies
- SURFACE OWNER
 - SURFACE OWNER (Road and/or Other Disturbance)
 - SURFACE OWNER (Impoundments/Pits)
 - COAL OWNER OR LESSEE
 - COAL OPERATOR
 - WATER PURVEYOR
 - OPERATOR OF ANY NATURAL GAS STORAGE FIELD

FOR EXECUTION BY A NATURAL PERSON

Signature: _____
 Print Name: _____
 Date: _____

FOR EXECUTION BY A CORPORATION, ETC.

Company: _____
 By: _____
 Its: _____

Signature: _____
 Date: _____

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West Virginia Department of Environmental Protection

Oil and Gas Privacy Notice:

The Office of Oil and Gas processes your personal information, such as name, address and telephone number, as part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov.



47 - 1706534

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION

Division of Highways

1900 Kanawha Boulevard East • Building Five • Room 110
Charleston, West Virginia 25305-0430 • (304) 558-3505

Earl Ray Tomblin
Governor

Paul A. Mattox, Jr., P. E.
Secretary of Transportation/
Commissioner of Highways

March 3, 2014

James A. Martin, Chief
Office of Oil and Gas
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

Subject: DOH Permit for the Melody Pad, Doddridge County
Bradford Unit 1H Well site

Dear Mr. Martin,

This well site will be accessed from a DOH permit #04-2014-0257 which has been applied for by Antero Resources Corporation for access to the State Road for a well site located off of Doddridge County Route 24 SLS.

The operator has signed a STATEWIDE OIL AND GAS ROAD MAINTENANCE BONDING AGREEMENT and provided the required Bond. This operator is currently in compliance with the DOH OIL AND GAS POLICY dated January 3, 2012.

Very Truly Yours,

Gary K. Clayton, P.E.
Regional Maintenance Engineer
Central Office O&G Coordinator

Cc: Ashlie Mihalcin
Antero Resources Corporation
CH, OM, D-4
File

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WV Department of
Environmental Protection

**List of Anticipated Additives Used for Fracturing or
Stimulating Well**

Additives	Chemical Abstract Service Number (CAS #)
Fresh Water	7732-18-5
2 Phosphobutane 1,2,4 tricarboxylic acid	37971-36-1
Ammonium Persulfate	7727-54-0
Anionic copolymer	proprietary
Anionic polymer	proprietary
BTEX Free Hydrotreated Heavy Naphtha	64742-48-9
Cellulase enzyme	(Proprietary)
Demulsifier Base	(Proprietary)
Ethoxylated alcohol blend	Mixture
Ethoxylated Nonylphenol	68412-54-4
Ethoxylated oleylamine	26635-93-8
Ethylene Glycol	107-21-1
Glycol Ethers	111-76-2
guar gum	9000-30-0
Hydrogen Chloride	7647-01-0
Hydrotreated light distillates, non-aromatic, BTEX free	64742-47-8
Isopropyl alcohol	67-63-0
liquid, 2,2-dibromo-3-nitrilopropionamide	10222-01-2
Microparticle	proprietary
Petroleum Distillates (BTEX Below Detect)	64742-47-8
Polyacrylamide	57-55-6
Propargyl Alcohol	107-19-7
Propylene Glycol	57-55-6
Quartz	14808-60-7
Silica, crystalline quartz	7631-86-9
Sodium Chloride	7647-14-5
Sodium Hydroxide	1310-73-2
Sugar	57-50-1
Surfactant	68439-51-0
Suspending agent (solid)	14808-60-7
Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7

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**Antero Resources Corporation Site Construction Plan for
Melody Well Pad**

** The Melody Well Pad, as shown in these plans, is also shown as Staging Area "B" in the Melody Centralized Freshwater Impoundment Site Design. Refer to the Melody Centralized Freshwater Impoundment Site Design (Staging Area "B") for all construction quantities associated with the construction of the Melody Well Pad. The proposed limits of disturbance acreage, as shown in the plan, are repetitive to the acreage previously shown in the Melody Centralized Freshwater Impoundment Plan. **

Antero Resources Corporation (Antero) is submitting the following Site Construction Plan in compliance with §35-8-5.5. This plan is submitted in conjunction with the Melody Well Pad Site Design & Construction Plan, Erosion & Sediment Control Plans prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection and Office of Oil and Gas, and certified by Navitus Engineering Inc., a West Virginia registered professional engineer.

Requirement §5.5.a. *The plan should describe the nature and purpose of the construction project and identify the procedures for construction that will be used to achieve site stability. The plan shall be considered conditions of the permit and be enforceable as such.*

Antero Response

The nature and purpose of the subject project is to perforate, fracture, and complete one or more horizontal shallow wells. Procedures to achieve site stability include seeding and mulching of earth disturbed areas and implementation of erosion and sediment best management practices (BMPs). Details of seeding and mulching rates as well as procedures for installation and maintenance of erosion and sediment BMPs are outlined on page 2 of "Melody Well Pad Site Design & Construction Plan, Erosion & Sediment Control Plans" (Site Design) prepared and certified by Navitus Engineering Inc. of West Virginia.

These procedures will be considered as conditions of the permit and shall be inspected and maintained for continual compliance measures outlined in §35-8-5.5.

Requirement §5.5.b.1. *A vicinity map location the site in relation to the surrounding area and roads;*

Antero Response

Please refer to the vicinity map on page 1 for the location the site in relation to the surrounding area and roads.

Requirement §5.5.b.2. *A plan view site map at a scale of one inch equal to one hundred feet (1"=100') or greater that shows appropriate detail of all site features and:*

Requirement §5.5.b.A. *Clearly identifies the limit of disturbance for the project;*

Antero Response

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Environmental Protection

The limit of disturbance for the Melody Well Pad can be found on "Overall Plan Sheet Index & Volumes," and "Access Road, Staging Area, & Well Pad Plan," maps included on pages 4-5 of the Site Design.

Requirement §5.5.b.2.B. Provides existing topographic information on a contour interval that affords sufficient detail to illustrate site terrain conditions

Antero Response

Please refer to the "Existing Conditions" maps on page 3 of the Site Design for the current topographic conditions for the constructed pad on a contour interval that affords sufficient detail to illustrate site terrain conditions.

Requirement §5.5.b.2.C. Identifies proposed cut and fill areas with grading contours at an interval that provides sufficient detail to accurately depict slope ratios, indicating top and bottom of slopes; and

Antero Response

Please refer to the "Overall Plan Sheet Index & Volumes," and "Access Road, Staging Area, & Well Pad Plan," maps included on pages 4-5 as well as the "Access Road Profiles," "Access Road Sections," "Well Pad Sections," and "Stream Crossing Details" on pages 6-9 of the Site Design for proposed cut and fill areas with grading contours.

Requirement §5.5.b.2.D. Identifies any existing structures, roads, water bodies, and other critical areas within the area that would most likely be affected by the construction.

Antero Response

Please refer to "Overall Plan Sheet Index & Volumes," and "Access Road, Staging Area, & Well Pad Plan," on pages 4-5 for the map identifying any structures, roads, water bodies, and other critical areas within the area of interest that would be most likely affected by construction.

Requirement §5.5.b.3. A cross-section of the length and width of the location, providing cut and fill volumes; and

Antero Response

Please refer to Access Road Profiles," "Access Road Sections," "Well Pad Sections," and "Stream Crossing Details" on pages 6-9 for a cross-section of the location. For cut and fill volumes please refer to the note at the top of the construction plan for Melody Well Pad.

Requirement §5.5.b.4. Any other engineering designs or drawings necessary to construct the project.

Antero Response

All other engineering designs and drawings necessary to construct this project are included in the Site Design.

Requirement §5.5.c. At a minimum, site construction shall be conducted in accordance with the following criteria:

Antero Response

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All Antero contractors shall be notified of and comply with the measures outlined in Section 5.5.c. of §35-8.

Requirement §5.5.c.1. All woody material, brush, and trees shall be cleared from the site area and kept to the minimum necessary for proper construction, including the installation of necessary sediment controls. Trees six inches in diameter and larger shall be cut and logs stacked;

Antero Response

The Site Design outlines measures to maintain compliance with Section 201 of the WVDOH Specifications which outlines clearing and grubbing measures. Please refer to Construction and E&S Control Notes on page 2 of the Site Design.

Requirement §5.5.c.2. Topsoil shall be removed from construction areas and stockpiled for reuse during reclamation. In woodland areas, tree stumps, large roots, large rocks, tree and leaf debris, and ground vegetation shall be removed prior to actual site constructions;

Antero Response

The Site Design outlines procedures for stripping and stocking topsoil. Please refer to Construction and E&S Control Notes on page 2 of the Site Design. In addition, soil for stockpiling and use as fill shall be further compliant with measures outlined in Section 5.5.c.2. of §35-8-5.5.

Requirement §5.5.c.3. No embankment fill shall be placed on frozen material;

Antero Response

All Antero contractors shall be notified of and comply with measures outlined in Section 5.5.c.3. of §35-8-5.5.

Requirement §5.5.c.4. The fill material shall be clean mineral soil, free of roots, woody vegetation, stumps, sod, large rocks, frozen soil or other objectionable material;

Antero Response

The Site Design outlines procedures for stripping and stocking topsoil. Please refer to Construction and E&S Control Notes on page 2 of the Site Design. In addition, soil shall be further defined to the measures outlined in Section 5.5.c.4. of §35-8-5.5.

Requirement §3.2.b.5. Embankment material shall exhibit adequate soil strength and contain the proper amount of moisture to ensure that compaction will be achieved;

Antero Response

All Antero contractors shall be notified of and comply with measures outlined in Section 5.5.c.5. of §35-8-5.5.

Requirement §5.5.c.6 Earthen fill slopes should be constructed with slopes no steeper than a ratio of two to one (2:1);

Antero Response

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The Site Design outlines all earthen fill slopes to be constructed with slopes no steeper than a ratio of two to one (2:1).

Requirement §5.5.c.7. Fill material will be placed in lifts or layers over the length of the fill. Lift thickness of soil shall be as thin as the suitable random excavated material will permit, typically from six to twelve (12) inches; and

Antero Response

Please refer to the Construction and E&S Control Notes on page 2 of the Site Design. Fill shall be placed in horizontal lifts of maximum loose depth of 12 inches. Compaction will be performed with a compactor with a minimum of five ton static drum weight vibratory roller or five ton static drum weight sheeps footed compactor as appropriate for the type of soil material at the site or other compactor approved by the Engineer.

Requirement §5.5.c.8. The size of rock lifts shall not exceed thirty-six (36) inches. The rock shall not be greater in any dimension than thirty-six (36) inches;

Antero Response

All Antero contractors shall be notified of and comply with measures outlined in Section 5.5.c.8. of §35-8-5.5.

Requirement §5.5.c.9. Compaction shall be obtained by compaction equipment or by routing the hauling equipment over the fill so that the entire surface of each fill lift is compacted by at least one wheel or tread track of equipment or by a compactor. Each lift shall be compacted before beginning the next lift;

Antero Response

Compaction compliance measures are outlined in the Construction and E&S Notes on page 2. Compaction is required with a compactor with a minimum of five ton static drum weight vibratory roller or five ton static drum weight sheeps footed compactor as appropriate for the type of soil material at the site or other compactor approved by the Engineer.

Requirement §5.5.c.10. Surface water diversion ditches shall be constructed above the disturbed area to intercept water and to divert surface water runoff around the site; and

Antero Response

Construction and E&S Control Notes on page 2 of the Site Design identifies the surface diversions used to prevent surface water and subsurface water from flowing on to the well pad and coming into contact with the stormwater associated with the well pad. Additional Erosion & Sediment BMPs will be used to prevent sediment discharges from the project.

Requirement §5.5.c.11. In areas of steep terrain, a terraced bench shall be constructed at the base of the slope where fill is to be placed, creating a toe foundation and aid in holding fill material. Additional terracing shall be constructed from each additional fifty (50) vertical feet of slope and shall be a minimum of ten (10) feet wide.

Antero Response

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All Antero contractors shall be notified of and comply with the measures outlined in Section 65.11. of §35-8-5.5. ~~47-1706534~~

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Office of Oil and Gas

JUN 02 2014

WV Department of
Environmental Protection

Antero Resources Corporation Erosion and Sediment Control Plan for Melody Well Pad

** The Melody Well Pad, as shown in these plans, is also shown as Staging Area "B" in the Melody Centralized Freshwater Impoundment Site Design. Refer to the Melody Centralized Freshwater Impoundment Site Design (Staging Area "B") for all construction quantities associated with the construction of the Melody Well Pad. The proposed limits of disturbance acreage, as shown in the plan, are repetitive to the acreage previously shown in the Melody Centralized Freshwater Impoundment Plan. **

Antero Resources Corporation (Antero) is submitting the following narrative and set of drawings in compliance with §35-8-5.4. This plan is submitted in conjunction with the Melody Well Pad Site Design & Construction Plan, Erosion & Sediment Control Plans prepared in accordance with the West Virginia Code of State Rules, Division of Environmental Protection and Office of Oil and Gas, and certified by Navitus Engineering Inc., a West Virginia registered professional engineer.

Requirement §5.4.b.1. *A general sequence of events that describe in relative terms how and when each construction phase (i.e. clearing and grubbing, mass grading, stabilization) will occur and when each erosion and sediment control best management practice ("BMP") will be installed;*

Antero Response:

The following includes a general sequence of events that describe in relative terms how and when each construction phase is anticipated to occur and erosion and sediment control BMPs to be installed. Please refer to the Melody Well Pad Site Design & Construction Plan, Erosion & Sediment Control Plans (Site Design) prepared and certified by Navitus Engineering Inc. for specific construction measures. Compliance with the measures outlined in the Site Construction Plan (§35-8-5.4) submitted in conjunction with this plan will also be maintained.

1. A pre-construction conference with the contactor and the appropriate erosion and sediment control inspector 48 hours prior to beginning work to review the construction drawings and provide any requested guidance.
2. Stake the limits of construction and mark all identified wetlands, streams, and other areas of concern for construction activities. Install signs to designate the areas and orange safety fence to identify important project attributes such as approved access roads, no refueling zones, wetlands/steam bounds, Etc.
3. Construct the rock construction entrance. All vehicles entering and exiting the site shall do so via the rock construction entrance.
4. Construction all BMP's as soon as clearing and grubbing operations allow. Diversions and sediment trap(s)/basin(s) shall be seeded and mulched immediately.
5. If applicable, convey upslope drainage around the access road and pad area by constructing all diversion berm(s) and/or compost filter sock diversion(s) as shown on the plans.
6. Clear and grub the site. All woody material, brush, trees, stumps, large roots, boulders, and debris shall be cleared from the site area and kept to the minimum necessary for proper construction, including the installation of necessary sediment controls. Trees six inches in diameter and larger shall be cut and logs stacked. Smaller trees, brush, and stumps shall be cut

and/or grubbed and windrowed in appropriate areas for use as sediment barriers at water drainage outlets (as shown on the plans), windrowed below the well site, used for wildlife habitat, burned (as per WV forest fire laws), removed from site, or disposed of by other methods approved by WV DEP.

7. If applicable, install all wetland or stream crossings as shown on the plans.
8. Strip the topsoil from the access road. Prior to placing any fill, the exposed subgrade shall be compacted and proof rolled to produce a stable and unyielding site. All stripped topsoil shall be stockpiled in areas shown in the plans, or re-spread at an approximate depth of 2-4 inches on all proposed 2:1 or flatter slopes, and immediately stabilized. Additional BMP measures shall be constructed around topsoil stockpiles, if necessary.
9. Construct the access road. All fill areas, including excess material stockpiles, shall be "keyed in" and compacted in horizontal lifts with a maximum loose lift thickness of 12" and maximum particle size as outlined in the geotechnical report. All fill shall be compacted by a vibrating sheepsfoot roller to 95% per the standard proctor test (ASTM-D698). Moisture content will be controlled in accordance with the standard proctor test (ASTM – D698) results. It is also recommended that each lift be proof rolled with a loaded haul truck where applicable. Ditch relief culverts shall be installed at a grade of 1-8% to minimize outlet velocities to the extent possible. Install outlet protection once ditch relief culverts are installed, as shown on plans. Stabilize the road with geotextile fabric & stone and side slopes as specified with permanent seeding. Excess material shall be stockpiled (if necessary) in areas shown in the plans and immediately stabilized. Topsoil shall be stripped from all stockpile areas prior to construction of stockpiles. After stockpiles are constructed, topsoil is to be reapplied at a depth of 6". Slopes shall be tracked by running tracked machinery up and down the slope, leaving tread marks parallel to the contour. All ditch lines shall be cleaned prior to installation of lined protection.
10. Strip the topsoil from the pad area. Prior to placing any fill, the exposed subgrade shall be compacted and proof rolled to produce a stable and unyielding site. All stripped topsoil shall be stockpiled in areas shown in the plans, or re-spread at an approximate depth of 2-4 inches on all proposed 2:1 or flatter slopes, and immediately stabilized. Additional BMP measures shall be constructed around topsoil stockpiles, if necessary.
11. Grade the pad area as shown on the plans. Install pad sumps (with 4" PVC drain pipe and outlet protection) and containment berm liner system. Immediately stabilize the outer areas of the well pad. The well pad shall be stabilized with geotextile fabric & stone and the side slopes with seed and mulch. Apply seed and mulch to all disturbed areas. This shall include all areas that will not be subject to regular traffic activity (to be stabilized with stone), or any disturbed area that will not be re-disturbed before site reclamation begins.
12. Commence well drilling activity.
13. All BMP's must remain in place and functional until all areas within the limit of disturbance are complete and permanently stabilized. Maintenance must include inspection of all erosion and sediment controls after each runoff event in excess of 0.5" and on a biweekly basis.
14. The construction site should be stabilized as soon as possible after completion. Establishment of final cover must be initiated no later than 7 days after reaching final grade. Final stabilization means that all soil-disturbing activities are completed, and that either a permanent vegetative cover with a density of 70% or greater has been established or that the surface has been stabilized by hard cover such as pavement or buildings. It should be noted that the 70% requirement refers to the total area vegetated and not just a percent of the site.
15. All permanent sediment control measures can be removed after the site is permanently stabilized and approval is received from the WVDEP

16. And areas disturbed by removal of controls shall be repaired, stabilized, and permanently seeded.

Requirement §5.4.b.2. *A description of the stabilization methods to be used, including the application rates for temporary and permanent seeding and mulching, and provide the timeframes for establishing stabilization*

Antero Response:

Stabilization methods used include seeding and mulching of disturbed areas as well as the implementation of erosion and sediment control BMPs. Please refer to Construction and E&S Control Notes on page 2 as well as "Construction Details" and "Stream crossing details" on page 9-14 for detailed descriptions of the different stabilization methods to be used. Seeding and mulching is to be in accordance with the WVDOT Standard Specifications unless specified otherwise in the plans or unless specified otherwise by the construction engineer or Antero representative. Please refer to Erosion and Sediment Control Narrative under Construction and E&S Control Notes on page 2 of the Site Design for more specific information regarding application, liming, and mulching rates.

Erosion and sediment BMPs will be constructed, stabilized, and functional before site disturbance begins within the tributary areas of those BMPs. In a timely manner after earth disturbance activities cease, Antero shall stabilize any areas disturbed by the activities. During non-germination periods, mulch must be applied at the specified rates. Disturbed areas which are not at finish grade and which will be re-disturbed within 1 year will be stabilized in accordance with the temporary vegetative stabilization and specifications. Disturbed areas which are finished grade or which will not be re-disturbed within 1 year will be stabilized in accordance with the permanent vegetative stabilization specification. Please refer to "Construction and E&S Control Notes" on page 2 for more information regarding timeframes for establishing stabilization and erosion and sediment BMPs.

The site shall be considered to have achieved full stabilization when it has a minimum uniform 70% perennial vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated surface erosion and subsurface characteristics to resist sliding and other movements. Until the site achieves final stabilization, Antero will assure that the best management practices (BMPs) are implemented, inspected, operated, and maintained. As such, Antero will maintain written inspection logs. All maintenance work, including cleaning, repair, replacement, regarding, and re-stabilization shall be performed immediately upon discovery of deficiency. After final stabilization has been achieved, temporary erosion and sediment BMPs controls will be removed. Areas disturbed during removal of the BMPs will be stabilized immediately.

Requirement §5.4.b.3. *Details of specifications for the erosion and sediment control BMPs employed on the project.*

Antero Response:

Please refer to the "Construction and E&S Control Notes" on page 2, "Construction Details" and "Stream Crossing Details" on pages 9-14 in the Site Design for specifications including instructions for installation, inspection, and maintenance for erosion and sediment control BMPs employed at this site.

Requirement §5.4.b.3. *A vicinity map locating the site in relation to the surrounding area and roads;*

Antero Response:

A "Vicinity Map" locating the site in relation to the surrounding area and roads is included on page 1 the Site Design.

Requirement §5.4.c.2 A plan view site map at a scale of one inch equal to one hundred feet (1"=100') or greater, showing appropriate detail of all site features, including the identification of site access that provides for a stabilized construction entrance and exit to reduce tracking of sediment onto public or private roads; and

Antero Response:

Overall Plan Sheet Index & Volumes," and "Access Road, Staging Area, & Well Pad Plan," and "Stream Crossing Details" maps on pages 4-5 and 9 of the Site Design. Specific design and layout and inspection and maintenance notes for a stabilized construction entrance are included in the "Construction and E&S Control Notes" verbiage on page 2.

Requirement §5.4.c.3. The location of all proposed erosion and sediment control BMPs

Antero Response:

Overall Plan Sheet Index & Volumes," and "Access Road, Staging Area, & Well Pad Plan," and "Stream Crossing Details" maps on pages 4-5 and 9 of the Site Design locate all proposed erosion and sediment control BMPs.

Received Date: 6/2/2014

API: 1706534

Operator: ANTERO RESOURCES CORPORATION

WELL: BRADFORD UNIT 1H

Pad Name: MELODY

End Comment Period: 7/3/14

Pad Built: Yes No

Date Reviewed: 7-16 INT. RC

CHECKLIST FOR FILING A PERMIT Horizontal 6A Well

Please include these required elements in the Horizontal Well 6A applications, in order listed below. Do not use staples.

First Well	Subsequent Well
10,150.00 <input type="checkbox"/>	5,150.00 <input checked="" type="checkbox"/>

Check#: 55918

SIGN-OFFS

- Fees Paid
- Checklist / Cover letter
- WW-6B Notice of Application Field Approved
- Cement Additives
- Well Bore Schematic (not required)
- WW-9 Fluids/Cuttings Disposal and Reclamation Plan Field Approved
- Site Safety Plan Field Approved
- Water Management Plan DWWM Approval
- Topographic map showing access road
- Mylar Plat (Signed and sealed) (Surface Owner matches WW-6A) Plat Spotted
- WW-6A1 Lease Information
- Road Crossing Letter (if drilling under road)
- WW-PN Application Notice by Publication
- Public Notice (dated copy of advertisement or affidavit of publication)
- WW-6AC Notice Certifications and Waivers
- WW-6A Notice of Application notarized w/ any attachments
- Topographic Map with labeled surrounding water wells (not required)
- Certified Mail receipts for WW-6A
- WW-6A3 Notice of Entry for Plat Survey (if one was conducted)

Disk

Horizontal 6A Well Permit App. Checklist:

API: 1706534

- Certified Mail receipts for WW-6A3
- ~~WW-6A4~~ Notice of Intent to Drill (if no WW-6A3)
- ~~Certified Mail receipts for WW-6A4~~
- WW-6A5 Notice of Planned Operation
- Certified Mail receipts for WW-6A5
- ~~WW-6RW~~ Well Location Restriction Waiver (if applicable)
- ~~WW-6RW~~ Voluntary Statement of No Objection (if applicable)
 - Waiver for Surface Owner at Wellhead
 - Waiver for Surface Owner for Roads or other Disturbances
 - Waiver for Coal Owner, Operator or Lessee
 - Waiver for surface owner for Impoundment or Pit
 - Waiver for Surface Owner or Water Purveyor within 1500 feet of Center of Pad
 - Waiver for Natural gas Storage Field Operator
- DOH Road Bonding Letter
- Frac Additives List of Chemical Names & CAS#s
- Site Construction, Reclamation, Erosion & Sediment Control Plans DEP Engineer Approved
- MSDS Sheets

Reviewer outside checks:

- Comments - Public, Surface Owner, Water Well Purveyor
- Bond (\$250,000)
- Operator is registered with the SOS
- Workers Compensation / Unemployment Insurance account is OK
- Professional Engineer/Company has COA
- Check for mine data at proposed coordinates
- Check for floodplain data at proposed coordinates

Horizontal 6A Well Permit App. Checklist:

API: 1706534

- ~~IMP-1A~~ Associated Pit or Impoundment (if applicable)
- WW-6A7 Well Restrictions Form w/ Signature
 - At Least 100 Feet from Pad and LOD (including any ES Control Feature) to any Perennial Stream, Lake, Pond, Reservoir or Wetland
 - DEP Waiver and Permit Conditions
 - At Least 300 Feet from Pad and LOD (including any ES Control Feature) to any Naturally Producing Trout Stream
 - DEP Waiver and Permit Conditions
 - At Least 1000 Feet from Pad and LOD (including any ES Control Feature) to any Groundwater Intake or Public Water Supply
 - DEP Waiver and Permit Conditions
 - At Least 250 Feet from an Existing Water Well or Developed Spring to Well Being Drilled
 - Surface Owner Waiver and Recorded with County Clerk, OR
 - DEP Variance and Permit Conditions
 - At Least 625 Feet from an Occupied Dwelling Structure to the Center of the Pad
 - Surface Owner Waiver and Recorded with County Clerk, OR
 - DEP Variance and Permit Conditions
 - At Least 625 Feet from Agricultural Buildings Larger than 2500 Square Feet to the Center of the Pad
 - Surface Owner Waiver and Recorded with County Clerk, OR
 - DEP Variance and Permit Conditions

OPERATOR: Antero Resources Corporation

PAD NAME: Melody Pad WELL: Bradford Unit 1H

PAD BUILT: YES NO DATE REVIEWED: _____ INT. _____

REVIEWED BY (APPLICANT): Ashlie Mihalcin

APPLICANT SIGNATURE: *Ashlie Mihalcin*

CHECKLIST FOR FILING A PERMIT HORIZONTAL 6A WELL

Please include these required elements in the Horizontal Well 6A applications, in order listed below.
Do not use staples.

First Well	Subsequent Well
\$10,150.00 <input type="checkbox"/>	\$5,150.00 <input checked="" type="checkbox"/>

*CK 55918
5150⁰⁰*

Fees

Checklist / Cover letter

WW-6B Notice of Application _____ Field Approved

Cement Additives

N/A Well Bore Schematic

WW-9 Fluids/Cuttings Disposal and Reclamation Plan _____ Field Approved

Site Safety Plan _____ Field Approved

Water Management Plan

Topographic Map w/water purveyors, showing access road

Mylar Plat (Signed and sealed) (Surface Owner matches WW-6A)

WW-6A1 Lease Information

Road Crossing Letter

WW-PN Application Notice by Publication

Public Notice (dated copy of advertisement or affidavit of publication)

WW-6AC Notice Certifications, notarized

RECEIVED WWM Approval
Office of Oil and Gas
JUN 02 2014
WV Department of
Environmental Protection

- WW-6A Notice of Application notarized w/ any attachments
- Topographic Map with labeled surrounding water wells
- Certified Mail receipts for WW-6A
- WW-6A3 Notice of Entry for Plat Survey
- Certified Mail receipts for WW-6A3
- N/A WW-6A4 Notice of Intent to Drill
- N/A Certified Mail receipts for WW-6A4
- WW-6A5 Notice of Planned Operation
- N/A Certified Mail receipts for WW-6A5 *Antero owns property*
- N/A WW-6RW Well Location Restriction Waiver
- N/A WW-6AW Voluntary Statement of No Objection
 - Waiver for Surface Owner at Wellhead
 - Waiver for Surface Owner for Roads or other Disturbances
 - Waiver for Coal Owner, Operator or Lessee
 - Waiver for surface owner for Impoundment or Pit
 - Waiver for Surface Owner or Water Purveyor within 1500 feet of Center of Pad
 - Waiver for Natural gas Storage Field Operator
- Road Bonding Agreement / DOH Certification
- Frac Additives List of Chemical Names & CAS #s
- Site Construction, Reclamation, Erosion & Sediment Control Plans
- N/A Copy of To Scale Plans
 - Inspector packet mailed to inspector (Plat, Topographic Map, WW-6B, WW-19, All Plans)
 - Bond (\$250,000)
 - Operator is registered with the SOS
 - Workers Compensation / Unemployment Insurance account is OK

RECEIVED
Office of Oil and Gas
Field Approved
JUN 02 2014
WV Department of
Environmental Protection

47 - 1706534

- Professional Engineer/Company has COA
- Check for Mine Data at proposed coordinates
- Check for Floodplain Data at proposed coordinates
- IMP-1A Associated Pit or Impoundment

WW-6A7 Well Restrictions Form w/ Signature

At Least 100 Feet from Pad and LOD (including any E&S Control Feature) to any Perennial Stream, Lake, Pond, Reservoir or Wetland

DEP Waiver and Permit Conditions

At Least 300 Feet from Pad and LOD (including any E&S Control Feature) to any Naturally Producing Trout Stream

DEP Waiver and Permit Conditions

At Least 1000 Feet from Pad and LOD (including any E&S Control Feature) to any Groundwater Intake or Public Water Supply

DEP Waiver and Permit Conditions

At Least 250 Feet from an Existing Water Well or Developed Spring to Well Being Drilled

Surface Owner Waiver and Recorded with County Clerk, OR

DEP Variance and Permit Conditions

At Least 625 Feet from an Occupied Dwelling Structure to the Center of the Pad

Surface Owner Waiver and Recorded with County Clerk, OR

DEP Variance and Permit Conditions

At Least 625 Feet from Agricultural Buildings Larger than 2500 Square Feet to the Center of the Pad

Surface Owner Waiver and Recorded with County Clerk, OR

DEP Variance and Permit Conditions

RECEIVED
Office of Oil and Gas
JUN 02 2014
WV Department of
Environmental Protection